ARCHITECTURAL RECORD

MAY 1957

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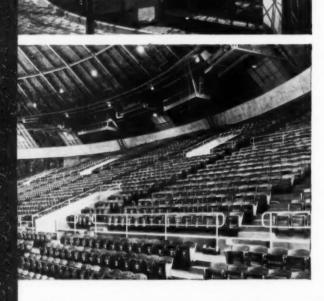
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Below — view of 2500-seat auditorium. Bottom Photo — section of 13,500-seat coliseum.



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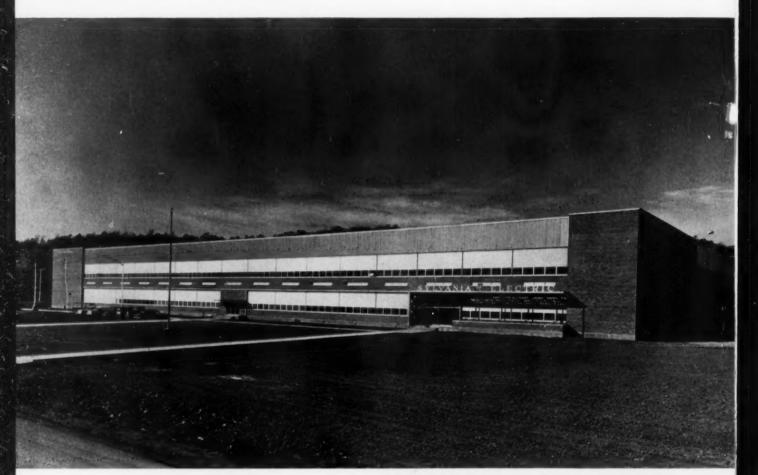
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ARCHITECTURAL RECORD

May 1957 Vol. 121 No. 5

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Minoru Yamasaki and his Search

The Record Reports

Yamasaki is one of a growing group of American architects trying to achieve again a whole architecture, an "architecture for enjoyment." Five of his recent buildings are shown, buildings which in one way or another illuminate that search 167

The Shape of an Architecture

Was there, is there, will there be an American Architecture? What is an American Architecture? Now that the A.I.A. is 100 years old, it is time to look with some penetration at such questions, so that before another century slips by some really positive answers might be found An article by John Ely Burchard

Penn Center Transportation Building and Concourse

Penn Center, Philadelphia, Pa.; Consulting Architect, City Planning Commission and Architect, Transportation Center and Concourse, Vincent G. Kling

Minimum	House f	for	Maximum	Vacatio	m					
	Vicinity	of	Ellensburg,	Wash.;	Paul	Thiry,	Architect	&	Owner	



COVER: Lobby screen, by Ellsworth Kelly, Transportation Building, Penn Center, Philodelphia, Pa.; Lauvence Williams photo

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One Hundred Years of Significant Building

Bringing to an end twelve months of one hundred years of significant building, but not bringing to an end the significance of the buildings premiated by our panel or of the observations on them by various panel members 12. In Summary. By Edgar Kaufmann

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THE RECORD REPORTS

P F R S

THE STATE OF ARCHITECTURE in these United States as the American Institute of Architects holds its Centennial Celebration Convention in

Washington this month can almost be reported around the two photographs at the bottom of this page — the one, a grotesque and earnest **H1857**-1957 effort at architectural



sensitivity by the agency of the United States Government most concerned with public building, in real danger of being built; the other, a triumph of architectural sensitivity to civic aspiration, having waited ten years for realization, alive again only as a Centennial project of the Institute's St. Louis Chapter. These, plus one recent conference on urban design, at any rate provide clues.

JACKSON PLACE, a site on the west side of Lafavette Park in Washington, D. C., just two blocks from the White House, has been designated as the site of a new Federal office building. In a genuine desire to allay the fears of those who foresaw the destruction of a fine old area, the General Services Administration last month released the sketch at left below "showing how the site might be developed with balanced treatment, low façades and preservation of historic houses of true architectural values." The building at right in the sketch is Decatur House, an existing Georgian house which was the first to rise on Jackson Place (1819); the central building - described as "a building that would harmonize with the Decatur House without detracting from the architecture of that historic building - would be the new

Federal office building; at left is "a Georgian counterpart" of Decatur House which would be built "to balance Jackson Place, contribute to the preservation of its original character and add a needed annex to Blair and Blair-Lee Houses, the block's remaining pair of historic houses, of outstanding design, which will remain standing on Pennsylvania Avenue." Thus GSA, in response to what it recognizes as "an architectural challenge."

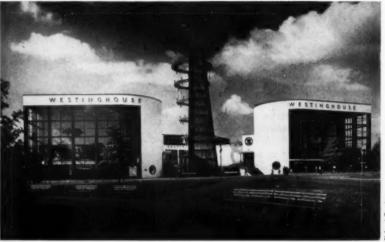
ST. LOUIS has let ten years go by since the high excitement of the national architectural competition sponsored by the Jefferson National Memorial Association; the \$40,000 first prize design by Eero Saarinen and Associates (his father submitted a separate scheme, not premiated) still exists only in drawings (rendering at right below). But the great arch was in the news again last month, with the announcement by the St. Louis Chapter of the A.I.A., as their special observance of the Institute's Centennial, that "as our contribution to our community's future, we have decided to concentrate our efforts on helping to gain support for the Jefferson Memorial and to solve the problems that lie between it and its realization." The problems, of course, include both financing and civic inertia; but the hope is that with a great celebration of St. Louis' Bicentennial coming up in 1964 enough enthusiasm may be generated to overcome even these obstacles at any rate the Chapter intends to try. "The central river-front area." a Chapter statement said, "is the heart of our community. To go forward with its redevelopment now, with the magnificent Saarinen arch,

would symbolize throughout the nation and the world the vitality of our metropolitan center on the greatest river in the world. It would inspire and challenge our planners and builders to comparable greatness."

THOUGH THE TOPIC was assigned to Richard Neutra - "Biological Realism" ("we must find a way to measure and prove the cost in human energy of making a left turn") - it was Charles Abrams who supplied the realism. Harvard's Urban Design Conference heard from this old warhorse of housing that eager and wellmeaning architects should stop the there-ought-to-be-a-law cry, when they talk about implementing ideals of design. There are already too many laws, he insisted; too many things are now possible, not too few. Somebody can do too much manipulation of our city patterns, and, he said fiercely, that somebody will not be you. Architects do not know how to organize their ideas and make them realizable. They don't know how to be expedient, to play politics, to be devious. You ask us lawyers to help you, he continued, but you don't reduce your wants to anything we can focus and put into a bill. It is always somebody else who gets the laws passed, the regulations drawn, or realizes whatever ambitions may be involved. If his remarks may have chilled the ardor of some of his listeners, others may have recognized a clear challenge to constructive action. It was certainly made clear, throughout the conference, that things are happening in urban scenes, that current years are finally seeing tangible results of somebody's planning. As Abrams said, at the right time you can do almost anything.



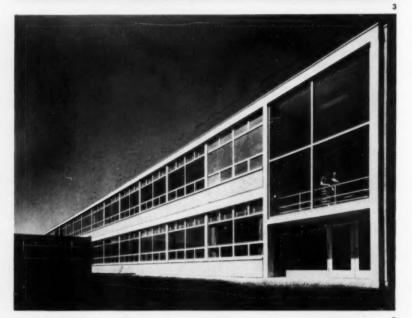
Louis Skidmore, F.A.I.A., will receive the Gold Medal of the American Institute of Architects, the Institute's highest honor, at the Centennial Convention in Washington this month. The work of Skidmore, Owings and Merrill, the firm he (with Nathaniel A. Owings and John O. Merrill) founded 20 years ago, has come since the war to be known around the architectural world, and, for foreign architects, to typify perhaps more than any other the achievements of American technology. Less universally recognized is the greater significance of S-O-M's organization as a context for the encouragement of individual talent, bulwarked but not barricaded by the solid sense of the conference.





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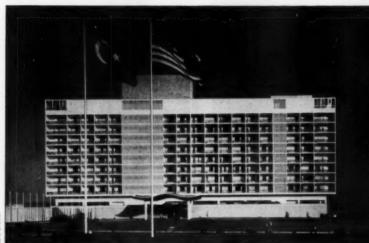


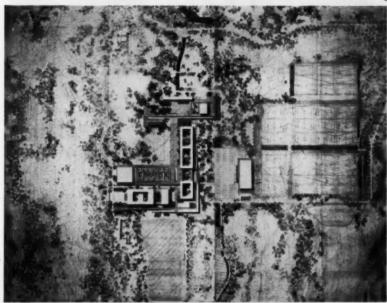






S-O-M: A.I.A. GOLD MEDALIST'S FIRM SELECTS EXAMPLES OF ITS WORK





WHEN THE RECORD ASKED Louis Skidmore to select examples of the work of his firm for this convention issue report, he deferred to his colleagues: "I think it more suitable that they do it as any success I achieved was certainly due to my associates." On these pages are the resulting selections. 1. New York World's Fair, Westinghouse Building - 1939. 2. Terrace Plaza Hotel, Cincinnati - 1948. 3. Senior High School, Oak Ridge, Tenn. -1950. 4. Greenwich, Conn., Hospital - 1951. 5. Hostess Building and Recreation Center, Great Lakes, Ill., Naral Training Center - 1943. 6. Istanbul Hilton Hotel, Istanbul, Turkey (associated with Sedad H. Eldem) - 1955. 7. U. S. Naval Postgraduate School, Monterey, Cal. - 1955. 8. Sile plan, U. S. Air Force Academy, Colorado Springs -Completion scheduled 1958. 9. Manufacturers Trust Company, Fifth Avenue Branch, New York - 1954. 10. Lever House, New York - 1952





Ezra SI

Ezra Stolle

THE RECORD REPORTS: REVIEWING THE RECORD





1. The Capitol, with the McMillan commission's suggestion for a new approach from the Mall; Benjamin Henry Latrobe, architect. 2. Washington Monument, shown with McKim's scheme for a base; Robert Mills, architect. 3. Lincoln Memorial; Henry Bacon, architect. 4. Front of the White House; James Hoban, architect. 5. The Octagon House, built for John Tayloe, now headquarters of the American Institute of Architects; William Thornton, architect





ARCHITECTURE AND GOVERNMENT: THE FITFUL EVOLUTION OF WASHINGTON

Washington, D. C., ever since it was first laid out by L'Enfant, has seemed to be one city, at least, in this country where the requirements of a noble and fitting architecture have been a matter of public concern. Inevitably, also, architecture and politics became curiously involved, with the politicians, starting with Washington, keeping a close eye on the architects, and the architects likewise keeping an eye on politicians.

From the beginning, however, government architecture has for the better part been kept out of any political grabbag — virtually all of Washington's important buildings resulted from design competitions.

The White House

The first of the city's official buildings was the White House, for which the

cornerstone was laid October 13, 1792. James Hoban apparently won the competition handily. "It was a specimen," wrote Montgomery Schuyler in April 1903, "of British Georgian, with some important cis-atlantic modifications. . . ." Cis-atlantic modifications were only the first of a long chain of modifications wrought on the White House, starting with the British fire in 1814. Through the 19th century, the several Presidents and their wives added stained glass screens, decorated the East Room in showboat style, and employed a Pullman Car interior designer to do over the Red Room. President McKinley's plans for renovation (see page 360) were fortunately defeated by the intercession of the American Institute of Architects, and when Theodore Roosevelt succeeded to McKinley's unfinished

term, he selected Charles Follin McKim to do a thorough job of redesigning the White House interiors. McKim devoted much of his personal attention to this job, succeeding so well that the public rooms of the White House look much the same now as the pictures published at the time.

¥

The Capitol

The Capitol, architecturally speaking, got off to a confused start. Like the White House, the design was the result of a competition. The first prize, of \$500, went to Stephen Hallet, whose design, the jury felt, was not really acceptable; they asked him to revise it, and at the same time asked William Thornton to submit a design, subsequently awarded him a \$500 first prize, (Continued on page 360)

76 Quarts of Actual Water

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NO WONDER TIMBER ROTS -PAINT PEELS - PLASTER CRUMBLES -STEEL BEAMS RUST!

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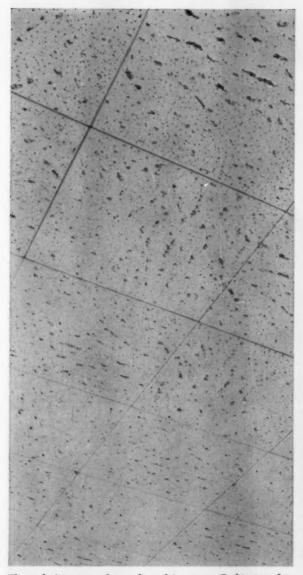
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(2 oz. per person per hr.)	51.0	Ibs.		
Showers (1/2 lb. per bath)	14.0	lbs.		
Washing Clothes	4.3	Ibs.		
Drying Clothes Indoors	26.0	lbs.		
Cooking (Gas) (4.7 lbs. daily)	32.9	Ibs.		
Ordinary Dish Washing (1 lb. daily, automatic much more)	6.0	lbs.		
Mopping (100 sq. ft. daily, 3 lbs.)	18.0	lbs.		
TOTAL WEEKLY VAPOR	152.2 r 76 qu			

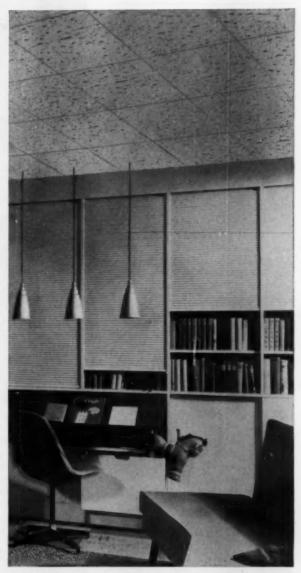
The U.S. National Bureau of Standards has published an informative booklet describing the destruction that condensation can cause, and means of its prevention. It is entitled "Moisture Condensation in Building Walls". Send us the coupon for a FREE copy.

New acoustical ceiling features distinctive textured design in wood fiber tile

Exclusive textured styling in Armstrong Cushiontone brings luxurious look to low-price field







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background. It's an economical wood fiber tile styled to match the luxurious beauty of costlier materials. The exclusive textured design now

available in Cushiontone offers architects and interior designers an opportunity to specify up-to-date, highstyled ceilings in homes, offices, and commercial areas at moderate cost.

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THE RECORD REPORTS

(Continued from page 12)

FERMI COMPETITION WON

BY REGINALD C. KNIGHT

A 36-year-old American architect, Reginald C. Knight of Coral Gables, Fla., has been selected as the winner of the Enrico Fermi Memorial International Architectural Competition. His proposal - shown in photographs at right, with the text of the jury's comments on it - was chosen for the \$5000 First Award from among 355 entries from 25 countries (176 from the U.S.) by an international jury (see below) which met in Chicago late in March. The competition, sponsored by the Chicago Junior Chamber of Commerce and the Chicago Joint Committee of Italian Americans, sought an appropriate structure as a key unit in the Institutional Center of Chicago's Fort Dearborn Project (AR, May 1954, page 170-171), to be a memorial to the late great physicist.

The jury report notes that study of the entries in relation to the site model convinced them that "a relatively open plaza achieved the best general solution to the problem" and that "for this particular type of memorial the primary requirement was a strong imaginative idea rather than detailed architectural plans." Although the jury "could not find any projects sufficiently distinguished to be given the Second and Third Awards," it distributed the prize money available as follows:

Three awards of \$1000 each to Peter Roesch of Hamburg, Germany; John Harold Box, James Reece Pratt and Joanne Henderson Pratt of Dallas, jointly; Huson Jackson, Costantino Nivola, Vincent J. Solomita and Joseph Zalewski of Cambridge, Mass., jointly.

Four awards of \$500 each to Eberhard Ludwig, Dusseldorf, Germany; Jan Lippert, Degenhard Sommer, Karlsruhe, Germany, and Dr. Eugene Lantzki, jointly; Louis J. Johnson and Arthur S. Takeuchi, of Chicago, jointly; and Igor Z. Sazevich, David H. Larson and Enrique Garcia-Reyes of San Francisco, jointly.

DISTINGUISHED JURY looks at model of Fort Dearborn Center with First Award entry set in place. At left: Architect Ludwig Mies van der Rohe, U. S.; Engineer Pier Luigi Nervi, Italy; Physicist Lancelot Law Whyte, England; Architect Gordon Bunshaft, U. S. John O. Merrill, F.A.I.A., professional adviser for the competition, is at Mr. Bunshaft's left. Right: Architect José Luis Sert, U. S.



FIRST AWARD - "The Jury was enthusiastic and unanimous in selecting this project for the First Award, their reasons being: It provided an integrated solution of the problem in relation to the entire project, in the form of an open plaza appropriately used. Moreover, in this open plaza the designer has created the brilliant conception of using sound as a unifying principle for the entire project. The instrument employed for achieving this result is a system of vertical, tubular bells which are so placed in three rows as to form a satisfactory composition defining a space and relating it to the surrounding area. In the opinion of the Jury, this has produced the most beautiful and dignified Memorial to Enrico Fermi, the scientist, particularly appropriate since it achieves a unification of Art and Science. This submission leaves the allocated site entirely open at the

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pedestrian level, and plans auditorium and covered exhibition space at the traffic level. The auditorium is square in shape and the exhibition space is distributed around it. The basement provides for equipment. storage and services. The main feature of this project, for which it receives the First Award, is - paraphrasing the words of the winner — that the entire design is based upon the integration of space, structure and acoustics in one total concept which will have meaning not only within the confines of the Memorial sile but over the entire area. Through the controlled medium of sound, architecture will be able to reach out and touch the lives of many more people than would be possible through vision alone. The upper pedestrian plaza, surfaced with translucent white material, will glow softly at night"



(More news on page 16B)



This is KENTILE vinyl asbestos tile

So much easier to care for! So much longer-wearing! And grease-proof, too!



available in Vinyl Asbestos, Solid Vinyl, Cushion-back Vinyl, Rubber, Cork and Asphalt tile...over 150 decorator colors.

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SPECIFICATI	0.5	10

SIZES AND T	HICKNE	SSES:
Marbleized	9" x 9"	1/16", 1/8"
Carnival	9' x 9"	1/16"
Corktone	9"x9"	1/16", 1/8"
COLOR5: Marbleised Cargival Corktone	19 16 3	

INSTALLATION 51 Kentile vinyl asbestos the (KenFles[®]) may be instilled over any smooth interior surface, including concrete in contact with the earth.

THE RECORD REPORTS

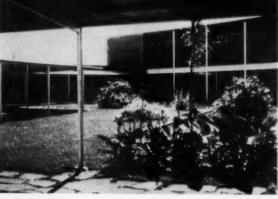
(Continued from page 16)

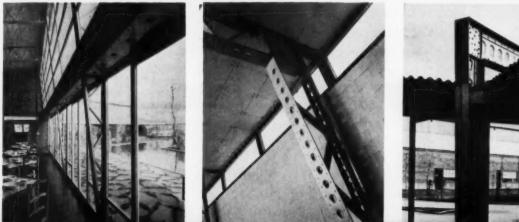
SPANISH ARCHITECTS WIN \$25,000 REYNOLDS AWARD

The first winner of the richest annual architectural prize in history, the \$25,000 R. S. Reynolds Memorial Award, is the firm of Cesar Ortiz-Echague Manuel Barbero y Rafael de la Joya of Madrid. Their winning entry (shown in photos here) was the Visitors and Factory Lounge Center of the S.E.A.T. automobile plant in Barcelona, completed last July. It was among 86 entries from 19 countries submitted in the annual international architectural competition instituted this year by the Reynolds Metals Company, as a tribute to its late founder, to recognize "the most significant contribution to the use of aluminum, esthetically or structurally, in the building field." In the judging, a jury appointed by the American Institute of Architects, which administers the award, decided the award "should go to a project in which aluminum had been used for structural members as well as for the enclosing and finishing elements"; nine submissions from seven countries met these conditions. Members of the jury were: George Bain Cummings of Binghamton (chairman); Willem M. Dudok of Hilversum, The Netherlands; Ludwig Mies van der Rohe of Chicago; and Edgar I. Williams of New York. George S. Koyl, F.A.I.A. was professional adviser.











Statler Hilton Hotel, Dallas, Texas. Wm. Tabler, architect, New Yark; Jaros, Baum & Bolles, mechanical engineers, New York; J. S. Brown & E. F. Olds Plumbing & Heating Corp., mechanical contractors, Dallas.



Proper zoning, with accurate compensation for the combined effects of sun, outdoor temperature changes, and other factors, insures perfectly conditioned primary air for 1,001 guest rooms, each of which has outside exposure.



Sensitive Johnson Room Thermostats compensate easily for shifting occupancy levels. Whether it's the 2,200-capacity grand ballroom, a busy restaurant, the spacious lobby or a small private dining room, occupants enjoy continuously ideal temperatures.

It takes a lot of comfort-6 million cubic feet of it-to satisfy the needs of the luxurious new Statler Hilton!

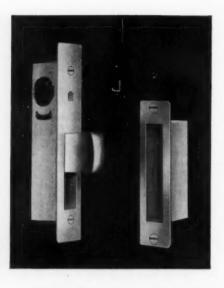
Comfort control problems in the 20-floor Dallas showplace include the operation of a 1,400-ton refrigeration system, regulation of a high pressure conduit system for guest room air conditioning and precision control of 20 central fan systems supplying 500,000 cfm of conditioned air to the public arrent.

The enjoyment of year 'round ideal temperatures, plus the economies of virtually waste-free air conditioning performance, are made possible by a modern system of Johnson Pneumatic Control, Its up-to-the-minute features include:

- Solar compensation-for maximum guest room comfort regardless of sun, wind, outdoor temperature.
- Central control-for ease in adjusting zone water temperatures from a single location.
- Accurate indoor compensation—for handling varying occupancy levels in public spaces.
- Johnson "economizer" sequencing for low cost cooling with outdoor air. Up to 100 per cent outdoor air may be used by some of the central fan units to minimize the cooling load.

Today's simplified, improved Johnson Control makes it easy and practical for any building to take advantage of these and other equally advanced control features. Only pneumatic control offers the flexibility to satisfy such control requirements so completely and efficiently, yet so simply and economically. Regardless of your needs, Johnson Pneumatic Control is certain to offer you important advantages in terms of both comfort and economy. Johnson Service Company, Milwaukee 1, Wisconsin. Direct Branch Offices in Principal Cities.





ADAMS RITE Maximum Security Narrow Stile Locking Devices

For New or Replacement Installations

Whether you specify, install, or sell narrow stile locking devices, you can be confident that Adams-Rite offers the utmost in design, construction, simplicity and safety. Check these advanced ideas that insure top performance and lasting customer satisfaction:

Illustrated above -- Maximum Security 1850 Deadlock:

This is the unit that provides Maximum Security for modern narrow stile swinging glass doors. The pivoted bolt actually bridges the opening with a bar of steel, retaining as much bolt within the lock stile as is projected. Its protection is so great that forced entry is impossible without destruction of the door itself.



MS 1849 Two-Point Door Bolt:

The modern method for locking the inactive door of a pair of narrow stile doors. Top and bottom bolts are locked or unlocked by natural operation of an attractive turn conveniently located on the inside surface. Positive deadlock of both doors is automatically provided when cylinder deadlock is thrown.

1848 Deadlock for Narrow Stile Sliding Glass Doors :

Every sliding glass door deserves the same protection demanded of any other exterior door. The 1848 gives security with an adjustable heavy hook type bolt with which turn and cylinder controls are used. For added safety, the bolt collapses if the door is accidentally shut while bolt is projected.

1340 Series, Deadlock and Latch:

Combination deadlock and latch for narrow stile swinging doors. A simple selector changes the unit from free swinging to latch action. The positive latch action helps prevent air losses when temperature control systems are used.

Specify, Sell, Install the Finest



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Specialists in Narrow Stile Locking Devices



970 Minimum Backset Deadlock:

This unit provides economical deadlocking for rigid narrow stile swinging doors. Like all Adams-Rite narrow stile locks, the 970 Series operates with standard mortise type cylinders of any make.

1450 Deadlocking Latch: Traffic control is made possible in

a narrow stile swinging door

entrance by use of the 1450 Series

Deadlocking Latch. Two-way

traffic flow or restricted entrance

is achieved by a simple selector.

Ideal for any public area with a

closing-hour problem, such as

banks, markets, apartment houses, etc. It satisfies building and safety

regulations.





Complete specifications and information on request.

In the fabulous Americana Hotel, Miami Beach

Architect, Morris Lapidus





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<u>Quietly</u> and <u>Dependably</u> Control the Personalized Air Conditioning in 475 Guest Rooms

The nation's newest luxury hotel, The Americana, owned and operated by Tisch Hotels, Inc., has individually-controlled air conditioning, for heating or cooling, in every guest suite. Hill York Sales Corp., the air conditioning contractor, selected Jackes-Evans Solenoid Valves to assure quiet, dependable, personalized control of room temperatures.

J-E Solenoid Valves have a long and proven record in providing positive automatic temperature control for circulating chilled and/or hot water systems using fan-coil units in individual spaces of multiple room buildings. They quietly control flow of water without fluid shock or chatter-dependably respond to thermostat demands.

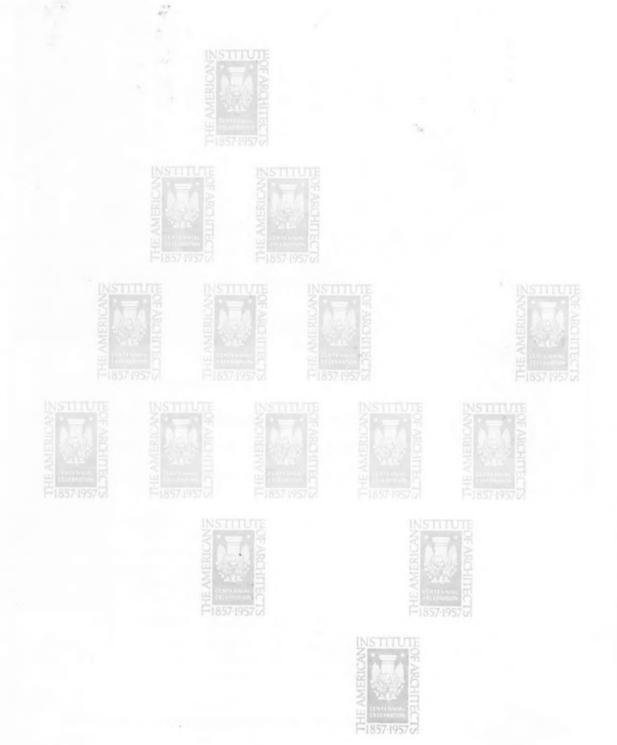
Unique J-E advantages include resilient synthetic diaphragm... no mechanical linkage or impact action to cause noise... tight seating with no bubble tolerance... simple design with only two moving parts ... no metal to metal contacts to wear... flexible diaphragm that eliminates clogging.

Whatever your requirements, for a completely satisfactory job specify and use J-E Solenoid Valves. Call your wholesaler or write direct today.



To The American Institute of Architects for 100 years of Creative Architecture The Mills Company Cleveland Ohio manufacturers Mills Movable Partitions

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The State of Construction

Construction contracts for February, second month of the expanded F. W. Dodge construction contract series. which now includes all 48 states, showed a 3% decline from February 1956; but the two-month cumulative total was even with last year's because of a small increase in January. Details on page 394.

A.I.A. Names New Fellows

Forty-eight members of the American Institute of Architects will be elevated to Fellowship in traditional ceremonies at the Institute's annual dinner during the Centennial Convention in Washington this month. The new Fellows, with the distinctions for which they are recognized, are:

Carl C. Britsch, Toledo — Service to the Institute; Harold E. Calhoun, Houston — Service to the Insti-tute; Waldo B. Christenson, Seattle — Service to the

Bardol E. Calinoun, Houston — Service to the Institute;
 Caldo B. Christenson, Seattle — Service to the Institute;
 Chark, Syracase — Service to the Institute;
 Chillip D. Creer, Austin, Tex. — Education;
 Roscoe P. De Witt, Dallas — Design; Alden B.
 Dow, Midland, Mich. — Design; William E. Dunwoody, Jr., Macon — Public Service.
 Also Leon N. Fagnani, Wilmington, Del. — Service to the Institute;
 Arhur Fehr, Austin, Tex. — Design;
 Thomas K. Fitz Patrick, Charlottesville, Va. — Education;
 Albert Frey, Palm Springs, Cal. — Design;
 Arthur B. Gallion, Los Angeles — Literature; John Thomas Griadale, Philadelphia — Design; B. Summer Gruzen, New York — Design; Sanuel W. Hamill, San Diego — Public Service; William Henry Harrison, Los Angeles — Design; Paul Heffernan, Atlanta — Design; Henry Kamphoefner, Raleigh, N. C. — Education; Donald Beach Kirby, San Francisco — Service to the Institute.

Service to the Institute. Also Hermon F. Lloyd, Houston — Design; An-thony Lord, Asheville, N. C. — Service to the Insti-

tute; Frederick J. MacKie, Houston — Design; Fred L. Markham, Provo, Utah — Design and Service to the Institute; Charles J. Marr, New Philadelphia, Ohio — Service to the Institute; Charles F. Masten, San Francisco — Public Service; Charles O. Matcham, Los Angeles - Public Service and Service to the Institute

Also Frank V. Mayo, Stockton, Cal. - Service to the Institute; Francis Joseph McCarthy, San Fran-cisco — Public Service; Howard R. Meyer, Dallas — Design; David H. Morgan, Philadelphia — Service to Desam; David H. Morgan, Philadelphia — Service to the Institute; John Frederic Murphy, Santa Barbara — Public Service; Joseph D. Murphy, St. Louis — Design; Arthur G. Odell, Jr., Charlotte, N. C. — De-sign; Arthur G. Odell, Jr., Charlotte, N. C. — De-sign; Archie Gale Pariah, St. Petersburg — Public Service and Service to the Institute; Ulysses Floyd Rible, Los Angeles — Design and Service to the In-vitante Albert S. Proc. Adv. Chil. Service 10, 10 (2010). Rible, Los Angeles — Design and Service to the In-stitute; Albert S. Ross, Ada, Okla. — Service to the Institute

Inatiute. Also Leon B. Senter, Tulsa — Service to the Insti-tute; Benjamin Lane Smith, New York — Design; Whitney R. Smith, Pasadena — Design; Walter A. Taylor, Washington, D. C. — Education and Litera-ture; Glen H. Thomas, Wichita, Kan. — Public Service and Service to the Institute; Paul R. Williams, Los Angeles — Public Service; Edward L. Wilson, Con Wich, Science and Institute Const. Winow, Service and Service to Latitute Const. Winow, New Work, Science and Latitute Const. Winow, Science and Service to Latitute Const. Winow, Science and Service to Latitute Const. Winow, Science and Science and Science and Latitude Const. Winow, Science and Science Science and Science and Science and Science and Science and Science Science and Scienc Fort Worth — Service to the Institute; George J. Wim-berly, Honolulu — Design; Marcellus E. Wright, Jr., Richmond—Public Service and Service to the Institute,

BRI Meets in Chicago

Traditionally, the Building Research Institute annual meeting is designed to provide broad coverage for a wide range of interests, in contrast to its "public conferences" which are devoted to one topic. (The idea being not only to have something for each of the attending members, but to show off BRI wares to potential members as well.) The Sixth Annual Meeting held at the Drake Hotel in Chicago, April 15-17, went even further in this direction by scheduling concurrent sessions - another sign of BRI's growing organization. Also, for



Drawn for the RECORD by Alan Dunn "Do you think I like being buried in the heart of town two miles from the nearest shopping center, three miles from the drive-in movies, five miles from the airport . . . ?"

Corregidor-Bataan Winners

As the RECORD goes to press comes word that Naramore, Bain, Brady and Johanson of Seattle have been named winners of the second and final phase of the national architectural competition conducted by the Corregidor Bataan Memorial Commission for a Pacific War Memorial to be placed on Corregidor Island. Jury for the secondphase closed competition between the five winners of the first phase and five firms selected by the Commission to participate (AR, Jan. 1957, page 48) included architects Pietro Belluschi, William J. H. Hough, Frederick V. Murphy. Arthur Brown Jr., William Gehron and John W. Root; sculptor Lee Lawrie; two retired admirals and two retired generals.

the first time, the meeting moved away from the East Coast, last year's having been in Niagara Falls. Registration showed an attendance of 330.

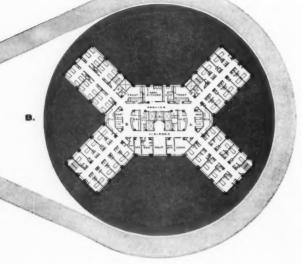
Main topics of this year's meeting included: Machine Application of Materials at the Site, New Paints and Methods of Painting, Waterproofing the Building Shell, Full-Scale Mock-Ups in Architectural Design, Panel Cooling and Heating Research, Building Research in Chicago, Household Appliances in 1962, Multi-Story Apartment Buildings. Talks at the annual dinner were devoted to some of the problems of the contemporary house including family needs, interior design and landscaping.

At a press conference the first day, William H. Scheick, Executive Director, and Edmund Claxton, President, explained the origin and functions of BRI to Chicago area reporters and editors. They drew the line of distinction between the Building Research Institute and The Building Research Advisory Board, both belonging to the National Academy of Sciences, a non-government advisory body in Washington. BRAB is purely an appointive organization which has given government objective advice on matters of moment. BRI is a participating membership organization which any company, trade association, or individual may join, and whose aim is to serve as the stimulating and correlating agency for building research in the United States.

(Continued on page 24)

at Rhode Island Hospital...

10 PEOPLE DELIVER COMPLETED TRAYS TO 452 BEDS ON 7 PATIENT FLOORS



The new main building of the Rhode Island Hospital has been designed around a central core from which radiate four separate wings. Careful design has resulted in a system requiring only 10 employees to carry trays to all seven patient floors.

The basis of the system is assembly-line food production and vertical transportation accomplished by means of a series of conveyors and trayveyors. So well designed is the system that distribution is accomplished with little heat loss. Thus, hot foods are served hot and cold foods served cold.

The kitchen itself is a stainless steel installation with flow designed to efficiently carry food from preparation to cooking areas, thence to the conveyor belt assembly table. Trays are loaded assembly-line style and move directly into the vertical trayveyors and upstairs to the patients.

For full information regarding the use of Blickman equipment for your needs, write to S. Blickman, Inc., 7005 Gregory Avenue, Weehawken, New Jersey.



Look for this symbol of quality...

A. Exterior of the new Rhode Island Hospital Main

C. Belt line service to patients. All foods are deliv-

ered directly to this belt for make-up and delivery through trayveyor. Cold foods are stored in cooled units under counter until needed. Trays are stored

in mobile Lowerators are stored in fixed position on top

Blickman-Suit

B. Typical floor plan in the 452-bed hospital.

Building, Providence, R. I.

of counter.

NEW! Stanley Hardware for <u>ALL</u> Sliding Doors! Pocket frame, bi-folding and by-passing

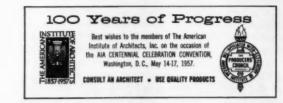
Now you can give your homes the smart, modern appearance and invaluable extra space created by interior sliding doors at no extra cost! And you can provide these home-selling values with the finest hardware made.



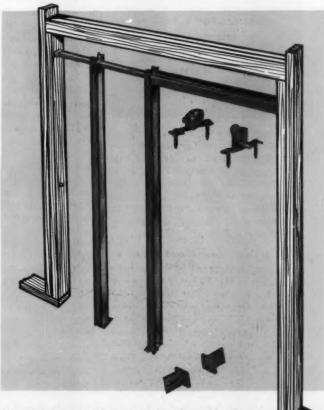
New 2980 hardware for bi-folding doors gives full access to interiors. Minimum projection of doors into room. Floor track is eliminated. Recommended for closets, narrow passageways, all storage areas.

Remember, the benefits of sliding doors are not limited to residences by any means. Office buildings, schools, hospitals — all can use this new space and convenience, particularly when it's created by top-quality, Stanley-made hardware.

Send for literature with specifications and details on Stanley sliding door hardware. Write Stanley Hardware, Division of The Stanley Works, 165 Lake Street, New Britain, Conn.



Your doors will go up faster, glide more smoothly, last far longer, require no call-backs. Just compare the expert craftsmanship and superior materials of Stanley sliding door hardware with any other make!



New 2825 pocket frame set is adjustable. Just one set for all door sizes from 2' 0" to 3' 0" wide. Easy for one man to install in 20 minutes or less. Telescoping track makes the difference. Adjustments can be made after trim is in place.

> 2800 hardware for by-passing doors includes the first hanger to permit vertical adjustments without loosening screws in door. One set of hardware for both 34" and 136" doors.



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THE RECORD REPORTS

MEETINGS AND MISCELLANY

(Continued from page 21)

GREAT LAKES A.I.A. Conference VIPs in a familiar pose before a familiar portrait — (Back row) Raymond S. Kastendieck, A.I.A. treasurer; James M. Turner, president of the Indiana Society of Architects; Bergman S. Letzler, A.I.A. Great Lakes regional director; John N. Richards, A.I.A. first vice president. (Front row) Eric Pawley, A.I.A. research



secretary; Robert B. Taylor, director of research, Structural Clay Products Research Foundation; C. Melvin Frank, moderator of the Research Forum at the Conference and its organizer; C. L. Crouch, technical director, Illuminating Engineering Society; and George B. Melcher of the National Association of Architectural Metal Manufacturers

A.I.A. Conference: Great Lakes

Meeting March 29 and 30 at Louisville. members of the American Institute of Architects in the Great Lakes District participated in what was termed a "pilot attempt" to inform members of activities in building research. The program followed the pattern of a forum held before the A.I.A.'s national Committee on Research last fall. The Great Lakes forum, introduced by Frederic Pawley, A.I.A. research secretary, was divided into three parts. Part One, on "Illuminating the Commercial Store with Its Adjacent Exterior Parking Facilities,' had C. L. Crouch, technical director of the Illuminating Engineering Society, as its speaker; C. Melvin Frank, a member of the A.I.A. research committee, moderated. Part Two, moderated by James M. Turner, president of the Indiana Society of Architects, was a discussion of the "Use of Aluminum for Exterior Walls and Entrances" by George B. Melcher of the National Association of Architectural Metal Manufacturers; he was aided during the question period by "technical experts" from the industry. At the same session, and also moderated by Mr. Turner, the third part of the forum covered "Structural Clay Products Research," with Robert B. Taylor, research director of the Structural Clay Products Research Association as the speaker. At the banquet,

A.I.A. first vice president John N. Richards addressed the members on the subject of an architect's public relations.

A.I.A. Conference: South Atlantic

The South Atlantic District of the American Institute of Architects held its conference April 4-6 at Atlanta. The big session at the meeting was the last day's panel on the conference theme, "Science, Intuition and Architecture." Led by Walter McOuade, an associate editor of Architectural Forum magazine, the chief speakers were Louis Kahn, Philadelphia architect, I. M. Pei, New York architect, painter Lamar Dodd of the University of Georgia and psychologist Albert H. Hastorf of Dartmouth College. Mr. Pei saw architecture as a field once dominated, at least during the 20's and 30's, by science, but thought also that this dominance has begun to fade: "I think we have lost much confidence in science. I think we are beginning to gain confidence in ourselves. We are having doubts that perhaps science is not a cure. . . . I characterize the 40's and 50's as a period in architecture that has a mood of doubt. realizing that we will still need science to challenge us and to nourish us, but no longer want science to dominate us. . . . I think in the next decade the longaccepted slogan of 'form follows function' will be much more broadly interpreted than in the past. I believe that the architecture will be less tense, less rigid, more natural and relaxed. . . Mr. Hastorf challenged this view of the dominance of science and held that architects have used not too much but too little science, that they should approach the needs of their clients as scientifically as they approach the needs of construction. "Architects have got to begin doing two things," he said, "develop an awareness of the factual evidence that now exists about man and about the nature of inter-action among men, and secondly, architects have got to start using the methodology of behavioral science." He added that he would like to see the architectural student "take a good course in interviewing, so that he is able to gain some fairly reliable knowledge about his clients and what his needs are." The second day's sessions included panel discussions on "Color and the Human Eye," with editor and color consultant Howard Ketcham of New York as the chief speaker; "Sound," with acoustical engineer Robert Newman of Bolt, Beranek & Newman and Massachusetts Institute

of Technology as the speaker; a general discussion of the impact of technological advances on architectural form by Frederic Pawley, the A.I.A.'s research secretary, and "Visual Perception," with Hoyt L. Sherman, professor of fine arts at Ohio State University, as the speaker. The panel for all of these sessions: architects Cecil Alexander, Andrew E. Steiner and Vernon M. Shipley.



MICHIGAN ARCHITECTS gave their 1957 Gold Medal to Emil Lorch, F.A.I.A., shown above receiving it from Adrian N. Langius, a director of the Society, as Society President James B. Morison looks on. Below: C. Allen Harlan, Detroit industrialist, receives Certificate of Honorary Membership in Society from its vice president, Frederick E. Wigen



Spider Webs and Structure

Fred N. Severud, New York structural engineer, was the principal speaker at the 43rd annual convention of the Michigan Society of Architects at the Hotel Statler in Detroit March 13-15. Pursuing a familiar tactic, Mr. Severud discussed the spider web as "one of the most phenomenal examples of architecture and structure"-"its grace, elegance and structural genius are unmatched by anything that man has done." Man has yet to reap the full benefits of his natural advantage over the spider - the ability to learn from experience - but, said Mr. Severud, "at least he is on his way, because lately spider web principles have been introduced into our building techniques and have created such enthusiasm that within comparatively few years the 'spider web' or hanging structure has become one of the leading media for roofing large areas." Other features of the convention program were a panel discussion on "Fees and Other Ethical Matters" and a seminar on "Mechanical, Electrical and Structural Coordination in Today's Architecture."

(More news on page 28)

R.



BORDEN MANUFACTURES EVERY TYPE FLOOR GRATING

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- EASY TO INSTALL engineered in conveniently sized units for easy installation.
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- LIGHT WEIGHT approximately 80% open, reduces dead weight, allows greater live load.
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information on BORDEN'S free planning and checking service in this FREE booklet	Gentlemen: Please send me BORDEN Catalog #AT254.
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Monel protection. Tower sheathing, flashings, parapets, bulkheads, drainage system and skylight frames of Regina Pacis Votive Church and adjoining parochial school are all fabricated of .021" Monel Economy Roofing Sheet. Corrosion resisting and long lasting, Monel weathers uniformly where exposed. Architect: Anthony J. DePace, 151 W. 46th St., New York 36, N. Y. Sheet metal contractor: John Schneider Roofing Contractors, Inc., 1056 Cypress Ave., Brooklyn 27, N.Y.

Its architect specified Monel because ...

a beautiful church deserves roofing that lasts for years!

In all of Brooklyn, New York which is famous for them - there are few churches more beautiful than Regina Pacis Votive - Our Lady of Peace.

Done in the Italian baroque style and laid out like a cathedral, the church is actually much larger than it appears in the picture. Thirty thousand pounds of Monel[®] Economy Roofing Sheet were used on the structure and its attached parochial school.

Monel was specified because Monsignor Angelo R. Cioffi, under whose auspices the buildings were erected, wanted permanence as well as beauty.

And architect Anthony J. DePace, with sheet metal contractor John Schneider's help, saw to it that Msgr. Cioffi got both!

Are you writing "Monel Roofing Sheet" into your specifications? It's a service many of your clients will thank you for in the years ahead.

Why? Simply because Monel will serve them long and dependably. It is stronger and tougher than structural steel. It resists corrosion . . . wear . . abrasion. Does not streak facades and stands extremes of heat and cold.

What's more, this sturdy nickel alloy presents no fabrication or installation problems. Monel Roofing Sheet used for metal work on Regina Pacis Votive Church was readily cut, formed, seamed and soldered.

Specs? "Basic Application Data-Monel Roofing Sheet" gives characteristics, properties, installation procedures, suggested gauges for major applications. Why not write for a copy today? It will prove useful the next time you specify Monel roofing.

The International Nickel Company, Inc. 67 Wall Street New York 5, N.Y.



When illuminated at night, the bell tower of Regina Pacis Votive can be seen 15 miles at sea.



ARCHITECTURAL RECORD MAY 1957 26



Architects: Harrison & Abramovitz and John B. Peterkin-Engineers: Jaris, Baum & Bolles-General Contractor: Turner Construction Co.-Sidewall Insulation Contractor: Muaro Damp-proofings, Inc.-Industrial Insulations Contractor: Asbestos Construction Co., Inc.-Acoustical Contractor: William J. Scully Acoustics Corp.

Quiet and beauty for the Socony Mobil Building

Over 20 acres of Fiberglas* Acoustical Tile ceilings quiet this magnificent new building. Fiberglas Acoustical Tile was selected because it performs better, looks better, goes up easier than any other fire-safe ceiling available. Tiles in Textured, Perforated, and Stria* patterns were used to give ceiling variety.

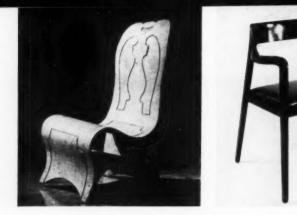
Other Fiberglas products also contributed to the efficient, economical operation of the building. Fiberglas Flexible Duct Liner, Vapor Seal and Foil-Faced Duct Insulation, Dual-Temp Pipe Insulation, Kaylo[®] Pipe Insulation and Curtain Wall Insulation all are used extensively throughout. To design comfort, efficiency, and beauty into your buildings, specify Fiberglas products. Full information is available from Owens-Corning Fiberglas Corporation, Dept. 68-E, Toledo 1, Ohio.

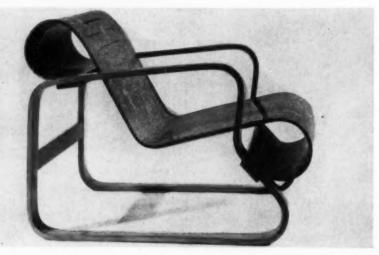


THE RECORD REPORTS: MEETINGS AND MISCELLANY

(Continued from page 24)

Left: from "New Techniques," molded plywood chair, United States, 1874; Isaac I. Cole, designer. Right: from "Classical Form Restated," armchair, Germany, 1899; Richard Riemerschmid, designer





From "Furniture," armchair, Finland, 1933–34; Alvar Aallo, designer

MUSEUM OF MODERN ART SENDS ITS DESIGN COLLECTION TO JAPAN

The cultural interchange between East and West goes on apace, with the East following our activities with apparently as much interest as we follow its. At the request of the National Museum of Modern Art in Tokyo, New York's Museum of Modern Art has sent a large part of its design collection to Japan, where it will be displayed at Tokyo, Osaka and Fukuoka as "20th Century Design in Europe and America."

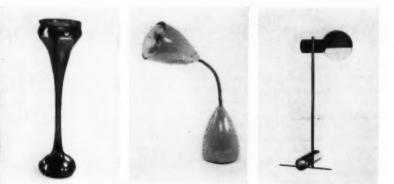
The largest part of the selections, made by Arthur Drexler, Director of the Department of Architecture and Design at the museum, and Greta Daniel, Associate Curator of Design, is in the "Machine Art" section, which with the section on "New Techniques" states the museum's theme of machine-made objects. Of the nine sections in the exhibit, four are devoted to schools of "style" — "Art Nouveau," "De Stijl," "Classical Form Restated," and "Bauhaus"; two are devoted generally to "Furniture" and "Tableware," and one to "Crafts."

There are approximately 300 objects from the museum's collection making the tour. Most of the selections are of 20th century designs, with a few 19th century objects illustrating the origins of some 20th century forms and techniques.

The exhibition, organized under the Museum's International Program of Circulating Exhibitions, is sponsored by the Japan Society and the Asahi Press.

This is the first time that much of the museum's collection has been on view. Since its organization for the Japanese trip, the museum has put it on its own 1958 exhibition schedule.

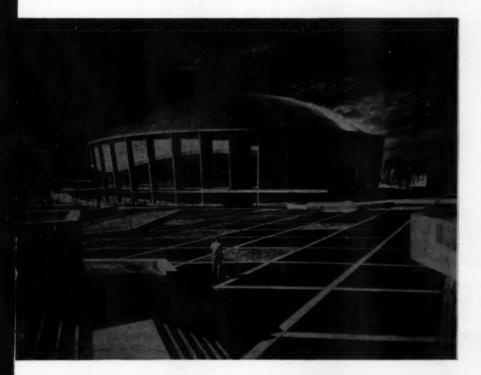
Left: from "Art Nouveau," favrile vase, United States, 1900; Louis Comfort Tiffany, designer. Center: from "Machine Art," sun lamp, 1950, Switzerland; Max Bill, designer. Right; from "De Stijl," table lamp, the Netherlands, 1924; Gerrit Reitveld, designer



(More news on page 32)

A SALUTE

from Alcoa commemorating the AlA's 100th anniversary



Typical of what modern architects are doing with aluminum is this handsome Civic Center in Charlotte, N. C. The lightweight dome of Alcoa Aluminum permits pillar-free construction of the arena for unobstructed viewing.

Civic Center Charlotte, N. C. A. G. Odell, Jr., and Associates, Architects From its founding in 1857, up to the present, the American Institute of Architects has been a powerful factor in giving strength and body and character to American architecture. Its efforts to advance the aesthetic, scientific and practical aspects of planning and building have added new stature to the architect.

As the Institute has grown to its present strength of more than 10,000 members, architecture has increased the scope of its service to society. By improving the environment in which our nation lives and works, architects have advanced living standards. They have made our world a better place in which to live. As the only society nationally representative of the profession of architecture in the United States, the AIA deserves a liberal share of the credit for this accomplishment.

Alcoa is proud of its close association with architects. The fact that the building industry is now the largest single user of aluminum is due to architects' acceptance of the strong, light metal that endures.

Aluminum as a commercially available metal is itself not yet 100 years old. Yet in the years it has been available, it has taken its place as one of the most beautiful and practical building materials. Shown on the next two pages are some of the milestones in the history of the use of Alcoa® Aluminum in architecture. And, while much has been done that is deserving of the highest praise, we are just on the threshold of the wonderful new world of aluminum in building. Architects are the men of imagination who will transform this world from a dream to a reality.

100 Years of Progre



1926

Smithfield Evangelical Protestant Church Pittsburgh, Pa. Henry Hornbostel, Architect



This 80-foot-high spire, rising 259 feet above the street, is darkened from 31 years of weather exposure. The aluminum is as sound as the day it was installed. Note 30-story Alcoa Building with its aluminum curtain wall in background.



1929

Koppers Building

Graham, Anderson, Probst and White, Architects

Pittsburgh, Pa.

The first large use of aluminum spandrels was here. A total of 967 cast units was installed. The spandrels are confirming the judgment of the architects that they would be good for the life of the building.

Municipal Stadium 193Cleveland, Ohio Walker and Weeks, Architects

뒘 This huge stadium is home field for the **Cleveland Indians Baseball Team and**

the Cleveland Browns Football Team. Aluminum is used for louvers, flashing, cornice light troughs, ceilings of marquee roofs at entrance gates and on the scoreboard. The architects are very pleased with the performance of the aluminum.

Philadelphia Saving Fund Society Bldg. Philadelphia, Pa. Howe and Lescaze, Architects



This attractive building was chosen by the Museum of Modern Art as one of the best erected in the country between 1932 and 1944. It was one of the first really big uses of aluminum windows. Now, after years of weathering, the award-winning appearance is still evident.

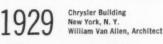
***** **Cathedral of Learning** 193 Pittsburgh, Pa. Charles Z. Klauder, Architect



Spandrels and skylight in this University of Pittsburgh building are aluminum. Despite the industrial atmosphere, no corrosion problem of any kind has existed. The aluminum is weathered but sound and good looking.



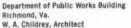
This landmark, familiar to visitors by train to the Ohio River city of Cincinnati, makes use of aluminum for windows and roof. The terminal operators state that aluminum has met all expectations as to permanency, ease of operation and low-maintenance cost. ,

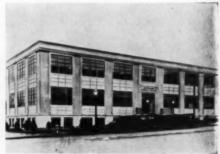




This famous landmark features extruded aluminum window sills throughout, as well as aluminum spandrels. Periodic painting is eliminated; years of maintenancefree service are assured.

1931





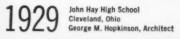
Really extensive use of aluminum has been made in this structure. The metal is used for curtain walls, inner walls, pilasters and entablature, doors, wall sections above windows, copings, inner partitions and trim. It comes close to being an all-aluminum building. Originally planned as a temporary structure, it is still in use.

> Federal Communications Laboratory Nutley, N. J. Giffels & Vallet, Inc., L. Rossetti, Architects



194

A laboratory, manufacturing buildings and a microwave tower are sheathed in aluminum. Much of it is combined with glassfiber insulation for comfort, summer and winter. Aluminum was chosen to do away with maintenance, but the owners are also proud of the attractive appearance of their buildings.





This very early use of aluminum spandrels helped insure taxpayers' investment in this school. Educational institutions are now one of the biggest users of aluminum building materials.

RCA Buildings, New York, N. Y.



More than 8,000 Alcoa Aluminum Spandrels are installed on the magnificent Radio City buildings in New York. The ballburnished finish gave a slate-gray effect at the start, and has since toned down to a darker gray, blending harmoniously with the stonework.

Equitable Savings & Loan Association 1948 Portland, Oregon Pietro Belluschi, Architect



This building is considered to be the first true application of aluminum in curtain wall construction. There's no masonry surface at all above the first floor. All of the glass and metal panels are held in aluminum frames.



Still modern looking and attractive after more than twenty-five years, this structure makes fine use of large aluminum window frames and pilasters. The interior applications of aluminum in main lobby are outstanding.

Conservatory, U. S. Botanical Gardens Washington, D. C. David Lynn and Bennett, Parsons and Frost, Architects



Despite the warm, moist air in the gardens, the all-aluminum superstructure is in excellent condition. Here is one of the earliest structural applications of aluminum. No effort has been made to maintain the surface appearance, yet even in an atmosphere trying to most metals, no corrosion problem has been experienced.



This majestic 16-story government building of Alcoa Architectural Blue-Finish Aluminum is highlighted with satin-finish natural aluminum windows and mullions. It is typical of the "new look" for architecture which is made ; possible through the use of aluminum in curtain wall construction.

A salute from Alcoa commemorating the AIA's 100th Anniversary

Architecture's aluminum MILESTONES ...all of

Alcoa Aluminum

No account of architecture's aluminum milestones would be complete without mentioning three additional buildings not shown here. The first is the Monadnock Building, erected in Chicago in 1891. Architects Burnham and Root were among the pioneers in using aluminum for stair railings, sliding doors and enclosures around elevators. The second building is the Bessemer Building in Pittsburgh. Designed by Architect Grosner Aterbury, it made important use of aluminum. The last building. important because of its use of aluminum column caps, is the Frick Building in Pittsburgh. Architect: Daniel H. Burnham. These buildings with aluminum applications are still in use.

Within the last decade, the use of aluminum in building has spurted forward at a rate that staggers the imagination. It has influenced design in all forms of architecture. This has happened because aluminum offers so many compelling advantages.

Aside from its aesthetic possibilities, which is a subject in itself, practical economics favor aluminum tremendously. It is easy to erect, light in weight and practically maintenance-free. Architects who, as a group, are better able than anyone else to judge a product on its true merits, are behind the movement to more widespread use of aluminum. Every day, more architects capitalize on the inherent advantages of this wonder metal - truly the building material of tomorrow, available today. ALUMINUM COMPANY OF AMERICA, 1888-E Alcoa Building, Pittsburgh 19, Pa.



Best in Aluminum Value

a WASHINGTON report by Ernest Mickel.

THE COMING AMERICAN LANDSCAPE: AS ROAD ENGINEERS SEE IT

ANYBODY LISTENING?

True function of everything we build must also include esthetic considerations proportion, design and appearance. For the buildings and roads we erect are by themselves an expression of our culture. They are, whether we desire it or not, monuments by which future generations will judge us.

> - Leon Chatelain, Jr. President The American Institute of Architects

Last year Congress approved a multibillion dollar highway improvement program which, when carried to fruition in the next 15 years, can work a profound change in this country's landscape.

The significance for architects in this greatest public works program of all time will be determined by the extent of the interest they take in it; their opportunities will be affected during its progress by decisions governing location of city and near-city routes, width of rights-of-way, and building code changes that might be prompted by or influence redevelopment programs. These are decisions that will be made at the state level, and are being made today as the vast construction effort moves into its action phase.

Congress decreed that \$27.4 billion in Federal money would be used for bearing 90 per cent of the cost of constructing the National System of Interstate and Defense Highways. Add to this an estimated \$22.6 billion that Uncle Sam will pay out to the states in the same period for a 50 per cent share of the cost of laying other roads in the overall program — rural, secondary, and urban and the full impact of the Federal government's financial contributions emerges. If all goes as now planned, this ultimate figure, under the present law, will approximate \$50 billion.

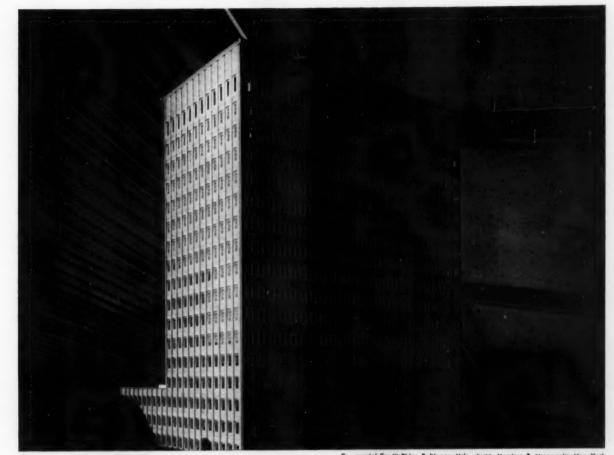
To support this largest single public works program expenditure, a taxing structure has been established which is feeding revenues into a trust fund over a specified 13-year period. The new Federal Highway Administrator, Bertram D. Tallamy, has estimated that with the final contracts let running beyond the termination of the financing program, it will take 15 or 16 years in all to construct the roads called for in the legislation.

Very obviously, major questions of city and regional planning are involved; and architects will want to be much (Continued on page 354)



Bureau of Public Roads

ARE ARCHITECTS LOOKING? This is the map of the National System of Interstate and Defense Highways. As a guide for development, the Bureau of Public Roads, the administering agency, has approved "Geometric Design Standards" adopted last year by the American Association of Highway Officials. Goals: safety, permanence, utility, flexibility (More news on page 36)



Commercial Credit Bidg., Baltimore, Md.—Archt.: Harrison & Abramovitz, New York Gen. Cantr.: Cansolidated Eng. Co., Inc., Baltimore, Md.—Fireproofing by The Hampshire Corp., Baltimore, Md

PROVEN METHOD OF FIREPROOFING CUTS COST—CUTS WEIGHT

machine-applied directly to steel deck—eliminates metal lath

FAST SINGLE-COAT APPLICATION from a rolling scaffold. Other work can proceed at the same time. Faster drying means earlier completion and earlier occupancy.

UNDERWRITERS' LABORATORIES test of deck and beam: 3-hour rating for 34" applied directly to cellular steel deck.



a product of COLUMBIA ACOUSTICS AND FIREPROOFING COMPANY Stanhope 3, New Jersey subsidiary of United States Mineral Wool Company ENGINEERING DEPARTMENT of Columbia Acoustics and Fireproofing Company is available to aid you in making the most effective and economical use of CAFCO FIREPROOFING.

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ARCHITECTS: Perry, Shaw and Hepburn, Boston CONSULTING ENGINEERS: Clyde R. Place • Cleaverdon, Varney & Pike MECH. CONTRACTOR: Mechring & Hanson Company

Below: Powers Recording controller regulates temperature of chilled water used for comfort air conditioning.





Williamsburg Inn was among the first of our country's outstanding hotels to provide guests with the comfort of modern year 'round air conditioning.

Spacious guest chambers, suites and lounges have individual room thermostats which allow occupants to select the temperature desired. Primary air in ducts to each space is properly conditioned including dehumidification.

In 1907 Powers Pioneered in Hotel Air Conditioning Control in the Gold

G CONTROL helps guests enjoy modern air conditioned comfort in this famous hotel

> Room of Chicago's Congress Hotel. Superior performance of this control system was due to an exclusive Powers feature . . . gradual control of mixing dampers and valves.

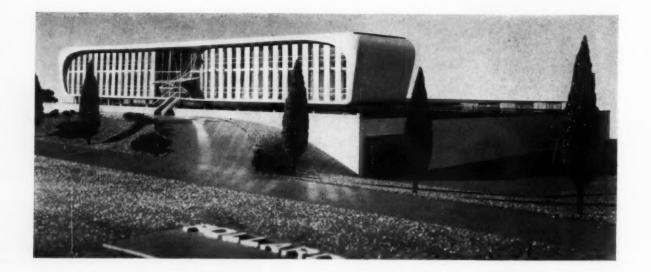
> Are You Planning a New Building or modernizing an old one? Ask your architect or engineer to include a Powers Quality system of temperature control. They have been time-proved dependable in thousands of prominent buildings since 1891. (74)



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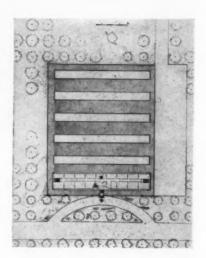
PLANT DESIGNED FOR AUTOMATIC CONTROL, PROTECTION AGAINST BLAST AND FALLOUT

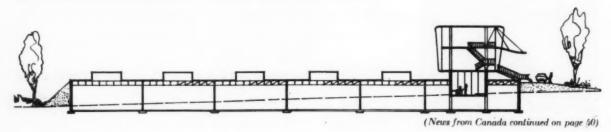
An industrial plant which half buries its manufacturing facilities for protection against blast and puts its office building above them for quick access and control of highly automated processes has been designed for Canadian Pollard Bearings Company Ltd. by A. Bruce Etherington, Architect, of Oakville, Ont. The plant, to be built in stages as production requirements dictate, is already under way on a rural site two and a half miles west of the Toronto suburb of Oakville.

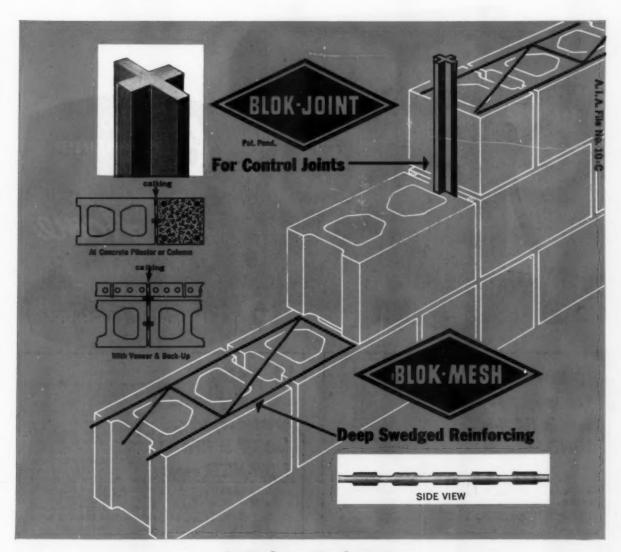
Glass-enclosed offices hung from the bottom of the office building will provide the visual control of production lines essential in highly automated operations. It is hoped in this plant to reduce manual labor by 50 per cent from existing plants in England by achieving a high degree of automation in the lathe, milling and tempering stages of manufacturing.

Security considerations were important because Pollard is a military supphier in wartime. Thus the decision to put the 200x200-ft manufacturing area partly below ground and surround it with concrete-stabilized earth retaining walls from three to 15 ft thick. Thus also a roof structure on the factory area which will permit installation of lead sheeting in multiple layers to a depth of 18 in., insulation estimated to provide sufficient protection from radioactive fallout on the roof until special roof sprays can wash such dust from the roof into specially planned cisterns. All of these precautions are regarded as making the factory safe against anything but a direct bomb hit.

Placement of the office building above the factory helped satisfy another of the owner's requirements — prominent visibility from the highway — and the sculptural shape of the building, a purely esthetic decision, seems likely to advertise it even more widely. Structure is reinforced concrete columns and plate slabs; curved end walls are constructed of reinforcing steel bent to contours, wired with metal lath and sprayed with gunnite to the required curviture.







It Takes Both For MORE STRENGTH & PROTECTION IN MASONRY WALLS

Blok-Joint is a cross-shaped rubber extrusion used to make control joints in masonry walls. No special blocks are required — no building paper and mortar fill is necessary. No cutting or sawing to be done. Blok-Joint is used with any standard metal window sash block.

The secure interlock provided by Blok-Joint adds to the lateral stability of the wall. It allows for contraction *and* expansion while maintaining a firm joint.

Blok-Joint is effective in single block walls, with brick and block backup and at pilasters and columns.

The big advantage you get with Blok-Mesh is the exclusive "Deep-Grip" swedging. It allows the mor-

tar to get a real bite on the reinforcing yet requires no more area in joint than other types of superficial deforming.

Blok-Mesh is designed to eliminate cracks above lintels and below sills. It minimizes ordinary shrinkage cracks. Notice in the illustration how the "Deep-Grip" swedging of Blok-Mesh is large, deep and well-defined to form effective dovetailing.

Write for FREE Blok-Joint sample and literature on Carter-Waters 2-point better masonry wall design. For Further Information See Stam Stam Stam Car Architectural or Industrial Construction File Car Architectural or Industrial Construction File Car Atta Pennway, Dept. AR, Kansos City, Mo.



The new all-plastic Acme-rak makes Acme towers lighter, more economical than ever. In an average unit (100-ton), the entire pack now weighs only 180 lbs as against 2300 lbs for a comparable steel pack! This means real savings on installations and on freight. Better still, it can never rot nor rust ... is cleaned more quickly, less frequently. Total savings are two-fold: lower installed cost, lower maintenance cost.

Twice as much surface protection

Acme's hot-dip galvanizing after fabrication de-posits twice the thickness of zinc that ordinary electroplating does. This double protection against rust leaves no surface exposed. Units never need painting.

5 Full access to coil or pak

For fast, easy maintenance, the new Acme units offer convenient access to nozzles, eliminators, pack or coil by removal of full-width panels front and rear. Sliding doors provided for quick inspection.

2 10.246

gering the tubes, air and spray water travel a longer zig-zag path, ef-fecting greater turbulence and better heat transfer. (2) By sloping the tubes longitudinally, spray water remains in longer contact with each tube. Also, the condensed re-frigerant drains more rapidly. The result is more rapidly. The result is more efficient evaporation . . . which means more capacity in less space with less blower hp.

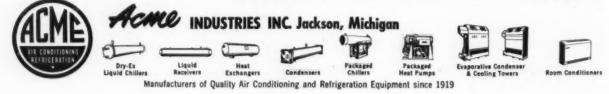
4 Easily serviced external sump

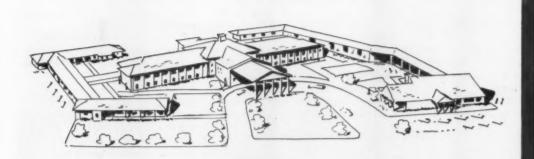
On both cooling towers and evaps, Acme's external sump provides quick easy access. Sediment screen, float valve, and water treatment facilities are reached by lifting the cover.

Balance where it counts

After final assembly, All Acme blower units are now electronically balanced to assure quiet, smooth operation at all times . . . less wear on blower bearings . . . greater efficiency . . . longer troublefree service.

New Acme Catalogs, Nos. 311 and 361 give full details. Write for them today.





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THE RECORD REPORTS

NEWS FROM CANADA

(Continued from page 36)

ALBERTA, N. B. ARCHITECTS HOLD ANNUAL CONVENTIONS

Both the Alberta Association of Architects and the Architects' Association of New Brunswick have held their annual meetings for the year.

The A.A.A. gathered at Edmonton. with 79 members present - actually 66 per cent of the total registration. Richard J. Neutra and Mrs. Neutra were honored guests, and the Los Angeles architect received an honorary membership in the Association. Dr. Walter H. Johns, dean of the Arts & Sciences Faculty at the University of Alberta, was banquet speaker.

H. L. Bouey of Edmonton was reelected president. Other officers are: first vice president - John Stevenson, Calgary; second vice president - D. G. Forbes, Edmonton; honorary treasurer - T. G. Groves, Edmonton; and honor-



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COMMERCIAL. AND INDUSTRIAL DOORS

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Monarch Sectional Overhead Doors can be installed in any industrial plant, wherever an opening is available, interior or exterior. Monarch Sectional **Overhead** Industrial Doors are the finest that experience and engineering skill can produce. They are usually BIG doors, involving elements of operation and safety that only real "Know-How" can successfully master. Hundreds of such doors, including some of the largest ever built, furnish evidence that MONARCH means the ultimate in efficiency, safety and

Various types of MONARCH Sectional Doors and equipment involved in their construction and use are described in our 45 Page Catalog. Yours for the asking.

ary secretary - J. B. Bell, Edmonton. Also elected to Council are John Mc-Intosh, Edmonton; Hugh W, Seton, Edmonton; G. B. McAdam, Calgary; K. L. Bond, Calgary; and Robert F. Bouey, Edmonton. Mrs. Helen L. Bond remains executive secretary.

The Architects' Association of New Brunswick, meeting in Saint John, elected as president Rolf Duschenes, Saint John. and as vice president Stanley W. Emmerson, Saint John. Immediate past president is Neil M. Stewart of Fredericton. These, with Yvon LeBlanc of Moncton and J. R. Myles, Saint John, constitute the Council. H. Claire Mott continues as secretary-treasurer.

ENGINEERS ELECT: NEWS OF A.C.E.C. DIRECTORS' MEETING

W. G. McKay of Saskatoon has been elected president of the Association of Consulting Engineers of Canada Inc. at a meeting of the directors held in Montreal

This meeting constituted the first phase of the annual meeting of the association: the second phase is scheduled for June 13, at Banff, coincident with the annual convention of the Engineering Institute of Canada.

MAY 16 ENTRY DEADLINE IN **ALUMINUM CO. COMPETITION**

May 16 marks deadline for receipt of entries in the nationwide architectural competition sponsored by the Aluminum Company of Canada Ltd., for the design of a suburban sales office in the Toronto area.

First prize is \$6000, with total cash awards amounting to \$12,500.

Richard E. Bolton, Montreal architect, is the professional adviser. Assessors are Pierre C. Amos, Montreal; A. F. Duffus, Halifax; Herbert H. G. Moody,

(Continued on page 44)



NEW COUNCIL of the Alberta Association of Architects - (back row) K. L. Bond, H. Selon, G. B. McAdams; J. McIntosh; (front row) J. B. Bell, H. L. Bouey, D. G. Forbes, T. A. Groves. Not in picture: J. Stevenson and Robert F. Bouey



The Kenmawr Apartments is Pittsburgh's second-largest modern apartment building. General contractor, Larson Construction Co.; heating contractor, Steel City Piping Co.; Anaconda distributor, Crane Co., Pittsburgh, Pa.

New 240-Unit Pittsburgh apartment gets "Sunshine Warmth"

PANEL



Approximately 3200 Anaconda Panel Grids were installed in ceilings throughout the Kenmawr Apartments. The PG's came to the job in handy cartons shown, ready to open out and fasten to the metal lath by tie wires.

Write for Publication C-6 which gives the full story, including engineering and layout data. Address: The American Brass Co., Waterbury 20, Conn. In Canada: Anaconda American Brass Ltd., New Toronto, Ont. The ease of installing PG's[®] was a big factor in adding radiant panel heating to the long list of modern comfort and convenience features in the new Kenmawr Apartments in Pittsburgh.

with ANACONDA pre-formed Copper Tube

GR

John O'Farrell, partner of Steel City Piping Co., Pittsburgh, heating contractor on the project, suggested a radiant heating system because of his previous experience with Anaconda Panel Grids. He knew that the savings provided by these ready-to-install copper tube grids make the installation cost competitive with other heating systems. And he felt strongly that the "sunshine warmth" of radiant heat would be an important feature in attracting and holding tenants.

Each of the 240 apartments has "customized" control of temperature. Each has its own radiant heating system served by a main supply line. A motorized valve, actuated by the apartment's thermostat, controls the flow from supply line to the panel circuits.

Why PG's save time and money. Anaconda Panel Grids are machineformed radiant heating coils containing 50 feet of Type L Copper Tube, conveniently packaged, ready to install. They lie flat against the ceiling construction so that plaster is applied easily and evenly. They are easily extended by hand to the center-to-center spacing required. Each grid has one tube end expanded for solder connection in series without fittings. PG's are available in two nominal tube sizes, ³/₈" for ceiling installations and ¹/₂" for floor panels.

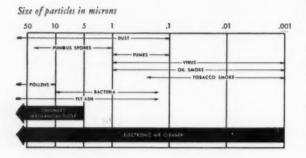


WHO SAID DIRT CHEAP?

Air-borne dirt wastes your best efforts your client's money



Specify Honeywell's New Electronic Air Cleaner and stop this waste



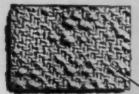
As shown above, common air-borne contaminants range in size from 50 to .001 microns. In this area lie the major causes of most soiling and many respiratory ills. Notice the scope of protection offered by the Honeywell Electronic Air Cleaner. Its range of efficiency extends from the largest particles to the microscopic ones that ordinary mechanical filters miss. For practical purposes, the mechanical type removes little under 5 microns. From Honeywell the leader in automatic controls for air conditioning, comes this new contribution you can offer your clients.

Because Honeywell's new Electronic Air Cleaner removes so many more air-borne dirt particles than ordinary mechanical air filters, the practical efficiency, economy and beauty that you design into a building's interior remains like new indefinitely.

This greater cleaning capacity of the Honeywell Air Cleaner cuts building owner's cleaning costs appreciably by reducing the need for frequent dusting, washing and redecorating. Improved occupant health is another client benefit, too.

Multiple advantages like these more than pay for a Honeywell Electronic Air Cleaner installation. For full details call your local Honeywell office or write Minneapolis-Honeywell, Dept. AR-5-95, Minneapolis 8, Minnesota.





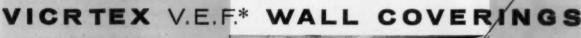


New International Headquarters of the Standard-Vacuum Oil Company on 55 acres of Westchester Countryside. Eggers and Higgins, Architects.



Eggers & Higgins' Helen O'Connell plans with

Almost 3 stories high the walls and foyer of this Executive Auditorium Meeting Room in Pine Green VEF Handloom blend with and enhance the luxurious effect of the flowing draw draperies and multi-storied windows.



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Luxurious beauty combined with modern serviceability keynote the new Stanvac interiors. At work everywhere on walls, columns and furnishings is the enduring magic of VICHTEX V.E.F....

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Beauty that's exciting . . . pleasing; surfaces that are easy to maintain . . . last a lifetime. No wonder VICHTEX V. E. F. covers more and more walls of fame!

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> Stratching the full height of the reer of the building the escalator well, from the lobby to the top floor, extends a rich welcoming glow with VEF Vicra-Loom in silver-threaded Cantalope.

Ind Seel Blue VEF Mirra-Disc Mords cushioned comfort in adjoining recreation rooms.

Airra-Disa



Skyblue VEF Regal with silver stripes becomes part of the airy skies along the outer perimeters of the large Communications Center on the Main Floor. The island center is in pleasing contrast with Cinnabar VEF Brussels.



VEF Brussels in Citron adds sunny and practical charm to these contralized Dining Room columns. Photos by Don Morgan

L. E. CARPENTER & COMPANY, INC. Empire State Building, New York 1, N.Y. LOngacre 4-0000 Mills: Wharton, N.J.

another -

Drussets

THE RECORD REPORTS

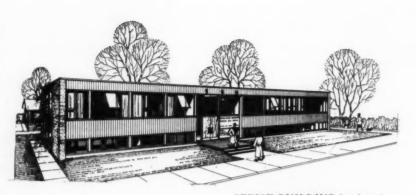
NEWS FROM CANADA

(Continued from page 40)

Winnipeg; William R. Souter, Hamilton, and John H. Wade, Victoria.

CMHC ANNOUNCES EXPANDED PROGRAM OF SCHOLARSHIPS

Twenty bursaries and fellowships for community planning and housing studies are to be awarded this year through Central Mortgage & Housing Corporation, it





BIG BLOWERS ARE BIG BUSINESS WITH PEERLESS

QUIET! . TROUBLE-FREE! . DEPENDABLE! . HEAVY DUTY! . GUARANTEED!

Versatility in size, application, and engineering has always been a Peerless strong point. Peerless builds its own motors and matches them to the specified blower requirements. Peerless blower frames and housings are usually heavier than any competitive products. Result—a quiet, vibration-free unit.

These are not "off-the-shelf" units, but built to customer rotation and discharge specifications. Each one receives 100% inspection before it leaves the Peerless factory. Each unit is built to NAFM standards. Motors are built to NEMA standards. Each unit is ready for operation when received at the installation site.

Write Today for Bulletins SDA-220, SDA-200 and SDA-160

Charter Member of the Air Moving and Conditioning Association, Inc.



OFFICE BUILDING for Associated Engineering Services Ltd., in Edmonton, was designed by K. C. Stanley and Company, Edmonton architects and Engineers. The building, which cost \$60,000 excluding land but including fees, is 40x108 ft on main floor and basement. Exterior walls are concrete block and wood studs finished with vertical cedar boards (and exposed concrete block); interior walls wood studs finished with 1/2-in. plasterboard; floors concrete slab in basement, wood joists at main floor; roof wood joists bonded; ceilings acoustic tile; heating forced hot air from two furnaces in basement



B. C. CENTENNIAL BUILD-ING designed by Architect Samuel Collins of Burnaby, B. C., is to be erected atop Burnaby Mountain to mark 1958 centennial year. It is to contain restaurant, banquet hall, municipal archites and lookout tower. Estimated cost: \$130,000

has been announced. This represents an increase over 1955, when 13 study aids were awarded.

Fifteen fellowships worth \$1200 each are offered graduates in social sciences, architecture or civil engineering. Three bursaries of \$800 each will go to graduates wishing to make special studies of housing or urban development. Two

(Continued on page 46)

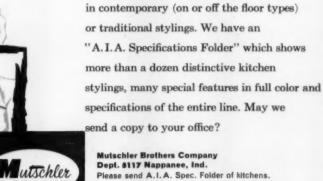
Nantucket Kitchen — featuring "Sheer Look" appliances by Frigidaire



This is but one example of the adaptability, the versatility possible with exclusive Mutschler features and cabinetwork

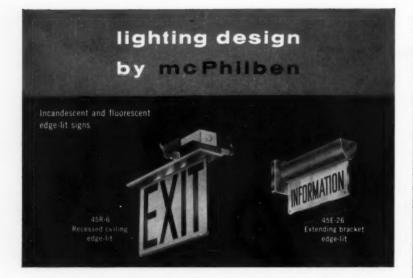
A COMPLEMENT TO THE "SHEER LOOK" by **MUTSCHLER**

Assembly plants in: Boston, Ft. Lauderdale, New Orleans and San Francisco



Please send A.I.A. Spec. Folder of kitchens.

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CAST ALUMINUM QUALITY

The gleaming satin finish of these mcPhilben directional units will blend with the interior door and window frames of the handsome new Philadelphia Sheraton Hotel. Invisible hardware permits flush installation so necessary to streamlined modern decorating. Solid cast aluminum construction assures permanent maintenance-free operation. Hinged access doors provide for easy relamping.

Most mcPhilben directionals are available in white, red and green color combinations with a range of lettering sizes to meet all fire code regulations. Auxiliary lampholders suitable for proper circuiting of emergency lighting systems may be specified.

Ask your mcPhilben representative for individual specification sheets. Consult Sweet's Architectural File $\frac{31a}{Mc}$ or write to mcPhilben Lighting Co., 1329 Willoughby Avenue, Brooklyn 37, N.Y.



Philadelphia Sheraton Hotel Another Outstanding Building Featuring mcPhilben Lighting Architects: Perry, Shaw, Hepburn & Dean; Electrical Contractors: Keystone Engineering Corp. Engineers: Slocum & Fuller; Distributor: Standard Wholesale Supply Corp.

THE RECORD REPORTS

NEWS FROM CANADA

(Continued from page 44)

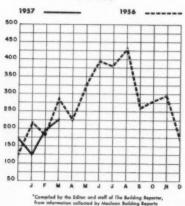
senior fellowships, of no set amount, are offered professional planners who wish to do research or undertake special studies of Canadian housing or planning.

NEWS NOTES

Rehabilitation of the blighted area of Montreal covered by the "Dozois Plan" has a green light from the Federal government. Public Works Minister Winters announced on March 21 that all necessary arrangements had been made with the city and the province, and that a subsidized rental housing project comprising 800 units would be built. . . . A 1957 Langley Scholarship has been won by E. A. Wetherill, a graduate of the School of Architecture of the University of British Columbia. The U.S. award, worth \$1000 for postgraduate study, was instituted in 1936. Since that time some 60 scholarships have been granted, six of them to Canadians. . . . **Royal Institute of British Architects** President Kenneth M. B. Cross and Secretary C. D. Spragg will visit Canada and the U.S. this spring in the course of a round-the-world trip. They arrive at Vancouver from Australia on May 6 and will be in Edmonton May 8 and Toronto May 22. Reception plans are being made by the various provincial associations of the R.A.I.C. . . . Surveys are under way for a 40.000-sq-mi industrial development proposed for the northern interior of British Columbia by Alex Wanner-Gren, Swedish financier. Percy Gray, partner in the Vancouver architectural firm of McKee and Grav, is technical and planning director for the (Continued on page 336)

Contracts Awarded: Comparative Figures





Proof!

Schools all over America are installing a Syncretizer unit ventilator in every classroom-with Wind-o-line radiation all along the sill. They not only get the heating or cooling and ventilating needed ... they also overcome cold window downdraft and stop excessive radiation of body heat to cold surfaces. Every pupil-even those near the window wall-enjoys a protected learning environment ... comfort and health plus more learning per school dollar. And by employing the Nesbitt series hot water method-in which the Wind-o-line tubing serves as supply and return for a group of classrooms-they get Nesbitt protection at a considerable saving.

This Nesbitt-equipped classroom has the protected learning environment. For the full story, send for Publication 101.

Nesbitt Protected Learning Environment COSTS LESS

with the Series Hot Water Wind.o.line System

Creve Coeur, Illinois Heating cost: \$1.41 sq. ft.

The two-story Creve Coeur Elementary School was designed and engineered by George Poppo Wearda, Pekin, Ill. With capacity for 256 pupils and gross area of 11,800 square feet, the entire eight-classroom building cost \$156,124. Total cost for heating and ventilating with Nesbitt series hot water system (Syncretizer unit ventilators with Wind-o-line radiation concealed by Nesbitt storage cabinets) was \$11,400.

Framingham, Massachusetts Heating cost: \$1.74 sq. ft.

The Framingham Senior High School, Samuel Glaser Associates, Architects and Engineers, has a 1300-pupil capacity, a gross area of 187,328 square feet for a total cost of \$2,509,000. The classroom learning environment is protected by Nesbitt Syncretizer unit ventilators and Wind-o-line radiation integrated as a series hot water system. The total heating and ventilating system costs were \$327,000.

Papillion, Nebraska Heating cost: \$1.83 sq. ft.

Papillion High School was designed by Unthank & Unthank and engineered by James P. Anderson. With a 200-pupil capacity and 15,296 sq. ft. gross area, the building costs totaled \$191,592. Nesbitt Syncretizer unit ventilators combined with Wind-o-line radiation for cold wall and downdraft protection were employed as a series hot water heating and ventilating system. The total heating contract was \$28,900.

Bridgeton, New Jersey Heating cost: \$1.60 sq.ft.

The new Bridgeton High School, a project of Edwards & Green, Architects and Engineers, Camden, N. J., will accommodate 2,200 pupils, have a gross area of 201,000 square feet, and cost \$2,880,865. Heating and ventilating will be furnished by Nesbitt Syncretizer unit ventilators piped in series hot water fashion with cabinet-type or wall-hung Wind-o-line radiation. Total heating contract: \$321,704.



WIND O'LINE RADIATION MAKES THE DIFFERENCE!

SYNCRETIZER UNIT VENTILATOR WITH WIND.O.LINE RADIATION

Made and sold by John J. Nesbitt, Inc., Philadelphia 36, Pa. Sold also by American Blower Corporation and American-Standard Products (Canada) Ltd.

COMPROMISE SCHOOL BILL WAITS COMMITTEE ACTION

The compromise Federal aid to school construction bill cleared a House Education and Labor subcommittee last month only to run into a three-weeks delay when it reached the full committee group. The latter voted 15 to 10 to start its consideration of the measure on May 1, after the subcommittee's hearing transcript has been printed and made available generally.

The subcommittee's earlier action in voting a middle-of-the-road \$2 billion five-year program reflected the influence of the economy drive rampant in the House. President Eisenhower had proposed a \$1.3 billion program of aid for four years and tagged it with a *must*. The Democrats were backing a much broader proposal calling for outlays of \$3.6 billion in six years. In their effort



THE EDITORIAL FEATURE ARTICLE ON THE A.M. CASTLE & CO. WAREHOUSE IN THIS ISSUE OF THIS MAGAZINE, SHOWING THE APPLICATION OF 3 PLASTEEL PRODUCTS.

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to ameliorate the bill's chances, the subcommittee members voted approval of a distribution formula which would take criteria from each of the two bills first considered. Half the money under the new plan would be distributed to the states on the basis of school age population, and half on the basis of established need.

The distribution method always has been a live issue in consideration of similar bills.

The subcommittee's school construction bill would provide \$750 million for the purchase of school district bonds by the Federal government whenever these bonds cannot find a ready private market. There was included, also, an item of \$150 million to cover the proposed government service and guarantee of state school bonds.

A penalty-reward system is set up in the measure as an incentive to states to spend as much as they can on their school construction needs. The national average would be the guiding criterion here. (Representative Ralph Gwinn, Republican of New York, voiced the only nay in the subcommittee rollcall.)

Meanwhile, Representative George S. Long, Louisiana Democrat, proposed a new and "simplified" approach to the school construction problem. He would return to each state from the Federal Treasury a sum equal to one per cent of the total income tax receipts collected on corporate and individual incomes.

Introducing a bill to implement this idea, Representative Long said the legislation provides that each state and territory would have returned to it one per cent of the total taxes collected each year to be used for public school construction purposes. This plan, in his opinion, would obviate any threat of Federal control of the states' educational pursuits. Nor, he added, would it pose any situation where a rich state would be forced to support a poor state. "Each state stands on its own resources and the distribution of the money is absolutely fair," he asserted.

HOUSE APPROVES FUNDS FOR LEASE-PURCHASE PLANNING

The full \$20 million requested by the General Services Administration for planning and site acquisition in connection with the lease-purchase building program was allowed by the House in its passage of the first Independent Offices appropriations bill for fiscal 1958. Although the taking of new bids has been (Continued on page 340)

ARCHITECTURAL RECORD

WESTERN SECTION

Western Editor: ELISABETH KENDALL THOMPSON, A.I.A. 2877 Shasta Rd., Berkeley 8, Calif.

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THE ACID TEST FOR PUBLIC RELATIONS

It's A RARE SESSION when a state legislature does not receive at least three or four bills which directly affect the design professions. In what light it views these bills depends largely on what it thinks of the profession involved. And what it thinks of it will depend on what it has seen and heard of it, and what its experience with it has been. Whether the sum of a legislature's actions on these bills is good or bad depends, in other words, on the profession itself. And that means, in essence, the profession's public relations.

In the years since the Institute undertook its public relations program, the profession, as individuals and as corporate groups, has greatly increased its activity in trying to effect a meaningful connection between itself and the public. An incomplete understanding of what really constitutes public relations has, unfortunately, produced activity in many areas which is actually individual publicity (and at times press agentry) rather than public relations. There is no place where the effects of this incomplete and short-sighted approach to so important an aspect of professional practice shows up more, or more often, than in the actions taken by the state legislatures.

In the last few years almost every Western legislature has had before it bills on architectural registration, fees for public work or use of stock plans for schools. But in only one Western state has there been enacted any piece of legislation that could be considered to be in the public's interest so far as the design professions are concerned. This record seems hardly to justify the optimistic mañana attitude that "it will be better next year" with which these recurrent set-backs are met by the professions.

For it will not "be better" unless it is made better — by building up the public's confidence in the design professions through the responsible, ethical, loyal performance of professional service by each of the individuals in the profession, and by demonstrating through corporate action in the public interest the profession's honest and very real concern with the overall good of the community, state and region. That is the real meaning of public relations.





REMODELLED OFFICES FOR ADVERTISING AGENCY

Miller, McKay, Hoeck & Hartung, Seattle, Washington; Young, Richardson, Carleton & Detlie, Architects

SET BACK from the street, the glass-walled front of the offices for this advertising agency in downtown Seattle acts as a "show-case" for the reception room and the stairway with its cantilevered landing. Although some changes were made in other parts of the offices, the principal remodelling was done at the entrance. Light and dark shades of gray, and rough and smooth textures were used in the reception area. The door is of the same stained cedar as the wall to the left of the stairway. The sign, used as a monogram by the firm, is of polished brass and white porcelain enamel, and is suspended on a line with the street from the edge of the roof overhang.



Art director's office

HIGHWAYS GREENBELTS URBAN RENEWAL ATOMIC POWER

ASPO Considers Planning's Most Challenging Problems at its San Francisco Conference

PLANNING IS A NEW PROFESSION, without the centuries of tradition and experience which give authority and prestige to other professions such as architecture. But when it comes to meeting the problems with which twentieth century technology has surrounded both planners and architects, neither oldness nor newness is an advantage. Only accomplishment based on farsighted, almost clairvoyant comprehension of all the factors involved in human needs, and strong-minded decisions and forthright action inspired by wise evaluations, provide the background for coping with these complicated, many-faceted problems.

As this country's planners met for their annual conference, held this year in San Francisco for the first time since 1940, speaker after speaker made it clear that although the planning profession has done much in its brief existence, it has not done enough. Some blamed circumstances, citizens' apathy, present statutes, finances; others blamed the profession itself as being derelict in tending to its "homework."

Despite the reiteration of this introspective soul-searching and the repetition of reasons, the more insistent refrain was *challenge:* on the Federal highway program, on greenbelts, on urban renewal, on zoning. On the highway program, time is short, warned John T. Howard, associate professor of planning at M.I.T.:

Highways and Greenbelts

"The highway act of 1956 is silent on planning and deals almost entirely with engineering and financing . . . No mention is made of any referral for review to city or metropolitan planning agencies . . . This is the immediate challenge to planners: to search their thinking to see if they have anything more important to be said than 'Hey, wait for me!' It may be too late to ask for re-routing of an already designed highway — but it might not be too late to ask that an interchange be left out so as to discourage development of an area that metropolitan considerations require as a rural reserve."

The need for preservation of a greenbelt around our cities — an idea revived from the Thirties when it had a brief (and turbid) flurry of prominence — was also stressed by William Zeckendorf of New York's giant firm, Webb and Knapp. Zeckendorf flatly stated that unless greenbelts are established between metropolises there "will be fluid suburbia — like Los Angeles — where there's no way to escape from the asphalt and concrete streets." A Webb and Knapp project now under way — an entirely new town — has been designed on that principle. The new town, halfway between New Orleans and Baton Rouge in Louisiana, will be surrounded by a greenbelt buffer to preserve it from encroachment by either larger city.

The part that highways can play in preventing development of fluid suburbia was emphasized by Grady Clay, real estate editor of the Louisville *Courier Journal*, in urging that the new express-highways be "thought of and planned as multipurpose projects, using space and landscape for the purposes of the whole society — not just for moving traffic." He amplified this remark with the suggestion that "while we are at it, we might as well plan these networks for future utility routes; for new recreation areas; for viewpoints at choice spots; for preserving natural features instead of flattening out all the character in the landscape.

"The public today is educated to structure and shape, esthetically aware of form (and whether or not it follows function). It is beginning to support zoning . . . It knows what it likes and if it isn't art, it's getting closer to it all the time: a total landscape designed to please the eye, as well as move traffic; a landscape to move men's spirits; to lift the heart as well as cut the accident rate. Only when this attitude becomes dominant among all highway planners can we be sure that the 41,000 miles of new highway will be put to their highest and best use."

Urban Renewal

On urban renewal both Julian H. Levi, executive secretary of the South East Chicago Commission, and Zeckendorf had much to say. Too little is known about the problems of design and their impact on the future of a neighborhood, said Levi. Suggesting that "what we need most is a totality of approach, particularly as to the public part of the program," he pinpointed the biggest problem of all in urban renewal programs: getting the private investor interested in "renewing" an area.

"We know now that slum clearance, or a public housing project, within itself will not produce private investment around it. But excellent schools, adequate recreational opportunities and parks, shopping and off-street parking facilities, will often induce private action."

He recommended that planners "do more research on the economics and financing methods involved in urban renewal; find ways of reducing costs of acquiring slum property (perhaps, as in Chicago, by aggressive and effective building code enforcement); recognize private institutional expenditures as an essential part of our urban renewal process; and take as a test of what we do now, whether it can be said in a quarter of a century that those who planned and worked today did so with high courage, imagination and insight."

Zeckendorf, whose part in urban renewal projects accounts for some of his largest jobs, emphatically stated that "the biggest future lies in the rejuvenation of cities," and that "private capital should implement the plans of the community — it's only good, enlightened self-interest." The highways to be built under the Federal program are, he said, a challenge to rejuvenation of cities: the cities with the most attractions in stores, cultural and educational activities, will be the winners in the competition to draw motorists off the highways.

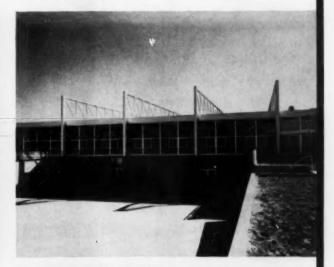
Although the coming of atomic energy as a practical means Continued on page 48-24

Steel opens new horizons in school design



STEEL FOR BEAUTY! Kellogg High School, Kellogg, Idaho, is a dramatic example of the functional beauty that can be achieved through steel. Fabricated by Gate City Steel, Boise, Idaho, using United States Steel angles, plates, and structurals, it contains 68,000 square

STEEL FOR ECONOMY! The Green River School in Utah was built at a cost of less than \$10 per square foot...one of the most economical school buildings in the Intermountain West! This modern structure features an all-welded frame...one of the first in this area. Architects were Cannon, Smith & Gustavson, Salt Lake City. Dean L. Gustavson—partner in charge. feet of space. The contemporary design provides maximum lighting for students and is a permanent structure, economical to maintain. Culler, Gale, Martell, Norrie, of Spokane, Wash., and Perkins and Will, of Chicago, Ill., were associated architects.



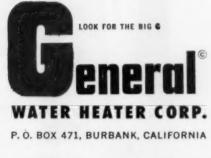
STEEL FOR VERSATILITY! Exposed steel trusses solved a problem in the construction of the Green River School's gymnasium ... and saved about \$30,000 in building costs! Since soil conditions required the building to be founded on pilings, the gym could be recessed half its height into the ground. This unique design allowed for a continuous roof plane. For your next project, consider the advantages of steel—United States Steel.



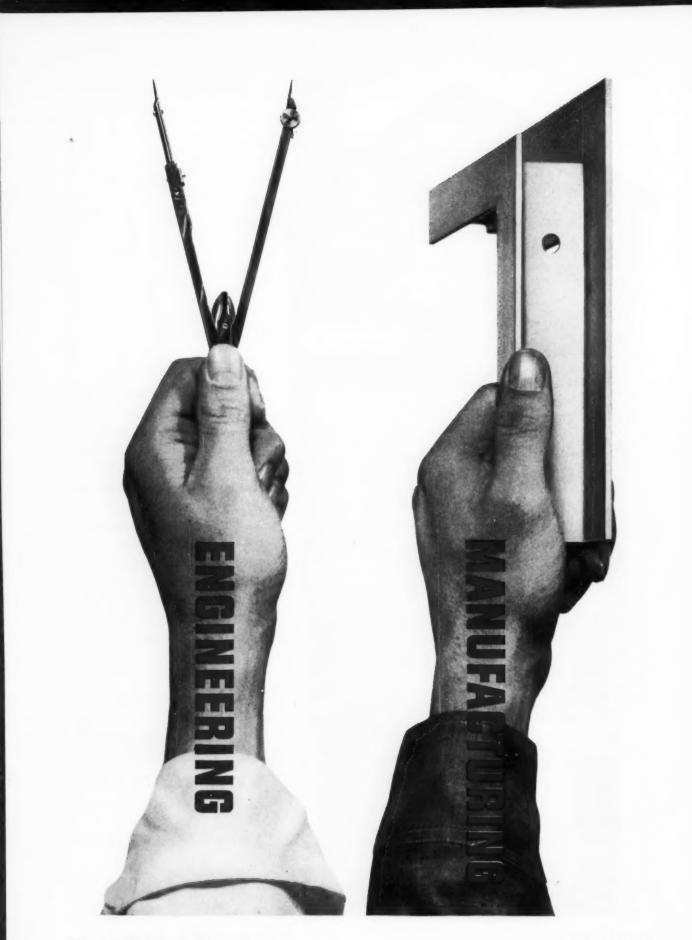




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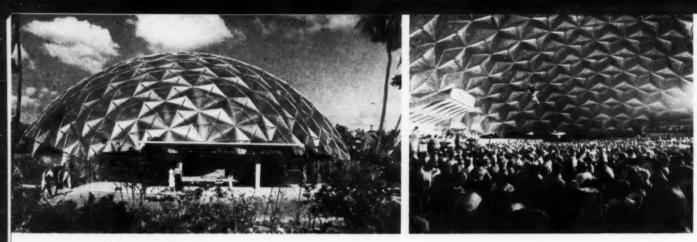


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TALLAT



Kaiser Alum, photos right, Yamada, Camera Hawaii

IN THE NEWS

Honolulu: Aluminum-domed Auditorium

Completed and put to use less than a month after the component panels arrived from California, the new aluminum-domed 2000-seat auditorium at Henry Kaiser's Hawaiian Village in Honolulu is of unique design which, because of rapid, easy construction and low cost, is under consideration of several cities as solution to their need for auditorium-sports arena space. Dome itself took only 20 hours to erect. Canopies at entrances, bamboo screen walls, landscaping, stage completed building. Kaiser Aluminum and Chemical Corporation engineers designed dome and panels



Sacramento: Municipal Office Building

Municipal Utility District offices for Sacramento, Catif., will be housed in the new office building located in the center of a 15-acre site. Three-story unit contains offices, auditorium; two-story unit adjoining contains business machine equipment and work space. Both units have fixed sun protection with floor to ceiling glare-reducing glass behind. Dreyfuss and Blackford of Sacramento are architects

Santa Monica: Ocean-front Parks

Four new ocean-front parks are under development in Santa Monica, Calif.; the first is to be ready for use this summer. Each will have dressing rooms, showers, concessions, parking, recreation areas of various types. Welton Becket & Associates are architects

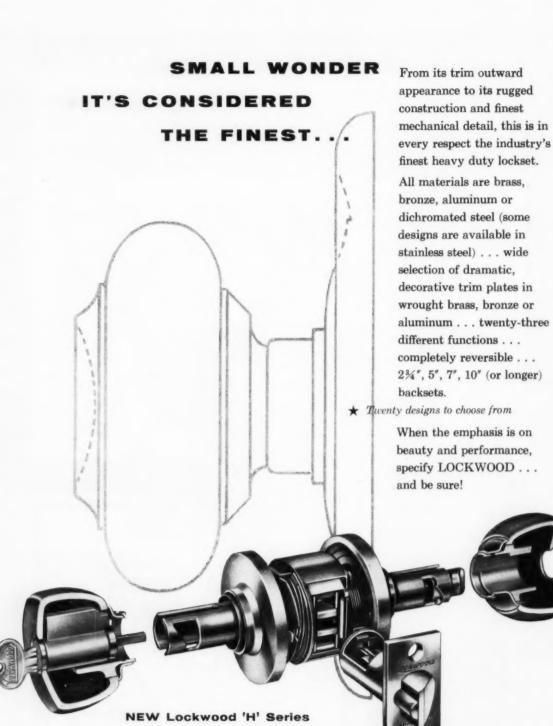




San Francisco: Art Festival Citation

Awarded a special citation at San Francisco's last Municipal Art Festival, this "memorial chapel" was designed by a group of collaborating artists as a demonstration of the incorporation of art in religious buildings. Marquis & Stoller were architects; Lawrence Halprin, landscape architect, Keith Munro, sculptor (candelabra); Martin Snipper and Leonard Breger, designers respectively of mosaic "Moses" panel and enamelled "Jacob's ladder"



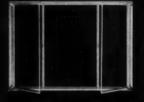




LOCKWOOD HARDWARE MANUFACTURING COMPANY Filchburg, Mass.

WESTERN SECTION

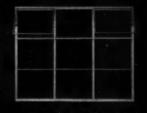
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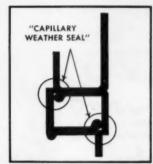


Bourne Diamond Patterns bring Old-World charm for modern homes.

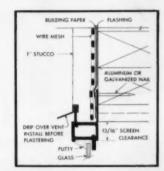
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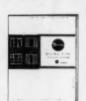
Bourne Patented Dual Fin saves installation time on frame or masonry construction.

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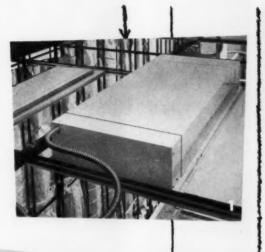


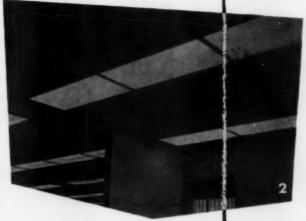
DEALERS: ASK ABOUT OUR PROFITABLE FRANCHISE!





WESTERN SECTION

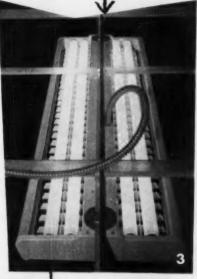


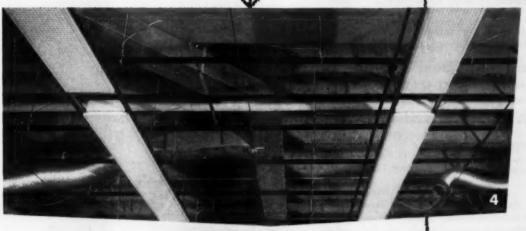


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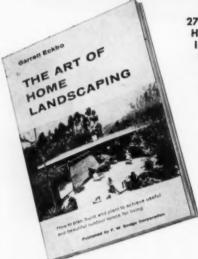
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ABOUT THE AUTHOR

Garrett Eckbo writes with contagious enthusiasm for his subject. In addition to his book authorship, he has been writing for magazines and professional journals since 1937. Eckbo, considered by many to be America's foremost landscape architect, has in his twenty-year career designed the outdoor portions of hundreds of homes, as well as housing projects, schools, colleges, community centers, hospitals, and other projects.

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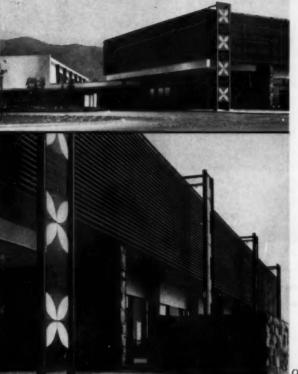
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NEWS OF THE PROFESSION

World Conference: Prestressed Concrete

A five-day meeting of 800 delegates expected for a world conference on Prestressed Concrete will hear some 70 papers on precast, prestressed members, thin shells and slabs, and latest reports on research, design and construction in various parts of the world.

The meeting, sponsored by the University of California Extension Division and the Prestressed Concrete Institute, will be held July 29 to August 2 at the University of California.

Among speakers so far announced is Wayne F. Palmer, Mobile, Ala., who will describe the world's longest highway bridge, the 24-mile prestressed concrete causeway across Lake Pontchartrain between New Orleans and Mandeville, La., which he designed.

The program includes a field trip to prestressing plants and jobs under construction, according to Professor T. Y. Lin of the University of California, general chairman for the conference.

Elections and Awards

Raymond Nordquist, architect, is the new president of the Billings, Mont., Architectural Association. He succeeds Gene Trotter. Other officers are Lew Evans, vice president and F. Wayne Gustafson, secretary-treasurer.

Marshall Perrow, architect, has been elected chairman of the Tacoma, Wash. Planning Commission.

John Roberts, acting director of planning in the Los Angeles City Planning Office has been named to the directorship.

Henry Wright, F.A.I.A., of Los Angeles, has been elected first chairman of the newly formed Architects and Engineers Conference of California. Wesley Haves. San Francisco structural engineer, is vice chairman, and Melton Ferris, executive director of the California Council. A.I.A., is executive secretary. The committee was formed for the exchange of information and for planning cooperative action at the state level in fields of mutual interest to architecture and structural engineering. It will make no policy decisions but will suggest action to the member organizations which include the California Council. Structural Engineers Association of California, Consulting Engineers Association of California, and California Council of **Civil Engineers and Land Surveyors.**

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SAN FRANCISCO Earthquake

Just a month short of 51 years after the 1906 earthquake, San Francisco and a good part of Northern California — was rocked by an earthquake too strong to ignore. Several smaller shocks preceded the big one which came just before noon on March 22. During the afternoon and evening, aftershocks of varying intensity — two almost as strong as the one at midday — kept residents in a state of suspension.

Registered at an intensity of 5.3 on the Richter scale, the quake was the strongest felt in the area since the big quake of 1906 which had an intensity of 8.25. Since the energy released by an earthquake has a logarithmic progression, the latest San Francisco quake was considerably weaker than the 1906 record-maker.

Like the 1906 quake, this one was caused by a shifting of the earth along the San Andreas fault centered off the San Mateo coast at Mussel Rock. The San Bruno and Hayward faults, which are actually branches of the big San Andreas, were also affected by the movement.

The worst damage was found in the area just south of San Francisco, in the Lake Merced and Daly City areas, where some houses of recent construction were twisted on their foundations, plate glass store windows were broken, and some swimming pools and reservoirs were cracked and had to be drained. A portion of highway 101 along the coast fell into the ocean when a landslide from the hill above fell on it.

In downtown San Francisco, buildings swayed, some cracks appeared but were apparently non-structural. In the East Bay, although the shock was felt strongly, and movement of structures was obvious, no damage — not even broken plates — was reported. As far away as Sacramento, however, the quake was strong enough to shake loose some rigidly suspended light fixtures.

The movement had a noticeable East-West direction. Stacks of lumber laid lengthwise in a North-South line in a warehouse in the North Beach area of San Francisco, were knocked over with a resounding crack, but other stacks laid in line with the movement remained intact.

It was an exciting earthquake but the most exciting thing about it was that the San Francisco buildings that replaced those lost in 1906, and the new ones built under its latest code, stood soundly, and that utility lines were undamaged. But self-congratulation was mild: it wasn't, after all, a big quake. And a big one — like 1906 — would be 1000 times more powerful.

Greenbelt Within a City Limit

Although the classic idea of a greenbelt has been that it should circumscribe a city, there is no reason why a greenbelt should not be just as beautiful, valuable and useful cutting across a city as girdling it. Six years ago the San Francisco Planning and Housing Association proposed such an idea to the city's Board of Supervisors, and last month the Board took action to make it an eventual reality.

(Continued on page 48-22)

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ARCHITECTURAL RECORD MAY 1957 48-21

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THE METROPOLITAN WEST

(Continued from page 48-20)

The greenbelt will be a series of parks with hiking and riding trails, picnic places and open wooded areas stretching from the north slope of Mount Sutro across Twin Peaks and down to Glen Canyon park. The supervisors have now approved purchase, at a cost of \$175,000, of 83 acres of land to complete this part of the greenbelt. Eventually the plan is to have a chain of parks from Golden Gate Park, which runs down to the ocean, to Candlestick Point on the Bay side of the city.

Especially valuable to a city like San Francisco where the classic greenbelt concept is an impossibility (its southern boundary abuts adjacent cities and on its other three sides it is built up to the shores that bound it), the chain of parks across the city will provide essential open areas.

HAWAII

Architecture Guide Celebrates Centennial

In celebration of the Centennial of the A.I.A., the Hawaii chapter has published a "Guide to Architecture in Honolulu" — something not heretofore available. The Guide, a 67-page book illustrated with photographs of some 70 buildings representing a wide variety of types from houses to pumping stations, includes a brief section on the city's early buildings as background information for the considerable accomplishments of today's architects, with which the rest of the book deals. A map, keyed to pictures of the buildings included, readily spots their location for the visitor.

Publication of the Guide was financially supported by the Honolulu Academy of Arts, whose building, designed by Bertram Goodhue in 1927, is illustrated in the book, and the Hawaiian Visitors Bureau, and are on sale at offices of both organizations. Copies of the Guide may be ordered from outside the Islands by addressing Alfred Preis, A.I.A., 1507 Kaiolani Boulevard, Honolulu 14, Hawaii.

CALIFORNIA

Maybeck's Palace Again

Once again San Francisco's beloved landmark is in the news, this time as the subject of a bill now in the State legislature which would appropriate \$2,000,000 of state park funds for rehabilitating the crumbling relic of the 1915 Exposition. Under the bill, submitted by Assemblyman Caspar W. Weinberger of San Francisco, the city would match the State fund over a period of years, deed the property to the State and then rent it for use as a museum, music and recreation center.

Two amendments have been suggested to the bill: one is to make the rental of the building mandatory, the other sets the rent at \$1 a year. San Francisco officials have approved the provisions of the bill and are encouraging its support.

Although Maybeck himself has said that he thinks the building should be torn down, and the Northern California chapter, A.I.A., has opposed the idea of restoring the entire group (the palace itself and the colonnade), it looks like San Francisco just can't bring itself to write finis to a building that has stood for 42 years as a symbol of beauty.

More Money for Winter Olympics

The first hurdle in increasing the amount of money which California will make available for development of the site at Squaw Valley in the High Sierra, chosen for the Winter Olympics of 1960, has been passed. The \$5,000,000 already appropriated is not enough, legislators have been told in a bill now being considered in the State senate committees.

(Continued on page 48-24)

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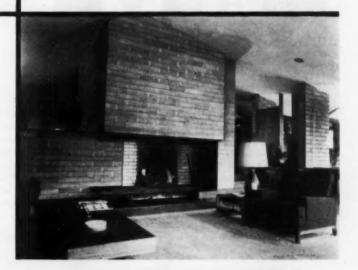
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San Francisco * Los Angeles * San Diego * Portland 48-24 ARCHITECTURAL RECORD MAY 1957

THE METROPOLITAN WEST

(Continued from page 48-22)

The State Senate Natural Resources committee has approved a provision which would add \$2,900,000 to the approved funds, and would permit condemnation and purchase of private lands if necessary.

Exercise of the right of eminent domain has been protested by George Rockrise, San Francisco architect, who is president of the Squaw Valley Property Owners' Association. The Association favors the holding of the games in Squaw Valley but is opposed to construction of permanent facilities to be used as a State Park after the Winter games are over.

California's Olympic Commission answered these protests with a resolution stating that it would acquire "no more private property than it needs to build and operate the permanent facilities for the games; that it would spend no State money for permanent improvements not owned by the State; and that it would retain Squaw Valley's natural beauty insofar as feasible."

HIGHWAYS, GREENBELTS

(Continued from page 48-4)

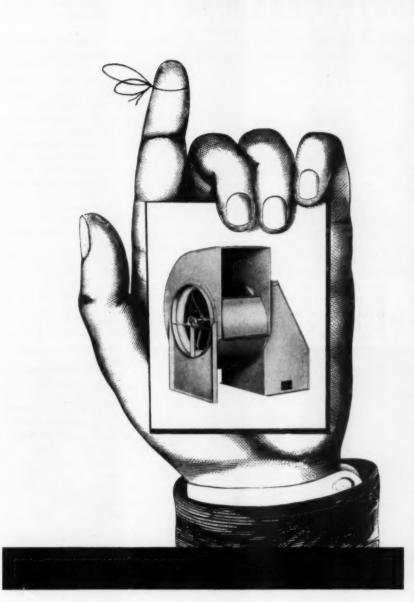
of producing electric power indicates no immediate changes in the planning of cities, Myron Beekman of the Detroit Edison Company, speaking for Walker Cisler, president of the company, reminded the planners that "we must recognize that atomic power plants cannot be isolated in remote areas if we are to benefit by atomic energy" and that "the situation in regard to atomic power plants will not be different from today when conventional power plants must be located near load centers in order to hold the line on costs.'

Admitting that electric power generated from atomic heat is not — and will not be for some time — competitive with conventionally produced power, he pointed out that the United States' program in atomic power is directed toward research for increasingly better and more economic methods of power production. However, by the time "second generation" reactors are built - within the next 10 years - improvements made possible by knowledge and experience with the wide variety of reactor types under construction in this country will, he said, bring atomic power into a competitive price range with hydro- or steam-produced power.

Keynoter Decries Conformity

Creative thinking and imagination, backed with a will to act on ideas in which one believes, can change societies and whole civilizations, Dr. Harold Taylor, president of Sarah Lawrence College told the planners, urging that they cast aside conservativism and "refuse to conform" with the current trend toward seeking security. Because "architects, dancers, musicians, artists, planners continue to search for new forms, they are demonstrating that our culture is expanding. This is the true function of the intellectual. The real issues can be found under the neon world: what needs discovering is that to be truly alive in one's own time it is necessary to become involved in something that matters in one's own time."

Though few architects turned up for the planners' conference, much that was said and considered was of prime concern to the field of architecture. Planning wouldn't be more than paper plans without architecture, and architecture and planning once were not separate professions. More frequent foregathering of the professions could not fail to be profitable to both.



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WASTE SPACE

A Return to True Architecture

Listening to Pier Luigi Nervi — as architects and engineers in the San Francisco Bay area were privileged to do on two occasions last month — the reason was clear why his structures are pre-eminent in the world of design today: he not only knows completely the material that he uses but he feels every force generated in its specific use, and he designs to use those forces expressly and expressively.

In his book "Structures," Dr. Nervi says "An architect who is not master of the technical facets of construction finds himself in the painful situation of the man who wishes to compose although he knows no instrument, is unable to write music and knows nothing of the art of counterpoint."

From the buildings which he showed in slides at his talks, it was clear that Dr. Nervi, who is engineer, architect and contractor, is indeed "master of the technical facts of construction." Not only that: he is also philosopher, with a theory of design: Deal with the basic elements of the material, express it in the simplest form, resolve the forces in the structure to their minimum, and if the design is structurally — that is, functionally, technically and economically — true the result will be good even if it is not architecturally perfect.

The esthetic quality results, he believes, from a simple, honest, orderly concept that works well, but to be beautiful it must have a quality of spontaneity. For him, as for many another designer today, reinforced concrete offers the potential of making possible a return to true architectural expression. He envisions an eventual understanding of the nature of this material—its plasticity and its decorative qualities as well as its high compressive strength — which would give this century such "wonderful monuments for today as the Gothic age had."

Intuitive knowledge, which leads to creative concepts, is the most important element in a building's design. But in structural analysis there must be some application of mathematical theory it should be a minimum, he believes. Structures are not designed by complicated calculations, he says; nor are they designed without any calculation. Approximate calculation — by which he decidedly does not mean just a happy guess — leads to the use of direct methods of analysis which he regards as "indispensable to the progress of structural design." Experimental stress analysis through use of models is especially valuable for imaginative designs where structural or constructional problems are difficult to solve theoretically. A model can, in effect, act as a sort of calculating machine.

Ferro-cement, a kind of reinforced concrete which was first used by Nervi & Bartoli, engineers, on a 165-ton motorsailing ship in 1945, has now been used on a number of structures, including the amazing Turin Exhibition building, where, says Dr. Nervi, the structural-architectural concept was utterly dependent on the use of this material. The material consists of lavers of fine steel mesh (sometimes interlaced by one or more layers of steel bars) held together by high quality cement. Since the cement actually acts only to hold together the mesh and steel bars, the resulting slab can be very little thicker than the layers of the mesh.

The biggest barrier to using his favorite material - reinforced concrete to its fullest expression is the limitation which is imposed by the use of wood forms. With wood forms, the concrete is inevitably an expression of what wood itself can do. What is needed is a form which matches the plasticity of concrete itself, and this Dr. Nervi has obtained in the use of plaster molds. These have the further advantage that the resulting concrete has so smooth a surface that it requires no further finish of any kind. Nevertheless, the slab-and-beam can be an expression of reinforced concrete, he feels: "in the realm of architecture it is simply a matter of proportion; a beam that is variable in form can indeed be very expressive."

The fact that Dr. Nervi is his own contractor, as well as architect and engineer, makes possible a control of the job which is unknown in this country. But he had to be his own contractor in order to get built the structures he designed; methods they required were new and untried; he had to go into the field himself in order to make realities of his designs.

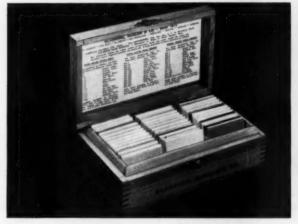
The master-builder of the middle ages is rarely seen today. The combination of engineering knowledge, creative intuition, esthetic feeling and actual accomplishment, as seen in the quiet, assured and modest person of Dr. Nervi, is an example not only to be remembered with delight but to be emulated by architects and engineers and perhaps — who knows? — someday even by contractors. E.K.T.

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CALENDAR OF WESTERN EVENTS

• May 4-12: California Spring Home and Garden Show, Oakland Auditorium, Oakland

 May 7–12: Annual convention, National Association of Architectural Metal Manufacturers, Fairmont Hotel, San Francisco

May 27–June 3: Utah Home Show, Liberty Park, Salt Lake City

• June 1–July 31: "Designer-Craftsmen of the West, 1957," juried exhibition, M. H. DeYoung Memorial Museum, Golden Gate Park, San Francisco

• June 11-13: Western Plant Maintenance and Engineering Show and Conference, Civic Auditorium, San Francisco

• June 20–30: Los Angeles Home Show, Pan Pacific Auditorium, Los Angeles

• July 29-August 2: World Conference on Prestressed Concrete, sponsored by University of California, Extension Division, and Prestressed Concrete Institute, University of California campus, Berkeley

• September 5-7: Western Mountain Region Conference, Jackson Lake Lodge, Jackson Hole, Wyo.

• October 2–6: California Council, A.I.A., annual convention, and California-Nevada-Hawaii Regional Council, Hotel del Coronado, Coronado, Calif.

• October 17-20: Northwest Region, A.I.A., annual conference, Gearhart, Ore.

• October 17–20: California Council of Landscape Architects annual convention, Mark Thomas Inn, Monterey, Calif.

 October 31-November 2: Structural Engineers Association of California annual convention, Hotel del Coronado, Coronado, Calif.

WESTERN SECTION

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ic	Industrial Construction File (blue)
10-	Light Construction File (vollaw)

le	- Light Construction File (yellow)			
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-ie	Sunbeam Lighting Company	48-1	15	
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	Utility Appliance Corp.	48-1	11	
	Utility Fan Corp.	48-2	25	

Western advertising offices: LOS ANGELES, Bob Wettstein, 672 S. Lafayette Park PL; PORTLAND, Bob Wettstein, 921 S. W. Washington St.; SAN FRANCISCO, Bob Wettstein, Howard Bldg., 209 Post St.

How WELDED you cut the cost

WIRE FABRIC can help of concrete floors

Beam-and-slab and pan-and-joist concrete floors are the most economical and the most durable floors you can put in a modern building. And Welded Wire Fabric helps make them so.

Welded Wire Fabric adds strength and crack resistance to the concrete. It simplifies installation of reinforcement because it comes in prefabricated rolls or sheets that go into place quickly. It gives concrete the needed extra strength with 28% less steel than other reinforcement—thus, reduces shipping and handling costs.

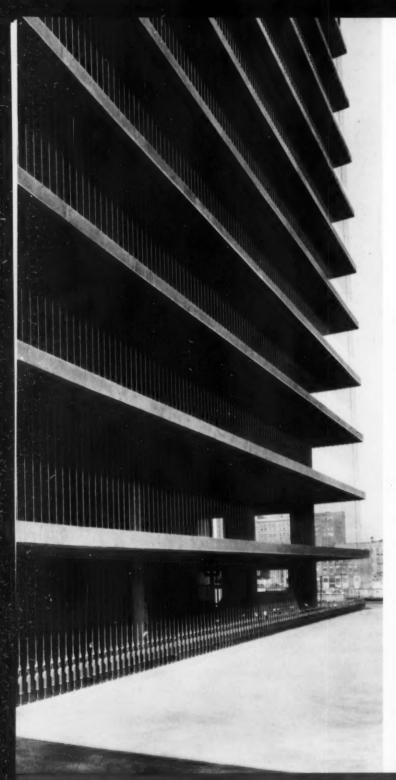
American Welded Wire Fabric meets ASTM specification A-185, and that means the size of each wire varies in diameter only .003" and the spacing of each member must be within $\frac{1}{4}$ of an inch of your specification. Also, the welds are carefully made so that exceptional bond with the concrete is assured.

AMERICAN STEEL & WIRE DIVISION, UNITED STATES STEEL GENERAL OFFICES: CLEVELAND, OHIO COLUMBIA-GENEVA STEEL DIVISIOR, EAN FRANCISCO, PACIFIC COAST DISTRIBUTORS TERRESSEE COAL & IRON DIVISIOR, FAIRFIELD, ALA., BOUTHERR DISTRIBUTORS UNITED STATES STEEL CAPANT CONTART, ELV YORS

CLIENTS WILL ASK

"is it Reinforced





CHICAGO PARKING GARAGE Much publicized for its walls that aren't walls (made from stainless steel cables supplied by American Steel & Wire)—this building, like so many other new structures, was made better with concrete reinforced with American Welded Wire Fabric. Strength and durability were especially important in the floors here because of the heavy loads and punishment imposed by its daily load of automobiles.

SOCONY MOBIL BUILDING The largest new building to become part of New York's sky line in 25 years—here, too, short-span beam and slab floors reinforced with American Welded Wire Fabric proved the answer to economical and long-lasting floors.

They saved.

The QUALITY of American Welded Wire Fabric-its precision manufacture (backed by effective quality control), its uniformity, its availability in any needed style or size-helped give these buildings the best and most economical floor systems. These buildings were built with concrete floors reinforced with American Welded Wire Fabric.



and MATERIALS

PITTSBURGH'S GATEWAY These notable buildings, as you well know, marked the beginning of Pittsburgh's muchpublicized renaissance. Outside, the best and newest of building materials were used. Inside, an old reliable combination —concrete floors reinforced with American Welded Wire Fabric—was found to be the best answer for floors.

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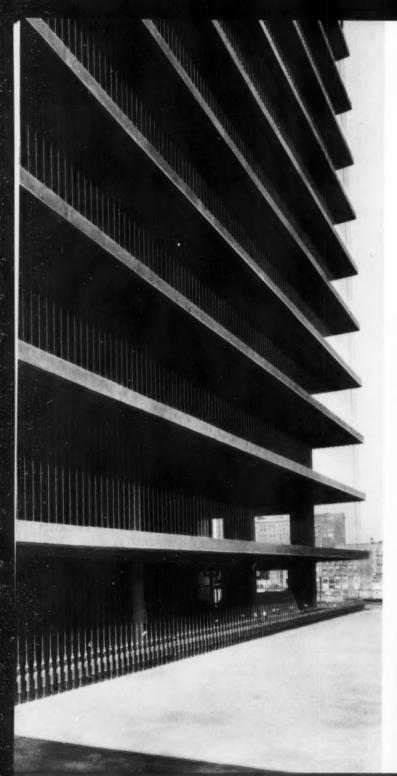
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USS American Welded Wire Fabric

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American Steel & Wire
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Please send complete information on the following:
American Welded Wire Fabric Reinforcement
American Wire and Strand for Prestressed Concrete

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CHICAGO PARKING GARAGE Much publicized for its walls that aren't walls (made from stainless steel cables supplied by American Steel & Wire)—this building, like so many other new structures, was made better with concrete reinforced with American Welded Wire Fabric. Strength and durability were especially important in the floors here because of the heavy loads and punishment imposed by its daily load of automobiles.

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USS American Welded Wire Fabric

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When you design homes, remember ...

WELDED WIRE FABRIC REINFORCEMENT makes this basement floor 30% more durable

Simply because it is reinforced with welded wire fabric! Proper reinforcement increases the strength of concrete slabs 30% over non-reinforced concrete slabs. And, this advantage costs you only about 10% more than the concrete itself. So use *reinforced* concrete to add economical quality to all concrete construction including:





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Learn the money-saving method for better shower construction

The cross section sample being shown in the photograph above clearly and simply demonstrates why the FIAT PreCast method of shower floor construction is the answer to an age old building design problem. It takes but a few minutes to see how this one-piece floor has many, many advantages over old fashioned, built-on-the-job shower floor construction. It is immediately evident that this solid, monolithic unit does away forever with any problems of leakage. The cut-away view shows how the integral flange forms a watertight seal between the floor and shower wall material (whether tile, plaster, wallboard or structural glass). You can examine how the drain is cast permanently into the floor material and how the inclined floor and raised shoulders deflect water downwards toward the drain. You will appreciate the substantial savings of on-the-job labor and understand why the low installed cost of a PreCast FIAT Floor makes all other shower floor methods obsolete.

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Since 1922...First in Showers / Packaged Showers • Doors • Floors Toilet Room Partitions

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THE RECORD REPORTS: CONSTRUCTION COST INDEXES

Labor and Materials

U. S. average 1926-1929=100

Presented by Clyde Shute, manager, Statistical and Research Division, F. W. Dodge Corp., from data compiled by E. H. Boeckh & Assocs., Inc.

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Period	Resid Brick	lential Frame	Apts., Hotels Office Bldgs. Brick and Concr.		rcial and y Bldgs. Brick and Steel	Resid Brick	lential Frame	Apts., Hotels Office Bldgs. Brick and Concr.		rcial ana Bldgs. Brick and Steel
1930	127.0	126.7	124.1	128.0	123.6	82.1	80.9	84.5	86.1	83.6
1935	93.8	91.3	104.7	108.5	105.5	72.3	67.9	84.0	87.1	85.1
1939	123.5	122.4	130.7	133.4	130.1	86.3	83.1	95.1	97.4	94.7
1946	181.8	182.4	177.2	179.0	174.8	148.1	149.2	136.8	136.4	135.1
1947	219.3	222.0	207.6	207.5	203.8	180.4	184.0	158.1	157.1	158.0
1948	250.1	251.6	239.4	242.2	235.6	199.2	202.5	178.8	178.8	178.8
1949	243.7	240.8	242.8	246.4	240.0	189.3	189.9	180.6	180.8	177.5
1950	256.2	254.5	249.5	251.5	248.0	194.3	196.2	185.4	183.7	185.0
1951	273.2	271.3	263.7	265.2	262.2	212.8	214.6	204.2	202.8	205.0
1952	278.2	274.8	271.9	274.9	271.8	218.8	221.0	212.8	210.1	214.3
1953	281.3	277.2	281.0	286.0	282.0	223.3	224.6	221.3	221.8	223.0
1954	285.0	278.2	293.0	300.6	295.4	219.6	219.1	223.5	225.2	225.4
1955	293.1	286.0	300.0	308.3	302.4	225.3	225.1	229.0	231.5	231.8
1956	310.8	302.2	320.1	328.6	324.5	237.2	235.7	241.7	244.4	246.4
Dec. 1956	316.0	306.6	327.9	338.7	332.0	239.8	238.1	245.5	248.1	250.8
Jan. 1957	315.7	306.2	327.8	338.7	331.9	239.8	238.1	245.5	248.1	250.8
Feb. 1957	316.5	306.5	329.5	341.2	335.1	239.8	238.1	245.7	248.7	250.8
Feb. 1957	156.3	% 150.4	increase over 19 152.1	39 155.8	157.6	177.8	% i 186.5	ncrease over 19. 158.4	39 155.3	164.8

ST. LOUIS

NEW NORK

SAN FRANCISCO

Feb. 1957	162.9	% ir 162.7	ncrease over 145.2	1939 152.6	149.7	168.1	% in 174.3	crease over 1 152.9	1939 152.2	160.4
Feb. 1957	289.7	281.1	291.0	302.6	297.2	283.1	272.4	296.9	307.4	303.4
lan. 1957	289.7	281.1	290.8	302.0	297.2	283.1	272.7	297.2	307.6	303.5
Dec. 1956	289.7	281.2	289.9	300.8	297.2	281.9	271.9	295.6	306.6	302.5
1956	288.7	280.3	287.9	299.2	293.3	279.0	270.0	288.9	298.6	295.8
1955	273.3	266.5	272.2	281.3	276.5	268.0	259.6	275.0	284.4	279.6
1954	266.6	260.2	263.7	273.3	266.2	257.4	249.2	264.1	272.5	267.2
1953	263.4	256.4	259.0	267.6	259.2	255.2	257.2	256.6	261.0	259.7
1952	259.1	253.2	249.7	255.0	249.6	250.2	245.0	245.6	248.7	249.6
1951	252.0	248.3	238.5	240.9	239.0	245.2	240.4	239.6	243.1	243.1
1950	232.8	230.7	221.9	225.3	222.8	227.0	223.1	222.4	224.5	222.6
1949	221.4	220.7	212.8	215.7	213.6	213.0	207.1	214.0	219.8	216.1
1948	227.9	231.2	207.7	210.0	208.1	218.9	216.6	208.3	214.7	211.1
1947	202.4	203.8	183.9	184.2	184.0	193.1	191.6	183.7	186.8	186.9
1946	167.1	167.4	159.1	161.1	158.1	159.7	157.5	157.9	159.3	160.0
1939	110.2	107.0	118.7	119.8	119.0	105.6	99.3	117.4	121.9	116.5
1935	95.1	90.1	104.1	108.3	105.4	89.5	84.5	96.4	103.7	99.7
1930	108.9	108.3	112.4	115.3	111.3	90.8	86.8	100.4	104.9	100.4

Cost comparisons, as percentage differences for any particular type of construction, are possible between localities, or periods of time within the same city, by dividing the difference between the two index numbers by one of them; i.e.: index for city A = 110index for city B = 95

(both indexes must be for the same type of construction).

Then: costs in A are approximately 16 per cent higher than in B.

$$\frac{110-95}{95} = 0.158$$

Conversely: costs in B are approximately 14 per cent lower than in Å.

$$\frac{110-95}{110} = 0.136$$

Cost comparisons cannot be made between different types of construction because the index numbers for each type relate to a different U. S. average for 1926-29.

Material prices and wage rates used in the current indexes make no allowance for payments in excess of published list prices, thus indexes reflect minimum costs and not necessarily actual costs.

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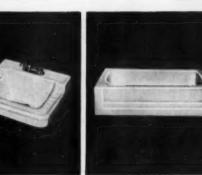
Concentration on sound planning and basic quality make Summit Park an outstanding example of modern housing. The result has been not only a special citation by civic groups—but also a record of sales success. To date 203 houses have been built—203 houses have been sold to satisfied customers. Naturally, like so many builders who put quality first, the Herbert Construction Company installed plumbing fixtures by Richmond. The same clean-line styling, sparkling colors, lasting beauty and performance have a place in your future plans. Write for complete catalog, or consult Sweet's Catalog File.

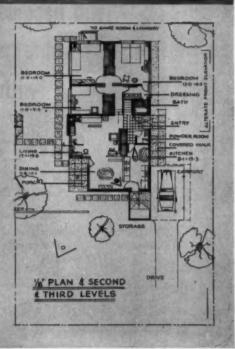
> BUILDER—Herbert Construction Co. ARCHITECT—Thomas G. Jewell ENGINEERS—Whitman, Requardt & Associates PLUMBING WHOLESALER—The James Robertson Manufacturing Company PLUMBING CONTRACTOR—Joseph Sandler, Inc. SITE PLAN—Bernard M. Willemain SURVEYOR—Nathan Scherr

TYPICAL RICHMOND FIXTURES FOR SUMMIT PARK







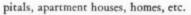




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By reducing glare, a deterrent to comfort and efficiency, AMERICAN LUSTRAGRAY provides a greater field for design expression. Functionally, it enables progressive architects to specify larger amounts of glass per installation on any building exposure—for office buildings, banks, schools, hos-



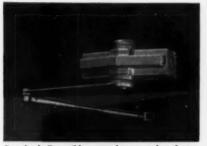
As a bonus benefit, AMERICAN LUSTRAGRAY --while not classified as a heat absorbing glass --provides a significant reduction in the trans-

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Ultraviolet	68.4%	63.7%	63.0%	61.0%
infrared	79.2%	73.4%	71.7%	68.5%
Total Solar Radiation	75.5%	68.3%	66.3%	62.6%

MODERN GLASS Best at a Glance WINDOW Glass company PITTSBURGH, PA. PLANTS: ARNOLD, PA. + ELLWOOD CITY, PA.



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.

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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-A-5.



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

REQUIRED READING





ECONOMIC DEVELOPMENT OF THE TROPICS CREATES A NEW FRONTIER FOR ARCHITECTURAL EXPRESSION, ASPIRATIONS

As ECONOMIC DEVELOPMENT uproots the ancient and primitive customs of the tropical zone, as latent resources of mind and matter are stirred with the swizzle stick of industrialization, as tribal towns and villages give way to the mass centralization of cities, as mud-and-thatch shacks are abandoned in search of a better means of shelter — then architecture will find a whole new frontier, a whole new source of inspiration, a whole new challenge to its artistic and functional aspirations.

There is much to be learned about this new frontier. There is much to be learned about the requirements, the potentialities and the psyche of this new stage for architectural pioneering if the challenge is to be met — not only met but transcended. What Le Corbusier, Jeanneret, Fry and Drew have done in Chandigarh can be nourished, multiplied (but not necessarily duplicated), and bettered throughout the width and breadth of the tropical zone; and that is a challenge mighty enough to inspire, and require, the most extensive and exhaustive research.

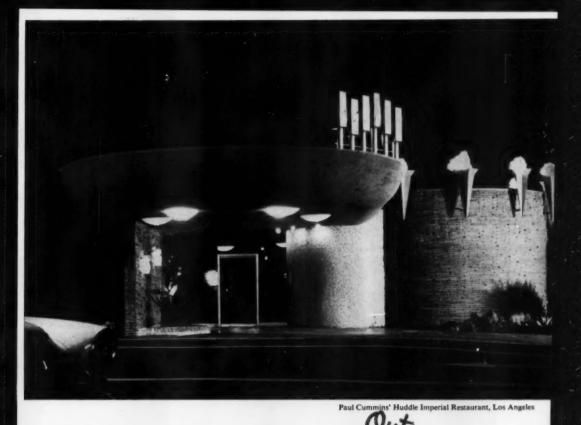
Two of these pioneers, Maxwell Fry and Jane Drew, have broached the total scope of this new frontier in their recently published book, *Tropical Architecture*. They have not stopped (Continued on page 62) Tropical Architecture in the Humid Zone. By Maxwell Fry, C.B.E., F.R.I.B.A., and Jane Drew, F.R.I.B.A. Reinhold Publishing Co. (N.Y.), 1956. 320 pp. Illus. \$10.





Eldon C. Davis, A.I.A. Armet and Davis Los Angeles

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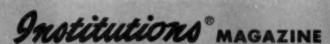
INSTITUTIONS Magazine, an important, dynamic news source of building trends, of construction and interiors products, of design ideas in the mass housing, mass feeding Institutions industry, is a monthly habit with this ten-billion-dollar client: the management and key operating personnel of America's leading Institutions and Institutions-Chain headquarters. Only in the pages of INSTITU-TIONS Magazine do these people find competent editorial and news coverage of every phase of Institutions construction, remodeling and design . . . and, in addition, food and food service, maintenance, sanitation, etc. This is INSTITUTIONS Magazine's "wideangle" approach to the broad Institutions field ... top-drawer editorial and industrywide news, generating a high interest level across the whole Institutions field ... prompting month-after-month high reader traffic from cover to cover.

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Aerial view of the new Maine State Office Building with the Capitol building at the rear.

specified Building!





Here's an interior view showing a small part of the installation of Gold Seal Inlaid Linoleum. Actually, about 3½ acres of floor space are covered with tais ½" burlap-backed "Veltone."

MORE than 148,000 square feet of Gold Seal Veltone[®] $\frac{1}{8}$ ["] Inlaid Linoleum has been specified and installed in the new Maine State Office Building at Augusta, Maine.

Originated by Gold Seal, "Veltone" provides an attractive, long-wearing, all-over decoration for use in all public buildings, schools, hospitals, offices, etc. Veltone's excellent resiliency provides quiet and comfort under foot. The unique design of this Inlaid Linoleum literally hides foot marks... it's exceptionally easy to clean and keep clean because of its density and surface smoothness. This ease of maintenance naturally reduces the expense of building service and upkeep. For those who prefer the modern textured look in Inlaid Linoleum, Gold Seal offers Sequin®- $\frac{1}{8}$ " thick-with all the advantages of "Veltone."

Gold Seal Vinylbest* Tile and Gold Seal Asphalt Tile were also used in special areas such as the food and photo laboratories.

Specifications—Gold Seal Veltone: 6' wide yard goods, ½" gauge, burlap-backed. Install over suspended wood, or suspended concrete under-floors. Available in 8 colors—Pompeian Grey, Heather Tan, Spicewood, Bermuda Grey, Light Tan, Grey, Brown, Surf Green. Also made in standard gauge for residential use—in 9 colors.

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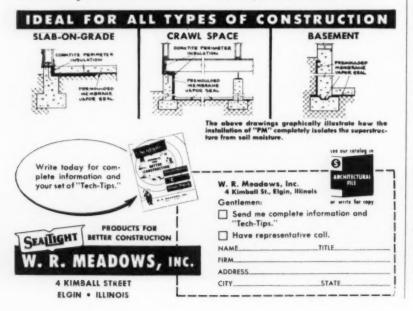


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Eliminate the ravages of moisture with <u>Premoulded Membrane</u> the only <u>TRUE</u> vapor seal!

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Governmental and academic research has proven that more than 80% of the moisture induced into the home is from the ground source. It makes little difference whether gravel is used under the basement, slab floor or crawl-space... or whether the site is on high or low ground, whether it's on a sand dune or a cess pool —somewhere below the structure, water exists and vapor will soon rise into the building. The only way to eliminate destructive moisture is in the original construction with the installation of "PRE-MOULDED MEMBRANE." the industries only TRUE vapor seal. In construction application the 4" x 8" sheets of "PREMOULDED MEMBRANE" are laid directly over the hard tamped grade or fill with a 6" head and side lap that is sealed with Sealtight Catalytic asphalt producing a monalithic vapor seal with mechanically sealed joints, that will expand and contract with the concrete slab above . . . without breaking the bond. "PREMOULDED MEMBRANE" has a permeance rating of only .0066 grains per square foot. We sincerely invite your comparison of "PM" against all other socalled vapor barriers on the market.



REQUIRED READING

(Continued from page 58)

at a mere picture book of good and bad design in the tropics (though there is a profusion of well-selected photographs which frame a more than adequate pictorial account of current equatorial building.) They have assembled a vast amount of technical knowledge regarding the physical nature of the tropics and its relation to structure and design. They have studied the social strata and the social consciousness. And they have come up with ways and means to satisfy the requirements of both. They have also taken great care to show the evolution of a new social consciousness under the influence of economic development and industrialization.

The authors class the three main considerations which effect design of architecture in the tropics as follows: people and their needs; climate and its attendant ills; and materials and the means of building.

It is pointed out that new goods breed new desires, and the introduction of machinery and its products into the tropics has created not only an awareness of new and better ways of doing things, but a desire among the people to achieve these ways and means. Old skills, once so valuable in a mud-andthatch village, must be turned to new and more productive tasks. The mudand-thatch village must itself be supplanted by advanced design. But what supplants it must be as functional as those mud-and-thatch shacks which sheltered the people so well against the powerful rays of a vertical sun and the driving rains of the wet tropics. Much research must be done on materials and the means of building, for the insect (termite) problem in the tropics almost negates the value of the prolific store of wood.

In specifics, the authors discuss such vital subjects as climate; the design of the house; housing and town planning; shops, markets and commercial buildings; educational buildings; health, hygiene and hospitalization; and peculiarities of tropic esthetics. A particularly valuable epilogue contains a wealth of technical reports on climate, earthquakes, the performance of building materials, thermal movement, fungus, protection against termites, and much more.

FIRST BUILDING IN MULTI-MILLION DOLLAR PROJECT HAS

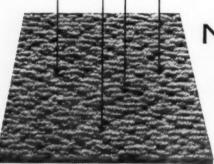
CUPPLES

PUBLIC HEALTH CENTER, Minneapolis, Minnerota Thorshov & Cerny, Inc., Architects, Minneapolis Viking Construction Company, Contractor, Minneapolis The Public Health Center heralds an ambitious redevelopment program in Minneapolis. The upper floors of this functional building are enclosed in aluminum curtain walls-combining Cupples double-weatherstripped windows, aluminum louvers and tempered glass spandrels.

Vertical mullions are structural tubular aluminum extrusions. Their design meets the architects' requirements for narrow vertical sight lines. On the ground floor, all doors and frames are aluminum, also by Cupples.

Cupples' dominance in sound, economical curtain wall design, construction and erection keeps pace with its leadership in the fabrication of aluminum windows, doors, Alumi-Coustic grid systems and special ornamental products. See our catalogs in Sweet's file.

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Tests performed at a nationally-known acoustics laboratory prove – beyond doubt – carpet's ability to control sound:

- Carpet absorbs air-borne noise as well as many materials used solely for sound control.
- **2** Carpet virtually eliminates floor impact noises in the room and in rooms below.
- **3** Carpet absorbs 10 times as much noise as other types of floors and floor coverings.

When you specify carpeted floors, you're providing your clients with a high degree of sound control in addition to exceptional savings on maintenance. For, in heavy traffic areas, where sound control is usually most needed, carpet cuts floor maintenance costs over 50%.

In addition, of course, carpeted floors offer all the prestige, beauty, comfort, and safe footing for which they've always been preferred.

Send today for your file copies of "Sound Conditioning With Carpet," the complete study of carpet's ability to control airborne and impact noises. You'll discover that, in addition to the beauty, dignity and safe footing carpet brings to any area, it is the most economical sound control you can specify. If you don't already have your copy of "Cutting Costs With Carpet," a comparative study of the maintenance costs of carpeted and non-carpeted floors, ask for that, too. Write Dept. A-2, Carpet Institute, Inc., 350 Fifth Avenue, New York 1, New York.

Specify carpet designed and made for the American way of life by these American manufacturers: Artloom • Beattie • Bigelow • Cabin Crafts • Needletuft • Downs • Firth • Gulistan Hardwick & Magee • Hightstown • Holmes • Karastan • Lees • Magee • Masland • Mohawk Philadelphia Carpet • Roxbury • Sanford • Alexander Smith

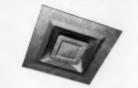
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THERE'S A **KNO-DRAFT** DIFFUSER FOR EVERY NEED

For residential, commercial or industrial installations . . . wherever effective, controlled air diffusion is needed . . . there is a Kno-Draft Air Diffuser to do the job better. Fully adjustable for both air volume and direction, Kno-Draft Air Diffusers are engineered to perform dependably for more working and living comfort, designed to complement any architectural motif. Kno-Draft Air Diffusers are produced exclusively by Connor Engineering Corporation.



Panel type, for suspended acoustical ceilings. Two styles, three sizes to deliver from 75 to 175 CFM. Sleevetype damper for instant volume control. One-piece pressed steel furnished in baked-on flat white enamel to match acoustical ceiling panels. Write for Bulletin K-36.



Square types KP and KPT, for flush ceiling mounting. In two smart de-signs: Type KP, overlap design for plaster ceilings; Type KPT, to snap into T-bar grid of acoustical tile ceilings. Both engineered to assure com-plete, dependable diffusion. Write for Bulletin K-27.



Slotted type KLS, for modern in-teriors. Effective diffusion assured by adjustable vanes, easy volume control by grid-type damper. Classic lines will enhance any decor. Available in 2-, 3-, 4-, 5- or 6-foot lengths for single or continuous installation. Write for Bulletin K-27.



Type SRD, combination supplyreturn. For use where air is supplied and exhausted through one unit. Supply air cannot "short circuit" into return air opening. Built-in dampers provide independent supply and return air volume control. Of spun aluminum. Write for Bulletin K-20A.



Type KDA for all-purpose use. The diffuser specified most by architects and engineers. Adjustable for air volume and diffusion pattern after installation. Spun aluminum construction. In all sizes for flush ceiling or exposed duct mounting. Write for Bulletin K-20A.





Type KDA with built-in light fixture. Combines attractive lighting and controlled air diffusion. Solves many installation problems. In design and application, this functional diffuser has all the features of the standard type KDA shown at left. Write for Bulletin K-20A.



Type KH, for residential use. Pre-engineered for both heating and cooling applications. Easily installed, may be used with either round or rectangular ductwork. An exclusive integral anti-smudge cone eliminates unsightly ceiling smudge. Provides quiet, draftless air diffusion. Type KH-L, at right above, incorporates a smart lighting fixture that may be used with either a 75- or 100-watt lamp. Illumination and air diffusion are thus com-bined in a single unit. Both KH and KH-L units are made of spun steel, with aluminum lacquer finish. Write for Bulletin KH-76A.



Type SPKR, combination speaker-alr diffuser. For P.A. or piped music sys-tems. Provides same central location for both sound and air diffusion. Ac-commodates any extended range 8" speaker. Specifications are same as those of standard Kno-Dratt types described in Bulletin K-20A.

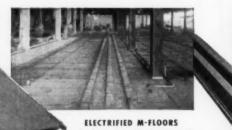
Type KDA, for butting against walls or columns. Half-round design for use where standard diffusers would not be suitable. Features include Kno-Draft precision air pattern adjustment and sleeve-type damper (optional). Spun aluminum construction. Write for Bulletin K-31.

CLIP THIS PAGE- CONNOR KEEP IT AS A HANDY REFERENCE GUIDE



M-DECKS Now Serve

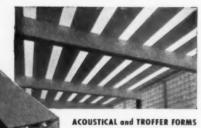
Typical Installation of Mahan Long Span M-Deck with Acoustical Ceiling and Troffer Lighting in Rigid Frame Construction, in installations of this type, the Long Span M-Deck Sections and the Troffer Sections serve as the Structural Roof and the Acoustical Ceiling Combined.



ELECTRIFIED M-FLOORS Mahon M-Floors provide electrical availability in every square foot of floor surface—ascfeguard buildings against electrical obsolescence in years to come.

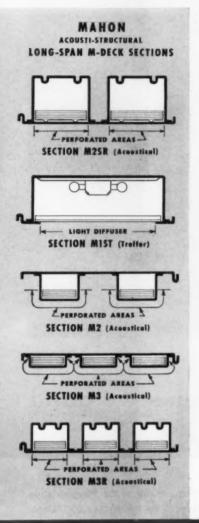
Tes All

CONCRETE FLOOR FORMS Mahan Permanent Concrete Floor Forms in various types meet virtually any requirement in concrete floor slab construction over structural steel framing.



ACOUSTICAL and TROFFER FORMS Provide an Effective Acoustical Ceiling with Recessed Troffer Lighting—Serve as Permanent Forms in Concrete Joist and Slab Construction of Floors and Roofs.

as the Structural Unit, the Roof Deck and Interior Finish Material as Well



... Acoustical Treatment can also be included in the Same Package!

Mahon Long Span M-Decks are ideal for combined roof-ceiling construction in such structures as auditoriums, armories, sports arenas, churches, and other types of buildings where exposed truss or rigid frame construction is employed.

An M-Deck is a structural roof and ceiling combined . . . its structural sections span from wall-to-wall or from truss-to-truss, eliminating the cluttered effect of roof purlins and producing a neat, continuous, flat metal ceiling surface—all of which can be acoustically treated. If recessed lighting is desired, Mahon Troffer Sections can be included in this type of roof-ceiling construction in any ratio to meet specific lighting requirements.

Mahon M-Deck Sections and Mahon Troffer Sections are roll-formed from galvanized, structural quality steel . . . they are permanent and indestructible. Exposed surfaces in roof-ceiling construction can be readily painted to match or harmonize with any interior decor.

All Mahon Long Span M-Deck Sections can be furnished with bottom metal perforated and sound absorbing material inserted to provide a highly effective acoustical ceiling . . . Noise Reduction Coefficients range up to .85 in Mahon Sections recommended for this use.

Some of these Mahon Sections do not appear in the current Sweet's Files. Why not have a Mahon sales engineer call and bring you up to date on new Mahon products now available for Floor, Roof, and Combined Roof-Ceiling Construction.

THE R. C. MAHON COMPANY • Detroit 34, Michigan Sales-Engineering Offices in Detroit, New York and Chicago Representatives in all Principal Cities



INSULATED METAL WALLS Three Distinctive Patterns with "U" Factor Superior to that of Conventional Masonry Wall with Lath and Plaster. Erected up to 60 Ft. in Height without a Horizontal Joint.



UNDERWRITERS' RATED FIRE WALLS Mahon Metaldad Fire Walls carry two Hour Roting by Underwriters' Loboratories, Inc., for Use as Either an Interior Dividing Fire Wall or an Exterior Curtain-Type Fire Wall.



Standard Manually, Mechanically or Power Operated Rolling Steel Doors and Grilles. Underwriten's Labeled Automatic Closing Rolling Steel Fire Doors and Fire Shutters.



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a strong selling plus"-Bob Scarborough, builder

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"Whenever a prospective buyer discovers the use of Western Pine woods in our homes, we find an almost immediate positive response. Particularly with kitchens. A kitchen must appeal to people for several reasons. It must be planned for efficiency, eye-appeal and ease of maintenance.

"The beauty, versatility and ease of maintenance of the Western Pines adapt them ideally not only for kitchens but for practically every kind of building and remodeling project."

For more information on any of the Western Pine woods, write: WESTERN PINE ASSOCIATION, Dept. 206-U, Yeon Bldg., Portland 4, Oregon.

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and these woods from the Western Pine mills WHITE FIR . INCENSE CEDAR RED CEDAR · DOUGLAS FIR ENGELMANN SPRUCE LODGEPOLE PINE . LARCH

are manufactured to high standards of seasoning, grading, measurement

TODAY'S WESTERN PINE TREE FARMING GUARANTEES LUMBER TOMORROW



Architect: Onnie Mankki, Cleveland, Ohio

An answer to today's biggest problem in RESIDENTIAL BUILDING

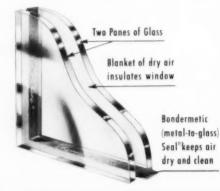
With material costs and labor costs what they are, how can you give home buyers a better house at a price they are willing to pay? We think we have an answer for you: (continued on next page)

LIBBEY . OWENS . FORD GLASS CO., TOLEDO 3, OHIO



Design, build and sell your house as an ALL-insulated home by putting Thermopane[®] insulating glass in every window. Sales points you can use on prospective owners:

- 1. Any house with single glass without Thermopane in every window is only halfway insulated.
- 2. *Thermopane* keeps the house *warmer* in winter (and cuts fuel bills). *Cooler* in summer (cheaper to air condition). And it insulates against outside noise year 'round.
- **3.** No storm sash to buy, put up, take down, paint, wash or worry about . . . ever!
- **4.** The cost of *Thermopane* can be part of the *original* mortgage for only a dollar or two a month, and the *resale* value of the house is higher.



YOU CAN CASH IN ON THIS! Home buyers in your community who read *Life*, *Better Homes and Gardens*, *American Home* or *House Beautiful* will see *Thermopane* advertised as "a sign of a better buy". By using it in your houses you can cash in on this and 13 years of national advertising. *Thermopane* is the best known and most wanted kind of insulating glass.

LIBBEY . OWENS . FORD GLASS CO., TOLEDO 3' OHIO

Thermopane Facts



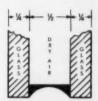
1/2-inch DSA Thermopane

Two lights of $\frac{1}{10}$ " glass with $\frac{1}{10}$ " air space -54 standard sizes. *Thermopane* made with DSA Glass is economical double glazing. However, while made with fine-quality window glass, it does not provide the clarity of vision and superior exterior appearance attained with polished plate glass.



1/2-inch polished plate glass Thermopane

Two lights of $\frac{1}{6}$ " plate glass with $\frac{1}{4}$ " air space—49 standard sizes. *Thermopane* made with $\frac{1}{6}$ " plate glass provides better vision and gives the home a finer quality appearance.



1-inch Thermopane

Two lights of $\frac{1}{4}$ " Parallel-O-Plate" Glass with $\frac{1}{2}$ " air space—56 standard sizes. This *Thermopane* provides excellent thermal insulation combined with the clarity of vision that you get with plate glass. Ideal for picture windows, window walls and sliding glass doors.

Special Glasses

Thermopane can be made with four types of glass for reduction of glare and solar energy transmission: $\frac{1}{4}''$ or $\frac{1}{8}''$ Heat Absorbing Plate Glass—blue-green, transparent. Also $\frac{1}{4}''$ or $\frac{1}{6}''$ AKLO* Hammered Glass—blue-green, translucent.

For diffusion of light and for decoration, it can be fabricated with any one of several Blue Ridge Glass patterns.

For extra resistance to thermal shock or impact, it can be fabricated with Tuf-flex® tempered plate glass.



SLIDING GLASS DUORS — The demand for Thermopane for these large glass areas is growing at a tremendous pace. L-O-F and the sliding glass door industry have standardized on three sizes of 1*-thick Thermopane: 33* x 76³/₄*, 45* x 76³/₄*, 57* x 76³/₄*. Architect: Wilbur Firth, Cincinnati, Ohio.

PICTURE WINDOWS AND WINDOW WALLS —Most leading manufacturers of wood or metal sash for picture windows or window walls can supply sash designed to take standard sizes of 1"-thick Thermopane. Porch planned by owners, Mr. and Mrs. P. F. H. Reichert, Toledo, Ohio.





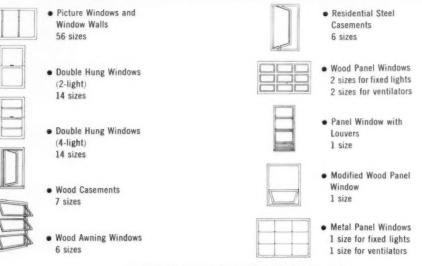
Design by Don Scholz, Toledo, Ohio

Since *Thermopane* is a factory-sealed insulating glass unit and is subject to movement due to changes of temperature and barometric pressure, adequate provision should be made for expansion and contraction.

An approved cushioning material *must* be used so there is no contact between the sash and glass at any point. L•O•F has available Neoprene setting blocks for units $\frac{1}{2}'', \frac{3}{4}'', \frac{7}{6}''$, and 1" thick. Also, for units $\frac{1}{2}''$ thick, the company has available a metal glazing clip for use in steel, aluminum and wood sash. Under no circumstances should units be *forced* into any type of sash. Face clearances between glass and stops must be at least $\frac{1}{8}''$. Edge clearances between glass and frame must not be less than $\frac{1}{8}''$ on each edge for $\frac{1}{2}''$. *Thermopane*, and $\frac{1}{4}''$ on each edge for units over $\frac{1}{2}''$. For detailed glazing information, ask for *Thermopane* Manual.

The contractor, architect and building owner should assume responsibility in seeing that glazing instructions are followed and *not accept the job if they haven't been*.

Thermopane can be used in these standard types of sash:



HELPFUL INFORMATION AVAILABLE

To assist you and your staff in using Thermopane, L·O·F offers the following:

List of standard sizes

List of manufacturers who make sash for Thermopane

Simple framing methods (complete details)

Folder on economical Panel Window System



hermopane

Thermopane Merchandising Guide - to assist you in using Thermopane as a sales feature.

Thermopane Sales Aids-signs, folders, displays, banners, mats, TV commercials, radio spots, etc.

For further information contact your local L-O-F Glass Distributor or Dealer (listed under "Glass" in phone book yellow pages) or write to Libbey-Owens-Ford Glass Company, Dept. 517, 608 Madison Ave., Toledo 3, Ohio.

LIBBEY · OWENS · FORD a Great Name in Glass

FOUR LIGHT (as shown): 23/4" x 253/4" x 483/4" TWO LIGHT: 23/4" x 141/2" x 483/4"

the new Gibson Ceilo.35

The thinnest fixture ever designed with no dark areas

This beautiful surface-mount fixture is only 23/4" deep, the thinnest ever designed without panels or strips to conceal the ballasts. In the Ceilo-35, the ballasts are mounted in the sides, an exclusive Gibson development which provides a smooth, unbroken panel of light.

Not only is this new fixture the bestlooking you ever saw, it has many new and practical design features to make installation faster and maintenance easier.

WRITE TODAY FOR COMPLETE INFORMATION

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Makers of the world's most versatile fixtures





350 Manufacturing Co.

1919 Piedmont Circle, N.E., Atlanta 9, Georgia



STEEL JOISTS USED IN FLOOR CONSTRUCTION OF NEW SHERATON HOTEL IN PHILADELPHIA

Centrally located in Philadelphia's Penn Center is the new 22-story Sheraton Hotel, first hotel to be built in Philadelphia in over a quarter of a century.

The new Sheraton will provide 1,000 guest rooms, with one floor, the twenty-first, entirely given over to balconied luxury suites. Parking for guests' automobiles will be handled in a 1,000-car garage just across Pennsylvania Boulevard, and connected to the hotel by an underground concourse.

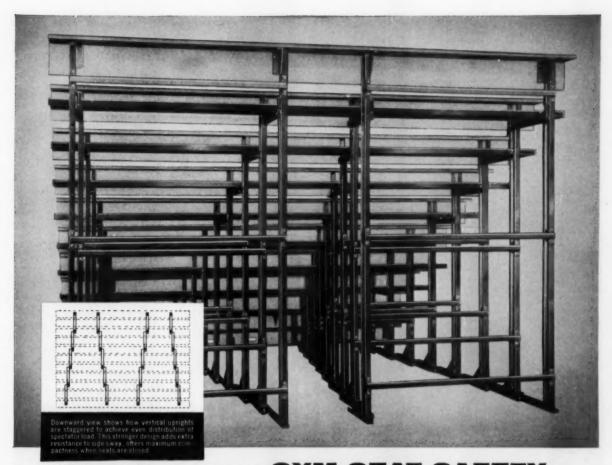
Bethlehem Open-Web Steel Joists were used in the floor construction of the new Sheraton Hotel, from the sixth floor to the twenty-first floor, inclusive.

The advantages of using Bethlehem Joists were many. They were delivered to the job site tagged and ready for immediate placing, with no delays to the construction schedule. They required only field welding to secure them permanently in place, forming a rigid, permanent floor structure, which will help to hold future maintenance to a minimum. And used in combination with floor slab and poured ceiling, Bethlehem Open-Web Steel Joists provide a fire-resistant building construction.

BETHLEHEM STEEL COMPANY, BETHLEHEM, PA. On the Pacific Coast Bethlehem products are sold by Bethlehem Pacific Coast Steel Corporation. Export Distributor: Bethlehem Steel Export Corporation



BETHLEHEM OPEN-WEB STEEL JOISTS



When it comes to GYM SEAT SAFETY MEDART'S skyscraper construction proves best

The illustration above shows how the steel superstructure of Medart Telescopic Seats is engineered, not only for capacity load, but strong enough to support up to 400 pounds per linear foot per row without noticeable deflection or side sway.

Each row, 16' long, rests on 4 twin angle welded vertical uprights, tied together with channel bracing. The entire load is placed directly on the floor, not on walls or casters. Like a modern skyscraper, the steel understructure is completely self-supporting, open or closed. Strength of the assembly is not dependent upon wood members, oblique bracing, springs or wall supports. Medart seats, risers and footboards provide additional rigidity and resistance to side sway.

No other retracting type of seat can exceed the dependable safety of Medart design.

Medart Seats are roomier. Available with 22" or 24" row spacing and $10\frac{1}{2}$ " or $11\frac{1}{2}$ " row rise, extra toe and heel room offer more comfort and full visibility than any other seats. Exclusive "Floating Motion" and "Dual Align" assure non-binding straight line trackage—make Medart easiest of all gym seats to open and close.

Before specifying, compare the superior features and value of Medart Seats. Get all the facts...

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KNOCK ON THE ON THE GRANT FOLDING DOOR, naturally!

The Grant Folding Door *alone* combines the flexibility of fabric with the solidity of a 5/16" core. Designed by Paul McCobb, in cooperation with the nation's leading Sliding Hardware manufacturer, it is the only such door that has captured both the beauty of specially designed fabric and the durability of a natural door.

• solid, 5/16" core - you can knock on it.

- finely textured vinyl fabric, laminated to core.
- sound-resistant, light-proof
- nylon carriers, aluminum track
- minimum stacking space door stays put against jamb, *without* air pockets, puffiness or distortion
- nylon friction catch
- wide range of colors and sizes

Write for your copy of the Grant Reference Catalogue. Important data on Folding Doors and the full Grant line.

Outstanding single source for sliding hardware.

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"COMPARISON convinced us that a SQUARE D Control Center offered us MORE!"

NOW...EGAM PRODUCTS ARE A PART OF THE SQUARE D LINE !

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the building form

your logical choice, too

INCREASED SAFETY because bus bars are fully enclosed, rigidly supported and have ample cross section. Circuits are isolated by individually enclosed plug-in units. Disconnect handle designed for maximum operator protection.

FLEXIBILITY. Individual plug-in units or complete sections are easily added, removed or exchanged.

These design features make Square D Pushbuttons, pilot lights, and selector switches are readily added to unit doors.

Control Center installation in U.S. Industrial Chemicais Company, Dubuque, Iowa plant. Inset below shows portion of previous space-consuming, "piecemeal" starter installation.

INSTALLATION ECONOMY. All wiring channels are large and accessible from front without removing units. No "wire fishing."

SPACE ECONOMY, TOO. Up to six combination starters fit in a 20" x 20" x 90" section. Plug-in unit heights designed in space-saving increments of 3 inches.



184

Here's How to Get the RIGHT Answer to your HEAT-EXCHANGE PROBLEMS

Heating?

Cooling?

Process?

Conditioning?

Air

The right ratio of surfaces – the right materials – the right velocities – the right proportion between coil area and depth \ldots there are dozens of factors that affect the efficiency, maintenance and service life of heat-exchange coils.

For best performance in your own application, the practical approach is to take full advantage of the unequalled engineering, research and design skill—the unequalled manufacturing and testing facilities—which Aerofin offers you.

To get the right answer - ask the Aerofin man.

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

4ERDFIN CORPORATION 101 Greenway Ave., Syracuse 3, N.Y.



Fixtures for the new National Housing Center, Washington, D.C., by Smithcraft Lighting Division, Chelses, Massachusetts. LUCITE molded by Mack Molding Company, Arlington, Verment. Architects: Aubinoe, Edwards and Beery, Washington, D.C. Lighting designed by Kluckhuhn, Cobb and McDavid, Washington, D.C. Electrical contractor: Walter Truland Company, Arlington, Va.



There are 391 fixtures, using 1,564 square feet of LUCITE, illuminating about 30% of the total floor space in the building. The LUCITE is installed in a single frame of steel hinged to the fixture. The Housing Center has an average of 45 foot-candles, as opposed to the 30 foot-candles issually found in office buildings.

Better looking, better lighting

with fixtures of Du Pont LUCITE®

The National Housing Center, in the heart of the nation's capital, is the show place of the home-building industry and the headquarters of the National Association of Home Builders. The eight-story, \$2,500,000 building serves as a storehouse of accumulated knowledge on home building and related matters and a focal point for all major housing activities. Contributing to the beauty and efficiency of this modern architectural center are lighting fixtures made of LUCITE acrylic resin.

Fixtures of LUCITE are used on three floors, containing the offices, library, conference rooms and work areas. Because they are made of Du Pont LUCITE, these fixtures transmit optimum light without spec-

ular glare or shadow. They are strong, durable, free from discoloration and dimensionally stable. Installation is a simple matter.

SEND FOR FREE BOOKLET. This 12-page illustrated booklet describes property and application data on LUCITE acrylic resin for lighting. For your free copy, write to E. I. du Pont de Nemours & Co. (Inc.), Polychemicals Department, Room 425, Du Pont Building, Wilmington 98, Delaware.



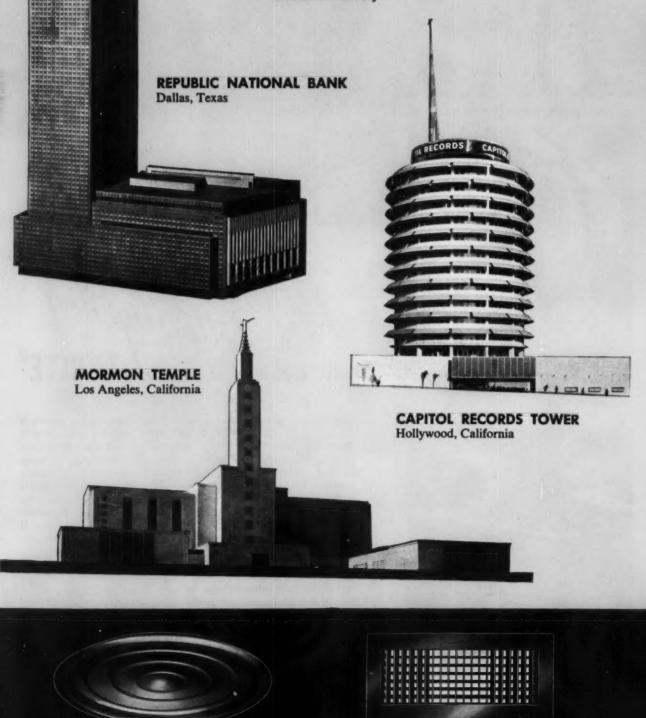
BETTER THINGS FOR BETTER LIVING ... THROUGH CHEMISTRY



TUTTLE & BAILEY Air

... is installed in these outstanding buildings

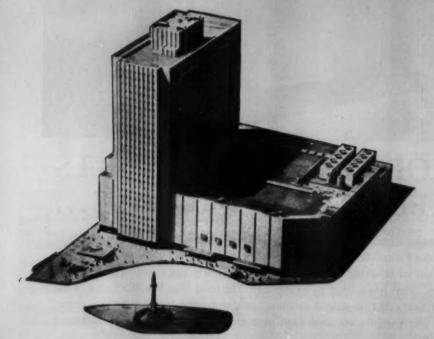
From coast to coast, the story is pretty much the same. In notable buildings everywhere — wherever people enjoy air conditioned comfort — chances are you'll find a T&B installation. From experience, architects and engineers know that "Tuttle & Bailey" in the specifications is assurance that the air distribution equipment will meet the most exacting demands of appearance... and will operate with maximum efficiency.



Distribution Equipment



THE BEVERLY HILTON HOTEL Beverly Hills, California



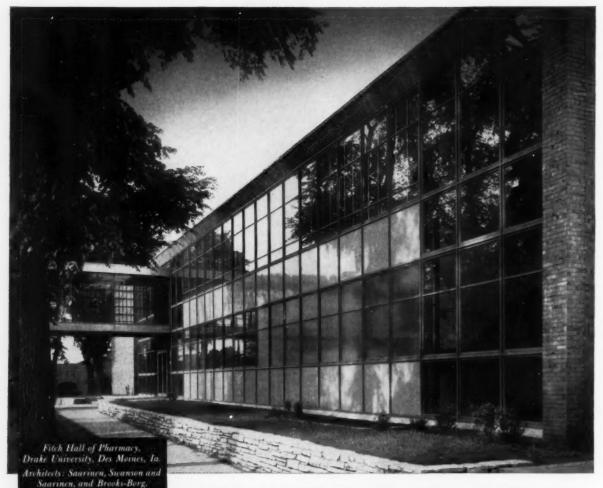
For specific catalog information on T&B Diffusers, Grilles and Registers, or High Pressure Units, write ---



division of Allied Thermal Corp. NEW BRITAIN, CONNECTICUT

NEW YORK COLISEUM New York, New York

A complete line of air distribution equipment and accessories for low and high pressure systems



HOPE'S WINDOW WALLS KEEP THEIR PROMISE...

More than ten years have passed since the architects designed this building ... one of the earliest "Window Wall" installations in the United States. At the time, when Hope's Window Wall construction was adopted, we pointed out the labor-saving advantages of its installation and confidently predicted that upkeep expense would be low. That has proven to be the case. The total Window Wall area in the building group is more than four times that illustrated in the photograph; the location is in a severe climate; yet the maintenance is less troublesome and expensive than for comparable, conventional masonry and window construction.

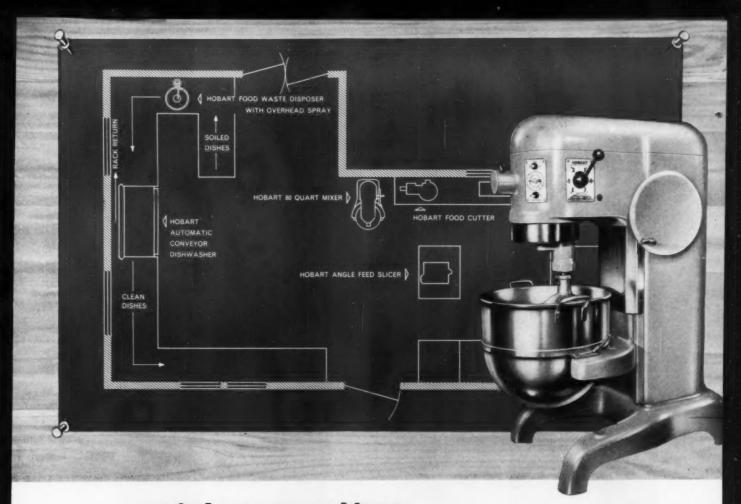
The great increase in the use of Window Wall construction by architects is sufficient evidence that it offers economies in original building cost and that its esthetic effects and benefits to building interiors are pleasing to owners.

Hope's engineering and planning assistance can be of great help to you and is always available when you have in mind a building with an interesting window problem. Write for Catalog 152 AR for your files.

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

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

Contractors : Irthur H. Newmann & Bros., Inc.



reminder to an architect planning a food service kitchen

achines

Kitchen layout will only be as efficient as the mixers that are specified...highest possible standards of sanitation must be met... can't afford to gamble on mixer performance...source of supply must be able to provide any size mixer-volume demands of the client...service must be readily available whenever needed.

You may not have realized, Mr. Architect, but the above paragraph boiled down to one sentence says, "I'd better contact Hobart."

Performance of Hobart kitchen, food and dishwashing machines has been proved by over 60 years of service to the food industry. Bakers and chefs *know* and *trust* Hobart quality and performance.

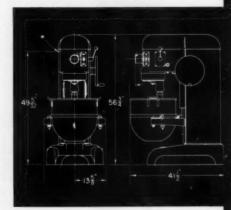
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In the full line of Hobart mixers (nine models) for kitchens there is a model that is engineered to handle any volume from five quarts (bench type) to 140 quarts (floor type). All are designed to save space while increasing efficiency and production. Each is designed with Hobart planetary mixing action that gets positive results every time. Timed mixing control and other advanced features are available on many models.

Hobart bakery mixers are built for superior sanitation. Streamlined housings and open-rim bowl design make them easy to clean and keep clean.

Check Sweet's Architectural File for complete specifications and capacities on all Hobart machines, or send in the coupon. Model L-800, 80-quart all-purpose mixer with Timed Mixing Control.





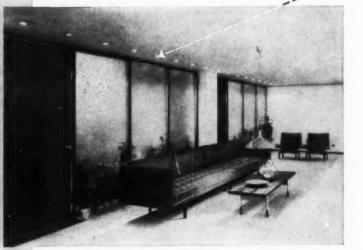
The World's Largest Manufacturer of Food, Kitchen and Dishwashing Machines

The Hobart Manufacturing Co., Dept. HAR, Troy, Ohio Please send information and specifications on Hobart bench model mixers []. On floor model mixers []. On the complete line []. Please have representative call [].

Firm name	
My name	
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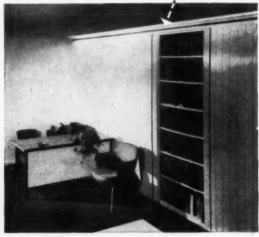


by AGITAIR.



Ceiling installation of STRIPLINE slot diffusers.





Sidewall installation of

STRIPLINE slot diffusers.

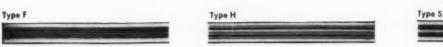
STRIPLINE combines the best features of both slots and efficient air diffusers to provide equalized air flow throughout its entire length.

STRIPLINE slot diffusers are slenderly designed, inconspicuous, practical and versatile. These slot diffusers can be located in walls, ceilings, coves, moulds, window reveals and stools or almost anywhere to suit interior design.

Write for complete Stripline catalog.

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constant air quantify through and unit, regardless of variance of static pressures on either inlet or outlot of mixing valve. Also: Independent of outside source of

ower such as compressed air or electricity ... no control instrument to calibrate; nothing but a screw adjustment of spring remains ... can be factory-set for desired volume and guaranteed within 5%, plus or minus that amount, when installed ... change in air volume made by simple adjustment of one nut whenever desired.

The mixing value is controlled by com pressed air from the local thermostat. If designed for direct, straight-line move ment, without any linkage or pivot points

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BUENSOD-STACEY

Buensod units are being installed in more and more structures — new and renovated. Consider them for your next project!

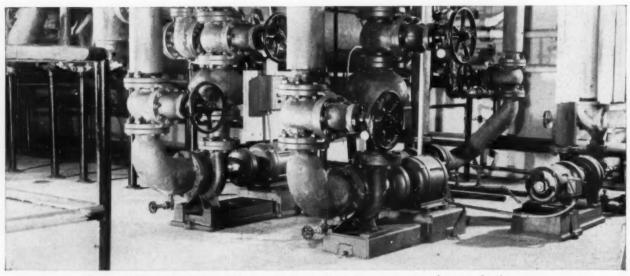
BUENSOD-STACEY, Inc.

Buensed representatives

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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.



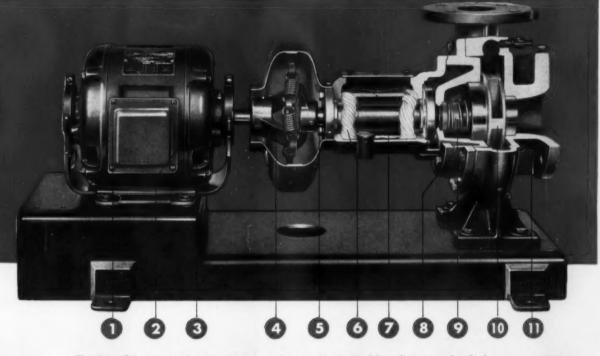
A B&G Universal Pump is installed here to raise city water pressure.



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

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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

- 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. Maile 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.
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- 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.





K&M asbestos-cement structural sheets DEFY 5-POINT TORTURE TEST

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K&M Structural Sheets came through these five murderous tests without failing: 1. Fire; 2. Corrosion; 3. Mildew and rot; 4. Vermin and rodents; 5. Repeated washings with harsh solutions... proving their value as a basic material of construction where the going's rough.

There are two grades of K&M Structural Sheets— Apac and Linabestos; Apac is for use when initial cost is the first consideration. Both go on fast in big sheets, can be cut and drilled on the job, fastened to studding or other members by unskilled labor. They never need protective paint, but take paint beautifully. You can specify K&M Asbestos-Cement Structural Sheets with confidence. Write for complete information.



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Patterned Glass works wonders. Adjoining areas share light but their privacy is protected. Muralex pattern

To separate, decorate, brighten offices,

Creative IDEAS in GLASS

RIDGE

light but their privacy is protected. Muralex pattern (above) is used in both the glass panels and in the Securit[®] Interior Glass Door.

To admit light, shut out unwanted view

Imagine this lovely office marred by an unlovely view through the window. But with Blue Ridge Doublex (one of more than 20 patterns) the window becomes a beautiful part of the room decor and still provides plenty of light.

For more information on *Patterned Glass* and *Securit* Doors, use coupon on page four of this advertisement.



made by **BLUE RIDGE GLASS CORP.,** Kingsport, Tenn. sold by **LIBBEY.OWENS.FORD** Glass Distributors





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HUETEX®

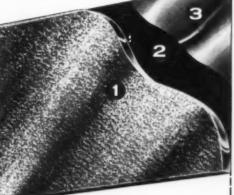
the unique glass facing that insulates

The 21 stories of colorful curtain walls you see here will retain their beauty indefinitely. The ceramic enamel is protected on both sides-glass on the weathering side, atomized aluminum on the other.

The aluminum coating, an exclusive HUETEX feature, also acts as a barrier to radiant energy. Heat loss in winter and heat gain in summer may be reduced as much as 42%. Heating and air-conditioning costs are lowered.

HUETEX is available in 12 standard colors or may be custommade to your color sample. The glass is tempered to increase its mechanical strength. It can be used with a variety of framing systems. For descriptive folder, fill in and mail coupon on next page.

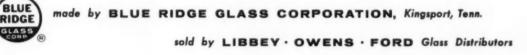
HUETEX GLASS



RIDGE

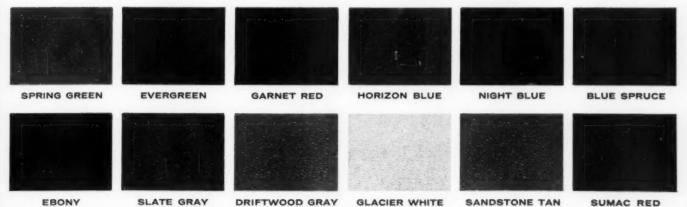
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- TEMPERED GLASS, 5/16" thick, is textured on the weathering side to subdue bright reflections.
- 2 CERAMIC ENAMEL, fused to the glass, adds permanent beauty in the color desired.
- 3 ALUMINUM. welded to the back, protects the enamel, reflects heat, insulates . . . an exclusive **HUETEX** feature.





In 12 beautiful standard colors or custom-made to your color sample.



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AKLO is available in *Hammered* and *Finetex*[®] patterns (frosted, if desired), wired or unwired. Widely used in walls and skylights of factories, schools and public buildings. Detailed information available upon request. Use coupon.

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Magee makes contract carpeting news

carpets

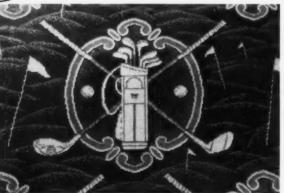
Here is another colorful example of our complete contract program! This all-wool, 3-frame Wilton, "Belle Isle" is just the weight, weave and pattern to give long-wearing service, under-

foot comfort, distinctive

atmosphere to the men's locker room of Western Golf and Country Club of Detroit, Michigan.

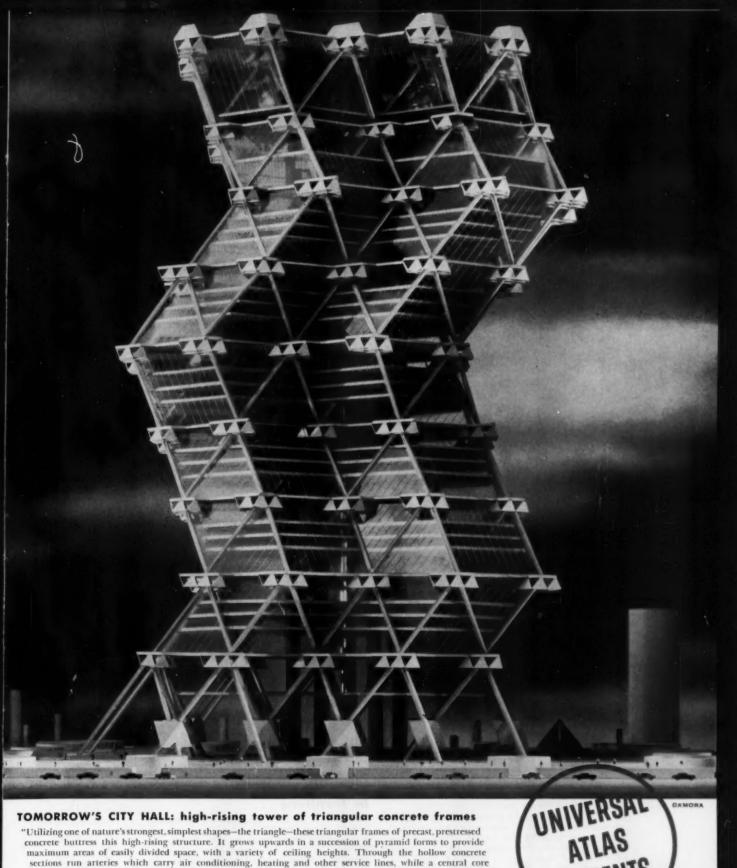
> So whatever *your* contract carpet requirements, in style, in color, in unique design and budget, consult Magee first.





For further information on contract carpet, write to The Magee Carpet Company, 295 Fifth Avenue, New York, N. Y.

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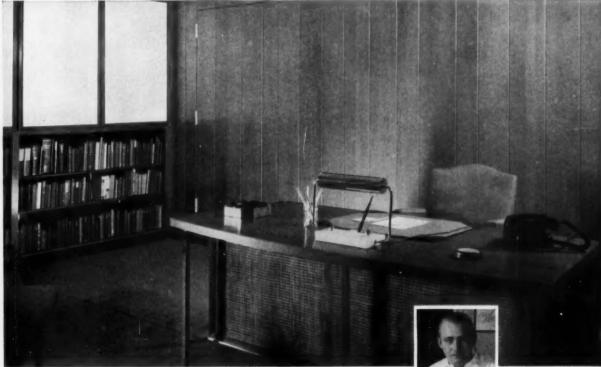
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Wiring drops from header duct into cell at handhole junction.



To install outlet: drill hole at outlet location.

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Wiring then runs either way through cell to floor outlet.



Last, attach electric or telephone outlet box.

This new engineering and research building for the National Cash Register Company in Dayton, Ohio has Flexicore electrified floors.

The steel frame structure was designed for either concrete or steel cellular floors. Concrete was selected because no fireproofing was required on the ceiling and because of other cost and time saving advantages.

In the construction picture above you can see the hollow cells in the exposed ends of the precast floors. These cells are used as electrical raceways, and electrical outlets can be installed in the floor at any point along a cell. Cells are spaced 51/3" on centers with the 6 x 16 Flexicore unit used on this job. Conduftor electrical fittings were used to provide complete underfloor electrical distribution.

For a copy of the new 32-page Office Building Manual on Flexicore Electrified Floors, write or phone the nearest Flexicore manufacturer listed below, or The Flexicore Co., Inc., Dayton 1, Ohio.

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Next, install fitting in

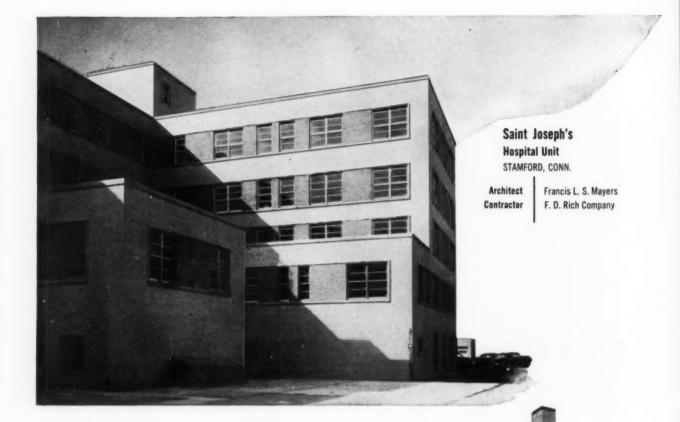
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^o Balanced with UNIQUE. the world's most efficient sash balance.

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Consult with our window engineering and design staff for your next project-Hospital, School, Office or Commercial buildings of any size.



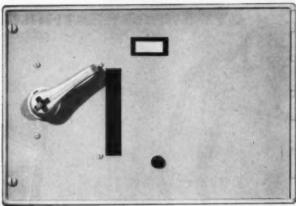
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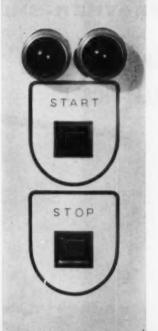
Complete Interchangeability Plus New Safety Features Mark Industry's Newest Control Center

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To learn more about the newest control center in the industry, call your Westinghouse sales engineer. Or, write Westinghouse Electric Corporation, 3 Gateway Center, P. O. Box 868, Pittsburgh 30, Pennsylvania.







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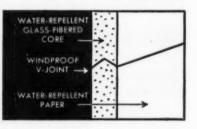
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3. STRONG—The glass fibers knit the gypsum core securely together, providing up to 80% more resistance to shock and giving the board far better nail-holding qualities. The heavy, water-repellent surface paper offers high resistance to transverse stresses.



GYPSUM SHEATHING

(TM)

4. STABLE—It will not warp or buckle with changes in temperature and relative humidity. Expansion and contraction are negligible. Being an inert material, it will not decay, nor will it harbor vermin.

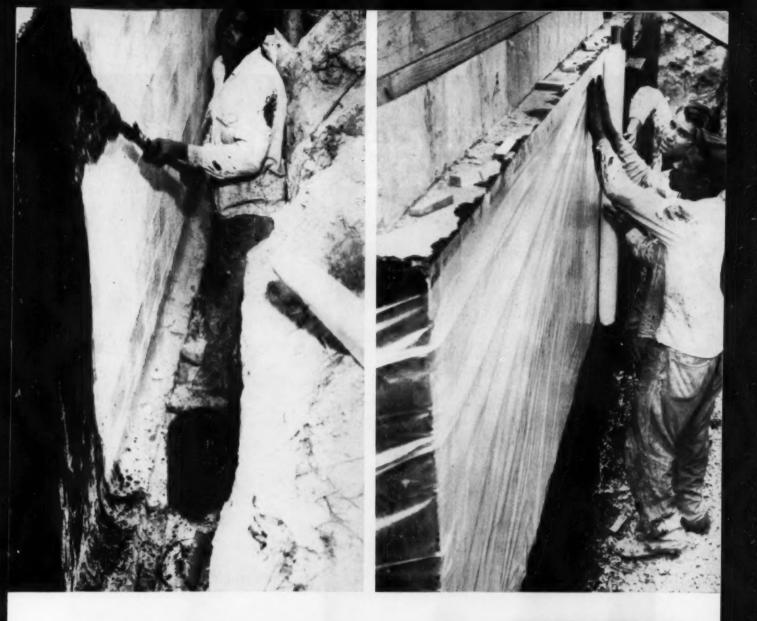
5. WEATHERPROOF — Weather-Shield's water-repellent core, heavy water-repellent paper covering, and tongueand-groove V-joint provide weather protection equal or superior to that of other sheathings used with building paper.



Manufactured by Bestwall Gypsum Company—sold through **BESTWALL CERTAIN-TEED SALES CORPORATION** 120 East Lancaster Avenue, Ardmore, Pa. **EXPORT DEPARTMENT:** 100 East 42nd 51., New York 17, N.Y.

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- 3. Brush down to achieve tight fit.
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For the name of your nearest dealer write the VISKING Company.

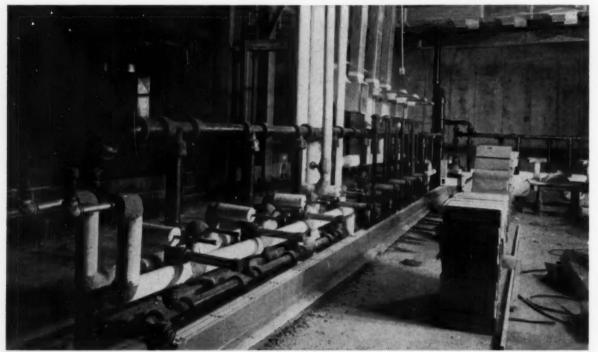
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CAST IRON SOIL PIPE AND FITTINGS in Purdue University's New Union Hall of Music Annex





Part of building showing 8" Cast Iron Soil Pipe suspended underground sewer and two 6" downspout connections.



Air view of campus, showing \$8,500,000 Purdue Memorial Union Hall of Music Annex. Steel framework of building in foreground.

Our Company does not manufacture Cast Iron Pipe, but supplies many of the nation's leading foundries with quality pig iron from which pipe is made. Cast Iron Soil Pipe and Fittings roughing-in for closets and lavatories.

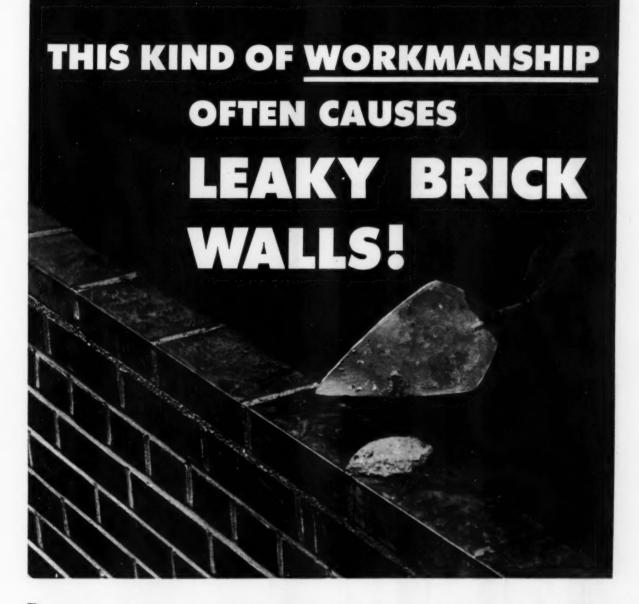
One of the most architecturally beautiful and soundly constructed buildings on the campus of Purdue University, Lafayette, Indiana, is the \$8,500,000 Memorial Union Hall of Music Annex. This structure contains a conference hall, two theaters and a large addition to the library.

Pictured here are several of the many installations of Cast Iron Soil Pipe and Fittings in this imposing Hall of Music which assure drainage that is both troublefree and permanent.

In any building — modest home, costly mansion or structure such as this — it pays to specify Cast Iron Soil Pipe and Fittings for long run economy and lasting satisfaction.



WOODWARD, ALABAMA



PARTIALLY filled head joints are one of the common causes of leaky brick walls.

Instead of throwing enough mortar on the brick to fill the joint completely, bricklayers often spot a dab of mortar only on one or both corners of the brick—and then slush the head joint after the brick is laid. This slushing is not enough to fill the joint solid. Result—water may work its way through voids in the head joint, to the inside of the wall.

Brixment's exceptional workability makes it easy for the bricklayer to use enough mortar to completely fill the joints without slushing, and still lay the brick easily and accurately to the line. Brixment mortar has great plastic-

ity, 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.



LOUISVILLE CEMENT COMPANY, Incorporated, LOUISVILLE, KENTUCKY

Where cost and comfort count...

CABINET UNITS

And you can cut space needs 27%

VERSATILITY and low-cost performance make Modine cabinet units ideal for heating and ventilating commercial, institutional and public buildings. They provide fast, quiet, positive air distribution. And where space is limited, size of units can be reduced more than 25% by using Modine Type W coils and operating on hot water instead of steam.

They can be installed upright or inverted . . . fully exposed, recessed or concealed . . . on walls, floors or ceilings. Some models are for steam or hot water heating—others heat with hot water, cool with chilled water. Some can be installed with ducts.

Easily attached accessories permit ventilating with fresh outside air. When so equipped, cabinet units meet many requirements where the expense of unit ventilators is not warranted.



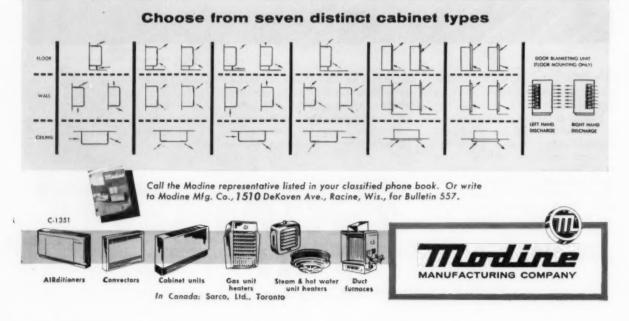
Series of Type BF units provide quiet, uniform heat distribution in this spacious, modern church.



Adaptability to ceiling mounting makes Modine cabinet units ideal where wall space is limited.



Here's how the use of Type W coils with hot water can reduce unit size. Dotted lines indicate space steamcoil units of equal capacity would need.



WAYNE ANNOUNCES ...

new rolling gymstand advances

PACING THE INDUSTRY AGAIN IN 1957 !

1 BRAKING SYSTEM-400% more braking area-4 times greater holding action.

2 ROLLING FOOT SYSTEM-When loaded, wheels retract. Foot thus provides 250% more floor bearing support than any other gymstand.

3 POWER OPERATION-Now-effortless opening and closing on high row stands (15 rows or more).

4 PHILIPPINE MAHOGANY-Handsome color and grain in this rich beautiful hardwood blends into any interior decor.

5 AUTOMATIC WOOD SURFACING-New automatic wood surfacing for more uniform eased edges-consistently smooth surfaces.

6 SURFACE FINISH-New Polyester Nitro Cellulose Lacquer Finish-Greater depth of gloss-lower surface friction-higher abrasion resistance-will not darken with age.



NEW 1957 CATALOG-Planning a Gym? You'll want this! All-new 16-page catalog in color. Write direct to:

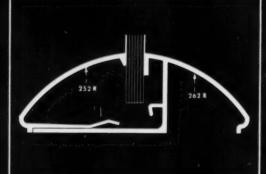
NE 148 N. PEMBROKE AVE., WAYNE, PA. FOLDING PARTITIONS . OUTDOOR GRANDSTANDS ROLLING GYNSTAND

WA

IRON

WORKS





With its pleasing simplicity of line, rugged construction, and fine finish, this sash is typical of the quality metal members to be found in the complete line of Pittco Metal Products. For full information, see your Pittco Store Front Metal Representative.

PAINTS GLASS CHEMICALS BRUSHES PLASTICS FIBER GLASS I T T S B U R G H P L A T E G L A S S C O M P A N Y IN CANADA: CANADIAN PITTSBURGH INDUSTRIES LIMITED



FRY ROOFING

The architect's is a continuing responsibility. Looking ahead in an effort to forestall every needless annoyance or expense to which their clients may be exposed, more and more architects are recommending that roofs be not just "bonded," but FULL VALUE bonded.

FRY—world's largest manufacturer of asphalt roofing and allied products—backs both its asphalt shingle and built-up roofing with a FULL VALUE bond covering labor costs as well as cost of materials for 10, 15 or 20 years. For condensed specifications, see SWEET'S 1957 INDUSTRIAL CONSTRUCTION FILE 4a/Fr. For complete details and specimen bond, write FRY today!

LLOYD A. FRY ROOFING COMPANY

World's Largest Manufacturer of Asphalt Roofing and Allied Products 19 Roofing Plants Strategically Located Coast-to-Coast GENERAL OFFICES: S818 Archer Road, Summit (P. O. Argo) Illinois ROOFING PLANTS: Summit, III. • Portland, Ore. • Houston, Texas Morehead City, N.C. • Compton, Cal. • Kearny, N.J. • Detroit, Mich. • Irving, Texas • Minneapolis, Minn. • York, Penn. • N. Kansas City, Mo. • Brookville, Ind. • Jacksonville, Fla. • San Leandro, Cal. • Stroud, Okla. • Memphis, Tenn. Robertson, Mo. • Waltham, Mass. • Fort Lauderdale, Fla.

1101 Elm Street Wausau, Wisconsin

WESLEY MEMORIAL

CHURCH

ARCHITECT: Foster & Yasko 407½ Scott Street Wausau, Wisconsin ROOFING CONTRACTOR: Schuette Builders Company 1328 S. 11th Ave. Wausau, Wisconsin ROOF: 130 squares, "Desert Blend," FRY 290-Ib. glant asphalt shingles, 20-year FULL-VALUE bonded. the skydome that does all 3! controls light...diffuses light...reduces heat

NEW WASCOLITE REFLECTADOME WITH SOLATEX SILVER

After years of development and research, Wasco Products, the company that originated Skydomes, now offers you a revolutionary new overhead daylighting unit. It's Reflectadome, the one dome that does all 3 – controls light . . . diffuses light . . . reduces heat.

Reflectadome's secret is <u>Solatex Silver</u>, a special material <u>embedded</u> not laminated) right into the acrylic dome. Unlike ordinary skydomes, Reflectadome provides an even supply of natural light all day long. For example, when the altitude of the sun is 20 degrees, Reflectadome <u>doubles</u> the amount of light transmitted by a clear skylight. When the sun's altitude approaches 90 degrees at noon, light is reduced by 60%:

While producing this remarkably level lighting curve, Reflectadome also diffuses light to keep interiors evenly illuminated for top visual performance.

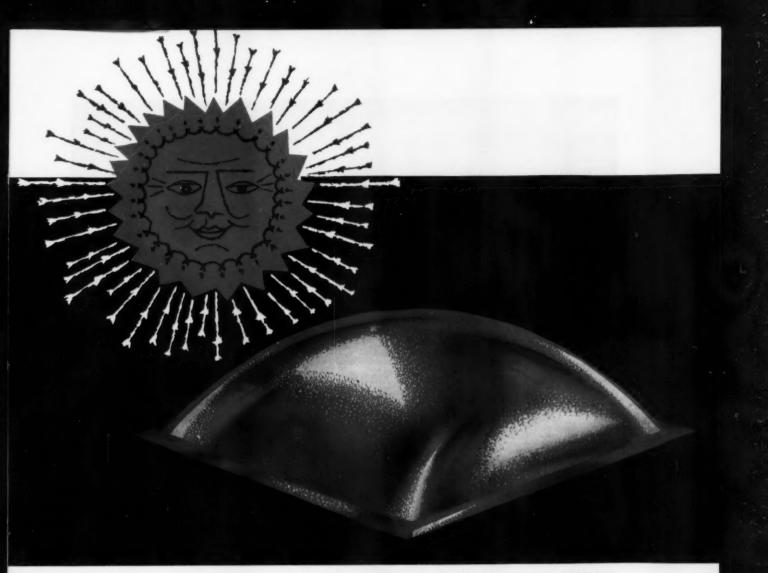
Most amazing of all, as Reflectadome performs these lighting miracles it drastically reduces solar heat at the same time!

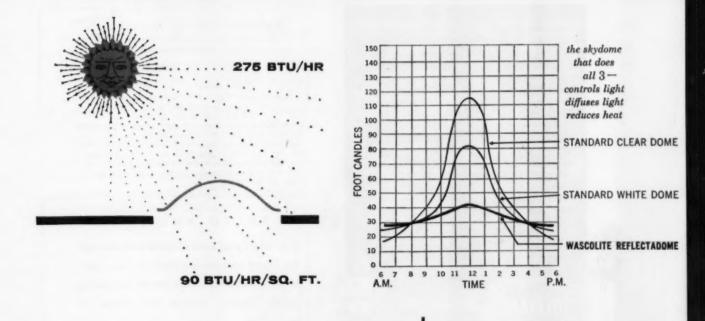
Naturally, Wascolite Reflectadome features all the improved functional advantages of the Wascolite Skydome. <u>Solatex Silver</u> embedments are available only from Wasco, so specify Wascolite Reflectadome by name.

Write immediately for full details on exciting new Reflectadome, the one dome that does all 3 – controls light . . . diffuses light . . . reduces heat,

"NOTHING LIGHTS LIKE WASCO CONDITIONED DAYLIGHT"

* Trademark of Wasco Products, Inc.





WASCO PRODUCTS, INC.

Bay State Road, Cambridge 38, Massachusetts Wasco Chemical (Canada) Ltd., Toronto 12, Canada



Ironbound* floors are best conditioned for lifetime service by the application of Hillyard finishes. Superlative Hillyard treatments help these fine floors retain their original beauty, smoothness, toughness, and ease of maintenance over literally generations of hard wear.

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National Floors Co.	Starm Flaaring Co., Inc.
Boston, Mass.	New York City
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Canton, Ohio	Philadelphia, Pa
Chas. H. Anderson Floors, Inc.	R. L. Dresser
Chicago, III	Raleigh, N. C.
Austin Flooring Co.	Yunger Floor Company, Inc.
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The Ironbound Co. of Cleveland	Missouri Floar Company
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Depend on your local Hillyard Maintaineer® for expert consulting advice on floor treatment specifications—application procedures —"Job Captain" service. No charge, no obligation.

HILLYARD, St. Joseph, Mo. Dept. A-2

the Two Grand Old Names in Lighting

Guth Incandescent Lighting Catalog

"Mr. Holophane" says-

"Glad to have you aboard, Ed. My colleagues tell me your new catalog will prove to be most valuable for Architects and Engineers. Congratulations!"

CHARLES FRANCK, President The Holophane Company New York 17, N. Y. "Mr. Guth" says— "Thank you, Mr. Franck. Our Engineers have had a hey-day with your grand lens-line. The new catalog appears to be a most helpful lighting tool."

EDWIN F. GUTH, SR.

The Edwin F. Guth Co. St. Louis 3, Mo.



THE NEW GUTH CATALOG features 8 special indexed sections to completely cover the entire new Brascolite line of incandescent fixtures: square and round recessed units with Holophane Controlenses*, surface and suspended fixtures, night lights, bed lights, gym lights, etc. Complete with photograph of each fixture, plus specifications, dimensional drawings (drawn to scale for easy reproduction), coefficients of utilization, light curves, installation information and other technical data.

Also a special 12 page section including complete Lumen and Point-by-Point Charts, features of Guth quality design and construction, as well as description of the famous ALZAK Lifetime Aluminum Finishing Process.



Write on your letterhead for your complimentary copy of this new catalog today.

Celebrating Our 55th Anniversary 1902-1957



THE EDWIN F. GUTH CO., ST. LOUIS 3, MO.

* Holophane Co.

ARCHITECTURAL RECORD MAY 1957 113

TO Prove To Yourself this is the FINEST, MOST ECONOMICAL OPEN WEB FLOOR AND ROOF SUPPORT AVAILABLE

STANDARDIZED STEEL BUILDING PRODUCTS

MACOMBER INCORPORATED

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FABRICATING AND

And after you have that V-BEAM Catalog you will discover the greater reserve strength provided by these lighter, stronger framing members — so popular — coast to coast.

QUICKEST, MOST

METAL DECK

V-LOK STEEL FRAMING STEEL JOISTS

Cold formed chords and webs provide this greater strength, build a stronger floor or roof at savings — per member — your General Contractor will be very happy about.

Look at that floor system in the photo above. Then look in your V-BEAM Catalog and contact your nearest Macomber Representative for quotation on your loads and spans.

In one job — you will prove to yourself that V-BEAMS are the most outstanding structural framing buy on the market.

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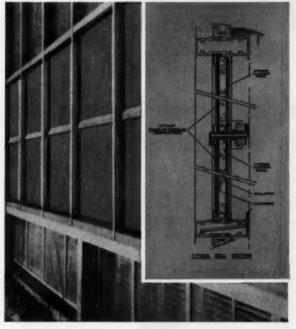
YOUR

THE MACOMBER

V-BEA



Imperial Oil Engineering Building uses 5,880 square feet of colorful, durable Porcelain-Enameled Aluminum



DU PONT PORCELAIN ENAMELS

BETTER THINGS FOR BETTER LIVING ...THROUGH CHEMISTRY

ARCHITECT: John B. Parkin Associates Toronto, Ontario, Canada ENAMELER: Kawneer Company Niles, Michigan Shown here is Imperial Oil's smart new Engineering Building at Sarnia, Ontario. In addition to the extensive use of glass, 588 aluminum-faced 5' x 2' spandrel panels were used. This allowed plastic foam insulation and exterior wall, finished in Du Pont porcelain enamel, to be installed as a unit. On the interior, an air space was created by the use of 4" precast lightweight concrete slab backup.

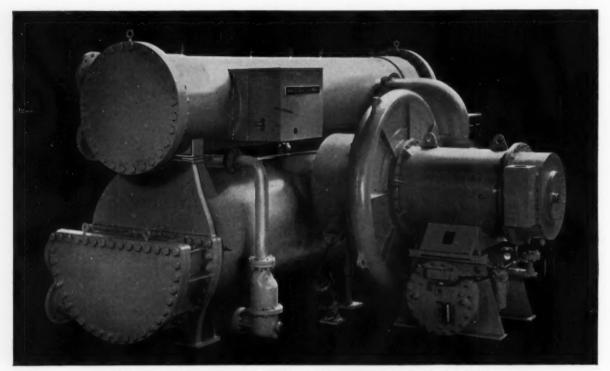
According to the architect, "The following considerations dictated the selection of porcelain-enameled aluminum spandrel panels: light weight, high insulation, lowest possible maintenance and deterioration, free choice of color and shiny, clean crisp finish. The panel used was the best answer."

Du Pont porcelain enamels for aluminum are available in an unlimited range of highly stable colors and surface textures. Because they can endure a good deal of punishment without spalling or exposure of metal, they readily lend themselves to a wide variety of architectural applications—both in prefabricated units and where some on-site work is required.

May we send you detailed literature describing these Du Pont porcelain enamels for aluminum? If you wish we can also put you in touch with an experienced enameler who can serve your needs. The coupon below will bring a prompt reply.

E. I. du Pont de Nemou Electrochemicals Dept.,	AR-5, Wilmington 98, Delaware
on Porcelain Ename	al Bulletin CP 4-454 and illustrated folder I for Aluminum. presentative call with further details.
Name	Position
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ARCHITECTURAL RECORD MAY 1957 115



TONRAC® - single-stage hermetic centrifugal refrigerating machine - maintains chilledwater temperature regardless of load. Single-level construction simplifies installation.

You'll get one-source responsibility from American Blower's complete air-conditioning line

Compact and easily accessible, American-Blower Inductor Units are available for both high- and low-pressure systems.



American Blower line includes Multi-Zone Conditioners, plus central-station units and self-contained packaged air condi-

tioners.

Sirocco® High-Pressure Fans are part of the complete American Blower package for high-velocity, high-pressure air-handling systems.



American Blower offers a complete line of air-conditioning products which are designed, engineered, and manufactured to work together. Whether it's for a small installation or a large-scale central or zone system, you can specify all your equipment from a single source - pinpoint responsibility for quality, performance, delivery dates. You'll save time and money doing it - and you're assured of a balanced system!

Point is, for every air-conditioning and air-handling requirement, there's an efficient, dependable product backed by American Blower's 75 years' experience. From self-contained packaged units and heating and cooling coils to Tonrac Centrifugal Refrigerating Machines, you get the finest when you specify American Blower. Why not get in touch with our nearest branch today! American Blower Division of American-Standard, Detroit 32, Michigan. In Canada: Canadian Sirocco products, Windsor, Ontario.





ONLY UNIT LOCKS



Make a simple cut-out and two bolt holes in the door, slip the lock into place, apply through bolts and tighten. That's how easy it is to install a CORBIN Unit Lock ... any one of the 20 available functions! Unit Locks are the only type locks completely assembled at the factory with knobs and escutcheons attached. There's nothing to take apart and reassemble ... practically no chance of misapplications!

In operation too, Unit Locks are foolproof. The lock mechanism, precisely adjusted at the factory, goes into service undisturbed. It's the simplest lock mechanism on the market . . . big, rugged parts with the stamins and precision that faultless service demands. Deadlocking is *positive*. And when it comes to security, Unit Locks have actually stopped burglars armed with pinch bars and jimmies!

These are just a few reasons why Unit Locks are consistently first choice for fine commercial, institutional, and public buildings. Available in a wide range of distinctive designs. Get the full story from your nearest Corbin distributor.

CONSTRUCTION FEATURES

Cerbin Unit Lock designs available in cest brass, bronze or aluminum, in all popular finishes. Internal parts are of long-wearing, non-ferrous metal or zinc-plated, dichromated steel. Lock frames are tough, 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 deers.



P & F CORBIN Division American Mardware Corporation New Britain, Connecticut



the locks that come practically "pre-installed"

Nicholson Metal Partitions ... easy to assemble ... modern, clean appearance ... ready for immediate delivery



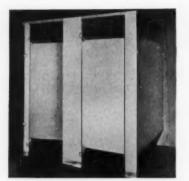






Figure on low installation costs when you specify Nicholson Toilet Compartments. They are designed and constructed for easy adjustment to location contours and quick assembly.

Count on the attractiveness of Nicholson metal partitions—built to enhance the appearance of any washroom. Designs range from ultra modern to rugged utility units.

Specify Nicholson compartments, and have them shipped fast. Nicholson toilet compartments are stocked in

standard styles and sizes for fast "from stock" delivery. Types available are:

Type A—floor braced Type AR—overhead braced Type B—flush style

manufactured by W. H. Nicholson and Company, 14 Oregon St., Wilkes-Barre, Pa. Sales and Engineering offices in 98 principal cities.

For good-looking, easily-assembled metal toilet partitions, specify . . .



COLD

HIGH

VELOCITY

UNITS

ANEMOSTAT Announces....

ALL-AIR

CONSTANT VOLUME

Pressure Ratio 1:4

Here is a vitally important advance in the field of air distribution. Anemostat All-Air High Velocity units, with new simple automatic controls, deliver constant volume, no matter what the fluctuations from 1:4 or 4:1 on inlet pressures of either the hot or cold valve.

Each unit is a single package including the controls and integral thermostats if required. There is complete accessibility of all controls through removable diffusers. No access panels are required. Capacities of CONSTANT VOLUME units can be pre-set at the factory.

These Anemostat CONSTANT VOLUME units

- Assure scientific draft-free distribution of air.
- Are available in 100% induction units.
- Include Anemostat die-cast metal rocket-socket valves. More than 50,000 of these valves are in service, and not a single one has needed maintenance.

• Operate on standard 15 lb positive acting compressed air systems.

See your nearby Anemostat representative for complete details on these revolutionary Anemostat All-Air CONSTANT VOLUME High Velocity units.

Anemostat: The Pioneer of All-Air High Velocity Systems



DRAFTLESS Aspirating AIR DIFFUSERS ANEMOSTAT CORPORATION OF AMERICA 10 EAST 39TH STREET, NEW YORK 14, N. Y.

Representatives in Principal Cities

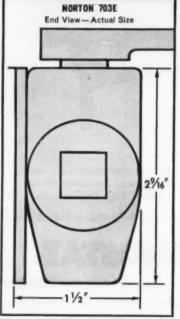
AC 1946

HOT

Pressure Ratio

4.1 1





Ultra-Modern in clean-lined functional design...Traditional in ruggedness of construction...full rack and pinion dependability of operation.

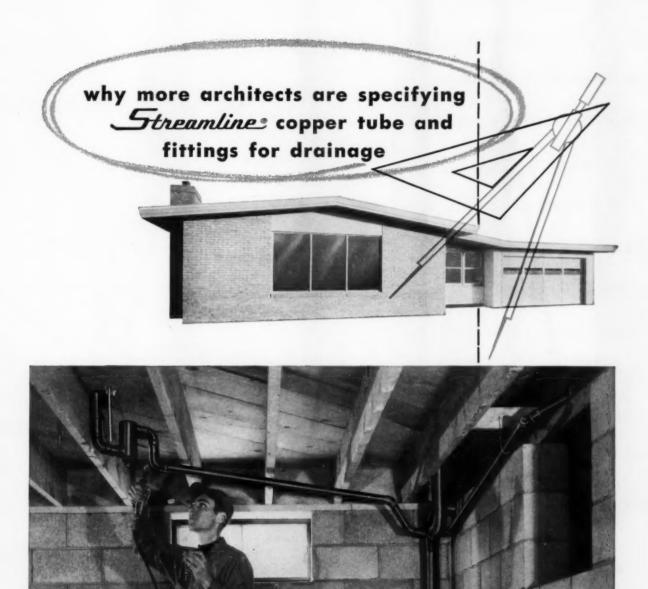
After years of research to perfect suitable alloys and designs, Norton now offers the very first door closers which are not cast iron...not die cast or sand cast but *extruded from tough aluminum alloy* of such density that leakage through the shell is eliminated.

Utilizing this advance are two brand new Norton models specifically designed to complement the structural simplicity of modern doors...engineered to serve indefinitely with the efficiency, low maintenance and durability typical of all Norton Door Closers. **NORTON 703E:** Surface mounted type, can be used on either side of door...only 1½" projection...can be finished to match hardware...up to 180° opening, trim permitting.

NORTON 750: Corner type of unique design for outside doors... arms completely concealed when door is closed... blends unobtrusively with latest aluminum frame doors.

But, not all advantages of these newest Norton Closers can be listed here. Write today for new data sheets just off the press giving full description and specifications.

NORTON[®] DOOR CLOSERS Dept. AR-57 · Berrien Springs, Michigan



In designing a home, you, as an architect, consider every component with great care. That's why we'd like to point out that by specifying Streamline copper tube and soldertype fittings for drainage, you add still greater merit to your most sound architectural design. With Streamline copper tube and fittings, for example, there are no cauked joints to leak . . . no rust to impair the building's beauty and utility. In addition, compact Streamline stacks fit into standard $2^{\prime\prime} \times 4^{\prime\prime}$ paritions . . . increasing useable house space and affording greater flexibility of design. The net result is a modern corrosionresistant drainage system that will last for the life of the building.

It costs a little more, but the extra cost of a drainage system of copper is negligible when you compute its practical advantages.* When Streamline tube and fittings are used, it means a trouble-free future for your client's home.

Remember—the advantage of an all-copper Streamline drainage system far outweighs the small extra cost. Write today for information Kit No. 15 containing the detailed story of using copper for drainage.

MUELLER BRASS CO. PORT HURON

See our catalog in Sweet's Architectural File.



2 Joseph F. Fehrenbach, licensed master plumber of Bridgeport, Michigan, installed the plumbing in the home shown here. He chose Streamline tube and fittings for drainage because it gave him an attractive, troublefree instellation for only \$14.23 more than other competitive materials. He was able to de the job much quicker, too.



8

1857 · CENTENNIAL YEAR · 1957

A tribute to the courageous 13

On this 100th Anniversary of the founding of the American Institute of Architects we wish to pay tribute to Richard Morris Hunt, Richard Upjohn and the eleven others of "ideals and vision" who on February 23, 1857, founded the A.I.A. At the same time we wish to pay tribute to the 22,000 practitioners who today are continuing to uphold the original ideals on which the society was founded and are envisioning, for the years ahead, even greater accomplishments than those already achieved.

REVERE COPPER AND BRASS INCORPORATED

Founded by Paul Revere in 1801

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



Patterns in concrete masonry



Ask your local NCMA member for a copy of "Ideas with Concrete Masonry."

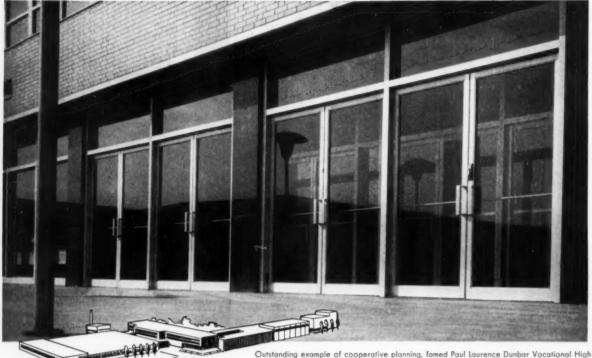
FLEXIBILITY

you can do so much more with concrete masonry at so much less cost. Block can be used in striking new patterns. Your local NCMA member can show you all the latest patterns and developments in block. Call him soon. NATIONAL CONCRETE MASONRY ASSOCIATION

38 South Dearborn Street - Chicago



RIXSON overhead concealed door closers



Outstanding example of cooperative planning, famed Paul Laurence Dunbar Vocational High School, Chicago Public Schools. Holabird and Root and Burgee, architects, Chicago.

THE ONLY FITTING CLOSER

for shallow head jambs like these !



with complete control of opening and closing action BUILT-IN

two independent closing speed adjustments—one controlling the closing speed from open to 15°, the other from 15° to closed position.

built-in door holder-where specified, holds door at any one choice of four positions.

hydraulic shock absorber (back-check) -absorbs the force of violent openings.

spring cushion door stop-door is "cushion stopped" at choice of any one of four positions.

the most compact-only 21/8"x 21/8"x 17" long

These RIXSON no. 225 closers not only meet the requirements of narrow style head jambs but have ample power to dependably control heavy entrance doors under all conditions. Being completely concealed, no mechanisms or protruding arms are exposed to be tampered with or mar the appearance of the modern entrance. Available in three sizes for both center hung and butt hung installations.

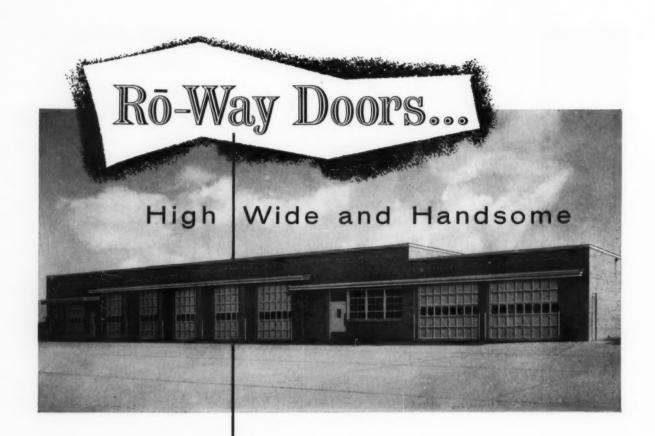
Write for complete details and template information.



CANADIAN PLANT: The Oscar C. Rixson Co. (Canada) Ltd. 43 Racine Rd. • Rexdale, Ontario

9100 west belmont avenue • franklin park, illinois





If it's extra height you need in commercial doors-or extra widththere 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 Ro-Way for every Doorway!

DVERHEAD TY DOORS COMMERCIAL . INDUSTRIAL . RESIDENTIAL

ROWE MANUFACTURING COMPANY 1282 HOLTON STREET · GALESBURG, ILLINOIS

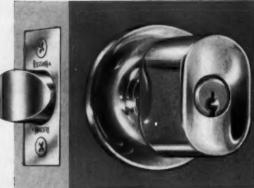
Free architect's manual

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.



New Russwin Designs

in doorware fashioned to fit the hand



THE ERA DESIGN ... an interesting departure from the conventional knob styling. The Era knob is not only pleasing to the eye and easy to grasp, but also unusually easy to turn.



Russwin Doorware in these new designs offers more than modern styling, security and service. It offers an unusual and outstanding selection of materials plus knobs designed purposely to fit the hand. The new designs are available on Russwin Doorware that has been thoroughly tried and proven for its extra-sturdy construction, smooth operation and durable finishes. They are available in cast or wrought brass, bronze or aluminum, and in wood where indicated, also in all standard finishes and popular functions. Write for new descriptive brochure. Russell & Erwin Division, The American Hardware Corporation, New Britain, Conn.



THE TEMPO DESIGN

a delightful creation that

form-fits the palm of the hand. This design is not only available with knobs

and roses of beautifullyfinished metals, but also

in an exciting new combination of knobs in

rare woods and ceramics with roses in metal.





Over 150 tons of G-E Zone-by-Zone Air Conditioning serve the entire Louise Obici Memorial Hospital in Suffolk, Va. In all, 26 General Electric Packaged Units were installed with no major alteration or structural changes.



Linen closets house and conceal compact General Electric Air Conditioners providing service to another area.



Basement storeroom also houses General Electric Units. These four units serve a section of first floor wing. Installation by Mechanical Engineering Corp., Norfolk. Va.

GENERAL ELECTRIC ZONE-BY-ZONE AIR CONDITIONING

Selected as most practical method for modern hospital

Nobody would ever guess that General Electric Air Conditioning was installed *after* this hospital was completed—so well concealed are the quiet General Electric Units.

Zone-by-Zone Air Conditioning is also a sure way to solve budgeting problems. It is easy to install—no costly interruptions no major alterations—no heavy initial outlay. Operation is economical and space problem is minimized. Indeed, more and more architects are specifying General Electric Zone-by-Zone Air Conditioning as the most practical answer for every requirement. General Electric Company, Commercial and Industrial Air Conditioning Dept., 5 Lawrence St., Bloomfield, N. J.

> Floor-mounted units may be stationed in or away from area served.



Ceiling-mounted units use no floor space—air-cooled and water-cooled.



Progress Is Our Most Important Product



Congratulations

to all A.I.A. members on your centennial celebration

The A.I.A. Centennial is, indeed, an important milestone in the economic and cultural growth of this nation. When the A.I.A was founded, a century ago, the folks at the Paine woodworking mills were already manufacturing the wood products that helped make Oshkosh known as the "sawdust capital of the world." The reputation they established then for quality and craftmanship has been cherished generation after generation. Today it is with the deepest measure of pride that we extend, to all A.I.A. members, a friendly, warm welcome into the "Century Club."



America's finest flush doors are Lezo doors with all wood grid core

and they are made only by



Below are two of many reasons why leading architects specify Paine Rezo Doors for residential or institutional installations.



help equalize moisture content inside.

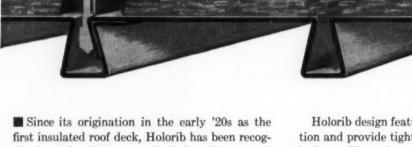


Rezo's all wood grid core assures rigidity, strength, light weight.



Fenestra HOLORIB...

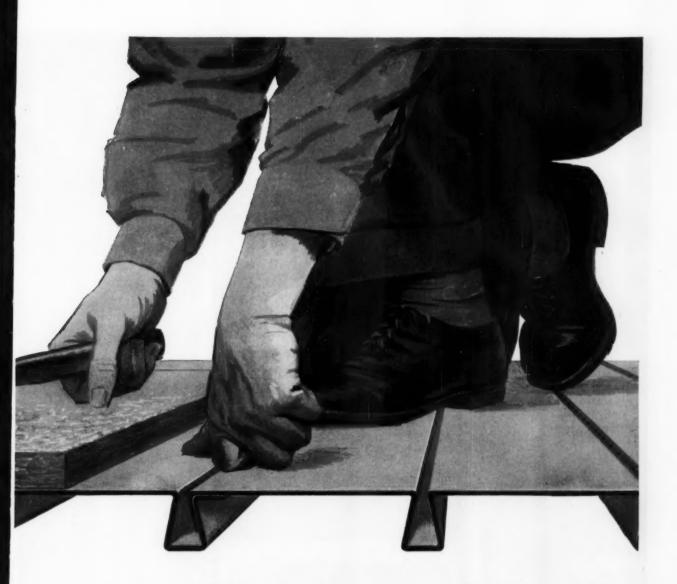
quality standard for steel roof deck!



■ Since its origination in the early '20s as the first insulated roof deck, Holorib has been recognized as the design standard for this type of construction. Its exclusive features give you many important advantages.

The pyramidal-shaped ribs which distinguish Holorib provide greater lateral and vertical stability than ordinary designs. This greater strength allows heavier loads on longer purlin spacings. The narrow rib openings— $\frac{3}{8}$ "—give full bonding area and a firm support for insulation as well as allowing a minimum waste of bonding materials. The broad base—1"—rests firmly on the purlins for a balanced structural section and greater welding area. Holorib design features also speed up construction and provide tight joints to eliminate asphalt leakage. The telescoping end laps provide for expansion and contraction and give positive connection. The side laps interlock with the complete last rib of the adjoining sheet to assure full and equal strength at all points. The side lap is smooth and permanent and allows the Holorib to conform to movements of the material above it. No side lap clips are required.

Fenestra^{*} Holorib Steel Roof Deck is rolled in lengths that permit economical spacing of purlins and the design advantage of continuity over supports. Full 18" coverage gives fast erection with the large area sheets.



Non-piercing insulation clip now available exclusively for Holorib. This provides fast construction and a positive anchor for insulation when the asphaltic vapor barrier or adhesive is eliminated between deck and insulation.

Be sure to get the quality design and construction advantages of Fenestra Holorib Roof Deck. Specify it exactly . . . there is no equal. Check any alternates for bonding area, strength and

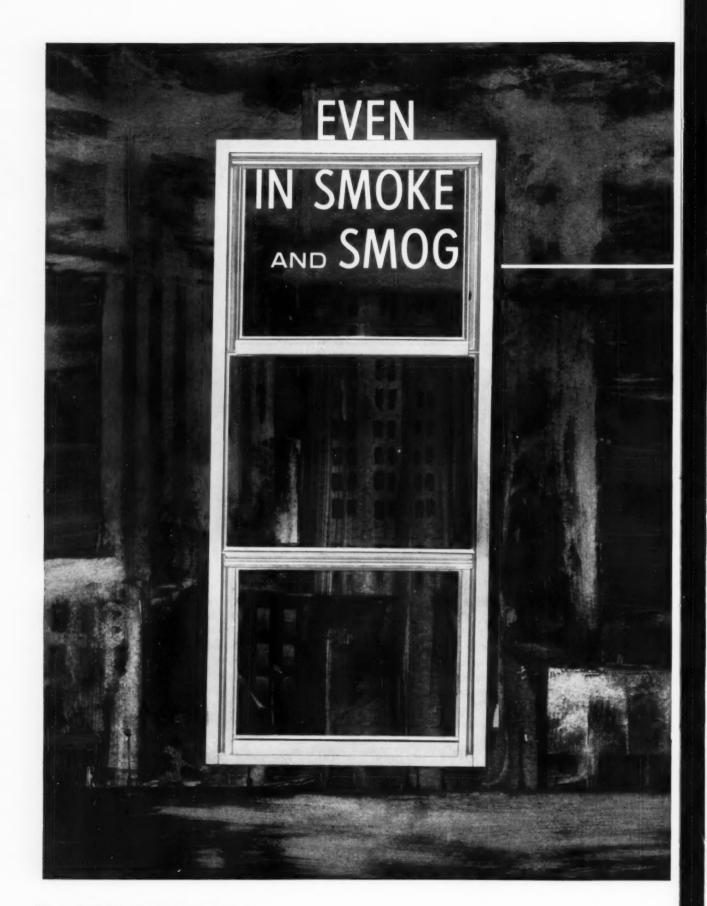


YOUR SINGLE SOURCE OF SUPPLY FOR BUILDING PANELS • DOORS • WINDOWS stability of section at all ribs, end and side lap details, insulation fastening, and speed of installation. There is no comparison to Fenestra Holo-



rib. For complete details, get your FREE copy of the 1957 Fenestra Building Panel Catalog. Call your local Fenestra representative—listed in the Yellow Pages—or mail the coupon below, today.

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FENESTRA FENLITE WINDOWS

New Fenestra® FENLITE Industrial Steel Windows are the answer to window maintenance problems in new or existing plant buildings. They give you distinctive appearance . . . lifetime corrosion resistance without painting . . . plus the strength of steel! And they cost no more than ordinary steel windows with two-coat field painting.

This new corrosion-resistant steel window finish is produced by an exclusive Fenestra process developed through years of research and testing. The FENLITE process alloy-bonds a lifetime zinc surface with the steel of the window. A special chemical polishing treatment protects the surface against the natural early corrosion of free zinc. Standard 20% salt spray tests indicate that resistance to the start of white corrosion of the zinc is increased 3 to 12 times by this treatment. The window is also prepared for a tight glazing compound bond and for decorative painting, if desired. Maintenance protective painting is not required. Precision electronic control is needed for every step in the FENLITE process. The windows

must be completely submerged in one dip in each bath! Fenestra's specially designed "million-dollar" plant is the only one in America with facilities to produce FENLITE.

Fenestra FENLITE Industrial Steel Windows are now being installed in new industrial plants from coast to coast. Other leading firms are solving their window maintenance problems in existing plants by replacing the windows with Fenestra FENLITE Windows. They estimate their savings in painting and maintenance costs will quickly pay for the new windows and eliminate future problems and expense.

If you have the responsibility of designing or maintaining industrial buildings under all types of



atmospheric and weather conditions, you should get complete information on Fenestra FENLITE Steel Windows. Your local Fenestra representativelisted in the Yellow Pages-can show you an actual sample. Call him, today, or mail the coupon below for details.

The Fenestra FENLITE Finish is also available on the complete line of Fenestra Intermediate Steel Windows for schools, office buildings and other fine structures.



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

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Fenestra packages hollow metal door, frame and hardware units to save you up to \$100



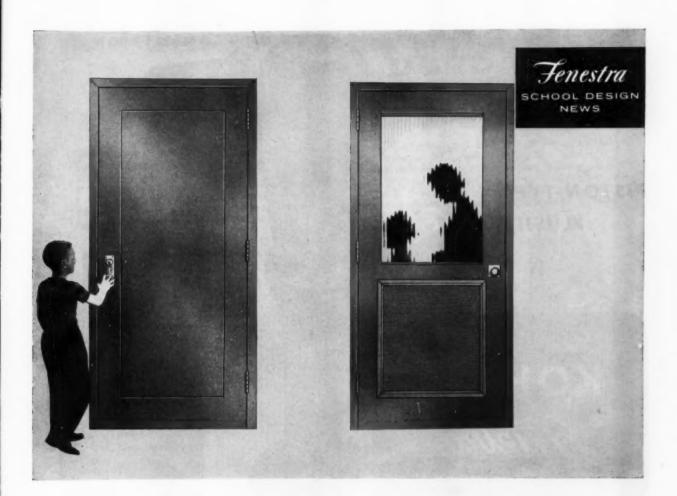
Look like costly custom-made doors, don't they? They're not. They're stock doors by Fenestra®with an installed cost about \$100 less per opening than you'd expect to pay!

Fenestra's new idea for saving you money on school doors is really very simple. We mass produce

them on special jigs that save us expensive labor. We pass along this savings to you. We maintain large stocks of standard sizes to give you fast delivery and doors come to your building complete with frames and hardware, ready to install. You don't have to cut, fit, mortise, drill or tap a Fenestra Door. One



REIDLAND SCHOOL, Paducah (Reidland), Ky., cost less to build because 134 Fenestra 13/4" Hollow Metal Flush Doors were used. Architect: G. Tandy & Lee Potter Smith, Paducah, Ky. Contractor: Erhart-Knopf Construction Co., Inc., Louisville, Ky.



FOR SCHOOL DOORS

man with a screw driver can install it in minutes. Fenestra Hollow Metal Doors swing open smoothly. They close quietly because there's a sound-deadening material inside. You save, year after year, on maintenance because Fenestra Doors can't warp, swell, stick or splinter. They last a lifetime!



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Your Single Source of Supply for DOORS . WINDOWS . BUILDING PANELS

Illustrated are Fenestra's 134" Entrance Doors, 134" Flush Door and the NEW 134" Fin-Air Louvered Door for air-conditioned buildings-three of the many fine doors in Fenestra's complete line. Call your Fenestra representative for detailed information or mail the coupon below.

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The Kohler Metro for closets and urinals is made with the precision workmanship developed by Kohler Co. in the manufacture of highly specialized valves and fittings.

Light pressure in any direction on the handle trips the valve for normal, positive flush and refill. A surge of water through the passageways an instant before each flushing action removes foreign particles and in-

Kohler Co., Kohler, Wisconsin • Established 1873

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sures prompt, thorough cleansing.

The length of each flushing, and the volume of water, are regulated by easily accessible screws. Waste of water is forestalled because action cannot be prolonged by continued pressure, or by wedging the handle. Cap and flush handle are sealed with O-rings. Sturdy construction assures years of satisfactory service. Available with or without vacuum breaker.



You can **BANK** on Zonolite when doing a bank construction job

ZONOLITE[®]

Yes, you can "bank" on Zonolite plaster, acoustical plastic and concrete for advantages you can measure ... in many terms. Security Trust in Billings, for example, discovered Zonolite Acoustical Plastic earned a better fire rating than tile and saved on insurance premiums. You can "bank" on Zonolite vermiculite aggregates for fireproofing beams, columns, ceilings; for insulating spandrel wall backup; for lightweight roof systems: (1) to earn highest fire ratings, (2) usually at lower cost, (3) to reduce deadweight by tons, (4) add vital insulation and noise reduction factors. High speed machine application cuts days and dollars off construction schedules. Send for details today:



How much have you been missing by not using JAMISON'S extra services?

You may already know of the efficient performance of Jamison Cold Storage Doors...their ease of opening... their low maintenance. But do you know that Jamison also offers four valuable services unmatched in the industry?

JAMISON DESIGNS AND BUILDS ALL KINDS OF SPECIAL DOORS



A full-time research and engineering staff enables Jamison to design and build doors for practically any special requirement. Many times, all that's needed is to modify a standard door. Whatever the need, Jamison is equipped

and prepared to build any door to your order.

JAMISON HELPS CONTRACTORS TO QUOTE ON DOORS

Upon request, a Jamison representative will call upon the architect, and take off the door specifications the insulation contractor needs to quote on a job. He'll then



help to interpret specifications and supply the contractor with quotations on the specified doors and any alternates that can be offered.

JAMISON ASSISTS ARCHITECTS IN PREPARING LAYOUTS



Jamison field representatives throughout the country are always available to work with architects in preparing layouts. They will help with the specifications to insure that the right door is used

as well as the one most economical for the job.

JAMISON HELPS CONTRACTORS ON UNUSUAL SERVICE PROBLEMS

Jamison representatives work with contractors to provide the user the best possible service. Advice and suggestions on installing doors can frequently save service cost and trouble.



Help is also available on unusual service problems.

You can depend on Jamison for both a quality product and technical service. Jamison Doors have been the standard of comparison for nearly 50 years. Jamison field service can save you time, money and worry. JAMISON COLD STORAGE DOOR COMPANY, HAGERSTOWN, MD., U.S.A.



More JAMISON Doors are used by more people than any other Cold Storage Door in the world.





bridge-like construction keeps FIAT years ahead in toilet compartment design

(1) LOAD EQUALIZER

Rhodes Schoo

River Grove, II

Architect: Euge Contractor: Art Heavy channel reinforcing distrib-utes load away from the top hinge -gives added support to the pintle. Provides permanent protection against unusual loads-specifically, when children hang from or swing on the door.

(2) IMPACT ABSORBER

Formed, heavy gauge plate anchors the alide bolt-distributes shock of severe door "slamming" over wide area. Prevents tearing out of slide bolt or damage to door.

(3) STRESS RESISTOR

Channel type reinforcing unit is interlocked with the panel edges – provides basic side-to-bottom sup-port – anchors Life-Line* Gravity Hinge in position – positively pre-vents door "sway."

Toilet Compartments are years let rooms. Send the coupon now

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PUBLIC LIBRARY ...

In

DURABILITY

In Southwestern Bell's new Oak Cliff Office Building in Dallas, arranging phone installations, answering inquiries, billing accounts, and a hundred other matters keep employees constantly on the go. Needing a really tough floor that would stay handsome despite years of constant foot traffic, the Southwestern Bell Telephone Company used Textelle Linoleum. This flooring has provided high resistance to indentation and excellent underfoot comfort for this and other Bell Telephone business offices across the country.

> Southwestern Bell Telephone Co., Oak Cliff Office Building, Dallas, Texas Architect: Architectural and Engineering Department, Southwestern Bell Telephone Co.



TELEPHONE EXCHANGE . . . HOTEL CAFE



the flooring spec: Armstrong Textelle Linoleum

EASE OF MAINTENANCE

Wanting an attractive floor that was low in both initial cost and operating expenses, the architects of this handsome new wing of the Kirkwood (Mo.) Library chose Armstrong Textelle® Linoleum. They recognized that Textelle, basically an economy floor, continues to save money because of its durability and its ease of maintenance. They were convinced that despite the economy of a floor of Textelle Linoleum, there is no sacrifice in appearance. Textelle stays attractive for years with minimum maintenance.

Kirkwood Public Library, Kirkwood, Missouri Associated Architects: Raymond X. Grueninger, A.I.A., Clayton, Mo. Frank L. Thompson, Clayton, Mo.



STRIKING EFFECT

To create the appearance of an Old World street for this "sidewalk café," the designers specified Textelle Linoleum. Specially cut sections of Textelle, in contrasting colors, added a bright, gay touch to the floor of La Rue du Ville in Harrisburg's Penn Harris Hotel. Textelle's distinctive bold graining made it easy to create a flagstone paving effect. Another feature which led to Textelle's specification was its ease of maintenancespilled food and tracked-in dirt are no problem with this modern flooring.

La Rue du Ville, Penn Harris Hotel, Harrisburg, Pa. Interior: Walter M. Ballard Corp., New York City

Armstrong Textelle Linoleum is a heavy (¹/₆") gauge, burlapbacked floor, designed especially for use in commercial interiors. Available in a wide range of tone-on-tone colors, it is a handsome asset to any interior. Although Textelle is dense and highly resistant to abrasion and indentation, it is resilient and comfortable underfoot. Textelle's exceptional durability and its ease and economy of maintenance make it ideal for heavy-traffic areas where a smart appearance is essential at all times. Because it is greaseproof, it is also an excellent floor for food-service areas. It should be installed on suspended subfloors only. Because Armstrong makes all types of resilient floors, unbiased recommendations can be offered for every flooring need. For information, samples, complete specifications, design and color scheme assistance, call the Architectural-Builder Consultant in your nearest Armstrong District office or write direct to Armstrong Cork Company, Floor Division, 105 Rock St., Lancaster, Pennsylvania.



Armstrong FLOORS

Approximate Installed Prices per Sq. Ft. (Over concrete, minimum area 1000 sq. ft.)



b) 157 Asphalt Tile, 3/16" (C, D) 100 Linoleum, Va" ("Battleship") Greaseproof Asphalt Tile



Rubber Tile, 1/6" Cork Tile, 3/16" Linotile® Corlon (Hydrocord* Back) Linoleum (Cushion-Ere* Back**) Custom Corlon Tile (Homogeneous Vinyl) 3/32", Va" Cork Tile, 5/16" Rubber Tile, 3/16" Corlon (Cushion-Eze Back)



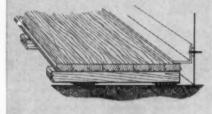
Custom Vinyl Cork Tile Imperial Custom Corlon Tile

*TRADE-MARK

new permaCushion[†] rock maple gym floor



Architect Jos. W. Radotinsky says the installation is "proving very satisfactory. Coaches and players as well as visiting coaches, players and officials have commented quite favorably on the resiliency of the floor . . . it is a first-class installation. As architects, we will be pleased to recommend this floor to clients." Similar comments on the nearly one-half million feet of PermaCushion floors now in use attest to its acceptance.



Air channeled GRS cushioned pads assure uniform, permanent resiliency, prevent sleepers from contacting slab and allow for cross ventilation under entire floor. With void between flooring and wall, plus the fact that no part of the floor is anchored to slab, floor system expands and contracts without "cupping" or "buckling." Power nailing method of installation assures perfectly nailed floor, eliminates hammer marks and broken tongues.

the only truly resilient free-floating floor with dimensional stability.

Here's the floor that has permanent resiliency and dimensional stability built right into it. It's the new PermaCushion* system, the floor that actually floats on GRS resilient pads and is entirely separated from slab and other structural members. The unique construction of the specially engineered and compounded pads *cushions* the floor to assure uniform, permanent resiliency. And since no part of the floor is anchored to slab, the entire system can expand and contract without warping, "buckling," or "cupping." This ability to relieve stress results in dimensional stability unmatched by virtually any other floor.

Besides its resiliency, stability and the natural beauty and warmth of wood, PermaCushion offers such benefits as elimination of moisture transmission from slab, a warm, dry subfloor assured by cross ventilation under the floor, unusual longwearing qualities and great structural strength. And compared to substitute floors, it's remarkably economical in the long run.

For your next gymnasium or auditorium job, look into the advantages of PermaCushion. For full details, and the name of your nearest authorized contractor, write Robbins Flooring Company, Reed City, Michigan, Attn: Dept. AR-557.

Developed especially for the PermaCushion floor system, Dri-Vac vacuum preservative treatment is available on all Robbins flooring for economical protection against moisture absorption, shrinking, swelling, grain raising and checking plus complete protection against termites and fungi attack.



Manufacturers of the popular Ironbound* Continuous Strip* Hard Maple Floor



KOPPERS COAL-TAR PITCH is still the best roofing material

The John A. Nichols School in Syracuse, N. Y., was an expression of the latest thinking in school architecture when it was constructed in 1928. In marked contrast is Pederson & Hueber's recent design for the George Washington School, since it reflects the modern trend toward functional, single-story construction.

Building design certainly changes . . . but the Koppers Coal-Tar Pitch Roof is still acknowledged as the top-quality built-up roof by architects the country over. Just as the Koppers flat roof on the Nichols School has outlived its 20-year bond by 9 years, so can clients throughout the country testify to the long, trouble-free performance of coal-tar pitch roofing materials. It's the outstanding waterproofing and self-healing properties of coal tar that make this kind of service possible.

We'd like to give you all the reasons behind coal tar's success. The Koppers representative in your area will be glad to make an appointment; or write for full information to Koppers Company, Inc., Tar Products Division, Pittsburgh 19, Pa.



A message of importance to the profession...

SYLVANIA ELECTRIC PRODUCTS INC. LIGHTING DIVISION

SIXTY BOSTON STREET

SALEM. MASS.

FRANK J. HEALY WICE PRESIDENT - OPERATIONS

In 1947 Sylvania introduced Flexi-Module, the first Gentlemen: of our wall-to-wall lighting systems. Then, 3 years ago, Sylvan-Aire made its debut. Here was a totally different Sylvania wall-to-wall system providing a striking 3-way treatment of beauty, light and sound.

And now, on the pages facing, we announce the third and greatest of Sylvania's lighting systems--designed especially for your use by Sylvania engineers with the assistance of Peter Muller-Munk Associates, prominent industrial

We call it Sylva-Lume wall-to-wall lighting system. Take the time to study Sylva-Lume's details carefully. Discover for yourself how it combines dynamic new ceiling décor values with the finest lighting qualities attainable. See the limitless variety of new design possibilities it opens up to you--both at the time of initial planning, and later for periodic or seasonal changes.

New Sylva-Lume gives you a special kind of working tool, an opportunity to inject your individuality into a custom-designed ceiling area...using a relatively few standardized components. You can combine color and form to develop pattern, texture, mood and style,

For your own information, why not look through our adjoinas you see fit. ing insert. Get your own preview of the lighting system of tomorrow, here for you to use today!

Cordially

Vice President--Lighting Operations Frank J. Healy



Flexi-Module..

in 1947, was Sylvania's first wall-to-wall lighting system ... using 32" x 32" modules.

Sylvan-Aire in 1954, included optional sound-conditioning with wallto-wall lighting...using continuous rows of plastic shielding.

... and now **SYLVA-LUME** Sylvania's newest wall-to-wall lighting system offers complete design freedom for the luminous ceiling

SYLVA-LUME is Sylvania's newest concept in wall-to-wall lighting. With Sylva-Lume the luminous ceiling becomes for the first time an area for truly *creative* design — integrating with walls, floor and other interior elements. Sylva-Lume goes far beyond the variety permitted by even the most advanced types of over-all illumination systems.

The Sylva-Lume lighting surface is composed of standardized "design-building" modules. Using these, the architect or interior designer can introduce the fascinating interplay of pattern or motif — contrasts in depth and texture — subtle or striking color effects. And can create atmosphere and individuality for any area... whether store, office, conference room, restaurant, lobby or assembly hall.

With Sylva-Lume the lighting system performs other functions in addition to providing good lighting. It can include acoustic elements for sound conditioning. It can conceal exposed overhead wiring, piping, heating and air conditioning ducts. Most noteworthy of all — Sylva-Lume achieves this new height in functional beauty through the use of economical standardized components.

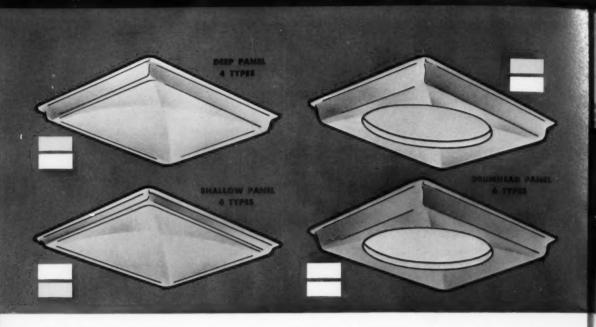
Send for complete data and specifications on the new Sylva-Lume lighting system and fixtures designed for this system.

V-400 (4-57-100M-DR) Printed in U.S.,

Sylvania Electric Products Inc. Fixture Division Wheeling, West Virginia

ANIA

4.1.A. 31-F-2



Unlimited design variety from standard components

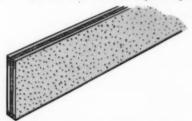
TRANSLUCENT VINYL PLASTIC PANELS FOR PATTERN,

TEXTURE, COLOR

Shallow and Deep Panels Come in 4 types each — with Single panels in white only — Double panels in white or tints of pink or yellow.

Drumhead Panels In 6 types. Single and Double panels in all white. Two Double panels with outside edge in tints of pink or yellow — and white cylindrical drumhead. Two Double panels with outside edge in white - and cylindrical drumhead in tints of pink or yellow.

Single and Double Construction Single panels are made with a single layer of plastic — designed so a top panel can be added to form a double panel. Single panels cost somewhat less — give greater light output from the same number of fluorescent lamps. Double panels have an air space between the two panels. This increases their soundabsorbing capacity. Also reduces frequency of cleaning because lower layer of plastic is protected from dust and dirt. All plastic panels 3 ft. square.



ACOUSTIC BAFFLES FOR DELINEATION AND ACCENT

Constructed with lightweight perforated steel casing (phosphate bonded against oxidation) filled with sound-absorbing glass insulating fiber. In white and tints of yellow or blue — 3-ft. long, 5-in. deep.

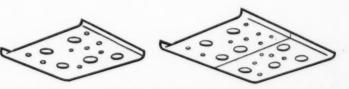
Baffles can be used to frame one or more

diffusing panels — or run in rows lengthwise or crosswise between panels. Projecting *below* the diffusing panels, they provide effects of texture as well as linear accent. Baffle Intersection Posts to join baffles at any type of corner intersection come in five styles and matching colors.

PERIMETER PANELS FOR BORDERS AND CONTRAST

Made of lightweight metal with random perforations . . . backed by inserts of translucent plastic. The perforated random circles allow light to shine through. White finish can be painted to blend with any color scheme. Panels cut easily. Two sizes — 3-ft. square and $1\frac{1}{2}$ ft. by 3 ft.

Used: (1) For finishing off edges - cut to



exact size needed to make a border around major design area of 3-foot squares — extending to meet walls on all sides. (2) For fitting around columns and other structural elements where plastic diffusing panels cannot be used. (3) As part of the over-all ceiling design — to provide an interesting change of pace by breaking up over-all light pattern of translucent plastic panels.



"SYLVA-LUME ... provides much more than merely another fixed answer to area lighting ... it provides the elements for composing an endless variety of answers. With Sylva-Lume, lighting becomes part of the creative space ... and the ceiling part of the total architectural design." As described by Peter Muller-Munk, managing partner of Peter Muller-Munk Associates, the prominent industrial design firm which assisted Sylvania with Sylva-Lume styling.

SYLVA-LUME introduces pattern, color, texture, mood and style to wall-to-wall lighting

SYLVA-LUME is Sylvania's answer to a major problem of architects and interior designers how to give more interest and individuality to wall-to-wall lighting, yet maintain its high quality.

With Sylva-Lume, each over-all lighted ceiling can be a *unique* creation — designed to harmonize exactly with the individual character of any area — store, office, restaurant, lobby, auditorium. This means a great deal in over-all design. For with walls broken up by windows and doors . . . and with the floor expanse broken up by chairs, tables, desks and other furniture and equipment ... the ceiling is the one remaining unbroken area. And Sylva-Lume provides the tools for introducing pattern, texture, color and "atmosphere" to this ceiling area.

These "tools" consist of light-diffusing plastic panels which vary in design, color and construction... and which can be arranged for endlessly varied decorative effects. Special perimeter panels and acoustic baffles also can be used to increase design interest.

A custom ceiling in a standard package

Sylva-Lume is based on a system of 3-foot square modules. But it can be easily fitted to any ceiling area, with its flexible perimeter treatment.

The system consists of three basic elements. First, an installation on the actual ceiling of opentype fluorescent fixtures. Second, an aluminum supporting gridwork hung from the fixtures. Third, light-diffusing plastic panels — arranged on the supporting gridwork to form a dropped ceiling of decorative design.

Amazingly simple to install — the entire Sylva-Lume system is composed of standard instock components. Nothing needs to be made to special order. With Sylva-Lume it's easy to achieve dynamic new beauty — with economy that only standardization could make possible.





"PRESTO CHANGE-O" FLEXIBILITY

Once installed, Sylva-Lume ceiling designs can be quickly and easily changed at any time. To conform with interior changes in office layout, for instance — or re-arrangement of displays or departments in stores. Changes can be made to introduce decorative seasonal effects, as at Christmas — or simply to conform to a new decor. Diffusing panels and baffles are completely interchangeable — and any types desired for design changes are always obtainable.

SYLVA-LUME ... lighting at its finest ... performs important *extra* functions

Uniform, Glare-Free, Shadow-Free Lighting Sylva-Lume provides low-brightness illumination of maximum quality for eye comfort and efficiency. And Sylva-Lume's decorative value adds a new dimension to lighting — by making it "positively pleasant" rather than "acceptably good".

Sylva-Lume lighting levels can be designed for any desired intensity. From lower levels for general seeing in restaurants, lobbies, conference rooms and auditoriums — to the very high levels needed for selling merchandise in stores or performing close eye tasks in schools and offices.

Supplementary lighting can also be used with Sylva-Lume. Spotlights, floodlights and other directional lighting fixtures can be located anywhere on the Sylva-Lume ceiling — by enclosing with a Perimeter panel cut to fit around it.

Efficient Sound Conditioning Actually as a lighting system alone, Sylva-Lume has sound-absorbing qualities that aid in acoustic treatment. The use of double diffusing panels increases its acoustic value. With the further addition of hanging acoustic baffles to the wall-to-wall light source — research shows efficient sound control can be provided for all normal installations.

Effective Screening for Service Systems Sylva-Lume can conceal unsightly overhead service systems in the empty space (or plenum) between plastic lighting surface and structural ceiling.

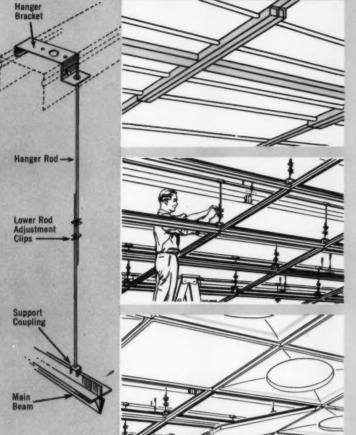
This feature can save substantially on construction and modernization costs in old or new buildings. It eliminates the expense of plastering and other costly building-in—to hide air-conditioning and heating ducts, wiring for telephone and electrical systems, exposed pipes, pneumatic tube carriers, etc. (However, it is recommended that the structural ceiling and elements in the plenum be painted white or a light color to provide a good reflecting surface.)

The same feature also reduces repair costs. Sylva-Lume diffusing panels simply come out of the supporting gridwork with an easy "push-pull" motion — giving easy access to all service systems they conceal. This eliminates expense and mess involved in going through solid ceilings to repair or replace pipes, wiring and ducts.



DESIGNED TO MEET U. L. REQUIREMENTS

Sylvania diffusing panels are made from vinyl plastic, which has an extremely slow burning rate, and self-extinguishing characteristics. Furthermore, the system has been designed to meet the stringent requirements of the Underwriters' Laboratories with respect to use under sprinkler systems. It is best, however, to consult local building codes on this point. SYLVA-LUME is easily and economically installed



First . . . fixtures to hold fluorescent lamps are installed on structural ceiling — placed at even intervals wall-towall. Sylvania's new "Outrigger" fixture, described below, is recommended. But any other standard single-lamp or multi-lamp units may be used.

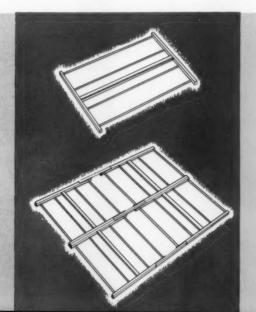
Second . . . extruded aluminum suspension grid system is easily hung from lighting fixtures with specially designed hanger brackets. Grid provides rigid framework of 3-ft. squares — consists of 9-ft. main beams and 3-ft. cross beams. Is lightweight, easy to handle.

Third . . . lightweight plastic diffusing panels are quickly "seated" in position on supporting gridwork without use of tools or any fastening. Acoustic baffles, if used, are simply "snapped" into place. Various types of panels are arranged with baffles to produce any desired effect in design, texture, color.

Sylvania's new "**OUTRIGGER**" fixture economical "short-cut" for wall-to-wall lighting

4-LAMP OUTRIGGER

4 OUTRIGGERS BOLTED TOGETHER



Sylvania developed the "Outrigger" especially to simplify installation of any type of wall-to-wall lighting. The Outrigger comes in two-lamp, threelamp or four-lamp styles — with lamps already spaced at 2-foot or 3-foot intervals. Units in 4-foot or 8-foot lengths bolt together quickly — speeding correct lamp placement for the entire ceiling area. The Outrigger both simplifies wiring and cuts installation and equipment costs way down. Complete specifications and details available on request.

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increase employee morale
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To help carry this concept forward DEVOE has made available its Color Consultant Service. You are invited to submit plans of important projects under consideration. We will prepare color recommendations and a complete analysis of paints required for the job...all without obligation on your part.

For this service, please feel free to write or call the nearest DEVOE sales office. At the same time, we suggest that you send the coupon for "A DEVOE Paint for Every Surface." You'll find it an excellent paint reference guide for practically every surface finish job.



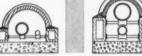
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New ceramic Cert-A-Bar Pipe Support Blocks eliminate the need for interior cast iron rests. The perforated block is laid as a structural support member at regular intervals, and the bars are simply inserted and locked in place.

T^{HE} vital consideration in selecting an underground conduit system is *permanent* protection . . . not for one year or five, *but for the life of the piping*. You get the best possible protection for your underground metal service piping with a Stillwater Conduit System of vitrified clay. It's chemically inert—can't rust, rot, corrode, or decay . . . ever. And it is manufactured in accordance with ASTM specification C-13-54, assuring proper strength and quality. Any combination of service piping can be protected. Conduit is available in a wide range of sizes, with a complete line of fittings and accessories, including alignment guides, lateral guides, and anchors. Any contractor's crew can handle the installation easily, or if you prefer, Stillwater Licensed Installers will assume the responsibility. The Cert-A-Bar Tunnel System can be installed with any of three suggested new waterproofing specifications —one for average conditions, one for intermittent ground water conditions, and a third for high water table conditions. It's the lowest-cost conduit per year of service that you can specify or install!





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illustrated, four-page circular with complete installation specifications.

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The Stillwater Clay Products Co. STILLWATER CONDUIT DIVISION 3334 PROSPECT AVENUE, CLEVELAND 15, OHIO

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- Inherent structural strength for permanent protection
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A few of the hundreds of possible combinations of piping for the Cert-A-Bar Tunnel System are shown at left.



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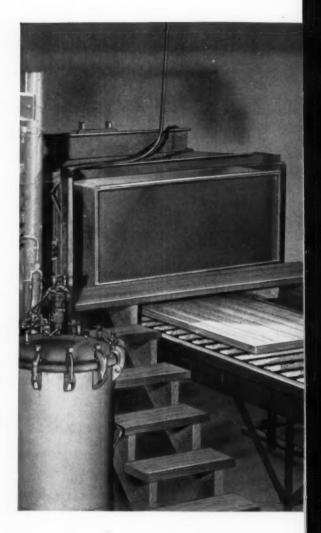
PERLITE DIVISION, GREAT LAKES CARBON CORP.

PERMALITE INTERNATIONAL SALES CORP. SALES AGENT

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To assure superior on-the-job final finishing of <u>all</u> your doors...

famous Roddis Doors now available with factory prime and seal protection!



IT'S THE LATEST RODDIS DOOR SERVICE FOR ARCHITECTS AND BUILDERS. A NEW "AUTOMATED" TECHNIQUE NOW MAKES POSSIBLE UNIFORM, PERFECT FIRST-COAT ON EVERY DOOR ... MEANS FACTORY-TO-INSTALLATION PROTECTION ... FINER END RESULTS.

The building expert will readily see the important quality, cost-saving and other advantages of having doors primed and sealed at the factory.

Roddis' new production line system means doors are always sealed under ideal conditions. The entire operation is automatically controlled. Special Roddis synthetic resin sealer is applied in an unvarying film depth to all surfaces and edges. The result is a *prime and seal* finish with perfect uniformity of coverage, unmatched smoothness.

Roddis *prime and seal* locks in wood beauty, shuts out dirt, fingerprints, disfiguring stains, and troublesome moisture during transportation and installation. Final finishing of doors on the job is made practically foolproof. Specifying *prime and seal* on Roddis Doors costs very little extra—and this is more than offset on the job by savings in time and labor alone. Add to this your confidence that the final finishing will give the clean, lustrous, beautiful job you want.

You can also specify **complete custom pre-finishing** from prime and seal to final finish coat!

Doors professionally and beautifully pre-finished in color tones to match any of the 9 woods in the famous Roddis line of pre-finished Craftwall wood paneling . . . or to your color sample for those "special effect" doors you may be planning. New prime-and-seal production line for Roddis Doors. Double sanded, dust-free, doors go into machine—the rest is automatic. Special synthetic resin sealer is accurately applied, dried to an insoluble film. A light sanding . . . doors emerge perfectly sealed and protected, satin smooth, ready for final finishing on the job.





What a difference prime-and-seal makes! Raw, unprotected door at left shows smudges, fingerprints, scuffs, so often inflicted during transportation and handling by tradesmen. Cleaning and re-sanding on the job take time to do properly. Door at right, Roddis *primed and sealed*, is unmarred, clean, dry . . . perfect for final finishing.



No more "starved" door faces, from uneven penetration of final finish, with Roddis prime and seal. Automatic application-control assures uniform undercoating for lustrous final finishes. Factory sealing helps prevent moisture discolorations and "blue stain" on oak doors.



Doors clients will admire! Even Roddis Doors, known for quality, can *look* only as good as their finish. Factory *prime and seal* helps even skilled tradesmen do better finishing quickly—produce unblemished, beautiful doors you'll okay with pride.

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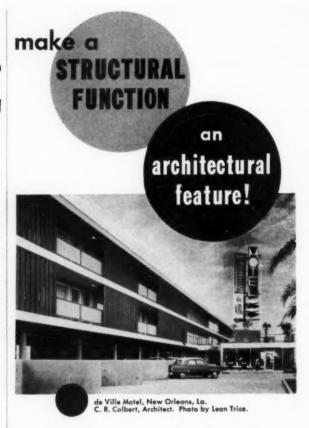


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Specify round columns of concrete formed with Sonoco SONOTUBE® Fibre Forms!

The round concrete column supports for this ultra-modern motel are architecturally appealing as well as structurally functional.

The design of the 150-room building permits the ground floor area to be used for parking space. The columns were formed economically and quickly with Sonoco SONOTUBE Fibre Forms.

Combine structural functions with architectural features . . . plan for round columns of concrete in churches, banks, schools, hotels and other buildings. Specify Sonoco SONOTUBE Fibre Forms.

These low-cost fibre forms can also be used for quarter-round, half-round and obround columns. They are light weight, easy to handle and require minimum bracing.

Sizes to 48" I.D. and 48' long.

SEE OUR CATALOG IN SWEET'S







Important Wiring gets Permanent Protection with SHERARDUCT RIGID STEEL CONDUIT

Specify National Electric Sherarduct and you safeguard electrical wiring against corrosion for all time.

NE's Sherardizing process of dry galvanizing under heat actually alloys corrosion resistant zinc with the steel walls of the conduit. Threads are machined before galvanizing so that the entire length of the conduit receives a uniform protective zinc coating from end to end.

On the job Sherarduct helps cut construction costs. A slick inside coating of Shera-enamel makes fishing and wire pulling easy. The gradual heating and cooling of the Sherardizing process anneals the steel conduit . . . develops the ductility needed for efficient bending and working.

On the next conduit installation remember – Sherardizing is Galvanizing at its best–Sherarduct is Galvanized conduit at its best.

National Electric Products

PITTSBURGH, PA. 2 Plants • 11 Warehouses 35 Sales Offices

New Bell Telephone Building, Gateway Center, Pittsburgh, Pa., showing main vertical conduit runs of Sherarduct, Architects: Press C. & William C. Dowler, General Contractor: Mellon-Stuart Company. Electrical Contractor: Franklin Electric Company. Electrical Engineer: Carl J. Long.

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You can give your clients true wiring-system economy, both now and in the future, when you specify ample-sized runs of Republic ELECTRU-NITE® Electrical Metallic Tubing. The reason: ELECTRUNITE E.M.T. is economical, easy to handle and easy to install, simplifies changing or adding conductors to meet future requirements.

That's what the designers and builders of Chicago's magnificent Henry Horner Housing Project and Atlanta's Peachtree-Baker Building had in mind when they chose Republic ELECTRUNITE E. M.T. Hundreds of thousands of feet of ample-sized ELECTRUNITE were installed in these two jobs to provide owners with permanent wiring-system flexibility. Economy in adjusting to meet anticipated heavier demand is assured. Beyond providing for the fature, Republic ELECTRUNITE E. M.T. gives today's builder many exclusive advantages to help make installations easier and more economical. For example, "Inch-Marks" indicate feet and inches along each length. You measure the job only, and cut and fit the raceway easily and accurately. "Guide-Line" simplifies making bends in the proper plane. Inside knurling in smaller sizes makes wire pulling easy. Compression-type couplings and connectors eliminate threading and turning of entire runs during installation.

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It will pay you to get the complete story on the safe, grounded, fully protected electrical system made possible by easy-to-use, economical Republic ELECTRUNITE E. M.T. Send coupon for handy reference booklet giving complete facts.



This Stainless-covered apartment building will never lose its luster. More than 60% of its exterior surface is made up of spandrels fabricated from Republic ENDURO® Stainless Steel. That means it will stay vivid and attractive for life. High resistance to rust and corrosion reduces maintenance costs. And there's a saving in weight. Send coupon for ideas on how ENDURO Stainless Steel can help you. Interested in windows, joists, stainless spandrels? See Republic.



Truscon "O-T"[®] Steel Joists for floor and roof supports are light, strong and fire-resistant. A product of Republic's Truscon[®] Division, they're easy to handle, lessen the time and labor required for erection, save material in supporting framework and foundations. Send for illustrated booklet with complete facts.



Truscon Vision-Vent Window Walls make any building bright, light and weather-tight. Truscon also offers window types and sizes for every type of construction. All are engineered to the application. Send coupon for illustrated catalog with complete facts.





Unretouched 18-month test samples

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

COMPETITIVE PANEL made from a good lightstabilized standard resin.

- Before testing, the above panels were identical FACT 1. 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.
- Proven superiority of STRUCTOGLAS "A" FACT 3. results from new resin not used in other reinforced panels.
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 - * A product of Rohm & Haas Company

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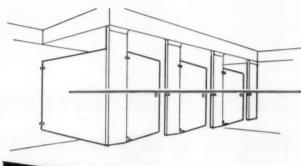
STRUCTOGLAS 4390 West 35th St. Cleveland 9, Ohio NAME . TITLE . GET THE COMPLETE COMPANY STORY . . . send for STREET unretouched photos ZONE CITY -- STATE and test data. (Please Print) 7849-1M It's time for a Change! Let's face it - Comfort Heating has new standards

> The Burgess-Manning Radiant-Acoustical Ceiling has completely changed the comfort heating picture. This modern, "nature's method" of heating radiates energy waves direct to the surfaces to be heated, it does not depend on hot air to heat a room. It provides a positive direct control of the mean radiant temperaturethe major factor in human thermal comfort. It provides a uniform heat from ceiling to floor, which no other system will do. It eliminates dangerous and irritating drafts and concentrated heat sources. It provides highest efficiency in acoustic control. To these prime advantages are added many construction, operating and maintenance advantages and economies possible only by the B/M Radiant-Acoustical Ceiling. Such savings as lower building height, elimination of, or reduction in size of auxiliary equipment, ease of installation, lower operating costs fuel-wise, redecorating costs sharply reduced, maintenance practically eliminated and many more.

> The B/M Radiant-Acoustical Ceiling story has been published in detailed, illustrated form-write for it!

< Ask for Catalog No. A-138-L





CONCEALED LATCH ASSEMBLY— mechanism is concealed within the door, has mortised face plate, stainless steel bolt. Flush-mounted, finger-tip-control latch handle has back set of 2³/₄". Escutcheon and latch made forever theft-proof without the use of nuts or bolts.



SEEN FROM INSIDE OF COMPARTMENT – latch presents smooth flush lines and minimum projections. Latch handle operates with smooth cam action, has no springs; (tested to 300,000 cycles of operation without noticeable wear).

Write for Sanymetal 8800 Concealed Latch brochure, now being prepared, and for Catalog 94, which gives other important details of quality toilet compartment construction.

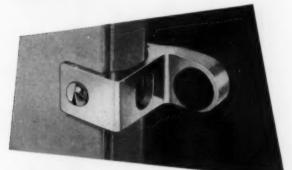
LOOK FOR THIS



NAMEPLATE WHICH IDENTIFIES EVERY SANYMETAL INSTALLATION. This is where Sanymetal now offers you <u>another first</u> in styling, value, engineering...it's the NEW Sanymetal 8800 concealed LATCH



VIEW FROM OUTSIDE OF THE COMPARTMENT — the handsome escutcheon plate is flush with the door. Exposed parts, made of strong non-ferrous castings heavily chromeplated, will keep their beautiful lustre for the life of the compartment.



KEEPER AND DOORSTOP-

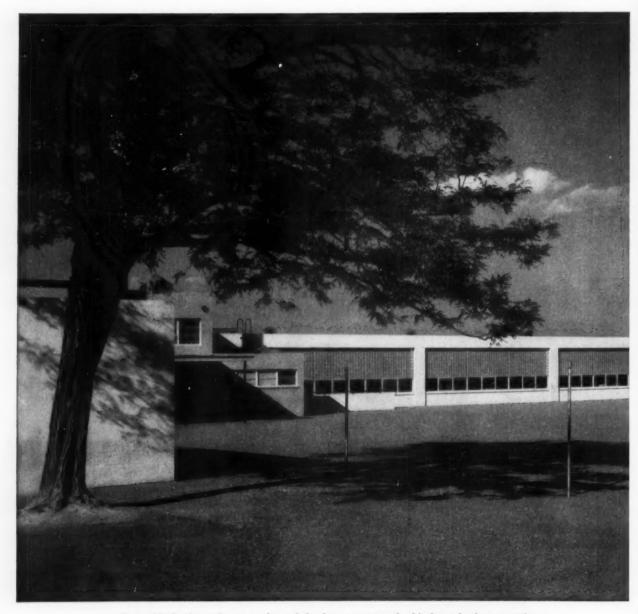
of universal design, for in- or out-swinging, left or right doors. Keeper quickly applied with one theft-proof bolt, aligning positively without adjustment. Full ¾" rubber bumper held with concealed theft-proof device absorbs closing shock without vibration.

Sanymetal

PRODUCTS COMPANY, INC. 1689 Urbana Road, Cleveland 12, Ohio 6433A E. Canning St., Los Angeles 22, Calif.



Low school construction costs demonstrate Three of fir plywood



Re-usable fir plywood concrete forms helped set a new standard in low school construction cost for Washington State on 46,891 sq. ft. Lowell Elementary School, Tacoma, Washington.

key advantages concrete forms



1. time and labor savings

The design adaptability, time and labor savings afforded by fir plywood forms helped set a Washington State record for low construction costs on this Tacoma school. Allowing half area* for the lower floor, school officials give \$9.91 per square foot as the complete construction cost, including taxes and fees. Architect Irvin E. Muri credits fir plywood forms with playing an important role in helping hold costs to this low figure – some 20 per cent below the state average.

2. smooth, fin-free concrete

Plywood-formed surfaces, both inside and out, were merely sack-rubbed and then painted – a major factor in the low cost. Fir plywood also was used for ceiling slabs, retaining walls.

3. economy through re-use

Up to 6 re-uses of plywood forms were reported by contractor. In addition, many panels were later re-used on other jobs. The contractor reports the plywood forms helped speed work and cut costs all along the line.

*Allowing full area for the complete per square foot construction cost comes to \$7.85.



ALWAYS SPECIFY BY

DFPA GRADE-TRADEMARKS

INTERIOR PLYFORM®-standard concrete form grade made with moisture-resistant glue. Gives multiple (10-12) re-uses.

EXTERIOR PLYFORM®-standard form grade made with waterproof glue. Gives maximum (25 or more) re-uses.

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

FOR YOUR FILES: Complete application-specification-design portfolio assembly. Write (USA Only) Douglas Fir Plywood Association, Tacoma 2, Washington, Dept. 111.

LOWELL ELEMENTARY SCHOOL LOCATION: Tacoma, Washington ARCHITECTS: Lance, Muri & McGuire, Tacoma CONTRACTORS: Bonnell Construction Co., Tacoma

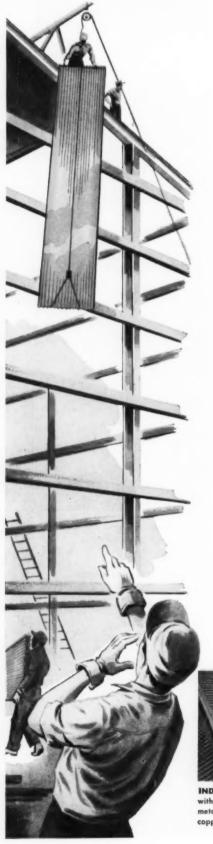


Construction view shows wall and floor slab forms in place. Panels were used six times on job, many also re-used by contractor on subsequent jobs.



Stripping ceiling forms. Exposed concrete surfaces, both inside and out formed against 5%" fir plywood, were painted direct after minimum of rubbing, eliminating plastering.





ACP Architectural Alodine® PROCESS FOR ALUMINUM PROTECTIVE • DECORATIVE • GLARE-REDUCING

Architectural Alodine is protective because it further improves the good weathering characteristics of aluminum. It provides unusually effective protection at the seaside and in industrial areas. Architectural Alodine is decorative because it chemically forms an attractive green color which enhances the appearance of the aluminum. The coating formed is integral with the metal and the color is sunfast. Architectural Alodine is glare-reducing because the chemically formed coating materially reduces the natural reflectivity of aluminum. And the process is inexpensive, compared to other commercial finishes. Write for samples of aluminum which has been Architectural Alodine treated—no obligation.

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THE MOTEL ON THE MOUNTAIN

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GLULAM BEAMS structural members for finer motels

These modern motel units utilize low cost hillside property with an inspiring view. Yet, with cantilevered glued laminated beams of Timber Structures, Inc. eliminating costly foundation walls, construction costs remain low. Roof beams extend longitudinally through the units, adding distinctive appearance to the rooms, and allowing utmost flexibility of room arrangement.

Basic design data on glulam structural members is contained in a comprehensive new booklet, "Engineering in Wood". Write for your copy, or get it from your Timber Structures representative.

Glulam roof beams remain exposed, adding to pleasant effect achieved by modern furnishings and decor.



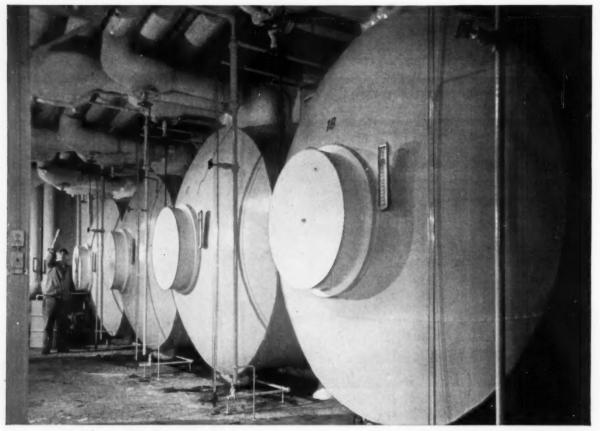
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For insulation: Styrofoam brings best combination of properties

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STYROFOAM	STYROFOAM	A		C	
Low "K" factor	x		x	×	
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Light Weight	x		x		
Superior Resistance to rot and vermin	x	x			
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Low cost installation	X		x		
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Permanent "K" factor average, 0.25. Avg. density, 1.8 lbs. per cu. ft. No odor. No food value. Pleasant to work with. Fabricates with common tools. Does not crumble or settle. Here's what Best Foods learned from experience:

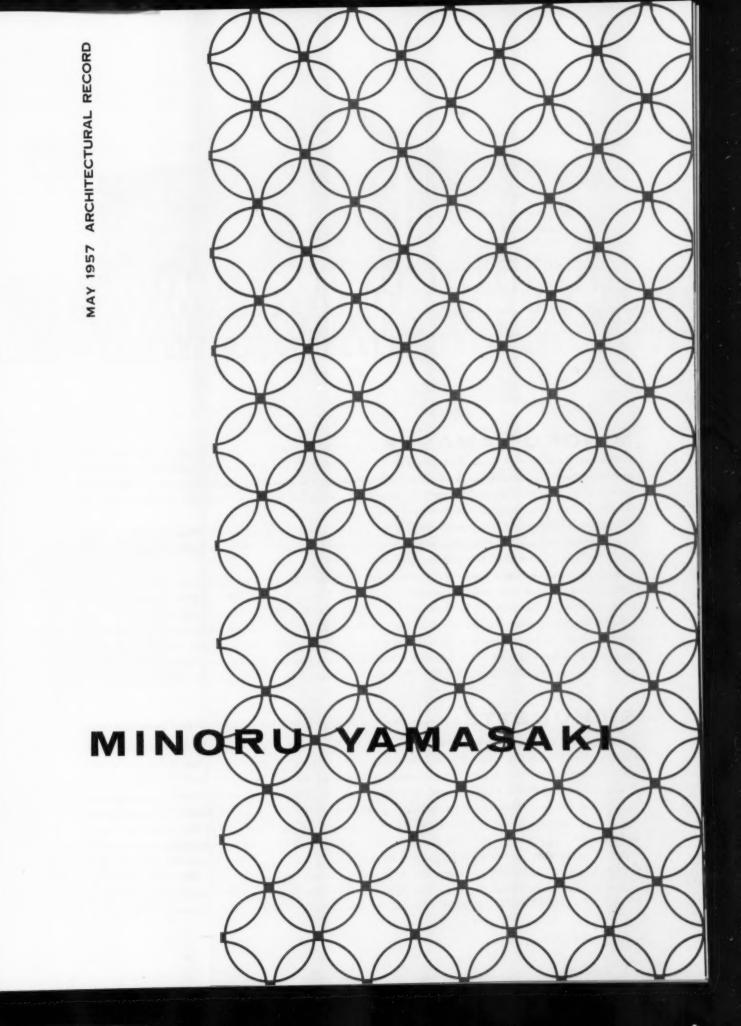


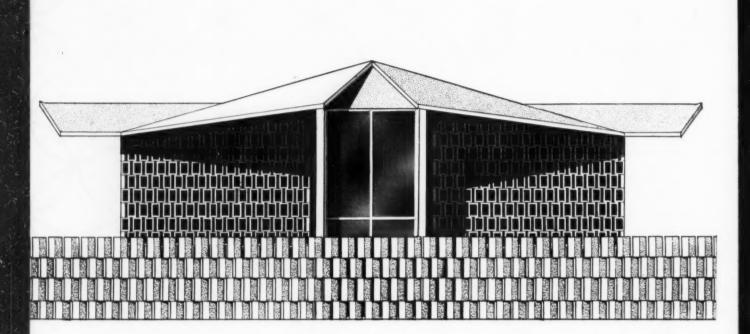
The makers of Hellmann's Mayonnaise first used Styrofoam* (a Dow plastic foam) in 1952. That was to insulate egg-storage rooms. The results have been so satisfactory that when Best Foods planned a new unit for making salad oil, Styrofoam was specified for 40° insulation in the winterizing cells (see illustration).

When you specify easy-to-install Styrofoam for low-temperature structures or refrigerated equipment, you are ahead with the unique combination of superior properties found only in Styrofoam (see chart). For complete information, write THE DOW CHEMICAL COMPANY, Midland, Michigan-Plastics Sales Dept. 1714N.

*Styrofoam is a registered trademark of The Dow Chemical Company







MINORU YAMASAKI is one of a growing group of American architects whose work is clearly and consistently demonstrating a search for the means of achieving once again a whole architecture; an architecture rooted in the conviction that to afford man both a broad and penetrating experience of space is the ultimate concern of the architect. They seek an architecture satisfying to the man who acts and thinks and feels; which any man can enjoy at some level and some men can enjoy at many levels.

Acknowledging their debt to the rational work of our most influential pioneers they nevertheless have felt its limited sensual appeal and their own efforts have been drawn into that vacuum much as their predecessors had tried to fill the intellectual vacuum with which they had been confronted.

It is understandable that the lessons of history are being reexamined by these men. In the case of Minoru Yamasaki, India, Italy and Japan have furnished particular inspiration, of which he has written with great feeling in "Toward an Architecture for Enioyment" (ARCHITECTURAL RECORD, August, 1955), quoted here in the margins.

In the works undertaken since his travels in those countries there are five buildings which mark especially the impressive distance he has climbed in the direction of achieving "an architecture for enjoyment." In each can be found the principal means employed in his search for a total synthesis of experience in structured space. Of particular interest are the ways in which he employs the ancient tools of silhouette, sunlight, surface and surprise.

SILHOUETTE: through plastically developed profiles and penetrations

The American Concrete Institute Building (*abore*) and the Wayne University Conference Building (*right*) show ways in which from either inside or outside the edges of the building are seen meeting the sky in moving lines whose changes of direction develop from the basic structural organization, just as the peaked and hooded vault silhouettes of the earlier St. Louis Airport. Although these are admirable effects we were moved to ask the architect: Why is the roof structure so complicated in the small ACI building? "Normally, this structural system wouldn't be appropriate, but in view of the client's objectives, it seemed basic to show what can be done with concrete" . . . With your interest in silhouette, why didn't you lead the roof valley water through a row of projecting spouts — like modern gargoyles? "As a matter of fact we do take the water down through scuppers just back of the fascia and drop it into a coarse gravel strip" . . . This kind of roof demands a very finished look. What are you applying to the concrete slab? "We're using a plastic because it's attractive, economical, and in addition has the same quality of continuity that the concrete has."

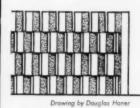
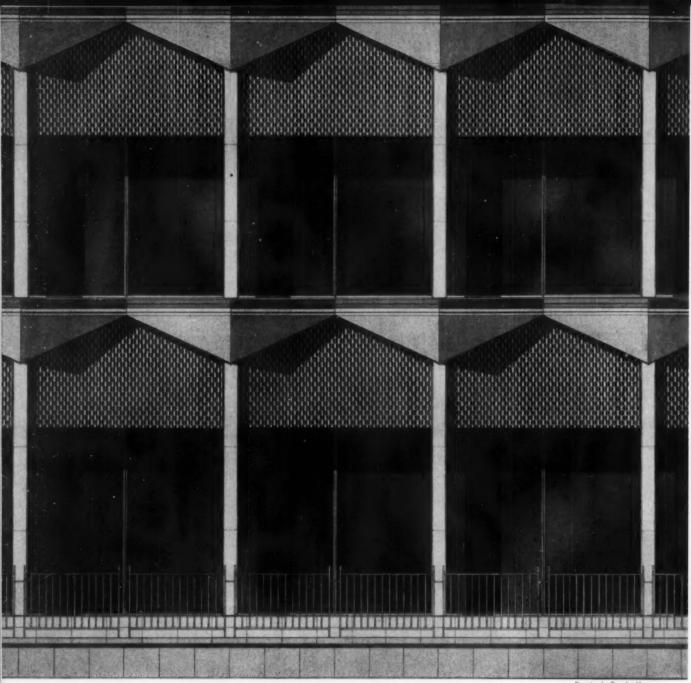




Photo above: Hedrich-Blessing All other photos: Lens-Art

"Our architecture must ... learn new forms and new dimensions to give richness to our skyline ... bring back the pleasure and drama of silhouette against the sky"

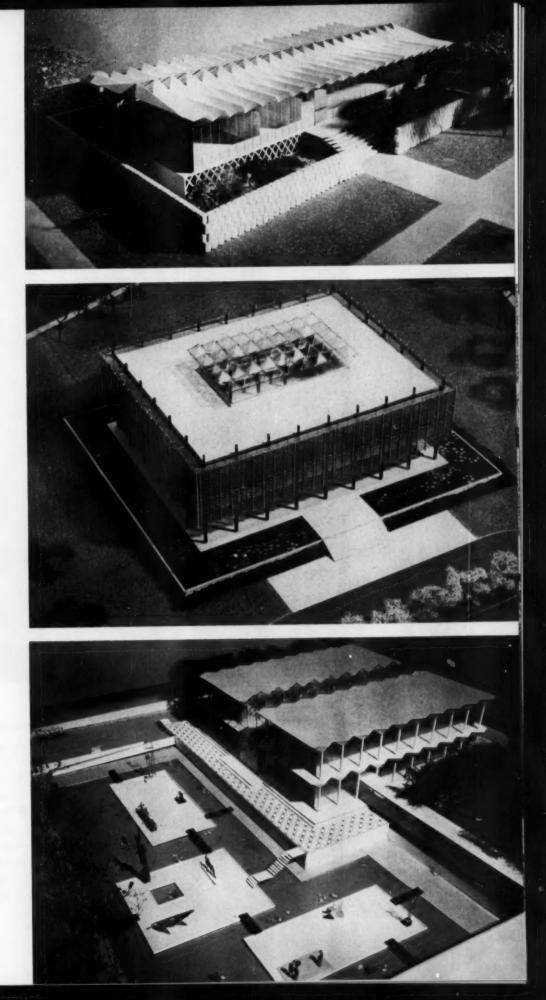




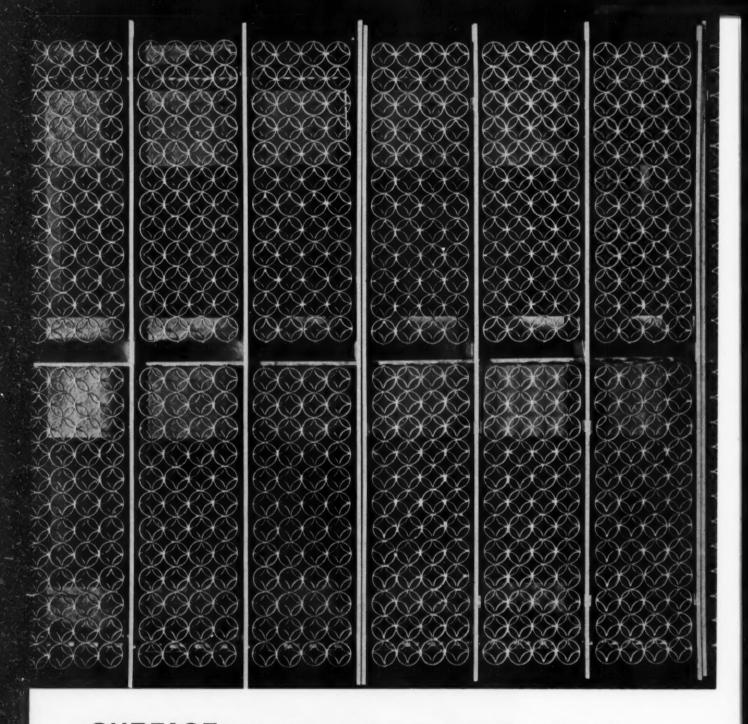
rawing by Douglas Haner

SUNLIGHT: and the shadows generated by its intricate interruption

All these buildings have been designed to exist in the sun and their eaves and skylights and walls and screens (as on the Reynolds Metals Building, right center) have been calculated to admit and exclude or modulate the light in useful and stimulating ways. Granting the visual excitement of flooding the middle of the buildings with sky light we asked: **Won't these spaces get pretty hot?** "Well . . . we faced that, of course. For Wayne (abore and right, bottom) we had planned to use blue heat-absorbing glass as in the other three, but changed to clear glass — with client agreement — when we decided it would be more satisfying to have full sunlight and the strong patterns of frame and column shadows though it will be warmer for brief periods . . . at night the whole thing reverses; shadows become light and daylight goes dark" . . . For us there's strong disharmony in ACI (right, top) between the pattern of the garden wall and the lattice screen at the building's base. "We have changed that lattice (see p. 173) . . . actually we're trying to express that it has no supporting function . . . and we're trying to echo the diagonals of the roof too."



"We need buildings which can be flooded with the joy of bright sunlight in which the impulse is to dance"



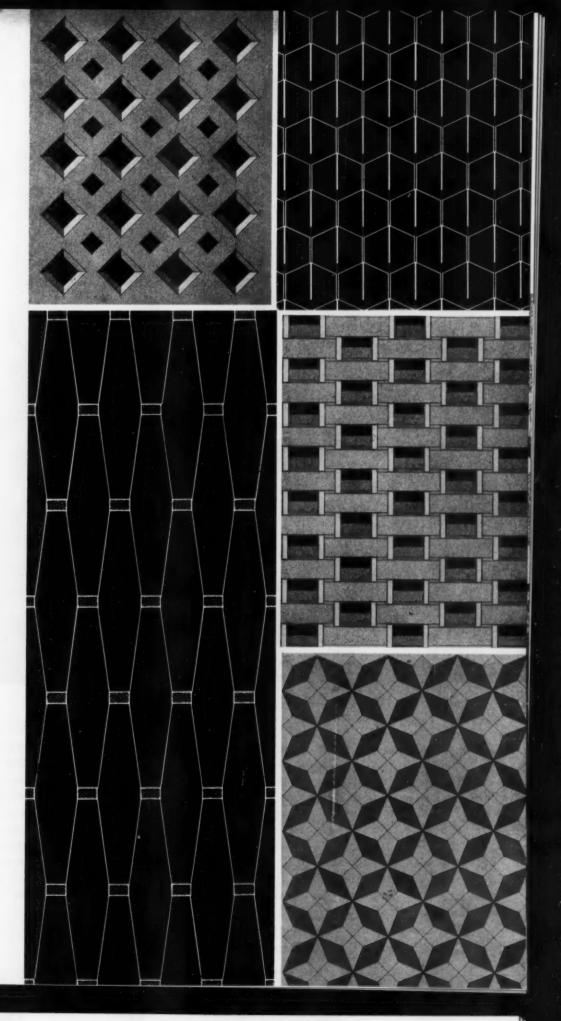
SURFACE: richly responsive to demands of material, method and motive

Whether in metal, masonry or glass the patterns in these building surfaces are seldom arbitrary. Typical of the regard for *both* form and function is the screen for the Reynolds Building (*above and p. 167*). "It's metal of course . . . gold anodized aluminum for Reynolds . . . short sections of tubing. But where it passes the upper part of each story we deepen the tubing sections . . . that way we cut down on direct light and glare where they're most critical . . . of course many of these surfaces develop from the fact that in me the urge to touch buildings is strong . . . sometimes irresistible . . . I've often developed an arm 50 feet long so I could mentally reach and touch a building beyond a wall. When the desire to touch architecture is not there, something is wrong . . . perhaps it's with me . . . but this is my only reservation about Corbu's work" . . . Where are the plain surfaces — for relief? "In Wayne the end walls and floors are plain . . . some of the masonry patterns look stronger on paper than they will in space . . . but in ACI we thought of such a small building in terms of jewelry which need have no plain surfaces."

"The simple, strong forms of our architecture can gain richness in detail"

"The pleasure of shadow within shadow"

Top left, concrete grille, ACI Building; top right, sun serven, Wayne Conferance Building; bottom left, floor pattern, ACI Building; middle right, parfornted wall, Art School; bottom right, floor pattern, Wayne Conference Huilding



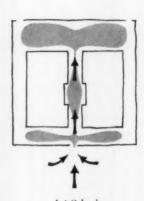


SURPRISE: the calculated sequence of unfolding visual experience

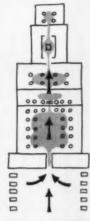
Surprise in any spatial sequence largely develops from unexpected change: going from light to dark to light again; from large to small to large; or high — low — high. To find daylight where it is not expected, a garden or a pool, is to find heightened pleasure. In these buildings, and particularly the Society of Arts and Crafts Building (*above, righl, and page 178*) most of these means are employed — and most artfully. However it seemed fair to ask: **All these buildings are essentially symmetrical. Doesn't that limit your ability to surprise?** "Yes . . . a little. But in these instances order superseded surprise . . . it seemed essential to keep the simple order which we felt was demanded and which the central axis provides . . . actually the majority of our work today is not symmetrically arranged. Above all the architect has an obligation to try to create beauty; and order is a great part of this . . . each building asks for its own kind of order. But other elements work to furnish surprise . . . the skylights — especially in the Wayne and Reynolds buildings. You go from dark to sunlight and reach up to the sky . . . you always walk toward daylight."



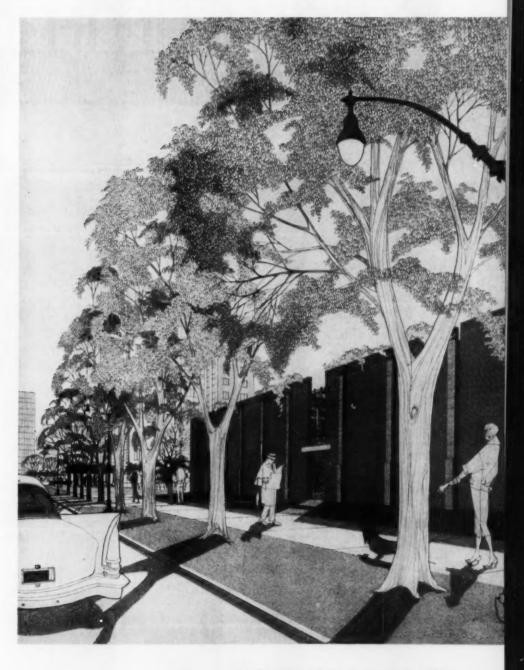
"... buildings as relaxed, friendly and enjoyable places... evidence those qualities... which symbolize our democracy"

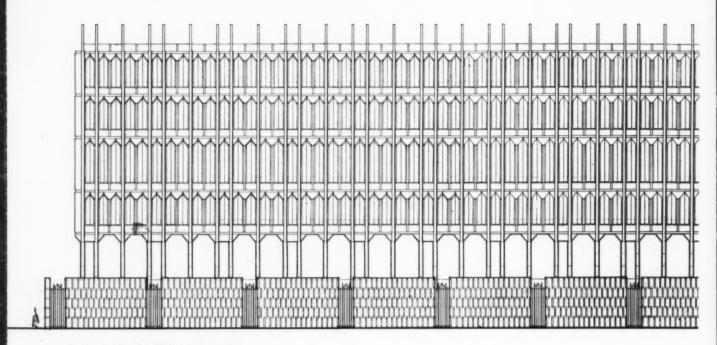


Art School

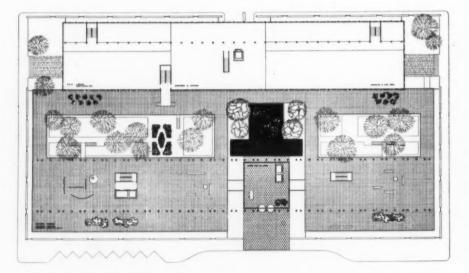


Karnak, 1200 BC



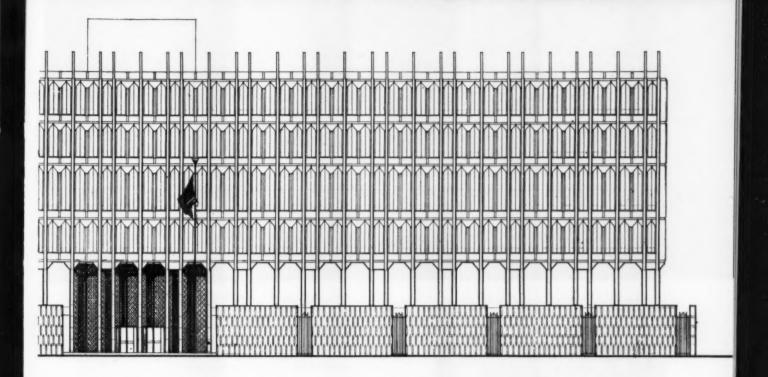


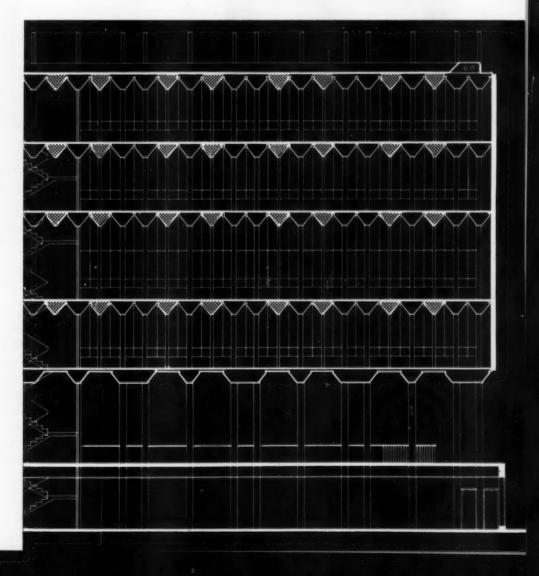
Design for London Embassy Competition



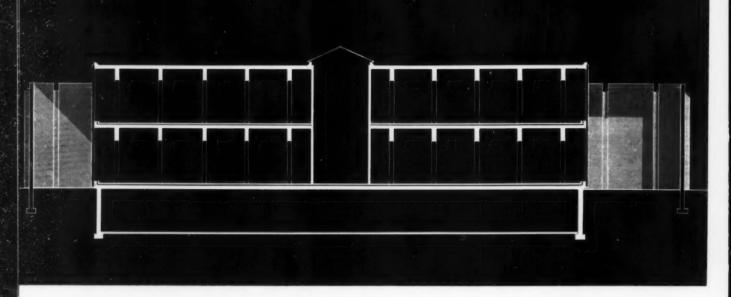
SYNTHESIS: space structured for experiences of enjoyment

Underlying the careful organization of silhouette, the handling of sunlight, the surfaces, and the provision for surprise is the primary sense of unity in the spaces of these buildings and in the pattern of structural elements through which it is achieved. The column plays a full role in this architecture; it is constructive *and* decorative. The London Embassy proposal on these pages illustrates this approach to the total use of structural elements. But fascination with the decorative potential of structure *can* inhibit structural efficiency and we inquired about the close spacing of the columns. "Of course we liked the looks of the close spacing . . . we felt it recalled a kind of English verticality . . . we really did this because the spaces are so long in the other direction . . . 45 ft in the Embassy . . . the bays in Wayne are 40 by 10 . . . in Reynolds 25 by 15. In each case there was the matter too of the best module for the office partitions." . . Is it a coincidence that the Embassy recalls the Doges Palace in Venice? "Not entirely . . . we wanted to combine the strength and English quality of Westminster Palace with the elegant laciness of the Doges."

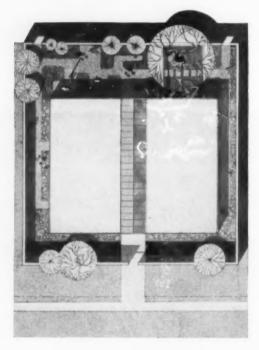


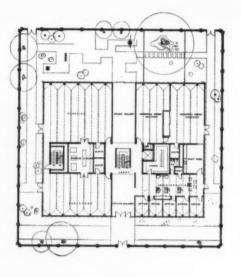


"Enrichment must fit within the framework of our mechanized society"



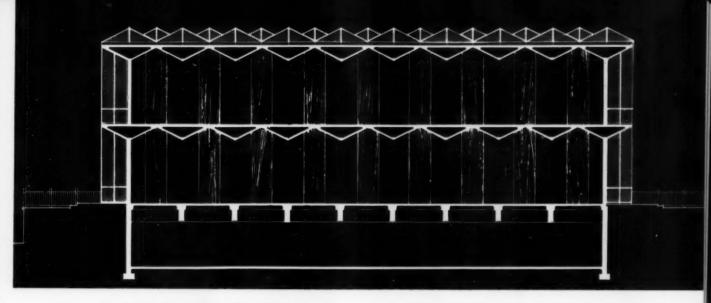
Art School for the Society of Arts & Crafts, Detroit



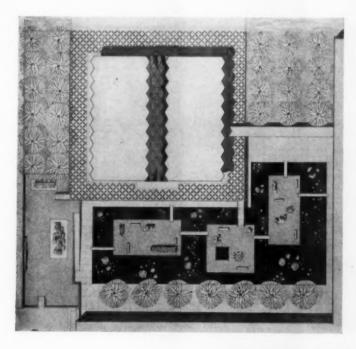


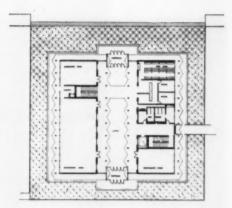
SYNTHESIS

What role does color play in all this? "To us it's enormously important. We think of colored surfaces in terms of how they receive daylight . . . how they contribute to the sequences of surprise . . . how they bring unity to the whole . . . and, of course, in terms of other specific functions certain surfaces may have . . . for example, in the Art School (*abore*), light walls serve as the background for many brilliantly colored exhibits, and the dark red brick walls offer striking contrast. There is the same kind of contrast outside, with the white mullions played against the dark brick walls again . . . in Wayne (*right*) we tried for lightness and brightness with travertine end-walls, gray-green slate floors with some cream Mankato stone, white marble columns and corridor floors, also off-white and teakwood interior walls . . . the only strong color inside is the green marble bridge at the second floor level . . . the Reynolds building (*overleaf*) is gold and black and silver, with white floor and elevator shafts. The ceiling for the first floor is black with pinpoint lights; upstairs, the situation reverses, with dark floor and white ceiling."



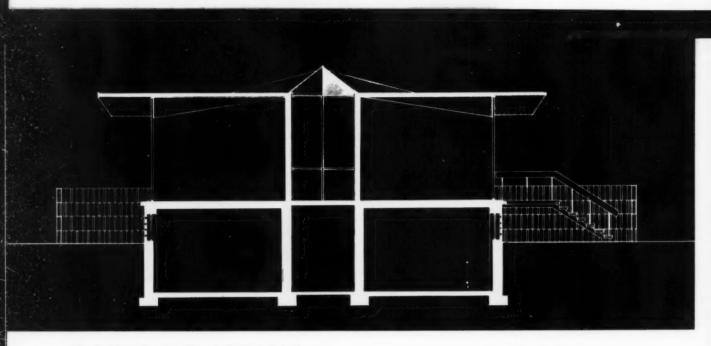
McGregor Memorial Conference Center, Wayne University



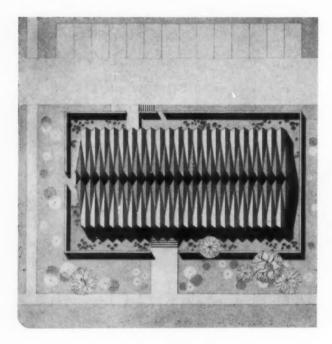


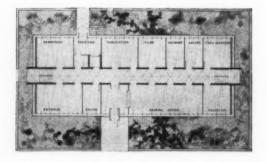
"... the joyousness of Renaissance architecture ... the color of stone, the play of water ... all contrived to make a wonderful and happy place ..."





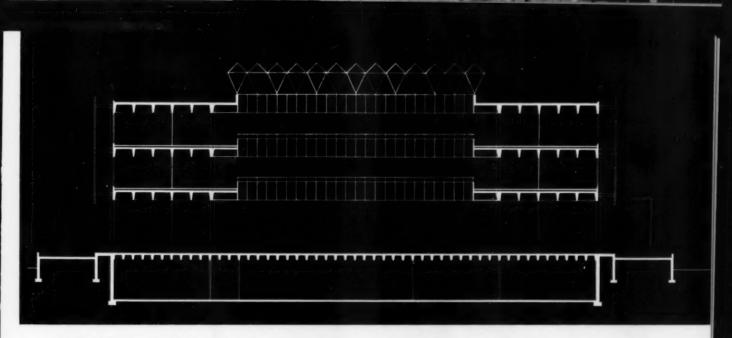
Office Building, American Concrete Institute. Detroit



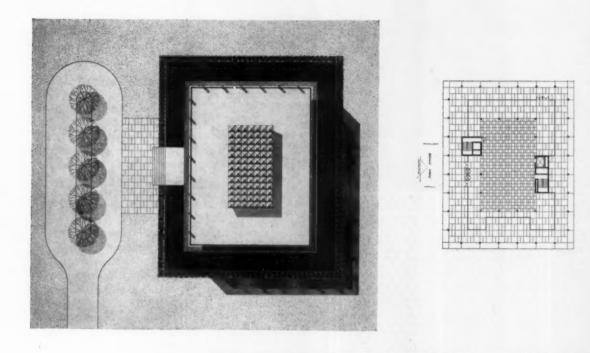


SYNTHESIS

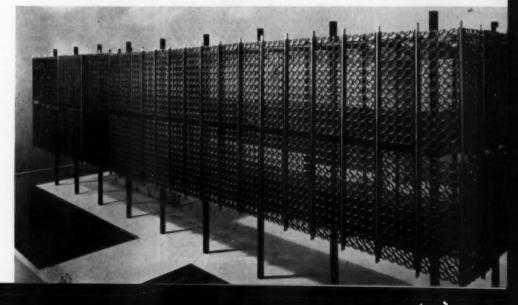
You've said you weren't completely happy with the expression of the mullions for the ACI building (above). "Well . . . they are liable to look as though they're holding up the roof — I wish I had been able to leave them out" . . . Where you run the columns above the roof in the Reynolds building (right) and the Embassy, why don't you mark their termination . . . they're no longer structural up there . . . couldn't they be more interestingly shaped? "I'm glad you asked that because you're right . . . actually, the concrete columns back of that screen will taper (through three decreasing sections) and become thin at the top — like needles" . . . Where the screen projects above the roofline, how will it look against the sky? "You won't see the sky in that perspective — you'll see the inside of the tubing" . . . Where do you go from here? "I've got a lot farther to go . . . in what direction . . . and how . . . I don't know . . . certainly since Lionel Pries first got me started on the right track at the University of Washington, these five buildings mark the most important phase in my own development" . . .

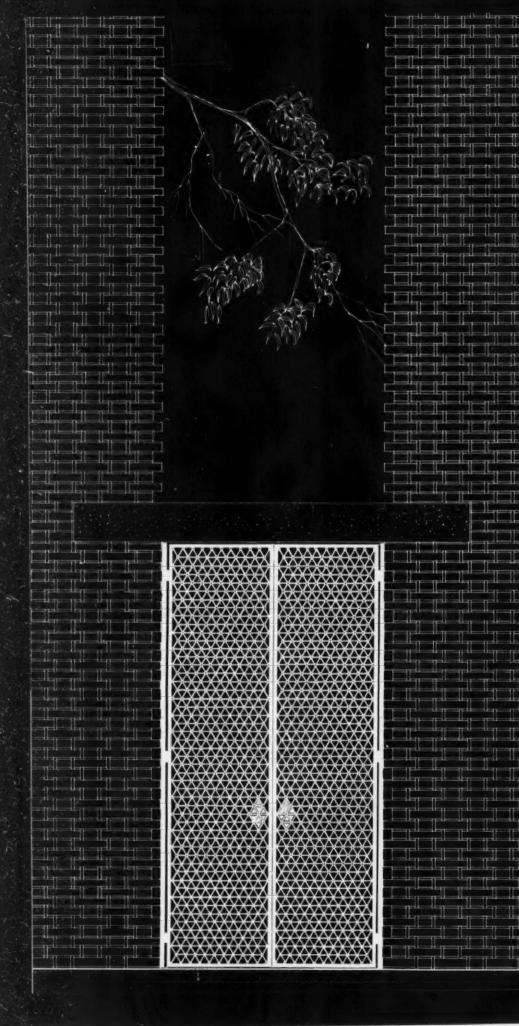


Regional Office, Reynolds Metals Co., Detroit



"The buildings of the future will bring more variety to our surroundings through diversity of forms against the sky, through the excitement of surprise . . . and the richness of ornament"





Designers in the office of Yamasaki, Leinweber & Associates who should receive credit for their contribution to these buildings: Gunnar Birkerts, Astra Zarina Haner, Hans Busso von Busse, Manfredi Nicholetti, Harold Tsuchiya. Engineers for the buildings: Structural, Amman & Whitney; Mechanical, Cass Wadowski; Electrical, Henry Guthard. Associates in the Y & L firm; Don Hisaka, William Jarral, Frank Straub, and Wallace Kagawa

"I wondered if the signature of the architect, written boldly on buildings which are the effort of many, is not a kind of arrogance"

THE SHAPE OF AN ARCHITECTURE

by JOHN ELY BURCHARD

John Burchard, Dean of the School of Humanities and Social Studies, and Albert Bush-Brown, Assistant Professor of Architectural History, both at Massachusetts Institute of Technology, have been working more than a year on a social history of American Architecture commissioned by the A.I.A. The following, based on much of the content of the still incomplete manuscript, was delivered as a talk before the recent Centennial Meeting of the Minnesota Society of Architects. Now we are happy to publish it in the month of the Centennial Convention of the A.I.A. — The Editors

WHAT IS ARCHITECTURE? Certainly it does not include every building ever built. It can never really be far away from meeting the three famous old canons of Vitruvius. At least it must try to achieve firmness, commodity and delight. A failure to measure to the canons may mean bad architecture. But a building which ignores one or more of them or has no aspiration to be measured by them falls outside the scope of architectural history and criticism.

The covered wagon was never architecture, nor the sod house, nor the Chinese laundry in a Gold Rush town. The Corn Palace in Mitchell, South Dakota, is not architecture. Not very many log cabins were architecture, perhaps none, though as reconstructed some may seem to have been. We must not mix up nostalgic romance with architecture. It is one thing to play at reliving a past that never was, to trip on dainty high heels over the streets of a Williamsburg which in real life would have trapped the slippers in gluey mud; it is permissible to attend an opera at Central City and sit through a performance sans drunks, sans painted women, sans a conflagration in the opera house or a shooting in the bar or a lynching outside. But these experiences have no relation to any historical reality. If we examine the buildings of ghost towns for example we are not likely to find much architecture among them.

Many barns of Lancaster County, Pennsylvania, some in Minnesota, some in Oregon or Washington, may be architecture. But not all are well built or well planned or well formed or well situated. Not all even try to be. Not all are architecture.

Delight *does* have a part in any acceptable definition. Nor can we be frivolous about what is meant by delight. We must not have it stand for something else. We must not rely on the fading ideology so categorically expressed by Bruno Taut in 1938, "Everything that functions well, looks well," even if we add at once, as he did, "Nothing can look unsightly and function well."

HOW MUCH MORE DIFFICULTY is involved in defining American architecture! We can without too much hesitation say that we do not mean pre-Columbian building, or indeed even the architecture of the Indians of the Southwest; we can exclude, too, the architecture of Canada and of Mexico.

We will raise a few hackles if we suggest that the main stream of development was clearly an evolution from the architecture of the English settlers. Yet this is true. The French settlements left few durable remnants and little inspiration or tradition. The Spaniards did somewhat more but not enough to matter. The few baroque cathedrals of the Southwest, such as San Xavier del Bac near Tucson were not in the long run influential even in the Southwest. The late mission building of Father Junipero Serra left some modest buildings in California from San Diego to Sonoma. These offer a pleasant nosegay for the Californian or his visitor. But they have had little effect on the course of American architecture, even in California. The famous adobes owe more to Larkin of Monterey than to any Californio and they stem from Charleston, S. C., not from Mexico. Of course in 1925 and around Santa Barbara there was a romantic and intense but brief moment of trying to create a separate and regional style out of this Spanish-Mexican-Catholic architecture in a society which was neither Spanish nor Mexican nor Catholic. The railroad roundhouse became a bull-ring. But fortunately such extravaganzas peter out.

California, too, was American. Its history after Frémont was the more important part of its history. But even if the effect of Spain had been more durable in California it would still have been but a local effect. The course of empire was from east to west and so was the course of cultural development. Californian culture and architecture, like all the other cultures and architectures of the Far West, owed most to what came over the Rockies from St. Joseph, Missouri, or around the Horn from New England ports.

Each American territory modified and diluted the memories which advanced behind the advancing frontier. Regional variants are therefore interesting, however transient. But if you are to steer a reasonably short and reasonably clear course through history, you have to stay in the channel and keep out of the bayous, enchanting as they may be. If the efforts to maintain regionalism, or to create it, throw dust in your face you will never see the main features of American architectural development. The efforts have often been charming and there is nothing wrong about nostalgia and sentiment, but they are doomed by the course of American life and can be maintained only by artificial measures. To a sophisticated visitor from abroad, New York is more interesting than Boston, Los Angeles than San Francisco, and of course Chicago more interesting than all four of these ancient and delightful cities put together.

EVEN AFTER WE HAVE PASSED the road-block of a vanishing regionalism we have to decide what we shall call American. We shall not be so foolish as to insist that the architect shall have been American-born. Shall we insist that architecture to be American must by some definition be indigenous? Are we for example to seek out for major attention only those building types which have seemed especially American in that they served needs which in America were premiated and in other countries perhaps given less attention must we be restricted to American types like public schoolhouses, county courthouses, commercial skyscrapers, even detached dwelling houses reaching far down into the income groups? Are we going to insist that American architecture shall have been invented here, like the balloon frame; or brought to the peak here, like the skyscraper? All of these special restrictions seem to lead to an incomplete idea. The only ultimately satisfactory restriction seems to be that the buildings were built here.

In this sense the American Georgian of the time of Peter Harrison, though less polished than the corresponding Georgian of England, is quite as American as the Greek Revival mansion which had a finer development here than in Europe; and both are as American as the Prairie Style of Frank Lloyd Wright or the Chicago Style which may or may not have been invented in Chicago and revealed there in the second Leiter Building of Major Jenney. Jenney, Sullivan, Wright, are more *native* in their work than Latrobe, Harrison or Bulfinch, but we cannot say more American.

This kind of decision is bound to be repugnant to many people. Ever since Edward Johnson wrote his



It is one thing to play at reliving a past that never was

"Wonder Working Providence," there has been a stirring in the air of America that America was going to be different. This spirit still exists. It is complicated. It has something of the early Puritan view expressed by a New Englander a hundred years after the landing of the Pilgrims: "It's more noble to be employed in serving and supplying the necessities of others, than merely in pleasing the fancy of any. The Plow-Man that raiseth Grain, is more serviceable to Mankind, than the Painter who draws only to please the Eye. The Carpenter who builds a good house to defend us from Wind and Weather, is more serviceable than the curious Carver, who employs his Art to please the Fancy."* It has much of the view that the past is too much with other peoples. The voices of nationalism became more strident after the separation from England. There were cries that we *must* develop a national novel, a national poetry, a national dance, a national music, a national painting, a national architecture. This exhortation was more than mere chauvinism. It rested on the conviction that this boundless land, this country in which the door of opportunity was never closed, this place in which the future was always to be better than the present, this terrain with its great scale, its violent and majestic scenery and weather, must, if expression for it could but be found, produce arts which would be as different from the arts of Europe as the geography and the politics and the economic, social and technological attitudes seemed to be; that this would indeed come if only Americans would stop looking over their shoulders at Europe. However much it might be denied by the facts, the notion that the American was more inventive than the European has never died out. However often the ideas of our architecture have come from elsewhere, the desire that we shall make our own persists. It was one of the tenets of the transcendentalists from Emerson and Thoreau to Whitman and Sullivan and Wright. It was opposed by those who respected rather the genteel tradition, who argued that a frontier could not remain a frontier forever and who thought that for a start anyway America would achieve its civilization faster by noting what Europe had to offer, transferring what was appropriate to our own shores, modifying it as little as possible. Architects in the genteel tradition could be such different men as Hunt and McKim and Richardson. They could be prompted by such different aesthetic, moral and philosophical principles as those of Stanford White and Ralph Adams Cram. All of them in this definition made American architecture. Yet some seem more American than others. Richardson somehow we call more American than Hunt, McKim or Cram. Wright is more American than Pope. Why?

It is not for the simple reason that they were greater geniuses or because their forms were not repeated explicitly in Europe. If we could answer why, we would have some clue to what American architecture is. But

* From an anonymous pamphlet of 1719 entitled An Addition to the Melancholy Circumstances of the Province Considered, cited by Oliver Larkin, Life and Art in America, Rinehart, N. Y. 1949. we would not want the answer to force us to exclude the work of Cram, Hunt, Walter, Upjohn, Costigan, Shryock, Thornton or Latrobe.

One does not usually speak of "French Architecture." There is, of course, a French spirit in architecture. One can clearly speak of French Gothic or French Renaissance or French Baroque. What this says is that the Gallic spirit took each of the forms and building types as they became important in Europe and on Gallic ground erected them in harmony with generally accepted principles and needs but with a peculiarly Gallic flavor. Sometimes the forms or the needs were found earliest in France, sometimes latest. Sometimes they were original there, as in the Norman or Burgundian Romanesque; sometimes they originated far away. as in the Renaissance forms. Some of them were doubtless more sympathetic to the French character and taste than others. Sometimes the style was carried to its apogee as in the great thirteenth century cathedrals of the Île de France; sometimes, though not often, the French version was the poorest. But no Frenchman would be silly enough to insist that French architecture should include only the Cathedral of Chartres and its nearby contemporaries. In the pantheon of French architecture you can find many deities. There have been several, if not so many, in the pantheon of American architecture.

American architecture had to begin with its own version of an evolving and vestigial though graceful style, the Georgian; had to try to accommodate, and on a frontier, to the intellectually sharp but aesthetically dull notions of the Enlightenment; had to indulge in its own variations of recall of work from Egypt, Greece, Rome, the Ile de France, the universities of England and the Victorian experiments. Not much before 1890 could America begin to stretch its muscles to the tune of a new architectural ballet, a ballet with technological instruments, which might offer new opportunities and new problems for architecture; which if grappled with courageously might lead to the first great style since the sixteenth century. Here was perhaps the first chance for America or indeed the Western World to produce another architecture that by the test of time might expect to rank with the Greek or the Gothic in future history books.

But this opportunity was only beginning to be clear at the turn of the twentieth century. To study it is to study a style in development, to try to interpret something contemporary. To complicate the matter, the rest of the Western World was industrial, too; it had technology though it might approach it in a different way; all the inventions and all the power were not yet in America nor likely ever to be. So although America might be a greater force in the architecture that was to come than it had been in the architecture that was past, it would be unrealistic to think of this architecture as uniquely American; foolish to expect that all the best exemplars were certain to be produced in America; insane to protest against an "International Style." In all this it would be appropriate only to ask that the



The difficulty involved in defining American architecture

American version of the architecture of the technological century should be a first-class version.

Sometimes the American version would be better than that of other nations, sometimes worse; sometimes it would owe much of its basic philosophy to American invention. Such a version might have an American flavor but this would have to come naturally and not by self-conscious effort.

IN shaping the building needs of the twentieth century and in providing the tools to meet those needs many forces were at work. Some were international and could be expected to affect building everywhere even if their development were more aggressive in one country than in another. Some were national and therefore likely to have mostly a local effect. The technological forces were likely to be international; some had obvious impact the Bessemer process, the elevator, the internal combustion engine, the super highway. Some were less obvious and accepted in some places more than in others - the electric light bulb, the telephone, the typewriter, the loud speaker, the television tube. The political forces often showed up in many places, as the revolutions of 1848 did, but they were more likely to have a clearly national slant. Again, some were easy to relate to architectural developments - for example, the changing concept of America's political relations in foreign lands. Others were not at all easy to connect with palpable effects. If American relations with Japan became more intense, for example, if young architects visited Japan, there would soon be visible evidence of the changing relation in the new buildings. But where for example was there a Populist Architecture or a Bull Moose architecture or even a radical architecture in the same sense that there was a radical novel, a radical novel which sought less to change the form of the novel than it did the form of society?

AMERICA PASSED RAPIDLY FROM THE STATUS OF a colony on the Atlantic Coast to that of a continental nation. The main process took only about 75 years. The colony coincided with the architecture of Peter Harrison and the bland Georgian passed almost imperceptibly into the Classic Revivals of Latrobe, Strickland and Shryock. These civilized buildings got somehow over the Alleghenies and then followed the rivers towards the west, and it is amazing to see how many elegant and reposed exemplars of the Greek Revival are for example to be found in Ohio and Kentucky.

West of the Western Reserve the examples thinned out. The drive to the Pacific had a different kind of momentum, fewer people planned to stop on the way, the terrain became less and less inviting to permanent settlement. Even an important depot such as St. Joseph, the jumping-off place for the Far West, remained a frontier town and did not seek architectural stability until much later, perhaps much too much later. Even a permanent settlement like Salt Lake City was too busy expanding to do much consolidating; and here, where some efforts towards a refined architecture might have begun earlier, the Mormon temperament seemed to prefer beehives to the work of the "curious Carver." Thus when the Civil War finally broke upon the nation almost everything that could seriously be called American architecture could be found east of the Mississippi, most of it east of the Appalachians.

THE GREAT ACCELERATION OF TECHNOLOGICAL change coincident with and no doubt promoted by the Civil War itself brought us new building materials, notably steel, which called for and received new architectural treatments. The vast transportation networks that were opening up began to prepare the way for the elimination of indigenous necessities which had forced a reliance



Regional variants are interesting, however transient

on local materials, though the final blows to regionalism were to be struck later, after electricity had made climatic control possible. The expansions made great fortunes and the men of these fortunes sought to demonstrate their success through building. The building was personal, not institutional. If the soap-maker of 1957 lived in an unidentified dwelling and praised his soap through the excitement of his urban office building, the railroad entrepreneur of the 80's made his personal palace his corporate advertisement. These personal palaces and the architects who made them would inevitably have to come into conflict with Chicago and its buildings of trade and the architects who made them. The story of this conflict has been told too many times already.

THROUGH ALL THIS TIME THE POPULATION was increasing enormously, becoming more homogeneous, its center of gravity moving steadily from Baltimore westward to Central Illinois. Economic circumstances were always leveling off as America moved in the direction of becoming one vast middle class. But long before all these effects had worked their full way, another set of technological stimuli appeared, more subtle, more far-reaching, harder to control. The internal combustion engine, the motor car, the concrete highway made it easier to escape the city and thus made civic design for a time seem less important. They also opened up America to every traveler as the railroads had never done, and this struck another blow at regionalism. The sunset strips that are the American versions of the Appian Way are but one of the most disagreeable byproducts of these potentially benign innovations. The automobile accelerated urban obsolescence and blight as the streetcar and subway could never have done. While the latter remained pinned to their tunnels, wires and elevated rails, the enterprises and residences which clustered near them could entertain some hopes of durability. But the bus line or the private motor vehicle could make a new route tomorrow, and each new highway not only made the old one obsolete but produced new backwaters and new main streams which in turn were doomed from the beginning to become backwaters in their turn. New cities which lacked the stabilizing force of well-developed public transportation were quite unprepared; like Los Angeles they were atomized. However charming, however exciting they might appear to a foreigner as a confirmation of what he believed America to be, they carried less of this conviction to an American. But even the old cities were eroded at their peripheries by the tide of motor cars and strangled at their centers by uncontrolled street parking, while the economics of public transport became shaky. Now great gullies were cut through the metropolis by men like Robert Moses that people might move rapidly through the city if not in it. The speed of movement found architectural design based firmly on the vision of the pedestrian, ill prepared to cope with eyes which passed at 50 or 60 miles an hour, still less well prepared for eyes that viewed it from an airplane even if such



To steer a course through history . . . stay in the channel and keep out of the bayous, enchanting as they may be

a view was fleeting. No outstanding circulatory or aesthetic solution had by 1957 been achieved, despite the occasional and accidental beauty noted in an approach to an American city by air, especially at night. What a foresighted architect or client might have foreseen would be that the isolated building could have no meaning in the great city of tomorrow, that competition between isolated buildings could produce only selfcancellation or chaos. Even by 1957 there were few examples in America of successful larger groupings. The Detroit waterfront, the Golden Triangle of Pittsburgh, the South Side Housing of Chicago had somehow all seemed to miss the architectural boat while combinations like that of Rockefeller Center in New York were still few and far between. Of the incipient projects like that of the Boston and Albany yards in Boston or the Near North Side in Chicago, many seemed to have lost their stature between the first exciting proposals and what emerged from other and usually different architects' boards. If there were to be success with the city-scape it would have to be tomorrow - and if the tomorrow were to be too far away, there might be no tomorrow for the American city at all.

Elevators, steel, automobiles, electricity were all needed to make the skyscraper possible. But they did not make it inevitable or desirable. That required the vaulting and competitive ambitions of men. Here let us speak, though, of a more subtle technological influence implicit in the invention of the electric light bulb. The bulb ultimately made the city a 24-hour proposition. It changed the time sense of Americans and removed the limitations of a life lived from sunrise to sunset. It also stole away some of the compensations of such a life. It changed the time sense of Americans and the space sense and the color sense. It enlarged their fear of the dark. One way to destroy this fear was to destroy the night. When this happened the visual city became two cities, a city of day and a city of night. The architectural problem was of course not the same but it was seldom even recognized. Buildings continued to be designed for day. Most often the illumination tried to reproduce the sun, missing the shifting shadows implicit in the solar progress across the heavens, and this gave us the artificially floodlighted building, more like the ornament of a wedding cake than like architecture. At odds with this stood internal illumination which when allowed to show through in an otherwise dark street transferred the voids of a building to solids, and vice versa. Here a stairwell might become the main accent of a building at night while absent at day; here internal wall colors might lend accents to the building in the dark which were entirely missed in the light, an interior sculpture assert dominance. Yet it appeared that most such effects were accidental. Again there were the colored signs which provided the blazing and beautifully vulgar stridency of Broadway and 45th Street or the serene and equally accidental repose of a frugally lighted Charles River in Boston.

But the potentials of all this light in dark, of color, even of the possibilities of moving light and moving color had not been exploited with any conscious vigor and had also not met many happy accidents. One could not say of many American buildings of 1957 as one might of the Manufacturers' Trust in New York that their architecture was even well aware of the electric light bulb, much less the neon tube.

WITH THESE TECHNOLOGICAL PRESSURES at work there was also the move away from isolationism and towards an understanding that, for good or ill, America had to be part of a larger scene. This move was by no means steadily forward, but the trend was clear. This development was almost certainly one of the most significant in American architectural history. She had become an exporter more than an importer of architecture. French students studied architecture in America, not the other way around as had so long been the case.

BUT ONE OTHER TREND COULD NOT BE IGNORED, either, much as it was intuitively rejected. America was becoming more and more collective. Collectivism was not in America a matter merely of a socialistic distribution of economic goods, which was not approved in public by very many people. It meant rather the extent to which a group effort or decision was needed for any accomplishment. Every sign of America for the last 25 years had been that the group effort was steadily becoming more dominant. You might love it or you might hate it, but you could not deny it. You could speak against it and run campaigns against it and be elected on a platform which preached against it, but it went on just the same. The President of the United States was the chairman of a committee, in



Artists felt more secure if misunderstood

point of fact; and so was the president of a corporation.

And as the architectural projects grew larger and more complicated and demanded more and more kinds of knowledge and skill, they reached to the point where it was impossible for any man to know all that needed to be known, to do all that needed to be done. The question was whether the architect too was to become the chairman of a committee. Most architects and critics sensed in that the death knell of architecture. It was even more threatened by the emergence of the committee as client.

Against all this trend stood the most obdurate defenders of the individual, the painters and the sculptors and the poets. The more individualistic they persisted in trying to be, the less the society could understand what they were trying to say; the less importance it might feel that there was in anything they did say. Indeed, at some times it almost seemed that they paraded their individualism to the point where they felt more secure if they were not understood as though that were the only way they could be sure that individuality was secured in a collective and voracious society. The society was not always rejecting them, they were perhaps ejecting themselves. And this too raised some problems for American architecture which could not operate on so isolated a plane of personality or often ignore the fact that the user of the building might also have rights.

There had never been a time in America, really, when sculpture and painting had been fully integrated into architecture as it had been in Greece, Egypt, Persia, India, Romanesque or Gothic Europe. Critics like Herbert Read would have men believe that twentieth century methods of building and demands from buildings forbade such a rich collaboration, which he called "operatic." Some thought that the other arts had fled from architecture because the buildings had no symbolic ideas to express which might have been enforced by the allied arts. Others thought that the artists were given no chance because of the arrogance of the architects who made their own sculpture out of a building. It was perhaps true that in this alienation painting and sculpture had been made free and independent arts. Whether or not this had been a good thing was still being weighed in the balance. But there could also be an uneasy feeling

that all this was nonsense, that great architecture must somehow effect this combination of all the visual arts, perhaps even mobile visual arts not yet considered appropriate for buildings or for architecture. Yet the road to such a collaboration seemed more tangled in 1957 than it might have when Latrobe substituted the tobacco leaf for the acanthus in the column capitals for the Hall of Representatives in the United States Capitol, or when McKim commissioned the murals for the Boston Public Library by Sargent, Abbey and the more durable Puvis de Chavannes, or when Magonigle and Goodhue worked so hard at the collaboration with Lee Lawrie on an architectonic sculpture such as was so evident on buildings like the Nebraska State Capitol at Lincoln. For as the sculptor or painter had advanced or retreated into personal idiosyncrasy so the architect had retreated or advanced into the state of being a cooperative social animal. You could make your own choice as to which was happier. As to what this might say of the future of American architecture, there could be no such choice. Breakers were ahead.

T is not impossible that what emerged from Chicago as the most important element of American architectural history was not the Transportation Building or the Meyer-Schlesenger store at all but the principle of coordination which began to be understood by Burnham then and more fully later as he moved on to be the planner of large cities, and was intuitively accepted anyway by such men as Adler when they conceived the Chicago Auditorium. These were the men who cast the shadow of things that had to come, Burnham and Adler, not Sullivan and Root, although Burnham and Adler too were incomplete men and their own designs were never gracious once their talented partnerships had been severed.

The taste-makers had been guilty too of a kind of indifference to matters of economy and even of use. It was common for librarians to say of architects like McKim that the architect was the librarian's enemy, while forgetting that others said of them that the librarian was the reader's enemy. Again it was the man like Adler who accepted a responsibility to the user of the building; and from his line came other and always larger coordinators, born in America usually, or like Adler and Kahn early comers, trained in America, unoffended by industrial America but not romantic about it either as some unindustrial Europeans of the twentieth century were to be, men in the American stream of Richard Shreve, Albert Kahn, Louis Skidmore.

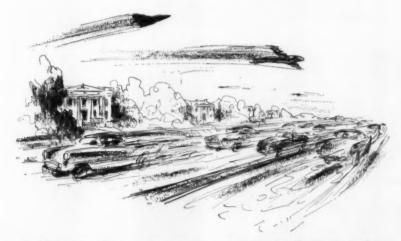
The single building, the single site, the operation which could all be conceived by one man shrank away but not without pain, and not ever completely. But the momentum of the country was bound to demand more and larger projects and the alternative would be weak and diffused collaborations between many artistarchitects controlled by well meaning but not very understanding clients, or the collection of more and more sl.ills and some kind of effective combination, presumably in a mammoth firm whether of a transitory or a

permanent form. The decision would not be an easy one for it was no secret to America that the great coordinating firms had not often achieved great architecture. Kahn's factories which he did not regard as architecture had elegance; his libraries which he did regard as architecture were feeble or worse. Burnham made fine plans but few fine buildings after John Root died. Shreve's Empire State Building was a phenomenon of the steady and remarkably fast flow of materials from all points of the globe to the top of the highest edifice in the world, but though the edifice was the highest it was scarcely one of the finest. In this welter of big projects of the 30's and early 40's only the phantom figure of Raymond Hood seems to have shown a steady artistic progression from the tentative and backwardlooking Gothic Chicago Tribune Tower through the ever simpler and more powerful massings of the Mc-Graw-Hill and the Daily News buildings to the triumph of Rockefeller Center. Across this evolutionary road to coordinated architecture stood warning signs to say that more interesting, more imaginative, more varied, more beautiful and probably even more commodious suggestions were being made in some of the side alleys and that one should not wall off from the traveler the lanes where a Wright, a Mies or a Saarinen walked. Out of this was developing though a legend or a myth that the big coordinating office could never accomplish "great' architecture. But this had to be coupled with the warning to the architect who purposefully kept his office small and yet wanted to take on big work that he was kidding himself, that he could be spread too thin between the Gold Coast, Hong Kong, Fargo, North Dakota, and his home town of San Francisco or Boston or Chicago, and that when spread thin the advantages he might have held over the architect coordinator would have been dissipated.

Few if any of the brilliant and small offices were prepared in 1957 to accept minor roles and many of the talented were having perforce to become coordinators themselves. In entering these lists they often found themselves losing the gage not to the coordinators whom they had scolded but to big sales organizations with little aesthetic concern or conscience, the "Madison Avenue boys" of architecture. Meanwhile some of the

large offices such as that of Skidmore were trying all the experiments they could to divide the tasks into parts of human scale, to let the individually talented man in their employ design a building that would have some of his character and not merely be the reflection of a Skidmore, Owings and Merrill style, wherever that style might have originated. Whether they were succeeding as well in this as they thought was a verdict that could not be rendered in 1957. It had to wait for more buildings. Whether the small office could survive while doing big building, whether the large office could encourage genius and innovation in its organization, whether both would lose the game to the advertising world with all that would signify, could not be foreseen in 1957. But it too would have a great deal to say about the future of American architecture in the second half of the twentieth century.

Whether Americans could forego the self-conscious seeking for a national architecture and achieve it by the simple process of making good architecture in their own place and for their own time; whether they could accommodate their cities and their architecture to the automobile and the airplane; whether they could learn to exploit the aesthetic potentials of the electric light; whether they could accomplish an "operatic" architecture which would at once and in a unified way use the talents of architect, painter, sculptor and even some newer kinds of artists and craftsmen; whether they could solve the problem of collectivism as it bore on the organization and the practice of architecture these were questions which architects might think about as they went their way in the spring to the celebration of the hundredth anniversary of the founding of their professional organization. If they were resolved in the right way there might yet be an American architecture, or an American version of a world architecture, which could stand in the great halls of architectural history as a peer with the architecture of Athens or Byzantium or the heart of Europe; if they were not, the palm that seemed inevitably to be awaiting the architecture of the automatic age would be awarded elsewhere. To the question of which, an American watching the contemporary scene might express a tentative but hopeful. "Yes, it will be made in America."



Architecture was ill-prepared to cope with eyes that passed at 50-60 miles per hour

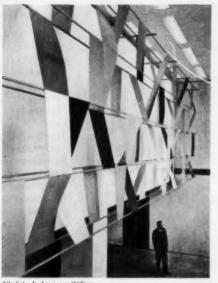


Above, left to right: Transportation Building; Sheraton Hotel; Suburban Station, P.R.R.; No. 2 Penn Center. Below, Penn Center area in relation to established Philadelphia landmarks

PENN CENTER



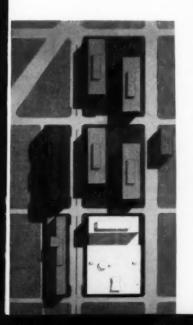




All photos by Lawrence William

Penn Center, Philadelphia, Pa. Consulting Architect, City Planning Commission and Architect, Transportation Center and Concourse, Vincent G. Kling. Consulting Architect, Pennsylvania Railroad, Vincent G. Kling. Consulting Architects, Greyhound Corporation, Arrasmith & Tyler. Architects, No. 2 Penn Center, Emery Roth & Sons. Architects, Sheraton Hotel, Perry, Shaw, Hepburn, Kehoe & Deane. Structural Engineers, Transportation Center, McCormick & Taylor Associates; Mechanical & Electrical Engineer, Robert J. Sigel, Inc.

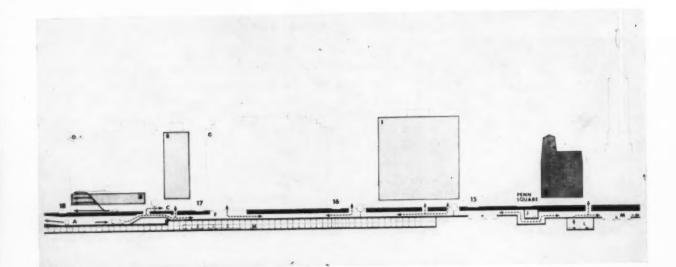
TRANSPORTATION BUILDING AND CONCOURSE

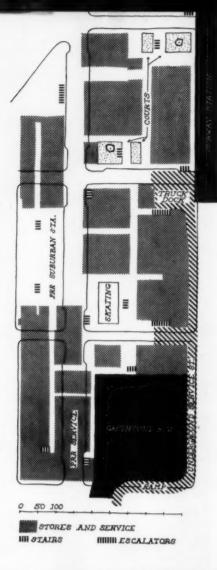


Penn Center has been in truth a joint undertaking requiring many talents: the businessman's, the politician's; the realtor's, the building operator's; the bureaucral's and the technician's; the financier's, the builder's, the owner's; the man-of-vision's, the specialist's and, key to all, the architect's. To the Pennsylvania Railroad acting through its president, James M. Symes and other officers, goes credit for making the huge underlaking possible. The City Planning Commission has been involved, and so has the Advisory Board consisting of Architect George Howe (succeeded upon his death by Vincent Kling), Robert Dowling and Edmund Bacon (executive director, Philadelphia City Planning Commission). Eight Philadelphia banks, the Penn Mutual Life Insurance Co. and 25 lawyers participated in the 45 separate transactions required before McCloskey & Co., owner-builder, could erect the Transportation Building. One architect's vision, design enthusiasm and continued devotion are evident at every stage of the Center's history, though many architects contributed.



TRANSPORTATION BUILDING AND CONCOURSE, PENN CENTER

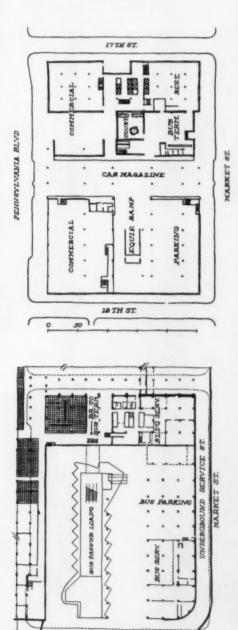




PENN CENTER IS AN IDEA, born in the decision of the Pennsylvania Railroad to remove its "Chinese Wall," which had for so long hindered mid-Philadelphia development, and the Broad St. Station. The underlying motive was economic. The decision offered many possibilities. There was at one time fear that the land thus freed might become a patchwork of small, speculatively developed parcels. This might have been a means to great immediate profit, but the railroad — quite frankly after prodding by many of those named on the preceding page; yet this second momentous decision was in truth the railroad's and so the credit is theirs - decided to make it an open, unified commercial development, to limit ground coverage to 50 per cent, and to construct the underground concourse as a shopping esplanade, open to the sky at frequent intervals, and connecting the above-ground buildings, Pennsylvania Suburban Station, two subways and eventually the Greyhound Bus Terminal and a parking garage. The first building, 2 Penn Center, was built for Uris Brothers who hardly believed the Concourse dream would come true and so declined at first to consider worthwhile the extra cost of full connection to it. The most recent, the Transportation Building (plans at right), ties Penn Center together and gives it reality.







20 M COMMERCIAL AREA



TRANSPORTATION BUILDING, PENN CENTER

Early in 1950 the architect who was later to design the Transportation Building was invited to serve as consulting architect for Penn Center development by the Philadelphia City Planning Commission; his association with the entire Center since has been continuous. Although the buildings now rising in the Center do not conform exactly to concepts then initiated, the main theses (minimum ground coverage, pleasant pedestrian circulation, separate underground vehicular access, penetration of the ground plane by courtyards open to the lower concourse level) have been realized. Among the important services rendered by Kling were:

1) Preparation of a master plan for Penn Center.

2) Coordination of the re-routing of utilities in order to accommodate the underground pedestrian concourse (a new 60 in. sanitary sewer in the middle of the area, rehandling of the telephone lines, relocation of the city's major steam company line, the usual problems with water, electricity, and clearances for the Market Street Subway and underground track system of the Pennsylvania Railroad.

 Coordination of the relationships with concurrent building projects.

4) Exploration of the financial and functional feasibility of the areas composing the four-block lower-level commercial concourse, and the complex coordination of accesses to street level and public transportation system.

5) Design of the concourse and planning of construction in such a manner that presently undetermined superstructures might rise in harmony with the master plan.

6) Assistance in the preparation of the cost-income studies for the Transportation Center itself (including a 1000-car parking garage, Greyhound bus terminal, commercial space and an 18story office building served by underground truck loop). Studies of construction costs and rental income had to be concluded before a client, The Pennsylvania Tower Building Corporation, and the proprietary construction company could arrange financing with the various Philadelphia banks.

 Preparation of plans and models in greater detail for specific tenants in the Transportation Center in order to assist in renting space.

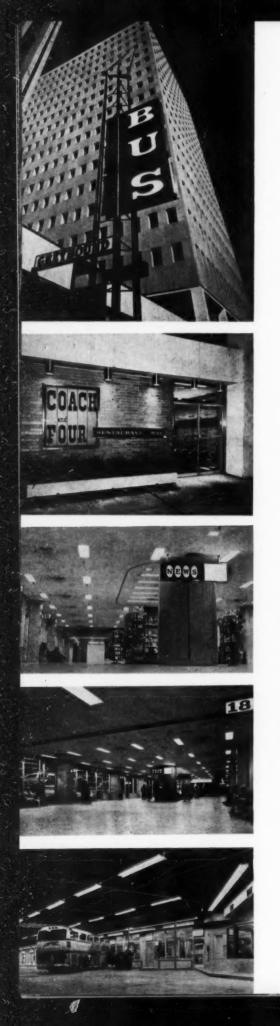
8) Coordination and review of commercial areas designed by other architects for tenants in Transportation Center.

9) Detailing tenant changes, including division of space, interior finishes, furniture and decorating scheme.

10) Developing, with various city departments, the complex underground fueling and maintenance section for the Greyhound

Facing page: tree-planted court from Greyhound waiting room, Sheraton Hotel at rear, parking garage at left, Transportation Building tower at right. This page, top to bottom: typical large office, first floor elevator lobby, court, bus waiting room, bus loading concourse





TRANSPORTATION BUILDING, PENN CENTER

Bus Terminal, where for the first time buses can be fueled, repaired, washed and serviced in the same area with passenger loading facilities. This required an automatic-fire-fighting system as well as two 30,000-gallon gasoline tanks and a 10,000-gallon tank of oil buried below the floor.

11) Commissioning design of a 10 ft by 70 ft sculptured screen in the main lobby of the Transportation Building designed by Ellsworth Kelly.

12) Design and supervision of paving of reflecting pool, treewells, stairways and several courtyards which compose the esplanade and knit the entire Penn Center project together.

13) Design of all commercial signs throughout the Transportation Center Project. This was done with the approval of the Art Jury headed by Roy Larsen, Architect, which is charged with esthetic control of structures planned for the Parkway area.

14) Service, with Robert Dowling (City Investment Trust Company, New York) and Edmund Bacon (Executive Director, City Planning Commission), on the Penn Center Advisory Committee, created to advise the Pennsylvania Railroad on projects proposed for Penn Center.

15) Design of the access stairways, ventilating system and physical structures that comprise the underground street system used by trucks in the east-west loop and by pedestrians below north-south streets.

16) Schooling of building maintenance personnel, engineering staff and real estate managerial staff in the operation of complex mechanical and electrical systems in the Transportation Center.

Amid today's thin-skinned office towers, the Transportation Building's solid limestone may seem old-fashioned. Many remarks have already been passed, probably with some justification; and this is an instance of design for acceptance by a large, diversified group, which always entails compromise. But consider: the Transportation Tower deliberately straddles the axis of the Center to permit vision through and thus create an openness exactly opposite to the character of the "Chinese Wall" which the Center replaces. In Philadelphia, curtain walls still require masonry backing; what should one think of the apparent thin skin of the Uris Building? The Transportation Building's exposures to sun made heating and cooling costs heavy whereas pierced masonry walls lowered air conditioning costs; and against its conservative concentration on the juxtaposition of solid building masses - somehow in keeping with the multi-level, three-dimensional design of the whole Center - the gayety of the Sheraton almost verges on the gaudy. There may have been pressures on the architect, but he has managed to preserve his original theme.

Greyhound Bus Terminal: top bus sign indicates character of signs throughout Penn Center, all designed by Kling's office; waiting room from office building lobby; bus passenger concourse; loading docks

MINIMUM HOUSE FOR MAXIMUM VACATION

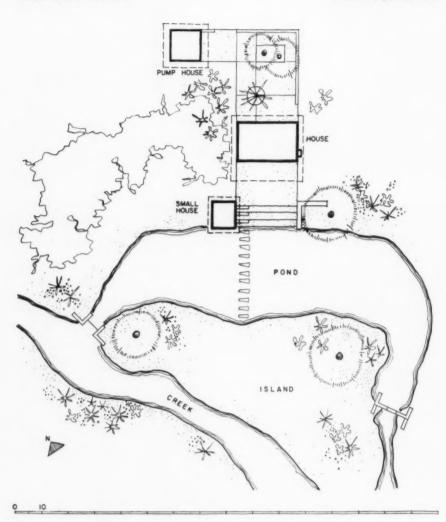
Vicinity of Ellensburg, Wash.

Paul Thiry. Architect and Owner

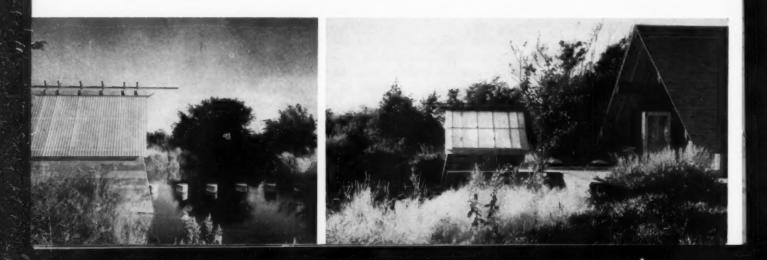
Art Hupy

Imaginatively conceived and skillfully executed, this small weekend cabin expresses its function with a directness not often achieved. Its roofline, openness and simplicity of plan are all reminiscent of the familiar camp tent — deliberately so, no doubt, since the design goal was an easily maintained base for hunting, fishing and hiking trips. Everything possible was done to minimize housework: floor area was cut to the bone, materials and colors were selected for durability and quick cleaning, and a special "clean-up room" was built adjacent to terrace and swimming area. WEEKEND HOUSE

Paul Thiry, Architect



Site is in Kittitas Valley, a flat grazing land, hot and dry in summer and cold (20 to 30 degrees below zero) in winter. A mountain stream nearby was diverted and damned to create a pond large enough for swimming; stepping stones connect house with island and the narrow creek beyond it

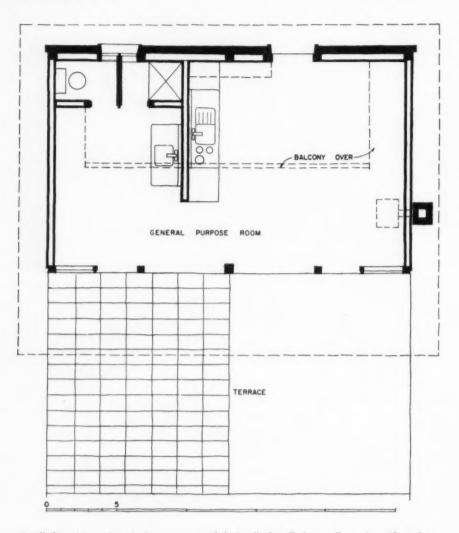




THE THIRY "CABIN" is actually three separate structures: a tiny 16- by 24-ft main house consisting of a central living-kitchen area with adjacent shower and dressing alcove and a balcony bedroom for the parents; a much smaller bunk-house for the two sons; and a pumphouse which contains, in addition to the water tank, a work bench and storage space for tools and foods. The main house is so placed on the site that it is open to the breeze on the sunny side and closed in on the shady side; it overlooks a fine view of fields and distant snow-capped mountains. Art Hupy

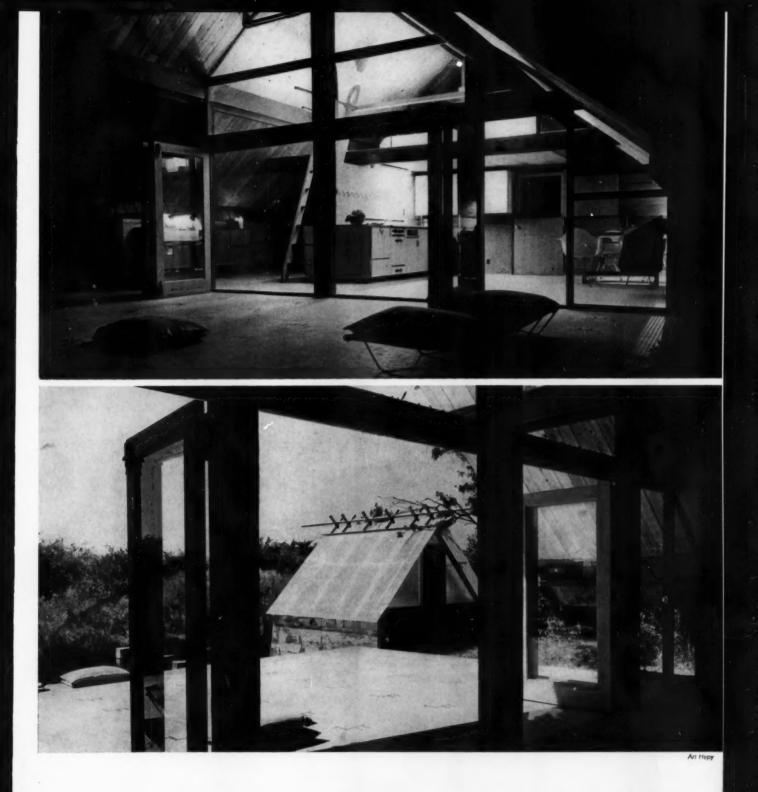
WEEKEND HOUSE

Paul Thiry, Architect



Small dimensions of main house are extended visually by all-glass wall on view side and actually by flush terrace which more than doubles living area. Partitioning is limited to the essentials: enclosures for shower and toilet, and a dressing room which is only partly enclosed

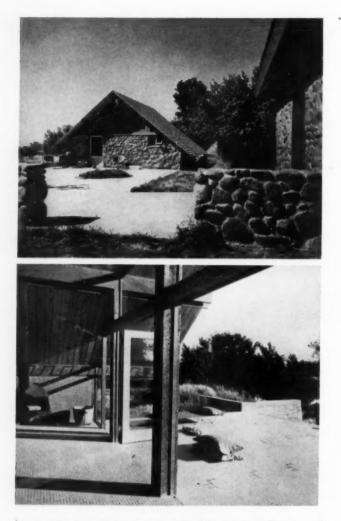




The emphasis on minimum housework has one interesting sidelight: there are no closets in the house "to hold dirt, spiders or bugs, or to get musty when the house is vacant." as the architect puts it; the family dresses at home. Flooring is easily washed ceramic tile in yellowish color which is slow to show dirt; cabinets are all wall-hung to simplify sweeping. Walls are wood or tile, ceilings are wood. The boys' cabin has a plastic roof (it is in shadow until after eight o'clock in the morning).

WEEKEND HOUSE

Paul Thiry, Architect



Construction is wood frame on concrete slab; exterior walls are wood and fieldstone, roofing is asbestos shingles. Kitchen is fully equipped, even to an electric dishwasher. Heating is electric radiant



WAINWRIGHT BUILDING, St. Louis

CARSON PIRIE SCOTT STORE, Chicago Lauis Sullivan

ROCKEFELLER CENTER BUILDINGS, New York Reinhard & Holmeister, Corbett, Harrison & MacMurray, Hood & Feuilhoux

LEVER HOUSE, New York Skidmore, Owings & Merrill

TRINITY CHURCH, Boston

PHILADELPHIA SAVINGS FUND SOCIETY BUILDING, Philadelphia Howe & Lescare

GENERAL MOTORS TECHNICAL CENTER, Detroit

LAKE SHORE DRIVE APARTMENTS, Chicago

5. C. JOHNSON & SON, INC., ADMIN. BLDG., Resine Frank Llayd Wright

MONADNOCK BLOCK, Chicage

DAILY NEWS BUILDING, New York Head & Howells

TVA NORRIS DAM & POWER HOUSE, Tennessee Roland Wank, Architect.In-charge

BOSTON PUBLIC LIBRARY, Boston McKim, Mead & White

STOCK PAVILION, Rainigh Nowicki & Deitrick

CHRISTIAN SCIENCE CHURCH, Berkeley Bernard Maybeck

WOOLWORTH BUILDING, New York

CROW ISLAND SCHOOL, Illinois Sascinen & Sascinen, with Perkins, Wheeler & Will

MANUFACTURERS TRUST BUILDING, How York Skidmore, Owings & Merrill

UNITY CHURCH, Oak Park Frank Llayd Wright

NEBRASKA STATE CAPITOL, Lineain

S. C. JOHNSON & SON, INC., LABORATORY, Rasing Frank Liegd Wright

UNITED NATIONS SECRETARIAT, New York Wallace K. Harrisen & Consultants

LINCOLN MEMORIAL, Washington

M.I.T. AUDITORIUM, Combridge

EQUITABLE BUILDING, Pertland

ALLEGHENY COUNTY BUILDINGS, Pittsburgh

UNIVERSITY CLUB, New York McKim, Mead & White

CRANBROOK SCHOOLS, Michigan Eliel Searinen

MINERALS & METALS RESEARCH BLDG., I.I.T., Chicago

ALCOA BUILDING, Pittsburgh Harrison & Abramovitz

MUSEUM OF MODERN ART, New York Goodwin & Stone

PENNSYLVANIA STATION, New York McKim, Mead & White

EXPERIMENTAL SCHOOL, Los Angeles Richard Nautra

DODGE TRUCK PLANT, Detroit

100 MEMORIAL DRIVE APARTMENTS, Cambridge Kannedy, Kesh, DeMars, Ragion & Brown CENTRAL LUTHERAN CHURCH, Portland Pietro Belluschi

HOUSES

F. C. ROBIE, Chicago Frank Llayd Wright E. J. KAUFMANN, Pennsylvania Frank Llayd Wright

Frank Llayd Wright TALIESIN WEST, Arizona Frank Lloyd Wright

HENRY VILLARD, New York McKim, Mead & White

WATTS SHERMAN, Newport H. H. Risnardson

AVERY COONLEY, Hilinois Frank Lloyd Wright

W. W. WILLITTS, Illinois Frank Llayd Wright

D. R. GAMBLE, Pasadona Greens and Greens

PHILIP JOHNSON, New Cansan Philip Johnson

WALKER GUEST HOUSE, Florida Paul Rudelph

ELLEN SCRIPPS, La Jolla Irving Gill

WESTON HAVENS, Berkeley, Harwell Hamilton Harris

LOVELL "HEALTH HOUSE", Los Angeles Richard Neutra

EDITH FARNSWORTH, Chicago Miss van der Rohe ONE HUNDRED YEARS OF SIGNIFICANT BUILDING

12. IN SUMMARY

by EDGAR KAUFMANN

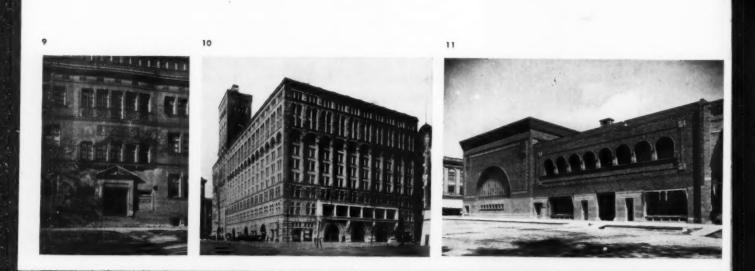
WHEN THE AMERICAN INSTITUTE OF ARCHITECTS was founded one hundred years ago, what significant buildings were in construction? Three examples can be cited. At Broadway and Broome Street in New York City rises the Haughwout Building (Figure 1) built in 1857 by J. P. Gaynor, using standardized elements from the American Iron Works. It has long been recognized as a classic of its kind and an early instance of the use of passenger elevators. Its daring, practical structure is clearly expressed in forms borrowed from the Venetian Renaissance, yet its function, structure, and forms are knit into an impressive unity. The Haughwout lifted a novel, modular building technique to brilliant accomplishment. Just as rational and eloquent is the Hamilton Hoppin house (Figure 2) at Newport, by Richard Upjohn, a founder of the A.I.A. Its wood forms speak for themselves; its influence on American home design can be seen in much work of subsequent decades, as Vincent Scully demonstrated. Even so late as the 'nineties a family resemblance can be traced between the Hoppin house and Frank Lloyd Wright's Harlan house (the very building that caused the break between Wright and Sullivan). The year 1857 also produced, in contrast to these progressive works, the last, most monumental and dreamlike of all classicizing Southern mansions, Belle Grove (Figure 3), built in stucco by Henry Howard at White Castle, Louisiana.

These three buildings stand at the beginning of American professional architecture, promising an inheritance of artistic talent, nostalgia, inventiveness, and common sense. Here at the start are indicated two great areas of activity — homes and business buildings — that have come to include much of our best architecture; here are the two structural materials we have developed most fully, metal and wood; and here is the building germ that promises to dominate the next hundred years — prefabricated standardized architectural components. Neither the present nor the future of American architecture can be well understood without appreciating these roots in the past.

In this sense the panel's choices, published over the last eleven months in ARCHITECTURAL RECORD, highlight disturbingly spotty aspects of our understanding of the past. If the original buildings that have given form to





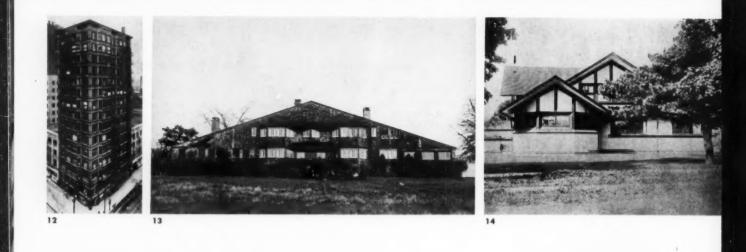


ONE HUNDRED YEARS OF SIGNIFICANT BUILDING



our world are not to vanish, all of them, into legend - as many too many have already - the architectural profession will need to alert the rest of the community and many of its own members to the values of these structures, values that have enabled our country's worldwide acceptance as a center of cultural achievement. The RECORD, searching for fifty buildings, asked fifty panel members to name "about twenty buildings in existence today." Now that the results have been published, this panel member for one believes a century of American architecture is inadequately outlined in fifty examples. The editor has generously allotted these closing pages to some amplification and certain general remarks. For example, are those buildings we have torn down ipse facto of minor interest? Is Richardson's Marshall Field Wholesale Store, 1887-1930 (Figure 4), insignificant? Indeed, what building has exerted more influence on our architecture, what one can we look at with more certainty that ours is not only a vital architecture but one that has achieved its perfections along the way? Is Wright's Larkin Building, 1904-1950 (Figure 5), that compendium of well-documented "firsts," to be forgot now, when only a generation since it was one of the chief works of modern architecture anywhere in the world? Destroyed by fire, not by the hand of man, isn't Maybeck's Hearst Hall at Berkeley, 1900-1922 (Figure 6), more curiously prophetic than his extant buildings? And if Sullivan is to be praised for the architecture of Carson, Pirie, Scott's store (Figure 7), that end is properly served by showing its original top, a termination as beautiful and inventive as any other part of this uniquely integrated, sensitive design. If American architecture is to have a living tradition, we must not only study the past, we must cherish it openly. But we must acknowledge that the publication of buildings gone and done for, and of buildings in their pristine state, will stir students and leave city fathers utterly uninterested. The task of preserving what is still extant has been eased notably by the publication of this series of articles: in city after city the local press has drawn attention to the acclaim some familiar landmark has won in the ARCHITECTURAL RECORD poll, weaving the building more securely into the fabric of local pride - the only protection available against cupidity and decay. What extant buildings of the past hundred years, then, may be distinguished as significant architectural accomplishments, beyond those already published in the series?

H. H. Richardson was one of the first Americans to receive the flattery of imitation in Europe, even as he was one of the first American students at the Beaux-Arts. Richardson is represented in the panel's choices by Trinity Church, a prominently located but less than creative work, and by the Allegheny County Buildings, where his best efforts, in the courtyard, are rarely photographed. But Richardson gave us both the Stoughton house in Cambridge, 1882 (*Figure 8*), which H.-R. Hitchcock understandably











ONE HUNDRED YEARS OF SIGNIFICANT BUILDING

has called "perhaps, the best suburban wooden house in America," and Sever Hall at Harvard, 1878 (*Figure 9*), which the same biographer has called "an almost unique masterpiece of the incredibly difficult art of building in harmony with fine work of the past and yet creating a new style for a new day" — a problem tackled recently by several younger U. S. architects. Sever Hall is also one of the rare American buildings where brick is architecturally mastered.

From Richardson it is natural to turn to Sullivan, for the Field Building is often given as the stylistic parent of Adler and Sullivan's much-imitated Auditorium Building, 1887 (*Figure 10*), Chicago's bid to outdo the Metropolitan Opera in New York. But inspection of both illustrations will convince a candid eye that here a younger architect has adopted the scheme of an earlier building with the same relationship maintained as between, say, a sonnet by Milton and one by Meredith: the common scheme yields basically different results for each man. And indeed it was not until late in his career, long after worldly success had left him, that Sullivan produced those now unappreciated masterpieces that really challenge Richardson's greatness, like the National Farmers' Bank of 1907 at Owatonna, Minnesota (*Figure 11*), currently being remodelled inside by H. H. Harris.

Chicago after the Fire had more to its credit than buildings by Richardson and Sullivan; it resumed the general search for proper structure and form of business buildings on narrow, downtown lots which had been begun a generation earlier in Philadelphia and New York, as Winston Weisman of Pennsylvania State University has shown. If the frames of modern building are eloquently displayed in those Sullivan designs that give him fame today (ARCHITECTUBAL RECORD, June, 1956), a curtain wall largely of glass, hanging free of the building's vertical supports, was displayed with parallel virtuosity on Burnham and Root's Reliance Building, 1890, 1895 (*Figure 12*), a real victory of Chicago construction and ingenuity, pointing to much done since and still today.

In the Midwest also, the Richardsonian excursion into a native form of domestic architecture was to find its best successors after the turn of the century. But earlier, back East in 1887, only two years after their Villard houses (ARCHITECTURAL RECORD, October, 1956), McKim, Mead and White were working on the Low residence (*Figure 13*) at Bristol, Rhode Island, where Richardson's direction was maintained and given new form. By 1900 Frank Lloyd Wright was erecting his classic Hickox house (*Figure 14*), as perfect in its way as the now more famous Willitts (ARCHITECTURAL RECORD, October, 1956). It stands at the beginning of Wright's marvelously fertile and masterly out-pouring of modest, individual homes leading to the Goetsch-Winckler house (*Figure 15*) of 1939 at Okemos, Michigan. I cannot help feeling that these small homes have contributed as much or



ONE HUNDRED YEARS OF SIGNIFICANT BUILDING

more to our way of life as the spectacular and beautiful architecture of Taliesin West or Fallingwater.

And in the Northwest has not this American domestic architectural tradition flowered again, as in the enduringly satisfactory forms of the Watzek house (*Figure 16*) designed by John Yeon in 1937 at Portland, Oregon?

A blend of this domestic tradition with forms of space and structure not native but readily assimilable is found in the East in our own times; witness the friendliness of Marcel Breuer's Chamberlain cottage (*Figure 17*), Wayland, Massachusetts, 1940, and Eliot Noyes' calm, symmetrical home (*Figure 18*) which he designed in 1956 for his family in New Canaan, Connecticut.

Mass housing has rarely received as much architectural attention in the United States as individual homes, yet during the last war at least two big projects of real value were carried out — Breuer and Gropius collaborated on Aluminum City (*Figure 19*) at New Kensington, Pennsylvania, 1942, while in the next year Neutra's Channel Heights (*Figure 20*), L. E. Wilson consulting, went up at San Pedro, California, near Los Angeles.

What promises to be a significant feature of office-building design appears in published photographs of the model of a work scheduled for completion in 1957, the Inland Steel Building (*Figure 21*) in Chicago by Skidmore, Owings and Merrill. The appearance of columns as louvers on the exterior of a glass facade is the only intrinsic modification of such building yet seen that gives scale and movement to a city street. I find it hard to understand that only three schools were called significant, especially after the most recent efforts in this field. And finally, in a list of American churches of the last hundred years should there not be a place for Wright's quiet, moving meeting house (*Figure 22*) for the Unitarians at Madison, Wisconsin, 1951, its rafters ingeniously joined in warped planes?

Here, then, are a score out of the hundreds of examples of good architecture, not chosen for the fifty of this series. Few of these added designs will arouse much opposition, I dare say, and most were listed by some panel members in the original naming. Were they omitted because little known or little remembered — it doesn't matter. They were not omitted from American architecture. Together with the fifty chosen by acclaim they trace an outline of the wonderfully varied accomplishments of American architects in the last hundred years; it is no record to be ignored, and it augurs well for the future. If only the evidence can be preserved!

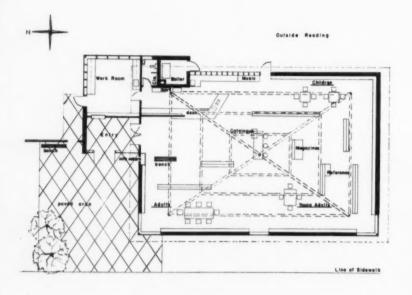
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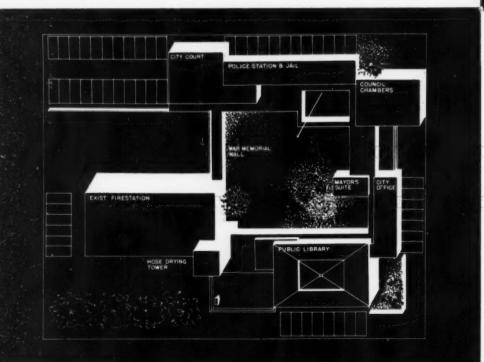
A LIBRARY IN A SMALL TOWN'S CIVIC CENTER





0_5 0 6 feet





The reading room is one large open space, 50 by 70 ft, divided by movable bookcases into reading areas for adults, teenagers, children. An unusual framing system provides height at outer walls (where balcony may be added later), and daylight at center; the roof is supported by four diagonally laid, laminated wood beams deeper at each supporting column than at center column where they join. No acoustical material was used, despite openness of room; so far, none has been needed, due to character of room



MOUNT VERNON, WASHINGTON, PUBLIC LIBRARY

Henry Klein, Architect

In the small library two factors — in addition to the primary ones of sheltering books and making possible their use — especially influence the design: easy supervision and flexibility of space use. The high-ceilinged, continuous space in the reading room of this library in Mount Vernon, Wash., admirably meets these needs, but, in the kind of environment which it creates, it answers other less tangible requirements. It is informal and yet dignified, inviting and still conducive to the essential quiet and reposeful atmosphere of a library.

THE LIBRARY is the first completed building in the new civic center on the fringe of the town's main business section, accessible to shoppers who combine shopping expeditions with library visits. Since the library's circulation has more than tripled in the 18 months of the building's use, there is an obvious two way advantage — to the businesses of this area and to the library — in such a location. When fully developed, the civic center will provide an open, almost park-like setting for all of its buildings, with the library as the dominant element of the group. *Peter Hostmark, Structural Engineer; Norman L. Omodt, Mechanical Engineer.*





PUBLIC LIBRARY

Building was economical: contract price was \$44,980, including all cabinetwork, cases, racks designed by architect. Adults' reading area (center) is in one corner, Children's (bottom) is diametrically opposite with door to enclosed court All wood is natural except hemlock ceiling which is bleached. Cases, racks are birch. Steel columns are bright red; counter tops, dark green

HOTELS

SINCE THE LAST ERA OF HOTEL BUILDING, the big fact has been the automobile. Nobody needs to be told what highway travel has done to the hotel business. But in some respects the wheel has gone full circle; the motel is acting, and looking, more and more like its older brother.

The downtown hotel, entrenched so firmly, so long, was slow in reacting. It was fat with wartime occupancy. But no more occupancy has gradually come down from a fantastic 93 per cent in '46 to something like 72 per cent (still pretty good). Time now to take this competition seriously.

Hotel interests are now, therefore, going into the highway field. Frequently they work a joint operation, the highway hotel feeding the downtown one, and vice versa. Sometimes this sort of mutual benefit arrangement smooths out the peaks—extra weekend guests on the highway are sent downtown, midweek business overflows are sent out to the motel.

Downtown hotels are also doing a great deal of refurbishing; they can't justify high rates without at least keeping rooms decorated if not modernized. They are also taking hard looks at public spaces, especially dining rooms, to develop maximum income in a competitive world. They are putting in drive-in entrances, parking garages, no-bellboy approaches, and everything else they can think of to imitate motel advantages.

Motels, for their part, are jealous of downtown locations, close to the sights and the business houses. They are going ever closer to the heart of things; they are also, willy nilly, tending toward vertical buildings. The current version of the highway hotel seems to be about six stories high.

For architectural excitement, however, one must turn to the foreign hotel-building operations, most of which Uncle Sam is financing. The new hotels are needed because so many tourists can no longer sleep on the ship — it's an airplane. Though the hotels will have usefulness for local businesses, they will cater largely to American tourists. Thus there's a new design problem, a sort of regionalism in reverse. If local interests in, say, Baghdad, expect the building to be slick and modern, the tourists will expect it to "look like Baghdad." In any case, one of the current American exports is our know-how in hotel design and operation, and a better way of building good will would be difficult to find.

- Emerson Goble



TODAY'S TRENDS IN HOTEL DESIGN

By WALTER O. VOEGELE Editor, Hotel Management

THE BEGINNING OF A NEW PERIOD of hotel building, after a twenty-year hiatus, finds the big downtown hotels competing with the motel or highway hotel. It also finds hotel operation under the scrutiny of scientific accounting methods, as against the tradition-bound methods of innkeeping. Both of these factors have had great influence on hotel design.

The "uniform system of accounts for hotels" with its operating ratios has become the Bible. Rigid adherence to prescribed figures and percentages replaced handeddown, traditional practices and principles of hotelkeeping of former days. Analyzing operating statements and trying to achieve prescribed financial results, became the order of the day. Hotel accounting firms have set up operating ratios for every department. These are usually expressed in three different ways: (1) ratio to room sales, (2) to total sales, and (3) to cost per available room. This highly developed accounting system led to the oft-quoted rule of thumb that a transient hotel under normal conditions cannot expect a satisfactory financial result unless it can obtain an average room rate of at least \$1 for every \$1000 of original investment per room in the building.

If, for example, a transient hotel cost \$10,000 per room to build, exclusive of land and furniture, under normal conditions and 70 per cent occupancy, nothing less than an average room rate of \$10 could produce a satisfactory financial result, the accountants explain.

Today this rule of thumb still holds. While building costs have gone up, so have room rates. If an occupancy higher than 70 per cent can be expected, or in the case of very large or luxury hotels the \$1 figure can be reduced to around 90¢ or slightly lower.

Outside of Miami Beach, and perhaps Las Vegas, only eight large city hotels have been built in the U. S. since 1948. (Terrace Plaza, Cincinnati, 1948; Shamrock, Houston, 1949; Carlton House, Pittsburgh and Statler, Los Angeles, 1952; Statler, Hartford, 1954; Beverly Hilton, Beverly Hills, 1955; Statler-Hilton, Dallas, 1956; Sheraton, Philadelphia, 1957.) Only a handful of other large city hotels are on the drafting boards. Motor hotels, on the other hand, have had the most spectacular growth during the last five years, and more and more hotelmen and hotel chains with downtown properties are entering the motor hotel field.

Sheraton, with two motels in New York State already, recently announced a \$4-million combination hotel and motel for Portland, Oregon, and a \$3-million luxury inn for Binghamton, New York. The Portland project is to be eight stories high with plans calling for 300 rooms at the outset; 300 more may be added later without altering the structure. The 200-room Binghamton Motor Inn will have six stories. Chicago's plush Drake Hotel is building the Drake North motor hotel near the O'Hare airfield, to mention only a few. The Knott, Pick and Dinkler hotel chains have been in the highway hotel business for several years and more chains are joining their ranks. Four of the six Jack Tar Hotels, with properties in Galveston and Orange, Texas; Charleston, South Carolina; Ashville, North Carolina; and Clearwater and Marathon, Florida, are members of Master Hosts, the motor hotel association with the highest requirements.

For decades the state hotel associations have been fighting motels. Today all but six states take them in. Significant of the trend is Sheraton's President Ernest Henderson's statement: "We have become more and more convinced that in these competitive times the best in modern hotel services often can best be achieved only through new construction. Other such projects (like Portland and Binghamton) are now under consideration."

Meanwhile, hundreds of individual investors and several motel or motor hotel chains have sprinkled the countryside with horizontal hotels. While large city hotels usually announce a cost per room in the neighbor-



hood of \$16,000, motor hotels in the last few years have shown costs per room anywhere from \$6,000 to \$18,000. In size they range from 40 to 366 units, the largest being the \$5-million Marriott Motor Hotel near the Pentagon in Washington.

Almost without exception, these motor hotels have complete hotel service, and their average room rates are in the \$8 to \$10 general range. There are those who predict an ever-growing number of this type of highway hotels.

According to a recent study by C. Vernon Kane, partner of Horwath & Horwath, hotel accountants and consultants, the modern motor hotel is more expensive to operate than the oldtime "motel." The cost per unit of operation is usually in the neighborhood of \$1500, and payroll per unit between \$600 and \$750. Housekeeping expense, exclusive of payroll, is about the same as in other hotels of the same size, but administrative expenses are usually higher than most investors anticipate. Their operating profit before fixed charges varies from about \$1000 to \$2400 per unit, but probably none would earn more than \$7-900 had they not food and beverage income. The resort-type motor hotels usually show the highest profits, but usually they cost more to build, and sometimes get as much as one quarter of their net profit from food and bar operations. A first class resort motor hotel, operating the year round, accountants say, must gross at least \$3000 per unit in room sales - or about a \$12-14 annual average daily rate at 65-70 per cent occupancy.

Already there are strong indications — and several examples — of decentralizing group and function business which heretofore was monopolized by downtown hotels. Many of the newer motor hotels are making a strong bid for group business with function and convention facilities. To be sure, it's only the beginning and may never reach the proportions of large city operations. But more and more established motor hotels are planWilliam F. Howland





The big downlown holels of the last few years: 1. Holel Statler, Hartford, Conn., William B. Tabler, architect. 2. Terrace Plaza, Cincinnati, Skidmore, Owings & Merrill, architects. 3. Hotel Statler, Los Angeles, Holabird and Root and Burgee, architects, William B. Tabler, associated. 4. Statler Hilton, Dallas, William B. Tabler, architect. 5. Sheraton Hotel, Philadelphia, Perry, Shaw, Hepburn & Dean, architects. 6. Shamrock Hilton, Houston, Wyatt C. Hedrick, architect. 7. Beverly Hilton, Los Angeles, Welton Becket & Associates, architects.



ning function room additions. And as more downtown hotels and hotel chains gain a foothold in the highway field they will, no doubt, introduce features which will force the older hotels into the competitive race.

The two- and three-story motor hotel is no longer an isolated case. Those who pour millions into their projects are convinced they have the ideal solution by going vertically as well as horizontally in construction. Others try to compromise with a split level, from the parking level up and down. It's a good solution where the terrain lends itself. The guest has his car outside his room, whether he lives on the lower or upper floor.

It's safe to say that highway hotels will get larger and more luxurious. With money getting harder to borrow, money will probably come from real estate syndicates. The sale leaseback method is already attracting investment money to the motor hotel field. Some motor hotel operators with older properties are trying to ward off new competition by upgrading or enlarging their establishments.

Existing downtown hotels continue to add garage and parking facilities and create drive-in entrances wherever possible. Group facilities are also enlarged wherever there is some waste space to recover.

There are definitely new trends in the hotel eating facilities. It is no secret that Americans prefer to eat in restaurants rather than hotels. And food operations in many hotels are not profitable. But it cannot be blamed entirely on customer refusal to patronize hotel dining rooms. In many existing hotels, food preparation and service areas are poorly laid out and oriented. It takes too many employes to prepare and serve the meals speedily and economically under today's high labor wages.

In the older hotels the kitchens are not on the same floor with the eating facilities. Some still have two and three separate kitchens. Even the newer ones with one oversized central kitchen now go in for specialty food rooms with a specialized limited menu in each

The Sheraton chain is venturing into the highway hotel field with two projects: 8. a 300-room for Portland, Ore., and 9. a 200room hotel for Binghamton, N. Y., Samuel Glasser, architect. The Pick Hotels Corporation is moving into the field with two motels: 10. The Edge-O'-Town Molel, Rockford, Ill., E. P. Lewin, architect; and 11. Holiday Inn Hotel, Chattanooga, Tenn., William Bond, architect. 12. The "world's largest" motel is going up near the Pentagon Building, Marriott's Motor Hotel, by Hot Shoppes, Inc., Joseph Morgan, architect. 13. Chicago's famous Drake Hotel is building the Drake North, a \$2,000,000 highway hotel in the northwest suburban area of Chicago, Walton and Walton, architects. 14. One of the Jack Tar chain, this one in Orange, Texas, Goleman § Rolfe, architects.



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room. This allows the guest the choice of a number of different eating places at various prices.

This has several other advantages: the eating places are tailor-made for a variety of people with different tastes, different money and different times to spend it.

A typical example is the Hotel New Yorker in New York City. It had four public restaurants occupying 20,000 square feet of space. The kitchen and bakery alone occupied 31,000 square feet. With \$3½ million food and beverage volume, it was making a departmental profit of about 10 per cent, *before* light, heat, power, rent depreciation, insurance, and taxes. On a comparative restaurant basis, the hotel had been losing because it couldn't cover those expenses with 10 per cent.

To remedy this situation, first a survey was made to determine the income per square foot and turnover per seat. (Both were entirely out of line with commercial restaurants. Income was too low, and the turnover too slow.)

The character and design of one of the four eating places were completely changed. A 2700 square foot dining room was changed to be an eating and drinking restaurant equally conducive to breakfast, lunch, cocktail, dinner and supper business. The restaurant was to stay open from 7 o'clock in the morning until 3 o'clock the next morning. The cost of the change-over, including equipment and decor, was about \$175,000. Immediately, the annual income increased 90 per cent, to \$1 million.

In another dining facility at the same hotel, the income doubled from \$500,000 to \$1 million when it was converted. Then, a 5400 square-foot formal dining room was closed and diverted to banquet business. Within six months, the income was up 60 per cent.

While creating commercial rental areas is still in vogue, here and there low income producing shops are being turned into cocktail lounges or eating facilities. In one case a shop area which brought in \$9000 rent a year now nets \$60,000 in a newly created cocktail-cafe lounge in the same area.

With exception of the luxury hotels in Miami Beach and Las Vegas, and some of the better motor hotels on the highways, guestrooms in the new commercial hotels are considerably smaller than what was formerly considered a required minimum. In the 455-room Hartford Statler, the single rooms are only 96 square feet; doubles are 138 sq ft; small twins 150 sq ft; large twins 191 sq ft; parlors 410 sq ft; sample rooms from 140 to 313 sq ft.

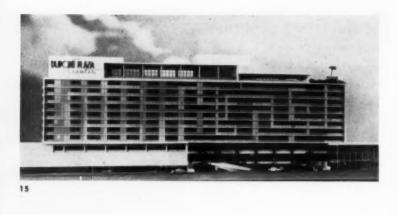
In the newer Dallas Statler Hilton they are only slightly larger, but in the newest hotel, the Philadelphia Sheraton, guestrooms are again smaller. There seems to be no guest resistance to small hotel rooms, provided the furniture is not over-scaled. Air conditioning and television, on the other hand, are something every traveler expects in a new hotel.

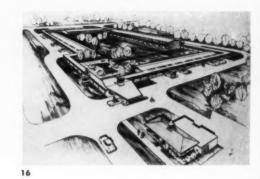
Most recently-built hotels have an equal number of studio-type and conventional bedrooms with alternating connecting doors. Room clerks, however, say they could do with fewer studio-type rooms. The demand for conventional beds is increasing. A 40–60 ratio, with the larger portion of rooms having conventional beds, might be a safer bet.

It's usually best to survey a locality for hotel room requirements. In certain cities, there is still a great demand for single rooms, while in others twin-bedded rooms throughout the house are more economical. Some recent surveys have shown an increasing demand for double beds in certain areas. Furniture can be changed to suit the demand, but permanent construction cannot. To make the smaller rooms large enough for a double bed, if needed, would seem a good solution.

The new hotel lobby is just large enough to handle the traffic. A minimum of seats discourages lobby sitters. The public writing room so popular in the 20's and 30's is a thing of the past.

Elevator control is important. With more operatorless elevators being used in hotels, the front office staff or bell captains should have an unobstructed view of the elevators.





TODAY'S TRENDS IN HOTEL DESIGN

After World War II the open front desk with everything built into the counter, made its first appearance. Guests could lean over the counter to see whether the house was full or empty. Room clerks and assistant managers had no way of discussing anything without being overheard by the guest. While the old conventional hotel desk, where clerks spent most of their time concealed behind brass fronts was bad, the completely open desk is not much better. The ideal solution is a compromise between the two, where room clerks and assistant managers can step out of guest's hearing. The pivoting room rack in all of the new Statler hotels is one way to do it.

Function rooms are receiving more design attention than in former years. Group business constitutes a major portion of the food and room income in city hotels. Flexibility and accessibility are major factors. Assembly areas which can be closed off and used separately should be included. Hotels in large cities and state capitals usually require larger function space because of a greater number of conventions. Storage space for banquet tables and chairs should be included. Some of the larger hotels have also located a public bar or cocktail lounge on the function room floor.

If sample rooms are specified, it will be wise to proceed with caution. Demand for sample rooms blows hot and cold. In most hotels sample rooms are used for small conferences. The newer hotels design them with that double purpose in mind. At the Philadelphia Sheraton a partition between two regular guest rooms has been eliminated, but bathroom plumbing connections in bathrooms are left intact. If it proves the hotel does not need as many sample rooms, the partition can be put back and bathroom fixtures installed for regular guest room use.

Almost without exception, hotels have insufficient storage space. Employe feeding facilities and adequate locker space are receiving more attention today than formerly. Usually it's best to have only one employe entrance and exit, preferably in connection with the delivery entrance, where the timekeeper can watch the traffic.

While 30 years ago the architect could make a guestroom or guestroom floor corridor any width, today he'll be picked up quickly by the alert hotel man if the floor measurements for wall-to-wall carpeting are not in multiples of the standard 9-in. carpet width.

The hotelman may also have definite ideas about bathrooms. He wants more shelf space for shaving and make-up kits, and larger mirrors with better bathroom lights. In the luxury type hotels, he demands larger bathrooms, possibly with two basins in twin rooms. And a glass shower door rather than curtains. (He doesn't have to buy them outright, but can write them off over a period of years and then own them.) In some of the newer motor hotels even the toilet is separately enclosed. Where costs must be trimmed, partial tiling in bathrooms might be a solution. Several hotels have switched to moisture-proof wall covering above the tiles. Some luxury hotels use both fluorescent and incandescent lighting in bathrooms.

Hotelmen stress preventive maintenance features in guestrooms. A great variety of color schemes is no longer necessary. Two or three color schemes are more economical to maintain than eight or twelve. A guest occupies only one room at a time and no hotel guest has ever refused accommodations because a hotel room wasn't in his favorite color.

Radio, hotelmen have learned, isn't entirely out of style. Many who have replaced radio with television get increasing demands for radios. Latest trend is to have a radio-clock combination, either built into the night stand or on top of the dresser-desk combination. But there are distinct disadvantages in this latest trend. If the house current is interrupted it delays the clock and makes guests miss trains and appointments. Also, in certain steel structures poor radio reception may make the investment wasteful. The better solution would be





a centrally-controlled clock, and a radio-television combination working off a master antenna.

Some of the newer hotels anchor new-type picture hooks permanently in the wall between two rooms where furniture is placed back to back in connecting rooms. Sooner or later a colorful, pictorial map of the area, and perhaps another of the immediate vicinity, pointing out places of interest, might replace the old picture print.

Savings in electrical wiring can also be achieved if furniture placement is shown in the plans. Some hotelmen prefer outlets just slightly below desk top height rather than at baseboard level. It saves on cords, prevents tripping. Lamps to be placed against mirrors need only half shades. The mirror reflects the other half.

Ceiling lights for over-all illumination have long been discarded. The new trend is to make the closet light serve as foyer illumination by undercutting the wall on the closet so the closet light will shine out into the fover.

Fewer desk or dresser drawers are another trend. Functional baggage racks take their place. Slanted fronts on drawers, with undercut fingertip grooves at the bottom make hardware unnecessary. Laminated plastics for furniture tops and fronts are standard today.

If preliminary surveys show the hotel will have a good portion of businessmen patronage, it's advisable to provide some rooms with larger-than-average hotel desk surfaces. Most recently-built hotels have a goodly number of executive suites. But it's more important to have more regular rooms with greater desk areas, even if it's accomplished with a raised drop-leaf.

Whatever the survey shows as to proportion of business men and vacation travellers, it is safe to predict for the future some interesting changes in clientele trends, as the downtown hotels go out for the highway business, and the motor hotels move ever closer to downtown to reach for the business man business.







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ociated Phot

More and more, motels are becoming part of other developments: 15. hotel with office building with architects bureau of building products, the DuPont Plaza Center, Miami, Frank H. Shuflin, John Edwin Peterson, architects. 16. a prototype design for Howard Johnson's southern restaurant-motels, this one for Portsmouth, Va., Rufus Nims, architect, with Carl Koch Associales; and 17, a similar prototype for northern areas, this one for Wilmington, Del., Carl Koch and Associates, architects, with Rufus Nims. 18. One of the important motels crowding into downtown territory, 1200 Beacon Street, Boston, Sturgis Associates, architects. 19. Many hotels are adding drive-in entrances, this one the Adams Hotel, Tucson, Ariz. 20. San Francisco seems a city where motels get downtown easily, this Holiday Lodge, by Hertzka & Knowles, architects. 21. A representative Miami Beach Motel, this one the Pan American, Carlos Schoeppl, designer.



LUXURY HOTEL FOR AIR-CONSCIOUS BEIRUT

PLANNING HOTELS for the exolic, exciting cities that appeal to American tourists may have a romantic sound, but it is strictly business for Intercontinental Hotels Corporation, a subsidiary of Pan American World Airways. In the words of Byron Calhoun, president, "When you design a hotel, you are not designing a building; you are not designing a shelter for a business; you are designing the business itself." On this theme he, with Joseph Salerno, chief architect, and Richard S. Smith, construction chief, study the income polentials for hotel schemes, whether the designs are their own or those of architects they have commissioned. This hotel design and the two shown on succeeding pages, are examples of current projects, with analytical notes supplied by Intercontinental.

 \Box As air travel to the east has grown, Beirut has become a great airport city, one of the busiest in the world. Besides being the air entrance to the east it is the recreation center of its corner of the world, where one can swim in the Mediterranean or ski in the mountains; it is an oasis then for American colonies throughout the middle east. The hotel thus combines a business and luxury tourist trade, and is designed to dominate in both categories.

□ Feature is ballroom and theater combination. Theater can operate separately as a movie house, or it can join with the ballroom for business functions. As a convention auditorium it far surpasses the folding chair arrangements. Or, it can be used for exhibits, with virtually the whole ballroom becoming its stage.

□ Ballroom can be arranged in various space combinations, with or without adjoining ante rooms.

□ Theater-ballroom traffic kept entirely separate from general hotel activities.

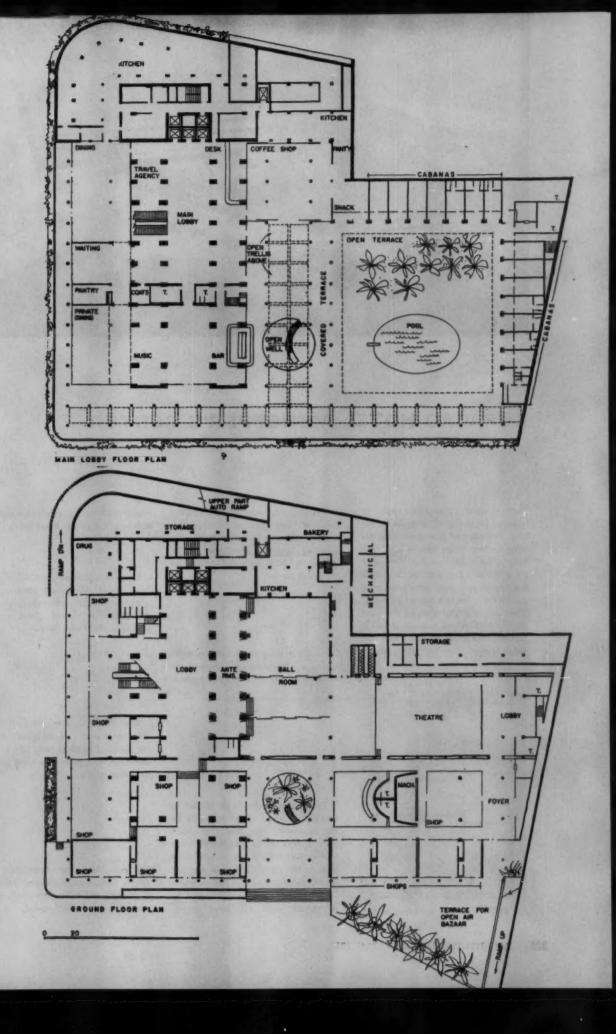
□ Extensive shop areas at ground level. Most of these, it is planned, will be developed as native bazaars, possibly with several concessioners together in one store space. All of this activity, however, is fairly well isolated from main hotel areas, especially from the extensive terrace areas and cabañas around the pool.

□ Trellises around terraces will serve to break up direct sunlight, but will be punctured by openings to permit sunbathing.

□ Coffee shop and snack bar open to the pool areas, also a cocktail bar.

□ Another bar will be located at the lower level at the deep end of the swimming pool, which will have under-water windows so that bar patrons can watch swimmers.

Hotel Phoenicia Intercontinental, Beirut, Lebanon, for Intercontinental Hotels Corporation. Edward D. Stone, architect. Peter Bruder, mechanical engineer. Gorlin & Atlas, structural engineers.



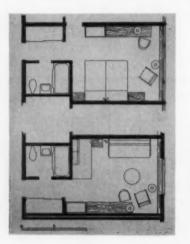


CURACAO HOTEL A SHOPPER'S CENTER

THE ALMOST COMPLETED holel at Curaçao (Willemstad) occupies the sile of a 300-year-old fort overlooking the busy harbor. Ships are reloaded here before entering the Panama Canal, and, since this is a free port, all the tourist boats stop here and passengers rush ashore for a feverish day of shopping. This sort of traffic explains the holel, in the first place, also some of its features. Since the model (above) was made another story has been added to the near wing. □ The large dining rooms overlooking the pool were planned to serve the tourists who may leave a ship for only a day of shopping. These crowds can be handled with little disturbance to the hotel guests.

□ Rooms in the ancient fortress walls will be developed for little shops to attract people in the two-level garden. water windows. Soda fountain service will be given at the lower level.

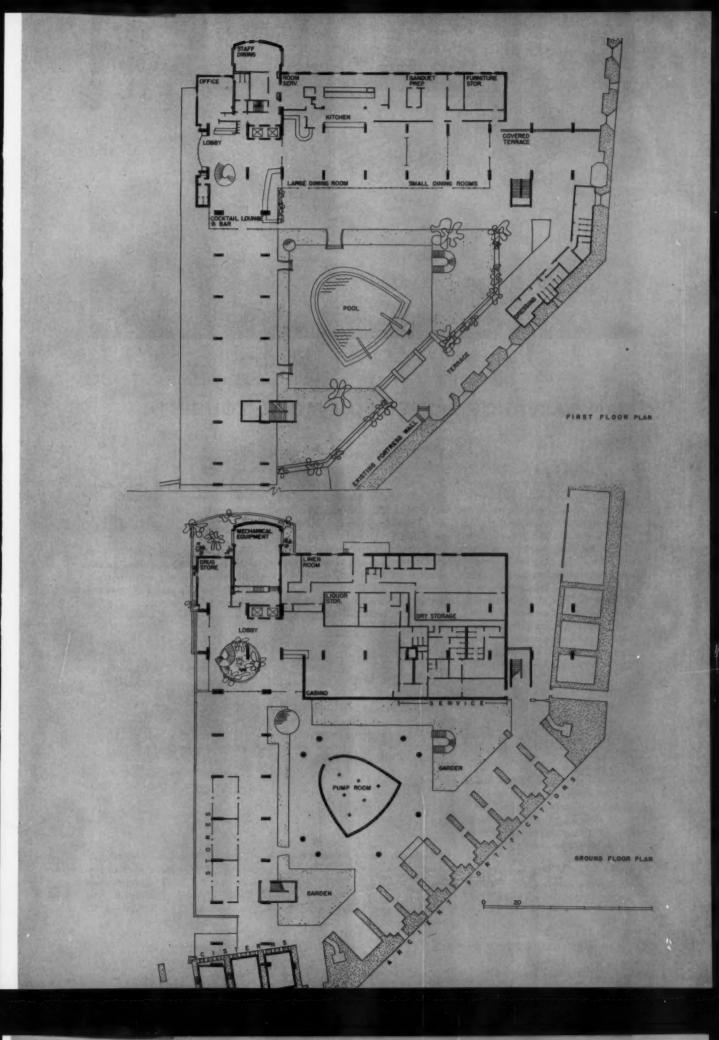
□ Climate is pleasant, but sun can be hot. Hence the raised guest room wing on stilts, providing shade at two usable levels. Raised guest rooms also keep the views open.



□ Triangular garden is developed in two levels. What would normally be the basement level must be above ground because of the water table (three feet); this is the ground floor level in the plans. The pool was put at a higher level so that the view can be enjoyed. Lower level will also be developed; pool will have under□ Plan develops one of Mr. Calhoun's favorite points: keep all money-making facilities in plain sight of lobbies, elevators, and so on, to keep guests conscious of them.

Curação Hotel, for Intercontinental Hotels Corp. Joseph Salerno, Richard S. Smith, architects; Ben Smit, associate architect in Willemstad.

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SAN SALVADOR HOTEL FOR MORE TOURISTS

SAN SALVADON, capital of El Salvador, is another of those locations combining business, diplomatic and tourist activity for a hotel, though some of this potential is yet to be developed. This Central American country is wealthy and stable, with heavy coffee investments contributing to prosperity. The new hotel, planned to be THE one, will be on the outskirts of the city, in the line of growth and on the Pan American highway which will be connected to this point in due course. The hotel is exceptionally well arranged for caring for its multiple functions.

 \Box One of Mr. Calhoun's principles is that the kitchen should not be too large. Most hotel kitchens, he points out, are costly because they are too large: more steps to be taken by all concerned, inefficient operations. The chef usually manages to hire another employe for every extra corner of a large kitchen. This particular one is kept small and efficient, is augmented by some food preparation areas in the basement. has adequate storage and maintenance shop areas in basement.

□ Round front desk provides very good control in all directions. An important point in any hotel, particularly in one planned for efficient use of personnel.

□ Service drive at lower level in the rear, for quiet unobtrusive operation.

□ Cocktail lounge is well placed for multiple service. It works by itself as bar lounge, it serves the swimming pool area, or becomes part of the supper club for the night hours.

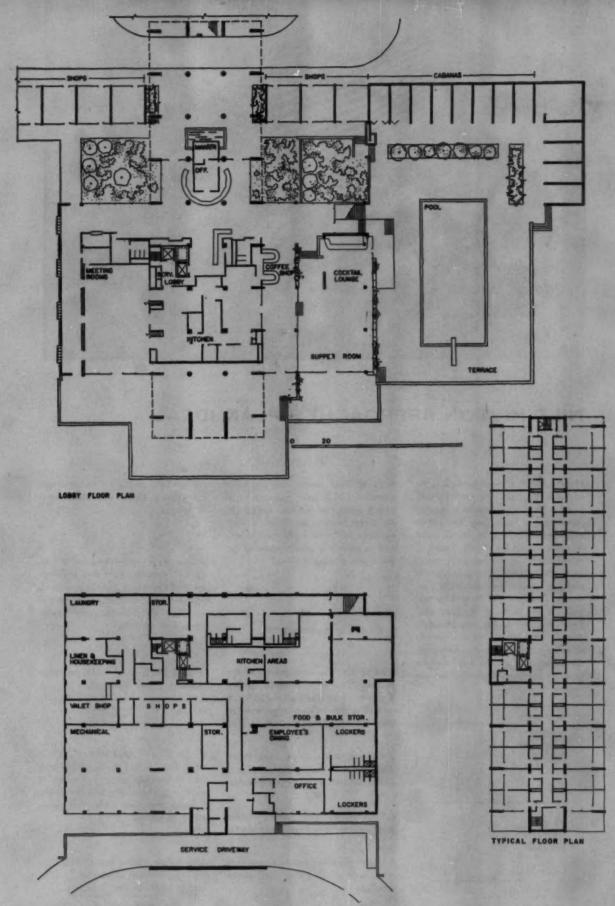
> □ Good shopping areas to develop interest for guests and income for hotel.

□ Central placing of kitchen makes for ideal service to various locations. It serves conveniently in four directions, to four separate dining facilities: to the meeting rooms, to room service via service elevators, to coffee shop and supper room, and (downward on plan) to a bar and barbecue combination that has been added on the terrace above the service driveway.

□ Coffee shop and cocktail lounge prominently placed to attract business.

□ Hotel is compactly planned, but

Hotel El Salvador, San Salvador, El Salvador, for Compania Hotelera Salvadorena, S.A., and Intercontinental Hotels Corporation. William B. Tabler, architect.

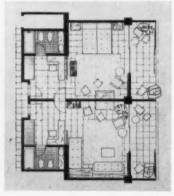


BASEMENT FLOOR PLAN



NILE HILTON APPROACHES PLAN IDEAL

HILTON HOTELS INTERNATIONAL. the branch of the Hilton empire that operates foreign hotels, also takes a hand in planning them for best and most profitable operation; if not in fact the client they are at least the client's American representative in dealing with architects. Curt Strand, vice-president in charge of construction, assisted by Emmanuel Gran, head of the architectural unit, is the focus of the functional know-how here; he has been known to work a hotel scheme up to twice its original earning capacity. Comments about the plans of this hotel and the next two shown are typical of the con-



cerns of hotel design for profitable operation. This hotel, planned as a luxury operation catering largely to American tourists, represents a particularly satisfactory planning effort, and an especially good example of the desiderata of this operation.

□ Kitchen is "best of all."

□ Ideal service arrangements from central kitchen to various dining areas — a matter of many man-hours — and to service elevators, for room service, and delivery to roof kitchen.

□ Ballroom and private dining room divisible by folding partitions. Each section accessible via service corridor.

□ Cocktail bar near dining rooms. Bar (not on these plans) near street.

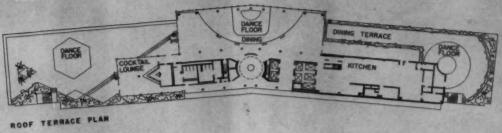
□ Coffee shop in prominent location with respect of lobby and street frontage. Especially good for this particular operation is plenty of rentable area for shops.

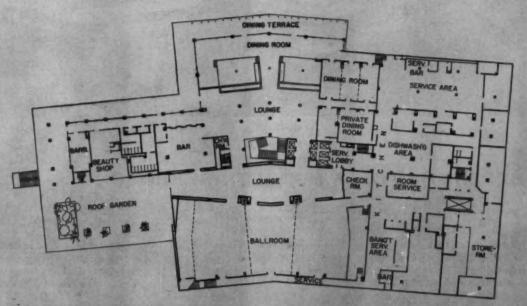
□ In a city where outdoor living is an age-old custom, intensive development of the site is plainly indicated. This scheme develops its income potentials, with shops, refreshment spots, roof gardens.

□ Good handling of double entrance problem. Good front office control. Executive offices well related to operations.

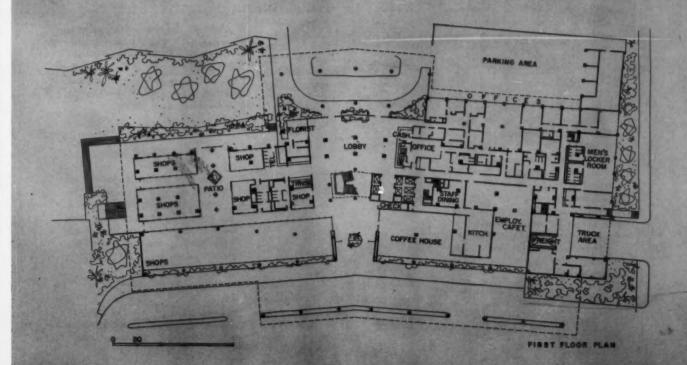
□ Like plan of guest room ("This is what you sell"). Like especially curtained dressing area. Bathroom is good — has lavatory shelf, also bidet. Balcony five feet wide, full room width, is usable.

Nile Hilton, Cairo, Egypl; Misr Hotels Co.; Welton Becket and Associales, Archilects and Engineers.





SECOND FLOOR PLAN





BERLIN HILTON A BUDGET ASSIGNMENT

BECAUSE OF A GREAT HOUSING NEED in Berlin, there was no inclination to make this hotel a luxury project; it was built to meet a budget. This is not to say that it is exactly a hovel, with its nice eating places, not to mention its pool, its facilities for important diplomatic functions, and so on, but it does not have all of the luxury items of some of the more glamorous of walering places. It occupies an important sile overlooking the Tiergarten, and will be much used by traveling public and v.i.p.s. alike.

 \Box Any hotel needs some item of especial appeal, budget or no budget. Here it is the swimming pool, which in the heart of Berlin is likely to be more talked about than the pool of, say, the Nile Hilton at Cairo. Thus the pool becomes the visual focus, and sort of activity focus as well. Sliding doors will open many rooms, in seasonable weather, to the pool and its terrace. The fondness of Europeans for eating out of doors suggests very good business in these poolside areas.

□ American touches are much valued in hotels of this type. A soda fountain for example, is not only an excellent conversation piece in Berlin, but a source of worthwhile profit.

□ A modern American hotel touch is the variety of small dining rooms of the specialty type. A rotisserie is featured here, much as it might be in America, and there is no doubt that it should prove just as successful as similar ones in our own land.

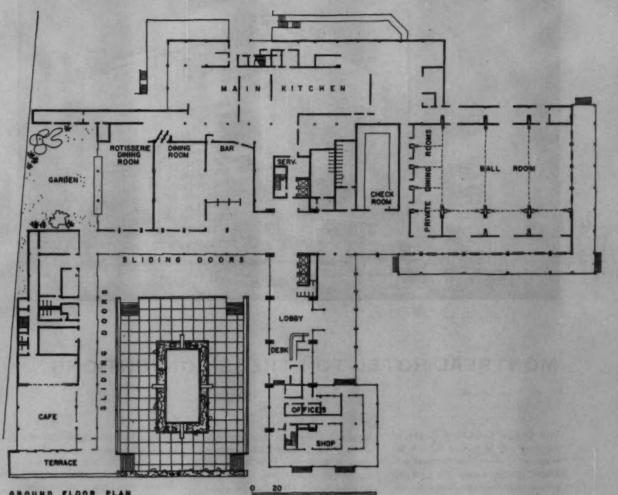
□ The European eating-out habits are catered to also with extensive hofbrauhaus facilities on the roof.

□ Serving all these eating places focuses the kitchen problem in hotel planning. Here a large central kitchen is arranged to do this job with maximum convenience. Direct serving corridors reach from kitchen to all eating places except the coffee shop (this one always gets its close-to-street location and never-mind-the-kitchen-location).

□ Ballroom is exceptionally well placed not only for serving but also for crowd handling. As usual in modern planning, folding partitions make it possible to cut up the ballroom space into separate function rooms, each with anteroom attached for the inevitable cocktail parties.

□ Front desk gives good control view of entrances, elevators and so on. The circulation route of hotel guests is also good; he is made conscious, first of pool and its terrace and eating rooms, then of dining rooms and bar indoors to the rear of the pool.

Berlin Hilton for Hotelbau-Gesellschaft, Pereira & Luckman, architects.



GROUND FLOOR PLAN

OFREPLACE C1 1.0

ROOF BAR PLAN

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TYPICAL FLOOR PLAN

ARCHITECTURAL RECORD MAY 1957 229



MONTREAL HOTEL TO STRESS CONVENTIONS

THE QUEEN ELIZABETH HOTEL at Montreal will be part of the new development of the railroad terminal, will directly join the station. The holel will be built by the Canadian National Railvays, but operated by Hilton International. While undoubtedly there will be tourist business, this building is not primarily designed to draw the tourists for lengthy slays, but for business men, especially for conventions. So the income-developing study gives first altention to the extensive banquel facilities, to insure economical service and profitable food and bar sales.

Main banquet room can be extended by two progressive additions, via movable walls.

 \square A whole row of private dining and/or conference rooms, which can be arranged in a great variety of combinations.

□ It is very important, says Strand, that each banquet room or large private dining room have its own foyer space for the cocktail hour before the banquet; frequently small private dining rooms are used for that purpose, if available. Here there are convenient spaces just across the banquet foyer; they can be partitioned as the occasion demands.

□ A bar is located at a focal point on the banquet floor; at times it can be a source of great profit.

□ Banquet kitchen is well located with respect to all banquet and private dining rooms. It is directly above main kitchen, is served from there by kitchen elevator.

□ From preliminary to working drawing stages, planning study increased the income potential by 100 per cent. ing attractions, is exceptionally effective merchandising.

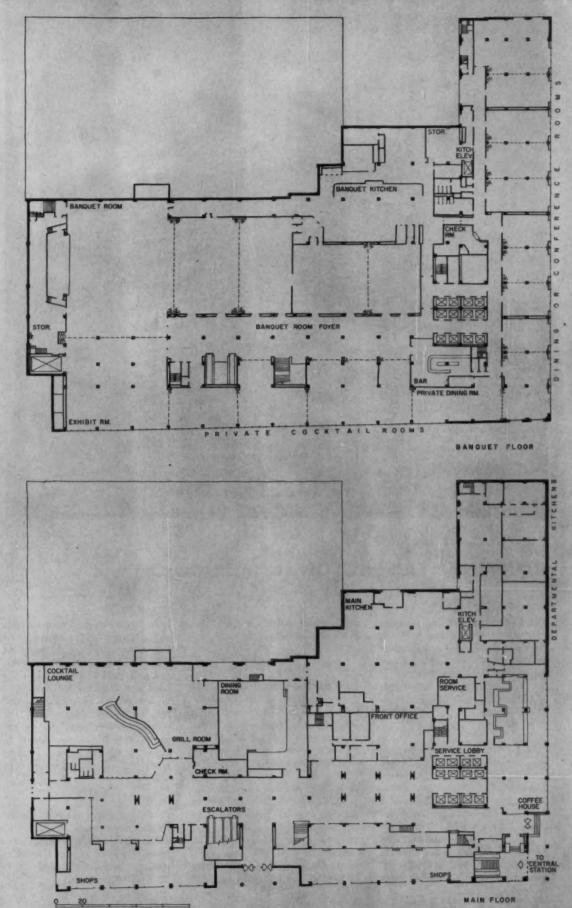
Dining area broken up into three separate rooms — intimate specialty rooms do much more business than large formal rooms.

Main hotel kitchen serves all dining areas efficiently.

□ Coffee shop located for street traffic; is still close to main kitchen.

□ Lobby kept relatively small. Circulation good from entrances to desk to elevators to shops to dining rooms.

□ Principal public dining rooms open directly off lobby; location keeps hotel guests conscious of hotel's dinThe Queen Elizabeth Hotel, Montreal, Canada; Canadian National Railways, H. C. Greensides, Chief Architect.





James Vincent

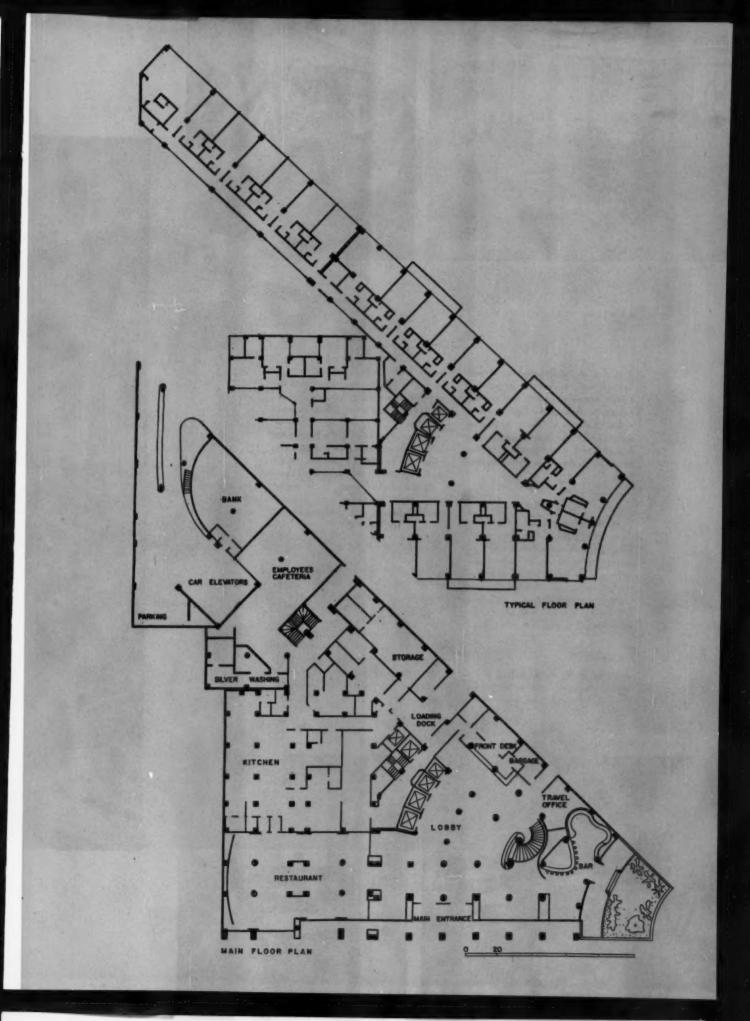
CONTINENTAL HILTON IN MEXICO CITY

THE CONTINENTAL HILTON possesses the first requisite of a good holel, and one not always enjoyed by large holels in great urban centers. It is situated conveniently and pleasantly on one of the magnificent circular intersections of Mexico City's wide, tree-lined Paseo de la Reforma.

 \square In choosing this site the owners and architect were confronted with the considerable job of integrating an existing structure into the new whole. This task has been generally successful, and it will be the rare guest who is aware of the marriage. It is difficult to know how much the architect may have been inhibited by this aspect of the program. Certainly the general exterior character of the work seems not as strong as the handling of the individual interior spaces.

Outstanding among its successes is the handling of the entire arrival procedure, from auto approach to room entry. Initially, the one-way traffic, tree-separated side lanes of the Paseo permit a quieter, roomier auto arrival. But the great genius of the plan is revealed in the way the guest proceeds from entrance to registration desk. Most importantly, one can see the desk from the entrance, and on the way there can see as well where the elevators are, and -- of real significance to guest and management - can see and get some sense of the quality of the first-floor cocktail lounge on one side and the restaurant on the other. Since these make a good impression, there is an excellent chance that the guest will spend his first pesos right in the hotel. In a city filled with first-class food and drink dispensaries this has considerable importance to the management. The course from desk to elevator and elevator through generous lobbies to individual guest rooms continues easily.

Continental Hilton, Mexico City, for Construcciones Internacionales, S.A., Hilton Hotels International de Mexico, lessee. Fernando Parra Hernandez, architect and general contractor. David T. Williams, decorator.







CONTINENTAL HILTON

□ Private rooms are amply sized, well lighted, and comfortably appointed. Public rooms are easy to find and are equally attractive. To both kinds of space David T. Williams, who is responsible for the interior design, has brought real understanding of the manifold problems in hotel decoration.

□ At the main entrance, the glass doors have pulls of the plumed serpent design in cast brass, inlaid with semi-precious stones, mosaics of malachite, lapiz lazuli, etc. Columns at the entrance are of black Belgian granite; uncarpeted floor section is of ivory white terrazzo with brass chips contributing a gold dust effect.

□ Lobby walls are of native ivorycolored onyx; staircase to mezzanine of the same onyx, with brass railing inlaid with mosaics of malachite. Carpet is handmade; background is blended tweed in a two-tone gold with the plumed serpent done in gold shearing.

Upholstery fabrics in the lobby are of handwoven wools and silks with metallic threads. Colors are deep gold with black and varicolored metallics; a plaid of green, blues, golds and fuschia metallic, and bronze leather trimmed with gold leather.

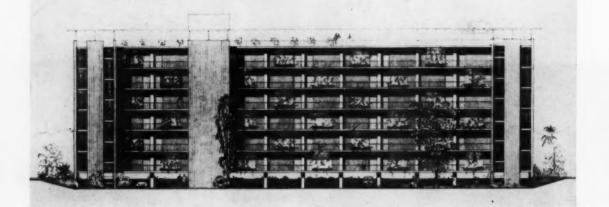
□ Most interesting — and far too unique — is the use that has been made of the talent of local artists. Everywhere and in myriad ways the sculptors, painters, fine designers, and craftsmen of the city have made of the hotel a useful and stimulating gallery of their work. Murals and door handles, fountains and fabrics, furnish a dimension little known in usual hotel life.





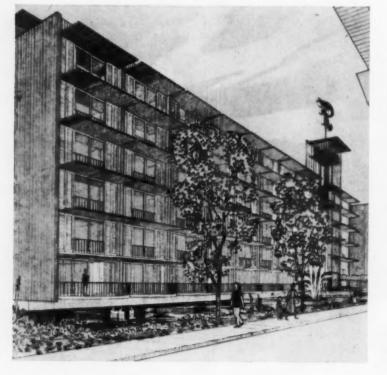




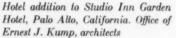


SIX-STORY ADDITION TO GARDEN TYPE HOTEL

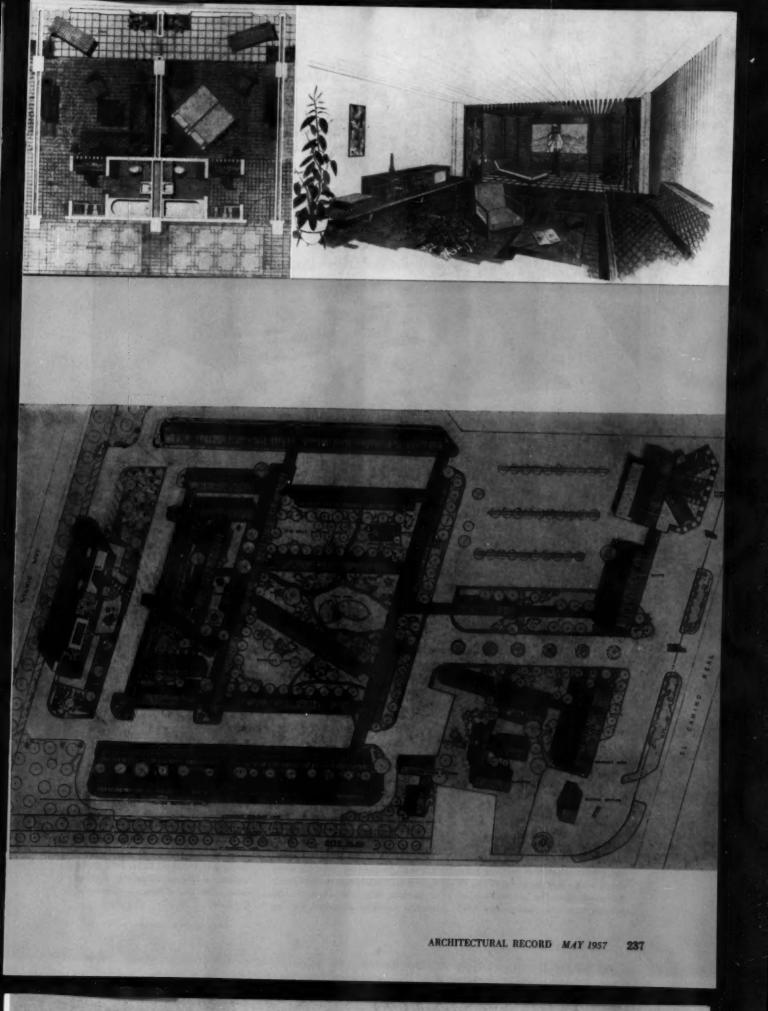
IT SEEMS CHARACTERISTIC of the times that as the small, intimate, horizontal hotels achieve more success they tend to extend themselves upward. Here is a six-story addition to the well known Studio Inn Garden Hotel in Palto Alto. It is carefully planned and placed to suggest rather an enclosure of the garden than a change in character. □ The new building, measuring 36 by 190 feet, will rise from a depressed water garden area extending under the first floor. Access to the entrance lobby and an unusual free-standing steel and glass elevator enclosure, is gained via a curved bridge from the garden. □ Individual rooms, eleven to the floor, will be commodious, to cater to permanent as well as transient guests. Each room is entered from a balcony corridor extending at each level along the rear. There are no windows on this side, and the outer side of the corridors is screened with a ceilingheight trellis to insure privacy, both for guest and for nearby residents.

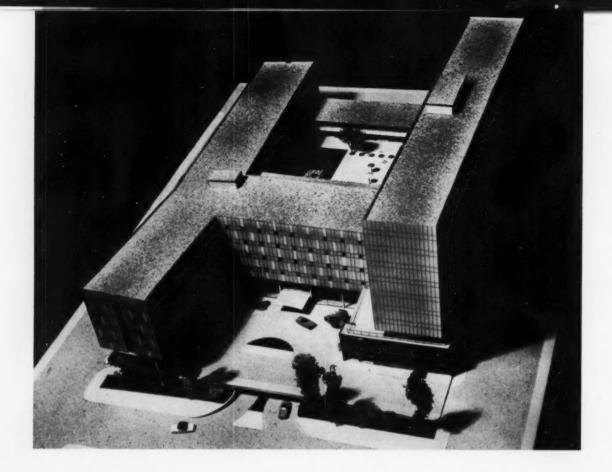


□ Each guest room will have a tilefloored lanai with wood jalousies, sliding glass doors and ornamental iron railings. This arrangement is calculated to give a sense of garden living, not to mention a planned place for sun-lounging.



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HIGHWAY HOTEL COMBINED WITH OFFICES

THE HIGHWAY HOTEL is not only moving downtown, it is also becoming an office building. Here is an interesting project showing how the old motel idea has developed. It has not lost its identity with the highway, nor with the informal ways that the automobile seems to conduce to. The effort here is to bring the convenience and relaxed air of the travel court logether with close-in location values and other city amenities.

Site is a full block between Post and Geary Streets, San Francisco (these two streets bound Union Square a few blocks away; and Van Ness Avenue (Highway 101, to Golden Gate Bridge) and Franklin Street. Major elements of the project will be 1) a 400-room hotel, 2) 150,000 sq ft of office space; and 3) a 600-car garage.

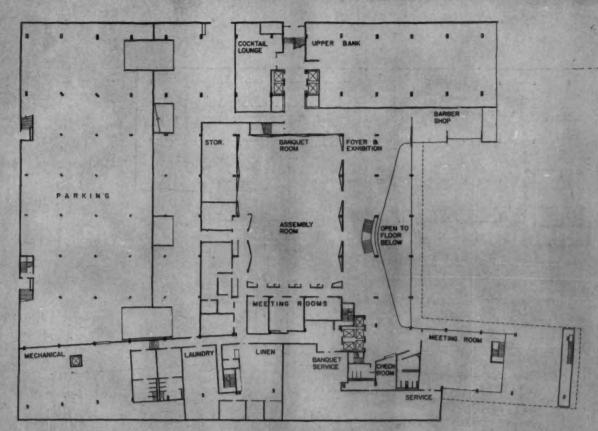
"We have thought," writes the architect, "that the hotel should provide all the amenities, the glamour and the convenience of location associated with a downtown hotel and at the same time the convenience of movement of the tourist court and the relaxed atmosphere of the resort. Incorporated in the design are those features expected of a fine hotel, such as restaurants, bars, meeting rooms accommodating up to 1000 people, laundry, garage, central air conditioning, circulating ice water, barber shop, beauty shop, valet, etc. Once the hotel amenities have been incorporated, there is left the problem of offering the guest the same convenience he can find in a tourst court . . .

"Our solution to this problem is to place the hotel rooms atop a 4-story parking garage laid out for self parking and equipped with several elevators located in convenient quadrants of the building and traveling through all floors of the garage and the hotel. By simply locating a registration desk in the garage entrance we have made it possible for the guest to register and go directly to his room, just as he would in a tourist court. But once he emerges from his room there is no resemblance in the variety of recreational, entertainment and business facilities furnished by this

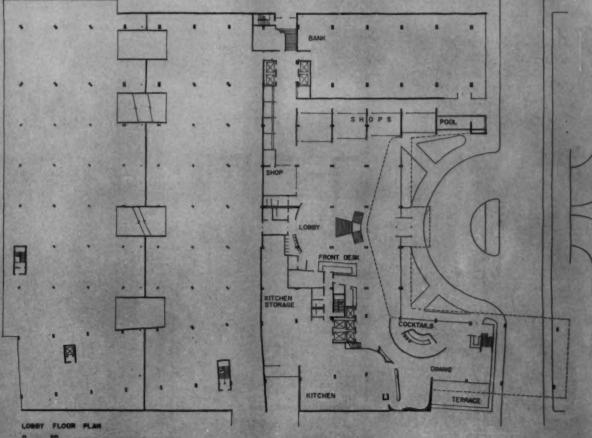
hotel and that furnished by the normal tourist court . . .

"The idea of incorporating an office building into this project has numerous advantages, not the least of which is that of adequate parkinggarage space. The tenant can drive directly into the garage and take the elevator to his floor. Or, he can stop off for breakfast, or take a client to lunch in one of the smart eating spots in the hotel, or entertain a business prospect in the poolside cocktail lounge. The larger company can also call its out-of-town sales force in, house the people in the hotel and use the hotel's meeting rooms and catering service --- all under the same roof."

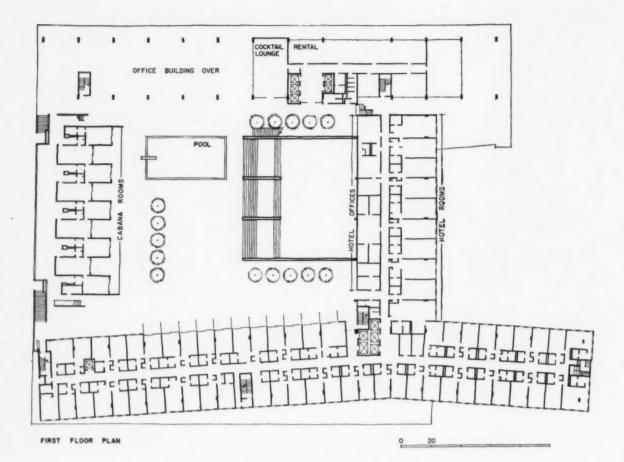
Hotel and Office Building for C. A. Sammons, San Francisco, Cal. Thomas M. Price; Hertzka & Knowles, Associated Architects. Thomas D. Church, Landscape Architect; R. L. Reid and Graham & Hayes, Structural Engineers; Joe A. Poole, Mechanical Engineer.



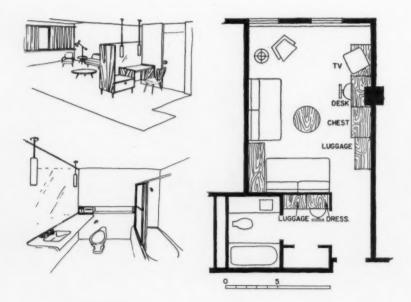
MEZZANINE FLOOR PLAN



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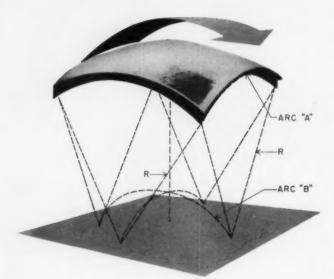
HIGHWAY HOTEL



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PRECAST SHELLS ROOF A SUPERMARKET





PRECAST SHELLS ROOF A SUPERMARKET

Here is a new approach to precasting — that is, taking real advantage of the structural and architectural potentialities. Twelve circular translational shells with a 24-ft span in each direction were cast at ground level and then hoisted by two small cranes. Costs were low, visual interest high

Architect: Victor Christ-Janer and Associates. Structural Engineer: Paul Weidlinger, Consulting Engineer, Mario Salvadori, Associate; Matthys Levy, engineer in charge. Contractor: The Wenzel Company. Owner: Walter Stewart, New Canaan, Conn.

AN UNUSUAL COMBINATION of architectural concept, engineering design and construction technique has produced a structure which may set a new trend in the use of precast concrete. While precasting has gained greatly in volume in the last few years, generally only a few of the advantages have been exploited — such as reducing formwork and providing closer quality control. Most precast concrete structures have been quite conventional, differing little in shape from steel framing.

The roof structure shown here stems from a much more imaginative approach by relying on the shape of a thin shell to get an efficient structural component, while retaining the other advantages of precast concrete. The architect envisioned a series of shells of such size as could be precast at ground level and lifted to roof height by a small crane. With this as a premise, a little figuring showed that a shell covering a 24-ft bay could be handled without trouble. This spacing caused no problem in terms of layout for shelving, food cases and other equipment.

There's no doubt that with a 24-ft column spacing there are a number of standard structural roof systems that could have given a minimum depth at low cost, but in this case the architect has also managed to achieve a high degree of structural interest while keeping the cost down to a respectable \$13.25 per sq ft, including air conditioning.

Once this idea had been decided upon, it was thin shell designer Mario Salvadori who suggested that an appropriate shape for repeated use in the roof would be a circular translational shell. The resulting solution was 12 shells each covering a 24-ft square bay.

Geometrically the shell is formed by

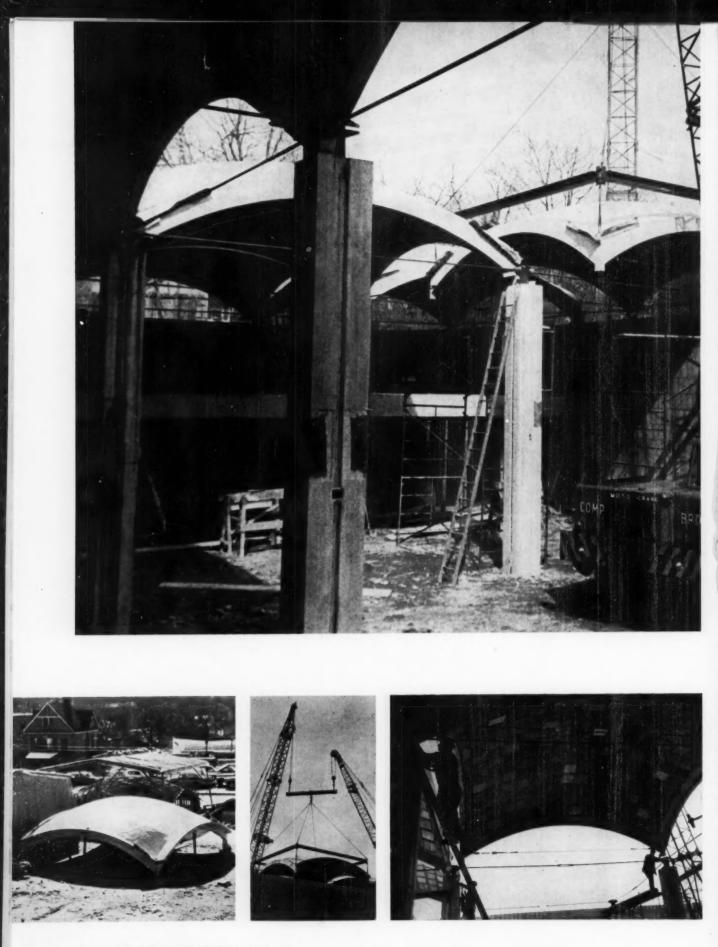


All photos by Charles Payne

At top left, diagram illustrates the generation of a circular translational shell, the type used in the supermarket. Arc "A" follows arc "B," at right angles to it. In the large photo a form is shown ready to be poured. Reinforcement pattern tells the nature of stresses. At near right, close-up of reinforcing and insulation; note flashing and lifting lug in corner. At far right, columns have fittings on top to which tie rods are welded



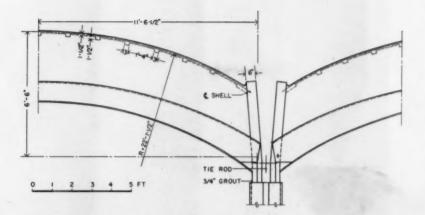




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The shell ribs are tipped back to leave space for plastic skylights. The ribs do not come clear down to the columns but merge into short stubs. Both are architectural features to emphasize the structural "separateness" of the shells. Space between shells at columns is filled with sufficient concrete to cover the steel tie rod fittings; rods then take rib thrusts

translating a circular arch 24 ft in span and 3 ft 3 in. in rise over an identical circular arch at right angles to it. (A translational shell is geometrically different from a spherical dome cut on four sides. The membrane stresses in it are quite different too.)

Although the first thin shell built in Europe in 1910 was actually a translational shell of this type, circular translational shells have only become popular again in recent times. (Salvadori has designed four of them in Italy made out of tile and concrete, the largest of which is 61 by 93 ft.)

The translational shells in New Canaan are the first of their kind to be cast integrally with their boundary arches on the ground, and then to be raised in place by means of a crane. (Actually two cranes were required at \$150 apiece per day. With only one crane, there would have been a tendency for the shell to "drift" during lifting, possibly upsetting it.)

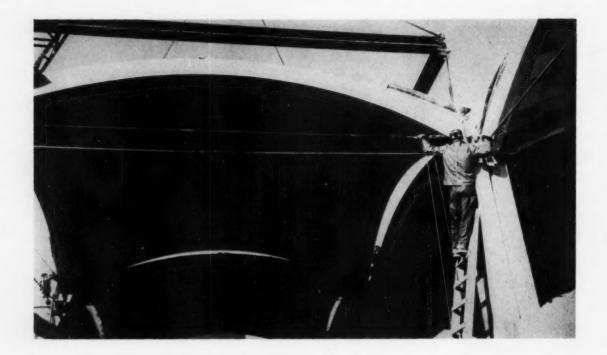
The repetitious use of individual forms on the ground together with a shell reinforced with only 0.37 psf of steel, makes this type of construction especially economical.

In addition to the 2- by 2- in. welded wire reinforcement, the shell is reinforced at the corner in order to prevent cracks due to tension in the diagonal direction.

Number 4 bars on 6 in. centers constitute shell reinforcement between the boundary arches and the shell. The thrust of the arches is resisted by means of $1\frac{1}{4}$ -in. tie rods welded to specially designed jaws set in the top of the columns.

The circular arches are 6^cin. wide and vary from 1 ft at top to $1\frac{1}{2}$ ft at haunches. The arches lie in a plane inclined towards the center of the shell so as to offer four bands of light around the shell, and to emphasize that from a statical viewpoint each shell is an independent element and gets no support from the adjacent shells.

The forms built on the ground were constructed of thin ribs 19 in. apart, on top of which were laid insulation







Shell being guided into position alop columns. Note temporary tie rod above, permanent tie rod below (with turnbuckle). Tie rods across interior shells are required because of the possibility of unbalanced load conditions; otherwise thrusts from shells would cancel

Permanent $1\frac{1}{4}$ -in. tie rods were welded to special fittings set in the columns. The jaws are $\frac{1}{2}$ -in. plate welded to a "box" section formed by two 6- by 5- by $\frac{5}{4}$ -in. angles

blocks of cement coated fibers, $2\frac{1}{2}$ -in. thick, approximately 16-in. square.

The contractor originally built two forms which were decreed adequate for the schedule, but unforeseen delays caused him to build two more. Since casting was done in freezing weather, the form was protected by a movable temporary shelter.

The concrete was poured directly over the insulation in a thickness of $1\frac{1}{2}$ in. while the insulation blocks created a grid of ribs 3-in. wide and 3-in. deep. (Because of the shell's curvature it was impossible for the insulation blocks to butt on the edges.) The ribs themselves are not necessary for structural strength, and could have been a lightweight insulating concrete.

While the underside of the shell will remain untouched, the outside will be painted with three coats of acrylic plastic paint which will weatherproof the roof, but will not be affected by shell movement. The skylight created by the incline of the boundary arches will be covered by strips of white corrugated reinforced plastic material, nailed through rubber gaskets to special wooden inserts in the shell.

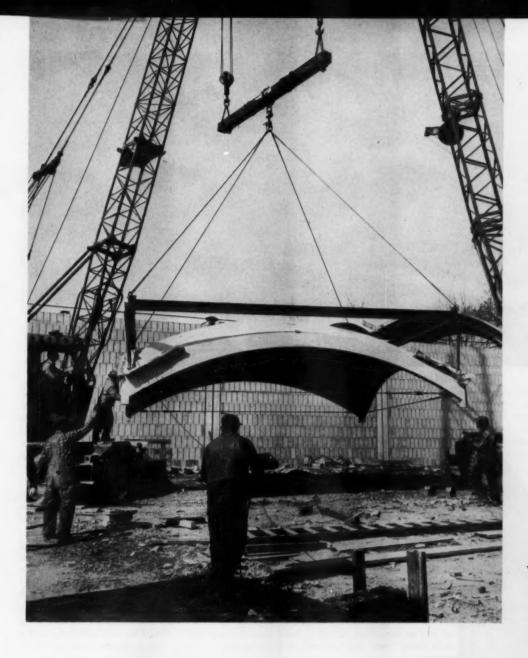
The shells weigh $13\frac{1}{2}$ tons and were lifted by means of a special frame which grabbed $\frac{3}{4}$ -in. bent rods cast into each corner of the shell.

The lifting schedule was two shells per day, but the contractor feels that on another job this could be increased to three.

Temporary tie rods were attached to the boundary arches during the lifting operations to provide stiffness, and were removed by burning them off once the shells were in place.

Drainage is accomplished through pipes set in center of interior columns and through scuppers at the fluting of exterior columns. Flashing was placed in the corner of the shells around the pipe insert.

This type of design can be easily adapted to shells 30 to 40 ft on a side, the only limitations on the dimensions of the shell being the cost and availability of crane service.



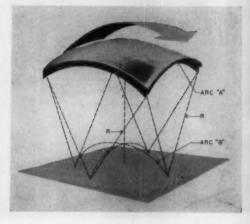
How the shell acts, and the nature of its stresses

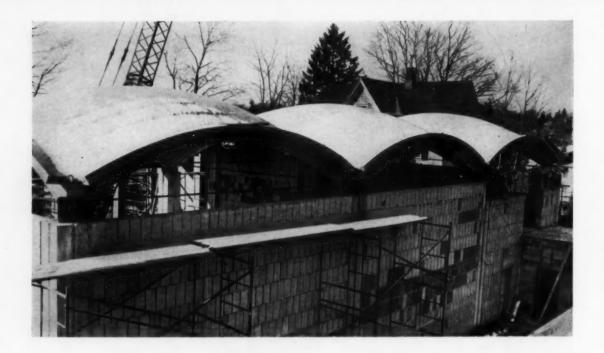
IN DESIGNING A thin shell, the engineer aims at having a shape and means of support such that most stresses in the shell are membrane stresses — direct tensions, compressions and shears in the plane of the membrane. It is desirable to avoid bending stresses as much as possible because this both complicates the analysis and increases the amount of reinforcement needed.

One might think that a membrane is practically self-supporting, that it can almost exist free in space with a minimum of support at the edges.

This is not so because at the edge of the membrane (or shell) there are forces that must be resisted so that the membrane will be in equilibrium. The ideal solution is a very thin, deep rib (a diaphragm) infinitely rigid in the vertical plane, but with no resistance in the horizontal plane.

Under this condition, forces parallel to the rib will be resisted by the shearing





Exterior shells have a cast-in-place "awning," provided with a reglet for window installation. Concrete blocks are set on end for a vertical wall pattern (difference in color is caused by variation in block moisture). Columns have a fluting to provide additional interest

Opening between shells gives a strong sense that shells are independent units. Corrugated, white reinforced plastic is attached through gaskets to wooden insert in the shell

strength of the rib. Forces normal to the rib will tend to displace the rib. Since it is actually impossible for the rib to be entirely free to move, bending forces (called boundary disturbances) are set up at the edge of the membrane, penetrating some distance into it depending on the shell thickness and the rib.

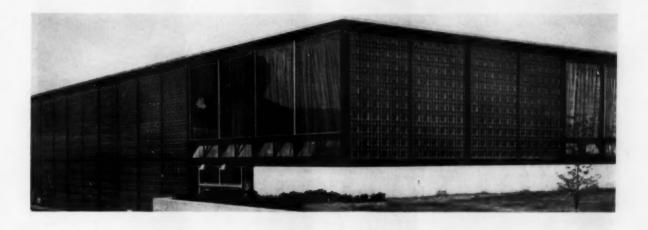
In the case of the translational shell shown in this article, arches tied to the shell are the elements which take the shear forces of the shell. These forces cause thrusts in the arches which are resisted at the ends by tie rods.

In the circular translational shell, the computed shear forces at the corner of the shell are infinite. In practice this does not happen, because the ribs have a certain lateral rigidity. But they are high enough to require special diagonal reinforcement at the corner.

At the junction of the rib to the shell transverse shears are developed which produce bending stresses in the shell.

For most of the shell, 2- by 2- in. welded wire reinforcement can be used to take the direct stresses, but rods are used next to the ribs to take the bending stresses. These bending stresses vanish rapidly away from the rib due to the curvature of the shell and its small thickness.

Materials . Equipment . Furnishings . Services



CURTAIN WALLS, COLOR ADD GLAMOUR TO GLASS BLOCK

Two RECENT DEVELOPMENTS — the use of glass block as a curtain wall material, and a new color-finished block — promise to give the Cinderella of the glass industry a leading role in building design.

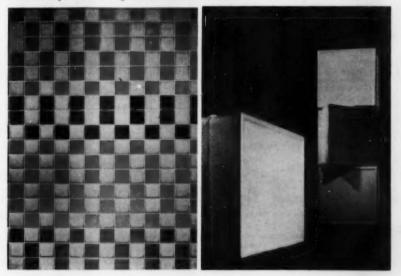
Until recently, glass block has been relegated to playing a practical and utilitarian - but not very glamorous supporting part. And, while architects have recognized and used its unique properties as a building material since glass block arrived on the American scene over twenty years ago, a survey conducted for the Pittsburgh Corning Corporation showed that many of them had tired of it. This may have been due, at least in part, to miscasting. Although glass block is both glass and masonry, it has inevitably been used most often for its most obvious advantages - those of a sort of "super-glass" which provides controlled natural lighting without glare, insulates against heat gain or loss accompanying large window areas, and eliminates expensive sash. Its potential use in walls (as masonry) rather than in window spaces (as glass) has been largely neglected.

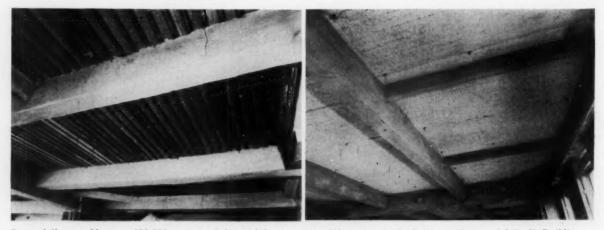
Now, such pioneer projects as Milwaukee's seven-year-old Layton School of Art, designed by John B. Waldheim Associates, have proved the practicality of glass block as a wall material, and the technique has gained increasing acceptance, spearheading what may prove to be a revolution in the glass block industry. What are the advantages of a glass block curtain wall? Add to its light-transmitting properties, its insulating value (glass block has a u-factor equivalent to that of an eight-inch masonry wall), its corrosion-resistance and easy maintenance, another factor — economy. Because one trade installs the entire wall, a glass block curtain wall can be erected at a lower cost than most conventional curtain walls. And once up, it is a finished wall inside and out.

To add impetus to the curtain wall technique, Pittsburgh Corning Corporation has developed a method of giving glass blocks a fired-on translucent ceramic finish which makes it possible for the architect to use color on the exterior of a building without sacrificing any of the inherent qualities of the glass block wall. The colors — turquoise, green, yellow and coral — have a median light transmission range of about 20 per cent, which allows the entry of diffused natural light while cutting down glare and heat gain. To produce the permanent finish, the blocks are sprayed with a water based ceramic enamel and sent through a long continuous lehr, where they are preheated, fired for 10 minutes at 1040 degrees F., and annealed for about $1\frac{1}{2}$ hours.

The new colored blocks, which are expected to find their greatest application in combination with PC Suntrol and standard functional blocks, come in the eight inch square size. Pittsburgh Corning Corp., One Gateway Center, Pittsburgh 12, Pa.

A new ceramic-finished block available in four colors promises to add impetus to the use of glass block in curtain walls such as that designed by architects Harrison and Abramovitz for the Corning Glass Works shown above.





Sprayed fiber was blown on 100,000 sq ft of cellular sleel flooring, giving 3-hr rating, in the Baltimore Commercial Credit Building

DIRECT-SPRAY FIREPROOFING CUTS WEIGHT AND COSTS

Two MARKED TRENDS have emerged from efforts to combat rising material and labor costs for structure, and, along with this, critical manpower shortages in certain trades: (1) the continuing search to lighten construction, and (2) the attempt to take greater advantage of mechanization.

Fitting neatly into this picture is sprayed fiber fireproofing for direct application to cellular steel flooring. The beams can be either direct-sprayed with fiber, or enclosed first in a metal lath cage and sprayed with fiber or lightweight plaster. The fibers are asbestos or asbestos combined with manufactured mineral fibers. A fiber spray can also consist of asbestos combined with vermiculite.

The significant development here is the first large scale application of direct spray fireproofing in a big building.

This current example of extensive usage of sprayed fiber fireproofing is in

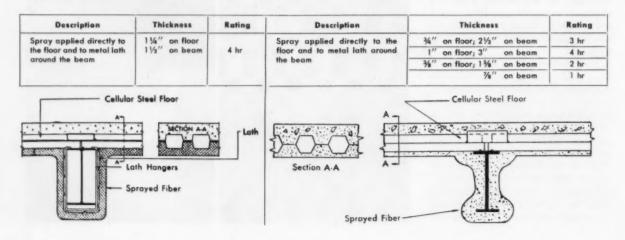
the Baltimore Commercial Credit Building designed by Harrison & Abramovitz. Eleven of the 18 floors, each with approximately 9900 sq ft, are fireproofed in this manner. The other seven floors have gypsum plaster with vermiculite or perlite aggregate. Beams of the top 11 floors have perlite plaster on metal lath. The fiber on the cellular steel flooring is tamped to a thickness of 3/4 in. below the lower cell, providing a three-hour fire rating approved by Underwriters' Laboratories. The steel beams, plastered with a 1-in. coat of perlite plaster, provide a 4-hr rating. The plastering contractor was John H. Hampshire, Inc. of Baltimore, Md.

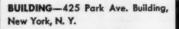
The sprayed fiber process, itself, is not new, the spray having been pretty well developed by manufacturers, and the construction assemblies tested by standard fire rating authorities. There is some news in the fact that machinery is being further improved to speed up the rate of application, which is now typically 1500 sq ft per day. Some equipment is said to be capable of handling 5500 sq ft per day. With hand plastering the rate is usually 300 to 400 sq ft per day, per man.

This is not difficult to appreciate when one considers the claims that costs can be cut from 10 to 33 per cent and weight up to 80 per cent as compared with suspended fireproofing treatment, including the metal lath, hangars, channels, etc.

Manpower can be reduced since in the spraying operation only two men are required for each machine, and another man moves the rolling scaffolding.

With proper operation and equipment, the application of spray fiber can be both free of dust and splattering residue. Since sprayed fiber coatings also give efficient sound reduction, it is possible that additional acoustical material may not be needed.





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ON-GRADE FLOOR SLABS FOR RESIDENCES-1

BASIC DESIGN CONSIDERATIONS

The physical characteristics of the site and the nature of the soil are the controlling factars. The type of soil, its load-bearing and capillary characteristics must be known in order to have an efficient and effective slab-on-ground design. Surface drainage in every direction is essential, and, if necessary, a positive underground drainage system must be provided. Proper elevation of the slab above the finished grade is critical. Many moisture problems will not occur if elevation of the slab and drainage are properly handled. A moisture condition may cause a failure of the flooring surface material, and increase thermal problems.

Moisture control involves controlling the water transfer by capillarity and by vapor phase migration. The capillary rise of water can be broken by using a layer of granular base material under the slab. A vapor barrier separating the slab from the ground will limit vapor transmission and may also serve as a water stop. Under certain conditions, it is desirable to use either one or the other of these slab protections; at other times, both are needed. Likewise, there are sites where neither would be required. The important thing is to know what is required in order to overcome any moisture difficulties that may exist for the specific site.

The major thermal consideration is to provide comfort. A less important consideration is to achieve some economy from heat loss through the slab. Two essentials are required: first, a suitable insulation material, correctly placed around the perimeter of the slab; and second, a properly designed heating system.

SITE PREPARATION AND GRADING

Fills Outside Foundation

 Grading fill should be clean soil, from which all roots or foreign material have been removed. Grading fill should be mechanically compacted in not more than 4-in. layers.

(2) Backfill used against the outside of foundation walls or grade beams should be thoroughly compacted by tamping.

Site Grading and Drainage

(1) Finish grades should slope downward away from structures having slab-on-ground construction, a minimum of 12 in. for a distance of 25 ft in all directions (4 per cent slope). Where property lines, retaining walls, etc., limit the distance from the structure to less than 25 ft, no less than 4 per cent slope should be provided.

(2) Wherever less than a 4 per cent slope is used adjacent to the structure, such as for

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a terrace, a positive means of drainage should be provided.

(3) In side-hill locations, the site should be so graded that surface water will be diverted around the structure. In addition, a positive system of underground drainage may be required for certain conditions.

Height of Floor Above Finish Grade

(1) For an unheated slab or where heating coils are embedded in the slab, the finish grade at the outside wall should be not less than 8 in. below the top of the concrete slab.

(2) Where warm air ducts are used in or under the slab, the finish grade at the outside wall should be not less than 2 in. below the bottom of ductwork adjacent to the foundation wall.

SLAB BED

Soil Capillarity

The underside of a concrete slab should not be in contact with liquid water. Capillary water rises through soil from the water-level or water-table to various heights depending on the type of soil. (See sketch.) A base



Moisture and vapor in covered soil

material of limited capillarity of sufficient thickness will break the capillary rise of water. Effective drainage will prevent the base from being a reservoir of water.

Limits of Capillary Rise

 The capillary rise of liquid water in a material used in a slab bed should not exceed 2 in. under a recognized test for capillarity for the material to be considered of limited capillarity:

Material of Limited Capillarity

Gravel or crushed rock, ¼ in. and larger in size or other material which will qualify by recognized test. The permanence of limited capillarity is necessary in such a test.

Capillary Material

Clay, slit, sonds, bank-run gravel, or other solids unless shown to be otherwise by a recognized test for capillarity. This classification applies to both undisturbed soil and foundation fill.

Foundation Fill

 Areas within foundation walls should have vegetation, topsoil, roots or foreign materials removed. The desired height should be established with clean foundation fill.

(2) Foundation fill and backfill should be thoroughly compacted in not more than 4 in. layers to assure uniform support for the slab. Compaction should be obtained by either mechanical means or by tamping.

ase

 A base for a concrete slab-on-ground when required by design conditions must be at least 4 in. in thickness.

(2) To qualify as a base of limited capillarity, the material should be a selected and clean material, ¼ in. or larger in size, or other material as described above.

(3) The base should be thoroughly compacted by rolling or tamping to assure uniform support for the slab.

Waterproof Membrane

A building site having either hydrostatic pressure in the soil or a liquid water condition, less than 6 in. below the natural surface of the ground, should not be used for a house incorporating slab-on-ground construction. With such condition a waterproof membrane under the slab would be required.

Vapor Barrier

 The permeance of vapor barriers should not exceed 0.20 perms when tested by the ASTM methods.

(2) Vapor barrier joints should be lapped a minimum of 6 in. Sealing is not required.

(3) Vapor barriers should be capable of withstanding handling and construction traffic without puncture or displacement.

(4) Vapor varriers should be required under design conditions 1 and 2, as shown in Table 1.

Separator

 When a vapor barrier is used it also serves as a structural separator between the concrete and the slab bed.

(2) A separator should withstand handling or construction traffic, but qualities of durability or low permeance are not required.

(3) A separator should be used under the following conditions:

(a) When a slump test of a concrete mix is more than 4 in, by standard test.

(b) When water heating coils or warm-air ducts are embedded in the slab.

Adapted from "A Study of Slab-on-Ground Construction of Residences," conducted by the Building Research Advisory Board for FHA

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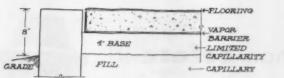
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ON-GRADE FLOOR SLABS FOR RESIDENCES-2



SLAB ON GROUND DESIGN CONDITIONS RELATIVE TO MOISTURE

Design No. 1 (shown above)

Design No. 2 (both base and fill capillary)

Design No. 3 (no vapor barrier)

Design No. 4 (no vapor barrier, base capillary)

TABLE I

Construction Item	Design No. 1	Design No. 2	Design No. 3	Design No. 4
Vapor Barrier	Provide	Provide	No vapor barrier. Separator as noted ¹	No vapor barrier. Separator as noted ¹
Base of Limited Capillarity Material	Provide ²	None	Provide ²	None
Fill or Base	Capillary	Capillory	Capillary	Capillary
Flooring Material	Group A or B	Group A Group B only as noted ³	Group A Group B not allowed	Group A only as noted ⁴ Group B not allowed

¹ Provide as listed under the subhead, "Separator" sheet 1.
 ² A duct or plenum system should have a 4 in, base material of limited capillarity under the entire system.
 ³ D determine if Group B floaring may be used with Design No. 2:
 (a) determine type of soil.
 (b) from table for capillary rise of water in various soils, determine figure which applies to this soil.
 (c) if the water table for the site is a' a distance below the ground surface greater than this figure, Group B

1 To deter

 (c) If the water table to the site is at a distance below the ground surface greater than this figure, Group A
 (c) if the water-table for the site is at a distance below the ground surface greater than this figure, Group A oring may be used.

INSULATION

Properties

(1) Insulation should be required to be non-capillary, not permanently harmed by wetting, or harmed by contact with wet concrete mix, and not subject to damage by termites or fungi.

(2) Insulation must have a compressive strength equal to or more than that required to pass the following test:

(a) Preload insulation to a loading of 50 Ib per sq ft. Measure the thickness of the insulation under this preload.

(b) Add an additional loading of 40 lb per sq ft for live load equivalent.

(c) Measure the thickness of the insulation under the second loading. The compression of the insulation under the second loading must not be more than 6 per cent of the thickness measured after the preload specified under (a).

Location

(1) The slab perimeter must be insulated in its entirety.

(2) If the highest known water-table of a site is 2 ft. or more below outside grade. perimeter insulation may be placed in either a vertical or horizontal position. If the highest known water-table is 4 ft or more below the outside grade, it is generally recommended that perimeter insulation be placed in a vertical position.

(3) If the highest known water-table is less than 2 ft below the outside grade, perimeter insulation must be placed in a horizontal or L-shaped position. An exception should be made if a special drainage system is provided to prevent moisture from reaching the insulation.

Thermal Resistances

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It is recommended that the method of es-

Four slab-on-ground designs are described in Table 1 which covers the conditions which may be created by various combinations of soil, fill, base, vapor barriers and floorings. These four designs apply for both heated and unheated slabs. Slabs are to be a nominal 4 in. in thickness. The design requirements are recommended as a guide for specific cases and for decisions on allowable floorings.

If more than 20 per cent of a slab is planned as a cement finish and not covered by a flooring material, only design conditions No. 1 and No. 2 will be satisfactory.

CAPILLARITY FIGURES

Capillary water does not rise water table more than the height in these soils		
Gravel	0.0	Ft.
Coarse Sand	2.6	Ft.
Fine Sand	7.5	Ft.
Silt	11.5	Ft.
Cley	11.5	Fł.

FLOORING TYPES

	ile, rubber ible vinyl	
 	inoleum, fel compositio	

tablishing thermal resistances for the selection of insulation be determined by using the outdoor design temperatures for the region.

Summer Cooling

(1) The frequent or continuous use of embedded coils for the purpose of cooling the house in summer is not recommended with slabs-on-ground as they are presently designed.

(2) For unheated slabs where summer air conditioning is contemplated, see perimeter insulation recommendation, Table 2.

Comfort

The achieving of comfort should not be dependent upon the provision of carpeting by the home owner. Therefore, the thermal conductivity, density, and specific heat of the flooring surface material or uncovered concrete floor surface should be taken into account in any consideration of comfort.

Adapted from "A Study of Stab-on-Ground Construction of Residences," conducted by the Building Research Advisory Board for FHA

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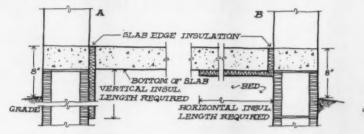
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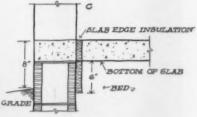




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ON-GRADE FLOOR SLABS FOR RESIDENCES-3





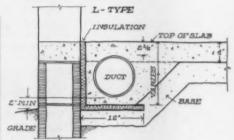
Note: If foundation wall is more than 8 in. above finish grade, vertical insulation should be increased a like amount.

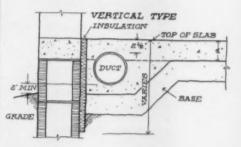
Note: Either A or B for design temperatures below 30 F.

Note: Use for design temp. of 30 F and above. Additional 6 in. if air conditioning is contemplated.

	TAB	LE 2	
RECOMMENDED	MINIMUM	INSULATION	REQUIREMENTS
FOI	CONCRET	E FLOOR SLA	BS

OUTSIDE DESIGN TEMP.	INSULATION CONDUCTIVITY	INDIRECTLY HEATED	PANEL HEATED	WARM-AIR PERIMETER
	(Nominal) Btu Inch	VERTICAL 18-in. or L-Type 24-in. length of Insu-	VERTICAL 18-in. or L-Type 24-in. length of Insu-	VERTICAL 18-in. or L-Type 12-in. vertical
	(hr)(sq ft)(F)	lation 1	lation ¹	12-in, horizontal length of Insu- lation ²
F	к	Insulation thick- ness, in.	Insulation thick- ness, in.	Insulation thick- ness, in.
- 30	0.2	11/2	1	1
- 30	0.3	2	11/2	11/2
- 30	0.4	21/2	2	2
-20	0.2	1	3/4	34
- 20	0.3	1 1/2	1	1
20	0.4	2	11/2	11/2
-10	0.2	1	34	3/4
-10	0.3	11/2	34	34
-10	0.4	2	1	1
0	0.3 0.4	1	VERTICAL 12-in. or L-Type 18-in. 34	34
0		VERTICAL 12-in. or L-Type 18-in.		
10	0.3	1	3/4	34
10	0.4	1 1/2	1	1
20	0.3	3/4	3/4	34
20	0.4	1	1	1
30	0.4	1-in. thick VER- TICAL 6-in.3	1-in. thick VER- TICAL 6-in.3	1-in. thick VER- TICAL 12-in. ³





Note: Ducts encased in concrete unless of crush-resistant, non-corrosive non-absorbent materials.

Length measured from bottom of slab, and is in addition to edge insulation which is equal to thickness of slab.
 Length measured from top of slab.
 For Summer Air Conditioning, where design temperature exceeds 30F (See Fig. C).

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Adapted from "A Study of Slab-on-Ground Construction of Residences," conducted by the Building Research Advisory Board for FHA

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Bartlesville, Okla.	Phillips "66" Proving Station Project	Phillips Engr. Dept.	Carl Moore Co.	Floyd Merryman
Riverdale, III.	Acme Steel Company	Schmidt, Garden & Erikson	La Salle Construction Company	M. Jepsen
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For prompt, qualified, personal help on any interior fire protection questions. call in your ALLENCO fieldman. Check your classified phone directory or write or phone our Home Office.













Russ Collins



Harold Joon



Catalog 150 (A.I.A. file 29e2) contains full details in simplest form, includ-ing standard "copyable" specifications. Write for your copy now.

Architects, Engineers and Contractors prefer ALLENCO



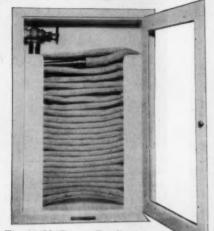


Fig. 278N (Patent Pending) FIRST practical cabinet for cotton rubber-lined hose. Wall recessed, saves space; fully enclosed, resists attack by fumes, dust, etc. Cradles hose in soft folds, ready for instant use. Several models, sizes and hose-lengths.



Fig. 7153 (listed and approved by Associated Factory Mutual Insurance Companies) — UNIQUE form of major fire hose cabinet, ideal for smaller structures. Steel cabinet no bigger than phonograph record album holds 30-40-50-75 feet of fire type hose. Recessed or wall hung.

Of the many distinct ALLENCO products and models, these are most widely specified and installed in the industrial field



Fig. 145 (UL and FM listed and approved) — Ryerson swinging hose reel with wall brackets or pipe clamps. Holds 50-100-150 feet of cotton rubber-lined hose out of way, yet swings and feeds instantly. To suit type, size and length of hose required.



Fig. 7170 (Patent Pending)—"Hozegard" reel combines protection with fastest way to get full pressure at nozzle in use. Best for linen or light-weight CRL hose, 50-75-100 feet in length, up to 1½ size. Adds years to hose life, fights fire faster.



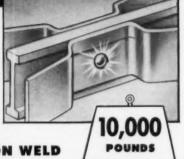


Realizing the need for an improved heavy duty, open steel floor grating of greater strength and economy. The GLOBE Company presents GOLD NUGGET Welded Grating – the first grating to take advantage of modern engineering design. As a result of this improved design, the GOLD NUGGET primary load bar provides 22° more strength with 14° less weight. The primary load bar is a miniature I beam with all of the advantages of a true structural member. GOLD NUGGET Welded Grating is recommended for power houses,

loading docks, oil refineries, fire escapes, drain grates, plating rooms, filtration rooms and for all types of heavy duty platforms.

GOLD NUGGET

- ★ ¾" projection weld nugget for greater rigidity and strength
- ★ vertical alignment of the main load bars assured
- all bars are load carrying bars including secondary bars
- 🛨 anti-skid pattern



PROJECTION WELD

Each secondary load bar (A), as projected welded to the primary load bar (B) has a shear strength of 5,000 pounds per weld. There are 28 such projection welds to a square foot of grating. This means that GOLD NUCGET Welded Grating can sustain greater shock loads than other gratings.

For the complete details of this revolutionary new grating, write for new catalog today. Distributors in all principal cities. Consult the yellow pages in your phone book under "GRATING."



4020 SOUTH PRINCETON AVENUE . CHICAGO 9, ILLINOIS

TECHNICAL ROUNDUP

(Continued from page 250)

WAREHOUSE PANELED IN STAINLESS STEEL AND PLASTIC



By combining type 302 stainless steel mansard panels with translucent plastic panels of the same design, the A. M. Castle Company was able to clothe its new Chicago warehouse in stainless steel at a cost comparable to that of other curtain wall materials. From the exterior, the warehouse presents a colorful appearance with its bands of green plastic and stainless steel marching in orderly rows above an orange brick wall. And, as an extra bonus, the plastic panels used in walls and skylights allow natural illumination of the building interior even on overcast days. A 2B finish was chosen for the stainless panels to cut specular glare and blend with the other materials.

The unbacked 22 gage stainless mansard panels used for the warehouse itself were fastened directly to girts or purlins with self-tapping screws. Stainless bolts and neoprene washers were used for side lap fastening. The translucent mansard panels were installed in essentially the same way, except that rubber grommets were used to compensate for the differences in expansion and contraction between the plastic and steel.



For the two-story office wing of the warehouse the stainless steel panels (Continued on page 266)



Redwood is particularly rewarding

in gardens, because of its resistance to decay and its handsome weathering qualities.

> LAWRENCE HALPRIN Landscape Architect



Mr. Halprin, working out of his San Francisco office, enjoys a varied practice throughout this country and abroad. Under construction now are a medical center and community in Israel, a large shopping center in Chicago, a water power company development in Spokane, as well as an interesting group of schools, libraries, industrial plants and private homes. He also finds time to lecture, teach and write.

Stimulating ideas for the uses of redwood in landscaping may be found in the new 1957 CRA Garden Ideas booklet. Write to us now for your free copy.

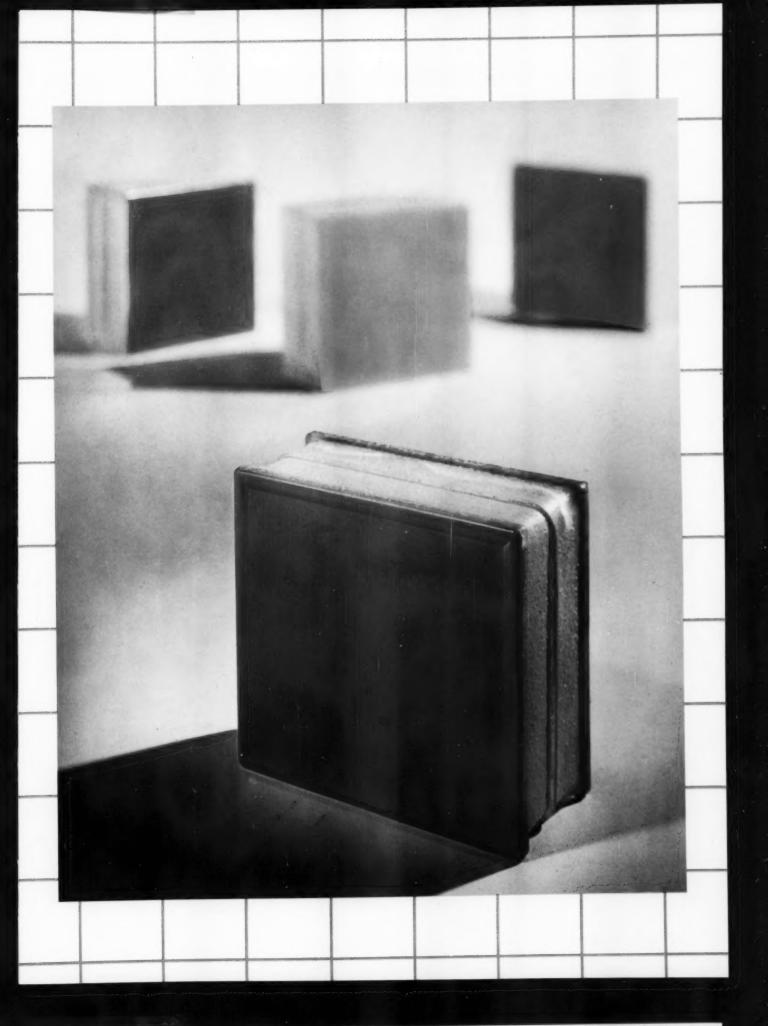


CALIFORNIA REDWOOD ASSOCIATION 576 Sacramento Street • San Francisco 11, California

PRODUCERS OF GRADE-MARKED, TRADE-MARKED CRA CALIFORNIA REDWOOD

A new design medium for the Architect... Color Glass Blocks by Pittsburgh Corning

An exclusive PC product available on Architect's specification only. Four ceramic face colors. Translucent. Eight-inch size. Pittsburgh Corning Corporation, Department C-57, One Gateway Center, Pittsburgh 22, Pennsylvania.





*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. R-89 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.



Here's a glamorous practical Hall-Mack bathroom

specify

Bathrooms are one of the most important rooms in any house. With Hall-Mack bathroom accessories you can design and build bathrooms of which you can be truly proud. Hall-Mack's beautifully chrome-plated accessories make any bathroom more attractive, more livable and enjoyable.

Shown here are but a few of the many beautiful and original Hall-Mack accessories that have earned the reputation as the world's finest. They all share Hall-Mack quality-and are all designed with the smart classic styling that blends with any bathroom style or budget. There are several complete lines of Hall-Mack accessoriesin several price ranges. You're sure to always find a style and idea which best suits your taste and needs. Always...specify and install ... Hall-Mack, the world's finest bathroom accessories!

ar holder.

AR-5

265

plated towel bar n be pulled out

ARCHITECTURAL RECORD MAY 1957

Sold by leading plumbing, tile and

HALL-MACK COMPANY HALL-MACK. DIVISION OF TEXTRON 1380 West Washington Blvd., Los Angeles 7, California Please send your FREE color booklet of new bathroom ideas. bathroom accessories NAME in sparkling prome ADDRESS CITY

hardware dealers everywhere

TECHNICAL ROUNDUP

were backed with $1\frac{1}{2}$ inches of glass fiber insulation and a back-up sheet of 18 gage galvanized steel, giving a U-factor of 0.17. After the back-up sheets had been fastened to the girts, subgirts consisting of $\frac{3}{16}$ and $1\frac{1}{2}$ in. steel bars were welded to the standing seams in front of the sheets, and the insulation placed between them. The stainless steel face panel was then placed over the insulation and fastened to the subgirts with self-tapping screws.

A third type of metal panel with a face sheet of mica and asphalt protected steel was used instead of brick for the lower portion of the west wall of the warehouse. This wall, which is considered expendable, will be dismantled and reassembled elsewhere when it becomes necessary to add to the warehouse space.

At present, the structure provides nearly ten acres of floor area for A. M. Castle's steel warehousing and distributing operations. Total width is 512 ft; total length is 700 ft. Steel columns spanned by trusses divide the space into five lengthwise bays, of which four are 100 ft wide, and one — the center bay — 110 ft wide to accommodate longer steel sections.

Each bay has a pitched roof of 20 gage galvanized corrugated steel decking over which bagasse and either an asphalt membrane or tar and gravel have been spread for insulation. Skylights supplement the light from the side panels.

Architect for the project was John Cromelin, F.A.I.A.; structural engineer was Fred Marshall. All panels — plastic, stainless steel and protected metal were supplied by the Plasteel Products Corporation of Washington, Pa.



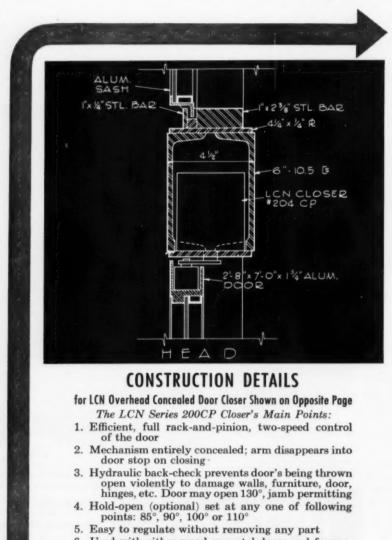
HOUSES BUILT FOR LESS — WITH MORE INSULATION

Air-conditioned houses can be built at less cost by using adequate insulation, according to a recent study conducted by John R. Watt, associate professor of mechanical engineering at the University of Texas. In an effort to determine whether home building costs could be cut by raising the FHA mini-

mum allowable heat transfer coefficients for residences, Professor Watt compared figures on construction cost, fuel consumption and operating costs for eight well-insulated houses in the Austin Air Conditioned Village, built by members of the NAHB in 1954, with what those figures would have been had the houses been insulated according to current FHA minimum requirements. The eight houses studied were chosen to give a representative cross section of air conditioned residences as to construction, exposure, and type of cooling system used. All were insulated entirely with mineral wool.

The results of the study showed that use of adequate insulation had resulted in a saving of \$139.60 in building costs, and an annual operating cost savings of \$107.90, computed on "country-wide average" rates for fuel and water. Or, as Professor Watt simplifies it, "Each dollar spent on adequate insulation for air conditioning above current MPR requirements saves \$1.82 in otherwise required equipment, and reduces average operating cost by 63 cents." In southern states, the latter saving averages as much as 57 per cent of the cost of added insulation installed.

(More Roundup on page 270)



6. Used with either wood or metal doors and frames. Complete Catalog on Request—No Obligation or See Sweet's 1957, Sec. 18e/La

LCN CLOSERS, INC., PRINCETON, ILLINOIS

MODERN DOOR CONTROL BY LCN. CLOSERS CONCEALED IN HEAD FRAME

Eero Saarinen and Associates, Architects

Anderson Beckwith and Haible, Associate Architects

KRESGE AUDITORIUM; MASSACHUSETTS INSTITUTE OF TECHNOLOGY, CAMBRIDGE, MASSACHUSETTS LCN CLOSERS, INC., PRINCETON, ILLINOIS

Construction Details on Opposite Page

101



Ebony, background for elegance...a spirited graciousness

Jim Crotzer is a photographer whose list of clients reads like a "Who's Who" of the art and design world. Here he highlights the ageless richness and strikingly decorative character of Macassar Ebony veneer, by Stem, in this self-portrait. "Ebony, veneered to a panel in this way, radiates a peaceful kind of strength and a timeless charm that makes it an ideal background for elegance." When he calls for Macassar Ebony, the architect, like the photographer, borrows for today and tomorrow one of the riches of the ages - a treasure that came by caravan with spices and silks from the East-and yet remains a stalwart pillar for the boldest contemporary design. Through the catalytic artistry of the architect, rare wood paneling and graceful living strike up a happy match. Wherever a

background of fine wood is used, its noble presence is felt by all, welding substance and a spirit into exciting unity. When rare woods from the forests of the world are used, there is a spirited graciousness – a strength and beauty that dwell in every ripple of its meticulously finished grain. And yet, beautiful wood is the essence of peace; it brings serenity to a room in a way that is all its own. Now, Stem brings you, through the magic of modern factory methods, all the nobility, splendor and lifetime permanence of the finest veneer that tradition knows. And you can afford to be generous with this wood, for the cost is low.

Chester B. Stem, Incorporated 185 Grant Line Road New Albany, Indiana New York—Chicago—Dallas—Los Angeles







TECHNICAL ROUNDUP

IMPROVED HOTEL SERVICE CHARTED FOR 1958

Although incoming and room-to-room calls will continue to be routed through the switchboard, installation of a dial telephone system in New York's Waldorf-Astoria Hotel is expected to greatly improve service by eliminating the outgoing load. Guests will be able to place both local and long-distance calls directly, as well as to dial all the hotel service departments. The exact number of calls made from each room will be recorded on an automatic registering system located in the cashier's office, and long distance charges will be teletyped to the hotel by the telephone company operators. Developed jointly by the Waldorf management and the New York Telephone Company, the system is scheduled for completion early in 1958.

Farther south, a Miami Beach inventor is also turning his attention to electronic gadgets calculated to improve hotel service in 1958. Among the devices created by Eli M. Lurie, president of the American Communications Corp. of New York and the American Antennae Corp., is a wake-up system that will make the morning call more pleasant for guests, and less burdensome for telephone operators. As Mr. Lurie sees it, the jangle of the telephone bell will be replaced. At the specified time, room lights will automatically be switched on, followed by musical chimes and a weather forecast rendered in a pleasant (feminine) voice. Only if the guest fails to respond by pressing a bedside switch within five minutes will his sleep be broken by a personal call.

Outside Heating System Melts Ice

An unusual de-icing system buried in the half-acre plaza at the site of New York's Seagram Building will melt ice and snow at the rate of one inch per hour and even keep the walks dry in the rain. By heating almost the entire plaza, including the stairways leading into the park from the street, it will allow the granite floor to sustain a lustrous sheen all year long. Prepared under the supervision of mechanical engineering consultants Jaros, Baum and Bolles, the snow melting device will utilize a network of 21,300 feet of galvanized pipe conduit containing a light, quick-heating oil that will transfer heat to the pipes, keeping the ground warmed to any desired temperature.

(More Roundup on page 274)



Mr. architert

When in doubt on what floor finishing material to specify for a client, rely on your Huntington Representative. He is the Man Behind the Drum, a skilled technician who has firsthand knowledge of many cleaning and refinishing problems that can be of value to you and

This Man Knows how to properly finish wood floors



For complete information and sound recommendations on any floor finishing or maintenance problem, call your Huntington Representative. His skill and experience is yours, at no cost to you or your clients.

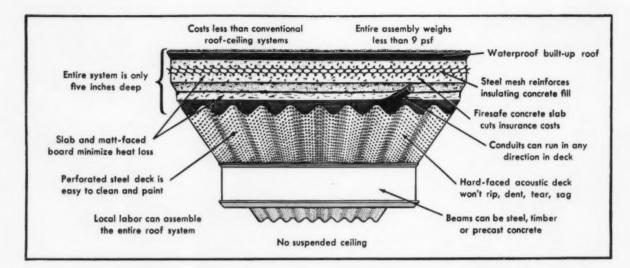
AND GIVE THEM ADDED YEARS OF HARD USE

When you specify Huntington Seal-O-San or any other Huntington floor finishing material, you can be assured that your client will have the finest floors possible. And here's why: Every Huntington Representative is a trained, skilled technician who knows exactly how and why to properly refinish wood floors to maintain the beauty you have designed in them.

Every Huntington Representative has this skill, because Huntington products service more than 25,000 floors daily. And from this accumulated knowledge of cleaning and refinishing problems comes the skill and experience that practically guarantees the finest results possible at all times.

So, when you specify "Huntington Seal-O-San," or any other Huntington floor finishing product, you can rest assured that your client will receive not only a high quality product, but the experience and skill to use it properly.





New idea in school ceiling-roof construction



5-INCH SYSTEM. A suspended ceiling system usually requires 16" to 20" in depth. Only 5" deep, the Structur-Acoustic system saves 11" to 15" in wall height, saves thousands of dollars in materials and labor.

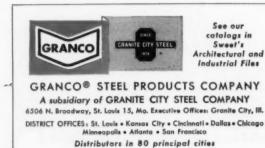
NEW STRUCTUR-ACOUSTIC DECK MAKES 5-INCH ROOF SYSTEM POSSIBLE

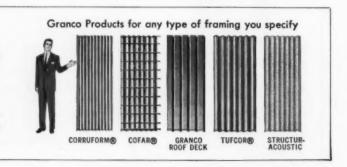
EASY TO ASSEMBLE, USES LOCAL LABOR



GOOD ACOUSTICS. Tests conducted by Riverbank Acoustical Laboratories indicate that Structur-Acoustic system with 21/2" slab provides Noise Reduction Coefficient of .80. Clean, corrugated underside of Structur-Acoustic reflects light, can be painted to matching color scheme. Hard surface won't dent, stays attractive. Heat loss is kept to minimum with U factor in excess of 0.14. Firesafe system protects both building and contents, helps reduce owner insurance costs.

A new combination of building materials, the Structur-Acoustic roof system eliminates suspended ceilings, offers one-third more roof for your dollar than conventional school roofs with similar features. Heart of the system is Structur-Acoustic-a galvanized, corrugated, perforated steel sheet that weighs only 2 psf. Strong but lightweight, these hightensile, tough-temper steel units are easy to handle and place, form a firm structural deck for the ceiling-roof assembly. Entire system can be assembled by local labor-no bulky prefabricated assemblies to ship long distances at high freight rates. For schools, one-story offices, factories, stores-wherever sound control is desirable. For more information, contact Granco home or district office, ATTN: Dept. R-75.





working with the architect on today's important school lighting projects ...

WEST PENSACOLA HIGH SCHOOL Florida's newest and largest, Architect: FRANK J. SINDELAR, A. I. A. Pensacola, Fla. Consulting Engineera: EVANS & PHILLIPS, Birmingham, Ala. Contractor: DYSON & CO., Pensacola, Fla. Electrical Contractor: BAROCO ELECTRIC CONSTRUCTION CO., Pensacola, Fla.

eoi

... every inch designed to make an architect's dream come true!

ting units

Here is lighting that takes the architect's thinking into consideration . . . expressed in the clean-cut lines and diminutive contour of the Benjamin Capri. In addition to its flair for making architectural dreams come true, the Capri's unique low-brightness illumination meets the high classroom lighting recommendations of the Illuminating Engineering Society . . . and even anticipates future increases and improvements in these practices. Benjamin Electric Mfg. Co., Des Plaines, Ill.



... always the source of good lighting

R-113



Always on Guard 100% Dependable

Exceeds Requirements of the NATIONAL ELECTRICAL CODE

that guards against costly confusion or panic caused by

Takes over in a split second! The instant power fails for any reason, at any time, Standard's centralized system goes to work automatically - provides instantaneous Emergency Lighting in effected areas. Work

Always on Guard! 100% Electrically Supervised. Standard's Emergency Lighting System protects itself against human neglect or accidental disarrangement. Should anything in the system go wrong, doubly supervised circuits go into action instantly! A burned out lamp, accidental damage, or even a light fingered bulb

Buzzers buzz! Lights light - and the trouble can be corrected before a lighting

Cadmium, alkaline battery has an expected life of more than twenty-five years, requires near-zero maintenance, does not

ing System is streamlined, good looking, designed to match the decor of modern buildings. Centralized power and control, concealed wiring and handsome fixtures replace box-on-the-wall units. Standard's **Emergency Lighting System is built-in just** like the fire alarm and sprinkler systems.



TECHNICAL ROUNDUP

STORE LICKS GLARE, HEAT WITH LOUVER-PANELED FRONT



The pleasant openness of a broad glass store front loses much of its charm for owners of supermarkets and grocery stores who must contemplate the spoiled perishables, melted candy and soaring costs of air conditioning and refrigeration which often result from solar heat introduced through that inviting expanse of glass. Equally undesirable is the accompanying glare which makes it difficult for customers to see signs and displays - and each other.

In the Penn Fruit Company's Brandywine Supermarket, Wilmington, Del., the glare-heat problem was made particularly acute by a 100 ft frontage on the west. Realizing that an all-glass front would direct the afternoon sun onto check-out counters, displays of perishables, and baked-goods and freezer cabinets at the front of the store, architect Angelo R. Aquaro of Penn Fruit enclosed the semi-circular facade above the window wall with daylight-control louver panels formed from Plexiglas acrylic plastic. The 6 by 8 ft panels consist of a series of molded horizontal saw-toothed corrugations, their upper surfaces angled to intercept sunlight and coated with a translucent ivory paint that admits light but blocks heat and glare. The transparent lower part of the saw-tooth allows customers outside the store to see through the louvered facade from some approach angles. The clear area also admits light reflected from the ground, providing additional natural illumination. According to the architect, the plastic louver panels, as designed and installed by the Amplex Manufacturing Company of Philadelphia, Pa., were competitive in cost with a plate glass and metal louver system also considered for the installation.

The Mother Seton School, Emmitsburg, Md., erected by American Bridge, included 134,400 pounds of structural steel and joists; 45,100 pounds of roof deck; 2,500 pounds of shop weld rods; and 9,600 pounds of well and curb liners. Porcelainenamel steel wall panels were supplied by U. S. Steel Homes.

Architect: Earl M. Harvey Contractor: Structo Schools Corporation-Boston Industrial Engineering Co. -New York



Strong, lightweight AMBRIDGE STEEL JOISTS support roof deck of new "Structo"-built Mother Seton School

T

LHE MOTHER SETON SCHOOL of the Daughters of Charity of St. Vincent De Paul in Emmitsburg, Maryland, one of the first "Structo Schools" ever built, combines the use of factory-fabricated porcelainized steel wall panels and AmBridge Steel Joists.

It is significant that this revolutionary type of school construction utilizes AmBridge Steel Joists with framing trusses and square tubular columns to support the steel deck roof.

These joists with square ends and moment connections not only provide strong, rigid, lightweight support for the 57 lb. per square foot roof load, but also offer collateral advantages of continuity for wind loads which make them

U

NITED

ideal for use in floor, roof and ceiling construction.

This open-web design allows free passage of conduits, pipes and ductwork in any direction. Their ease of erection cuts installation time to the bone. Use them in roofs to get your structure under cover sooner; use them in floors so that other trades can begin work more promptly, helping to maintain work schedules.

AmBridge Steel Joists are fabricated and assembled on production lines by American Bridge Division, assuring uniform production, delivered to your job on time.

Get in touch with our nearest contracting office for complete information about how AmBridge Steel Joists can save you time and money on your next job.

STE

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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 - DAILAS - DERVER - DETROIT - ELMIRA - GARY HOUSTON - LOS ANGELES - MEMPHIS - MINNEAPOLIS - NEW YORK - ORANGE, TEXAS - PHILADELPHIA - PITTSBURGH - POR LAND, ORE. - ROANOKE - ST. LOUIS - SAN FRANCISCO - TRENTON UNITED STATES STEEL EXPORT COMPANY, NEW YORK

AT

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F

Victor Gruen & Associates choose Bigelow carpet for Hochschild, Kohn in suburban Baltimore

Victor Gruen & Associates is a nationally known organization devoted to architecture, planning and engineering. This firm has designed some of the country's largest pioneering shopping centers, such as Northland, near Detroit; Southdale, near Minneapolis; Valley Fair and Bay Fair in the San Francisco Bay region.

> **RECENT PROJECT of Victor Gruen** A & Associates involved the interior design of the Hochschild, Kohn department store in the Eastpoint Shopping Center of suburban Baltimore.

One very important problem which faced the organization's interior design department was, of course, the selection of a carpet which would be completely suitable for the store. Mr. Gruen chose Bigelow and concerning his choice he says this:

"We have chosen the Bigelow carpet because of durability and other desirable qualities. We believe that carpets help to provide the quiet and attractive shopping atmosphere so important in a department store."

The Gruen organization and Bigelow's carpet counselors collaborated to design a carpet particularly suited for this installation. The carpet that filled the bill to perfection was Gropoint[®] Cushionlok[®].

This carpet, as shown in the illustration, is designed in three colors to give a corduroy effect. The combination of colors and the corduroy design interpretation successfully masks soil and stain, conceals traffic wear most effectively.





If you are planning a carpet installation, it would be to your advantage to consult with Bigelow's trained specialists at your earliest convenience and well ahead of your installation date. They're wonderfully equipped to suggest the right color, pattern and weave for your project—at just the right price.

This is just one more service you get when you specify Bigelow.

And you can get it at your local Bigelow sales office or by writing to the Bigelow Contract Dept., 140 Madison Ave., New York 16, N. Y. There is no obligation whatever.



Bigelow sales offices are located in the following strategic cities: Atlanta, Ga.; Boston, Mass.; Buffalo, N. Y.; Chicago, Ill.; Cincinnati, Ohio; Cleveland, Ohio; Dallas, Texas; Denver, Colo.; Detroit, Mich.; Hartford, Conn.; High Point, N. C.; Kansas City, Mo.; Los Angeles, Calif.; Minneapolis, Minn.; New York, N. Y.; Philadelphia, Penna.; Pittsburgh, Penna.; St. Louis, Mo.; San Francisco, Calif.; Seattle, Wash.



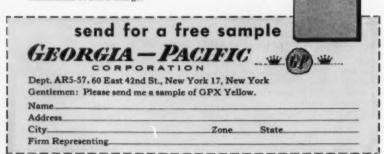


GPX=YELLOW

PLASTIC SURFACED PLYWOOD

Mr. Builder, board-and-batten, so popular with today's homebuyer, is a real profitmaker for you with GPX Yellow. Easy-tohandle panels cover large areas fast. Battens cover edges. Your economies continue right through to the finish—GPX Yellow is engineered to take paint without sanding or sealing. Two coats give a lasting beautiful finish that will never check. For gables, soffits, shutters—for unlimited interior uses, too—GPX Yellow can be machined, drilled, nailed, patched, riveted, glued or sawed. Put it to the test on your next job.

smooth! The CreZon surface of GPX Yellow is bonded on one or both sides with a phenolic resin overlay. Engineered for paint — it's the smoothest surface obtainable. Standard 4'x8' panels are available in thicknesses ranging from 5/16" to 3/4". Larger sizes and thicknesses at extra charge.



PRODUCT REPORTS

(Continued from page 249)



Shatterproof Shower Door

Safety glass is now available as standard equipment in Keystone's *Deluxe* and *Reserve* shower doors and tub enclosures. Other construction features include chrome-plated extruded brass frames, pressure glazing for stability and rigidity, full-length hinges and a safety latch. Glass finishes are clear, with opal and other colors available at extra cost. *Keystone Shower Door Co.*, *Southampton, Pa.*



Thermostatic Steam Traps

Series "A" steam traps, operating on a temperature differential principle rather than buoyancy, are designed for installations requiring frequent shutdowns and startups, elimination of large amounts of air or maximum protection against freezeup. Made for steam pressures up to 250 psi and temperatures up to 450° F., the traps are fitted with an orifice that operates the entire pressure range from 0 gauge to maximum rated pressure. Vertical inlets and outlets provided are $\frac{1}{2}$ in. and $\frac{3}{4}$ in. The Clark Mfg. Co., 1839 East 38th St., Cleveland 14, Ohio.

(More Products on page 280)

WHAT'S NEW?







ON A JOIST





IN A CLOSET



The Ebco Manufacturing Company, Columbus 13, Ohio Manufacturers of the most complete line of water coolers DISTRIBUTED IN CANADA BY G. H. WOOD & CO., LTD.

the versatile Oasis In-A-Wall water cooler

so THIN an 8" wall can hide it!

practical low cost unit for industrial, commercial, institutional, residential and restaurant installations

The new Oasis In-A-Wall Water Cooler solves the problem of custom-designing a water cooling system which leaves walls and corridors clean and uncluttered. The new Oasis "built-in" coolers serve up to 4 remote drinking fountains with a generous supply of refreshingly cold water. The tiny, built-in cooler is so thin, an 8" wall can hide it—so versatile, it mounts in walls, hangs in closets, suspends from walls, joists, and other supporting members.

TWO MODELS AVAILABLE. The small Oasis model, IW-5, supplies 5 GPH, sufficient for 60 persons in offices or schools and 35 in light industry. The large model, IW-10, has a capacity of 10 GPH, adequate for 120 people in offices and schools and 70 in light industry.

LOOK AT THESE FEATURES!

- Precision engineered -
- quality components throughout.
- Model IW-10, 10" thick, handles up to 4 remote outlets and delivers a full 10 GPH.
- Model IW-5, 6¾" thick, handles 2 remote outlets and delivers a full 5 GPH.
- Easy to install.
- 5 YEAR FACTORY WARRANTY.

ARCHITECTURAL RECORD MAY 1957 279

PRODUCT REPORTS

Gray Plate and Sheet Glass

Two new gray glasses, a heat-absorbing plate glass and a heavy sheet glass, have been developed to provide neutraltinted glass for glare control. The $\frac{1}{4}$ in. thick *Solargray* plate glass controls both heat and glare, transmitting 45 per cent of solar radiant energy and 40 per cent of visible light. It is available in cut sizes up to 75 by 128 in. Although the *Penneeron* gray sheet glass is not a heat-absorbing glass as defined in federal specifications, it too significantly reduces heat transmission while admitting only 53 per cent of visible light. The sheet glass is furnished in $\frac{3}{16}$ and $\frac{7}{32}$ in. thicknesses with a maximum sheet size of 70 by 126 in. *Pittsburgh Plate Glass Co.*, 632 Fort Duquesne Blvd., *Pittsburgh* 22, *Pa*.

Adjustable Headed Swing Spout

A new plumbing fixture modifies the conventional swing spout by adding an adjustable discharge head with which the stream of water can be directed to any point in a sink. It is so designed that water is cut off if the head is turned at an angle that would direct the stream over the edge of the sink. The head can also be completely reversed from its downward position to serve as a drinking fountain or bubbler. When the spout is used in this manner, the flow of water is automatically reduced, and the aerator cases to operate. Chase Brass § Copper Co., 236 Grand St., Waterbury 20, Conn.



Remote Room Conditioners

Four new room conditioners for yearround air conditioning of multi-room structures have been added to the *Flow-Temp* line. The four types, each available in sizes of 200, 300, 400 or 600 cfm, are designed for free-standing mounting beneath a window or along a wall, for fully-recessed installation in a wall, for suspended mounting from hanging rods and for concealed mounting in closets. Cooling capacities of the new units, which can be operated with either water or freon, range from $\frac{1}{2}$ to 2 tons. Acme Industries, Inc., Jackson, Mich.



Drink Dispenser-Ice Machine

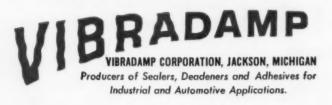
The Scotsman SD-1 is a single unit that combines ice-making with soft drink dispensing. The ice produced and stored is used in serving the drinks, for cooling the dispenser heads, and for pre-cooling and post-cooling of carbonated and non-carbonated water. An automatic control cuts off ice production when the 150 lb stainless steel storage bin is filled to capacity. American Gas Machine Co., 505 Front St., Albert Lea, Minn. (More Products on page 284)

LUTHERAN BROTHERHOOD HOME OFFICE BUILDING, Minneapolis, Minneapola, Architecta: Perkins and Will, Chicago. General Contractor: Kraus-Anderson, Inc., Minneapolis. "Twindow" and Glazing: Pitisburgh Plate Glass Company.

Modern Sealing for Modern Design

Contributing to the attractive curtain wall construction of the Lutheran Brotherhood Building are two Vibradamp products for modern design ... #3474 FORM-A-SEAL, a non-hardening, nonshrinking, permanently pliable sealing tape . . . and #1270 FLEXSEAL, a permanently plastic gun-applied sealer for metalto-metal joints. Together they form a positive, lasting seal against air, dust and moisture.

Through continuing research and development, Vibradamp is able to produce better sealing products for modern design. For full information and product samples, write Department A.



FABRICATING STEEL IS OUR BUSINESS

Ohio Power Company, Muskingum River Steam Plant, Unit #3. Steel Erection: The Ingalls Steel Construction Company.

RELIEF AT RELIEF (in Ohio)!

One of the richest industrial areas in Ohio lies along the 110-mile Muskingum River. Units #3 and #4 of the Ohio Power Company's big plant at Relief, Ohio, are important additions in this company's program... to meet the demands for more power.

6,000 tons of Ingalls' fabricated steel is going into the construction of the two added units of the Relief Plant. The fabricated steel is being erected by The Ingalls Steel Construction Company.

Ingalls' long experience, skill and ability in power plant requirements for fabricated steel have served importantly in the construction programs of 46 of the nation's leading power companies. Other thousands of commercial and industrial buildings are standing proof of Ingalls' ability to meet *all* demands, where fabricated steel is an important factor.

Can we help you? *Ingalls can serve you better*...for complete information regarding why and how, write:

NGALLS IRON WORKS COMPANY

Established 1910 BIRMINGHAM, ALABAMA Plants: Birmingham, Ala., Verona, Pa., North Birmingham, Ala., Decatur, Ala., Pascagoula, Miss.

> FABRICATED STEEL for Power Plants • Hangars • Stadia Stores • Bridges • Office Buildings • Theatres • Hotels Apartment Houses • Hospitals • Churches • Schools • Industrial Buildings • Tanks • Bins • Pressure Vessels • Stacks

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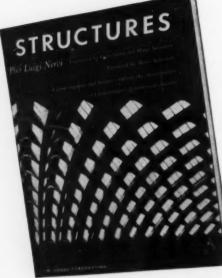
INGALLS' PLANTS

Capacity has been increased nearly 70% at Ingalls' Plants within the past three years... part of a program designed to give Ingalls the facilities to meet every modern requirement for fabricated structural steel for any construction purpose.

THE



a great engineer and builder explores the characteristics and potentialities of reinforced concrete.



by Pier Luigi Nervi

translated by Giueseppina and Mario Salvadori

It is not simply the magnificent structures Pier Luigi Nervi has built and his daring innovations in the use of concrete that will make reading this new book an unforgettable experience. Even more, it is Nervi's rare creative insight into the entire design and building process.

ARCHITECT, ENGINEER, BUILDER, EDUCATOR

Nervi is one of the few remaining master builders — that vanishing group of practical visionaries who conceive, design, engineer, and build their own structures. From the very start of his career 40 years ago, he combined an excellent mathematical knowledge with brilliant intuition.

When his revolutionary designs began to try the knowledge and techniques of conventional contractors, he founded the now-famous firm of *Ingg. Nervi e Bartoli* in Rome, integrating architecture, structural design, and contracting under one roof. In addition to heading this firm, Nervi is Professor of Structural Design at the School of Architecture, University of Rome. He has designed and built some of the largest and most beautiful thin-shell concrete structures in the world. Among these are the Turin Exhibition Hall (362 x 312 feet), six airplane hangars (clear span 330 x 130 feet), many other factories, halls, and other buildings. Many of the buildings are constructed of *Ferro-cemento*, a new type of reinforced concrete developed by the author. All of these projects are fully described and pictured in this book.

A MOST UNUSUAL BOOK

Ranging in scope from mathematical formulae, to practical building methods, to aesthetic criticism of contemporary



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Send me copies of STRUCTURES @ \$6.95 each. After 10 days' use, I will remit payment plus a few cents postage, or return the book without obligation.

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architecture, STRUCTURES is difficult to describe in a few words. Different readers will find different things of value in it.

... If you are interested in the problems and techniques of reinforced concrete design and construction, you will find a wealth of practical data. Nervi talks concrete as no one else can.

... If you are interested in the aesthetics of architecture and in the philosophy of building correctly, you will find food for thought to last for years.

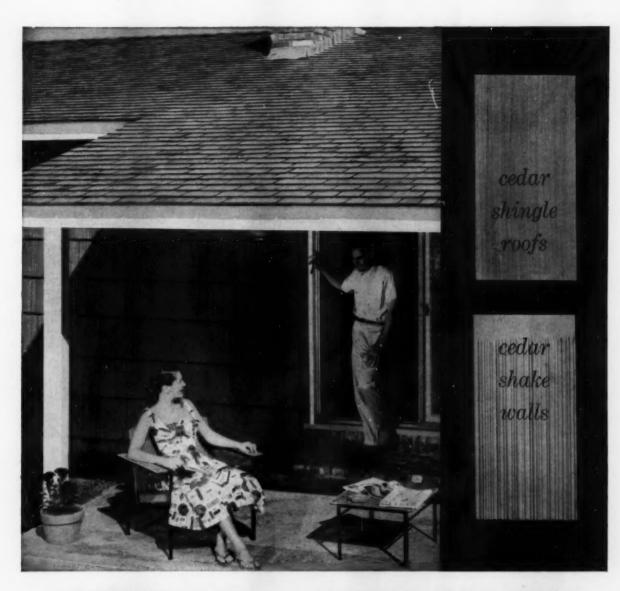
... If you are interested in one great man's story of success, failure, hope, doubt, experiment and invention, you will find yourself absorbed in this stimulating account.

In seven short, concise chapters, with over 100 striking illustrations, STRUCTURES is the summation of over 40 years of Nervi's experience.

118 pages in 7¼ x 9%" size Carefully printed on fine coated stock Illustrated with 88 photographs and 25 drawings Foreword by Mario Salvadori Fully indexed Bound in gray cloth with attractive jacket. \$6.95



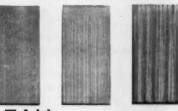
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CEDAR TURNS ON THE CHARM!

... and it's charm that makes the home

This is the kind of home that invites good living, appeals to good taste. The mellow warmth and dimensional texture of a cedar shingle roof ... blended with walls of colorful cedar shakes ... reflect obvious, ageless quality. Only cedar gives you such limitless expression ... such design latitude ... such unquestioned acceptance. But then, cedar is the genuine. And there's nothing like genuine charm!



RED CEDAR SHINGLE BUREAU

5510 White Building, Seattle 1, Washington 550 Burrard Street, Vancouver 1, B.C.





The attractive appearance of the new Lima Flexi-Trol air conditioning line matches the "beautiful" job it does in meeting air deflection requirements for maximum comfort and efficiency.

Features include: adjustable face bars with positive friction to prevent accidental movement . . . heavy gauge steel frame, resistance welded . . . reinforced corners for added strength . . . quiet operation without rattling or whistling . . . double overlap opposed valves . . . permanent Lima rust-resisting finish in neutral tone. Can be repainted if desired.

> Write today for literature and specifications on the new Lima Flexi-Trol Commercial Air Conditioning Line.



PRODUCT REPORTS

Washable Air Filter

The Model P-70 air filter is said to combine efficiency and complete washability with a greatly extended filtering surface for longer service. A special lint screen has been incorporated on both filter sides so that lint may be brushed off several times before washing is necessary. This screen is coarse enough to trap the large fibers, permitting finer dirt to be collected by the pleated fiber glass media. Construction is of corrosiveresistant materials, including galvanized channel, aluminum lint screens and polystyrene-bonded fiber glass. The frame is lightweight for easy handling, and flexible for better sealing to any holding frame device. Air-Maze Corp., 25000 Miles Rd., Cleveland 28, Ohio.



Vibration Isolating Hangers

Vibro-Hangers for suspending disturbance-generating equipment and piping systems utilize a helical steel spring as the high-deflection, high-efficiency vibration isolating medium. They are designed to provide maximum freedom from vibration transmission where very low frequency disturbances are present, where extremes of temperature are encountered, or where the equipment is installed in critical locations. The springs, made from quality oil-tempered carbon and alloy steels, are said to withstand high temperatures without permanent set and low temperatures without losing their resilience. The spring isolation units are available with several types of housing and load ranges from 50 to 3800 lb. The Korfund Co., Inc., 48-08A 32nd Place, Long Island City 1, N. Y.

(More Products on page 288)

sold exclusively through heating wholesalers and manufacturers



THE PROBLEM: First, the architects had to evolve an efficient, functional system for handling military personnel records; second, they wanted to enclose this system in a single building which would be subject to constant internal rearrangement.

THE SOLUTION: Reinforced concrete provided the flexibility of design for these requirements. Also, reinforced concrete was specified "as the only economical structural system to support the heavy live loads (200 lbs. per sq. ft. design load)." The six story building (1,340,000 sq. ft.) that was eventually constructed went up very rapidly and was completed in record time, according to the architects.

New U. S. Military Records Center features functional

REINFORCED CONCRETE

frame and floors



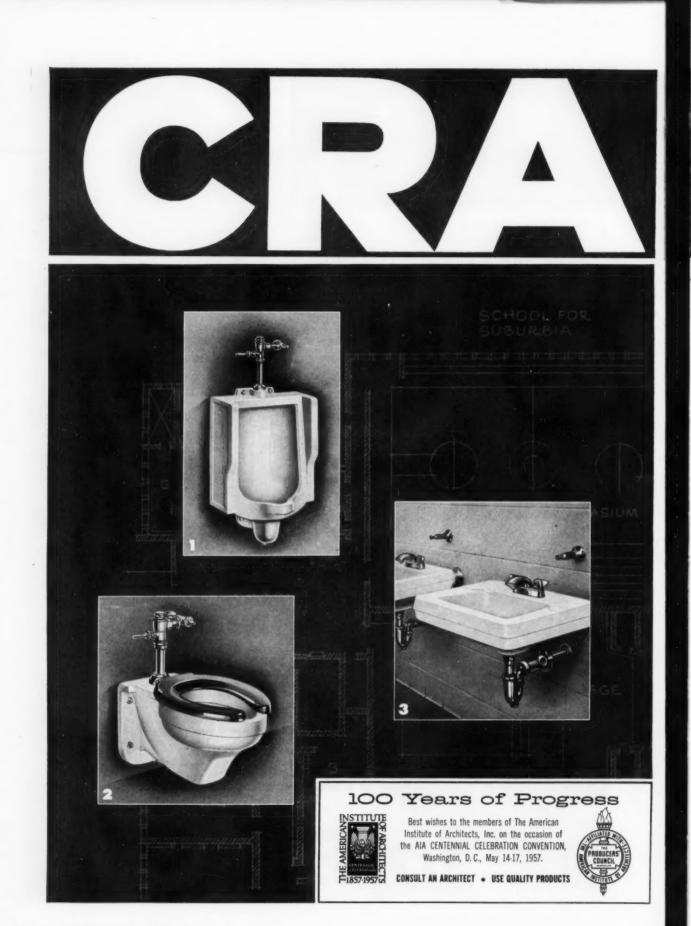
... and R/C Duct Floors provide 100% electrical flexibility

For the new U. S. Military Personnel Records Center, the architects chose a reinforced concrete frame and flat slab floors with underfloor electrical distribution ducts. This system provides a complete network of underfloor electrical outlets for power, light, telephone, and intercom systems—at a new low cost. Outlets can be connected to convenient risers in a matter of minutes without ripping up or drilling through floors and ducts.

R/C Duct Floors, which meet all building code requirements, consist of standard steel electrical distribution ducts set in the concrete floors. Cost studies show that R/C Duct Floors average 19% less than cellular steel floors! Before you design your next building, investigate R/C Duct Floors. Write for new 16-page bulletin.

CONCRETE REINFORCING STEEL INSTITUTE







Look...off-the-floor fixtures can make cleanup easy – and they're attractive, too

You know off-the-floor fixtures can cut washroom cleanup time by giving clean, unobstructed floor areas.

But have you also noticed Crane off-thefloor fixtures have an extra attractiveness you don't usually expect in commercial fixtures?

Some of this extra beauty comes from the clean Henry Dreyfuss designs. Some comes from the careful hand finishing given each Crane fixture. The result is off-the-floor fixtures as attractive as they are practical.

Why not specify these good-looking fixtures in your next washroom? You'll find Crane offers such a wide choice that it's easy to find a fixture for any installation. Your Crane Branch or Crane Wholesaler will be glad to furnish complete details.

In heating, too, ask for Crane quality.

Crane Neu-Rio wall-hung urinals of vitreous china—resistant to abrasion and stain—easy to clean and keep clean—designed for easy maintenance. Crane Triumph flush valve assures trouble-free operation.

2 Crane Walton closet with Triumph flush value embodies latest principles of sanitation. Siphon jet type. Dependable and efficient operation. Highest quality vitreous china. Made for long life and low maintenance cost.

3 New Norwich, Crane's most popular school lavatory. Newly redesigned by Henry Dreyfuss. Available with or without back splash. Neu-Spray supply fitting prevents splashing ... saves water. Dial-ese Replacement unit contains all working parts of Crane supply valves and faucets. Replacement takes only 90 seconds. Closes with the water pressure to prevent dripping. Lasts for years. The same interchangeable control unit is used in all Crane Plumbing trim.



CRANE CO. 836 South Michigan Avenue, Chicago 5, Illinois VALVES · FITTINGS · PIPE · PLUMBING · KITCHENS · HEATING · AIR CONDITIONING

PRODUCT REPORTS

Weatherproof Outlets and Switches

A new line of weatherproof duplex receptacles features a one-piece Saf-T-Lok snap cover that completely covers both receptacles. The line includes 1and 2-gang duplex receptacles in parallel-slot and tandem blade types; the No-Shok safety type; and a 2-gang combination duplex outlet and single pole switch, in both conventional and grounding types. Bell Electric Co., 1844 W. 21st St., Chicago 8, Ill.



Automatic Electric Baseboard

Although heating output of the Caralier automatic electric baseboard has been stepped up to 200 watts per lineal foot to maintain optimum room temperatures with fewer sections, the maximum



VAPOR CAN'T GET BY -**FLOORS STAY DRY with** Sisalkraft MOISTOP

Sisalkraft Moistop permanently stops the upward migration of moisture through floors. Applied under concrete or in crawl spaces, this superior product protects against the damages of water vapor for the life of the structure. Sisalkraft Moistop combines the inertness and permanency of polyethylene with the strength of Sisalkraft. Meets FHA and VA minimum property requirements.

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IN CANADA SISALKRAFT PRODUCTS ARE SOLD UNDER THE FOLLOWING NAMES: ORANGE LABEL FIBREEN, SISALATION, COPPER ARMORED FIBREEN, FIBREEN, VARDRSTOP, FIBREEN MOISTER --- CONTACT ALEXANDER MURRAY & CO., LTO., NONTREAL.

outside surface temperature remains less than 125 degrees F. Heated air is directed upward away from the walls, providing even comfortable heat at every level of the room. For easier installation, interlocking sections are fastened to the wall with only two screws per 32 or 48 inch section, and thermostatic controls build in with the baseboard, as do electrical convenience outlets. Cavalier Corp., Electric Heating Div., Chattanooga 2, Tenn.

Emergency Lighting System

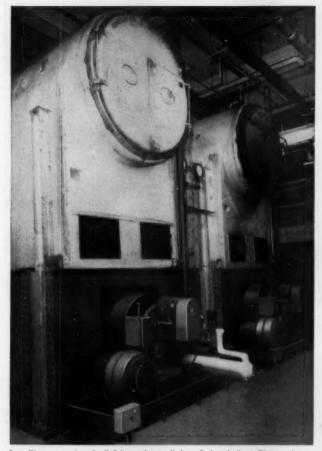
A new centralized emergency lighting system has been tested and approved by Underwriters Laboratories. Designed to provide emergency illumination throughout public and private buildings, the system is self-monitored by flashing lights and buzzers that not only report any fault in the system, but even sound an alarm when an emergency lamp is removed from its socket. In operation, the system is said to be instantaneous and fully automatic. Emergency lights operating on a long-life 32 volt battery go on when regular power fails, and off when it is restored. In addition to the central control console, area control panels provide localized control and supervision of emergency lighting circuits in each area throughout a building. Type 32EL, Series 300, Standard Electric Time Co., Springfield 2, Mass.



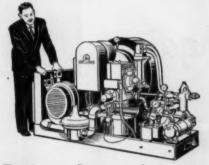
Double Glazed Sliding Door

The Pittco Twindow, a sliding glass door for one-inch double glazed insulating glass, has been developed for use in sliding glass walls. The glass panels, set in a tubular extruded aluminum frame, roll on nylon tired ball bearing sheaves guided by a stainless steel-capped aluminum track. The door is available in six standard sizes. Pittsburgh Plate Glass Co., 632 Fort Duquesne Blvd., Pittsburgh 22, Pa.

(More Products on page 292)



A complete firing system by Iron Fireman



Engineered as a unit . . . installed as a unit

Iron Fireman packaged oil firing units applied to firebox boilers. These units are suitable for nearly all types of steam or hot water boilers. The heating plant shown above is in the office building of the Celanese Corporation of America, Charlotte, N. C.

For oil, gas or oil-gas combination

Here is a *factory engineered* firing system. Everything needed for balanced firing is mounted on a rigid steel base, ready to bolt to the boiler front. Nothing is left to the uncertainties of local assembly. For example, the critical refractory firing throat is pre-cast and installed at the factory, rather than being molded on the job. It is critical because proper design and accurate placement of the refractory tile increases combustion efficiency. It is scientifically designed to introduce secondary air around the burner head, avoiding the elaborate firebox brickwork in the typical conversion job.

Accurate control of all firing functions Every factor that affects firing efficiency is engineered into the unit at the factory. The unit includes: (1) Single or dual-fuel burner, with complete fuel handling systems. (2) Forced draft air supply. (3) Enclosed



control panel, with instruments mounted, factory wired and tested, and with signal lights and dials that afford a complete reading at a glance.

In the oil-gas units, fuels can be switched automatically, or with the simple flick of a switch. Fires any fuel gas or any commercial grade of fuel oil available, including No. 6, without changing burner adjustment.

Local service. Hundreds of dependable Iron Fireman dealers are located in all parts of the United States and Canada. Their factory trained personnel are ready to furnish quick service to your burner, should the need arise. In addition, factory engineers are available in most areas to help you and your consulting engineer in planning boiler room modernization or construction.

For further information, mail coupon.



With matched Scotch type boiler

America's top boiler manufacturers join with Iron Fireman to produce boilerburner units in which the boiler and firing system are engineered as a single integrated unit. Hundreds of these installations are in use in all parts of the world, with outstanding performance records. The boiler room, shown above, equipped with Iron Fireman-Kewanee units, is in one of the Detroit plants of the Briggs Manufacturing Company.

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Please send information for oil, gas, or oil-gas com	n on Iron Fireman forced draft firing bination.
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and Again ... ARCHITECTS WISELY CHOOSE ASE STEEL FURNITURE

Today, more ASE Steel Furniture is specified in offices, schools, hospitals and institutions than ever before. Durable...flexible...beautiful...trend-setting ASE Steel Furniture has the qualities which find increasing favor with architect and client alike.



Better Built for Better Business

ALL-STEEL EQUIPMENT INC. Aurora, Illinois

for complete protection ... specify VULCATEX[®] caulking

An architect we know claims most clients' complaints are about "annoyances"-like water seepage between masonry and window frames, copings and sashes. Yet complaints about caulking are easily prevented: specify Horn's Vulcatex Caulking Compound. It's guaranteed to comply with Federal Specification TT-C-598 Grades I and II.

Vulcatex applications stay weathertight, pliable and intact-withstand vibration and temperature changes without cracking, sagging or running. Vulcatex can provide this protection because it's vulcanized elastic. The vulcanizing process enables it to form a tough weatherresistant outer skin while it stays live and resilient underneath. As a result, many installations over 20 years old are still fully protective. Specify Vulcatex while your plans are on the board.

> want more facts? See Sweet's for more information or write Dept. H45-515.

Plants: Houston Long Island City Los Angeles San Francisco Toronto

. C. Horn Companies

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Extending Drawer Slides

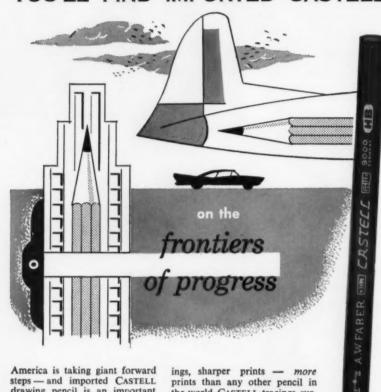
Full-X-Tend drawer slides support drawers in full extended position, making even remote corners fully visible and

accessible. Mating members mounted on wood or metal drawers and in the drawer opening roll past each other on nylon glides for frictionless, silent operation. Exposed members have a black oxidized finish while fixed members are of bright cold rolled steel. A. Geo. Diack, 1427 Santee St., Los Angeles 15, Calif.

Dual Circuit Time Switch

Internatic V22000 Series time switches control two electrical circuits at different times with the same switch. Especially suited for controlling lighting circuits in apartment houses, stores, factories and other public buildings, they permit

YOU'LL FIND IMPORTED CASTELL



America is taking giant forward steps - and imported CASTELL drawing pencil is an important

partner in this progress. Firmly held in the skilled hands of designers, engineers and draftsmen, smoother, stronger, graphite-saturated CASTELL is laying it on the line-producing the creative concepts and the mountains of tracings for our amazing industrial development. Seasoned Pros go for CASTELL,

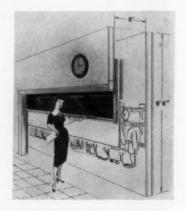
because it produces cleaner trac -

ings, sharper prints - more prints than any other pencil in the world. CASTELL tracings survive hundreds of trips through the blueprint machine without bleeding.

There's no reason why you shouldn't enjoy CASTELL. Whatever brand you use, you are paying for CASTELL -so why not get CASTELL. Your Dealer has an interesting story to tell you about CASTELL.



varying time periods from 30 minutes to 231/2 hours. The time dial will accommodate up to 4 sets of on-off trippers. Housed in a steel case 10 in. high by $4\frac{7}{8}$ in. wide and 4 in. deep, the switches are available with various switching sequences for 125 or 250 volt operation. International Register Co., 2624 W. Washington Blvd., Chicago 12, Ill.



Upward-Acting Sliding Door

Originated for schoolrooms, the WARD-ROBEdoor consists of two upwardacting sections suitable for mounting chalkboard, chalkrail, and tackboard. The sections rise to give access to a built-in wardrobe space which can be installed in 2 ft of depth, leaving aisle and floor clear for supervision and traffic even when the door is open. The hardboard facing of the sections is scuffresistant and easily finished, and the absence of hinges and pivots on the floor facilitates cleaning. Barber-Colman Co., Dept. 5P, Rockford, Ill.



Plenum Humidifier

The Model 400 plenum humidifier, designed specifically for use with warm air systems, mounts directly on the discharge plenum of the furnace. Its fan cooled motor is isolated from contact with moisture, and the whole unit enclosed in a stainless steel housing 103/4 in. wide by 83% in. high and 11% in. deep. Herrmidifier Co., Neffsville, Pa. (More Products on page 296)



VAMPCO ALUMINUM WINDOWS

STEPLETON, MCDONNEL & BARBER Architects KUHLMAN BUILDERS SUPPLY CO. Contractors



Photo By Walbridge & Bellg, Inc.

In practically every type of construction today, architects and builders everywhere are turning to Aluminum Windows and Window Walls for modern beauty, structural strength, better lighting and ventilation. The new Toledo Airport Terminal is a striking example of how Vampco Aluminum Window Walls and Monumental Windows have been combined to achieve these objectives as well as savings in cost and erection time. The famous Vampco Windows are available in the widest range of types and sizes, and our special designing department is at your service for custom built aluminum windows WRITE TODAY!

VALLEY METAL PRODUCTS CO.	VALLEY METAL PRODUCTS COMPANY Dept. AR-57, PLAINWELL, MICH.
SUBSIDIARY OF	Send 48-page Industrial-Institutional Window Catalog.
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A NAME THAT MEANS THE	ADDRESS
VERY FINEST IN LIFELONG ALUMINUM WINDOWS	CITY



A better roof or floor slab results at lower cost when architects and contractors agree on Steeltex Floor Lath, the wire mesh reinforcing that carries its own water-proofed form right on its back. Steeltex can be unrolled, stretched as in the photo above, and clipped with simple tools by workmen without previous training.

Steeltex saved 6½ days on 14,000 sq. ft. roof deck

Pressure on school boards, architects and contractors to finance, design and build new schools is greater than ever.

Although a record 62,000 new classrooms were built in 1956, educators say the nation needs at least 93,000 more each year for the next 10 years.

School boards demand the best value for each construction dollar. They also want their new schools placed in service as fast as possible. A Michigan contractor, to cite a case in point, responded to this need by saving $6\frac{1}{2}$ days on a school job by his wise choice of materials.

The contractor is The Charlson Company of Wyandotte, Mich., who saved a week's working time on the Ecorse Elementary School in Michigan by using Pittsburgh Steel Products' Steeltex Floor Lath. With Steeltex the roof was prepared for concrete pouring in 28 working hours, compared to an estimated two weeks if other forms had been used.

The job called for laying about

14,000 square feet of Steeltex over joists in preparation for pouring a $2\frac{1}{2}$ -inch concrete slab. Steeltex' time savings were made more impressive by the fact that the Charlson crew had never before worked with Steeltex. Also, the job was complicated by numerous columns and other irregular shaped objects on the roof deck.

William Johnson, construction superintendent on the job, said use of Pittsburgh Steeltex—the wire mesh reinforcing that carries its waterproofed form right on its back—per-

Steeltex is economical easy to form fits irregular shapes.





Since Steeltex Floor Lath is easy to bend and cut, one man covered this depressed area in a few minutes. John Casey, architectural superintendent, points to the neat finished job.

Steeltex requires no engineering to make it fit snugly around irregular shapes. On this job, columns were left protruding through the roof to support a future second story.

mitted his men to start laying Steeltex on a Wednesday morning and complete the job Monday noon, just $3\frac{1}{2}$ days later.

These photographs show some of

Steeltex' money-saving advantages.

Above, rods welded to joists eliminate diagonal bridging. Steeltex and con-

crete give joists lateral stability.

Steeltex, sold by the Pittsburgh Steel Products Division of Pittsburgh Steel Company, was specified by the Detroit architectural firm of Giffels & Vallet, Inc., L. Rosetti, Associated Engineers and Architects.

The specification pleased President K. H. Charlson of The Charlson Company who said:

"Steeltex definitely was the best choice. It is a good product that is easier to cut and shape than other material. The paper backing reduces dripping and eliminates clean-up problems on the floor below.

"Steeltex is economical to buy, saves a lot of costly, time-consuming work and produces a high quality concrete slab with good reinforcing."

You, too, can reduce costs and pour concrete decks quicker while improving the quality of floors and roofs—when you use Steeltex.

The special advantages of Steeltex will work as well for you as for this Michigan architect and the contractor.

A trained Pittsburgh Steel Products engineer, with lots of construction know-how, is available close at hand. Call him at any of the district offices listed here. Do it today.



You eliminate messy drip-through on the floor below when you use Steeltex. Mesh and water-proofed paper backing can be fitted right to the edges of objects like this sump on the roof deck.

See Sweets Catalog Section 2-B

Steeltex

Pittsburgh Steel Products a division of Pittsburgh Steel Company

Grant Building • Pittsburgh 30, Pa.

District Sales Offices Atlanta Columbus Detroit New York Tulsa Chicago Dallas Houston Philadelphia Warren, Ohio Cleveland Dayton Los Angeles Pittsburgh



Offer You the Most in * YEARS OF RESEARCH * SOUND ENGINEERING * QUALITY CONSTRUCTION

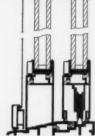
There are a number of companies that can and do build doors for aircraft hangars and for industrial use. But there are none that can offer the "plus values" and complete assurance of dependable operation of Byrne doors.

Since 1928, when the first Byrne doors were constructed, this company has conducted a constant research and development program. It has regularly maintained one of the largest engineering staffs in the industry. And adherence to top quality of construction has always been a "must."

It's not difficult to get a lower "quote" on your door requirements than you'll get from Byrne. But if you want to be sure that you are getting the most for your door dollar, you'll specify Byrne. Many of the country's leading architects do just that.

Full information is contained in our current catalog. We'll be glad to send you a copy—no obligation, of course.





PRODUCT REPORTS

Insulated Sliding Glass Door

The gray areas in the sliding door detail shown above are strips of insulation which, according to the manufacturer, prevent heat flow through extrusions and eliminate condensation on the exterior of the frame. The insulation is supplemented by heavy double weatherstripping. Designed exclusively for use with double glazing, the *THERMO* door is recommended for cold climate areas defined as those where temperatures drop below freezing. The aluminum door frames are sized to utilize standard *Thermopane* glass sizes. Ador Sales, Inc., 2345 W. Commonwealth Ave., Fullerton, Calif.



Shallow Fluorescent Fixture

The Shallorama, a surface-mounted luminaire with an apparent depth of only $2\frac{1}{4}$ inches, appears to be a recessed unit with a Plexiglas diffuser panel dropped below the ceiling line to form the sides and part of the ends of the fixture. Side and end returns are concealed within the metal frame. The ballast housing is concealed above rather than within the fixture and illumination is evenly diffused. eliminating perceptible light or dark streaks on the diffuser surface. Although the fixture may be opened from and hinged at either side, there is no exposed hardware. The Shallorama is available only as a 4 lamp, 48 in. rapid start unit. Sunbeam Lighting Co., 777 East 14th Place, Los Angeles 21, Calif.

(More Products on page 300)

Announcing . . .

a new hinged design* in ceiling

in cennig

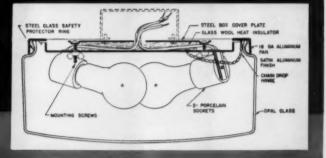
pan fixtures by

PERFECLITE

Perfectite now offers a new **hammer lock** design in incandescent ceiling pan lighting fixtures. No other ceiling pan fixture on the market today has all these engineering features:

- Globe opens on hinge for quick easy cleaning and relamping.
- Unique safety locking fitter holds globe in place without bothersome screws, unsightly extensions or trick springs. Globe is secured with lugs by simple twist of the wrist.
- Lip of globe is completely protected against breakage by a steel protector ring.
- Provides ceiling illumination as well as evenly distributed floor lighting.
- Minimum amount of metal, maximum amount of glass results in highest light efficiency.

Here is a unique ceiling pan fixture design for either commercial or residential installation. For further information send for The Perfectite Data Sheet 56-C today.



Perfectite's new hammer lock fixture is available in the following sizes:

171	Model	Glass Diameter	Wattage
111	HH-9	8"	2- 40 W
	HH-11	10"	2- 60 W
	HH-13	12"	2- 75 W
and a	HH-15	14"	2-100 W
	HH-17	16"	3-100 W

Send for new Perfective Catalog 956 giving full information or our entire line of Commercial in condecent Fixtures and Exit Unit

.

Fixtures are Underwriters Laboratories, Inc. approved. *Patent pending





Warehouses in Boston, Mass., Baltimore, Md., Columbus, Ohio, and San Leandro, Calif., contain over 365,000 sq. ft. of 24-gage Tufcor.

Why Rexall chose $8\frac{1}{2}$ acres of TUFCOR[®]

EXPANDING to give better service, handle more volume and cut marketing cost, Rexall Drug Co. is now erecting a series of spacious one-story warehouses across the U. S. The roof system chosen for four of these new buildings is Tufcor tough-temper steel deck and lightweight insulating concrete with a built-up roof. Why Tufcor? Because galvanized Tufcor offers a strong structural deck for insulating concrete, is quickly and easily applied, makes possible a lightweight, low-cost roof system with positive vapor barrier and maximum fire safety. Read what members of Rexall's building team say about this modern roof system. In their comments below, you will find many reasons why Tufcor may be the one right roof system for your next job. Like more information? Contact Granco home or district office. Attn: Dept.R-77.



REXALL CHIEF ENGINEER J. E. Deal says, "The positive fire resistance of Tufcor with insulating concrete means savings on sprinkler heads. We also save several thousand dollars on each job by not having to paint the galvanized underside of Tufcor. Sheet corrugations fit together nicely, which means placing is fast and easy. Tough-temper steel makes Tufcor flexible yet strong. Availability of Tufcor is also good. Two weeks from the day I ordered sheets, they were on the way! On the Columbus job, we placed and welded 98,200 sq. ft. of Tufcor in just 7 work days."



ARCHITECT-CONTRACTOR REPRESENT-ATIVE on the Baltimore job, E. L. Wieringa of Indenco, Inc., says, "Tufcor installation is fast. Sheets are light and easy to handle. Square-foot coverage is good. By covering two spans with a 14' sheet, we were able to weld a sheet to 3 joists at one time. Spot welding is a snap and Tufcor is safe to walk around on. These sheets hold the entire building together. They transfer thrust, give a lot of lateral strength and develop a good diaphragm. You notice it the minute you weld sheets down. Tufcor strength is a wonderful safety factor."



CONCRETE APPLICATOR on Baltimore job, R. C. Bollinger of EVA, Inc., says, "This was our first experience with Tufcor but in a couple of days my crew was operating efficiently. Tufcor is easy to place and weld. We got 12,000 sq. ft. per day from a four-man crew. Sheets are cut to fit building frame. We eliminated double handling by placing them directly from a mobile buggy. With Tufcor, you walk around as freely as you do on the ground—no planking is needed. We've poured insulating concrete over other systems but Tufcor is easier and structurally stronger, helps keep labor costs down."



Exposed Tufcor ceiling in Baltimore warehouse. Attractive galvanized Tufcor requires no field painting, assures building permanence.

roof system for new warehouses



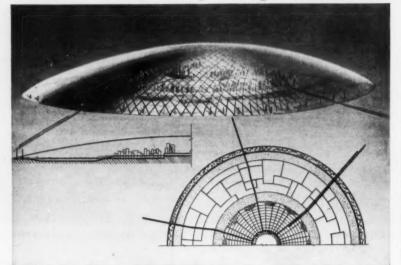
EASY TO PLACE. Tufcor sheets arrive at the job site bundled and cut to fit framing. No measuring or cutting is needed! After sheets are plug-welded in place, they provide a strong structural deck and a convenient work platform for trades. In the finished roof system, Tufcor acts as a vapor barrier, keeps insulating concrete dry so it maintains its insulating properties, saves on costly fuel bills.



EFFECTIVE INSULATION. Inert insulating concrete is one of the most permanent, desirable types of roof insulation. Rigidity of Tufcor system provides a firm base for built-up roof. Low dead load of finished Tufcor system is 4 to 6 psf less than most types of roof construction, requires less structural steel. Permanence, low maintenance of system plus low insurance premiums assure savings to owners.



MARS outstanding design SERIES



21st century city

The shallow, plastic-faced, Geodesic dome makes this city of the future look strange to 20th century eyes. But designer Philip H. Seligson has combined practical economics with creative thinking in committing his concept to paper. Industries are located at the outer circumference of the city; discharge their smoke through stacks that pierce the dome. Central air conditioning controls the temperature – winter or summer the climate is perfect. Instead of building their own four weather walls and roof, insulating them, heating and cooling them, people can build their walls merely as grilles and curtains.

No matter which of today's ideas become reality, it will be as important tomorrow as it is today to use the best of tools when pencil and paper translate a dream into a project. And then, as now, there will be no finer tool than Mars—from sketch to working drawing.

Mars has long been the standard of professionals. To the famous line of Mars-Technico push-button holders and leads, Mars-Lumograph pencils, and Tradition-Aquarell painting pencils, have recently been added these new products: the Mars Pocket-Technico for field use; the efficient Mars lead sharpener and "Draftsman's" Pencil Sharpener with the adjustable point-length feature; and—last but not least—the Mars-Lumochrom, the new colored *drafting* pencil which offers revolutionary drafting advantages. The fact that it blueprints perfectly is just one of its many important features.

> The 2886 Mars-lumograph drawing pencil, 19 degrees, EXEXB to 9H. The 1001 Mars-Technico push-button lead holder. 1904 Mars-lumograph imported leads, 18 degrees, EXB to 9H. Marslumochram colored drafting pencil, 24 colors.



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ARS-LUMOGRAPH

PRODUCT REPORTS



Rectangular Riveted Aluminum Grating

Designed to retain the combined advantages of rectangular openings and riveted construction, the recently introduced type RR aluminum grating is said to remain structurally rigid in spite of cutouts located in any part of the panel. In addition to meeting exacting load conditions, the new rectangular design provides almost 80 per cent clear opening, greatly reducing the accumulation of dirt in corners. Klemp Metal Graling Corp., 6608 S. Melvina Ave., Chicago 38, Ill.



Food Waste Disposer

A new compact food waste disposer featuring continuous-feed operation utilizes a grinding principle said to eliminate measuring loads, sorting food wastes or waiting for batches to clear the grinding chamber. The unit, which is only $10\frac{3}{4}$ in. high, $7\frac{1}{2}$ in. in diameter and weighs less than 25 lb., can be readily fitted into any type of sink with a standard $3\frac{1}{2}$ in. strainer fitting and $1\frac{1}{2}$ in. drain. Noise and vibration are minimized by internal baffles within the grinding chamber as well as by a dual chamber air space in the grinding wall and special mounting and connection gaskets which prevent metal to metal contact at drain and sink. American-Standard Plumbing and Heating Division, 40 West 40th St., New York 18, N. Y.

(More Products on page 304)



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Deneer LARGE UNIT

SUMMITVILLE

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QUARRY TILE

Frostproof tile perfect for store fronts, swimming pools, feature walls and decorative inserts. 20 decorator colors, Sizes: $2^{1/4} \times 8 \times 3^{1/4}$, $6 \times 6 \times 5^{1/2}$, $6 \times 6 \times 3^{1/4}$, $3^{1/6} \times 8 \times 3^{1/4}$, $3^{1/6} \times 12 \times 3^{1/4}$, and matching trim units. 12-veneer offers opportunities for unusual and dramatic concepts in design and decoration wherever interior tile are used. This 11 1/4 x 11 1/4 x 1/4 tile is available in 20 decorator colors.

SPECIFY Summitville

QUARRY

TILE

Now 6 earth calors that harmonize with or compliment any color scheme. Scratchproof, Preproof, acidproof. Sizes, Ired) 6 x 6 x 1/2, 6 x 6 x 3/4, 21/4 x 8 x 3/4, 37/6 x 8 x 3/4, 37/6 x 12 x 1/4, 6 x 9 x 3/4 and trim units. Colors other than red: 6 x 6 x 1/2 and trim units. No other product has all the outstanding features of Genuine Ceramic Tile. For all installations requiring beauty, durability under all conditions, versatility and minimum maintenance -specify Summitville Genuine Ceramic Tiles first... they last.

Full information is now available on all three superior Summitville products. Contact your local ceramic the contractor or write direct to Summitville Tiles, Inc.

SUMMITVILLE, OHIO

NEW – the only complete master handbook of Timber Design and Construction!

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Dodge Books, F. W. Dodge Corporation

TIMBER

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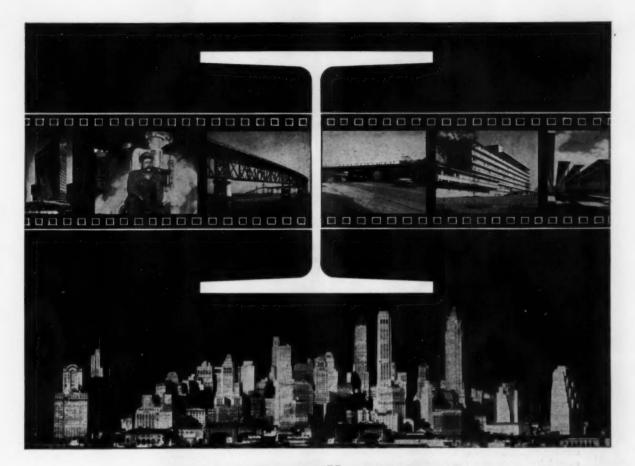
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942



New Film Tells Story of Steel and the Nation's Skyline

BETHL

A new Bethlehem motion picture, *Skylines*, is now available for showing.

Skylines is a 29-minute sound-and-color film that dramatically portrays the role of structural steel in building the skylines of today.

The picture tells how large multistory buildings were not practical until builders gave up the compression structure and began working with steel framework.

Structural steel was given new dimensions when Charles M. Schwab, Bethlehem Steel's founder, built the country's first mill to roll wide-flange structural shapes, at Bethlehem, Pa. These wide-flange shapes led the way into the age of skyscrapers.

But skyscrapers are only a part of the story of *Skylines*. There are bridges, too—from giants like the Golden Gate and Chesapeake Bay to the thousands of railway and highway bridges all over the country.

And there is the story of today's bold new concepts in building—modern shopping centers, industrial buildings, hospitals, apartments and schools. FREE ON REQUEST—There is no charge for the use of this 16-mm film. We suggest that prints be ordered at least three weeks in advance of your desired showing date, to allow ample time for scheduling and shipping. Please fill out the coupon below and mail it to Publications Department, Bethlehem Steel Company, Bethlehem, Pa.

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"Reznor sectional duct furnaces let us design the ideal heating-cooling system for each job"

"We'd never been able to design a really ideal heatingcooling system until Reznor introduced their sectional duct furnace. And even if we had designed one, installation problems would have been stymied until the Reznor sectional duct furnace came along.

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"Reznor sectional duct furnaces free us completely from packaged heating equipment which isn't exactly right for any one job because it has to be almost right for so many jobs. Now we start with a Reznor duct furnace, which is simply nothing more than a compact, highly efficient gas-fired heat exchanger with a complete set of combustion controls. To this we add the components for air moving, cooling, cleaning, and humidifying selected to meet exact job requirements. For our client it means greater efficiency, greater comfort, and lower cost.

"Reznor sectional duct furnaces are a heating engineer's dream come true... and our long experience with Reznor gas unit heaters gives us complete assurance that these new duct furnaces will be tops in efficient performance, dependable service and long life, too."

If you're not taking advantage of the design freedom these new units offer you, you're really missing something. Write today for free catalog or call your nearby Reznor distributor for details. You'll find him listed under "Heaters-Unit" in the yellow pages of your telephone directory.





Gold Ceramic Finish

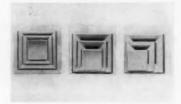
A gold ceramic finish that is said to be competitive in price with other finishes has been developed for architectural use. According to the manufacturer, the low cost is made possible by a new method of fusing a thin application of 22 carat gold dust into the surface of the ceramic. The Bettinger Corp., Waltham, Mass.

PRODUCT REPORTS



Steel Channel Bridging

Steel-X bridging of 20-gauge steel is channel designed and ribbed for maximum strength. Each brace consists of two members, locked together by fitting a metal tongue on one member into one of the slots on the other. As they are snapped into place, anchor spurs on the ends are driven into the top of one wood joist and the bottom of the next. Installed in pairs, the braces form an "X" with an ultimate load strength of 1050 lbs. Two sizes handle 13, 16, 20 and 24 inch joists. Taber Bushnell Co., Metropolitan Bldg., Minneapolis, Minn.



Convertible Ceiling Diffuser

The Model RC ceiling diffuser for commercial, industrial and residential use has inner cones which may be positioned to secure two-, three-, or four-way corner discharge patterns by simply sliding the vane to the desired position. Available in two sizes with a six- or eightinch square neck, the diffuser can also be secured with an integral opposed blade damper that is adjustable from the face. The Carnes Corp., Verona, Wisc.

(More Products on page 308)



Architect: Morris Lapidus, New York, N.Y. Gen. Contractor: Taylor Construction Co., Miami, Fla. Plastering Contractor: Thompson Plastering Co., Miami, Fla. Owned & Operated by Tisch Hotels, Inc.

The dramatic new AMERICANA HOTEL, Bal Harbor, Miami Beach, Fla., is the latest in vacationland luxury. A cosmopolitan city within itself, this \$17 million hostelry features the finest in spacious living.

Contributing to the structural quality of this hotel is LEHIGH MORTAR CEMENT. It was used in the masonry walls which required over 100,000 concrete blocks and in the exterior stucco.

LEHIGH PORTLAND CEMENT COMPANY ALLENTOWN, PA.

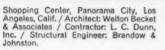


Steel Joist Fabricating

... with one standard of quality









10

Remington Rand Building, Chicago, III. Architect: Harry O. Bartlett / Contractor: J. L. Simmons Co. / Structural Engineer: John W. Emig. Meadow Brook National Bank Building, West Hempstead, L.I., N.Y. / Architect: W. Thomas Schaardt / Contractor: John J. Dixon Co., Inc. / Structural Engineer: Albert Roselli.

Plants from Coast to Coast

and service for all

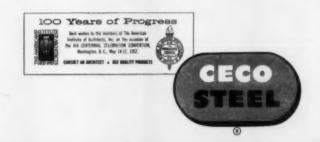
There are ways you can meet your own demand for quality building products — for prompt delivery — for dependability in suppliers.

In the field of Open-Web Steel Joists, for instance, all you need do is rely on Ceco. For Ceco answers your demands with a single standard of joist quality the country over. Only Ceco fabricates Open-Web Steel Joists in six plants located coast to coast to assure prompt and economical delivery anywhere. Moreover-wherever your office and wherever the job-you can count on the practical knowledge and advice of Ceco executive engineers.

Ceco's Quality Control ensures the highest manufacturing standards. All joists must pass Ceco's own rigid manufacturing and inspection requirements — also meet all design and quality standards of the Steel Joist Institute. So, specify Ceco Open-Web Steel Joists. They can be

quickly installed in any kind of weather. They provide space for pipes, ducts and conduit. And they give you light-weight, safe, permanent floor and roof construction, at a cost to meet budgets. Furthermore, our new Electro-Channel Joists offer the most economical underfloor electrical flexibility for steel frame construction... they function as both structural members and underfloor electrical distribution ducts. Ceco Steel Products Corporation —general offices: 5601 West 26th Street, Chicago 50, Illinois—offices, warehouses and fabricating plants in principal cities—consult Sweet's catalogs or your telephone directory for the address of the Ceco office nearest to you.

IN CONSTRUCTION PRODUCTS CECO ENGINEERING MAKES THE BIG DIFFERENCE . . . Steel Joists / Metal Roof Deck / Ceco-Meyer Steelforms / Concrete Reinforcing / Windows, Screens and Doors / Metal Lath





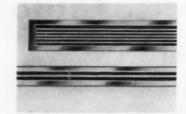
This map shows the coast to coast network of Ceco Steel Joist fabricating plants and sales offices.

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	nical data for the following
Shortspan Open-V	Web Steel Joists
Longspan Open-V	Veb Steel Joists
Electro-Channel C	pen-Web Steel Joists
Truss-Beams	
Steel Roof Deck	
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PRODUCT REPORTS

Time Switch

A momentary contact time switch series makes possible direct automatic control of low-voltage remote control wiring systems, mechanically-held contactors not equipped with auxiliary switches, and auxiliary switch type contactors where additional manual pushbutton controls are desired. A 24-hour timing dial automatically provides a 3 to 5 second momentary "on" and "off" pulse, the single pole momentary contact unit operating in series with a double throw circuit selector. Tork Time Controls, Inc., Mount Vernon, N. Y.



Linear Type Air Diffusers

A new line of extruded aluminum linear type air diffusing grilles which can be

SAFETY on the NEW YORK THRUWAY

... ALUNDUM Terrazzo Provides Walking Safety in Restaurants

The New York Thruway Authority has provided safety for the motorist not only on the highway but also in the restaurants and gift shops. The floors are attractive terrazzo made permanently non-slip by ALUNDUM Aggregate. Neither spilled liquids nor moisture tracked in on stormy weather days will cause a slipping hazard.





Corner House Restaurant Clifton Springs, New York

ALUNDUM Terrazzo by DePaoli Mosaic Co. Boston, Mass.



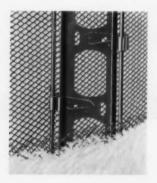
For full information on ALUNDUM Aggregate for terrazzo floors and ALUNDUM C.F. Aggregate for cement floors consult SWEET'S FILE or write for Catalog 1933R.

WORCESTER 6, MASS.

used in ceilings, sidewalls or floors are especially suitable for continuous line use above or below large window areas. The diffusers come in widths of 2, 3, 4, 5, 6 and 8 inches, and in one-piece lengths up to 12 ft, with front louvers fixed at zero or fifteen degrees deflection. The grilles are also available with a rear set of individually adjustable louvers, or multi-shutter or opposed blade dampers. *Tilus Mfg. Corp., Waterloo, Iowa.*

Oversize Cast Acrylic Sheets

Plexiglas RL colorless transparent and colored translucent cast acrylic sheets are now available in sizes up to 81/2 by 10 ft for large-area glazing, fluorescent luminaires, skylights and other architectural applications. According to the manufacturer, this is the first time the colored sheets have been available in sizes larger than 51/2 by 81/2 ft. The RL sheets, having the same physical and chemical properties and the same weathering characteristics as previously available sheets, come in sizes of 72 by 100, 84 by 84, 96 by 96, and 102 by 120 inches and thicknesses of .187 and .250 inches. Rohm and Haas Co., Washington Sq., Philadelphia 5, Pa.



Sound-Absorbing Partition

A non-bearing partition system designed to minimize the transmission of sound from room to room rated an average sound transmission loss of 56.4 decibels in recent tests. Consisting of steel studs, track and gypsum plaster over metal lath, the system uses the new Hush Clip in conjunction with a 1/4 in. pencil rod which provides vertical support for the metal lath as shown. Although the finished wall is only 534 in. thick, sound transmission is greatly reduced because wall-to-wall contact is made only at those points where the clips are attached to the studs. Penn Metal Co., Boston, Mass.

(More Products on page 312)

Wheeler

Wheeler BI-FLO UPLITER

"PACKAGE PLAN" LIGHTING the efficient, time-saving way to solve <u>all</u> your lighting requirements <u>at one time!</u> Fluorescent — Incandescent — Specialized Lighting ... most jobs require not just one but various combinations of these modern forms of industrial lighting. When you submit your requirements to Wheeler Reflector Company, one quote does it. No need to split your requirements or to locate sources for each type. One quote! One source! One standard of quality for over 75 years!



Wheeler "PACKAGE PLAN" Lighting as installed in plant of Tracerlab Pioneer in the Nuclear Industry

Wheeler Reflector Company

DIVISION OF FRANKLIN RESEARCH CORP. 275 Congress Street, Boston 10, Mass.

Distributed Exclusively through Electrical Wholesalers

Fesco Board[®] is part of the new



For Fire Resistance: New Materials with a "Forward Look"

This new 34-acre Chrysler roof deck brings together the most modern materials to establish a new level of fire-resistance and fire-containment. Specifications: Walcon steel deck, Koroseal vapor barrier and non-flammable Lexsuco cold adhesive R907T— (manufactured for Lexsuco, Inc., Cleveland, by B. F. Goodrich), Schundler's Fesco Board Roof Deck Insulation, and Koppers 4-ply tar and gravel built-up roof.

ARCHITECT and ENGINEER: F. A. Fairbrother and George H. Miehls with Albert Kahn Associated Architects and Engineers, Consultants, Detroit, GENERAL CONTRACTOR: Hunkin-Conkey Construction Company, Cleveland, ROOFING CONTRACTOR: Industrial Roofing and Sheet Metal, Inc., Cleveland, LEXSUCO ROOF construction engineered and distributed by Lexsuco, Inc., Cleveland,

> **Non-flammable Lexsuco adhesive R907T *TM B. F. Goodrich Co.

'Forward Look" in roof design





In every way, Fesco Board lent itself to a new concept in fire retardant roof design employed on the 34 acre roof of Chrysler's Twinsburg, Ohio body stamping plant. Teamed up with Lexsuco's non-flammable adhesive, and the modern vapor barrier, Koroseal*, Fesco Board contributed these important properties:

Incombustibility - Fesco Board is rated incombustible, with a flame spread of only 20.5. and a smoke contribution factor of 0.

Moisture Resistance - Fesco Board absorbs only 1.5% moisture by volume on 24 hours total immersion.

Permanence - Fesco Board is not subject to rot. fungus or decay.

Mechanization-With a compression factor of 174.8, rigid Fesco Board holds up under heavy traffic. is packaged for mechanized handling.

Workmanship -- Light. only 9 oz. PBF. and 24" x 36" sized. Fesco Board handles fast. Protective packaging, true-square corners, and dimensional stability assure good craftsmanship.

Designing for greater fire-resistance? You'll find Fesco Board at home with the newest materials, the newest highspeed application techniques, the newest concepts of fire-control. Write for engineering data.

F. E. SCHUNDLER & COMPANY, INC.

EET . JOLIET, ILLINOIS

RATED FIREPROOF MATERIALS, ACOUSTICAL & INSULATING Developers and producers of incombestible mineral products including Ebbtone As Fesco Insulation Board, Coralus Acoustical Plaster, Coralus Perlite Aggregates, Micr miculiter, High Temperature Insulating Blocks and Insulating Coment.



ANOTHER ARCHITECT-APPROVED QUALITY AIR CONDITIONING JOB BY MARLO

PRODUCT REPORTS



EDWIN WEIKE

VASHINGTON, D. C.



Steel Fastening System

A new embossed-hole fastening system is said to make it possible to install roof and wall sheets on Steelcraft steel buildings with only one man working on the outside. Inside scaffolding is unnecessary because, by striking with a mallet over prepunched extruded holes in the grits or purlins, impressions can be formed which mark the proper screw locations on the outside of the panels. After the screw location is found, a hole is punched and a sheet metal screw installed, the extruded hole providing a raised area which fits tightly against the washer to form a weathertight seal. Steelcraft Mfg. Co., 9017 Blue Ash Rd., Cincinnati 42, Ohio.



Pocket Slide Rule

A wafer-thin circular slide rule only 23¼ inches in diameter comes in a grained plastic case to be carried in the pocket like a watch. A German import, it is constructed of stainless steel with legible two-tone printing. Bruno Imports, P. O. Box 56, Philadelphia 5, Pa.

261 marla"SEAZONAIRES" AIR CONDITION LUXURIOUS NEW WASHINGTON APARTMENTS

Here is urban living at its most luxurious -a handsome apartment building only five minutes from the heart of the nation's capital, with every facility for the utmost in comfort and convenience.

And for this superb dwelling, architect Edwin Weihe and consulting engineers Lanier and Levy approved Marlo Seazonaire Room Air Conditioning Units – Remote Type, Free Standing Style. 261 of these compact, stylish units– smartly designed to harmonize with modern interiors– permit tenants to regulate temperature to suit their own preference.

Owned by Dr. Jacob Kotz, this new apartment project was built by the Cafritz Construction Co. Mechanical Contractor was Harry E. Nau & Co., Inc.

Write today for information on the complete line of quality air conditioning-by MARLO.



SAINT LOUIS 10, MISSOURI

Quality Air Conditioning and Heat Transfer Equipment Since 1925

312 ARCHITECTURAL RECORD MAY 1957



JAMISON sound reduction doors lead in engine test cell

use

JET ENGINE TEST CELL (High thrust) - An inner and outer set of double Jamison Sound Reduction Doors for extremely high sound levels.

Aircraft engine noise effectively minimized in test cells of all types

Jamison Sound Reduction Doors have become the No. 1 weapon in the increasingly important war against noise. For years Jamison has been furnishing Sound Reduction Doors to the Air Force and aircraft engine manufacturers for use in test cells for engines of all types. Today Jamison is the foremost supplier of doors scientifically designed to minimize sound.

Tests show impressive results

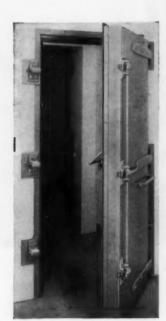
Jamison Sound Reduction Doors will consistently reduce sound by a factor of at least 50 decibels, based on the average results at 25 test frequencies over the range of 129 to 2070 c.p.s. The use of an inner and outer door shown above will almost double the sound reduction factor.

Jamison Sound Reduction Doors are designed to cope with varying levels of sound as well as other existing conditions such as extremes in temperature, humidity or pressure; and are available in sizes to accommodate movement of material or equipment or personnel passage.

If you are faced with a vexing noise problem, why not take advantage of Jamison's wide experience and knowledge. As the first step, write for Bulletin SR 22 or look up the Jamison insert in Sweet's Catalog File. Write to Sound Reduction Door Div., Jamison Cold Storage Door Co., Hagerstown, Md., U.S.A.

PERSONNEL DOOR Jamison Sound Reduction Door in smaller size to accommodate pedestrian traffic.





REYNOLDS ALUMINUM IN MODERN ARCHITECTURE

Lumbermens Mutual Casualty Company Building, Summit, N. J. Kumbermens Mutual Casuality Company. a division of Architects & Engineers: Childs & Smith, Chicago General Contractor: George A. Fuller Company, New York Erector of Windows and Mullions: F. H. Sparks Co., Inc., New York This building features Reynolds Aluminum Vertically Pivoted Windows Series 100, Reynolds Aluminum Mullions and Column Covers.

> Northwestern Bell Telephone Company, Tenth Street Building, Des Moines, Iowa General Contractor:

General Contractor: A. H. Neumann & Bros., Inc., Des Moines Erector: David Architectural Iron Works, Chicago Architects:

EYNOLD

Tinsley, Higgins, Lighter & Lyon, Des Moines

The Vaughn Building, Dallas, Texas

Owner: The Spartan National Life Insurance Co., Jack C. Vaughn, President Architect-Engineer: Hedrick, Stanley & Morey, Dallas General Contractor: The Henry C. Beck Co., Dallas Integrated Wall System Fabricator-Erector: Texlite, Inc., Dallas





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.





EL RANCHO MOTEL, HOT SPRINGS, ARK.

Space-Saving Advantages

and Inner-Fin®

the

All Copper Construction of





And this has been the experience of contractors all over the country. Customers are easily "sold" on these units . . . appreciate the sound advice of contractors who recommend them. Here's why:

- SPACE SAVING -- Patented Inner-Fin[®] construction makes Heat-X 'PC' Package Chillers the most compact on the market.
- **RELIABILITY** Non-ferrous construction of all water passages eliminates danger of corrosion. Traditionally rugged Heat-X construction assures long life.

'PC' Chillers also offer the contractor several advantages (in addition to consumer satisfaction):

EASE OF HANDLING — Units are lighter in weight and smaller because Inner-Fin[®] construction permits more chilling capacity with less bulk.

EASE OF INSTALLATION — Units are completely "packaged"... require only water and electrical connections.

> 'PC' Package Chillers are available in 2 HP through 100 HP models. Request complete catalog.

EAT-X, Inc. A Subsidiary of Dunham-Bush, Inc. BREWSTER • NEW YORK

OFFICE LITERATURE

Corrosion-Resistant Fittings

Describes and illustrates Speedline corrosion-resistant fittings for stainless steel piping installations, with detail drawings and dimensions. 24 pp. Horace T. Potts Co., Erie Ave. & D St., Philadelphia 34, Pa.

Radiation Protection (AIA 37-E)

Describes Ameray line of radiation protective equipment for X-ray and radioisotope applications. 4 pp. Ameray Corp., Route 46, Kenvil, N. J.*

Copper-Lined Water Heaters

Data File 16 contains construction details and recommended minimum specifications; dimensions, heating capacities and engineering data; installation suggestions and piping arrangements; and typical installations of p-k copper-lined hot water storage heaters. The Patterson-Kelley Co., East Stroudsburg, Pa.*

The Picture Book of Wrought Iron

Catalogs cast and wrought iron columns, railings and accessories as well as allied building products for interior and exterior, and illustrates typical installations. 12 pp. Locke Mfg. Co., Lodi, Ohio.

Toilet Compartment Planning

Catalog 570 gives detailed planning diagrams, and dimensional and construction data for complete line of *Fial* compartments. Illustrated, 16 pp. *Fial Metal Mfg. Co.*, 9301 W. Belmont Are., *Franklin Park*, Ill.*

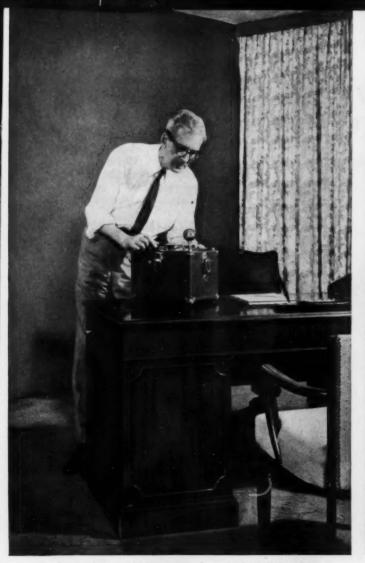
Manual of Consulting and Design

... Engineering Practices is a guide to assist design and consulting engineers and their clients in preparing agreements for professional services. Definitions of basic services, the scope of such services, the bases of determining fees, and sample forms of agreement are included. Single copy, 50¢; ten copies, \$4. Michigan Engineering Society, Executive Sec'y, P. O. Box 573, Kalamazoo, Mich.

Philite Rapid-Start Troffers

Four-page folder illustrates and gives dimensional cross sections and distribution curves for two troffer series, and other series in the *Philite* line of fluorescent fixtures. *Ruby-Philite Corp.*, 32–02 Queens Blvd., Long Island City 1. N. Y.*

(More Literature on page 318)





..........

Independent sound laboratory engineer checks decibel readings in one of many New York executive offices tested.

Sound level meter readings were also taken while elevators were traveling from floor to floor in normal operation.

Tests Prove Westinghouse Elevators are as Quiet as Executive Offices

Westinghouse Engineering rids elevators of noise...increases passengers' comfort

Comparative sound meter tests performed recently throughout the New York Metropolitan area prove that you enjoy the same quiet atmosphere in today's Westinghouse Elevator as that found in the finest top-executive offices. Yes, noise has been successfully engineered out of elevators by the perfection of a scientifically sound deadened system. Noise isn't "masked" in a Westinghouse elevator—it just isn't there to begin with.

If you are planning a new building—or thinking of modernizing an existing one why not experience a "proof of performance" test for yourself—and take your own decibel readings in a Westinghouse Elevator. Call the Westinghouse office nearest you to make arrangements for this eyeopening demonstration and also learn how you can save up to \$7000 per car per year with operatorless elevators.

Westinghouse elevator installations are the embodiment of prestige . . . highest achievement in comfort, safety and efficiency for you and your tenants. Made possible by Westinghouse automation in elevatoring which produced: 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 Elevatoring

5. Shuntless Relays and Electric-Driven Selectors for reliable operation



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

J-987278A

Low Cost + Low Cost INSTALLATION MAINTENANCE



DOR-O-MATIC CONCEALED IN FLOOR MANUAL DOOR CONTROLS

Superior design of DOR-O-MATIC controls makes them simple and inexpensive to install. Rugged construction requires minimum maintenance. Positive two-speed closing action with any type door. No unsightly detraction from beauty and design because DOR-O-MATIC controls are concealed in the floor.

Positive built-in backstop-eliminates door or floor ap-



plied stop devices. Built-in hold-open. No seasonal adjustments necessary. Thirtyone models to choose from. Write for detailed information.

DOR-O-MATIC INVISIBLE DOR-MAN-For completely automatic door controls in carpet or handle actuated models.



division of REPUBLIC INDUSTRIES, INC.

7358 West Wilson Avenue Chicago 31, Illinois CANADA: Dor-O-Matic of Canada, 550 Hopewell Avenue, Toronto 10, Ontario EXPORT: Consultants International, 69-77 Bedford Street, Stamford, Connecticut

318 ARCHITECTURAL RECORD MAY 1957

SEE OUR CATALOGS IN SWEET'S

Sales and Service in Principal Cities

OFFICE LITERATURE

Multi-Zone Air Conditioners

Catalog 383 includes engineering specifications, capacities, selection examples, performance tables, dimensions and a description of accessories for eight new Flow-Temp multi-zone conditioners. Acme Industries, Inc., Jackson, Mich.

Petro Burners (AIA 30-G)

Describes and illustrates Petro rotary cup oil burners, industrial oil pumps, combination gas and oil burners, and packaged units. 20 pp. Petro, 3170 W. 106 St., Cleveland 11, Ohio.*

All-Metal Merchandisers

Catalog 390 illustrates and describes Viz-U-Bill all-metal merchandisers and accessories with special emphasis on the new gondola type self selection units. 40 pp. L. A. Darling Co., Bronson, Mich.

Truscon Steeldeck Roofs

(AIA 12-A-3) Catalog K-120 gives technical data, construction and erection details and specifications for Truscon Ferrobord and accessories. 40 pp. Truscon Steel Div., Republic Steel Corp., Youngstown 1, Ohio.*

Aluminum Window Tracing Guides

Two 81/2 by 11 in. sheets are printed with standard window sections, special and vent sections, and door framing, installation and other details for Gevser's Contemporary series aluminum bar window, at 1/4 in. scale. Also available is a 4-page data sheet picturing the steps in installing the aluminum bar window. E. K. Geyser Co., 915 McArdle Rdwy., Pittsburgh 3, Pa.*

Radial Compressors

Form AC-249 features compressor, condenser and engineering specification data on Airtemp's 10 to 125 hp line of radial compressors for commercial and industrial air conditioning and refrigeration. Illustrated, 38 pp. Airtemp Div., Chrysler Corp., Dept. 620, 1600 Webster St., Dayton 1, Ohio.*

Metal Office Furniture

Four brochures catalog Invincible steel office furniture, including desks, tables, chairs, files and auxiliary office furniture. Invincible Metal Furniture Co., Manitowoc, Wisc.

(More Literature on page 322)





Vina-Lux with Micromatic Veining is an entirely new concept in pattern, appearance and performance of Vinyl Asbestos Tile. You can see the difference! Its subtle, blended coloring and finer, more artistically distributed marbelizing give you a wide range of soft new color effects. Vina-Lux with Micromatic Veining eliminates unsightly, blotchy mottling — permits faster installation—and assures uniform light reflectance throughout the floor.

See for yourself the new beauty and character of this better-made vinyl asbestos tile. Samples are yours for the asking.



AZROCK FLOOR PRODUCTS DIVISION UVALDE ROCK ASPHALT COMPANY 513A Frost Bank Building * San Antonio, Texas

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NOW READY — Authoritative help at every step of planning and building school projects

SCHOOL PLANNING AND BUILDING HANDBOOK

by N. L. Engelhardt, N. L. Engelhardt Jr., and Stanton Leggett, members of the firm Engelhardt, Engelhardt, Leggett and Cornell. Educational Consultants



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Here for the first time is the only practical handbook dealing with every phase of plan-ning and executing school building projects. This one book is the best source of information needed every day by architects, con-tractors, engineers, boards of education and everyone else concerned with the school building program.

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SCHOOL PLANNING AND BUILDING HANDBOOK, containing 626 pages and 53 detailed checklists, is a priceless reservoir of vital facts which will be a constant aid to you on all school building projects.

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Buildings: Requirements, Planning the Primary Classroom, Developing a Program

5. Public Relations: Importance, Literature, Organizing for an Intensive Compaign

6. Local Administrative Variations

7. Planning for Equipment, Furniture : Trends in Equipment, Responsibilities

8. Budget and Accounting for Programs: Capital Budget of the Community, Necessary Accounting Records

9. School Site Selection: Trend toward One-story Construction, How Community Progress Affects the Schools

10. Acquisition of Sites: Board Policy, Eminent Domain, Condemnation

11. Standards for Site Engineering Surveys 12. Contract with the School Building Architect

13. Contract with the Engineer: Specialized Engi-

neering Problems, Engineer's Fees and Contracts 14. Problems of Land Use and Landscaping :

Changing Concepts, Estimating the Cost.

15. Sanitary and Storm Drainage: Appraisal of Problem

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21. Statement of Preliminary Estimates of Cost

22. Standards for Final Working Drawings 23. The Volume of Final Specifications

24. Final Specifications of Materials and Work-manship: Writing the Final Specifications, Assurance of Superior Results

25. General Conditions of Contract: Sample Contracts

26. Detail Drawings and Shop Drawings 27. Cost Estimates Based on Final Plans and Specifications: Design-stage Estimating, Comparison of Project Costs

28. Incidental and Extra Costs

29. Problems Associated with Bidding

30. Contracts of Construction

31. Supervision of Construction : Architect's Overall Responsibility, Clerk-of-the-Works, Advance

Appointment of the Building Custodian

Insurance Coverage for School Construction
 Surety Bonds on School Construction

34. Unit Costs and Their Interpretation

35. Timetable for School Building Projects: Sources of Delays, Adjusting Schedules

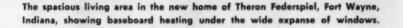
36. The Measure of School Building Design

37. Publicizing School Building Projects

38. Legal Services: Needs, Checklists of Possible Legal Problems

39. Financing: Pay-as-you-go Plan, Selling School Bonds

40. Naming the School, Cornerstone Laying, and Dedication: Ceremonies, Errors and Pitfalls to be Avoided



Feature House in New Homes Guide is heated with . . .

THRUSH Radiant HOT WATER HEAT

This beautiful home featured in the New Homes Guide introduces many interesting ideas in gracious living. Being a multi-level home, naturally it is heated with hot water and is Thrush equipped.

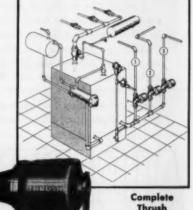
Both radiant coils in the floor and radiant baseboards are used beneath the broad expanse of windows. There are four zones, each controlled by separate Thrush units.

Heating is absolutely uniform, regardless of the outside weather. Installation costs are lower, and fuel consumption is reduced. The home is cleaner and quieter, with no noisy fans. There is practically no maintenance cost. Thrush heated homes are easier to sell at better prices.

> See our catalog in Sweet's or write Dept. J-5 for booklet and any information you may require in planning home heating.

H. A. THRUSH & COMPANY

PERU, INDIANA



Complete Thrush System

Thrush Water Circulator

INCREASED PRODUCTION



Immediate Deliveries!

Alberene Stone can be shipped normally in 60 days—or even sooner to meet very special circumstances. We can schedule our deliveries to meet all reasonable requirements of contractors and laboratory equipment manufacturers.

Further, the supply of Alberene Stone is inexhaustible. New veins are constantly being located in company owned quarries in Albermarle and Nelson Counties, Va.

Alberene Stone is the only natural silicate stone with the surface that goes all the way thru. It can be cut, drilled, songueand-grooved, refinished and reused almost indefinitely – while providing the best obtainable chemical resistance!

For information and technical assistance, address: Alberene Stone Corporation, 419 Fourth Avenue, New York 16, N. Y.



OFFICE LITERATURE

Low Temperature Installations

(AIA 37-B) Contains complete information on the latest recommended methods for installing *Foamglas* cellular glass insulation on walls, floors, ceilings and roofs of refrigerated spaces operating between -50° F and $+50^{\circ}$ F. It lists suggested thicknesses as well as recommended adhesives, finishes, paints and other accessories for use with *Foamglas* in low temperature installations. 20 pp. Booklet No. FL-101. *Pittsburgh Corning Corp., One Gateway Center, Pittsburgh* 22, *Pa.**

Rolling Gymstands (AIA 35-F-11)

Catalog R-57 describes five types of rolling gymstands and shows typical installations. Complete architectural specifications and planning aids, including typical floor plans, are also given. 16 pp. Wayne Iron Works, 147 N. Pembroke Ave., Wayne, Pa.*

Prescolite Lighting Fixtures

(AIA 31-F) Catalog G-10 illustrates Prescolite line of residential and commercial lighting fixtures, including recessed and surface fixtures, and portable and pin-up lamps. 32 pp. Prescolite Mfg. Co., 2229 Fourth St., Berkeley, Calif.*

Partition Systems (AIA 20-B-11)

Twenty-page manual describes and illustrates seven types of partition systems, giving sound transmission loss, fire-resistive ratings, and erection and material specifications for each. *Penn Metal Co., Inc., 40 Central St., Boston 9, Mass.**

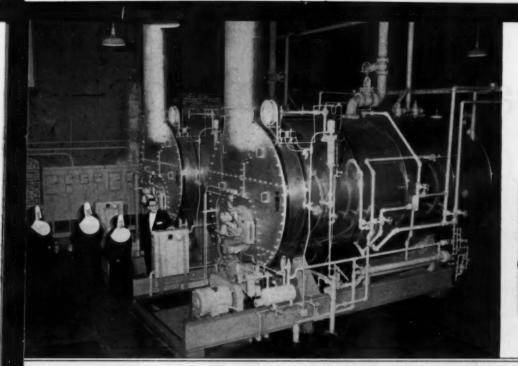
Incandescent Lighting Catalog

Contains all technical information, dimensions and specifications, installation procedures and other data on Guth's *Brascolite* incandescent line, with special emphasis on the *Alzak* lifetime aluminum reflectors. *Edwin F. Guth Co.*, 2615 Washington Ave., St. Louis 3, Miss.

Electrionic Control Centers

Discusses functions, uses and advantages of centralized automatic control of heating and air conditioning systems, and gives design information and suggested specifications for a typical *Electrionic Control Center*. Booklet F-8031, 8 pp. Barber-Colman Co., 1400 Rock St., Rockford, Ill.*

(More Literature on page 326)



NEW BOILERS combine efficiency and handsome appearance. Edward 'S. Green, Edgemont (Pa.), contractor, was responsible for this superior in-stallation. Pictured left to right are: Sister M. Cor Immaculatum, Im-maculata College Treasurer, Sister Jean Marie, Community Treasurer, Reverend Mother Maria Alma, Su-perior General and Salvatore S. Guz-zardi, Consulting Engineer.



OLD SOILER was a coal-fired HRT model — typical of many replaced by modern Cleaver-Brooks oil, gas or combination oil/gas fired boilers.

December 20, 1955

Consulting engineer* tells how Immaculata College boiler modernization saves estimated \$12,000 each year

Salvatore S. Guzzardi CONSULTING ENGINEER

Salvatore S. Guzzardi -Award-winning head of an organization of experienced professional engineers specializing in modernizing power service facilities. Clients include: Pennsylvania University, Baldwin-Lima-Hamilton Corp., H. Daroff & Sons, Sun Shipbuilding & Dry Dock Co. and City of Philadelphia.

2928 LEWIS TOWER Near Mr. Uleaver: Recently our office was retained to make an impartial, exhaustive engineering study of the 40-year old boiler plant and steam system at Immaculata College, Immaculata Pa., which is staffed by the Catholic order. Sisters of the Immaculate Heart of Mary. Mr. John C. Cleaver, President Cleaver-Brooks Company As a result of our recommendations, two fully automatic, oil-fired, 350 bhp Cleaver-Brooks package steam boilers, (12,000 lbs/hr steam each), replaced three and-fired coal boilers and steam-driven auxiliaries. The new boilers are operating a approximately 80% boiler efficiency year-round.

PHILADELPHIA 2, PA . KINGSLEY 8-2777

at approximately 80% boller efficiency year-round. Conversion of coal firing to automatic #6 oil firing and increased boller efficiency has reduced the fuel cost approximately 50% -- amounting to a saving of \$12,000 each year.

The cost of the bulker plant labor saves the College \$7,500 each year.

The cost of the boiler plant modernization will be paid for out of fuel and labor savings in approximately 2-1/2 years. savings in approximately 2-1/2 years. Commendation for this outstanding performance of the Immaculata boiler plant is due to your well-engineered boiler design and to the cooperation of your skilled servicemen. The results achieved were so impressive that the Sisters subsequently modernized their Villa Maria Convent, Westchester, Pa., with two 100-bhp Cleaver-Brooks boilers. Sincerely your

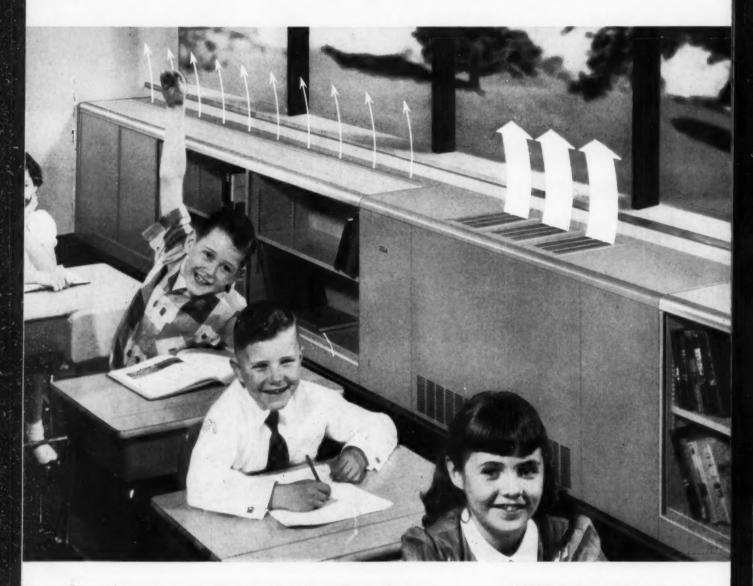
Sabatre S Buggardi Surveys show 32% of boilers now in service are 30 years old; 56% are over 20 years old

If your boiler fits this description, we recommend an immediate survey. "In 90% of the plants surveyed," summarizes Mr. Guzzardi, "we have found it possible to save thousands of dollars and to pay for the recommended improvements out of annual savings within one to three

years. Again and again the proved economy of Cleaver-Brooks four-pass, Again and again the proved economy of Cleaver-Brooks rour-pass, forced-draft boiler design results in savings reports as impressive as this. Contact your nearest Cleaver-Brooks representative for more facts on the complete line of steam and hot water boilers — 19 sizes, 130 models, 15 to 600 hp — for heating or processing. Or write Cleaver-Brooks Company, Dept. F, 362 E. Keefe Ave., Milwaukee 12, Wis., U.S.A. Cable Address: CLEBRO — Milwaukee — all codes



Now...an ideal climate designed for



In performance, only Trane offers these three advantages:

1. Powered ventilation that carries to every corner of the room, every minute it's occupied. 2. Room-wide ventilation from wall-to-wall extensions of the main unit. 3. Kinetic Barrier Action that stops cold window downdrafts before they start by blanketing windows with a continuously rising current of tempered air. For the TRANE Kinetic Barrier, unlike ordinary systems which depend merely on heating elements, continues to operate even when the room thermostat has turned off the heat. Result: a fresh air seat for every pupil in the room—all day long! IN HALLWAYS, TRANE Wall Line Convectors serve long wall and window runs, blend with beauty of modern buildings, combine low initial cost with low cost of installation to meet even the tightest budgets.



for learning the modern school

Trane Unit Ventilator's modern styling...new colors...new built-in look...complement today's school design

For any air condition, turn to

MANUFACTURING ENGINEERS OF AIR CONDITIONING, HEATING, VENTILATING AND HEAT TRANSFER EQUIPMENT THE TRANE COMPANY, LA CROSSE, WIS. + EASTERN MFG, DIV., SCRANTON, PA. + THANE COMPANY OF CAMADA, LTD., TORONTO + DO U.S. AND IS CAMADIAN OFFICES

Clean, fresh climate—and clean, fresh design. They go together in the TRANE Unit Ventilator, the modern heating-ventilating system created by TRANE for the modern school.

As you study the clean lines of the TRANE Unit Ventilator, you appreciate how easily you can integrate it into a modern show place building.

You sense the *extra* attention TRANE designers have paid to such details as the smart new shelving, in 2, 3 and 4-foot modules . . . the adjustable center shelves for larger books, maps and teachers' needs . . . the smoothly-operating sliding doors . . . the trim aluminum extrusions that make the units blend into one clean, continuous line. New "hard-top" laminated plastic covers come in five modern new patterns to blend with the interior you design.

Functionally, too, the TRANE Unit Ventilator's design offers extra advantages—the adjustable feet on the shelving and the adjustable kick panel for easy—and perfect alignment with uneven floors.

But most of all, you'll appreciate your clients' satisfaction with the way the TRANE Unit Ventilator *performs*, with its exclusive *Kinetic Barrier* action.

The picture-diagram at the left gives you some idea why this system is so superior. Your nearby TRANE Sales Office will provide more data. Or write TRANE, La Crosse, Wis.

IN STAIRWAYS like this, TRANE Convectors combine beauty with efficiency, fit where other types of units won't. Choose from a complete line of free-standing, recessed or wall-hung models for any type of installation.

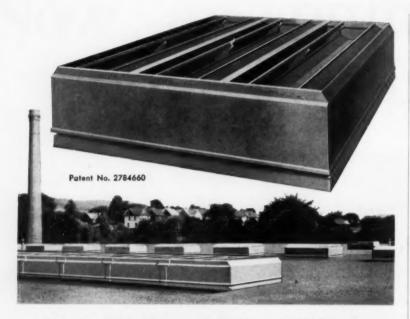


IN GYMS, LOCKER ROOMS, pools, auditoriums, the TRANE Torrivent simplifies design problems by its compactness, versatility. Heats efficiently, ventilates thoroughly. Easy to install ... requires only a small amount of ceiling space.



FOR HIGH-CHILINGED SPACES, TRANE Unit Heatern with exclusive louver cone diffusers are often the answer. Two-thermostat control traps otherwise wasted heat near ceiling, blows it down to save fuel.





Lower Contour, Higher Efficiency in roof ventilators, at Lower Cost with Swartwout's new

Contouramic Airmover

Nearly a foot lower than any roof ventilator previously offered, Contouramic Airmover follows the trend to neater roof appearance. But there's no sacrifice of efficiency! In fact, capacity is *increased* — and many other advantages follow:

With less bulk, there's less weight — less wind resistance — lower maintenance — lower first cost.

And automatic opening of dampers in case of fire is added as a standard feature.

Contouramic Airmover can be used in various ways: for "spot" ventilation over heat-producing operations; for safety ventilation above stages; and in runs or complete roof coverage to achieve large scale ventilation. And it's absolutely weatherproof.

Use this newest concept in roof ventilation on new buildings or for added relief on older ones.

Write today for Form 312-G.

THE SWARTWOUT COMPANY 18511 EUCLID AVENUE • CLEVELAND 12, OHIO



OFFICE LITERATURE

Mississippi Glass (AIA 26a-3-5-6)

Catalog No. 57-G, 20 pp., covers entire line of rolled, figured and wired glass for school, commercial, industrial and residential use. Also available are Catalogs 57-I for industrial uses, and 57-R for light commercial and residential usage. Mississippi Glass Co., 88 Angelica St., St. Louis, Mo.*

Metal Compartment Catalog

(AIA-35-H-6) Covers entire line of *Mills* toilet compartments, shower and dressing rooms, shower units and hospital cubicles, including complete specifications and detail drawings of typical layouts. Standard hardware and fittings are illustrated, and the catalog contains actual color samples of standard colors. 20 pp. *The Mills Co.*, 951 Wayside Rd., Cleveland 10, Ohio.*

Protective Coatings

Catalog contains factual data on *Del* protective coatings and synthetic rubber compound. Each product's features, functions, performance and instructions for application are outlined, with tab indexes for easy reference. *David E. Long Corp.*, 220 E. 42nd St., New York 17, N. Y.

Electronic Air Cleaners

(AIA 30-D-3) Catalog E-61 provides complete information on the advantages and applications of *Trion* electronic air filters. Dimension, capacity and model selection data is supplemented by engineering information and specification guides for the available models. *Trion*, *Inc.*, *McKees Rocks*, *Pa.**

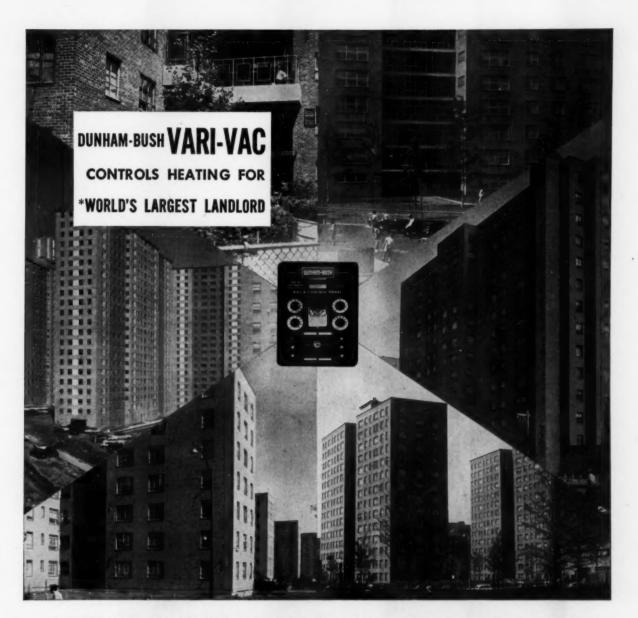
Wood Pressure Treatment

Handbook contains specifications for pressure treatment of western woods. *American Wood Preservers' Institute*, 1410 S.W. Morrison St., Portland 5, Oregon.

Pre-Formed Copper Tube Grids

Publication C-6 offers suggested layout and installation procedures for Anaconda's pre-formed copper tube panel grids for radiant panel heating systems. Extensive illustrations and complete engineering data are included. 24 pp. Also available are Publication C3-SA on sheet copper for building construction, and Publication C-33 on copper tubes and fittings for sanitary drainage systems. The Anaconda Company, 25 Broadway, New York 4, N. Y.*

(More Literature on page 330)



VARI-VAC is selected for BIG heating jobs (and small ones too) to provide fuel economy . . . precise central control, even in higher ambients . . . simplicity of operation . . . minimum maintenance cost . . . ultimate in tenant comfort.

For 10 years VARI-VAC has been proved-in-use by the New York City Housing Authority . . . is installed in its earliest, in its most recent projects.

On your jobs, big and small, specify VARI-VAC, the differential vacuum heating system that automatically balances heat medium to balance with varying heat loss of building due to changing outside weather conditions.



Air Conditioning, Refrigeration, Heating Products and Accessories

DUNHAM - BUSH, Inc. West Hartford 10, Conn., U.S.A. MARSHALLTOWN, IOWA • MICHIGAN CITY, INDIANA • RIVERSIDE, CALIFORNIA • TORONTO, CANADA • LONDON, ENGLAND • SUBSIDIARY: HEAT-X, INC., BREWSTER, N.Y. *New York City Housing Authority, "Landlord for 312,000 persons---"

VARI-VAC, nerve center for controlling heat, has been selected by the New York City Housing Authority to regulate heat for 927 buildings in 64 of its projects. These projects contain 74,761 apartments housing 283,972 tenants.

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Rush me Vari-Vac	details (Bulletin 2101)
Name	
Company	
Street	
City	-



Its name: Mall Building

Its location: Philadelphia

Its architect: Charles Colbert

Its contractor: Shelby Construction Co.

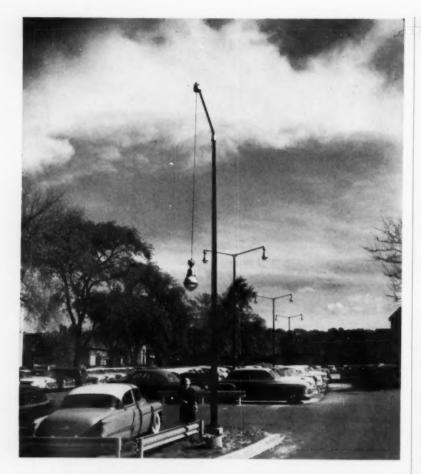
Among its appointments: Yale Heavy-Duty Locksets and Door Closers

Yale heavy-duty locksets (5400 Series) and door closers (both surface and concealed-Series 90 and 60, respectively) have application for apartment buildings, offices, hotels, hospitals, stores, theatres, restaurants, schools, factories. Yale locksets are distinguished by elegance, precision, unquestioned securityin distinctive knob and trim designs, or, if you prefer, in custom stylings created to your requirements. Yale door closers, are, of course, still the standard of sure, quiet closing-long-lasting efficiency.

> The Yale & Towne Mfg. Co. Lock & Hardware Div., White Plains, N.Y.



ARCHITECTURAL RECORD MAY 1957 329



MAINTENANCE COSTS ARE IN FOR A "LET DOWN" WITH Servisafe POLES

BECAUSE... servicing costs automatically come down with the lights when one man can relamp and clean pole-mounted luminaires at ground level! The entire operation can be accomplished in minutes ... day or night ... rain or shine.

With "Servisafe" Metal Poles, maintenance men carry only a detachable hand-line to operate the disconnecting and lowering mechanism. No ladders, no assistants, no waste motion. And no climbing or electrical hazards.

"Servisafe" Poles are available in single and double-arm models, as shown above, in a variety of standard styles . . . steel or aluminum construction.

> FOR DETAILS AND PRICES, WRITE FOR BULLE-TIN WPH-54 . . . OR CALL SUPERIOR 1-7626.





THE THOMPSON ELECTRIC CO.

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OFFICE LITERATURE

Square Concave Lenslites

(AIA 31-F-237) Bulletin L-120-J gives recommended optical systems, brightness and distribution data, coefficients of utilization and illumination calculations for two sizes of the concave Lenslile. 4 pp. Lighting Sales Dept., Corning Glass Works, Corning, N. Y.*

Acoustics and Acoustical Materials

Illustrations and accompanying text explain nature and causes of sound and noise, propose remedies for excessive noise. Instructions for acoustical analysis are followed by comprehensive information on sound-conditioning materials. Acoustical Materials Association, 57 East 55 St., New York, N. Y.

"AN" Stainless Steel Fasteners

Describes stock line of aircraft bolts, slotted and Phillips machine screws, flat and round rivets, and washers. 12 pp. Allmetal Screw Products Co., Inc., 821 Stewart Ave., Garden City, L.I., N. Y.

Unit Heater Handbook

Illustrated pocket-size handbook contains specifications and operating characteristics as well as installation and application data for complete Venturafin line. 64 pp. Bulletin 9417, American Blower Corp., Detroit 32, Mich.*

Ceiling Air Diffusers

Bulletin 390-F-57 gives detailed engineering and selection data on new Multi-Vent Troffer, a combination ceiling air diffuser and fluorescent troffer light, as well as on standard low-velocity, flush mounted diffusers. 8 pp. Multi-Vent Div., Pyle-National Co., 1334 N. Kostner Ave., Chicago 51, Ill.*

Hardwood Plywood Standard

Revised Fifth Edition provides minimum specifications for four types of hardwood plywood in standard grades. Covers tests, densities, standard dimensions, other pertinent information. 15¢. Supt. of Documents, Government Printing Office, Washington 25, D. C.

Cabinet Convectors

Details design and construction features of code rated cabinet convectors for steam and hot water heating systems. Illustrated with photographs and schematic drawings. 28 pp. Technical Data Dept., Dunham-Bush Inc., West Hartford 10, Conn.

(More Literature on page 334)



New hermetic centrifugal provides ECONOMY AT ANY LOAD

Worthington unit offers ease of installation plus high operating efficiency

Here is a self-contained refrigeration unit that's ideal for air conditioning, and for chilling water in industrial processes. Worthington Centrifugal units are available in sizes from 100 to 500 tons-thus adapt easily to any type and size of building.

Maximum efficiency at 10% to 100% is made possible by use of variable inlet guide vanes located directly ahead of each impeller. The units utilize a two-stage, balanced, vaneless diffuser type compressor designed especially for economical and efficient operation. Installation costs are lower, too, because no alignment of motor and compressor is necessary.

It will pay you to learn about the many other advantages offered by Worthington Hermetic Centrifugals. Among them... Elimination of need for special foundation... Automatic stop and start controls... Automatic safety controls for protection of shaft and bearings... and many others.

For detailed specifications, phone your nearest Worthington District Office. Or write: Worthington Corporation, Sect. A7.57, Harrison, N. J.





Lighting that has no "or equal"

How do you feel about substitutes?

If alternate "or equal" fixtures are offered when you've specified Day-Brite, do you readily accept them?

More and more top architects don't. They've learned from experience that the design and quality of Day-Brite fixtures have no "or equal."

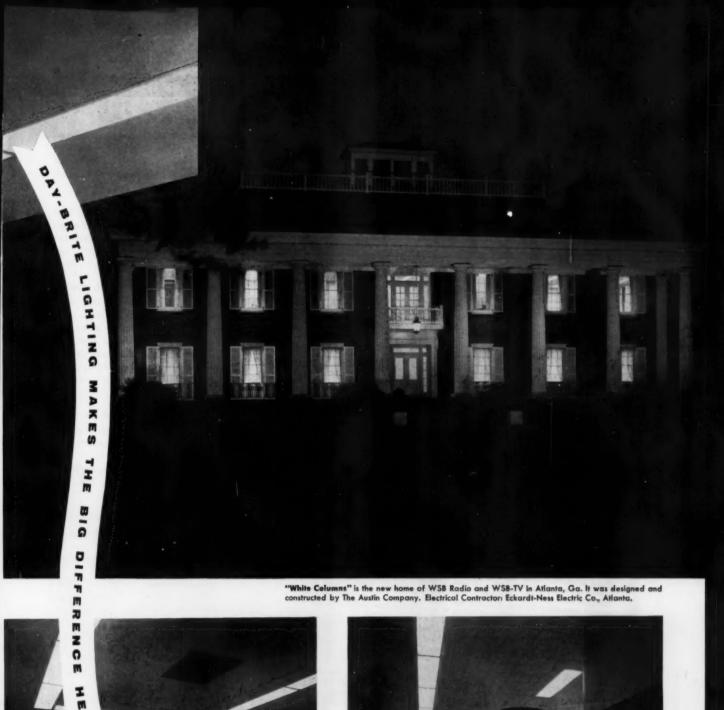
All fluorescent lighting fixtures may look good and sound good on paper. But the safe and sure way to satisfy your clients and yourself is to make a point-by-point comparison of all fixtures *before* you specify.

Then you're sure to do as most experienced architects do, namely, to specify *and insist on* Day-Brite... the one lighting fixture that enhances both the job and your own reputation.

DAY-BRITE LIGHTING, INC., 5465 BULWER AVE., ST. LOUIS 7, MO. DAY-BRITE LIGHTING, INC., OF CALIFORNIA, 530 MARTIN AVE., SANTA CLARA, CALIF. IN CANADA: AMALGAMATED ELECTRIC CORP., LTD., TORONTO 6, ONTARIO

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Conference Room. Day-Brite recessed traffers enhance the quiet dignity of this important gathering point.



Employes' Lounge ... a room designed for relaxation. No harsh brightness from these Day-Brite recessed Mobilex® and traffers,



Part of the Vikter air con-ditioning equipment at Southwestern Bell. Froon heat exchanger, 5-pass Frean water chiller, 2-pass Frean condenser, and Frean liquid receiver.



Two Vilter Freon 12-VMC com-pressors, complete with oil sepa-

How can the summer efficiency of many operators be increased in a busy telephone exchange?

with efficient AIR CONDITIONING

that costs less to own*

Busy workers throw off a great deal of heat—even though many are seated at long switchboards. Warm, "sticky" atmosphere means short tempers and reduced efficiency. BUT dependable air conditioning with proper humidity control, filtering and ample fresh air will rapidly change this. And the best solution of all is to install a Vilter system to assure efficient economical results at a reasonable cost efficient, economical results at a reasonable cost.

The Vilter equipment included in this telephone company installation consists of two 8-cylinder Freon 12-VMC compressors, a 2-pass Freon condenser, liquid receiver, water cooler and heat exchanger. The VMC's are designed for smooth operation, efficient performance and a minimum of vibration to reduce the noise level . . . a real asset in an office building. A high point of the application is the attractiveness of this installation.

Vilter, while primarily interested in utility, also exerts every effort to include eye-appeal in the design and installation of equipment. See your nearest Vilter engineer, today, for a careful evaluation of

your air conditioning and refrigeration needs. Sold and installed by O'Dower Engineering Company, Kansas City, Missouri



OFFICE LITERATURE

Paging and Alarm Systems

Booklet 10041 provides descriptive and installation data on Vibrechord chime alarm systems. 16 pp. Sales Promotion Depl., Edwards Co., Inc., Norwalk, Conn.

Stainless Steel Frames

Bulletin 56-D shows how stainless steel showcase, counter and table frames permit simplified wood or glass construction. Garden City Plating and Mfg. Co. 1750 N. Ashland Are., Chicago 22, Ill.

Commercial Lighting Applications

(AIA 31-F-237) Bulletin L-100 shows recommended lighting glassware for commercial buildings and a new method of determining fixture number and layout for both incandescent and fluorescent lighting of general or display areas. 20 pp. Lighting Sales Dept., Corning Glass Works, Corning, N. Y.*

Diffuser Selection Manual No. 60

Contains diagrams, tables, photographs and other data to aid in the selection of diffusers and accessories for all-air high velocity and conventional air conditioning systems and units. 80 pp. Anemostal Corp. of America, New York, N. Y.*

Engelmann Spruce Species Book

(AIA 19) A 48-page "species book" supplements complete descriptions of the properties and uses of Engelmann Spruce with photographs showing examples of various grades of the lumber. Charts and tables providing recommended grade uses are also included. Single copy, 50¢. Western Pine Association, 510 Yeon Bldg., Portland 4, Oregon.

Movable Partitions and Paneling

(AIA 35-H-6) Offers complete information, including details and specifications, on Methwall movable partitions and paneling. 20 pp. Prosperity Company, P.O. Box 671, Syracuse 1, N. Y.

Light Control Equipment

(AIA 31-F-25) Bulletin L755N contains latest information and details on standard line of non-interlocking Luxtrol light control equipment. 16 pp. Superior Electric Co., Bristol, Conn.*

Dress-up Bathroom Styling

(AIA 29) Describes and illustrates Grote line of cabinets and accessories, including Glo-Chrome surface mounted accessories. 8 pp. Grote Mfg. Company, Bellevue, Ky.

Installation Costs Cut 1/3 with New Rapidjust Brackets

E Rapidjust, an exclusive new mounting bracket introduced on the new Curtis Sky-Lux series of large-area luminaires, lets two men do the work previously requiring three men. Sky-Lux, in surface-mount and flush or flange recessed types, is available in 2' x 2', 2' x 4' and 4' x 4' sizes with white CurtiCell; flat, concave and dished concave acrylic plastic diffusers; Alba-Lite glass and plastic louver bottom closures. Recessed Sky-Lux luminaires featuring the new Rapidjust mounting brackets can be used in all standard type acoustical suspension ceiling systems. The new Rapidjust bracket also eliminates yokes or support straps, providing quick, safe and economical installation.

SEE A RAPIDJUST-EQUIPPED SKY-LUX DEMONSTRATION. CALL YOUR CURTIS REPRESENTATIVE.



CURTIS LIGHTING, INC. 6135 W. 65th ST., CHICAGO 38, ILL.

in California 242 S. Anderson St. in Canada 195 Wicksteed Ave. Los Angeles 33, Calif. Toronto 17, Canada



Walter Juergens, Juergens Electric, Hammond, Ind. "With Rapidjust two men install the same 4' x 4' unit that used to take three men."

Rapidjust brackets instantly engage ceiling members so that only two men are need for installation.



Lift recessed Sky-Lux into plenum. Rapidjust brackets held flush to unit by retainer clip.



Loosen wing nuts on inside of unit one-half turn and move Rapidjust brackets down in slot.



Spring-loaded Rap-idjust brackets are released: unit is selfsupporting on ceiling members. Align-ment and final posi-tioning is done by setting unit and tightning wing nuts.

SEE RAPIDJUST DEMONSTRATED AT BOOTH 48, A.I.A. CENTENNIAL CONVENTION, WASHINGTON, D.C., MAY 13-17.



BURT LOUVERS ARE VITAL VENTILATING EQUIPMENT

Air removed from a building with gravity or fan ventilators *must* be replaced. Burt Wall Louvers, with fixed or adjustable blades, provide efficient, weatherproof air inlets. The Burt line is complete, from general purpose models to industrial types and includes removable screens, louver operators and other accessories. Burt experience and specialized equipment also provide every facility to economically construct special units when required.



Series of Burt Adjustable Louvers

Send for FREE Data Book! Write for Burt Data Book SPV-17. It Supplies quick data on Burt's complete line of modern Wall Louvers. FAN & GRAVITY VENTILATORS · LOUVERS · SHEET METAL SPECIALTIES The Burt Manufacturing Company 48 E. South St. Akron 11, Ohio

MEMBER POWER FAN MANUFACTURERS ASSOCIATION

THE RECORD REPORTS NEWS FROM CANADA

(Continued from page 46)

project. . . . Construction of Vancouver's Civic Auditorium has commenced, with the contract awarded to Commonwealth Construction Co. Ltd. at \$4,034,922. Architects are Lebensold, Affleck, Desbarats, Michaud & Sise, of Montreal: associate architects Gardner. Thornton, Gathe & Associates, Vancouver; consulting engineers W. Sefton & Associates Ltd. (structural), Toronto, James P. Keith & Associates (mechanical and electrical), Montreal, and Bolt, Beranek & Newman (acoustical), Cambridge, Mass. . . . A civil service architect in Ottawa, Julien J. Olson, has been awarded \$1000 for an idea it is estimated will be worth \$10,500 to the Federal government this year alone: he proposed that whenever the Canadian coat of arms is to be placed on new government buildings, the crests be supplied from a central stock of aluminum moldings. . . . The Dumont family of professional engineers - father, seven sons and a daughter married to an engineer --- won an accolade at the general meeting of the Corporation of Professional Engineers of the Province of Ouebec in Montreal last month. Joseph Dumont, 78, was given a certificate of honor in recognition of his family's contribution to the engineering profession and to the northwest region of Quebec where Mr. Dumont, five of the seven sons and his daughter live. . . . New Addresses: Allward & Gouinlock, Architects. 245 Davenport Road. Toronto: F. A. Bell, Consulting Engineer, 460 Talbot Street, St. Thomas, Ont.; Douglas W. Huggins, Architect, 542 Tempe Cr., North Vancouver, B. C.; Kasten, Longworth & Associates Ltd., Consulting Structural Engineers, 10357 109 Street, Edmonton, Alta.; Leslie H. Kemp, Architect, 59 Wellington Street, Guelph, Ont.; Lund, King & Associates, Architects, Engineers and Planners, 1259 Marine Drive, North Vancouver, B. C.; S. M. Peterkin & Associates Ltd., Consulting Engineers, 21 Sultan Street, Toronto: W. H. Robinson, Architect, 102 Charles Street West, Toronto; K. J. Sandbrook, Architect, 604 Blackford Street, New Westminster, B. C.; K. C. Stanley & Associates, Architects and Engineers, 12306 Jasper Avenue, Edmonton, Alta.; Heinz Urbat, Consulting Structural Engineer, 1173 Bay Street, Toronto; H. J. White, Architect, 471 Wallace Street, Nanaimo, B. C.



Minneapolis where the significant word for elevators is OTIS

The economic capital of the dynamic upper midwest was quick to grasp the realty advantages of AUTOTRONIC® elevators. These completely automatic OTIS elevators keep existing buildings competitive. They assure an outstanding rental status for new buildings. This amazingly successful development is another OTIS first. 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



Washrooms of another notable building finished in Carrara® Glass!

The material selected to finish walls and build stiles and partitions in washrooms is a very important architectural specification . . . especially for outstanding buildings like this Paramount Theatre Building. This material must be of a quality in keeping with the rest of the building. It must make a good appearance. It must be durable and long wearing, and easy to clean.

To meet all these requirements with one material, many leading American

architects have turned to CARRARA Structural Glass. CARRARA is all pure glass with a surface mechanically ground and polished to a high degree of lustre and beauty. The smooth, even finish will not crack, craze, stain or fade and it is impervious to attack by water, steam, acids or cleaning compounds. The uniform homogeneous structure of CARRARA makes it simple to clean. An occasional wiping with a damp cloth is all that's required.



Paramount Theatre Building is located in New York City, New York



For more information on this quality structural glass, on its many uses and its ten beautiful colors, write to Pittsburgh Plate Glass Company, Room 7266, 632 Fort Duquesne Blvd., Pittsburgh 22, Pa.

GLASS . CHEMICALS . BRUSHES . PLASTICS . FIBER GLASS PLATE GLASS COMPAN URGH 1.84 CANADA: CANADIAN PITTSBURGH INDUSTRIES LIMITED

... the quality

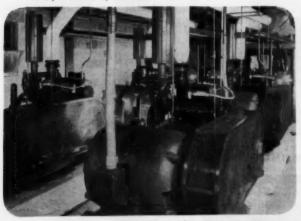
structural glass







Building housing refrigerating system has cooling tower, with fans, on roof



Frick "ECLIPSE" compressors cooling 256 Woodlane Apartments

Air Conditioning

The Woodlane Apartments comprise 18 buildings, covering four city blocks. Built and operated by Corrigan Properties, Inc., they offer year-'round air conditioning, among other attractions; people wait for a chance to rent them.

Beatty Engineering Co., Frick Air Conditioning Contractors in Dallas, designed and installed the year-'round system. Four Frick "ECLIPSE" compressors furnish 400 tons of refrigeration. Both the owners and occupants are much pleased with results.

You, too, will be pleased with Frick equipment—whether for air conditioning, ice making, quick freezing or other refrigerating work. Get bulletins and estimates now: write





340

THE RECORD REPORTS:

WASHINGTON TOPICS

(Continued from page 48)

halted in the lease-purchase effort, Public Buildings Service is continuing the design of approved buildings and the acquisition of land.

The House committee report accompanying this bill said the program should be tried for another year and that the committee would look seriously at direct appropriations proposals at that time if the lease-purchase approach hadn't worked.

Other items in the House-passed \$5.4 billion appropriations measure: \$65 million to GSA for the repair and renovation of more than 4000 Federally owned or leased buildings; \$1.2 million for matching grants to states for urban renewal planning; \$5 million to the HHFA revolving fund for public works planning; and \$42.5 million to the Veterans Administration for its hospital replacement and construction program.

The Administration did not request any funds for a broad shelter construction program for the Federal Civil Defense Administration, although this was discussed on the House floor. An amendment proposing an increase from \$2 million to \$6.7 million in money for civil defense research — including shelters was defeated.

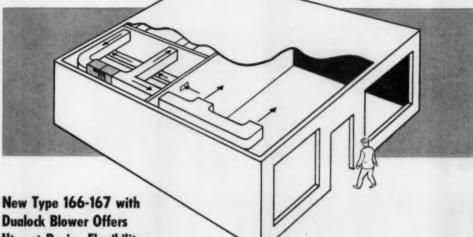
Meanwhile the Senate approved a \$1.5 hillion omnibus rivers and harbors and flood control measure, sending it to the House Public Works Committee. It was similar to the one the President vetoed last year on grounds it contained authority for many projects which lacked sufficient engineering study and Budget Bureau approval. The Senate's Public Works committee assured the body that this version contained no projects that could be objected to on these same grounds.

STATUS OF PROFESSIONALS UNDER LABOR ACT DEBATED

The old question of the status of the professional architect and engineer under the Fair Labor Standards Act was up in Congress again as the Senate's labor subcommittee conducted extensive hearings on the wage-hour aspect of this legislation.

While the American Institute of Architects continued its position that its members for the most part are covered by the legislation, the National Society of Professional Engineers went before the subcommittee to battle for a (Continued on page 344)

Mueller Climatrol Announces Most Versatile **Horizontal Yet for Light Commercial Jobs**



Dualock Blower Offers Utmost Design Flexibility

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Where heating requirements call for capacity from 80 to 140 thousand Btu whether it's an open area or several rooms - make the new Mueller Climatrol 166-167 part of your plans. You enjoy unmatched design flexibility-air discharge can be delivered from either end with its unique reversible blower. And it's a real space miser - needs minimum headroom.



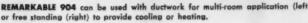
For shops, restaurants or garages, ducts can be used to heat service or rest rooms as well as the primary area. In offices or factories too, it can be adapted for uniform comfort in several rooms. Whatever the application, its quietness and fuel efficiency register a new high in performance. Finished in attractive Mueller Climatrol Mountain Spring Green.

MORE VERSATILITYI Type 166-167 can be suspended or floor mounted. Features include large blower to assure abundant air circulation . . . special heat ex-changer that does a better job of fuel utilization . . . heavy-gage steel casing finished on both sides to prevent rust . . . quiet rubber-mounted blower-motor.



904 Permits Space Heating and Cooling in One Unit!





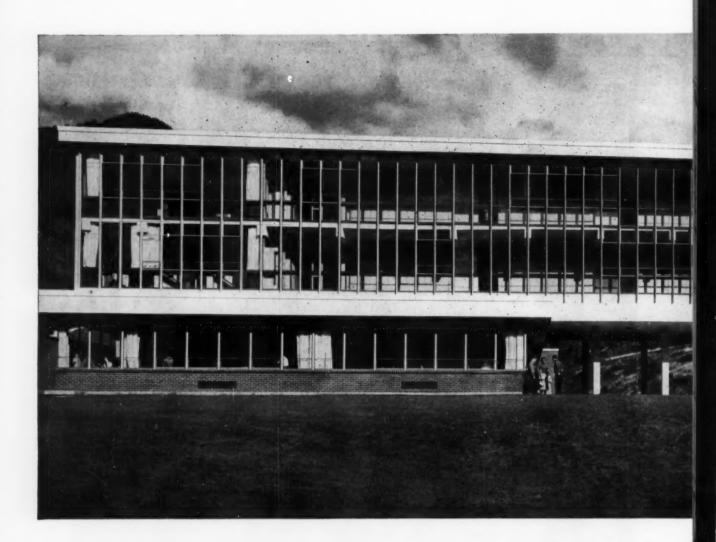
SEE YOUR MAN FROM MUELLER CLIMATROL for the full story on America's most complete line of heating and cooling equipment. For specifications and installation information, write for literature.



Cooling or heating, with or without ductwork, year-round air conditioning for stores and offices-no other unit handles so many jobs so well as the Mueller Climatrol Type 904. Designed primarily as a space cooler for stores, restaurants and offices, it can also be used with ducts or steam, hot water or electric coil to answer any combination of heating, cooling and room arrangement situations.



ARCHITECTURAL RECORD MAY 1957 341

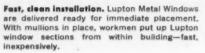


WALLS OF WEATHERTIGHT



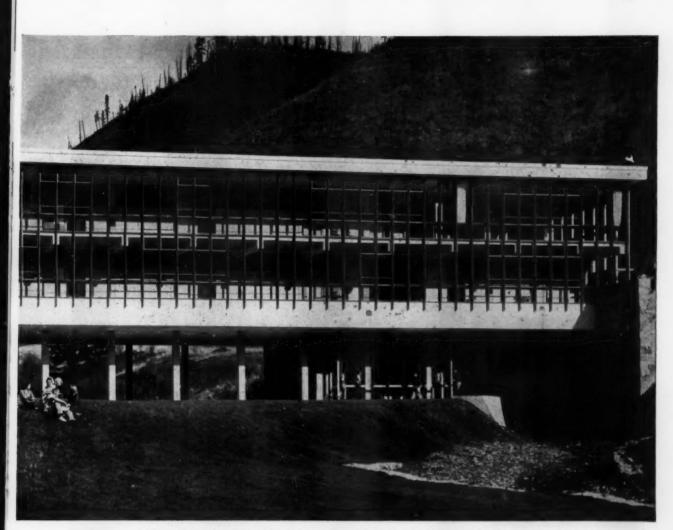
Ready for the Lupton Windows. Completed installation of outer mullions before erection of Lupton Windows. Notice outstanding simplicity the windows themselves become the walls in this all-Lupton installation.







Adjustable ventilation. Projected in at bottom or out at top, these Lupton Windows provide immediate controlled ventilation with maximum light, are tight-fitting and rattle-free.



KELLOGG HIGH SCHOOL, Kellogg, Idaho, Architects: Culler, Gale, Martell & Norrie, Spokane, Wash.; Perkins & Will, Chicago, HI. Contractor: Johnson-Bushoom-Bushoom-Bash, Spokane, Wash. Pholograph by Hedrick-Blessing.

LUPTON METAL WINDOWS bring maximum light and air to Kellogg High School

With this ultra-modern consolidation school the community of Kellogg, Idaho, voices its pride and civicmindedness. Thanks to these walls of LUPTON engineered metal windows, bountiful ventilation and light are made available throughout the building.

Working together with school authorities to typify community solidarity, the architects conceived this building design which embodies a continuous wall of windows. Bright yellow-painted steel mullions and red muntins provide a joyful frame to the impressive view through the 513 LUPTON Steel Architectural Projected Windows.

Certain extreme climatic conditions (wind and dust storms; smoke from nearby Bunker Hill smelter; a wide variance in atmospheric temperatures) made the selection of materials unusually important. Ruggedness and simplicity characterize the construction, and are epitomized in the modern, precisely-engineered walls of tight-fitting LUPTON Windows.

The Kellogg High School project reflects a growing

movement towards the use of entire walls comprised of LUPTON Windows in schools, hospitals, and other modern buildings. LUPTON's 75 years' experience in metal-window and curtain-wall manufacture merits your complete investigation—look first in the Architectural File (Sweet's) for the Michael Flynn Catalog, and then consult the Yellow Pages under "Windows— Metal." Or write for specific additional information on LUPTON Metal Windows and Aluminum Curtain-Wall Systems.



MICHAEL FLYNN MANUFACTURING COMPANY

Main Office and Plant: 700 E. Godfrey Ave., Phila. 24, Pa.

CONGRATULATION5, AIA! Michael Flynn Manufacturing Company joins the other members of the Producers' Council in extending best wishes on the occasion of your 100th anniversary celebration May 14-17.

Now Protecting the Exchange Bank 2 Ways:



Sealing Around Mullion and Sill Joint in an aluminum-porcelain window wall



Sealing Horizontal and Vertical **Expansion Joints between cast** stone and panels.

... and soon to protect the Braniff Building DALLAS EXCHANGE PARK Architects, Engineers and Site Planners Lane, Gamble & Associates

The CHTY OF TOMORB

... protected TODAY with PRESSTITE No. 1175.1 **POLYSULFIDE-BASE** SEALING COMPOUND

This development, right in the heart of Dallas, will cover 120 acres, provide a total of 2,394,065 sq. ft. of usable floor space, and have a normal occupancy of about 25,000 persons.

In addition to four office buildings, the community will include a 1000-guest room hotel, medical research center, maintenance building, major department store and 100 retail shops.



THE RECORD REPORTS WASHINGTON TOPICS

(Continued from page 340)

provision in any new amendments which would clarify the professional's standing once and for all. Confusion over application of the statute has led to untold expense and complicated litigation throughout the country.

Conflicting decisions from courts have placed the professional in a position of uncertainty.

N.S.P.E. recommended that consulting engineering services be expressly excluded from coverage under the Act along the lines of a 1951 measure introduced by Rep. Lenham (D-Ga.). The engineers suggested that this be accomplished by adding in Section 3 (i) of the present law the phrase "and does not include plans, drawings, or specifications, or other written, printed or topographical material, prepared or furnished by any person in connection with the performance of professional services."

A second change was proposed in Section 3 (j) with the addition of this phraseology: "An employee shall not be deemed to have been employed in any closely related process or occupation directly essential to the production of professional services by his employer."

These changes would remove for good the argument as to whether or not drawings, plans and specifications are "goods" within the meaning of the statute, N.S.P.E. asserted. It was held that Congress long has intended that the professional services of architects and engineers should be considered separate and distinct from ordinary business or commercial activities.

Actually, the argument had an academic tinge to it because as a rule architectural and engineering firms must pay at least the present minimum wage and more to acquire and retain the higher caliber of personnel required. There is a distinct issue on the overtime question, however.

CURRENT SHORTAGE PUT AT TWO MILLION HOSPITAL BEDS

Population increases and obsolescence have been offsetting the potential gains from new hospital construction and the total need for beds throughout the country now is approaching the two million mark. This was brought out by Dr. Vane M. Hoge, chief of the Division of Hospitals and Medical Facilities of the Department of Health, Education, and (Continued on page 348)



It's smart . . . It's steel -

It's STRAN-STEEL'S NEW BUILDING LINE FOR INDUSTRY

The best looking buildings you ever saw! The finest steel buildings your client can buy! That's the new Stran-Steel line of all-steel buildings . . . years ahead in style, with quality built in to give years of service.

Stran-Steel buildings are engineered on a modular basis so that you can design a building as big as your client wants and in any shape that will fit his needs. Six basic widths-32, 40, 50, 60, 70 and 80 ft. and multiples

Here's where you can get more information: Atianta 3, Ge., 206 Volunteer Bidg., JAckson 4-6611 Chicage 6, III., 205 W. Wocker Dr., Financial 6-4950. Cleveland 16, Ohio, 20950 Center Ridge Rd., EBison 1-3834 Detroit 29, Mich., Tecumen Rd., Vinewaod 3-8000 Housten 5, Texes, 2444 Times Bird., JAckson 6-1628 Kansee City, Me., 6 East 11th 5r., SAltimore 1-8892 Minneepolis 4, Minn., 708 S. 10th St., Féderal 9-8875 Sen Francisco 3, Calif., 1707 Centrol Tower Bidg., DOugless 2-1200 Washington 6, D. C., 1025 Connecticut Ave., N.W.,

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thereof, make them ideal for factories, warehouses or retail centers.

Attractive and distinctively styled, these rugged buildings with exclusive Stran-Satin exteriors provide noncombustible structures with unlimited design possibilities. Stran-Satin's soft, metallic luster gives a luxury look that combines ideally with other construction materials. Exterior treatment is limited only by the imagination.

With Stran-Steel you have a basic building tailored to meet precise needs, yet its pre-engineered construction means more building for less cost. Next time specify Stran-Steel buildings.

Your clients can finance these buildings. Up to \$25,000 is available through the Stran-Steel Purchase Plan. As little as 25% initial investment, up to 5 years to pay. For more information call the local Stran-Steel dealer listed in the classified telephone directory under Buildings-Steel.



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1. Q.

Which magazine has most architect subscribers?

Architectural Record with 17,241. (Progressive Architecture has 16,202; Architectural Forum 12,687.)

> SOURCE: December 1956 A.B.C. Publishers' Statements

2. Q.

questions advertisers

ask most about

ines

Architectural

Which magazine has most engineer subscribers?

Architectural Record with 9,407. (Progressive Architecture has 8,517; Architectural Forum 4,371.)

> SOURCE: December 1956 A.B.C. Publishers' Statements

з,*Q*.

Which magazine has most staff architect and engineer subscribers in commercial, industrial, and institutional organizations?

Architectural Record with 2,585. (Progressive Architecture has 1,783; Architectural Forum 1,259.)

Based on December 1956 A.B.C. Publishers' Statements: Staff Architects and Engineers in "Commercial, Industrial & Institutional" organizations.

Which magazine do architects and engineers prefer?

In 95 out of 104 studies SPON-SORED BY BUILDING PRO-DUCT MANUFACTURERS AND ADVERTISING AGENCIES, architects and engineers have voted Architectural Record "preferred." Architectural Record placed first in 27 out of 29 studies in 1955 and 1956.

> ummary of 104 studies available on request

Which magazine offers top verifiable market coverage?

F. W. Dodge Corporation's Dodge Reports document Architectural Record's coverage of over 85% of the total dollar value of all architect-planned building including 94% of the nonresidential building, 75% of the residential building.

SOURCE: State Checks of Architect Activity



Which magazine publishes most editorial pages?

Architectural Record. In 1956 Architectural Record published 1,481 editorial pages; Progressive Architecture 1,051; Architectural Forum 1,048.

8.1

In which magazine do advertisers advertise most?

In 1956, Architectural Record carried 41% more advertising pages than the second magazine; 68% more than the third magazine. Architectural Record ranked 4th among *all* monthly magazines in the U.S. in advertising page volume.

Sounce: Industrial Marketing



Which magazine leads in quality of editorial content?

A.

Architectural Record has won 36 awards for editorial excellence including 5 out of 6 awards to architectural magazines by the American Institute of Architects. 9.0

most economically? In Architectural Record with a cost per page per 1,000 of \$22.52. (Progressive Architec-

ture \$24.27; Architectural

Forum \$46.61.)

In which magazine can we

reach architects and engineers

If there are questions you would like to ask us about Architectural Record, its architect and engineer subscribers or the market it serves, we would welcome the opportunity to answer them. Please phone us or drop us a line.

Architectural Record



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THE RECORD REPORTS

WASHINGTON TOPICS

(Continued from page 344)

Welfare, when he testified before a House Appropriations subcommittee.

Doctor Hoge said the annual increase in population alone requires about 30,-000 additional hospital beds each year and added that 50 per cent of the hospitals in the nation are at least 50 years old. Testifying in connection with the HEW request for hospital construction funds under the Hill-Burton law, Doctor Hoge said: "In spite of our progress there is a continuing need for Federal assistance. There are still areas of the nation which have no acceptable hospital facilities, and we find that even in the wealthier states there are many areas with less than 50 per cent of their needs for hospital facilities and services being met."

The average life expectancy of a hospital building was placed at 50 years



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with depreciation of approximately two per cent annually. States have reported to HEW that about 13 per cent of all hospital beds are in buildings which are fire hazards, or have narrow corridors or other major inadequacies.

"In addition, because of the rapid development of new medical techniques, functional obsolescence takes place more rapidly and many of our hospitals are today becoming obsolete more quickly," Doctor Hoge testified.

Figures he brought to the subcommittee showed that as of January 1, 1957, more than \$828 million in Federal funds had been committed to 3232 projects in the 53 states and territories. This amount was matched with \$1.7 billion, altogether promising the addition of 143,000 hospital beds and over 650 public health centers to the national inventory. More than 2260 of the projects now are in operation and 700 are under construction.

The \$120 million requested for fiscal 1958 would provide for construction of around 16,000 beds. Another 32,000 will be built with private funds, making a total of 48,000 new beds expected to be built altogether in 1958.

HOUSE DEFIES PRESIDENT IN OMNIBUS HOUSING BILL

In defiance of a possible Presidential veto, the House Banking Committee reported an omnibus housing measure that went far beyond the monetary limits of Administration recommendation.

The \$2.9 billion measure contained the highly controversial authorization of National Service Life Insurance (GI) fund reserves for the making of direct housing loans to veterans. Earlier, Under Secretary of the Treasury Randolph Burgess had testified that he would recommend that President Eisenhower veto any measure that came to his desk containing this authority.

On a vote of 23 to 2 in the full House committee, the bill came out authorizing \$1 billion of NSLI funds for the purpose.

Anticipating conclusion of the VAloan guaranty program, the committee bill established a veterans' preference structure within the Federal Housing Administration. This came in lieu of raising the GI interest rate from four and one half to five per cent as the Administration had urged. Within the preference framework, veterans' down payments on housing would be only half the amount required for non-veterans. The Federal government, by direct appropriation, would absorb for the (Continued on page 350)



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THE RECORD REPORTS

WASHINGTON TOPICS

(Continued from page 348)

veterans the one half of one per cent service charge of housing contracts now paid by FHA-insured mortgagors.

The committee ignored another White House economy flag in approving \$250 million for urban renewal grants during the next fiscal year. President Eisenhower criginally had asked for this much for each of two fiscal years for attacking city slums, but the recent revision in the Housing and Home Finance Agency budget had lowered the request to \$150 million for the next fiscal period.

Mayors from throughout the country protested the White House cutback as soon as it was announced. The American Municipal Association took its fight for restoration of the proposed cut directly to the President. An A.M.A. delegation and HHFA officials, including Housing Administrator Albert M. Cole, called at the White House.

Earlier an A.M.A. spokesman told the



Senate's housing subcommittee (Sen. John J. Sparkman, D-Ala., chairman) that mayors of the nation were shocked to learn of the reduction in the Administration asking. It was referred to as a "breach of faith" with municipal officials who have worked on the renewal program with some certainty of continuity in their planning.

Senator Sparkman characterized the proposed reduction in grant funds as false economy. On-site activity would not be affected next fiscal year, but it was the long-range planning that had officials worried.

HOUSE ALLOWS \$121 MILLION FOR HILL-BURTON GRANTS

A fiscal 1958 appropriations bill with heavy significance for the construction industry — Labor-Health, Education, and Welfare — survived a wild storm of debate in the House of Representatives last month and on passage went to the Senate with major items intact.

The \$2.8 billion measure, as it passed the House, still called for \$121 million recommended for Hill-Burton hospital construction after a move to cut it to \$100 million was defeated on final roll call. Representative Hebert (D-La.) moved to trim the figure by \$21 million because of what he termed "heavy unobligated balances" in the program. Representative Fogarty (D-R.I.), champion of more masonry for the Air Force Academy buildings, argued forcefully for the entire H-B amount. As chairman of the appropriations subcommittee handling this measure, he pointed out that only \$1 million of nearly \$1 billion in total unobligated balances had been turned back to the U.S. Treasury unspent in a two-year period. Further, he stressed that the full \$121 million for H-B hospital construction would still leave a heavy backlog of unbuilt but needed hospital beds throughout the country.

Also defeated in the end was a move to eliminate a \$50 million item for Federal grants to states for sewage plant construction.

The House-passed bill also contained approval of \$41.7 million for construction of school facilities in areas where Federal installations swell school populations unduly, and \$30 million for the construction of health research facilities. (Over the past six years Congress has appropriated some \$1.2 billion for assistance to school districts in-constructing and running schools in the so-called Federally impacted areas. This is an average of \$200 million per year.)

(Continued on page 352)

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THE RECORD REPORTS

WASHINGTON TOPICS

(Continued from page 350)

More College Aid Urged

Meanwhile, Senator Fulbright (D-Ark.) urged an increase in the volume of college and university loans by the government, introducing a bill which would boost the program by \$200 million. The administration of this activity is through the Housing and Home Finance Agency.

His new bill would enable such direct. loans to continue at a "moderate rate." Senator Fulbright said, assuring more housing for a college and university population that is expected to double its present three million total by 1965. He noted that as of the first of April the President had brought no new Administration proposals to Congress on this subject. The January budget indicated that an increase of \$175 million would be needed and would be requested, but Sen. Fulbright doubted this would be enough. His bill was referred to the



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Senate Banking and Currency Committee.

ADDENDA

New Federal allocations of \$19,701.-760 to aid school construction in "Federally impacted" areas were announced late in March by Lawrence G. Derthick, U.S. Commissioner of Education. These grants go to communities where a strain has been placed on existing school facilities by a population growth due to a new Federal activity. Seventy-nine school districts in 31 states received the aid for construction of new or added facilities to relieve their overcrowded conditions. The allocations brought to \$45,832,799 the amount of Federal funds earmarked for this fiscal year for classroom construction in such areas.

Present buildings will not become obsolete in the face of new construction and building techniques, if owners are alert to improvement possibilities, said William A. P. Watkins of Chicago, immediate past president of the Institute of Real Estate Management. It is his opinion that about 90 per cent of the talk of obsolescence in present buildings due to industry's technological advancement is itself obsolete. There is little or no "improvement" which is available in a new building which cannot be available in an old building, he asserts: "If we throw away the gingerbread and streamline our properties, we will not need to take a back seat to the newest building on the market." The I.R.E.M. is an affiliate of the National Association of Real Estate Boards.

The plumbing-heating-cooling industry anticipates a \$6 billion potential in the home remodeling market and is preparing a program for meeting its own portion of this expansion. The recent annual meeting of the Middle Atlantic Wholesalers Association at Atlantic City was told of these plans by Jerome O. Hendrickson, executive secretary of the National Association of Plumbing Contractors. All segments of the plumbing-heating-cooling industry have joined in this all-industry program to capture "a fair share" of the home modernization work. A committee is encouraging contractors to enter a "vast and untapped" home modernization market. This activity, it is hoped, will compensate in strong measure for the decline in new residential construction.

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THE RECORD REPORTS

WASHINGTON REPORT

(Continued from page 32)

involved in the influence this 41,000mile network of modern roads will bring to bear on development along its routes in and near the 209 larger cities (50,000 population or more) and countless smaller cities and towns it will serve. The national interstate and defense system will comprise only 1.2 per cent of the nation's total road mileage, but upon improvement it will carry an expected 20 per cent of all street and highway traffic.

The new law forbids the construction of such improvements as gas stations, eating establishments and shops on any part of the right-of-way of the national system. Outside this boundary, however, the county and city regulations take over and the development occurring along the 41,000-mile improved system will be so guided. The Federal government has not enacted any control or incentive legislation to guide this con-



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struction, and probably will not. There have been discussions of a Federal control of advertising placed along the network — and the American Institute of Architects has testified in favor of such control — but no action on the bills considered is anticipated.

Outside cities and towns commercial and industrial growth will be affected by the frequency of interchanges on this limited-access system. The average spacing for these egress roads may average eight miles, depending upon state decisions approved by the Bureau of Public Roads, administering Federal agency. The average distance between the turnoffs on the New York State Thruway, which Mr. Tallamy administered before coming to Washington, is only six miles.

The only indication now of the pattern of future development along the national improved route lies in what has happened in states where new superhighways have been completed.

Take New York as the example. A survey by Thruway officials showed that at least \$400 million was spent or allocated by private enterprise for new or improved plants or developments along the new road within the state. Besides industrial plants, the highway there has triggered multi-million-dollar retail shopping centers, trucking terminals, large housing developments, motels, gasoline stations and many other types of large and small business. The economic development started even before the first toll section of the crossstate road system was opened to traffic in June 1954. It is claimed that in addition to the financial commitments for new plants and other construction along the Thruway, the road has stimulated new business throughout the state of New York. The \$2 billion tourist industry, for example, received a tremendous boost.

Nationwide, the Society of Industrial Realtors already has moved actively to assist state governments in approaching the industry potential being generated by the highway plan. So far, 38 states had replied to S.I.R.'s proposal to meet with state officials on industrial aspects, and 27 such conferences had been arranged. One of the objectives, said S.I.R. is to keep the states mindful of the special attention industrial land use deserves and requires in the program.

As pointed out by John A. Volpe, in his first speech as interim administrator of the program preceding Mr. Tallamy, proximity to the controlled-access highway is of particular benefit to industrial (Continued on page 358)



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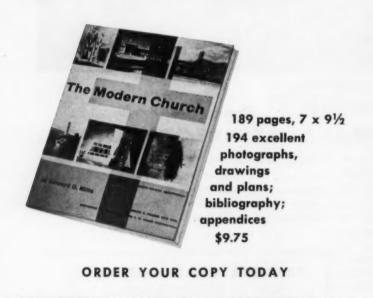
THE MODERN CHURCH

by Edward D. Mills

942

The Modern Church is a vital source of new church planning information, which will prove invaluable to anyone having to do with the design, planning, or construction of new church buildings - architect, builder, clergyman and layman alike. Although the book outlines the history and philosophy of the Christian church, it is mainly a factual, detailed work which covers new church construction step by step. Site selection, approval by church authorities, acoustics, heating, materials, furnishings and religious art, and building costs are all studied thoroughly. One of the appendices lists design specifications of each major Christian religion.

The Modern Church is profusely illustrated with 194 drawings, photographs and plans of the best in contemporary church architecture in America and Europe - including the work of such famous architects as Marcel Breuer, le Corbusier, Fritz Metzger, Mies van der Rohe, Eliel Saarinen and Basil Spence.



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COMPLETE OUTLINE OF CONTENTS-

Chapter 1—Historical Introduction

First centuries of the Christian church, Cult of the saints, The altar, Orientation, Baptism, Bishop's throne; pulpit, Position of the congregation, De-velopment of the church in England: Roman, Gothic, Nonconformist

Chapter 2—The Church and the Community Suburban expansion, Relationship between church and community, Churches for new communities

Chapter 3—Planning Considerations Site selection, Entrance, The nave, Sanctuary, Chapel, Choir, Baptistry, Vestries, Lavatory accommodations, Ancillary accommodation, Parking areas

Chapter 4—Acoustics

Reverberation, Echo, Problems of partial and full congregations, Sound absorption coefficients of various materials, Conditions for preaching and music, Position of choir, Special requirements

Chapter 5—Practical Considerations

Heating: basic requirements, low-pressure hot water, hot-air, individual heaters, comparative heating esti-mates; Ventilation, Natural lighting, Artificial light-ing: requirements of various interior areas, tables of recommended illumination values, selection of fixtures, Insulation: heat insulation, sound insulation

Chapter 6-Materials

General considerations, Stone, Brick, Concrete, Plaster, Timber, Roofing materials: lead, copper, aluminum, built-up felt, asphalt, tile, slate, shingles, Floorings: wood, stone, terrazo, plastic tile, other materials, table of recommended flooring materials for various areas, maintenance

Chapter 7—Furnishings and Religious Art

Seating: fixed and movable, Stained glass, Paintings, Sculpture

Chapter 8—Building Costs

Cost estimating, Percentage costs

Appendix 1—Church Planning Data

Appendix 1—Church Planning Data Approval of authorities for all Christian churches, Altars: specifications for all Christian churches, Baptistry and Baptismal tank, Bells, Bishop's throne, Candlesticks, Altar canopy, Chancel, Chapels, Choir, Caretaker's storage, Color, Canopeum, Communion rail, Confessional boxes, Credence table, Cross, Caucify, Dossal Drassing, cubides Enterprete Floor Crucifix, Dossal, Dressing cubicles, Entrances, Floor area, Floor gradient, Flower vases, Font, Footpace, Frontal, Galleries, Gradine, Holy Water stoup, Hymn-boards, Images, Lectern, Missal stand, Mor-tuary chapel, Narthex, Organ, Orientation, Mon-strance, Notice boards, Passage-ways, Pews, Piscina, Pulpit, Reliquaries, Reredos, Ridels, Rood screens, Sacristy, Sanctuary, Sanitary accommodations, Seat-ing, Sedilia, Signals, Standards, Stations of the cross, Storage, Tabernacle, Throne for exposition, Vestries, Vigil lights Crucifix, Dossal, Dressing cubicles, Entrances, Floor Vigil lights

Appendix 2—Ancillary Accommodation

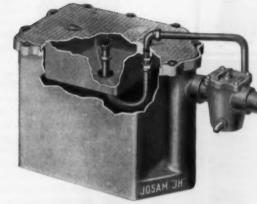
Assembly hall, Caretaker's quarters, Corridors, Dressing rooms, Games, Handicrafts, Kitchen, Library, Parking, Projection room, Sanitary accom-modation, Stairs, Sunday schools, Vicarage

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THE RECORD REPORTS

WASHINGTON REPORT

(Continued from page 354)

establishments. They are not interested, he said, in direct access to the arterials, but in being reasonably close to them.

All this means a certain heavy development of industrial and supporting commercial activity adjacent to the interchange points.

But in and around the cities the em-

phasis will be on redevelopment as well as new growth. Here as route locations are determined and approved, architects can look forward to new business in just about every building category.

There are those who feel - and a good many architects undoubtedly agree - that too much in the planning of this work is being left to the engineer. John T. Howard, associate professor of city planning at Massachusetts Institute of Technology and former president of the American Institute of Planners. noted recently that the program is forc-



of many types in Halsey Taylor line

Here, on the ocean front in Bal Harbor, Miami Beach, is the new Americana Hotel, combining the luxury, the charm, the atmosphere of all the Americas. The architects specified Halsey Taylor Drinking Fountains throughout, matching the elegance of the decor with the best in fountain

design. See Sweet's or write for catalog. The Halsey W. Taylor Co., Warren, O.

TAINS

VERY SERVICE TEST



ing engineers to make decisions that have impacts far outside their own field. He believes that the highway network in prospect will have a greater effect on all forms and patterns of growth than all of the metropolitan planning done by city planners since World War II.

What will these new roads look like?

They are being constructed under new design standards drafted by the American Association of State Highway Officials and approved by the BPR. The "Geometric Design Standards" were adopted by the A.A.S.H.O. July 12, 1956, and given Bureau approval five days later.

There is no firm standard for comparison of these with previous criteria, said one spokesman for Mr. Tallamy. BPR, up to the time of approval last year, had worked with its own minimum standards which were not in the same concept as the new rules.

Traffic lanes in no case will be less than 12 ft in width. The system will boast divided highways wherever the design hourly volume (1957) exceeds 700. For lower volumes, the road will be two lanes so designed and located on the right-of-way that an additional twolane pavement can be added to form divided strips.

Medians will range from 36 to 16 ft wide, depending upon the terrain. Narrower medians will be allowed in certain urban areas, on bridges and in mountains but never will they be less than four ft, according to the design standards. No fixed right-of-way widths are specified because conditions of high land costs may make narrow ways necessary in some instances. A suggested guide establishes minimums ranging from 150 to 300 ft.

Status of the program: as of March 31, funds had been obligated and contracts advertised for 450 projects estimated to cost \$1295 million. Of this amount, the Federal government's share was \$1002 million. Contracts had been awarded on 364 projects involving state construction of 895 miles of roadway and 874 bridges on the inter-state system which links 90 per cent of the principal cities. Value of the contracts was \$511.-700,000, of which the Federal share was \$418 400 000

As of the March 31 date, 10 states had obligated all of their interstate system funds for fiscal 1957 and had used varying percentages of their 1958 allotments. The 10 states obligating all 1957 funds were Maryland, Rhode Island, California, New Mexico, Illinois, Ohio, New York, Missouri, Minnesota, and Oregon.



THE RECORD REPORTS REVIEWING THE RECORD

(Continued from page 12)

asked him for design revisions, and accepted his scheme. Then the commissioners, oddly, appointed Hallet supervisor of construction. The temptation seems to have been too much for him, and he proceeded to amend Thornton's design with his own ideas, succeeding in laying a square foundation for Thornton's round dome. He was thereafter



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Two defeated schemes for the White House: above, design submitted by Dr. Thornton in the original competition; below, President McKinley's proposal for additions

AR June 1040

discharged, and George Hadfield appointed; President Washington also appointed Dr. Thornton to the board of commissioners. Progress on the Capitol went fairly smoothly for a while, until the board of commissioners was dissolved and President Jefferson appointed Latrobe architect of the Capitol. Latrobe, of course, redesigned the Capitol in his own way, and although Dr. Thornton was vocal in his protests, Jefferson stood behind Latrobe and Thornton's design, in the end, is not nearly as evident as Latrobe's.

The Washington Monument

In L'Enfant's original plan, Washington Monument was thought of as an equestrian figure, but the competition was won by Robert Mills's obelisk. This design, too, suffered some changes in the execution. It was not, to begin with, sited correctly - in L'Enfant's plan, it was to be at the intersection of axes from the White House and the Capitol, but the Corps of Engineers failed to get it on center. The McMillan Commission of 1902 accomplished some fancy footwork in planning to make it appear true. Mills's plan also had called for a "colossal circular colonnade" as a base. This was simply never built, and the shaft still stands unadorned.

The Library of Congress

"The history of the [Library of Congress] as a monument is rather complicated," wrote Russell Sturgis in 1896 (AR, Vol. VII, No. 3). The architects were Smithmeyer and Pelz, whose design was accepted in 1886. Two years later, General Casey of the Army Corps of Engineers, was put in charge of construction, with Mr. Pelz remaining as (Continued on page 362)

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THE RECORD REPORTS

REVIEWING THE RECORD

(Continued from page 360)

chief designer and Bernard R. Green as engineer.

Not much could be said, Mr. Sturgis felt, for the architecture of the library, and he doubted that it would receive as much attention as it had if it were not located in Washington where "sightseeing is the order of the day." The interiors were, he thought, worthy of some



AK. JOB.-March 1898



AR. September 1896

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862 ARCHITECTURAL RECORD MAY 1957

SPINET

MARBLE

Top: Library of Congress; Smithmeyer and Pelz, architects. Bottom: The original design for the Capitol; William Thornton, architect

attention. No fewer than 34 artists were credited in the RECORD's story.

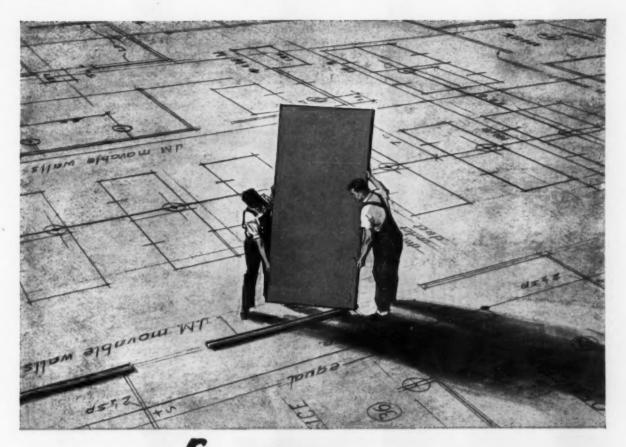
Lincoln Memorial

Henry Bacon's design was one monument with a comparatively unruffled architectural history. There was, however, plenty of controversy before construction was started; at one time, Congress had before it three bills proposing memorials to President Lincoln - the Newlands bill proposing the site ultimately used, the McCall bill calling for a site adjoining Union Station, and the Lafean bill suggesting a highway from Washington to Gettysburg.

The building itself was highly successful (see Significant Buildings series, AR, January 1957, p. 171).

The Pentagon

Qualifying as a monumental building by virtue of its size, the Pentagon went up with as little public argument as any public building in Washington. The likeliest explanation of this absence of controversy is the fact that it was built during the war; but it is likely too that function was considerably more in vogue in the late '30's and '40's than nobility of form. The Record's January 1943 report devoted a great deal of its space to discussions of heating, air conditioning and lighting in the building, and said of the architecture only that it was "far from, yet reminiscent of, the classic tradition" - not, perhaps, a surprising example of critical brevity when one learns that much of the exterior decoration of the building was determined by the requirements of camouflage. G. Edwin Bergstrom and David J. Witmer were the chief architects, working with the Army Corps of Engineers.



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ON THE CALENDAR

May_

- 4-12 Showcase for Better Living: International Home Exposition — Coliseum, New York City
- 6-10 Convention and Exposition, National Restaurant Association — Navy Pier, Chicago
- 13 Annual convention, Construction

Specifications Institute (in conjunction with the convention of the American Institute of Architects) — Washington, D. C.

- 13-14 Clinic and first annual meeting, International Council of Shopping Centers, Inc. — Chicago
- 13-15 The 31st Anniversary Conference, Construction Surveyors Institute — Hotel Washington, Washington, D. C.
- 14-16 Industrial Nuclear Technology Conference, sponsored by Armour Research Foundation and Nu-

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- 13–17 Centennial Celebration convention of the American Institute of Architects — Shoreham and Park Sheraton Hotels, Washington, D. C.
- 15-17 Jet Age Airport Conference, sponsored by the Air Transport Divi sion of the American Society of Civil Engineers — Park-Sheraton Hotel, New York City
- 2-23 Design Engineering Show and (sponsored by the machine design division of the American Society of Mechanical Engineers) second annual design conference — Coliseum, New York City
- 20–24 Annual meeting, National Fire Protection Association — Hotel Statler, Los Angeles
- 27-28 Ninth annual national engineering conference, American Institute of Steel Construction — Edgewater Beach Hotel, Chicago
- 29ff Annual Assembly, Royal Architectural Institute of Canada; until June 1 — Chateau Laurier, Ottawa

June_

- 2-55 Annual meeting, American Society of Refrigerating Engineers — Miami Beach
- 2-6 Annual meeting, Air Pollution Control Association — Hotel Jefferson, St. Louis
- 3-7 Tenth International Hospital Congress, organized by the International Hospital Federation — Hospital de Santa Maria, Lisbon, Portugal
- 3–7 Buffalo convention, American Society of Civil Engineers — Hotel Statler, Buffalo
- 9–13 Semi-annual meeting, American Society of Mechanical Engineers — Sheraton-Palace Hotel, San Francisco
- 13–15 Annual convention, New Jersey Society of Architects and New Jersey Chapter, A.I.A. — Berkeley Carteret Hotel, Asbury Park
- 14–29 Sixth Annual Boston Arts Festival, featuring two architectural exhibitions: "A Century of New England Architecture" and the annual New England competition exhibit — Boston Public Garden
- 16-21 The 60th annual meeting, American Society for Testing Materials — Atlantic City
- 23–28 The 11th annual meeting, Forest Products Research Society — Hotel Statler, Buffalo

(Continued on page 366)



Weldwood News for Architects

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Architects Joseph & Vladeck, New York, specified Weldwood Walnut in this home.

SHOULD YOU SPECIFY WOOD PANELING?

Low-Cost Pine Plywood Produces Superior Cabinets

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(Continued from page 364)

- 23–29 Annual conference, American Library Association — Municipal Auditorium, Kansas City
- 24–26 Third annual meeting, American Nuclear Society — William Penn Sheraton, Pittsburgh
- 24–27 Semi-annual meeting, American Society of Heating and Air-Conditioning Engineers — Murray Bay, Quebec, Canada
- 27-28 Annual convention, Minnesota Society of Architects — Duluth Hotel, Duluth, Minn.
- 28ff Chicagoland Fair, sponsored by the Chicago Association of Commerce and Industry; until July 14 — Navy Pier, Chicago
- 30ff Centennial convention, National Education Association; until July 6 — Philadelphia

July_

- 10-13 British Architects' Conference Oxford
- 27ff Eleventh Triennale di Milano; international exhibition of modern decorative and industrial arts and of modern architecture; until November 4 — Milan
- 29ff World Conference on Prestressed Concrete and third annual meeting of the Prestressed Concrete Institute; sessions jointly presented by the University of California and the Institute; until August 2 — Fairmont Hotel, San Francisco

OFFICE NOTES

Offices Opened____

• Joseph L. Coggan, Architect, has announced that he has opened offices at 144-A Gulf-to-Bay Blvd., Clearwater, Fla.

• Theodore C. Epping, A.I.A., has established architectural offices at 605 Powers Bldg., Rochester 14, N. Y.

• Robert J. Freund, Consulting Engineers, have opened offices at 300 W. Washington, Chicago; the firm specializes in electrical and mechanical design.

• Wallace Holm, A.I.A. and Associates (formerly Butner, Holm & Waterman) announce the opening of their offices at 321 Webster St., Monterey, Cal.

• William Dudley Hunt, Jr., A.I.A., has established new offices at 1320 N. 15th Ave., Pensacola, Fla.; operations will continue also from his New Orleans office.

Firm Changes____

 Robert Wilson Bentley, Architect, has joined the architectural staff of Rader and Associates, the engineering and architectural firm has announced; offices are at 111 N.E. Second Ave., Miami 32, Fla.

• Frank Grad & Sons, Architects and Engineers, announce that George T. Grieshaber, Kenneth D. Wheeler and Paul E. Falkenstein have been named associates in the firm, which is located at 11 Commerce St., Newark, N. J.

• Hinton, Poethig and Steuerwald, Inc., have succeeded to the architectural practice of F. J. Hinton, Architect. Partners in the new firm are F. J. Hinton, Fred F. Poethig and Robert W. Steuerwald, and offices are at 828 N. Broadway, Milwaukee 2, Wis.

• Arthur K. Hyde, F.A.I.A., has joined the Detroit firm of Harley, Ellington (Continued on page 368)

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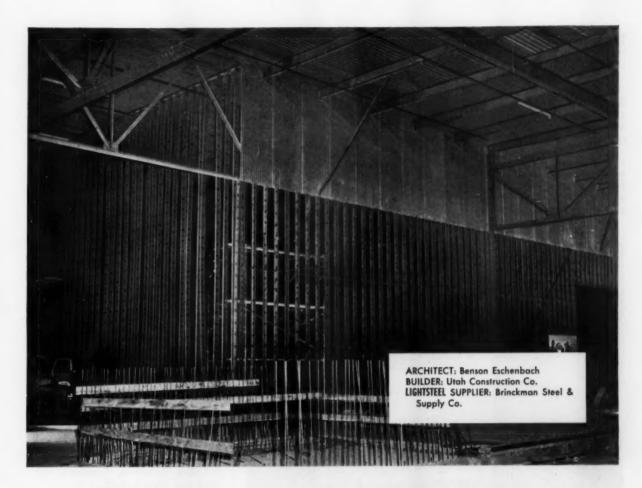


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Penmetal lIGHISITEL nailable studs were used for the 32-foot-high partitions in the refrigerated areas and the shelling plant. There are a number of reasons why lIGHISITEL was selected for these high-bay walls. Light weight of the sections

Light weight of the sections (2.584 lbs. per lineal foot) speeded erection and made it simple. The nailing groove was used to attach a variety of materials such as corrugated aluminum siding, lath for plaster, plywood, and fibreglass insulation to the studs, cutting erection cost. Electrical and plumbing work was done in record time, for pipes and wires were run right through the carefully designed openings in the studs. Furthermore, LIGHTSTEEL provided a non-warping, non-rotting construction, insuring against future maintenance costs. Finally, LIGHTSTEEL sections are low in cost themselves.

The huge plant is a fine example of one of many types of structures where Penmetal IIGNISIEEL is employed to advantage. Other highbay applications include: warehouses, school gymnasiums and aircraft hangars.

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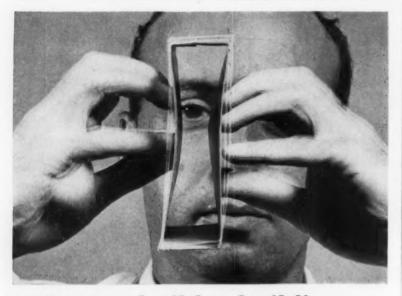
(Continued from page 366)

& Day, Architects and Engineers, as a member of its client relations division; Mr. Hyde was formerly vice president of Giffels & Vallet, Inc., L. Rossetti.

• Leon R. Levy and Associates, Architects, is the title of the firm recently formed by Leon R. Levy, A.I.A., and Richard E. Zegler; offices are located at 69 Wall St., Norwalk, Conn. Both principals were with the firm Leon & Lionel Levy, Architects, New York.

 Marshall & Brown, Architects & Engineers, have appointed as associates in the firm Charles C. Campbell, engineer, and Robert B. Jarvis, A.I.A.; the firm has offices at 1016 Baltimore Ave., Kansus City, Mo.

• Alfred J. Nelson, Architect, has returned to the Department of Administration, State of Minnesota, as Assistant State Architect; he was with the pri-



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vate firm Frank W. Jackson and Associates, Inc., Architects and Engineers.

• Seelye Stevenson Value & Knecht, Consulting Engineers, have named as associates in the firm the following men: Williams D. Bailey — civil engineering division; Frohman P. Page, Ira M. Hooper, Frederick J. Kircher, Philip P. Page Jr., Wayman C. Wing — structural engineering division; William T. Cleland, Jack N. Keck and Alexander Michelson Jr. — mechanical and electrical engineering division. Offices are located at 101 Park Ave., New York 17, N. Y.

• R. Newell Waters, Clark and Tomlin son, Architects, a new firm resulting from the merger of the practices of Mr. Waters, James Ingraham Clark and Robert S. Tomlinson, are successors to the architectural practice of Whitney and Tomlinson. Offices are at First National Bank, Weslaco, Texas, and 468 Palmero St., Corpus Christi, Texas.

New Addresses.

Allward & Gouinlock, Architects, 245 Davenport Rd., Toronto 5, Ontario.

Ross H. Bryan, Consulting Engineer, Life and Casualty Tower, Nashville, Tenn.

Carson & Lundin, Architects, 425 Park Ave., New York 22, N. Y.

Cosentini Associates, Mechanical Engineers, and Eitingon and Schlossberg Associates, Electrical Engineers, Coliseum Tower Bldg., 10 Columbus Circle, New York, N. Y.

Graham, Anderson, Probst & White, Inc., Architects and Engineers, Corn Products Bldg., 201 N. Wells St., Chicago 6, Ill.

Bernard Hersh, Architect, 12–45 River Rd., Fair Lawn, N. J.

Julian K. Jastremsky, A.I.A., 135 E. 65th St., New York 21, N. Y.

Millard F. Whiteside, A.I.A., 180 S. Broadway, White Plains, N. Y.

ADDENDUM

From Leonard Currie, author of the RECORD'S report on the Inter-American Housing Center in Bogota, Colombia (March 1957, pp. 193–200), comes an addition to the story, crediting Howard T. Fisher and Associates as laboratory consultants for the CINVA Building; Mr. Fisher should also be credited, writes Mr. Currie, "as the one who initiated the Developmental Design program at the Housing Center five years ago."

(More news on page 370)



Aluminum busways handle 20-KWHR LOAD per SQ FT per YEAR in Socony Mobil Building

New York's 45-floor Socony Mobil Building is the world's largest air-conditioned office building. It is also one of the best lighted. To handle the tremendous electrical load of 20 kwhr per sq ft per year, aluminum busways were specified. More and more aluminum busway systems are being used in buildings and plants. Here's why.

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Your Guide to the Best in Aluminum Value

(Continued from page 368)

STUDENTS TACKLE PROBLEM OF ABANDONED SAND PITS

This class project got its start as an editorial campaign of the Long Island newspaper *Newsday*, which deplored the number of abandoned sand pits on the island as wasteful of potentially valuable real estate and a defacement of



Above, the worked-out sand pit at Hempstead Harbor, sile of Pratt students' design project



the landscape. The fifth-year architectural students at Pratt Institute picked up the suggestion, and elected to take as their class problem a reclamation project for a sand pit. The site they chose was Hempstead Harbor, on the north shore of Long Island.

Working in five teams, the students' projects were essentially high-cost developments; they included housing both high-rise and one- and two-story — as well as other community facilities — schools, shopping center, recreation, theaters, libraries. Most of the town plans, as projected by the students, called for two or three separate communities and a community center, all areas bounded by ring roads, and all residential areas containing primary educational facilities.

"Sculptural" Planning

The characteristics of the site, which had been exploited until excavations had reached water level, where they are required by law to stop, made the molding of the terrain a relatively simple matter; the school described the project as "a sculptural approach to town planning." Ideally, it was thought, designers would work with the sand excavators, so that much of the shaping of the land could be done in the course of excavation. Some of the student projects called for considerable filling of the site, leveling it somewhat; other projects called for cutting, letting water from Long Island Sound flow over part of the site in one case, the student team designed a bay containing many small islands. In this project, the designers envisioned a sort of American Venice, with the harbor dwellings accessible only by boat, the Italian atmosphere enhanced by (Continued on page 372)

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(Continued from page 370)

houses suspended on the sides of the cliffs surrounding the harbor.

In most of the student plans, advantage was taken of the generous waterfront — some of the projects included individual docking facilities for houses on the water, as well as yacht clubs and marinas. An existing beach was preserved in all but two of the designs, and that replaced by three other beaches in





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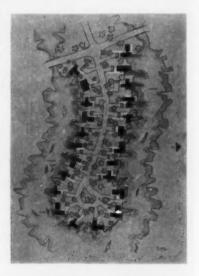
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Let your local MULTI-CLEAN representative serve as your expert floor consultant. You'll find his name in *Sweet's*, too. Call him or write Department AR-57, Multi-Clean Products, Inc., 2277 Ford Parkway, St. Paul 1, Minn.



Above, one of the student designs, calling for a number of connected peninsulas; below; one of the peninsular site plans, and one of the four-bedroom houses planned for the project. Damato, Deroo, Johnson and Kenyon, student designers





one of the two; beach club houses were provided in four of the designs.

No plans to execute any of the designs, in whole or in part, have been mentioned; but Dean Olindo Grossi, of the school of architecture, reports that several sand pit owners have visited the school and have exhibited interest in the studies.

(More news on page 376)



News Sentinel Building Ft. Wayne, Indiana Architects: Naess and Murphy Contractor: Wermuth, Inc.

BRICK TEXTURE . . . that adds expression to simple, pure design, is the architectural impact of Hanley Duramic 728 "Dapple Gray." An example of this expression is the NEWS SENTINEL BUILDING in Fort Wayne, Indiana. This building, the home of a major newspaper, expresses in line, color, and texture, the utility, integrity, and freedom that is the function of American Journalism. And this expression is more than surface beauty-Hanley fuses color to the traditional strength of quality brick. Hanley Duramics are highly resistant to severe weather changes and the corrosive elements found in the atmosphere of most large cities. For a complete architectural file on Hanley Ceramic Brick and Tile call or write your nearest Hanley office.

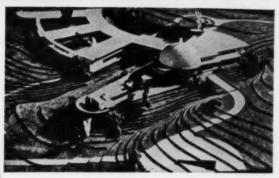
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(Revised 2nd Edition) by Arnold Whittick

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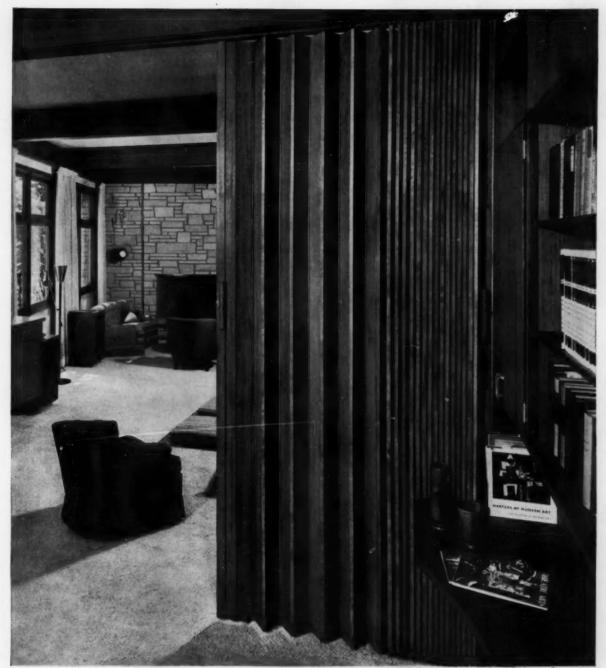
of this romantic architect — a genius which found its romance in looking to the future rather than to the past.

Beginning with Mendelsohn's childhood in a small East Prussian town, Arnold Whittick covers Mendelsohn's life in intimate detail. The entire span of Mendelsohn's career is presented — his early apprenticeship, the years of achievement in Germany, his fresh start in England after Hitler came into power, his contributions to the new architecture of Israel, and finally his life and work in the United States. From letters, from Mrs. Louise Mendelsohn, from friends and associates, and from Mendelsohn's designs and completed works, there emerges a rich, full portrait of the architect and his work.

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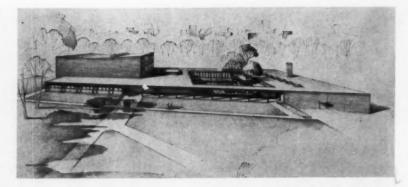
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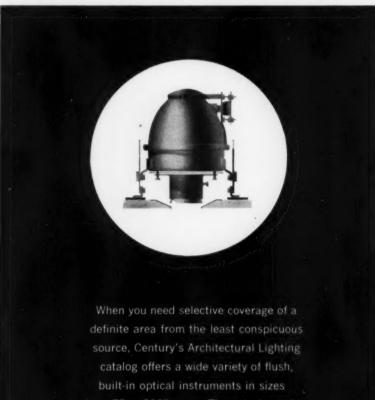
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(Continued from page 372)

GALLAUDET COLLEGE BUILDS FOR PHYSICAL EDUCATION

This Physical Education and Activities Building, now under construction at Gallaudet College, Washington, D.C., will complete the first stage of a construction program based on studies of the college and its role in the education of the deaf made under the auspices of the College, the U.S. Department of Health,





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Education and Welfare and the General Services Administration. A library, completed last June, and a girls' dormitory, also under construction, are the other buildings included in the first stage.

The physical education building shown here, designed by McLeod & Ferrara of Washington, D.C., will house a standard college gymnasium with two classrooms, a corrective gymnasium and auxiliary rooms, a standard-sized swimming pool, and an auxiliary gymnasium for girls, besides recreation room, dressing and shower rooms, laundry and shop, and a central boiler room for the completed campus. Open court separates main gym from auxiliary rooms. Estimated cost: \$1,327,000.



IN-CITY GRADUATE SCHOOL: N.Y.U. BUSINESS BUILDING

The proposed new home of New York University's Graduate School of Business Administration, designed by the New York architectural firm of Skidmore, Owings & Merrill, will provide 95,000 sq ft of floor area in ten air conditioned floors at an estimated cost of \$3 million. Six floors will be windowless — five of them containing classrooms, the sixth a library reading room. Classrooms will have capacities ranging from 15 to 150, the building a constant capacity of 1500. Four elevators will move traffic between floors. Exterior: gray brick, cast stone trim.

(More news on page 378)





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THE RECORD REPORTS

(Continued from page 376)

NEW YORK "WHITE PAPER" ON HOUSING THE AGED

"New Channels for the Golden Years" is the title of a new report concerning the aged published recently by the New York State Joint Legislative Committee on Problems of the Aging, one of the earliest and the most active of the state legislative groups in this field.

The report, which incorporates much of the expert testimony on various aspects of the problem given in committee hearings over the last year, also presents, in an initial section, the committee findings and recommendations. It goes into many variants of the economic and social problems besetting the elderly, as indicated in the committee's continuing investigations of these, but it also warns that "to attain our objectives we shall need to shift our attention from old age per se back into the beginnings of middle age"-thus to develop policies which will effectively emphasize the preventive aspects of gerontology.

On the subject of housing itself, the Committee stresses that the problem of housing older persons is not "an integral part of the basic problem of increasing the supply of housing for the community at large," but a special problem, or rather a series of special problem, because it "must be geared to not only an amazing variety of circumstances of the aged but to the amazing variety of income groups within our senior citizen population."

The committee recommendations include a \$50 million state loan fund to make loans to nonprofit agencies for construction of varying types of housing for senior citizens ranging from retirement cottages to new-type old-age homes; action by the State Division of Housing to require realty corporations directly benefitting from realty exemptions to set aside apartments for the aged as vacancies occur; encouragement by the Division of "all builders of gardentype rental projects" to set aside some small apartments for the aged; leadership by the Division in encouraging use of pension funds for construction of "sound, profitable" housing projects for retirees; expansion of the Division's research activities; encouragement by the Division of upstate (that is, smallcity) local housing authorities to convert large family residences into small residential suites for the aged.

(Continued on page 382)

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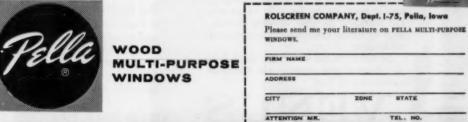
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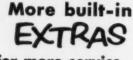
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THE RECORD REPORTS

Aged (Continued from page 378)

FEDERAL-STATE MEETING PROCEEDINGS PUBLISHED

The "Proceedings" of the first Federal-State Conference on Aging, held last June in Washington, D. C., under the joint sponsorship of the Council of State Governments and the Federal Council on Aging, have now been published and are available, in the form of a 120-page booklet, from the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. (65 cents).

The conference was organized in separate discussion groups on six major topics - Income Maintenance and Welfare Services: Employment, Vocational Rehabilitation and Retirement; Physical and Mental Health; Education and Recreation; Housing and Living Arrangements; State Organization and Functions. Each of the groups first heard summaries by "experts" on various phases of its topic, then turned to open discussion under the guidance of a trained discussion leader; finally group recommendations for future action were formulated and reported to the conference as a whole. Results, it was generally agreed, were both informative and stimulating.

The published booklet includes a 13page section on the Housing and Living Arrangements panel. There is also an appendix with a list of official representatives and a list of all participants which in themselves make useful references to the leading authorities in the field.

NAHRO REPRINTS ARTICLES FROM JOURNAL OF HOUSING

A 40-page booklet comprising selected articles on the subject of housing for the aging published in its *Journal of Housing* since 1946 has been published by the National Association of Housing Officials and is available from NAHRO, 1313 East 60th Street, Chicago 37, Ill., for one dollar.

The booklet, "Toward Good Housing for the Aging," provides a survey of housing and community services programmed or already accomplished. It includes articles on housing design, a summary of new Federal aids for housing for the elderly, reports on state and local housing projects for older people, and community services for the projects.

A selected list of books and pamphlets on design, operation and services is also included.

(More News on page 386)



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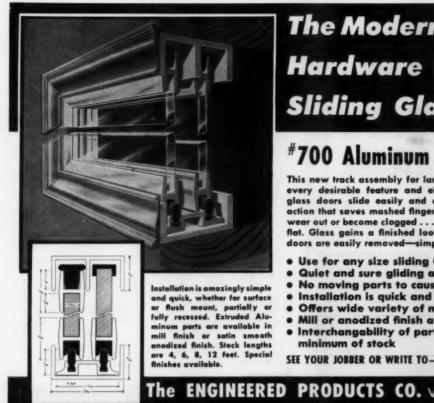
What I don't know won't hurt me.



Cancer?

Lots of people die of it, I know... but the American Cancer Society says a great many deaths from cancer are NEEDLESS deaths. That's why I do what they tell me. I have an annual medical checkup however well I feel. I know the seven danger signals. And when I want sound information, I get it from my Unit of the

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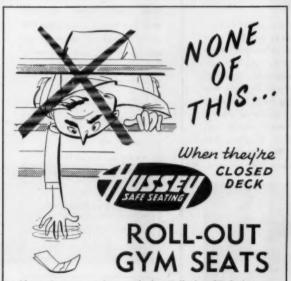
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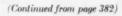
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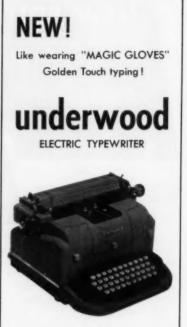


ANOTHER GAIDANO PROJECT WINS TOP INTERIORS AWARD

The Edgewater Inn Restaurant in Corte Madera, Cal., has won for its architect, Mario Gaidano, the top award in the annual national interiors award program conducted by *Institutions* magazine of Chicago. It is the third year in a row Mr. Gaidano has won the same award.

This year's winner is a motel restaurant on a state highway north of San Francisco in a large suburban residential area and was designed to appeal to the suburbanite as well as the motor traveler. The architect reports the keynote was tranquility. Bar, dining room and coffee shop are interwoven under a simple structural ceiling of wood planks and beams. Walls are glass, masonry and wood; floors of integrally colored cement tiles; lighting spot-splash incandescent.





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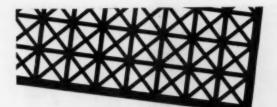
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A SURVEY OF BUILDING

REQUIRED READING

Building, U.S.A. By the Editors of Architectural Forum. McGraw-Hill Book Co. (N. Y.), 1957. 147 pp, illus. \$3.95.

(Continued from page 62)

Since this volume is intended primarily for non-professional readers, its origins are not indicated in it. The book actually, however, consists of reprints, with minor changes, of nine of the ten articles *Architectural Forum* ran from September, 1955, through August, 1956, as "Architecture in America" and one article, "The Public," from the February, 1957, issue.

Building, U. S. A., describes the complex roles played by all concerned, among them real estate operators, lenders, contractors, manufacturers, engineers, and, of course, architects. A valuable central message emerges in the book: it is up to architects to reorganize and reorient their own profession if they are to realize to the full their potentials as members of the one professionally trained group responsible for creating works of art. P.C.F.

STUDY OF SHELTER DEMANDS American Housing and Its Use. By Louis Winnick. John Wiley & Sons, Inc. (N. Y.) 1957. 143 pp. \$5.50.

A plethora of statistics regarding America's housing situation, compiled during the 1950 Census of Housing, has been given continuity and perspective by Louis Winnick in his new book, American Housing and Its Use. His extensive analysis of these statistics has produced meaningful social discoveries about the present and future demand for shelter space in America. Dr. Winnick discusses such factors as household size and composition, income, price and rent, in their relationship to the number of rooms occupants will want to acquire.

He points out that over the past 60 years America's investment in housing capital has been relatively small in view of the tripling of real per capita income during this period — which he says is evidence of a shift away from shelter toward other and newer consumer durables.

Vital topics treated by Dr. Winnick include the utilization of housing; the persons-per-room ratio (and its relation to income, etc.); space trends in the housing inventory; the changing household; and regional and racial differences in the size of homes.

The author is presently an economic consultant for the Office of the Mayor, New York City.

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inverted or horizontally. They are self contained, automatically controlled units equipped with induced draft fan and air circulating blowers. J-C Direct-Fired Unit design makes savings possible in beth installation and maintenance costs.



JACKSON & CHURCH - FURNACE DIVISION Segingw, Michigan



PROTECTS ... inconspicuously !



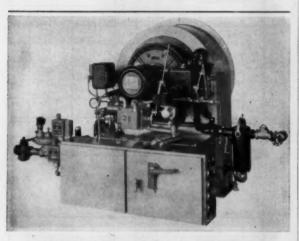
Grinnell SIDEWALL SPRINKLER

Specially designed deflector effectively distributes water over a predetermined area from the wall to the center of the room. Economical to install when remodeling rooms with narrow ceiling areas, such as hotel rooms and corridors.

For details, write Grinnell Company, Inc., 269 West Exchange Street, Providence, Rhode Island manufacturing, engineering and installation of automatic sprinklers since 1878.



GRINNELL



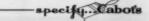
JOHNSON Forced Draft BURNERS

For firing with Oil only...Gas only...or Combination Oil or Gas. Wired, tested and completely assembled at the factory ready for easy, inexpensive attachment to any boiler or heat receiver. They provide smoother, more efficient combustion regardless of stack conditions and firebox pressure variations. Powered by the



famous Johnson Mod. 53 Burners, these "packaged" units are available for any heating need, in sizes from 25HP to 500HP.

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for blond and pickled effectsfor antiquing



Cabot's Stain Wax used in this "Let's Remodel" Home in Seattle, Wash. Architects: Green, Sibold & Associates, Seattle Spansored by Western Red Cedar Assoc.

Cabot's STAIN WAX stain, wax, and seal in one operation

Leading architects specify this unique "three in one" finish because it

- . gives the rich color of a penetrating stain.
- gives a soft lustrous wax finish.
- seals and protects the wood.
- bringsout the natural beauty of <u>all</u> types of wood.

• gives a custom-made, professional finish.

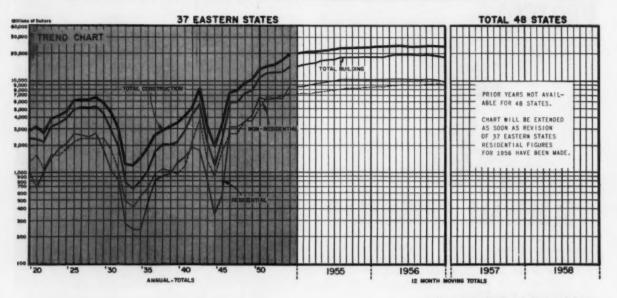
Your clients can choose from 9 appealing colors plus Black, White, and Natural.

A quality product from Cabot Laboratories ... manufacturing Samuel baby

SAMUEL CABOT INC. 529 Oliver Building, Boston 9, Mass. Pieche send me color card on Caber's Stoin Wax.

ARCHITECTURAL RECORD MAY 1957 393

THE RECORD REPORTS: CURRENT TRENDS IN CONSTRUCTION



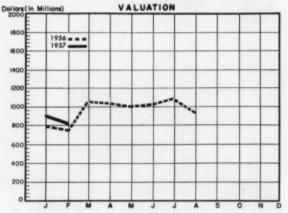
Charts by Dodge Statistical Research Service

DROP IN FEBRUARY OFFSETS JANUARY GAINS

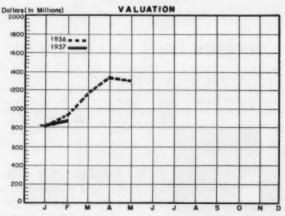
Construction contracts for February, according to national figures released by F. W. Dodge Corporation, showed a slight decline below the total recorded for February of last year. At \$2,161,009,000, the figure was three per cent lower than that for the same period of 1956. This February decline coupled with the slight rise shown in January put the first two months of this year on a par with the first two months of 1956. The February drop was entirely in private-ownership construction; public contracts rose from 33 per cent of the total in February 1956 to 39 per cent this year. In residential contracts the dollar volume fell seven per cent below February of last year for a total of \$875,486,000; reckoning these contracts in number of dwelling units, however, the 68,632 units reported were 12 per cent below last February's figure. Nonresidential building showed a rise of 10 per cent in February, with a total of \$820,038,000; both manufacturing and commercial building, however, showed a decline of seven per cent. In the heavy engineering categories, contracts at \$465,485,000 were 13 per cent below the total for February 1956.

		HC	TELS *		
	Constru	ction Contra	cts — 37 Ea	stern States	
		Number	of Project		
Year	Annual Total	Monthly Average	Year	Annual Total	Monthly Average
1929	706	59	1951	308	26
1935	481	40	1952	311	26
1943	199	17	1953	355	30
1944	401	33	1954	285	24
1947	448	37	1955	334	28
1950	386	32	1956	228	24
		Month	ly Totals		
	1	956		1	957
Jan.	17	July	32	Jan	. 25
Feb.	29	Aug.	25	Feb	. 26
Mar.	27	Sept.	22		
Apr.	20	Oct.	28		
May	33	Nov.	19		
June	21	Dec.	15		

NONRESIDENTIAL BUILDING



RESIDENTIAL BUILDING



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Gold Bond ASBESTONE PANELS bring to the building industry one of the simplest, most economical curtain wall methods ever introduced. In addition to easy handling, ASBESTONE PANELS provide the durability and permanency of ageless stone.

ASBESTONE PANELS are made of 2 Asbestos-Cement sheets, laminated to both sides of an asphalt-impregnated, chemicallytreated insulation core. This process provides the added advantages of resistance to weather, moisture and fire, plus built-in insulation. Four feet wide, ASBESTONE PANELS are available in 6', 7', 8', 9', 10' and 12' lengths in four thicknesses. There's a size for every building recommendation.



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Whether you're planning panelized curtain walls for factories, schools, hospitals; for inside or outside use; Gold Bond ASBESTONE PANELS offer you maximum flexibility, strength and economy.

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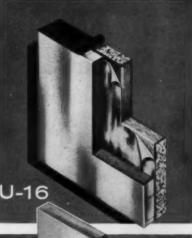
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U-20



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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 $4' \times 8'$.

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See 1957 Sweet's Architectural File, catalog 10a Ce.

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