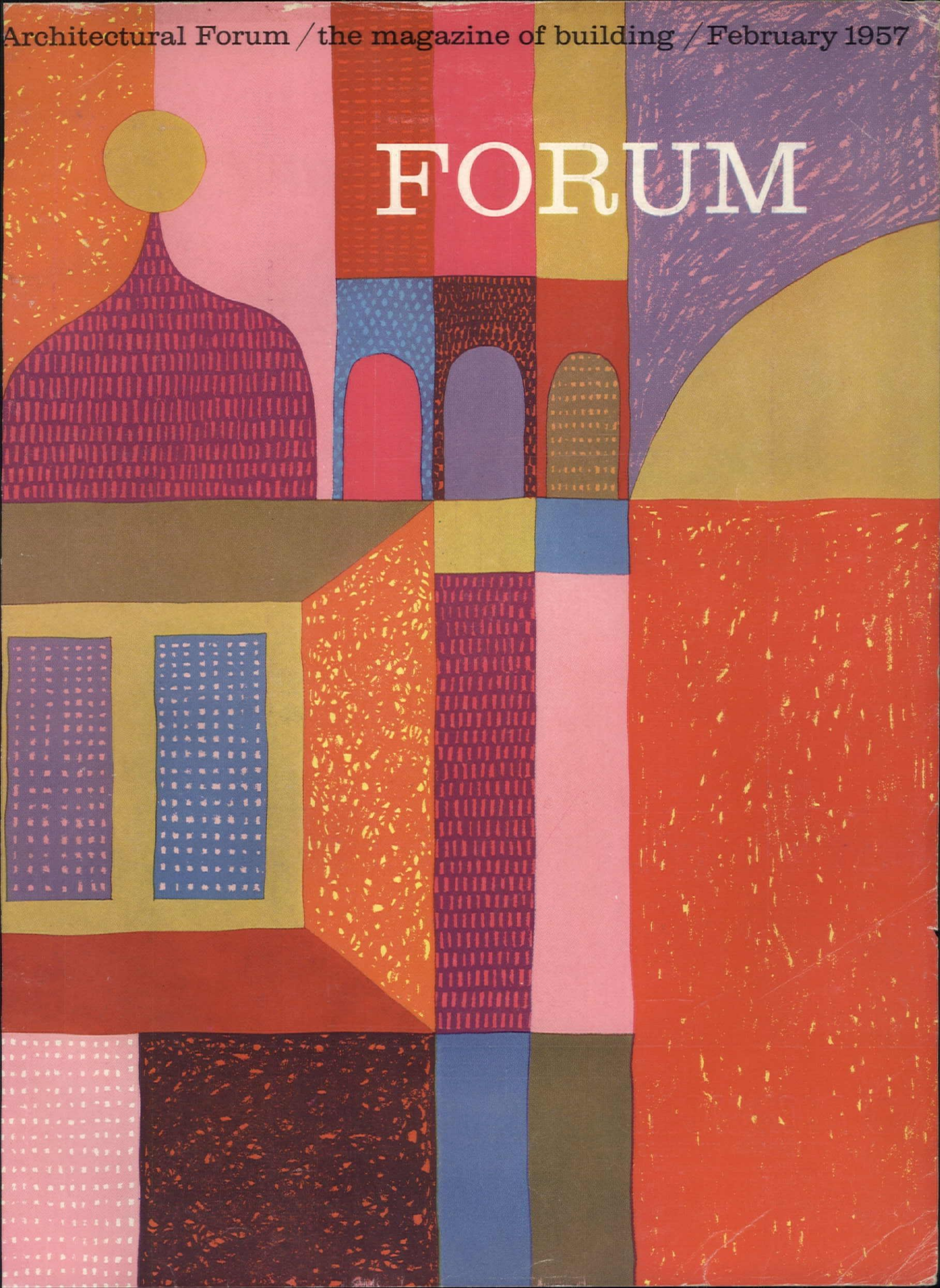
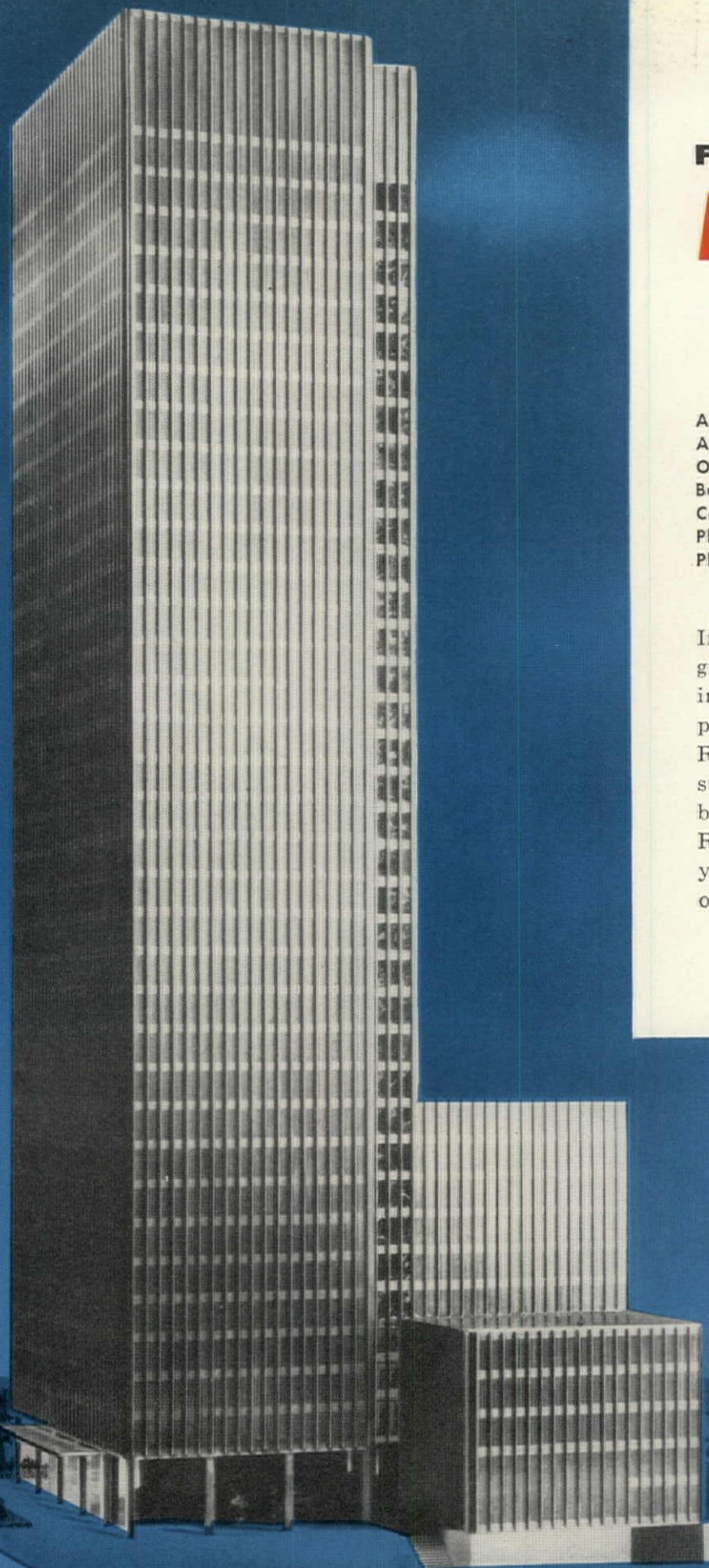


Architectural Forum / the magazine of building / February 1957

FORUM





Plumbing Fixtures by **RICHMOND**

**HOUSE OF SEAGRAM
375 PARK AVE.**

NEW YORK CITY

Architects—Mies van der Rohe and Philip Johnson

Associate Architects—Kahn and Jacobs

Owner—House of Seagram

Builder—George A. Fuller Company

Consulting Engineers—Jaros, Baum and Bolles.

Plumbing Wholesaler—Glauber, Inc.

Plumbing Contractor—Eugene Duklauer Inc.

Impressive newcomer to the world's fastest growing skyline, the House of Seagram presents impressive testimony to the ever growing popularity of Richmond Plumbing Fixtures. Richmond's superior quality and truly advanced styling are being specified more and more by distinguished architects and engineers. Richmond Fixtures have an important place in your future plans. Write for complete catalog or consult Sweet's Catalog File.

FIXTURES TYPICAL OF RICHMOND'S ADVANCED STYLING—HOUSE OF SEAGRAM



RICHMOND
PLUMBING FIXTURES

Division of Rheem Manufacturing Company
16 Pearl Street, Metuchen, N. J.

The Fastest Growing Name in Plumbing Fixtures



5	News
35	Projects
41	Trends
83	Letters
91	People
97	Editorial
163	Products
187	Books
193	Excerpts

Cover: Design by Ray Komai based on wall decoration by Alexander Girard. For more about Girard's house of many colors, see p. 132

97 Editorial, subscription and advertising data

252 Advertising index

VOLUME 106, NUMBER 2

Published monthly by Time Inc.,
9 Rockefeller Plaza, New York 20, N. Y.
Entered as second-class matter
at New York, N. Y.
Subscription price \$5.50 a year
© 1957 Time Inc. All rights reserved
under International and Pan American
copyright convention.

100 Land—a new kind of boom

The land market has long been a complete X in a lot of calculations. Obviously, since land is the one completely indispensable factor in any building operation, such a gap in our knowledge is serious. This is the first effort that has been made to pull the vast new land market into a coherent story.

106 IBM's corporate face

The new policies of International Business Machines are directed to a coordinated design treatment of everything from buildings to machines to trademarks and letterheads.

115 A new patina on Park Ave.

A color picture of the House of Seagrams.

116 The money pinch

A coast-to-coast survey of its effect on nonresidential building.

118 Who gets what office?

Today the interior designer is called into play even before the steel is ordered. Layouts establish areas and dimensions and offices according to desire. Only then is a reconciliation made with economical steel framing. This should be of interest to everybody who wants a building or will participate in planning one.

122 Banking in civics

The Detroit National Bank stands at the gateway to the new Civic Center, of which it is a vital part, and has a cunning staggered window system which produces a maximum effective wall tapestry with minimum glass openings.

126 Six high schools

A roundup of the liveliest ideas happening in the secondary school field—six new junior high and high schools.

132 House of many colors

A wonderful play with intense, bright colors against white plaster walls makes this house by Alexander Girard a delightful experience—a gallery of color pictures.

140 The debacle of popular taste

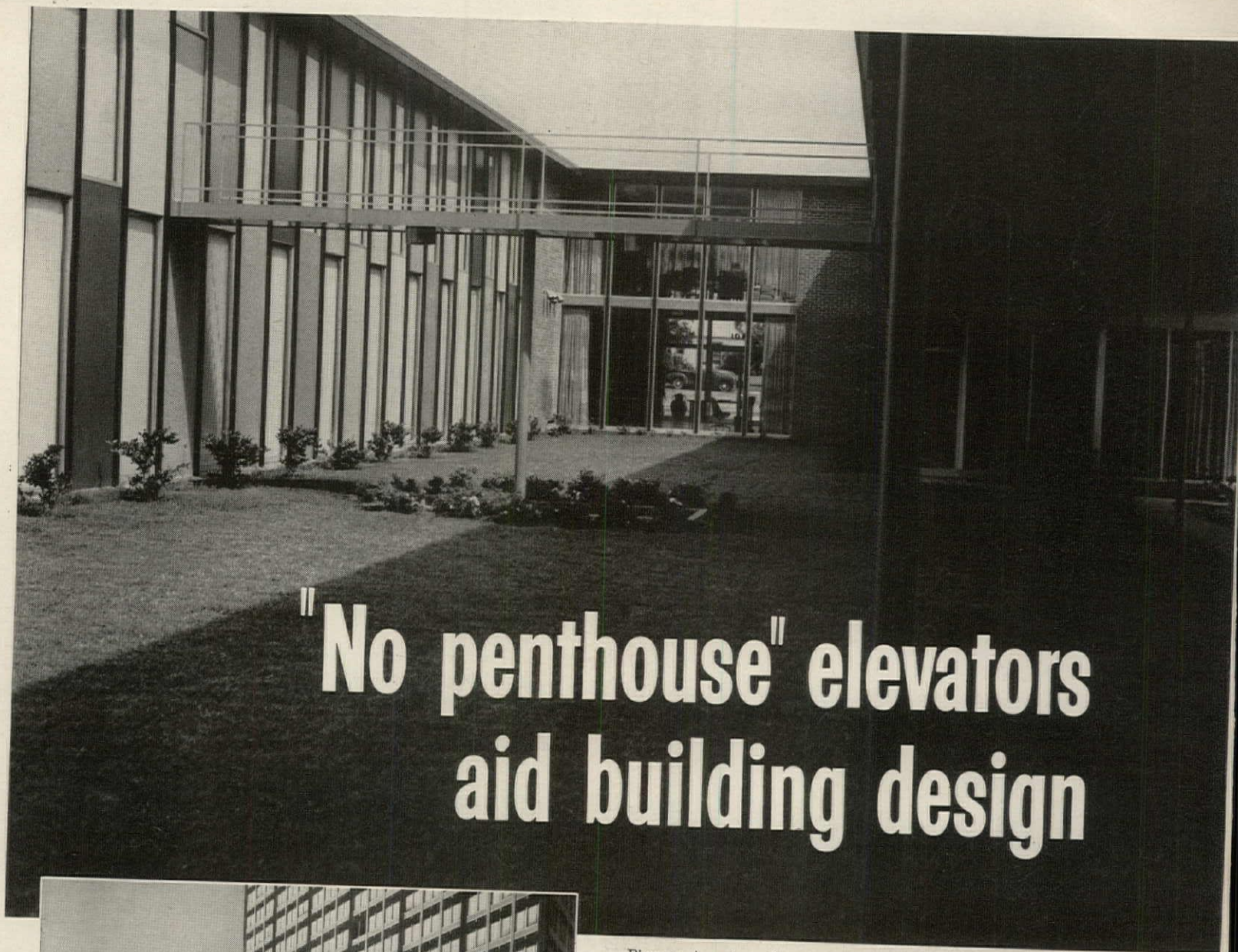
Our basic design problem today arises from a public that is uneducated in matters of taste, is overwhelmed with new materials and money, and is unfettered in its belief that it can and should do as it pleases. A controversial article that will stir a rousing debate.

146 Pittsburgh—projects without plans

The Pittsburgh redevelopment story was the first to break across the country in the new urban renewal movement in the fall of 1949. Question: what has happened since?

152 Technology

Lighting progress is now a major influence in modern architecture . . . a new railroad coach offers the building industry some lessons on weight reduction . . . also ceramic humiguide, water control, foam insulation blanket, pneumatic delivery tube.



"No penthouse" elevators aid building design



Mile High Center Exposition Hall, Denver
ARCHITECTS: I. M. Pei & Associates; Webb & Knapp project
GENERAL CONTRACTOR: Geo. A. Fuller Company
ROTARY OILDRAULIC ELEVATOR sold and installed by
William Colin Kirk & Associates

Pioneer American Insurance Co., Ft. Worth, Texas
ARCHITECT: John Wesley Jones
GENERAL CONTRACTOR: Friedman Construction Co.
ROTARY OILDRAULIC ELEVATOR sold and installed by
Hunter-Hayes Elevator Co.

IBM Regional Office Building, River Forest, Ill.
ARCHITECTS: Camburas & Theodore
GENERAL CONTRACTOR: Sherman Olson, Inc.
ROTARY OILDRAULIC ELEVATOR sold and installed by
Gallaher & Speck, Inc.



Architects specify Rotary Oildraulic Elevators to obtain clean, uncluttered lines in buildings to six stories

Eliminate the unsightly elevator penthouse to improve building design.

Lighten the elevator shaftway construction to save on building costs.

You can do both when you specify Rotary Oildraulic Elevators. This modern operatorless elevator is moved, supported and controlled by a powerful oil-hydraulic jack. It's pushed up from below, not pulled from above.

Lighter, More Economical Shaftway

With no overhead machinery there's no need for a penthouse. And weight of the elevator rests on a floor slab, permitting much lighter and more economical shaftway construction.

Smooth, quiet, dependable operation is achieved

by the patented Rotary control valve mechanism. Automatic floor leveling with $\frac{1}{4}$ -inch accuracy is guaranteed, regardless of load.

Elevator Planning Assistance

For rises to 60 feet, Rotary Oildraulic Elevators offer all the advances of modern vertical transportation systems at considerable savings in cost. A Rotary representative will be glad to demonstrate this savings to you in person, and to prepare complete plans and specifications to your requirements.

Sales, installation and service are by factory-trained personnel in a national distributor organization. Mail the coupon for more information or look for "Rotary Oildraulic" under "Elevators" in the yellow pages of your phone book.

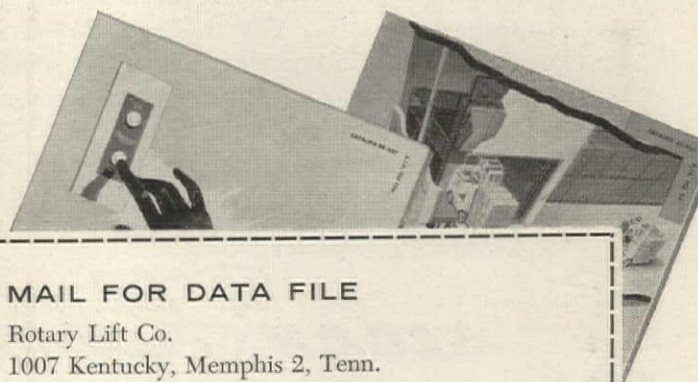


See our catalog in Sweet's

OILDRAULIC® ELEVATORS

Passenger and Freight

Engineered and built by
ROTARY LIFT COMPANY
Division of the Dover Corporation
Memphis, Tenn.—Chatham, Ontario



MAIL FOR DATA FILE

Rotary Lift Co.
1007 Kentucky, Memphis 2, Tenn.

Please send data file on freight ☐ passenger ☐
elevators to:

Name _____

Address _____

THE VAST MAJORITY OF THE NATION'S FINE BUILDINGS ARE SLOAN EQUIPPED



TISCH HOTELS, INC.
owner
MORRIS LAPIDUS
architect-designer
LEO KORNBLATH
associate
GEORGE O'MARA
mechanical engineer
TAYLOR CONSTRUCTION CO.
general contractor
MARKOWITZ BROS., INC.
plumbing contractor
CRANE CO.
plumbing fixtures

LUXURY AT GATEWAY TO THE AMERICAS

• At Miami Beach, Florida, the luxurious new AMERICANA HOTEL is a sensation in its premiere season. This \$17 million, truly tropical hostelry, is rated "superlative" from entrance driveway to crowning penthouse. Featured are 475 extra large, richly furnished guest rooms, parlor suites and de luxe apartments, all with private terraces and ocean view. Unique in the Florida scene are 30 lanai suites, each with its own tropical garden, private entrance and elevator. Adjoining the promenade which surrounds the king-size pool

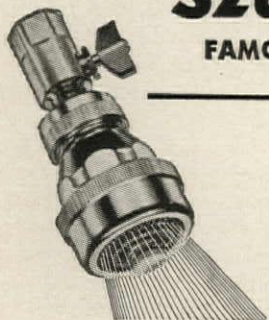
are 20 smartly appointed bedroom cabanas, and along the hotel's private oceanfront are 100 beach cabanas, each with two dressing rooms and bath. Huge picture windows are used in the lobby to integrate that spectacular area and the lush tropical landscaping that surrounds the hotel. A series of elaborate dining areas and a fabulous nightclub cater to the sophisticated tastes of pleasure-loving guests. As are thousands of other fine buildings, the magnificent Americana Hotel is completely equipped with SLOAN *Flush* VALVES.

SLOAN *Flush* **VALVES** FAMOUS FOR EFFICIENCY, DURABILITY, ECONOMY

SLOAN VALVE COMPANY • CHICAGO • ILLINOIS

Another achievement in efficiency, endurance and economy is the SLOAN *Act-O-Matic* SHOWER HEAD, which is automatically self-cleaning each time it is used! No clogging. No dripping. Architects specify, and Wholesalers and Master Plumbers recommend the *Act-O-Matic*—the better shower head for better bathing.

Write for completely descriptive folder



President's messages outline many programs of major interest to construction

The shape of things to come through new legislation affecting construction was outlined to the new Congress by President Eisenhower in his two main State of the Union and budget messages.

Among the President's principal proposals and recommendations:

Schools—A plea for the adoption of federal aid laws "uncomplicated" by the desegregation riders that killed last year's bills. This contemplates a measure "to accomplish in four years" what last year's proposals would have accomplished in five years through a program for: \$1.3 billion for matching grants to states for school construction; \$750 million for US purchase of local school bonds that cannot be marketed at reasonable rates. Later the President planned to send Congress a special message on the need for such a program. In hope and anticipation of its enactment his budget message included a \$451 million item for its first year's operation, including \$325 million for construction grants, \$100 million for bond purchases.

Health Research Buildings — The President's budget message requested \$30 million for grants to nonprofit medical, dental and public health institutions for construction of health research facilities, the same amount appropriated last year. In addition the President again requested \$15 million for grants for building medical and dental "teaching and training" facilities, a proposal that was defeated last year.

Military Construction — On recommendations of the Pentagon, the President asked for \$2.2 billion for US and overseas military public works in the fiscal year starting in July. This would be about 14% more than this year's spending program, which is up about 7% over expenditures in the year that ended last June 30. About 75% to 80% of military construction outlays go for buildings of various types, the balance for airfield runways, docks, roads, etc.

Monetary Commission — In recognition of the fast growing public debate over government monetary policy and credit controls, the President suggested that Congress should create a special commission to "conduct a broad national

inquiry into the nature, performance and adequacy of our financial system" and make proposals for improving "the mechanism through which monetary and credit policy take effect." Banker and realtor support for this proposal came rapidly. In his inaugural address NAREB President Kenneth S. Keyes called it a "most significant and statesmanlike move" that would be highly constructive for the real estate industry, in which the top problem today is mortgage financing. (For report on effect of tight money on construction, see "The Money Pinch," p. 116.)

Fanny May — In a credit expansion recommendation that would help home builders and some high-rise apartment builders, the President proposed an increase of \$100 million in this agency's capital stock owned by the Treasury. Under its charter, Fanny May can sell debentures equal to ten times its capital stock, so this would give it power to borrow another \$1 billion for its mortgage purchasing operations. And just in case Fanny May encountered any difficulty in selling its debentures on acceptable terms in the present market, the President also suggested making \$700 million of stop-gap Treasury financing available to Fanny May, half of it starting July 1, and the rest July 1, '58. In effect, this would be almost



AIA CENTENNIAL STAMP

This 3¢ postage stamp in honor of AIA's centennial goes on sale for the first time on Feb. 23 in New York. A total printing of 120 million (less than 1 per capita) has been authorized. The post office describes the stamp's main design as "composed of a modern mushroom type head and shaft superimposed on a Corinthian style capital, symbolizing the progress made in architecture during the last century." With minor modification in the lettering, the design was that of AIA Architect Robert J. Schultz, of South Bend, Ind., which was submitted to the post office by the AIA after it was awarded first prize (\$500) in a competition conducted by the institute.

direct investment of Treasury funds in mortgages, or government lending in the mortgage market. Also proposed for Fanny May: authority to earmark another \$50 million for purchasing cooperative housing mortgages, and \$250 million for mortgages on urban renewal (see separate story), military housing and housing for the aged.

URBAN RENEWAL

Congressmen begin studying resale prices of Title I land; poorest got 86% subsidy

In five sentences in the President's budget message last month, HHFA's Title I urban renewal, slum clearance and redevelopment program was summarized in sweeping, impressive terms.

Only one project has been fully completed under the original 1949 legislation, the President noted, but 40 more will be finished by the end of 1958. "More important," he added, "by that time 285 projects will be in process of actual clearance and redevelopment and plans will be underway for 246 more. These 572 projects will ultimately involve total costs of more than \$2.5 billion, of which federal capital grants will provide an estimated \$1.2 billion." To keep the program going during the next two years, the President recommended \$250 million a year.

Scrutiny from Congress

Even as the President spoke, however, it looked as if the new Congress were going to take a long hard look at some aspects of this program, and the Urban Renewal Administration itself might soon impose some important new "workable program" requirements on cities qualifying for Title I aid.

Last month, for instance, inquiring congressmen had asked URA to give them a list of the twenty projects that had received the largest federal write-down grants. While no other details were available yet, it was learned that there was some shock when it was discovered that in the largest subsidy case, on a percentage basis, the land involved was being resold for only 14% of its gross acquisition costs. Almost simultaneously, FORUM had requested statistics on actual or prospective resale prices of all Title I project land, but was informed that URA does not yet have such statistics available.

In enacting the Title I program, which provides for the United States

Public Works—In a broad statement in his State of the Union message, the President said future messages from him, or from heads of departments and agencies, would make more specific or "special recommendations" on such subjects as civil defense, labor laws, atomic energy development and "the furthering of public works."

to pay two-thirds of the loss or write-down on slum areas acquired by cities and resold on terms that will attract private redevelopers, Congress knew from the start that this would be expensive. What Congress is now starting to ask for, however, is some accounting that may show just how expensive this is turning out by actual experience.

Zoning via Washington?

In the Housing Act of 1954, Congress tied some strings onto Title I redevelopment grants. Before obtaining any further aid, it required each city to show that it had a "workable program" of rehabilitation and conservation to prevent the development of any new blight or slums. Administering this requirement is one of URA's toughest jobs. Now that it has gained some experience and a broader perspective on the problems of city decay and renewal, some URA men feel it may be time for Washington to demand not only local zoning codes, but better actual zoning.

Explained one official: "Before long, perhaps we should crack down on cities with too much area zoned as 'first commercial' district—which many authorities regard as a very important cause of slums. Perhaps we should say that if you keep on zoning, or keep zoned, two or three times more land for 'first commercial' than experience shows can be used for this purpose, we will have to cut you out of the program as far as any new grants are concerned."

After asking a committee of mayors for its advice on the subject, URA also made an important policy decision recently on local land resale procedures: it now fully approves negotiated contracts rather than competitive bidding sales, if the localities wish. The mayors pointed out, and URA agreed, that prospective redevelopers usually are put to considerable expense in preparing

their plans, and many will not go to this expense and trouble unless they have some reasonable assurance that they are likely to get the project.

To minimize the chances for abuse of the negotiated contract procedure, however, URA will also make it subject to two important controls: 1) it will require an additional public hearing on the proposed contract, and 2) it will require the local governing body to certify by resolution that negotiation is the only feasible way of signing up a redeveloper.

PUBLIC BUILDING

GSA budgets \$10 million for lease-purchase sites

The GSA's vast lease-purchase construction program was limping but unbowed.

It had exactly one project under construction, a \$2 million post office-court house in Rock Island, Ill. Fully approved by Congress, but bogged down by the tight money squeeze and the Budget Bureau's 4% yield restriction on owner-investors, were another 97 that would cost a total of nearly \$700 million. Acting optimistic, the GSA also hoped to win congressional sanction before summer to proceed with planning for another \$300 million of projects.

Ordinary rental funds were expected to cover practically all payments for this huge \$1 billion program—except for a \$10 million item that turned up as an outstanding example of cheerfulness in the midst of the money scarcity in the President's budget message last month. Up to now most of these projects have been planned on sites the government already owns. But henceforth land will have to be purchased for most projects, and that was what this \$10 million was requested for.

GSA had called for bids on eight lease-purchase projects on Dec. 20 under certain "liberalized" conditions, but still subject to a 4% yield (AF, Dec. '56). It received bids on only six, and last month rejected them all for exceeding available projects funds or containing unacceptable conditions. Undaunted, however, GSA has invited all the bidders to come in and see if they could work out acceptable contracts by negotiation.

More funds for liberal college housing loans

President Eisenhower made a more liberal budget recommendation last month than he did a year ago for HHFA's loan program for building college housing and related amenities. Last year he proposed \$100 million, and an overgenerous Congress voted \$250 million. Last month the President recommended an additional \$175 million, which, with surplus still available, he pointed out, would be sufficient to keep the program going "at its present rate of \$250 million a year."

This is just about the softest, most accommodating, least complicated loan program for construction in all Washington. It makes long-term loans up to 100% of costs, and under its current interest rate formula charges only 2.7%, or, as the administration ruefully complains to Congress, at a net loss to the government. For the third annual time, the President asked Congress to legislate "a more realistic formula," so the Treasury could at least recover its own interest costs and overhead. But Congress refused to do so each previous time; there was no indication yet that it would be any more realistic this year.

Borrowers' delight

The college loan program, administered by HHFA's Community Facilities Administration, has none of the red tape of "workable programs," mortgage commitments or minimum construction requirements that bedevil urban renewal projects, public housing or FHA insured loans. If costs exceed estimates, supplementary loans can be approved. Conversely, projects can be revised to fit available loan proceeds. Last month FORUM asked a Wisconsin college borrower for a sketch of an 11-story dormitory and dining facilities structure to be financed with such a loan. The reply: "The architect's plans are still fluid, their settlement depending on how bids conform to the \$2,415,000 of the federal grant [sic]. And under these circumstances, materials cannot be specified."

Ivy League institutions like Yale and the Institute for Advanced Study at Princeton also grace the list of applicants for these attractive government loans. Yale has sought \$950,000. The Institute for Advanced Study has a \$1,150,000 loan, which it is using with \$808,850 of its own funds to build 19 one- and two-story apartment buildings by Architect Marcel Breuer. They con-

tain 106 one- to three-bedroom dwelling units for the Institute's advanced research students and their families. At an average of about \$18,000 per unit, not counting land already owned by the institute, this is the highest-cost college housing reported under the program.

In Lubbock, Tex., the program resulted in the formation of a new architectural combine that has now decided to continue as a "permanent organization to bid for larger design jobs." The idea for associating to obtain the design contract for a \$4.5 million dormitory project for Texas Tech originated with Stile, Roberts, Gee & Messersmith. Those who joined it to form Associated Architects and Engineers were McMurtry & Craig, and Schmidt & Stuart.

Box score

Through Dec. 31, applications for these loans totaled 977, for \$909,237,000. Those processed and approved numbered 401, for \$362,665,000.

For what it described as "the nation's largest current college housing construction program"—a \$21.5 million dormitory and apartment project at Purdue University—the agency proudly announced private participation in the financing on an equal repayment schedule basis, the first time this has occurred in the five-year history of this program. In this case HHFA is lending \$9.1 million, and private sources \$12.4 million, and each is taking a proportionate share of serial bonds from earliest to latest redemption dates. In other "participation" cases, private lenders have usually taken only early redemption bonds, with all the longer term, less desirable ones absorbed by HHFA.

DESIGN

Feb. 15 is closing date for \$25,000 award

All official nomination forms for the first annual \$25,000 international R. S. Reynolds Memorial Award, first announced in November, must be received by Feb. 15 at Washington headquarters of the AIA, which is administering the award for the Reynolds Metals Co. March 25 will be the closing date for all material submitted for consideration. Entries will be judged April 1 and 2, and the architect elected to receive the award will be notified of his good fortune on April 3.

This impressive new annual award, established in memory of the late

founder of Reynolds Metals, will be made for the "most significant contribution to the use of aluminum, esthetically or structurally, in the building field"—preferably a structure completed during the previous calendar year. Entries may be structures of any type or size anywhere in the world designed by any legally practicing architect of any nationality. They will be judged primarily on their creative value and "potential influence on the architecture of our times."

Architect George S. Koyl, of Philadelphia, has been appointed professional advisor for the initial competition. The names of its five judges, to be selected by the AIA executive committee, will be announced later.

PROFESSIONAL RELATIONS

Walker, Skidmore named for top AIA medals

Highest honor medals of the AIA at its centennial celebration convention in Washington in May will go to Fellows Ralph Walker and Louis Skidmore, both of New York.



WALKER



SKIDMORE

To former AIA President Walker (1949-51), first chancellor of the College of Fellows, will go the Centennial Gold Medal, a special award created only for this occasion. Walker, 67, was a student of architecture at M.I.T., '11, and the 33rd holder of Boston's Rotch traveling scholarship in architecture. In 1919 he joined McKenzie Voorhees & Gmelin (now Voorhees Walker Smith & Smith). Also an authority on zoning and city planning, over the years he has been the recipient of a score of architectural awards, including the 1927 Gold Medal of the Architectural League of New York.

Skidmore, 59, will be given the institute's 1957 Gold Medal, its highest regular award. Like Walker, he studied at M.I.T., '23, and was the 41st Rotch traveling scholar; during 2½ years in

continued on p. 9

A steel access door for less than the cost of wood!

Milcor Steel Access Doors need no special framing, cutting, or fitting

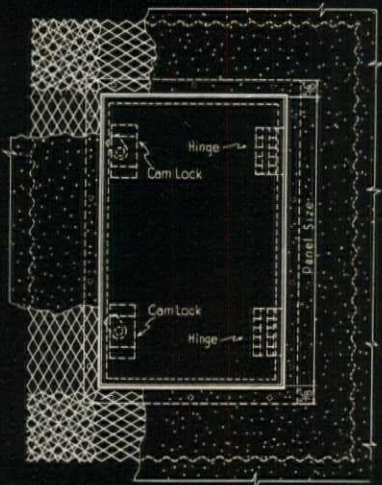
You help save labor costs and building time, when you specify Milcor Steel Access Doors — to provide quick, convenient servicing of plumbing, heating, electrical, and refrigeration systems in homes and public and commercial buildings.

Milcor Steel Access Doors are delivered to the job complete with framing. They're ready to install at once in either plaster or non-plaster construction, flush with the wall or ceiling surface. No old-fashioned frame protrudes to mar the appearance of your interior.

Paint or wallpaper can be applied right over Milcor Steel Access Doors. All doors are factory-primed and one finish coat usually covers. No sanding or filler coats are needed.

Three types are available for use with plastered or unplastered surfaces. Sizes — 8" x 8" to 24" x 36". See Sweet's File or write for latest literature.

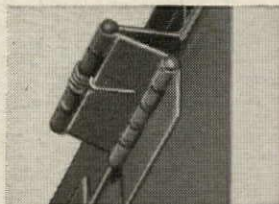
MILCOR[®] Steel Access Doors



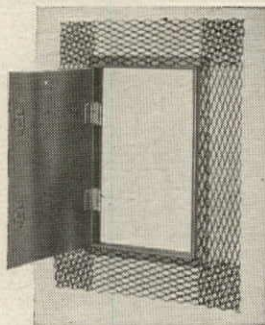
Expansion wings protect against plaster cracks



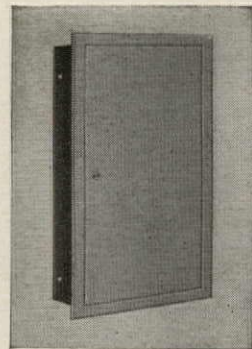
Style "L" Access Door for plastered walls. Without expansion wings.



Exclusive spring hinge lets door open 175°. Door is removed quickly by extracting hinge-pin.



Style "K" Access Door for plastered walls. With expansion wings.



Style "M" Access Door for masonry, brick, stone, tile, wallboard, etc.



INLAND STEEL PRODUCTS COMPANY

DEPT. N, 4031 WEST BURNHAM STREET

MILWAUKEE 1, WISCONSIN

OFFICES IN: BALTIMORE • BUFFALO • CHICAGO • CINCINNATI • CLEVELAND • DALLAS • DETROIT
KANSAS CITY • LOS ANGELES • MILWAUKEE • MINNEAPOLIS • NEW YORK AND ST. LOUIS.

M-175

Europe collaborated with Samuel Chamberlain on *Tudor Architecture*. He founded Skidmore & Owings in New York in 1936 (since 1940, Skidmore, Owings & Merrill), which also has received numerous awards for its structures of contemporary design.

Other medals and special awards to be made at the convention:

Fine Arts Medal — Painter Mark Tobey, of Seattle.

Craftsmanship Medal — Furniture Designer Charles Eames, of Venice, Calif.

Citation of an Organization — The Foreign Buildings Operations unit of the Department of State, for dis-

tinguished achievement in directing a building program.

Citation of an Individual — Chicago Sculptor Milton Horn, for excellence in arts and crafts.

Edward D. Kemper Award — David C. Baer, consultant on cost accounting and chairman of the institute's office practice committee.

Honorary Fellowships — Dean Cristiano Stocker das Neves, MacKenzie University School of Architecture, Sao Paulo, Brazil; Engineer Pier Luigi Nervi, Rome, Italy.

Honorary Membership — J. Winfield Rankin, institute administrative secretary.

COMMUNITY PLANNING

Jacksonville AIA chapter leads campaign, defeats move to trim civic center

Taking an active, leading role in community affairs, the Jacksonville, Fla., AIA chapter won a major battle last month for proper civic planning and design.

By unanimous vote on Jan. 8—reaffirming plans it first approved last March—the city council and mayor approved final plans, and early sale of a \$30 million bond issue, to begin a new modern civic center. Included in the project will be a new 15-story, \$5 million city hall, a large, circular, air-conditioned

BROWARD

\$3 million sports coliseum, convention and exposition hall (see cuts), and later a civic auditorium.

Buried permanently by the council's action was an interim "economy" proposal to scrap the separate coliseum and auditorium buildings in favor of a single conglomerate coliseum-auditorium-central library structure.

False economy

Said a report to the public prepared by a special committee of the AIA that also was endorsed by a number of other influential civic organizations:

"To combine the library with either of the other two buildings would be absurd, to say the least, and if the auditorium and coliseum were incorporated into one building both the concert-

goers and the sports fans would suffer. Neither group would be afforded proper facilities. . . . We consider . . . a combination structure not only contrary to the best principles of architectural design and engineering but an improper use of taxpayers' money. It is not an attempt at true economy and efficiency but merely an attempt by a relatively small group of people to partially satisfy everyone, yet no one."

Architect Robert C. Broward was chairman of the special AIA committee. Summarizing the sequence of the battle, in a report full of pointers for architects everywhere fighting instances of false economies in civic planning and design, he said:

"Last March, the city commission,

city council and mayor announced unanimous acceptance of a \$42.5 million capital improvements program, including a \$5 million city hall, \$3 million sports coliseum, and a \$4.5 million auditorium. Architects had already been retained to make preliminary designs. Existing taxes would cover financing.

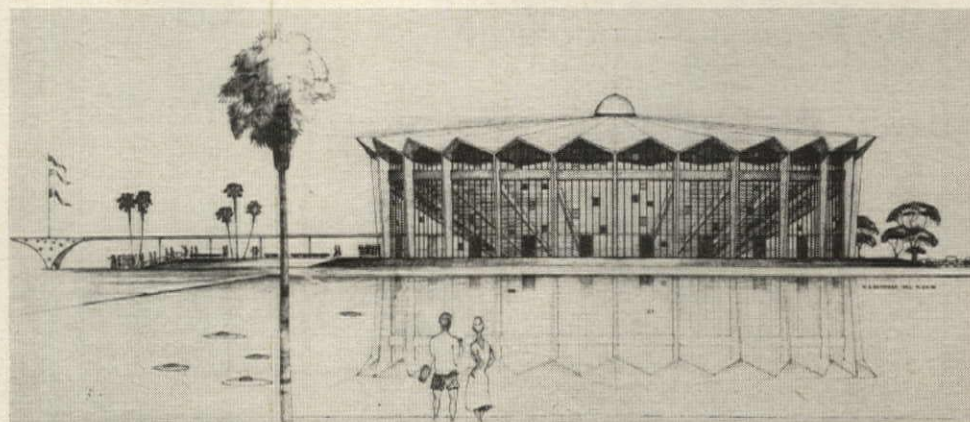
"Several months later a newspaper reported that a city councilman was proposing a combination building to house the auditorium and the coliseum, with a wing attached to house a new central library (though sorely needed, not even a part of the original improvement program). Next, a local newspaper waged a rather strong campaign for such a combination building, appealing to the sports fans of the city . . . stating that if the money for the entire program were not available the coliseum would be the first to be eliminated. So a rather intelligent approach to civic needs was erased overnight.

Architects assume leadership

"The first group to oppose this combination building forcefully and completely was the Jacksonville AIA. We felt that the apathy which followed the big change was the result of a misinformed (if informed at all) public. The people simply did not realize the



CITY HALL, BY REYNOLDS, SMITH & HILLS



JACKSONVILLE COLISEUM, BY A. EUGENE CELLAR, GEORGE RYAD FISHER

true nature of the situation about to be forced upon them. This was an issue that had to be brought before the citizens in a most candid way and it was quite obvious that the architects were the only qualified group available to present the facts about the functions and construction features of these highly specialized building types.

"A special AIA committee was formed to gather all pertinent facts. Its report . . . went on record as being

'unalterably opposed' to the combination building. . . . Copies were given to city officials, and to all members of the Jacksonville Civic Round Table, numbering 60 professional and service clubs and organizations, requesting their review and possible endorsement.

"Chapter President James Meehan soon received a number of letters from other organizations concurring with our stand. In general, it seemed that the city was awakened to the impor-

tance of good design in the place of . . . mediocrity stemming out of . . . financial or other expediency.

"In any city the size of Jacksonville, every possible mind that is trained in any phase of planning must be available for comment on important issues concerning planning and design. . . . In our chapter we all realize that to do good, we must act as a group. As our city grows at an unprecedented rate we realize that our thinking and our actions must reach out beyond the individual's office and encompass the planning of our entire piney woods area."

ART

Irate sculptors opposed to 'statuary' fund building

When is a building a monument?

Having won all litigation to date in a strange case on this question, the Chicago Art Institute was ready last month to build a new \$1.6 million administration wing fronting on Michigan Ave., designed by Architects Holabird & Root & Burgee. Institute officials said they hoped to announce the letting of contracts within 30 days.

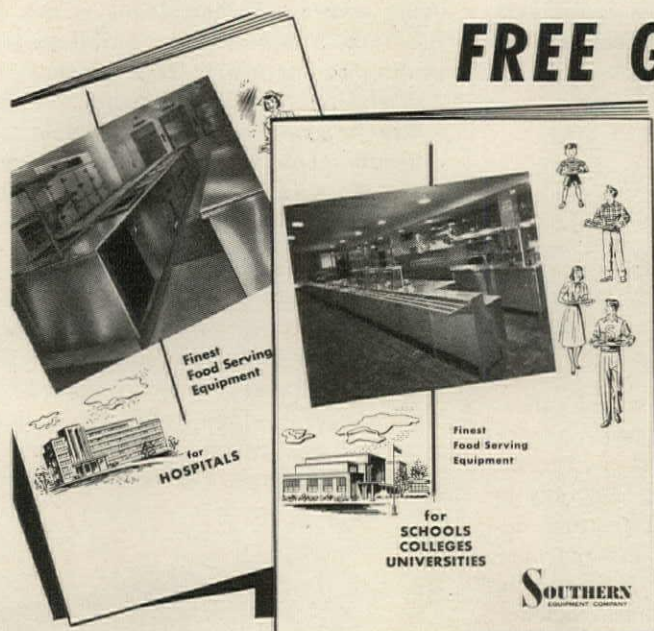
At the same time, however, unsuccessful litigants, with a new lawyer, threatened another suit under a new set of objections to ban construction with endowment funds left to the institute for "the erection and maintenance of enduring statuary and monuments." Their new attorney, flamboyant Luis Kutner, who says his "preoccupied vocation is defending all lost causes," said he was set to "fire away at the institute" as soon as enough funds to defray court costs are in hand.

Previous litigation arose from institute plans to apply accumulated interest from its Benjamin F. Ferguson trust fund toward the building costs. Objectors have included the city, Artists Equity and the National Sculptors Society. They argued that income from the \$1 million bequest of Lumber Merchant Ferguson, who died in 1905, could only be used for statuary or monuments; that a new building is not statuary or a monument. In 1933 the institute obtained court sanction to spend \$400,000 of income from the fund to erect a building, but never did so. Last summer it defeated a court challenge to its present plans to spend \$1.2 million of the fund's earnings, and the

continued on p. 12

FREE GUIDES

TO BETTER FOOD SERVICE



80 pages of pictures, layouts and data on actual installations planned, engineered, fabricated and installed by Southern Equipment Company and "Custom-built by Southern" Dealers.

Contact your nearest "Custom-built by Southern" Dealer for your free copy of either or both of these books, or write Southern Equipment Company, 4550 Gustine Ave., St. Louis 16, Missouri.

SOUTHERN EQUIPMENT COMPANY

75 National Award Winning Installations



"CUSTOM-BUILT BY SOUTHERN" DEALERS: ALABAMA, BIRMINGHAM—Vulcan Equip. & Supply Co.; MOBILE—Mobile Fixture Co. ARKANSAS, LITTLE ROCK—Krebs Bros. Supply Co. COLORADO, DENVER—Arnholz Coffee & Supply Co. FLORIDA, DAYTONA BEACH—Ward Morgan Co.; JACKSONVILLE—W. H. Morgan Co.; MIAMI—J. Conkle Inc.; ORLANDO—Turner-Haack Co.; TAMPA—Food Service Equip. & Engr. Corp. ILLINOIS, PEORIA—Hertzel's Equip. Co. INDIANA, EVANSVILLE—Weber Equip. Co.; INDIANAPOLIS, MARION—National China & Equip. Corp. IOWA, DES MOINES—Bolton & Hay. KANSAS, WICHITA—Arnholz Coffee & Supply Co. KENTUCKY, LEXINGTON—Heilbron-Matthews Co. LOUISIANA, NEW ORLEANS—J. S. Waterman Co., Inc.; SHREVEPORT—Buckelew Hdwe. Co. MICHIGAN, BAY CITY—Kirchman Bros. Co.; DETROIT—A. J. Marshall Co. MINNESOTA, MINNEAPOLIS—Aslesen Co. MISSOURI, KANSAS CITY—Greenwood's Inc. MONTANA, BILLINGS—Northwest Fixture Co. NEBRASKA, OMAHA—Buller Fixture Co. NORTH CAROLINA, ASHEVILLE—Asheville Showcase & Fixture Co. NORTH DAKOTA, FARGO—Fargo Food & Equip. Co. OHIO, CINCINNATI—H. Lauber & Co.; CLEVELAND—S. S. Kemp Co.; COLUMBUS—General Hotel Supply; TOLEDO—Rowland Equip. Co.; YOUNGSTOWN—W. C. Zabel Co. OKLAHOMA, TULSA—Goodner Van Co. PENNSYLVANIA, ERIE—A. F. Schultz Co. SOUTH CAROLINA, GREENVILLE—Food Equipment Co. TENNESSEE, CHATTANOOGA—Mountain City Stove Co.; KNOXVILLE—E. Carleton Scruggs; MEMPHIS—House-Bond Co.; NASHVILLE—McKay-Cameron Co. TEXAS, AMARILLO—Arnholz Coffee & Supply Co.; CORPUS CHRISTI—Southwestern Hotel Supply, Inc.; EL PASO—El Paso Hotel Supply Co.; SAN ANTONIO—Southwestern Hotel Supply, Inc. UTAH, SALT LAKE CITY—Restaurant & Store Equip. Co. VIRGINIA, RICHMOND—Ezekiel & Wellman Co. WEST VIRGINIA, CLARKSBURG—Parson-Souders Co. WISCONSIN, MILWAUKEE—S. J. Casper Co.

THE MILLS COMPANY OF CLEVELAND
MANUFACTURERS OF MOVABLE WALLS
RAILINGS AND ACCESSORIES INVITES
YOU TO SEND FOR YOUR COPY OF
THE NEW 1957 MILLS CATALOGUE
WRITE TO THE MILLS COMPANY
930 WAYSIDE ROAD CLEVELAND OHIO



objectors failed to appeal the decision within the prescribed time. The court held the proposed administration wing would be a memorial to Ferguson; would release space in the main building for more public displays, and in the main would carry out "the intent of the fund."

Sculptors, who would prefer to see the funds used for more conventional, less disputable statuary and monuments, were the main dissenters eager

for a new legal bout. Kutner said the plaintiff in his contemplated new suit would be Wesley Greene, president of an international film distributing service and husband of Sculptress Zoe Greene, on behalf of "the people of the city of Chicago, the intended beneficiaries of the Ferguson trust." Kutner said he would attempt to have set aside the original court ruling that "monument" could be interpreted in the Ferguson will to mean "building." He

claims this ruling was "fraudulently arrived at." He says the 1933 suit was filed at 10:02 A.M. on May 22, the "purported" answer of the Attorney General filed at 10:04 A.M. the same day, and the judge's 13-page decree and statement (all three documents of similar typing and on similar paper) filed another 37 minutes later. "This was a patent, transparent hoax," says Kutner.

BUSINESS

Two motels: two different investment incentives

Two interesting new hotel-motels made news last month.

Together they also made an interesting contrast, showing the widely divergent investment motivations and objectives that cause different people to launch building projects.

For deferred income

On the beachfront at St. Petersburg, Fla., more than 100 out of 230 co-owners passed a week end last month officially opening their first plush 100-room Doctors' Motel, complete with restaurant, cocktail lounge, fresh-water swimming pool, yacht basin, all rooms with semiprivate balconies or patios. Cost was about \$1,250,000, or \$12,500 per unit. Architects: Kansas City's Kivett, Myers & McCallum (the last a new partner), with C. Dale Dykema, of St. Petersburg, as associate.

Joseph M. O'fill, former Kansas City auto distributor, sponsored this motel, the first of a projected coast-to-coast chain of more than 40 establishments along the federal highway system. Its owners are a group of high-income Kansas construction executives, lawyers, bankers, manufacturers and professional men who were sold the idea as an investment program with special deferred income tax advantages. No returns are scheduled to be paid for about ten years, while everything is plowed back into the additional projects—the second scheduled to be started next month near Kansas City. Each stockholder paid in an average of \$5,300 and also is committed to buy debentures in proportion to his stock for five years—to insure capital for operation and growth.

The name Doctors' Motel was chosen, explained President O'fill, not because most of the stockholders are doctors, but because the group somehow felt

continued on p. 16

by **HAWS**



Leading Designs... for Leading Architects



MODEL 7W. Strikingly new in lifetime stainless steel. Flowing curves completely hide supply and waste fixtures... blend with modern styling.

"BUBBLER FEATURES"...

- Raised fountain head: angle stream, shielded, anti-squirt... prevents direct mouth contact.
- Self-closing automatic stream control valve.
- Vandal-proof socket flanges prevent fixtures from being turned.

HAWS provides drinking water facilities of the finest design for today's architectural planning. Handsome wall and pedestal models meet every design requirement—indoors or out, industrial or institutional! Up-to-the-minute styling by skilled craftsmen make HAWS Fountains the leaders!

All HAWS Fountains contain outstanding sanitation features, insuring a lifetime of unequalled protection. Find out what HAWS drinking water facilities can do for your projects!

Write for the new HAWS Catalog—today!

HAWS DRINKING FAUCET CO.
1443 FOURTH STREET (Since 1909) BERKELEY 10, CALIFORNIA

HAWS also features Electric Water Coolers, Deck-Type Fountains, HAWS Emergency Eye-Wash Fountains, and KRAMER Flush Valves for every make of plumbing fixture.

New building products using

B.F. Goodrich Chemical *raw materials*

for modern
seating...

VINYL FOAM OF GEON

Surface of vinyl foam cushioning is an embossed skin making an attractive, durable, easily cleaned exterior. Vinyl foam is an "expanded" plastic—springy, comfortable, flame resistant, with up to three times the tear resistance of other foam materials.



Here is the first elementary school use of vinyl foam cushioning, at the Edgelea School, Lafayette, Indiana. This cushioning is ideal for classroom seats, auditorium seats, offices, dining rooms, etc. The vinyl foam upholstery material, made of Geon, is produced by Brown Rubber Company, Lafayette, Indiana, and the seats produced by American Seating Company, Grand Rapids, Michigan.

This foam cushioning is one of many new products made of Geon polyvinyl materials that are now available for modern building and home construction. Products made of Geon are star performers—resistant to water, oil, solvents; to abrasion, wear, and tear.

Geon is your assurance of quality in cushioning... electrical insulation... coated metal panels... vinyl floor tile... wall covering materials... and even newer ideas you'll be using tomorrow.



B.F. Goodrich Chemical Company
a division of The B.F. Goodrich Company

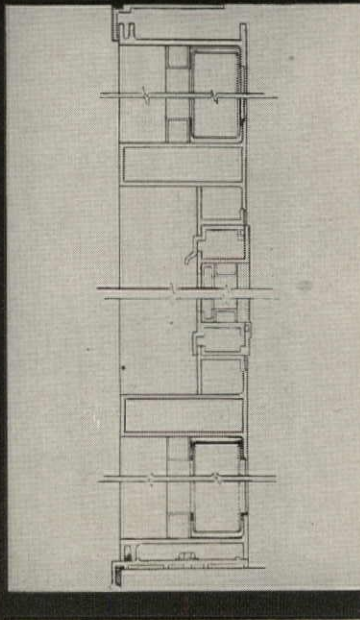
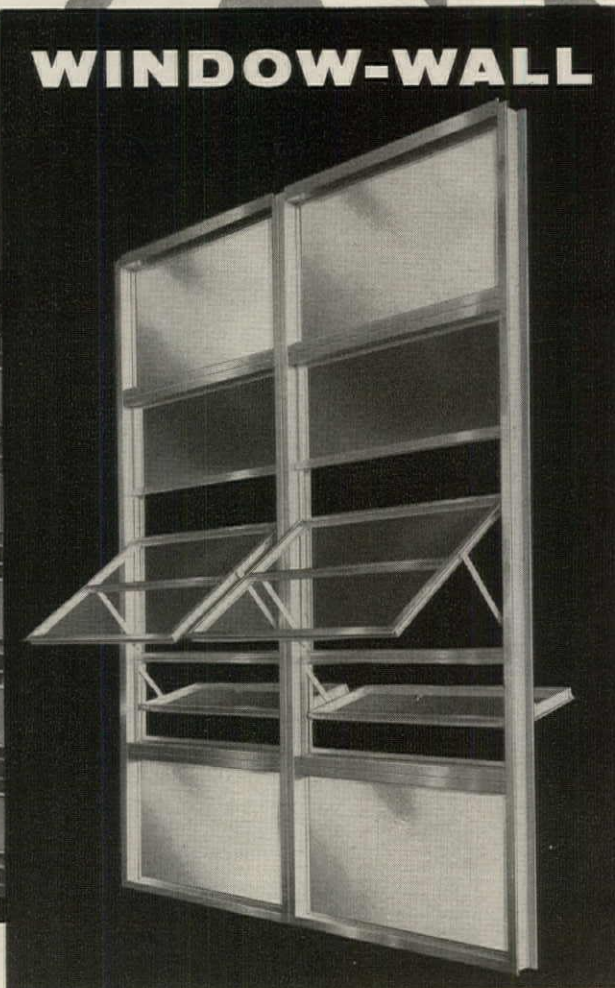
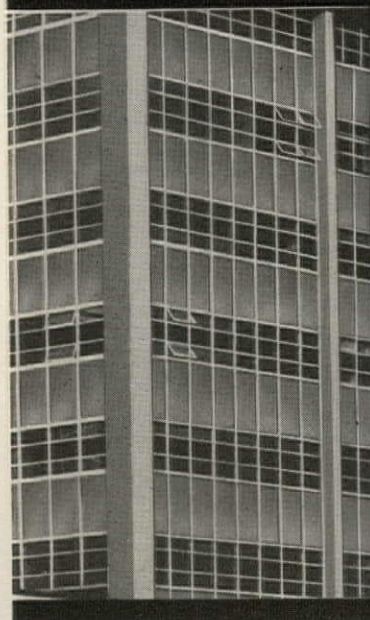


GEON polyvinyl materials • HYCAR American rubber and latex • GOOD-RITE chemicals and plasticizers • HARMON colors

INSTITUTIONAL or COMMERCIAL

WARE

HAS THE **WINDOW-WALL** YOU'LL WANT



CUSTOM-ENGINEERED

to meet **your** needs — for structural strength, design features, and budget requirements. Ware window-walls also stress weather-tightness and provide for simplified installation.

The unit illustrated is one of a complete series now available. It is designed for a one or two story window wall which is economical without sacrificing quality or strength. The interlocking mullion means easy erection because it forms its own structural member. It also eliminates leakage points found on other construction. Inside and outside bead glazing as well as heavy horizontal members are optional at extra cost.

Why not send us your requirements, *today*? Write Dept. AF-2

Aluminum **WARE** Windows



Ware Laboratories, Inc., 3700 N.W. 25th St., Miami, Florida

More Than 10½ Miles

OF

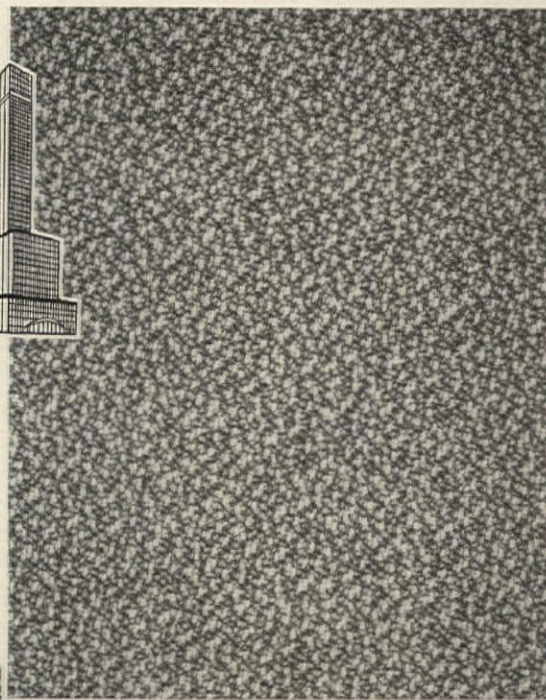
GULISTAN CARPET

SELECTED FOR THESE THREE AMERICAN SHOWPLACES

Over 6½ miles of beautiful, long-wearing Gulistan Carpet bring comfort, quiet and charm to the Socony Mobil offices in the magnificent Socony Mobil Building . . . New York's newest and largest stainless steel skyscraper. The carpet is nine-foot wide broadloom throughout.



Approximately 1 mile more of this fine all-wool Wilton adds practical beauty to the offices of the Air Reduction Corporation, and International General Electric Company. Interior Architect for these companies: Leigh Allen of J. Gordon Carr & Associates, New York, N. Y. Gulistan Carpet Contractor: Bergh Brothers, N. Y.



One-fiftieth of a mile of deep, thick Gulistan Coronation, a classic plain velvet carpet woven of the finest wools, graces the magnificent contemporary home of Mr. and Mrs. L. T. Gease of Orinda, California. Architect: Jack Buchter, Orinda, California.



Over three miles of specially designed nine-foot wide, tufted, all-wool Gulistan Carpet lend a gay "at home" charm to the beautiful rooms of the glamorous new Americana Hotel, Miami Beach, Florida. Architect: Morris Lapidus, New York, N. Y. Gulistan Carpet Contractor: Alexander Carpet Company, Miami, Fla.

Famous names and places choose Gulistan Carpet for comfort, quiet and low-cost maintenance.



- Ambassador Hotel, New York
- Fairgrounds Club House, New Orleans
- Radio City Music Hall, New York
- Tarantino's Restaurant, San Francisco
- Union Dime Savings Bank, New York
- Saddle and Sirlain, Palm Springs
- Hotel Chase, St. Louis
- Bonfils Memorial Theater, Denver

GULISTAN CARPET

COSTS NO MORE THAN ORDINARY CARPET

MADE IN THE U. S. A. BY AMERICAN CRAFTSMEN. A. & M. KARAGHEUSIAN, INC., 295 FIFTH AVENUE, NEW YORK 16, N. Y.

this name "has overtones of high-level accommodations."

For a hedge

To keep abreast of changing travel and hotel trends, Chicago's topnotch downtown Drake Hotel announced plans to build a 117-room \$2 million Drake North in the city's northwestern suburban area near the large new O'Hare Field airport. Besides catering to future airport trade, this will make an obvious bow to increased auto travel,

particularly intercity superhighway traffic. The Drake also says this branch or annex will be a brand new type of "suburban hotel"—a four-story main building with conventional rooms and suites, dining facilities, drug store and lounges, plus six (later eight) two-story "motor-room" buildings with adjacent parking spaces, a large center patio court with swimming pool and outdoor dining facilities. The project's 15-acre site will abut the new Northwest Free-

way to O'Hare Field about 1,200' from an interchange. The proposed Tri-State expressway will be only 1½ mi. distant.

The main Drake North structure also will have private dining and meeting rooms for small conventions, sales and civic group meetings that are now needed for this rapidly growing area.

DeLeuw, Cather & Co., traffic engineers, aided in the market research studies for this project. Architect Lewis B. Walton, of Walton & Walton, who as a partner of the late Benjamin H. Marshall was associated with construction of the downtown Drake, will supervise design of the Drake North.

When this branch is completed next year, the Drake will no longer be dependent entirely on income from typical downtown hotel trade, or have so much reason to envy the business of new motel competition.

Big Canadian realty firm goes into bankruptcy

Toronto's Ridout Real Estate Ltd., sometimes publicized as Canada's largest realty firm, was put into bankruptcy last month.

Tight money and reduced realty activity were partly to blame. The 27 office organization doing an \$80 million annual business also had large overhead expenses, however, and was heavily staffed, including many salaried executives who had been officers of firms bought up by Ridout in its rapid expansion program. About three weeks before its collapse the company dismissed 100 of its 430 salesmen. About the same time it also sold a number of its redevelopment site options in downtown London, Ont., to the Webb & Knapp interests of New York headed by William Zeckendorf.

The Ridout office was established in 1946 by young milkman and trucker Ernest Ridout, now 38, who was joined in 1947 by his brother George, now 37. In Canada's postwar housing and realty boom, it soared like a meteor on large advertising budgets and intensive, spectacular selling campaigns—24-hour-a-day service, including Sundays. Brother Ernest sold out to George in 1953. Last month, however, Ernest renewed his broker's license and started to pick up some of the pieces of the shattered firm that he had founded. He opened a new office, Ernest Ridout Real Estate, with about 50 former managers and salesmen of the old firm.

Prevent Leaks
... in curtain walls

Tremco research, aided by representatives of leading glass manufacturers, has developed new glazing and sealing techniques for curtain wall construction.

You'll find these new specifications important to insure leak-free installations. Ask your Tremco Man for a copy of "NEW PRODUCTS AND METHODS FOR NEW GLAZING AND SEALING PROBLEMS," or write: The Tremco Manufacturing Company, 8701 Kinsman Road, Cleveland 4, Ohio, or The Tremco Manufacturing Company (Canada) Limited, Leaside, Toronto, Ontario.

"When you specify a Tremco product — you specify a Tremco service!"

TREMCO
PRODUCTS AND METHODS FOR BUILDING MAINTENANCE & CONSTRUCTION

NEW PRODUCTS AND METHODS for NEW glazing and sealing problems

Vina-Lux® . . the Long-Lasting Tile

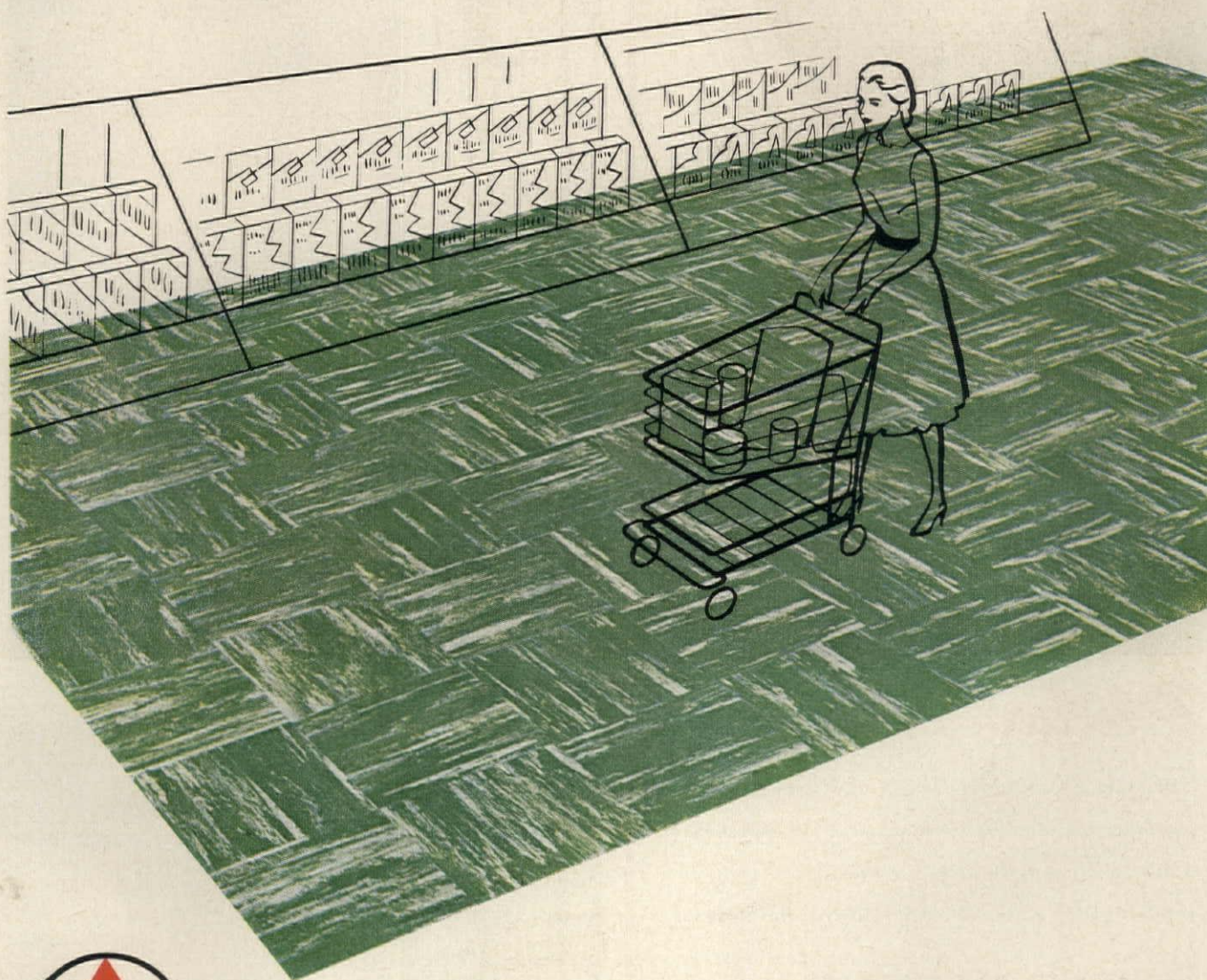
That Cuts Floor Costs

Architects everywhere are specifying Vina-Lux for supermarkets because it cuts floor costs three ways: Initial investment is moderate, maintenance is unusually low, service is long and trouble-free.

Vina-Lux is a tough, vinyl-asbestos tile with a tight texture that resists punishment from rolling carts, constant foot traffic, dirt and grease. It has a cushioned resilience, too, that cuts down on noise . . . has a foot-sure surface that increases safety for customers and employees. Its good looks and smart colors add style and sales power to the modern store.

If you wish, we'll be glad to send samples and complete factual data.

Pattern shown: Sprout



AZROCK PRODUCTS DIVISION • UVALDE ROCK ASPHALT CO.

501A Frost Bank Building • San Antonio, Texas

Makers of Vina-Lux • Azrock • Duraco • Azphlex



Philadelphia where the *accepted* word for elevators is OTIS

In the City of Brotherly Love, a new feeling of friendliness marks the widespread acceptance of completely automatic OTIS elevators. Business people enjoy touching electronic elevator buttons for themselves and other tenants. They assist visitors. Everybody likes automatic AUTOTRONIC elevators for their greater freedom of action. In Philadelphia, 66% of the elevators are by OTIS—first to introduce completely automatic elevating. As always, progress is expected of the leader. Outstanding value has made OTIS the accepted word for elevator quality in the cities of the world.

Automatic Autotronic® or Attendant-Operated Passenger Elevators • Escalators • Trav-O-Lators Freight Elevators • Dumbwaiters • Elevator Modernization and Maintenance • Electronic Systems The Baker-Raulang Company, an Otis subsidiary, is the maker of Baker Gas and Electric Industrial Trucks®



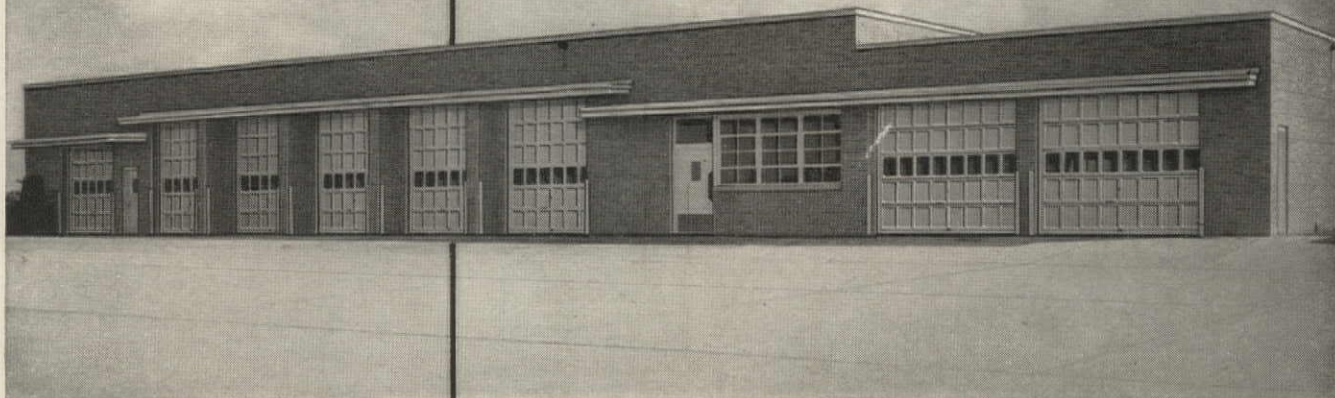
**OTIS ELEVATOR
COMPANY**

260 11th Avenue, New York 1, N. Y.
Offices in 501 cities around the world



Rō-Way Doors...

High Wide and Handsome



Free Architect's Manual

Complete details, drawings, etc. on Ro-Way's entire line. You'll find it especially helpful in selecting just the right door. Ask for Manual 55.



If it's extra height you need in commercial doors—or extra width—there are Ro-Way models specially designed to fill the bill.

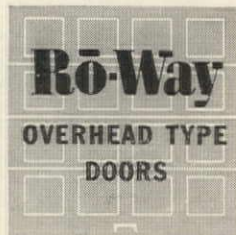
And high or wide, they're handsome. The clean lines of any Ro-Way overhead type door blend neatly into your modern building designs and combine smart appearance with utility.

Ro-Way doors are brutes for punishment, too. They're engineered to keep their perfect balance and snug fit even after years of heavy duty action. That's because they're made from carefully selected lumber and smooth, durable Masonite® Dorlux® panels . . . because mortise and tenon joints are both glued and steel doweled . . . because Taper-Tite tracks and Seal-A-Matic hinges are specially designed for easy opening and weather-tight closing . . . because they glide quietly on ball bearing rollers with Double-Thick Treads . . . because spring power is individually matched to the weight of each door . . . because the heavy-gauge hardware is both Parkerized and painted for maximum rust prevention.

Specify Ro-Way doors for your next commercial, industrial or residential building. They come in standard and special sizes to meet any design problem.

there's a Rō-Way for every Doorway!

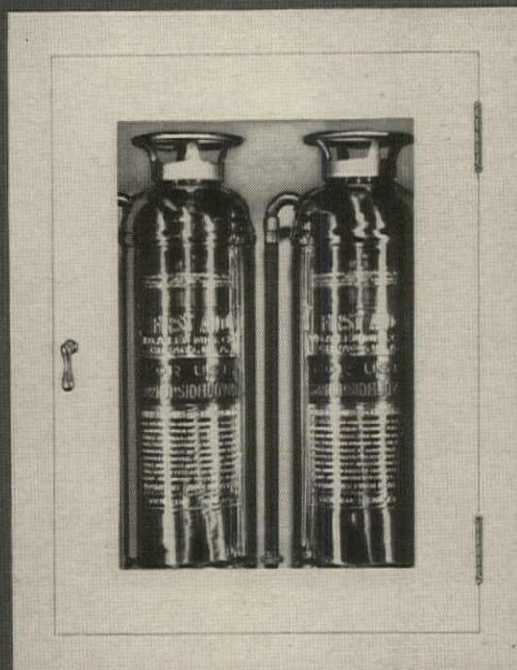
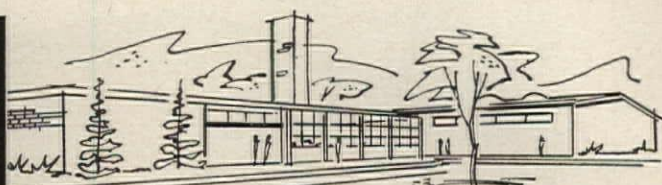
COMMERCIAL • INDUSTRIAL • RESIDENTIAL



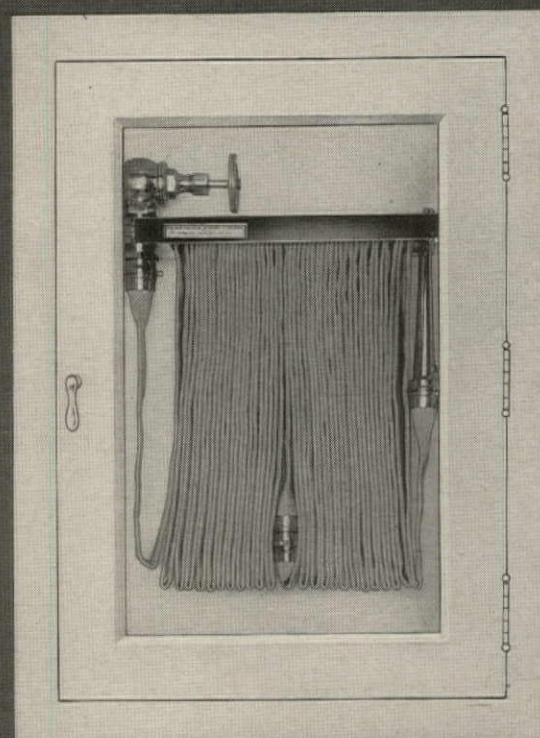
ROWE MANUFACTURING COMPANY
982 HOLTON STREET • GALESBURG, ILLINOIS

For Interior Fire Protection in SCHOOLS and CHURCHES . . .

Of the many distinct
ALLENCO models,
these two are most
popular for installations
in this field.



Allenco Fig. 285 is notably compact, contains one or two fire extinguishers and, if specified, tamperproof door.



Allenco Fig. 262 is "custom-sized" to suit choice of 5 hose-lengths, 4 hose-sizes with plain or fog nozzles, with optional spanner and bracket, and space limitations of any application-point.

Cabinets of both units are available in several groups—Allenco Satin Finish Hollow Steel Door, Nella Sheet Steel

Door, Aluminum Doors, and other styles. Rigid and true-to-size, they go in faster . . . look better . . . serve perfectly.

Catalog 150
(A.I.A. file 29e2)
contains full details in
simplest form, including standard
quotable specifications.
Write for your copy now . . .



ALLENCO

Architects, Engineers and Contractors prefer



Here are a few recently completed installations:

Where	What	Specifier	Installer	Fieldman
Springfield, Mass.	Junior High School	Maloney & Tessier	A. E. Stephens Co.	Harold Jope
West Hartford, Conn.	Junior High School	Nichols & Butterfield	Wadhams & May Co.	Harold Jope
Cincinnati, Ohio	Washington Park Elem. School	A. M. Kinney	B. A. Waltherman Co.	Dick Disney
Ann Arbor, Mich.	University of Mich. Library	Albert Kahn Assoc.	Dunbar-Borton	Russ Collins
Portland, Ore.	Woodrow Wilson High School	Tom E. Taylor	A. G. Rushlight Co.	Dick Finklea
Salem, Ore.	South Salem High School	Tom E. Taylor	Vern Collins Plbg. Co.	Dick Finklea
Salt Lake City, Utah	Latter-Day Saints Church	Owner	Owner	Nic Nicodemus
New Orleans, La.	St. Martin's School	James M. Todd & Assoc.	Frank A. Dorsa	Bob Barnes
Pullman, Wash.	Women's Residence, W. S. C.	James B. Natkin	Senna Service, Inc.	Stan Schafer
Moscow, Idaho	University of Idaho Library	Whitehouse, Price, DeNeff & Geeble		
Minneapolis, Minn.	Zion Lutheran Church	Thorsov & Cerney, Inc.	Detweiler Bros.	Stan Schafer
St. Louis Park, Minn.	Cathedral High School	Louis C. Pinault	Dean L. Witcher, Inc.	Art Narverud
LaFayette, Ind.	Purdue University Dorms	Walter Scholer	Roel Construction Co.	Art Narverud
Bloomington, Ind.	I. U. Medical Science Building	Ammerman, Davis & Stout	Frey Bros.	Don Davisson
Fairview Park, Ohio	High School	Fulton, Krinsky & DelaMotte	Hayes Bros.	Don Davisson
Gates Mills, Ohio	St. Francis of Assisi Church	Horn & Rinehart, Archts.	Gorman-Lavelle P & H	Jerry Sullivan
Pittsburgh, Pa.	High School	P. B. Fleming, C. Engr. Celli & Flinn	Gorman-Lavelle P & H	Jerry Sullivan
			John Kennelly	Wm. Negle



Harold Jope



Dick Disney



Russ Collins



Stan Schafer



Dick Finklea



Nic Nicodemus



Bob Barnes



Stan Schafer



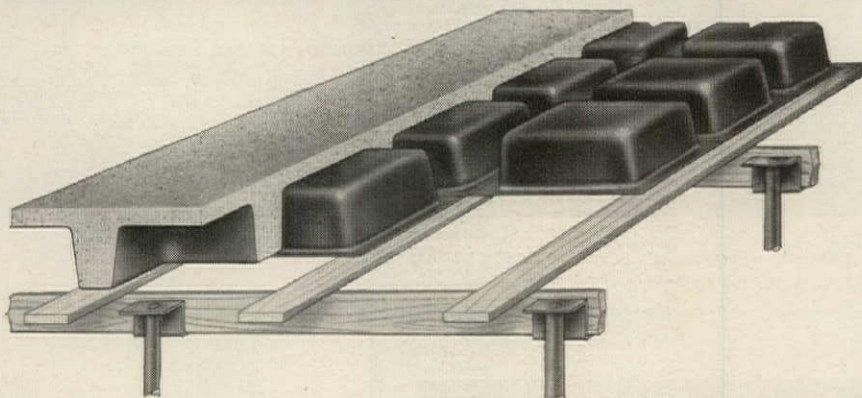
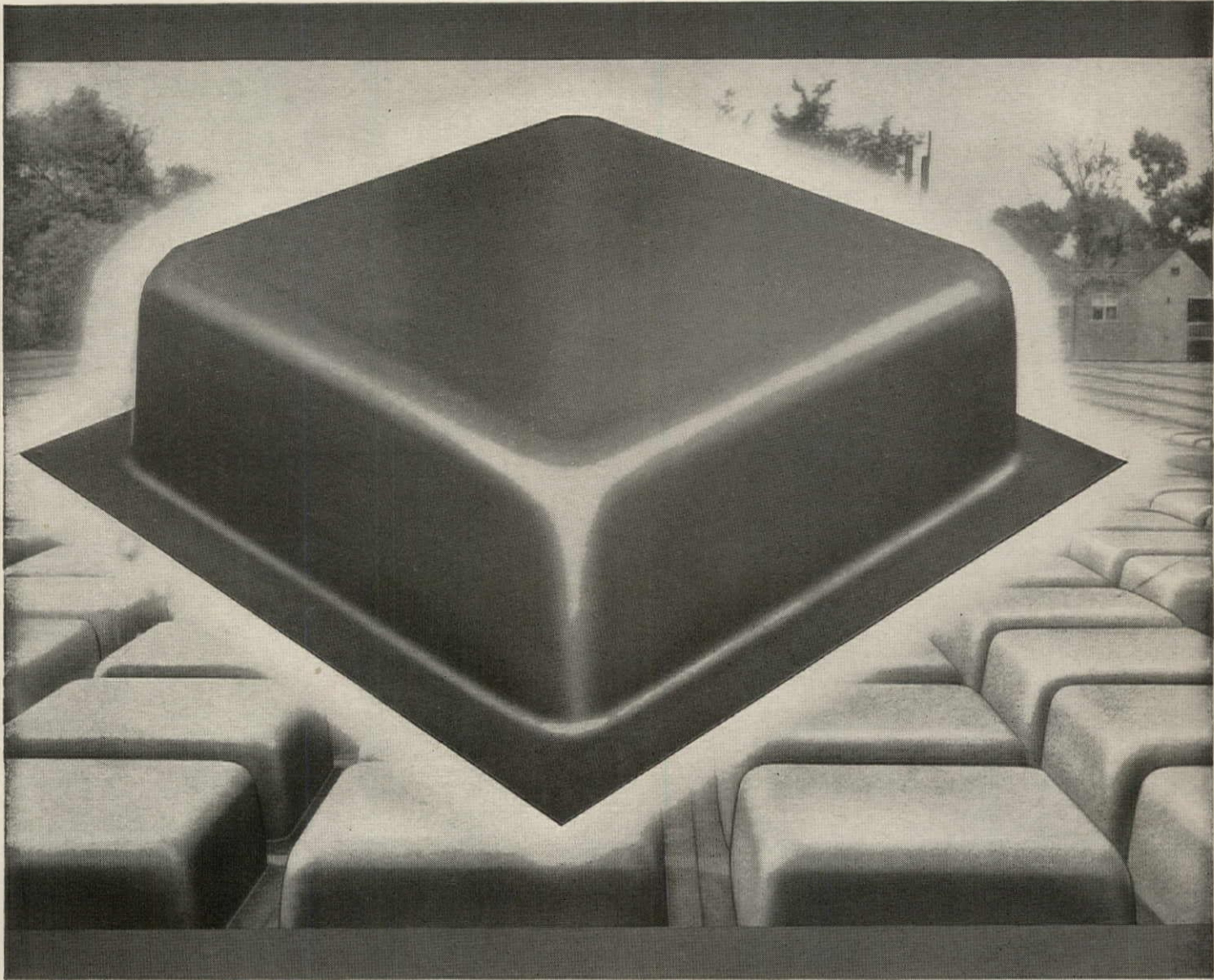
Art Narverud

*** ALLENCO** Fieldmen, operating from offices in 35 principal cities, offer prompt and useful help. Check "Fire Protection" in your classified phone directory or write for address of nearest office.

W. D. ALLEN MANUFACTURING CO.

Room 700 Allenco Bldg. • 566 W. Lake St. • Chicago 6

WIDE OPEN SPACES...



Showing how Steeldomes are used in forming waffle-type (two-way) concrete joist construction. Steeldomes are rigid, deep-drawn, one-piece units. Flanges forming standard-width joist soffits are an integral part of the Steeldomes. When erected Steeldomes are butted at all soffit joints, and eliminate the common defects of forms which must be lapped. Wide column spacings for open floor areas are easily achieved, because of (a) the basic economy of two-way construction, and (b) the saving of dead-load through use of a joist framing system. Story heights are decreased by the elimination of deep beams. Standard Steeldomes have a void of 30" x 30" and an overall plan size of 36" x 36" including flanges. Standard depths are 8", 10", 12", and 14".

WITH ECONOMY...FOR TODAY'S CONSTRUCTION

...ALL MADE POSSIBLE WITH THE NEW CECO-MEYER ONE-PIECE STEELDOME METHOD OF FORMING WAFFLE-TYPE CONCRETE JOIST FLOOR SYSTEMS

Maximum use of floor space is a must in today's functional buildings. And the most practical way to design wide open floor areas... with no projecting beams... is by using waffle-type concrete joist construction formed with Ceco-Meyer one-piece Steeldomes. The new Ceco method is the most economical way of forming waffle-type concrete joist construction. In most cases you save up to 30% in materials... up to 40% in floor weight compared with the use of flat

plate. Besides saving money, labor and materials, Ceco Steeldomes form smooth concrete surfaces for exposed ceilings of high quality finish—pleasing waffle-pattern design at no extra cost. R/C duct underfloor electrification may be readily installed—and pipes, ducts and other mechanical equipment can be located without interference of projecting beams. In planning your next building project, call in your Ceco product specialists.

CECO STEEL PRODUCTS CORPORATION

Offices, warehouses and fabricating plants in principal cities
General Offices: 5601 West 26th Street, Chicago 50, Illinois

IN CONSTRUCTION PRODUCTS CECO ENGINEERING MAKES THE BIG DIFFERENCE

Ceco-Meyer Steelforms / Concrete Reinforcing / Steel Joists / Metal Roof Deck / Windows, Screens and Doors / Metal Lath



"CREATIVE ENGINEERING" BY CECO—with a variety of building methods and products to meet any design problem. See CECO in the early planning stage for Steel or Concrete Joist Floor Systems—the most economical underfloor electrification—the widest line of Steel and Aluminum Windows and Curtainwalls. All will help you achieve individuality in building design. And at CECO construction materials and services can fit the tightest budget.

CECO STEEL PRODUCTS CORPORATION

5601 West 26th Street, Chicago 50, Illinois

Please send me your descriptive bulletin on Ceco Steeldomes, No. 4006.

Name _____

Address _____

City _____ State _____

AF

for
economy
thru
re-use

plus
smooth
concrete

and
design
adaptability



... no other form material compares with

Fir Plywood

FIR PLYWOOD's unique combination of advantages makes it the standout choice for any form job. *Re-use important?* ...fir plywood gives up to 200* pours per panel. *Appearance count?* ...specify fir plywood for smooth, monolithic surfaces. *Tricky forming problem?* ...fir plywood easily forms curves, angles, decorative effects. *Costs critical?* ...in addition to its low-cost-per-use, fir plywood cuts application time and costs by up to 20 per cent.

FOR YOUR FILES: New PlyForm Catalog. Contains detailed specification, application, design data. Write (USA Only) Douglas Fir Plywood Association, Tacoma 2, Washington.



always specify by
DFPA grademark



INTERIOR PLYFORM®—standard concrete form grade made with moisture-resistant glue. Gives up to 10 re-uses.

EXTERIOR PLYFORM®—standard form grade made with waterproof glue. Can be re-used as many as 25 times.

***OVERLAID FIR PLYWOOD**—special panel with hard, glossy fused resin-fiber surfaces. Waterproof glue. Gives up to 200 re-uses.

A continuous series of distinguished office buildings, schools, churches, hospitals and industrial structures using NORTON DOOR CLOSERS

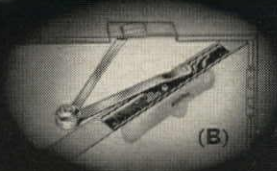
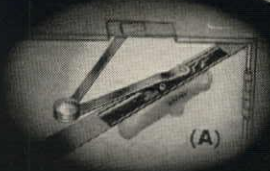
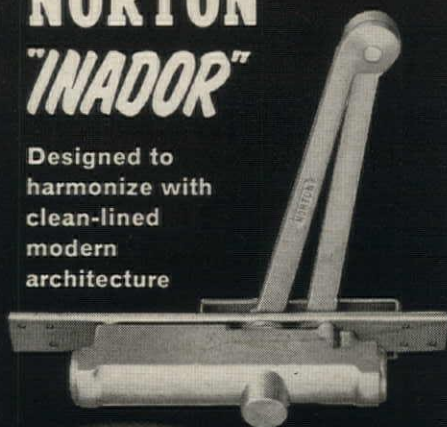
Skidmore, Owings & Merrill Architect

Bryant & Detwiler General Contractors



NORTON® "INADOR"

Designed to
harmonize with
clean-lined
modern
architecture



Available with (A) regular arm
or (B) holder arm...4 sizes to
satisfy all requirements.

900 NORTON INADOR® CLOSERS INSTALLED IN FORD'S DISTINCTIVE NEW CENTRAL OFFICE BUILDING

The primary reason for such extensive use of INADOR® concealed type closers here is, of course, that they are so completely in harmony with the clean-lined modern styling of the doors they serve. No less important, however...their compact, fully concealed mechanism packs all the rugged dependable power found only in a true, liquid-type closer plus the reliability, low maintenance and precision workmanship common to all *Norton Door Closers*. Current catalog gives complete data on all models. Write for it today if you don't already have one.

A complete line of Norton Surface type closers is available for installations where concealment is not essential.



NORTON® DOOR CLOSERS

Dept. AF-27, Berrien Springs, Michigan

How
high velocity
solves problem of
flexibility
in the
Medical Towers

Architects: Golemon and
Rolfe, AIA, Houston
Consulting Architects: Skidmore,
Owings and Merrill, New York
Consulting Engineers:
Bernard Johnson and Associates
General Contractor:
Tellepsen Construction Co.
Air Conditioning Contractors:
Straus-Frank Company



When the new Medical Towers Building in Houston, Texas was planned, the key air conditioning problem was flexibility. Professional office areas had to be subdivided *after* the building was completed. Here's how an Anemostat dual duct high velocity air distribution system solved the problem.

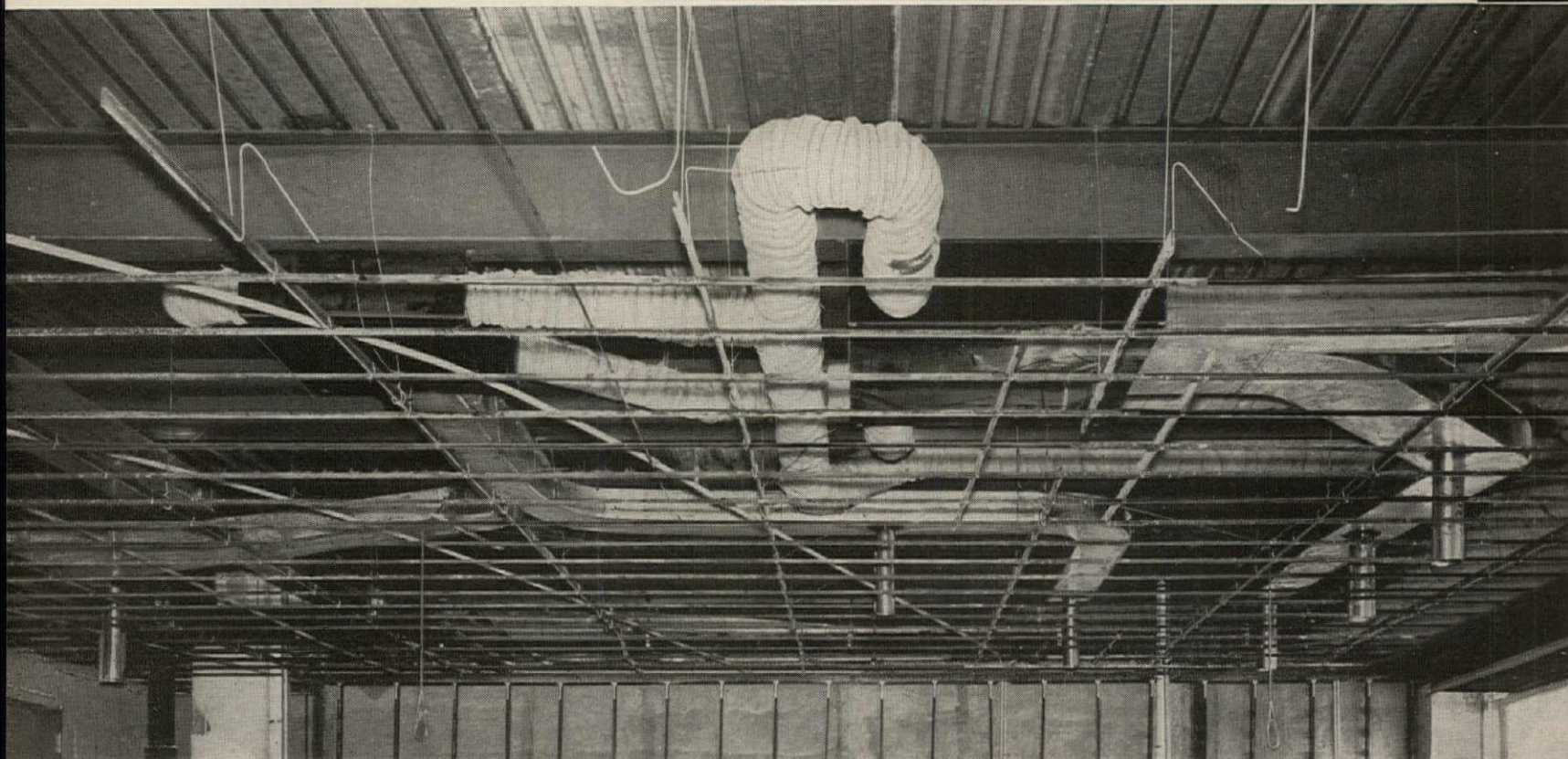
As shown in the diagrammatic sketch, a system of perimeter take-offs from the hot and cold ducts enables each doctor to provide the exact temperature he wants. Temperatures in the various rooms of each suite of offices can be varied. Air distribution is draftless, comfortable, perfectly suited to tenants' needs.

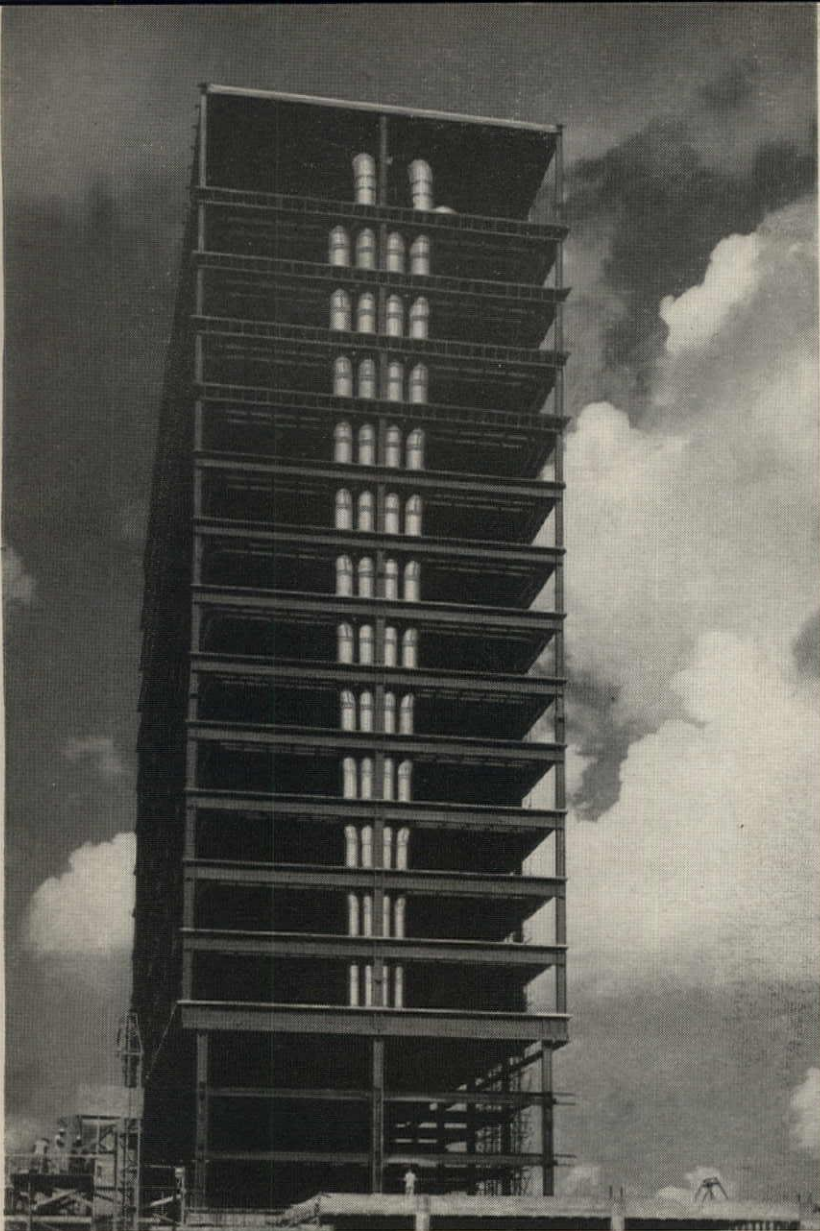
The Anemostat All-Air High Velocity distribution system offers further important advantages. It can be used with smaller than conventional ducts. It can be installed in less time and at less cost. It requires no coils, thus eliminates leakage, clogging and odors.

ARCHITECTS—Attention Please:

Anemostat round, square and straightline diffusers with high velocity units are adaptable to a wide variety of architectural designs.

Anemostat HPE units and duct connections installed in office before construction of ceiling and walls

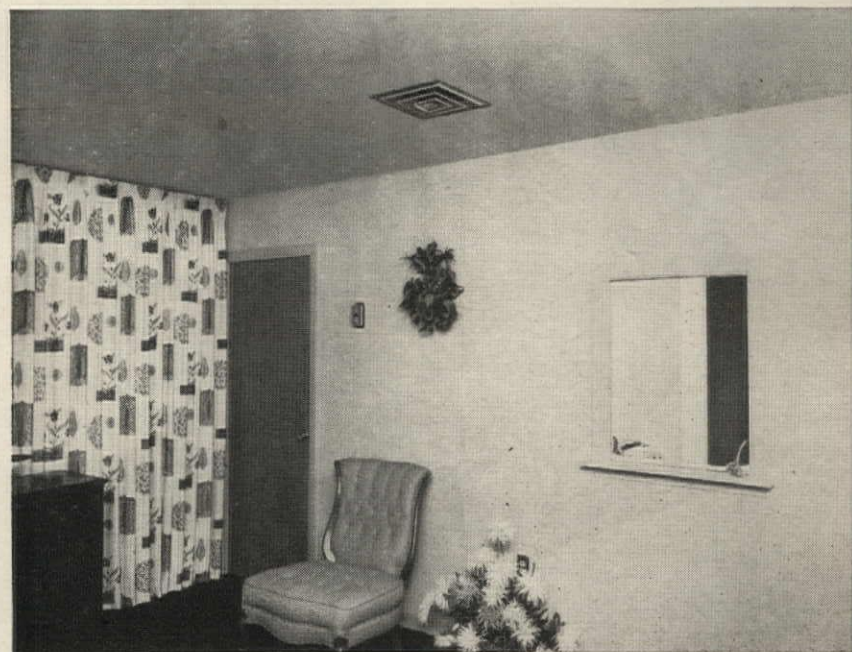




◀ Note how locating of hot and cold ducts saves space in new Medical Towers Building, Houston, Texas

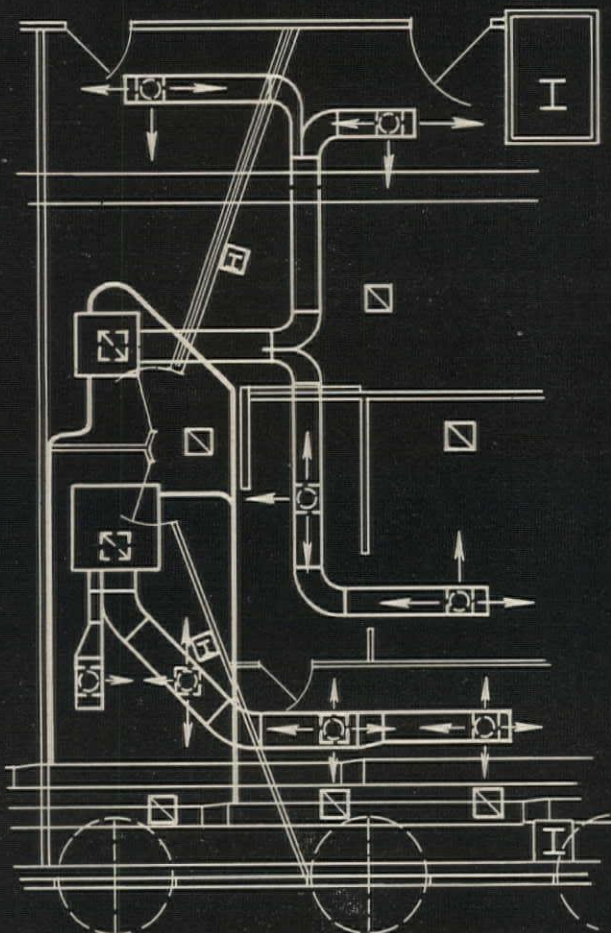


View of lobby showing Anemostat Air Diffusers



View of professional reception room

◀ Layout of typical suite



Write on your business
letterhead for your copy of

New Anemostat Selection Manual 60

to Anemostat Corporation of America,
10 East 39 Street, New York 16, N. Y.

ANEMOSTAT: The pioneer of All-Air High Velocity Systems



for smart, business-like entrances

You're sure to please cost-conscious clients — and simplify your own job — when you include Steelcraft all-steel doors in your building plans.

Steelcraft doors are **standard** doors — mass-produced for low first cost and low maintenance . . . factory-stocked for immediate delivery.

Steelcraft standard steel doors also eliminate costly detail in planning and specifying. Each door is shipped complete with frame and all hardware prepared for fast installation. And they are available in a wide variety of standard and heavy-duty styles for any commercial, institutional or industrial application. See Sweets' Catalog or write for details.

standard steel doors by **STEELCRAFT**

The Steelcraft Manufacturing Company • Rossmyrne, Ohio



THE INDUSTRY'S MOST COMPLETE LINE OF STANDARD STEEL DOORS



Robbins Hard Maple Floor in University of Wichita Fieldhouse. Architects: Lorentz, Schmidt, McVay and Peddie, Wichita, Kansas. Installed by Cincinnati Floor Co., Cincinnati, Ohio.



ROBBINS HARD MAPLE FLOOR

Come gametime, some 15 thousand eyes will be directed at this Robbins Hard Maple Floor. To the spectators, it's the center of interest. To players, it's the most important surface in the entire fieldhouse. And to architects and their clients, the floor is mighty important, too. It must be chosen carefully — its beauty, smoothness and lasting qualities considered in detail. The flooring must be selected for its ability to withstand punishment administered by thousands of pounding feet and remain smoothly beautiful for generations. That's why so many architects, realizing the floor's importance and desiring to combine beauty and durability, specify Robbins flooring. And that's why you'll find Robbins flooring in the nation's finest schools.

For information and name of your nearest franchised installer, write Robbins Flooring Co., Reed City, Mich. Dept. AF-2-57.



ROBBINS FLOORING COMPANY Reed City and Ishpeming, Michigan

Manufacturers of Ironbound* Continuous Strip* and Perma Cushion Resilient Floors*

*T.M. Reg. U.S. Pat. Off.

now...lath and plaster

when you build with the
Three Keys to Stronger Plaster
KEYMESH • KEYCORNER • KEYBEAD



are better than ever!

Every day, builders and contractors are discovering the big advantages of building with plaster reinforced with Keymesh, Keycorner and Keybead.

For example, Keymesh adds 50% greater fire safety to plaster ceilings in frame construction. It triples the fire endurance limit of open web, steel joist construction. And when you fireproof steel beams and columns with Keymesh reinforced plaster, the reduction in the insurance rate soon pays for the fireproofing.

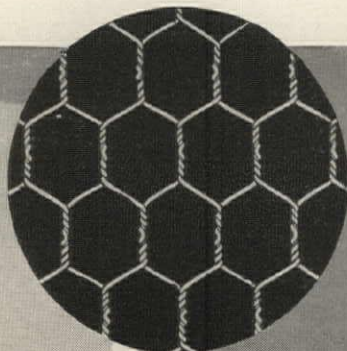
Keycorner economically provides the extra strength

that takes the worry out of trouble spots like corners, wall-ceiling junctures and joints.

Keybead allows exacting work on outside corners where ordinary beads fail. You save time and money.

In addition to these hidden values, the Three Keys help make plaster even more beautiful, more easily adapted to any design requirement.

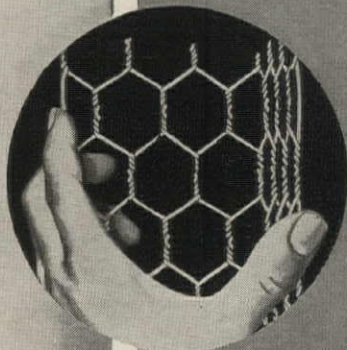
For far better construction that costs very little, ask your plastering contractor to figure your jobs with the Three Keys to Stronger Plaster.



KEYMESH

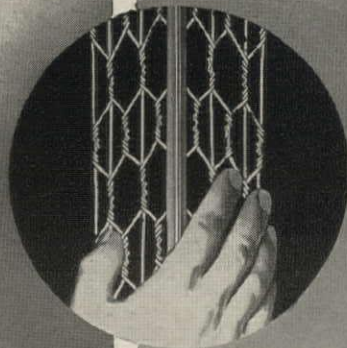
Tests prove that Keymesh-type Galvanized reinforcing lath increases fire safety of plaster ceilings a minimum of fifty percent . . . in some cases many, many times more. Since this is true by actual fire tests*, imagine the extra strength that a Keymesh ceiling or wall has against ordinary, day-to-day stress and strain. The hex mesh is a network of reinforcement. Plaster completely embeds the steel wires to make a solid, reinforced ceiling or wall. Keymesh stops plaster cracks before they start. It makes lath and plaster better than ever.

*Building Materials and Structures Report 141 National Bureau of Standards.



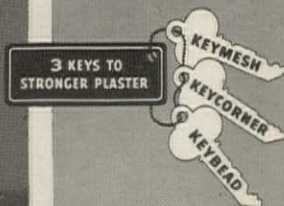
KEYCORNER

Keycorner is the only Galvanized strip lath preformed to fit corners, joints and wall-ceiling junctures. Just flex it—it bends to corner shape. It goes up quickly, easily. And what reinforcement! Corners and joints are no longer trouble spots when you build with Keycorner. It knits the plaster into a single, solid unit, reinforced at points of most strain. And it costs so little for this protection, this extra life for your plaster job. Keycorner pays big dividends in client satisfaction. See that it is used when you build with plaster. It makes lath and plaster better than ever.



KEYBEAD

New Keybead Galvanized lath makes possible exacting plaster work where ordinary corner bead fails. Keybead is straight, end to end. No waste. It's easy to true up. And Keybead makes a solid plaster corner! Plaster is easily troweled through open mesh flanges to fill corner and completely embed every reinforcing wire. Twenty-three gauge Galvanized steel nose—no other regular corner bead provides such protection against shock. Keybead is also available with solid zinc nose for use in highly corrosive atmospheres. Ask for Key Z Bead.



KEYSTONE STEEL & WIRE COMPANY

Peoria 7, Illinois

KEYMESH • KEYCORNER • KEYBEAD • KEYSTONE NAILS
KEYSTONE TIE WIRE • KEYSTONE WELDED WIRE FABRIC
KEYSTONE NON-CLIMBABLE AND ORNAMENTAL FENCE

PITTSBURGH DOORS are in architectural flexibility,

These are some of the reasons why Pittsburgh Herculite and Tubelite Doors are preferred for entrances of all kinds all over the country. Architects, builders and building owners know that, once a *Pittsburgh* door is installed, their entrances assume greater eye-appeal . . . long life and trouble-free operation. This is why we urge you to make sure that Pittsburgh Herculite or Tubelite Doors are specified for your entrances. Regardless of your particular problem, you can depend upon quality *Pittsburgh* doors to solve it. And it does not matter whether your design calls for a single door or a multiple-unit installation.

HERCULITE®

This attractive entrance to the Riverside Chevrolet Company at Jacksonville, Florida, utilized Pittsburgh Herculite Doors, together with Carrara® Structural Glass. The result of this remodeling is a building of immediate appeal. The architectural flexibility of Herculite Doors is one of the features which has made these doorways so much in demand. Made from Pittsburgh Polished Plate Glass which undergoes a special tempering process, Herculite is four times stronger than ordinary glass of the same thickness.



unsurpassed beauty and dependability



TUBELITE®

The W. A. Green Co. department store in Dallas, Texas, installed the four Tubelite Doors shown here in a fine remodeling program. Here, the Tubelite Doors are in complete architectural harmony with the entrance design. Tubelite Doors are noted for their clean, simple lines. They represent a decided advance in hollow metal entrance design. Their unique interlocking feature gives maximum rigidity. Quickly glazed and installed, Tubelite Doors offer the highest value at the lowest possible cost. Architect: Wyatt C. Hedrick, Dallas, Texas.

For detailed information on Pittsburgh Doors, see Sweet's Architectural File . . . Sections 16a and 16d . . . or write direct to Pittsburgh Plate Glass Company, Room 7168, 632 Fort Duquesne Blvd., Pittsburgh 22, Pa.



PAINTS • GLASS • CHEMICALS • BRUSHES • PLASTICS • FIBER GLASS

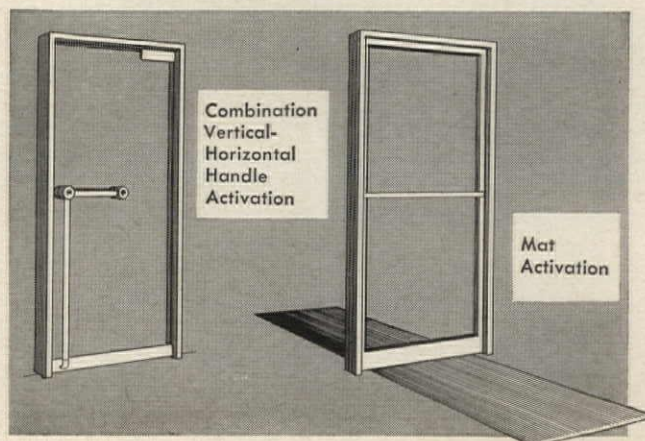
PITTSBURGH PLATE GLASS COMPANY

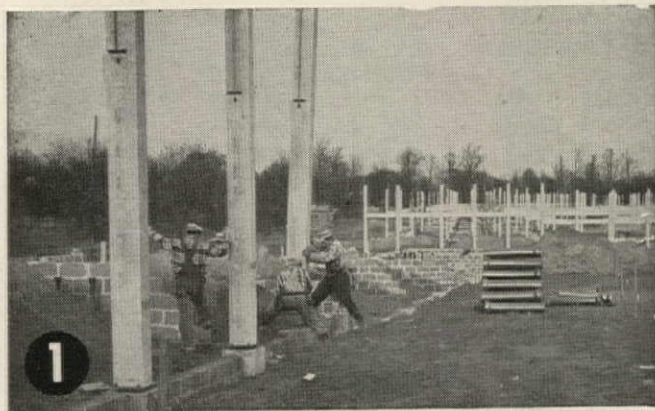
IN CANADA: CANADIAN PITTSBURGH INDUSTRIES LIMITED

With the PITTCOMATIC® doors open at a touch!

Herculite or Tubelite Doors may be equipped with the Pittcomatic automatic door opener. The operation of the Pittcomatic is simple: Smooth hydraulic power is supplied by the power unit, through $\frac{3}{8}$ " copper lines, to the hinge under the door. In the *handle*, or *mat*, there is a 10-volt circuit which passes through the control box and activates the power unit. Adjustments provided in the control box and the hinge regulate the action of the door. Here is the safest automatic door opener to operate . . . the easiest to install and maintain.

TYPICAL PITTCOMATIC INSTALLATIONS





First step was to erect the two-story precast concrete columns.

Precast Concrete Units Cut Erection Time and Cost in Philadelphia Housing Project

Use of precast concrete columns, floors and roof decks for the 52 two-story buildings of the Liddonfield Housing Project in Philadelphia made possible fast construction at low cost per sq. ft. The 20 ft. wide buildings, ranging in length from 150 to nearly 200 ft., went up at a rate of two a week. Photos show the construction sequence employed.

Built for the Philadelphia Housing Authority, the 500,000 sq. ft. low-rent housing project consists of 412 firesafe dwelling units plus central-heating, community and management buildings. Liddonfield Architects of Philadelphia designed the project. Stofflet & Tillotson was the general contractor.

Fast, economical construction is possible in any structure designed to utilize precast concrete units. It can be built to conform with applicable building codes and will offer all the advantages of conventional concrete construction for frames, floors and walls.

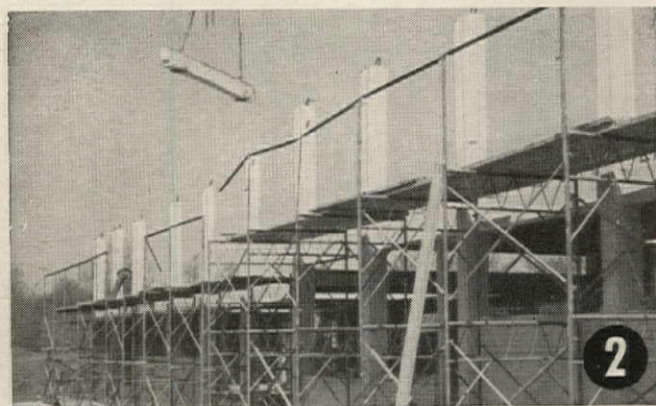
For additional information write for free literature. Distribution is limited to the U. S. and Canada.

PORTLAND CEMENT ASSOCIATION

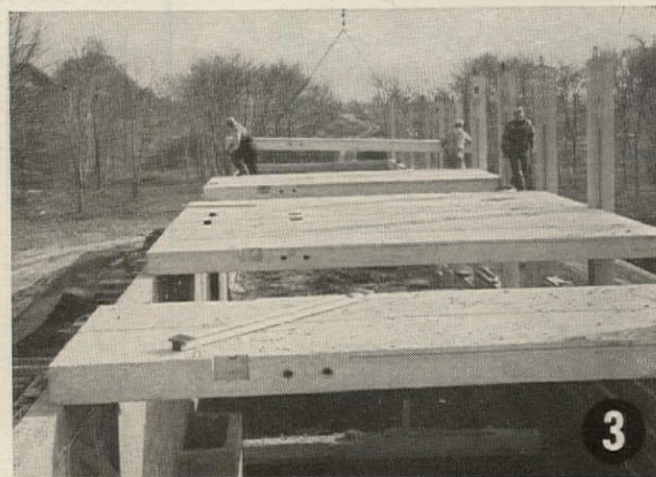
Dept. A2-7, 33 West Grand Avenue, Chicago 10, Illinois

A national organization to improve and extend the uses of portland cement and concrete . . . through scientific research and engineering field work

Finished building. Precast roof slabs project 2 ft. to form sunshade.



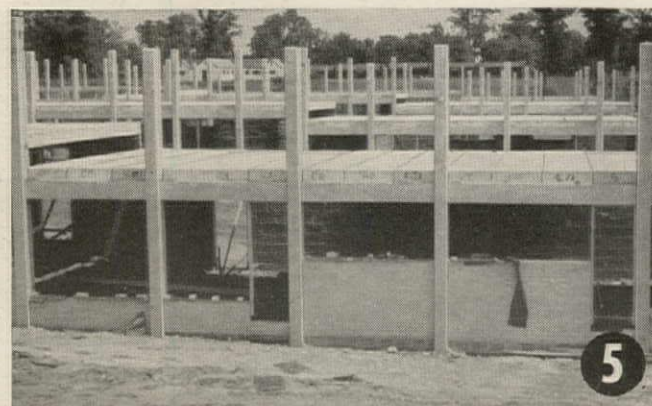
Next, the second floor spandrel beams were lowered into position.



After rear walls were brought to second floor elevation, 3-ft. wide precast concrete floor channels with 10-in. legs were placed across the entire width of the buildings. Below is a view of the underside of the floor showing how conduits pass through sleeves in the legs.



General view before roof spandrel beams and roof slabs were erected.



A roundup of recent and significant proposals

LOUIS CHECKMAN



UNITED STATES: Edward D. Stone, architect



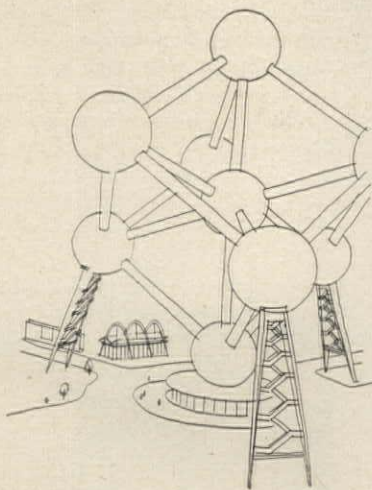
GREAT BRITAIN:
Howard Loebe & partners

BRUSSELS FAIR DESIGNS

Contemporary architecture of almost all nations will abound at the '58 Brussels World Fair.

Theme structure will be the Atomium (lower left), nine 59' diameter spheres in an arrangement 360' high, symbolizing man's ability to harness the atom's power to the peaceful advantage of all nations and peoples. This will be made entirely of metal. Escalators and elevators will carry visitors from sphere to sphere to view different exhibits or dine in a top sphere restaurant.

The US pavilion, designed by Edward Stone, will be set into a hillside and will have a separate circular theater in which US Commissioner General Howard S. Cullman hopes to present outstanding American theatrical, movie and TV productions. A translucent plastic roof and transparent plastic honeycomb curtain wall hung from the top will sheathe the building (385' dia., 65' high).



BELGIAN "ATOMIUM": A. Polak



VATICAN: P. Rome



JAPAN: Kunio Maikawa

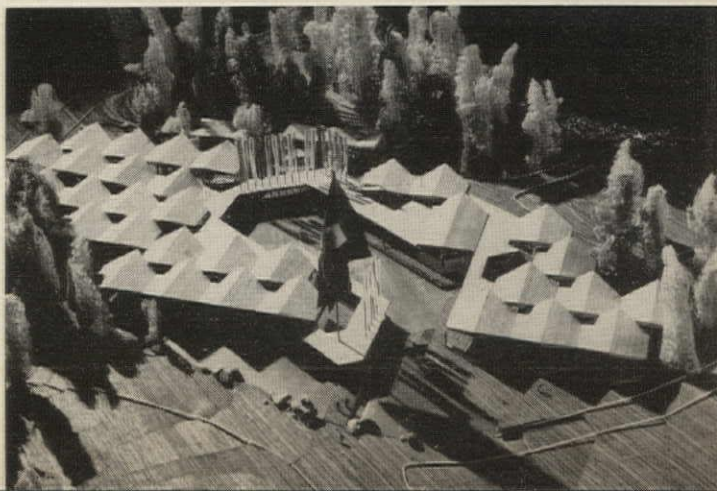


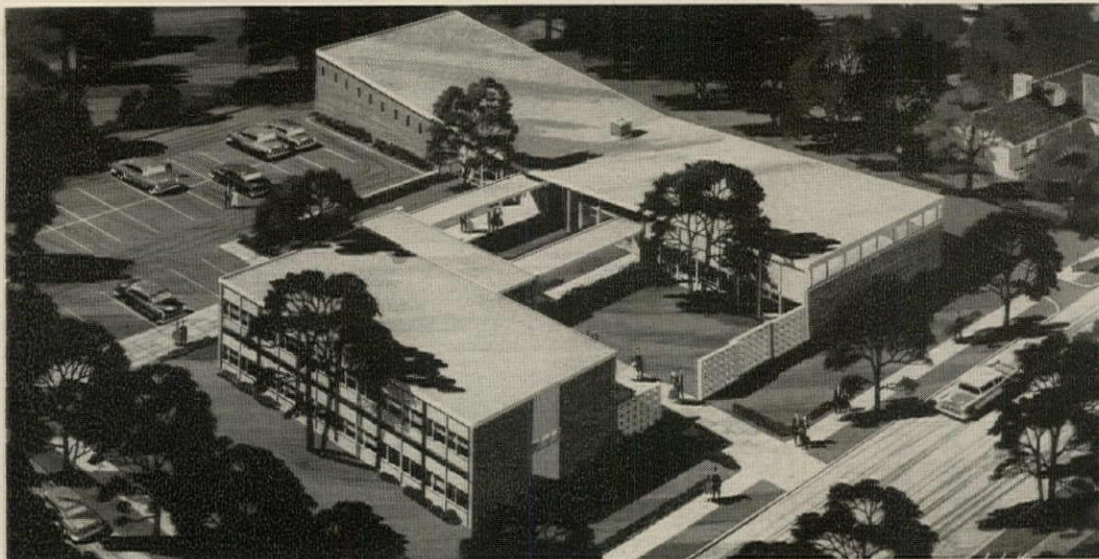
FRANCE: G. Gilbert



RUSSIA: Nikiforov

SWITZERLAND: Werner Gantenbein

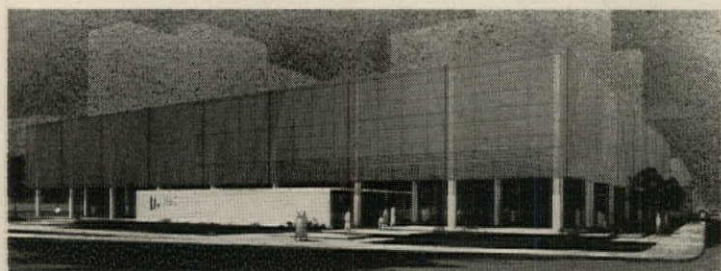




SUBURBAN UNITARIAN CHURCH WITH OFF-STREET PARKING

Ketchum, Gina & Sharp designed the South Nassau Unitarian Church, Freeport, Long Island, to meet the long-range needs of its congregation. First to be built, at a cost of \$100,000, will be the church-auditorium (rear), connected with temporary classrooms,

social hall, and service areas. In the rear this one-story structure slopes up to two-story space for the choir. About one-quarter of the site will be reserved for parking. Classroom building (foreground) will be built later, cost about \$135,000.



TRANSPARENT PUBLIC LIBRARY

To provide maximum visibility with minimum glare, Architects Curtis & Davis designed New Orleans' \$2.4 million central library with glass walls

protected by an aluminum grill. The transparent effect of the design enables visitors to find bearings easily; building has an open well in center.



STATE DEPARTMENT GIANT

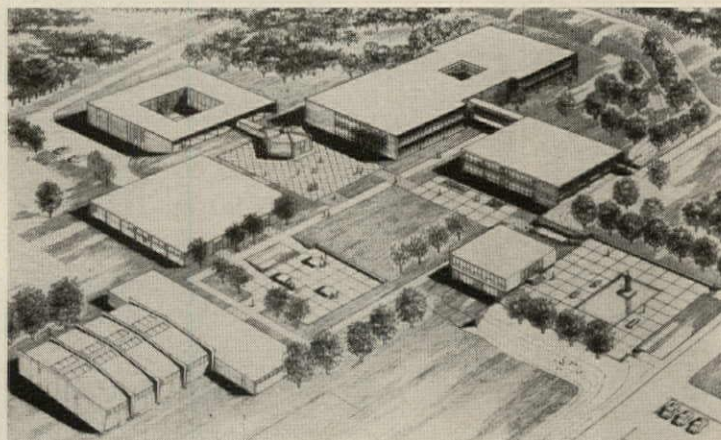
This \$57.4 million State Dept. headquarters, covering four whole blocks, will be the largest federal building in Washington. Newest sketch (above) shows west elevation with

entrance to public auditorium. Architects: Graham, Anderson, Probst & White, Inc., Chicago; Harley, Ellington & Day, Inc., Detroit; A. R. Clas, Washington, associate.



OAKLAND SKYSCRAPER

The First Western Building, an 18-story, \$10 million skyscraper planned for downtown Oakland, will offer tenants a glass showcase at its base, built-in parking, ceiling panel radiant cooling and heating, and movable partitions based on a 4' module. Architects: Stone, Mulloy, Marraccini & Patterson of San Francisco.



CAMPUS BUILT AROUND A PLAZA

A hexagonal chapel set in a paved courtyard will be the focal point of the new Catholic Aquinas High School near St. Louis. The entrance from the parking area (r) is a paved plaza with a pool, sur-

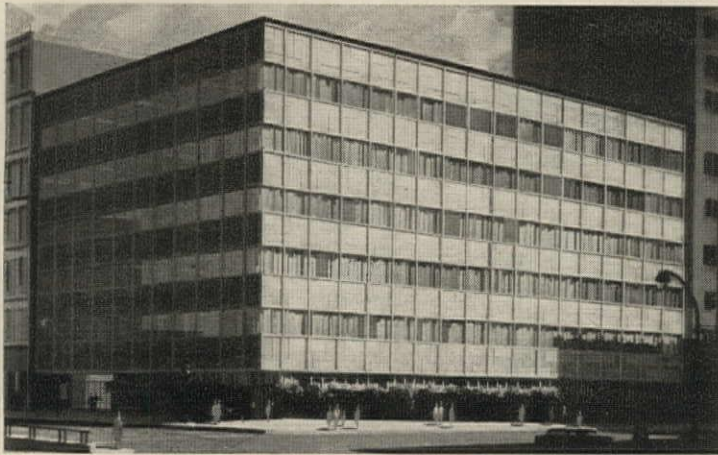
rounded by administrative and special functions buildings, classrooms, gymnasium, cafeteria-dining hall, and a convent in back of the chapel. Architects: Hellmuth, Obata & Kassabaum.

BROWN PALACE ANNEX

The Denver City Council has approved a bridge and "hanging garden," as well as a tunnel to connect a new Brown Palace West with the original Brown Palace Hotel in the adjoining block to right. Designed by New York Architect William B. Tabler, the 22-story tower of cantilevered reinforced concrete will have 288 rooms, 25% corner rooms with curved windows. Two basements will provide parking space for guests.

ADOLPH STUDLY





HEDRICH BLESSING

DESIGNED FOR GROWTH

Initially a six-story \$4.5 million building, this new downtown Chicago headquarters for the Mutual Trust Life Insurance Co. was designed by Perkins & Will, architects-engineers, so it can be raised later to 12 stories. Exterior is granite, stainless steel, glass and two shades of blue porcelain enamel. A two-level underground garage will accommodate 116 autos. Building also can be expanded horizontally.



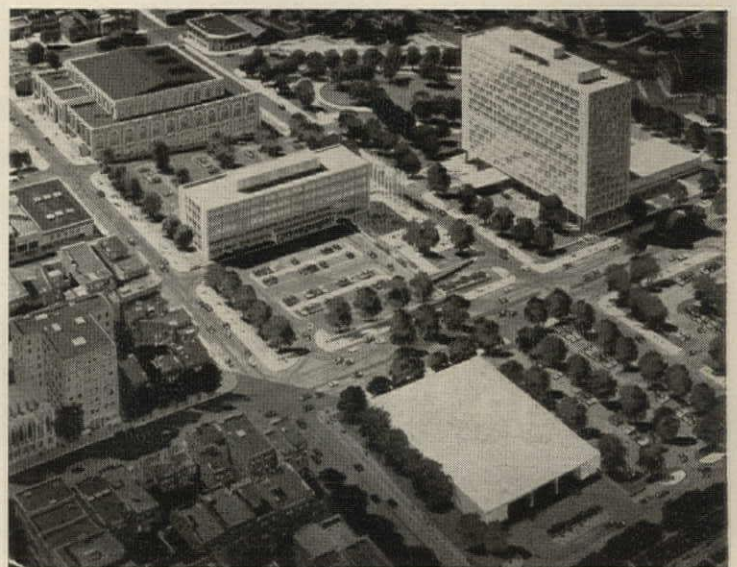
AGC HEADQUARTERS

The Associated General Contractors of America commissioned Chatelain, Gauger & Nolan, of Washington, (the office of AIA President Leon Chatelain Jr.) to design their new capital headquarters building. All members of the AGC District of Columbia chapter will be invited to submit bids; ground breaking in March.



NO-LIMIT LOS ANGELES TOWER

At least a dozen tower buildings for Los Angeles exceeding the old 150' height limit scrapped by a city charter amendment last November are on drawing boards, estimates City Planning Director John E. Roberts. In the race to be the first completed is this 25-story \$10 million structure for McKee & Co., building owner investors. Three lowest floors and three basement levels will park 600 cars. Upper section facing: ceramic veneer and colored porcelain enamel aluminum. Architects: Heitschmidt & Thompson.



BLAKESLEE-LANE INC.

SHRINKING STATE PROJECT

Baltimore (not the capital, Annapolis) is the site of the \$11.5 million Maryland state office building (r) and roads commission laboratory (foreground). Lowest bid for the project was \$1.5 million over the estimate; economy moves have dropped the laboratory temporarily and substituted limestone for marble on the office building facade. Special features still planned: walnut-paneled governor's suite and two-story lobby with marble facing. Both buildings were designed by Baltimore's Fisher, Nes, Campbell & Associates; L. P. Kookan Co.



WALTER DORAN

FIVE-IN-ONE CIRCULAR THEATER BUILDING

In New York's proposed Lincoln Square redevelopment, in addition to opera house and philharmonic hall, there would be six theaters for regular

theatrical productions. Five would fill the huge center circular building (see plan). The sixth, especially intended for experimental and low-budget



shows, would occupy the small round building at right; a restaurant, the other at left. Developer: Roger Stevens. Architects: Pereira & Luckman.



7:30 A.M. Nine pockets on four foot centers were provided in each of the 40 foot outside walls to support ends of the nine 24' eight inch JUNIOR BEAMS weighing 1,400 pounds.



8:00 A.M. Workmen are shown placing the JUNIOR BEAMS in the notched recesses in the eight inch blocks. A concrete block wall through the center of the house foundation provides intermediate support for the JUNIOR BEAMS.

Contractor saves using Junior Beams

This labor saving resulted when JUNIOR BEAMS with 2·4·1 plywood floors were used in place of conventional wood joists by Steinkamp & Company, Inc., Batesville, Indiana, a Lu-Re-Co builder.

The framework of this \$9,500 one-story 24' x 40' brick veneer house was recently erected in eight hours. Floor construction with steel JUNIOR BEAMS as joists was completed in 19 man-hours as compared to 75 man-hours for conventional wood joist construction.

Material costs were comparable. The 2·4·1 Douglas fir plywood panels serve as subfloor and underlayment for any desired floor covering.

You also can accomplish similar savings with JUNIOR BEAMS, an exclusive development of Jones & Laughlin. They can be used in either crawl space or basement construction.

JUNIOR BEAMS are low in first cost; light in weight for fast, easy steel erection with minimum manpower. Overall building heights can be reduced by proper framing of JUNIOR BEAMS into supporting members.

Call your nearest Jones & Laughlin representative for complete details or write to the Jones & Laughlin Steel Corporation, Dept. 491, 3 Gateway Center, Pittsburgh 30, Pennsylvania.



Jones & Laughlin Steel Corporation



9:00 A.M. Rigid bridging is attached to JUNIOR BEAMS in a continuous row in the center of the 12 foot spans. The 2" x 4"s, laid flat, are securely fastened on four foot centers transverse to the joists.



9:15 A.M. In turn, 2" x 4"s are laid along the length of the JUNIOR BEAMS between the transverse 2" x 4"s, providing a four foot grid. A 2" x 6" wood plate is attached to walls to support floor and wall panels.

56 man-hours as floor joists

10:15 A.M.

The 4' x 8' Douglas fir 1 1/8" plywood panels are nailed in place.



10:45 A.M.

Erection of the pre-fabricated side wall panels is under way.



1:30 P.M.

Roof trusses are being fastened in place according to schedule.

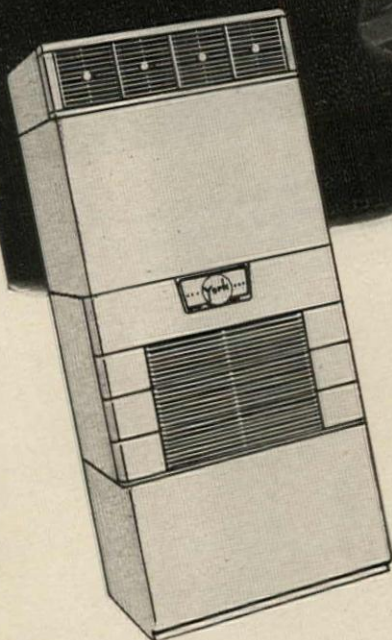


3:45 P.M.

Frame of house is completed with laying of roofing paper.



NEW!
YORK "SELECTIVE ZONE"
AIR CONDITIONING PLAN CUTS COSTS—
SIMPLIFIES OWNER PROBLEMS



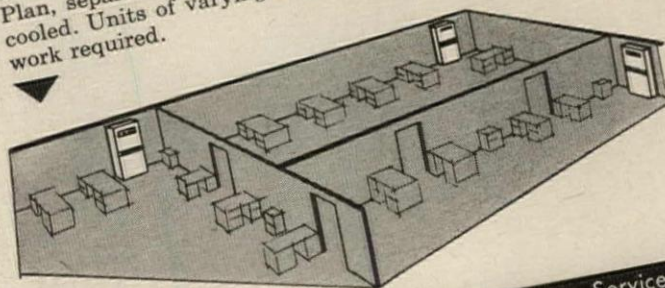
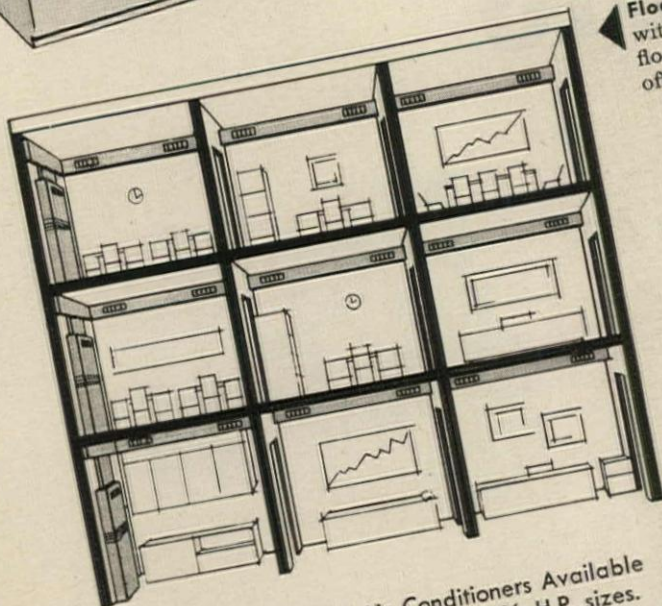
...Complete line-up of new, compact packaged units now make it practical and economical to air condition selected zones in stores, factories and institutions

When planning additions, or when remodeling, if the job calls for air conditioning specific floors, rooms, or other large areas, it will pay you to check into the York "Selective Zone" Plan before you make any recommendations. This

new plan uses two or more individual York units of the same or varying sizes to condition selected zones. So, on mild summer days only the units needed are turned on...and your client pays only for the actual areas being air conditioned.

Floor-by-floor installation...Here, three separate York units with ductwork supply cool comfort to all the rooms on 3 floors. Each unit operates independently and may be turned off when the floor is unoccupied.

Room-by-room installation...In this York Selective Zone Plan, separate units are placed in the specific areas to be cooled. Units of varying capacities may be used. No ductwork required.



York Packaged Air Conditioners Available in 3, 5, 7½, 10, 15 and 22½ H.P. sizes.

the quality name in air conditioning



YORK CORPORATION, YORK, PA.
 Subsidiary of Borg-Warner

Mail Coupon for Free Consultation Services!

York Corporation
Dept. AF-1, York, Pennsylvania

Gentlemen:
 I would like to learn more about your "Selective Zone" air conditioning plan. Please arrange to have one of your engineers call.

Name.....
 Address.....
 City..... Zone..... State.....



Public utilities and public works—not so restricted by tight money—help set spending record

Public construction and building for public utilities were the stars that sent construction outlays to a new record total of \$44,258 million last year, up \$1,267 million, or 3% from 1955.

Total private construction advanced only \$253 million, or a scant 1%. To register this gain it had to overcome a serious \$1,480 million drop in new nonfarm housing outlays, which fell 10% in dollar volume, and 15.7% in number of units started—a total of 1,120,000 last year against 1,329,000 in 1955.

Public utilities spent a total of \$5,065 million for construction last year. Their share of the \$1,733 million advance that was scored by private construction except for new nonfarm housing: \$461 million. Observers also cite a special reason why public utility building is expected to register another substantial increase this year, with little or no impediment from the restraints of the tight money pinch affecting many other construction categories (p. 116): utilities usually do not need to have any great concern about the costs of money, or anything else—they can simply report all their costs to their regulatory bodies and have their rates to consumers adjusted to cover them.

Public works: some up, some down

Public construction expenditures last year totaled \$13,433 million, a gain of \$1,014 million, or 8%, over 1955 (see table and separate chart). This work

also enjoys partial immunity to the tight money pinch, and this year such outlays are expected to increase another \$1,600 million to a total of about \$15 billion, according to Commerce and Labor Dept. forecasts.

There were mixed reactions when FORUM's correspondents around the nation asked public works men how their programs were faring.

Some officials, unhampered by special restrictions, insisted all jobs were going ahead as usual, although their bond costs (passed right along to taxpayers) were rising sharply. A contrasting view was expressed by others who had to work with specified total capital budgets or maximum interest rates (such as the stifled GSA lease-purchase program, p. 6). Typifying the latter was Alfred E. Bolt, finance chief for Chicago's board of education, who said tight money was costing Chicago two good-sized public schools. A \$10 million 3% school bond issue sold in November cost

continued on p. 43

SPENDING BY BUILDING TYPES

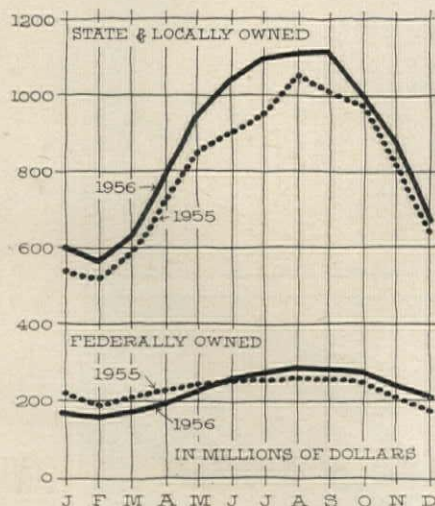
(millions of dollars)

	Full year			
	Dec. '56	1956	1955	%±
PRIVATE BUILDING				
Residential (nonfarm)	1,202	15,339	16,595	-8
Nonresidential	768	8,801	7,612	+16
Industrial	270	3,065	2,399	+28
Commercial	272	3,296	3,043	+8
Offices; lofts; warehouses	128	1,362	1,136	+20
Stores; restau- rants; garages..	144	1,934	1,907	+1
Religious	73	773	734	+5
Educational	46	537	492	+9
Hospital; institutions	32	327	351	-7
Public utilities	402	5,065	4,604	+10
*PRIVATE TOTAL	2,472	30,825	30,572	+1

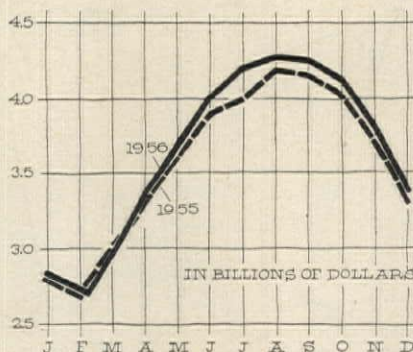
PUBLIC BUILDING

Residential	27	292	263	+11
Nonresidential	311	4,061	4,227	-4
Industrial	33	431	721	-40
Educational	200	2,548	2,442	+4
Hospital; institutions	23	309	331	-7
Military	108	1,398	1,297	+8
Highways	250	5,100	4,520	+13
Sewer; water	100	1,275	1,085	+18
*PUBLIC TOTAL	898	13,433	12,419	+8
*GRAND TOTAL	3,370	44,258	42,991	+3

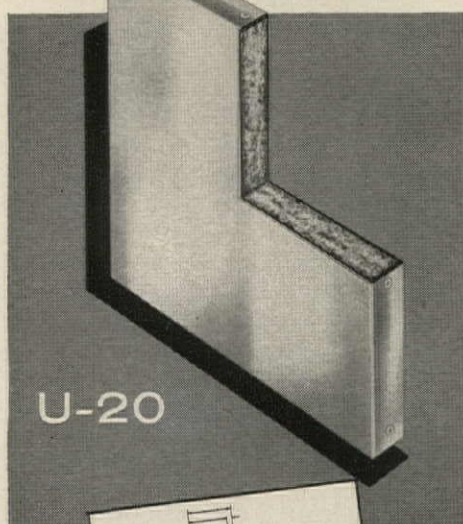
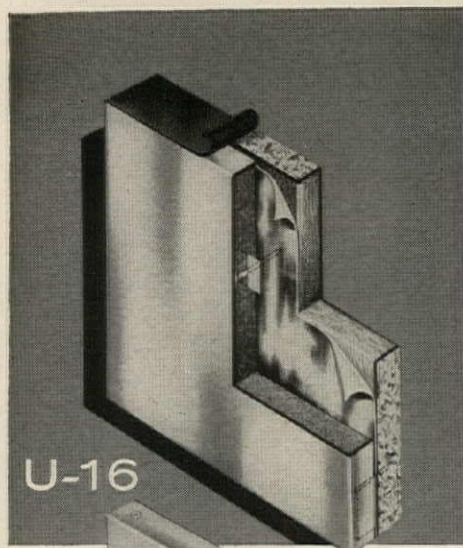
*Minor components not shown, so total exceeds sum of parts.



PUBLIC EXPENDITURES for new construction last year totaled \$2,760 million for federally owned projects, and \$10,673 million for state and local works. State and local outlays were higher than 1955 spending throughout the entire year. Federal spending lagged from January through May, exceeded 1955 outlays from June through December.



TOTAL EXPENDITURES for new construction in December declined seasonally to \$3,370 million, but were 3% greater than in Dec. '55 by Commerce and Labor estimates. Private outlays for the month were 2% higher than a year earlier, public spending up 9%. Private nonfarm residential outlays were down 6%, but nonresidential up 13%.



THESE TWO *Erie* Porcelain Enamel Panels adapt to every standard window wall

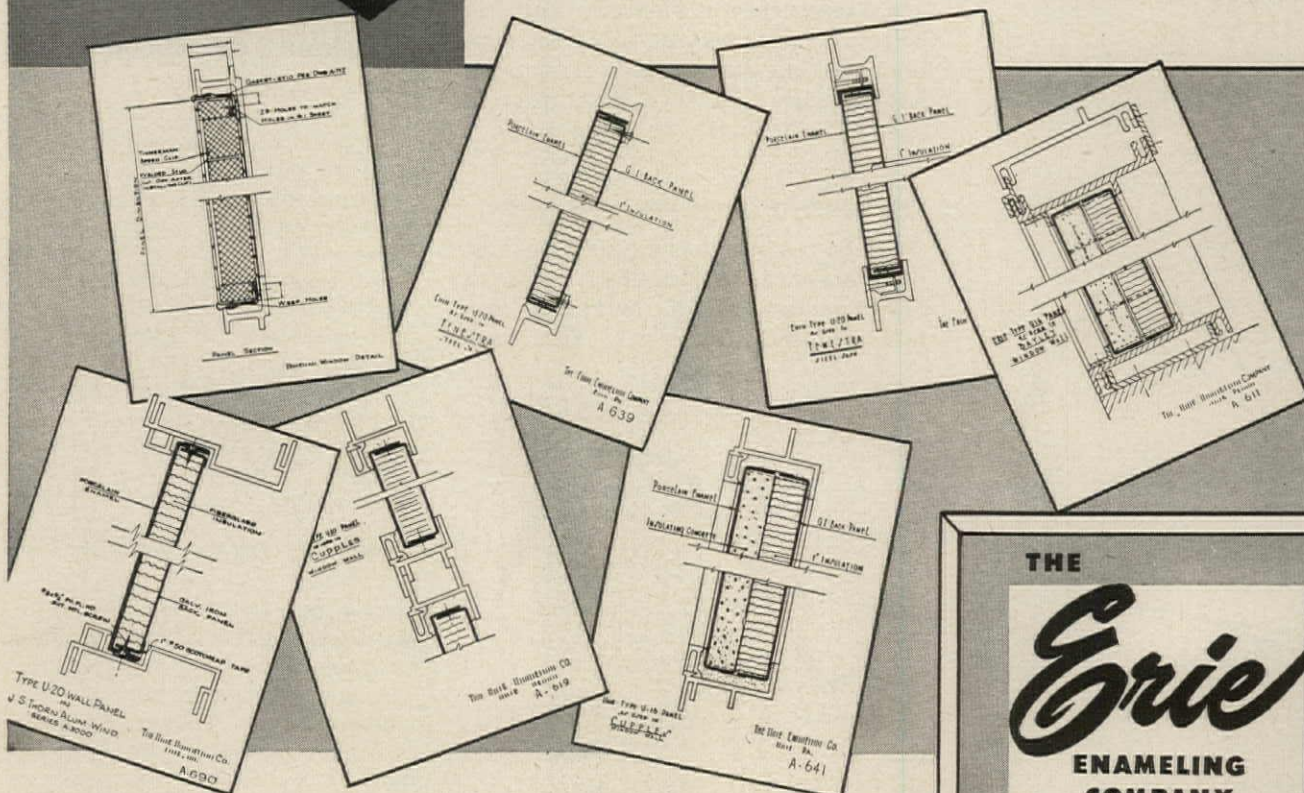
THE ERIE U-16

A double faced, concrete filled and fibre glass insulated panel with vapor barrier, featuring exceptional flatness and all mechanical fastening—no adhesives. Thickness is 2"; U-factor is .16; weight, 9 pounds per square foot; size range, up to 4' x 8'.

THE ERIE U-20

A lightweight panel—6 pounds per square foot—featuring double faced, all-mechanically fastened construction with fibre glass or other insulation. Thickness is 1 1/8"; U-factor is .20; size range, up to 16 square feet.

Note: Both of the above panels are finished in Erie AA Porcelain Enamel on one or both faces as desired, and are available in a full range of fade-proof colors.



Write for detail sketch of panel installation in the window wall of your preference. Drawings available for all principal window systems. No obligation.



BUILDING MATERIALS

the city a \$450,000 discount, so its building program will have to be cut back by one small school, Bolt explained. Another \$15 million issue this year, he added, will probably cost a \$600,000 discount, and another new school will have to be scratched from its schedule.

Detroit officials said expressway and sewer projects were being delayed by the city's borrowing difficulties. Said a Cleveland official, referring to an increase from 2.56% to 3.58% in that city's bond costs: "That means we will have to cut down somewhere else in our capital improvement program."

William Mead, of Mead & Mount, who does a large volume of school building in the Denver area, said many school boards there are trying to delay projects until the bond market improves. But Jack Shirley, of Boettcher & Co., one of Denver's leading investment banking firms, noted that if they wait, in hopes that money will get cheaper, they may find their ultimate construction costs even higher than current combined costs for money and building.

Public works: disputed

At the recent St. Louis convention of the American Municipal Assn., Maj. Gen. J. S. Bragdon, special assistant to President Eisenhower for public works planning coordination, said public works were being constructed at less than half the rate required to complete the backlog of projects needed by 1965. "For the next two decades," said Bragdon, "the portion of our gross national product devoted to public works could be increased substantially with no danger of overbuilding"—preferably with more cash during boom times, more credit during slack times.

This immediately drew a sharp dissent from realty developer William Zeckendorf (on the program as a public defender of cities vs. decentralization): "Municipal, state and federal governments are some of the worst perpetrators of inflation. . . . This is not a time, when money rates are the highest in 20 years, to build public works. . . . When the depression—or recession—or whatever you call it, hits, we're all going to run out of gas at the same time. Wait until those lines form to the right again for relief before unwrapping public works projects such as the new federal highway program. I don't want to eliminate it, just postpone it. Private interests in competition with government are being forced to pay black market prices for materials and labor, fantastic interest rates."

Average prices rose 1.7% in '56; unfilled steel orders exceed record year's shipments

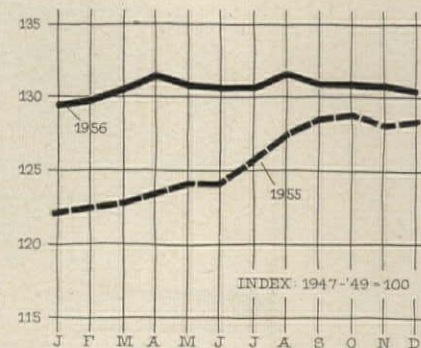
Although a renewed uptrend is expected this year, average wholesale prices for all building materials declined a slim 0.1% in December, and finished 1956 at 130.5 on the BLS index, just a shade under this barometer's average of 130.6 for the entire year.

Throughout 1956 this index moved within a relatively narrow range: from its low of 129.4 in January to its peak of 131.5 in August, a 1.6% swing.

A 3.4% decline in lumber and wood product prices was mainly responsible for holding the index for all materials in check last year, but these particular items hit bottom in November and December and are now pointing upward again. Average prices for all other building materials rose throughout 1956, ranging from a low of 0.6% for plumbing equipment to a high of 13.3% for prepared asphalt roofing. Other specific increases were 8.3% for structural steel (also slated for a considerable boost this year); aluminum sheets, 8.6%; prepared paint, 7.2%; plate glass, 6.0%; window glass, 5.1%; concrete ingredients, 4.5%; structural clay products, 4.0%; heating equipment, 4.3%; metal doors, sash and trim, 1.4%.

No shining steel performance

The picture of structural steel's performance as 1956 ended was not nearly as bright as construction had wished. Through November, when it forwarded 276,000 tons to customers, the industry



BUILDING MATERIALS PRICES declined from 130.8 in November to 130.5 in December on the BLS index of average wholesale prices. This index was 1.7% higher in December than a year earlier. Its average for all of 1956 was 130.6, or 4.1% above the 1955 average.

has shipped 2,907,703 tons of structurals, according to AISC, a gain of 6% over comparable 1955 deliveries.

If December's shipments were able to match the record 306,000-ton rate reached last March and May, total 1956 deliveries would top the record of 3,135,525 tons construction obtained in 1954 by 78,000 tons, or 2.4%.

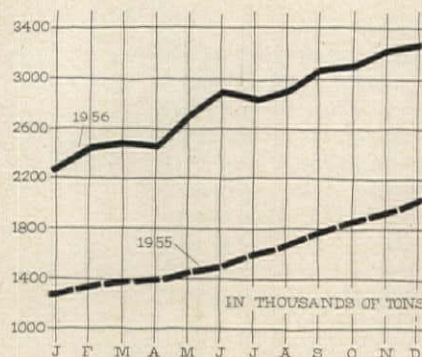
Except for last summer's steel strike, shipments of structurals last year undoubtedly would have far surpassed the 1954 record. As it turned out, however, new orders for structurals set a new record of over 3,800,000 tons during 1956. By December the industry's backlog of unfilled orders had climbed to 3,252,202 tons (more than the record shipments for all of 1954). This was an increase of 1,177,000 tons over the backlog of unfilled orders at the start of the year (see chart).

COSTS

Uptrends will continue through 1957

There was a considerable spread in the extent of advances in various construction cost indices from November to December.

The E. H. Boeckh index for non-



STRUCTURAL STEEL unfilled orders on Dec. 1 rose to a new peak of 3,252,000 tons, according to the American Institute of Steel Construction. New orders during November totaled 338,892 tons, or 2% below Nov. '55, while shipments totaled 276,045 tons, or a 7% increase over the previous November.

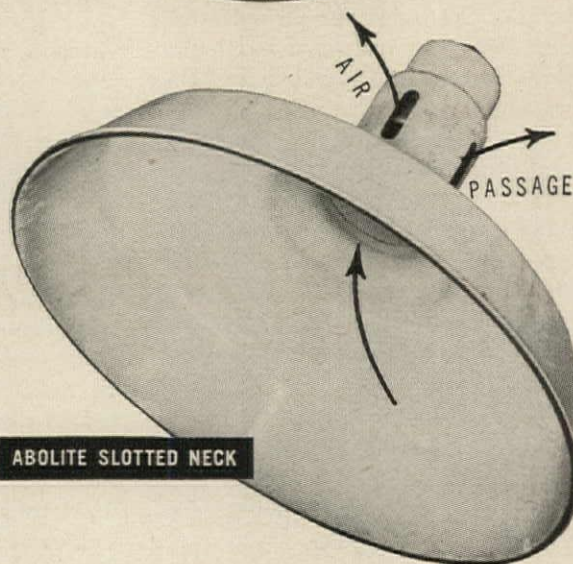
Keeping industry bright with **ABolite**



STANDARD FIXTURE

6-MONTH TEST RESULTS

The photographs show two reflectors after 6 months of side-by-side use in the core department of the James B. Clow and Sons plant, Coshocton, Ohio. Note the heavy deposit of dirt and grime on the non-vented unit, drastically reducing its illuminating value. The Abolite slotted-neck reflector shows minimum dirt deposit; lighting efficiency remains high.



ABOLITE SLOTTED NECK

Self-cleaning Abolite fixture gives 30% more light, longer lamp life

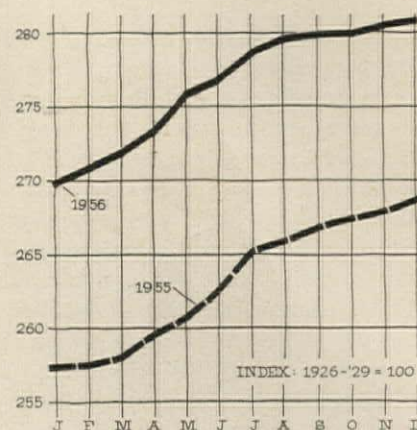
The slotted-neck reflector design, by Abolite, greatly increases lighting efficiency and lamp life, cuts maintenance costs way down. Air circulation through the ventilator slots keeps dust and grime on the move. Lamp and reflector stay clean nearly twice as long, give 30% more illumination. Lamp operating temperature is reduced 40%. Make sure you get all these advantages—at no extra cost—by specifying Abolite. For full details on Abolite's complete line of lighting fixtures, write *Abolite Lighting Division, The Jones Metal Products Co., West Lafayette, Ohio.*

ABOLITE



Trends

cont'd



CONSTRUCTION COSTS for nonresidential buildings rose from 280.3 in November to 280.7 in December, an increase of 0.1% on the index compiled by E. H. Boeckh & Assoc. In the course of the year since Dec., 1955, this index rose a total of 4.5%.

residential work (see chart) edged up only 0.1%, the same degree it advanced from October to November, and the AGC index remained unchanged. However, the *Engineering News-Record* building and construction indices jumped 0.4% and 0.6%, and the American Appraisal index rose 0.5% on top of a 0.3% advance the previous month.

The Boeckh index for the entire year 1956 averaged 276.5, a 5.1% advance over its 1955 average, and its December reading was 4.5% higher than December, '55. Most indices rose 4.5% to 5% from December to December (the AGC barometer 5.4%), and Boeckh predicted another 5% increase in his index this year, EN-R forecast another 3.4% rise in its construction cost computation, a 2.6% increase in its building cost barometer. The major factors behind these forecasts: existing labor contracts that already provide for an average increase of about 12¢ an hour this year for building trades workers; inescapable steel and cement price boosts. In addition the ICC authorized railroad freight increases of 7% on Eastern lines in December, 5% on Western lines, and truckers planned 10% to 15% hikes.

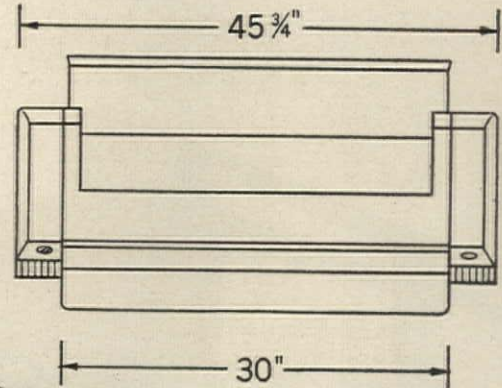
Odd picture of industry given by pay reports

For those who are curious about who gets what in construction four diverse reports were issued last month:

► A survey of 899 companies in 27 industries by the National Industrial Conference Board found that chief executive salaries averaged \$87,000 in

continued on p. 46

At Last! A Small Whiteprinter that Makes BIG Prints!



**FULL 30-INCH
PRINTING WIDTH!**

NEW! **BRUNING** *Copyflex Model 300!*

*** Brings "Inside" Reproduction within the Means of the Smallest Architectural Firm or Department!**

Now, with your low-cost, versatile Model 300, you can make high quality prints when you want them—rapidly, privately, and in any quantity. You can exercise complete control over valuable originals at all times.

*** Provides Large Companies an Economical Way to Supplement Main Reproduction Centers!**

With its compact size, big printing width, and low cost, the Model 300 is an ideal helper for your big reproduction machine. Strategically located throughout your company, Model 300s can bring new speed, convenience, and efficiency to your reproduction operations.

Here it is! The compact, low-cost reproduction machine that offers all the versatility and big printing width of a large, expensive whiteprinter!

Just think—you can make sharp, black-on-white prints in seconds of a drawing or tracing up to 30 inches wide by any length. And anyone can operate the Model 300 after only brief instruction. One fingertip control turns the machine on or off and regulates its speed. Exposure and development are automatically synchronized.

The new Copyflex Model 300 is ideal for drafting rooms and offices because it can be operated anywhere without annoyance to personnel in the vicinity. It is clean, quiet, and odorless. No exhaust venting, plumbing, or accessory equipment required. It needs only a connection with a 115-volt AC outlet for operation.

If you're pressed by the boom in production for more and more drawings and prints, the all-new Copyflex Model 300 is your answer! Its low initial cost, outstanding economy of operation and maintenance, and convenience make it your soundest, low-cost investment of the year. Mail coupon today! You'll be glad you did!

BRUNING

Best Process! Best Machines!
Best Selection of Materials!

Copyflex

Offices in 37 Cities of the U. S. and Canada

CHARLES BRUNING COMPANY, INC., 4700 MONTROSE AVE., CHICAGO 41, ILL.
In Canada: Charles Bruning Co. (Canada) Ltd., 105 Church St., Toronto 1, Ont.

CHARLES BRUNING CO., Dept. 23-AF
4700 Montrose Ave., Chicago 41, Ill.

Please send me information on the all-new Copyflex Model 300.

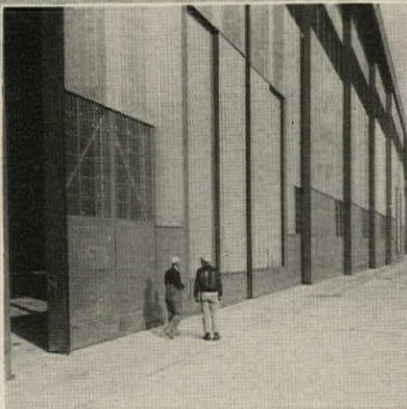
Name _____ Title _____

Company _____

Address _____

City _____ County _____ State _____

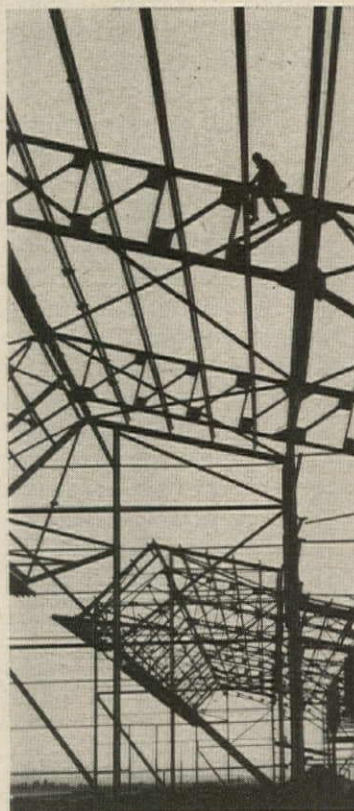
INTERNATIONAL SERVICE

New England Style

New warehouse at Portsmouth, New Hampshire, Air Force Base. All structural steel and doors for this building and seven wing hangars — plus all doors for a maintenance hangar — by International.

New Hampshire or New Mexico . . . Dixie or the Dakotas . . . wherever there's a construction project involving special structural steel engineering and fabrication, more and more profitable use is being made of International Service. This same *fully integrated*, full-range service is ready to serve you — anywhere and every way.

See Complete Catalogs
In Sweet's Industrial
Construction Files
No. 2c and No. 7a



INTERNATIONAL STEEL COMPANY

2102 EDGAR STREET • EVANSVILLE 7, INDIANA

1955. The kicker: the construction industry's top men averaged \$56,000, the lowest group in the survey; (the highest, rubber industry executives, averaged \$140,000).

► More encouraging was an American Management Assn. report on a poll of 31,400 engineers and technical employees. This showed that engineers' salaries are rising faster than any other group. During the past year they rose an average of 8.6%, compared with 5% for "middle management," 3.5% for sales personnel, and 2.7% for top management.—Even so, Dean John R. Dunning, of Columbia University School of Engineering, gave the annual convention of the National Assn. of Manufacturers some pointed advice: "If you gentlemen in industry want to solve the engineering and scientific shortage problem, the straightforward solution is simply to double the salaries of your engineers and make a reasonable ratio between engineers and skilled labor. Word will then go into the high schools, 'If you get into science and engineering, it is almost worthwhile; you will get paid more than a welder or bricklayer'."

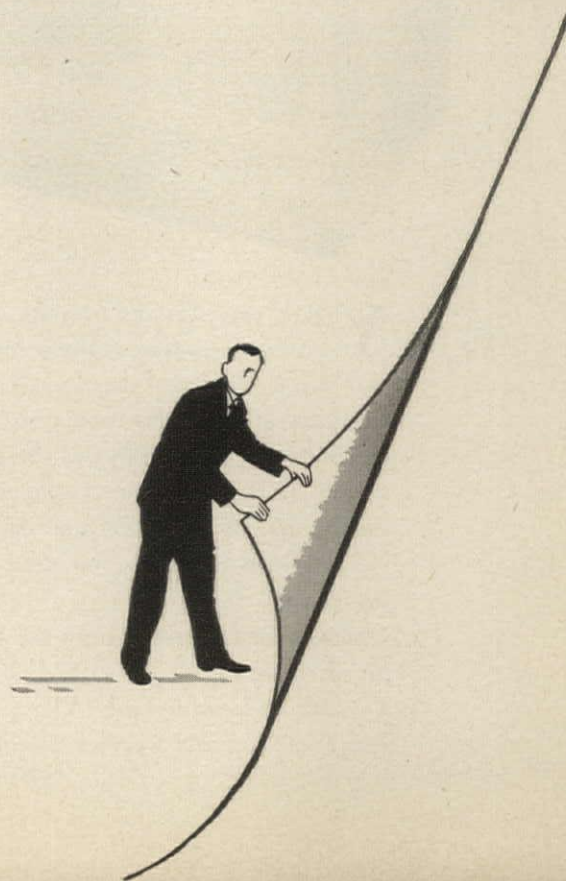
► From executive compensation data filed with the SEC by 606 companies in 18 industries, McKinsey & Co., management consultants, calculated that presidents of 29 building materials companies received 5.9% greater pay in 1955 than in 1954, compared with an average increase of 6.3% for industry in general. About 50% of the building materials presidents got increases over 1954, 35% about the same, and 15% got less. An analysis of the survey in the November *Harvard Business Review* showed that chief executives in this industry averaged \$62,000 in firms with \$30 million sales; \$90,000 in \$100 million enterprises, and \$150,000 in companies with \$500 million sales. Grouped by net profits, firms earning up to \$3 million paid their presidents an average of \$76,000; up to \$10 million net profit, an average of \$88,000, and \$40 million or more of net profits, an average of \$104,000.

► In Ottawa, the Dominion government revenue department completed its analysis of earnings and taxes paid by Canadians in 1954. Their revelation: In Canada, at least, consulting engineers and architects replaced physicians and surgeons as the greatest individual earners and taxpayers. Lawyers and notaries came in third, after the medical professions. However, the doctors' nurses remained in last place (16th) on an occupational basis.

Will the heating
and ventilating system
you select for
your new school
meet the requirements
of 1962...or 1967
...or even 1977?

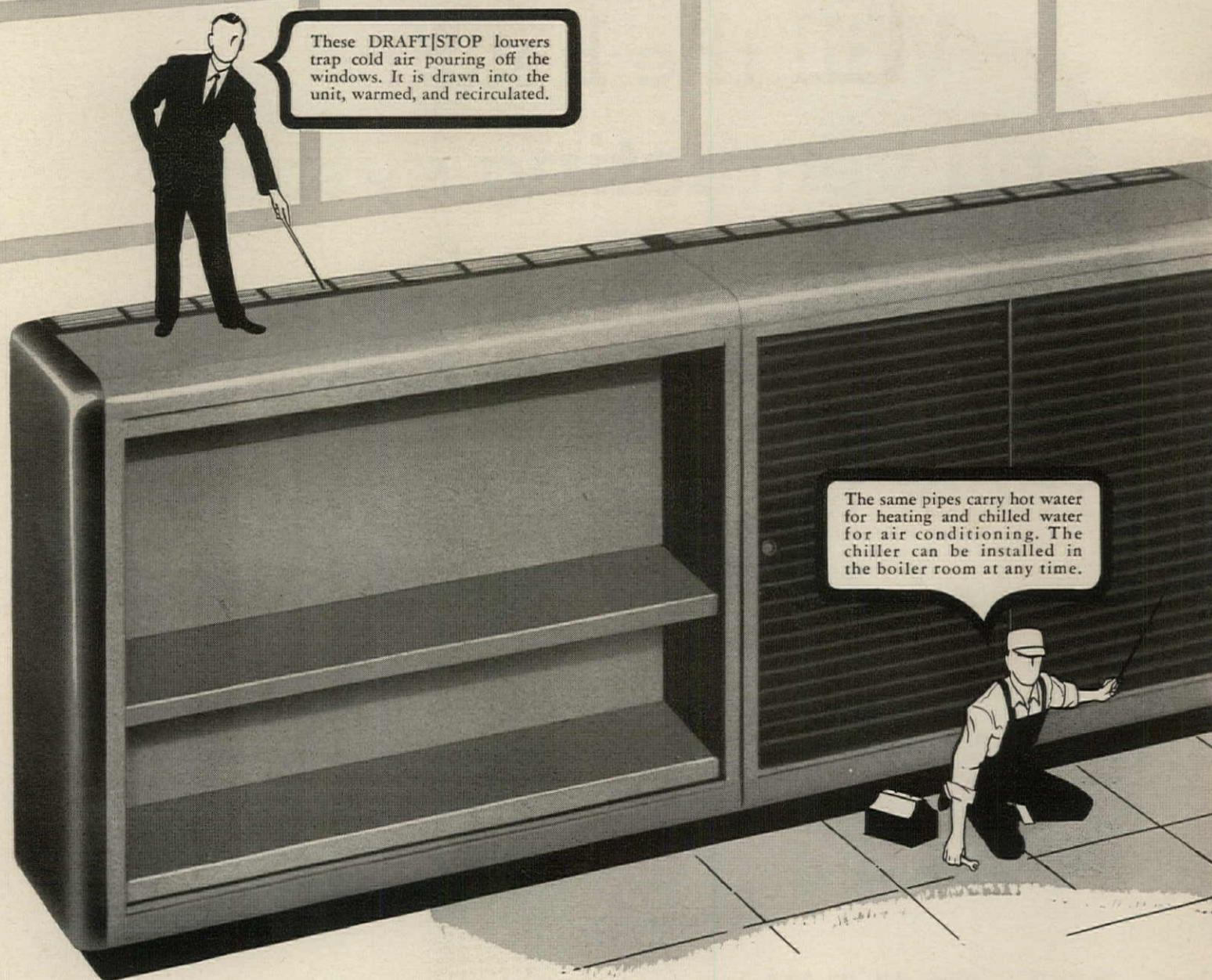
IT CAN!

On the next two pages, the latest development in unit ventilators is described. It takes the guesswork out of planning . . . it lets you provide for tomorrow's needs today with today's budget!



Here's the new HerNel-Cool II Unit Ventilator..

INSTALL IT *NOW*..



YOUR new school's heating and ventilating system can be as modern as tomorrow—and *stay that way*—if you plan around the new HerNel-Cool II!

Every essential for classroom comfort, including air conditioning, is provided in this "last word" system. Every month of the year, the climate inside each classroom can be that of a perfect June day—comfortable, fresh, clean—with no drafts, no dead spots, no stale over-heated air.

Check these features—only the HerNel-Cool II offers all of these:

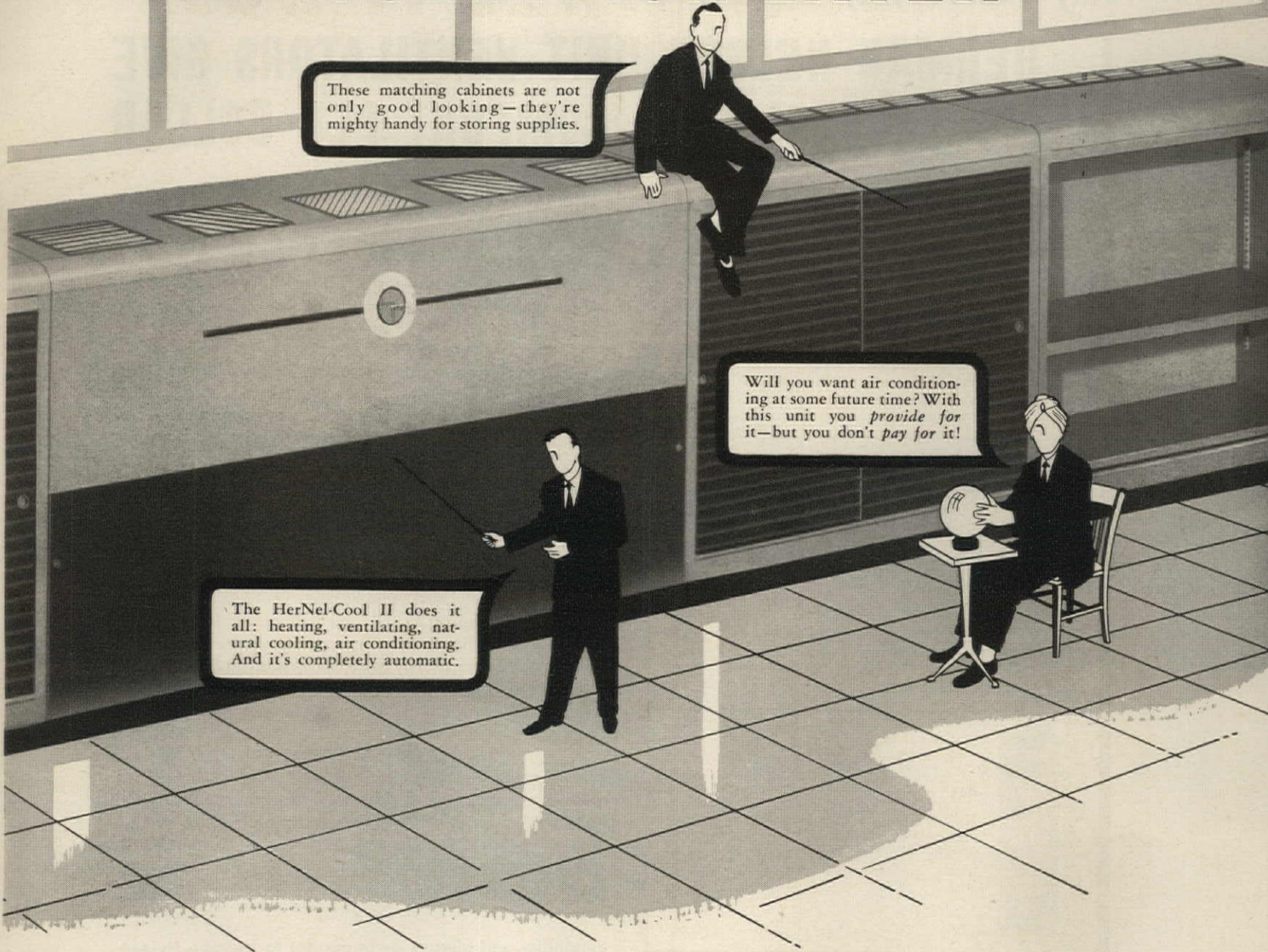
- 1 **Flexible air conditioning:** The same pipes which carry hot water for cold weather heating carry chilled water

for summer air conditioning. All you need is a chiller in the boiler room. It can be provided initially or at any future time. Whenever air conditioning is desired, you can have it with a minimum of expense, with no disruption, with no costly alterations!

- 2 Famous DRAFT|STOP* method of controlling window downdrafts without adding to the classroom heat load. Cold window drafts are trapped, drawn into the unit, then warmed and gently circulated.
- 3 Circulating *hot water* for heating—with either wall-hung, cabinet-base, or recessed-edge perimeter piping. The most flexible, most economical heating system there is. HerNel-Cool II heats only when heat is needed—

..by Herman Nelson

AIR CONDITION LATER



These matching cabinets are not only good looking—they're mighty handy for storing supplies.

Will you want air conditioning at some future time? With this unit you *provide* for it—but you don't *pay* for it!

The HerNel-Cool II does it all: heating, ventilating, natural cooling, air conditioning. And it's completely automatic.

saves fuel when it is not.

- 4 *Completely automatic individual room control* for true comfort in every season. The HerNel-Cool II "thinks for itself" and provides rapid heat, air for ventilation, or air for natural cooling as the room requires. In hot weather, when outside temperatures soar, it switches automatically to mechanical cooling.

A HerNel-Cool II system fits into today's school budget... but its benefits will be enjoyed for many years to come. Today—or twenty years from today—pupils will be alert and comfortable from the opening of school to the closing bell. Teachers will be free to concentrate on *teaching*—in an atmosphere that's conducive to *learning*.

Want more facts? Ask your Herman Nelson representative or write to Herman Nelson Unit Ventilator Products, American Air Filter Company, Inc., Louisville 8, Ky.

**Patented, there are no substitutes.*

herman nelson

UNIT VENTILATOR PRODUCTS

American Air Filter Company, Inc.

SYSTEM OF CLASSROOM COOLING, HEATING AND VENTILATING

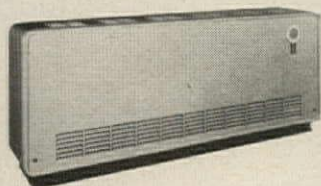
Any Fuel... Any Climate...

HERMAN NELSON UNIT VENTILATORS GIVE MORE CLASSROOM COMFORT PER DOLLAR



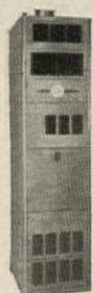
**HOT WATER
OR STEAM**

Herman Nelson Unit Ventilators with patented DRAFT|STOP control downdrafts without adding to the heat load, provide ideal classroom climates.



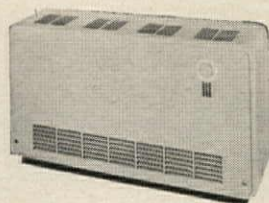
**AIR
CONDITIONING**

The HerNel-Cool unit provides mechanical cooling, heating, ventilating or natural cooling as required. Thoroughly tested in hot, humid climates.



GAS

New UNivent Gas School Ventilator provides all the health and comfort features of the DRAFT|STOP system in a completely self-contained unit.



MILD CLIMATES

AMERVENT built especially for schools in mild climate areas, provides fresh air cooling, heating and ventilating within the nominal cost of heating alone.



ELECTRIC

New Electric Unit Ventilator in which an electric heating element replaces the hot water or steam coil provides all DRAFT|STOP comfort features.

Herman Nelson now offers a line from which you can select the ideal unit for meeting any school's requirements! The cooling, heating, ventilating system can be "tailored" to provide true classroom comfort in the most economical and most practical way.

VARIETY OF FUELS

In temperate or cold climates, the *Herman Nelson Unit Ventilator* operates with either *hot water, steam, gas or electricity*. The patented DRAFT|STOP system has given a new meaning to "classroom comfort" as it controls down drafts and automatically provides a constant supply of properly heated or cool fresh air.

AIR CONDITIONING

HerNel-Cool units offer an economical and practical solution to the increasingly important air conditioning problem. Most of the year they provide heat, ventilation or natural cooling (with outside air). Air conditioning can be provided at any time by simply adding a chiller to the system. The units switch automatically to mechanical cooling with chilled water circulating in the same piping that carries hot water during cold weather.

MILD CLIMATES

Schools in mild climates have an increased cooling and ventilating problem and a decreased heating problem. With Herman Nelson *AMERVENT* these schools can now enjoy all the essentials for classroom comfort—cooling, heating and ventilating—without paying for the excess heating capacity required in frigid climates.

* * *

Flexibility will always be important to Herman Nelson—for there is no "one best" system to provide for heating, ventilating and cooling classrooms. The health and comfort of pupils and teachers come first. Climate area, design and structure of each school will indicate the most economical and practical system to achieve that ideal classroom atmosphere.

Would you like more information? Ask your Herman Nelson representative or write to Herman Nelson Products, American Air Filter Company, Inc., Louisville 8, Kentucky.

BETTER AIR IS OUR BUSINESS



herman nelson
UNIT VENTILATOR PRODUCTS

American Air Filter Company, Inc.
System of Classroom Cooling, Heating and Ventilating

Naugatuck MARVIBOND

Marvinol vinyl-to-metal laminating process



**glamorizes
even
everyday
articles**

MODERN PRODUCT DESIGN seeks to combine eye-catching beauty with functional durability. And Marvibonded vinyl-to-metal laminates do just that! Two excellent examples are the "Thunderbird" ice chest and picnic jug, manufactured by Polaron Products, Inc.* Their almost indestructible fabric-embossed vinyl finish is fused to aluminum sheets by the Marvibond† Process, then formed into the shells of extremely lightweight, glass-fiber-insulated food and drink containers that are as eye-appealing as they are practical.

Marvibonded laminates afford imaginative architects limitless opportunities to add the colorful beauty, texture, warmth and wear-resistance of embossed vinyl to the structural strength of sheet metal for modern partitions, doors, screens, wainscoting, cabinet fronts, radiation covering and dozens of other uses. Sheets of steel, aluminum, magnesium or copper, *prefinished* by the Marvibond process, can be shaped and machined by standard sheetmetal-working equipment without damage to the vinyl surface finish.

We do not make Marvibonded laminates or the products shown here, but we have licensed many laminators throughout the country to use the Naugatuck-developed Marvibond Process. We'll gladly give you the names and addresses of several licensees near you.

*Polaron Products, Inc., New Rochelle, N.Y.

†U.S. Pat. No. 2,728,708



United States Rubber
Naugatuck Chemical Division

Naugatuck, Connecticut

BRANCHES: Akron • Boston • Gastonia, N.C. • Chicago • Los Angeles • Memphis • New York • Phila.
IN CANADA: Naugatuck Chemicals, Elmira, Ontario • Rubber Chemicals • Synthetic Rubber •
Plastics • Agricultural Chemicals • Reclaimed Rubber • Latex • Cable Address: Rubexport, N.Y.

STAINLESS STEEL

Gives Old Building Bright New Look

Architects: Pereira and Associates, Chicago
Stainless panel fabricator: Rippel Architectural Metals, Chicago



Architect transforms old masonry facade into one of sparkling modern design with stainless steel panels.

Handsome appearance of the A. Finkl and Sons Company building in Chicago belies the fact that it is an old structure ingeniously modernized with stainless steel by Pereira and Associates.

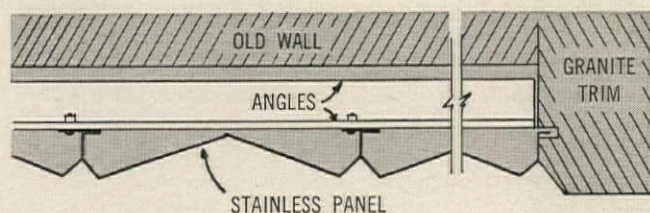
Story-high formed stainless panels create a distinctive gleaming surface, accented by the reflection-breaking planes of the vertical design. Attached to the old masonry wall by bolting to horizontal angles, no fasteners mar the simple clean lines of the facade. Panels, coping and trim are Type 302, 20-gage stainless with No. 4 surface finish.

Stainless Enhances Design

This attractive modernization is typical of the architectural achievement possible with Armco Stainless Steel. Its good

formability and strength give you unlimited design freedom, simplify support and attachment problems. And the durability of Armco Stainless is assurance that your buildings will retain their structural and esthetic qualities for years to come. Clients, too, appreciate the lasting beauty of stainless and the low maintenance costs of its easy-to-clean, hard surface.

Take advantage of these inherent qualities of Armco Stainless Steel. They give you added opportunities to create attractive designs and gain lasting client satisfaction. Specify Armco stainless for curtain walls, facades, mullions, entrances and interiors on new construction as well as modernizations. For complete data on Armco Stainless Steels and their uses in architectural design, fill out and mail the coupon today.



TYPICAL HORIZONTAL SECTION

Armco Steel Corporation, 917 Curtis St., Middletown, Ohio
Send me information on Armco Stainless Steels and their uses in architecture. We are considering stainless for _____

Name _____

Firm _____

Street _____

City _____ Zone _____ State _____

ARMCO STEEL CORPORATION

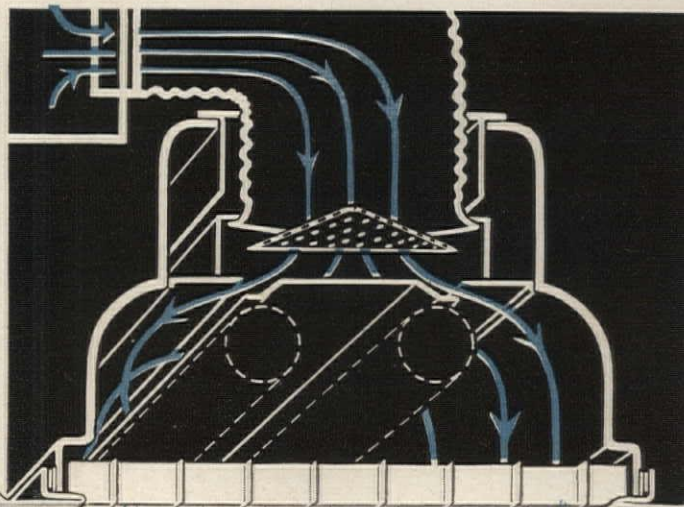
917 CURTIS STREET, MIDDLETOWN, OHIO

SHEFFIELD STEEL DIVISION • ARMCO DRAINAGE & METAL PRODUCTS, INC. • THE ARMCO INTERNATIONAL CORPORATION



2 in 1

A great improvement in Air Conditioning is born INSIDE a lighting unit! Cold air is efficiently diffused along the entire length of the fixture through the unique Multi-Vent Diffuser Plate. A multitude of vents disperses air along the contour of the reflector, resulting in a gentle downward diffusion of the air for truly draft-free air conditioning.



both **LIGHT** and **AIR**
from the **SAME** fixture!

Here is a lighting unit that does something about room temperatures, too! The new 2-in-1 Benjamin Multi-Vent Trofferlite delivers both the most modern illumination and improved air diffusion from the same fixture at a decided cost saving. It brings you well-diffused, adequately-shielded Benjamin-engineered light conditioning, in combination with a new advance in gently-diffused, draft-free air conditioning. Ceilings take on a modern, uncluttered look because air diffusers are concealed inside the clean-lined troffer lighting units. Installation costs dip way down, as the 2-in-1 feature reduces the number and variety of fixtures required. Wherever light and air conditioning are needed, specify Benjamin Multi-Vent Trofferlites to make the job simpler, the design more beautiful, the air conditioning more successful and the cost much lower! Send for FREE illustrated 8-page Data Brochure. Write Benjamin Electric Mfg. Co., Dept. YY, Des Plaines, Illinois.

B-1472

Now — Advanced Benjamin Light Conditioning
PLUS Greatly Improved Air Conditioning from one unit!

No double installation problems!

Improved draft-free air conditioning!

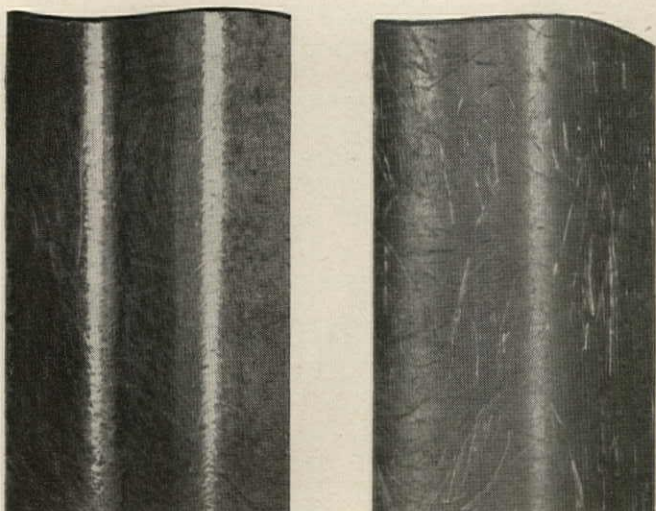
Benjamin-engineered illumination!

No discord of fixtures!

BENJAMIN
MULTI-VENT TROFFERLITE

2-IN-1 LIGHT AND AIR DIFFUSION SYSTEM

Trofferlite by Benjamin Electric Mfg. Co. • Multi-Vent® Air Diffuser by Pyle National Co.



Unretouched 18-month test samples

STRUCTOGLAS "A" PANEL made from extra-hard new Paraplex® P-444 resin*.

COMPETITIVE PANEL made from a good light-stabilized standard resin.

- FACT 1.** Before testing, the above panels were identical in surface gloss, color, appearance.
- FACT 2.** After 18-month exposure in south Florida, competitive panel had lost all surface gloss, was badly discolored, exposed glass fibers. STRUCTOGLAS "A" showed no erosion and only slight color change.
- FACT 3.** Proven superiority of STRUCTOGLAS "A" results from new resin not used in other reinforced panels.
- FACT 4.** STRUCTOGLAS "A" costs no more than ordinary plastic panels.

* A product of Rohm & Haas Company

structoglas®
division of

international molded plastics, inc.
4376 west 35th street • cleveland 9, ohio

STRUCTOGLAS 4376 West 35th St. • Cleveland 9, Ohio

GET THE COMPLETE
STORY . . . send for
unretouched photos
and test data.

NAME _____ TITLE _____
COMPANY _____
STREET _____
CITY _____ ZONE _____ STATE _____
(Please Print)

7849-1M

The Interior is what you make it in an Armco Steel Building

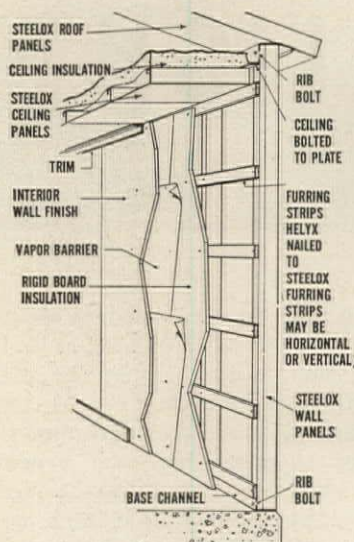
You Gain the Economy and Convenience of a Factory-Made Structure Yet Retain Important Freedom of Treatment.



VAULTED CEILING finished with acoustical tile, and plaster walls contribute to the spacious good looks of the main lounge of the Wildwood Golf Club, Middletown, Ohio. The basic structure is a rigid frame Armco Steel Building.



WOOD PANELING and other drywall materials find broad acceptance as interior finish in many types of building construction. In an Armco Building they give you a plus benefit in savings. The STEELOX® Panels that make up the walls form a regular framework (16-inch module) that makes the basis for the interior treatment. The ceiling in this office is also STEELOX panel construction.



Drawing shows typical method of finishing the interior of an Armco Steel Building.

Get the Armco Building story and see how these basic structures can help you save preliminary design time, speed your work and save money for your client. Tell us your functional requirements. Armco Drainage & Metal Products, Inc., 3367 Curtis Street, Middletown, Ohio • Subsidiary of Armco Steel Corporation • In Canada: Write: Guelph, Ontario. Export: The Armco International Corporation.



Beautiful New Norman Three-Sixty®



gas-fired, forced convection
overhead gas heater, with

- EXCLUSIVE ELECTRIC IGNITION
- SEALED COMBUSTION SYSTEM

The all-new Norman Three-Sixty is the greatest improvement in overhead heating in 25 years. It has more exclusive features than any product in its field. And it has more to offer in beauty, economy, safety and comfort.

This new pressurized Norman unit features a sealed combustion system completely independent of room air. Exclusive electric ignition with no open flame exposed to the room makes the Three-Sixty safe for applications where an ordinary unit heater might create a hazard.

Smartly styled, this new Norman Three-Sixty with its attractive circular spun aluminum casing makes ordinary unit heaters obsolete . . . adds a touch of luxury to the most modern stores and shoppes.

In performance, the Norman Three-Sixty is even more outstanding. It assures an umbrella of comfort-

able warmth gently distributed outward and slightly downward in a full 360° radius. No hot blasts or cold spots.

Norman Patented Sealed Combustion System

All combustion air is drawn from outside through a separate inlet pipe . . . all exhaust gases are vented to outside through a parallel separate pipe. Fully automatic electric ignition eliminates pilot flame outage. No chimney needed . . . no problem of make-up air . . . no possibility of food contamination from products of combustion . . . no humidity or dust problem.

Phone, wire or mail coupon today for complete details.

NORMAN PRODUCTS CO.
1158 Chesapeake Ave., Columbus 12, Ohio
Please rush complete details and literature
on the all-new Norman Three-Sixty.

NAME _____ TITLE _____
COMPANY _____
ADDRESS _____
CITY _____ ZONE _____ STATE _____

Norman®

products
company





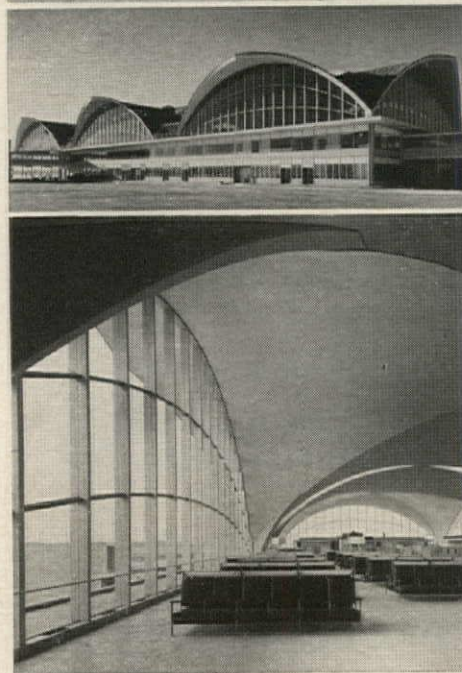
LAMBERT-ST. LOUIS MUNICIPAL AIR TERMINAL

Hellmuth, Yamasaki & Leinweber*
William C. E. Becker*
L & R Construction Co.*

*St. Louis, Missouri

architects
structural engineer
general contractor

Winner of a First Honor Award, the
American Institute of Architects, 1956



Lloyd Spainhower

Hedrich-Blessing

REINFORCED CONCRETE

*provides dynamic flexibility
for airport terminal design*

THE NEW "SPIRIT OF ST. LOUIS"... A bold and imaginative example of the design flexibility of reinforced concrete is the new \$4,500,000 Lambert-St. Louis skyport. Note the unusual treatment of the thin shell concrete roof formed of three intersecting, barrel-vaulted sections, only 4½ inches thick and 120 feet long. The architects also specified reinforced concrete for the floors and framing.

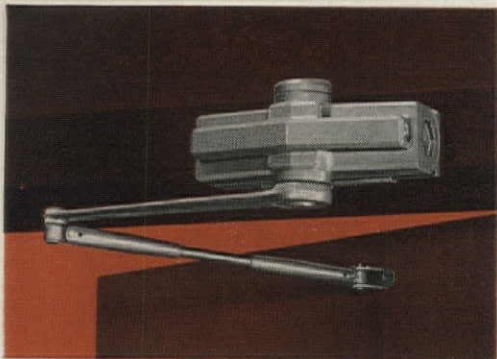
On many other important buildings and structures from coast to coast, reinforced concrete is also providing better structures for less money. It is a flexible medium, inherently firesafe, and highly resistant to wind, shock, and quake. On your next job, design for beauty plus economy . . . design for reinforced concrete.

**CONCRETE REINFORCING
STEEL INSTITUTE**



38 South Dearborn Street
Chicago 3, Illinois





Completely Reversible . . . can be mounted on the top jamb for maximum headroom on out-swinging doors.



Installation is Quick, Easy . . . can be installed in less than half the time of other surface-type closers.

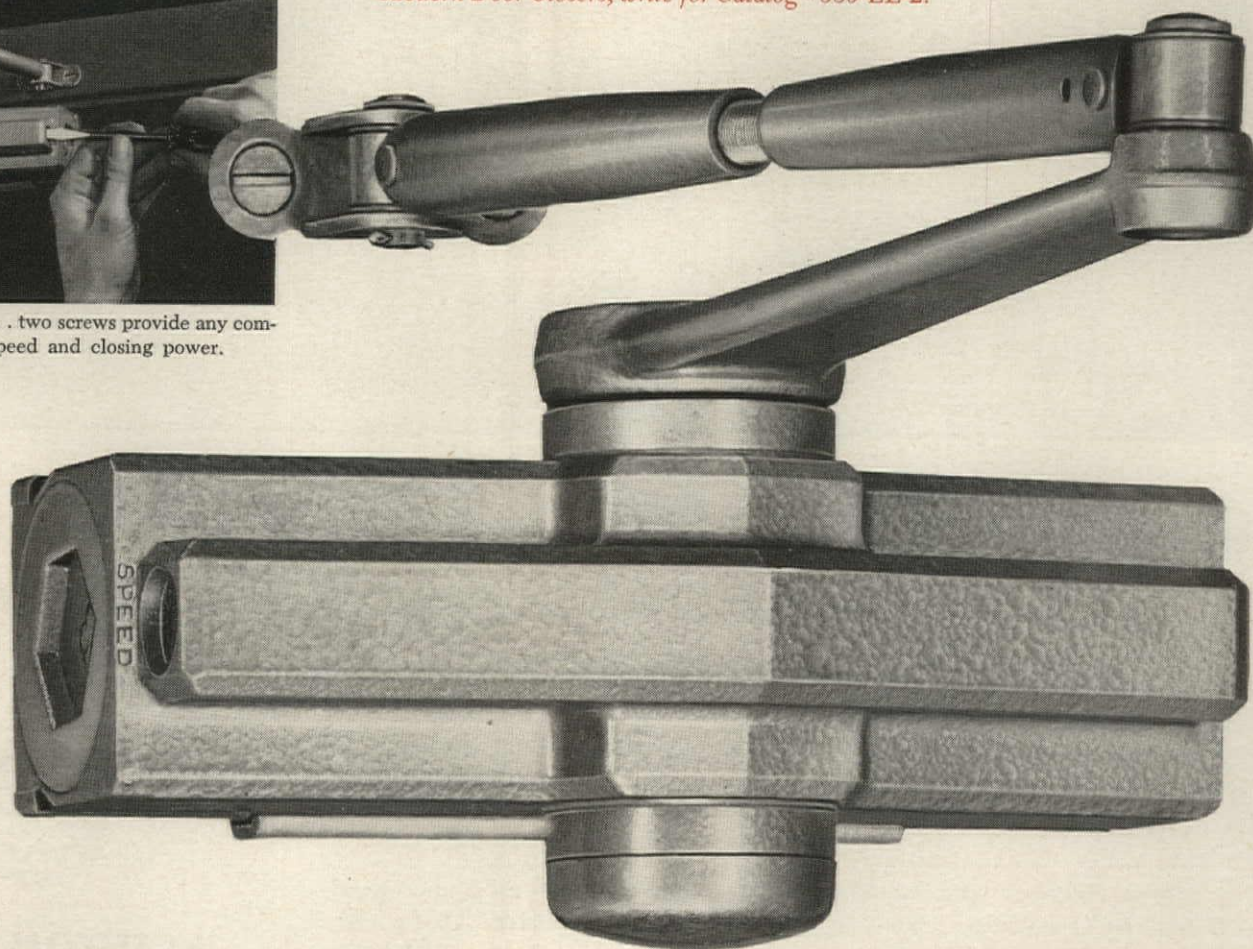


Adjustment is Simple . . . two screws provide any combination of swinging speed and closing power.

modern door closer beauty

Designed and styled to match today's architectural trends, Schlage door closers reflect the clean lines of modern interiors. For the first time, you can furnish your clients with the maintenance convenience and functional superiority of surface-type closers . . . and at the same time be assured that the appearance will complement the building design. As advanced in mechanical precision as it is in external design, the Schlage door closer provides complete control throughout the entire door swing by a full rack and pinion mechanism . . . teeth are pitched for greatest strength and are sufficient to permit 230° shaft rotation. In both appearance and function, Schlage door closers meet the building requirements of contemporary architecture.

For complete information about Schlage's Modern Door Closers, write for Catalog #680-EE-2.



SCHLAGE
LOCK COMPANY

SCHLAGE LOCK COMPANY, SAN FRANCISCO • NEW YORK • VANCOUVER, B.C. • Address all correspondence to San Francisco



Why **WEIRKOTE**[®] zinc-coated steel carries lots of weight with today's architects

Specifications like this are becoming more and more an old story to architects everywhere:

SHEET METAL WORK—
Materials—Galvanized steel. Unless otherwise specified, this shall be of 26-gauge galvanized sheet steel, of "Weirkote" with make and gauge stamped on each sheet.

And there's plenty of reason for specifying Weirkote zinc-coated steel. Inside or outside the building—in heating and ventilating ductwork, ducts for dust and fume removal, rain drainage

items; water type air coolers, other uses—Weirkote brings greater durability and corrosion resistance to sheet metal work. And the cost is low compared with other materials.

Weirkote, made by a continuous galvanizing process, has the skin-tight zinc coating that won't flake or peel despite punishing fabrication or rough handling on the job.

Free Weirkote Booklet

Send for the new Weirkote booklet today. Write Weirton Steel Company, Dept. P-7, Weirton, West Virginia.



**WEIRTON STEEL
COMPANY**

WEIRTON, WEST VIRGINIA

a division of

NATIONAL STEEL CORPORATION



Executive position open

— will pay \$100,000



These headlines probably will never appear because they aren't *quite* true. The position doesn't *pay* \$100,000, but could cost some business man that amount to fill it.

When a key man in a business dies, his place must be filled. It costs money to find and train a new man, and in the meantime, the value of the busi-

ness is diminished. So although the key man's salary was not \$100,000, the cost of his loss to the business may be more.

You can readily protect the life value of the key men in your business through Aetna Life's Business Insurance Plan. Your local representative will be pleased to give you full details.



AETNA LIFE INSURANCE COMPANY

Affiliates: The Aetna Casualty and Surety Co.
The Standard Fire Insurance Co.

Hartford 15, Connecticut

Since 1853

Why not mail the coupon for a copy of our new free booklet "Will This Man Take Your Business With Him When He Dies?" It tells how business insurance can fit your individual situation. No obligation, of course.



AETNA LIFE INSURANCE COMPANY Hartford 15, Conn.

Gentlemen:

Please send me a copy of your new booklet "Will This Man Take Your Business With Him When He Dies?"

Name

Company

Address

MM4-F

**ANOTHER MACOMBER FIRST
PRODUCES AN ALL COLD FORMED
STRUCTURE THAT IS STRONGER,**

LIGHTER,

MORE ECONOMICAL



FOR THE FIRST TIME IN THE HISTORY OF STEEL CONSTRUCTION — Macomber has made available cold formed framing members for every part of a structural frame.

**MACOMBER NOW PRODUCES
COLD FORMED**

1. **V-BOWSTRING TRUSSES**
FOR SPANS 50 TO 120 FEET
2. **V-GIRDERS**
FOR SPANS 40 TO 76 FEET
3. **V-BEAMS**
FOR SPANS 7 TO 48 FEET
4. **V-GIRTS (NAILABLE)**
FOR ANY COLUMN SPACING
5. **V-EAVE STRUTS**
FOR ANY COLUMN SPACING
6. **V-FLAT GATHERING TRUSSES**
FOR SPANS 20 TO 60 FEET
7. **V-COLUMNS**
FOR CLEAR HEIGHTS TO OVER 20 FEET

**ALL FABRICATED FROM COLD
FORMED STEEL SECTIONS
SEND FOR CATALOG**

These completely standardized framing members are ALL-INCLUSIVE. They represent advanced, improved engineering design to provide greater rigidity in a structural frame with members which are lighter and cost less.

If your organization designs or builds any type of commercial, institutional or recreational type of structures, the undisputed economy of the bowstring truss now places a new value on this Macomber achievement.

You will want the new V-BOWSTRING TRUSS CATALOG as close as your desk drawer to check loads and spans and a quotation through your nearest Macomber Representative.

See what 30 years of advanced structural engineering has done to lower construction costs and produce a better structural frame.



STANDARDIZED STEEL BUILDING PRODUCTS

MACOMBER INCORPORATED

CANTON 1, OHIO

• ENGINEERING • FABRICATING AND ERECTING •

NAILABLE
V-BEAMS
V-GIRDERS
V-BOWSTRING
TRUSSES
METAL DECK
V-LOK STEEL
FRAMING
STEEL JOISTS



You are cordially invited

...to come visit us and see
our complete line of distinctive
Air Conditioning Outlets

TITUS EXHIBIT

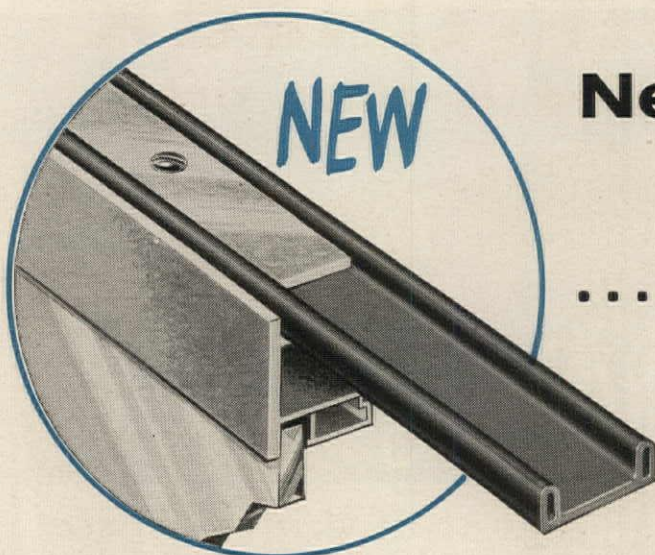
Booths No. 117 and 121

INTERNATIONAL HEATING & AIR
CONDITIONING EXPOSITION

Feb. 25-Mar. 1, 1957
INTERNATIONAL AMPHITHEATRE,
CHICAGO

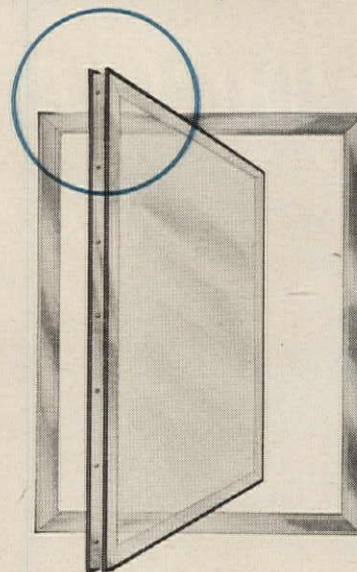
Titus
MFG. CORP.

TITUS MANUFACTURING CORPORATION • WATERLOO, IOWA

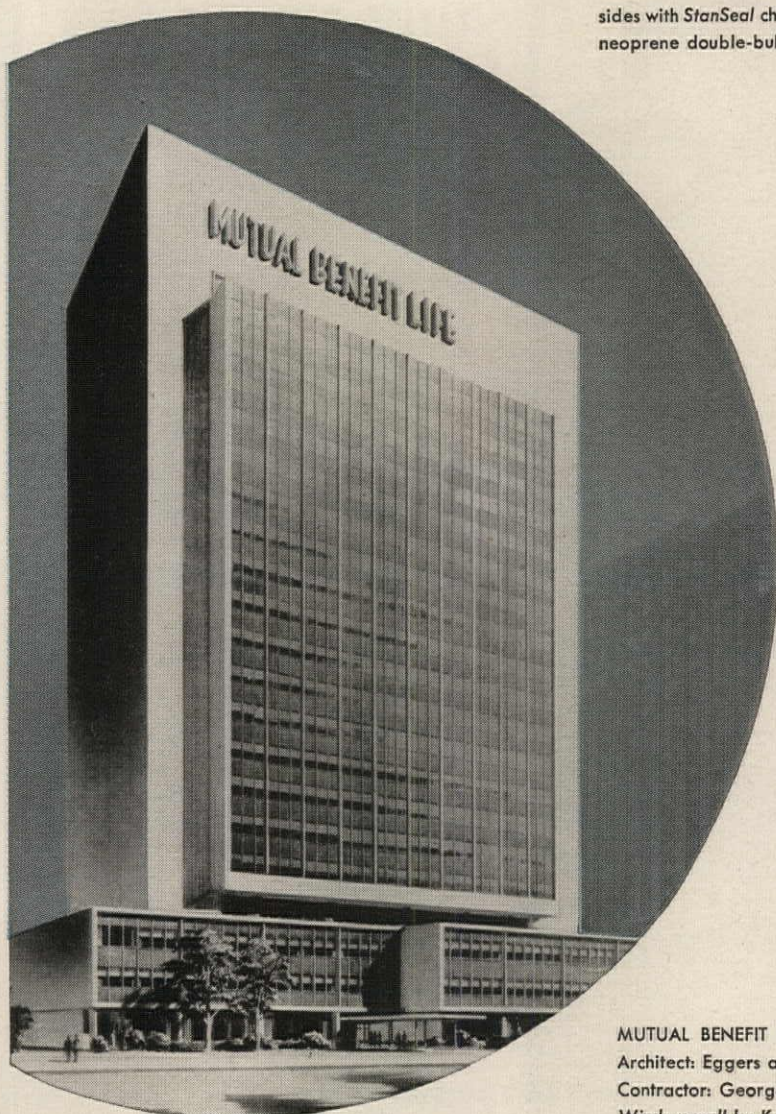


Neoprene StanSeal Weatherstrip

... the seal of a better pivoted window



Sectional view of Kawneer
360° full pivot window ...
weathersealed on all four
sides with StanSeal chlorinated
neoprene double-bulb strip.



One of the features that must be incorporated into a pivoted window is a good seal around the perimeter against air infiltration and exfiltration. Designed as it is for 360° rotation, the seal must be flexible, have long life, and at the same time surface friction must be reduced to a minimum.

To accomplish these features for The Kawneer Company, and other window manufacturers, our Laboratory developed a chlorinated neoprene called StanSeal.

StanSeal is flexible and at the same time reduces surface friction to allow for greater ease of operation. It is a long-life material, and has withstood wind tests far in excess of minimum standard requirements.

Our *proper* chlorinating process is the secret of StanSeal's superiority. Our know-how can help you with your weathering problems. For this assistance, write to us at the address below.

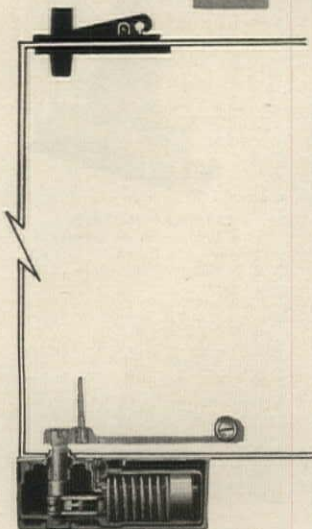
Also ask for our catalog illustrating DraftTite wool pile weatherstripping.

MUTUAL BENEFIT LIFE INSURANCE CO. • NEWARK, NEW JERSEY
Architect: Eggers and Higgins
Contractor: George A. Fuller Co.
Window wall by Kawneer ... Weatherstripping by Standard



The Standard Products Co.

BUILDING PRODUCTS DIVISION, P. O. Box 678, Lexington, Ky.
STANDARD PRODUCTS (CANADA) LIMITED, WINDSOR, CANADA

RIXSON**DUO • CHECK**
concealed • in • floor closers**2****WAY** safe control for
double acting interior doors

Push the door either way—the return to closed position is gentle and quiet, making two-way door traffic safer and more rapid. RIXSON Duo-checks are especially desirable for doors where busy people pass through with loaded arms . . . carrying trays, pushing wheeled carts, etc. Where specified, a hold-open is built in that automatically holds the door

when pushed open to 90° on either the right or left swing or both. A gentle push or pull releases the hold-open.

completely invisible . . . RIXSON Duo-checks are concealed in the rigid floor. The door is pivotal hung with no unsightly arm, mechanism or hinges exposed to gather dust or dirt.

ideal for *hospital doors leading to utility and supply rooms; cafeteria and kitchen doors leading to dining areas; all double acting light interior doors. Write for descriptive literature and templates.*

THE OSCAR C. RIXSON CO.

9100 west belmont ave. • franklin park, ill.

43 racine road • rexdale, ontario

New construction . . .



or modernization



Modine AIRditioners are the quiet, fingertip answer to year-round comfort

Successfully combining the most desirable features of *central* and *unit type systems*, Modine AIRditioners have earned wide acceptance among architects, engineers and contractors. Whether it's a new or remodelling job, these men like the individual room control — with the economy of operating from a central boiler and chiller. Slow-speed, resiliently mounted fans provide extra-quiet year-round comfort. And, like all Modine products, AIRditioners are designed and built to meet highest appearance and mechanical standards.

Ask the Modine representative listed in your classified phone book for Bulletin 755 — or write Modine Mfg. Co., 1507 DeKoven Ave., Racine, Wisconsin. A-1336



Modine

Airditioners®

In Canada: Sarco, Ltd., Toronto



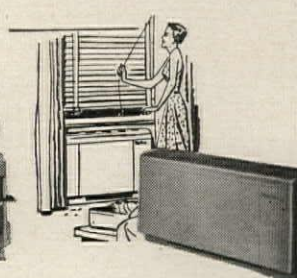
CEILING MODELS
deluxe units for exposed overhead installation. Save floor and wall space.



OVERHEAD MODELS
available with or without plenum and filters for use in furred overhead space.



CONCEALED MODELS
(front panel cut away). Designed for easy, in-the-wall installation below windows.



CONSOLE MODELS
free-standing units can also be recessed so only 6 inches of cabinet shows.



How high is a counter?



In the fountain and counter food service fields, counters come high—in importance. Their height—and width and contour—importantly affects worker efficiency, customer pleasure and owner's costs.

Maybe you know how high, in inches, a food service counter should be, but

Bastian-Blessing's experience—the result of more than 40 years of manufacturing fountains and counter food service equipment, planning installations and checking operation—is available to help you plan all or any part of a job in this field.

Specs, catalogs and technical plans are

available . . . or we will work with you . . . or you can turn the whole job over to us for planning, installation and final inspection. The Bastian-Blessing Co., 4205 W. Peterson Ave., Chicago 30, Ill.

See Our Catalog Insert 24c/Ba
in Sweet's Architectural File.

BASTIAN-BLESSING

World's largest manufacturer of fountains and counter food service equipment

2 *famous names*



ROMANY

...the complete line of ceramic floor and
wall tile. Same high quality, same uniformity
of color, even better service. For greater
owner satisfaction specify Romany • Spartan tile.

become one...

• SPARTAN

ROMANY



SPARTAN

*Member of Tile Council of America
and The Producers' Council, Inc.*

UNITED STATES CERAMIC TILE COMPANY • THE SPARTA CERAMIC COMPANY • CANTON 2, OHIO



**STATLER HILTON HOTEL
DALLAS, TEXAS**

OWNER:
Hilton Hotels Corp., New York, N. Y.

ARCHITECT:
William B. Tabler, New York, N. Y.

GENERAL CONTRACTOR:
Robert E. McKee, Dallas, Texas

ROOFING CONTRACTOR:
The Lydick Roofing Co., Dallas, Texas

On the new Dallas Statler Hilton Hotel...

A RUBEROID BUILT-UP ROOF

Engineered to the job!

The Statler Hilton is the newest member of the family of fine Hilton hotels... and a striking, colorful addition to the fast-growing Texas skyline. On top of the Statler Hilton—63,000 square feet of Ruberoid Built-Up Roofings!

Here is an excellent example of the versatility of Ruberoid Built-Up Roofings in solving varied problems. The design of the Statler Hilton called for three separate roofs:

1. **A UNIQUE HELIPORT DECK** — Ruberoid specification #206 — Coal Tar Pitch and Tarred Felt overlaid with promenade tile — was selected to provide a roof that would stand up under rugged service conditions.
2. **COURT AND LOWER ROOF AREAS** — These areas, visible to hotel guests, required roofing that

would harmonize with the over-all appearance of the hotel exterior. Ruberoid Specification #203A —Special Roofing Bitumen with green mineral surfacing was selected.

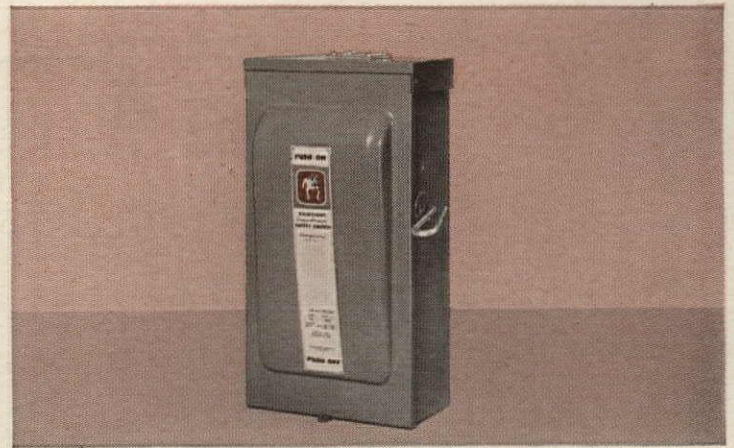
3. **HIGH SUPERSTRUCTURE AREAS** — Here, Ruberoid Specification #203—Coal Tar Pitch and Tarred Felt with gravel surfacing—was selected for its economy and proven record of long, trouble-free service.

No matter what *your* built-up roofing problem, there's a Ruberoid specification that will give you the answer. They're all explained in detail in the Ruberoid Built-Up Roofing Specification Book. It's your guide to the best in any type of built-up roofing. For more information write: The Ruberoid Co., 500 Fifth Avenue, New York 36, N. Y.



The **RUBEROID** Co.

Asphalt and Asbestos Building Materials



Raintight Clampmatic Vacu-Break—a fusible or nonfusible switch completely weather-proof. Ratings from 30 to 200 amps.



Junior Clampmatic Vacu-Break—a high-quality, fusible, general-purpose switch. Ratings range from 30 to 600 amps.

◀ **Master Clampmatic Vacu-Break**—unequaled for quality, dependability and performance. A fusible or nonfusible heavy-duty disconnect for applications up to 1200 amps.

Clampmatic Vacu-Break Safety Switches provide 3 safety firsts

Three exclusive *safety firsts* are the mark of *all* Bulldog switches. They assure top efficiency and performance . . . bring extra protection and longer life.

Vacu-Break® arc control, for one, smothers arcs instantly . . . minimizes burning and pitting. Unique Clampmatic® action provides *bolt-tight* contact pressure. And the dependable Bulldog switch mechanism guarantees positive switching.

In every way—for any application, one of Bulldog's big 3 safety switches will meet your exact requirements. *And with less maintenance.* A Bulldog field engineer, electrical contractor or distributor can give you all the facts or, write Bulldog direct.
© BEPCO

Bulldog Electric Products Company, Detroit 32, Michigan • A Division of I-T-E Circuit Breaker Company • Export Division: 13 East 40th St., New York 16, N.Y. In Canada: Bulldog Electric Products Co. (Canada), Limited, 80 Clayson Rd., Toronto 15, Ontario.

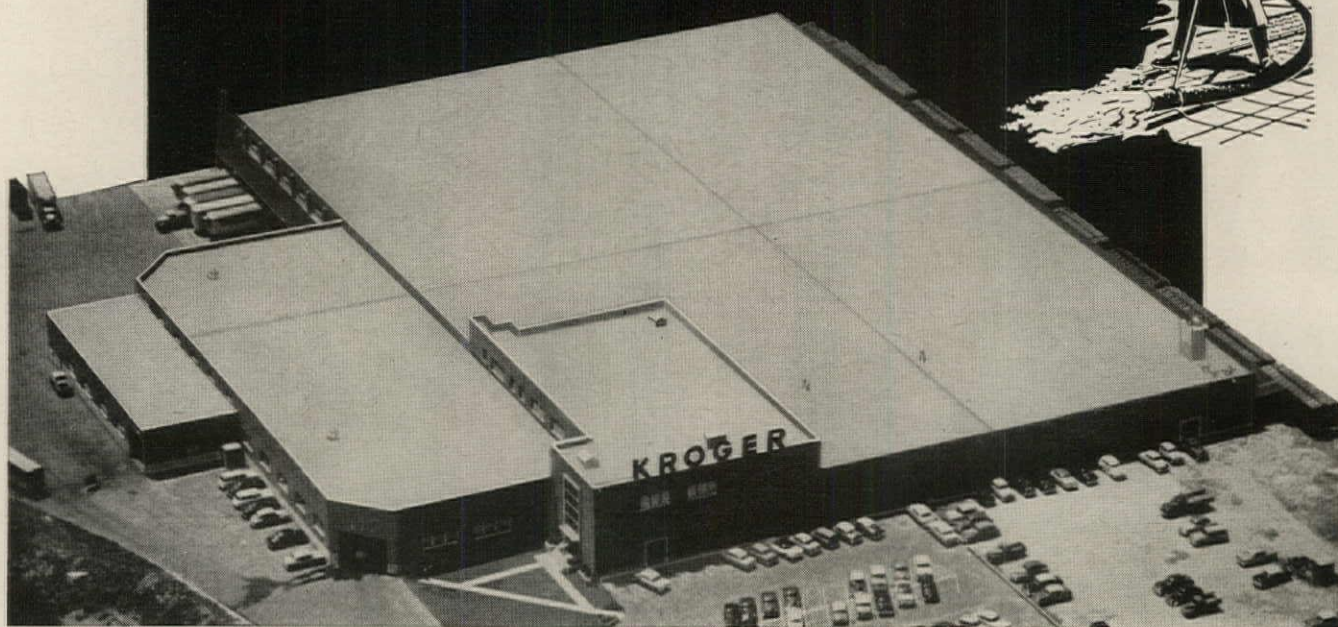


IF IT'S NEW . . . IF IT'S DIFFERENT . . . IF IT'S BETTER . . . IT'S

BULLDOG

ELECTRIC PRODUCTS COMPANY

8 million pounds of food protected by Gold Bond "Firefighter" Roof Deck!



KROGER WAREHOUSE, Charleston, West Virginia; **General Contractor**: Rust Engineering Co., Pittsburgh, Penna.; **Roof Deck Applicator**: Hoge-Warren-Zimmerman Co., Cincinnati, Ohio.

The new Kroger Warehouse in Charleston, West Virginia, holds enough solid food to feed a city the size of Denver for a week. A Gold Bond "Firefighter" Gypsum Roof Deck protects this valuable supply from fire.

Over 153,000 sq. ft. of incombustible gypsum roof deck forms a natural fire shield over the entire building structure. Gypsum cannot burn and will not warp or transmit high temperatures when exposed to heat and flame.

Gold Bond® "Firefighter" Roof Decks are poured-in-place. Construction is fast...as much as

30,000 sq. ft. of gypsum can be poured in a single day.

These decks, installed by approved contractors, take full load capacity in less than an hour because of quick setting action. Whether you design a pitched, barreled or flat roof, "Firefighter" Roof Decks are completely adaptable. Their low dead load permits lighter supporting structures and allows substantial construction savings.

Learn how "Firefighter®" Roof Decks can help you in your building plans. Send in coupon below for full details. National Gypsum Company, Dept. AF-27, Buffalo 2, New York.

Gold Bond
BUILDING PRODUCTS

"FIREFIGHTER" GYPSUM ROOF DECK

NATIONAL GYPSUM COMPANY

NATIONAL GYPSUM COMPANY, Dept. AF-27

Gentlemen: Send me Technical Bulletin No. 589 with complete details on "Firefighter" Roof Decks.

Name

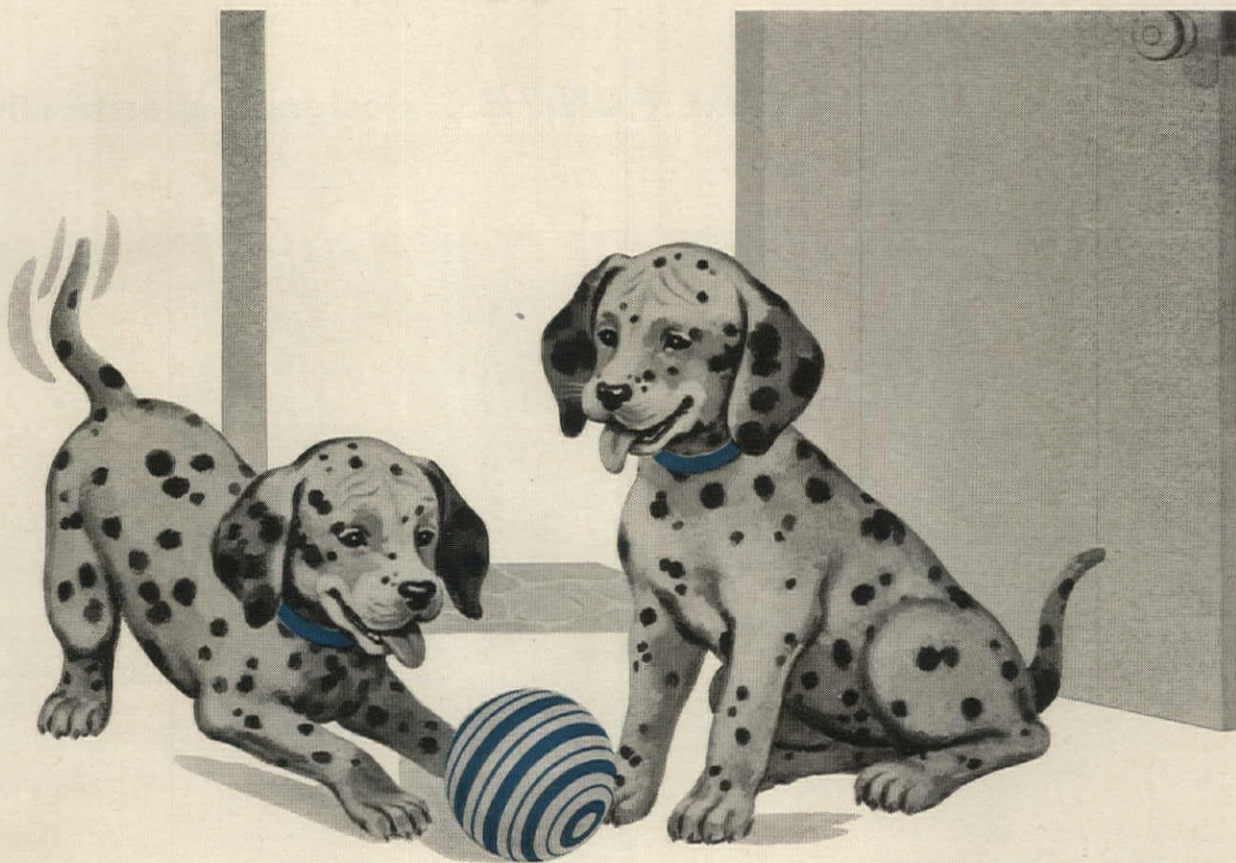
Address

City

County

Zone

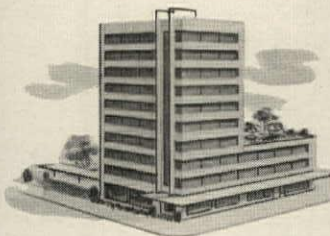
State



matched mates you should know!

Standardization has produced *perfect matching* in USF Metal Doors and Frames. Hang one or 1000—they're all alike and interchangeable. Unlike "hand-mades"—these doors and frames are engineered to the most exacting standards in the industry and produced on precision tooling. You can profit by custom-appearance with production-line economies and save costly man-hours on the job site.

USF
STANDARDIZED
METAL DOORS AND FRAMES



*fit each other
fit modern building materials
fit finest surroundings*



UNITED STEEL FABRICATORS, INC.
WOOSTER, OHIO

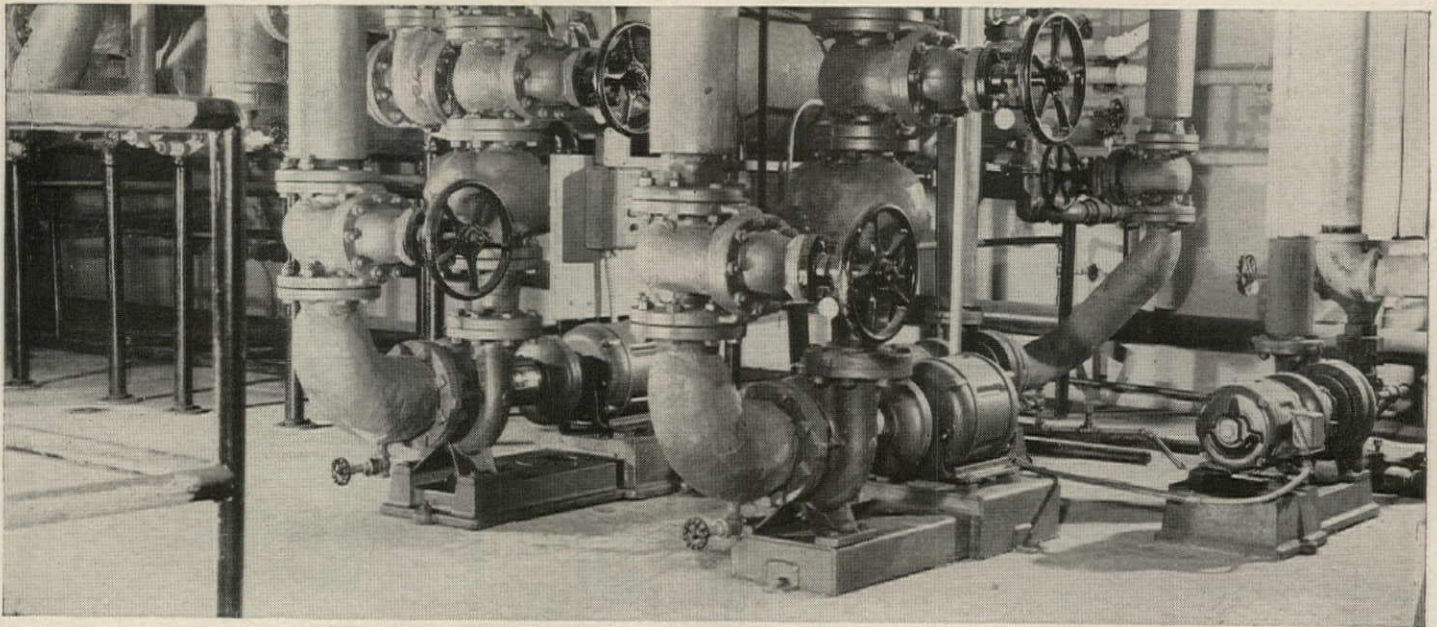


Write:
for complete bulletin
of details, sizes,
fire ratings.

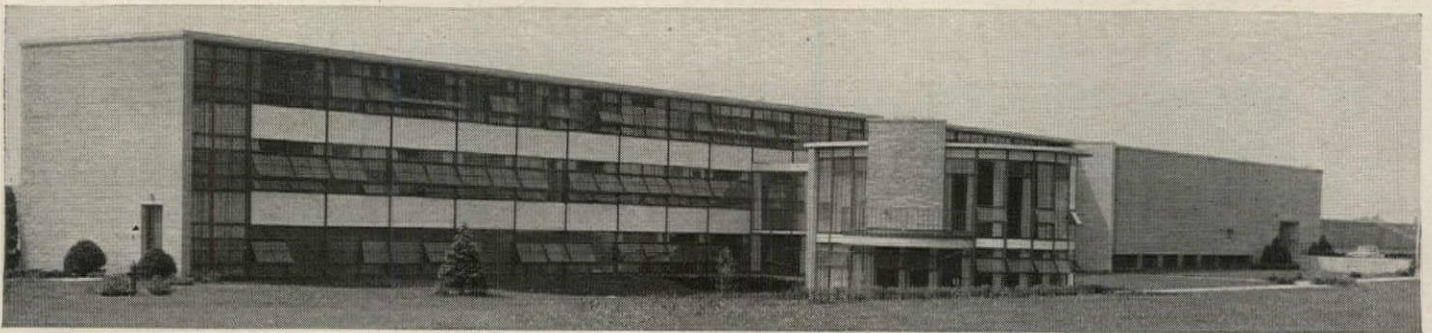


AMERICA'S FIRST MANUFACTURER OF STANDARDIZED METAL DOORS AND FRAMES

B & G UNIVERSAL PUMPS... designed specifically for



Battery of silent B&G Universal Pumps circulating a two-pipe, reverse return hot water heating system.



Notre Dame High School, Niles, Ill., is heated with unit ventilators and radiant panels, supplied by B&G Universal Pumps.



The National Home Office of the Allstate Insurance Company, equipped with B&G Universal Pumps.



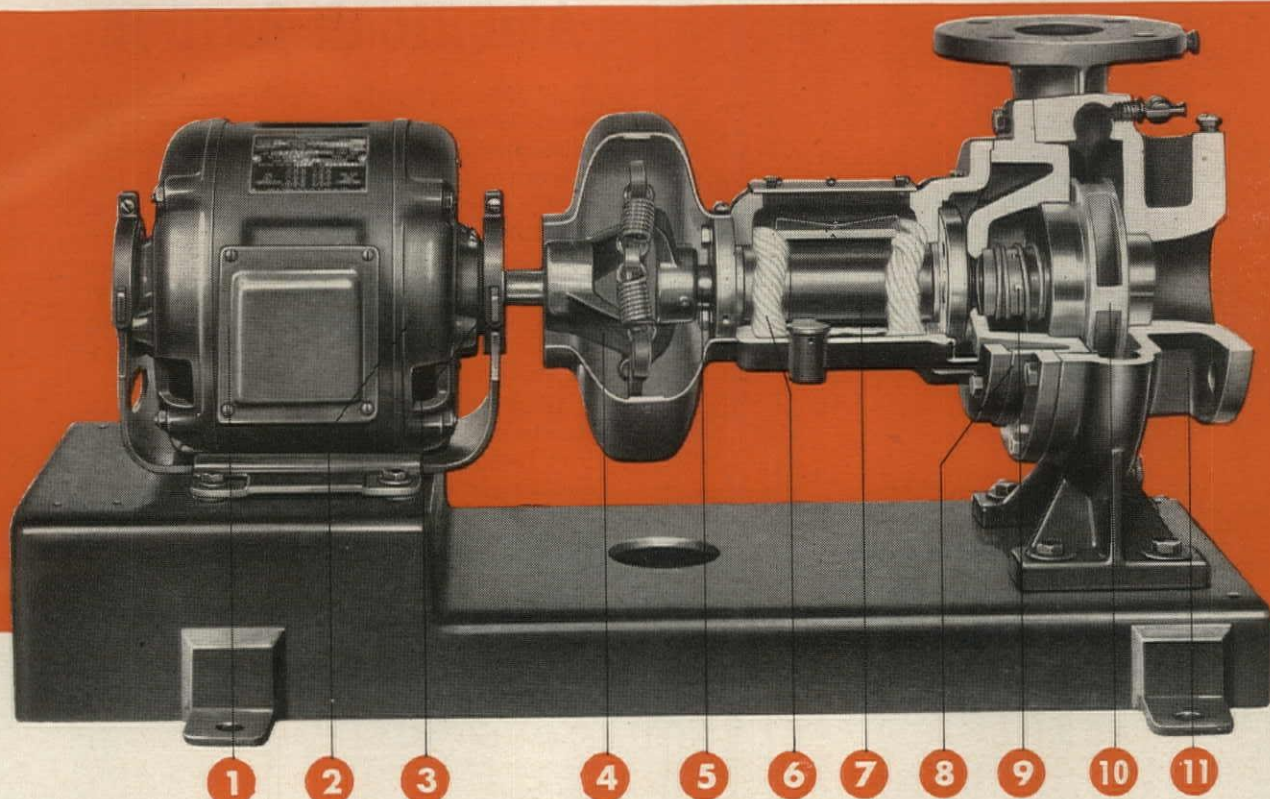
A B&G Universal Pump is installed here to raise city water pressure.



These multi-story apartment buildings depend on B&G Universal Pumps for quiet operation.

Quiet Operation

in liquid Heating and Cooling systems



For forced hot water heating systems where noise control is a factor, a circulating pump must have more than mere ability to meet head and capacity requirements. *Silent and vibrationless operation must be given first consideration!*

Below are eleven reasons why the B&G Universal Pump fully satisfies these operating demands. No vibration eliminators or flexible connections to the piping are needed—no special rubber, spring or resilient bases.

THE MOTOR

1. **Extra quiet...non-overloading.** B&G Universal Motors are specially constructed, selected and stamped for *extra-quiet* operation. They are non-overloading—a Universal Pump will operate satisfactorily along its entire capacity curve.
2. **Sleeve bearings.** Universal Motors are equipped with oil lubricated sleeve bearings for silent performance and long life.
3. **Mounting.** For extra assurance of noiseless operation, Universal Motors, through 5 HP, are NEMA ring-type mounted and completely suspended in rubber. All motors are drip-proof.

THE PUMP

4. **Spring-type coupler.** Another warranty of silent operation. Provides excellent pump and motor protection against the strain of starting torque.
5. **Shaft.** The Universal shaft is *oversized*—affording large bearing surfaces. Made of hardened, special alloy steel, polished to a mirror finish. The integral thrust collar absorbs end-thrust—lengthens seal and motor bearing life.
6. **Lubrication.** Universal pumps use an oil lubricating system. No grease to channel with resulting bearing failure. Oil level indicator permits visual check.
7. **Sleeve bearings.** A “must” for quiet, vibrationless operation and long life of both pump and motor. An exclusive Universal feature!
8. **Removable bearing frame!** To service pump, the entire bearing frame assembly with impeller is easily removed from volute. No pipe connections to break or motor to remove—all the advantages of split case design. Bearing frame assemblies are interchangeable.
9. **Mechanical seal.** This time-proved Seal positively prevents water leakage up to full design pressures. The Seal is self lubricating and features a floating seat of “Remite”—a diamond-hard, highly polished ceramic material developed by B&G.
10. **Hydraulically balanced impeller.** Balancing chamber and thrust pressure relief holes in the impeller reduce thrust to a minimum, lengthening pump life.
11. **Solid type volute.** Support feet directly below volute absorb ever-present piping strains without distorting pump alignment.



BELL & GOSSETT

C O M P A N Y

Dept. ER-62, Morton Grove, Illinois

Canadian Licensee: S. A. Armstrong, Ltd., 1400 O'Connor Drive, W. Toronto

Another **Big Office Building**

by

AMERICAN BRIDGE

This imposing 30-story steel-frame structure is the latest New York office building to be fabricated and erected by American Bridge. Known as 425 Park Avenue, it fronts 201 feet on the avenue, 146 feet on Fifty-fifth Street and 132 feet on Fifty-sixth Street.

Approximately 5,900 tons of structural steel went into its framework. Field connections were made with high strength bolts, regular bolts and welding—which held construction noises to a minimum.

Working in crowded areas like this is routine to American Bridge. From the old Flat-iron Building in 1901, to the Empire State Building in 1930, to the Socony Mobil Building in 1956, American Bridge has become more and more dexterous in handling big jobs in big cities.

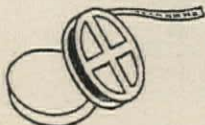
The experience thus acquired over the past fifty-five years qualifies American Bridge to handle any type of structural steelwork with skill and speed. For more information concerning our ability to help you with your construction problems, contact the nearest office, or write direct to our Pittsburgh headquarters.

AMERICAN BRIDGE DIVISION, UNITED STATES STEEL CORPORATION
GENERAL OFFICES, 525 WILLIAM PENN PLACE, PITTSBURGH, PA.
Contracting Offices in: AMBRIDGE • ATLANTA • BALTIMORE • BIRMINGHAM
BOSTON • CHICAGO • CINCINNATI • CLEVELAND • DALLAS • DETROIT • DENVER
ELMIRA • GARY • HOUSTON • LOS ANGELES • MEMPHIS • MINNEAPOLIS • NEW YORK
ORANGE, TEXAS • PHILADELPHIA • PITTSBURGH • PORTLAND, ORE. • ROANOKE
ST. LOUIS • SAN FRANCISCO • TRENTON
UNITED STATES STEEL EXPORT COMPANY, NEW YORK

The
425 Park Avenue
Building
Manhattan, New York City

Designed by
Kahn and Jacobs, Architects, and
Charles Mayer, Engineer

General Contractor
George A. Fuller Company

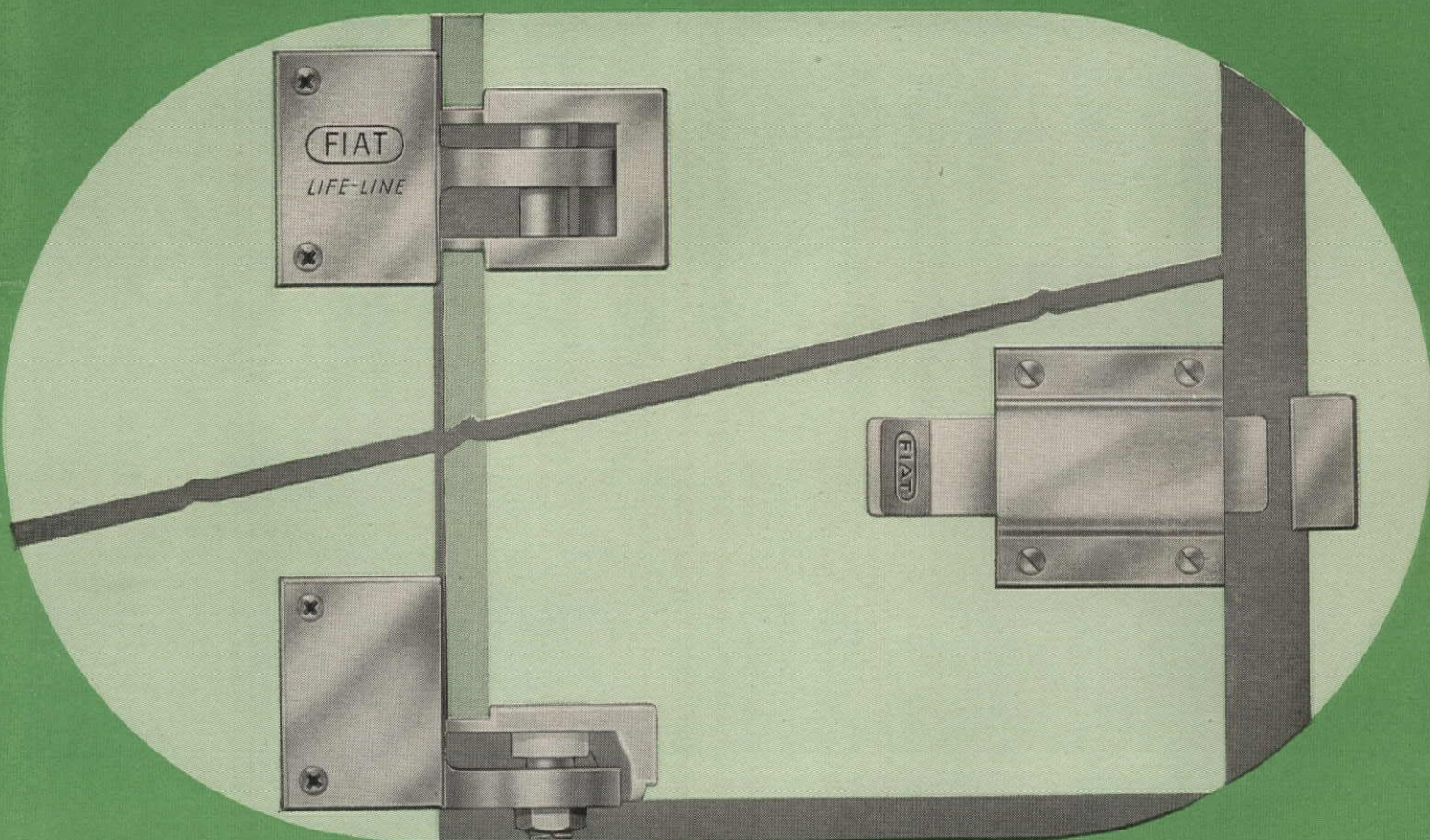


INTERESTING MOTION PICTURES AVAILABLE—"Building for the Nations" and "The Suspension Bridge," two entertaining and educational films, are now available without charge to business, fraternal and civic organizations, churches, schools and colleges. Write to Pittsburgh office for bookings.



U N I T E D S T A T E S S T E E L

Only **FIAT** TOILET COMPARTMENTS have **LIFE-LINE*** Hardware



made to outlast the life of the installation!

New LIFE-LINE TOP HINGE

"Zytel"**, the wonder nylon resin developed by DuPont, is the bearing surface for the stainless steel pintle of this new top hinge. Absolutely will not corrode... simply can't wear out... always operates smoothly and quietly.

New LIFE-LINE SLIDE BOLT

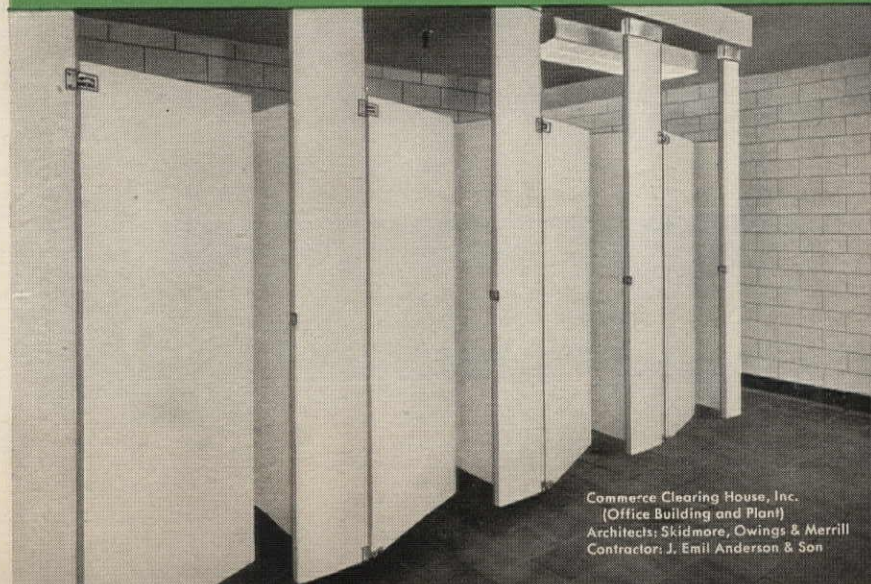
The simplicity of the ingenious FIAT slide bolt and keeper-bumper conforms to the smooth, modern "years ahead" design typical of the entire FIAT compartment line. Easy operating, extra strong for years of service.

New LIFE-LINE GRAVITY HINGE

Here is a true gravity hinge that has a complete load bearing and cam action surface of Zytel nylon. Concealed entirely in the door... no springs to replace—no undersized ball bearings to wear out—no periodic adjustments to make—no lubrication required.

* FIAT Trade Mark

** DuPont Trade Mark



Commerce Clearing House, Inc.
(Office Building and Plant)
Architects: Skidmore, Owings & Merrill
Contractor: J. Emil Anderson & Son

GET THE COMPLETE STORY! Send for new, colorful catalog that will help you plan all your toilet room installations.

FIAT METAL MFG. COMPANY • 9319 Belmont Ave. • Franklin Park, Illinois

- ☐ Please send me new, fully illustrated catalog #570
☐ Please have your representative call.

Firm _____

Address _____

City _____ Zone _____ State _____

Individual _____

FOUR COMPLETE PLANTS STRATEGICALLY LOCATED FOR BETTER SERVICE, LOWER COST

Long Island City 1, N. Y. • Franklin Park, Ill. • Los Angeles 63, Calif. • Orillia, Ontario, Canada

Manufacturing Quality Showers and Compartments since 1922



CLASSROOM-LABORATORY BUILDING, NORTHEASTERN UNIVERSITY, BOSTON, MASS.

Architect: Shepley, Bulfinch, Richardson & Abbott

Contractor: John A. Volpe Construction Co., Inc.

HOPE'S CUSTOM STEEL WINDOWS

were chosen for this classroom-laboratory building at Northeastern University in Boston, Mass. It contains 110,000 square feet of floor space and incorporates 42 classrooms, 8 laboratories, 12 offices and 5 conference rooms. Hope's Steel Windows were used to form vertical glass bays extending from the first floor to the top. Awning type ventilators provide comfortable and healthful air circulation while providing maximum protection from inclement weather. Abundant natural light is admitted making all working areas cheerful and restful.

More and more throughout the country Hope's Windows are being used in finer buildings because of their greater strength, rigidity and weather-tightness and because of their design flexibility that fits any architectural style.

When next you have a building in the planning stage, why not investigate Hope's Windows? Full information and planning assistance are always available without obligation. In the meantime, write for Catalog 152 AF or see Sweet's Architectural File.

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

THE FINEST BUILDINGS THROUGHOUT THE WORLD ARE FITTED WITH HOPE'S WINDOWS



Rust-Oleum is distinctive as your own fingerprint. Accept no substitute.



... goes on faster, stops rust, lasts longer over rust!

ONE MAN often does the work of two!

EASIER TO USE—because Rust-Oleum 769 Damp-Proof Red Primer goes over rusted metal after scraping and wirebrushing to remove rust scale and loose rust—usually eliminating costly surface preparations. ***Stops Rust***—because Rust-Oleum's specially-processed fish oil vehicle *penetrates* rust to bare metal—driving out air and moisture that cause rust.

LASTS LONGER applied over rust—and teamed up with Rust-Oleum's many attractive finish coatings, assures lasting beauty. Try Rust-Oleum on *your* tanks, metal sash, machinery, wire fences, stacks, girders—or around *your* home. Prompt delivery from Industrial Distributor stocks. Write for illustrated literature with color charts showing colors and applications.

RUST-OLEUM CORPORATION • 2459 Oakton Street • Evanston, Illinois

RUST-OLEUM®



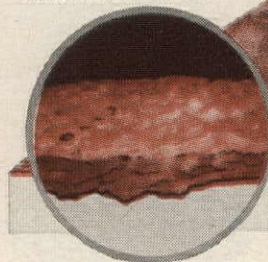
30% GREATER COVERAGE— MANY ATTRACTIVE COLORS

Rust-Oleum covers up to 30% more area, depending upon surface condition and porosity. And you can beautify as you protect with Rust-Oleum finish coatings in Aluminum, White, Red, Gray, Green, Blue, Yellow, Black, etc.

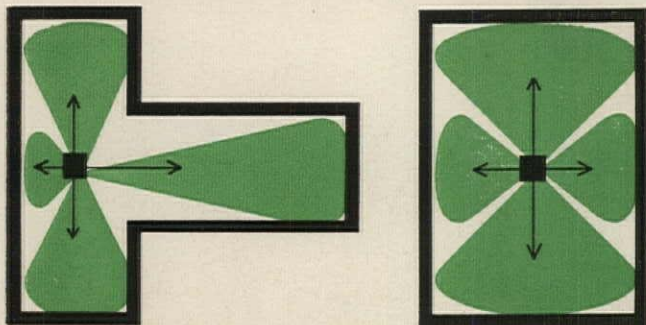
STOPS RUST!®

Rust-Oleum and Stops Rust are brand names and registered trademarks of the Rust-Oleum Corporation.

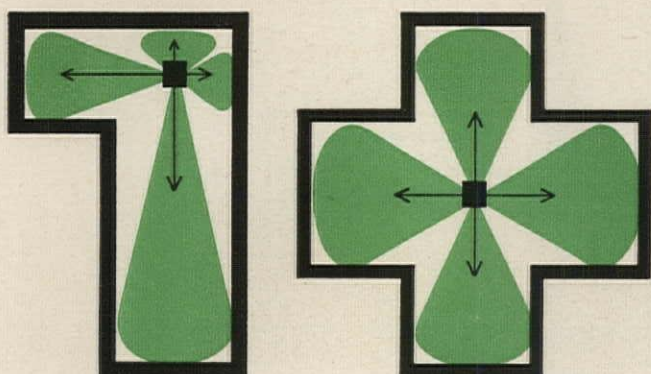
Write for special report showing Rust-Oleum penetration to bare metal.



How one "Clover Leaf"



does the work



of two or more
conventional heaters



Just one of Carrier's exclusive "Clover Leaf" Unit Heaters with variable 4-way air distribution effectively heats up to 8000 square feet of floor area. Carrier's greater, more flexible coverage means fewer units are needed, resulting in impressive savings in first cost, installation and upkeep. For steam or hot water, in 8 sizes: 55,000 to 600,000 Btu/hr.

For a complete catalog on the "Clover Leaf," call your Carrier manufacturer's agent. Look in the Classified Telephone Book under "Heaters—Unit." Or write Carrier Corporation, Dept. UH, Syracuse, New York.

Complete Line of Unit Heaters. Over 50 years' leadership in temperature control! Carrier knows heating!



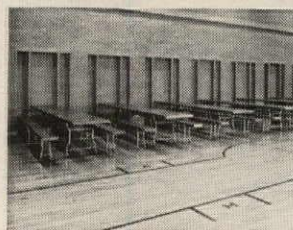
industrial heating • air conditioning • refrigeration

SPECIFY QUALITY WITHOUT MENTIONING THE WORD

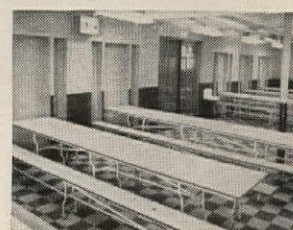
Schieber introduced folding table and bench equipment 26 years ago and today, thousands of schools, plants and institutions are equipped with the company's products. There is a model for each application to meet restricted budgets by making space serve double duty—Each model built to high Schieber standards and fully guaranteed up to 10 years.

SERVICE TO ARCHITECTS

We will furnish on request, complete specifications and detail drawings on all models. Our representatives are completely qualified to consult with you on applications, make recommendations and quote prices.



PUBLIC SCHOOL, S. W. Haynes
& Assoc., Inc., Architects



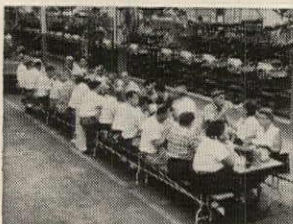
PAROCHIAL SCHOOL, J. Gerald
Phelan, Architect



COMMUNITY HOUSE, Edward A.
Schilling, Architect



FIRE STATION, Jahr-Anderson
Assoc., Inc., Architects



LARGE PLANT



SMALL PLANT



Detroit 39, Michigan

Representatives in all areas U.S. and Canada



ladies with mops have 4 dimensions

Einstein proved that time is the 4th dimension, a fact which architects have known all along. It's a vital measurement to consider in regard to maintenance . . . a prime dimension in flooring. Multiply yards of MATICO flooring in high traffic areas by a cleaning woman's time and you come up with a client-satisfying answer. Soil-resistant MATICO cleans faster, preserves its fine color styling for years. You're right in every dimension when you specify MATICO tile for important projects.



MASTIC TILE CORPORATION OF AMERICA
Houston, Tex. • Joliet, Ill. • Long Beach, Calif. • Newburgh, N. Y.

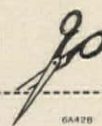
Aristoflex • Confetti • Parquetry • Maticork • Asphalt Tile
Rubber Tile • Vinyl Tile • Cork Tile • Plastic Wall Tile



**MAIL
COUPON
TODAY**

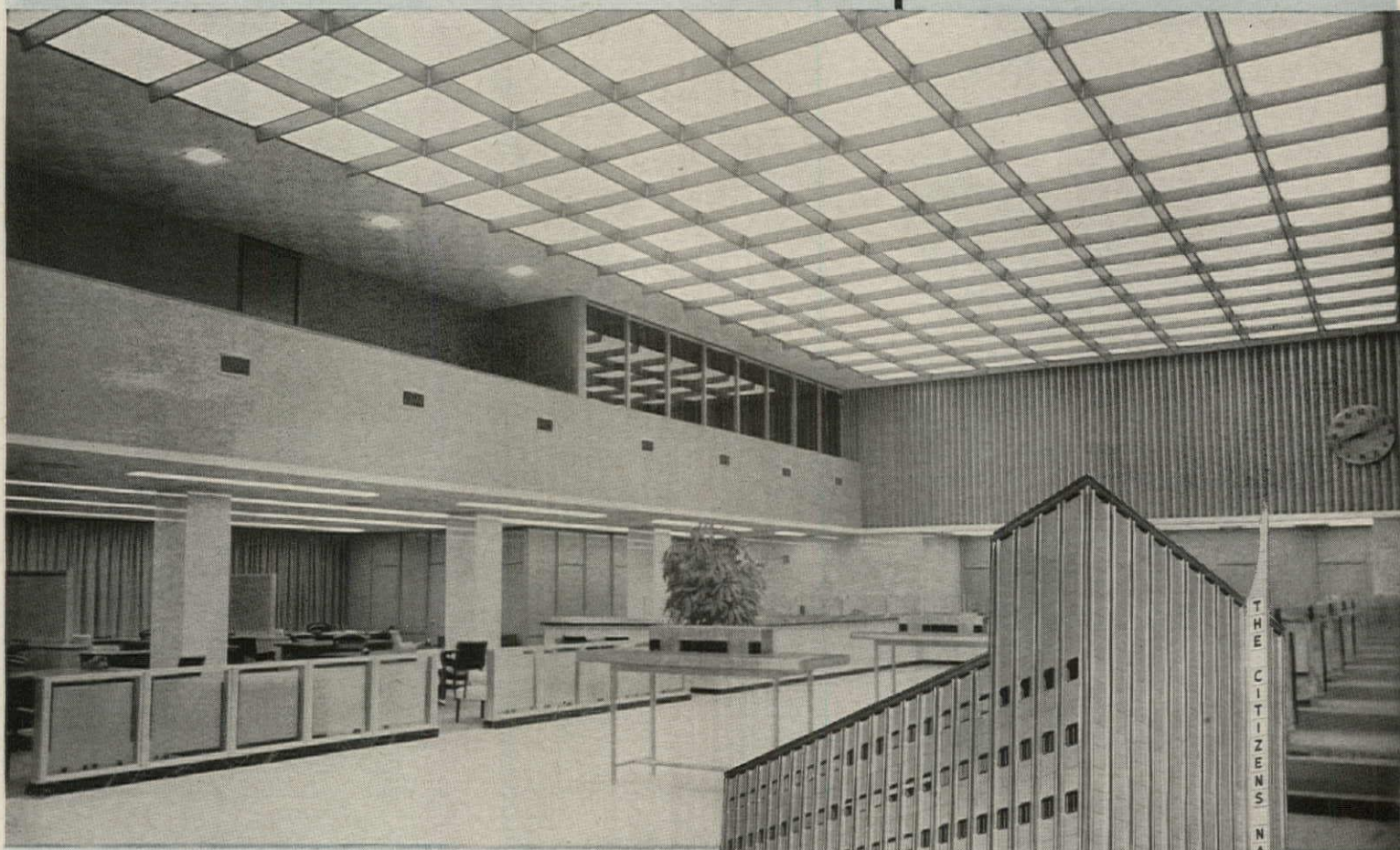
MASTIC TILE CORP. OF AMERICA, Dept. 6-2, Box 986, Newburgh, New York
Please send me free samples and full details about MATICO Tile Flooring.

Name Address City Zone State



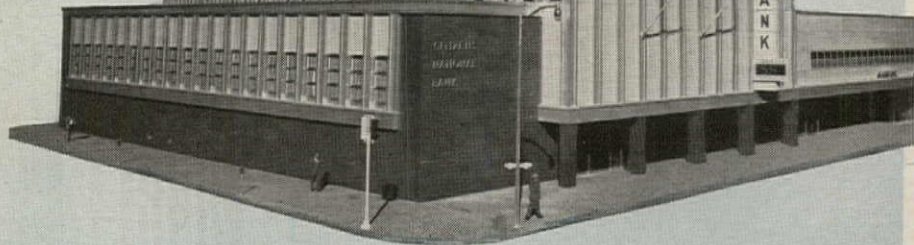
**Skylights
with domes**

formed from PLEXIGLAS
provide efficient,
balanced daylighting.
Covington Elementary
School, Launenburg, N.C.
Architect: Leslie Boney.



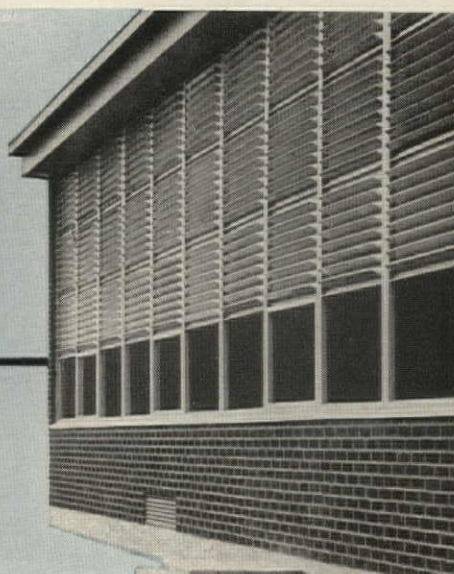
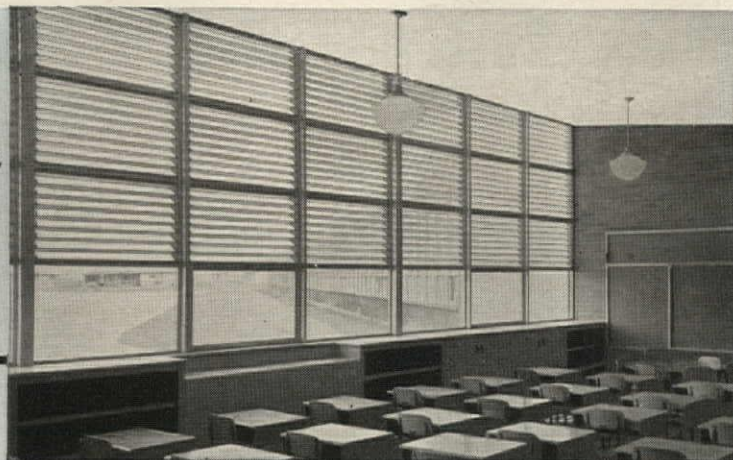
PLEXIGLAS diffusers

provide high-level illumination with low surface
brightness in the main banking area, and a
105-ft. high internally-lighted sign with
PLEXIGLAS letters and corrugated background
gives dramatic exterior identification.
Citizens National Bank, Abilene, Texas.
Architect: George Dahl.



Daylight Louver Panels

formed from PLEXIGLAS,
for light transmission,
daylight control,
and weather closure in
one continuous surface.
McKinley School,
Boise, Idaho. Architect:
Anton E. Dropping.



PLEXIGLAS

The Architectural Plastic

... for lighting ... signs ... skylights ... daylight-control glazing

It is the outstanding *combination of properties* obtained with PLEXIGLAS® acrylic plastic that accounts for the specification of this material for so many light-transmitting applications. PLEXIGLAS is—

Formable economically into domes, pans, spandrels, louvered panels, letters, sign faces, and corrugated sections.

Resistant to age, weather, sun and corrosion.

Strong, yet light in weight.

Efficient in the transmission and diffusion of light.

Clear, in transparent form, as optical glass.

The coupon below will bring you color samples and the names of sources of supply for building products and signs that incorporate PLEXIGLAS.



Chemicals for Industry

**ROHM & HAAS
COMPANY**

WASHINGTON SQUARE, PHILADELPHIA 5, PA.

Representatives in principal foreign countries

Canadian Distributor: Crystal Glass & Plastics, Ltd.,
130 Queen's Quay at Jarvis Street, Toronto, Ontario, Canada.

ROHM & HAAS COMPANY
Washington Square
Philadelphia 5, Pa.

Please send PLEXIGLAS color samples and the names of suppliers of:

- | | |
|---|--|
| <input type="checkbox"/> Lighting equipment | <input type="checkbox"/> Dome skylights |
| <input type="checkbox"/> Daylight Louver Panels | <input type="checkbox"/> Signs and letters |

Name _____

Firm _____

Address _____

City _____ Zone _____ State _____

(P7-5)

back of every **RLM**-Labeled Unit are **1,000 Words of Specifications**

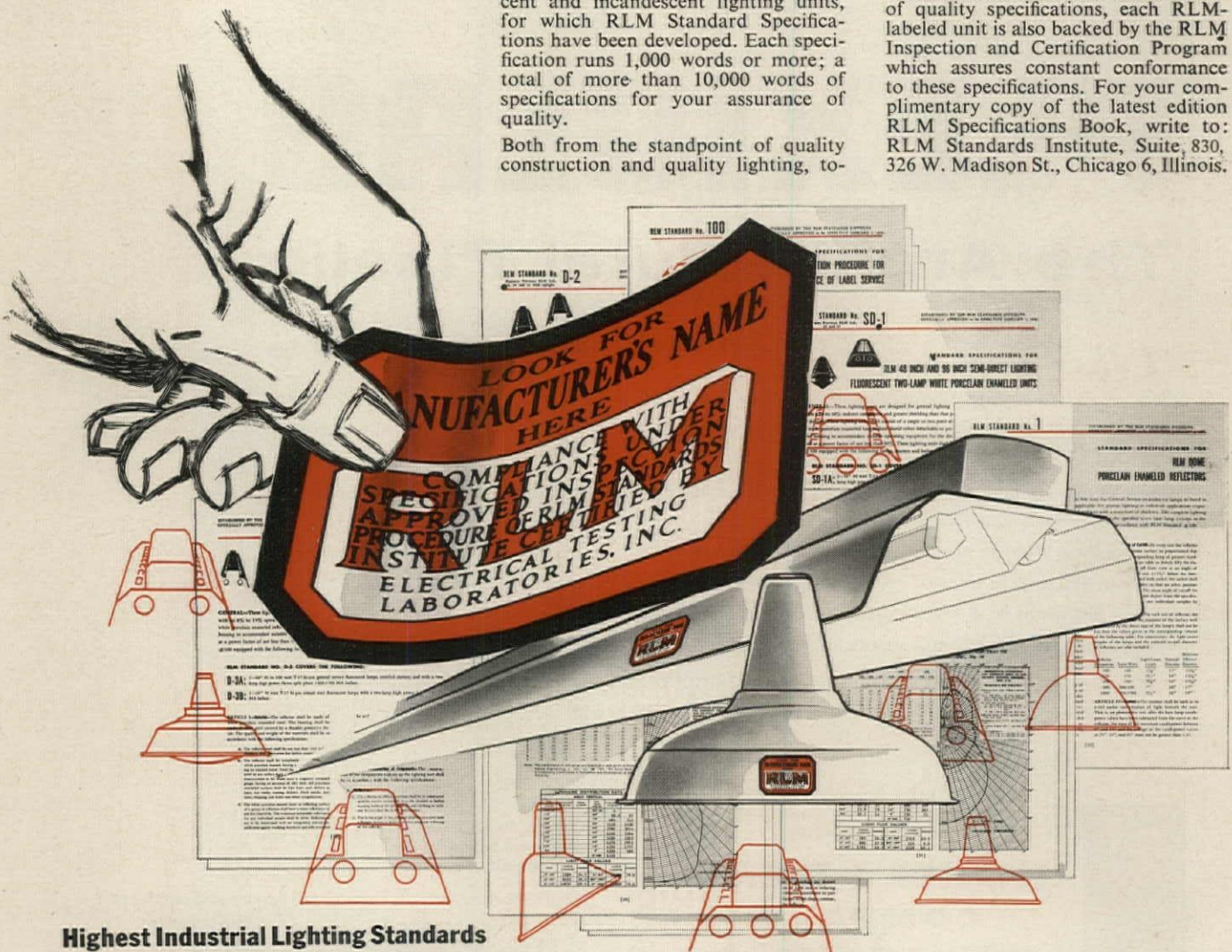
covering highest Industrial Lighting Standards in RLM History

Back of every RLM-labeled lighting unit is the assurance of over a thousand words of quality specifications. Each word is in accord with the basic, nationally-accepted minimum standards for industrial lighting equipment efficiency, design and performance. In all, there are 10 types of industrial fluorescent and incandescent lighting units, for which RLM Standard Specifications have been developed. Each specification runs 1,000 words or more; a total of more than 10,000 words of specifications for your assurance of quality.

Both from the standpoint of quality construction and quality lighting, to-

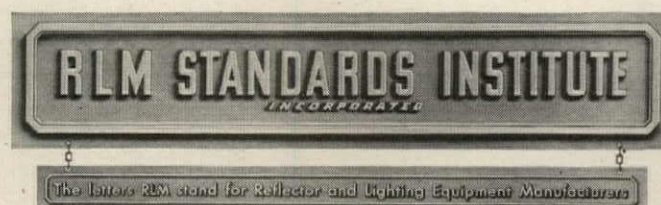
day's RLM Specifications are the highest in history! The new RLM SD-1 standard for increased upward light, for example, calls for a fluorescent lighting unit with a 20% to 30% upward component to assure an important advancement in seeing comfort.

In addition to over a thousand words of quality specifications, each RLM-labeled unit is also backed by the RLM Inspection and Certification Program which assures constant conformance to these specifications. For your complimentary copy of the latest edition RLM Specifications Book, write to: RLM Standards Institute, Suite 830, 326 W. Madison St., Chicago 6, Illinois.



Highest Industrial Lighting Standards in RLM History feature:

- Higher light output • Lower-cost installation
- Better protection against glare
- More seeing comfort • Easier re-lamping
- Increased brightness control
- Reduction of light loss
- Safety from electrical hazards
- Protection against rust and corrosion



A NEW DEPARTURE

FORUM:

WITH YOUR JANUARY ISSUE YOU HAVE GIVEN ARCHITECTURE A NEW DEPARTURE. YOU HAVE BROADENED DEBATE FOR A UNIFIED ORGANIC CONCEPT OF THE INTEGRITY OF HUMAN, SOCIAL AND STRUCTURAL FORCES WHICH ARE CAPABLE OF BRINGING ABOUT ECONOMIC ACTION BASED ON POLITICAL FORESIGHT. SUCH INTEGRITY COULD USHER IN AMERICA'S TRUE POTENTIAL: BEING FIRST AMONG EQUALS IN THE QUEST FOR A NEW HABITAT. DON'T LOSE THIS HIGH EDITORIAL PLATEAU. CONGRATULATIONS.

OSKAR STONOROV, architect
Philadelphia, Pa.

LAND MARKET

Forum:

I have read in your December issue about the St. Louis redevelopment project and note the bid of \$1.56 per sq. ft. for 6.6 acres in a fairly prominent part of the city.

The October issue of FORTUNE cited the value of "prime land for office buildings in this [Wall Street, N.Y.] area is selling as high as \$300 per sq. ft."

Maybe we should not compare St. Louis with New York, nor Market St. with Wall St., but really is there that much difference in value between two locations?

JOHN C. STEVENS, president
Clarksdale, King & Anderson Co.
Real estate investment
Clarksdale, Miss.

P.S. Comparable property in Clarksdale recently sold for \$3.50 per sq. ft.

Questions such as this have prompted FORUM to begin this month a series of articles on the changing market for land in the US.—ED.

KUDOS

Forum:

The articles on shopping centers in the December FORUM are among the most interesting and informative that I have come across. I enjoyed them and shall profit by them.

ROBERT C. GOODMAN, vice president
Goodman-Segar-Hogan, realtors
Norfolk, Va.

Forum:

Your article on "Who Does What in Urban Renewal" (AF, Nov. '56) has attracted a good deal of interest among our members who are vitally interested in attacking the problem of urban redevelopment in this area.

ROBERT L. McHALE
Scranton Chamber of Commerce
Scranton 1, Pa.

Forum:

The "Lesson from England" by Antony Part (AF, Oct. '56) certainly does the best job of spelling good school atmosphere I have seen. By showing how England has provided imaginative landscaping and art while simultaneously cutting costs, you have given his words even greater importance.

DAVID G. MURRAY, architect
Tulsa, Okla.

Incidentally, Antony Part is Under Secretary of the British Ministry of Education, not Secretary as indicated in the October article.—ED.

ACCOUNTING FOR SCHOOLS

Forum:

I have read with a great deal of interest the article in the October FORUM on school costs. It will be a real service to education and to all people interested in educational buildings to develop an evaluation method of comparing school buildings. Equating educational adequacy and environment along with unit costs, quality of construction and maintenance factors is indeed a challenging problem for us to consider.

I hope that FORUM will implement the recommendations of the first conference on this subject and form an advisory council to develop research methods which can be distilled down to a relatively simple procedure for determining comparative school costs.

JAY C. VAN NUYS, architect
Somerville, N.J.

Forum:

We are very glad to see that thought is being given to this matter, as we have run into the problems outlined many times. The facilities provided within a school in relation to the pupil load and the educational program play a tremendous part in affecting costs.

Congratulations on bringing this subject to the fore!

R. N. THORSHOV
Thorshov & Cerny Inc., architects and engineers
Minneapolis, Minn.

HANDLE WITH CARE

Forum:

Congratulations on your excellent story on the problems of using glass for building walls (AF, Dec. '56). It contained such pertinent information that we would appreciate 50 reprints.

The vacuum lifters have helped to lower

continued on p. 85

New STRUCTURAL FLEXIBILITY

for Store Interiors

Vizupoles®

... with quick-lock brackets and accessories, lend greater freedom and imagination to practical store design. Available with temporary spring tension or semi-permanent mounting flanges. For complete illustrated manual showing dozens of interesting uses — clip coupon below and mail today.



MERCHANDISE PRESENTATIONS



DISPLAY EFFECTS



FREE STANDING PARTITIONS

LA DARLING COMPANY

Main Office Bronson, Michigan
NEW YORK CHICAGO LOS ANGELES
47 W. 34th St. 222 W. Adams St. 1828 S. Flower St.
Cameron McIndoo, Ltd., 490 Adelaide St. W., Toronto 2B, Ontario

L. A. DARLING COMPANY

Bronson, Michigan Dept. 4

Send complete information on Vizupoles.

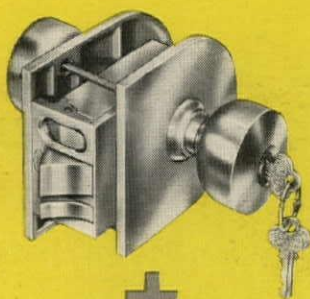
Name _____

Company _____

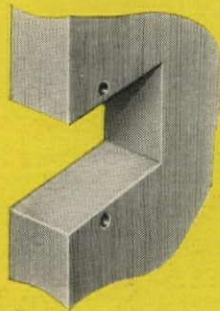
Address _____

City _____ State _____

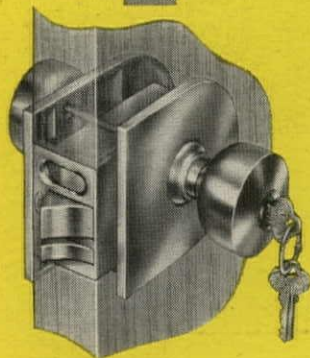
Send data on new Workwall Movable Partitioning



+



=



THE LOCKS THAT COME

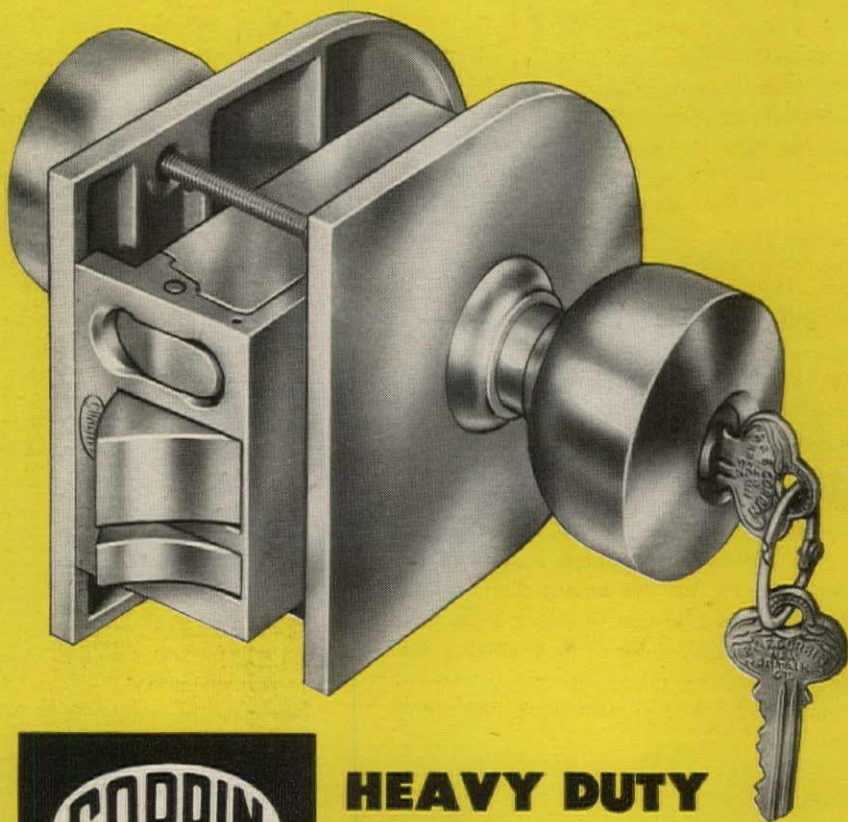
PRACTICALLY "PRE-INSTALLED"!

CORBIN UNIT LOCKS

Completely assembled and aligned on a rugged one-piece "chassis" at the factory, Corbin Unit Locks provide simpler and more fool-proof installation than any other type of lock. Only simple notching of the door and two bolt holes are required . . . and the lock can be slipped into place as a unit, without mortising or further adjustment.

That's why Corbin Unit Locks are specified for so many outstanding new buildings of all types. Richly designed . . . with the solidity and fine finish that unmistakably say "quality" . . . they not only complement the architect's creative conceptions, but also minimize installation costs, eliminate maintenance, and thus insure enduring trouble-free operation.

Ask your dealer for full details of these finer locks for heavy-duty service. Also consult him for other selections from Corbin's complete line . . . *the world's most widely used builders' hardware.*



CONSTRUCTION FEATURES

Corbin Unit Lock designs are available in cast brass, bronze or aluminum metals in all popular finishes. Internal parts are of long-wearing nonferrous metal or zinc-plated dichromated steel. Lock frames are extruded brass. And the famous Corbin master ring cylinder provides unusually flexible keying and maximum protection at the same time. Approved by Underwriters' Laboratories for all Class B label doors.



**HEAVY DUTY
UNIT LOCKS**



P & F CORBIN Division
The American Hardware Corporation
New Britain, Connecticut

Letters

cont'd

the "in place" cost of large glass; when factory-to-site problems are also overcome by more efficient mechanical handling devices, the future for glass use in building walls will be unlimited.

STANLEY E. ARONOFF, vice president
Southern Place Glass Co.
Baltimore, Md.

POST MORTEM

Forum:

Your article on hospitals (AF, Nov. '56) shows two features of operating rooms which I consider architectural errors. They concern surgeons more than architects, but are felt by surgeons only after the hospital is built and when it is too late to correct them easily.

► The only person in an operating room who must watch a clock is the anesthetist. Surgeons are no longer properly "clock watchers." Speed is no longer important; concentration upon the task at hand and careful dissection and hemostasis now distinguish a good surgeon, not speed. Therefore the wall clock in an operating room always should be on the wall *opposite* the anesthetist's place, not behind or to the side of him.

► X-ray view boxes should be as close to the entrance of the operating room as possible to make it unnecessary for X-ray technicians to walk through the room. There is no point considering the relation of the view box location to the surgeon's place, as he has to go away from the operative field anyway to see the films (in order to see details he may have to come as close as reading range), and it matters little where he has to walk to view them.

Better even than placing the view box close to the door would be to place it on the outside of a window, accessible from the hall; doing this would make it unnecessary for X-ray technicians to enter the operating room for showing films. It also would obviate the necessity of observing rules on explosion hazards in switches, etc., on such view boxes placed outside the operating room and separated from it by a window pane. It may be well to suspend them on hinges so one can place the films easily and then swing the view box with the film in place so the film is parallel to the window pane.

HEINRICH LAMM, M.D.
La Feria, Tex.

THE GREAT DEBATE

Forum:

As a representative of a distinctly different media of the American press, I was greatly interested in reading newspaper reports this week of a debate held in St.

continued on p. 86

IT PAYS TO HAVE GOOD CONNECTIONS



LANKENAU HOSPITAL
Philadelphia, Pennsylvania
ARCHITECT
Vincent G. Kling
ELECTRICAL CONTRACTOR
Harry F. Ortlip Co.
CONSULTING ENGINEER
A. Ernest D'Ambly
HUBBELL SUPPLIER
Graybar Electric Co.





Cat. No.
9595
15 amp.
125 volt

Pleasing Appearance • Rugged Construction
Functional Convenience • Long-Term Security

These are the attributes that contributed to an A.I.A. first honor award in hospital architecture for the Lankenau Hospital, above. The same attributes make Hubbell specification-grade wiring devices the choice of architects and consulting engineers throughout the Country.

At left, Hubbell Specification-Grade Duplex Convenience Outlet, one of the many quality devices installed in the hospital... a 100% Hubbell, quality wiring device installation.

HARVEY HUBBELL, INC.

BRIDGEPORT 2, CONNECTICUT

QUALITY WIRING DEVICES

FACTORY WAREHOUSE
LOCATIONS ASSURE
NATIONWIDE STOCK
AVAILABILITY

Bridgeport 2, Connecticut
State and Bostwick Streets
Chicago 7, Illinois
37 South Sangamon Street
Los Angeles 12, California
103 North Santa Fe Avenue
San Francisco, California
1675 Hudson Avenue
Dallas 7, Texas
1111 Dragon Street

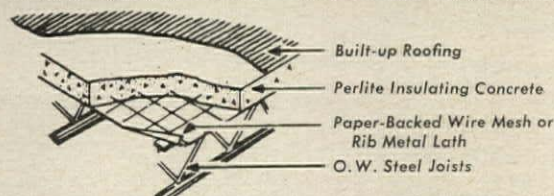
PERLITE

... the 2-in-1 solution
to these design problems



COMBINE

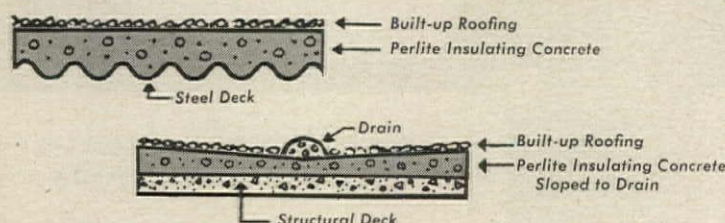
fireproofing and interior finish with
perlite-gypsum plaster



Mix Ratio	Weight pcf	Compressive Strength, psi	U-Value 2 1/2" slab & roofing
1:4	36	440	0.214
1:6	27	180	0.175

COMBINE

roof deck and fire-safe insulation
with perlite insulating concrete



COMBINE

lightweight fill and insulation with
perlite insulating concrete

Perlite -
the
WHITE
aggregate

PERLITE PLASTER offers the lightest, thinnest, most economical fireproofing for 2-, 3- and 4-hour protection of structural steel framing, floor and roof decks.

PERLITE CONCRETE insulation adapts to any roof—curved, flat, pitched—and can't rot, burn or spread fire. No other insulation is needed. Specify it over formboards, metal decks, structural concrete, ribbed metal lath or paperbacked wire mesh.

Write for "Fireproofing with Perlite" and design data for perlite concrete and plaster.

PERLITE INSTITUTE 45 West 45th Street, New York 36, N. Y.

Letters

cont'd

Louis between Frank Lloyd Wright and William Zeckendorf on the subject of the American city. I recall with pleasure that FORUM (Aug '56) covered their first clash.

Since the Wright-Zeckendorf debates, if they continue, will do for architecture what the Lincoln-Douglas debates did for American politics, your readers may be interested in having a memento of their historical inception. Reprints of the complete text of *The American Forum* debate on "The Future of the American City" can be obtained by sending 10¢ to Ransdell Inc., Printers & Publishers, 810 Rhode Island Ave., Washington 18, D.C.

LEONARD ZWEIG, associate producer
The American Forum of the Air
Washington, D.C.

URBAN RENEWAL

Forum:

We read with great interest your article in the October issue, "How to Get Renewal Off Dead Center." It is indeed a fine statement of what can be done by citizens and government working in cooperation. Madison has recently organized a metropolitan government committee to look into many of the same problems which affect our urban areas.

WALTER K. JOHNSON, planning director
Plan Commission
Madison Wis.

ERRATUM

■ FORUM regrets that Weed, Russell & Johnson were not credited as the architects of the National Airlines hangar at Miami in its December issue.—ED.

ARCHITECTURAL FORUM is published monthly by TIME INC., Time & Life building, 9 Rockefeller Plaza, New York 20, N. Y.

SUBSCRIPTION DATA: Sold to architects, engineers and other individuals or firms engaged in building—design, construction, finance, realty; material distribution, production or manufacture; government agencies and supervisory employees; commercial and industrial organizations with a building program and their executives; teachers and students of architecture and engineering; libraries, professional clubs, society and trade associations connected with the building industry; advertisers and publishers; US, possessions and Canada, \$5.50; elsewhere, \$10.00. Single copies, if available, \$1.

SUBSCRIPTION CORRESPONDENCE should be addressed to ARCHITECTURAL FORUM, 540 N. Michigan Ave., Chicago 11, Ill. When ordering change of address, please name the magazine and furnish an address label from a recent wrapper envelope, or state exactly how the magazine is addressed. Both the old and the new address are required. Allow four weeks for the change.

EDITORIAL CORRESPONDENCE should be addressed to ARCHITECTURAL FORUM, 9 Rockefeller Plaza, New York 20, N. Y. FORUM will not be responsible for unsolicited manuscripts or illustrations submitted, and it will not return such material unless accompanied by postage.

ADVERTISING CORRESPONDENCE should be addressed to the advertising director, ARCHITECTURAL FORUM, 9 Rockefeller Plaza, New York 20, N. Y.

TIME INC. also publishes TIME, LIFE, FORTUNE, SPORTS ILLUSTRATED and HOUSE & HOME. Chairman, Maurice T. Moore; President, Roy E. Larsen; Executive Vice President for Publishing, Howard Black; Executive Vice President and Treasurer, Charles L. Stillman; Vice President and Secretary, D. W. Brumbaugh; Vice Presidents, Bernard Barnes, Allen Grover, Andrew Heiskell, C. D. Jackson, J. Edward King, James A. Linen, Ralph Delahaye Paine Jr., P. I. Prentice; Comptroller and Assistant Secretary, Arnold W. Carlson.

An announcement of interest to architects, builders and specifiers

KENTILE, INC., to re-name all of its floor tile products

To conform with established architectural practice in specification writing, and for quicker and simpler identification, the names of all Kentile, Inc., floor tiles will now carry the Kentile name plus the material description as follows:

FORMER NAME	NEW NAME
KENTILE	KENTILE asphalt tile
KENRUBBER	KENTILE rubber tile
KENCORK	KENTILE cork tile
KENFLEX	KENTILE vinyl asbestos tile
KENROYAL	KENTILE solid vinyl tile
KENFLOR	KENTILE cushion-back vinyl tile

Effective in March, all Kentile, Inc., national advertising will feature these new names.

We at Kentile hope that this simplification will prove to be of assistance to you in selecting the proper flooring in your future specifications.

KENTILE, INC., Brooklyn 15, N. Y. • 350 Fifth Avenue,
N. Y. 1, N. Y. • 3 Penn Center Plaza, Philadelphia 2, Pa. • 1211 NBC
Building, Cleveland 14, Ohio • 900 Peachtree Street, N. E., Atlanta 9,
Georgia • 1016 Central Street, Kansas City 5, Missouri • 4532 So. Kolin
Avenue, Chicago 32, Illinois • 4501 Santa Fe Avenue, Los Angeles 58, Cal.

SPECIFY
BESTWALL®
 GLASS-FIBERED
 PLASTER

—JOB-TESTED AND
 PROVEN SUPERIOR!



We have designated all of our fibered plaster to be glass-fibered, since our men all say that it handles easier under the trowel and keeps a more uniform surface, while the tenders don't have trouble with the fibers collecting on the blades of the mixer.

Hurd & Simmons,
 Waterloo, Iowa

Bestwall Glass-Fibered Plaster—a revolutionary new concept in plaster—has won enthusiastic acceptance from plasterers in the field.

Job-tested on buildings throughout the Middle West, Bestwall has clearly established its points of superiority over ordinary plasters fibered with sisal or hemp:

- Its filaments of Fiberglas* weigh only 1/150 to 1/200 as much yet are as strong on an equal basis as many steels
- It contains 30 to 40 times as many fibers
- Its glass fibers are cut to uniform, controlled length, as contrasted with the random 1/4 to 4 and 5-inch lengths of sisal or hemp fibers
- It's faster, smoother, cleaner and more economical to work with on the job

Bestwall has excellent spreading and darbying properties. There are no long fibers to foul up mixer blades or build up on box, hoe or hod. There is no balling of fibers on walls to require backtracking and smoothing. There are fewer plaster droppings. The even distribution of uniform fibers in Bestwall provides better keying on both metal and perforated gypsum lath—insures a better base for the finish coat. Bestwall dries strong, hard and highly resistant to impact and cracking.

With all its fine-quality characteristics, and the savings it makes possible on the job, Bestwall Glass-Fibered Plaster costs no more than other fibered plasters. Here is an efficient, economical, base-coat plaster which eliminates the need for specifying extra-fibered or double-extra-fibered plasters on any job. For complete specification details, contact the Bestwall Certain-teed Sales Office nearest you.

*Trademark OCF Corp.

Our experience with this material which was used on metal lath and clay tile was entirely satisfactory. The glass-fibered plaster applied smoother than manila-fibered plaster. There were no balls or clumps of fiber in the plaster. It rodded and darbied better than manila-fibered.

Stanley J. Sleichert,
 Chicago, Ill.

This is to commend you on your fine new product, glass-fibered plaster. After having used several hundred bags of your glass-fibered plaster in lieu of manila-fibered plaster, we have noted several qualities about it that are definite advantages to the plastering industry.

Lee Bros. Contractors,
 St. Louis, Mo.



FIREPROOF GYPSUM
BESTWALL®
 BUILDING PRODUCTS

Manufactured by Bestwall Gypsum Company—sold through

BESTWALL CERTAIN-TEED SALES CORPORATION

120 East Lancaster Avenue, Ardmore, Pa.

EXPORT DEPARTMENT: 100 East 42nd St., New York 17, N.Y.

SALES OFFICES:

ATLANTA, GA.
 CHICAGO, ILL.
 CHICAGO HTS., ILL.
 CLEVELAND, OHIO

DALLAS, TEXAS
 DES MOINES, IOWA
 DETROIT, MICH.
 EAST ST. LOUIS, ILL.

JACKSON, MISS.
 KANSAS CITY, MO.
 MINNEAPOLIS, MINN.
 NIAGARA FALLS, N.Y.

WILMINGTON, DEL.
 RICHMOND, CALIF.
 SALT LAKE CITY, UTAH
 TACOMA, WASH.



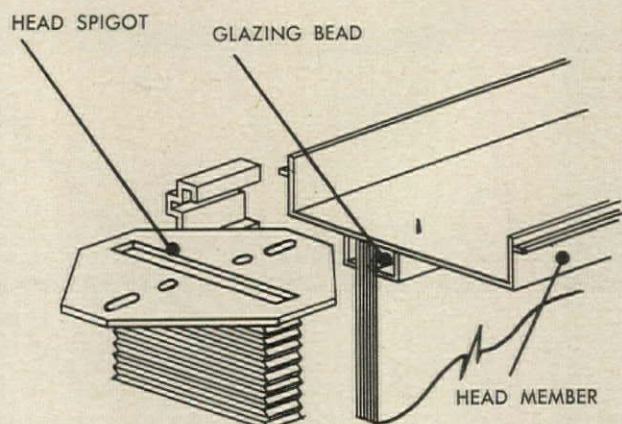
HONEYLITE®
 LIGHT-DIFFUSING ALUMINUM HONEYCOMB
 A development of HEXCEL PRODUCTS INC.
 951 SIXTY-FIRST STREET, OAKLAND 8, CALIFORNIA

THE FINE ART OF LIGHTING

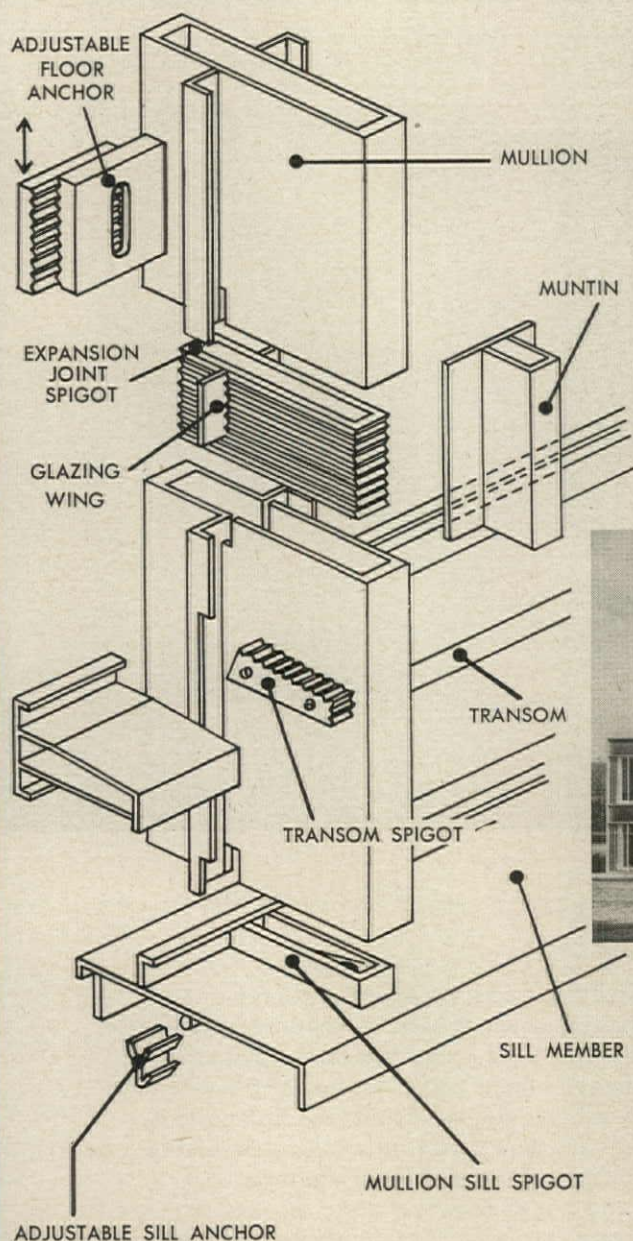
Whether you're lighting priceless objects, not-for-sale . . . or merchandise priced for quick sale, Honeylite's gentle but completely shadow-free light makes "seeing" a pleasure. But Honeylite doesn't stop at being just one of the very best light diffusing elements. Salespeople, and more important, customers will tell you that Honeylite's full air circulation makes a room as refreshingly airy as a summer morning . . . cool to work in, and fun to shop in. And Honeylite's gossamer-weight, all-aluminum construction reduces the costly man-hours of installation, and lengthens the life of lighting units. For price lists and detailed information call your dealer or write to Hexcel Products Inc., 951-61st Street, Oakland 8, Calif.

WALLSPAN

CURTAIN WALL BY WILLIAMS & WILLIAMS



Here is a Weather-Wise Curtain Wall



This diagram shows the simple, sturdy construction of Williams & Williams "WALLSPAN" Curtain Wall.

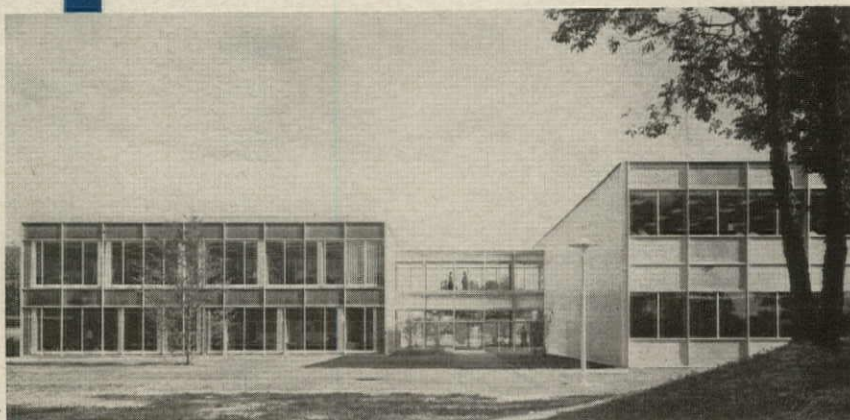
Note the weatherproofing features:

- Integral drip bars to all horizontal members
- Overlapping flanges on all joints
- Expansion tolerance at all junctions (to avoid "build-up" movement)
- Ample provision for drainage
- Rebated glazing wings, for additional weather seal and key for caulking compound (minimizes exposure of compound to the atmosphere)

"WALLSPAN" Curtain Wall gives complete modular freedom in planning. It is versatile—accommodating a wide range of infill materials and all types of windows.

All aluminum construction—no maintenance, no corrosion hazard.

Write for full details now!



*I.B.M. Research Laboratories, Poughkeepsie, N. Y.
(Architects: Eliot Noyes & Associates)*

"WALLSPAN" weatherproofing has been proved in conditions ranging from near-Arctic to tropical. You can depend on it!

WALLSPAN

CURTAIN WALL BY WILLIAMS & WILLIAMS

Williams & Williams Products Corporation
770 Eagle Avenue, New York 56, N. Y.
Telephone: MOthaven 5-8900

Neele E. Stearns named president of Crane Co.;

John P. Weyerhaeuser dies

EXECUTIVE PARADE

As the new year began, many new men took the helm in a number of building's largest firms of all types.

Crane Co., third largest plumbing equipment manufacturer, induced Engineer **Neele E. Stearns**, 49, to become its president. He had twice declined the offer rather than quit Inland Steel, where he was vice president in charge of planning and development. But Crane was in serious need of extra executive help from outside its own ranks, following the crash of a company plane (AF, July '56) in which it lost three of its five divisional heads directly under President **Frank F. Elliott**, 63, who moved up last month to board chairman.



STEARNS



CRANDALL

In New York, **Lou R. Crandall**, who joined George A. Fuller Co. in 1917 and became president in 1928, was named chairman of this 75-year-old construction firm, succeeding **Edwin J. Beinecke**, resigned. **Raymond C. Daly**, who joined the company in 1930 and became a vice president in 1953, was named president.

Ford, Bacon & Davis, Inc., engineering and construction firm, elected **C. C. Whitelsey**, formerly executive vice president, to succeed **E. S. Coldwell**, named chairman after serving as president since '49.

Diesel Construction Co., builder and owner of a number of New York's largest postwar office buildings, advanced President **Erwin S. Wolfson** to the new post of board chairman and elected Vice President **Carl A. Morse**, engineer and construction specialist, as his successor.

In Los Angeles, the 70-year-old **McNeil Construction Co.**, builders of Disneyland and many of Los Angeles' height-limit structures, appointed **F. M. Franz**, 49, as vice president and general manager.

Cushman & Wakefield, Inc., rental agents for the House of Seagrams and many other leading new office buildings in New York, elected as chairman Founder **Bernard Wakefield**, president since the death in 1955 of Cofounder **J. Clydesdale Cushman**. Executive Vice President **L'Huillier S. Sheaff** was advanced to the presidency.

International Steel Co., Evansville, Ind., a leading producer of structural steel and revolving doors, elected **Wesley D. Hamilton** as president and chief executive, succeeding **Walter G. Koch**, now chairman.



BACH

BACH HEADS CHICAGO PLANNING

In a nonpolitical appointment, Mayor **Richard J. Daley** last month named **Ira J. Bach**, a professional planner, as Chicago's first Commissioner of Planning under a reorganization of city planning activities.

Bach, 50, has been executive director of the Chicago Land Clearance Commission for the last eight years, and since 1955 president of the AIP Chicago chapter. He studied architecture and planning at MIT, held planning posts in Denver and Chicago, and for four years was Cook County Housing Authority executive director. In his new \$20,000 post he will be in charge of a new municipal Department of City Planning with broad powers for comprehensive planning and public works coordination. A recast Chicago Plan Commission, mostly lay members and ex officio public officials, will serve mainly in an advisory and review capacity.



WOODBIDGE

OF ARCHITECTS AND SCHOOLS

To insure that future buildings for the Columbia campus in New York will have an appearance "worthy of the university's traditions," President **Grayson Kirk** appointed a five-member architectural advisory council chaired by **Frederick J. Woodbridge**, '23, member of the New York City Art Commission and the architectural office of Adams & Woodbridge. Others on the council, which will concern itself mostly with site planning, exterior aspects of new structures, and "the degree of departure from past classical designs": Dean **Leopold Arnaud** and Professor **Charles Rieger**, of Columbia's

continued on p. 93

202

now, Crucible low nickel stainless steels
that meet many of your needs...

Here are two *new* Crucible grades, Rezistal type 201 and 202 that are similar in quality and properties to types 301 and 302 . . . but with desirable features all their own.

In the annealed condition, for example, Rezistal 201 and 202 have about 10% higher strength than 301 and 302, yet maintain almost identical ductility. This means that these grades can be fabricated with ease equal to their counterparts. In addition, their mill finishes and corrosion resist-

ance to a wide variation of media compare most favorably with 301 and 302.

To sum up: Rezistal 201 and 202 have practically all the desirable properties of 301 and 302, *plus* some of their own. And they're available *promptly* in all forms. Write now for data sheets fully covering the properties of these new stainless grades. *Crucible Steel Company of America, Dept. AAF, The Oliver Building, Mellon Square, Pittsburgh 22, Pa.*

CRUCIBLE

first name in special purpose steels

Crucible Steel Company of America

Canadian Distributor—Railway & Power Engineering Corp., Ltd.

school of architecture, and alumni **Arthur Holden**, of Holden, Egan & Associates, and **William Platt**, of the office of William and Geoffrey Platt.

Named to supervise the long-term planning and architecture of a new 30-acre science quadrangle next to Stanford University's famed original "quad": San Francisco Architect **Gardner Dailey**.

At Alabama Polytechnic Institute, **Frank Marion Orr** resigned as dean of the school of architecture to head the new department of building technology. To succeed him the school appointed Atlanta Author and Architect **Samuel T. Hurst**, of the office of Abreu & Robeson, former secretary of the AIA Georgia chapter. Hurst's books include: *An Approach to Design Procedure*; *Composition for Beauty and Use*; *Be It Ever So Modern, There's No Place Like Home*.

\$10,000 FELLOWSHIPS

Started after a 20-year delay, the newest and handsomest fellowships in architecture were announced in Chicago by the Graham Foundation for Advanced Studies in the Fine Arts. On his death in 1936 Builder **Ernest Robert Graham** left \$2.9 million to finance freewheeling "post-graduate" work of their own selection by artists and architects, but income of the endowment was so small in its early years that the program was not launched until now. Among the first nine recipients of \$10,000 stipends for this year: Sculptor-Welders **Harry Bertoia**, 41, of Barto, Pa., **Joseph Goto**, 36, of Chicago, and **Keith Monroe**, 39, of San Francisco; Architects **Frederick Kiesler**, 64, of New York, and **Paul Nelson**, 62, an American now practicing in Paris. Director of the program: **William E. Hartmann**, Chicago office manager, Skidmore, Owings & Merrill.

SUCCESS

Last fall a sign was erected on the Midland, Mich., courthouse lawn: "Drop Your Rocks Here." The purpose was to acquire free some 7,000 esthetically acceptable fieldstones, no smaller than footballs, to help hold down the costs for a \$700,000 addition to the county's stone, stucco and timber courthouse and jail. The addition was designed by Midland Architect **Alden B. Dow**; the original structure, by **Bloodgood Tuttle** of Cleveland. Last month Dow reported success in this "bring it yourself" building materials drive: farmers and townspeople had brought just about enough stone to take care of this part of the job and allow an early call for construction bids.

WEYERHAEUSER DEATH, SHIFTS

Executive realignments were the order last month in the huge Weyerhaeuser Timber Co. and associated ventures, following the death of President **John Philip Weyerhaeuser Jr.**, 57, Dec. 8 in Tacoma, of leukemia. Brother **Frederick King Weyerhaeuser**, 62, president of Rock



JOHN P. WEYERHAEUSER

Island Lumber and Weyerhaeuser Sales, and board chairman of the parent timber company since March, '55, was named president and chief executive of the latter. Timber company General Manager **Charles H. Ingram** was given an additional assignment as executive vice president, and would probably assume increasing responsibility in view of the heavy burden now placed on **Frederick Weyerhaeuser**, who will commute between his St. Paul home and office and the parent firm's headquarters in Tacoma.

OTHER DEATHS: **Charles Warner**, 79, board chairman of the Warner Co., large, old Philadelphia building materials concern (founded 1794), Dec. 11, in Philadelphia; Washington building contractor **Charles H. Tompkins**, 73, whose firm erected many of the Capital's principal commercial and public buildings and also remodeled President Eisenhower's Gettysburg farm, donor of the Tompkins Hall of Engineering to George Washington University, Dec. 12, in Washington; **Alden G. Roach**, 55, of Los Angeles, construction engineer and president of the Columbia-Geneva division of US Steel, Dec. 20, in a crash of his private plane near Tyrone, Pa.; New York Building Contractor **Edwin Johnson**, 56, president of John A. Johnson & Sons, builders of the 1939 N.Y. World's Fair Trylon and Perisphere and of many public housing, AEC and Defense Dept. projects throughout the country, Dec. 21, in Huntington, N.Y.; **George D. Robertson**, 76, former head of the Los Angeles Realty Board and NAREB vice president, Dec. 27, in Los Angeles; **Farnham Yardley**, 88, board chairman of Jenkins Brothers, valve manufacturers, Dec. 30, in Orange, N.J.; **Stewart McDonald**, 77, FH Administrator from 1935 to 1940, Jan. 3, in New York.

Actual, up-to-the-minute construction costs . . .

BUILDING COST MANUAL



Prepared under the direction of THE JOINT COMMITTEE ON BUILDING COSTS OF THE CHICAGO CHAPTER OF THE AMERICAN INSTITUTE OF ARCHITECTS and THE APPRAISERS DIVISION OF THE CHICAGO REAL ESTATE BOARD

In this single volume you will find data on the construction costs of 150 different building types, including authoritative introductory material on factors affecting building costs, depreciation, and regional variations. The figures used are based on actual, final construction costs of buildings and their normal installed equipment. Over-all costs are given, as well as square foot and cubic foot costs, for structure and finish, heating and ventilation, air-conditioning, plumbing, and electrical equipment. Amply illustrated with halftones and line drawings and coded for easy reference to each building type.

1956 367 pages 233 illus. \$15.00

Helps solve your structural problems . . .

ARCHITECTURAL CONSTRUCTION



The Choice of
Structural Design

By
THEODORE CRANE, C.E.M.A.,
Yale University

A revised edition of an outstanding book, offering a comprehensive view of the more useful types of construction and the newer features of building design available in the United States today. Emphasis is placed on the appropriate choice for structural portions of a building as governed by geographical location, site, type of occupancy, equipment, and architectural design. New material includes descriptions of contemporary fireproofing, details for steel assemblies, and similar practical considerations, as well as startling designs utilized in modern auditoriums and hangars. All factual data have been checked by leading authorities.

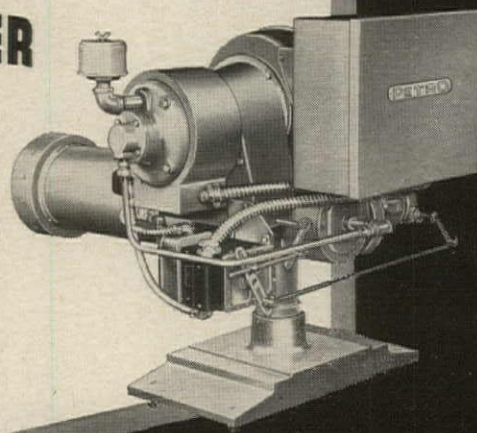
Second Edition, 1956 433 pages 285 illus. \$10.00

Mail this coupon for ON-APPROVAL copies

JOHN WILEY & SONS, Inc.		AF-27
440 Fourth Ave., New York 16, N. Y.		
Please send me the book(s) checked below to read and examine. In 10 days I will return the book(s) and owe nothing, or I will remit the full purchase price, plus postage.		
<input type="checkbox"/>	BUILDING COST MANUAL	\$15.00
<input type="checkbox"/>	ARCHITECTURAL CONSTRUCTION	\$10.00
Name		
Address		
City Zone..... State.....		
<input type="checkbox"/> SAVE POSTAGE! Check here if you ENCLOSE payment, in which case we pay the postage. Same return privilege, of course.		

NEW PETRO BURNER FIRES LIGHT OR HEAVY OILS...

Including ALL grades of No. 5



Fires low-cost oils with
traditional PETRO dependability

The revolutionary atomizing principle used in the new Petro Supercharger Burner produces the highest degree of atomization ever achieved in a burner for heavy oils. Oil and air are premixed in a supercharger, where the self-generating heat resulting from compression of the air-oil mixture, atomizes even heavy No. 5 oils into a highly volatile mist. This revolutionary Petro burner mechanically atomizes the oil, but, *in addition*, the supercharger further reduces the oil spray to a microscopic air-oil vapor.

Heating of oil is needed only for starting or pumping when the heavier oils are used. Therefore, the power load is hardly more than that required to operate the motor.

Controls are available to operate this Petro burner either with continuous fire, high-low or with full modulation.

These new Petro burners are available for two important uses: either for conversion, or as a component part of a packaged boiler-burner unit. It fires low cost heavy residual oils with little more attention than a domestic oil burner.

For more information and specifications, please mail the coupon. ➡

3 TO 25 GALLONS PER HOUR

New principle produces finest
atomization yet achieved in an
oil burner.



Electric ignition



Oil heating required only for
pumping or starting with heavy
oil.



Built-in control panel



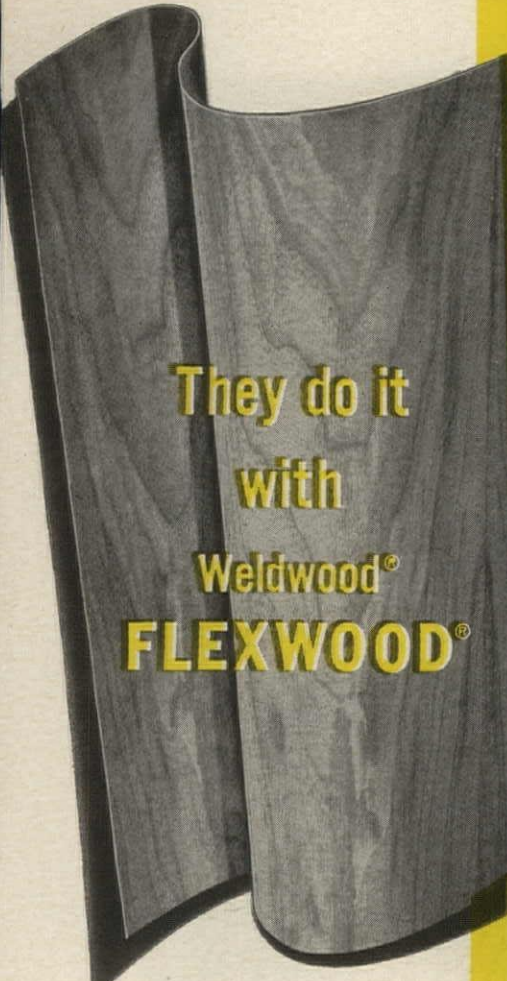
Low fire starts - Full modulation

PETRO®

3515 West 106th Street, Cleveland 11, Ohio
(In Canada: 2231 Bloor St. W., Toronto, Ont.)

Please send me more information on the
money-saving new Petro Supercharger Burner.

Name _____
Company _____
Address _____
City _____ State _____



They do it
with
Weldwood®
FLEXWOOD®

Offices of H. K. Porter Company, Inc., New York, N. Y.

They get matched grain wood beauty — at a practical price!

They use real wood paneling on ugly pillars, on irregular curved walls, *on limited budgets!*

They do it with new, improved Flexwood, real wood paneling in flexible form. So flexible, it's installed easily — often in a matter of hours — on pillars, posts, straight or curved walls!

40 beautiful woods, in architectural and random grades, for new jobs or alterations. Meets all fire code requirements for offices, banks, hotels, homes, etc. Every installation guaranteed! Send for samples.

Architects and designers call it the year's most exciting new idea in vinyl wall coverings. It's Kalistron's new Shadowline, new in texture, new in pattern. Shadowline is permanently textured (unlike some "textured" coverings). It incorporates the same easy-to-clean vinyl protection for which Kalistron is noted — nothing can mar it, dent it, scratch or scuff it. Its texture stands up, its beauty stands out... indefinitely.

If you are searching for something new—and beautiful—and durable, then Kalistron's new Shadowline is for you. Send today for samples.



UNITED STATES PLYWOOD CORPORATION

New York 36, N. Y.

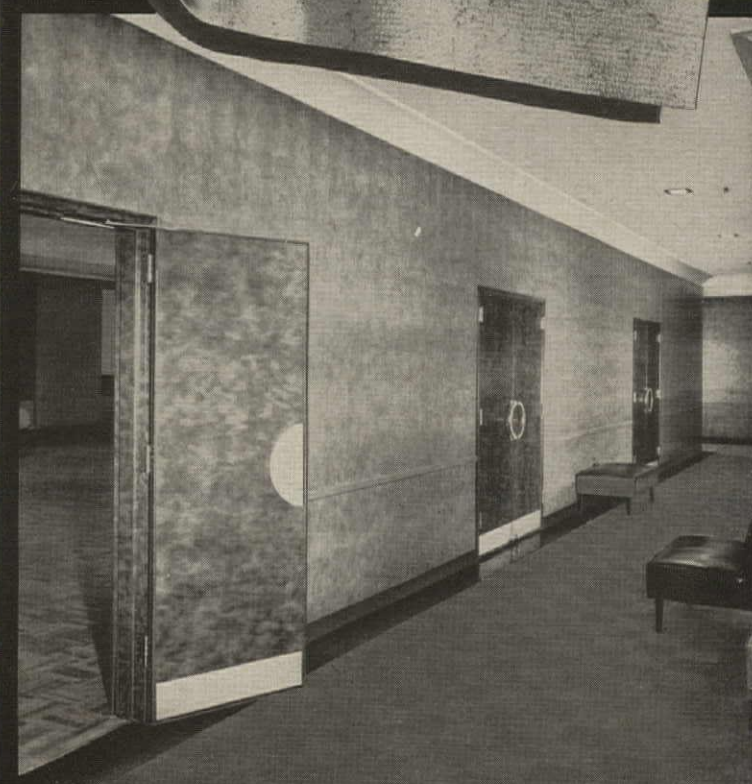
Flexible Materials Division
2921 So. Floyd St., Louisville 13, Ky.

Student Union Building, University of Connecticut

and they do it with

KALISTRON®

(ANOTHER WELDWOOD PRODUCT)



Dur-O-wal Adds STRUCTURAL SOUNDNESS to Masonry Walls



Butt weld Dur-O-wal lies flat in the mortar bed . . . handles fast . . . provides crack control for every type of masonry wall.

6 Reasons why Architects Specify Dur-O-wal

- Dur-O-wal combats cracks; safeguards beauty
- The trussed design makes all steel work as a unit
- Dur-O-wal meets ASTM Specification A82-34
- Dur-O-wal handles fast, assures tight mortar joints
- Dur-O-wal's performance has created its demand
- Dur-O-wal is nationally distributed; dealers everywhere

Trussed Design
Butt Weld • Deformed Rods
DUR-O-WAL®

**the Backbone of Steel
for EVERY masonry wall**

Phone, wire, or write Dept. 5H for additional information about Dur-O-wal.



Dur-O-wal Div., Cedar Rapids Block Co., **CEDAR RAPIDS, IA.** Dur-O-wal Prod., Inc., Box 628, **SYRACUSE, N.Y.** Dur-O-wal of Ill., 119 N. River St., **AURORA, ILL.** Dur-O-wal Prod. of Ala., Inc., Box 5446, **BIRMINGHAM, ALA.** Dur-O-wal Prod., Inc., 4500 E. Lombard St., **BALTIMORE, MD.** Dur-O-wal Div., Frontier Mfg. Co., Box 49, **PHOENIX, ARIZ.** Dur-O-wal, Inc., 165 Utah St., **TOLEDO, OHIO**



FIRST IMPRESSIONS ARE IMPORTANT!

Photo shows reception area of the beautiful Du Pont Showroom in the Empire State Building, New York. Designed by William Pahlman to combine a restful residential influence with commercial utility. Kliegl lighting illuminates area with accents on reception desk, decorative screen, pictures and decor.

Regressed-lens units provide the general lighting. Adjustable ball fixtures accent the decorative screen. Surface-mounted baffled downlights highlight the ornamental items.

This is another typical application of Kliegl lighting using selected lighting units, diversified to provide harmonious effects without glare or eye strain.

For equally satisfactory results on your next job, send for Architectural Lighting Catalog, A-11. Contains all data on this equipment . . . other useful suggestions.



PUBLISHED BY TIME INC.

EDITOR-IN-CHIEF: Henry R. Luce

PRESIDENT: Roy E. Larsen

EDITOR:

Douglas Haskell, AIA

MANAGING EDITOR:

Joseph C. Hazen, Jr.

ART DIRECTOR:

Paul Grotz

ASSOCIATE EDITORS:

David Allison, Frank Fogarty,
Mireille G. Gerould, Marilyn
Grayboff, Jane Jacobs, Mary Jane
Lightbown, Walter McQuade, AIA,
Joan Dumper Mebane, Richard A.
Miller, Richard Saunders, Ogden
Tanner, Stephen G. Thompson,
Mary Elizabeth Young

ASSISTANTS:

Anne LeCrenier, Dorothy O'Shea,
Henry Martin Ottmann,
Ann Wilson

ART STAFF:

Ray Komai, associate director;
Martha Blake, Charlotte Winter

CONSULTANTS:

Miles L. Colean, FAIA
Carl Feiss, AIA
Lawrence Lessing

PUBLISHER:

Ralph Delahaye Paine Jr.

GENERAL MANAGER:

Charles B. Bear

ADVERTISING DIRECTOR:

S. C. Lawson

ASSISTANT TO THE PUBLISHER:

John Fistere

Editorial

"Commodity, Firmness and Delight"

It is because of a new opportunity confronting America that you hold before you a new 1957 version of this magazine, which was 65 years old last month.

With her industry booming, her technology dynamically expanding, her population multiplying, America is in position (barring catastrophe) to enter a golden age in her architecture. The opportunity is here to rebuild America in the image of her own greatness. And she has an advantage over leaders of historical golden ages—over Pericles of Athens, Abbé Suger of St. Denis, or Louis XIV of France—for she can have a great architecture, if she will, without impoverishing anybody to create it.

These vast perspectives of architecture in America are now open for all who have eyes to see. It is not magnitude that makes them exciting, although the investment of America over the next ten years will add up to nearly \$500 billion—half a trillion—in construction of all kinds, and within 20 years to a trillion and more. The truly significant prospect is a scale of predictable change which is so great that the nature of the challenge and the problem is wholly new.

For example, we shall have to accommodate from 56 to 60 million more Americans in the next two decades (not to mention 50 million more automobiles)—and accommodate al-

most all of them in cities. The crux of the problem does not lie in construction, nor even primarily in individual building design: it lies in the urgent question of how, when and where all this building and rebuilding is to fit into the living texture of man-made America; and how this texture as a whole is to be stretched and reshaped to fit with entirely new developing patterns of industrial geography and social mobility.

We consequently find the most urgent engagement in the planning and building problems of "urban renewal" among groups that never bothered their heads over architecture before—manufacturers of automobiles, for example, and builders of highways; heads of utility companies, members of merchants' associations, and owners of large pear orchards; and, above all, that great reliance of America, the individual citizen leader, the man of ability.

The citizen leader now finds himself somehow perpetually concerned with building: he finds himself on the corporate building committee, the merchants' downtown committee, the school board, the hospital board, church boards, town zoning boards, planning commissions and chamber of commerce subcommittees. He has the same need for a central communication medium, an authoritative source of information and analysis, as do the architects, planners and engineers, the manu-

Editorial cont'd

facturers, contractors and labor men, the real estate men, mortgage bankers, insurance company executives, commercial bankers, the traffic men, municipal and state officers and heads of federal agencies, not to mention the client who signs the building contract, or sculptors and artists.

What do all need? First of all, the latest building news, the sharpest analysis of general business and money trends, selective and discriminating reporting of the best in current planning and design. And then the best current thinking in three dominant areas of interest:

1. Architecture, planning, design, interior design.
2. Technology, building manufacturing, engineering, science.
3. Building industry economics—the business of building, including governmental relationships.

All this must relate to buildings not only singly but in their urban context.

Now the triangulation above will be recognized by architect readers as being nothing else than a restatement of their favorite dictum, which Sir Henry Wotton had earlier put into Renaissance English: "Well-building hath three conditions: Commodity, Firmness, and Delight." Here "Commodity" stands surely for good programming and economics, "Firmness" for good technology and engineering, and "Delight" for the designed outcome in terms of architecture, man's noblest art.

So these are the people and these the interests seeking for themselves an open forum which ARCHITECTURAL FORUM sets itself to supply. In the very first issue, when the magazine was the *Brickbuilder*, it paid special attention to architects, of course; and they are still at the center of architecture today, but their ideals must be shared more widely in the new America.

Highways into cities

A powerful impetus to the rational building of the new America was given last month by the Highway Research Board at its 36th annual

convention held in Washington.

The Board acknowledged the importance of its new Urban Research Committee by making the theme of highways and their effect on cities an opening theme for the full convention, which was attended by about 1,800 engineers and researchers representing not only the government road-building agencies but a dozen powerful industries.

This move is timely, for a great many people have been worrying over the possible side effects of the \$32 billion federal-aided program, in which 40% of the funds are to be spent in cities. Traditionally, highway engineers have been considered as the abettors of massive traffic movements that scour through cities, interfering with local traffic while contributing very little themselves to the economic life of the center. Then too highways have been a means of emptying cities of their more influential citizens who prefer to live outside and commute by highway. Meanwhile the removal of large quantities of old buildings for the new throughways has been a great means of slum clearance and urban renewal but without much heed to getting really beneficent consequences for property values, human values or esthetic values. So last year the American Civic and Planning Association emphatically asked that no federal funds in aid be given except on proof of cooperation with local planners, and Congress at least made it obligatory, in a vague way, to hold hearings before condemnation of land for new highways.

The evidence of last month is that the highway builders themselves intend to be excellent citizens, and are aware that right now they can be the greatest builders of cities and not the destroyers some have thought they were. The energetic project director of the new research committee is Mr. Joseph L. Intermaggio, and there are excellent research men available to it, such as Robert Mitchell of the Philadelphia Urban Traffic & Transportation Board, and Wilfred Owen of Brookings Institution among many others—men who see the close relationship between highways and cities.



Floor-a-Week Frame Construction . . . 50% Form Saving



APRIL 1, 1956



JULY 15, 1956

ENCORE FOR 'INCOR' This year's big news on South Florida's Gold Coast is the amazing Americana. Architect Morris Lapidus, who designed the Fontainebleau in 1954 and Eden Roc in 1955, has endowed the Americana with a distinction all its own, by blending touches of decor from all the Americas. Matching brilliant design is the staunch, fire-safe concrete construction, and newsworthy indeed is the Contractor's performance in completing this far-from-simple design in record time.

Miami Beach prohibits building December through March. So construction from foundation to lobby floor of the 15-story, 475-room guest unit was completed September through November. Resuming construction April 1, the Contractor went onto a high-speed 'Incor' schedule on the superstructure, to assure early-December opening.

Forms filled with concrete one day, stripped and jumped the next . . . structure topped out July 15 . . . 14 stories and roof erected in as many weeks. Typical 'Incor'* results: 50 to 60% saving on forms . . . faster completion, less job overhead . . . earlier rentals . . . quality concrete, with high ultimate strength matching high-early performance. Duplicating similar record on Fontainebleau and Eden Roc . . . another encore for 'Incor.'

*Reg. U. S. Pat. Off.

THE AMERICANA
Bal Harbour, Miami Beach
LAURENCE A. TISCH, President
Owner: TISCH HOTELS, INC.

Architects & Designers: MORRIS LAPIDUS
LEO KORNBLOTH, Associate
New York-Miami Beach

Structural Engineers:
OBOLER & CLARKE, Miami Beach

Contractor:
TAYLOR CONSTRUCTION COMPANY, Miami

Ready-Mix 'Incor' Concrete
MAULE INDUSTRIES, INC., Miami



LONE STAR CEMENT CORPORATION

Offices: ABILENE, TEX. • ALBANY, N. Y. • BETHLEHEM, PA.
BIRMINGHAM • BOSTON • CHICAGO • DALLAS • HOUSTON
INDIANAPOLIS • KANSAS CITY, MO. • NEW ORLEANS • NEW YORK
NORFOLK • RICHMOND • WASHINGTON, D. C.

LONE STAR CEMENT, WITH ITS SUBSIDIARIES, IS ONE OF THE WORLD'S LARGEST CEMENT PRODUCERS: 18 MODERN MILLS, 38,200,000 BARRELS ANNUAL CAPACITY



History has seen the like of it, but never the match of it—this fabulous, and strangely different, build-up of land prices since the war. Beginning this month, a new series—Part I on the suburbs, Part II on the city core, and Part III on retirement and recreation land—which will probe the structure of the boom, the forces that made it, and its impact on the look of America

Land: a new kind of boom

by FRANK FOGARTY

In the colossal change that has swept America since the war, many builders, farmers, real estate operators and just plain speculators have happily discovered what John Stuart Mill once referred to as the "unearned increment" of land. The trick has taken no great doing. For, as town after town succumbed to the subdivider's plat and the landshaping of commerce and industry in the great suburban shift of this era, the cost of land for building around the great cities moved steadily skyward, far exceeding the rise in the general price level. A spiral barely discernible in 1947 has twisted upward into one of the greatest of all urban land price rises. In ten years, change, which is the seed of everything in real estate, has produced a land boom of truly awesome proportions, one which can be compared with only four others in history, which already has outstripped its predecessors in terms of impact and staying power, and which, as we will see later, differs markedly from all previous land booms.

Americans have always been addicted to the fables of real estate—to the tall tales of fortunes spun in club cars, in corporate dining rooms, in barbers' chairs—and this boom, like its predecessors, has been far deeper in folklore than in fact. For this, the nature of the real estate business itself is as responsible as anything. Urban property is a complex and nonstandardized thing, bought and sold, not in a homogeneous market,

but in a collection of submarkets only vaguely related to one another. Even within these markets, there is only the scantiest reliable information on bid offers and sale prices. Thus myth and fact become inextricably mixed, and the result, it has been said cynically, is that real estate is perhaps the only market where the successful guesser can rely on one constant—the ignorance of the rest of the world.

In this article, and two that will follow, FORUM, on the basis of extensive reporting in 15 cities, will attempt to sift fact from myth in this fifth, and still largely undocumented, land boom in US history. Because suburbia has been the crucible of the boom, this first article will deal with it. In succeeding issues, FORUM will show what has happened to land in the city core, and finally in the retirement and recreation centers that this age of plenty has bred and nurtured.

The big picture

The over-all proportions are Paul Bunyan's. Between 1947 and 1956, something like 5.7 million acres were bulldozed out of US farmland* and brought, in the main, into urban area (about 1% of the nation's total 1.9 billion acres in 1950). Postwar housing alone has consumed more than 250,000 open acres annually, based on one-quarter-acre per unit, including streets, for the more than 1 million new houses a year averaged since 1947. The size of the bite taken by commercial and industrial building can't even be guessed at. But a clue



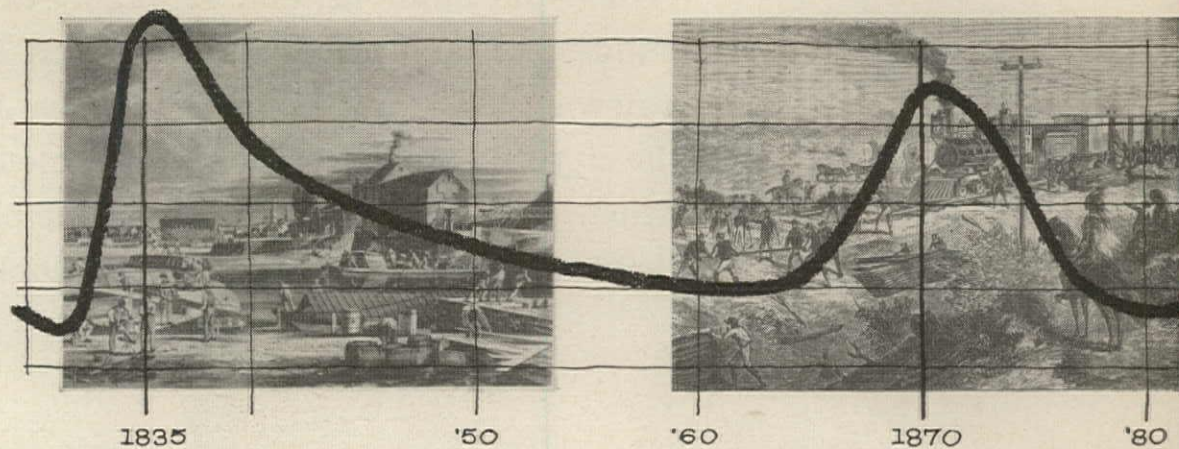
The suburb, creator and keeper of the boom, has entrapped the farm, devoured its acreage, but has left as recompense a record of land profits seldom equalled.

*Based on an "average" of 238 acres converted per 1,000 of population increase in selected standard metropolitan areas. Formula by Donald J. Bogue of the University of Chicago's Population Research and Training Center.

The canal era first sent prices soaring . . .

then came the railroads . . .

The great booms of US land prices (here charted symbolically) have all been tied to eras of national growth and all, so far, have ended in magnificent bust.



to its magnitude shows in the fact that at least 225 organized industrial districts (average size: 500 acres) have opened since the war, while some 2,000 new shopping centers, scaling in size from vast regional marts to neighborhood nests of three or four stores, have probably carved away another 10,000 acres.

The forces behind all this are by now too well known to require more than recapitulation. First, there was the pent-up demand created by a long war, preceded by a longer depression, in which building lagged year after year behind even simple replacement. Then, in the economic breakthrough seemingly provided only by war, two forces arose of overwhelming significance to the urban land market: an explosive expansion of population, particularly in urban areas (which set the potential magnitude of demand), and a tremendous rise in personal income and in capital formation (which made the demand effective). Finally, added to the mobility of money and population was the continuing and increasing mobility provided by the automobile, a factor of peculiar significance in metropolitan growth.

Between 1940 and 1956, more than 82% of the total gain in US civilian population (32.7 million) was concentrated in and around standard metropolitan areas. And this massive, concentrated increase took the form of a single phenomenon—suburbia—growing at a rate almost seven times that of the central city.

Confronted by this phenomenon, in all its aspects, the price of land responded in classic tradition—first by rising, then rising some more, then rising again. By 1955, the per-acre value of farm real estate, which in part reflects the prices paid for land converted to urban use, had climbed 44% over 1947. The average cost of improved sites for new houses mortgaged under FHA guarantee (one of the few indices to nonfarm land prices) came close to doubling in the same period. But even this, being an average, understates the rise in some of the nation's key metropolitan centers. Around Los Angeles, for instance, prime-grade raw land in the San Fernando Valley is selling at prices five to six times

those of ten years ago; for industrial acreage, top-grade locations are bringing \$40,000 to \$50,000 an acre, compared with \$2,500 in 1947. Detroit's fast-growing north-eastern fringe, which includes Macomb County, has seen residential raw land prices climb from \$1,500 to \$1,700 an acre a decade ago to \$7,000 to \$8,000 today. In Atlanta, the leapfrogging of urban growth into De Kalb County finds industry paying \$20,000 an acre for sites that a few years ago would have brought \$3,500.

Lacking a statistical base—there is no national price index, not even a count of transactions or their dollar value—it is impossible to tell how much these tremendous gains have affected the over-all movement of urban land prices, or, indeed, how big, in terms of decimal points, the gains themselves are. Nevertheless, on the strength of its reporting, FORUM believes that land prices outside the central city have risen far more than construction costs, that they have at least tripled within the last ten years (after correcting for dollar inflation), and that on this basis the postwar land boom must rank with the four great expansions of land prices in US history: the booms of the 1830's and 1860's associated with the opening of the West; the great immigrant-industrial boom of around 1890; and that of the still-lamented 1920's, which marked the first wave into suburbia.

The anatomy of the boom

FORUM bases its estimate of the new and greatest of all suburban land booms on reports from its correspondents over the country. They talked with realtors, builders, appraisers, mortgage bankers, planners and tax officials, real estate counselors and university experts on price movements of land, since 1947, in three use categories: residential, commercial and industrial.* In addition, they checked tax assessment rolls—an imperfect measure of value, but a barometer of trends—

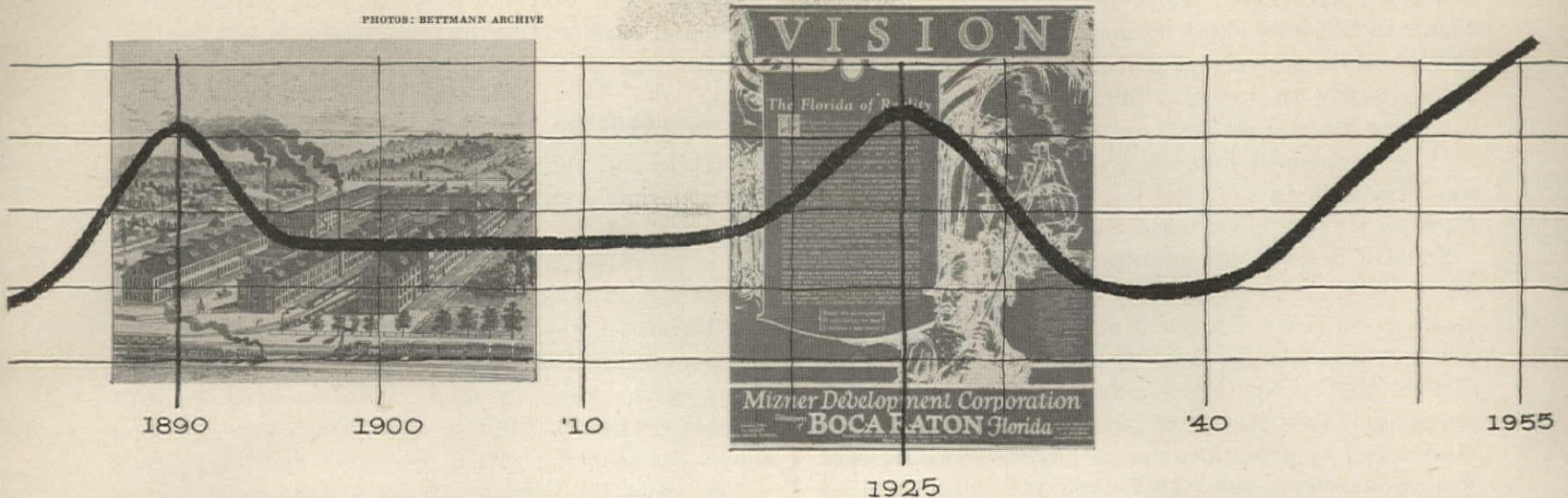
* Where there is no use, or immediate prospect of use, land has little value and can still be bought at homesteading prices—at \$3.50 to \$9 an acre in Tennessee for instance; \$5.50 in Maine; \$12 in upstate New York.

the immigrant waves and industrial expansion

the suburban mania and Florida frenzy

and the age of the auto

PHOTOS: BETTMANN ARCHIVE



tracing price gyrations in typical parcels of land through the revenue stamps attached to deeds. Though nearly every area reported wide price variations, there was surprising unanimity about the extent to which all prices had changed and the amount of influence various types of use had exerted on the market.

Residential demand for suburban land is responsible for far and away the biggest part of acreage conversion in every area. Columbus, Ohio, where veteran Planning Director Ernest Stork estimates that 80% to 90% of all development has been for residential purposes, shows these more-or-less typical figures: in ten years, a total of 8,400 acres were platted for subdivisions in Franklin County, against some 500 acres for commercial use (including about 260 for shopping centers), and another 1,600 to 2,000 acres for industry.

Though over-all residential land prices have at least tripled since 1947, the gain has been five- and sixfold in sections where utilities were already installed and where there was not a surplus of lots left over from the twenties. (Chicago and Cook County, for example, which had such a surplus, didn't really work off the excess until about three years ago; since then, land that was selling in the \$2,000-an-acre range has moved up to a \$5,500 level.) In Los Angeles, where freeways have fed a suburban sprawl that has turned the citrus groves and truck farms of Orange and Los Angeles Counties into a *mélange* of tract homes interspersed with shopping centers, lots today are selling at about the price that acres brought ten years ago. In 1947, a 12-acre citrus farm in the west San Fernando Valley sold at \$1,000 an acre; a year later it was resold—again for agricultural purposes—for \$1,100 an acre. By 1950, when an "investor" picked it up, the price had climbed to \$1,500, and when he, in turn, sold to a builder in 1954, the markup was 100% to \$3,000. Had he held on until today, the tag would have been \$5,000 to \$6,000.

Dallas had its main development within the city until about 1950. But since 1953, with an improved highway system, 60% of its new development has been on the

fringe. In 18 months, the town of Richardson—now 15 minutes from downtown Dallas by expressway—changed from an Old South cotton community of about 2,000 people to a middle-class suburb of 8,000 or more. Land on the fringe, which could be bought for \$400 to \$500 an acre in 1947, now brings \$2,000 to \$2,500. Outside Cleveland, where industrial growth has been a strong factor in placing residential developments, land is in strong demand at \$1,800 to \$2,500 an acre, four to five times its early postwar price level. Atlanta's fanlike growth has sent some De Kalb County land prices up from \$500 an acre to \$3,500. A group of doctors and dentists who got upward of 90 acres at rock-bottom prices of \$150 to \$250 an acre in 1948, sold off some of it in 1951 to 1952 at \$1,000, more of it in 1954 at \$1,200 and the remainder in 1955 at \$1,500.

Commercial building, compared with housing, has consumed only a fractional amount of suburban land—and a highly selective fraction at that. (There is an old saying in real estate that there are only three factors that count in considering commercial property—location, location, and location.) But though its influence on over-all land prices has, of consequence, been secondary, commercial use has touched off some of the sharpest, if spottiest, price rises of the decade. Generally, where housing has led, commercial development has followed, and in heavy-growth areas today a buyer may pay prices for prime business land that are nine and ten times the market level of 1947.

Shortly after the war, for instance, a group of Kansas City merchants and bankers put together \$250,000 to buy 280 acres of good business property in Johnson County, Kan. This winter, on the heels of record growth in the county (Johnson had more than half of all new housing in the metropolitan area through 1953), the same land is being sold at \$375 a front ft., nine and one-half times the original front-ft. price. Just outside Denver's city limits, 66 acres of land, bought by shopping-center developers for \$10,000 an acre only two years ago, are now appraised at \$40,000, and this

applies to the undeveloped part of the tract. One lot across the street from the center jumped in price from \$8,000 to \$26,000 in just 90 days. For desert land outside Phoenix, builders of a motel-shopping center had to pay \$3,500 an acre this fall, more than three times the going price three years ago, while along New Jersey's store-jammed Route 4 at Paramus, frontage that was \$100 a ft. in 1947 has leased and sold for \$750 to \$1,000 a ft. and, in one case, for \$2,400.

Some of these prices, admittedly, are drawn from the top of the scale and apply only to the most-sought-after locations (a few miles north of the Paramus shopping complex, for example, frontage can still be had for \$300 to \$400 a ft.). Nevertheless from a wide sampling, it seems likely that the cost of most first- and second-grade commercial land in the suburbs has increased at least five or six times since 1947. And this takes into account the existence of some sites in older, more developed suburbs where there has been little or no upgrading of values.

Industrial land prices outside the central city have climbed so far and so fast (from what, in many cases, was a next-to-nothing value base) that their percentage gains probably outstrip all other types of acreage. A Cleveland case is typical: when Ford Motor Co. nine years ago took a factory site on Brookpark Road beyond the city's southwest border, industrial land could be had for \$875 to \$900 an acre, and there was plenty of it for the taking. Today only a few acres are left, at prices of close to \$12,000.

Unquestionably, the great industrial postwar expansion has had an effect on all land values, but nowhere does the impact show more dramatically than on land that has been organized into industrial districts. Along Peachtree Industrial Boulevard, now the site of Atlanta's Peachtree Industrial section, acreage has climbed from \$3,500 an acre in 1947 to an average of \$20,000 today. One site—a particularly good one—sold for \$25,000 an acre last year. In 1946, when Realtor Alexander Summer carved his Teterboro Industrial Terminal out of the New Jersey Meadows, he paid \$2,500 an acre for the land, spent another \$2,000 to improve it, made his first sale a year and a half later at cost—\$4,500. In 1956, when the last two sites in the district were sold, the price was just a shade under \$40,000 an acre.

Even where land is still raw, the relative scarcity of good, close-in sites has often pushed prices up ten to twelve times. (For the last two years, the Society of Industrial Realtors in its annual surveys of prices has been reporting year-to-year changes of a minimum of 10% and a high of 25% for raw sites.) Outside Skokie, Ill., land that was bought at \$4,000 to \$5,000 an acre in 1947 and was later rezoned for industrial use is now bringing \$1.25 a sq. ft., or roughly \$50,000 an acre. In King County near Seattle, industrial land is up more than five times in price over five years ago, and one 4½-acre site sold last fall for \$175,000. For its con-

tribution, Columbus, Ohio can point to one 82-acre tract that sold for a total of \$13,500 in 1946, sold again for \$19,000 in 1948, and finally changed hands last year for \$165,500.

Use vs. speculation

High as this suburban land boom has gone, it shows one remarkable sign of maturity and difference from its nearest relative in the twenties. So far, it is a boom tied much more closely to immediate land use than to speculation. The boom of the twenties was different if only because it was a boom of Tom, Dick and Harry, all of whom believed in the gospel of land's propensity for never ending rises in value, and who took as their prophet George or Ralph or the nearest, most vigorous subdivider-promoter. With 10% down and ten years to worry about the balance, almost anyone could "invest in the future" by buying lots, and thousands of people, white- and blue-collar workers alike, did. Suburban plots in Chicago were hawked all over the Midwest, while Detroit's highly mobile promoters even maneuvered as far south as Georgia. In one typical subdivision more than 75% of the lots were sold to people who were not even residents of the county.

If the question of use of these plots troubled some people, the vast majority was singularly undisturbed by the thought that America was acquiring a staggering surplus of improved land. Anticipating use by as much as 30 years became a common, if unadvertised, policy of land developers, and the result was that in Chicago in 1928, 55% of all improved lots were vacant, while in Cook County outside the city, 69% were unbuilt upon. Detroit, which had a 70% increase in population between 1920 and 1930, welcomed its newcomers so warmly that it laid out 74 lots for every 100 of them, man, woman and child. One land economist calculated that to absorb all the open lots in Ocean County, N.J., at that time would have taken no less than 1,627 years at the rate of growth between 1910 and 1930. But absorption was hardly the point. The force that produced the overproduction of lots in the twenties was not use at all—or at least foreseeable use—but speculation in the hope of extraordinary profit.

In the current boom, much of this has changed. To be sure, an afterglow of the twenties still lingers on in county deed vaults, particularly in the records of land dealt back and forth among builders over the past few years. But this is only a shadow of the speculation that used to be. Somehow this time—for the first time ever—the US has managed to mount itself a land boom in which use, rather than speculation, has been the dominant force, in which prices have shown a steady, not frenetic climb, and in which the developer's habitual maltreatment of the land has been tempered, at least in part, by a degree of planning and concern for the future. How and why has it happened?

For one thing, prosperity and population growth this time are stronger, steadier and more broadly based.

As fast as US population has climbed, US productivity has climbed even faster, paving the way for a steadily rising standard of living and creating new, and higher level, demand for shelter, office space, and factories (in 1956, for instance, despite all the catch-up housing production, dwelling units available for sale or rent were still only 2.8% of the total units of the nation). The ability of the consumer to spend—and the ability to borrow which he has acquired through the programs of the Veterans Administration and the Federal Housing Administration—has meant an immediate market of such proportions that land holders and developers have been able to satisfy their profit instinct without resorting to speculation in anticipation of blue-sky demand, as they did in the twenties. The second factor is the almost complete domination of the land market by the builder-developer, who came to the fore in the mass-production revolution in housing that began with the National Housing Act of 1934. Though lot developers are reappearing as the housing market turns more to custom output, the overwhelming proportion of subdivided land has been developed by builders. This by no means eliminates speculation—FORUM's reporting shows that there has been a sizable amount of back-and-forth selling of raw land among builders—but it restricts the field and screens out many of the nickel-and-dime plungers who helped so mightily to pile up the subdivided surplus of the twenties.

Finally, and perhaps most important in limiting both long- and short-term speculation, there is the vast improvement in lending practices. Appraisal policies of the FHA and Veterans Administration, for all their shortcomings, have made it a great deal more difficult to take account of speculative values for loan purposes

(so much so, in fact, that builders bitterly complain today that government-approved lot allowances are totally unrealistic). Further, the sort of shoestring financing that enabled thousands to enter the land market in the twenties is gone, at least in the sense of it being a distinctive feature of the market. Options on land are still traded, but in actual sales, the once-common land mortgage has lost its institutional blessing and survives primarily now only where a land owner is eager enough for a sale to take back a mortgage himself. The great majority of land transactions for building have been financed by commercial loans, so-called builders terms, which usually involve an equity of no less than 29%.

These inhibiting forces not only have taken some of the skyrocketing out of land prices, they also are largely responsible for whatever restraint there has been in development practices. Though this boom has heaped nonsense and crudities on the landscape with a thoroughness that will take years, if ever, to eradicate, it has been nothing compared to the twenties. The narrow 25' to 35' lots that left a legacy of vacant land that may never be usable (at one time Detroit had enough 20' x 100' business lots laid out to stretch all the way to Chicago and half way back again); the street patterns that meshed with nothing; the utilities that were left unpaid for by developers—these excesses at least have not been repeated. Land development even at its septic-tank best, still leaves a great deal to be desired from the planning point of view and from an economic standpoint, too, for the highest efficiency, and thus value, comes when there is a perfect balance between different types of land use. But the combination of federally imposed standards, a more enlightened attitude by

continued on p. 230

Buyer's guide to suburban land

ATLANTA: Sharp price jumps in all categories. Increases average 400%, with some land in far-out areas up as much as 900% since 1947. Residential acreage selling at \$1,500 to \$2,000, raw, occasionally \$2,500; site-to-finished value ratios quoted at 15% to 18%, compared with 8% to 10% at war's end. Shopping center land brings \$10,000 an acre in top locations (against \$1,300 three years ago), smaller highway sites \$11,500 or better, some corners \$45,000. Select industrial tracts, still raw, up from \$500 an acre to \$15,000, in some cases.

BOSTON: Price rise mainly in last five years; near-in land now scarce, much residential zoning at one-acre minimums. Half-acre plots in choice locations bring \$7,500 to \$8,000,

against \$4,000 to \$4,500 three years ago. Acreage farther out, now \$4,500 to \$6,500 raw, was \$2,500 to \$3,000 in 1953. Biggest jump shows in large estates, subdivided, selling in 1947 for maximum \$750 an acre, today \$4,500 to \$6,500.

CHICAGO: Good residential, industrial land tight throughout Cook County. Industrial land about highest in nation, reaching \$50,000 an acre in prime locations. West of Chicago, 75¢ to \$1 per sq. ft. is being quoted for sites that sold in some cases at \$1,000 per acre before rezoning. Top raw residential acreage now \$3,000 in large parcels, smaller tracts as high as \$6,000, with recent ceiling \$9,300 near city. Far-fringe acreage now \$500, all farmland generally triple 1947. Site-value ratio up from 10%

to about 20%. Land rezoned from residential to commercial shows jumps from \$3,000 an acre to \$10,000.

CLEVELAND: Industrial expansion has led way in upgrading all land values. Biggest rise is in factory acreage; top sites, with utilities, bring \$10,000 to \$12,000 an acre, compared with average open-land prices of \$1,000 an acre ten years ago. Land rezoned for shopping centers is up ten times from \$500-an-acre level of 1947, while subdivision land, at about \$2,000 an acre, shows four-fold jump (site to total value ratio: now about 15%). Top prices not rising this year.

COLUMBUS: Land prices up 200% to 300% on average, but some jumps of 1,000% on raw acreage (from \$200 to \$300 in

1947 to \$2,000 to \$3,000). One large residential parcel, 127 acres, sold \$150 per acre, 1949; \$1,100, 1955; \$1,500 last year. Ratio land to total price now 20% on average. Commercial acreage up five to ten times, to a top of \$1,000 a front ft. Industrial land running \$2,000 to \$5,000 an acre, up from postwar \$150 to \$300.

DALLAS: Raw acreage for subdivisions now selling \$2,000 to \$2,500 an acre, four to five times level of 1947, but still within 15% of total finished value. Last three years have seen suburbs take two-thirds of all area growth. Boom closely tied to use; relatively little speculation apparent so far. Rate of development leveled off in 1956, with current water shortage strong factor in slowdown.



© EZRA STOLLER

Like other big US corporations, International Business Machines is careful how it acts in public. During the past year it has become more and more conscious of how it looks, too. Evidence is beginning to appear in many different ways: in a growing number of smart new IBM factories, training schools, laboratories and showrooms, in brightly colored electric typewriters coming off the assembly line, in boldly lettered packaging, trade-marks and displays—all part of a gradual, unpublicized program to make the company's appearance as advanced as the nature of its electronic machines and its ideas of business and cultural leadership.

For IBM a time of growth and reorganization has meant a chance to do some face-lifting. Business is good, and IBM is well launched on a

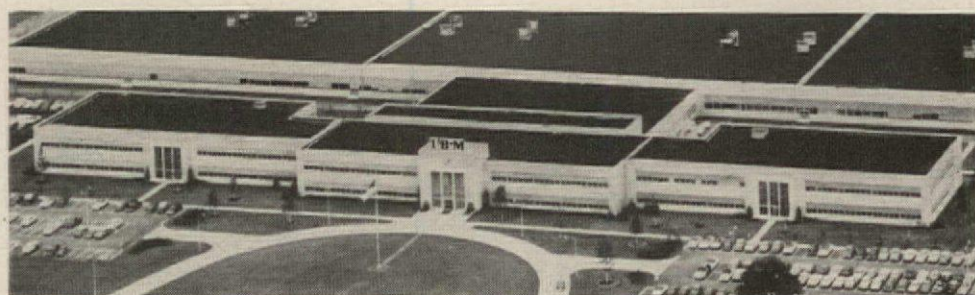
multi-million dollar expansion that reaches from the old plants at Endicott and Poughkeepsie, N.Y. to the blossoming markets of the West and Southwest. Strikingly, almost every one of these new buildings is different from the last, yet each reflects an unusual awareness of good design, of employees' welfare and of the community into which it has moved. IBM, which like so many other companies once imposed "themes" on all its buildings, is now gaining better and more forward-looking architecture by picking a variety of good architects and giving them a free hand, within reasonable cost and program limits, to develop fresh ideas. The first results are kindling excitement in all echelons of the company, particularly in the industrial design, display and promotion departments, where

everything from letterheads to future machines is getting a rethinking with outside help from top designer-critics (see p. 114).

In its new over-all approach to design, IBM is on the same track as Italy's Olivetti company, whose handsome business machines, factories, employee facilities, advertising and display work have set the most consistently high design standards of any corporation here or abroad. Olivetti's present face is the result of ideas first put forth 16 or 17 years ago by a family of managers uniquely sympathetic to humanism and the arts. IBM has these sympathies too, developed over the 42-year reign of the late Thomas J. Watson Sr. At Tom Jr.'s instigation and under his guidance as president, they are now being brought up to date.



Parent factory in Endicott (1929)

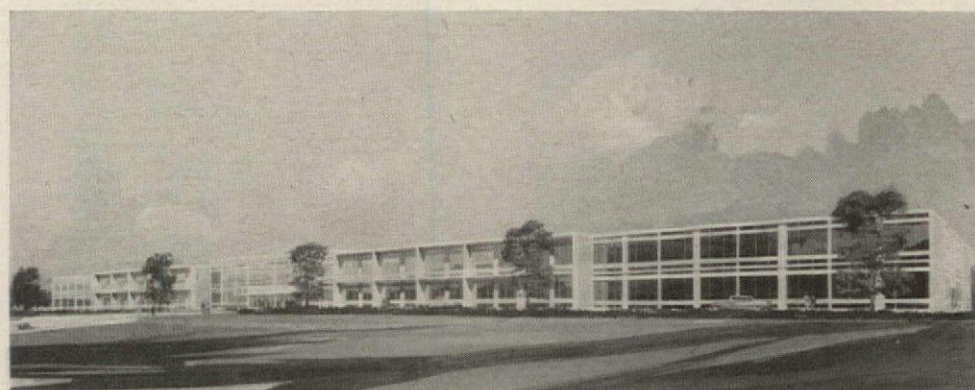


Typical factory at Kingston, N.Y., completed last year, was the last to follow the stiff, monumental style of earlier plants in Poughkeepsie and Toronto. IBM's new approach is producing freer, handsomer designs, like that of the new electric typewriter administration building by Architects Fordyce & Hamby, now underway in Lexington, Ky. (below).

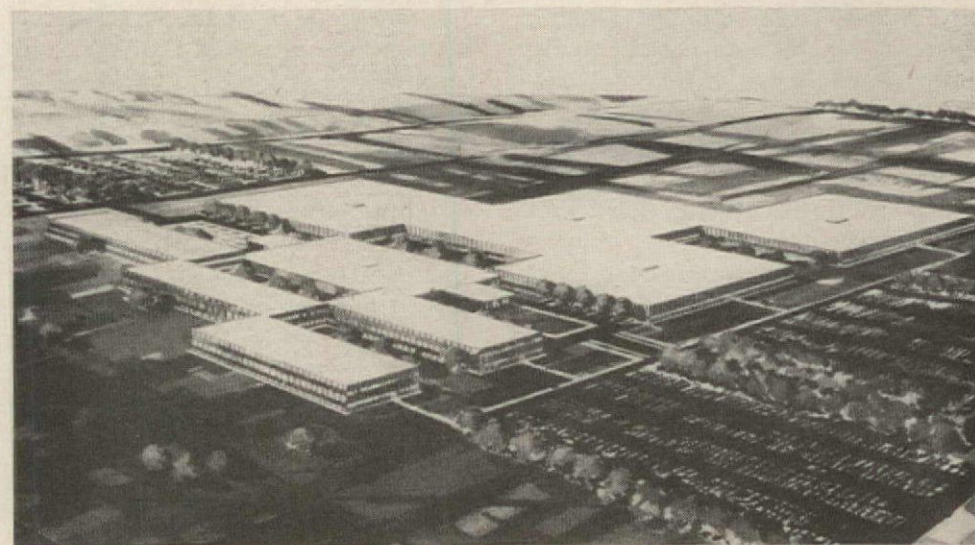
As IBM gets into high gear on its varied building program, certain features are reappearing from one building to the next. The "garden" aspect of most of the new plants is seen opposite. In addition, all of IBM's new buildings, including shops and assembly lines, are air conditioned (with a minimum of 25% outdoor air introduced into the system) and the older plants are gradually being converted. Light levels are above 50 foot-candles, and ceilings are acoustically treated. Parking outside has been gradually increased from one car space per 1.8 employees to one for 1.4 in the newer plants.

Pleasant colors and patterns are becoming a part of new designs, too. At the new 190-acre IBM "campus" at San Jose, Calif., for instance, Architect John Bolles, Landscape Architect Douglas Baylis and Sculptor Robert Howard are bringing the buildings to life with planting, pools, bridges, sculpture and whole walls of "multicolored tiles" (right).

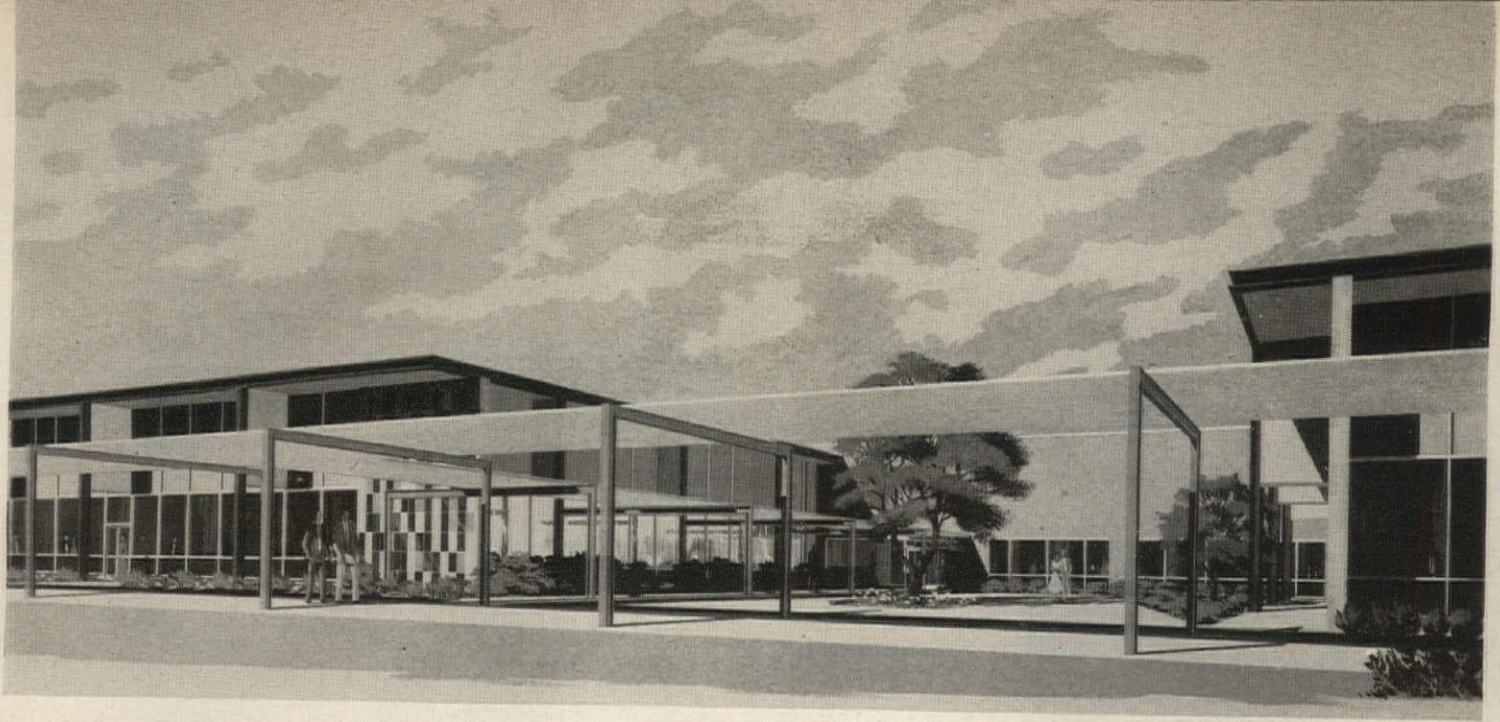
How does IBM pick its architects? Setting well-rounded goals, the young mechanical engineer who set up IBM's planning and construction department less than two years ago, lists some of the criteria: 1) creative ability, including a sense of how to project to the public an impression favorable to IBM; 2) cost con-



IBM's new plants:
big, well groomed and
community conscious



Proposed plant in Rochester, Minn., by Eero Saarinen & Associates, places factory, engineering, administration and school buildings in a pattern of gardens.

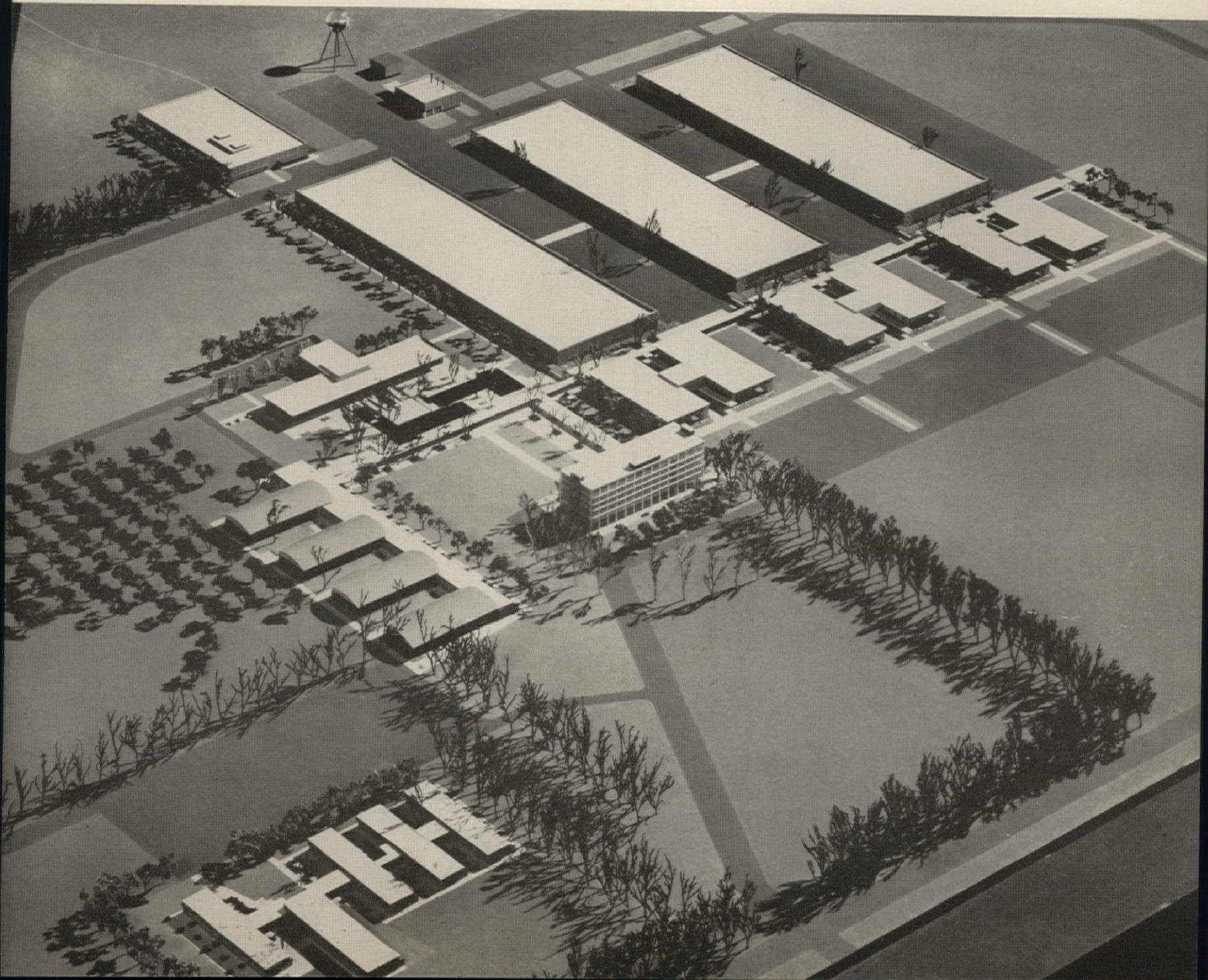


West Coast campus, designed by Architect John Bolles, will be finished late this year in San Jose, Calif. At lower left in model photo (below) is advanced research building, set apart and built around gardens for indoor-outdoor Thinking. Next to it is a school with classrooms for staff and

customers, laboratories in four wings separated by gardens. To the left is the lounge and cafeteria serving 6,000, to the right the administration building. All face a central plaza spruced up with reflecting pools, footbridge and sculpture. At right are three H-shaped product engineering

buildings, each with its own garden courts (sketch above) and long, low factory behind, where IBM will produce the new RAMAC brain and 604, 605, 607 computers now made in Poughkeepsie. Same tilt-up concrete panel system is being used by Bolles in IBM plant for Sherman, Tex.

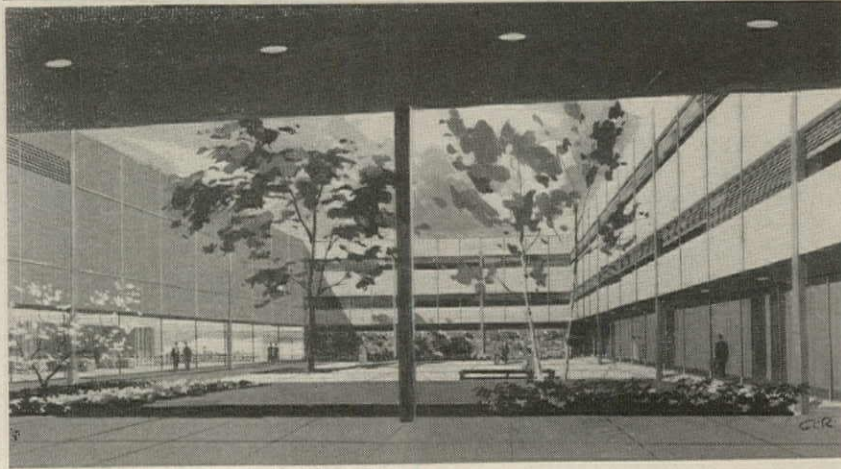
MOULIN STUDIOS



Old school at Endicott, in early "moderne" garb, will get a new wing three times its size. Design is also under way for an art and science museum by Harrison & Abramowitz.



GTR STUDIO



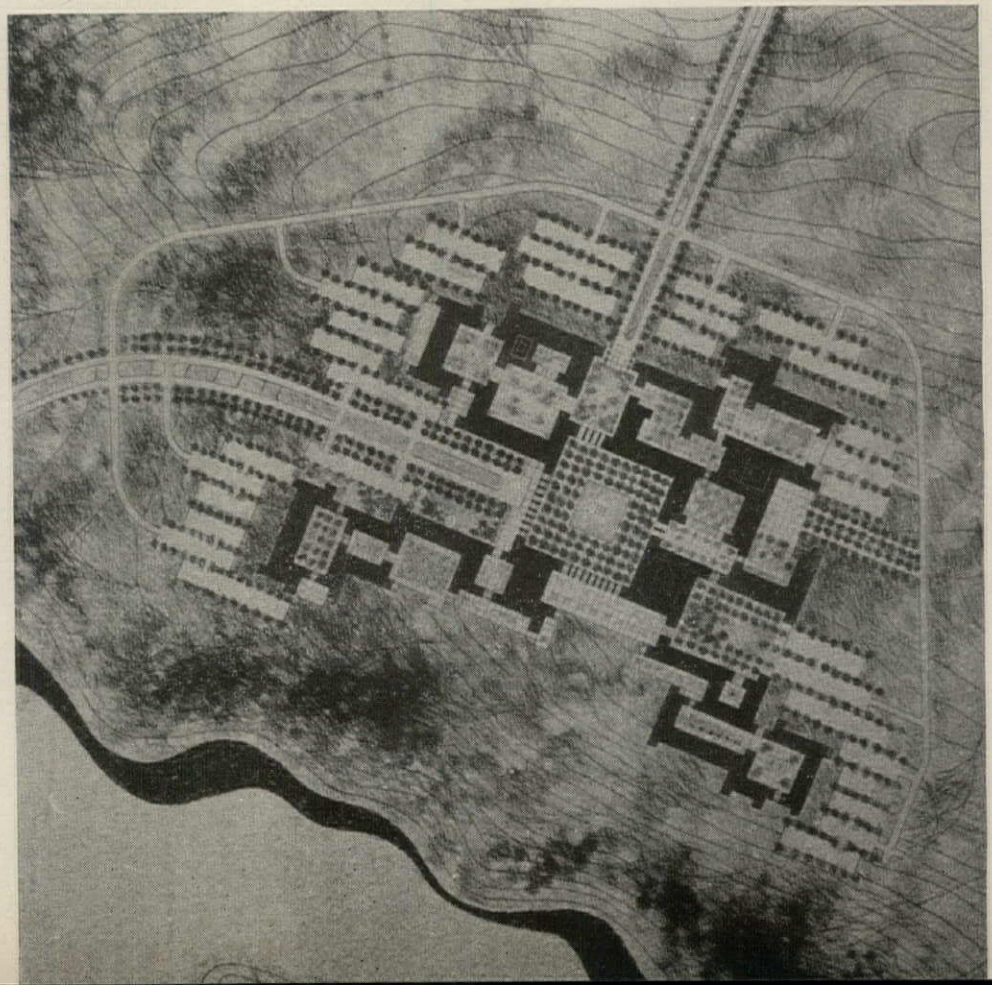
IBM backs up its plants with bright new schools and laboratories

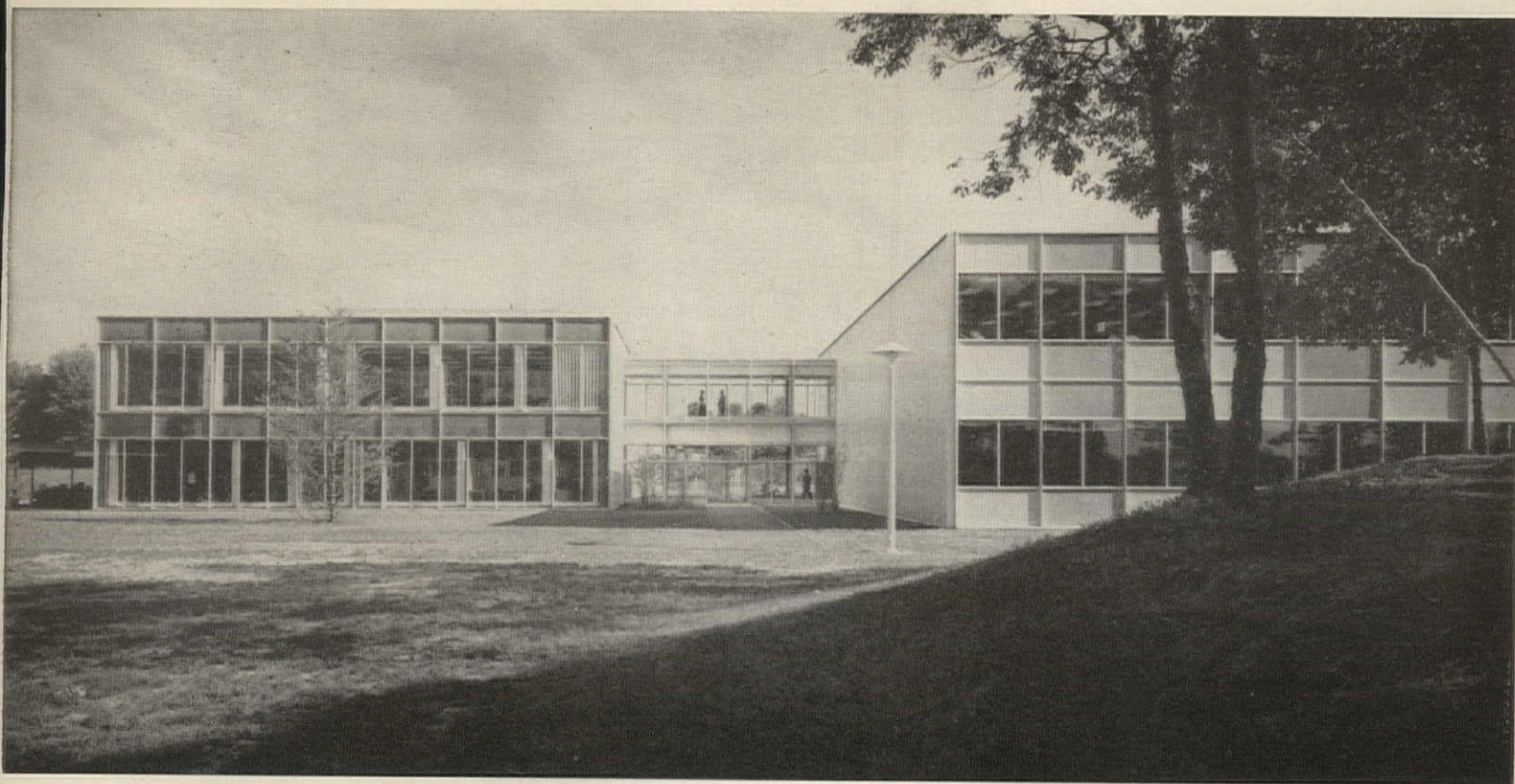
New school for Poughkeepsie will group classrooms and labs for 1,200 around landscaped court. Fieldstone walls are set back behind columns covered in stainless steel. Balconies flush with glazed brick above allow a breath of fresh air or a smoke between classes. Architects: Eliot Noyes & Associates.

sciousness, although the building department shoulders the main responsibility for this; 3) familiarity with local architectural and building practices; 4) experience in buildings of the type under consideration; 5) the depth of experienced personnel necessary to produce work quickly and to supervise the job; 6) the staff to handle engineering as well as architectural design; 7) reputation based on comments of previous clients.

Before the architect is picked, members of the planning section make incognito visits to possible sites armed with a lengthy checklist, compile information on everything from the community's labor supply, utilities and taxes to its attitudes toward industry. IBM, realizing the drawbacks of a company town, attempts to tailor the staging and eventual size of the plant to the local situation, tries to soften its impact by working closely from the beginning with local officials, business and school leaders so that town and company can grow comfortably together.

Research center at Yorktown Heights, N.Y. has been site-planned by Eero Saarinen as an interesting complex of buildings and courts that can expand outward from center group.





New laboratory for product development at Poughkeepsie (shown also in frontispiece) has porcelain enameled steel curtain walls in two shades of gray in aluminum frame, glass bridge connecting wings.



Reception lounge of Poughkeepsie lab

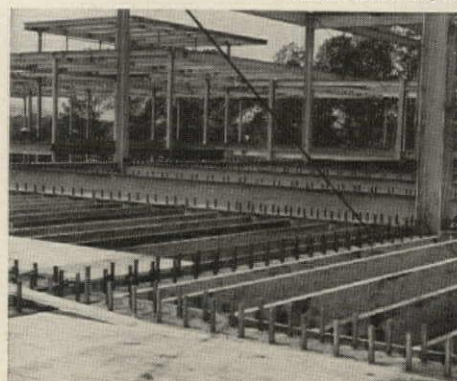
PHOTOS: (RIGHT & ABOVE): © EZRA STOLLER

(BELOW): COURTESY NELSON STUW WELDING DIV., GREGORY INDUSTRIES, INC.



Drafting rooms at Poughkeepsie have ample light and landscaped view through broad ceiling-high windows.

One-third less steel, and shallower floor depths, are made possible by anchoring floor slabs to beams with shear connectors (seen, right, as "spikes") stud-welded to top flanges to give composite action. Engineers: Seelye, Stevenson, Value & Knecht.



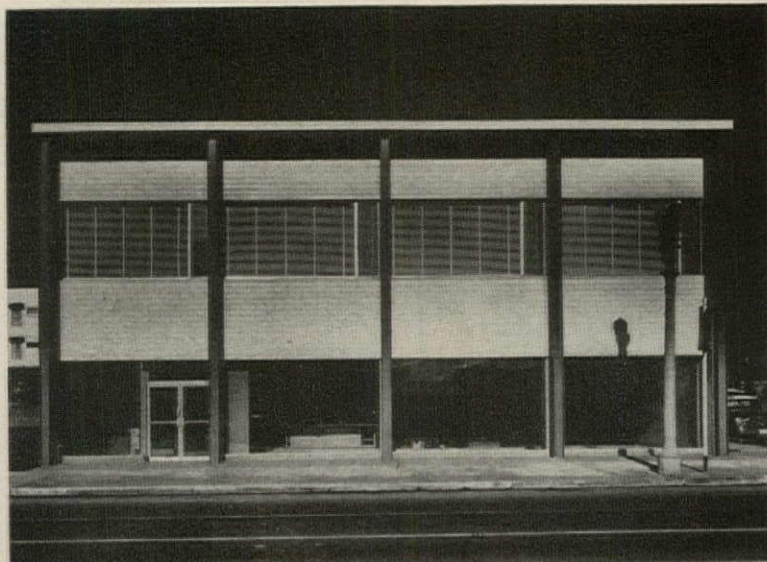
Old branch office in Hartford, Conn., which once rivaled the proudest of firehouses, will bow out to a new and more contemporary design now on the boards.



IBM's new offices and showrooms are modern salesmen

Somehow the big gray card punches and computers didn't look quite right in the dark, ornate old showroom of IBM's "World Headquarters" on Madison Ave. Architect Eliot Noyes was called in to design the space as a bright, comfortable reception room, which also makes an appropriate backdrop for the electric typewriters he had designed earlier (photo opposite).

But the fabulous computers, handsomely styled as some of them are, still don't *look* so fabulous as they might, and IBM and Noyes are now working on that problem, too. One objective is to show more of what actually happens inside. Brought in and backed up by Tom Watson Jr. as IBM's new consultant director of design, Noyes has in turn called in names like Charles Eames, George Nelson and Marcel Breuer to work with IBM's own industrial design departments and would like to bring in prominent sculptors and engineers to round out a critics' panel. At Noyes's instigation, Paul Rand, one of the top graphics men in the US, has been spending almost half



PICS CHICAGO



New branch offices among IBM's 188 around the country show machines and special displays through broad glass fronts. Above, top to bottom: Santa Monica, Calif. (Milton L. Anderson, architect); River Forest, Ill. (Theodore & Camburra, architects); Springfield, Mass. (Ernest F. Carlson, architect, engineer).



New York showroom by Eliot Noyes, IBM's design consultant, shows off red and yellow electric typewriters he designed earlier (they also come in green, blue, standard gray). Logotype on wall has since been slightly changed for better adaptation to packaging and promotion (See p. 114).



Old head office
on New York's Fifth Ave.
(1925).



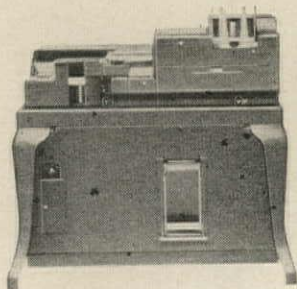
New head office for IBM's international wing, World Trade Corp., is rising opposite the United Nations in New York. Architects: Harrison & Abramowitz.



New Los Angeles headquarters by Pereira & Luckman will house 600 IBM employees, 600 others behind grid of sunshades, on Wilshire Boulevard.

© EZRA STOLLER





Old machines evolved from curve-legged design, through chrome-trimmed office furniture. New machines like the RAMAC (bottom) are panelized, squared off and accented with slimmer lines, new lettering.

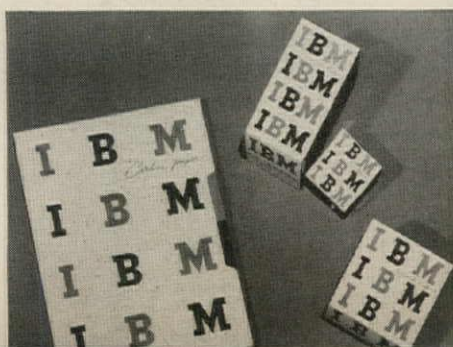


Display of equipment at trade show in New York's Coliseum featured new lettering, latticed canopy holding spotlights in shape of a hyperbolic paraboloid.

IBM's new look
spreads to products,
packaging, promotion

his time with IBM for nearly a year on its new logotype (right) and on letterheads, booklets, name plates, carton designs and packaging for typewriters and ribbons. Delighted by the new atmosphere, Peter Sicks, head of IBM's display design section, has turned out striking exhibits for business shows at New York's Coliseum and Chicago's Museum of Science and Industry and has transformed IBM's traditional Christmas windows from American-as-apple-pie tableaux to abstract starbursts and religious pageantry of deeper impact. Gordon Smith, who coordinates the whole visual program as IBM's director of communications, is beginning to commission artists like Feliks Topolski and photographers like Ezra Stoller to walk through the company's plants and research labs recording whatever strikes their fancy. The results are kept as a backlog of visual material for display and publication. Noyes is leaving Museum of Modern Art books lying around on reception tables where IBM staffers and visitors can't miss them, and is starting to arrange shows with names like "Structure and Shape in Modern Engineering" for lobbies and employee lounges. Someday IBM's famed traveling collections may be joined by a new one representing the best in modern art.

New trademark can be used as a pattern on packaging, booklets, matchbooks, curtains, as on typewriter supplies below.

[illegible]



A NEW PATINA ON PARK AVENUE

Reflecting the same forward approach to architecture shown by companies like IBM (preceding pages), the new Seagram's building now nearing completion across from Lever House on New York's Park Ave. is beautiful even in construction. Gray glass in a bronze setting looks subtly

lustrous, seems at home and weathered both at once. Whether and how a green patina will develop is yet to be seen. This is the first time bronze has been used to sheathe a building. Architects: Mies van der Rohe and Philip Johnson, in association with Kahn & Jacobs.

The money pinch

It hasn't hurt the big builder as much as the housebuilder,
but the pressure is on.

There is still plenty of money for good customers with sound projects

How hard has "tight money" hit big building?

Last month FORUM put this question to 400 industry leaders coast to coast—with mixed results.

From city to city, some builders and architects report that they feel no effect of the mortgage drought. But in the same cities others reply: "It's murder"—and then cite projects from \$100,000 to \$20 million, from churches to shopping centers, from industrial plants to office buildings (in Denver a \$270,000 mortuary) that have been delayed or abandoned for lack of financing.

Though some have escaped the consequences, construction definitely has been hit by the rising cost of financing, or the lack of sufficient funds to accommodate every project that every owner or promoter would like to build right now. But no one keeps records of unmade loans. There is no established benchmark of "normal" mortgage volume to measure the exact degree of drought or flood stage.

The problem's source

Money is the source of all building. And usually most of it is borrowed money, or mortgage financing. Despite an overrated reputation for being mysterious and complicated, "mortgage financing" is a simple subject. In essence, mortgage credit is merely another commodity, and the first rule that governs it is the law of supply and demand. Interest and amortization rates are simply the price of this credit, and they fluctuate mainly in relation to demand, secondarily in relation to the degree of risk the lenders may feel they are taking.

Construction borrowing is usually limited only by the owner's or builder's capacity for repaying, with the new structure pledged as security for the loan. But sometimes, as at present, the borrower's capacity to borrow may also be limited by the lender's capacity to lend.

For more than a year now, construc-

tion—and almost every other type of business—has been booming. Building and business expansion plans have sent demands for mortgage, and business, credit beyond the normal supply of credit. To minimize the risk of an inflationary bidding up of prices, the government's monetary policies have aimed at preventing excessive credit expansion (but *not* at reducing credit).

Result: there has not been enough credit to go around—in the volume or at the price all would-be borrowers would like to pay. In toto, however, mortgage and other borrowing actually has been higher than ever. But with demand exceeding supply, it has been spread around differently; not everyone can now get all he wants exactly when he wants it.

The spreading process

It is axiomatic that architects regard stock plans as impractical, if not also sacrilegious. Yet architects, and most others in construction, never seem to realize that mortgage lenders are like that too. They have no "stock plans" for mortgage loans. Each must be negotiated separately.

In this negotiating process, when demand outruns supply, lenders are like a hostess with extra guests, and not enough roast to go around. At such a dinner, rich old Aunt Agatha, or local social arbiter Mrs. Steelbeam may get a thick, juicy serving. A poorer relation will get a thinner slice. When this happens in the mortgage field, it is said that "lenders are being more selective." That is the case today.

Some of Boston's Yankee bankers insist their "selectivity" is not a result of "tight money," but only a return to "normal" lending practices because the exceptional postwar need for plant expansion and other deferred construction has now been met. Says one: "The abnormal loan is out. The normal loan is easy to get." Another, when asked what causes the sponsor to delay or abandon a project, says: "The straw that is breaking the camel's back is the lack of

equity on the part of the borrower."

(Some publicly recorded second mortgages in New York, however, offer their own mute testimony to the cost of money: a number of these, to corporations—not covered by the state's usury laws—were being made at interest rates as high as 18 and 20%.)

The effects

Many well-known names show among those who still declare "tight money has had no effect on us." Examples:

▶ "I know of no sound projects in the Chicago area that have been impeded by lack of credit. I know some unsound projects which have been aided by excessive credit."—Former NAREB President Morgan L. Fitch, Chicago.

▶ "I know of no sound project that has been abandoned. We have several major developments ready to go. We are confident they will be completed in spite of credit difficulties."—Joseph W. Lund, Boston, another former NAREB chief.

▶ "I haven't even thought of tight money. It has not affected any of the things we're doing." Architect Donn Emmons, of Wurster, Bernardi & Emmons, San Francisco.

▶ "We have all the work we can handle. It has not touched us. We can't see that it will in the future, either. The number of our contracts is up and we are able to go ahead on every one of them." Barrett Construction Co., San Francisco.

▶ "Tight money hasn't affected anyone we're connected with. We have some pretty good customers. They know where they're going and where the money is coming from by the time they get to us. In fact, the only ones I've heard holler are a couple of fellows from banks who can't make loans. After all, these increases in the interest rate are not as costly as wage increases have been."—An officer of Naess & Murphy, Chicago architects.

But louder and more numerous are those who cry, "It's murder." (For obvious reasons not all of these are willing to be identified by name or by association with specific ventures that, temporarily, at least, have to be chalked up as "duds"):

▶ "In this business you go from crisis to crisis these days because of tight money." So spoke a Midwestern builder who had a \$1.5 million office structure nearly completed, but is losing both his temporary and permanent financing commitments because of strike and weather delays. An insurance company has refused to extend his 5% perma-

nent mortgage commitment for three months beyond Feb. 15 because it can now get 6%, he reported. At the same time the bank providing temporary financing is refusing to advance any more funds after then unless the permanent commitment is extended.

▶ In Atlanta, Builder Ben J. Massell recently completed his \$3.5 million Peachtree-Baker building. On the same block he was planning a \$5 million hotel and an addition to the first building. Cost difficulties had just been ironed out when the money squeeze became acute. "That does it," said Massell, indefinitely canceling the new work, and leasing existing stores on the property for another three years.

▶ "Anything that is the least bit speculative is being delayed by tight money," reported J. W. Batson, of Batson Construction Co., Dallas. Offhand, he said, he knew of four shopping centers for a total of about \$12 million that have been put under wraps until money eases. (In this same city, however, Architect Mark Lemmon said he knew specifically of only one postponed project—a \$1 million church—deferred because the "loan was too costly.")

▶ Said Robert Murch, of St. Louis' big Murch-Jarvis Construction Co.: "The small businesses are the ones most drastically hit. A local company would have trouble today getting someone to build a \$100,000 plant on a 20-year lease deal. No one wants to put up \$100,000 for a small outfit any more. They are taking the preferred risks, the big fellows with Triple-A national credit ratings." His company has erected 28 truck terminals in the St. Louis area since World War II, and it would be at work on three more right now for about \$300,000 each, except for financing difficulty.

As viewed by Chicago's Richard Nelson, president of the Real Estate Research Corp., it is the speculative shopping center, motel and commercial building "promoter" rather than the owner-occupant builder-client who has been affected most by tight money. "It is the old-time real estate promoter of the twenties, who has staged a comeback in the last few years, and now finds it difficult to obtain financing," said Nelson.

Three large leaseback projects that were canceled when lusty demand boosted money rates all along the line suggested that clients might be rebelling more over relative increases than over absolute charges. New York Realtor J. C. Cushman Jr., of Cushman & Wakefield, cited one prospective \$8

million job in the East that was knocked out when the rate went from 4% to 4.5%, another \$1.1 million project canceled when it went from 4.5% to 5.25%. Hoboken, N. J. Industrial Realtor Clinton B. Snyder cited a \$2 million project that was ready to go at 4.75%, but was dropped when 5.5% was demanded.

Cutbacks in New York

New York City's vast office and apartment construction program is not immune to money trouble. Even a cursory survey revealed many delayed or abandoned projects in this area: two office buildings for \$35 million; eight apartments for \$15 million; an industrial building, \$6.8 million; five shopping centers, \$15 million; four churches, \$2.25 million.

Some New York builders and realtors also report that temporary financing is "critical." In one instance a \$16 million office building with a firm commitment for permanent financing has not been able to proceed beyond foundation stages for lack of building money. In another, a builder who had a firm commitment from an insurance company to take the permanent loan on a new post office (lease) building could not find building money.

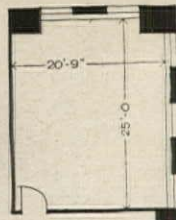
Long way around

Some builders have given up the struggle (like the New Yorker who put away his plans for an office building when a savings bank offered to make the loan only if the owner would take off its hands a comparable volume of government bonds *at par*), but others resorted to ingenuity to overcome adversity. One of the most determined sold some of his existing New York buildings to get funds for a new structure. But, as one observer quipped: "How long can you keep that up?"

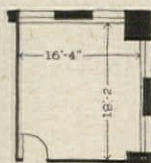
In a few instances projects have been trimmed in size or amenities to stay within the limits of available financing. A middle-income New York City cooperative needed about \$250,000 additional to cover higher costs. When the lender refused to increase the mortgage, the sponsors switched from wood to asphalt tile floors, reduced the tile in bathrooms, boosted the prices on ranges and refrigerators it was selling to apartment purchasers. Again, in Houston, Developer Alvin Moody, president of Texas Title Co., planned a \$2 million shopping center. After bids had been taken, money got tighter. First the job was postponed; more recently, it was trimmed to \$1 million.

Builders' compliments for FHA have

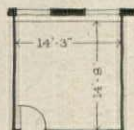
continued on p. 236



AA. President has 518 sq. ft. pacing space, corner windows, couch



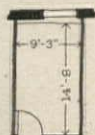
A. For next executive echelon space is shaved to 280 sq. ft.



B. Next rung down still retains 210 sq. ft., wrap-around desk



C. Desk meets wall; 140 sq. ft.



Oil company offices are standardized from AA through H. Minimum is office pool (left) with 66 sq. ft. per person. Layout is by J. Gordon Carr for Socony Mobil in N.Y.

Who gets what office?

One recent morning in Manhattan a man with desk space in a brokerage house, an option on an interesting business site in midtown Manhattan, and a strong scent on some mortgage money, made phone calls to some building specialists. First he called a famous firm of office and apartment house architects; he described and identified the street corner he had optioned, and asked: "How many square feet net in the envelope up to, say, 20 stories?"

Then he called the head of a contracting firm and asked: "When can you get steel delivery for 20 stories?"

And then he called a firm listed as interior planning specialists, and asked when they could give him a layout for a building.

This is an exaggerated scene in the great drama of office architecture in New York today. It is described by way of introducing a relatively new performer whose part in the show is constantly growing, in the opinion of realty men—and office managers. This new star is a specialist (who may or may not be an architect) in the science of making interior office space work out logically, i.e., profitably. He usually has little care or control in designing the exterior face or structure of the building. In some cases this specialist is called in before the architect; sometimes he is even called in *by* the architect.

The layout expert has become particularly powerful in the field of institutional, single-occupancy buildings. For example, when a large oil company a year ago decided to put up a suburban administration building near a Midwest city they engaged Michael Saphier & Associates

A new breed of designing specialists is helping decide, and thereby influencing the shape of architecture from the inside out

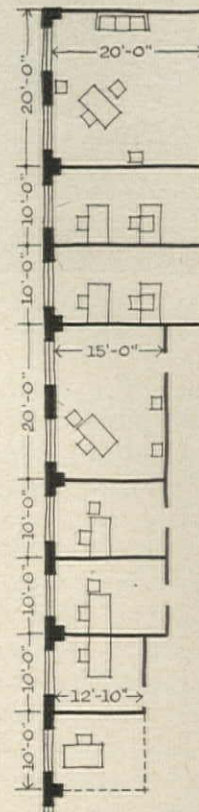
Inc. before they even picked a site. After a detailed space utilization analysis by their programming associates, the Saphier space planners (who describe their services neatly as "the design of units of space less than a building") recommended a four-story building with a specific bay spacing. A suitable site was found, an architect engaged and the building is now going up.

Few tenants renting large slices of new office buildings in New York do it without retaining their own interior planning consultant. Air-conditioned space, at \$6 per sq. ft., is too expensive to waste. If the tenant is contracting for ten or 12 floors of a projected building on long-term lease before construction, his interior expert may well swing some weight on the planned column spacing and fenestration. It is known (although not publicly admitted) that steel has sometimes been revised in the design stage at the behest of interior layout specialists on Manhattan. No interiors man wants credit for this kind of thing, of course, because architects continue among his crucial future associates, and some architects still are wary of him.

This architectural attitude is dissolving, however, for several good reasons. Although the specialty of designing office interiors may well have begun when somebody's wife picked out drapes for his board room, it has since gone deep into the technical process of business procedures. Also, some clients, who want the intricacy of complete office procedural replanning, may ask it from the architect, but will pay for it only if a separate expert is called in.

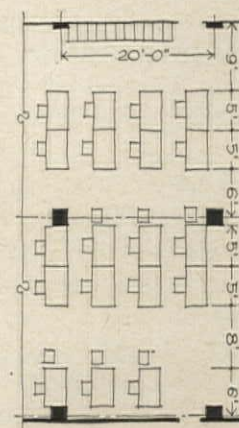
As much as anything else, the process of designing efficient interiors calls for exhaustive programming and analysis of needs. There exist some organization charts, drawn up initially by architects or interior designers for purposes of space analysis and allocation, which still serve the organizations that ordered them as the best diagrams they have for explaining their operations. Further along, considerable diplomacy is used in standardizing office types, and applying the program to influential individuals within the client company. Everyone wants a bigger office when a move is made; in truth and in economy, almost everyone today usually gets a smaller office. This is one of the less technical reasons that so many full-size mock-ups are being made—not only to study the realities of the space before it is built, but also to show suspicious executives that new techniques in furniture placement, storage and lighting can make up for the loss of a few square feet of wall-to-wall floor.

The field of office designing specialists includes a number of varieties: there are architectural firms like Kenneth Ripnen and J. Gordon Carr who specialize in interiors but also can build the walls around the offices, if called upon; then there are the strictly interiors firms such as Maria Bergson and Eleanor LeMaire, who came into the business from the other end. Nationally, Raymond Loewy Corp. does an immense amount of all kinds of interior planning. Designs for Business Inc. is another very large firm, especially in the office field. A third important group are the furniture manufactur-



Fitting the bay spacing.

Extracts from buildings designed by Kenneth Rippen show (above) how office sizes can be condensed both laterally and in length and (below) how desks can be butted when space squeeze is essential.





Mock-up. This is not a working office, but a three-dimensional exercise in space by the Knoll Planning Unit, which does this frequently to get the interior design process up off the drafting board.

GEORGE CSERNA

ers like Knoll and Shaw-Walker who maintain separate (and very differently oriented) design groups to execute complete interiors. Actually the largest of these in volume probably is the design wing of Shaw-Walker, the big office equipment manufacturers. R. K. Gad, who is director of this Office Planning Division, is a figure of no small legend within the field. He is emphatic in his demand for organizational efficiency: "Don't talk cost or esthetics with me," he says, "talk efficiency. If I can do something to save 10% in efficiency, the company gets its building free in ten years."

Gad diagrams three general types of space to be designed into any office building: 1) Large areas with and for continuity of work—paper assembly lines. 2) Compartmented areas for private offices. 3) Areas which "can jump either way and are cushions for overflow of either type."

No company can afford too much space, he says: "Too much space is a lot more expensive than too little space—not only in heat and light, but in payroll too."

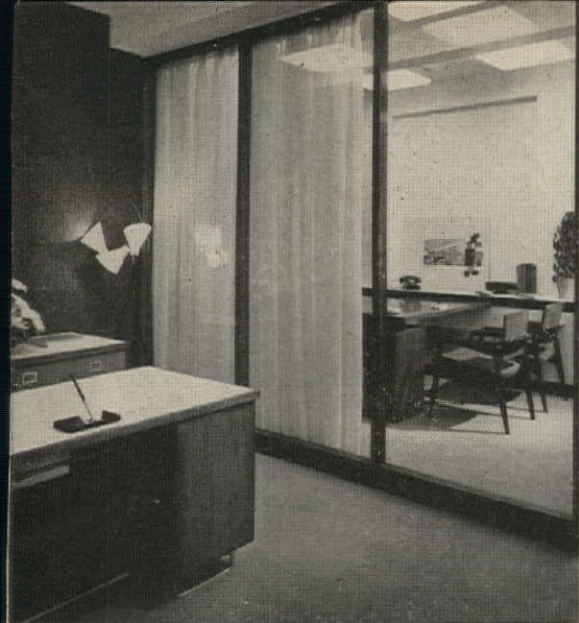
The Knoll design unit, led by Mrs. Florence Knoll, is famous as a member of teams clearly captained by

architects. Examples: the interiors of the Alcoa building in Pittsburgh by Architects Harrison & Abramovitz; interiors in the Connecticut General Insurance Co. building by Architects Skidmore, Owings & Merrill, now under construction.

An example of J. Gordon Carr's approach to the many layered executive organization of a large corporation is shown on p. 118, in photographs of various echelon offices. Carr has executed some of the largest recent interiors in New York; currently he is designing the interior layout of Seagram's offices in its new headquarters (p. 115). About as close to generalization as this interiors expert will come is that he likes to operate in a structural context of 9' or 18' bays.

Kenneth Rippen categorizes office space into four general levels, with differing per-person space requirements, based on conventional 20' x 20' as the average structural bay. Categories run from the "A" type executive office at 400 sq. ft. to the clerk in an office pool at 65 sq. ft.

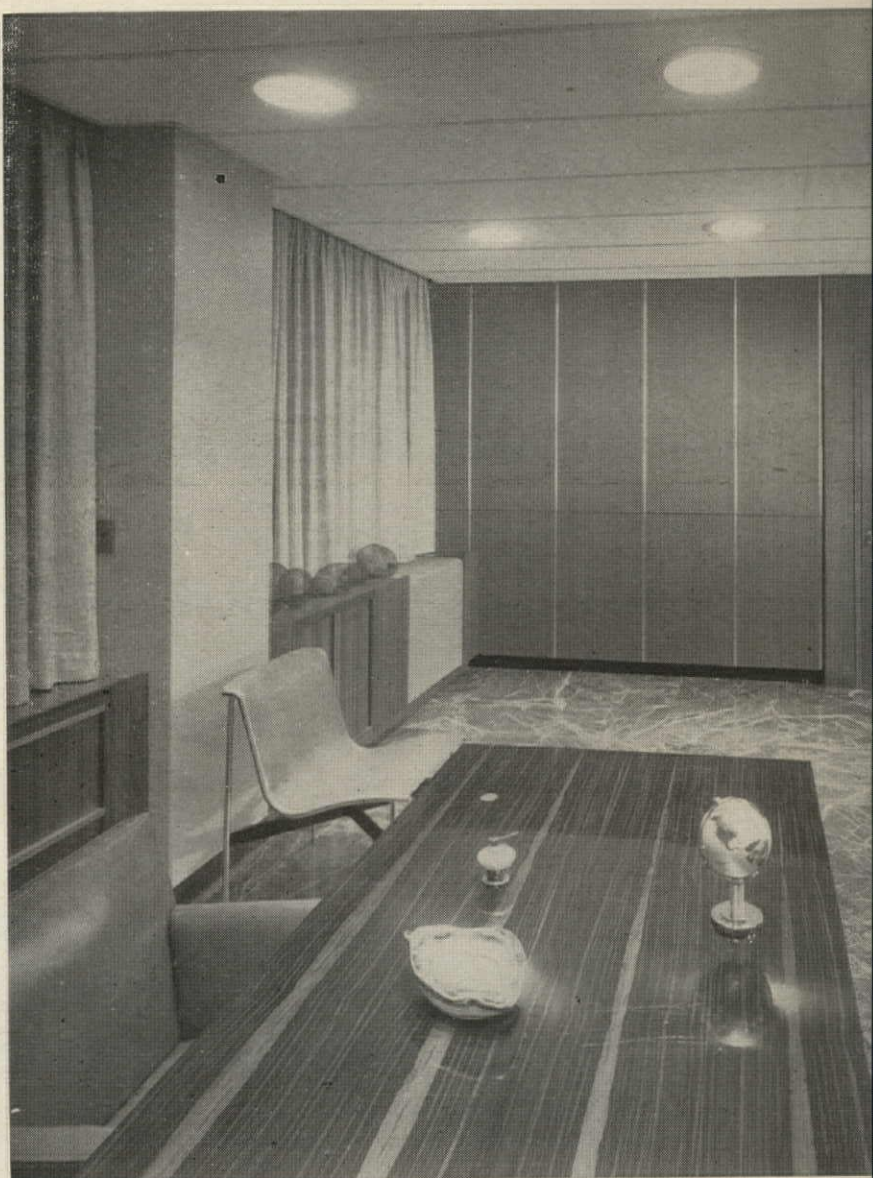
But standards continue to vary job by job, just as do sites and company situations. Office planning, the experts say, is an extension in depth of architecture into auditing.



HEDRICE BLESSING

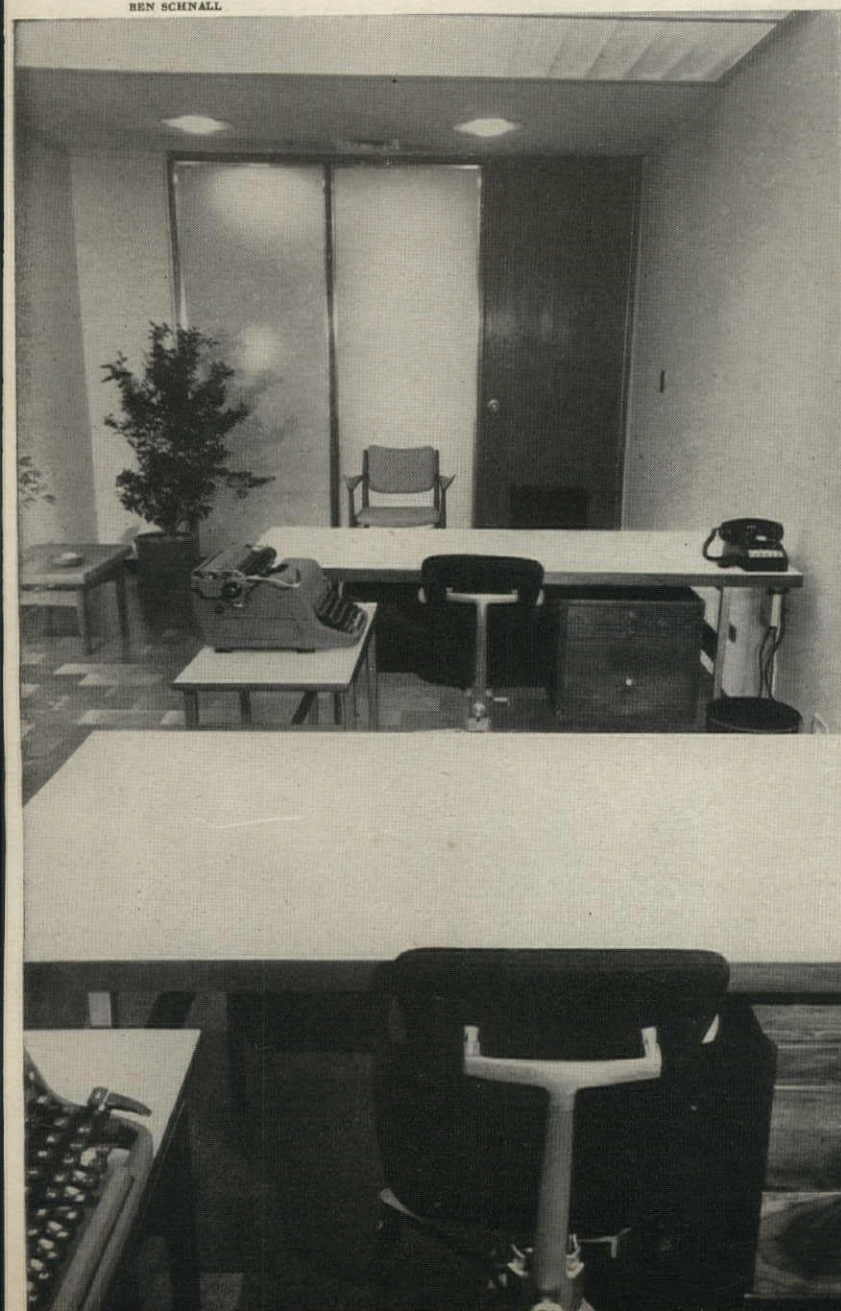
Glass partitioning, with curtains on one or both sides, is used to enlarge small offices visually, and to borrow daylight from exterior offices for interior spaces. This is part of Interior Designer Maria Bergson's own suite.

J. ALEX LANGLEY



Uncomplicated but richly furnished space in this office is used to maximum effect by a top executive in Herbert Charles & Co., N.Y. real estate firm. Designers: Michael Saphier Associates.

BEN SCHNALL

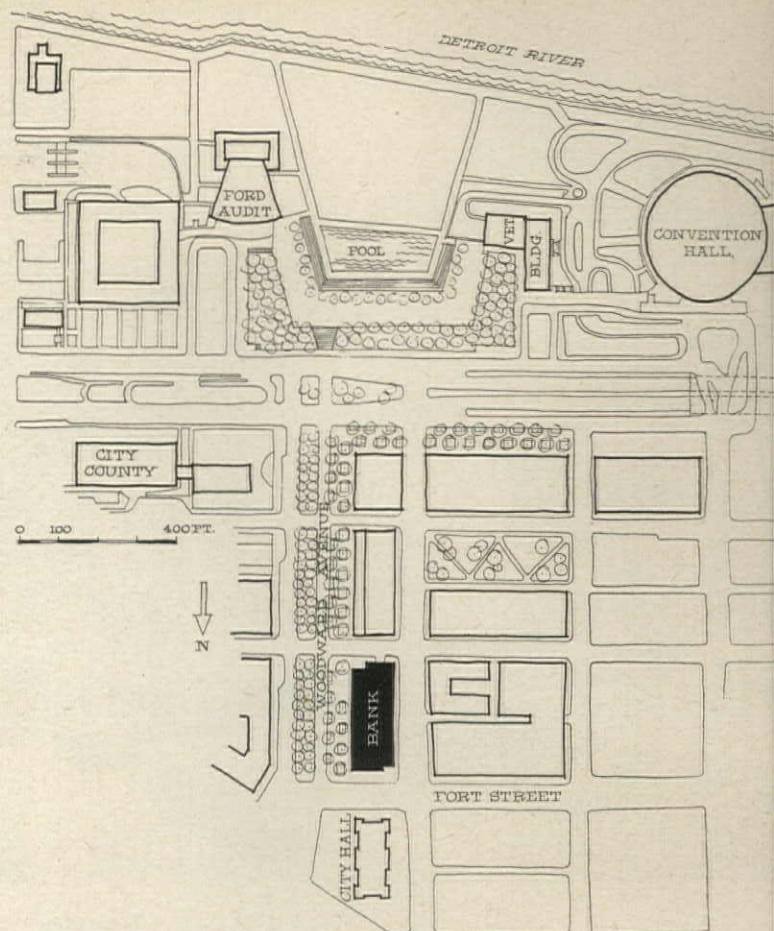


Long narrow office can jump echelons easily. With one desk, this space is suitable for ranking executive, with two desks for secretarial bank. Interior is by Designs for Business, Inc. for Olin Mathieson Chemical Corp.



Detroit's biggest commercial bank sparks the investment of private money in downtown renewal by linking its building to the new civic center

Banking in civics



The National Bank of Detroit is the eleventh ranking US bank. Its roster of directors reads like a bluebook of Detroit industry. Its influence can be read in the statement of Detroit's businesslike Mayor Albert E. Cobo that the bank's decision to put up a \$15 million headquarters is likely to spark badly needed private investment downtown—perhaps as much as \$185 million worth. In line with a bank's normal concern for general community health, the officers and directors, led by President Charles T. Fisher Jr., are consequently multiplying the effect of the bank's investment.

But the multiplication was actually begun by the city. The bank building is being built at the portal to Detroit's new civic center, and—let there be no mistake about it—the civic center was conceived by the city as a “pump priming” device for renewing downtown Detroit.

What the bank has done about

building in this situation sets a fine example for any business interested in tying private enterprise to city renewal, with benefit to both. The bank tied its program to Detroit's renewal by extending the features of city planning started in the civic center. It then coordinated its land acquisition with the city in negotiations that were open, straight forward and nonpolitical. Finally, it looked for a building exterior which would show its character and the place it had in the civic center.

A place in the center

Detroit's civic center spreads out along the river at the end of “Main Street” (Woodward Ave.), like the crossing of a “T.” The new bank building will be three blocks down “Main Street” on Cadillac Square at the foot of the T.

In the over-all plan for the T-shaped civic center laid down by the late, great Architect Eliel Saarinen in 1944, Woodward Ave. was widened through two blocks. At the base of the T where the bank is being built, he pinched it together again, creating the effect of a narrow portal. This narrowing was subsequently abandoned and the bank is



Arcade under building adds 16' to the spaciousness of the 40' sidewalk.

NATIONAL BANK OF DETROIT, Detroit, Mich.
ALBERT KAHN,
associated architects & engineers, Inc.

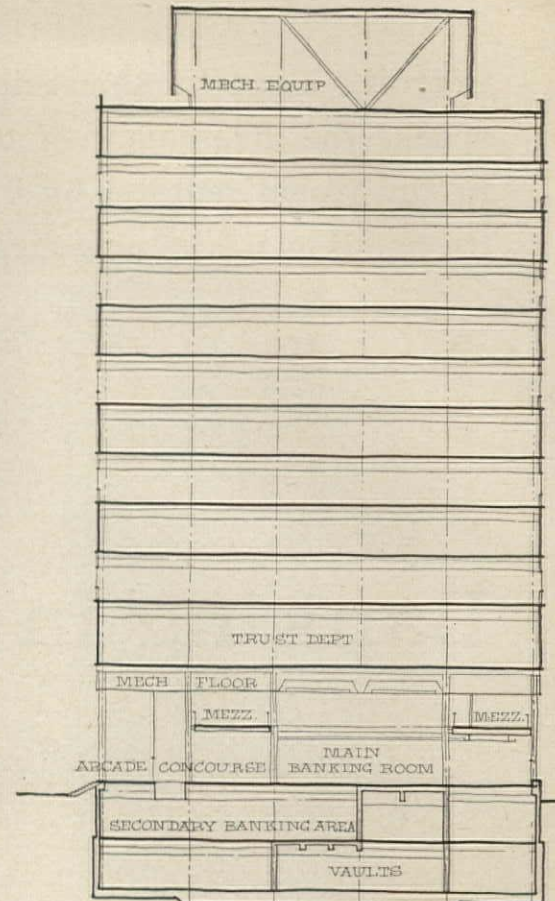


Model of National Bank of Detroit's new headquarters, like its big brother now under construction, marks the widened approach to the civic center on the river beyond. The building in the right foreground is the 1871 City Hall.



LENS-ART PHOTO

Tapestry of stone, aluminum and glass will give the bank the appearance of a treasure box when seen from Cadillac Square. The model conveys the approximate look of the building in place.



now engaged in a give and take with the city—by giving up a 70' strip of land to the city for widening the street past its premises, the bank gains a wider vista for itself.

Advised by their architects (Detroit's Albert Kahn Associated Architects & Engineers, Inc.), the bankers' agreement with City Plan Director Charles Blessing confirmed his concept of a 190' boulevard providing three lanes of traffic each way. But beyond the traffic benefits, Blessing's idea included a 40' pedestrian esplanade planted with a double row of trees, and behind that a 16' covered arcade to be provided by the bank inside its property line.

The total proposal meant that a third of the site would be taken by the city for its part of the plan, with the bank tossing one eighth of its remaining ground floor area into the arcade without public compensation.

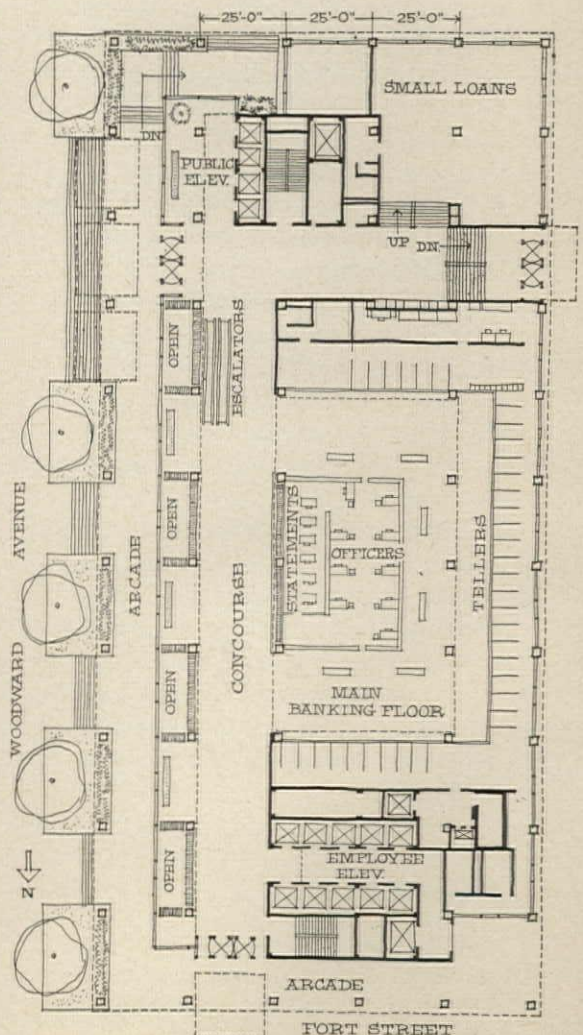
A room along the arcade

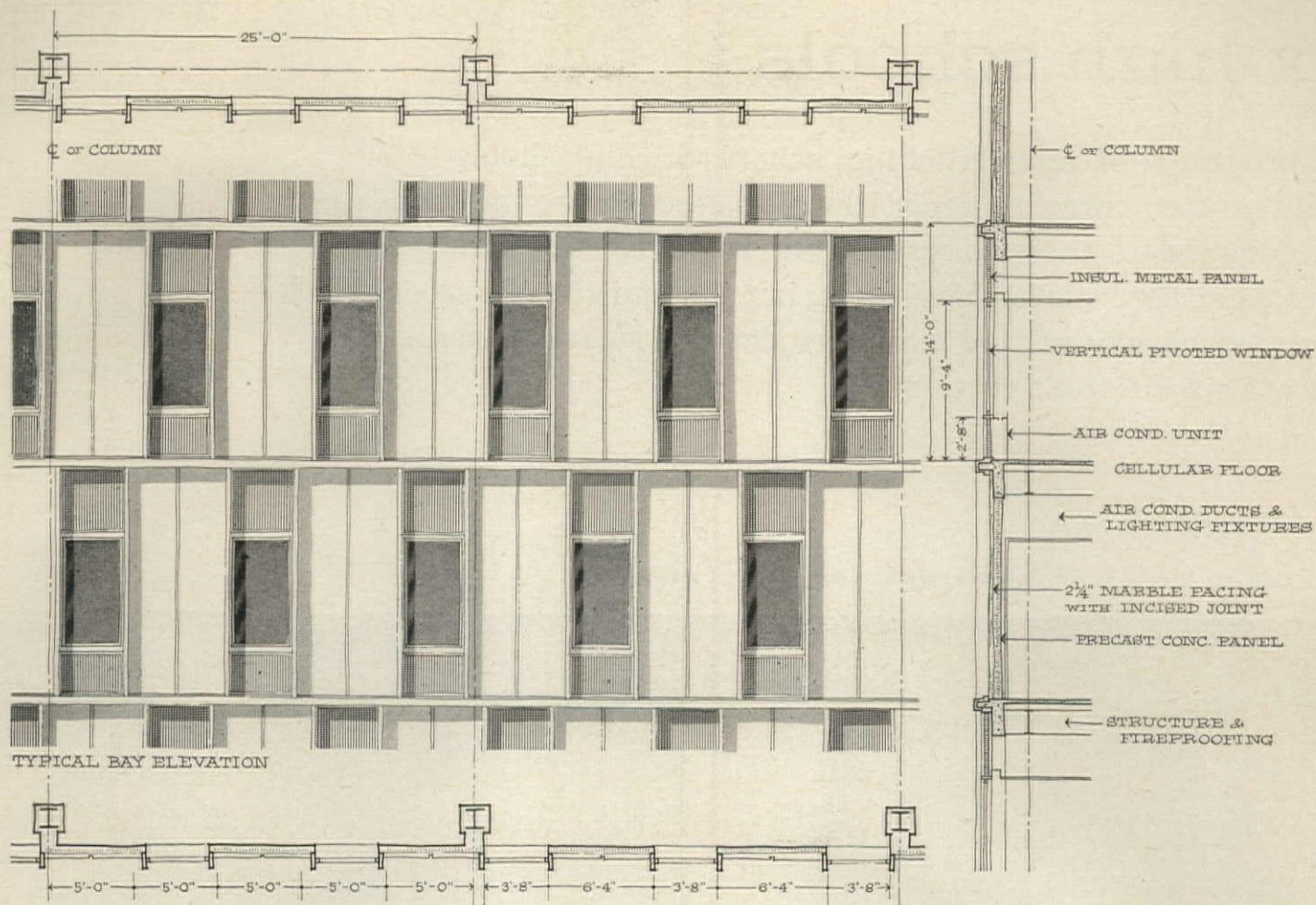
The bank's final plan provides a lot more than a minimum covered walk along "Main Street." Turning the corner, the arcade is tied down around the solid wall enclosing the stairs and elevators at one end of the

building. Another plus in the design of the arcade is the handling of grades at the other end. A 7' difference in elevation from the sidewalk to the first floor line of the building has been absorbed by three flights of steps breaking back at a right angle to the main façade (see plan).

The change of direction strongly suggests that the esplanade and arcade need not be a "straight line" proposition. If the buildings in the next block could be cleared to the alley and left as open space, the extra depth would shape an alcove off the street which would help regain the vitality that was a part of Saarinen's original plan.

All along the arcade on the "Main Street" side of the bank, the passer-by can see an unfolding panorama of activity in the big banking room behind a wall of glass. Just inside the glass, open wells perforate the floor, giving the passer-by a "peep hole" view into the secondary banking space under the arcade in the basement. The two-story height of the arcade is matched inside the glass by a two-story concourse, which is, in turn, lightly separated from the main banking room beyond





by a mezzanine level bridge. This high-low-high sequence, because it is exposed to the arcade and the street beyond, is a good piece of street architecture in itself (see section, opp.).

A question of method

Often a sensible and agreeable coordination of private plans with public objectives flounders on the simple questions of procedure. The whole thing gets embroiled in a political stew and coordination is lost. Bank officers and Detroit city officials, determined to avoid this, established methods of land acquisition and demolition which were beyond any criticism.

The bank negotiated privately with the several parcel holders in the entire block, and then submitted to condemnation proceedings for the portion needed by the city. Thus, the circumstances of the deal between the city and the bank became a matter of public record.

When it came to removing the existing buildings (covering both portions indiscriminately), the city let a contract for the whole job under required city bidding proce-

dures. The bank reimbursed the city for its part of the job on a square-foot basis.

As the place of private business in city renewal matures, the kind of extra caution the bank felt impelled to use may not be so essential. Until then, the bank's obvious "clean-hands" approach may be best in handling this kind of cooperation.

The face of a portal building

The remarkable exterior, among the first in America to be actually executed with staggered windows, rests on a solid line of reasoning.

The architects analyzed the bank's upper floor operation (administration, trust and central services for 55 greater Detroit branches) as being largely of the big room and bullpen type, requiring controlled conditions of heat, light and air conditioning. A wall of only 25% glass would meet the need for view and would cut air-conditioning costs.

Consequently, the Kahn office's director of architecture, Sol King, with Walter Sanders of the University of Michigan as consultant and John Haro as designer, took this practical consideration in hand and

developed a building face that would sit pretty in the over-all civic center pattern.

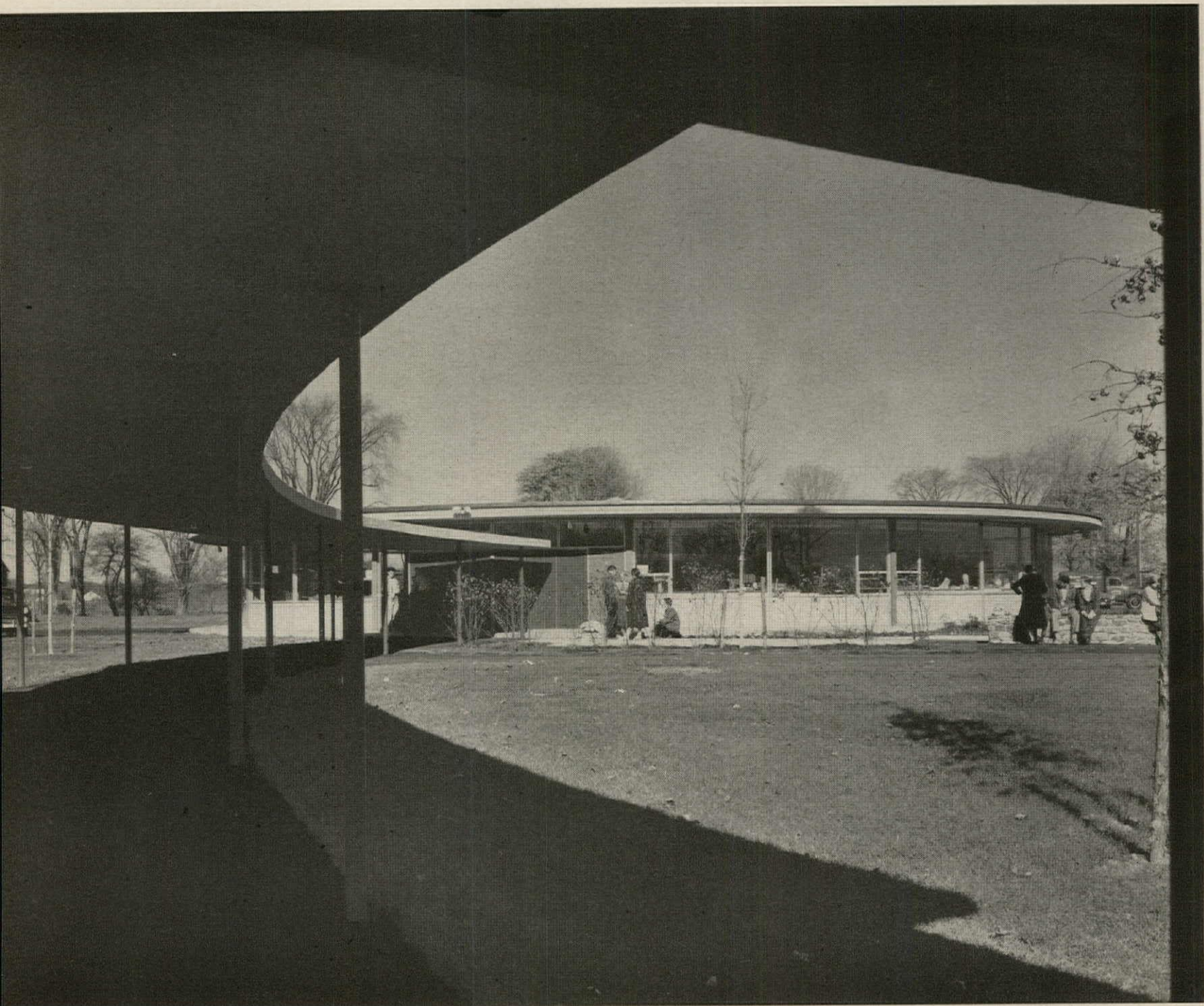
With the towers of Detroit's Wall St. area as a backdrop, and with the exuberantly renaissance City Hall as a neighbor, the relatively small bank building had to be visually important, in keeping with its place in the civic center. A horizontal or vertical commitment would only call attention to the city hall alongside or the towers overhead. A pattern of holes punched in rigid alignment, the conventional solution in these circumstances, would end up looking foreboding and dingy.

The staggered window solution, carefully integrated with the column spacing, yields a simple tapestry that wraps up the building and sets it in place. The alternate panels of glass and stone are bound in narrow moldings which will elegantly enrich the surface with their cast shadows. The wall materials (at present only tentatively selected), are white marble for the infill panels with bronze anodized aluminum for the framing members and spandrel panels, combining to give the bank an appropriate air of being a treasure box.

Six high schools

New programs of team teaching, schools-within-schools and integrated curricula are stirring up secondary education. To accommodate these programs, the basic teaching unit is no longer the isolated classroom, but instead the classroom block—a group of closely related class, project and social spaces. Here are six different versions

Circular unit, one of four at Old Saybrook, contains shops and art classrooms





Classroom seen from corridor

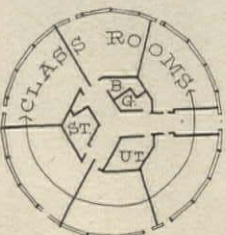
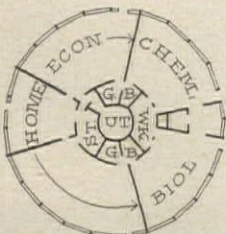
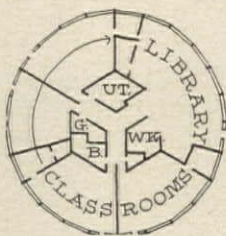
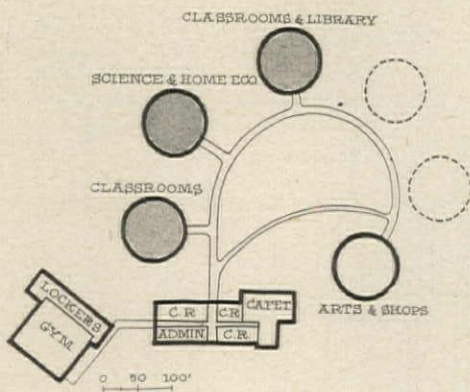


Library

PHOTOS: JOSEPH W. MOLITOR



Woodworking shop

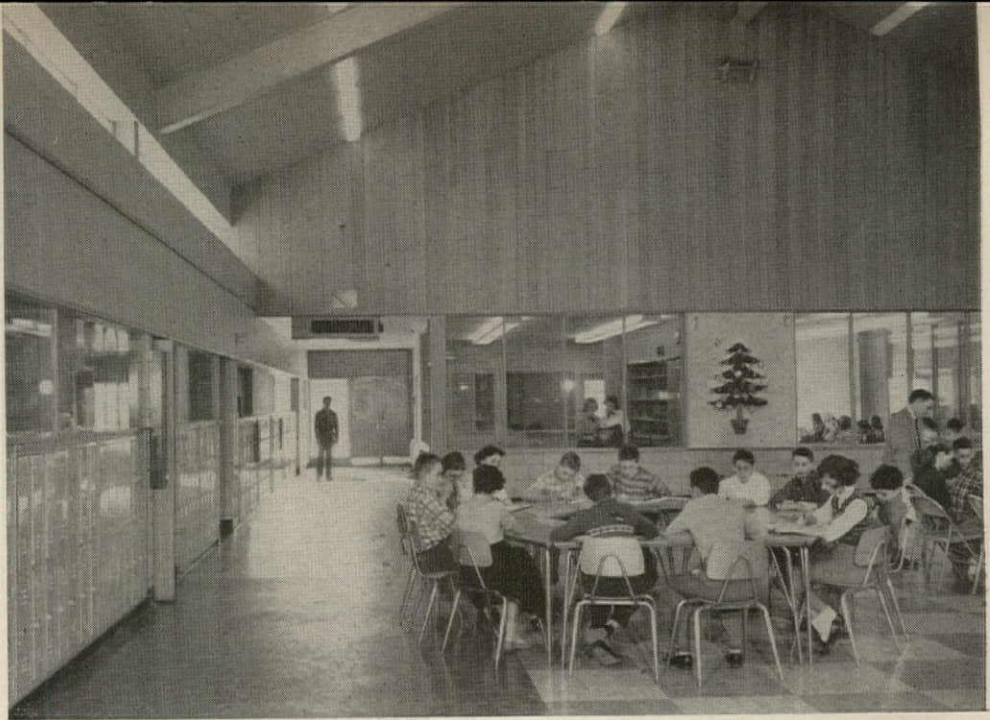


Chemistry and physics classroom

1. Campus plan classrooms in the round cut unproductive space

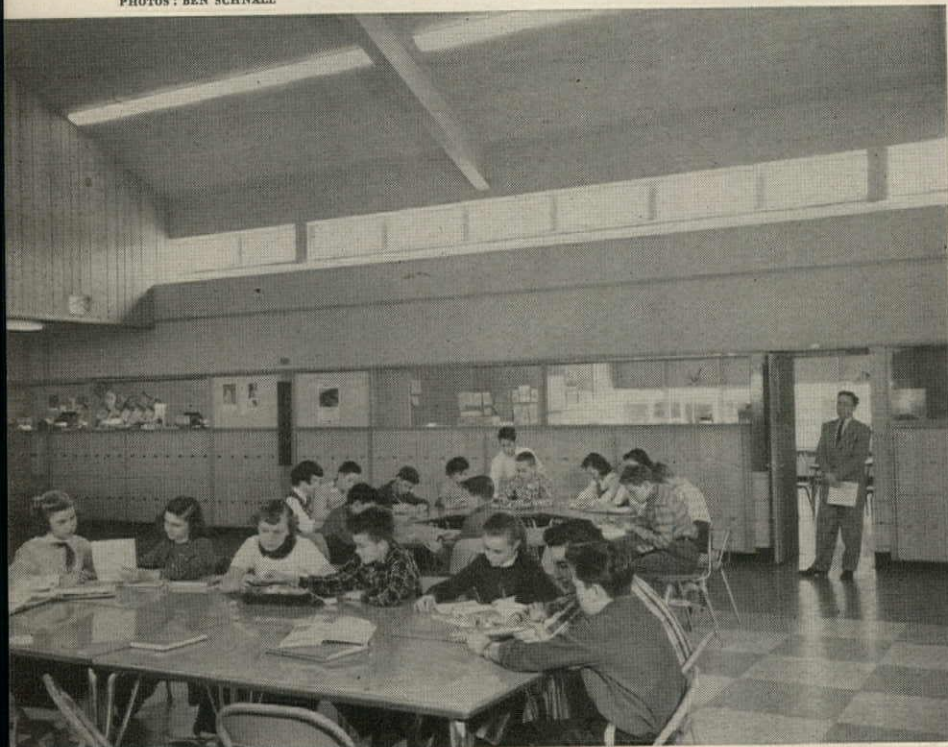
Indoor circulation space is almost eliminated in the circular classroom units at the high school in Old Saybrook, Conn. The school is therefore much more economical than even its low-average square-foot cost would indicate. It has only 8,615 sq. ft. of noneducational area to service 45,227 sq. ft. of educational space. (For a school of this size, 20,000 sq. ft. of noneducational space would not be unusual.) The wide wedge shapes of the rooms work out splendidly for classroom and laboratory activities. The success of the

scheme suggests further development: larger circles with more interior, devoted to activities and project space, an idea already in use in a few elementary schools. Capacity, 600 students; construction cost, including fees, \$779,408; \$14.47 per sq. ft. Warren H. Ashley, architect; Charles Currier, landscape architect; Marchant & Minges, engineers; Engelhardt, Engelhardt & Leggett, educational consultants; Bolt, Beranek & Newman, acoustical consultants; Harlan Wright, kitchen; Torrington Building Co., contractor.

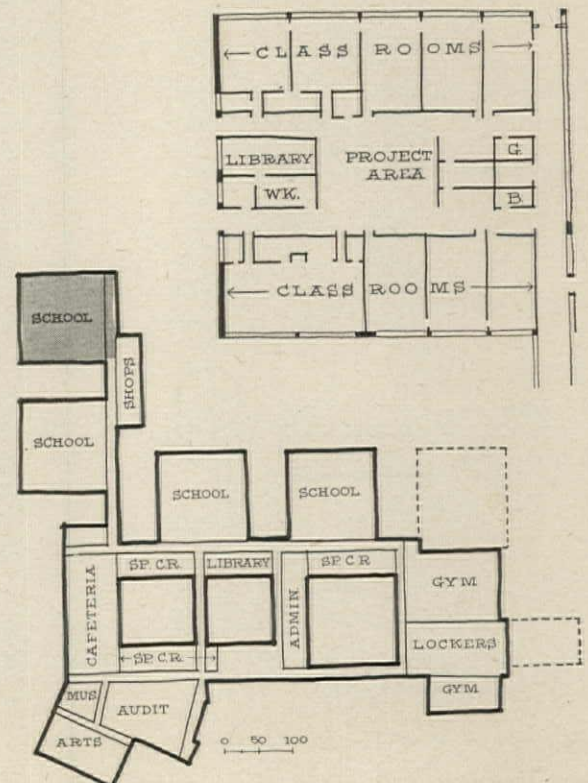


High-roofed central hall, looking toward library

PHOTOS: BEN SCHNALL



Central hall, viewed toward row of classrooms



2. Big cheerful project hall is the heart of this classroom block

The junior-senior high school in Syoset, L.I., will be one of the most studied and influential schools of our time. Under a grant from the Ford Foundation, teaching methods will be analyzed, evaluated, reported. The plan is admirably suited to the flexibility needed for such a project—and for the flexibility needed by secondary schools in general, in their current state of educational flux. Each little school has its own library, conference, guidance and work

suites and classrooms centering around a clerestoried central project and social area. Small project spaces off of several classrooms add still more flexibility. Capacity, 1,760 students; construction cost including fees, \$3,492,840; \$18.88 per sq. ft. Eggers & Higgins, architects; Eipel Engineering, structural; Cosentini Assoc., mechanical; Engelhardt, Engelhardt & Leggett, educational consultants; Lawrence J. Rice, general contractor.

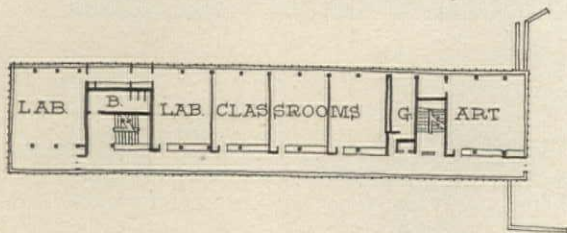
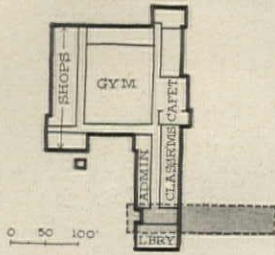
Exterior of two classroom units



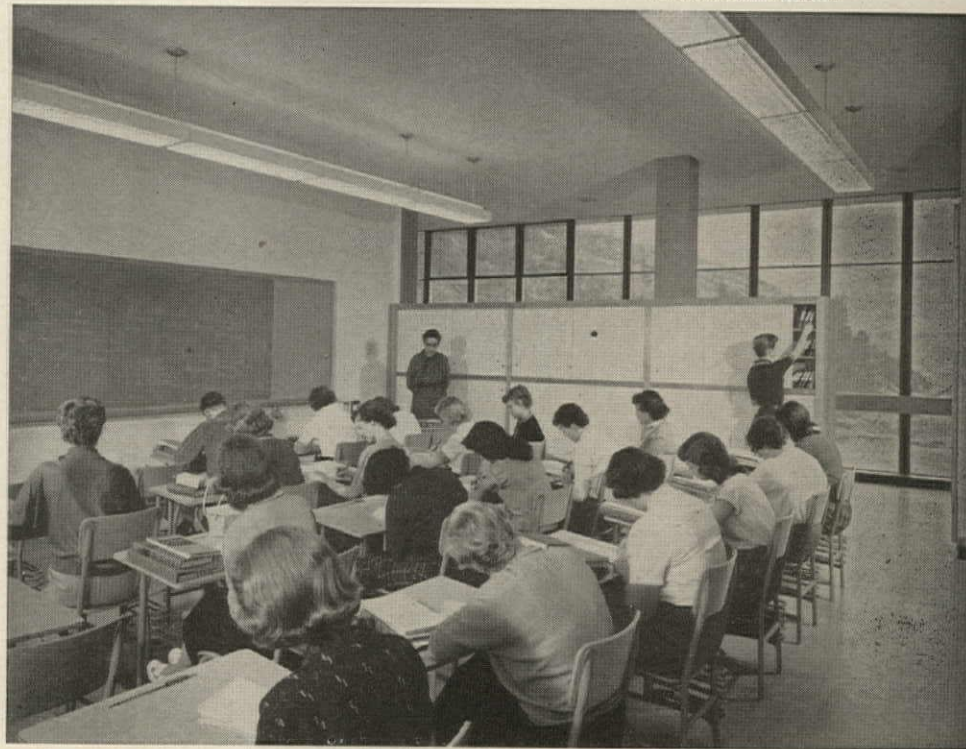
3. This classroom block has a project area as big as outdoors

The two-story raised classroom block at the high school in Kellogg, Id., does not turn inward to a small project area but outward to an enormous one—to a community just emerging from the status of a passive, company dominated town, and to mountains seared and blighted by smelter fumes. Most extra-curricular activities, many of the formal studies, are directly involved with the community's problems and opportunities; the school is a busy agent in the local renaissance, as well as its symbol. Internally, the informal, open

relation between classrooms and corridor-social area works well for a program that includes accelerated study with many individual, self-directed projects by good students, but few mechanical audiovisual aids. Capacity, 600 students; construction cost, excluding fees, \$927,232; \$13.63 per sq. ft. Culler, Gale, Martell & Norrie and Perkins & Will, architects; Lyle E. Marque & Assoc., mechanical and electrical consultants; J. F. Weltzin, educational consultant; Johnson, Burboom & Rouh, general contractor.

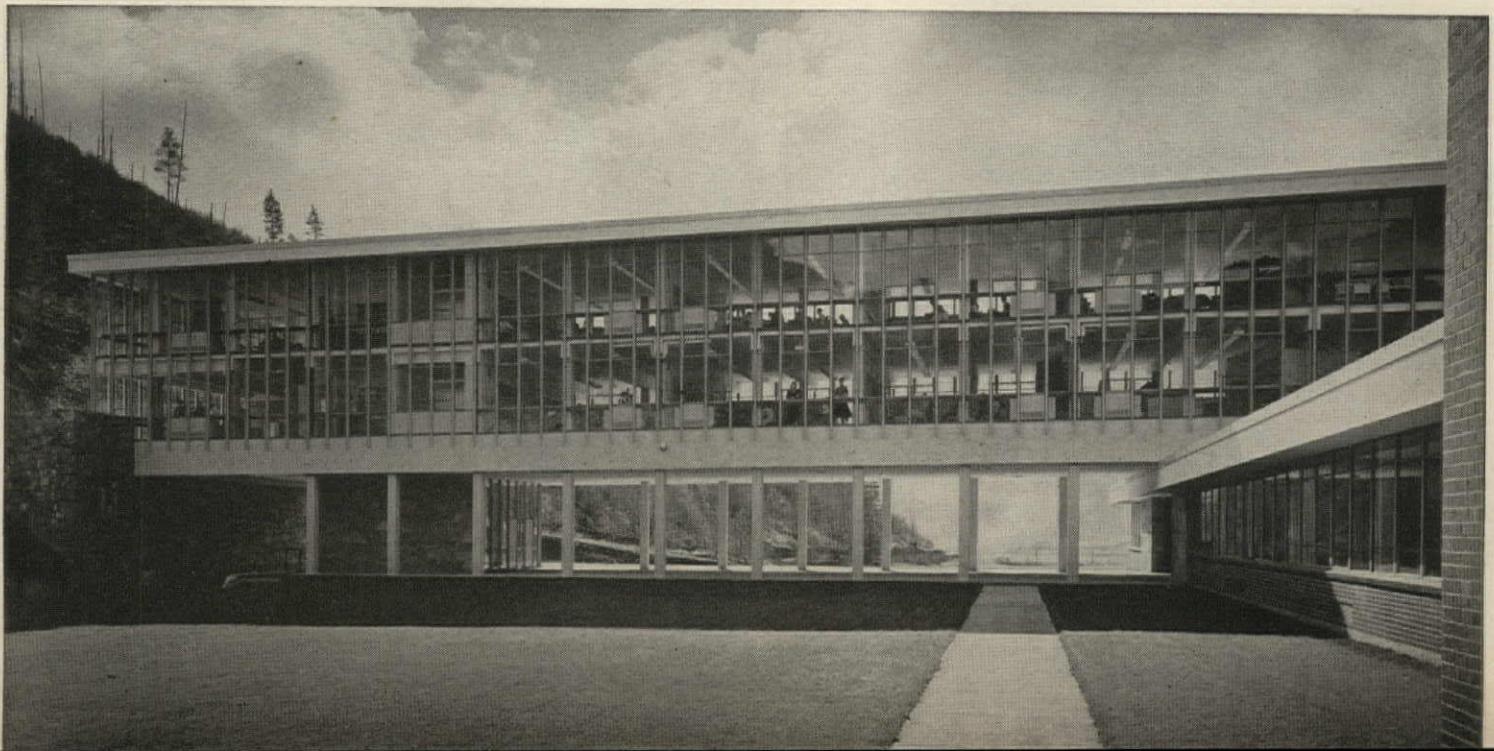


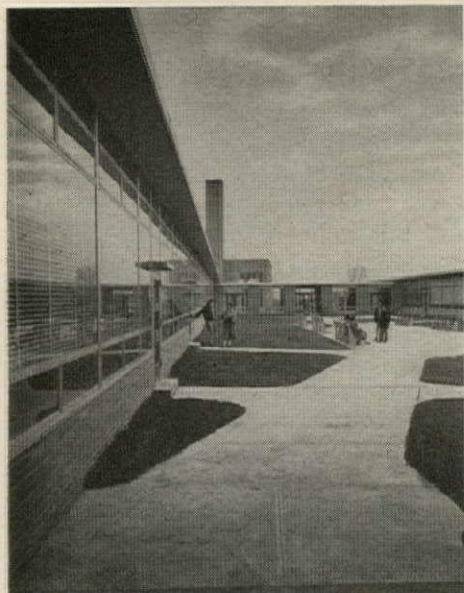
PHOTOS: HEDRICH-BLESSING



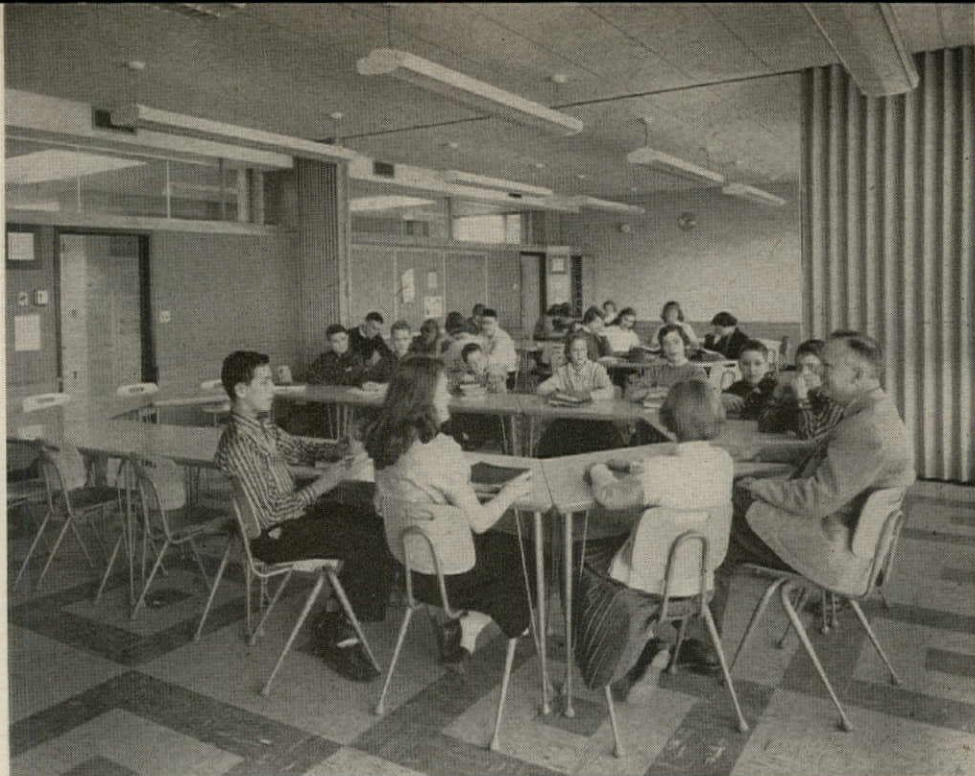
Classroom, looking toward "sun porch" corridor

Two-story classroom block, from corridor side



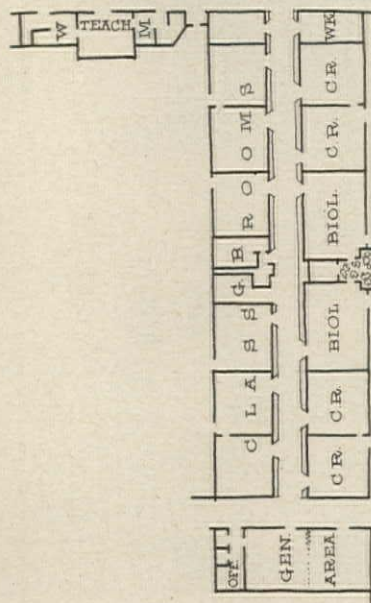


Court shared by pair of "houses"



General area of unit, divisible into two rooms

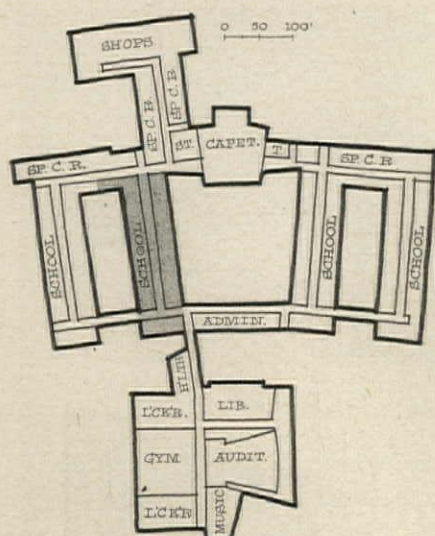
PHOTOSS MARION SMAE



Central court, looking toward cafeteria



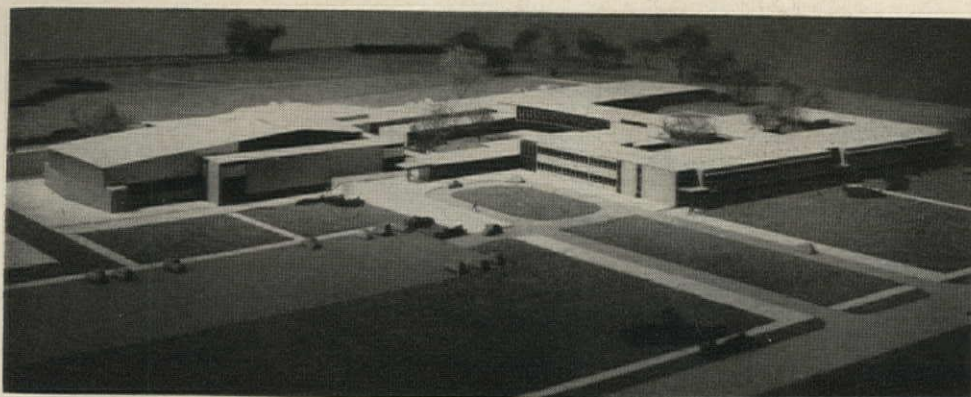
Teachers' lounge
within classroom unit



4. Four schoolhouses are brought together with courts

A student or teacher member of a "school within a school" is also very much a member of the larger school's community. This duality is clearly recognized and nicely handled in the Andrew Warde high school, Fairfield, Conn., where each house has its own instructional, guidance, administrative and activities facilities and identity, but each pair of houses joins in sharing a social court and all houses center toward a joint assembly court, its stage forming the cafeteria terrace. The courts bring the parts together, rather

than isolate them. This school employs the house plan in its pure form: each classroom-activities block, with its own headmaster and teaching team, contains a cross-section of grades and students; a student keeps the same house and teachers throughout high school. Capacity, 1,500 students; construction cost including fees, \$2,708,260; \$13.72 per sq. ft. Lyons & Mather, architects (John Gill, project architect); Paul D. Harrigan, mechanical engineering; John Zandonella, general contractor.

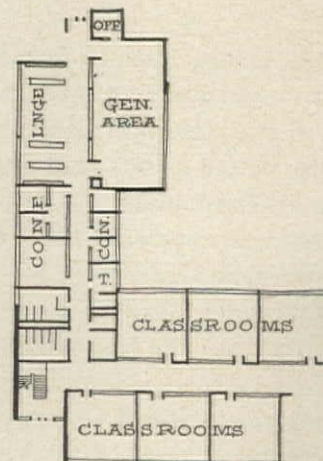
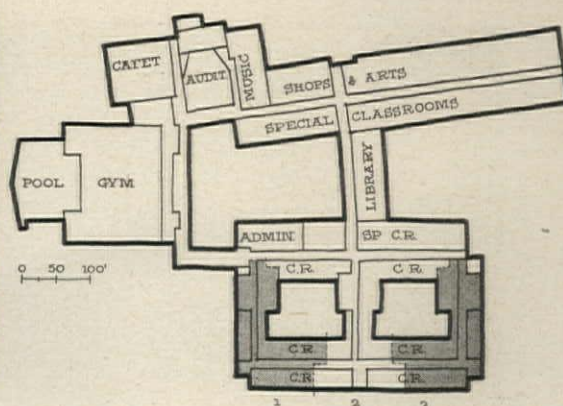


LENS-ART PHOTO

5. These little schools shift their boundaries

Each floor of the two-story classroom wing in the Clarence M. Kimball high school at Royal Oak, Mich., has three separate classroom blocks, and each block has its own project area, locker and lounge space, guidance, conference and work suites, and exterior entrance. But there is no fixed separation point between these individual schools; some classrooms can be shifted back and forth as need occurs. This makes it

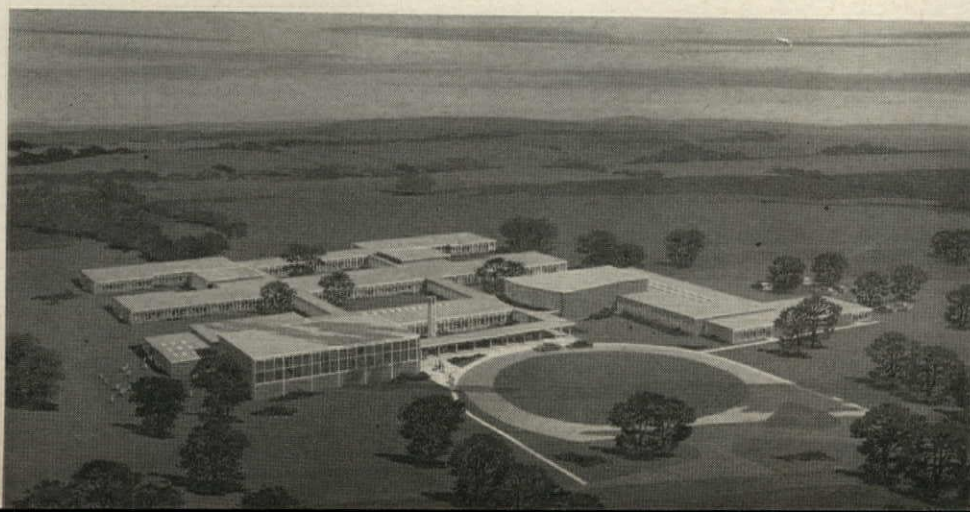
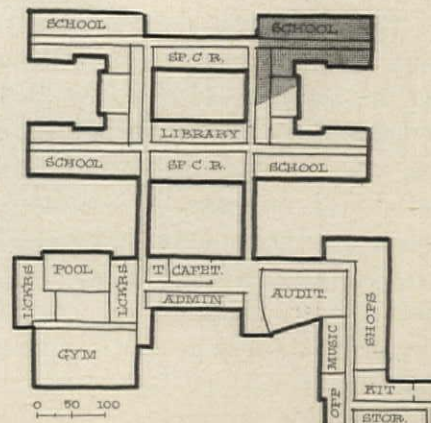
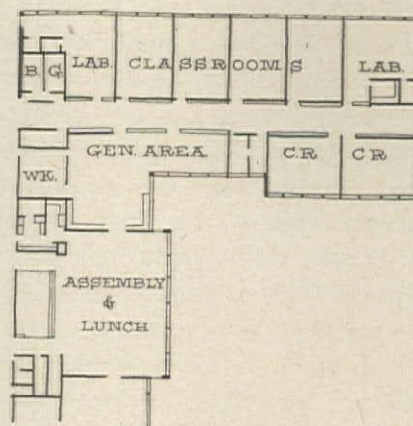
easy to use an individual school either as a single-grade unit or a cross-section unit. Under either system, it is planned that a student will remain a member of the same little school throughout his high school career and keep most of the same teachers. Capacity, 2,600 students; construction cost, including fees, \$4,307,324; \$13.33 per sq. ft. O'Dell, Hewlett & Luckenbach, architects; O. W. Burke, contractor.



6. A dual-use room goes with each pair of little schools

The high school planned for Massena, N.Y., is among the most thorough-going "little school" designs, for not only does each classroom block have its own project, guidance and conference areas, but each pair of blocks has a lunch and assembly room with stage. Since each lunchroom will thus serve about 720 students, this device cuts the problem of mass feeding down to more civilized dimensions than usual, as well as giving the little schools a stimulating and useful extra facility. Central

kitchen will supply three service kitchens in the school, plus service kitchens in five elementary schools. Placement of special classrooms, used by students from all the little schools, is especially good in this scheme; they form a central block between little schools. Capacity, 1,440 students; estimated construction cost, about \$3,500,000; \$19 per sq. ft. Sargent-Webster-Crenshaw & Folley, architects and engineers; Engelhardt, Engelhardt, Leggett & Cornell, educational consultants.



House of Many Colors

Like Flaming Youth, modern architecture has always prided itself on not wearing much underwear—nothing in addition to the essential furniture except a few exquisite lamps, potted plants and chaste ash trays. Regarded in a different light, in the narrowness of these accepted artifacts, *modern* may be becoming more sternly conventional than *Greek Revival*.

But not Alexander Girard's house in Santa Fe, N. M. It contains what may be the most surprising collection of little *things* recently assembled in any house by an eminent modern architect—foreign dolls, primitive artifacts, oriental brasses, little Venetian glasses, and hundreds of other delicate, intricate little objects, carefully displayed on frames and shelves.

How can this be? What has become of that holy household word *uncluttered*? The answer is that Alexander Girard has swallowed it, and smiled. In a modern period that is fast becoming perfunctory, he has gone his own way, collecting objects around the world which interest or amuse him. Girard's friend, Charles Eames, jokes: "He is part magpie . . . and a Florentine one at that." And unlike those collectors who come home to live properly among the few accepted "good modern" ash trays and clocks, Girard refuses to stack his treasures in a storage wall. His is a special modern house, and a special modern life. They are both full.

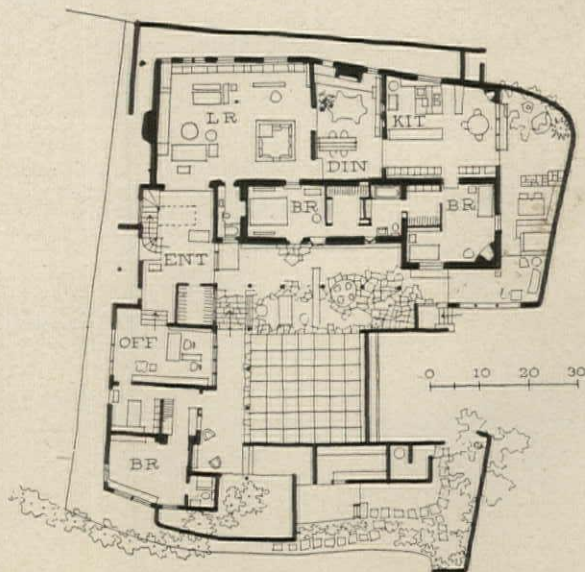
It was three years ago that the designing Girards moved from a Detroit suburb to New Mexico—not to retire, they were quick to assert, but to get more done. "Our work does not require us to be in any specific place." The vivid, jostling colors they splashed on some of the exterior walls of their hillside adobe add a defiant edge to this assertion.

There were three old buildings; the Girards connected and extended them, keeping the heavy cavelike strength of the 200-year-old core, and then they unpacked their trunks of fragile treasures and really began to produce an environment of contrast. This is the secret: by means of remarkably sensitive arrangement and display, they are able to weave the beautiful wares into a unified tapestry which conveys more than the sum of the parts, even bringing the quality of humor into the temple of modern design. The house has no central heating, but it does not lack a central culture, catholicity.

The Girards receive a constant stream of visiting

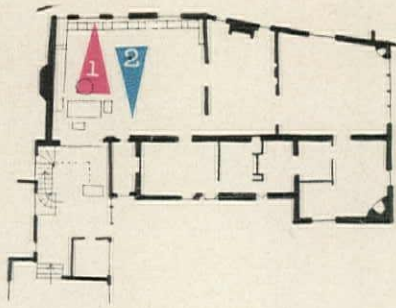
friends from many parts of the world. Here are some of their comments: Banker J. I. Miller: "Sandro is omniverous . . . he will devour and digest anything from an old packing case to an 1890 antimacassar . . . he is a prophet, and I use this word in the sense of a 'revealer'. . . . Finally, a creator of fashions, he is himself fashionless." Dr. Rudolph Kieve: "The whole structure reveals Girard's extraordinary capacity for marshaling shapes, textures, and colors under his ruthless will, making them fall into an easy but vital order and rhythm with total and successful disregard for conventional history, ethnology, archaeology, taste and usage, all of which creates an orchestration of incandescent space. . . . Girard creates his habitat." Executive W. D. Laurie Jr.: "My first reaction was one of contrasts: the infinitely complex versus engaging simplicity; the suave and naïve; the artful and ingenuous . . . somehow in this environment your own personality and conversation take on a special importance and subtlety that are quite flattering; and yet, cats, dogs, offhand guests and children drift in and out in an atmosphere of complete and relaxed 'at homeness.'"

Executive J. T. Ross sums it up: ". . . it reflects the broad interests of today's life, and it makes you feel that there are still bigger riches in the future. . . . To me its chief appeal is as an expression of a way of life. I guess that's one of the criteria of architecture, isn't it?"



PHOTOS BY CHARLES EAMES





In the living room, Girard extended the fireplace with a long mantel doubling as a table. The house has a total of six fireplaces, fueled mostly with local piñon, which produces a very fragrant smoke. In the hall beyond the living room, a section of the stairway is bridged in steel framing. Framing of the roof is unfinished pine logs; most floors are natural dark reddish stone. Inside the house there are almost no doors between rooms. Windows are small and few in the old local tradition, making the house a cool cave in hot weather.

(1)



Display cases cover an entire wall of the living room. Wooden, and painted raw umber, they are deep enough to allow for setting objects forward and back, arranging them into a three-dimensional tapestry. Built into the wall is indirect lighting. "As for Girard's methods," writes a visitor, Advertising Executive William D. Laurie Jr., "well, take superb taste, an utterly fresh and original mind, a sure sense of inner conviction, wide open curiosity and ruthless disregard of dogma, and you're on the way."

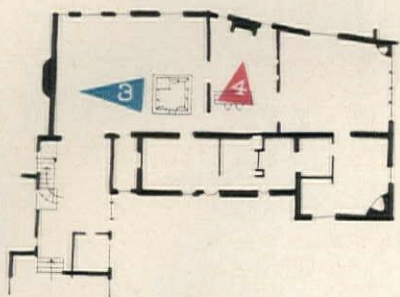
(2)



Adobe is used for furniture in this continuous seat constructed like a swimming pool in the living room (entrance, right). Proverbially, you don't lie on this couch, but in it. Made of plastered block, comforted with pillows, its bulk is confounded by delicate objects such as the frail model cannon; its solidity is relieved by the humor of the ceramic pig poking out. In the background, the wall to the dining room is broken by openings framing the next room's hot wall.

(3)

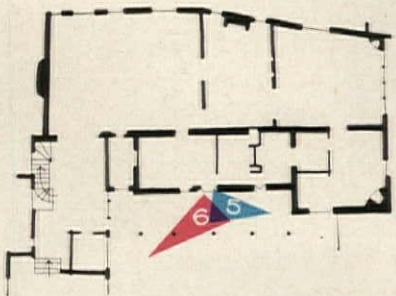




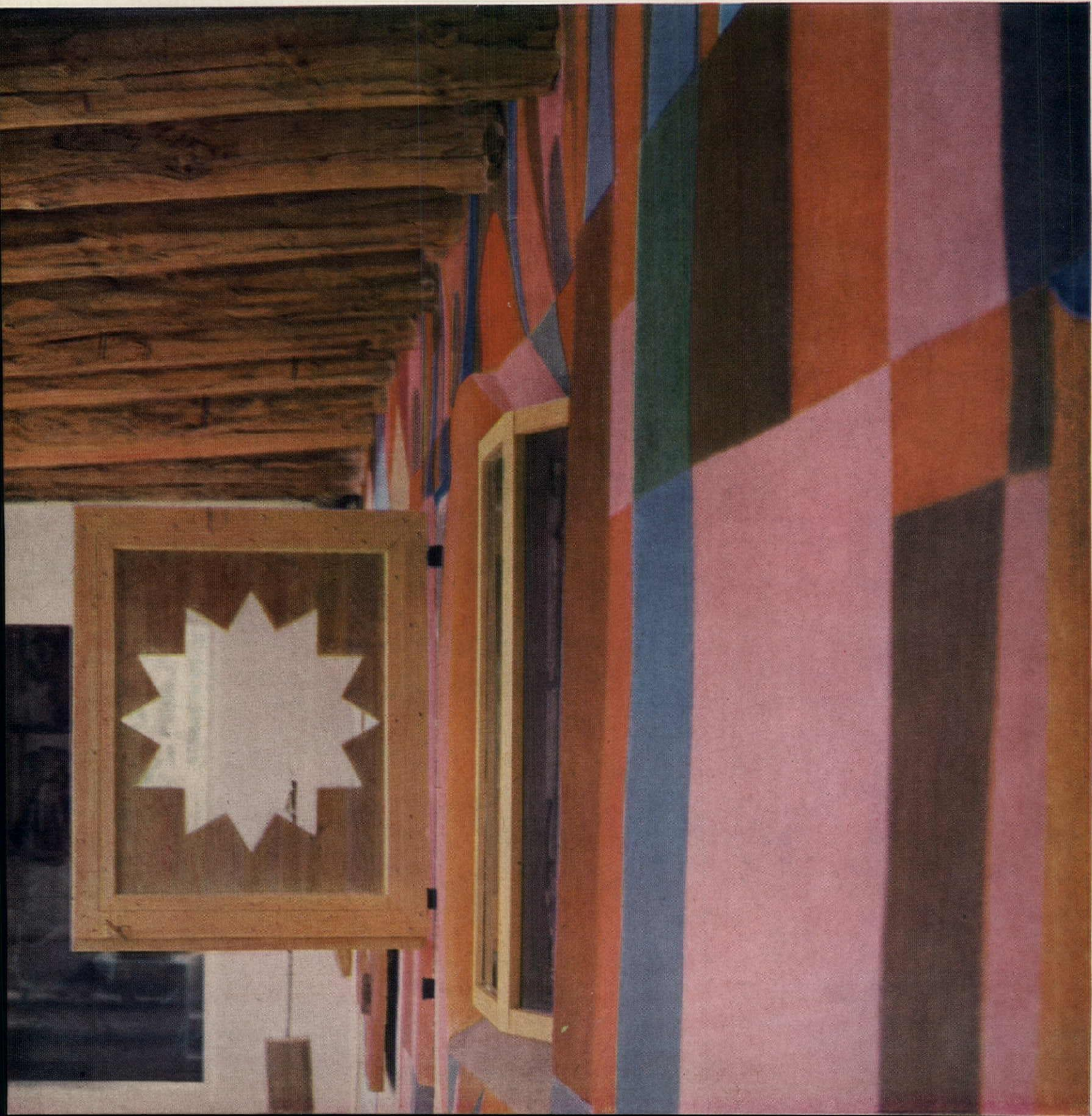
A pine board dining table is suspended from the ceiling on steel cable coated with nylon, anchored firmly below. Girard says this turned out to be the most satisfactory way to do it—simpler than legs because of the uneven surface of the floor. Note the doll hanging from a cable. Says Japanese Designer Isamu Kenmochi: "Girard is a master at tempering the contemporary design trend toward the theoretical and mechanistic with human warmth and emotion." Here Girard makes taut technology gay.

(4)





(5)



Patio and portals are bannered in bright colors softened only a little by their porches in the clear New Mexican air. Most, but not all, of the Girards' things out here are potted plants. Girard says, about his artifactual house, and his active children: "Visitors . . . have often remarked, 'We could not have so many things around the house—our children would break them,' or 'How do you keep all this stuff dusted?' But our own two children have grown up in this atmosphere

of fiddling, arranging, admiring, relating and respecting things, so that instead of breaking them, they have learned to take care of and enjoy not only the things that surround us, but also their own toys and treasures. . . . This attitude removes the necessity for valuing possessions on an economic or prestige basis and allows instead the growth of a keener and more critical awareness, in us, our children and our friends. Dusting and polishing? Susan [Mrs. Girard] says she likes it!"

(6)



The debacle of popular taste

WILBUR C. HAYES—FORTUNE



The common man rules our age, but
his almost limitless freedom of choice is not
matched by training or knowledge.

The only hope: a vigorous
counterattack by those who know what
looks well and why

BY MARY MIX FOLEY

In no previous culture have people in general been so free to choose what they like or do not like with so little deference to authority. The average man may not fully rule himself but he certainly rules the market. Between popular taste and educated taste the dividing line is certainly not costliness. Vulgarly may dominate costly structures like the Texas hotel of which an architect remarked: "I always wanted to see what things looked like inside a juke box. Now I know."

Popular taste cuts across almost every building type. It intrudes itself alike into city and country, into subdivision and country, into subdivision and fashionable suburb, into old Main Street and the new shopping district on the edge of town. It lines our highways with the conglomeration of snack stands, diners, filling stations, pottery shops and motels, which service a nation on wheels. It represents, in short, the great bulk of American building.

Granting the fact that popular taste is all-pervasive, a discussion can nevertheless center around its most easily recognized fields. They constitute the so-called mass market: the subdivision or contractor-built house, the local store or restaurant; the roadside stand. These are our modern vernacular, the twentieth-century equivalent of the peasant cottage, the blacksmith shop, the wayside inn.

Since architecture became a recognized profession in the mid-nineteenth century, its members have consistently missed out on this market. As a gentleman's calling, architecture took the cream off the bottle, designing (most often) mansions for the wealthy, plush hotels and watering places, temples of commerce and industry.

Only since World War II have architects begun to realize the vast potential of the mass market. Some have entered the field of development housing, cooperating with the speculative builder to produce an occasional group of handsome, livable homes and well-planned communities in the moderate and low-cost range. They have penetrated prefabrication, providing crisp, con-

WALTER SANDERS—LIFE



"Row on row of identical, small boxes, marching across a denuded landscape. . . ."

temporary designs, tailored to factory production. They have planned handsome, regional shopping centers, with correlated buildings, landscaped malls, off-street parking.

Even so, the mass market has hardly been tapped. It is so vast, so scattered, so piecemeal that it is almost impossible for the architect to get his hands on it. The average man, if he wishes to redesign his shop front, calls in a contractor; he telephones a sign company for the desired flash of neon; a carpenter helps him put up his roadside stand; he buys his ready-made house from the nearest speculative builder like a pound of sugar at the grocery store. To reach this market at all, the architect must work through the builder, through the prefabrication industry, through the small merchant or a committee of merchants, through the real estate interests and the city planning office. Meanwhile, popular building goes on, largely without benefit of architect, like a flood out of control, inundating the country with the badly designed and the ineptly planned.

Six years ago the *Architectural Review* of London devoted an entire issue to calling this "the mess that is



"Today more atrocious examples of homemade decor have appeared than ever in the heyday of Grand Rapids mission oak and mail-order wallpaper."



ROLAND PATTERSON—LIFE

man-made America." Whether or not one resents the superior British viewpoint, it is depressing to contemplate the raucous ugliness which is taking over our land.

Village green to Main Street

When we think of the native architecture of the American past we see the gracious elm-lined streets of a New England village, its houses neat and white, its church spire rising beyond the common. Across our mind's eye flashes the spare beauty of the Iowa farmhouse, the early Tidewater tobacco shed, the Shaker round barn. From the southwest, there beckons the white-walled adobe ranch house, gay with Indian rugs; in New Orleans an iron grillwork balcony makes delicate tracery against a pastel wall.

Then we turn to the twentieth-century substitute. Instead of the New England village, we now have Orchard Acres: row on row of identical, small boxes, marching across a denuded landscape, sprouting television aerials like insect feelers. Instead of the upright clapboard farmhouse, we see a "rambler" sheathed in fake fieldstone, pink shutters on its picture window. Instead of the village green, there is Main Street, a jam of dingy nineteenth-century buildings "modernized" at street level with chrome, glass and neon. We pass the winking lights of the movie palace, the jumble of billboards, telephone poles, stop lights, all-night parking lots. We stop in restaurants jazzy with glass brick, shiny metals, leatherette-covered bar stools—and plastic lace tablecloths. At the filling station, the gas pumps contrast strangely with the tiled-roof, Spanish-style garage behind them.

Probably never in the history of the human race has a culture equalled ours in the dreariness and corrupted fantasy of a major part of its building. It is no longer even a question of modern versus traditional design. The anachronistic hangovers which make hash of so much current building have been the subject of opprobrium for these many years. They still persist. Added to them more recently is a new specter: the pseudo-modern. It is almost impossible to describe. But the clichés of modern architecture have been incorporated without understanding or discipline into buildings of the most diverse type. In contrast, a good copy of a Cape Cod cottage would be refreshing.



"It is depressing to contemplate the raucous ugliness

Cuteness: today's fantasy

But even copying is no longer subject to rules. The criterion of modern popular taste, if there is any at all, may perhaps best be described as cuteness. Contemporary as well as traditional forms have succumbed to its lure. In some buildings this cuteness has gone over the line into a peculiarly twentieth-century fantasy, giving us the restaurant in the derby hat, the candy-striped motel, and the frozen custard stand, dripping silvered, concrete icicles.

As we look again toward the past, we see that this was not always so. Traditionally, popular building—however modest—had an integrity and a dignity which we call beauty. Today integrity is almost entirely lacking. It seems that there is a startling conclusion to be drawn—a conclusion which could not have been made until quite recently when the artifacts of foreign and primitive cultures ceased to be considered quaint, and

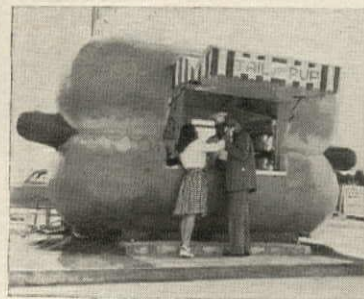
"Probably never in the history of the human race has a culture equalled ours in the dreariness and corrupted fantasy of a major part of its building."



MARGARET BOUKE WHITE—LIFE



REX HARDY JR.



A. VON SECKENDORFF-GUDENT



REX HARDY JR.

which is taking over our land."

were recognized as esthetic expressions of equal validity to our own. The conclusion is this:

Until the industrial revolution man never created ugliness.

This is a new and unique manifestation in human history. To concede this statement, our definition of beauty must be a broad one, our acceptance of alien cultures catholic. We must not limit beauty to a majestic cathedral or a king's palace, but must recognize it also at its most humble. Conversely, we must not confuse ugliness with squalor or brutality, with a lack of modern plumbing or a lack of modern democracy.

If we so expand our vision, we may choose at random from the centuries behind us or from existing primitive societies: a Stone Age lake dwelling; the Temple of Karnak; a grotesque sculpture from Easter Island; a medieval walled city; an American Windsor chair. Whether rich or simple, refined or primitive, useful or entirely ornamental—whatever man built, or carved, or molded, or wove, had the intrinsic form and fitness of beauty.

But just as man, before the machine, found it almost impossible to create anything ugly, now it seems that only by the greatest exertion of native talent, education, salesmanship and luck can he create anything else. Why?

Who is the villain?

It is not a question which can be glibly answered. As in a mystery story we have only the apparently inexplicable facts with which to start: once everyone seems to have possessed an intuitive grasp of line, color, texture, proportion. Now only the highly trained or the especially gifted do. Basic human attributes can hardly have changed. Therefore, it must be the change in our environment, something implicit in our industrial society which has destroyed an esthetic sense in the vast majority of the people. Since none of us would choose, even if we could, to return to a handcraft world à la Ruskin, it behooves us to try to isolate the villain.

A number of attempts have already been made to penetrate this mystery. Most of them, however, end rather lamely by trying to prove that popular taste is innately sound. In fact, despite the evidence which we see all about us, it has become almost an intellectual im-

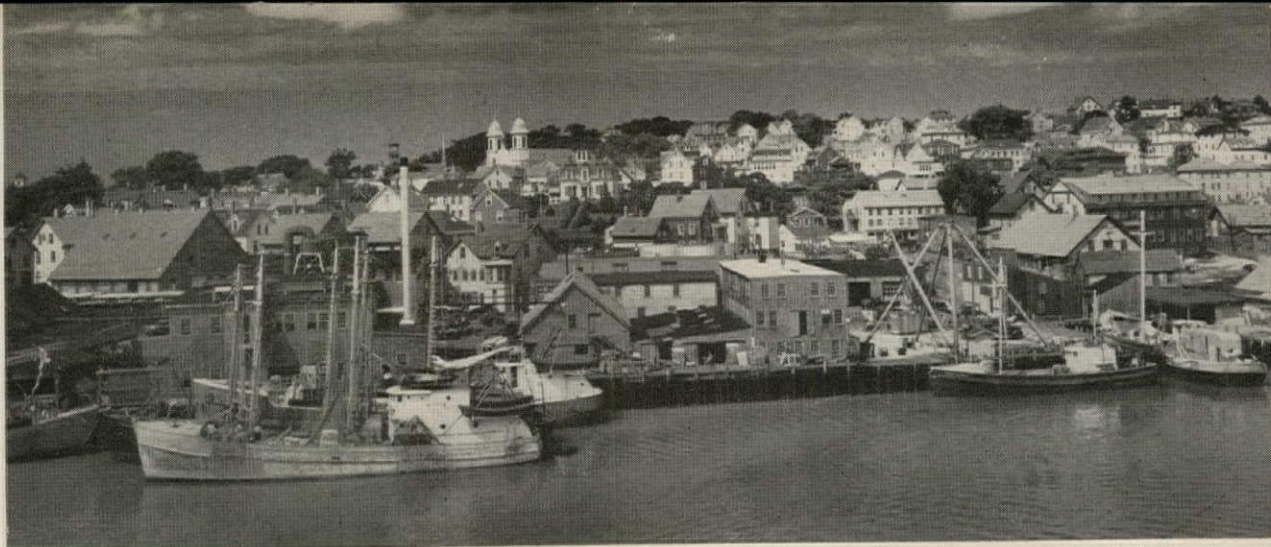
perative to believe that "the people" are more sinned against than sinning. The majority of the general public may respond wholeheartedly to fake ranch house, fake colonial, fake *moderne*. The car buyer may delight in chrome and fancy "streamlining." The home owner may trick up his "split level" with useless molding, shutters and decalcomanias, with a souvenir statue of the Empire State building on the mantel shelf and pink iron flamingos on the front lawn. Nevertheless, it is stoutly maintained that the unfortunate customer is given only bad design from which to choose; that if good design were offered him he would recognize and claim it.

Perhaps the most convincing argument is that the "good taste" movement, given its greatest impetus by the World's Fair of '93, corrupted the simple American natives who were previously working out an honest machine esthetic, unpretentious, but fresh and vital (a simple native like Louis Sullivan, perhaps?). To the eclectic architects—and their handmaidens, the popular home magazines—goes the greatest blame for the English half-timber, the Dutch Colonial, the Spanish plaster, the Greek revival and the turreted medieval castle which began to appear in fashionable suburbs in the early part of the century. Once established, the eclectic quality of our architecture was then assured by the mortgage lender and the government appraisal agency, working for the status quo.

The blame for this particular phenomenon may be correctly placed. But it does not account for the rash of "borax" modern which has little if any relation to traditional styles. It seems that a vernacular machine esthetic, when it first appeared, was largely accidental, determined by utilitarianism. Later, in the hands of genius, this chance utilitarianism grew into the conscious esthetic of functionalism. But the untutored twentieth-century man—whether given so-called traditional or so-called modern—seems unerringly to pick the awkward line, the discordant color, the overdone decoration. In our society, at least, it takes a sophisticated taste to be truly simple, and an even more educated palate to achieve richness without monstrosity.

Made-to-order ugliness

Those who defend the taste of the populace have two distinguishing characteristics: they care deeply about



ANDREAS FEININGER—LIFE

democracy and equally deeply about design. This is most commendable. But it makes it almost impossible for them to realize that the average man simply does not care.

The people who build, buy, sell, live and work in the suburbs, the Main Streets and the roadtowns of America are eminently satisfied with the established ugliness. They do not even know it is ugly. They have never heard of the philosophies of organic architecture, form follows function, less is more, or a house is a machine for living in. If they ever did they would only stare uncomprehendingly and turn back to watching "I Love Lucy." When they see the magnificent and precisely machined General Motors Technical Center in *LIFE* magazine, they are momentarily impressed. But the esthetics it embodies touch their daily life no more closely than the unearthly beauty of a jet-propelled rocket. If they see a modern house they call it a chicken coop—or ask, as one puzzled neighbor of an architect did: "Is it cheaper that way?" It seems we may have to admit that, if the consumer is served up ugliness, it is exactly the ugliness he wants.

The loss of craftsmanship

In addition to the "taste maker" theory, there is another oft-stressed factor which attempts to explain the decay of popular design. This is the disappearance of craftsmanship from the building scene. In the past, builder, designer and owner were often one and the same man. Every husbandman knew, of necessity, the use of the ax, the adze, the plane; knew how to shape timbers and notch a precise joint. House raisings and barn raisings were community affairs, with neighbors pitching in to raise the frame, passing the jug of apple-jack when the roof tree was hoisted into place. Furniture and even utensils were made at home: the trestle table, the dower chest, the gayly painted folk chairs, the wooden truncheons, the braided rugs. Professional artisans were artists at their trade. Craftsmanship was an end in itself; the proper shaping and the satiny polishing of a piece of fine wood a matter for personal pride.

Today, almost no one has the skill in his hands which comes from an intimate knowledge of materials and their working. Even the professional carpenter or mason rarely takes the pride in his craft which led an

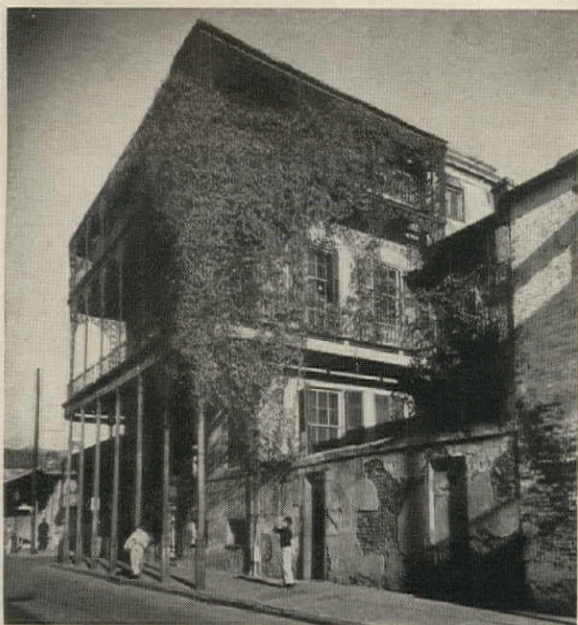
earlier artisan to seek perfection. The point is now to get the job done quickly and collect one's pay. This lack of craft skills has inevitably destroyed our standards of workmanship, even our recognition of appropriate design—or so the argument runs.

But this does not quite answer the question of how the early craftsman managed to produce beauty. Despite his skill, he could so easily have created houses and furniture of bad proportion, awkward line, jangling color, inappropriate decoration. It seems he never did. Today, with the do-it-yourself movement, probably more atrocious examples of homemade furniture and homemade decor have appeared than ever in the heyday of Grand Rapids mission oak and mail-order wall paper.

This leads us to the role of tradition in popular taste, for tradition and craftsmanship go hand in hand. In the past, each geographic locale produced a rational and recognizable style, repeated generation after generation. It was this that so surely guided the tool of the early artisan. If the Italian peasant or the Japanese fisherman wished to build a house, he knew just how a house should be built. The plan, the form, the dimensions, the detail were prescribed by tradition. With small individual variations, his house would look very much like his father's house and his father's house would strongly resemble his grandfather's. Thus we have the earth-hugging, white-walled Irish cottage; the delicate wood-framed Japanese house with its translucent rice paper panels; the Swedish log cabin; the Swiss Alpine cottage with its steeply pitched roof; the gracious, balconied Spanish hacienda. The list is almost endless. Even in the new world a tradition of building quickly emerged, modifying transplanted forms to fit local conditions.

But how did each tradition grow up in the first place? Probably the decisive factor was the discipline of poverty. Not the poverty of the individual, although this was a real and continuing condition. The poverty of pre-industrial society was the important point. Buildings had to be built of local materials. They had to be shaped with available hand tools. The design of the building itself had to adjust to the climate, controlling heat and cold, heavy snow or hot sun as best it could by the thickness of walls, the slope of the roof, the size of the windows and the heat from a fireplace or stove.

"Traditionally popular building—however modest—had an integrity and a dignity which we call beauty: the Gloucester waterfront, a Colonial fireplace, a New Orleans residence, a Pennsylvania barn.



KOSTI RUOHOMAA—LIFE



KOSTI RUOHOMAA—LIFE



ALFRED EISENSTAEDT—LIFE

The chaos of plenty

Today we are almost swamped with riches. We have not only the traditional building materials: wood, stone, brick, tile, glass, adobe. We have a host of new man-made materials: concrete, concrete block, cinder block, glass block, imitation stone and brick, asbestos, asphalt tile, acoustical tile, rubber tile, cork, steel, stainless steel, aluminum, aluminum foil insulation, plywood, glass fiber, tempered glass, striated glass, corrugated glass, lucite, transite, wall board, insulation board, laminates, plastics and alloys without number.

We have sandwich wall and ceiling panels, curtain walls, steel I beams, T beams, joists, lally columns; prefabricated aluminum or steel window sash, plastic screening, plywood or steel trusses. We have radiant heating,

air conditioning, thermostats, fluorescent lighting, refrigerators, automatic washing machines and cooking stoves, prefabricated bath tubs, showers, toilets. And what's more we have trains and trucks, rails and highways to transport these things anywhere at any time.

With the new materials and equipment we can now control our environment by artificial means rather than by the structural methods of the past. If we wish to build a house with a glass wall in Vermont or a Cape Cod cottage in New Mexico we can do so. We have complete freedom to design whatever we wish, wherever we wish. The earlier disciplines of time and place are almost totally lacking. The imposed simplicities of the past are swept away.

The result, as might be expected, is chaos. Because almost anything can be done with the new materials and equipment, there is no one essential way to build. In all but the most exacting of chemical, medical and industrial architecture—in homebuilding especially—functionalism is an intellectual and artistic exercise, not a necessity.

Futhermore, for the first time in history, we have the whole world from which to choose our styles. We are familiar with the architectural forms of almost every country, past or present. In a civilization not yet webbed together with lines of mass communication, the builder knew only his immediate neighborhood and his local tradition. Today, the world's architecture is at our fingertips to draw from if we so desire.

The combination of unlimited technical freedom and greatly broadened stylistic influence has created a confusion unparalleled in any other century. It is perhaps small wonder that, on the one hand, the average man clings to past forms and that, on the other hand, his adventures into fantasy are completely unpredictable. It is hardly surprising that when modern design percolates down to the popular level it is perverted into a monstrous hybrid. There is both the nostalgic aspect and the adventurous: the wish to hang onto the known and the desire to try something never seen before under the sun.

In the greater part of our building, however, the determining factor is probably neither of these. It is simply inertia. It is so much easier not to be truly creative,

continued on p. 238



Pittsburgh, long considered the Mecca of urban renewal, may have cleared the smoke and erected a lot of buildings, but its lack of a comprehensive plan is blocking a sustained renaissance

Projects without plans

BY FREDERICK GUTHEIM

Many wistful glances have been cast at Pittsburgh's civic progress by other cities struggling with the problems of urban redevelopment. The ingredients of this fame are obvious enough: visible accomplishments in building, a relatively light cost to the taxpayer, and the dramatic contrasts of the clean, new present with a sordid, grimy nineteenth-century past. Now, on the eve of the city's bicentennial, and after a decade of effort, the interest in Pittsburgh's progress is greater than ever. But on close inspection the methods that got this progress started don't look so good for the long haul that is still ahead. Neither do the architectural results thus far.

The Pittsburgh redevelopment boom is still running strong. Projects under construction, or scheduled for this year, amount to \$150 million—excluding bridges, highways and long-term redevelopment work. This equals the volume of central district building already completed during the postwar decade. To guide and sustain this activity, to keep it from strangling in the congestion it creates, still greater

efforts will be demanded, because the time has come when projects are probably not enough; when, indeed, the problems they are creating are becoming nearly as important as the problems which existed before and which they have claimed to eradicate.

The new problems now evident in Pittsburgh—site of the largest, oldest and farthest advanced clearance and rebuilding job in the country—probably represent a forecast for other cities which are now looking at redevelopment primarily as simply a solver of old problems, rather than the creator of new and different problems which it is.

The problem of traffic—which means the problem of parking and the problem of pedestrian spaces, as well as flow—is only accentuated by redevelopment. Indeed, the more successful the rebuilding, the greater the traffic problem.

One quarter of the central business district has been rebuilt in the last decade, this in an area which in the previous 15 years had not added a single important new building. The rejuvenation is dra-

matic, and there is no doubt that it is also a huge investment and management success. But as one wanders, for example, through the new buildings of the Equitable Insurance Co.'s great "Gateway" office project at the point of the Golden Triangle, confluence of Pittsburgh's two rivers, or as one looks down upon the Point from neighboring Mount Washington, or from the tops of the skyscrapers themselves, misgivings are difficult to suppress. Mentally fitting the new buildings scheduled for construction into the existing complex, it is disturbing to see that the sites for the new buildings are now occupied almost wholly by parking areas. The new buildings will not only decrease the amount of parking now available; they will also increase traffic congestion and the parking load by bringing new activities into the area.

Highways without egress

Expressways are inching toward the Golden Triangle, and their completion will strengthen the central business district of this metropolitan area of 2.5 million people. They

Pittsburgh's Point Redevelopment is impressive: Equitable Life's first three office towers are fully tenanted. An apartment building (1) for the same owner is proposed. Architect William Tabler's design of the new 800-room Hilton Hotel (2) has received final approval. The state office building (3) is now ready for occupancy, and the Telephone building (4) is framed in. Finally, a subterranean, 800-car parking garage and another office building for Equitable (beyond hotel) are scheduled. One result: parking lots for over 1,000 cars (left) will disappear.





MARGARET BOURKE-WHITE—LIFE



will also strengthen Pittsburgh's downtown boom. But as they develop their full peak load, the traffic and parking problems of the Triangle will increase further. They will be the worst at the Point. The construction of a proposed tunnel and twin bridges at the Point will develop traffic volumes of 40,000 to 50,000 cars per day. This magnitude of traffic at the Point interchange, when taken with other developing traffic and parking conditions in this area, has already convinced most local officials concerned with it that the interchange, as now planned, would break down under these loads. The powerful Allegheny Conference on Community Development is now stumping for a crosstown boulevard to divert much of this traffic from the Point to a new relief route a mile west. This proposal would undoubtedly help, but the real question faced by the booming office building center in the once decaying central business district is whether it is not

likely to be strangled in its own success.

The parking picture in the Golden Triangle is certainly grim, particularly as it threatens the future course of redevelopment and the continuation of building activity in this area. When the cards are played out, for example, it may prove that the present attractiveness of the Point as a corporate address cannot be sustained. The three initial office buildings in Gateway Center provided a total of only 250 off-street parking spaces. An 800-space underground garage is now projected on an adjacent site. This will serve the present office building tenants by day and most of its spaces will be available by night for activities in the adjoining Hilton Hotel. But far more parking will be needed at the Point, and the chance of getting it on easy terms is dim. New buildings cannot provide off-street parking and compete with earlier structures which failed to meet this obligation. The Public

Parking Authority of Pittsburgh has now completed parking structures in the Triangle area with a total capacity of about 4,000 cars (including an ingeniously designed garage, whose sloping floors serve as ramps, and a six-level-deep garage below Mellon Square — photo, p. 150). The Authority's program has been concentrated in the central business district since it began operations eight years ago, and it now looks toward the fringe of the downtown area and to secondary business districts, for its future operations. Thus far off-street parking has done its share, helping reduce the number of street parking spaces by half and restricting half of the remainder to ten-minute halts. But the future will demand much more parking space if more people are to be packed into the geographically limited 6/10 of a mile that constitutes the Triangle. What is really needed in the central business district is reduced street congestion and more attractive mass transportation.

Downtown redevelopment

of Pittsburgh is concentrated in three areas: The "Point," with Equitable Life's trio of identical office towers (1), a proposed apartment building (2), the recently approved Hilton Hotel (3), the newly completed state office building (4), and the Pennsylvania Bell System building now under construction (5). In the heart of the long-established business district are the new Alcoa and US Steel buildings (6 and 8) on either side of the Mellon Square garage and park (6). Beyond the crosstown boulevard with its spaghetti-like access ramps is the Lower Hill redevelopment area which will feature the circular area shown on p. 151. The elaborate five-level intersection shown at the right is part of Ft. Pitt Boulevard, along the Monongahela.



PITTSBURGH PRESS

Buildings without parking

The Pittsburgh Hilton is a brave effort to face the problems of Pittsburgh's reputation as a "four-day-week hotel town." Facing Point Park, and distinguished by a dramatic glass restaurant showcase that will overlook the junction of Pittsburgh's two rivers, historic Fort Duquesne and the new highway interchange, the hotel will exploit its location while serving business in the nearby office centers. The hotel's orientation to the highways is largely visual. Hilton studies indicate that most of their patrons will arrive from the airport—in many cases patronizing the mushrooming rental car business for local travel. Hilton people do anticipate heavy parking demands for banquets, conventions and other hotel functions, but are counting on the off-peak time of day of these activities to find accommodation in the adjoining parking garage or other lots in the area which serve office building tenants by day.

Other new buildings projected in the Point area will not be so fortunate. Many of them will be major parking generators, like office buildings and department stores. In addition to whatever the new expressways create in the way of direct problems, they will aid the suburban dollar to make contact with the downtown store bargain and restore to Pittsburgh's central business district its supreme position in the geographical center of a rich metropolitan area—if the problems of downtown traffic congestion do not cancel out the advantages of the swift access roads.

A further demand for high quality central business district merchandising will shortly appear from high income families who in increasing numbers are choosing to live in the central business district or at its fringe. So long as the smoke pall hung over the city, the attractions of the higher, cleaner suburbs were irresistible. Today a reverse movement is evident. In Pittsburgh this

movement has two objectives. One is at the Triangle, where management merchandising, communication and finance are centered. Nearly two miles to the west is another center—of education, sport, medicine, science and research, loosely grouped around the University of Pittsburgh and the city's cultural institutions. Between the two is the Lower Hill redevelopment area which has now received federal financial aid. It is a safe conclusion that a good deal of high-income housing should be provided on land now occupied by slums. It is even possible that in addition to the prevailing pattern of luxury apartments and apartment hotels, some lower density housing in rehabilitated older buildings or in terrace housing will prove to be the most desirable solution.

A city without residents

Luring these families back to the smoke-free city is certainly not the least important aim of this phase of Pittsburgh's redevelopment pro-

gram. Here is the human core of urban cultural life everywhere. These are the people who prefer to live near the center of things because the nature of their work is such that they cannot live in the suburbs. They are doctors who must be near hospitals, journalists who must be available when news breaks, people in radio and television whose schedules may be intermittent and exacting, professional people of all descriptions whose work flows and ebbs in unpredictable volume and often requires crash schedules. They are the intellectuals and the people who hang around intellectuals. They are the people whose patronage of cultural activities, amusements and sports is obvious and decisive. If Pittsburgh is to be more than a "four-day-a-week hotel town" they are the ones who will make it something different. If the Triangle is to have any night life after the great department stores have closed their

doors and the office workers have caught their buses for suburbs in the hills, it will be because of those living close to the central business district—even more than those who can get there readily by the new expressways. It may be the making of a mature city, rather than the present work place that today imports much of its culture, even its architecture, from other cities—notably New York.

Public spaces without the public

One of the boom's most ambitious products is Mellon Square (photo, below). This luxurious city ornament, surrounded by the new US Steel and Alcoa buildings and the rehabilitated Oliver building and Sheraton-Penn Hotel, is a sort of penthouse park, one side of which is pushed high above the street, and the whole of which caps an underground parking garage. It furnishes plenty of eye-food for the fortunate ones whose offices overlook it. Perhaps a few office workers eat a sandwich there on a sunny day. But it is hard to detect any greater human activity. A welcome space in the density of a great city, something like the Adirondack Lake Winslow Homer called "the eye of the landscape," Mellon Square still shares with Lever House and other recent city plaza projects a wistful, indeterminate, deserted quality. No one seems to know what it takes to create attractive urbane spaces, to make even a well-designed downtown park into a really popular resort. Something more than architecture, certainly. A location closer to pedestrian routes perhaps. More residential land in the immediate vicinity possibly. This is a question worth raising, because pleasant walking is one necessary element in city rebuilding plans, for example between transportation terminals or parking garages and destinations. The willingness to walk the several blocks that separate the place where you park your car from your ultimate destination is crucially affected by the attractiveness of the walk.

On that willingness to walk, actually, hangs the present success or failure of Pittsburgh's largest current building project, the fan-roofed amphitheater for which Architects Mitchell & Ritchie have now com-

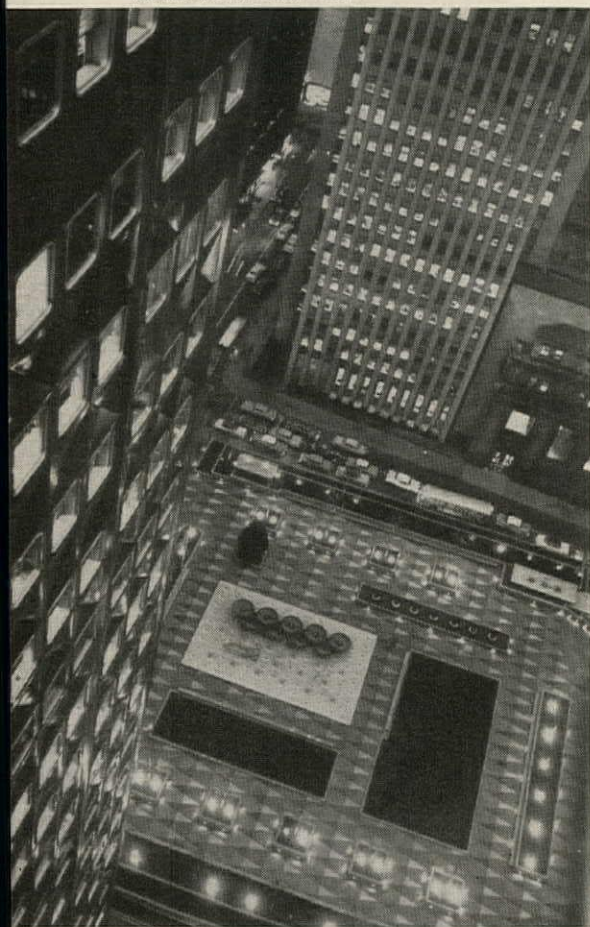
pleted drawings. The site, at the eastern edge of the central business district, is scheduled for clearance this spring. The auditorium project requires for its success such extensive parking facilities—about 3,000 spaces—that only by assuring their daytime use will it be possible to provide them within the framework of a self-sustaining project supported by revenue bonds. Parking experts have warned that the location of these facilities is too far from the ultimate destination of most downtown users of parking space to be attractive at the proposed fee schedule. An uphill walk from the central business district to the auditorium site is a further discouraging factor, plus the fact that the pedestrian route passes through a dingy, rundown district. Positive measures to make routine walking of this sort more attractive would certainly pay good dividends—everywhere.

A boom without a master plan

It is hard to escape the conclusion that the Pittsburgh boom is now facing its greatest test. Until now it has been doing the easy things, or doing things the easy way. It has been skimming the cream on the redevelopment milk. This may be justified as a way of getting things started. It has overcome the nineteenth-century heritage of grime and congestion (as have St. Louis and many other cities). It has generated an impressive downtown rebuilding activity (although not so impressive as midtown Manhattan or some other places). But it has yet to face the twentieth-century problems of the automotive city (and here it has plenty of company, too). These problems cannot be solved merely by requiring central area buildings to provide more off-street parking spaces—as some critics of Equitable's development at the Point now contend the city should have demanded. Nor is it likely that until an unforeseeable development in metropolitan government takes place, anyone except the city of Pittsburgh itself is going to subsidize the production of more parking spaces. The competition between the central

continued on p. 250

MARGARET BOURKE-WHITE—LIFE



Mellon Square at night presents an exciting pattern but, even during the day, it fails to draw the crowds that make a city plaza really attractive and exciting.



H. K. Porter building, housing a rapidly growing industrial firm, and accommodating the overflow from Alcoa's headquarters (beyond), is scheduled for immediate construction. Harrison & Abramovitz, architects.



Y.W.C.A. building, hopefully expected to rise next year, has a 12-story tower on a four-story base. Skidmore, Owings & Merrill; Pietro Belluschi, architects.

ASSOCIATED PHOTOGRAPHERS



Equitable's fourth office tower in its Gateway Center, as proposed by Architects Harrison & Abramovitz, departs from the X-plan of Equitable's earlier towers.

NEWMAN-SCHMIDT STUDIOS

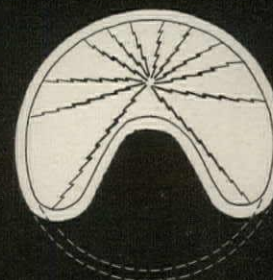
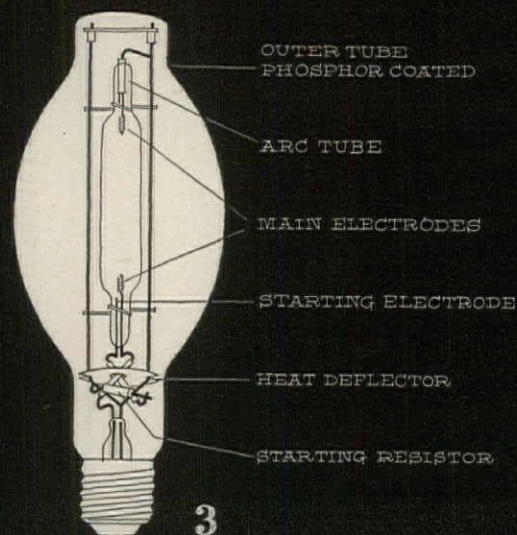
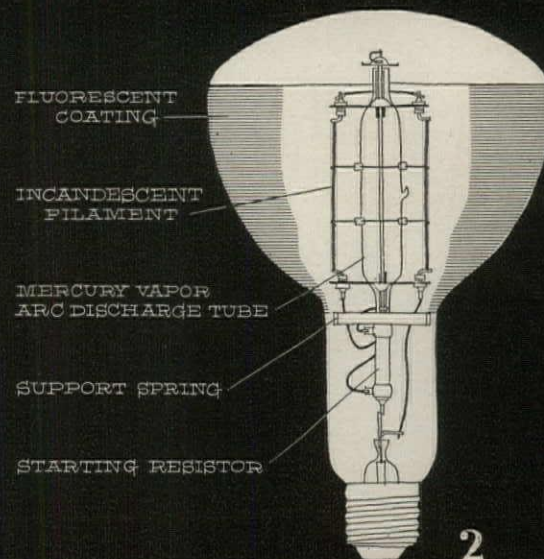
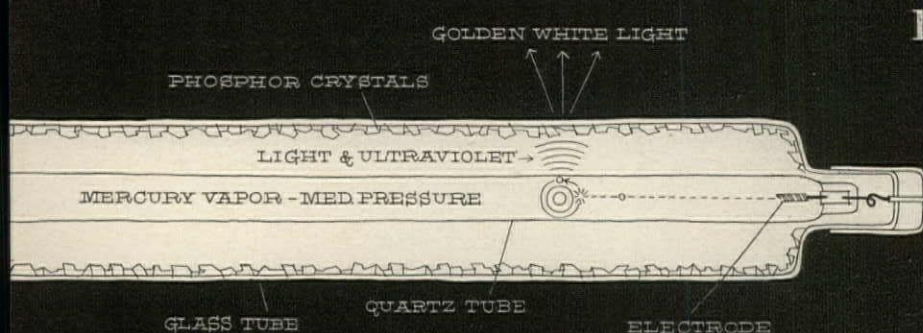
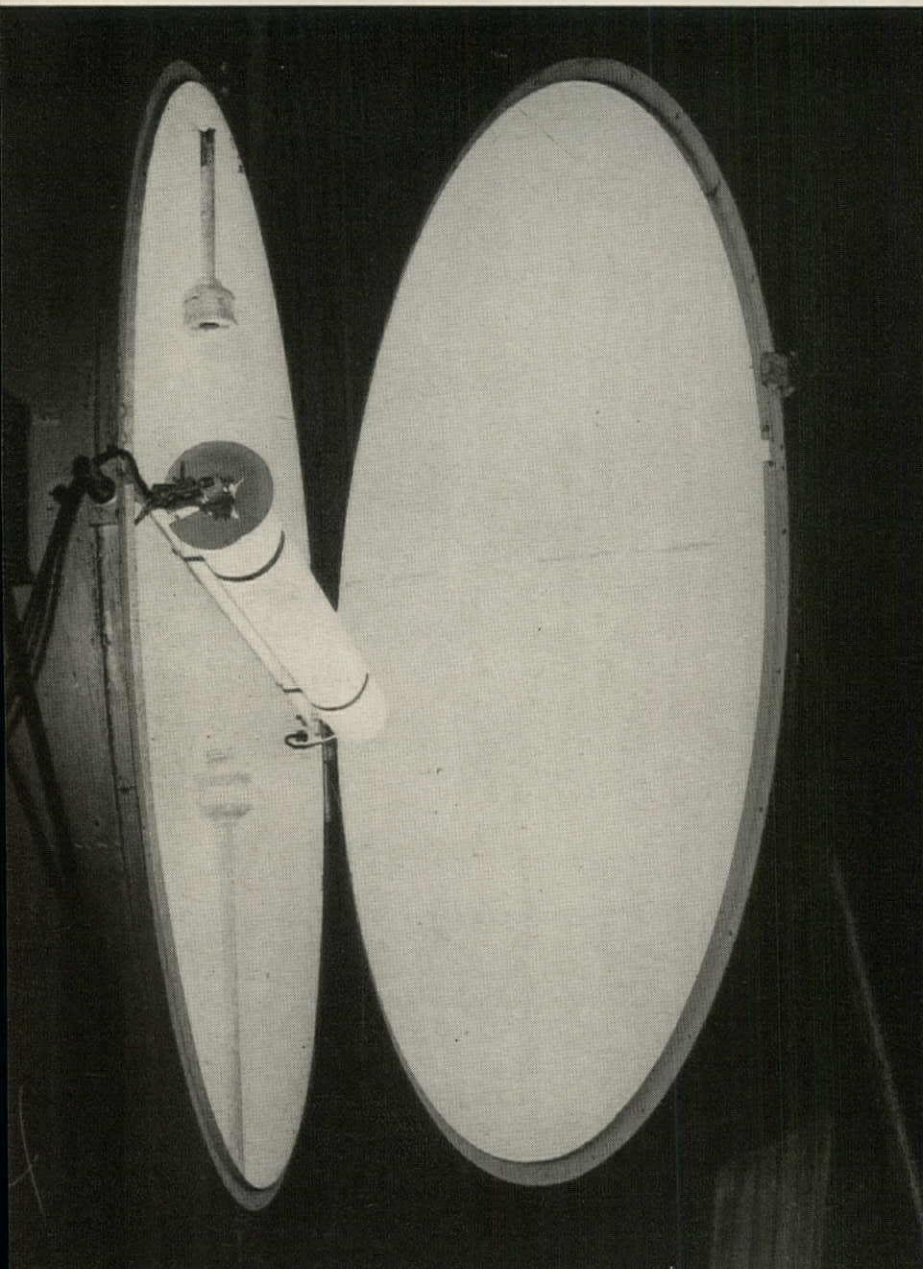


Amphitheater with retractable aluminum roof is the major feature of the Lower Hill redevelopment plan. Other project elements include a 3,000-car parking facility and apartment buildings. Mitchell & Ritchey, executive architects.

NEWMAN-SCHMIDT STUDIOS



Technology



JAMES YOUNG

Important lamps: experimental light by Westinghouse (1) is combination fluorescent-mercury, with 120,000-lumen output. Fluomeric lamp (2) of Duro-Test combines tungsten filament, mercury vapor, and fluorescing phosphors; color rendition

is good. Color-corrected mercury (3) now rivals big incandescents; efficiency is better, though color is not yet so good. "Power groove" fluorescent (4) by G.E. produces twice the light of conventional fluorescent.

NEW PROGRESS IN LIGHT

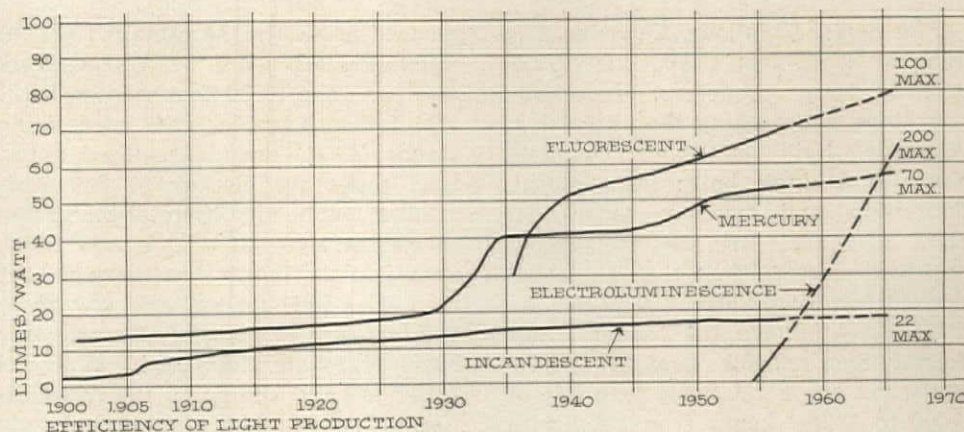
The swift and abundant development in light technology is now a major influence in modern architecture

There is today a sudden, great activity in lighting. Though Edison's incandescent lamp is nearly 80 years old and has been refined to a high degree, and the more efficient fluorescent lamp has had an almost equally great development since its introduction commercially in 1938, still a flood of new and improved light sources indicates that progress is by no means ended. And, beyond these new sources, there is a development in the architectural use of light which indicates that we are only now beginning to understand what light can do.

The influx of new devices since the war has been phenomenal. Whether or not the epochal post-World War II anti-trust action against the General Electric Co., depriving it of its patent control inherited from Edison, has had anything to do with it, competition has reached new and beneficial heights. G.E. itself, which remains the largest of light sources, has introduced over 750 new lamps in the past seven years. Westinghouse Electric and Sylvania Electric Products, its nearest rivals in bigness, are not far behind. Indeed, the latter have sprung the most radical of new light-source developments—electroluminescence, a thin sandwich panel of phosphorescent light (FORUM, Jan., '57)—which is still largely experimental for the future and not to be considered here. Other, smaller companies have entered with new developments. Altogether, 80% of the lamps and 95% of the fixtures produced today were unknown 20 years ago, and the amount of creative thinking going into lighting probably exceeds that of any other segment of building.

New sources

The bulk of these developments flooding in are small though collectively substantial improvements in existing light sources. For instance, in 1955, G.E. introduced a "bonus line" of incandescent lamps with efficiencies 6 to 15% higher than existing incandescents, which may be close to the practical limits for a device raised ten times in efficiency since Edison's day. In 1952, five lamp producers introduced a "rapid start" fluorescent lamp, which eliminated one cumbersome element in the circuit, the starter, with no loss in economy of operation. And steady progress is being made in de-



Efficiency is a key word in electric light's evolution. Fluorescent's climb has been steadiest. Newest light source, electroluminescence, though inefficient now, is believed by Westinghouse scientists to have greatest potential efficiency.

veloping new phosphors to coat the inside of fluorescent tubes, shifting the light from this source away from the eerie green-yellow segment of the color spectrum toward the warmer red for better balanced light.

But some of the more recent developments in the lighting industry, either from the wide nature of the improvements they effect or from the new combination of elements they embrace, are substantial enough to be singled out as new sources. The most immediately significant are these:

"Super-powered" fluorescents. These are high-powered tubes, developed last year by G.E. and Sylvania and now in production. The G.E. "power groove" (sketch, p. 152) achieves an increase in light output by deep grooves along the tube's length which reduce the distance which electrons must travel and thus increase light output. On two-and-one-half times the wattage of a conventional fluorescent, the "power groove" produces more than double the light. For example, a 4' "power groove" with a 100-w. rating produces a light output of 6,250 lumens, against 2,400 lumens for a conventional 4', 40-w. fluorescent. The Sylvania VHO, which achieves the same light output, is not grooved, but rather gets its extra brightness from changes within the tube itself: by using a neon gas, rather than argon, and by careful control of mercury vapor pressure. These jumps in light output have wide implications for reducing the number of light fix-

tures required for a given area.

Color-corrected mercury. The mercury-vapor lamp, invented in 1901 but little used because of its deep bluish-green glow unsuitable for most locations, has had a renaissance in a color-corrected version introduced by Westinghouse in 1949. In this modification, the interior of the lamp's globe is coated with red-emitting phosphors which, bombarded by the lamp's ultraviolet rays, produce a brilliant light, superior for many large-area uses. Sylvania and G.E. also have developed new mercuries. Sylvania was the first to introduce a color-corrected mercury which exceeded the efficiency of the standard mercury. In such locations as the huge concave ceilings of St. Louis' new airport building, color-corrected mercuries beat out large incandescents by requiring much less current, hence one-eighth as much copper wiring.

Fluorescent-mercury. Westinghouse is about to challenge the "super-powered" fluorescents of G.E. and Sylvania with an experimental, combination fluorescent-mercury lamp, which may be ready for production this year. It has tremendous brilliance: 120,000 lumens at 3,000 w., in a tube 5' long by 4" in diameter with a rated life of 10,000 hours. Westinghouse figures that by combining fluorescent and mercury vapor, it makes the most of both types of light source. In the mercury, some 90% of the light comes from gaseous discharge, only 10% from the phosphor coating; in the fluorescent the ratio is

reversed, about 5% from gas discharge, 95% from the phosphor. In the new lamp, the ratio is about 50-50. The new lamp is made possible by a new phosphor, which Westinghouse Research Director Edward Arnett believes is the only one yet available, able to stand up to the lamp's high loading.

Fluomeric. This lamp, introduced in 1955 by Duro-Test Corp., one of the smaller lamp producers, represents something approaching the ultimate in combining light sources. It combines three in a single bulb: incandescent, fluorescent and mercury vapor. Its chief advantages are that it is about one-third more efficient than an incandescent of comparable size (750 w., 230 v.), eliminates the ballast transformer required for straight fluorescents, yet has a relatively long life of 6,000 to 12,000 hours (compared with 7,500 hours for standard fluorescent), while providing a broader spectral color range than any. This last feature makes it particularly suitable for installations where good color rendition is important.

New uses

The multiplying of new light sources is as nothing—except as it provides ever more powerful, bright and flexible tools—to the new, more sophisticated uses of lighting in the changing pattern of architecture itself. The change is visible both inside and out: inside, where lighting demonstrates its ability to create a more efficient atmosphere or create a mood; outside, where lighting is creating a new, luminous after-dark appearance for architecture.

The salient fact about lighting, both

in its sources and uses, is that it is still rising in brightness. In the early thirties, when light merely lit a room and dimly at that, the standard of illumination recommended for school-rooms by the Illuminating Engineering Society was a minimum of 12 foot-candles. Today the minimum recommended is 30. In the same period, the minimum for office secretarial work also has gone to 30 foot-candles, while that for such special work as drafting stands at 50. Some specialized industrial tasks are already at 300 foot-candles, while in hospital operating rooms the accepted level is now 2,000. People in the lighting industry predict that office lighting will one day go to 100 foot-candles, as some offices already have. Many architects feel that this is going too far, adding to the complications of air conditioning and to already considerable lighting costs, merely to sell more light. But the trend of illumination is unmistakably higher.

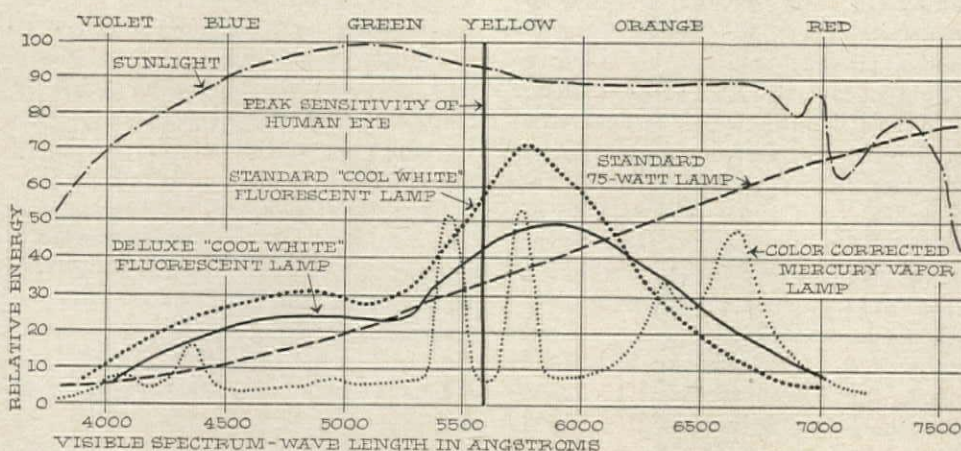
This is partly reflected in the fact that the quantity of light used in the US today is six times that of 1940. The main cause for his big jump is the rise of the fluorescent lamp, rapid since 1949, to No. 1 US light source. More incandescent lamps are still sold than fluorescents, but for the past four years the fluorescent has outranked the incandescent in total light produced, because against a higher initial cost it delivers more light per dollar of electricity. Two out of three new office building installations are fluorescent. In factories, virtually all are fluorescent, though the new mercury lamps are moving in here.

An important factor in the rise of the fluorescent is the development since 1945 of the luminous ceiling: banks of fluorescent fixtures screened by diffusers. No lighting idea in years caught on so firmly, for it offered an opportunity to integrate lighting with architectural design. The ultimate expression of this, so far visible in only a few buildings, is the ceiling integrating all four elements of lighting, air conditioning, acoustical control and sprinklers into a single system. But architects soon learned that luminous ceilings had three shortcomings: too monotonous, if uncritically used; too glaring, unless shielded; too diffuse a light for sharp perception. Despite many improvements in one or another of these factors, the luminous ceiling is still a problem requiring carefully studied treatment.

A possible solution to some of these problems may be found in the newest development: a translucent multilayer glass polarizing panel. Multilayer polarization is a complicated phenomenon, in which normally scattered light is trained through an optical material so that light rays vibrate in only one plane, reducing glare and excessive diffusion. Several major companies are known to be studying the possibilities of a polarizing panel. At least in part, their current interest has been stimulated by the work of Polarized Lighting, Inc., Woodside, L. I., which has been struggling with this knotty phenomenon since 1946, and hopes this year to introduce such a panel.

Perhaps the most creative display of the new lighting, using the tools at hand in a studied and integrated manner, will embellish New York's new Seagram building (color photograph, p. 115). For this building, Lighting Consultant Richard Kelly has designed a system in which artificial light will perform the triple function of illumination, reduction of brightness contrast between roomlight and daylight, and creation of an architectural mood, especially at night. All 38 floors will have luminous ceilings stretching from near the windows' face 20' into the room. This wide band of electric light helps eliminate the glare associated with glass enclosures by increasing the brightness level near the windows. The rest of the interior lighting will be done from reflecting troffers, giving a strong downward light. Two circuits will control the system: one for daytime, when lights will work at full intensity; the other, at lower intensity, to make the building a tower of light at night.

This kind of light manipulation is creating a new breed of independent



Visible spectrum of light is shown above, with various light sources plotted against it. While all sources appear white to the eye, each produces different quality of white. Incandescent, mainly red, is still favored for its warm tone.

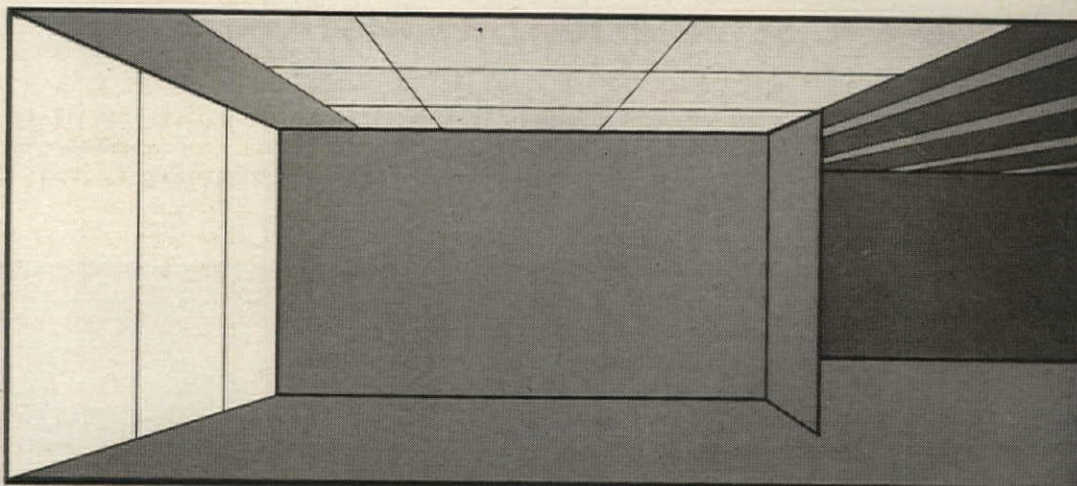
lighting consultant of diverse background (Kelly's is in both physics and architecture) and great promise. There are still so few of them for the mounting problems of architectural lighting that most are busy around the clock.

More research

The great need in lighting today is for more basic research in visual perception. Lighting is a growingly expensive item in modern building, ranging from a high of about \$10 sq. ft. for the lighting segment of a fully integrated, high-quality (e.g. G.M. Tech Center) system, down to \$1 to \$1.25 per sq. ft. for an adequate minimal system. Superior installations often run 10 to 20% of total building costs, against no more than 2% 20 years ago. Architects and consultants want more light on light to see where they are going. "I'd like to see statistics on the number of people with eyestrain today versus 20 years ago," says one architect. Nearly all feel a need for research on light in terms of people, so that psychological and physical needs may be defined and scaled more economically into lighting systems.

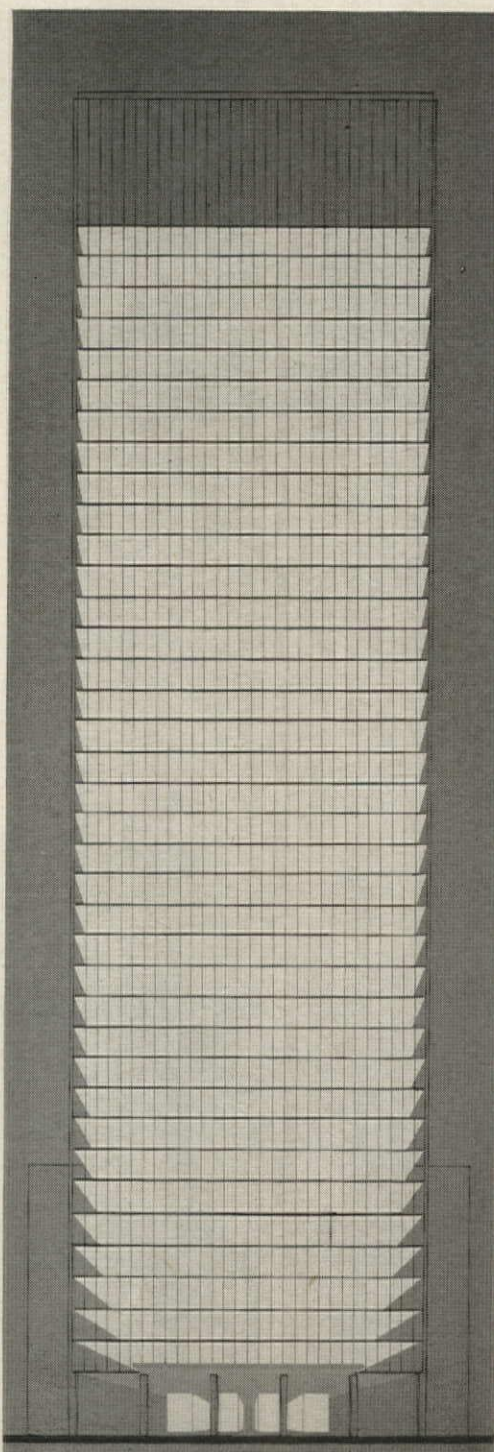
Some milestones in this field have been recorded. Twenty years ago Matthew Luckiesh and the late Frank K. Moss of G.E.'s famous Research Center at Nela Park established the fact that higher light level reduced muscular tension. In the early forties, Dr. D. B. Harmon, an independent investigator, concluded that bad light in schoolrooms could not only injure eyes but warp small bodies. And, roughly, the light required for a room can now be measured by a loose yardstick known as the Visual Comfort Index, which simply measures the percentage of people who will be "comfortable" at a certain level of illumination. But more basic knowledge and measurements are needed on light and the human eye. To get this, the Illuminating Engineering Research Institute, on a small budget of \$20,000 to \$25,000 a year, is sponsoring research projects, mostly in universities. These have to do with such things as a study of how the eye reacts to sudden stimuli, how human vision may be measured in seeing objects against various dark and light backgrounds, how to measure the amount of effort required to see.

The great breakthroughs for the future will come in this area. The first 80 years of the electric light were preoccupied with increasing the efficiency of the light source and adapting it to new uses. This will continue. But the great future is in bold experiments to understand better the nature of light and the human eye.



Tower of light: Seagram's building will use newest lighting techniques for both daytime indoor visual comfort and nighttime outdoor appearance. With Architects Mies van der Rohe and Philip Johnson, Lighting Consultant Richard Kelly developed a uniform lighting system. Inside (top sketch), Kelly designed 20'-wide band of luminous ceiling which extends from near windows' face to interior of room along all exterior exposures of building. In daytime, its nearly 100 foot-candle level of illumination will help to counter sky glare (with help from gray glass curtain wall). Glare is lessened because contrast between ceiling and sky is less. On each floor, beyond range of luminous ceiling, building will have low-brightness reflecting troffers which will provide nearly 80 foot-candles of illumination. Diffuser troffers will not be used because brightness contrast would be too great. System is designed so that additional lighting—for special effects—can be installed.

At night, entire building will switch to second lighting circuit which will give it "tower of light" appearance. Fluorescent tubes will operate at 120 milliamperes (as against 425 milliamperes in daytime). Entry area posed particular problem in nighttime lighting. The architects and Kelly felt that the ground floor had to be much brighter than upper floors; otherwise, design effect would be lost. Marble in entry was changed from dark green to white. Nighttime brightness level at ground level was designed to be about four times the level of the upper floors.



EXERCISE IN WEIGHT REDUCTION

New railroad coach, an ambitious venture in plastics and prefabrication, holds lessons for building

Building manufacturers and fabricators may some day take over useful techniques from such structurally related industries as railroad-car manufacturing. This railroad car, prototype of the Budd Co.'s new lightweight line, Pioneer III, now completing exhaustive test runs, is a particularly notable exercise in weight reduction.

Over all, the 85' Pioneer III cuts the weight of the standard lightweight coach more than in half, from 123,200 lb. down to a trim 52,330. In terms of load, this means a reduction from 1,678 lb. per passenger in the standard lightweight coach, carrying 74 passengers, down to 595 lb. per passenger in the Pioneer III, carrying 88. In other words, 14 passengers have been added to the new car's accommodations, but at a saving of 1,083 lb. per passenger and 70,870 lb. in over-all weight. This makes it the lightest railway car so far built in the US meeting all the strength and safety requirements of the Association of American Railroads.

The bulk of this weight reduction, which was the main objective of Budd Designer Walter B. Dean, was secured in structural and traction members. The four-wheel trucks, for instance, are one-third the weight of conventional cast-steel trucks, mainly through new design and the use of welded alloy steel and hollow axles. Of more significance to building is the stressed stainless steel exterior panel skin over a high-tensile stainless steel structure—a continuously welded construction now more or less conventional in lightweight-car manufacture—which in addition to being lightweight has high strength and permanence.

The plastic interior

The second major source of weight reduction in the Pioneer III is in the wide use of plastics in the car's interior, plastics used in such a way that certain applications may have particular significance in building.

Virtually every visible interior component in the car is made of plastics: walls, ceilings, baggage racks and seats. The washrooms, which are more than reminiscent of an idea once proposed by Buckminster Fuller and unsuccessfully tried in the building industry, are molded in a single piece

continued on p. 158

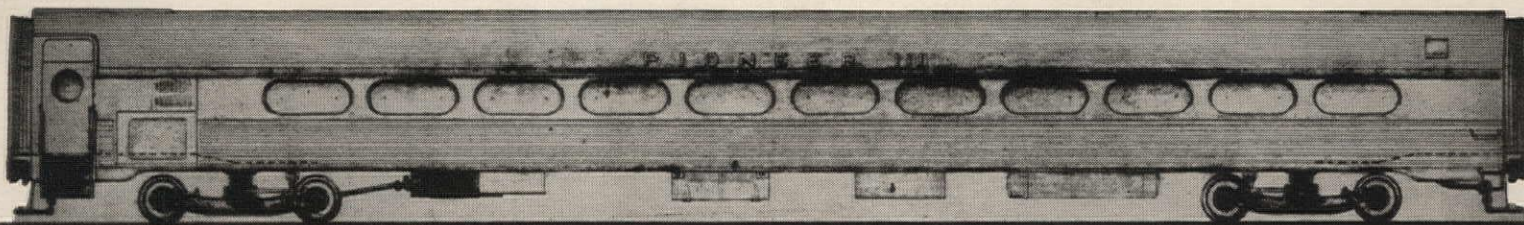
PHOTOS: (BELOW) H. TAYLOR; (BOT. & OPP. P.) LAWRENCE S. WILLIAMS



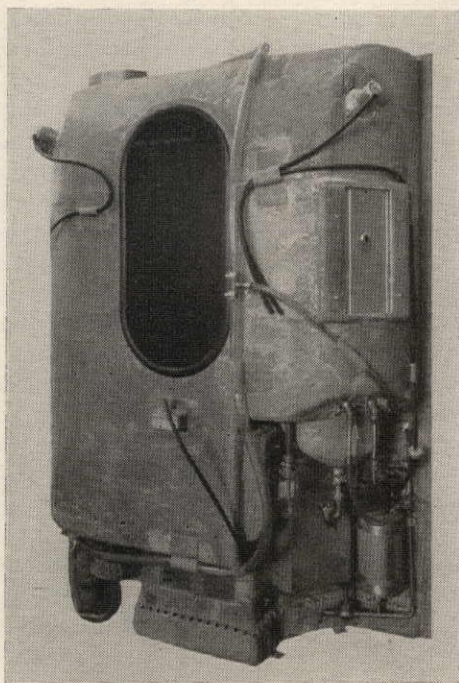
Interior structure is of high-strength stainless steel. Underframe is efficient, two-sill span which extends uninterrupted from one end of car to the other.

Two plastic panels cover most of each window bay. First extends from floor, includes underside of rack; second covers rack, plus ceiling and half of air duct.

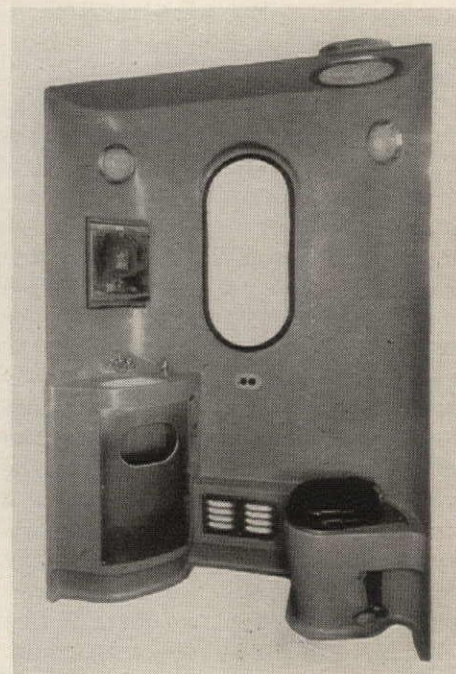




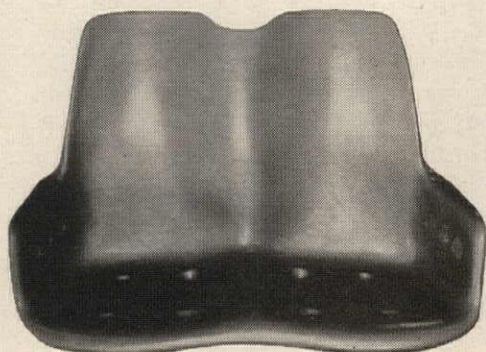
The car, 85' long, is lightest ever built in US, in terms of weight-per-passenger (595 lb.). Car weighs less than half as much as the standard lightweight car.



Washroom is molded in single piece of reinforced plastic, prepiped and prewired. The interior's plastic form combines outer wall with basin and hopper, with provision for fixtures.



Car's interior is virtually all plastics, including seats, cushions, floor, lighting fixtures. Windows are tinted at top, eliminating need for shades. Seat is molded in a single piece, supported by aluminum base. Weight, with cushion: 47 lb.



Outside steps are made in single mold of reinforced plastic. Outside door is steel on exterior, plastic on interior.

BRIEFS

of reinforced glass-fiber laminate. This single piece forms the washroom's inner and outer wall as well as the enclosures for washbowl and waste hopper. Each washroom unit is pre-wired and prepiped (with flexible vinyl pipe which expands in freezing weather) so that the whole room may be simply installed as a complete unit in the car. A 100-gal. laminated-plastic water tank is located overhead above the lavatory. Other single-panel partitions within the car are of plastic-covered plywood.

Plastics are not wholly confined to the interior. The skirt running along the lower edge of the car's stainless steel skin is plastic. And the car's steps are a single molding of laminated glass-fiber plastic installed as a unit. Some plastic designers think that this kind of "cubic modular" design of units or whole rooms, as in the case of the washroom, will some day have powerful application in building, making use of the continuously moldable properties of plastics. The results might be the volumetric design of room units in a single piece, eliminating many supporting structures and joints, providing continuous, easily cleaned surfaces, great strength, light weight and fast assembly into the building's structure.

Plastics' real importance, both for railroading and building, may be summed up in one word: prefabrication. The material's inherent flexibility in manufacture permits monolithic design. It reduces the task of construction from the high level of carpentry to a routine assembly job. For example, two plastic panels cover each interior window bay; one panel is formed to include the window and the lower portion of the baggage rack; the other combines the upper surface of the rack, the ceiling, and half of the air duct. Each pair of seats is molded in a single piece, upholstered with slip-on vinyl foam cushions. A pair of seats, including cushion and welded-aluminum base, weighs just 47 lb. Being plastic, the material has integral coloring, of course; no painting is ever required and cleaning of the entire car may be done with brush and hose.

Because of prefabrication and unit assembly, any mechanical or interior section of the new coach may be replaced in little more than an hour. The coach also is adaptable to other railway forms, such as lounge cars and diners, and to lightweight interurban trains.

CERAMIC HUMIGUIDE

Relative humidity has always been a difficult atmospheric factor to measure rapidly and accurately, particularly at the upper reaches of air saturation. This may now be solved by a discovery made by Edward Mayer, section head of the Physics Department of Horizons, Inc. Studying a number of new synthetic ceramics for their electrical resistance properties in classified applications, Mayer noted that one ceramic composition showed remarkable changes in electrical resistance with changes in surrounding humidity. The material was so sensitive, in fact, that the mere approach of the investigator's hand caused rapid fluctuations in electrical readings. Relative changes could be measured, up to 90% of the change, in less than 30 seconds, even in the heretofore unmeasurable range of 90 to 100% relative humidity. This rapid response, with further development of the ceramic, may be put to work in instruments and equipment to control critical industrial atmospheres, such as those in pharmaceutical production, and to trigger dehumidifying or air-conditioning systems.

BUILDING ADVANCES

A poll of its members by the Building Construction Employers' Assn. of Chicago on the relative value of recent advances in building methods showed the following ranking: 1) improvements in equipment and tools (placed first by 28%); 2) standardization of parts, such as windows (first by 27%); 3) more use of prefabricated materials (21%); 4) prestressed concrete (18%); 5) lift-slab method; 6) wider use of plastics and synthetics.

WATER CONTROL

The method by which most modern automatic washing machines have cut water use and waste about 80% under old-style washers with hand rinses—the water-flow control valve—is moving over into plumbing systems. The problem of water waste, averaging about 50% for all municipal water consumption, was recently characterized by William R. Wallin, application engineer of the Dole Valve Co., as "water down the drain." This uninhibited waste has raised the average per capita consumption to 35 gal. a day for men, 45 gal. a day for women, with hotel residents

averaging 15% higher than all others. The water-flow control valve is a simple device placed behind fixture outlets. It consists of a pipe coupling having a flexible rubber diaphragm with orifice that closes slightly as water pressure increases, opens as pressure drops, to maintain a predetermined constant flow in gallons per minute, regardless of pressure variations. Installed behind shower heads in one new hotel, such valves cut water flow from 9 to 2½ gallons per minute for an average saving of 32,500 gals. a day, with no lag in the functioning of showers.

FOAM BLANKET

Styrene foam plastics found a new use this winter as protective sheathing for the huge concrete monoliths of the Table Rock Dam project on Missouri's White River, insulating the surfaces against rapid temperature changes while curing. The rigid foam was put on in 1" x 12" x 9' planks by the Morrison-Knudson Co. and Utah Construction Co., joint contractors. Faster to install and more thermally protective than thick wooden planks or heavy insulating blankets, the styrene material can be salvaged for reuse.

PNEUMATIC TUBE

The pneumatic tube as an instrument of interfloor and office communication has reached a modern apotheosis in an automatic high-speed system now at work in the Standard-Vacuum Oil Co. building in White Plains, N.Y. Designed by Stanvac's own engineers and controlled from a central station by an electromechanical "brain" or mechanism, the system has a mile-long labyrinth of tubes through three floors to 20 receiving-dispatching stations within reach of some 700 employees. The user places material, documents and even office supplies up to 7 lb. in weight into a 14" clear-plastic, oval container, dials a destination number, and the lozenge zooms off on its journey at 25' per second. The control mechanism spaces the moving carriers safely from one another, slows down some, momentarily by-passes others, to bring each to its destination with a breaking of speed to a gentle landing glide. Automatic switching devices in the central control can handle more than 1,500 carriers an hour. Thus far, the system is dispatching some 2,800 carriers on 550 container-miles of travel a day.



Boston



Miami



From
Boston to
Brazil...

SHEPARD WARNER

ELEVATORS



Rio, Brazil

Today, thousands of SHEPARD WARNER Elevators throughout the western hemisphere are demonstrating their dependability, as they have since 1860.

Some are modern, automatic passenger carriers... others powerful freights... but each is engineered to perform over and over again the function specified by the architect.

Let us help you meet your current vertical transportation requirements.

See our catalog insert in the SWEET'S 1957 Architectural File.

SHEPARD WARNER ELEVATOR COMPANY
5012 Brotherton Road
Cincinnati 9, Ohio



THE INSULATION VALUE WILL STAY IN THIS FEDERAL RESERVE BANK ROOF!

Architects: James, Meadows & Howard, Buffalo, N.Y.; Eggers & Higgins, New York, N.Y. **General Contractors:** William L. Crow Construction Co., New York, N.Y. **Waterproofing and Roofing Contractor:** Jos. A. Sanders & Sons, Inc., "Buffalo's Live Wire Roofers"



...and "our costs are lower... thanks to Gold Bond"

says **Joseph A. Sanders, Jr., Roofing Contractor**

Mr. Sanders, Vice President of Jos. A. Sanders & Sons, Inc., used 35,000 square feet of Gold Bond Insulation Roof Board on the new \$4,000,000 building of the Buffalo Branch of the Federal Reserve Bank of New York.

He says: "Gold Bond Insulation Roof Board helps us deliver in the finished job *the full insulation value specified*. It stands up under the loads of working crews and equipment."

Gold Bond resists the two common ways insulation roof board can lose a good share of its full efficiency during construction—soak-in of mopping material and squeeze-down of the insulating material itself.

Costs are lower with Gold Bond Insulation Roof Board; less mopping material is needed and the smoother surface means faster mopping. Moisture resistant Gold Bond Roof Board comes in ½" to 2" thicknesses; shiplap, offset and square edges; asphalt-coated and plain.

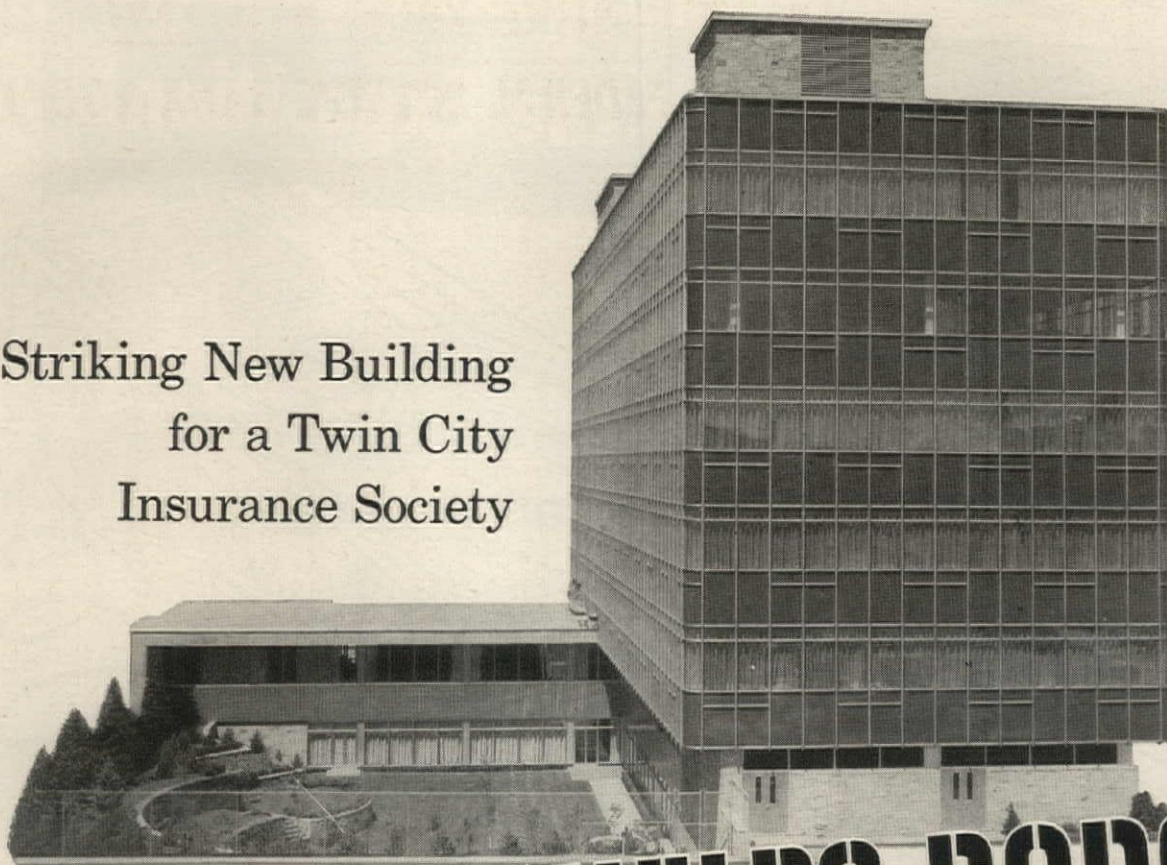
To see what this building's construction story can mean for *your* design plans, call your Gold Bond® representative or write Dept. AF-27, National Gypsum Company, Buffalo 2, New York.

INSULATION ROOF BOARD

NATIONAL GYPSUM COMPANY

Gold Bond
BUILDING PRODUCTS

Striking New Building
for a Twin City
Insurance Society



WIRE BY PHELPS DODGE

Latest addition to the growing Minneapolis, Minn., business center is the beautiful new home office of the Lutheran Brotherhood, a fraternal life insurance society. This modern building boasts a number of unusual features, including a unique sunken garden and terrace, exterior walls of blue-green porcelain-enamel steel and 640 windows of double-pane plate glass.

One of the requirements for this building was an electrical system of the highest quality. That's why Phelps Dodge building wire and paper insulated power cable were installed exclusively.

On every wiring job where top-quality materials, expert workmanship and experienced "know-how" are called for, *it pays to rely on Phelps Dodge and your Phelps Dodge distributor!*

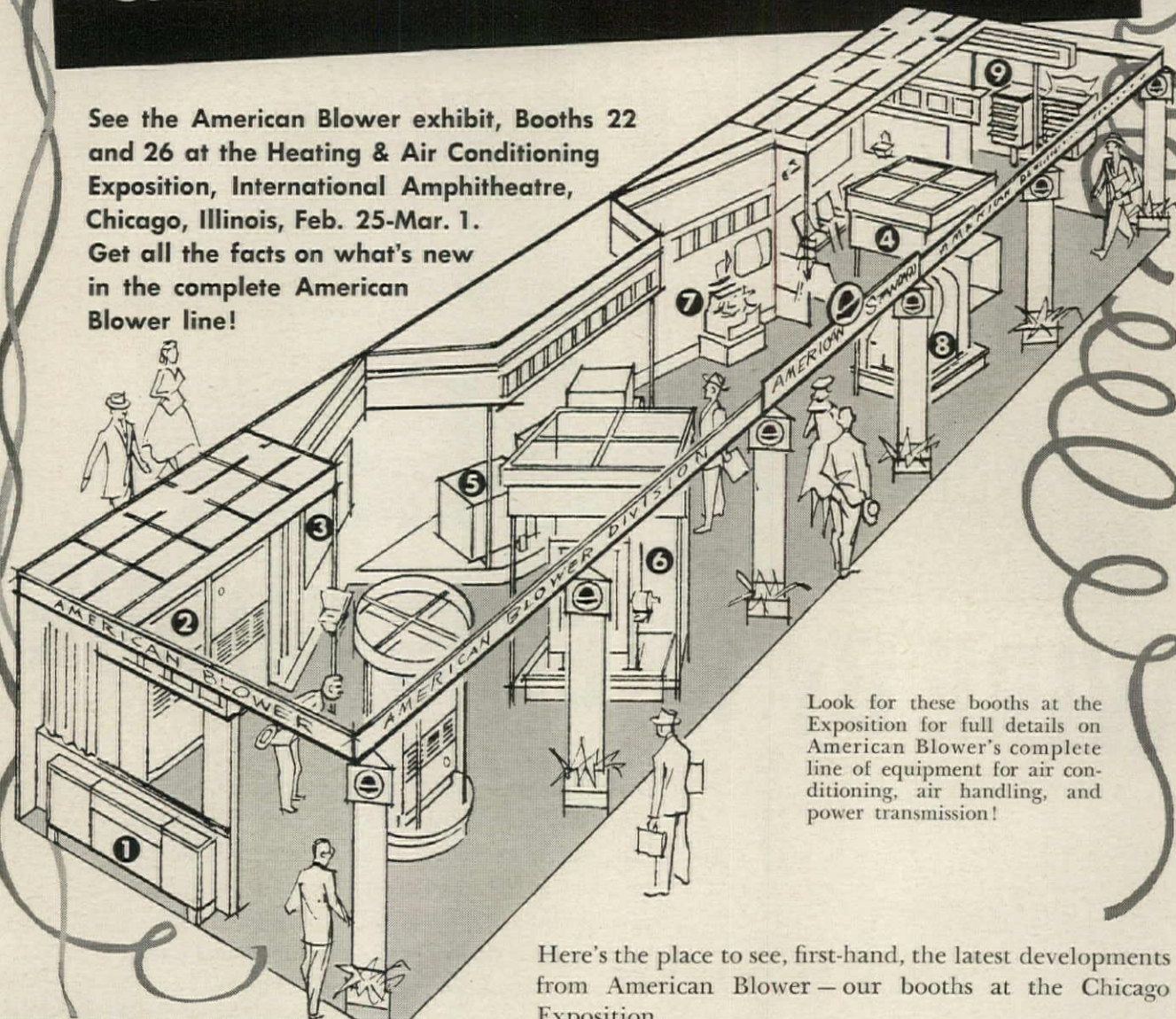


**PHELPS DODGE COPPER PRODUCTS
CORPORATION**

SALES OFFICES: Atlanta, Birmingham, Ala., Boston, Buffalo, Charlotte, Chicago, Cincinnati, Cleveland, Dallas, Detroit, Fort Wayne, Greensboro, N. C., Houston, Jacksonville, Kansas City, Mo., Los Angeles, Memphis, Milwaukee, Minneapolis, New Orleans, New York, Philadelphia, Pittsburgh, Portland, Ore., Richmond, Rochester, N. Y., San Francisco, St. Louis, Seattle, Washington, D. C.

Come visit us at the Exposition!

See the American Blower exhibit, Booths 22 and 26 at the Heating & Air Conditioning Exposition, International Amphitheatre, Chicago, Illinois, Feb. 25-Mar. 1. Get all the facts on what's new in the complete American Blower line!



Look for these booths at the Exposition for full details on American Blower's complete line of equipment for air conditioning, air handling, and power transmission!

Here are some of the things you'll see!

- ① Unit Conditioners—designed to provide year-round air conditioning on an individual-room basis.
- ② American Blower Packaged Air Conditioners—modern styling, engineered for industrial and commercial applications.
- ③ Tonrac® centrifugal refrigeration machines that maintain chilled-water temperature regardless of load.
- ④ Ventura Fans—propeller fans, with streamlined inlets, for general ventilation in commercial applications.
- ⑤ Air-Conditioning Units—components for central station air-conditioning systems.
- ⑥ Sirocco High-Pressure Fans, for high-velocity direct air-conditioning systems and industrial applications.
- ⑦ GYROL® Fluid Drives for smooth power and adjustable-speed control in a wide variety of industrial applications.
- ⑧ Utility Sets—self-contained fan units for general supply or exhaust where duct work is required.
- ⑨ Unit Heaters—horizontal and vertical models for use with steam or hot water, plus gas-fired heaters.

*Trademark

Here's the place to see, first-hand, the latest developments from American Blower—our booths at the Chicago Exposition.

You'll find a display on Tonrac, our new centrifugal refrigeration machine that installs on a single level. You'll see our completely new line of comfort-engineered packaged air conditioners, the latest Gýrol Fluid Drive, high-pressure fan, utility set, unit heater, and much, much more.

And there'll be motion pictures, moving displays, fact-filled literature—everything to make your visit interesting and informative. So make a note now to stop by! American Blower Division of American-Standard, Detroit 32, Michigan. In Canada: Canadian Sirocco products.

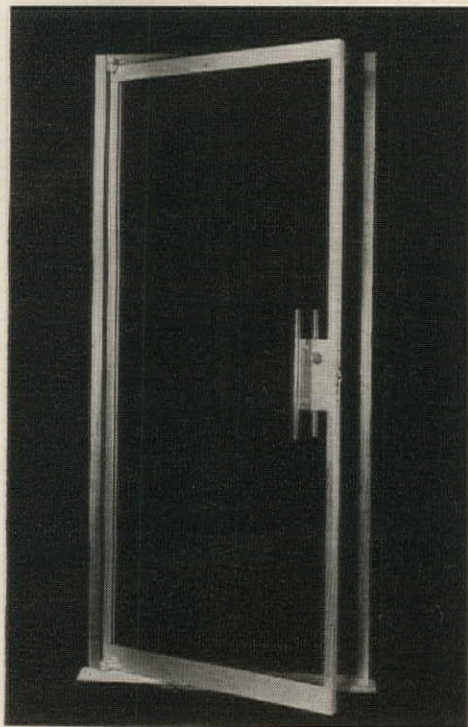
AMERICAN BLOWER

Division of AMERICAN-Standard



Glass gets a girdle, T-rails go underground

—a review of the month's new products



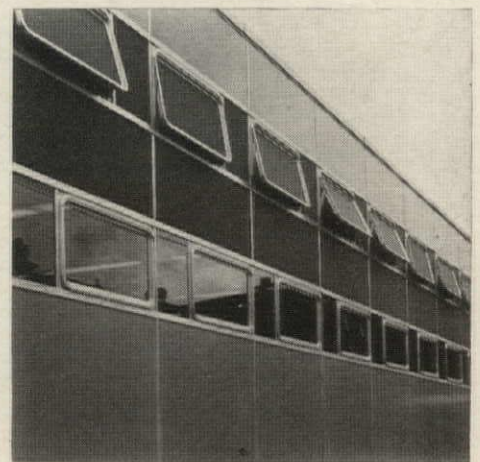
(1) TENSION DOOR puts slim frame harness on plate glass

Few people passing through one of these slim frame doors will marvel at its boldness, but architects and fabricators owe George West, its engineer, a red badge for putting glass to work structurally. While untempered glass has higher tensile strength than steel, most designers mount glazing to accommodate only its frailties. As manager of Pittsburgh Plate's building products department, West is familiar enough with the inherent properties of glass not to be cowed by its brittleness. He also is sensitive to current interest in reducing weight in construction materials and in designs in tension. Knowing that plate glass is not a homogeneous mass but a transparent sandwich with heat-stressed skins over a softer core, he harnessed its tremendous strength for the thin *Tension Door* by careful edge loading. In assembly, metal *H* rails are placed at top and bottom of a $\frac{1}{2}$ " thick glass sheet, narrow stiles along the sides. As the frame is drawn taut by concealed bolts, the verticals are pulled in tension while compression is applied through two heavy steel leaf springs inside the lower glazing channel. In theory, steel wire could substitute for the stiles but the framing is an engineering concession to hardware: the 1" wide verticals provide a place for hinges and weatherstrip and also protect the glass's Achillian edges from sharp blows. So framed, the $\frac{1}{2}$ " rough or polished plate has impact resistance equal to fully tempered 1" *Herculite*.

The result is a delicately delineated door that cannot sag, rack or get out of line. If a *Tension Door* is shattered, the broken pieces stay harmlessly in their frame. In one test it took battering ram to smash through the door.

New push-pull handles and plates have been designed for West's door. These can be inserted directly in the glass with the locks set in top or bottom rail; no across-the-door bar is necessary. Manufactured in stainless steel, bronze and aluminum frames in standard sizes, the doors can be center or offset mounted or adapted to overhead closures. The price, about \$200, falls between $\frac{1}{4}$ " plate-glass doors in heavier frames and unframed 1" tempered glass.

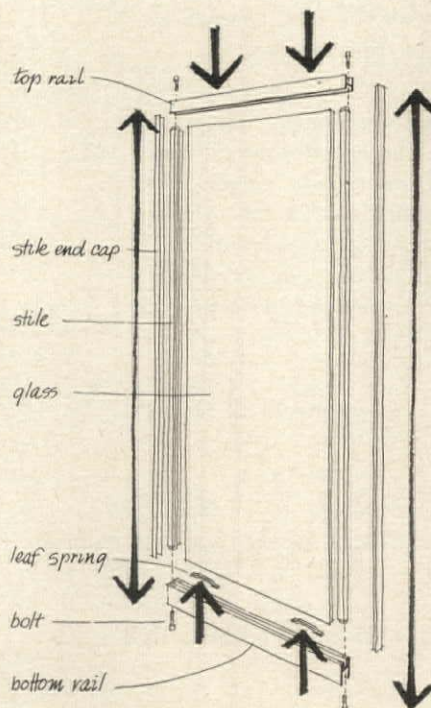
Manufacturer: Pittsburgh Plate Glass Co.



(2) BUTT JOINT WINDOWS show no putty or screws on trim frame

By slimming the frame and simplifying the glazing, Geyser has done about all it can to modernize its 18-year-old window. Already a modern classic, the aluminum unit got a boost in prestige in the Heinz vinegar plant (FORUM, Jan. '54), a structure that capitalizes on the sturdy directness of the stock fenestration. The new Geyser models have no exposed fasteners or face putty, and the verticals are only $1\frac{1}{2}$ " wide. Intersections butt together; there are no moisture-collecting recesses. Head, jamb and sill all meet neatly in a continuous frame $3\frac{5}{8}$ " inside the glass. To glaze each unit, grooves in the horizontal bars and faces of the mullions are filled with nonhardening sealing compound. The glass is lifted into the top bar channel until it clears the lower, then dropped into place. Cover strips are set over the vertical members and excess compound knifed away. The rounded vent windows are formed in one piece like bus windows

continued on p. 164



the **SUN** heats this building
in winter...



Another
Architect-Approved
Comfort Conditioning Job
by **MARLO**

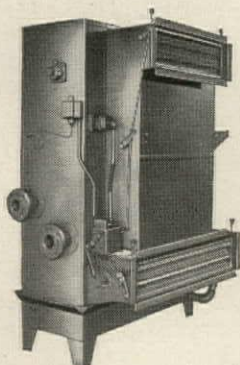
ARCHITECTS:
STANLEY & WRIGHT
MECHANICAL ENGINEERS:
BRIDGERS & PAXTON

Marlo helps cool it
in summer...

This unique building in Albuquerque, N.M., is believed to be the first solar-heated commercial building in the United States.

Marlo heat transfer equipment is an important part of this installation which combines solar heating, evaporative cooling and an auxiliary heat pump.

Occupants of this unusual building include its owners and designers, the mechanical engineering firm of Bridgers & Paxton. Architects were Stanley and Wright, general contractor was Paul Priest. All are of Albuquerque.



Marlo equipment has played an important role in many distinctive air conditioning installations in this country and abroad. To learn how it can serve your needs efficiently and dependably, write us today.

See our bulletin in Sweet's.

MARLO coil co.

SAINT LOUIS 10, MISSOURI

Quality Air Conditioning and Heat Transfer Equipment Since 1925

Products

cont'd

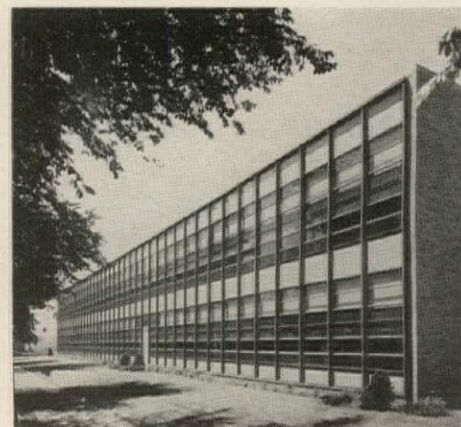


(a mode of fabrication used many years before the Alcoa Building). They can be made to project inward or outward and can be installed anywhere in the wall. Geyser's fixed and ventilating windows are sold as separate units, in continuous ribbons and as complete window walls. Multiple windows can be built up to 21' high and to any width in multiples of 3'-6" or 4' without intermediate supports. Prices start at about \$1 a sq. ft.

Manufacturer: E. K. Geyser Co.

(3) **STEEL GRID WALL** made in trim sections, silvery finish

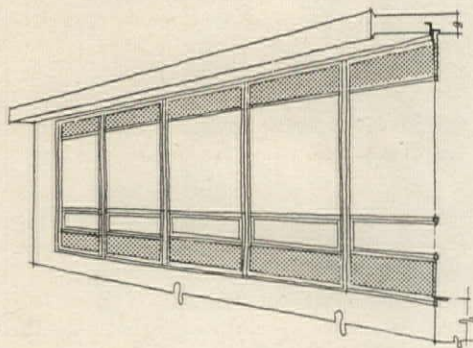
Spinning a thin web of hot rolled steel around its basic window, Fenestra has engineered a rugged, sophisticated curtain wall. Flat-face intermediate sections 1 1/4" deep contribute to the grid's sheer look but conform to specifications set up by the Metal Window Institute. Innumerable combinations of insulated sandwiches, fixed and operable windows can be designed into the standard grid for single- and multiple-story construction. Porcelain enamel panels (up to 12 sq. ft. per unit) are supplied by the manufacturer; other types such as asbestos cement and polyester skin laminates are fabricated to order. Construction costs range between \$2 to \$4 a sq. ft., depending on spacing and materials. Framing is shop finished with a bonderized coat, prime paint, or with Fenestra's new high luster *Fenlite*, a protective coating of bright zinc alloy. This





lasting surface is secured through an eight-step cleaning and dipping process. It is reported to have 3 to 12 times the resistance to white corrosion of ordinary galvanizing, and its zinc coating has a self-healing action which fills in pinholes and scratches.

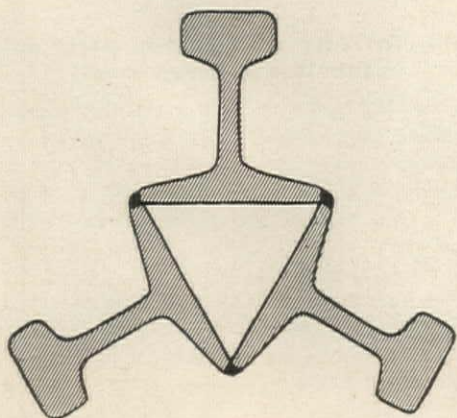
Manufacturer: Fenestra Inc.



(4) FOUNDATION PILE of rail steel punches through tough strata

Three steel rail T's welded along their base edges into a triangle make an effective pile-driver for foundations in rough ground. Taking advantage of the strength of high-carbon rail steel (and its ready availability), the symmetrical pile with its chunky flanges is said to resist lateral earth forces and to deflect obstructions more efficiently than standard H section piles. Rail pile can be driven with con-

continued on p. 166



PROBLEM: obtaining an overhead door that will blend with a modern-looking fire station and also afford smooth operation, fast action!

RAYNOR
OVERHEAD DOORS

solve your most difficult

Installation Problems



RAYNOR

INSTANT LIFT

Design

for Quick Manual Operation

Whatever your problem, Raynor's engineering staff is always ready to advise you on special equipment and design. For example, the problem above was easily solved by supplying an architecturally-correct commercial overhead door PLUS Raynor's quick-release mechanism that permitted an easy switch to manual operation (a necessary precaution against power failure). Raynor's instant lift produces quick response when it's needed most.



Check your telephone directory for the Name of Your Nearest Representative or write to

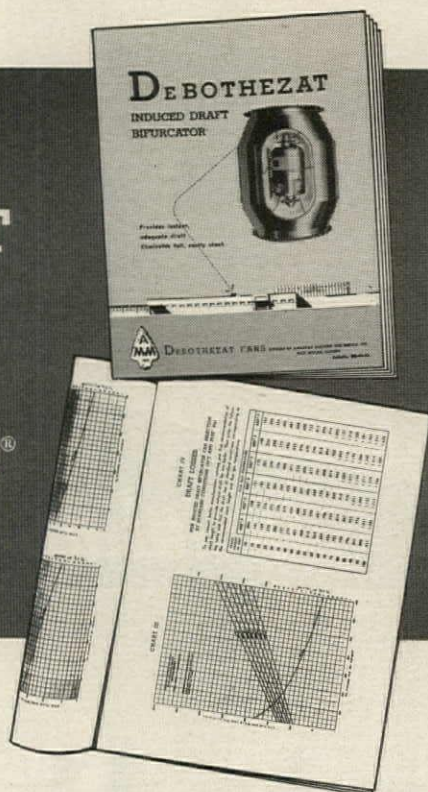
RAYNOR MANUFACTURING CO.

Dept. AF-2

Dixon, Illinois

Builders of a complete line of wood sectional overhead doors

NEW DeBOTHEZAT INDUCED DRAFT BIFURCATOR® CATALOG



all boiler code ratings
expressed in BTU/HR

A valuable working tool for both the engineer and contractor. This new 20-page catalog gives all manufacturers' organizations boiler code ratings reduced to their common relationship of BTU/HR delivered to the steam.

Also included are useful tables and charts on volume of flue gas for oil, gas and coal. Facts are given on the selection, use and installation of Induced Draft Bifurcator Fans. Performance data and complete specifications on all DeBothezat Induced Draft Bifurcators are outlined in detail.

send
for
FREE
COPY

De Bothezat FANS

A DIVISION OF
American Machine and Metals, Inc.
EAST MOLINE, ILLINOIS

DeBOTHEZAT FANS, Dept. AF-257
Division of American Machine and Metals, Inc.
East Moline, Illinois

☐ Please send a copy of your new Induced Draft Bifurcator Catalog.

FIRM NAME _____
ADDRESS _____
CITY _____ ZONE _____ STATE _____
ATTENTION MR. _____

Products

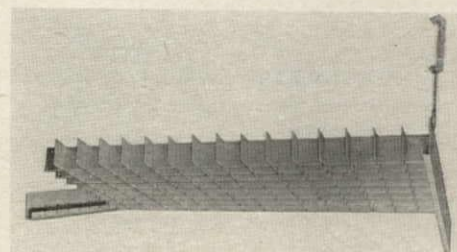
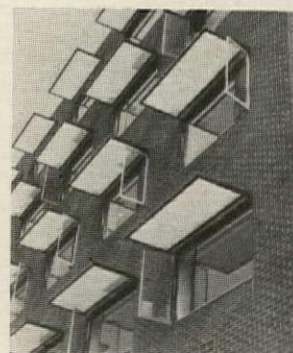
cont'd

ventional leads and hammers; no mandrels or special accessories are necessary. The new piles are supplied in sizes ranging from 60 to 133 lb. per ft. in lengths from 28' to 39'. For deep driving, sections can be butt-welded in the field. Prices are competitive with cold-rolled shapes, with possibly faster delivery.

Manufacturer: L. B. Foster Co.

(5) LIGHTING LOUVER put to work beneath the southern sun

In a fresh improvisation on the eggcrate theme, Architects Stevens and Wilkinson bracketed stock ceiling louvers outside the windows on their new hotel building for the University of Georgia. Filtering sunlight without blocking precious Atlanta air, the thin cross fins in their 3' x 4' frames cost \$22.55 apiece or about \$1.90 a sq. ft. The louvers were shop assembled of 18-ga. aluminum strips interlocked in 2" cells and were given a sprayed satin finish to subdue bright spot reflections.



Pleased with widening its market to the outdoors, light fixture producer Neo-Ray now finds itself in the sun control business and will fabricate *Sunshields* to design specifications.

Manufacturer: Neo-Ray Products, Inc.

(6) ROTARY GUN throws paint out in thin line or broad band

Throwing paint at high speed over a controlled area of wall or ceiling, the *Rogers Rotary Magic Painter* whisks through a 15' x 20' room in less than half an hour. The 3-lb. electric spray gun works on the principle of a centrifugal pump. Its self-enclosed motor spins rotor blades at 22,000 rpm to draw paint up from the attached container and out through a gate slot. The opening can be regulated for a fine line or a 1' wide swath, with little overspray and hence minimum masking. The *Rogers* gun



handles any water or oil base paint and can be used indoors or out.
Manufacturer: Napco., Inc.

(7) SPINNING TOOL whirls paint-brush clean and dry

A salesman demonstrated this rotary paint-brush cleaner to a skeptical audience by attaching what looked like the upper half of an egg beater to a brush oozing red paint, then dipping it in turpentine, whirling it for a moment in an empty can and then wiping the brush across his white shirt front. Rendered absolutely clean and dry by the simple tool, the brush left no trace of pigment or even solvent. This *Spin-a-Brush*, like the Rogers gun above, makes basic use of centrifugal force but relies solely on handpower to whirl wet or crusty pigment out of a brush in less than two minutes. In an ultimate test of the device, a painter switched one brush from black to white without streaking. The tool sells for \$7.95. Attachments are available at \$1.50 each for cleaning rollers and for stirring. Grip and crank are molded nylon with a solvent-resistant gray finish.
Manufacturer: Portable Electric Tools, Inc.

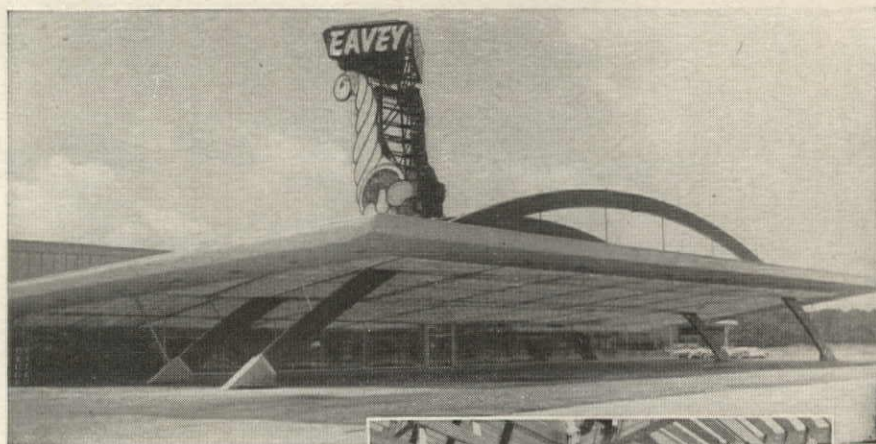


(8) SHALLOW RACEWAY brings underfloor wiring to old buildings

Buildings running short of power on insufficient, inaccessible wiring can get a comfortable transfusion with *Flushduct* underfloor system. Existing floors are
continued on p. 168

Supermarket spans years of construction progress...

USES *Ramset*!



Ramset System
 saves \$10,000 and
 two months' time
 for new Ft. Wayne
 Supermarket



Using the latest construction methods, contractors completed Eavey's Supermarket in Fort Wayne, Indiana, ahead of schedule and ahead of budget!

The electrical contractor reported hanging 10,000 feet of conduit carrying 350,000 feet of wire, with RAMSET, using 100,000 fasteners for the job. About \$10,000 and two full months were saved by using speedy RAMSET SYSTEM, according to George Clement, service engineer for Eavey's. Other contractors saved in the same way.

RAMSET FASTENING SYSTEM can be used in a variety of ways on most jobs: electrical, plumbing, air conditioning, door, window and wall installations. Moreover, RAMSET is just as valuable in the plant maintenance operation as to the original builders and contractors.

You can anchor almost anything to concrete and steel with RAMSET. New catalog is ready, send for your copy now.

companion tool

Shure-Set
 TRADEMARK

Babybrother to RAMSET, this hammer-in tool uses no cartridge, but makes your own hammer power more effective. For masonry, mortar joints, cinder block. Ask for literature.

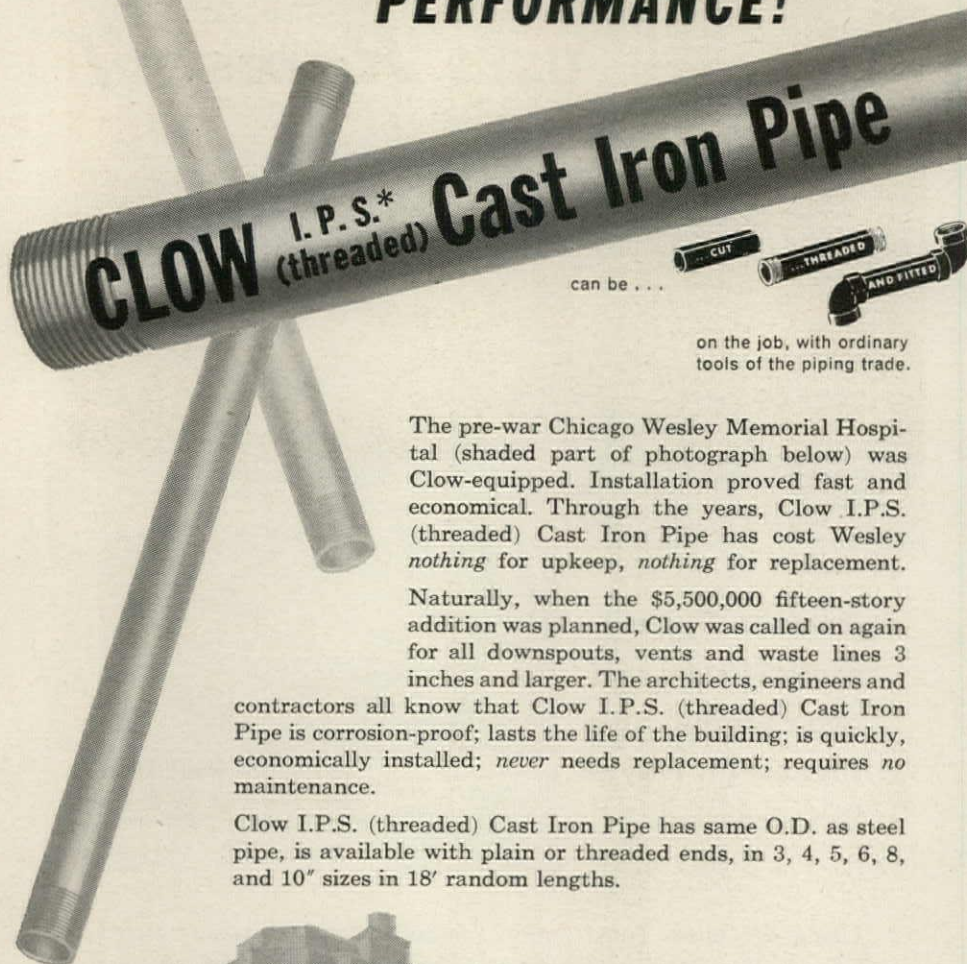
Ramset Fastening System

WINCHESTER-WESTERN DIVISION
 OLIN MATHIESON CHEMICAL CORPORATION

12157-B BERE A ROAD

CLEVELAND 11, OHIO

"REPEAT performance"
because of its original
PERFORMANCE!



can be . . .



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

The pre-war Chicago Wesley Memorial Hospital (shaded part of photograph below) was Clow-equipped. Installation proved fast and economical. Through the years, Clow I.P.S. (threaded) Cast Iron Pipe has cost Wesley *nothing* for upkeep, *nothing* for replacement.

Naturally, when the \$5,500,000 fifteen-story addition was planned, Clow was called on again for all downspouts, vents and waste lines 3 inches and larger. The architects, engineers and contractors all know that Clow I.P.S. (threaded) Cast Iron Pipe is corrosion-proof; lasts the life of the building; is quickly, economically installed; *never* needs replacement; requires *no* maintenance.

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.

*Iron Pipe Size O. D.

Chicago Wesley Memorial Hospital (ADDITION)

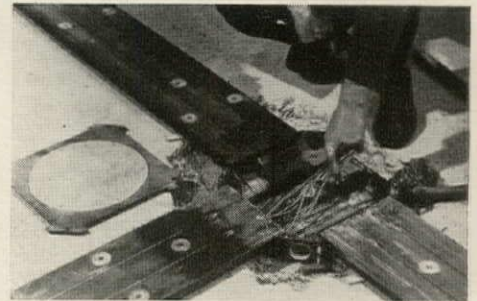
ARCHITECT:
Fugard, Burt, Wilkinson & Orth
CONSULTING ENGINEER:
A & T Engineering
PLUMBING CONTRACTOR:
Great Lakes Plumbing & Heating Co.

JAMES B. CLOW & SONS, Inc.

201-299 North Talman Avenue • Chicago 80, Illinois

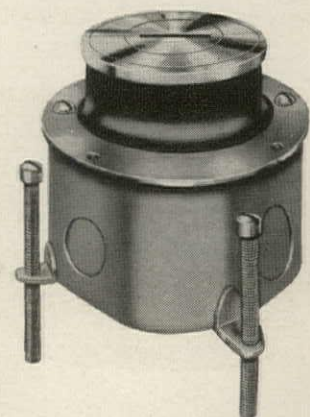
Manufacturers of Cast Iron Pipe
Wholesalers of Plumbing
and Heating Supplies

routed to take the 1- $\frac{3}{8}$ "-deep raceways or, as on a recent Ontario job, *Flushduct* can be laid over the old floor without any concrete cutting or drilling. In the trenchless installation the duct system is secured with studs, 1 $\frac{1}{2}$ " of new concrete poured to bring the floor up level with the raceway, and a finish surface applied on top. Produced in 10' lengths in one, two and three raceway arrangements with a complete line of service fittings, *Flushduct* has outlets

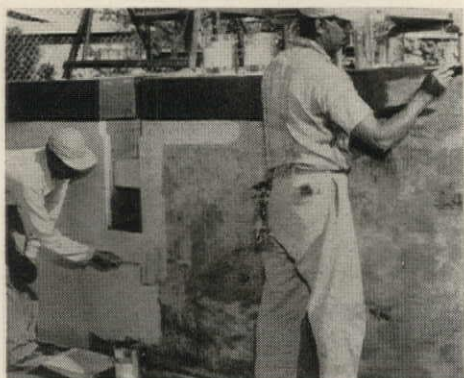


spaced 2' apart along each duct. Roomy junction boxes have removable linoleum pans for quick access.

Another flush-conscious electrical component introduced recently by National for standard underfloor systems is the 800 series floor outlet box. Made in depths of 2- $\frac{5}{8}$ " to 3 $\frac{1}{4}$ ", the 4"-wide octagon box



has a rubber collar gasket which keeps out moisture and adjusts to variations in floor levels. Holes are provided for tying the box down to concrete forms.
Manufacturer: National Electric Products Corp.



(9) EPOXY PAINT is protective coat for wood, metal or masonry

Epoxy, one of the toughest of new plastics, makes up 40% of the formula for *Poxy-cote* industrial paint. Known best for its adhesive powers in bonding unlike materials, epoxy resin creates a hard, long-lived surface over wood, masonry or metal. The nonporous coat has excellent scratch resistance, surpassed in plastics only by melamine, and is not affected by climate changes, most chemical fumes or moisture. It is produced in several standard colors and for large orders will be pigmented to specification. *Poxy-cote* is also made in clear form for outdoor use as a lacquer for brass and bronze. Price runs \$11.50 to \$15 a gal.; test kits are \$5. Resin and activator are mixed on the job (in quantities to be used within 48 hours), and applied by brush, spray or roller. For proper curing, temperature should be above 50° F. Depending on porosity of the surface, coverage ranges from 300 up to 1,000 sq. ft. a gal. for a cost of 5¢ down to 2¢ a sq. ft. *Manufacturer: National Coating Products, Inc.*

(10) STRIPPABLE TAPE keeps window unscratched in handling

One lesson carried over from the factory to the construction site is that it is easier to protect materials in transit than undo mars afterward. For the Chicago apartment below, adhesive tape was applied to

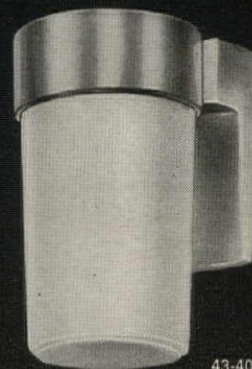
continued on p. 170



design by mc Philben

for The New House of Seagram

Superbly contemporary in design



43-40



Architects:
Mies van de Rohe
& Philip Johnson
Associate Architects:
Kahn & Jacobs
Electrical Engineers:
Clifton E. Smith
Lighting Consultant:
Richard C. Kelly
Electrical Contractors:
Fischbach & Moore, Inc.

Selected to light the stairways of the new House of Seagram in New York, the McPhilben 43-40 wall bracket offers these exclusive advantages: solid cast aluminum construction... gleaming satin finish... dust-free and bug-tight operation... a larger, threaded tapered globe which gives greater diffusion, lower operating temperatures and longer lamp life.

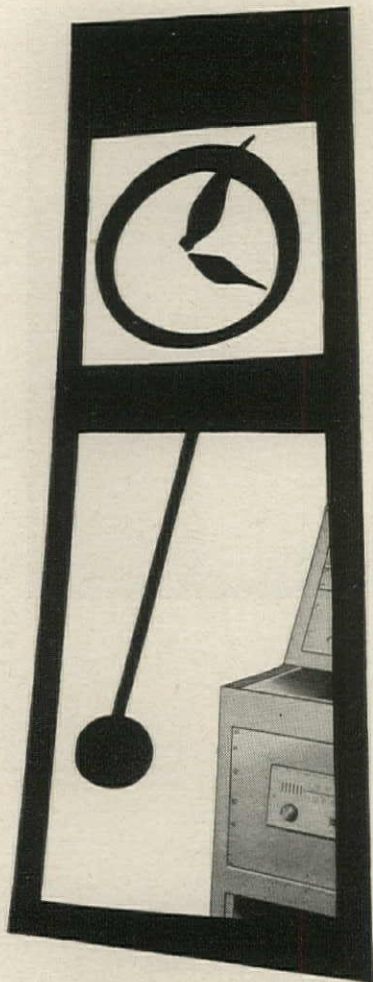
Wall and ceiling units are made in 100 and 200 watt sizes. Both are available in a UL approved vapor-tight series and may be fitted with cast aluminum protective guards.

See the McPhilben sales representative in your area or write for full 43-40 specifications to: McPhilben Lighting Co., 1331 Willoughby Ave., Brooklyn 37, N. Y.

Representatives in major cities • Stocked by electrical wholesalers

Products

cont'd



DISMISSED!

11 a.m. A signal sounds through the Bogen loudspeaker in Classroom 2B... time for children to move to the 3rd period classroom. Automatic Clock Classroom Change systems may be built into any Bogen School Sound Console, avoiding the duplication of wiring and expense of a bell system. This modern way to handle classroom change signalling is one of a thousand jobs done by Bogen School Sound. There's a Bogen Sound System for your school, your budget. Write for brochure to Dept. RN David Bogen Co., Inc., P.O. Box 500, Paramus, N. J.



you are there... with a

Bogen

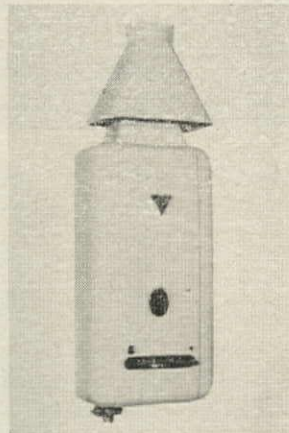
SCHOOL SOUND SYSTEM

A UNITRONICS CORPORATION AFFILIATE

(Architects: See Sweets 32 a-Bo)

the aluminum mullions to prevent scratching and spotting during shipping and installation. Costing about 25¢ for each 10' mullion, the 6102 Black Protecto Mask is one of several *Mystik* papers developed for building materials handling. Adhesiveness can be varied for particular products. A freshly primed metal partition can be completely masked and when in place can be stripped without lifting a fleck of paint. Tape also can be spotted on steel during fabrication to keep areas that are to be welded free from oxides.

Manufacturer: Mystic Adhesive Products.

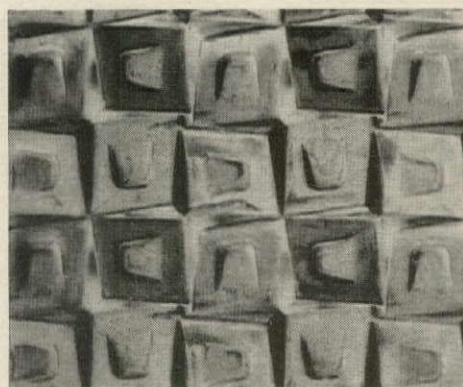


(11) GAS HEATER puts out continuous supply of hot water

The *Ascot* instantaneous heater can deliver up to 120 gal. of hot water an hour from a cold water pressure source. A British import, the compact automatic unit operates on natural, manufactured or bottled gas. It burns fuel only as hot water is called for. The first motel or camp guest of the season can take a hot shower the minute he walks in without waiting for a tank to heat up. Practical for service stations, factory washrooms and summer homes, the *Ascot* is approved by the American Gas Assn. It stands 3'-7" high and is 1'-2" wide, and sells for \$129.50. Distributor: Southern Heater Co., Inc.

(12) TEXTURED METAL produced in widths up to 52"

Instead of christening its 52" rolling mill with a magnum of champagne, Rigidized



Metals asked Raymond Loewy to develop a new sheet metal pattern. The industrial designer's loosely geometric texture (pictured left at full scale) is priced at the same rates as other Rigidized embossed metals: about 18¢ a sq. ft. in 22-ga. steel and 25¢ a sq. ft. in 18-ga. aluminum. The manufacturer also has announced a process that imprints textures on strips or selected areas of a sheet and leaves the rest plain. Manufacturer: Rigidized Metals Corp.

PRODUCTS INFORMATION COUPON

For additional information on any product reviewed in the February issue check the corresponding key number below and mail this coupon to Architectural FORUM (Room 7-06) 9 Rockefeller Plaza, New York 20, N. Y.

- ☐ 1. Glass tension door
- ☐ 2. Aluminum bar windows
- ☐ 3. Thin curtain wall
- ☐ 4. Rail foundation pile
- ☐ 5. Sun control louver
- ☐ 6. Rotary paint gun
- ☐ 7. Spinning brush cleaner
- ☐ 8. Epoxy paint
- ☐ 9. Shallow underflow duct
- ☐ 10. Protective tape
- ☐ 11. Instantaneous heater
- ☐ 12. Rigidized metal

name _____

title _____

company _____

street _____

city _____

state _____

NOTE: This request cannot be honored after April 30, 1957

Please enter my subscription to Architectural FORUM for ☐ one year at \$5.50 or ☐ two years at \$8.50 (These rates for US and possessions and Canada only.)

☐ Renewal ☐ New

Signature _____

metlwal

STEEL

PARTITIONS AND PANELING

for modern functional interiors

TOPPING THE TREND

... UTILITY WITH A BACKGROUND
OF STEEL AND METLWAL BEAUTY

STAFF OFFICES

AMERICAN IRON AND STEEL INSTITUTE
38th Floor (20,000 Square Feet) Socony Mobil Building
42nd Street and Lexington Avenue, New York City

The inviting entrance
to the American Iron and Steel Institute
is most pleasingly enhanced
by the depth and friendly warmth
of a decorator's choice
in Metlwal partitions and paneling.

In this restful,
modernly appointed reception room,
Metlwal holds prestige
with the deep-piled carpeting,
quality textured fabrics
and decorative steel surfaces.
Subtle tones of blue, gray,
grayed chartreuse,
aqua and beige
reflect the elegance of Metlwal.

Metlwal Partitions and Paneling restfully surround the
multiple activities of the American Iron and Steel
Institute in their ultra modern offices which embrace
the entire 38th floor.

Diversity of finishes offer a wide range in decorative
contrast, and versatility of usage permits unlimited
layout possibilities.

Architect
J. Gordon Carr
Associate Decorator
Leigh Allen
Project Manager
René de Blonay

METLWAL PARTITIONS AND PANELING ...
THE CHOICE OF MANY LEADING ARCHITECTS THROUGHOUT THE COUNTRY

PHONE, WIRE OR WRITE — THE PROSPERITY COMPANY, P. O. BOX 671, SYRACUSE 1, N. Y.

metlwal
by PROSPERITY
DIVISION OF WARD INDUSTRIES CORPORATION

*Formerly manufactured by Martin-Parry Corporation, Toledo, Ohio.



26 Story AMERICA FORE Building at 80 Maiden Lane is located in the hub of New York's financial and insurance district. When built in 1912 it was Manhattan's fifth largest office building

Architects for
Building Modernization:
Cross & Son

Mechanical Engineers:
Meyer, Strong & Jones

General Contractor:
Irons & Reynolds

Mechanical Contractor:
Kerby Saunders, Inc.

All of New York City



Today's 80 Maiden Lane Building represents one of the largest and most complete reconstruction job attempted in New York City. The building has over 250,000 sq. ft. and is occupied by 2,500 people. It is sturdily built, structurally sound and well located.

Modernization of lighting, heating, flooring, corridors, elevators and other facilities was accomplished without serious interruption of normal growth and expansion during the alterations period.

The H-shaped building complicated solar-load effects. Changes in heat gain from the sun were caused by traveling shadows. Fast response of Powers Heating-Cooling Thermostats in air conditioning units compensate for this condition.



HOME OFFICE

The Continental Insurance Company

Niagara Fire Insurance Company

Fidelity-Phenix Fire Insurance Company

The Fidelity and Casualty Company of New York

Photo shows installation of air conditioning equipment with minimum of disturbance to office employees.



POWERS

Air conditioning control system helped transform this 44 year old structure into a comfortable and efficient office building



Productivity of Employees Was Increased 9.3% and there were also fewer errors in the Transcribing Department and less absenteeism and reduced labor turnover, throughout the organization, resulting from more pleasant surroundings and greater thermal comfort. A 1912-vintage heating system was replaced with modern air conditioning... controlled by Powers.

Air conditioning system chosen was a 1350 ton high velocity conduit type for the perimeter of the building and a low pressure system for the interior zones.

Over 1600 air conditioning units in the perimeter of the building are controlled by Powers Heating-Cooling Thermostats operating Packless valves. Primary air to these units is supplied by four air conditioning systems. Interior zones of the building are served by seven air conditioning systems which supply tempered and humidified air in Winter and cooled and de-humidified air in Summer.

Powers sub-master room thermostats or type K return air thermostats control interior zone spaces. These instruments

schedule the indoor temperature between 72 and 80° F as the outside air varies between 75 and 95° F. One of the 14 Powers Control Panels with Series 100 Temperature Indicating Controllers is shown below on opposite page.

If You Are Planning a New Building, or modernizing an old one, ask your architect to include a Powers Time-proven Quality System of Control. You will insure utmost comfort and lowest operating and upkeep cost.

For further information contact our nearest office

THE POWERS REGULATOR COMPANY

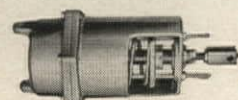
SKOKIE, ILLINOIS | *Offices in Chief Cities in U.S.A., Canada and Mexico*
65 YEARS OF AUTOMATIC TEMPERATURE AND HUMIDITY CONTROL



FLOWRITE VALVE



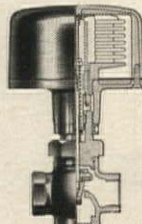
POWERSTROKE MOTORS



AVAILABLE 3", 4"-6"



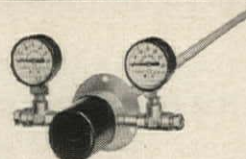
ROOM THERMOSTAT



PACKLESS VALVE



HEATING-COOLING THERMOSTAT



LIMITEM THERMOSTAT

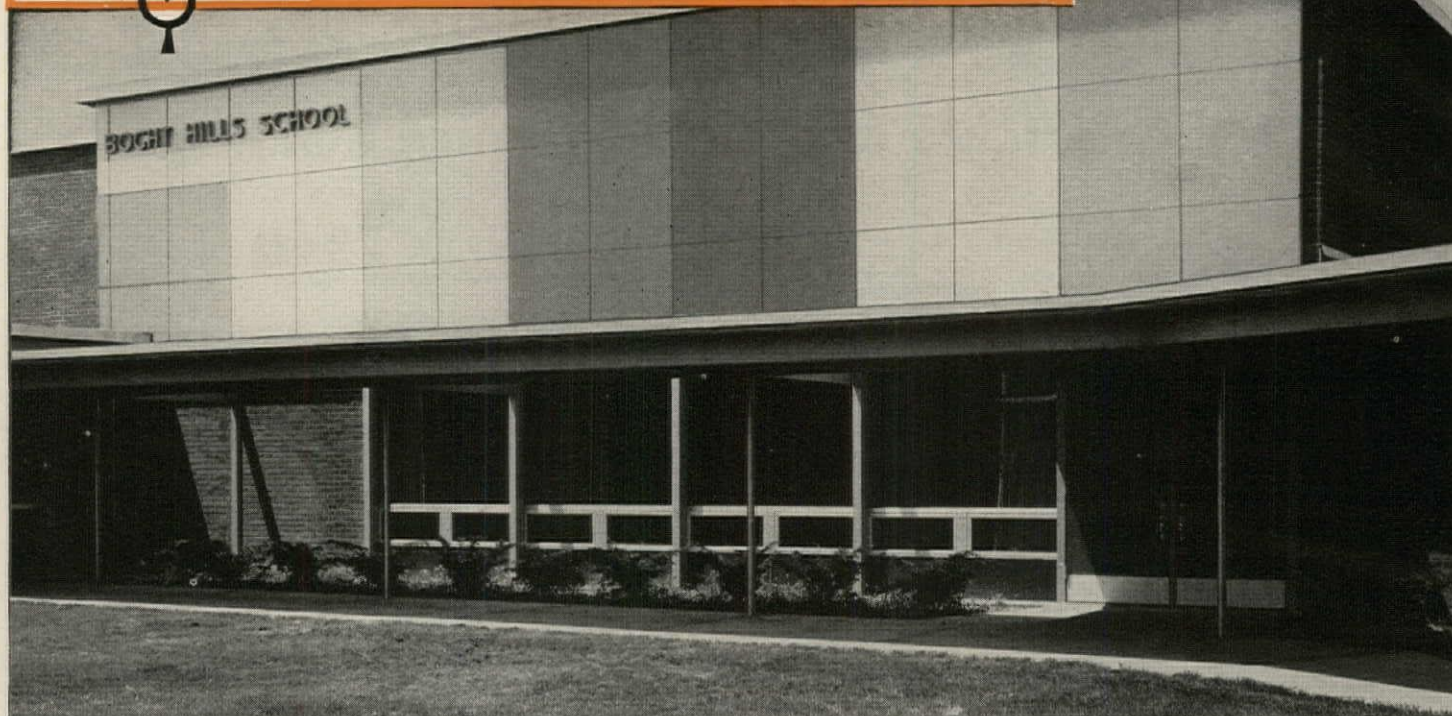


STATIC PRESSURE REGULATOR

(c83)

DESIGN STUDY
NUMBER

3

**Davidson**
DOUBLE-WALL
 type A porcelain panels
 for curtain-walls

BOGHT HILLS SCHOOL
 NORTH COLONIE,
 NEW YORK

 Architect:
 HENRY BLATNER, A.I.A.
 Albany, New York

 Contractor:
 SANO-RUBIN CONST. CO.
 Albany, New York

**DAVIDSON DOUBLE-WALL TYPE A
 PORCELAIN PANELS DISTRIBUTED
 AND ERECTED BY: F. P. ARNOLD
 CORP., Syracuse, New York.**


Modern and economical curtain wall construction methods consisted of installing the windows first and then the panels. Different colored panels were uniquely used throughout the structure complementing its overall attractiveness.

Davidson**ENAMEL PRODUCTS, INC.**

1105 EAST KIBBY STREET • LIMA, OHIO

**ARCHITECTURAL PORCELAIN**
*the modern building material ...
 engineered for Architects*

Member Producers' Council



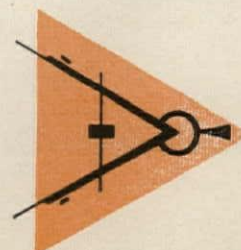
Modern school planning necessitates and typifies the need for modern, durable, and economical building materials.

Because Davidson Panels are quality engineered to fit the first time, they offer unlimited applications for any wall framing system. After they're up they stay put—colors remain new always—maintenance is practically zero.

On your next building project consider specifying Architectural Porcelain Panels by Davidson in order to be assured your design will continually reflect the dignity of your planning for the years to come.

See next page for study of
 porcelain construction details
 of the building shown above.

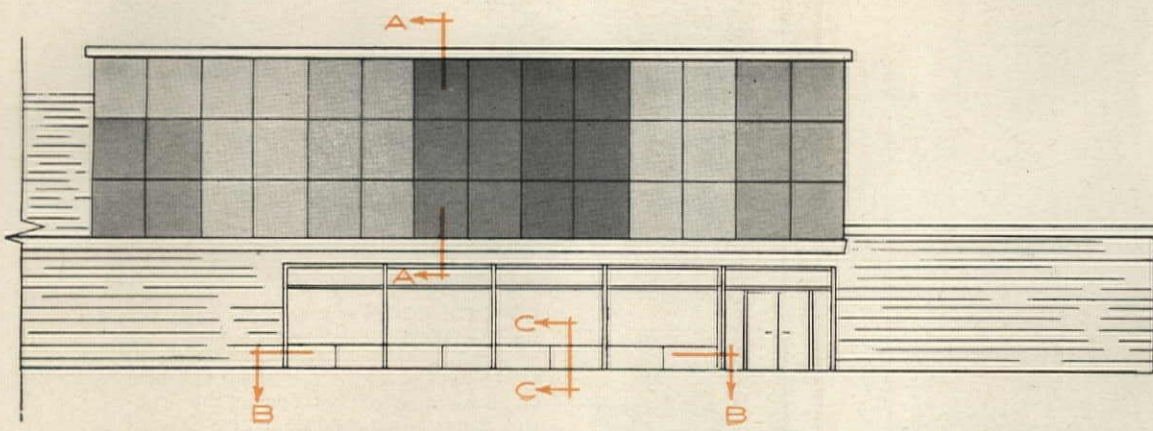
In case you have missed Design Study 1 and 2, let us know. We will be glad to send as many copies as you need.



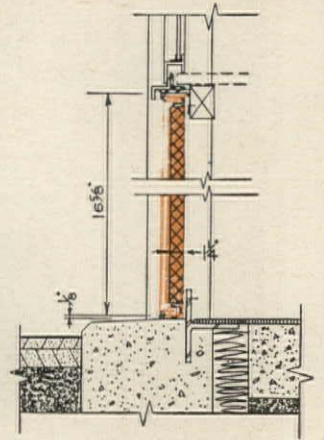
DESIGN STUDY
NUMBER
3



Davidson
DOUBLE-WALL
type A porcelain panels
for curtain-walls



ELEVATION

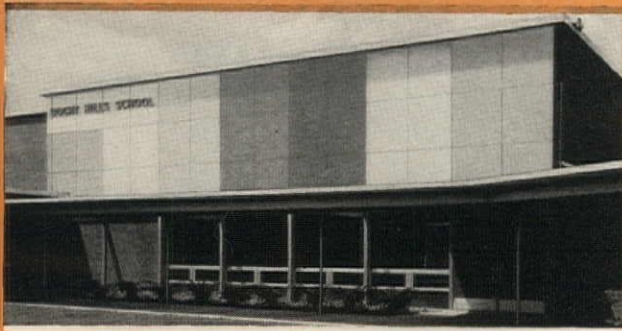


SECTION C-C

DESIGN
STUDY



DESIGN & DETAIL STUDY OF ARCHITECTURAL PORCELAIN

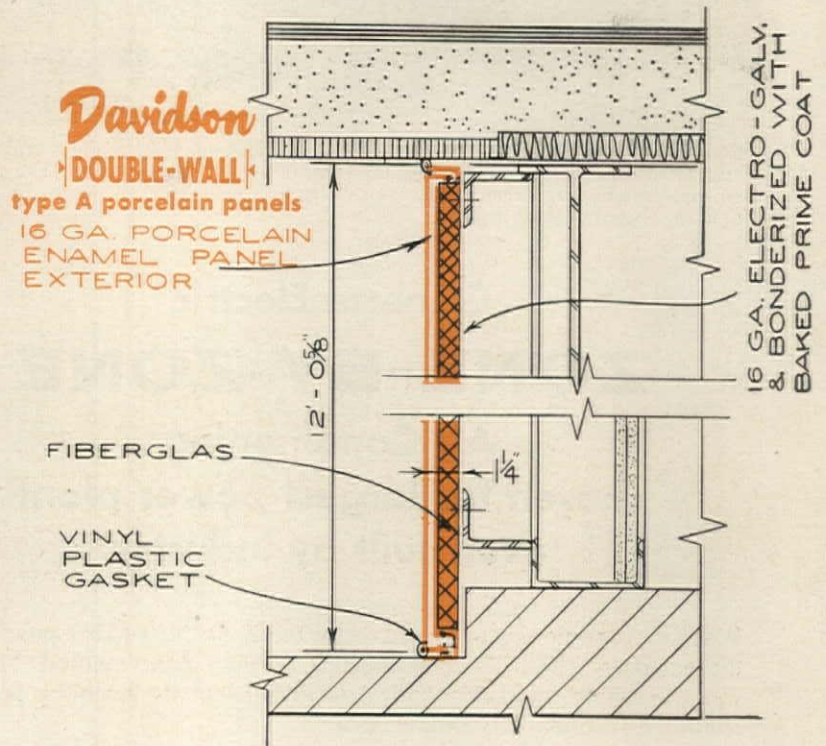


Boght Hills School, North Colonie, N. Y.

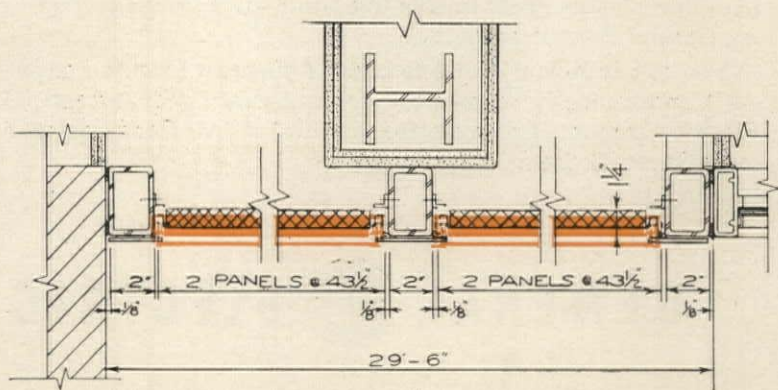
For further information on the application of Davidson Architectural Porcelain check and send to: **DAVIDSON ENAMEL PRODUCTS, INC., 1105 E. Kibby St., Lima, Ohio**

- ☐ Full scale drawings showing the application of Architectural Porcelain for the Boght Hills School.
- ☐ Detailed, 16-page Architectural Catalog, 1956 Edition
- ☐ Porcelain Panels for Store Fronts
- ☐ Porcelain Panels for Shopping Centers
- ☐ Porcelain Panels for Schools
- ☐ File of Typical Construction Details
- ☐ Reference File Jacket on Architectural Porcelain
- ☐ Reprints of this Study #3. Quantity _____

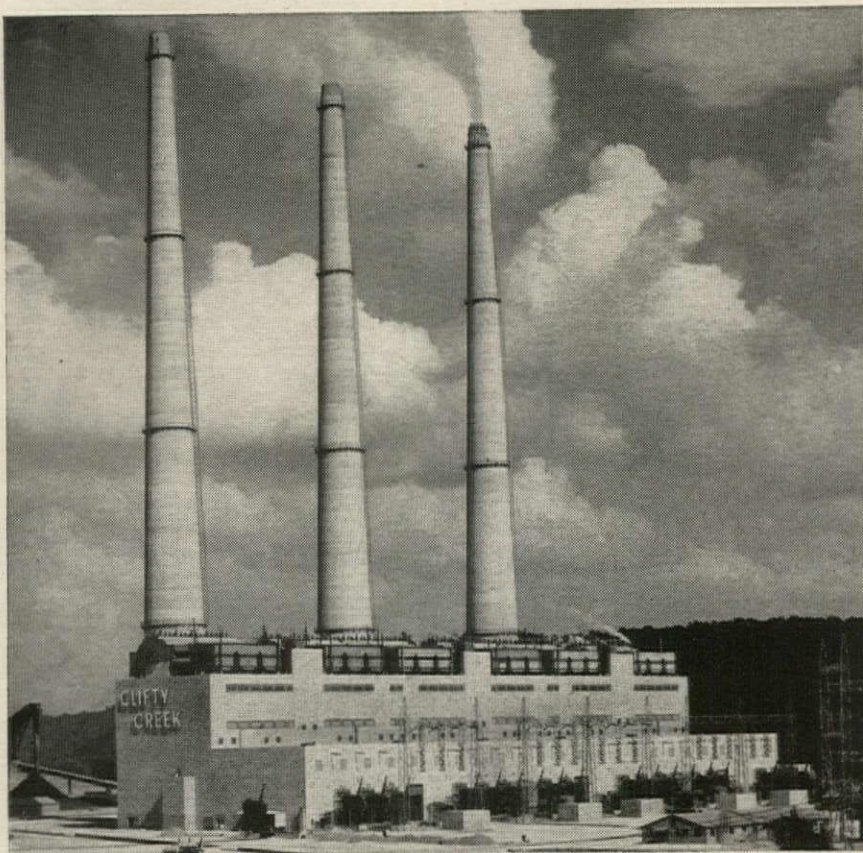
NAME _____
 COMPANY _____
 ADDRESS _____
 CITY & STATE _____



SECTION "A-A"



SECTION B-B



GIANT ON THE OHIO. Clifty Creek Plant at Madison, Ind., is the world's largest investor-owned power plant—with a 1,290,000 kilowatt capacity. The complex air conditioning requirements for this "big job" were met efficiently by General Electric Zone-by-Zone method.

General Electric **ZONE-BY-ZONE** Air Conditioning chosen for largest power plant ever built by industry

When air conditioning was selected for the giant Clifty Creek power plant, the engineers chose General Electric Zone-by-Zone method. Not only was this system most economical to install—but its flexibility permits a continuing economy in cooling costs.

General Electric Air Conditioning can be installed step-by-step, if desired, so that the investment at any time can be kept relatively low. Space presents no problem—ceiling-mounted units take no floor space and floor-mounted units may be stationed out of space. These smartly streamlined units are self-contained, trouble-free. And you'll always go right specifying General Electric products.

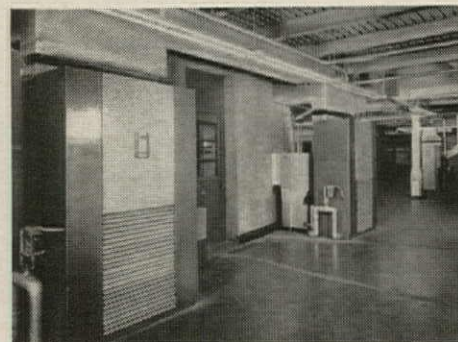
You owe it to your clients to consider General Electric Zone-by-Zone Air Conditioning in economically planning their requirements. General Electric Company, Commercial and Industrial Air Conditioning, 5 Lawrence Street, Bloomfield, N. J.

Progress Is Our Most Important Product

GENERAL  ELECTRIC

EACH ZONE INDIVIDUALLY COOLED BECAUSE EACH UNIT INDIVIDUALLY CONTROLLED

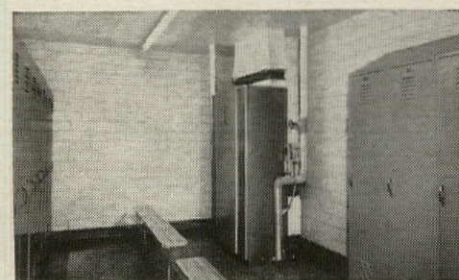
You air condition only the areas you need when you need it.



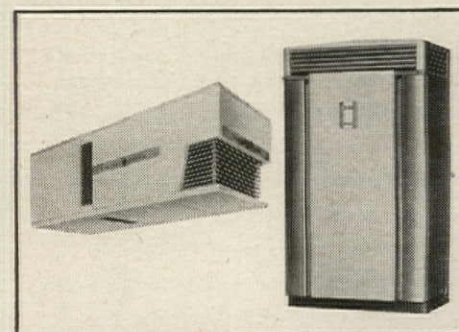
CONTROL ROOM at base of each of three stacks—tallest in the world—adequately air conditioned by 2 General Electric 10 ton Units. Third unit (located out of space) serves foreman's offices. Each of the 3 control rooms is air conditioned by General Electric Units in a similar manner.



CAFETERIA receives its cooling from a 10 ton and a 7½ ton unit. When area served is not in use, Zone-by-Zone Air Conditioners may be turned off without affecting other areas.



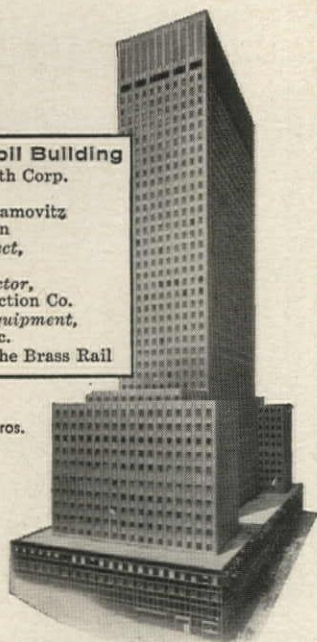
LOCKER ROOMS air conditioned by a 3 ton unit. In addition, all offices and laboratory have General Electric Zone-by-Zone Air Conditioning.



CEILING-MOUNTED UNITS take no floor space—available in 3, 5 and 7½ ton capacities, water-cooled; 3 and 5 ton air-cooled; **FLOOR-MOUNTED UNITS** in 3, 5, 7½, 10 and 15 ton capacities.

Socony Mobil Building
 Owner, Galbreath Corp.
 Architects,
 Harrison & Abramovitz
 John B. Peterkin
 Interior Architect,
 J. Gordon Carr
 General Contractor,
 Turner Construction Co.
 Food Service Equipment,
 S. Blickman, Inc.
 Food Service, The Brass Rail

Photo by Wurts Bros.



Luncheon to your order... 2500 times a day!

This minor miracle, performed five days a week in the new Socony Mobil employee and executive dining rooms was made possible only through the close cooperation of architect, contractor, operator and fabricator from the time the decision was made to include feeding facilities in the building.

To meet the problem of serving luncheon to 2,500 people in seven separate dining areas in a limited time, Blickman designed, built, and installed the world's most modern kitchen. All equipment is long-lived, heavy-gauge stainless steel featuring

Blickman's crevice-free, round-corner construction that simplifies cleaning and maintenance. Work areas are laid out for the most efficient operation possible... flow from production to service areas is accomplished without any confusing cross-traffic. And all of this has been accomplished within the stringent space requirements of the original specifications.

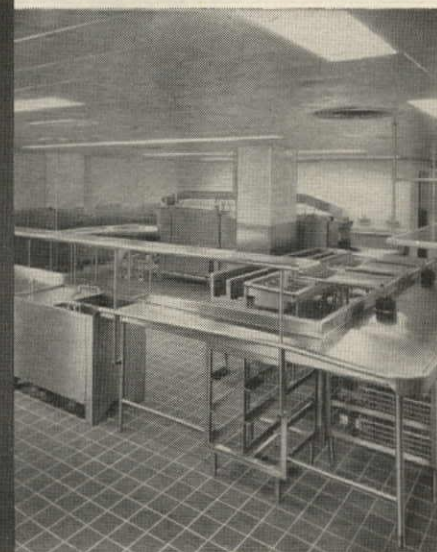
For more information regarding Blickman-Built food service systems and equipment, write to S. Blickman, Inc., 5802 Gregory Ave., Weehawken, N.J.



MAIN COOKING AREA • A 39' long section with 15 all-electric ovens, broilers, ranges and fryers. The entire area is covered by a stainless steel hood with built-in automatic CO₂ fire extinguishers that flood the hood when temperatures get too high.



GARDE MANGER AREA of stainless steel is separated from the main cooking area by a 12' aisle. An oyster and shell food counter is at extreme right. Adjacent is the cold sandwich section flanked by the salad counter. Extreme left is the dessert preparation section.



DISHWASHING AREA #1. A spacious 32' x 27' area designed for maximum sanitation. Tables of stainless steel with fully enclosed roll rims discourage dirt accumulations. All corners are rounded, bull-nosed and coved. Dishwashing capacity is 10,000 pieces per hour.

Blickman-Built

Look for this symbol of quality

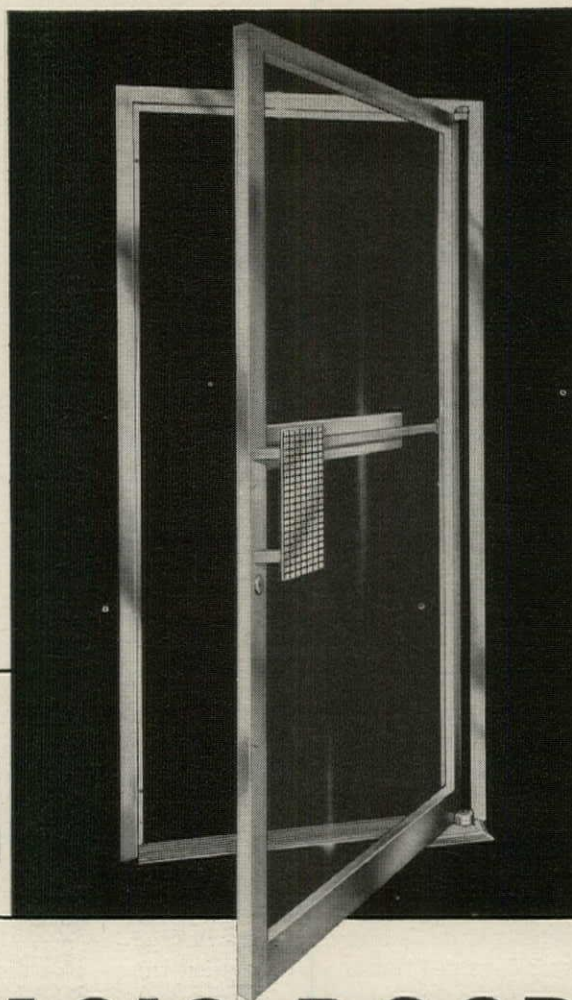
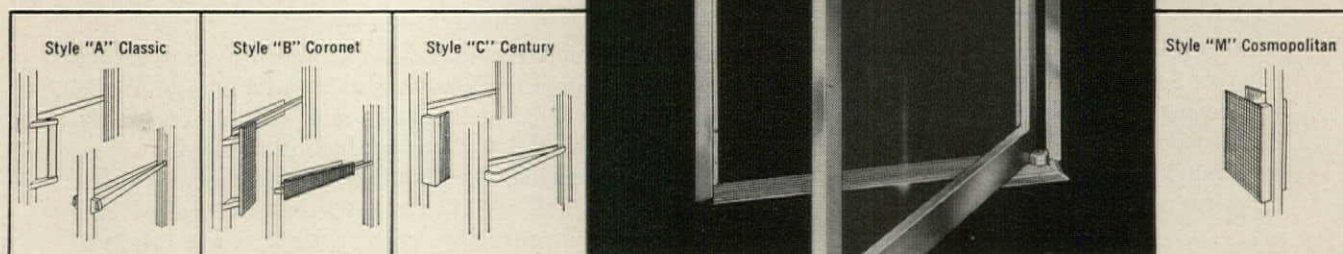
BLICKMAN
FOOD SERVICE EQUIPMENT

HOSPITAL EQUIPMENT • LABORATORY EQUIPMENT • KITCHEN EQUIPMENT • CUSTOM STAINLESS STEEL PRODUCTS

complete design flexibility with interchangeable hardware

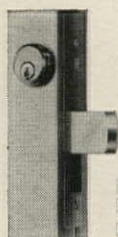
**4 basic push-pull groups—
2 with custom-design FACE PLATES**

You can individualize the Kawneer narrow-stile door, with the new interchangeable hardware. Your own design or monogram in color, and in aluminum, wood or plastic is easily adapted to Styles B and M hardware. Never before has such versatile hardware been available with such ease of installation.



ONE BASIC DOOR

with hardware for every need



MS (maximum security) Deadbolt by Adams-Rite offers extra protection against forced entry.



Panic Device by Kawneer is designed with fewer parts, a bar shaped to fit the hand, and for lower cost.

The new Kawneer narrow-stile door has all the qualities of a "custom-made" product. Welded construction is used to insure maximum strength with slim, attractive lines. Deep etch alumiliting and no exposed screws assure continued good appearance. The wide selection of hardware provides great flexibility of design. See Sweet's ^{16a}/_{Kaw} for complete information.



THE KAWNEER COMPANY CONSISTS OF A NATIONWIDE NETWORK OF STRATEGICALLY LOCATED SALES ENGINEERING OFFICES, FACTORIES AND WAREHOUSES:

EXECUTIVE OFFICES—Niles, Mich. **WAREHOUSES**—Atlanta, Ga. Brooklyn, N. Y. Cambridge, Mass. Chicago, Ill. Cleveland, O. Dallas, Tex. Los Angeles, Cal. New York, N. Y. Phoenix, Ariz. Richmond, Va. St. Louis, Mo. Toronto, Ont. Albany, N. Y. Berkeley, Cal. Cincinnati, O. Denver, Colo. Los Angeles, Cal. New York, N. Y. Portland, Ore. Seattle, Wash. Stamford, Conn. Havana, Cuba Atlanta, Ga. Brooklyn, N. Y. Chicago, Ill. Dallas, Tex. Kansas City, Mo. Minneapolis, Minn. Philadelphia, Pa. Pittsburgh, Pa. Sacramento, Cal. Wichita, Kan. Mexico City, Mex.



Betty Furness invites you to "Time" Westinghouse Elevator Operation

One "Do-it-Yourself" Stop Watch Test Is Worth Ten Thousand Words.

You can't describe superior elevator performance, you've got to *experience* it. That's why we're rolling out the red carpet to you who are planning new heavy traffic buildings—or thinking about modernizing old ones. A simple stop watch test verifies these new standards set by Westinghouse for more economical and more efficient elevating:

- ... Better floor-to-floor time-saving
- ... Elimination of all unnecessary door open time
- ... Maximum speed with smoothness and comfort

Yes, we invite you to test all operational phases of Westinghouse automated (operatorless) elevator systems. Call our nearest office today to arrange for a stop watch demonstration and also learn how you save up to \$7000 per car per year with operatorless elevators—and learn more about the remarkable components which allow elevators to think for themselves:

1. Selectomatic for master supervisory control
2. Synchro-Glide for accurate, smooth, soft landings
3. Traffic Sentinel® for safe, courteous, yet time-saving passenger handling
4. Automatic Traffic Pattern for Traffic Controlled Elevating
5. Shuntless Relays and Electric-Driven Selectors for reliable operation

AUTOMATED

**Westinghouse Elevators
AND ELECTRIC STAIRWAYS**

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

J-98729BA

REYNOLDS ALUMINUM IN MODERN ARCHITECTURE



REYNOLDS

666 Fifth Avenue, New York

38 stories... 52nd to 53rd Street... largest aluminum-faced office building ever constructed.

Owners and Builders:

Tishman Realty & Construction Co., Inc.,
New York

Architects:

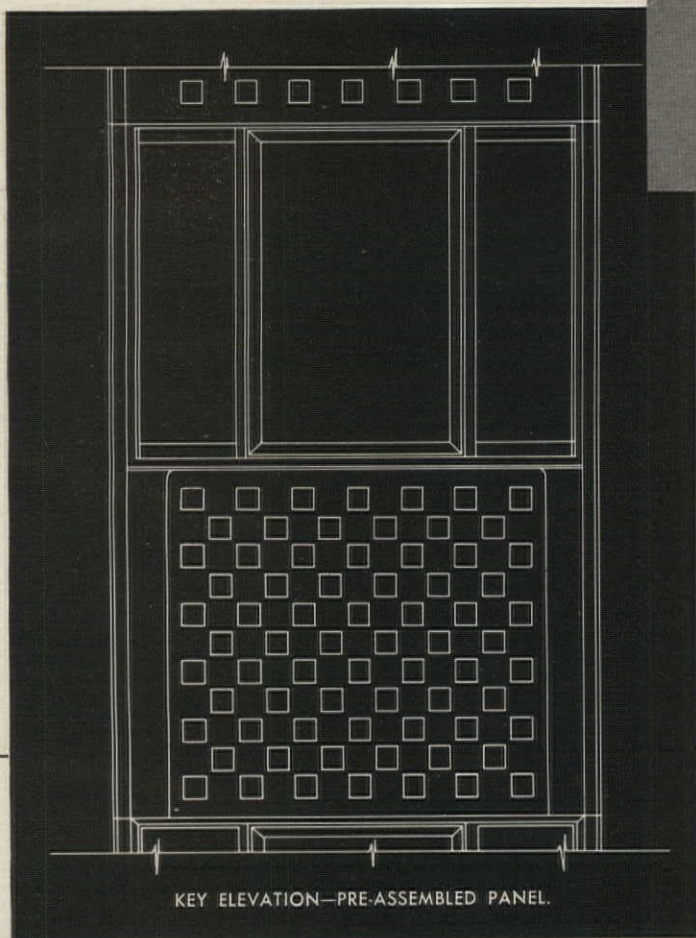
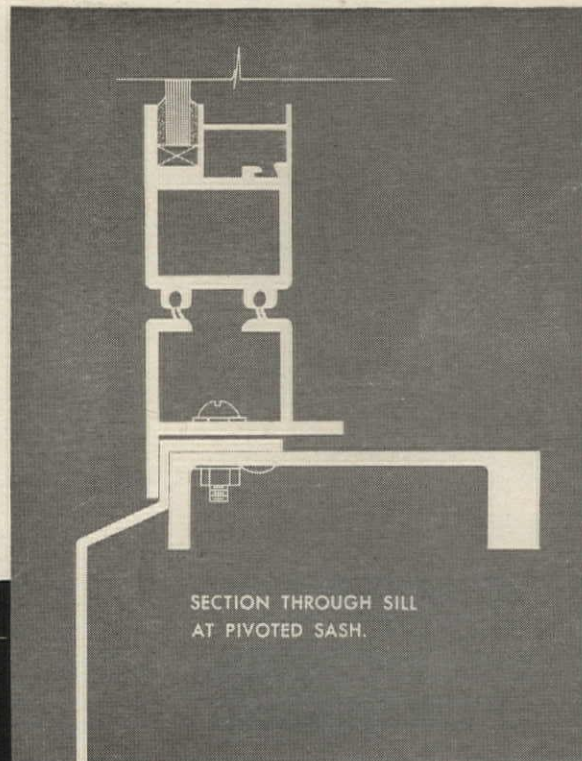
Carson and Lundin, New York

Exterior Wall Erectors:

F. H. Sparks Co., Inc., New York

Aluminum Facia Fabricators:

Superb Bronze & Iron Co., Inc., Brooklyn



Reynolds Aluminum applications—pre-assembled panels comprising windows and spandrels; also vertical columns between panels. Windows are Reynolds Series 100 Vertically Pivoted, flanked by fixed sidelights. Spandrels are custom-designed in pyramidal pattern, with anodized finish. Vertical columns are porcelain-enameled white.



ARCHITECTS' SERVICE

Reynolds Architects' Service Representatives offer specialized assistance on aluminum design problems, on applications of standard aluminum mill products, and on the use of commercially fabricated aluminum building products. They can help coordinate aluminum requirements for procurement efficiency and economy. Address Architects' Service, Reynolds Metals Company, Louisville 1, Kentucky.

See "CIRCUS BOY", Reynolds dramatic adventure series, Sundays, NBC-TV Network.



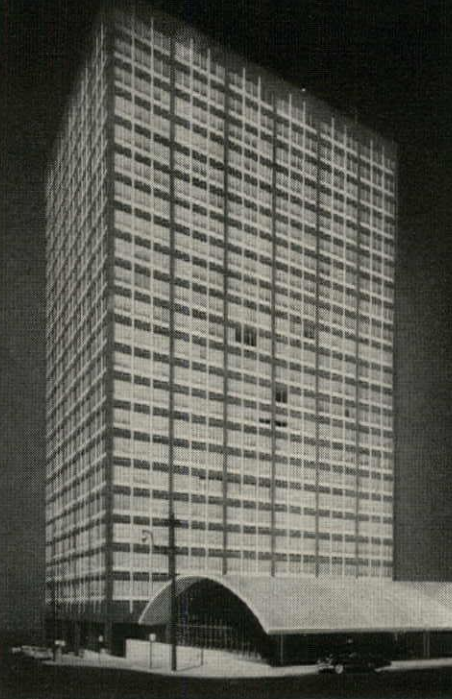
ALUMINUM

Space-Saving

NIBROC®

Recessed Cabinets

Add Functional Efficiency to
Denver's Mile High Center



Mile High Center Building, Denver

A Webb & Knapp Project

Architects: I. M. Pei & Associates, Kahn & Jacobs,
G. Meredith Musick

Consulting Engineer: Jaros, Baum & Bolles,
Severud-Elstad-Krueger

General Contractor: George A. Fuller Co.



NIBROC RECESSED DISPENSERS and Waste Receptacles and Nibroc Towels are keyed to every requirement of modern washroom design.

DISPENSER and DISPOSAL SAVINGS come from the extra floor space, easy maintenance, and *built-in durability* provided by the Recessed Dispenser. It loads faster, holds more, is made of 22 gauge stainless steel for lasting good looks. Dispenser and waste receptacle are obtainable separately for staggered installation.

TOWEL SATISFACTION results from the built-in wiping properties of Nibroc Towels. One Nibroc Towel dries both hands. They speed washroom traffic; end waste. Nibroc was America's original wet-strength towel and is today the most widely used in business, industry and by institutions.

When planning your next building specify Nibroc Cabinets and Towels. Look in the "Yellow Pages" under "Paper Towels" or write to Dept. NU- 2, Boston, for name of your nearest Nibroc distributor.

CONSULT SWEET'S CATALOG for complete information about Nibroc Cabinets—wall, floor model and recessed.

BROWN
COMPANY



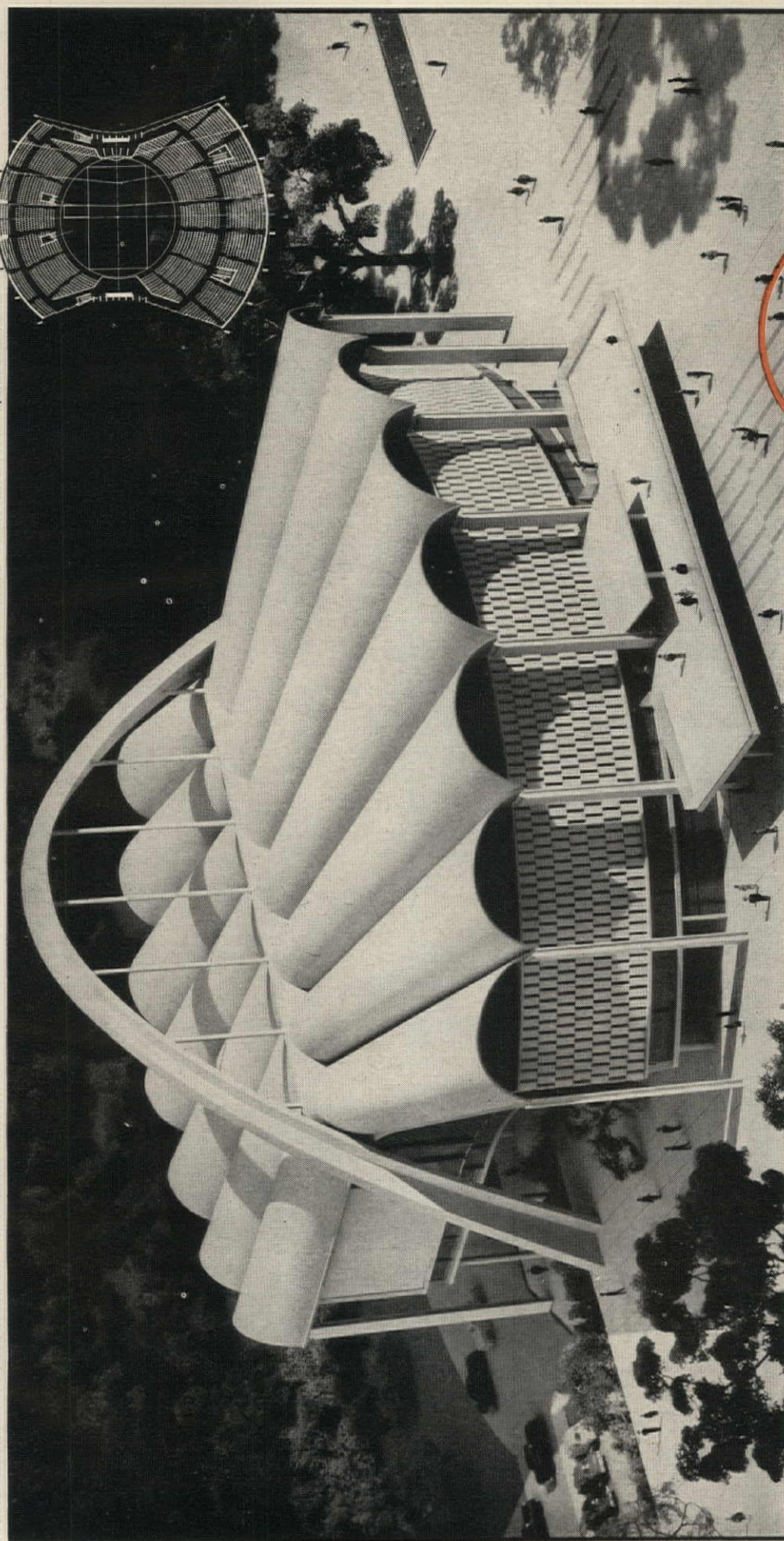
Berlin, New Hampshire

General Sales Office:

150 Causeway Street, Boston 14, Mass.

This auditorium is part of a proposed new Civic Center in Tallahassee, Fla.

Plan shows how entire area can be divided into two separate auditoriums.



TOMORROW'S AUDITORIUM: flexible design gives triple use

"Backbone of this structure is a single parabolic reinforced concrete arch, from which thin concrete roof shells are suspended. These shells cover a spacious area, which can be divided into two separate auditoriums, or the entire space can be used for sports or other mass spectator events. Visibility is excellent, because there are no supporting columns. Dramatically conceived, this structure uses concrete in varied ways: in addition to the concrete arch and the thin roof shells, the exterior walls are made up of precast concrete blocks, while the large plaza is paved with precast concrete slabs. This building demonstrates the versatility of one of our most creative building materials—concrete."

The Architects Collaborative, Cambridge, Mass., Architects • PAUL WEIDLINGER & MARIO SALVADORI, New York, N. Y., Engineers

■ One of a series of advertisements being presented in national magazines by Universal Atlas — to promote interest in architectural contributions for a greater America through the medium of concrete. For more about this building method, write to Universal Atlas, 100 Park Avenue, New York 17, N. Y.

UNIVERSAL ATLAS CEMENT COMPANY — MEMBER OF THE INDUSTRIAL FAMILY THAT SERVES THE NATION — UNITED STATES STEEL

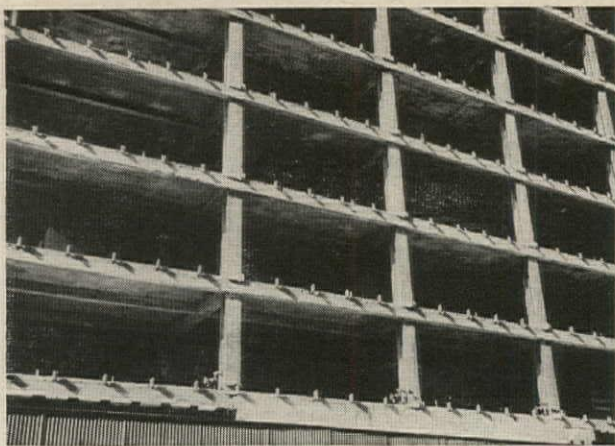
DAMORA

ATLAS PORTLAND CEMENT
UNIVERSAL PORTLAND CEMENT
ATLAS DURAPLASTIC PORTLAND CEMENT
UNIVERSAL PORTLAND SLAG CEMENTS
ATLAS MORTAR CEMENT
ATLAS WHITE PORTLAND CEMENTS
ATLAS LUMINITE CEMENT
UNAFLO OIL-WELL CEMENT

UNIVERSAL
ATLAS
CEMENTS

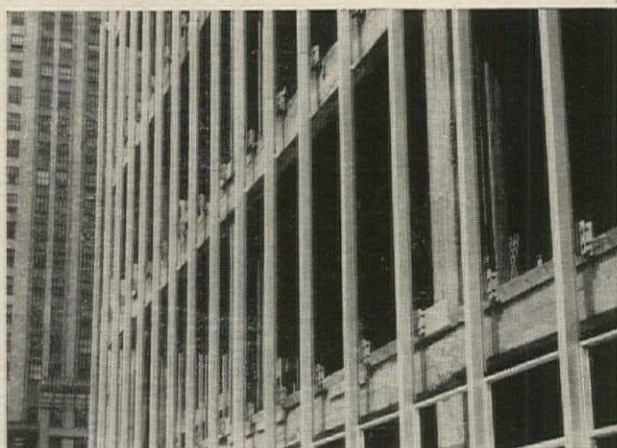


"UNIVERSAL," "ATLAS,"
"DURAPLASTIC," "LUMINITE"
are registered trademarks of Universal
Atlas Cement Company.



CONSTRUCTION IS FAST, SIMPLE:

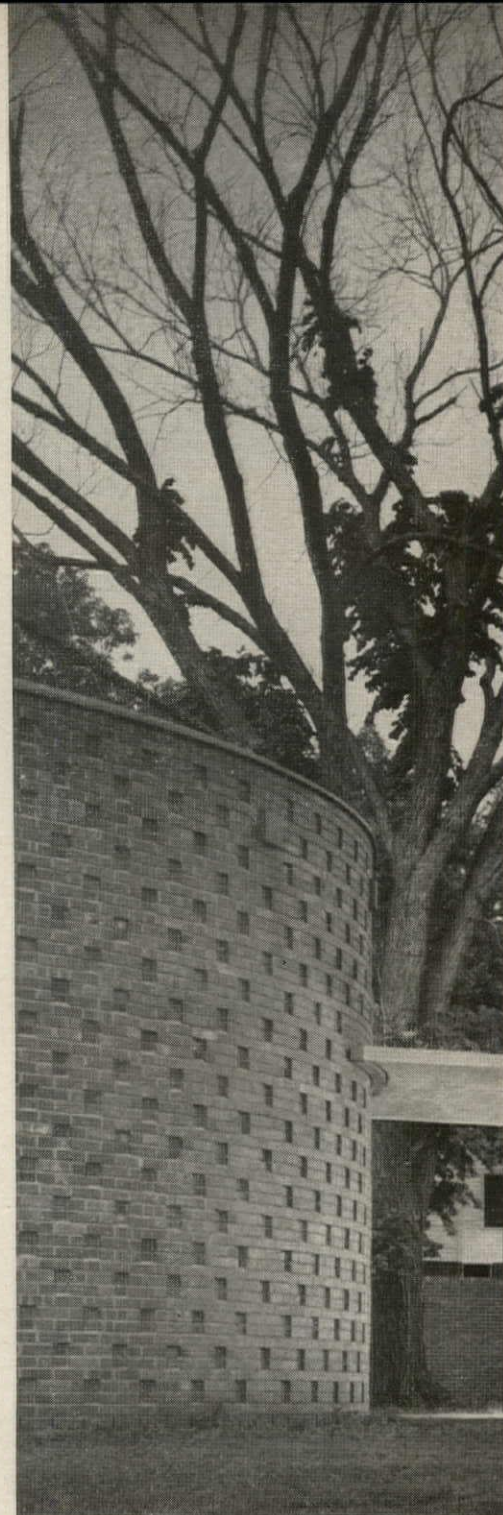
First step in the erection of a Lupton Curtain Wall System is the bolting of galvanized steel clips to angle clips fastened to the floor slab or spandrel beam. Angle clips are accurately aligned and welded to the structural frame before concrete is poured.



Vertical mullions of extruded aluminum that act as the "organizing element" of the wall are bolted to the galvanized clips. Slots in the angle clips and galvanized clips allow extremely accurate positioning of the mullions, regardless of structural irregularities.



Here experienced Lupton crew men insert wall units between vertical mullions from inside the building, without scaffolding or special hoisting equipment. (They are designed to be installed from either inside or out.) Single Lupton contract provides single responsibility for manufacture and installation of curtain wall system.



...You Get **LOW COST** and **BEAUTY** with the

Freedom of design, speedy construction, minimum maintenance
—these are the major advantages of this curtain wall system.

Here is a revolutionary wall system that offers both you and your client unparalleled advantages.

Consider, for instance, the variety in design you can achieve merely by varying the size and location of glazed and non-glazed areas—or the type of fenestration—or the material, color and texture of opaque areas.

Consider the saving in time the Lupton System makes possible. Both panels and windows are factory-assembled—go up in record time. Lupton-trained crews install Lupton-engineered and Lupton-assembled units under a single contract.

Consider the saving in money you pass on to your client. Lower first costs, lower maintenance costs.



Memorial Chapel and Charles Medbury Hall, College of the Bible, Drake University, Des Moines, Iowa
Architects—Eero Saarinen & Associates, Bloomfield Hills, Mich. Contractor—Fane F. Vawter Co., Des Moines, Iowa

LUPTON ALUMINUM CURTAIN WALL SYSTEM

And curtain walls—one-third as thick as conventional masonry—provide a *plus*-dividend in additional square feet on *every* floor.

Get Lupton into your design picture *early*. You'll find complete specifications listed in Sweet's Architectural File 3a/FLy. To locate your closest representative, look for the name LUPTON in the Yellow Pages under Windows—Metal. Or write or wire. Inquiries acknowledged by return mail.

LUPTON

ALUMINUM CURTAIN WALLS AND METAL WINDOWS

•
Main Office and Plant:

MICHAEL FLYNN MANUFACTURING COMPANY
700 E. Godfrey Avenue, Phila. 24, Pa.



Lakeview Country Club, Oklahoma City, Oklahoma.
Installed by Hogue-Stone Flooring Co. of Oklahoma City.

4 Important Reasons Why Homogeneous Vinyl Bolta-Floor is being specified

1. Bolta-Floor offers unlimited design opportunities to residential, commercial and institutional interiors. It is superior in quality, more versatile in color and style. Demand this beauty.
2. The high vinyl content and fully homogeneous construction of Bolta-Floor guarantees a lasting lustre that resists scuffs, stains and wear. It's non-porous... is unharmed by water and detergents.
3. The resilient qualities of premium vinyls permit Bolta-Floor to yield quietly to impact and resist permanent indentation. Bolta-Floor recovers more quickly. Demand this comfort.
4. Bolta-Floor has dimensional stability... will not chip, crack, peel or shrink. It retains its original beauty year after year, even in heavy traffic areas. Demand quality! Specify Bolta-Floor.

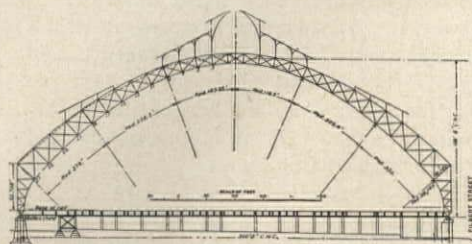


THE FINEST
QUALITY FLOORING
FOR

HOSPITALS
SCHOOLS
THEATRES
HOTELS
HOMES
MOTELS
BANKS
APARTMENTS

FOR SAMPLES WRITE **THE GENERAL TIRE & RUBBER COMPANY**

Flooring Division • Akron, Ohio



THE RAILROAD STATION. By Carroll L. V. Meeks. Yale University Press, New Haven, Conn. 203 pp. 8" x 11". \$7.50

"Of the nineteenth century" is a warning phrase that should be added to the title of Professor Meeks's authoritative volume, *The Railroad Station: an Architectural History*. For it is that century the Professor is really writing about—its taste, its techniques, its necessities, and his love for them all. Near the end of the book occurs what the reader has been expecting, the final word against the century that supplanted his favorite. The professor writes: "One reason that these [nineteenth-century architectural] achievements do not meet with general admiration today is that our society unfortunately places a higher premium on conformity than on individuality."

True or not, the statement is backed up by 231 illustrations of nineteenth century individual flamboyance. It is also supported by the author's great scholarship and by the imposing number of unique difficulties he meets and conquers. The greatest difficulty: writing a history of taste in which the examples must be limited to "depots"—structures so seemingly unesthetic by nature and so strictly conditioned by function that they have been regularly shunned with equal shyness by top-level artists and critics alike.

But, given an unpopular century and a



Eccentric reminders of our nineteenth-century architectural heritage, stations such as Chicago's Dearborn or "Polk St." Station, clutter US cities today. Forgotten are the century's invaluable structural experiments (see sketch, top, for Philadelphia's Broad St. Station).

subject more often associated with grime and impatience than with artistic clarity, Meeks makes a convincing case for a second look. The re-examination reveals an era brave in its machines and bursting with experiments in greater spans, lighter structures and freer forms. The case is not so convincing, however, that modern travelers, safely out of the Machine Age, might wish that today's terminals would mirror such frowzy antecedents as Chicago's Dearborn Station (see photo) and its co-evals.

CALIFORNIA HOUSES OF GORDON DRAKE. By Douglas Baylis and Joan Parry. Reinhold Publishing Corp., New York City. 91 pp. 9" x 9". \$6.50

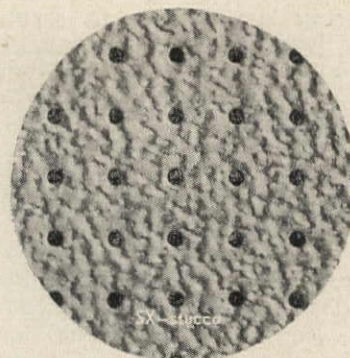
This handsomely illustrated elegy is the work of a California friend of the late Gordon Drake in collaboration with a wandering British journalist. It is no surprise, therefore, that the result is somewhat uneven—combining an overgenerous evaluation of Drake's artistic theories with a facile survey of his architectural accomplishments. The surprise is that this unpromising combination succeeds so well in evoking the romantic spirit of the young and genuinely talented marine veteran whose 15 West Coast houses continue to stand as the truest tribute to his adventurous idealism.

AIRPORT BUILDINGS AND APRONS. Published by the Technical Secretariat, International Air Transport Assn., International Aviation Bldg., Montreal 3, P. Q., Canada. 133 pp. 8½" x 10¾". \$1.50 (US)

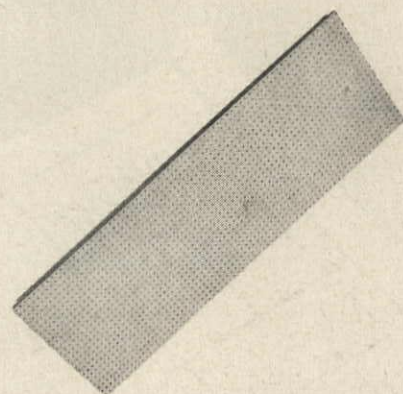
The many new airports abuilding or expanding around the world may have their esthetic points, say the IATA, but they show a remarkable lack of uniformity in layout and operational efficiency. So IATA has attempted to set down the general requirements and opinions of its member airlines, for the benefit of their own building committees and for municipalities and airport architects. IATA reiterates the need for short, self-evident routes, separation of passengers, visitors and baggage, early consultation with the airlines on all design aspects, the need for good over-all apron illumination, the pros and cons of fixed servicing facilities, location and design of heliports, etc. Nothing startling new, but a useful checklist for airport design, if combined with some of the newer thinking on the subject by architects and passengers.

continued on p. 188

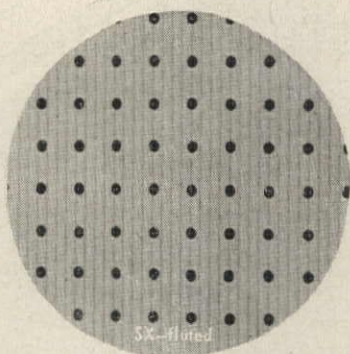
It's Brand New . .



... a new design dimension in metal pan acoustic ceilings — **textured aluminum surfaces**. It's the new CEILECT line of the Simplex Ceiling Corp., conceived to put a new softness, new surface interest in metal pan ceilings.



CEILECT textured aluminum panels are available in **permanent**, natural and color anodized finishes. They are square edged for almost invisible fine line joints and come in sizes 12" wide by up to 36" long.



For sample squares and literature send to Simplex Ceiling Corp., 552 W. 52 St., New York 19, N.Y.

SIMPLEX

CEILING CORP.

552 WEST 52 ST., NEW YORK 19, N. Y.

Please send me sample squares of CEILECT textured aluminum acoustical ceiling panels.

Name

Firm

Address

City Zone....State.....

HANDBOOK OF STANDARD STRUCTURAL DETAILS FOR BUILDINGS.

By Milo S. Ketchum. Published by Prentice-Hall, Inc., 70 Fifth Ave., New York 11, N.Y. 120 pp. 7" x 10 1/4". Illus. \$4.65

Says the author: "The term 'standard structural details' has been used in this handbook to indicate details of design and methods of presentation of details which have stood the test of use in many design offices." Obviously, structural details will never be completely standardized. Nevertheless, a volume of drawings of struc-

tural details should be of great practical use in many architectural and engineering design offices as well as an aid to the students of structural engineering and architecture.

ARCHITECTURE, NATURE & MAGIC.

By W. R. Lethaby. Published by George Braziller, Inc., 215 Fourth Ave., New York 3, N.Y. 155 pp. 5 1/2" x 8 1/2". Illus. \$3.95

This series of papers originally contributed in 1928 to *The Builder*, a British magazine, is of interest to students of the

human motives that condition the shape and appearance of buildings. Lethaby's thesis is that the development of building practice mirrors the general development of world ideas, and that histories of architecture solely in terms of structure and style esthetics and chronology, have no real meaning. And he has carefully assembled evidence from all countries and ages to support this thesis.

ARCHITECTS' DETAIL SHEETS.

Edited by Edward D. Mills. Published by Philosophical Library, Inc., 15 E. 40th St., New York 16, N.Y. 232 pp. 9" x 12". Illus. \$12

The third in a series of portfolios of design details presented in both photograph and dimensioned drawing—mostly of British buildings.

DESIGN IN CIVIL ARCHITECTURE.

Vol. I—Elevational Treatments. By A. E. Richardson and Hector O. Corfiato. Published by Philosophical Library, Inc., 15 E. 40th St., New York 16, N.Y. 216 pp. 10" x 12 1/2". Illus. \$15

This goes to prove that it is still possible to learn nothing and forget nothing in about 30 years. On buildings before 1900, the standard selections; since 1900, a batting average of about .050.

Other books received

SEWERAGE PLANNING. By Thomas deS. Furman, John E. Kiker Jr. and David B. Smith. Published by Florida Engineering and Industrial Experiment Station, College of Engineering, University of Florida, Gainesville, Fla. 86 pp. 6" x 9". Illus. \$1. Paperbound

GEORGIAN GRACE. A Social History of Design from 1660 to 1830. By John Gloag. Published by The Macmillan Co., 60 Fifth Ave., New York 11, N.Y. 426 pp. 7 1/4" x 10". Illus. \$12.50

REBUILDING ST. PAUL'S AFTER THE GREAT FIRE OF LONDON. By Jane Lang. Published by Oxford University Press, London, England. 269 pp. 7 1/2" x 10 1/4". Illus. About \$5.50

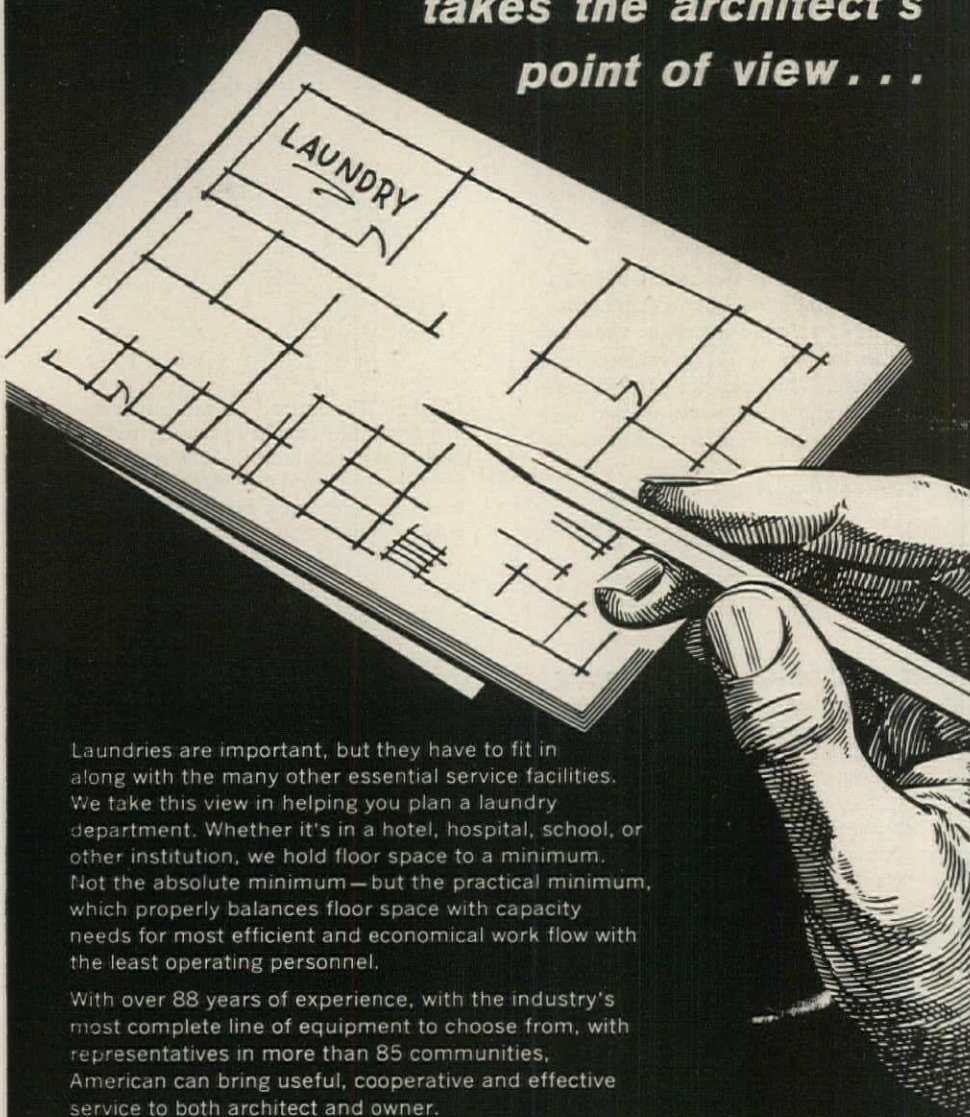
ARCHITECTS' YEAR BOOK 7 (British). Trevor Dannatt, Editor. Published by Philosophical Library, Inc., 15 E. 40th St., New York 16, N.Y. 220 pp. 7 1/4" x 10". Illus. \$10

CONTRACTS, SPECIFICATIONS, AND ENGINEERING RELATIONS, third edition. By Daniel W. Mead. Published by McGraw-Hill Book Co., 330 W. 42nd St., New York 36, N.Y. 427 pp. \$7

THE ART OF ARCHITECTURE. Revised edition. By A. E. Richardson and Hector O. Corfiato. Published by Philosophical Library, Inc., 15 E. 40th St., New York 16, N.Y. 744 pp. 6 1/2" x 10". Illus. \$25

HOUSE CONVERSION & IMPROVEMENT. By Felix Walter. Published by Architectural Press, 9-13 Queen Annes Gate, S.W. 1, London, England. 257 pp. 7" x 9 1/2". Illus. About \$5.50

American's Laundry Planning Service takes the architect's point of view...



Laundries are important, but they have to fit in along with the many other essential service facilities. We take this view in helping you plan a laundry department. Whether it's in a hotel, hospital, school, or other institution, we hold floor space to a minimum. Not the absolute minimum—but the practical minimum, which properly balances floor space with capacity needs for most efficient and economical work flow with the least operating personnel.

With over 88 years of experience, with the industry's most complete line of equipment to choose from, with representatives in more than 85 communities, American can bring useful, cooperative and effective service to both architect and owner.

Write for your copy of American's ARCHITECT'S REFERENCE GUIDE showing our complete line of laundry equipment.

American



The American Laundry Machinery Co., Cincinnati 12, Ohio

World's Largest, Most Complete Line of Laundry and Dry Cleaning Equipment





In Building, THIS makes sense...*

***FIRST COST can be the LEAST COST
if it's the LAST COST**

"INFO" for Architects and Builders

1 "AL Stainless Steels for Building"—12 pages on stainless grades, properties, forms, finishes, standard "specs," uses and advantages.

2 "Stainless Steels for Store Fronts and Building Entrances"—40 pages of valuable data on examples and details. AIA File No. 26D.

3 "Stainless Steel Curtain Walls"—A 24-page progress report on methods. AIA File No. 15-H-1.

Write for Details

Address Dept. B-86

Take the lobbies of big buildings as an example, so many of them all agleam with stainless steel on walls, columns, elevator enclosures, etc.

They weren't built that way just to *spend* money. Stainless was used to **SAVE** money, because of all modern surfacing materials, nothing else is at one and the same time as hard, strong and lastingly beautiful—as resistant to heat, wear and corrosion—as easy to clean and keep clean as stainless steel. *Nothing else lasts as long and costs as little in the long run!*

Lobby interiors are only a case in point. The same advantage of long-term economy holds good for stainless steel curtain wall panels on building exteriors. Or stainless store fronts, marquees and entrances. Or stainless windows and doors, railings, grilles, roofs, drainage systems, etc.

• Wherever a surface or a product has to take a beating and *last*, AL Stainless can save you money. Let us give you any information or technical assistance you may need. *Allegheny Ludlum Steel Corporation, Oliver Building, Pittsburgh 22, Pa.*

Make it BETTER-and LONGER LASTING-with

AL Stainless Steel

WAD 5732A Warehouse stocks carried by all Ryerson Steel plants



Why does this school stand out?

The answer is good design — and GLASS!

Just for a moment, study these pictures of the Eastern Junior High School in Riverside, Connecticut. Then, try to imagine this school *without* its clear, sparkling areas of Pittsburgh glass. A handsome, useful building would become an unpleasant, gloomy box. Nature's free daylight would be sealed out, and the visual vigor of the students would be sealed in.

The architect who designed this school, J. Gor-

don Carr, says, "Glass has resulted in classroom lighting benefits, and in the creation of an indoor-outdoor environment for the students.

"Glass is one of our most effective allies in effecting good space relationships in the interior areas."

The school uses large quantities of Pittsburgh Polished Plate Glass, Pennvernon Window Glass, Solex Heat-Absorbing Glass, as well as Herculite Plate Glass Doors.

Architect: J. GORDON CARR, NEW YORK CITY.



CANTILEVERED construction adds interest, and provides covered walkways for the students.

ARCHITECT Carr says, "... striking appearance of the main entrance was made possible with the large expanse of glass ..."



**CONSULT YOUR
SWEET'S ARCHITECTURAL FILE**

*for information about the use of these famous
Pittsburgh Glasses in school construction:*

SOLEX®heat-absorbing and glare-reducing plate glass
HERCULITE®shock-resisting tempered plate glass
TWINDOW®the world's finest insulating window
POLISHED PLATE GLASSfor clear, undistorted vision
PENNVERNON® WINDOW GLASSwindow glass at its best

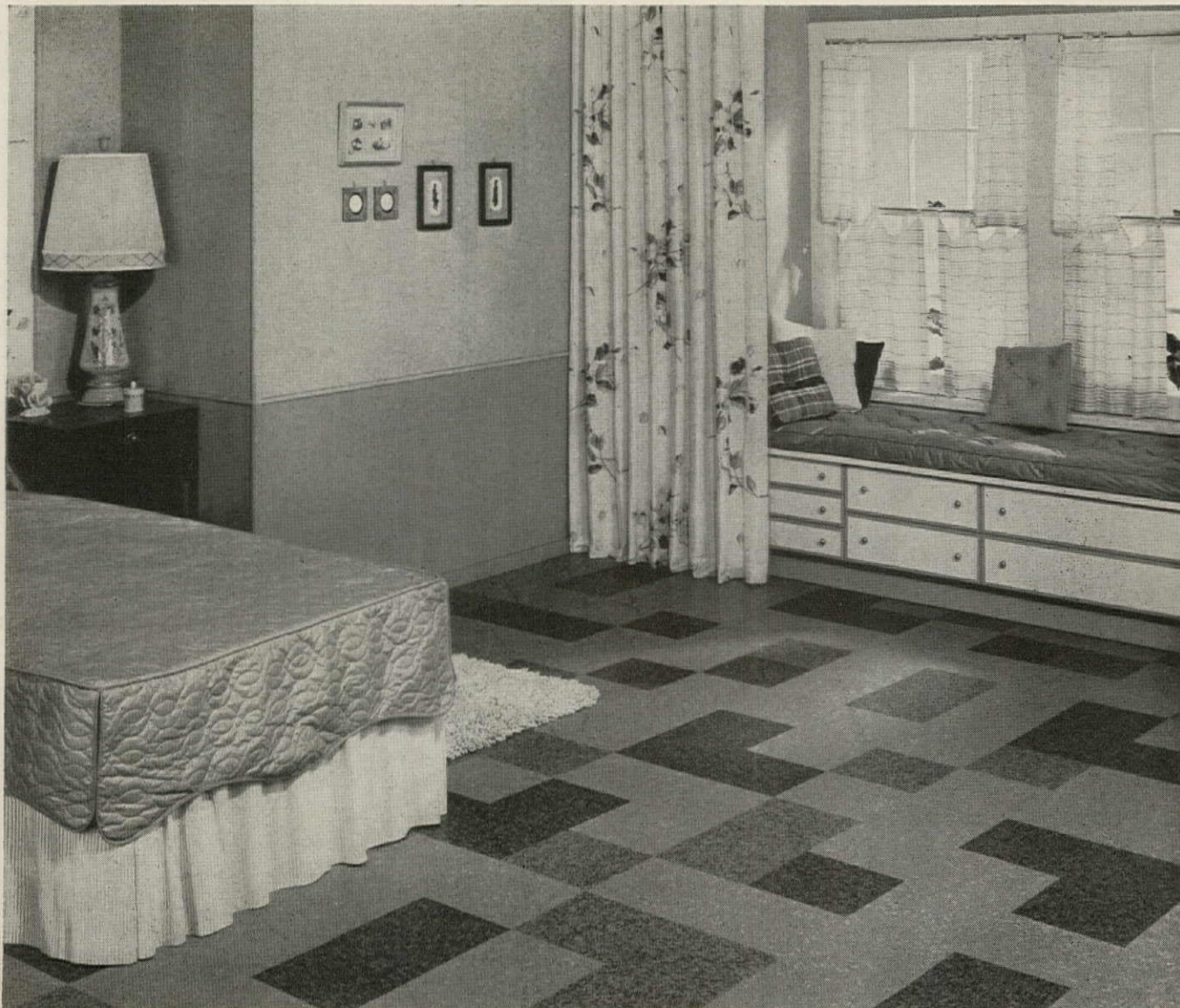
— *Design your schools better with* —
PITTSBURGH GLASS



PAINTS • GLASS • CHEMICALS • BRUSHES • PLASTICS • FIBER GLASS

PITTSBURGH PLATE GLASS COMPANY

IN CANADA: CANADIAN PITTSBURGH INDUSTRIES LIMITED



J-M Terraflex Floor Tile brings refreshing beauty to modern room décor. In this bedroom, a blend of light, medium and dark Cork-type colors is used.

New colors in Terraflex Tile give added design freedom...

Architects are discovering that Terraflex® Vinyl Asbestos Floor Tile in the 7 new, gay Spatter and 3 rich Cork-type colors can bring charm and distinction to every room in the home.

These new Terraflex colors are specially designed for homes and light traffic areas. They are an exciting new addition to the famous

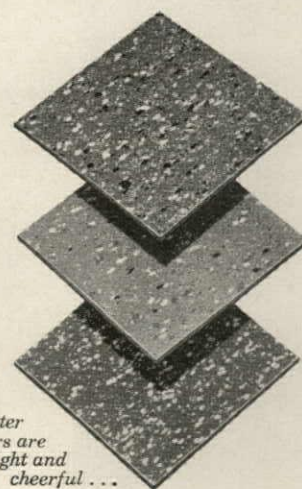
Terraflex line of marbled colors you have been specifying for homes, offices and schools for more than a decade.

For full information about new Terraflex Spatter and Cork-type colors as well as 17 handsome Terraflex marbled colors, write to Johns-Manville, Box 158, Dept. AF, New York 16, N.Y.

See "MEET THE PRESS" on NBC-TV, sponsored on alternate Sundays by Johns-Manville



Johns-Manville



*New Spatter
Colors are
bright and
cheerful...*

The decorator's case

Marc T. Nielsen sketches a pattern for co-existence with architects*

The ability to draw plans and elevations does not give the decorator the right to design and build houses unless he holds a legal license to perform as an architect. We feel also that no architect without specialized training in the field of interior decoration should attempt practice in this field. It should be obligatory for each to respect the professional prerogatives of the other.

The decorator by the operation of assembling the materials and labor needed to furnish and decorate the enclosure designed by an architect becomes the final contractor in the transaction. He is in every practical aspect a contractor. But, I have not found in the mandatory standards of the AIA provision for an architect to become a contractor, retailer, distributor or purveyor of merchandise of any kind.

We are all aware that many important interiors, principally public rooms, bypass the interior decorator. If an architect does a better job for the client than the decorator, who is to blame for this? The decorator had best look to himself to find the reason. If, on the other hand, the work goes to the architect only on the basis of price, then the subject should be studied and clarified.

Many, many hours of labor sometimes are necessary to complete a beautiful room up to and including the last accessory. It would be impossible to exist on a limited fee for this work figured on the same percentage as the architect charges for designing the building. It must be remembered that in finishing a room a decorator does not benefit from the fee charged for the structure itself. If the architect has, through experience, arrived at a fair price or commission to charge for his services, the decorator should also be allowed the same right of determination.

A new and annoying situation is appearing on our economic horizon. This is the growing tendency on the part of some architects, industrial designers, bank designers, restaurant equipment designers, etc., to do interior decorating for their clients and accept compensation

on the same basis as that received for straight architectural and design work.

Another very serious situation is the extending by architects of wholesale privileges to clients. Should this and other similar practices continue, the American Institute of Decorators may be well on our way to disfranchisement.

The architect's reply

Leon Chatelain makes a counter proposal to US decorators*

We architects are not the experts in every line that is necessary to create a building, and for years we have had the mechanical, structural and electrical engineers as part of our team. We also have had the landscape architect on our team, and speaking from my own personal experience, I have always included the decorator as part of this team.

Unfortunately, however, our profession has probably passed by the decorating "profession." We have ethics in our profession; we would like decorators to have similar ethics. If they did, our whole profession then could recognize decorators as one of us. Some of our mandatory rules are directed toward the protection of the client and his money, and herein we could do well to think together. An architect is forbidden to be in building construction and to have anything to do with the purchase by him of things that go into the building. If he does do that he is, of course, buying it in the name of the client.

Architects charge a percentage fee, but decorators "buy wholesale and sell retail." Their fee is in the difference of buying and selling. I have no qualms about the amount of fee. But we would like to see decorators come out and say: "Well, Mr. Client, we will buy these things for you wholesale and sell them to wholesale and we will just charge you a fee." What the fee is, I don't care. But it is wrong to hide the fee in a difference of pricing, for the client does not know exactly what he is paying for. This is one of the things that architects seem to be at odds with decorators about. Could decorators charge a fee, or maybe an hourly rate or a daily rate as a lawyer might?

Architects think this would help place decorators on a professional basis. No
continued on p. 194

*President, American Institute of Decorators, speaking before an A.I.D. board meeting.

Opinions expressed in this department of excerpts from the remarks of leaders in the world of building do not necessarily coincide with the views of FORUM's editors.

*President, American Institute of Architects, speaking at the same A.I.D. board meeting.

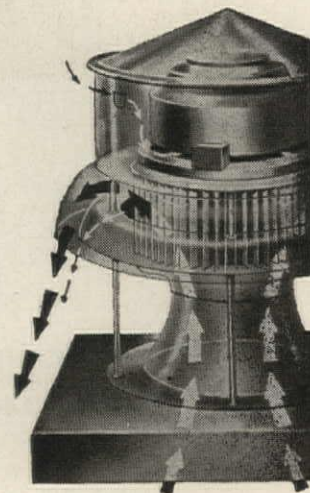
Specify the One Power Roof Exhauster

with these

12 vital features!

Gallaber Has Them All!

Inconspicuous Appearance
Low Installed Silhouette
Corrosion Resistant Finish
Sound Structural Design
Shipped Completely Assembled
Quiet Operating
Certified Ratings
Scroll Design
Weatherproof
Safe Fume Handling System
Meaningful Guarantee
Standard Motors



All 12 features are vital to years of service and efficient performance, and Gallaber Air-Vans have them all. Architect and engineer achieve function and appearance. Owners save money over the years.

For full information, contact:

The GALLAHER Company
4108 Dodge St. Omaha, Nebraska

Export Office: 306 Paul Bldg., Utica, N. Y.
Cable: Keiserquip - Utica, (N. Y.)

other profession charges fees the way decorators do; the doctor doesn't go to the druggist and buy medicine and then sell it to you at retail prices. He charges you his fee, and then you buy.

Maybe a decorator should set up a separate little company or organization, within his own personal organization, to make the purchases, and the decorator act as professional adviser.

If decorators establish a proper code of ethics for themselves, a proper way of doing business, with always the pub-

lic and society in mind, some day we architects will be able to go with the decorators to the legislatures of this country and ask for laws, registering interior decorators as a profession.

Eventually the decorators and the manufacturers can get together and form an alliance such as the architects have done with the Producers' Council, which is an organization of manufacturers of the building industry, wherein we have asked the manufacturers to live up to certain standards.

The ideal acoustical material

Lyle F. Yeager sets up a target for industrial research*

The ideal acoustical tile is a composite of paradoxes which has defied the best technical and research minds for years and will probably always do so. It would probably need to incorporate the strength of reinforced concrete, the lightness of down, paintability of enameled metal, 100% or more absorption, complete dimensional stability under any and all conditions, light reflection of at least 90%, and the ability to be erected under any and all conditions for a cost in place not to exceed about 5c per sq. ft. At least experience with architects and customers for the last 25 years would indicate that these qualities are the acceptable minimum.

Following are the *actual* characteristics of an ideal acoustical tile toward which manufacturers aim:

Customer costs:	
Material	\$.15 — .30 per sq. ft.
Erection	.08 — .25 per sq. ft.
Acoustical value	
Noise reduction coefficient	.60 — .80
Uniformity	Good
Application	Adhesive, nailing, mechanical
Size	12" x 12" to 24" x 48"
Tolerance	+ 0, — 1/64"
Stability	Excellent
Warp	1/32
Fire resistance	Incombustible
Moisture resistance	
Sag	1/32
Humidity	Five-day 90% humidity 90° F.
Breathing	High resistance
Paintability	Ten coats commercial paint, brush applied
Weight	1.75 lb. maximum
Strength	Modulus of rupture 300 lb. per sq. in.
Shock resistance	Excellent
Abrasion resistance	Very good
Permanence	Excellent
Edges	Bevel, flush, kerfed, T&G
Field cutting	Excellent with knife
Surface	Nonrepetitive
Light reflection	80% and over

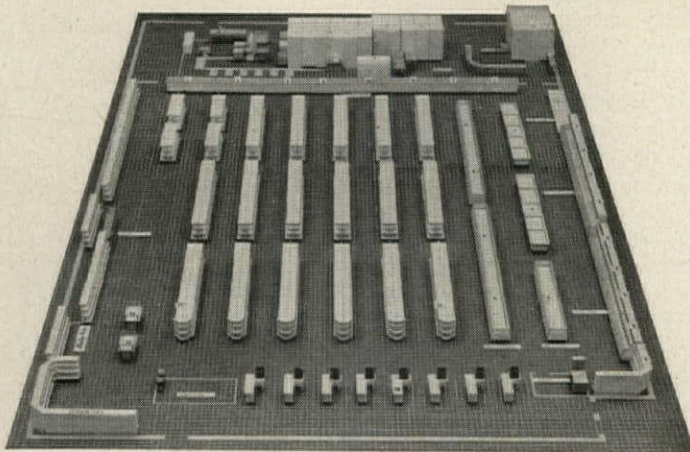
However, even the best tiles are the result of compromises with various desirable features in order to make a low-cost acceptable product. A lightweight, porous, highly absorbent material is usually weak and combustible. Incombustibility, strength, and dimensional stability under various conditions of environment must be combined into such a product. Maintainability

continued on p. 196

GET IN TOUCH WITH TYLER FOR...



first complete color system exclusively for supermarkets



...specialized assistance in supermarket planning

Go right with color in the supermarket—use the **NEW TYLER-KETCHAM COLOR COMPATIBILITY SYSTEM** developed in consultation with Howard Ketcham, Inc., color experts. Covers Tyler equipment in color and its relation to walls, flooring, signs, the entire store interior! Flexible, simplified. Wide range of selections. Store-tested. Write Store Planning Dept. for complete details, today.

The Tyler Store Planning Department can help you take advantage of the very latest ideas in successful supermarket planning and operations. For prompt assistance, write Tyler today.

NEW TYLER SALES-CASE LINE (Series Y) for self-service Meat, Produce, Dairy, Ice Cream, Frozen Food Depts. Introduces new, low 33" merchandising height; many other new "Advanced Design" features that simplify, speed up installation; cut costs; boost profits! Send coupon for complete data.

TYLER

TYLER REFRIGERATION CORPORATION
Niles, Michigan

Canada: Tyler Refrigerators, 732 Spadina Ave., Toronto

Send coupon for complete information.

Tyler Refrigeration Corporation, Dept. AF-2
Niles, Michigan.
Rush information on Tyler ☐ Color Compatibility System ☐ Supermarket Planning Assistance ☐ Complete line of Food Refrigeration equipment for ☐ food stores ☐ restaurants, hotels, etc.
NAME _____
ADDRESS _____

*Manager of the Industrial Sound Control Dept., US Gypsum Co., speaking recently before acoustical consultants.

Washrooms in another notable building finished in Carrara® Glass

Because Carrara Structural Glass is practical—as well as beautiful—it is widely specified by architects for restroom walls. Carrara, made of all pure glass, gives a fresh, clean, sparkling appearance to any restroom. Its surface is mechanically ground and polished to a high degree of smoothness and brilliance. This smooth finish and the homogeneous structure of Carrara Glass enable it to resist successfully the attacks of moisture, acid, steam and cleaning compounds.

Loose particles of dirt can find no foothold on the polished finish of Carrara.

The true, even joints between the large blocks provide few lodging places for dust and germs to collect. An occasional wiping with a damp cloth keeps Carrara bright and clean.

And Carrara Glass is a permanent material. The years have little effect on it—it retains its beauty indefinitely and will not stain, craze, crack or fade.

For more information on Carrara Glass—its many properties, its ten beautiful colors—just write to Pittsburgh Plate Glass Company, Room 7163, 632 Fort Duquesne Blvd., Pittsburgh 22, Pa.



The Soldiers Memorial, in St. Louis, Missouri, was designed by Mauraan, Russell, Crowell & Mullgardt. P. J. Bradshaw, associate. Plaza Commission Architects, St. Louis, Mo.



Carrara
...the quality
structural glass



PAINTS • GLASS • CHEMICALS • BRUSHES • PLASTICS • FIBER GLASS

PITTSBURGH PLATE GLASS COMPANY

IN CANADA: CANADIAN PITTSBURGH INDUSTRIES LIMITED

is important, yet mechanically repetitive appearance is not so desirable as non-repetitive surfaces. It is necessary that a well-rounded, complete acoustical line have several products, each better adapted to a specific use than the others.

In the past ten years the Acoustical Materials Association has conducted research on more than 15 highly specialized acoustical projects designed to learn more about the technical aspects of acoustics and acoustical treatments. Most of them more correctly belong in the laboratories of

acoustical consultants and universities. The A.M.A. did the research because no one else was doing it. The independent technicians, engineers and scientists are the ones best fitted for studying the strictly scientific aspects of acoustics and acoustical treatment. Of course, industry recognizes its need to contribute financial support to these projects, but the projects should originate in other laboratories.

Generally speaking, the manufacturer is best equipped to do research on his own products. He isn't too well equipped for

pure research and highly academic study. But, through his contributions to industry associations and other groups, he can support the latter type of study.

The taste of US art

Randall Jarrell thrusts a finger in the pie of American visual arts*

Our society, it turns out, can use modern art. A restaurant, today, will order a mural by Miro in as easy and matter-of-fact a spirit as, 25 years ago, it would have ordered one by Maxfield Parrish. The president of a paint factory goes home, sits down by his fireplace, folds his hands on his stomach, and stares relishingly at two paintings by Jackson Pollock that he has hung on the wall opposite him. He feels at home with them; in fact, as he looks at them he not only feels at home, he feels as if he were back at the paint factory. If we have the patience (or are given the chance) to wait till the West has declined a little longer, we shall all see the advertisements of Merrill Lynch, Pierce, Fenner & Bean illustrated by Jean Dubuffet.

A great many Americans are perfectly willing to sit on a porcupine, if you first exhibit it at the Museum of Modern Art and say that it is a chair. In fact, there is nothing, nothing in the whole world, that somebody won't buy and sit in, if you tell him that its a chair: the great new art form of our age, the one that will take anything we put in it, is the chair.

Our architecture is flourishing too. Even colleges have stopped rebuilding the cathedrals of Europe on their campuses; and a mansion, today, is what it is not because a millionaire has dreamed of the Alhambra, but because an architect has dreamed of the marriage of Frank Lloyd Wright and a silo. We Americans have the best factories anyone has ever designed; we have many schools, post offices, and public buildings that are the best factories anyone has ever designed; we have many delightful, or efficient, or extraordinary houses. The public that lives in the houses our architects design—most houses, of course, are not designed, but just happen to a contractor—is a broad-minded, tolerant, adventurous public, one that has triumphed over inherited prejudice to an astonishing degree. You can put a spherical plastic gas tower on aluminum stilts, divide it into rooms, and quite a few people will be willing to crawl along saying, "Is this the floor? Is this the wall?" to make a down payment, and to call it home. When, in a few years, some young American airmen are living on a space-satellite part way to the moon, more than one will be able to look around and think: "It's a home just like father used to make," if his father was an architect.

continued on p. 198



Humphrey "Series A" Gas Unit Heaters are lighter, stronger, more durable and more efficient, due to this exclusive Humphrey Gas Burner.

Ordinarily, burners are made of thick cast iron — satisfactory for small heaters but excessively heavy in ceiling-suspended unit heaters.

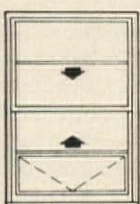
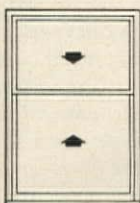
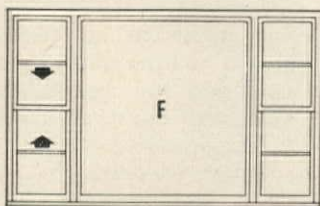
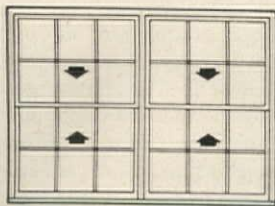
Humphrey solved this weight problem by making their burner of light, strong *formed steel*. The exclusive "Dual-Flame" heads are *stainless steel* — efficient, self-cleaning, and highly resistant both to heat and corrosion.

This great Humphrey Gas Burner is one of many quality features that make Humphrey Unit Heaters first choice of those who want the best in service and dependability.

GENERAL GAS LIGHT COMPANY
Kalamazoo, Michigan

Automatic Gas
Humphrey **UNIT HEATERS**

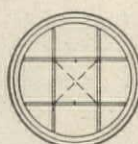
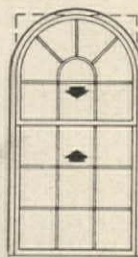
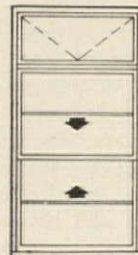
*Consultant in poetry at the Library of Congress.



POMEROY ALUMINUM WINDOWS TO BE FEATURED NEXT MONTH



TEMPLE UNIVERSITY MEDICAL CENTRE
ARCHITECT: Skidmore, Owings & Merrill
ASSO. ARCHITECT: James A. Nolen, Jr.
BUILDER: John McShain, Inc.



DOUBLE-HUNG STEEL WINDOWS

with unlimited
design possibilities

Dynamic design treatments with windows backed by a tradition of structural quality. Pomeroy's engineering staff will be pleased to discuss window arrangements and design for your next building project—large or small.



CALL OR WRITE TODAY!

SINCE
POMEROY
1897

manufacturers of

DOUBLE-
HUNG
WINDOWS

VERTICALLY
PIVOTED
WINDOWS

CUSTOM-
BUILT
ENCLOSURES

SPANDRELS
SYSTEMS

ACOUSTICAL
CEILING
SUSPENSION
SYSTEMS

METAL
PARTITION
STUDS

FABRICATION IN ALUMINUM — STAINLESS STEEL and COATED STEEL

S. H. POMEROY CO., INC., 25 BRUCKNER BOULEVARD, NEW YORK 54, N. Y.

But the greatest American industry (why has no one ever said so?) is the industry of using words. We pay tens of millions of people to spend their lives lying at us, or telling us the truth, or supplying us with a nourishing medicinal compound of the two. For all of us are living in the middle of a dark wood of words, words, words. It is a forest in which there isn't a tree that is not, for every moment of its life, of our lives, persuading or ordering or seducing or over-awing us into buying this, believing that, voting for the other.

The St. Louis arch

*A reaffirmation of belief in the symbol by William W. Wurster**

The arch designed by Eero Saarinen for St. Louis seemed to the jury to be a thing of genius when it won the 1948 Jefferson Memorial contest. Upon reappraisal I find I am still in accord with this expression. The form of the arch would eternally serve as the Gateway to the West for those who crossed the river and fanned out in wagon trains to settle

our country. Let us build the arch as the first structure of this city's great development. The regular and easily achieved aspects of redevelopment will be made easier by the very force of the daring imagination which is inherent in such a structure. Let us revive and expand our national heritage of great symbolic structures. Let us extend this from the east coast where the cities are rich with them to the central area of our country.

The facts of urban crisis

An outline of our cities' decline by Luther Gulick†

The revolution in American population growth and the shifting pattern of human settlement are creating an urban crisis which will dwarf all previous conceptions of city problems.

Within 50 years, the population of the US is likely to reach 300 million. Of the added 132 million people as many as 80 to 90% will work and make their homes in and around the metropolitan areas.

In this new urban world, what outlines, what "truths" can be discerned today? Here are five points that no one outside a home for the feebleminded can miss: 1) Right before our eyes there is being born a completely new pattern of human settlement. 2) Every large American city is now physically obsolete. 3) The governmental machinery and powers of most great cities and of all metropolitan areas are also obsolete; there is no governmental authority which can think, make plans, develop programs, reach decisions, and take action for the metropolitan community; no metropolitan community has any official plan for its general development or for solving the related problems of regional obsolescence. 4) Our local governments are struggling to get along with revenue, tax and debt systems which belong largely to the nineteenth century and its pattern of wealth and incomes. 5) The final problem is purely political. It covers the action of the community in selecting officials, holding them accountable and guiding the course of public policy through debate, petition, research, recommended decision and maintenance of community governmental standards.

The emerging crisis points again (and more clearly so) to the urgent need of broad and whole-scale planning—not just physical planning, but planning that takes into view all aspects of the urban pattern, the governmental, economic, social and political, and weaves these elements together with a new approach or philosophy geared to the truths of the new world our cities are living in.

*Dean of the Architectural School, University of California, writing in the *St. Louis Post Dispatch*.
†President, Institute of Public Administration, New York City, writing in *The American City*.



ARCHITECT
Abner C. Hopkins
Jacksonville



MORRISON'S CAFETERIA • LAKELAND, FLORIDA

Why do Morrison Cafeterias favor this name plate?

- It's the same reason that has moved Van customers for a century and four years . . . good will is the tendency of the trade to return to the place where it has been well treated.
- At Lakeland, Tampa, Daytona Beach and Jacksonville, Florida; at Columbus, Georgia; Van's name plate on spotless gleaming kitchen and cafeteria equipment evidences this prosperous operator's keen judgment. He knows what will efficiently serve and economically last.
- When you need kitchen equipment for new installation or modernization or expansion, bring us your problem and let us give you the same quality that Morrison Cafeterias appreciate.

The John Van Range Co.

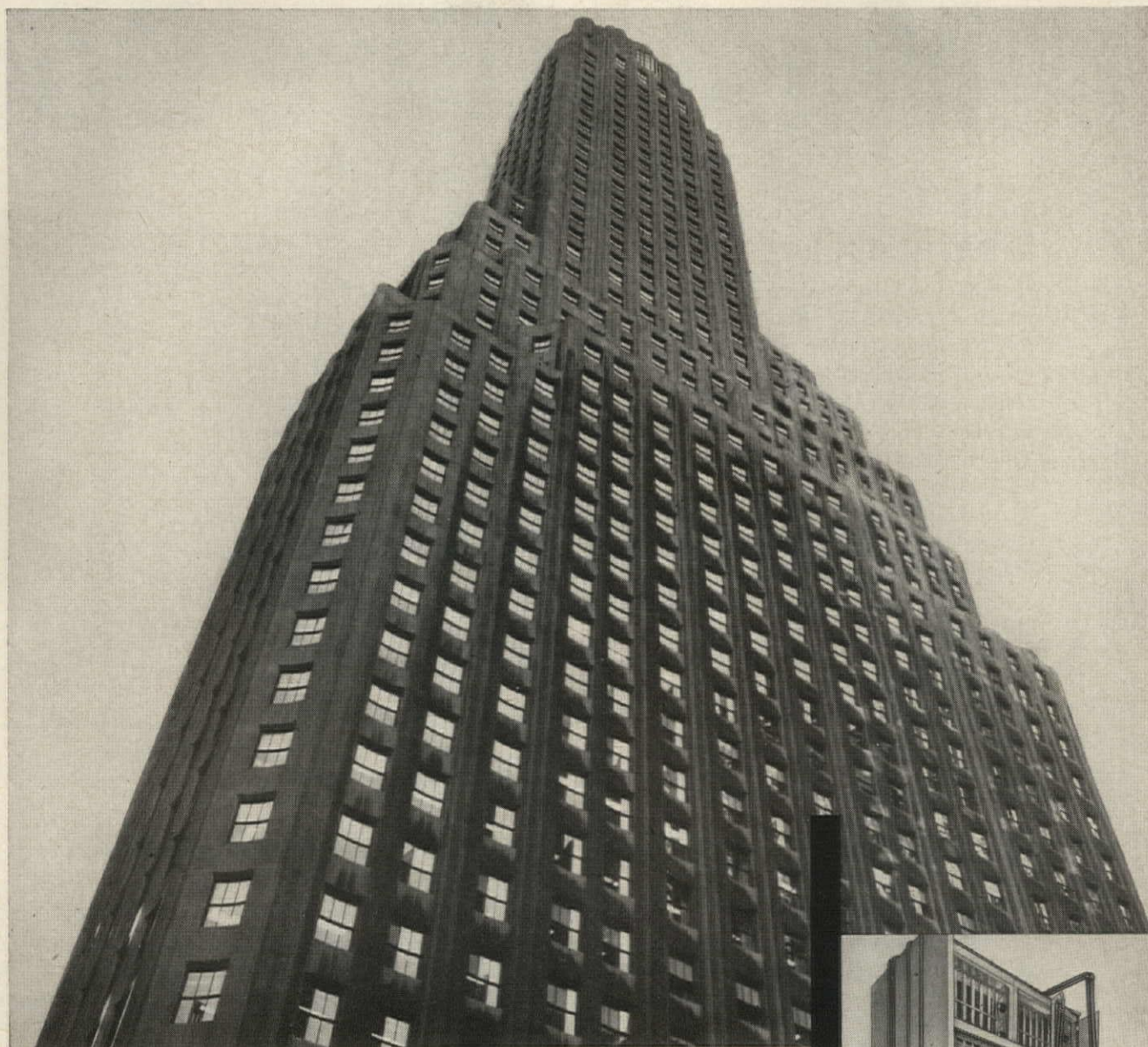
EQUIPMENT FOR THE PREPARATION AND SERVING OF FOOD

DIVISION OF THE EDWARDS MANUFACTURING CO.

Branches in Principal Cities

328 EGGLESTON AVENUE

CINCINNATI 2, OHIO

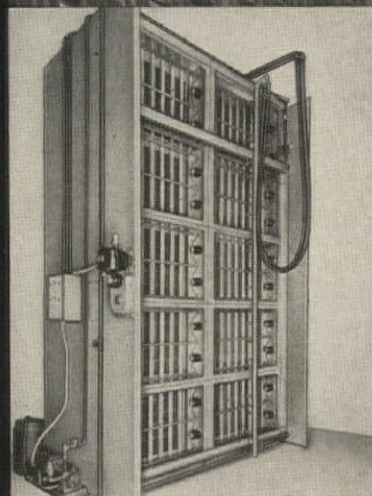


Irving Trust Building, One Wall St., New York City

4 out of 5 New Skycrapers Use Electronically-Cleaned Air

New buildings from coast to coast "breathe" electronically cleaned air. Projects like New York's Seagram Building and The Irving Trust Building, The Chicago Board of Trade Building, the Los Angeles TIMES-MIRROR Building and many others employ Westinghouse Precipitron. They're better places to work in — easier to keep clean inside — far less costly to maintain. For the full story, write today to Westinghouse, Sturtevant Division . . . pioneers in electronic air cleaning and builders of the PRECIPITRON.

Westinghouse Electric Corporation, Sturtevant Division, Dept. 7B,
Hyde Park, Boston 36, Mass.



Irving Trust Co. Building, New York has Westinghouse PRECIPITRON electronic air cleaners installed throughout.

WESTINGHOUSE AIR CLEANING

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

J-80601

Must a Fire Door

What about heat transmission?

Stopping flames is just one part of a fire door's job. For 500 F. heat will easily ignite many materials and cause fire to break out on the other side of a fire door even if the original flame and fire are stopped. This chart (right) proves the positive protection a Weldwood Fire Door offers against destructive, suffocating heat. This substantial margin of safety is due to Weldrok® — the exclusive incombustible core material of the Weldwood Fire Door (U.S. Pat. No. 2,593,050). Weldrok is a mineral material consisting of hydrous calcium silicates with asbestos fiber binding.

What about proven performance?

Just in the last 10 years, many thousands of Weldwood Fire Doors have been installed in all 48 states. Between them, these doors have lived through every conceivable adverse condition—fire, flood, slamming, storms, violence, and severe use. The Weldwood Fire Door always comes through! And this door is approved by Underwriters' Laboratories for all Class "B" (vertical shaft) and Class "C" (room and corridor partitions) openings. The Weldwood Fire Door is also approved by Factory Mutual Laboratories, New York City Board of Standards and Appeals, and Building Official Conference of America.

Blowtorch barrage! In laboratory tests up to 1700°F., the Weldwood Fire Door proved its superiority.

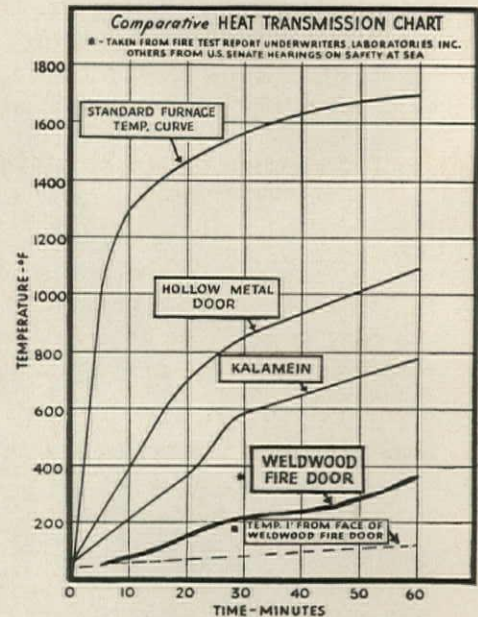
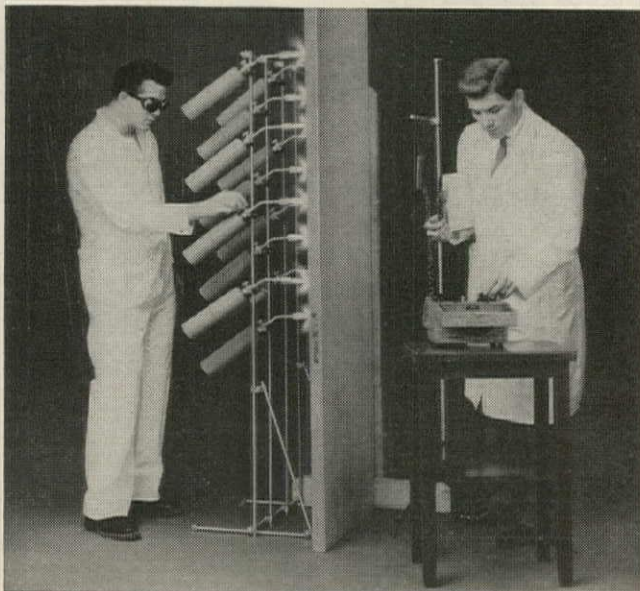


Chart shows true UL tests — not "averaged figures."

What about weight?

Weight has no part in stopping flames or heat. The Weldwood Fire Door gives vital protection from fire and heat, yet is 33% *lighter* than some other core fire doors. And that lighter weight means no hidden costs from sky-high shipping charges... simpler installation because the door is easier to handle and carry. One man can install the Weldwood Fire Door. No undue strain on hinges and door frames, either!

What about day-to-day use?

Even with bad luck, a fire is a once-in-a-lifetime event. Day-to-day performance is almost as vital. The Weldwood Fire Door — because its Weldrok core is completely inert and won't absorb water — will never warp, twist or get out of line. And that's a guarantee! Furthermore, in laboratory tests a Weldwood Fire Door was opened and closed 200,000 times. Then the same door was opened and slammed shut an additional 100,000 times. Even after this torture test, the Weldwood Fire Door still worked like new!

What about appearance?

The Weldwood Fire Door is as beautiful as it is practical. Choice hardwood veneers are a pleasure to look at, easy to maintain. Choose from regular stocks of Birch, Korina®, Mahogany, Rift Oak, Walnut or any other wood, on special order. Veneers may be picked

be only "Fireproof"?

to match wood-paneled walls, if you wish. And doors are available in a *complete range* of sizes (up to 4' x 7'—two sizes larger than some other doors). UL approved vision panels of 10" x 10" or 8" x 12" available.

What about construction?

Compare the construction of the Weldwood Fire Door point by point:

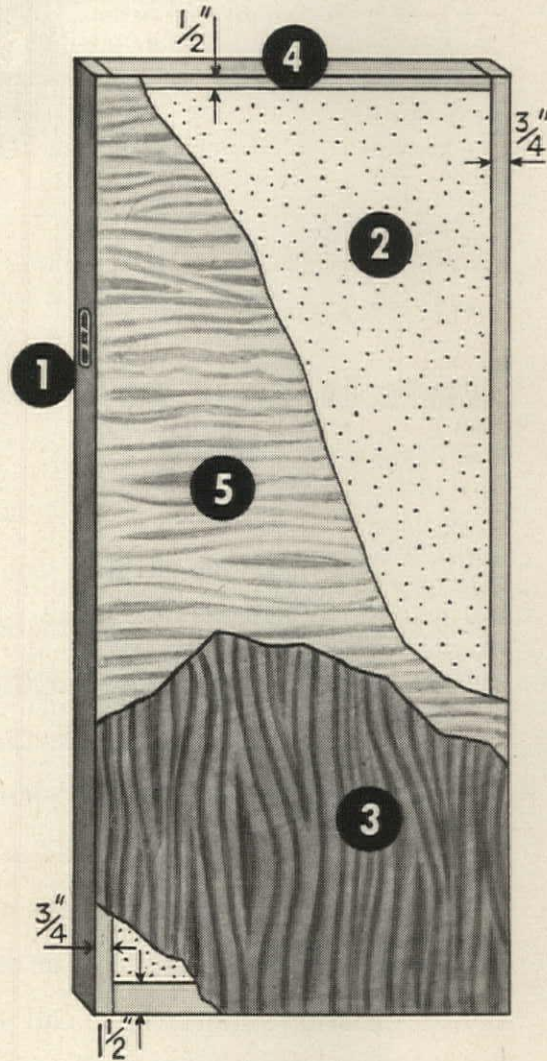
1. $\frac{3}{4}$ " hardwood stiles treated with Class "A" fireproofing agent. Note UL label and individually registered guarantee number on the stile for your protection.
2. Incombustible Weldrok core. A material that needs no artificial fireproofing because it is *naturally* unburnable and incombustible. Won't char, deteriorate or "break down" either! This exclusive core material is dimensionally stable, strong, light in weight. Won't warp, shrink or swell.
3. Handsome hardwood face veneer $\frac{1}{28}$ " thin. (Send coupon for complete proof why "thin" veneers are better.)
4. Solid hardwood rails, treated with Class "A" fireproofing agent. Top rail is $\frac{1}{2}$ ", bottom rail $1\frac{1}{2}$ " to permit trimming.
5. Hardwood crossbanding. This $\frac{1}{16}$ " veneer is bonded to the core with a waterproof phenolic resin glue.

All underwriter approved types of hardware are easily installed if simple directions are followed. This has been proved over years of continuous use with complete satisfaction.

What about a guarantee?

This guarantee is given *in writing* with every Weldwood Fire Door installation: "United States Plywood

Corporation *unconditionally guarantees*, if properly installed, this Weldwood Fire Door against warping, twisting or manufacturing defects for the **LIFE OF THE INSTALLATION**. If any Weldwood Fire Door should fail to meet these standards, we will replace said door without charge, *including all labor costs of hanging and refinishing involved*!"



Weldwood®
FIRE DOORS

A product of

UNITED STATES PLYWOOD CORPORATION

Weldwood — The Best Known Name in Plywood

SEND FOR MORE INFORMATION

Architects Service Department
United States Plywood Corporation
55 West 44th Street, New York 36, N. Y.

AF 2-57

Gentlemen: Please send me the following:

- ☐ Booklet # 1663—Weldwood Doors
- ☐ Booklet # 1245—Why is a "thin veneer" door better?
- ☐ Please have an Architects Service Representative call on me.

NAME.....
FIRM.....
ADDRESS.....
CITY..... STATE.....



Watch out for the "or equal" that isn't

There is no "or equal" clause in Day-Brite's self-imposed specifications covering the design and construction of lighting equipment. It meets highest standards throughout . . . Knowing this, more and more architects stand firmly behind their original Day-Brite selection. They have learned from long experience that the design and quality of Day-Brite fixtures enhance the job as well as their reputation. Their clients, too, are happier—when the keys are turned over to them and for many years thereafter . . . For convincing evidence of Day-Brite's lasting superiorities, call your Day-Brite representative. Send for new Architectural File material, *just published*.

DAY-BRITE LIGHTING, INC.

5471 Bulwer Ave., St. Louis, Mo.

71104

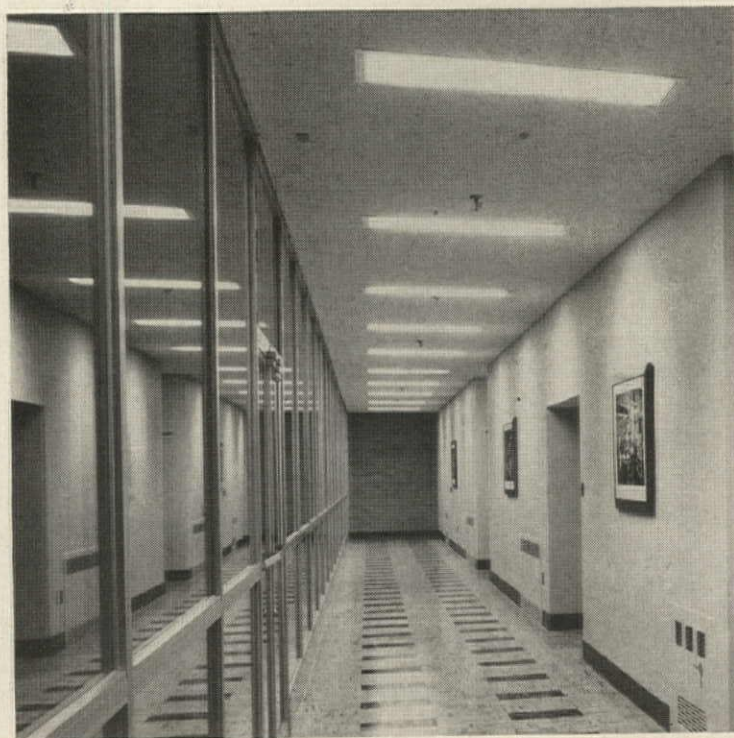
DAY-BRITE LIGHTING MAKES THE BIG DIFFERENCE HERE



The Upjohn Company Branch Office and Warehouse, Washington, D.C. Architects and General Contractors: The Austin Company... Electrical Contractor: The Jack Stone Co., Inc.



Office area lighted with Day-Brite recessed troffers.

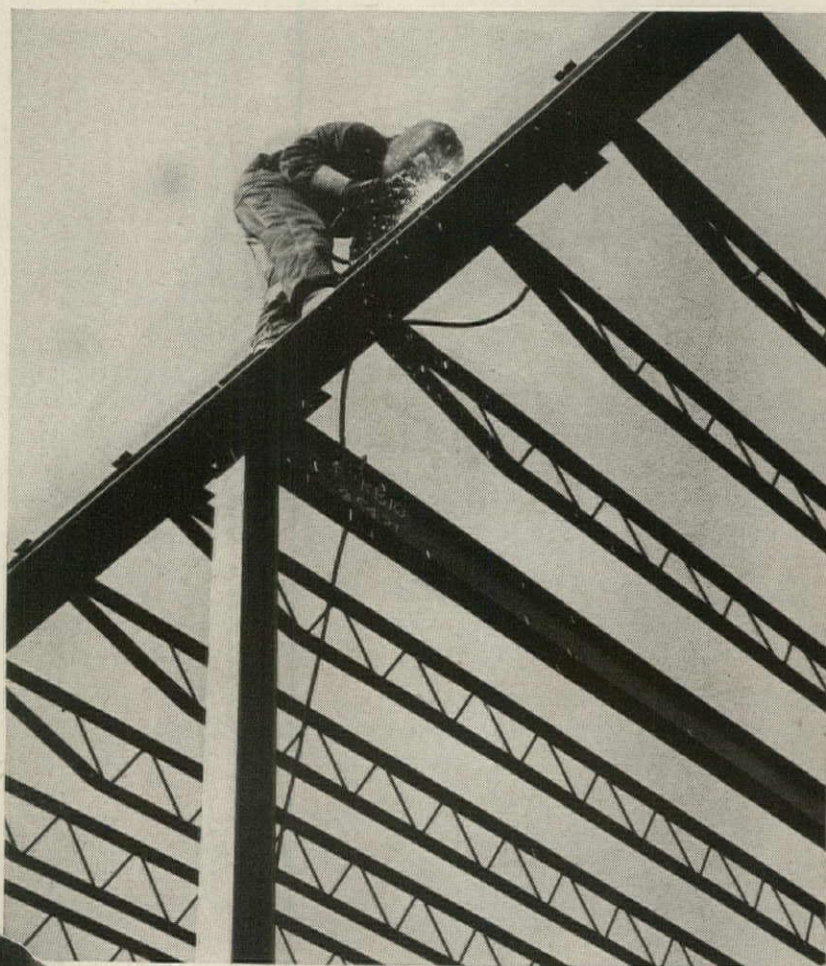


Typical corridor with Day-Brite recessed troffers.



QUALITY

Truscon "O-T" Shortspan Steel Joists are designed and manufactured in accordance with the specifications of The Steel Joist Institute and the Simplified Practice Recommendation (S.P.R.-94-30) on open web steel joists as issued by the U.S. Department of Commerce, Bureau of Standards. Load-bearing capacities are predictable and dependable!



REPUBLIC



World's Widest Range of Standard Steels

PROTECTED!

Every Truscon "O-T" Steel Joist
is backed by
The Steel Joist Institute
Seal of Approval



Be safe...avoid inferior quality.

Specify approved Truscon
"O-T"[®] Open Truss Steel Joists.
(SHORTSPAN SERIES)

Write for facts...

STEEL

and Steel Products



Truscon Metal Lath attaches directly to the underside of Truscon Steel Joists. When plastered, it becomes a fire-resistant ceiling. Metal lath and plaster membrane fireproofing is vital throughout modern buildings. No design or architectural effect is too intricate for Truscon Metal Lath. It can be cut, shaped, formed and curved into simple and complex contours. Send coupon for more facts.

Truscon Ferrobord[®] Steeldeck is welded or clipped directly across the top of Truscon "O-T" Steel Joists. Ferrobord roofs large areas quickly, whether flat, pitched or curved. It comes in lengths long enough to span three or more purlins. When laid, its flat surface is ideal for application of insulation and built-up waterproofing. Light, strong, fire-resistant roofs are the result. Send coupon for design data.



REPUBLIC STEEL CORPORATION

Dept. C-3032

3108 East 45th Street, Cleveland 27, Ohio

I'm interested in more information on these products of Republic's Truscon Steel Division.

☐ "O-T" Shortspan Steel Joists ☐ Ferrobord Steeldeck
☐ Metal Lath and Accessories

Name _____ Title _____

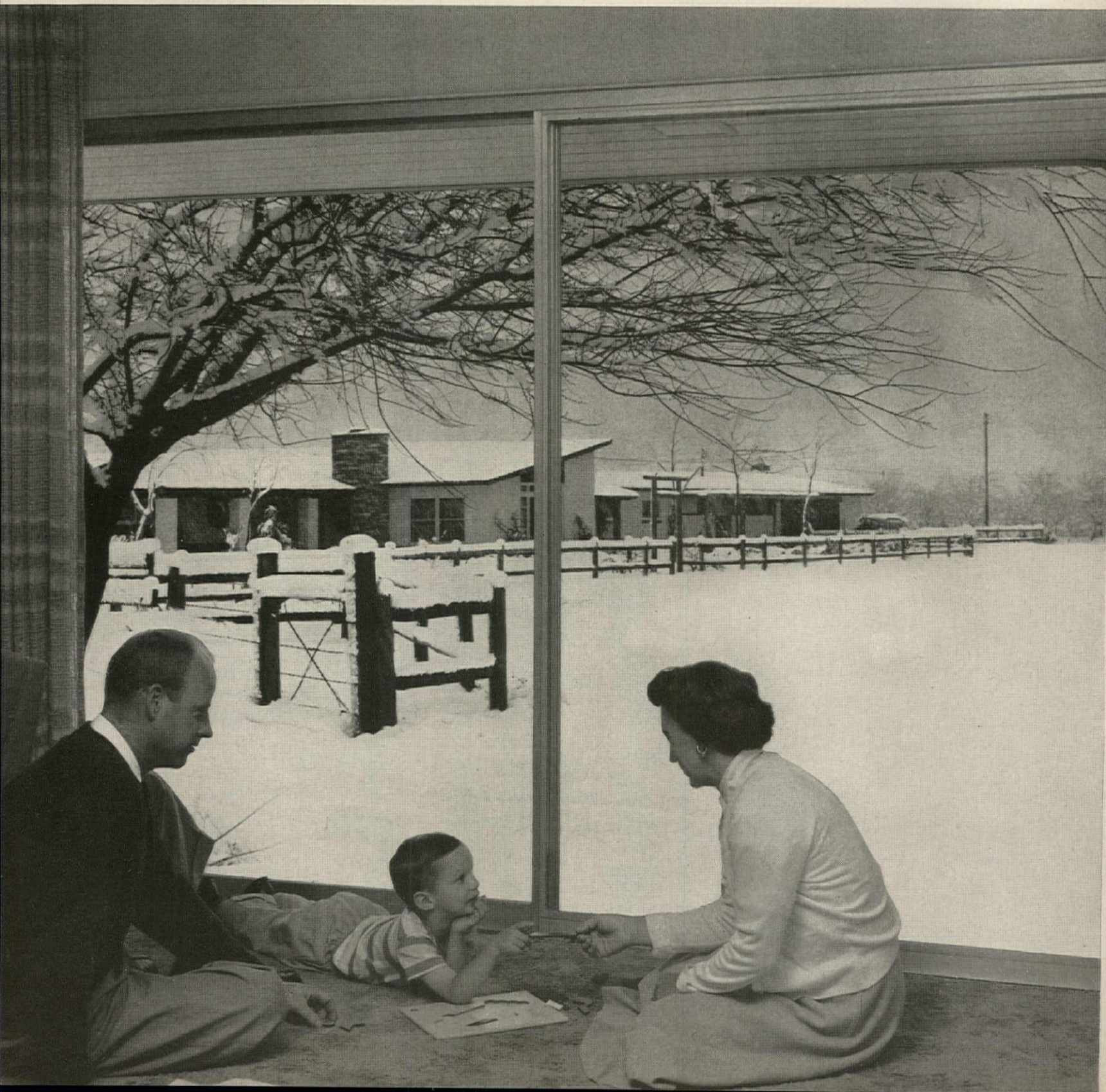
Firm _____

Address _____

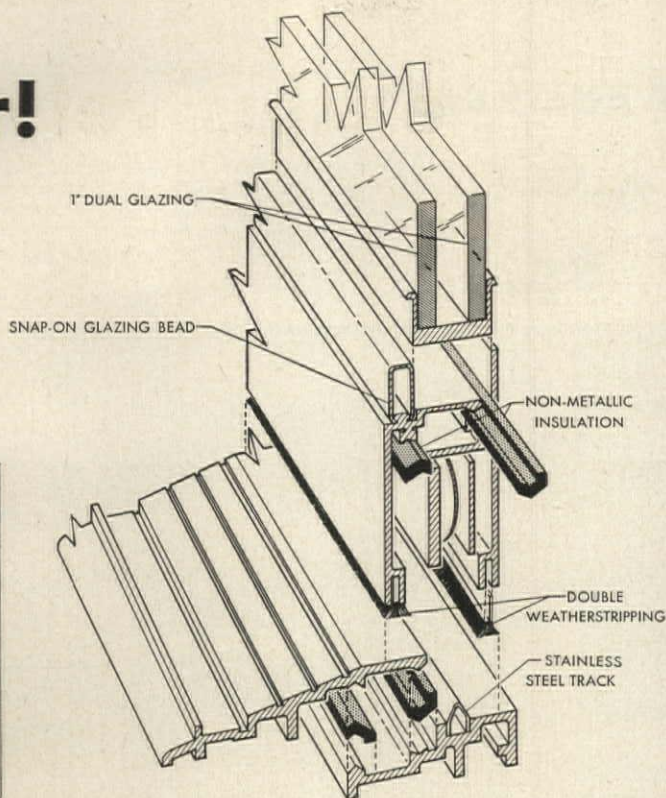
City _____ Zone _____ State _____

Now—a sliding glass door designed exclusively for cold

New Ador Insulated Thermo Door makes this installation a comfortable, enjoyable feature of the home the year 'round. Despite subzero weather, inside temperatures are maintained and the problem of condensation is overcome by full door and glass insulation.

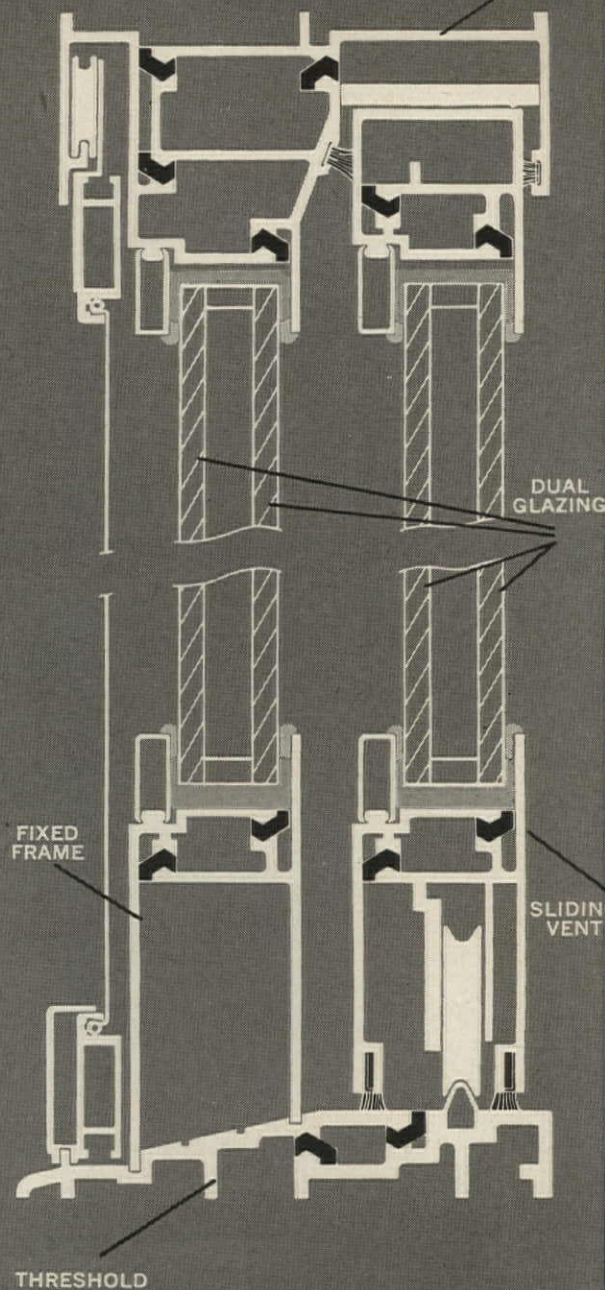


weather!



Secret of Ador Insulated Thermo Door is shown by this exploded view of threshold and sliding unit bottom rail. Black areas are non-metallic strips of insulation. They effectively seal interior metal surfaces from the outside. This restricts heat flow, overcomes condensation. Note also double weatherstripping, inside and out.

Schematic of new Ador Insulated Thermo Door Features extremely heavy-duty extrusions, 1 3/4" o.d. hard brass sheaves with stainless steel bearings, aluminite finish, stainless steel track, custom hardware and many other advances.



This is a completely new kind of sliding glass door

IT'S NEW because it's designed exclusively for use with 1-inch dual glazing. It extends the practical use of sliding glass doors to every climate, regardless of temperature or humidity conditions.

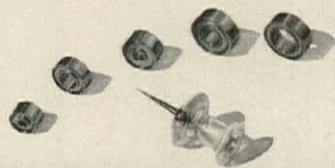
IT'S NEW because it's the first *insulated* sliding glass door. Each aluminum extrusion incorporates a non-metallic insulation barrier. Thus, each extrusion is actually *insulated, inside from outside*. Heat flow is reduced to an absolute minimum. This overcomes the problem of condensation on interior metal surfaces.

IT'S NEW because it has the most effective weatherstripping ever devised for a sliding glass door. It's *double* weatherstripped, inside and out. It utilizes a special, silicone-treated, extra-long, hi-pile mohair weatherstripping.

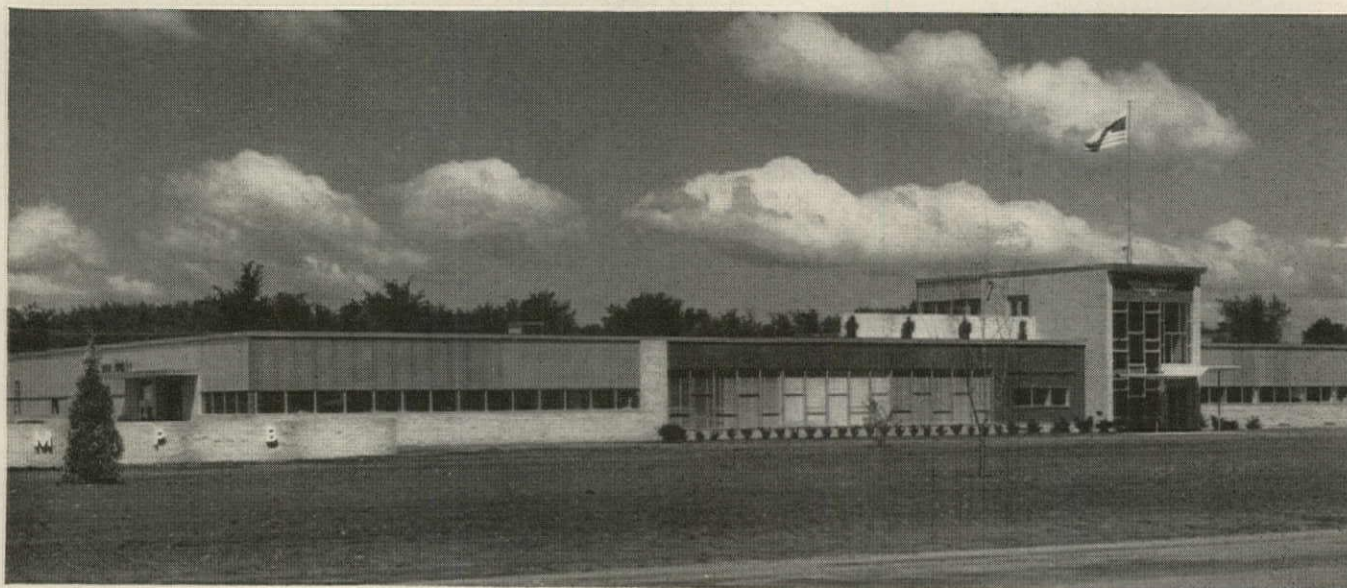
These are but a few of the many advanced features of the new Ador *insulated* Thermo door. This is truly the first unit to apply the full benefits of dual glazing to sliding glass doors. Your inquiry is invited. Ador distributors and dealers have full information, or write factory direct: Ador Sales, Inc., Fullerton, California.

NEW *Ador* INSULATED *Thermo Door*

a new home for the **WORLD'S "SMALLEST BUSINESS"**



Miniature Precision's line of miniature and sub-miniature bearings includes more than 500 different types and sizes. The smallest of the bearings shown with the push pin has an outside diameter of 1/10th of an inch; is 3/100th of an inch thick, and has a 1/40th inch bore.



MINIATURE PRECISION BEARINGS, INC., KEENE, N. H.

another modern plant equipped with **JENKINS VALVES**

Ball bearing assemblies so tiny that 500 can be carried in a thimble; held to tolerances so precise they meet the highest standards for radar mechanisms, gyroscopes, precision instruments — this is the "small business" in which Miniature Precision Bearings, Inc., is a specialist.

This company's fine new plant, located in the foothills of New Hampshire, was planned with the same critical appreciation of mechanical efficiency that typifies their product. Jenkins Valves were selected for dependable control of pipelines providing compressed air, steam, water, air conditioning and other services. Confidence in the extra measure of efficiency and economy of Jenkins Valves is shared by leading architects, engineers, and contractors, and by more and more managements concerned with future operating costs.

For new installations, for maintenance, in any plant — large or small — the Jenkins Diamond is your reliable guide to lasting valve economy. Jenkins Bros., 100 Park Ave., New York 17.

Architect and Engineer:

ANDERSON-NICHOLS & CO., BOSTON, MASS.

General Contractor:

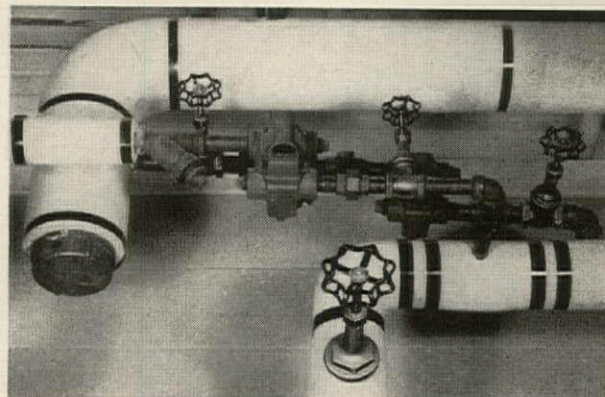
R. E. BEAN CONSTRUCTION CO., INC., KEENE, N. H.

Plumbing Contractor:

STICKNEY PLUMBING & HEATING CO., KEENE, N. H.

Heating & Air Conditioning Contractor:

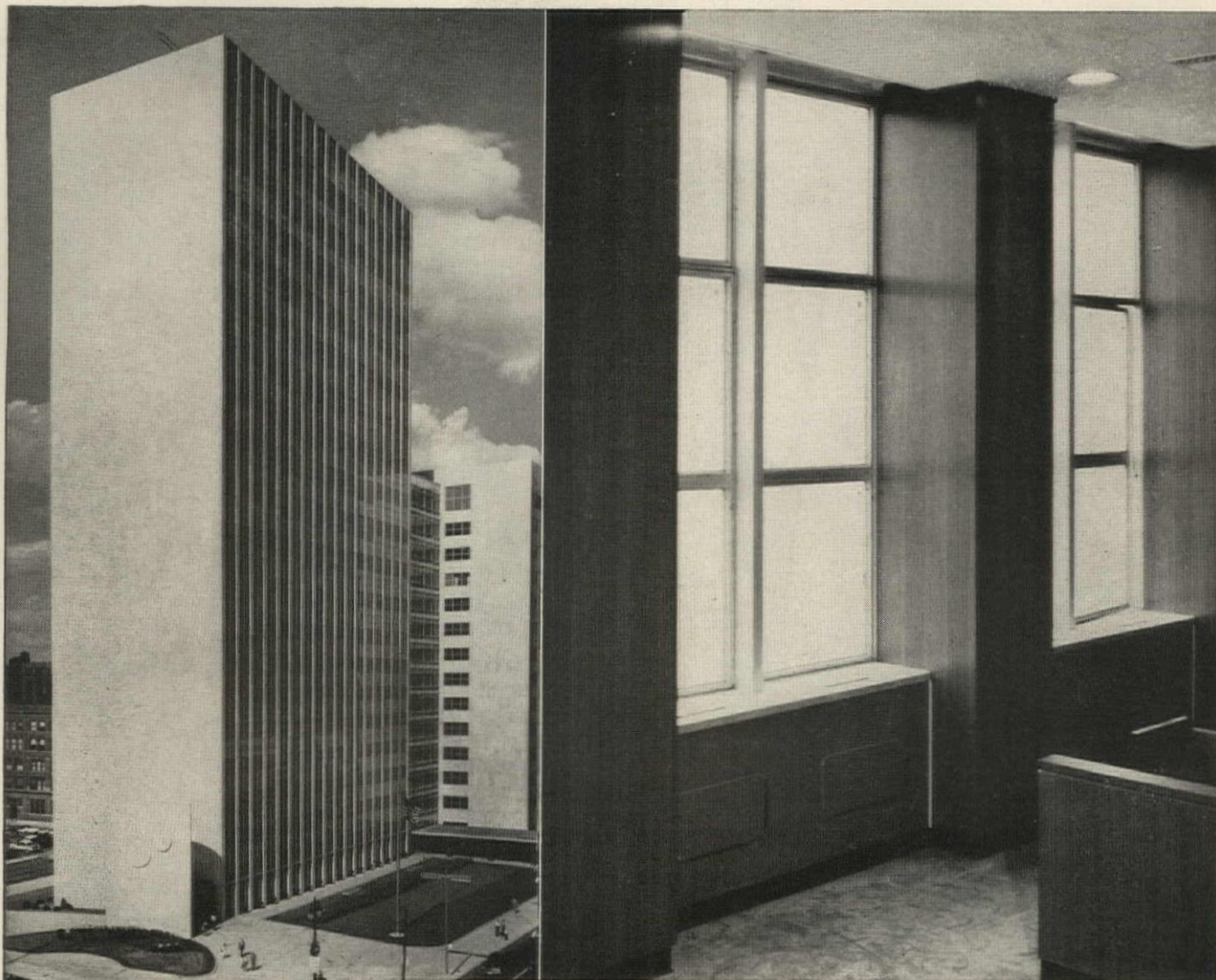
ROYAL STEAM HEATER CO., GARDNER, MASS.



JENKINS
LOOK FOR THE JENKINS DIAMOND
VALVES



SOLD THROUGH PLUMBING-HEATING AND INDUSTRIAL DISTRIBUTORS



Harley Ellington & Day — Architects & Engineers

CITY-COUNTY BUILDING IN DETROIT INSTALLS 3,600 BUENSOD-STACEY DUAL DUCT AIR MIXING UNITS

Here's why —

The pioneer work done by Buensod-Stacey made the Buensod Air Mixing Units the only ones suitable for an installation of this magnitude. Here are the advantages they offer —

The engineers found them efficient. They are the only dual duct mixing units with a self-contained, completely automatic volume control. This control maintains the desired supply of conditioned air regardless of variations in pressure at the inlet.

The contractors found them practical. The automatic volume control, when once set,

does not need rechecking. Adjust one nut and the unit delivers the required air volume.

The architects found them flexible. They allow each individual room to maintain its own separate temperature. You can heat one room and cool the one next to it.

The owners found them economical. One system conditions the entire building — needs no seasonal changeover. There is no local air recirculation — therefore no need for individual circulating fans. There is no need for a separate heating system.

The occupants find the result — totally comfortable. The Dual Duct system provides completely filtered air, at any desired temperature, at all hours of all seasons. The mixing units are *quiet* — they are acoustically treated to eliminate noise. They are not drafty, but diffuse air evenly, steadily throughout the room.

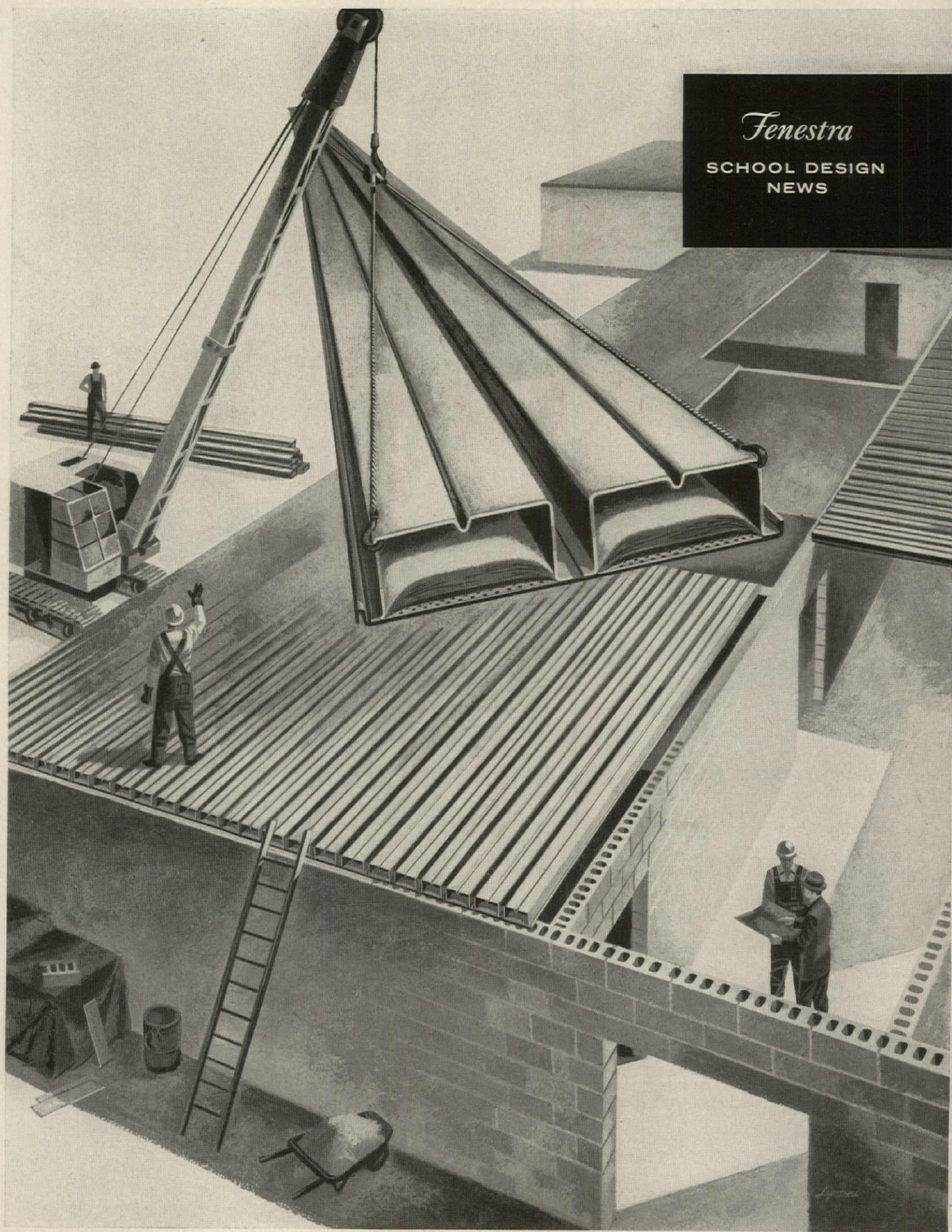
Buensod Dual Duct Mixing Units are useable in large or small, existing or new buildings. Application data available for consulting engineers and contractors.

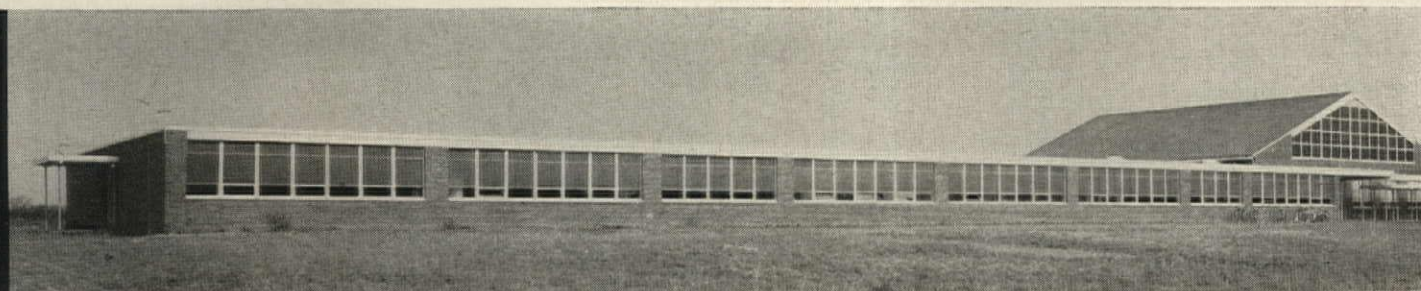
BUENSOD-STACEY
INCORPORATED

Buensod-Stacey, Inc. 45 West 18th Street New York 11, N. Y.
Charlotte, North Carolina Richmond, Virginia

Fenestra

SCHOOL DESIGN
NEWS





Fowlerville High School, Fowlerville, Michigan, is designed with interior load-bearing masonry walls and Fenestra Acoustical-Structural "D" Panels to reduce structural steel requirements to a minimum. Total costs for this 41,000 square foot school were approximately \$11.00 per square foot . . . an economical

figure for high school construction in this area.

Architect: Louis C. Kingscott and Associates, Inc., Kalamazoo, Michigan.

Contractor: Vandenburg Construction Co., East Lansing, Michigan.

How Fenestra Acoustical-Structural Building Panels*

SAVE STRUCTURAL STEEL IN SCHOOL CONSTRUCTION

Spanning between interior masonry bearing walls, Fenestra Panels practically eliminate structural steel and reduce foundation and footing requirements. Schools using this basic structural system have been built in many different areas at costs from \$9.00 to \$12.00 per square foot depending on mechanical facilities, interior trim and accessories.

Fenestra Acoustical-Structural Building Panels form the structural roof deck and the finished interior ceiling complete with "built-in" acoustical treatment. They replace *five* different materials—usually requiring extra labor and costs—with *one* building unit, erected in *one* operation by only *one* trade.

The unique cellular design of Fenestra Building Panels makes them strong enough to span up to 31 feet under normal roof loads. They also provide lateral bracing for the bearing walls. Their width—24 inches—fits perfectly with modular design techniques. This speeds up construction and eliminates cutting and fitting of panels and other materials on the job.

To provide the acoustical ceiling, the flat bottom

surface of the panels is perforated. An exclusive Fenestra arched, sound-absorbing batt that produces a noise reduction coefficient of 80% is enclosed *inside the panels*. It cannot be harmed by painting or maintenance cleaning. There is no "stuck on" material to discolor or fall off and require replacement. And, because this plate is a part of the structural panels, it is made of 16-gauge steel—4 times thicker than the usual metal pan ceiling construction. This assures extra resistance to damage by objects thrown against the ceiling or other impacts. Room-to-room noise flow is prevented by sound transmission barriers incorporated into the panel design.

If you are now planning a new school building, you should get complete details on Fenestra Acoustical-Structural Building Panels and the new school design concepts possible with them. The New 1957 Fenestra Building Panel Catalog gives you complete information. Mail the coupon below, today, for your FREE copy or call your Fenestra representative.

*Trademark



Fenestra
INCORPORATED

METAL
BUILDING
PANELS

Your Single Source of Supply for
BUILDING PANELS • DOORS • WINDOWS

Fenestra Incorporated

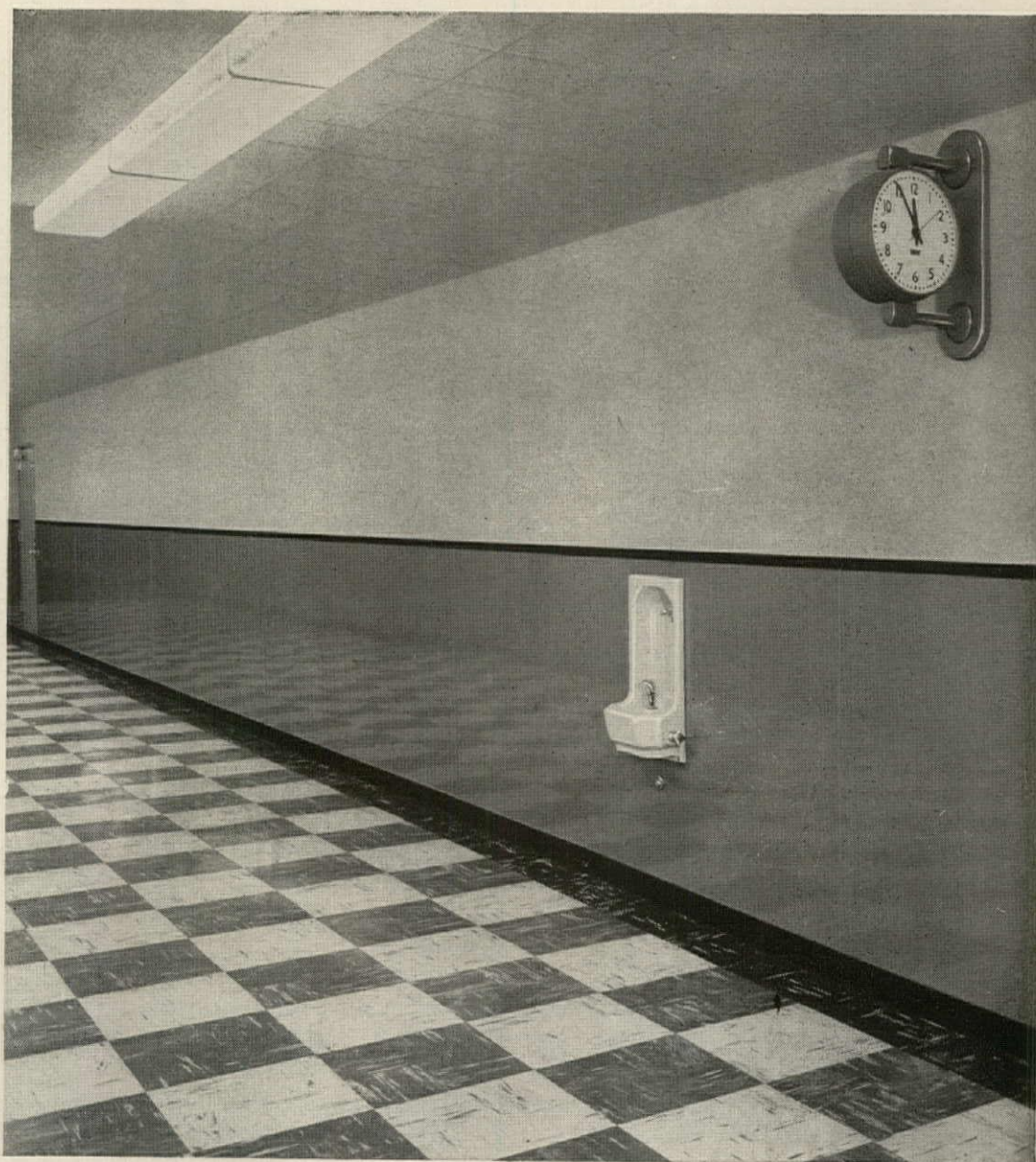
Dept. AF-2, 2296 East Grand Blvd.
Detroit 11, Michigan

Please send me FREE copy of New 1957 Fenestra Building Panel Catalog including details on Fenestra Acoustical-Structural Building Panels for schools.

NAME _____
FIRM _____
ADDRESS _____
CITY _____ STATE _____

ARCHITECT: Donn Hougen
 CONTRACTOR: Thomsen Abbott
 Construction Co.
 CABINETS: Robert Brand & Son
 Co. and Modern Cabinet Co.
 CONSOWELD DISTRIBUTOR:
 Wausau Supply Co.

Consoweld 10 Cocoa Echo on corridor walls in the Wood County Court House. Altogether more than 14,000 square feet of 8 different Consoweld patterns, including woodgrains, were used in various applications in the building, and on the judge's bench.

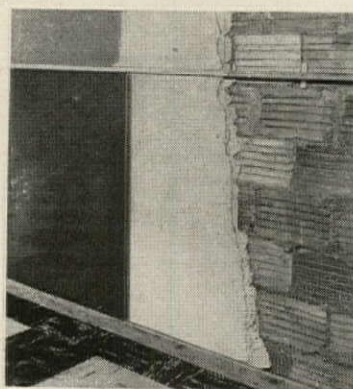


CONSOWELD 10 EASY TO APPLY, MAINTAIN, IN NEW COUNTY COURT HOUSE CORRIDORS

The beautiful colors, ease of application, and minimum maintenance of Consoweld were reasons for selecting Consoweld for wainscoting and other applications in the Wood County, Wis., Court House.

Consoweld on walls and counter tops provides color with durability. All Consoweld patterns have been color-tuned by Color Research Institute for color harmony and public preference. Application is easy and economical because Consoweld is applied in large panels—up to 51" x 144", resulting in a minimum of seams.

Consoweld is a dense, tough plastic laminate. It comes in two thicknesses—Consoweld 6, the standard 1/16", and Consoweld 10, the extra-thick 1/10" panel that is applied directly over sheathing-grade plywood, gypsum lath, and other less-than-perfect surfaces. Mail the coupon for architect-builder file folder giving full information.



Ground strips for plastering also act as nailing strips for mouldings. Below wainscoting height the walls were finished in grey coat over which Consoweld was applied directly with mastic adhesive.

CONSOWELD®

the nation's finest plastic surfacing

...good for a colorful lifetime

Consoweld Corp., Wisconsin Rapids, Wisconsin

AF-27

Please send me architect-builder file folder on Consoweld and name of nearest distributor.

NAME _____

FIRM _____

ADDRESS _____

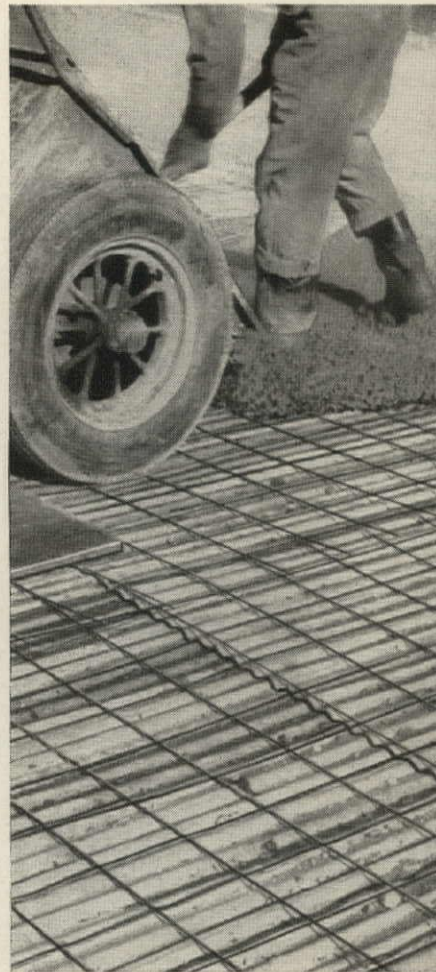
CITY _____ STATE _____



EASY TO HANDLE. Light Corruform sheets span up to 30", are quickly welded or clipped to steel joists, can be easily cut to fit openings.



ROLL OUT MESH. Corruform in place offers an immediate, safe work platform, withstands normal construction abuse, adds stiffening to joists.



FAST CONCRETING. Rigid Corruform sheets permit slab to be cast and finished in one operation. The finished slab is ready for floor covering.

Have you ever seen a faster, easier way to construct reinforced concrete floors?

Secure Corruform® to joists . . . roll out mesh . . . place concrete. That's all there is to it! Corruform corrugated steel base makes cast-in-place floor slabs strong, safe, easy to erect because Corruform sheets are light yet nearly *twice as strong* as ordinary steel of comparable weight. The minute Corruform is down, you can walk on it, work on it. Rigid sheets resist dents and punctures, distribute loads, eliminate pull on joists, provide a tight, solid base for concrete. And because Corruform is 100,000 psi steel, it carries concrete over joists without sag, stretch, bend or leakage. Sheets retain cement paste, speed finishing, assure true and level finish. Corruform has been used extensively throughout the U. S. on almost every type of building. Stocks available from coast to coast. Get more information by writing Granco home or district office. ATTN.: Dept. F-72.

CONCRETE YOU SAVE PAYS FOR CORRUFORM

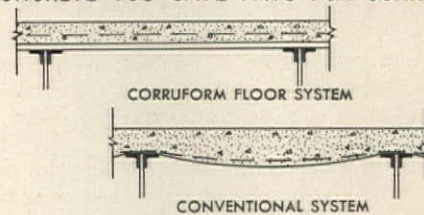


Diagram shows how Corruform stays level, saves about 20% or more in concrete over "flexible type" centering.



See our catalogs in Sweet's Architectural and Industrial Files

GRANCO® STEEL PRODUCTS COMPANY

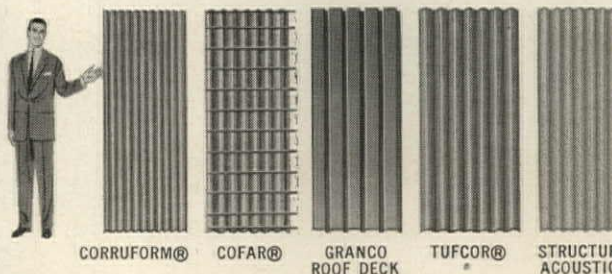
A subsidiary of GRANITE CITY STEEL COMPANY

6506 N. Broadway, St. Louis 15, Mo. Executive Offices: Granite City, Ill.

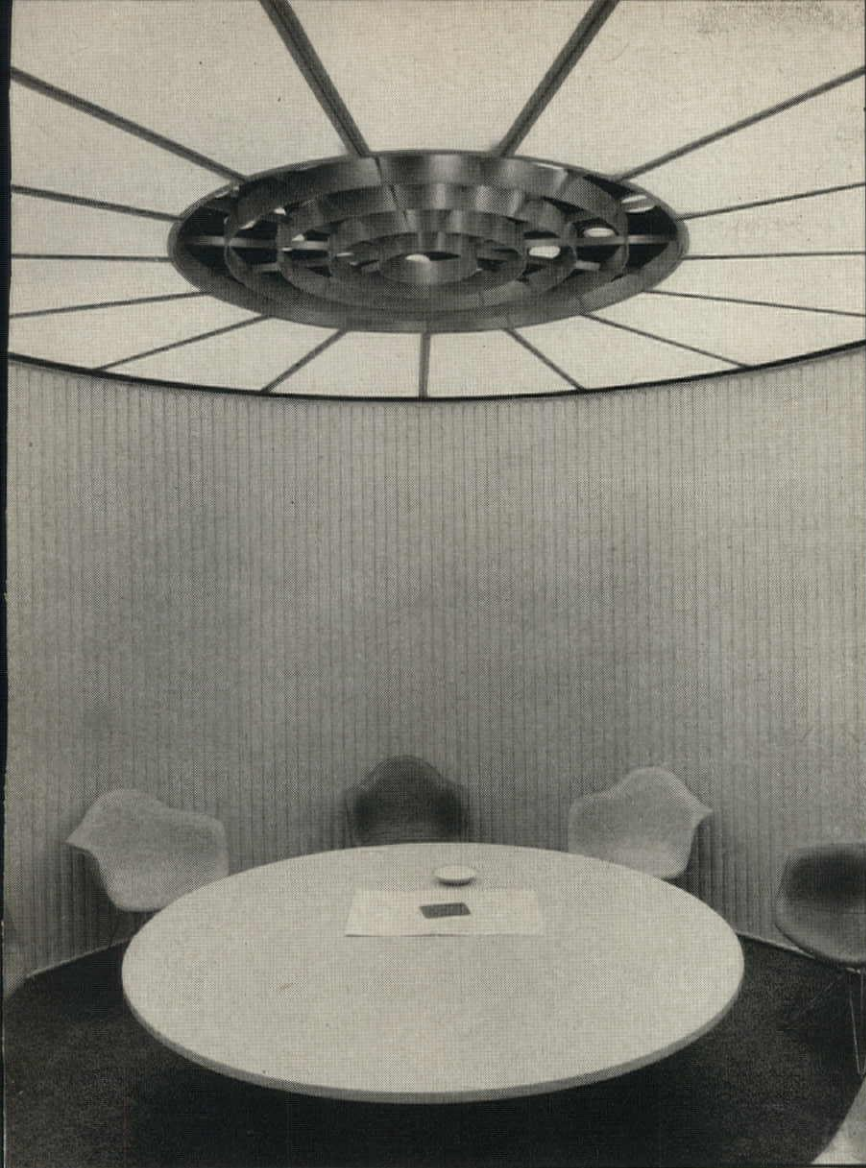
DISTRICT OFFICES: St. Louis • Kansas City • Cincinnati • Dallas • Chicago • Minneapolis • Atlanta • San Francisco

Distributors in 80 principal cities

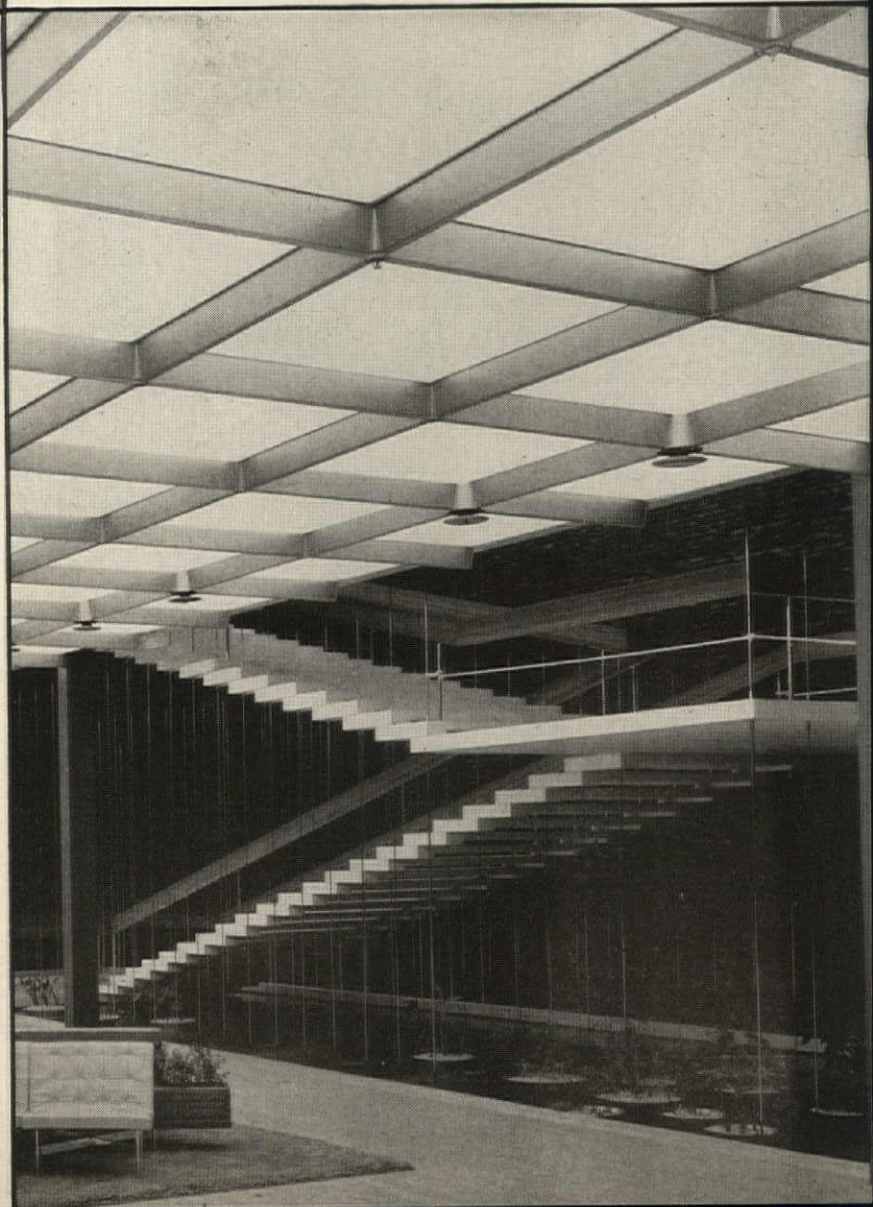
Granco Products for any type of framing you specify





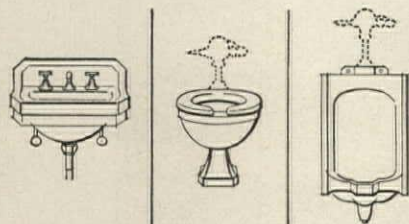


These photographs taken at General Motors Technical Center show how Wakefield multi-function ceilings have solved in several ways the problems of lighting, acoustics, heating and air conditioning, fire control and movable partitions. They show how Wakefield worked with the architect to make his concept a reality. May we help you? Please write to The Wakefield Company, Vermilion, Ohio. In Canada: Wakefield Lighting Limited, London, Ontario.





As you consider the needs of the nation's office buildings



Eljer fixtures are made in cast iron, formed steel, and vitreous china. Consult Sweet's Architectural File, or write for complete illustrated catalog and roughing-in book. Eljer Division of The Murray Corporation of America, Three Gateway Center, Pittsburgh 22, Pennsylvania.

—bear in mind that Eljer can supply you with a complete selection of plumbing fixtures and brass goods styled to embellish your own good design. Look to Eljer, too, for the durable, proved utility you demand.

ELJER

DIVISION OF THE MURRAY CORPORATION OF AMERICA

THE ONLY NAME YOU NEED TO KNOW IN PLUMBING FIXTURES

GUTH-LIGHT guards

**THE EYES
OF TEXAS!**



**4,200
GUTH TROFFERS... ALZAK ALUMINUM LOWEST
LOW-BRIGHTNESS TROFFERS IN NEW
U.S.A.A. BUILDING, SAN ANTONIO**



Texans think big and demand the best! That's why designers chose Guth Troffers for the magnificent new home office of United Services Automobile Association, San Antonio.

Their distinctive, custom-made look adds beauty to the contemporary decor... the shadowless, low-brightness lighting (with at least 65 ft. candles throughout) assures eye-ease and efficiency. What a combination!

And more: Guth's complete-unit design made the installation double-easy. No on-the-job assembly... they're ready to hang.

ARCHITECTS: Phelps & Dewees & Simmons-Atlee
B. & Robt. M. Ayres, San Antonio

ELECTRICAL DISTRIBUTOR: Southern Equipment Co., San Antonio

ELECTRICAL CONTRACTOR: Paul Wright Electrical Co., San Antonio

STRUCTURAL ENGINEERS: Matthews & Kenan, San Antonio and
Beretta, Greenslade, Clark & Collins, Inc., San Antonio

MECHANICAL ELECTRICAL ENGINEERS: Gerard M. Baker, San Antonio,
and Beretta, Greenslade, Clark & Collins, Inc., San Antonio

WRITE FOR GUTH TROFFER CATALOG NO. 50-E

THE EDWIN F.



COMPANY • ST. LOUIS 3, MO.

TRUSTED NAME IN LIGHTING SINCE 1902

MULTI-STORY CONSTRUCTION / FLOORING

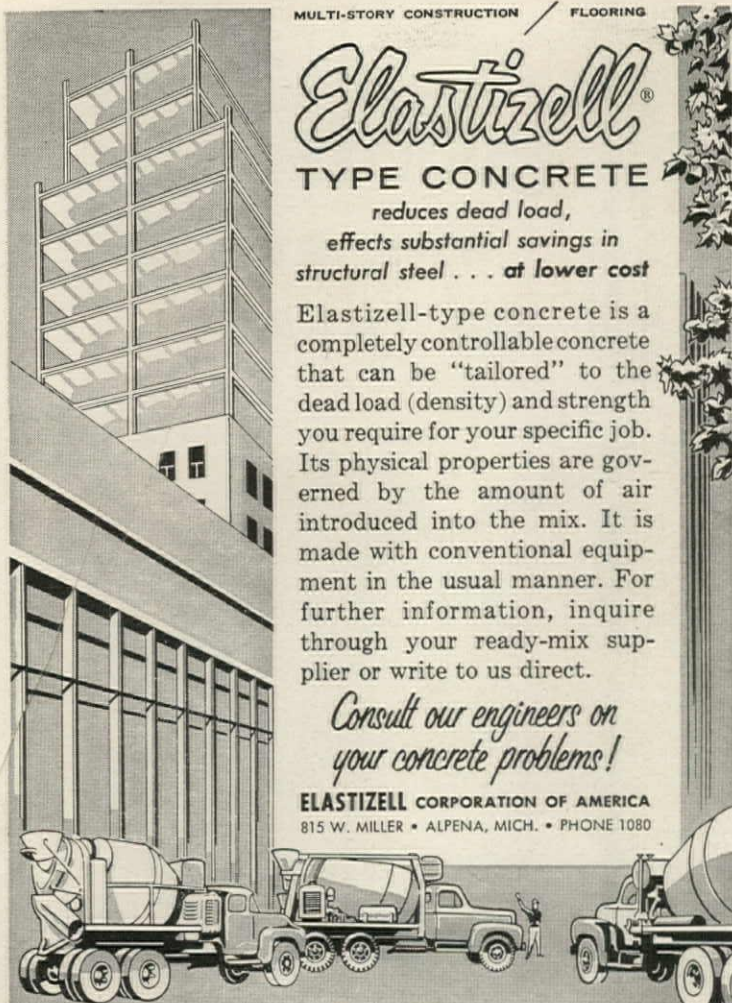
Elastizell® TYPE CONCRETE

reduces dead load,
effects substantial savings in
structural steel . . . **at lower cost**

Elastizell-type concrete is a completely controllable concrete that can be "tailored" to the dead load (density) and strength you require for your specific job. Its physical properties are governed by the amount of air introduced into the mix. It is made with conventional equipment in the usual manner. For further information, inquire through your ready-mix supplier or write to us direct.

*Consult our engineers on
your concrete problems!*

ELASTIZELL CORPORATION OF AMERICA
815 W. MILLER • ALPENA, MICH. • PHONE 1080



MAKE THE WASHING FACILITIES THE NO. 1 CONSIDERATION



Bradley full-circle Washfountains, City of Cincinnati, Waste Collection Garage. Architects: Felsberg & Gillespie; Engineer: W. D. Ehlers.

- Foot-control eliminates all faucet contacts and maintenance
- Bowl is self-flushing, no collection of contaminating used water
- No water waste, removal of foot cuts water supply immediately
- Piping connections reduced 80%—installation costs cut
- Save 25 per cent floor space

Architects, building authorities, plumbing and engineering firms recommend Bradley . . . the most widely used sanitary washing facilities . . . Cat. 5601 mailed on request.

**BRADLEY
WASHFOUNTAIN CO.**
2235 W. Michigan St.
Milwaukee 1, Wisconsin

BRADLEY
washfountains
Distributed Through
Plumbing Wholesalers

no strings attached!

* **SERIES 1200
custom
windows**



Blue Cross-Blue Shield Building
Little Rock, Arkansas

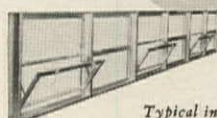
Architect
Wittenberg, Delony,
& Davidson
Little Rock,
Arkansas

Marmet Custom Engineered windows can be developed for any type of structure . . . however unusual . . . or conventional its design may be. They are as completely versatile as the architects skill and imagination demands. With Marmet Series 1200 Custom Windows . . . there are "no strings attached" to architectural creativeness.

The Series 1200 Custom Window is fabricated of the finest extruded aluminum alloy, 3/16" thick in both the frame and sash sections. Tubular (as well as the standard) sash is available for construction jobs requiring greatly increased rigidity. Snap-on glazing bead for inside or outside glazing accommodates up to one inch insulated glass. Special double vinyl weatherstripping, anchored in a dovetail shaped groove provided in the frame extrusions, is available in the custom series as well as other Marmet doors and windows. Like all Marmet aluminum structural products, the Series 1200 Custom Windows have a beautiful satinized or alumilite finish etched in the world's largest dip tanks.

To lend graceful window beauty to educational, religious, or commercial structures like the Blue Cross building above . . . specify MARMET Series 1200 Custom Windows. Marmet precision aluminum fabricating is also available in two series of ribbon windows (note industrial application below), two architectural projected series, standard and custom entrances, glass block ventilators and aluminum doors.

* **SERIES 200
ribbon windows**



Typical industrial application of Series 200.

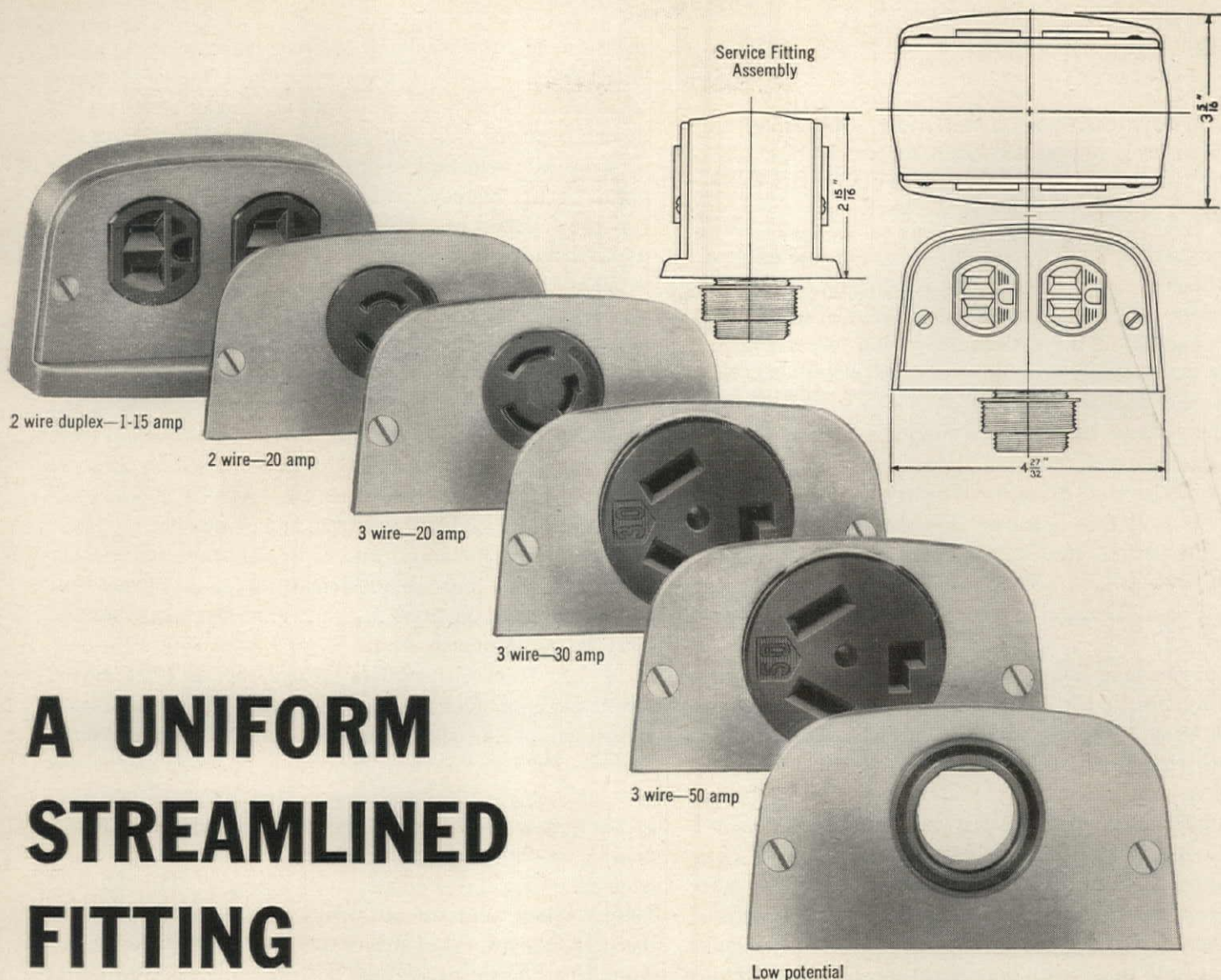


For detailed information and specifications on the complete line of MARMET windows—consult Sweet's Catalog File No. 17a . . . or write to MARMET for Catalog 57-A.

MARMET

CORPORATION

302d Bellis Street, Wausau, Wisconsin



A UNIFORM STREAMLINED FITTING

*for almost every
service requirement*

National Electric's complete line of Service Fittings for installation with underfloor electrical distribution provides uniformity of outlets in the finished installation. Every unit can be quickly installed even where the height of the fitting is restricted to less than 3" by modern desks or other free-standing equipment.

All housings are made up of bright, smooth, die-cast aluminum that presents an attractive, modern appearance. Nepco Service Fittings have a shock-resistant, one-piece housing that cuts installation time and simplifies replacement inventory because the housing is designed to accommodate cover plates for a wide range of services. They are designed to be interchangeable with National Electric's underfloor duct systems and with concrete floor boxes.

When your plans call for reinforced concrete floor construction, make sure you include a National Electric Nepcoduct underfloor electrical raceway system and NE Service Fittings.

National Electric Products

PITTSBURGH, PA.

2 Plants • 11 Warehouses • 35 Sales Offices



A single, double, or triple duct system, National Electric Nepcoduct provides separate, easily accessible underfloor wiring facilities for light and power, signal circuits, communication and telephone.

lenders, consumers, and builders, and zoning and subdivision controls has vastly improved conditions.

The cycle

If the market for land has shown one consistent trait down through time, it has been its chronic instability. Man, being bound by gravity, has depended on land for the satisfaction of his needs and wants, but the nature of these wants—and his ability to fulfill them—has been even more changeable than the economic winds. Though there has always been a close correlation between land prices and general business conditions, the peaks and troughs of the land cycle have been so violent as to be abnormal. And the cause of this malady has been an almost perpetual imbalance between the forces of demand, which have been highly sensitive to changing economic conditions, and the forces of supply, which have not.

The urban land supply, limited as it is by place, but mainly by time (in the sense that it takes time to prepare outlying raw land for use) has at first responded slowly to rising demand. Then as competition for available sites has sharpened, and prices have climbed, supply has moved more nearly into line with demand. The trouble is that the process has seldom, if ever, stopped there. Led on by the vision of more and more price rises, speculation has taken hold, and "investors" have begun driving prices up and creating surplus stocks of land in anticipation of future demand. At this stage, supply becomes particularly vulnerable to a change in demand and when, as has happened so often

in the past, an economic tremor shakes the buying structure, and price resistance develops, the cards begin to tumble. Unable to adjust supply to the new level of demand, prices fall, fall further and ultimately crash. This is the cycle that has been repeated over and over again in US history, and it is this that has accounted for the violent upswings and downswings that have marked real estate activity.

What then of the present boom? Has it really been different enough and solid enough to escape the magnificent bust that has ended all the others?

In many cities, particularly those in the East and Midwest, FORUM's survey found unmistakable signs that the boom has leveled off in the last year. Prices have not turned down, but they have ceased to climb at their old rates. For this, of course, there is a ready explanation—the tightening of the money market (p. 116), the drop-off in housing. But the explanation may simply mask what is a more serious condition, and the fact that prices have not dropped in the face of declining demand may be symptomatic of it.

In past booms, there has always been a brief period after genuine demand has retreated when values are sustained by speculation alone. In this boom, though speculation has not been a popular phenomenon it has certainly been a pervasive one, and the evidence suggests that within the last two years the rate of "investment" in land by businessmen, builders, and plain sharpshooters has stepped up alarmingly. This has not only worked to create out-of-line prices—and there can be little question that prices are out of line when land-to-total-value ratios average 20% (double the traditional ratio in homebuilding)—but it may well be the force sustaining those values today. The question, of course,

continued on p. 232

Buyer's guide to suburban land

DENVER: Land boom based on change from single to multi-industry local economy; 2,000 new residents a month have pushed price of one-time range-land up as much as ten times over early postwar. Raw land near one development rose from \$800 to \$3,000 per acre in 1950-54, but price rise now slowing down and site-value ratio holding at about 20%. Near new or planned highways, commercial and industrial sites selling for \$10,000 to \$40,000 per acre, up from \$500 to \$700, ten years ago, \$2,000 to \$10,000 in 1951. Residential and industrial developments expected to spread to 100-mi. radius of city. Water a problem now, but believe it will be solved by 1962 with completion of trans-mountain diversion projects which will open far fringe.

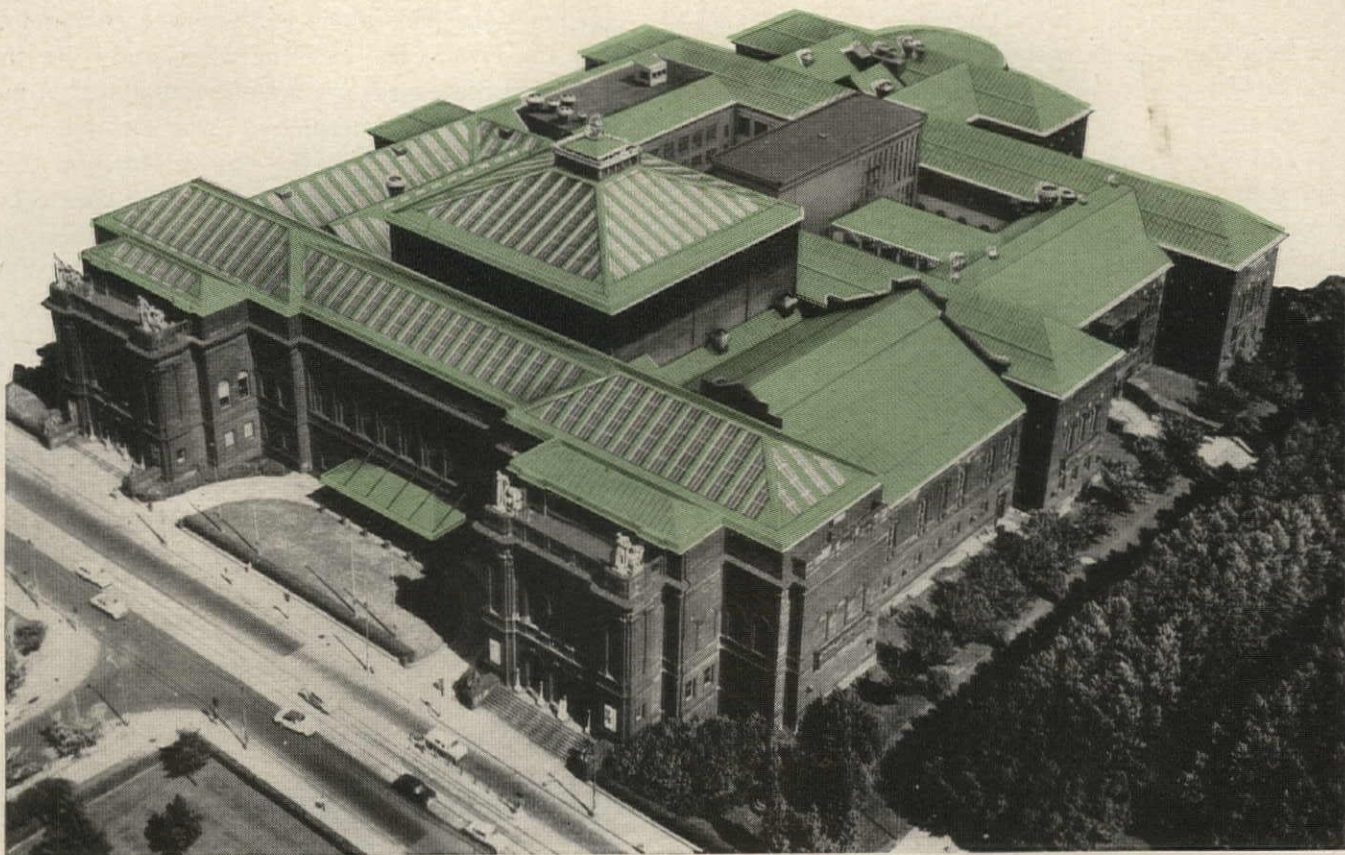
DETROIT. Commercial land shows strong gains, but mainly in past four years; typical 100-acre parcel \$2,000 an acre in 1952, now \$6,000. Top shopping center sites quoted \$8,000 to \$9,000. Residential prices, improved lots, up from \$22 to \$35 a front ft. to \$60 to \$105 since 1947; site-value ratio, now 22% to 25%, has more than doubled. Acreage for developments not bought heavily until 1952, but parcels sold raw for about \$1,500 to \$1,700 an acre in 1947 now worth typically around \$7,000 to \$8,000, with choice small pieces up to \$10,000. Over-all, residential land up 400%; little surplus subdividing. Increase for industrial land in out-city areas, slightly less than that for residential and commercial use. Area population up 800,000 since 1947.

KANSAS CITY: Main growth in this two-state five-county area has come since 1951; considerable raw land left. Prices of residential acreage up three to four times in ten years but improved sites (top price: \$100 a front ft.) still below national average. Site-value ratios now in range of 20% to 25%. Sizable speculation in commercial land with some large tracts bought in mid-forties for less than \$1,000 an acre now being parceled at \$9,000 to \$10,000. Industrial district land tight at prices roughly double postwar.

KNOXVILLE: Ten years ago land in this predominantly agricultural area ranged from \$250 to \$500 an acre, now sells raw for \$1,500 to \$2,000. Finished lots in average-price subdivisions have risen about two-

and-one-half times to \$2,200, with much of increase due to stiffer town and FHA requirements. In choice locations, increase is fivefold. Ratio of land to finished building nearing 20% today, up from 10% in 1947.

LOS ANGELES: 1.89 million more people in area than in 1947. Residential land prices up roughly five to seven times with signs of increasing speculation. Some unimproved acreage as high as \$10,000 compared with maximum \$1,500 ten years ago. Heavy demand for large industrial tracts; price jumps up to 900%; sales at \$40,000 to \$50,000 an acre. Considerable activity in out-laying tracts for future use. Business centers of small out-lying towns only ones to show relatively stable prices.



Fabricator and Installer: Overly Mfg. Co., Greensburg, Pa.
 Architect and Engineer: Charles M. and Edward Stotz, Pittsburgh, Pa.

FAMED CARNEGIE INSTITUTE gets handsome, low-cost green roof of Alcoa Aluminum

A Pittsburgh landmark, the internationally known Carnegie Institute and Library, is looking its attractive best these days. A new four-and-one-half-acre roof of Alcoa® Aluminum now covers the 60-year-old art treasure house. Not only is the new roof beautiful but it provides lasting protection for the priceless paintings, museum pieces and other works of art exhibited in the building.

The cost of the aluminum roof was far less than the cost of copper. It weighs less than a third as much as the old roof of Spanish tile. It is designed to withstand winds of hurricane force without harm. Mechanically interlocking joints made it possible to permanently seal each section of the roof as it was applied, preventing weather damage to the interior.

Overly Manufacturing Company, Greensburg, Pa., fabricated and installed the roof, using the patented Overly type "B" batten roofing method. It is permanently watertight and should last as long as the building. The color is a soft, harmonious green approximating the patina of aged

copper. Known as Alodine*, the long-lasting color finish is chemically a part of the metal surface. A large portion of the new roof consists of Overly-Goodwin Puttyless Skylights.

If you are looking for beauty, permanence and low cost in a roofing material, you'll find all these features in Alcoa Aluminum. See the architectural consultant at your nearest Alcoa sales office or write Aluminum Company of America, 1887-B Alcoa Building, Pittsburgh 19, Pennsylvania.

*Registered trademark of American Chemical Paint Company



Your Guide to the Best
 in Aluminum Value



THE ALCOA HOUR
 — Television's finest live drama, alternate Sunday evenings

is how long they can be sustained, for land is a residual cost in building, and unless a market is willing to pay more and more for its finished construction, rising materials and labor costs must be offset by lower site costs.

FORUM has predicted (Nov., 1956) that by 1966 outlays for new construction will have climbed to \$64 billion, figured on the basis of present dollars. This implies a tremendous and continuing demand for land. But what may happen in fulfilling it—and, indeed, seems to be happening now—is a by-pass of the present areas of highest prices in favor of cheaper land farther from the city (some of this leapfrogging, of course, is simply the normal process of urban growth). If this trend should persist, the boom in its present environs could suffer a serious deflation, with prices forced down to more realistic levels where mass-market development would again be feasible. This does not mean that values would collapse, or even that they would fall to the levels of more remote acreage; today's investors, presumably, would be able to weather the slide and avoid panic selling; potential demand would still be present, and choicer locations would still be able to command a premium. But the effect would be a shake-out and a sizable decline in some of the top-layer prices.

Admittedly, this prospect could be upset by a strong government move to stimulate housing by further credit manipulation. But short of this, there seems little chance of stemming the forces that are now producing the shift to cheaper land. In housing, a trough in family formations through most of the next decade will be working to ease demand pressures, with the result that

the market is likely to become increasingly selective, eyeing prices more closely, demanding more in terms of construction. This alone will create a tremendous pressure for lower-cost, outlying sites, and with improved highways these sites are not only possible, but palatable. In this sense, the federal road program will have a tremendous effect—paving the way to the outer fringe and more marginal land for both industry and central-city workers, and widening immensely the living radius for people with jobs in the suburbs. In the New York area, for instance, the peripheral counties are expected to absorb more than half the region's population growth for the next 20 years; in Los Angeles, as one builder wryly said: "The Hollywood hills look flatter every day." Finally, the relative scarcity of close-in, easy-to-develop sites, and the tighter zoning and building restrictions placed upon them, will continue to push building farther out, as it is doing now—e.g., Boston's latest big industrial-residential project went 50 miles out, to rural Sturbridge, to get the acreage and conditions it wanted.

But if the boom does retreat, and the age-old land cycle is confirmed in this way, it will be confirmed in a strange way, indeed. For at the very time one boom is ebbing, another, farther out, may be building up, and this has never happened before. Were it not for the automobile, it might not be happening now, but so great is our mobility in this motor age that it is now possible to conceive of a chain of land booms, one following the other, with dislocation in between, each one farther from the old urban center. A Cleveland industrial builder put it candidly: "When that 10% to 15% ratio of land-to-building cost for factories becomes 20% to 30%, we simply move farther into the country and start a new boom."

Buyer's guide to suburban land

NEW YORK: More than 300 sq. mi. of area developed since war. Subdivision land, Bergen, Nassau Counties, four to five times 1947 prices, but little acreage left close-in. Prices at \$10,000 to \$13,000 an acre past year, with prestige locations for custom building as high as \$18,000 for half-acre plot. Land beyond short commute still available at \$450 to \$1,000 in eastern Suffolk County, \$2,500 to \$3,500 in Rockland County built-up areas, compared with \$200 to \$350 in 1947. Greatest price hike in commercial land particularly shopping center sites, with some highway acreage doubling in just past two years. Key areas in Bergen, Rockland, quote prices six to twelve times over 1947. Land zoned apartment houses brings \$25,000 an acre, was \$1,000 to \$2,000. Industrial land scarce;

top price near-in areas about \$40,000 an acre along main highways. One parcel, zoned light manufacturing, up from \$1,800 an acre 12 years ago to asking \$30,000. Jersey Meadows marsh-and-garbage acreage, bought for \$700 to \$3,500 five years ago, now selling for speculative holding at \$13,500 or better. Will pay to redeem if acreage in New York area stays at \$1 sq. ft. or higher.

PHOENIX: Low-value desert land in Maricopa County has gone up as much as 200 times. With industrialization and population doubling, speculation reaches to waterless, isolated areas bringing prices of \$1,000 an acre for residential land on expectations alone. Nearer-in tracts, with water, are priced at \$3,000, while one old race track site near city

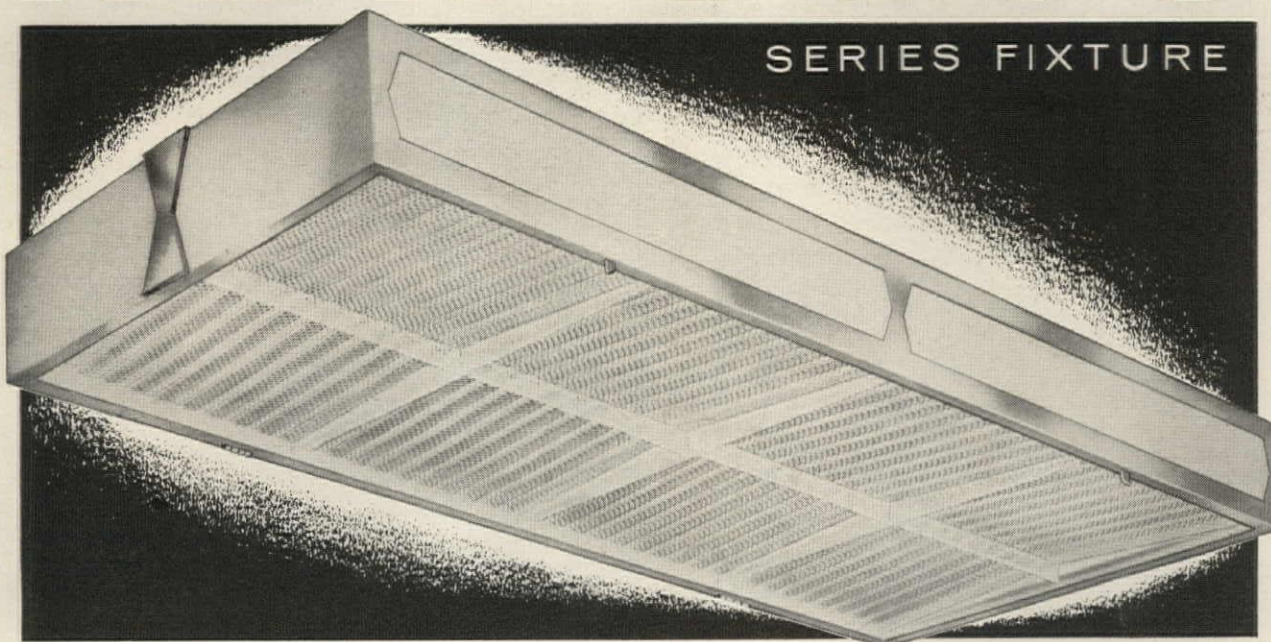
sold to a developer for \$12,000 an acre in 1956 (postwar price: \$500). Commercial land along highways bought at \$35 a front ft. being held for \$500 to \$900; some acreage up from \$50 to \$3,000 in three years.

SEATTLE: Relative scarcity of good development land has powered upswing of 800% to 1,000% in price of prime suburban locations since 1947. Residential land shows steady climb of peak prices from \$150-\$200 an acre in 1947 to \$850 an acre in 1954, to \$2,200 or better today. (Site-value ratio shows little change, though, now about 11%.) Industrial land market highly speculative, running at five to six times 1950 prices. Rezoning expected to raise land held on options from \$1,000 to \$7,000

and even \$10,000 an acre. Some industrial land being held at \$35,000 an acre, bought at \$1,000 two years ago.

ST. LOUIS: Heavy growth in St. Louis County (ten-year population gain, 70%) has boosted prices of residential land an average of 400%. One parcel bought for \$750 an acre raw in 1946 sold recently for \$4,000 raw; others have moved at \$6,000 and as high as \$9,000 with improvements. Commercial-zone land shows greatest rise: some highway frontage now quoted \$1,500 a front ft., while in-town suburban sites that brought \$200 a front ft. in 1950 are tagged at \$800 today. Undeveloped land for industrial districts relatively cheap, some tracts still under \$6,000.

Meet Litecontrol's NEW 7300



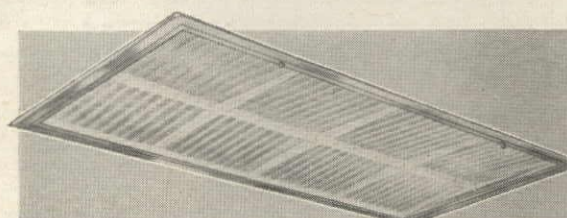
SERIES FIXTURE

*... Modern lighting at its
Problem-Solving Best with
Holophane's New, Revolutionary
Acrylic Lens*

Yes, here is modern surface lighting at its best for modern stores and offices. Why? Because here is an attractive fixture which utilizes the Holophane No. 6024 Controlens* — the lens that has broken the glare barrier. This lens, extremely high in efficiency while low in brightness, permits the use of high lighting levels without the glare discomfort heretofore unavoidable with high footcandle installations. What's more, the fixture is sturdy, light-weight and economical... first cost and maintenance are appealing to any budget. If you have a lighting problem, this is the type of standard fixture that can solve it for you. Available with 2, 4, or 6-40 watt rapid start lamps — length 49½ inches, height 4¾ inches.

QUICK FACTS

- **TYPE** — Surface hinged acrylic lens fixture
- **HOUSING** — Die-Formed, all welded. Made of at least 20 Gauge Electroplated Zinc Coated Steel, for Rust Prevention and Bonderized for paint adherence.
- **HINGED DOOR** — Easy to open and close with Trigger Catch. 16 gauge die formed steel, welded throughout.
- **SIDE PANELS** — Translucent plastic
- **FINISH** — Baked white enamel
- **KNOCKOUTS and HOLES** in top for easy mounting



*Also New! Litecontrol
8300 Series
for Recessed Mounting*

Like the 7300 Series, the 8300 may be easily used to advantage individually or in rows in stores, offices, auditoriums, banks and elsewhere. It is designed for recessed mounting in plaster or T-Bar ceiling (will not snap in). Not for inverted Tee grid ceilings (for which other designs will be available). 2, 3, 4 or 6-40 watt rapid start lamps. Holophane No. 6025 CONTROLENS*. Hinged door is removable, opens from either side, Trigger Catch. Length 48 inches, height 7 inches. Other construction details similar to 7300 Series.

*Registered T.M.


LITECONTROL
Fixtures

KEEP UPKEEP DOWN
LITECONTROL CORPORATION
36 Pleasant Street, Watertown 72, Massachusetts

DESIGNERS, ENGINEERS AND MANUFACTURERS OF FLUORESCENT LIGHTING EQUIPMENT DISTRIBUTED ONLY THROUGH ACCREDITED WHOLESALERS

Enduring Beauty and Economy!

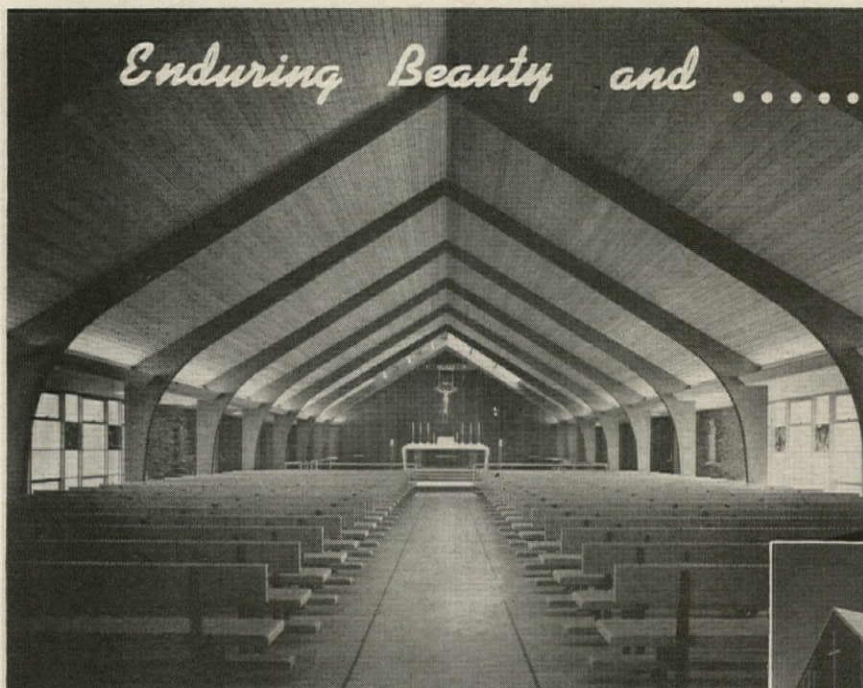


PHOTO-HEDRICH-BLESSING

Our Lady of Humility Church, Zion, Illinois
Architect: Joe L. Bennett, Des Plaines, Illinois

No other building medium equals the inherent beauty of wood. Unit Laminated Arches allows the architect full freedom of expression toward the creation of inspirational church interiors.

Panel Graded Unit Deck, a 4"x5" structural interlocking wood decking, provides unobstructed ceilings with all the warmth and pleasing appearance of wood which tends to accent the beauty of the sturdy Southern Pine laminated structural members.



WRITE FOR INFORMATIVE BULLETIN



UNIT STRUCTURES, INC.

PLANTS & OFFICES—PESHTIGO, WISCONSIN, MAGNOLIA ARKANSAS

YOURS FREE!



New catalog helps solve your structural sealing and protective coatings problems.

- Tells how to protect metal, masonry and wood against acids, alkalis, alcohol, oils, gasoline, solvents, salts and water with DEL Coatings.
- Describes how DEL Synthetic Rubber Compound solves the problem of joining metal, wood, masonry and glass in a *permanent, weathertight* seal.
- Carefully tabulated and organized to help corrosion, construction and chemical engineers and architects find the *right* product for each structural sealing and protective coating problem.



For a free copy of this new, easy-to-use catalog, write today!

**DAVID E. LONG CORP., DEPT. AF-27
220 East 42nd St., New York 17, N. Y.**

Please send me FREE, your new catalog on DEL Protective Coatings and DEL Synthetic Rubber Compound.

Name..... Title.....
Company.....
Address.....
City..... Zone..... State.....

FOR BUILDINGS OF ALL TYPES
... first in efficiency, economy
and client satisfaction



TODD BURNERS

GAS OR OIL



PRODUCTS DIVISION
TODD SHIPYARDS CORPORATION

Headquarters:

Columbia & Halleck Streets, Brooklyn 31, N. Y.

Plant:

Green's Bayou, Houston 15, Texas





**"We specified
SJI-approved joists,
of course . . .
because we wanted
top quality!"**

THE STEEL JOIST INSTITUTE is a non-profit association of open web steel joist manufacturers, formed to establish and maintain a strict code of standards and specifications for the types of joists adopted and approved by the Institute.

To insure the continued high quality of SJI-approved joists, the Institute has adopted a comprehensive quality control program. A nationally known independent testing laboratory is employed to conduct unscheduled visits to member company plants.

Production methods and equipment are studied, joists are selected at random from the production lines and subjected to rigid tests and inspection. Dimensional tolerance, panel spacing, alignment of bearing members, weld and tensile strengths and other structural features are checked.

Only after the manufacturer has demonstrated his ability to deliver products conforming to SJI standards is he permitted to identify his joists as SJI-approved.

You specify with confidence when you select SJI-approved steel joists.

Send coupon today for the Steel Joist Institute's technical bulletins on Bridging Research Program and/or Quality Verification Program.

See Our Insert

In Sweet's

Architectural File = $\frac{2c}{ST}$



STEEL JOIST INSTITUTE

DuPont Circle Bldg.,

Washington 6, D. C.

Steel joists of the designations adopted by the Steel Joist Institute and manufactured by the following companies have been investigated and approved by the Steel Joist Institute:

AMERICAN BRIDGE DIVISION
United States Steel Corporation
BETHLEHEM STEEL COMPANY
BUILDERS STRUCTURAL STEEL CORP.
CECO STEEL PRODUCTS CORP.
COLORADO BUILDERS SUPPLY CO.
CONCRETE STEEL COMPANY
GABRIEL STEEL COMPANY

LACLEDE STEEL COMPANY
MACOMBER INCORPORATED
SHEFFIELD STEEL DIVISION
Armco Steel Corporation
SOUTHWEST STEEL PRODUCTS
TRUSCON STEEL DIVISION
Republic Steel Corporation
VIRGINIA STEEL COMPANY

STEEL JOIST INSTITUTE
DuPont Circle Building
Washington 6, D. C.

Gentlemen: Please send me your Technical Bulletin(s) on: (please check)

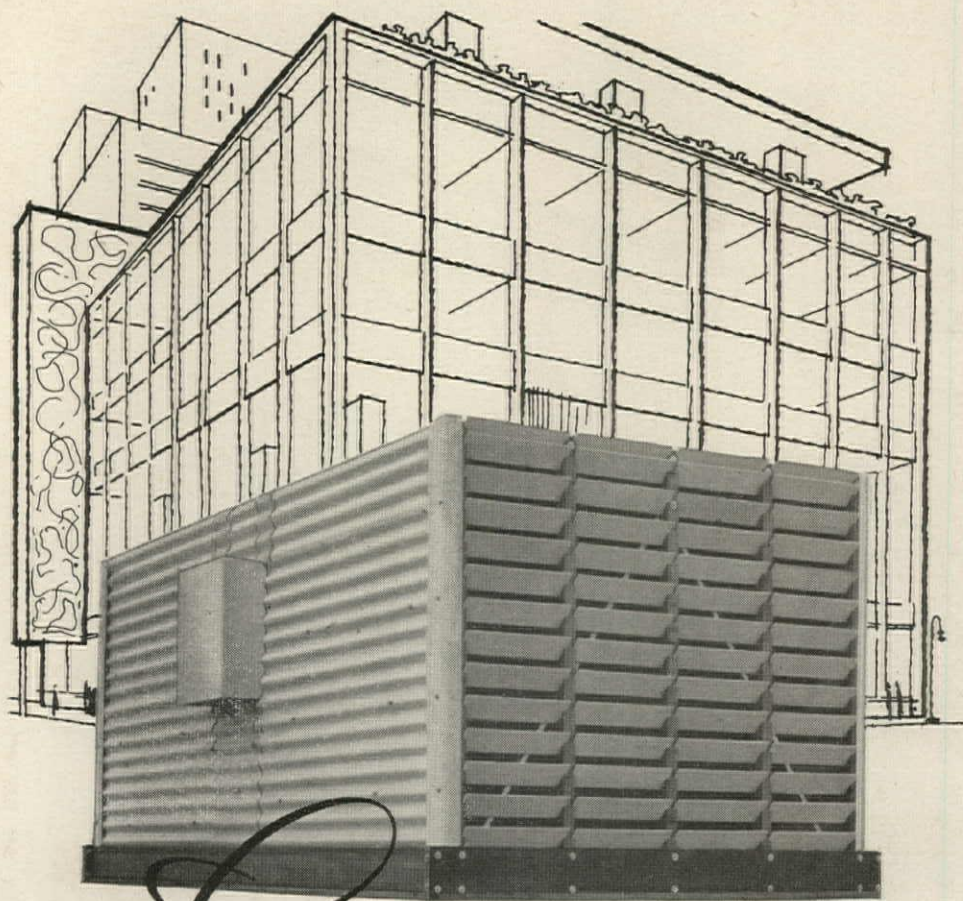
- ☐ 1BR—Bridging
☐ 1QVP—Quality Verification Program

Name _____

Company _____

Address _____

City _____ Zone _____ State _____



DOUBLE-FLOW AQUATOWERS* ARE

Complete...

When reviewing submittals on intermediate capacity cooling towers it pays to make certain that all essential elements are included.

For example, do they include such vital tower components as diffusion decking . . . drift eliminators . . . access doors . . . adequate fan cylinders? Without these basic parts, no tower can be complete.

When you receive submittals on Marley Double-Flow Aquatowers, you can automatically be sure that "it is all there" — that there is nothing extra to buy. Every cooling tower component that contributes to better performance, greater economy and simpler maintenance is standard equipment on Double-Flow Aquatowers.

The performance you get out of your cooling tower depends on what goes into its design and construction. In a Marley Double-Flow

Aquatower, there is no compromise with quality, no "shortcuts" that prove expensive in the long run. That's why the Double-Flow Aquatower is the overwhelming first choice of architects, contractors, engineers and owners who require commercial or institutional water cooling equipment.



The Marley Company

Kansas City, Missouri

*Registered Trade Names

THE MONEY PINCH

continued from p. 117

been rare in recent years. But in the current squeeze this oft-criticized agency is about to become an angel for a few apartment builders—those obtaining urban renewal area mortgage insurance (under Section 220). Last October, for instance, Chicago Developer Herbert S. Greenwald was proceeding with his Lafayette Park-University (formerly Gratiot) project in Detroit without a firm take-out for his permanent 4.25% loan. He was "gambling," he declared, depending in a pinch on selling it to Fanny May for a discount (loss) of no more than 2.5%. But with a revised commitment at the new, liberal 5% rate FHA has now approved for such loans (FORUM, Jan. '57) Greenwald now anticipates no trouble at all in finding a takeout at par.

New York Builder James Scheuer, partner with Roger Stevens on the "Area B" urban renewal redevelopment project in Washington, D. C., also was greatly pleased with FHA's new 5% for urban renewal loans but not as optimistic as Greenwald about passing it along all the way up to par.

Steel and tight money

If tight money was making any considerable dent in big building activity, it did not yet show up significantly in the tight structural steel market. One architect and two builders in New York did report cases where steel suppliers had offered steel delivery in about eight months, by slotting the orders into production schedule vacancies created by projects that supposedly were washed out by tight money problems. But by all accounts these must have been isolated favorite-customer "Aunt Agatha" cases—as rare a windfall as picking up same-year *My Fair Lady* tickets at box-office prices. A check with almost a dozen other top builders brought replies that building steel was still as tight, or tighter than ever—18 to 24 months' delivery.

How much longer would the money pinch last for big building?

Answers vary from expert to expert, from city to city. About two thirds of the scores who expressed their opinions to FORUM last month think building credit will still be just about as tight at midyear; a gloomy 20% think it will be even tighter then. But time bred optimism: about 50% think it will be easier by the end of the year; 40% still about the same, and only 10% tighter than ever.



MARPOLE PUMICE AUTOCLAVE TILE

*Underwriters
approved... Distributors and
Canadian Sales Agents
for...*

CASCADE PUMICE

*Lloyd A. Williamson
Producer
Bend, Oregon*

Manufactured by

Marpole Brick Division

McCLEERY & WESTON
LIMITED

• Vancouver B.C. Canada •



Only DOR-O-MATIC provides
these 10 service advantages

1. Positive uniform control
2. Built-in hold-open device (optional)
3. No accidental hold-open
4. Positive back-stop
5. Positive centering of door
6. Two-speed closing action
7. Built-in leveling screws
8. Permanent oil seal at spindle
9. No seasonal adjustment
10. Easy installation

DOR-O-MATIC INVISIBLE DOR-MAN
NOW AVAILABLE IN 2 NEW MODELS

For completely automatic door controls,
specify the Invisible Dor-Man... in carpet-actuated or handle-actuated models.



DOR-O-MATIC

Division of Republic Industries, Inc.
7356 W. Wilson Ave.,
Chicago 31, Ill.

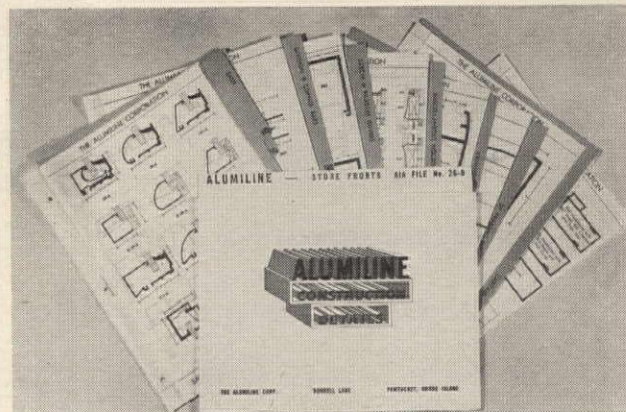
IN CANADA: Dor-O-Matic of Canada, 550 Hopewell Ave., Toronto 10, Ont.
EXPORT REPRESENTATIVES: Consultants International, 11 W. 42nd St., N.Y. 36, N.Y.

Choose from 31 Models...
there's one for every type door
... in any type building

Specify Dor-O-Matic for metal, glass, or wood doors. Installed with any one of them, Dor-O-Matic gives uniform opening control and produces a positive, 2-speed door closing action... yet your door retains a clean, eye-appealing appearance. Finest construction and simple, safe design assure long, trouble-free service.

WRITE TODAY FOR
ILLUSTRATED BROCHURES

6134



ALUMILINE Offers All Architects Its Latest 1957 Publications

No charge... No obligation... Yours for the asking

1. ALUMILINE FULL-SIZE CONSTRUCTION DETAILS
2. ALUMILINE 1957 STORE FRONTS CATALOG
3. ALUMILINE 1957 ENTRANCES CATALOG

Send for your free copies today
Write to Dept. F

THE ALUMILINE CORPORATION
Architectural Aluminum Products
DUNNELL LANE PAWTUCKET, R. I.

see our catalog in

Sweet's
or write for copy

MODULAR SIGHTRON



for the critical
lighting professional

Modular Sightron, in 4' and 8' modules, creates an unbroken line of light for office, school and hospital corridors and utility areas. Complete specifications on request.

LIGHTOLIER

ARCHITECTURAL LIGHTING
JERSEY CITY 5, NEW JERSEY



**"Reznor is the one
name in gas heating
equipment my clients all
recognize and accept"**



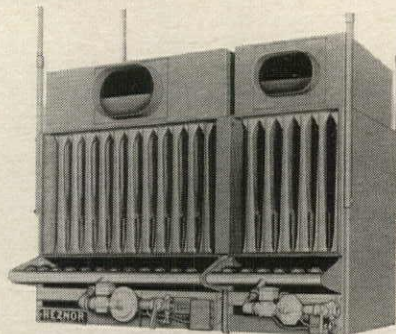
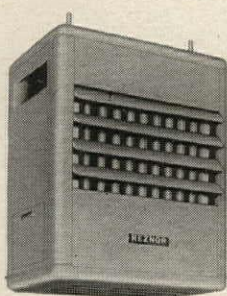
"It's pretty discouraging to write careful equipment specifications and then have them rejected by a client because he just doesn't know the make. But that never happens when we specify Reznor gas heating equipment. Reznor is the one make all our clients know and accept. It's not hard to understand why. Reznor sells nearly one out of two gas unit heaters, so Reznor is the unit heater our customers are used to seeing wherever they go. And Reznor is the brand they see advertised in the national magazines they read.

"Client acceptance is only one of the reasons we specify Reznor equipment. We know from experience that Reznor stands for quality of construction and performance. High operating efficiency . . . long life . . . dependable service.

"We like to work with Reznor because it gives us one source for all our gas heating equipment needs . . . suspended gas unit heaters for all industrial and commercial heating requirements . . . gas-fired duct furnaces which let us custom engineer heating and heating-cooling systems to meet exact job requirements.

"We appreciate Reznor availability, too. There's a stocking Reznor distributor in every major city. We know we can specify Reznor equipment with complete assurance that the units we specify will be available when and where they're needed."

Yes, Reznor is the preferred line of gas heating equipment . . . preferred by clients, by architects, engineers and heating contractors. If you don't know Reznor, it's time you got acquainted. Write today for free catalog or give your nearby Reznor distributor a call. You'll find him listed under "Heaters-Unit" in the yellow pages of your telephone directory.



REZNOR
THE WORLD'S LARGEST-SELLING
GAS UNIT **HEATERS**

REZNOR MANUFACTURING COMPANY
40 Union Street, Mercer, Pa.

POPULAR TASTE

continued from p. 145

not to have to think in terms of a new discipline. Furthermore, it is doubtful whether the average mind can ever grasp the complexities of modern building. It was easy to understand the design and structure of the Italian peasant farmhouse. Today, the plethora of possibilities is so vast and so confusing that a rational esthetic can be developed out of it only by genius; an acceptable interpretation of this esthetic only by the trained professional. In the past, genius was required only for huge and complicated projects such as the Pyramids or the Taj Mahal. Today, great talent is required to design a satisfying small house.

Lost: nature's touch

There is no doubt that the wealth of possibilities in our industrial society has left the average person far behind and hopelessly confused. But even this confusion does not seem an adequate explanation for a lack of the most rudimentary sort of taste.

Can it be because we are almost entirely cut off from nature? Are we, in fact, so alienated from it that the subject itself sounds silly to our modern ears? Whether so or not, this is the one truly basic difference which separates the past and the present.

Until the industrial revolution with its consequent specialization of work, every man experienced a direct connection with the land, with sun and storm, with all the elemental forces which ruled his life. Hunting, fishing and agriculture were the traditional means of livelihood throughout the ages. Even in the great cities the toolmakers, the masons, the weavers, the woodworkers were close to the natural resources upon which they drew. Seedtime and harvest, the fruitful summer and the recuperative season of cold or rain were the experience of every man. There was a rhythm to life, an ebb and flow attuned to the yearly birth and growth and death and rebirth of the earth itself.

It was from this natural world that symbolism—in religion, language, art and architecture—sprang. The ancient pagan ceremonies of the seasons emphasized the peace and progress of life itself, giving point to man's existence. Even in Christian times, the Church's Holy Days were superimposed upon the older nature festivals, giving the new ceremonies an extra dimension of meaning. Throughout the pre-industrial past, nature was

continued on p. 240

WHEN YOU SEE THIS KIND OF WORKMANSHIP,
EXPECT TROUBLE...



GOOD workmanship is one of the most important factors in preventing leaky brick walls.

Good workmanship includes wetting the brick, securing full head and bed joints, backplastering the face brick—and laying the brick carefully to keep the bond. The position of the brick should never be shifted after the mortar has stiffened.

Expect trouble when brick are shifted or tapped into place after the mortar has stiffened. Cracks will result and the wall may leak.

Brixment mortar has high water-retaining capacity. It resists the sucking action of the brick. It stays plastic and workable longer. Brixment mortar therefore makes it easy for the bricklayer to lay the brick accurately, before the mortar has stiffened.

Brixment mortar has great plasticity, high water-retaining capacity and bonding quality, great resistance to freezing and thawing, and freedom from efflorescence. Because of this combination of advantages, Brixment is the leading masonry cement on the market.

BRIXMENT

LOUISVILLE CEMENT COMPANY, Incorporated, LOUISVILLE, KENTUCKY

the artist's master and his inspiration. His forms intuitively expressed the vital principles of birth and growth and death inherent in animal and plant, in sun and moon and human forms.

Furthermore, there was a wholeness to life. Work and workshop, art and ritual, nature and man were as warp and woof to each other. Primitive art was never abstract in our modern sense, no matter how stylized. It was always deeply meaningful, usually sacred. The medieval cathedral sprang from a religious impulse which permeated man's entire existence. Form was always significant, an expression rooted in man's basic orientation within his natural world.

Today, most of us are entirely cut off from nature. We buy our package of frozen peas and our sanitary, cellophane-wrapped beefsteak at the supermarket. A thunderstorm may mean a temporary failure of electric current, or a drip of water if we have a leaky roof. How many of us, at this moment, know the phase of the moon? Our days run by, without seasonal rhythm, without pace, a dead level broken only by a swift summer vacation and a Christmas buying spree.

The basic fact of our lives is not nature but the machine. And the voice of the machine is a steady, monotonous hum. Only the exceptional man partially escapes its dominion. The laborer on an assembly line turns the identical screw, hour after hour, day and year without end. The white collar worker figures and files and writes memoranda by a routine almost as deadly.

Furthermore, the machine has shattered our lives into pieces. The work of most men bears little relation to their leisure-time pursuits. Religion has lost its place in the texture of our days. Art is secular, endowed with no deep significance, created in a vacuum and housed in a museum. Ceremony, symbol and community of feeling are almost entirely lacking from our lives. To many persons, the washing of the car on Saturday is the one remaining ritual act. This may account for the vague unease of many people who should be happy—well-clothed, well-fed, snugly housed and, despite the threat of the atomic bomb, far more secure from day to day than were our ancestors.

For man is above all a symbol-making animal. It is his genius for symbolizing that has created language, music,

continued on p. 242



THE CEILING: FORESTONE

Bernard Hoffman School
North San Rafael, Calif.

Architect:

Donald Francis Hines

Contractor:

Pacific Coast Builders

Acoustical Contractor:

Cramer Acoustics

Economical Forestone is available through the following Simpson Certified Acoustical Contractors:

ALABAMA

Badham Insulation Co., Birmingham
Stokes Incorporated, Mobile

ARIZONA

Fiberglas Engineering & Supply, Phoenix
Hall Insulation & Tile Co., Tucson

CALIFORNIA

Coast Insulating Products, Los Angeles
Cramer Acoustics, Fresno and
San Francisco
John K. Haas Company, San Diego
H. W. Rivett Company, Sacramento

COLORADO

Construction Specialties Company, Denver

CONNECTICUT

Wilson Construction Company, Hartford

FLORIDA

Anning-Johnson Company, Miami

GEORGIA

Anning-Johnson Company, Atlanta

IDAHO

Fiberglas Engineering & Supply, Boise
Idaho Acoustical & Building Specialties
Co., Boise

ILLINOIS

General Acoustics Company, Chicago
George S. Grimmer & Co., Champaign,
Decatur, Mattoon and Springfield

INDIANA

The Baldus Company, Inc., Fort Wayne
E. F. Marburger & Son, Inc., Indianapolis
Parkinson Brothers, Evansville

IOWA

Lamoreaux and Assoc., Inc., Marshalltown

KANSAS

Ecoff & Co., Wichita

KENTUCKY

Atlas Plaster & Supply Company, Louisville

LOUISIANA

King & Co., Inc., New Orleans

MARYLAND

Lloyd E. Mitchell, Inc., Baltimore

MASSACHUSETTS

Acoustical Contractors, Inc., Brighton

MICHIGAN

Detroit Acoustical Contracting Co., Detroit
Grand Rapids Acoustical Co., Grand Rapids
and Lansing

MINNESOTA

Dale Tile Company, Minneapolis

MISSISSIPPI

Stokes Incorporated, Jackson

MISSOURI

Hamilton Company, Inc., St. Louis
B. J. Lutz, Inc., Kansas City
Midwest Services, Inc., Joplin

NEBRASKA

Kelley Asbestos Products Co., Omaha

NEW JERSEY

Connor & Company, Inc., Kenilworth
Kane Acoustical Company, Inc., Fairview

NEW MEXICO

Fiberglas Engineering & Supply,
Albuquerque

NEW YORK

The Cronin Acoustical Co., Stony Point
Davis Acoustical Corp., Albany
Davis-Fetch & Company, Inc., Buffalo and
Jamestown
Robert J. Harder, Inc., Lynbrook, L. I.
James A. Phillips, Inc., New York
Rochester Davis-Fetch Corp., Ithaca and
Rochester

NORTH CAROLINA

The Bonitz Insulation Co., Greensboro and
Goldsboro
Bost Building Equipment Co., Charlotte

OHIO

Acoustical Contracting & Supply Corp.,
Cleveland
Cincinnati Floor Company, Cincinnati
Rietmiller Acoustic Company, Columbus

OKLAHOMA

Denman Floors Company, Oklahoma City
Midwest Marble & Tile Company, Tulsa

OREGON

Commercial Tile Company, Eugene
R. L. Elfstrom Company, Salem
Johnson Acoustical & Supply Co., Portland

PENNSYLVANIA

Selby, Battersby & Company, Philadelphia
Standard Floor Company, Pittsburgh

SOUTH CAROLINA

Bonitz Insulation Co., Columbia

TENNESSEE

Alexander Marble & Tile Company, Memphis
Anning-Johnson Company, Knoxville
Nelson Baird Company, Inc., Nashville

TEXAS

Blue Diamond Company, Dallas
Builders Service Company, Fort Worth
Collins Roofing & Sheet Metal Company,
Odessa
General Supply Company, Inc., Houston
Houser Resilient Floors Co., El Paso
Raymond Rambo Materials Co.,
Corpus Christi
Rufus A. Walker & Co., San Antonio
Stanford Engineering Company, Abilene

UTAH

Utah Pioneer Corporation, Salt Lake City

VIRGINIA

Anning-Johnson Company, Alexandria
Manson-Smith Company, Inc., Norfolk and
Richmond

WEST VIRGINIA

Asbestos & Insulating Co., Charleston

WASHINGTON

Elliott Bay Lumber Company, Seattle
Fiberglas Engineering & Supply, Spokane

WISCONSIN

Building Service, Inc., Appleton and
Milwaukee

CANADA

F. Drexel Company Limited, Calgary,
Alberta; Vancouver and Victoria, B. C.
Hancock Lumber Ltd., Edmonton, Alberta

HAWAII

Hawaii Builders Supply Company, Limited,
Honolulu



*The Contractors above also install these other
Simpson Acoustical Materials: Hollokore Per-
forated Acoustical Tile Standard and Scatter-
drilled, Acoustical Roof Slab, Forestone Ceil-
ing Board, Fissured Mineral Tile, Metal Acous-
tical Units, Perforated Hardboard, Perforated
Cement Asbestos Board. Write today for com-
plete information on all Simpson Acoustical
Products.*

SIMPSON LOGGING COMPANY

SHELTON, WASHINGTON

THE CEILING: FORESTONE

Beautiful, inexpensive acoustical treatment for schools

When planning a new school . . . or remodeling an existing one . . . specify the built-in quiet essential to scholastic efficiency. Forestone Fissured Woodfiber Acoustical Tile lets you specify the beauty and warm texture of expensive mineral tile at a cost no greater than that of perforated woodfiber tile of comparable thickness. Forestone is available in 12" x 12" tiles; as ceiling board, sized to fit standard 24" x 24" and 24" x 48" exposed grid suspension systems; and in 12" x 23 $\frac{3}{4}$ " tiles designed for exposed Z and T suspension systems. Forestone is now available in 12" x 24" center-scored tiles with tongue-and-groove edges, flanged for nailing or stapling. When planning your next school, specify Forestone for luxurious, yet low-cost sound conditioning. Your nearest Simpson Certified Acoustical Contractor (see list on opposite page) will be glad to assist you in any way he can.





3 quality lines, completely weatherproofed, make Miller sliding glass doors ideal

1 Aluminum "250 Series" for single glazing only.

Snap-on glazing mold accommodates 1/4" plate or crystal. Fully Alumilited finish. "Magic-touch" hardware with Lucite pull.

2 Aluminum "1000 Series" for interchangeable single and dual glazing.

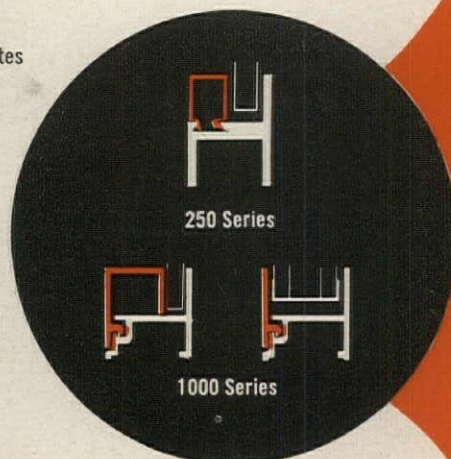
Converts from 1/4" plate to 1" insulating glass (or reverse) anytime without disturbing framing installation. Fully Alumilited finish. Full-grip hardware.

3 The Steel Series for single or dual glazing.

Made from heavy gauge Bonderized steel. Full-grip hardware with Lucite pull.

Miller SLIDING GLASS DOORS
Frank B. Miller Mfg. Co., Inc.
3216 Valhalla Dr., Burbank, Calif.

Write for catalogs. See your Distributor.
See Sweet's Arch. File (15d/MI).



art, religion, mathematics, atomic physics. But he can symbolize only from reality. And the existence of the average man today is too meager, too monotonous to be endowed with meaning. He is cut off from that nature which was the well-spring of his esthetic being. The machine has been unable to provide a substitute. Indeed, the industrial revolution did more than mechanize and specialize our work. It ploughed under the traditions, the rituals, the ways of life developed over many thousands of years—and gave us in exchange a world which we are unable to comprehend. We are left suddenly without a hold on reality, without guideposts or real convictions.

A second-hand esthetic sense

In relation to art and architecture this means that man's basic esthetic sense is stunted, is warped from its normal functioning. It is not firmly rooted in his way of life. It operates only at second hand. His yearning for symbolic meaning leads him to the outward forms of a warmer and more vital past; or to expressions of grandeur, stability, quaintness as his fancy dictates.

The machine esthetic as expressed in modern architecture touches no deep chord within him. He does not understand its rightness instinctively. It must be explained. Many persons, cut off as they now are from an intuitive understanding of design, can never grasp its esthetic. And since taste is now adrift, anything goes.

This is a major factor behind the corruption of modern architecture which one sees more and more often today at the popular level. The rambler with the picture window—neither fish nor fowl, modern design nor traditional—is a case in point. The clean taste of contemporary architecture is considered too severe. Some of its clichés are therefore incorporated in a bowl of mush. And there is neither tradition nor an instinctive design response to say it nay.

Even more hideous are the new shops and store fronts, supposedly modern; actually nothing but unbridled license, designed with neither the formal disciplines of harmony and proportion, nor the self-imposed restraints of functionalism.

But even the license of our domestic and commercial architecture pales in comparison to "roadtown." Here popu-

continued on p. 244

**ANOTHER
Acousti-Quiet
HOSPITAL**

QUIET Plus Beauty for Modern Hospitals

Foyer of Indianapolis Community Hospital, Indianapolis, Ind., showing ceiling installation of Striatone® Striated Mineral Fiber Tile. Architect: Daggett, Naegle & Daggett. Acousti-Celotex Contractor: Hugh J. Baker & Company.

This foyer of the Indianapolis Community Hospital is an attractive example of the highly compatible combination of quiet *and* beauty made possible when Acousti-Celotex Sound Conditioning is specified. Incombustible Acousti-Celotex Mineral Fiber Tile was installed throughout corridors, semi-private rooms, laboratories, wards,

surgery rooms, nurseries, labor rooms, diet kitchens, other service areas, cafeteria, offices, lobbies, and lounges. Your Acousti-Celotex Distributor will be glad to discuss the use of Acousti-Celotex Sound Conditioning materials in all your projects. Write for information today!

*TRADE MARK

FOR FULL DETAILS on the complete line of Acousti-Celotex products, please write to The Celotex Corporation, 120 S. LaSalle Street, Dept A-27, Chicago 3, Illinois.



ACOUSTI-CELOTEX

REGISTERED

U. S. PAT. OFF.

Sound Conditioning

Products to Meet Every Sound Conditioning Problem . . . Every Building Code—

The Celotex Corporation, 120 S. LaSalle St., Chicago 3, Illinois • In Canada: Dominion Sound Equipments, Ltd., Montreal, Quebec

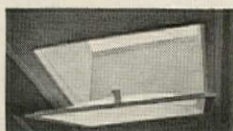
You can Solve a host of Design Problems with **WASCOLITE** products for **OVERHEAD DAYLIGHTING** **PLUS**



FIRE-VENTING



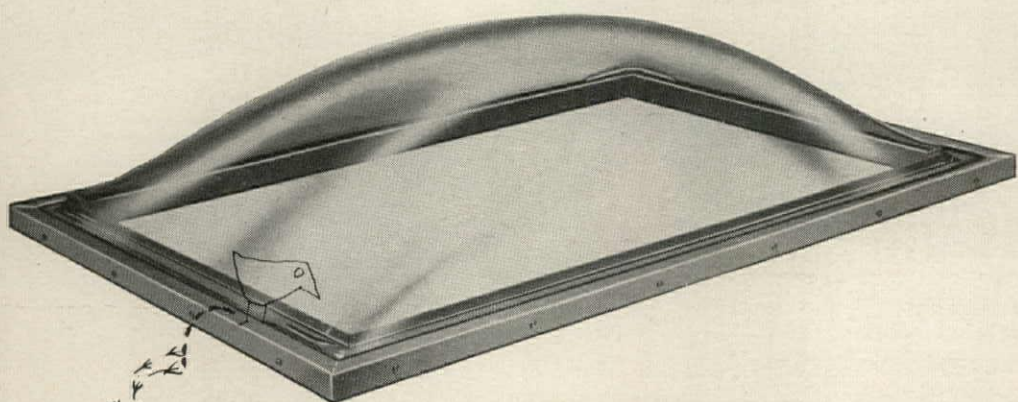
VENTILATION



EXTRA INSULATION



ACCESS TO ROOF

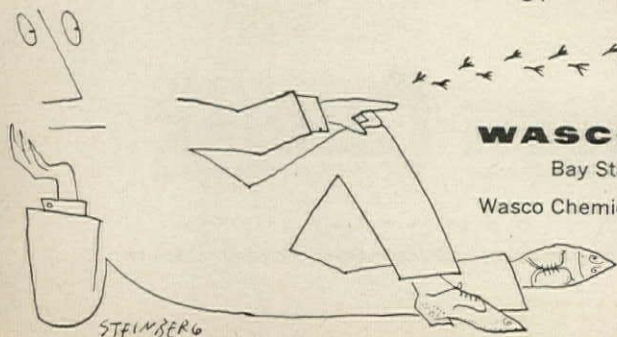


Wise birds will send for the full story on this line of
new building products today.

WASCO PRODUCTS, INC.

Bay State Road, Cambridge 38, Mass.

Wasco Chemical (Canada), Ltd., Toronto 12, Canada



POPULAR TASTE *cont'd.*

lar taste is seen in its freest display. Here, the former peasant, cut off from tradition and from his once meaningful way of life, goes a little mad. We have the Santa Claus Village, complete with sleigh and reindeer atop the roof; the Log Cabin restaurant built of plastic logs; the Eskimo pie shop in the shape of an igloo. There has even been discovered a hot-dog stand designed in the shape of a bun. To this has human symbolism fallen.

The right to vulgarity

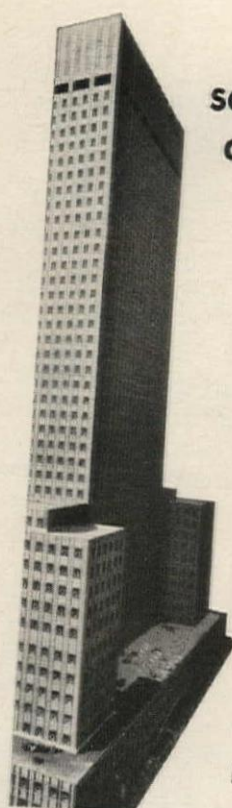
There is no question of it. In its worst forms our popular architecture has become obscene. Furthermore, there is an arrogance in this obscenity which strikes the man of taste like a blow in the face. This is a new and peculiarly twentieth-century phenomenon. The popular architecture of the pre-industrial past was characterized by modesty. It knew and kept its place. This brings us to a crucial part of our mystery, and to a very ticklish subject.

José Ortega y Gasset, the Spanish philosopher, wrote in his book, *The Revolt of the Masses*: "The mass is all that which sets no value on itself—good or ill—based on specific grounds, but which feels itself 'just like everybody' and nevertheless is not concerned about it. . . . When one speaks of 'select minorities' it is usual for the evil-minded to twist the sense of this expression, pretending to be unaware that the select man is not the petulant person who thinks himself superior to the rest, but the man who demands more of himself than the rest, even though he may not fulfill in his person those higher exigencies. . . ."

"The division of society into masses and select minorities is, then, not a division into social classes, but into classes of men, and cannot coincide with the heirarchic separation of 'upper' and 'lower' classes. . . . Within both these social classes are to be found mass and genuine minority."

He further explains: "There exist, . . . in society, operations, activities, and functions of the most diverse order, which are of their very nature special, and which consequently cannot be properly carried out without special gifts. . . . Previously these special activities were exercised by qualified minorities, or at least by those who claimed such qualification. The mass asserted no right to intervene in them; they real-

continued on p. 246



**SOCONY-MOBIL
CURTAIN WALL**



Sealed with

PARFLEX

Extruded Calking
COMPOUND

This handy, extruded calking ribbon helped speed erection... assures a lasting non-shrinking weather seal. Available in a wide range of standard widths and thicknesses.

Like a sample? Write today!

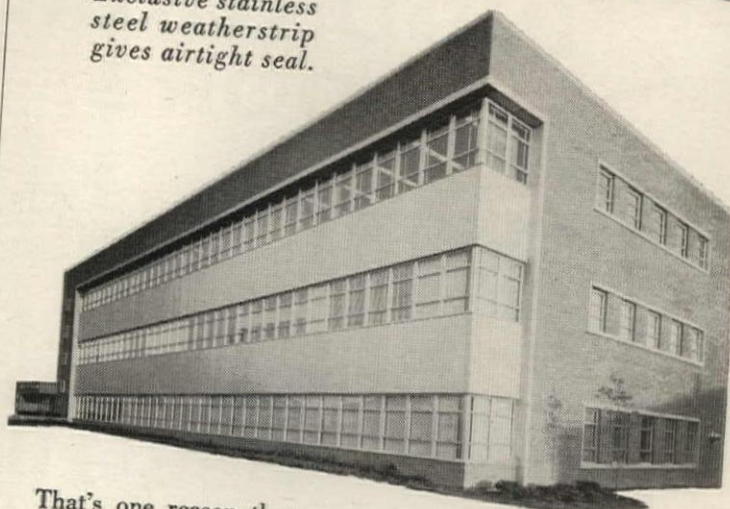
The PARR Paint & Color Company

18400 SYRACUSE AVE., CLEVELAND 10, OHIO



PROJECTED WINDOWS

Exclusive stainless steel weatherstrip gives airtight seal.



That's one reason these rugged, trouble-free units were specified for the modern new Metal Goods Corporation building* shown here.

Available in standard sizes or engineered to specifications.

*Architect: Syl G. Schmidt & Associates

"Not just a window... a WINCO"

WINCO VENTILATOR COMPANY • ST. LOUIS 15, MISSOURI

Editorial leadership is the key to circulation leadership

and Architectural FORUM has led its field in circulation ever since 1935—21 consecutive years!

It is editorial leadership, primarily, that makes a magazine worth buying, worth reading, worth advertising in...

FORUM

the magazine of building

Editorial and Advertising Offices: 9 Rockefeller Plaza, New York 20, New York

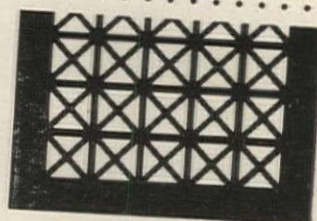
Subscription

Offices: 540 N. Michigan Avenue, Chicago 11, Illinois

*For
Beauty in
Buildings*

What makes one building interior stand-out over others? In many cases it's that extra touch of splendor made by the inclusion of Hendrick Grilles.

There are over one hundred different Hendrick Grilles available to harmonize with the most modern designs for residential, business or public buildings... and many are exclusive Hendrick designs. Each design can be furnished in a wide range of overall dimensions, bar sizes and number of perforations. And they're easy to install because they always lay flat... don't bend or warp. Write for complete details.



Hendrick

MANUFACTURING COMPANY

50 Dundaff St., Carbondale, Pa.

Perforated Metal • Perforated Metal Screens • Wedge-Slot and Hendrick Wedge Wire Screens • Architectural Grilles • Miter Open Steel Flooring • Shur-Site Treads • Armorgrids • Hendrick Hydro-Dehazer

Byrne meets all design requirements for a wide variety of

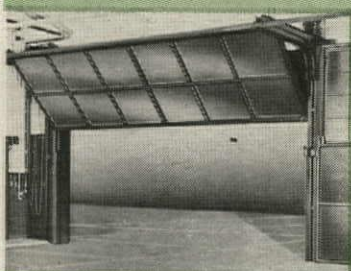
INDUSTRIAL DOORS



For industrial and commercial buildings of all types, Byrne can supply doors to meet any opening requirement.

For example, where head room is available, vertical lift doors of the type illustrated above can be furnished without limitations in width or height. Where head room may be as little as two feet above the lintel, turnover doors such as shown below can be supplied. These are recommended for openings up to 25 feet wide by 20 feet high.

Byrne Doors, Inc., with over a quarter of a century of experience in meeting closure problems of innumerable types, can offer you unequalled engineering cooperation. And the results will be seen in doors which fit openings snugly . . . which operate smoothly . . . and which require the minimum of maintenance over many years.



This Free Catalog

provides complete information on the many types of doors produced by Byrne. Write for your copy.



BYRNE doors, inc.

1603 E. 9 Mile Road, Ferndale, Detroit 20, Mich.

Dept. E-20

101 Park Ave., New York 17, N.Y.

Cafritz Bldg., Washington 6, D.C.

Byrne Doors, Ltd., 381 College St., Toronto 28, Ont.

POPULAR TASTE *cont'd.*

ized that if they wished to intervene they would necessarily have to acquire those special qualities and cease being mere mass. . . .

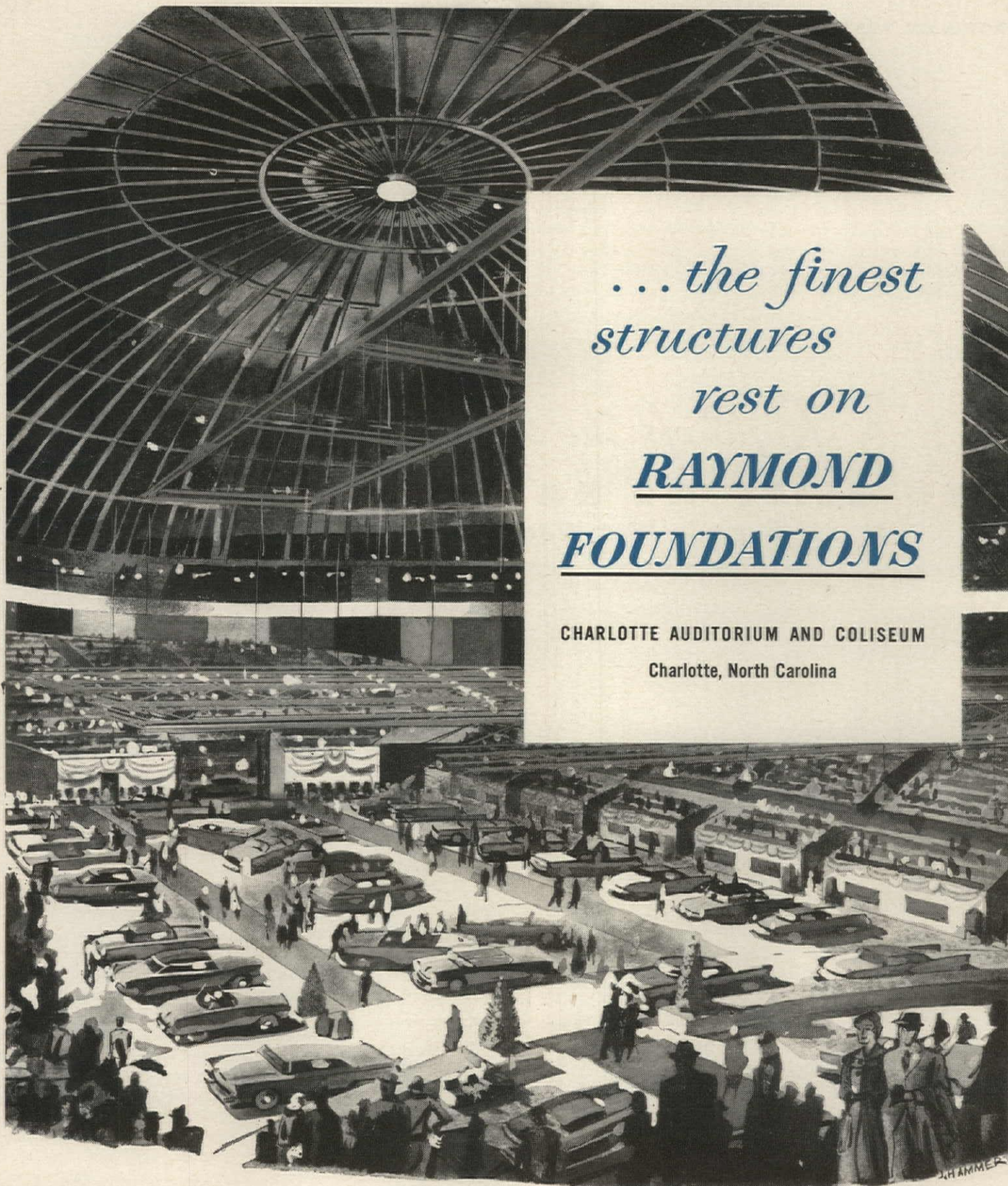
"The characteristic of the hour is that the commonplace mind, knowing itself to be commonplace, has the assurance to proclaim the rights of the commonplace and to impose them wherever it will. . . . Not that the vulgar believes itself superexcellent . . . but that the vulgar proclaims and imposes. . . vulgarity as a right. . . .

"The normal primitive. . . is the most submissive ever known to external authority be it religion, taboo, social tradition or custom. . . . Today, the masses have shown themselves indocile to the minorities—they do not obey them, follow them, or respect them; on the contrary, they push them aside and supplant them. In our time it is the mass man who dominates, it is he who decides. . . .

"The mass crushes beneath it everything that is different, everything that is excellent, individual, qualified, select. Anybody who is not like everybody, who does not think like everybody, runs the risk of being eliminated. And it is clear, of course, that this 'everybody' is not 'everybody.' 'Everybody' was normally the complex unity of the mass and the divergent, specialized minorities. Nowadays 'everybody' is the mass alone. Here we have the formidable fact of our times, described without any concealment of the brutality of its features."

In relation to architecture the conclusions are obvious. The select few, fighting the battle for genuine design, are ignored and overwhelmed by the dominating majority. Even to question the popular right to domination amounts to heresy. The average builder sees no reason why he should not place his crackerboxes facing a superhighway, their picture windows staring like great eyes at the passing traffic. Together with the real estate operator, he is outraged at any attempt to control his rampant expansion. To question his inalienable right to gut our countryside is but the carping of eggheads and do-gooders. On the other hand, the government bureaucrat, self-righteous as only a dedicated public servant can be, will explain patiently the reasons for the preservation of the mediocre. As for the man who built his roadside stand in the shape of a bun. Why not? It's a free country.

continued on p. 248



*...the finest
structures
rest on*
RAYMOND
FOUNDATIONS

CHARLOTTE AUDITORIUM AND COLISEUM

Charlotte, North Carolina

GENERAL CONTRACTOR: Thompson & Street Co.
STRUCTURAL ENGINEERS: Severud-Elstad-Krueger
ARCHITECTS: A. G. Odell, Jr. & Associates

*FOUNDATIONS FOR THE STRUCTURES
OF AMERICA...*

*COMPLETE CONSTRUCTION SERVICES
ABROAD*



RAYMOND
CONCRETE PILE CO.

OUR 60th YEAR 140 Cedar Street • New York 6, N. Y.

Branch Offices in principal cities of the United States,
Canada, Central and South America.

isn't it? Architecture and planning—or rather the wild lack of planning—are today almost entirely controlled by the unqualified. The highly trained architect comes humbly, hat in hand, to “sell himself” to his master.

We now have the complete picture of this master: the man who has created popular architecture in his own image. He is a person without skill,

without tradition, without talent, lost among the complexities of a modern machine society and entirely cut off by that society from the traditional wellspring of his esthetic nature. Yet withal arrogant, bowing to no more gifted mind, nor to a more specialized knowledge. Like the relentless march of the steamroller, he imposes his taste across the land.

Yet this man is not a destroyer in the conscious sense. He is pleasant. He works hard. He means well. He tramples the fine beneath his feet without

knowing he has stepped on anything. He would be utterly baffled to find himself called ugly names because he built an ugly house. And yet the march of roadtown and suburbia goes on and on, implacably eating up our rolling wooded farmland, extending yearly the dominion of the hideous.

There is an even more unpalatable idea to be recognized. Again Senor y Gasset writes: “. . . Can we be surprised that the world today seems empty of purposes, anticipations, ideals? Nobody has concerned himself with supplying them. Such has been the desertion of the directing minorities, which is always found on the reverse side of the rebellion of the masses.”

Hope for counterrevolution

As a criticism carried over to architecture this is not entirely fair. The past decade particularly has witnessed a coming to the fore of the trained professional, an extension of influence in city and regional planning, a growing concern with the mass market. Certainly more examples of outstanding modern design in all fields have been built during the past ten years than ever before.

Nor have the voices of our leaders been entirely still. Frank Lloyd Wright, many years ago, recognized the basic problem of man's estrangement from nature in his plan for Broadacres City. He has clocked the march of the mediocre in his *Genius and the Mobocracy*. Walter Gropius, too, has recognized the dominion of the unqualified. His suggestion that the architect turn builder, assuming again his traditional role as master in his field, is one answer to the problem. There have been other voices.

Nevertheless, the professional status quo has become almost immovable. The spheres of the architect, the builder, the real estate interests are by now accepted almost without question. So far the architect has been unable to grasp the reins in his hands. He stands fuming and frustrated as the spectacle of mass ineptitude sweeps past him.

There is no magic key for unlocking the status quo. Nevertheless it is self-evident that the architect must gain control of his own field if we are not to see American building slip irretrievably into the hands of the twentieth-century primitive. This may well be the primary problem which the architect faces today. Only he can devise the means to its solution. Only he can assume command. And only such an esthetic counterrevolution by the qualified minority can give us hope for a more rational architecture in the future.

Right off the street... NO SLIPPING HAZARD Even in Wet Weather!



NORTON
NON-SLIP AGGREGATE

IN all kinds of weather, people coming in from the street meet no slipping hazard on this terrazzo floor containing ALUNDUM Aggregate. It is non-slip wet or dry . . . attractive, and will show no sign of wear for years and years.

Norton ALUNDUM Aggregate installed in terrazzo in the proper proportion makes the ideal walking surface — especially for entrances, hallways, stairs, ramps and countless other places where there is heavy foot traffic and a potential slipping hazard. Norton ALUNDUM (C. F.) Aggregate gives the same advantages to cement floors, stairways and ramps.

Our latest catalog No. 1935F will give you complete information, or it is always as near to you as your Sweet's File.

★ **NORTON COMPANY** ★
WORCESTER 6, MASSACHUSETTS

Reflection #1
Plate Glass

Reflection #2
American Lustracrystal

Is the slight difference in distortion* between plate glass and **American Lustracrystal** worth a 40% premium?

Reflection #3
Competitive Brand of Crystal

Ask this question of the architect who installed an air-conditioning system with the money saved by using AMERICAN LUSTRACRYSTAL instead of plate glass. Despite its substantially lower cost, AMERICAN LUSTRACRYSTAL is a more dependable structural glass than equal-size plate glass:

- v More resistant to breakage from impact
- v More resistant to breakage from constant pressure
- v More resistant to surface abrasion

Only very limited application of plate glass is found necessary by architects within the 6' x 10' x $\frac{1}{4}$ " limits of Lustracrystal.

Check the advantages of AMERICAN LUSTRACRYSTAL fire-polished heavy sheet glass—minimum distortion, greater strength, clarity, luster, and lower cost.

Write us today for our new 1957 Architectural Catalog No. 7-A, containing technical data. Or ask our Architectural Consulting Department to contact you.

***LEGEND:** The types of glass tested were mirrored so that reflections could be photographed to show relative amounts of distortion. All three photos were taken under identical conditions.

MODERN GLASS
Best at a Glance



American
WINDOW Glass COMPANY
PITTSBURGH, PA.

PLANTS: ARNOLD, PA. • ELLWOOD CITY, PA.
JEANNETTE, PA. • OKMULGEE, OKLA.

PROJECTS WITHOUT PLANS

continued from p. 150

business district and the suburbs is going to be fought out in the open, so to speak. And the heretofore winning formula of a strong key figure (Richard B. Mellon) and a compact business elite (here organized as the Allegheny Conference) is by no means so strong when confronting this wider battleground.

One of the central figures in the Pittsburgh redevelopment program, at the conclusion of a lengthy conversation reviewing the city's present problems, blurted out: "You know what we need in this downtown area? We need a plan." It is certainly true that there is no overall highway plan for Pittsburgh's central area. A regional highway and mass transit study is only now beginning. There is no regional land use plan and, in fact, no regional

planning at all in a systematic sense. Most of the effort that proceeds under the name of regional planning consists in stimulating and guiding the local planning efforts of outlying communities rather than creating a solid framework for such district plans. Pittsburgh's city plan is ten years old, and even a decade ago was far from complete. It bears almost no resemblance to the present conditions and prospects of the city itself. Thus the various redevelopment efforts that have taken place, and the even more extensive redevelopment undertakings that are now in prospect, still lack any kind of over-all plan that would define their relationship to each other.

Top priority should go to a general metropolitan regional plan, within whose framework Pittsburgh and Allegheny County's other independent cities can work out their destinies. In the spirit of the recent report by Pennsylvania's Metropolitan Study Commission, such a regional plan must point toward some eventual metropolitan government. The skeleton for such planning fortunately exists in the Pittsburgh Regional Planning Assn., and in such current activities as its pending traffic and transportation study and the urban renewal studies for undertakings now in prospect. Such planning can be expected to help sort out the city's activities. Like many other cities, Pittsburgh needs a clearer idea of what belongs downtown. It also needs to know the shape of a downtown area that will be more concentrated on less land, but which will also be provided with the transportation terminals and other necessary services of a metropolitan center. A richer texture of human activities in the downtown area must be blended.

Given Pittsburgh's two downtowns, the Triangle and the University district, special care is needed to understand the requirements of each. These are the tasks of a comprehensive city plan, employing public powers, not a citizens' coordinating and effectuating agency.

Pittsburgh resembles a business which currently is doing well, but which is neglecting research. It has put its main effort into getting things done. Now it needs to put an equal effort into masterminding.

MICHAELS QUALITY

is reason enough to specify Michaels Products

The high quality of every Michaels product is self-evident. And top quality can only be attained by a concern whose engineering skill and manufacturing know-how are backed by many years of experience.

Michaels, a name well-known among architects and builders, is such a concern, numbering among its projects many of the nation's leading structures. When you specify Michaels, you can be sure quality will never be compromised.

The Baptist Sunday School Board building, Nashville, Tenn., is a good example of Michaels workmanship. Here the careful arrangement of non-ferrous metals produces unusual contrasts and strikingly beautiful effects.

Write us. We welcome the opportunity of working with you.

**MICHAELS PRODUCTS: Architectural Metal • Curtain Walls • Tablets
Reversible Windows • "Time-Tight" Exhibit Cases • Memorials**

THE MICHAELS ART BRONZE COMPANY, INC.

P.O. BOX 668-F • COVINGTON, KENTUCKY

*One of the Nation's Largest Fabricators of
Architectural Metal Building Products*

