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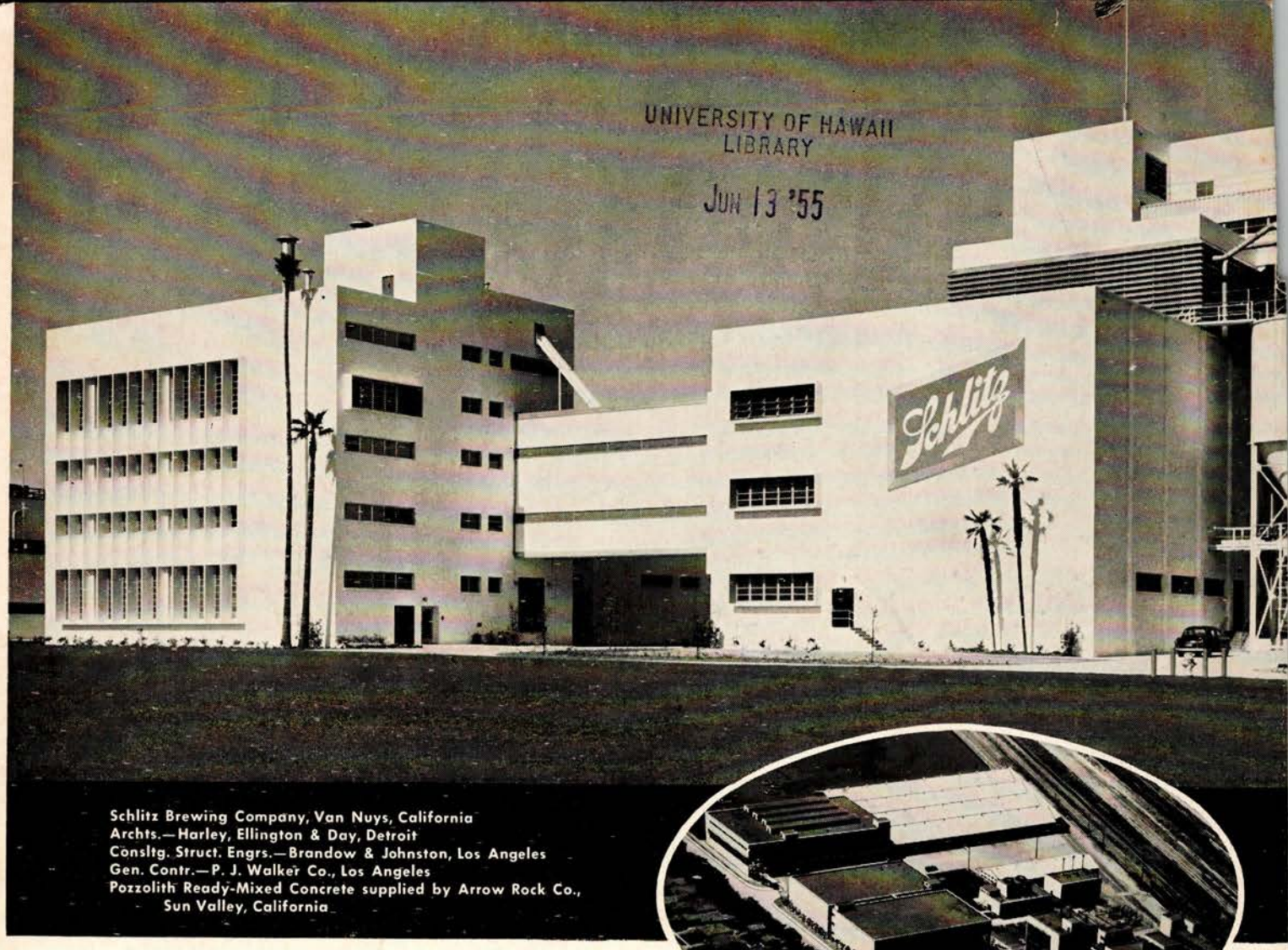

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*American Concrete Institute, Committee 613, 1944 Report, Page 655
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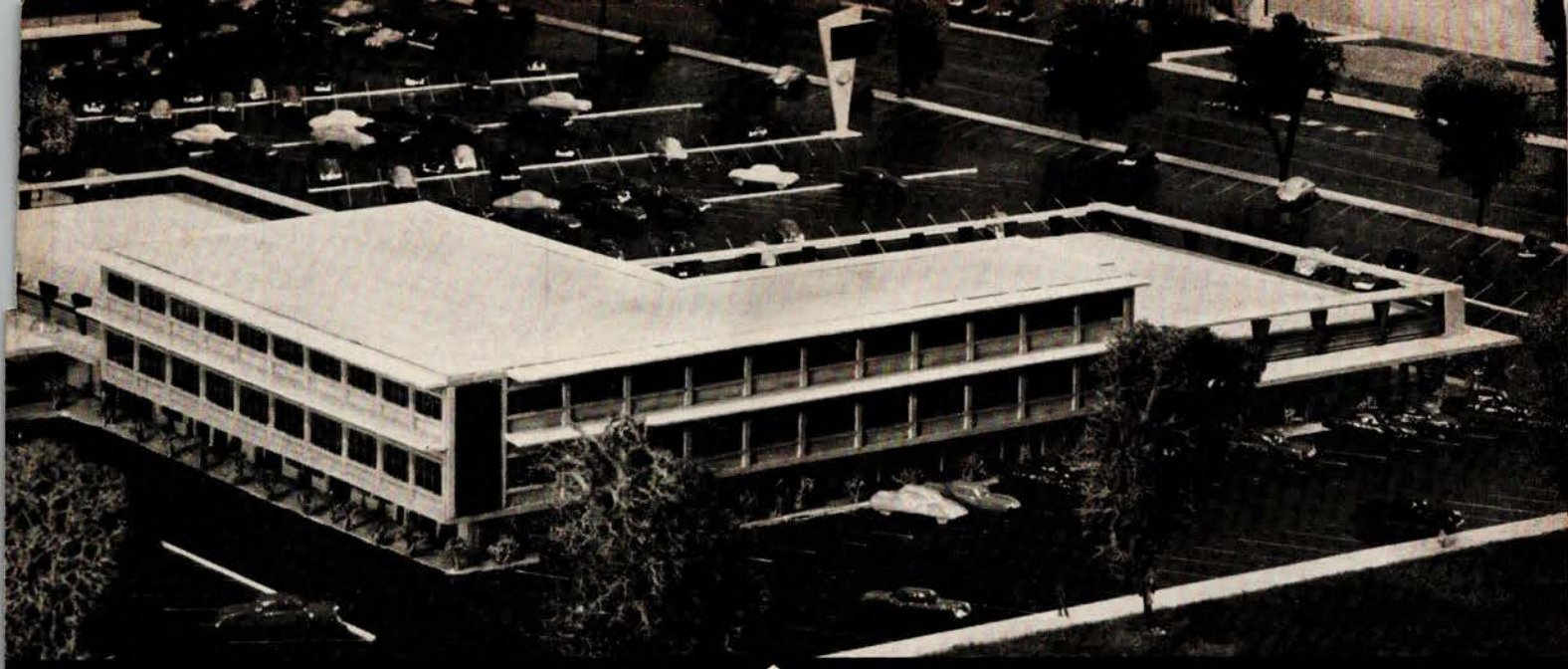
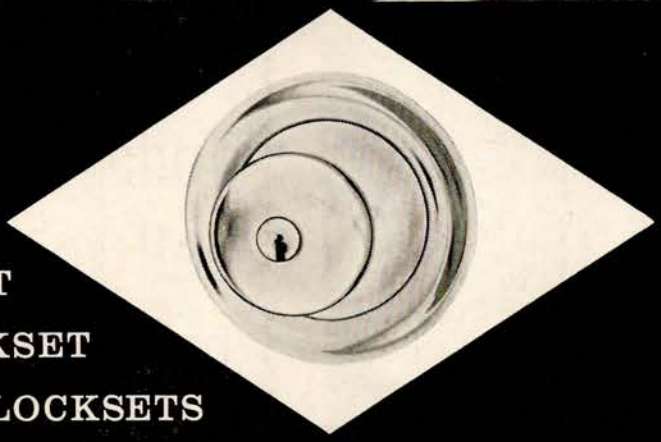
(Western Edition)

Entered as second-class matter at the Post Office, Concord, N. H., March 16, 1946, under the Act of March 3, 1879.





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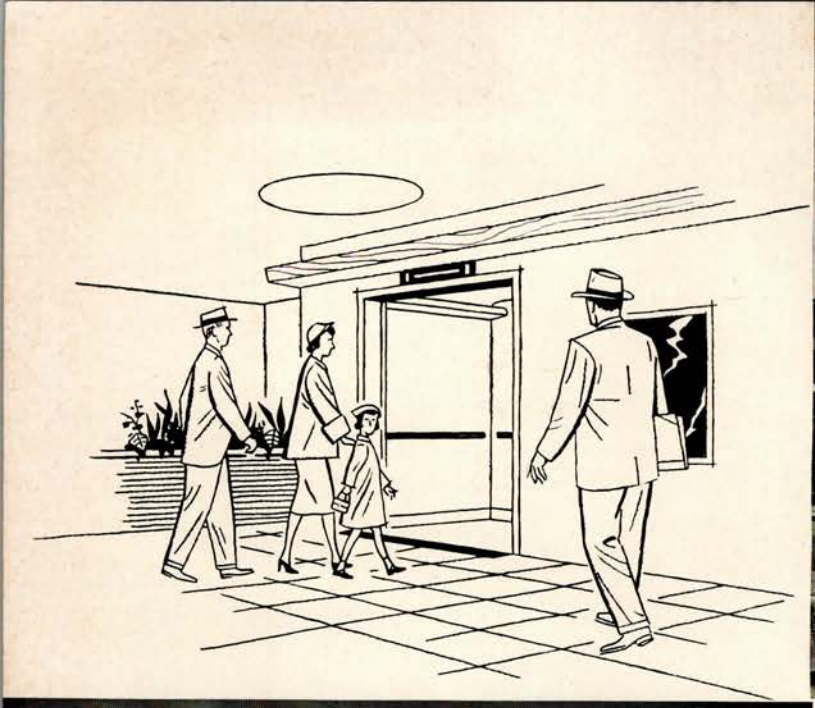
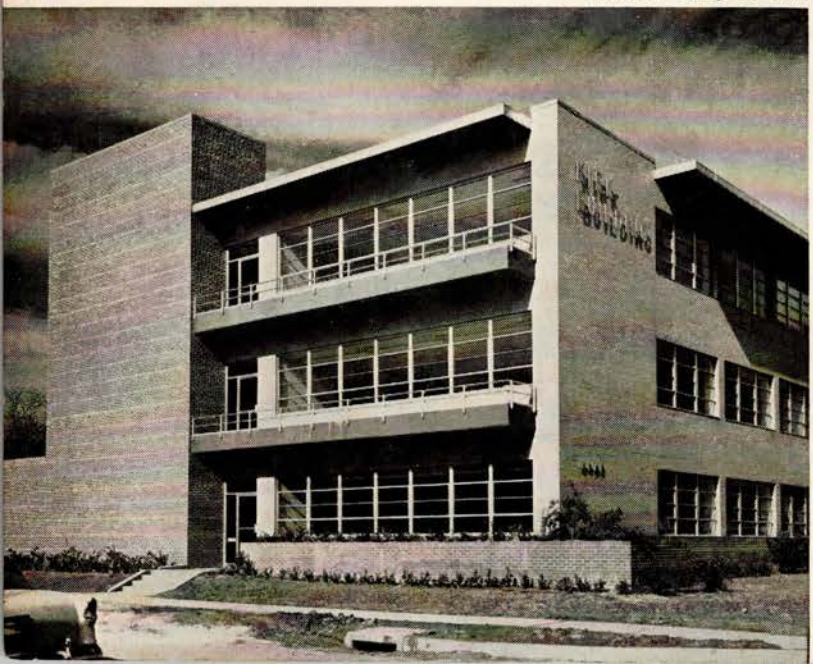






Northwestern Mutual Fire Ass'n—Los Angeles
Architect: Richard J. Neutra

Kirk Building—Dallas
Architect: George L. Dahl



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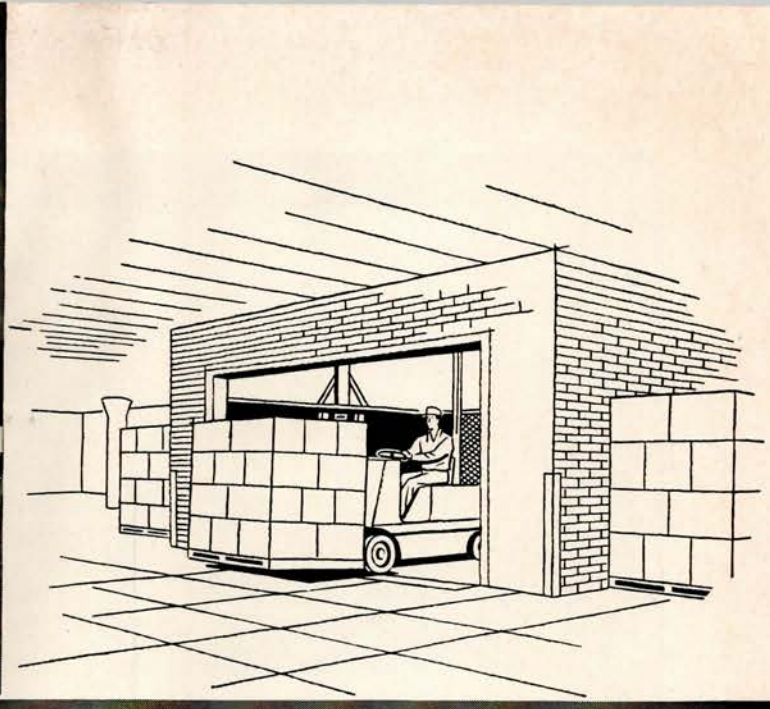

Hampton Village Shopping Center—St. Louis
Architects: Preston J. Bradshaw, I. M. Pei

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May 1955 Vol. 117 No. 5

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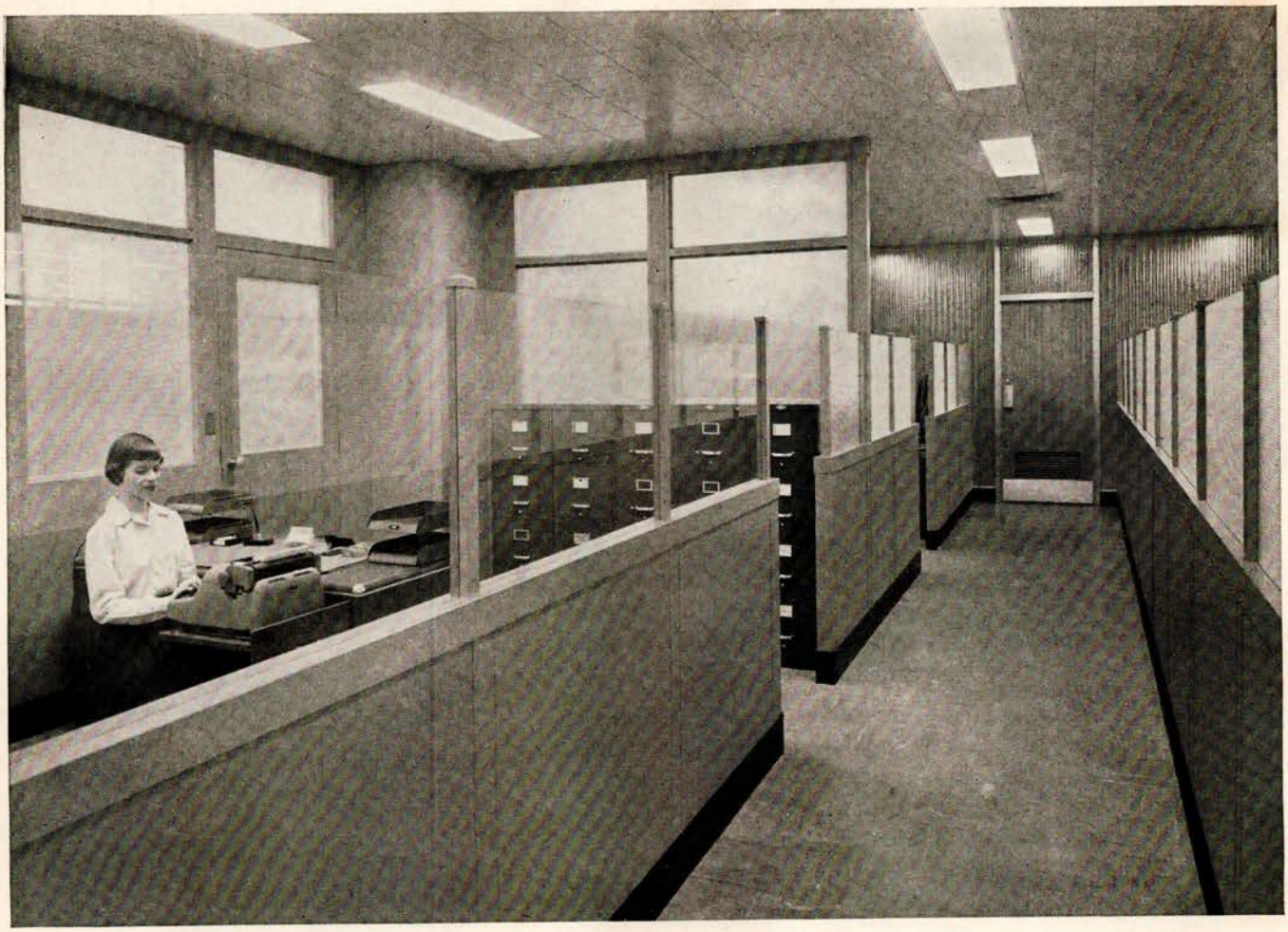
Subscription rates in U. S., U. S. Possessions, and Canada: $5.50 for one year, $9.00 for two years, $11.00 for three years. Elsewhere, subscriptions from those who by title are architects or engineers, $6.50 for one year, $11.50 for two years, $15.00 for three years; subscriptions from all others outside U. S., U. S. Possessions and Canada, $20.00 a year. Single copy price, $2.00. Circulation Manager: Marshall T. Ginn. Change of Address: Subscribers are requested to furnish both old and new addresses, sending if possible the stencil impression from magazine wrapper. Allow four weeks for change.



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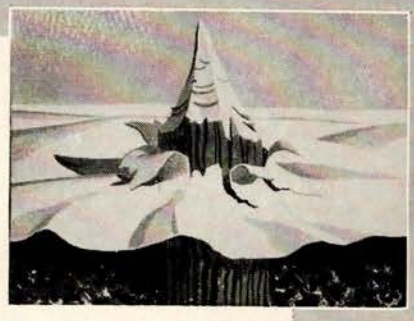

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THE RECORD REPORTS

PERSPECTIVES

THE REAL LOWDOWN: according to a piece in the British magazine *Building Materials Digest*, architect Edward Mills reported at a recent "colloquium" at the Building Centre in London that "American architects are seriously considering abandoning the use of curtain walls because they are scared of the problems which have arisen." (Don't turn the page.)

PUBLIC RELATIONS NOTE: architecture was ranked below medicine, law, education, banking and journalism among "prestige" occupations in a recent poll of 25 high school editors in the New York metropolitan area. The architect outranked the accountant, the salesman and the secretary in the students' social scale.

WHITHER THE ENGINEERS? Location of their new headquarters has been a matter of lively interest ever since it was announced they had outgrown their home of more than 50 years in the Engineering Societies Building at 33 West 39th Street in New York. Bidding has been spirited among leading U. S. cities, which know a Cultural Benefit when they see one; and Philadelphia, Pittsburgh and Chicago, so far the leading contenders, have each thought this one was worth $1,500,000. But New York itself, having dragged its feet for long enough to see the color of the opposition's money, last month brought up the big guns. First, at a luncheon at New York's University Club, former President Herbert Hoover asserted the engineers ought to stay in New York, "for their own good and the good of the city." Then a five-man committee was named to select a New York site for a new headquarters and "arrange for financing construction"; and William Zeckendorf himself was appointed chairman. After a more or less discreet interval (six days), New York State Attorney General Jacob K. Javits advised New York City's Commissioner of Commerce and Public Events that the state would oppose the societies' plans to move elsewhere on the ground that special state legislation incorporating them as "United Engineering Trustees Inc." provided the corporation will "perpetually maintain its headquarters" in New York. Whither?

IN PORTLAND, Paul Thiry of Seattle urged Oregon A.I.A. members at their annual banquet not to "underestimate the function of that intangible thing called beauty." Form follows function, yes; but "beauty is a functional necessity. . . . I would like to dissipate the notion that it is something apart. Architecturally speaking beauty can be many things . . . a dancing shadow of a tree branch on a wall, maybe a stream of sunlight, a curve, a contrast of surfaces, a texture, perhaps a reflection in the water. Sometimes it is achieved by a fresco or a mosaic. Somehow beauty is not something acquired but it is inbred . . . it is woven into the fabric of a building . . . it is not divisible. . . . Proportion and form and line are not something we prescribe . . . they too are the result of design . . . they too must be inbred factors . . . not struggled for, but easy and concise and not compromising in that they steal from the practical, but rather that they complement the practical." And the end of it all: "Primarily it is the architect's mission to understand the life of the people he serves and to weave into his structures the framework for living. The complexities of their enterprises should find simple direction through his rational thinking."

IN MILWAUKEE, it should be noted, Frank Lloyd Wright told the Wisconsin Architects Association that "America is going to have an architecture, the greatest the world has ever known, to which Rome's will not compare." Mr. Wright also warned against "importing style from abroad," viewing architecture as a business, striving for quantity instead of quality and blind reliance on the form-follows-function formula. "Architecture is an expression of human beings for human beings. You can see painting, you can hear music. No word is sufficient to describe architecture. Literature tells about man. Architecture presents him. There must be a soul in architecture — art and religion go hand in hand. We must have something to go with the Declaration of Independence. We need the spirit of our forefathers to inspire our young."

AND IN DETROIT, Minoru Yamasaki shared some of *his* architectural thinking with the Michigan Society of Architects at *their* annual convention — against the background of his recent travels in Italy, India and Japan, "experiencing for the first time their wonderful architectures of the past." Discussing overemphasis on function among other "fallacies" he listed as "growing pains" of today's architecture, Mr. Yamasaki observed that "if we stop at function and function only, we have not even commenced with architecture. We must," he declared, "work for the uplift, the emotional quality of architecture which is man's physical expression of his nobility. If we could attain this quality in every building, in every walk of life, no matter to how small a degree, then we would have achieved with the tools of our architecture the kind of environment that we so desperately need as a framework for our civilization." In spite of the fallacies, Mr. Yamasaki believes, "the state of architecture is wonderful. In our dreams of the future are buildings which will be symbolic of the democracy in which we so deeply believe. The enjoyment of buildings, the designs, will be enhanced by our never-resting search for beauty . . . "

CHICAGO

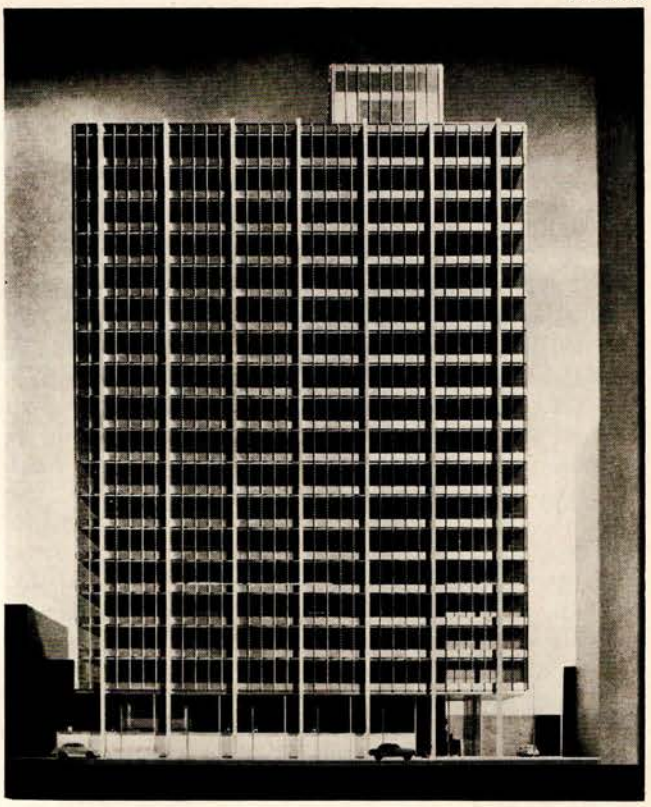


ALUMINUM AND GLASS—Two more lakefront apartment projects by Ludwig Mies van der Rohe (Friedman, Alschuler and Sincere associated) for Chicago builders and developers Herbert S. Greenwald and Samuel N. Katzin: above, "900 Esplanade Apartments" (to be immediately adjacent to Mies' 860–880 Lake Shore Towers); below, "Commonwealth Promenade Apartments." Structure will be flat-slab, reinforced concrete; exteriors a series of prefabricated aluminum frames nine by 21 ft, designed to eliminate as many construction joints as possible. Frank J. Kornacker is the structural engineer. Estimated cost: $25 million



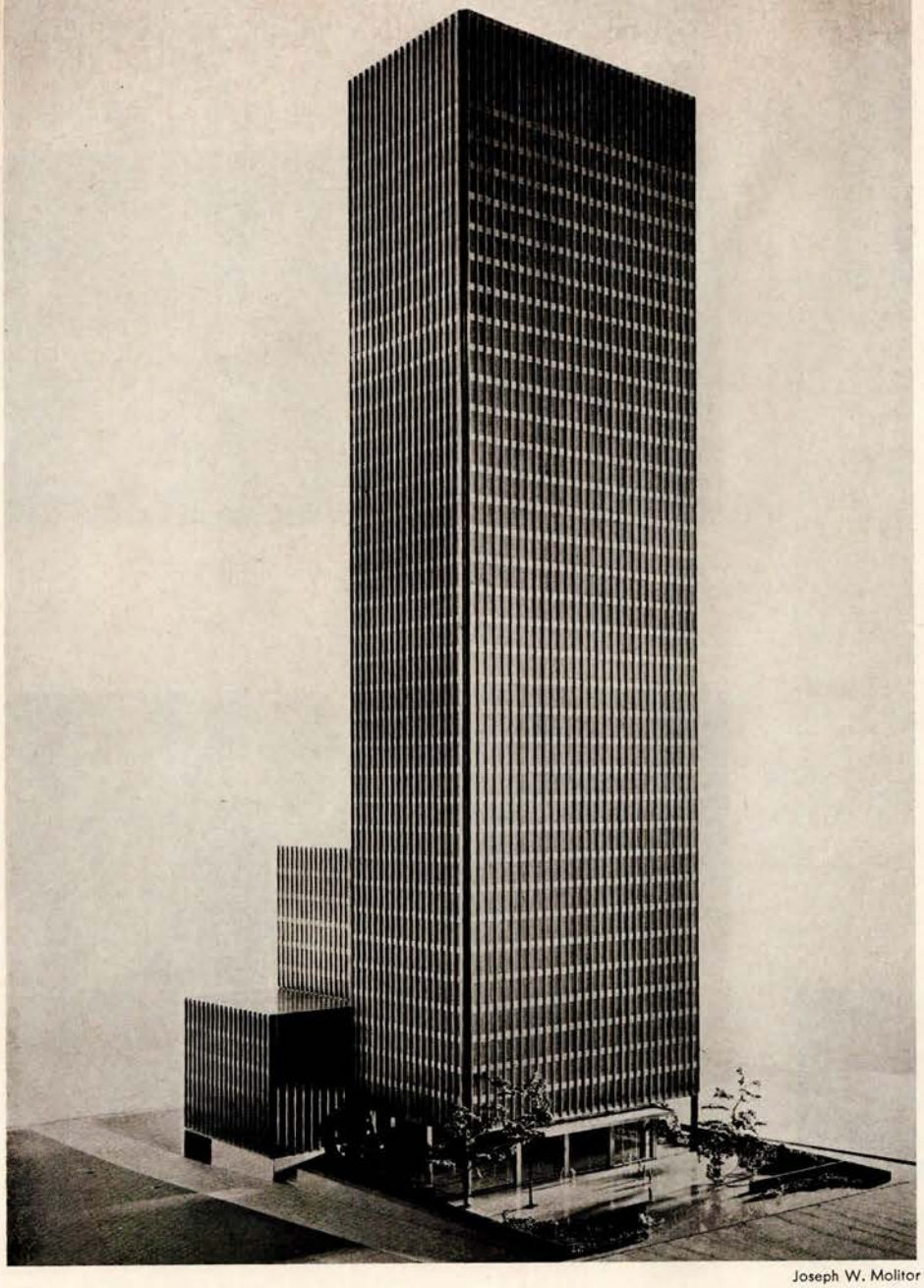
Hedrich-Blessing

Ezra Stoller



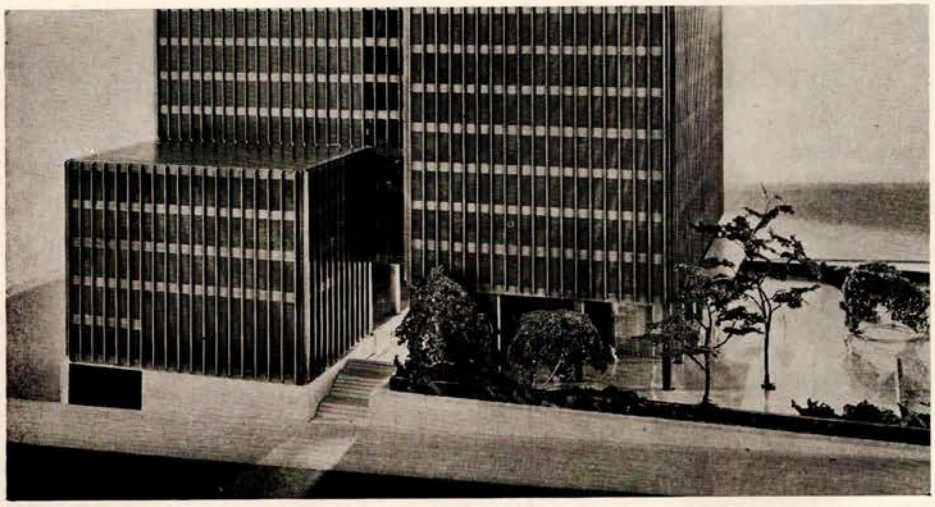
STEEL AND GLASS—Skidmore, Owings and Merrill are architects for 19-story, 250 ft $6 million office building projected by Inland Steel Company for northeast corner of Dearborn and Monroe streets. It will be Loop's first large new office building in 20 years and the city's first all stainless steel building. Use of exterior steel columns for structural support and a separate service shaft (310 ft high) for all risers as well as utilities will leave the main office tower unobstructed interior floor areas 177 by 58 ft, said to be the widest clear span of floor space ever designed for a multi-story building. Construction is scheduled to start this fall





Joseph W. Molitor

BRONZE AND GLASS—The design by Ludwig Mies van der Rohe and Philip Johnson (Kahn and Jacobs, Associated Architects) for "Seagram Park Avenue" projects a 38-story skyscraper with a façade entirely of bronze and dark-gray glass, set on a marble platform which will constitute a large open plaza at ground-floor level. The new headquarters of Joseph E. Seagram & Sons Inc., on the east side of Park Avenue between 52nd and 53rd streets, is scheduled for completion in 1957, when Seagram's will celebrate its 100th anniversary. Estimated cost: "in excess of" $20 million. Structural engineers: Severud-Elstad-Krueger. Builder: George A. Fuller



NORTH CAROLINA Chapter of the American Institute of Architects held its first honor awards program as a feature of its annual winter meeting at Chapel Hill this year (AR, Mar. 1955, page 15). A jury consisting of Richard L. Aeck, A.I.A., Atlanta, Thomas H. Creighton, A.I.A., editor of Progressive Architecture, *and Dean Olindo Grossi of the Pratt Institute School of Architecture, named 14 projects (of 52 submitted by 21 North Carolina firms) to receive honor awards, and designated nine of the 14 for "special commendation." The nine are shown on this and next page*

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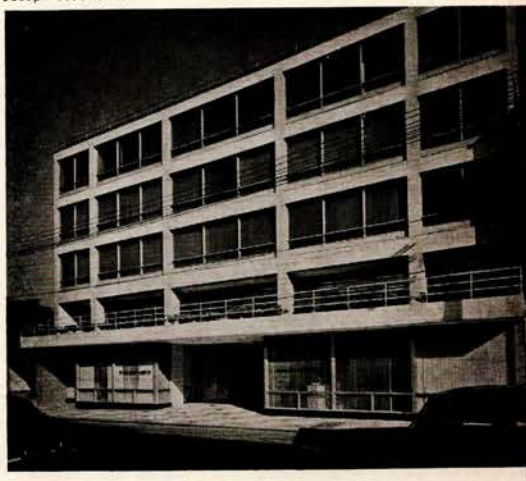
Student Union Building, North Carolina State College, Raleigh; William Henley Deitrick—John C. Knight, Architects

Joseph W. Molitor



Office building for First Federal Savings and Loan Association of Catawba County, Conover; Clemmer & Horton, Architects

Joseph W. Molitor



Office Building for Addison Building Corp., Charlotte; A. G. Odell Jr., Architect

(Continued on page 12)

North Carolina Awards

(Continued from page 11)



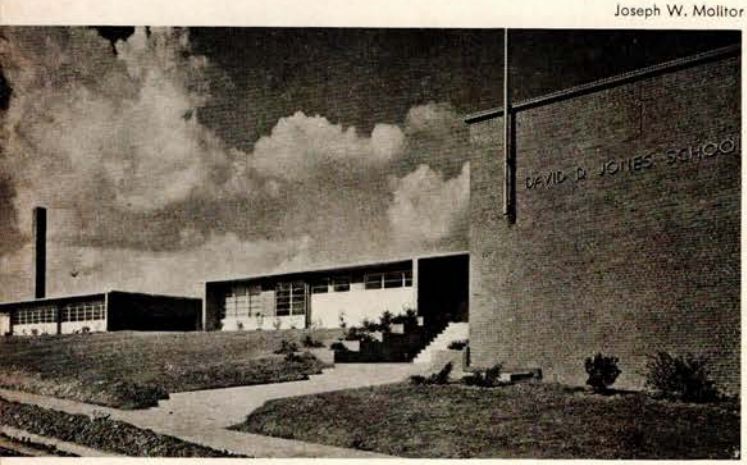
Farm Colony Building, State Hospital, Morganton; John Erwin Ramsay, Architect

Joseph W. Molitor



Double Oaks Elementary School, Charlotte Public School System; A. G. Odell, Jr., Architect

Joseph W. Molitor



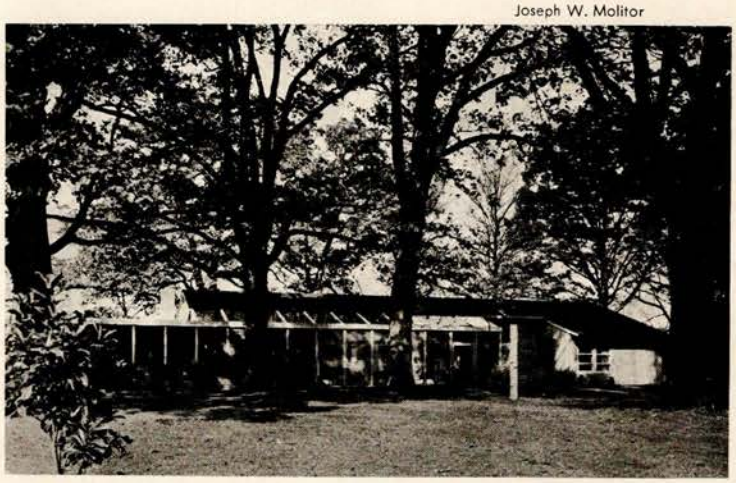
David G. Jones Elementary School, Greensboro Public School System; Loewenstein-Atkinson, Architects

Joseph W. Molitor



Residence for Mr. and Mrs. J. Spencer Bell, Charlotte; A. G. Odell Jr., Architect

Joseph W. Molitor



Residence for Mr. and Mrs. Wilbur Carter Jr., Greensboro; Loewenstein-Atkinson, Architects

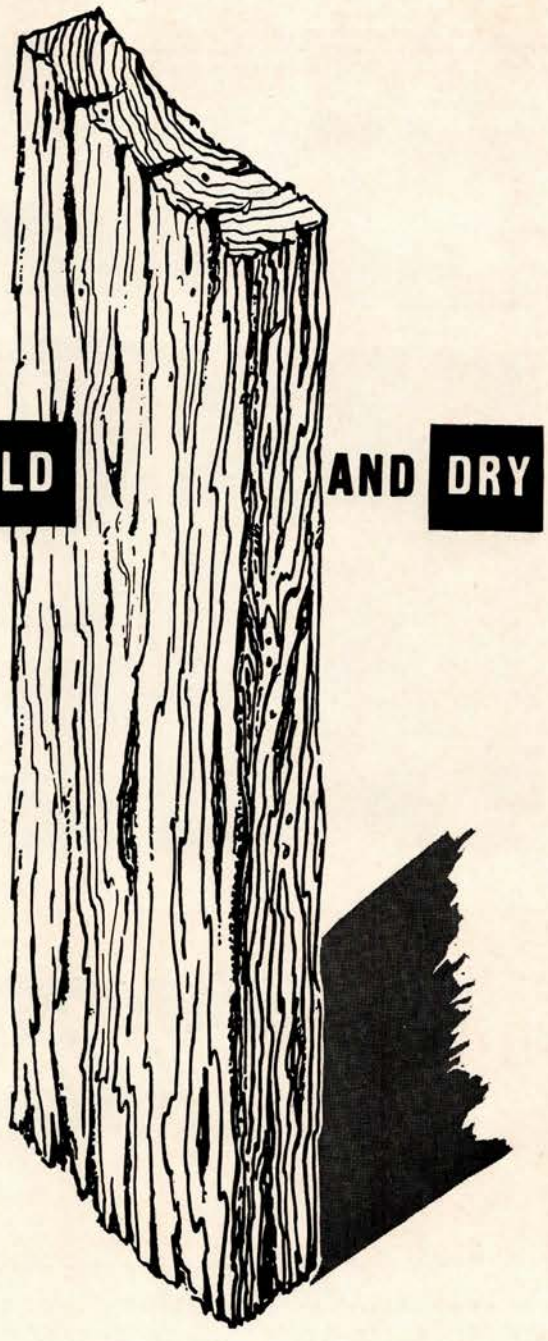
G. E. Kidder-Smith



"The Little Chapel on the Boardwalk," Wrightsville Beach; Leslie N. Boney, Architect

(More news on page 15)

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



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

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

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

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

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

To obtain maximum uniform depth protection against heat loss and condensation formation, it is necessary to use **edge-to-edge** multiple aluminum, **each** sheet of which automatically stretches from joist to joist, and also all through the flanges for further vapor protection as well as permanent attachment of each sheet.

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

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Type 4-PS about 8¢ sq. ft.

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525 Broadway, New York, N. Y.

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☐ Please send samples

Name_____

Firm_____

Address_____

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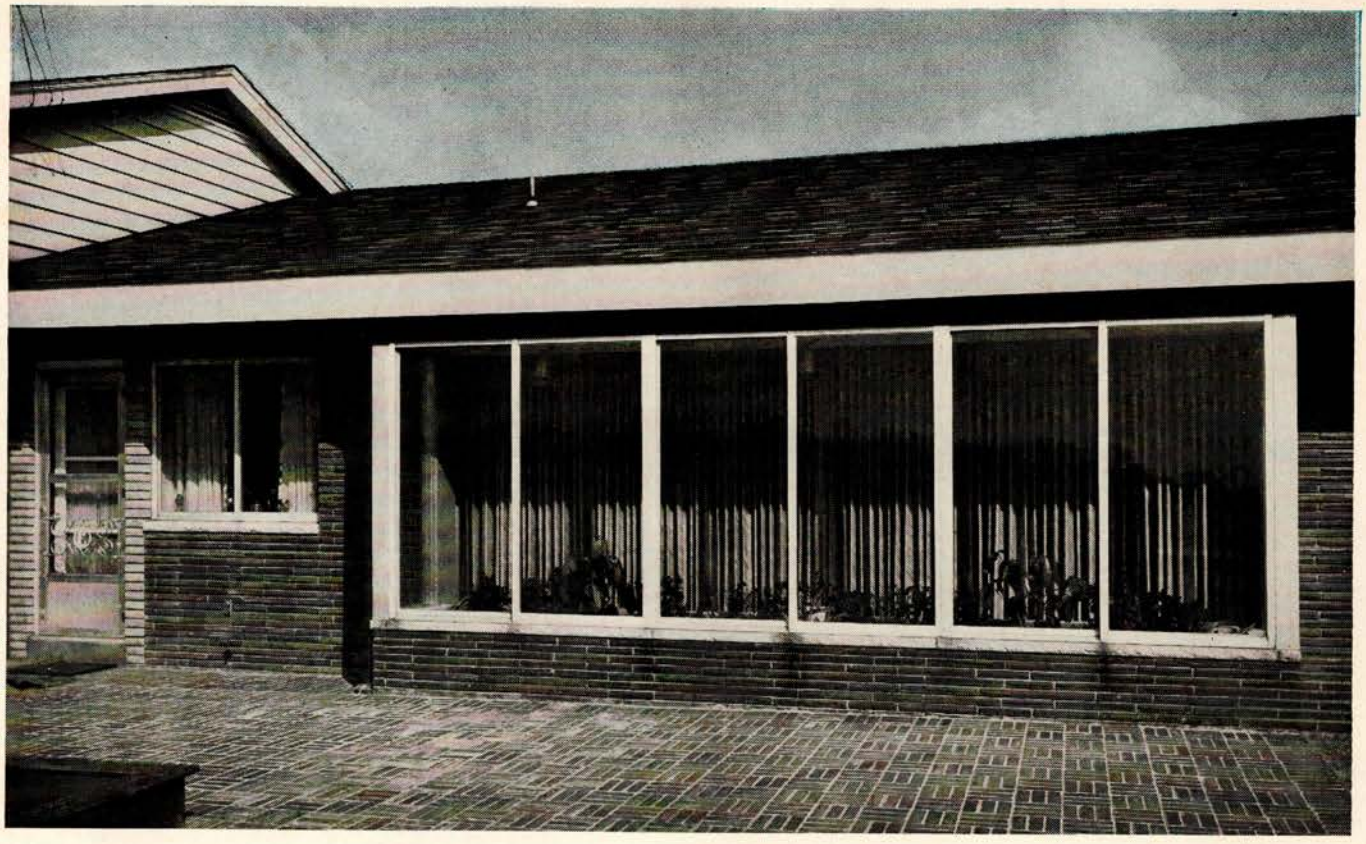

Lustracrystal Saves 35% of Glass Cost on this job

More and more architects are turning to LUSTRACRYSTAL for glazing large openings or for glass doors, because LUSTRACRYSTAL is the economical, yet completely satisfactory glass for these purposes. On the job above, 7/32" LUSTRACRYSTAL costs 35% less than ¼" plate glass.

With LUSTRACRYSTAL you can be lavish in your use of glass, yet keep your costs way down. LUSTRACRYSTAL is made in thicknesses up to 5/16". It is a sheet glass of extraordinary flatness, clarity and brilliance, made by American Window Glass, specialists in the manufacture of flat glass since 1899.

Here's an additional plus value when you specify LUSTRACRYSTAL — upon request, the company will inspect the installation and without expense, report whether the glass furnished is the kind, quality and thickness specified. Be sure to specify the economical glass for large openings, LUSTRACRYSTAL.

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The State of Construction

BOOM, BOOM, BOOM is the continuing theme, and for whatever the economic pundits can make of it, the construction industry goes on setting new all-time records. The latest F. W. Dodge Corporation report shows first quarter 1955 construction 40 per cent over the previous all-time-high first quarter in 1954 (for details, see page 382). At its annual meeting in Washington at the end of March, the regional directors of the American Institute of Architects reported more work in architects' offices at that time than a year ago in eleven of the Institute's 12 geographic regions; the twelfth — the Great Lakes area — maintaining last year's high level. And the Associated General Contractors of America reported at its annual convention in New Orleans (see next page) that a telegraphic survey of their members revealed a large majority anticipated increases in all three major categories of construction — building, highway and heavy engineering — over the next six months.

A.I.A. News and Notes

FIVE HONOR AWARDS and 22 Awards of Merit will be given in the 1955 A.I.A. Honor Awards Program. Selections were made last month in Washington — in advance of the annual convention for the first time — by a jury consisting of Thomas H. Locraft, Washington, D. C., chairman; Ludwig Mies van der Rohe, Chicago; Eugene F. Kennedy, Jr., Boston; J. Byers Hays, Cleveland; and Ernest Born, San Francisco. **First Honor Awards:** The General Telephone Company of the Southwest, San Angelo, Tex. — Pace Associates, architects, with Charles B. Genther, arthitect in charge; Central Restaurant Building, General Motors Technical Center, Warren, Mich. — Eero Saarinen and Associates, architects; Women's Dormitories and Dining Hall, Drake University, Des Moines, Iowa — Eero Saarinen and Associates, architects; American Embassy, Stockholm — Ralph Rapson and John van der Meulen, architects; North Hillsborough Elementary School, Hillsborough, Cal. — Ernest J. Kump, architect. **Awards of Merit** were made to: St. Brigid Catholic Church, Los Angeles — Chaix and Johnson, architects; Texas Children's Hospital, Houston, Tex. — Milton Fay Martin, architect; Eagle Rock Playground Clubhouse, Eagle Rock, Cal. — Richard J. Neutra, architect, and Dion Neutra, associate; Men's Residence Hall, University of Washington, Seattle — Young, Richardson, Carleton and Detlie, architects; Bank of Apple Valley, Apple Valley, Cal. — McFarland, Bonsall, Thomas, architects; Danforth Chapel, Colorado A&M College, Fort Collins, Colo. — James M. Hunter, architect; O'Neil Sheffield Shopping Center, Sheffield Township, Ohio — Weinberg and Teare, architects; Charles M. Goodman residence, Alexandria, Va. — Charles M. Goodman, architect; U. S. Naval Postgraduate School, Monterrey, Cal. — Skidmore, Owings and Merrill, architects; U. S. Navy Service Schools, Great Lakes, Ill. — Skidmore, Owings and Merrill, architects; Bandstand and Park Pavilion, St. Petersburg, Fla. — William A. Harvard, architect; Home Economics Building, University of California, Davis Campus — Hervey Parke Clarke and John F. Beuttler, architects; George Channing residence, Sausalito, Cal. — Roger Lee, architect; St. Matthews Church, Pacific Palisades, Cal. — A. Quincy Jones and Frederick E. Emmons, architects; Children's Clinic, Raceland, La. — Curtis and Davis, architects; Sigmund Kunstadter house, Highland Park, Ill. — George Fred Keck and William Keck, architects; apartment development, Fairfax County, Va. — Keyes, Smith, Satterlee and Lethbridge, architects; Manresa Jesuit Retreat House, Azusa,

(*Continued on page 16*)



— *Drawn for the* RECORD *by Alan Dunn*



William E. Bradley

Happy humorist: architect Roger Allen of Grand Rapids addressing Michigan architects' banquet. Below: A.I.A. President Clair W. Ditchy, who received the Michigan society's 1955 Gold Medal, with Elmer J. Manson, society president



William E. Bradley

(*Continued from page 15*)

Cal. — Wallace Neff, architect; Ernest Nelson Moore house, Carmel, Cal. — Anshen and Allen, architects; five-unit apartment building, Los Angeles — Carl Maston, architect; the William H. and May D. Taylor Memorial Library and the John M. Reeves Student Union Building, Centenary Junior College, Hackettstown, N. J. — Jan Hird Pokorny, architect; and the Mercantile Library, Philadelphia — Martin, Stewart and Noble, architects.

CLARENCE STEIN will be the banquet speaker at the 87th annual convention in Minneapolis June 20–24. The choice of one of this country's pioneer city planners is in key with the convention's theme, "Designing for the Community," and Mr. Stein's address will highlight a program of seminars on such subjects as "Rebuilding the City" (Cities Are Planning Conscious Review of Redevelopment Accomplishment, Training the Architect for Planning, Design Objectives in Planning, Urban Design and Housing) and "The Architecture of Community Expansion" (Planning Needs the Architect, Development Housing — Neglected Architectural Opportunity, Planning of Smaller Communities, Commercial Service to New Areas).

Michigan Architects Meet

HIGHLIGHTED BY AN ADDRESS "Where Do We Go from Here?" by Minoru Yamasaki (see page 9), the 41st annual convention of the Michigan Society of Architects was held at the Hotel Statler in Detroit March 9–11. At the Michigan Building Industry Banquet, traditional closing event of the Society's conventions, A.I.A. President Clair W. Ditchy, F.A.I.A., received the Society's Gold Medal for 1955.

Another notable event of the convention was the first public showing of the Society's new 16-mm color sound movie made as part of the Society's very lively and effective public relations program to dramatize the architect and his work for public consumption. The Society plans to make prints available to A.I.A. chapters for a nominal fee.

Prosperity and Competition

THE COUNTRY'S GENERAL CONTRACTORS, some 1800 of them, met in New Orleans this spring in an atmosphere of continuing prosperity. Talk of continuing tight competition in bidding for the big jobs while markets remain strong highlighted

(*Continued on page 314*)

Ezra Stoller



1

Ezra Stoller



2

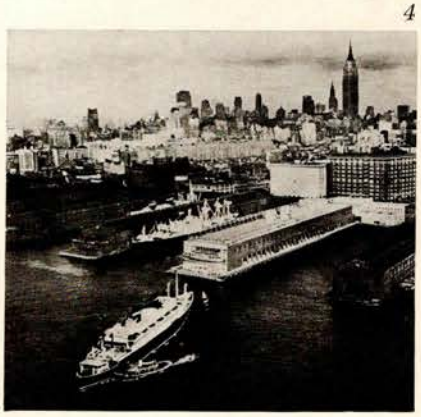
ARCHITECTURAL LEAGUE OF NEW YORK GOLD MEDALS for 1955 went to these entries in the League's 58th annual exhibition of architecture and the allied arts. 1. Manufacturers Trust Company branch bank, Fifth Avenue and Forty-third Street, New York City, Skidmore, Owings and Merrill, Architects, received the Gold Medal for Architecture. There were no Silver Medals or Honorable Mentions in architecture. 2. Harry Bertoia's sculptural metal screen, in the same bank, was awarded the Gold Medal in Design and Craftsmanship. 3. Gold Medal for Sculpture was awarded to Ernest Morenon for his Stations of the Cross in the Church of the Blessed Sacrament, Holyoke, Mass. (Chester F. Wright, architect). 4. Pier 57 (Grace Line), New York City, won the Gold Medal in Engineering for E. H. Praeger of Madigan Hyland. Rendering shows concrete boxes which support the superstructure, provide unique underwater storage areas

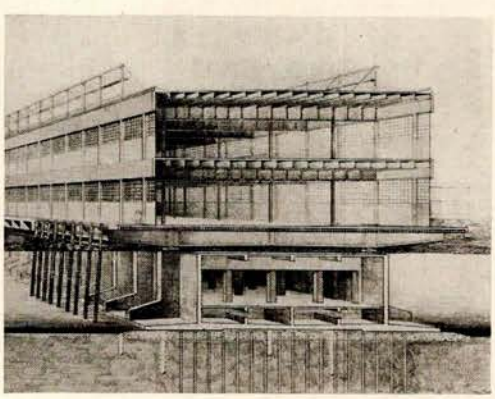
3



4

Grace Line





(*More news on page 20*)

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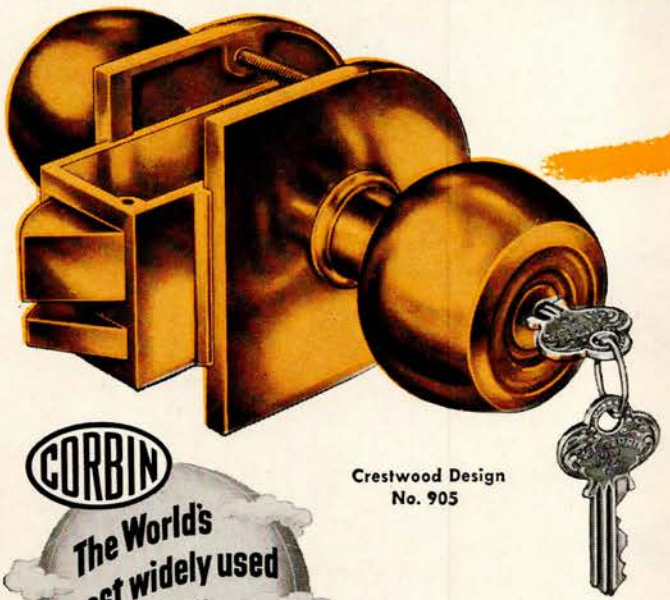

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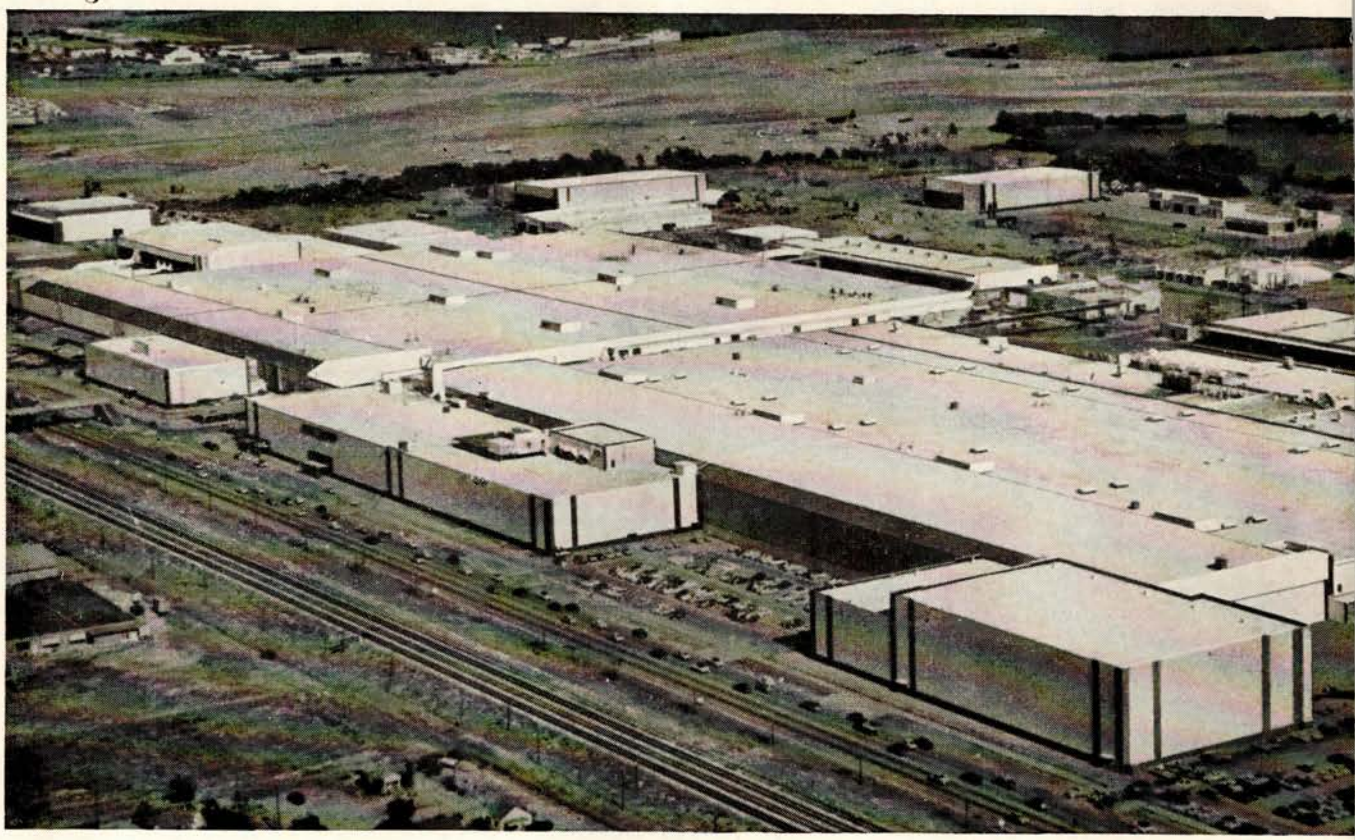
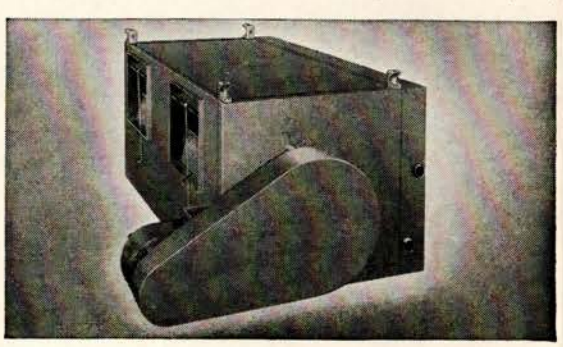


Chance Vought uses air conditioning

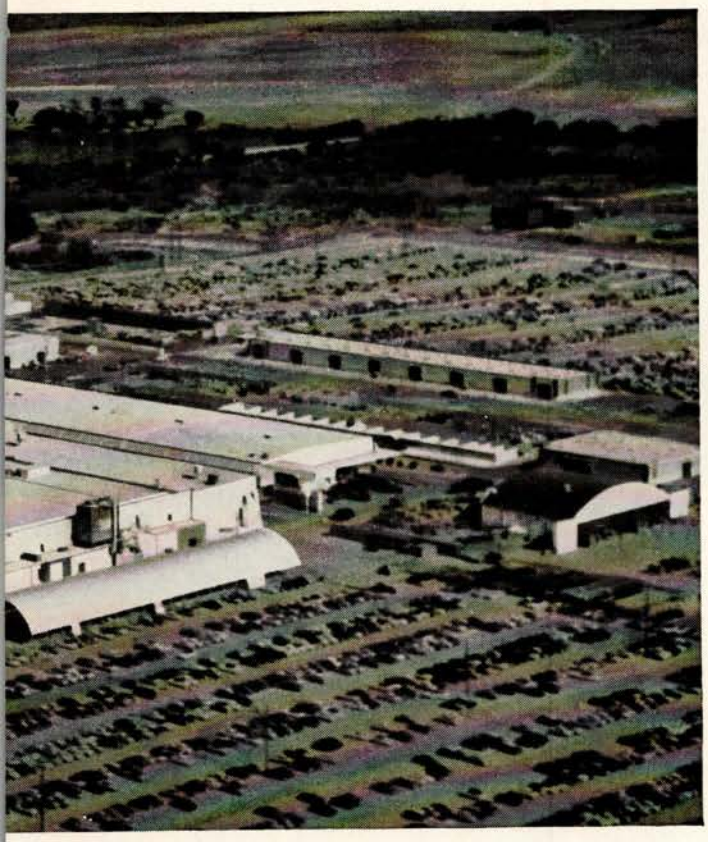


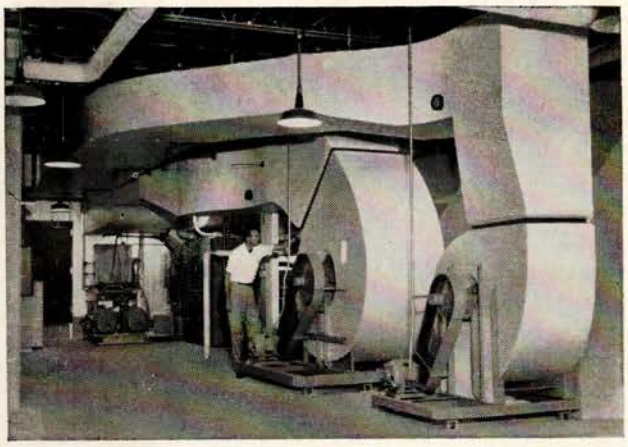


Chance Vought, maker of the famous Corsair, is now in full production of delicately machined guided missile Regulus (above) and twin-jet Cutlass (left).



American Blower H&V Units circulate conditioned air in hangars; 21 of these units in missile hangar provide complete change of air every 12 minutes.





Five American Blower Supply Fans and a Sprayed Coil Dehumidifier furnish conditioned air for offices, test laboratory in upper floors of missile hangar.

Chance Vought (foreground) and adjoining plants are leased from the U.S. Navy. Entire air-conditioning installation contains 7400 tons of refrigeration — of which no less than 6600 tons are applied to the load through American Blower equipment.

by the acre in modern Texas factory

American Blower equipment air conditions more than 3 million sq. ft. of factory, office, and hangar space at Chance Vought — the equivalent of nearly 70 acres!

Chance Vought Aircraft, Incorporated, Dallas, Texas, is one of America's foremost aviation pioneers — having produced planes for the Navy since 1917. Currently, it's making some of the world's fastest aircraft and newest guided missiles.

To help meet exacting manufacturing standards — and to insure efficient production — Chance Vought uses American Blower equipment to air condition more than 3,000,000 sq. ft. of floor space in its factory, offices and hangars.

The system — which includes American Blower Supply and Exhaust Fans, Air Conditioning Units, Chilled Water Cooling Coils, Heating & Ventilating Units, Sprayed Coil Dehumidifiers, Utility Sets, and Steam Coils — accurately controls humidity; maintains pre-selected indoor temperatures, ranging from 75° to 85° F. — providing ideal year-round manufacturing and working conditions.

Do you have an air-conditioning or air-handling problem? American Blower engineers have a complete knowledge of the special problems of many industries. A call, right now, to your American Blower or Canadian Sirocco Branch Office is all it takes to have this expert know-how at your disposal.



Ross Zumwalt, missile-hangar engineering consultant: "American Blower equipment gives top performance."



Carl Wallace, missile-hangar contractor: "American Blower helps contractors in every way."

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THREE FIRMS ARE CITED IN WISCONSIN BIENNIAL

THREE FIRMS WON FIVE AWARDS in the 1955 Biennial Honor Awards Competition sponsored by the Wisconsin Architects Association. All of the premiated buildings are shown on this page.

There were 44 entries in the competition, which is held every two years "to encourage the appreciation of excellence in architecture and to afford recognition of exceptional merit in recently-completed buildings which are the product of Wisconsin members of the American Institute of Architects." Entries are judged, not in competition with each other, but "on the basis of the excellence of the architect's solution of the problem presented him by the owner's requirements, site conditions, cost limitations and other limiting factors."

The winners and other entries are to be exhibited throughout the state.

Members of the jury were: Carl Koch, A.I.A., of Cambridge, Mass.; Harold Spitznagel, A.I.A., of Sioux Falls, S. D.; and John W. Root, F.A.I.A., of Chicago.

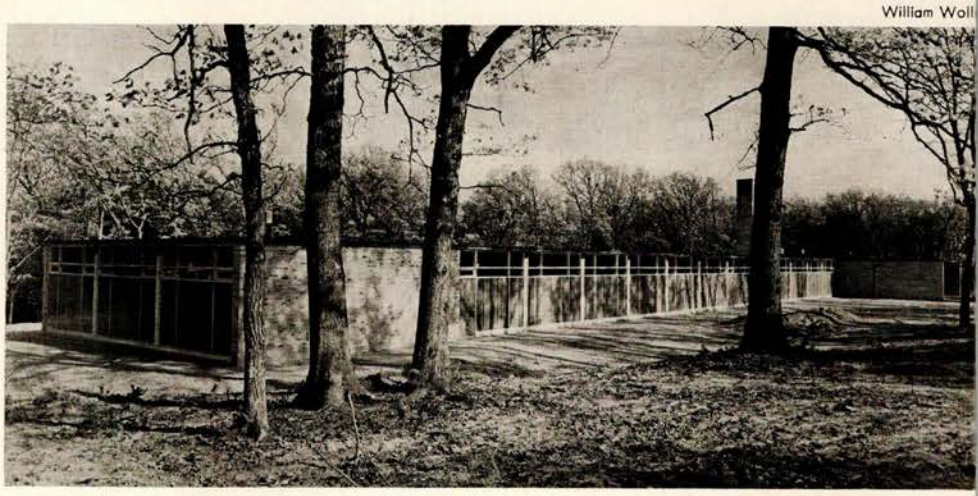
Mark T. Purcell of Madison was chairman of the committee which arranged the competition. Members were Frederick J. Schweitzer of Milwaukee and Maurey Lee Allen of Appleton, vice chairmen; Wallace R. Lee Jr., Robert J. Van Lanen and Austin A. Fraser, all of Milwaukee; Thomas H. Flad of Madison; and Theodore H. Irion of Oshkosh.



William Woll

FIRST HONOR AWARDS — "for distinguished accomplishment in architecture" — went to two buildings by John J. Flad and Associates of Madison: above, industrial plant for Parker Pen Company, Janesville, Wisc.; below, Middleton (Wisc.) State Graded School. The jury, choosing to give two first awards instead of the one the program called for, commended the Parker plant especially for its "straightforward plan" and "well-integrated exteriors"; the school for "interesting fenestration and human scale"

William Woll





1.



2.

3.

AWARDS OF MERIT IN ARCHITECTURE —

1. *Jewish Community Center, Milwaukee; Maynard W. Meyer & Associates, Milwaukee, architects. Jury praised "ingenious solution" of difficult site problem*
2. *Residence of Mr. and Mrs. William Metzker, Mequen, Wisc.; Maynard W. Meyer & Associates, architects. Jury called house "a good low-cost solution to the residential problem"*
3. *Public Library Branch, Milwaukee, Wisc.; Grassold, Johnson & Associates, architects. Jury liked use of garden as part of plan, commended "strategic location" of control desk*



(More news on page 24)



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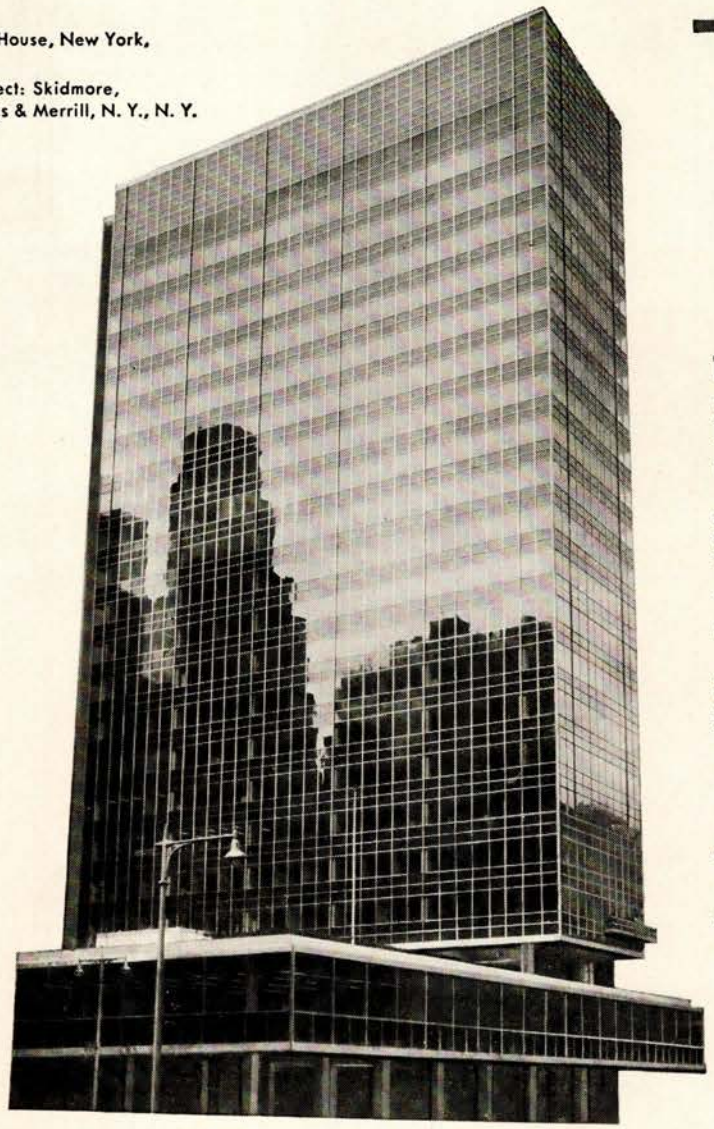

Lever House, New York, N. Y.
Architect: Skidmore, Owings & Merrill, N. Y., N. Y.

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Kentucky State Capitol Annex Office Building, Frankfort, Ky.
Architect: Meriwether, Marye and Associates, Lexington, Ky.



architectural news

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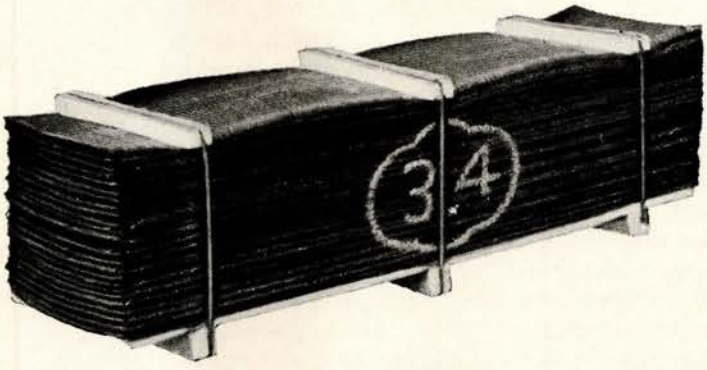

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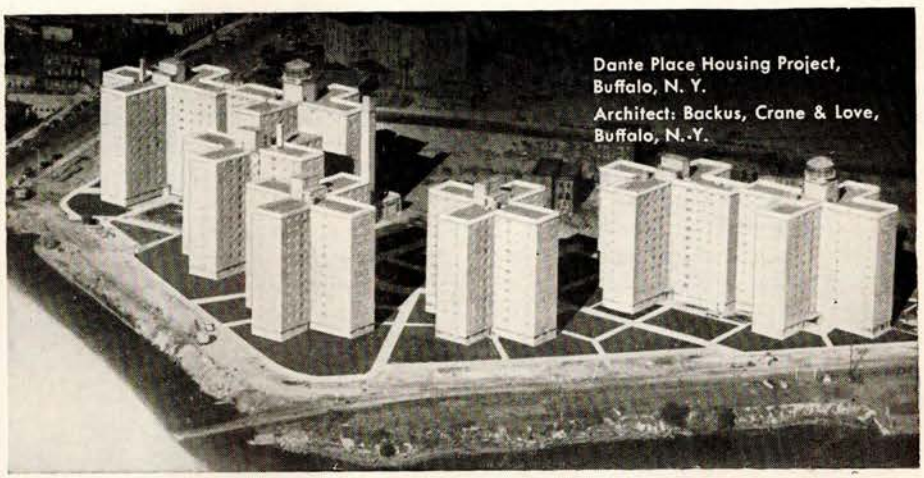
LOUISVILLE MINNEAPOLIS NEW ORLEANS NEW YORK PHILADELPHIA RICHMOND ST. LOUIS



Greater Pittsburgh Airport, Pittsburgh, Pa.
Architect: Joseph Hoover, Pittsburgh, Pa.



Dante Place Housing Project, Buffalo, N. Y.
Architect: Backus, Crane & Love, Buffalo, N.-Y.

FHA'S NEW ARCHITECTURAL ADVISORY GROUP STUDIES MPR'S PARAGRAPH BY PARAGRAPH

THE PROMISED REVISION of Federal Housing Administration minimum property requirements to make possible "a more livable house that in the long run will cost less money" is expected to step up in tempo terrifically in the near future. FHA Commissioner Norman P. Mason's first major move toward this objective was the appointment last fall of Boston architect Neil A. Connor to be the new head of FHA's architectural standards division (AR, Oct. 1954, pp. 38 *et seq.*). Now he has named a seven-man "architectural advisory committee" (it includes engineers) which will undertake a paragraph-by-paragraph study of the FHA *Handbook of Minimum Property Requirements* as one of its major projects. The committee, holding a two-day meeting in Washington every two months, is estimated to need about a year to get through the entire handbook.

Members of the committee are: Edward H. Fickett, Los Angeles architect specializing in small house design; Harold D. Hauf, architect and engineer, former editor-in-chief of ARCHITECTURAL RECORD, a top Navy construction specialist and now head of the Department of Architecture at Rensselaer Polytechnic Institute, Troy, N. Y.; Leonard G. Haeger, architect, former director of the National Association of Home Builders' Research Institute and now affiliated with big home builder William Levitt; Irwin G. Jalonack, consulting engineer, of Old Westbury, L. I., N. Y.; James T. Lendrum, director of the University of Illinois Small Homes Council; David C. Slipher, former technical director for the Fritz Burns homebuilding organization, Los Angeles, and now field director for ACTION, the American Council to Improve Our Neighborhoods; and Harold P. Vermilya, now vice president of American Houses Inc., New York City.

Commissioner Mason noted that all members of the group are concerned with the house as a completed unit, not with any particular component.

The committee will hold its second bimonthly meeting late this month, and no new MPR revisions will be issued before that time. A preliminary organization meeting in New York early this year enabled the group to get down to serious work when it convened its first formal session in Washington March 17 and 18.

All problems of FHA's architectural standards division will come before the committee as the bimonthly meetings continue, but none will have more importance to architects than those dealing with material acceptance. Minutes of the first meeting were written and distributed to members of the group. Replies are being checked and recommendations will be acted upon quickly, according to Mr. Connor.

Subjects for discussion in addition to the item-by-item revision of the handbook are being selected from among questions most frequently raised in correspondence or personal visits from architects and builders. Topics currently under consideration by the committee include the following:

— Thermal insulation.
— Sills and plates.
— Sill and plate anchoring.
— Questions of privacy in planning. These were said to involve "unconventional" plans — as in contemporary house design.
— Gutters and downspouts.
— Concrete composition.
— Corner bracing.
— Setting nails in exterior wood trim.
— Acceptable thickness of plaster.
— Carpeting as finished floor.
— Bituminous fiber and cement asbestos sewer pipe failures.
— Guarantee for hot water heaters.
— Weight and thickness of coating on heating and air conditioning ducts.

Besides these specific items, there were a number of more general questions discussed by the committee in its initial session.

Restrictive changes decided upon necessarily will take longer to effect than the non-restrictive MPR revisions, but all will be handled with dispatch, Mr. Connor promised.

Mr. Mason emphasized that the panel was appointed for the primary purpose of developing quality houses at low cost. "The willingness of this group to consult with FHA and to make available to us the fruits of their experience and knowledge will contribute immeasurably to the advance of the quality concept in building better values into today's homes," Mr. Mason declared. Membership was selected to represent both the "academic" and the "practical" phases of architectural and engineering design, he said.

Another important part of the FHA drive to update minimum property requirements is the new move toward cooperation with the Building Research Advisory Board. So far, FHA has contracted with BRAB for a study of one specific subject, slab-on-ground construction; but other contracts were being negotiated. All of the BRAB findings will be closely reviewed by the advisory committee and translated into MPR changes if this seems indicated.

The new FHA efforts follow a comparative lull in the issuance of MPR revisions — only four have been issued since last June. These dealt with kitchens, insulation labeling, composition of concrete, and heating requirements. The last-named is the most extensive of the recent series.

FHA also issues materials-use bulletins from time to time. These describe acceptability of materials and give detailed specifications. The three issued since March 1953 have covered concrete roofing tile; application of clay tile with adhesives on walls of gypsum plaster and gypsum wallboard and on wood or concrete floors; and asphalt strip shingles on low-pitched roofs.

FHA has made no recent changes in its requirements for individual water supply and sewage disposal systems.

Revisions resulting from the current "new look" at MPRs will be gotten to architects and builders as soon as possible after they are decided, Mr. Connor promises — for one reason, to gain the money-saving objective inherent in most revisions at the earliest possible date. If changes make the product application or process less restrictive, revisions can be issued immediately. Sixty to 90 days may be required to institute more restrictive revisions.

FHA always endeavors to get the new information out at the beginning of the "construction season" if possible so the new applications can affect the larger volume of homebuilding.

(*More news on page 26*)

Throughout one of the World's newest and most luxurious hotels

The Fontainebleau MIAMI BEACH, FLORIDA



ARCHITECT: Morris Lapidus, Miami Beach, Fla.
General Contractor: Taylor Construction Co., Miami, Fla.
Mechanical Engineers: Sasnett and Bennett, Miami, Fla.
Mechanical Contractors: Markowitz Bros., Inc., Miami, Fla.

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Olsonite model No. 56 Solid color seats were installed throughout the Fontainebleau Hotel.

For every deluxe and standard bathroom throughout Miami Beach's new Fontainebleau Hotel—one of the world's most fabulous—Solid Olsonite Seats were specified and installed.

Olsonite No. 56 open front seats with cover were specified in a variety of plain colors to match the pottery of the colorfully appointed bathrooms. Like all Olsonite seats, these plain color models are solid one-piece construction. There's no sheet covering or applied finish of any kind to crack, chip or peel.

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A-3-55

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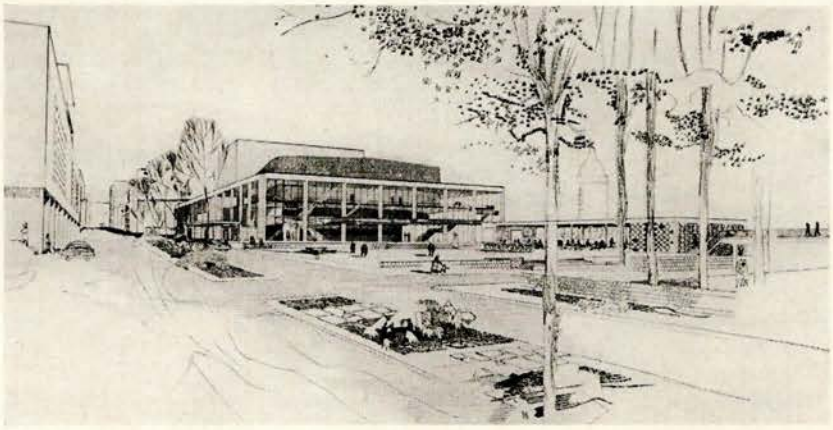
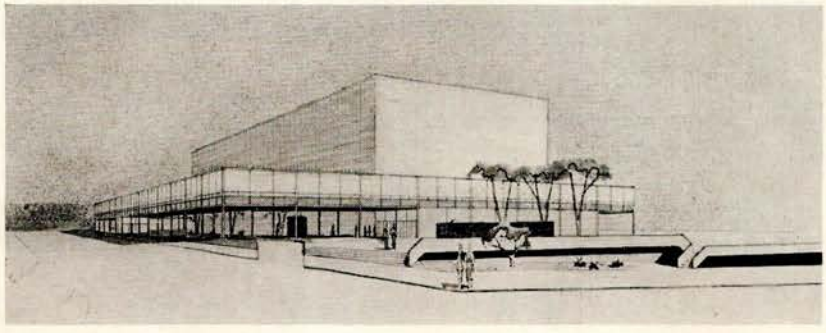
NEWS FROM CANADA *By John Caulfield Smith*

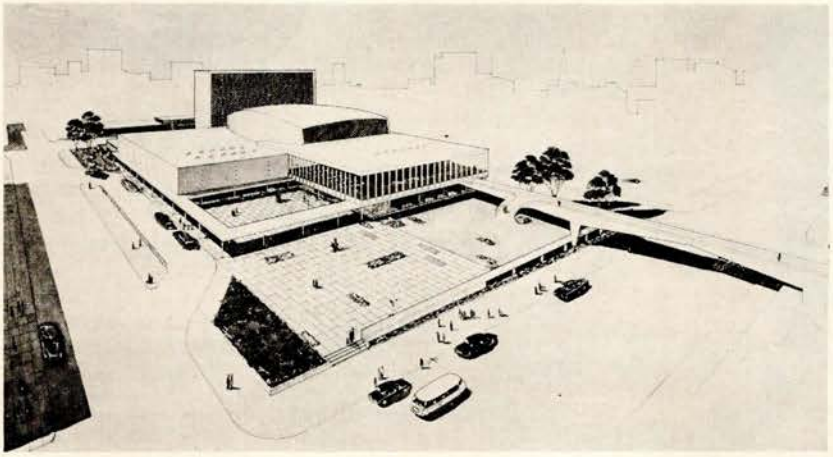
VANCOUVER CHOOSES A PLAN FOR ITS CIVIC AUDITORIUM



First Prize of $5000, and the commission, went to architects R. T. Affleck, J. Michaud, G. Desbarats, H. Sise and D. F. Lebensold, all of Montreal



Second Prize, of $2500, was awarded to the entry of Calgary architects J. Clayton and K. Bond



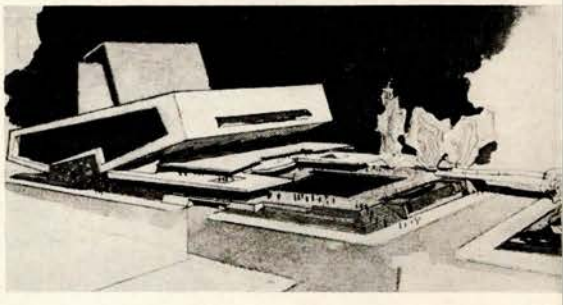
Third Prize, of $1000, was awarded to the design submitted by architect J. Paivio of Calgary

AFTER SEVERAL FALSE STARTS over the past 40 years, Vancouver, it seems, is finally going to get its Civic Auditorium. The city plans to build the winning design in its recent competition, which was won by a group including architects R. T. Affleck, J. Michaud, G. Desbarats, H. Sise and D. F. Lebensold, of Montreal. The first prize is $5000 and the commission fee.

The second prize, of $2500, was awarded to J. Clayton and K. Bond of Calgary and the third prize of $1000 went to J. Paivio, also of Calgary. Five honorable mentions, shown on this and the following page, were awarded $200 each. The competition was open only to members of the Royal Architectural Institute of Canada.

The project, which will be built at a cost of $2,750,000, will cover a city block in downtown Vancouver. The facilities required by the city include a principal hall for opera, ballet, drama, concerts, meetings and films (in that order of importance) to seat 2750–3000; broadcasting headquarters; a small hall seating 450–700; a restaurant with lounge; and two meeting rooms seating

(*Continued on page 30*



Above: First Mention (all mentions were awarded $200) went to C. Owtram, Vancouver architect. Below: Second Mention was awarded to W. R. Ussner and J. C. Peeps of the University of British Columbia



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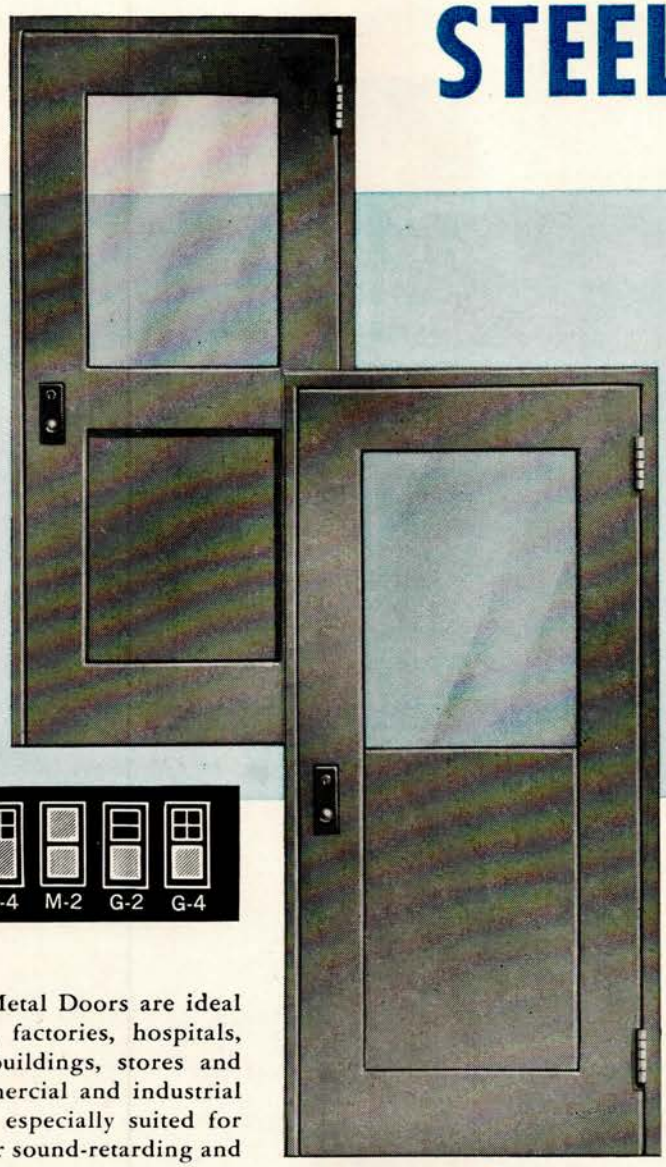
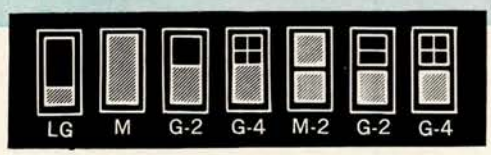


PANEL TYPE



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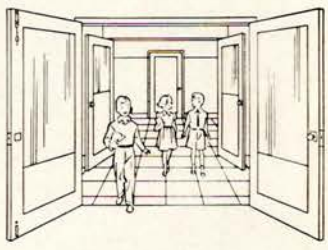

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Controls in the renovated Heinz service building auditorium help provide ideal Indoor Weather—no matter how large or small the gathering for an event.

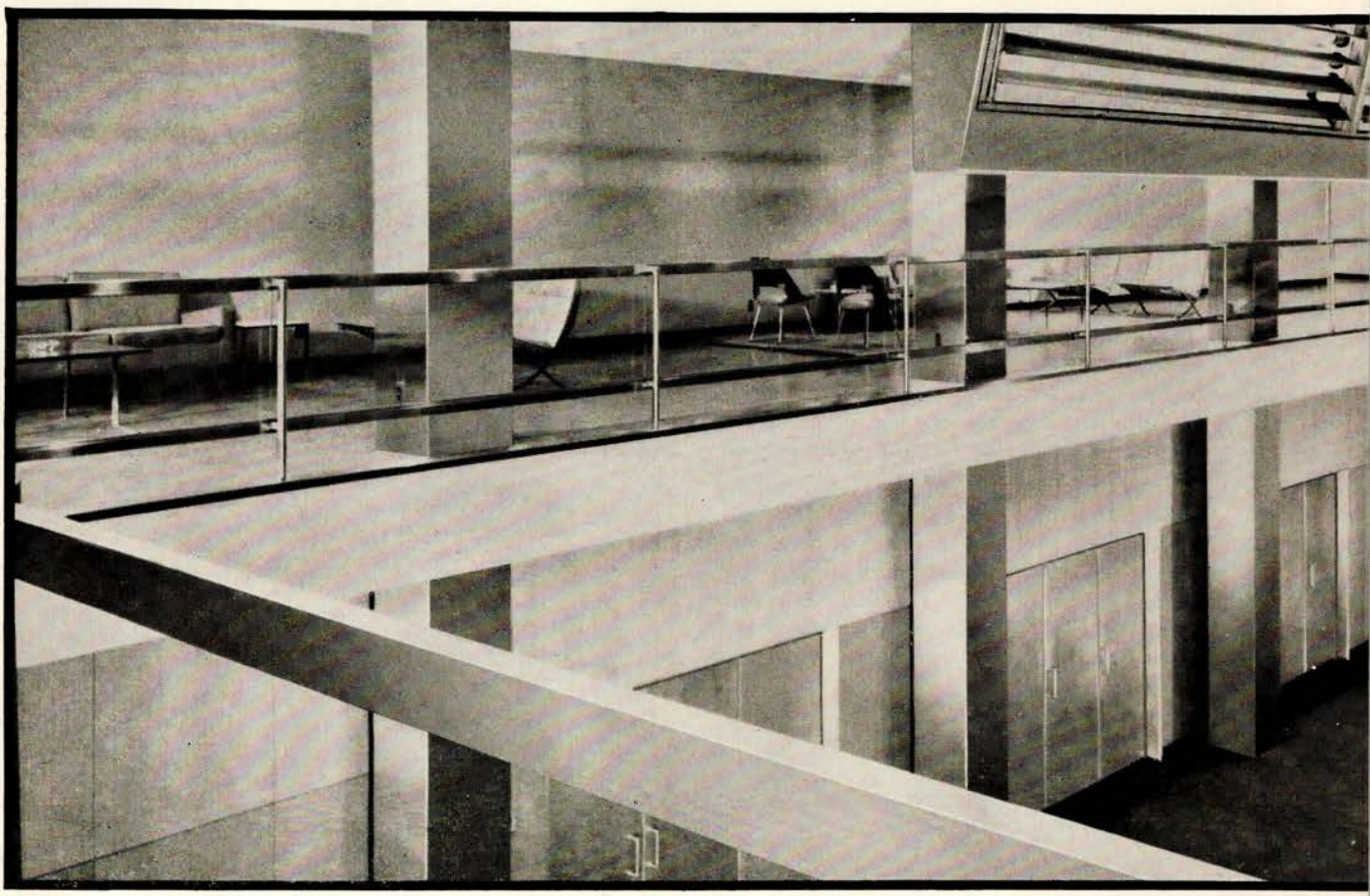
That's the big reason why the remodeled service building of the H. J. Heinz Company in Pittsburgh features it. The service building provides locker rooms where employees change clothes, an auditorium for large gatherings, cafeteria space and many other "service" facilities.

In the control installation, Honeywell thermostats and humidistats control fan systems, heating and cooling coils and humidifiers—compensating for occupancy, exposure and use factors. More on these important factors will be found in the captions.

The *techniques* used in the Heinz service building, applied to your particular problems, can help you provide the Indoor Weather required for your clients' facilities—customized to their needs.

The key word here is "customized." It means that whatever your clients' control requirements, a Honeywell Customized Temperature Control installation *designed to fit the needs of the building and its occupants* is your answer. This applies not only to heating and cooling, ventilating and humidity control, but to industrial control as well.

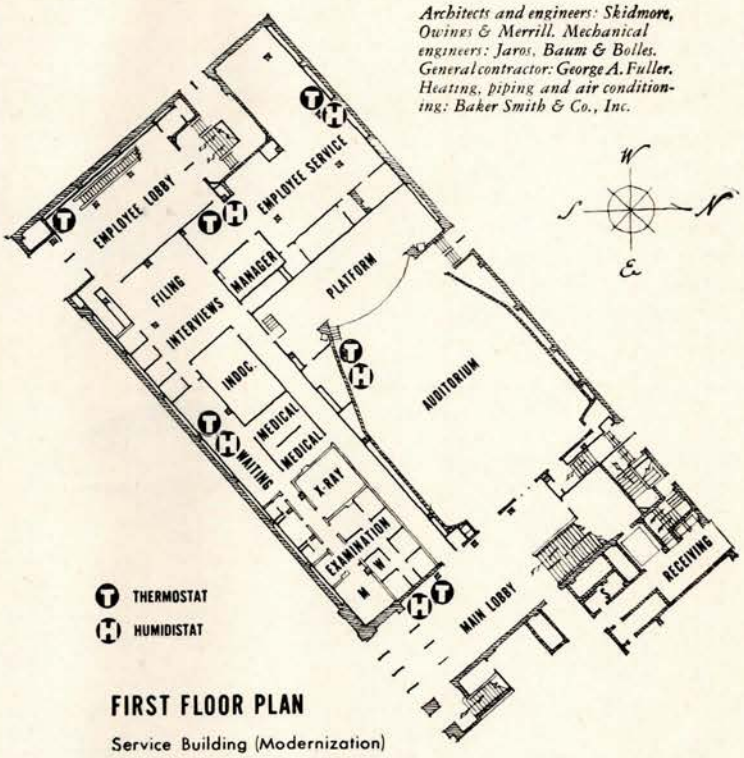
Only Honeywell can provide true "customized" control—for new or modernized buildings. Because only Honeywell manufactures all three types of controls—electronic, pneumatic and electric.





Occupancy. Separate thermostats in the cafeteria provide ideal comfort by calling for more heating or cooling—depending on the number of occupants. They also easily meet special comfort problems such as compensating for heat from steam tables. Separate thermostats, too, provide comfort in locker rooms where the internal cooling load may be raised by the influx of hundreds of people in a few minutes' time.

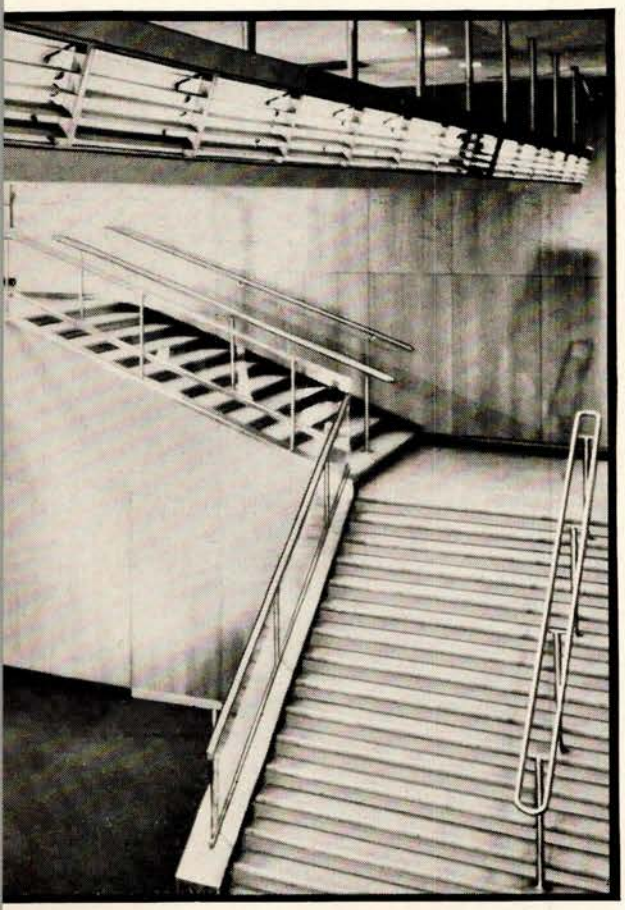
Architects and engineers: Skidmore, Owings & Merrill. Mechanical engineers: Jaros, Baum & Bolles. General contractor: George A. Fuller. Heating, piping and air conditioning: Baker Smith & Co., Inc.



FIRST FLOOR PLAN

Service Building (Modernization)

Exposure. Part of the reason why Honeywell Customized Temperature Control provides ideal comfort is its ability to compensate for exposure factors. Much of the wall space of the large lobby below has a northern exposure. Heat loss is greater here than in other parts of the building. Yet strategically placed thermostats keep not only the lobby but every part of the building comfortable. Buildings in addition to the service building equipped with Honeywell Customized Temperature Control include the vinegar and office buildings.



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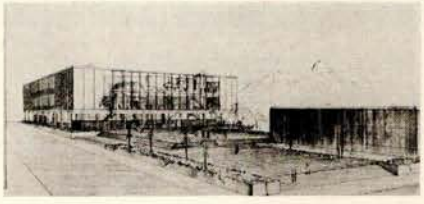
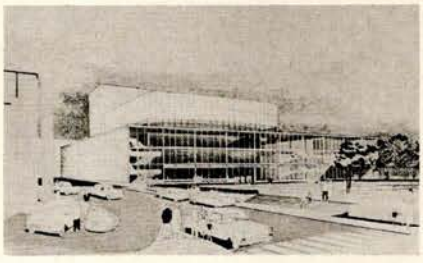
CANADA (Continued from page 26)

Vancouver Auditorium

Top: Third Mention was won by J. Semmens and D. C. Simpson, Vancouver architects. Center: Fourth Mention, by architects Green, Blankenstein, Russell & Associates, Winnipeg. Bottom: Fifth Mention, by architects J. B. Parkin Associates, Toronto







100–200 people. Site requirements include a landscaped forecourt and a smaller landscaped court on the opposite side; service areas and unloading and parking facilities.

Fred Lasserre, M.R.A.I.C., director of the School of Architecture at the University of British Columbia, was professional adviser for the competition and chairman of the board of assessors. Other judges were G. Sutton-Brown, Director of Planning, City of Vancouver, and architect Eero Saarinen of Bloomfield Hills, Mich.

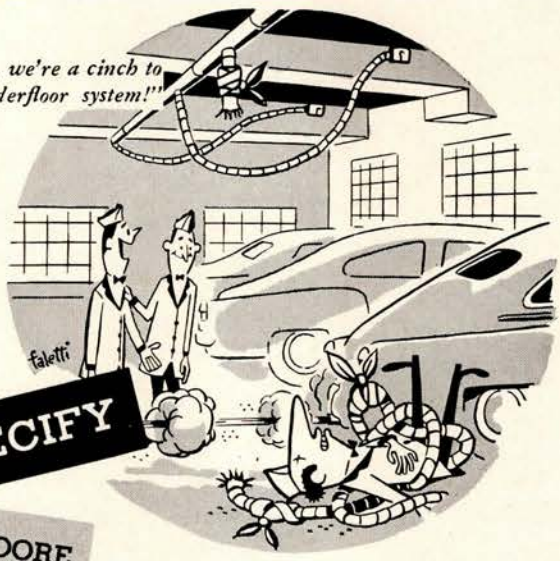
HOUSE BUILDERS URGED TOWARD BETTER DESIGN

The need for better residential design was stressed at the 12th annual convention of the National House Builders Association, held in Toronto March 27 through April 1.

The view held by a number of the speakers was that an increasingly competitive market focused attention on the contribution the architect was in a position to make. It was agreed that the idea of architect-builder teams, as they have developed in the United States, has very definite application in Canada.

(Continued on page 32)

"With Chadwick on our side, we're a cinch to score for a Monoxivent underfloor system!"



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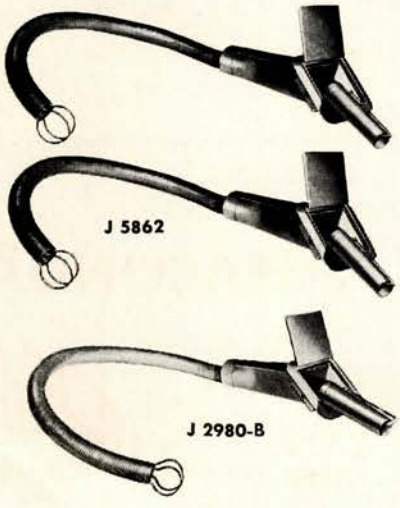

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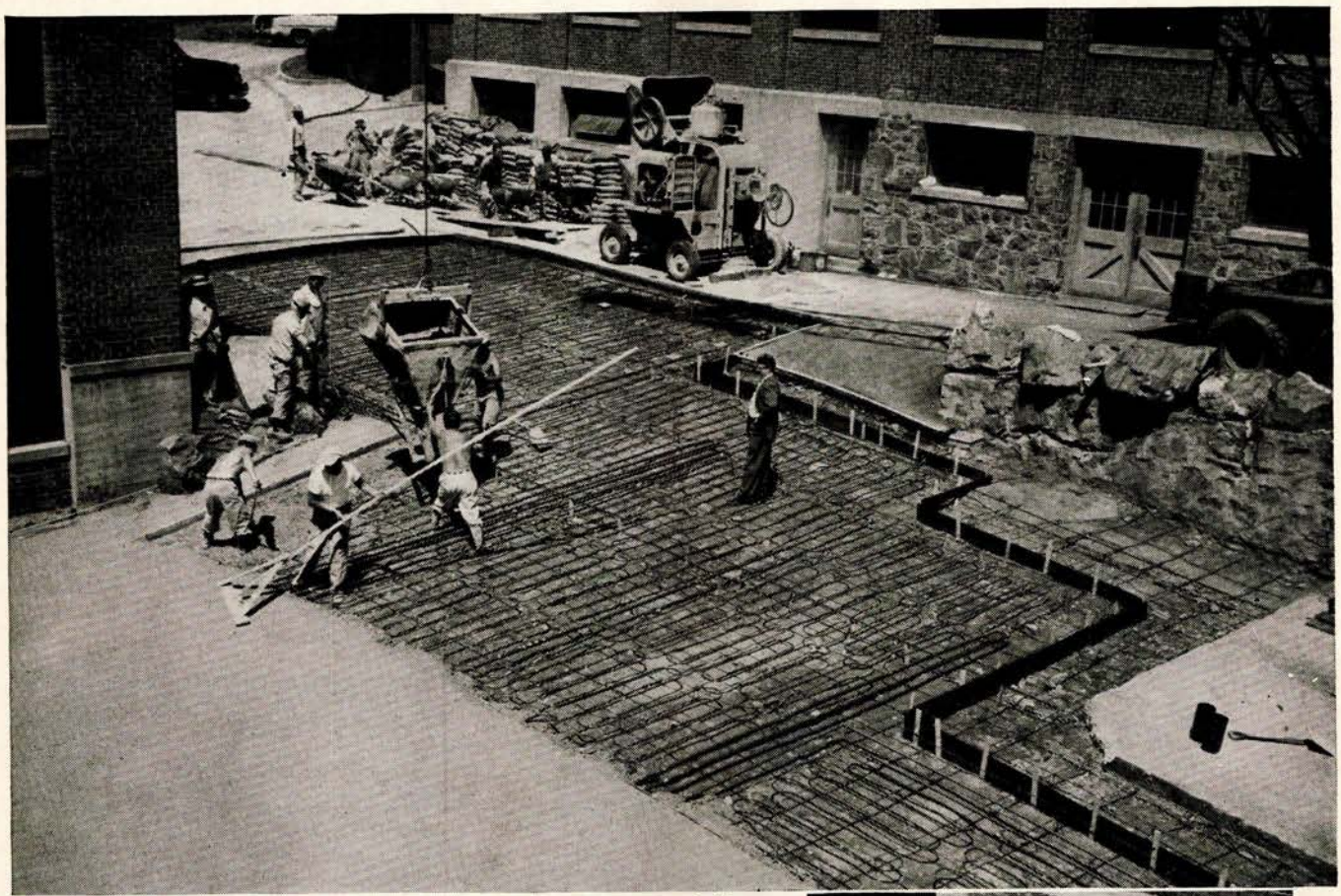
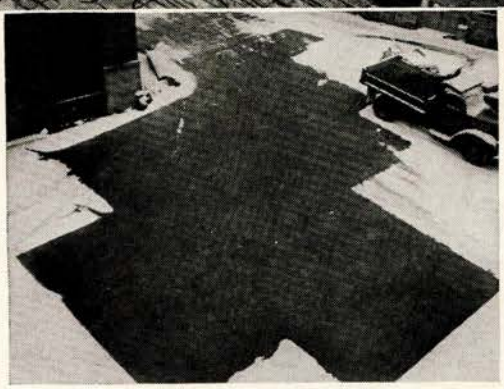
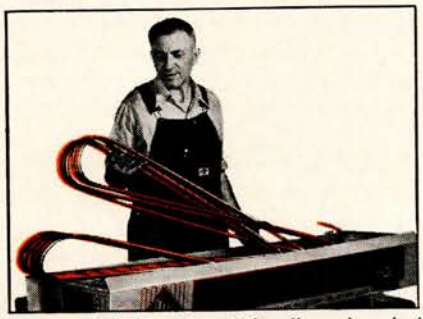


Pouring concrete over Anaconda Pre-Formed Panel Grids, the basic units of this snow-melting system for the loading area of a New England manufacturing plant. Right, you see how effective the system is in operation. No snow, no ice, no trouble all winter. All done by simply turning a valve.



Snow-melting systems of copper tube installed faster and easier with Anaconda Pre-Formed Panel Grids



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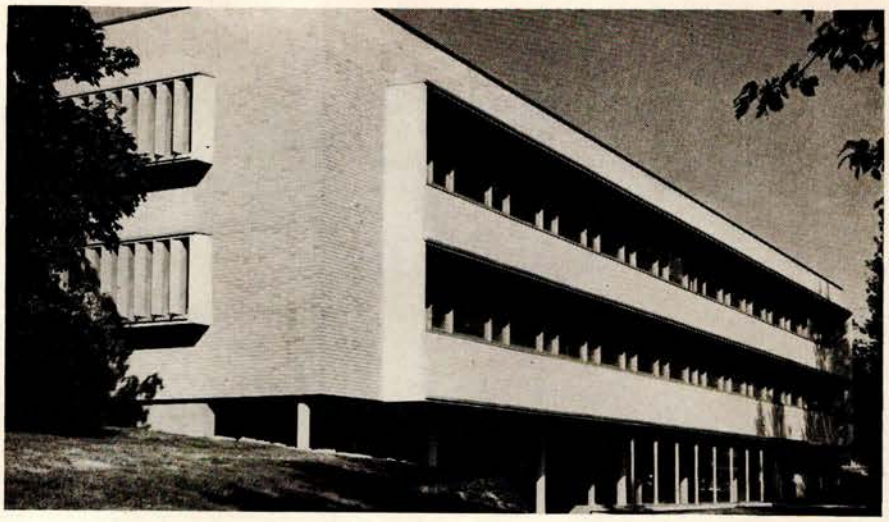
PG's

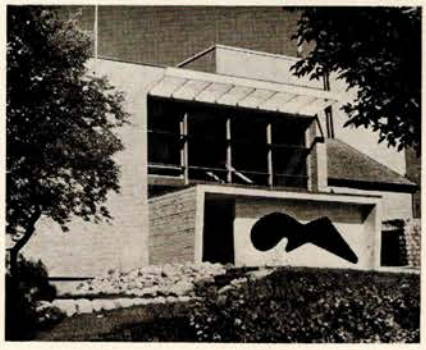
CANADA

(*Continued from page 30*)

Hon. Robert H. Winters, Minister of Public Works, voiced the opinion that the quality of new houses is going to have a more important bearing than it has had in the past on the quantity of new houses built from year to year. There is no call to abandon the objective of quantity, he said, but in order to achieve it, more emphasis must be placed on new ways and kinds of housing.



Municipal Health Headquarters Building in Hamilton, Ont., is constructed largely of precast concrete elements; building houses tuberculosis, prenatal and infant clinics and administrative offices, and was designed by City Architect S. M. Roscoe



"We have been so concerned," Mr. Winters told the builders, "with the problems of meeting the increase in demand from year to year, that we have not had much time to devote to new ways of housing or renewal of deteriorating housing and slum clearance. Houses, like automobiles, become obsolete and should at the appropriate time either be replaced or turned in for new ones."

Earl W. Smith of El Cerrito, Cal., president of the National Association of Home Builders of the United States, and Walton Onslow of Washington, public relations counsel of the N.A.H.B., also addressed meetings.

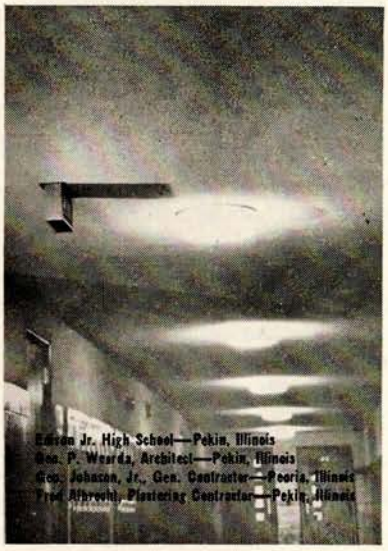
The new president of the N.H.B.A. is Harry J. Long, Toronto merchant builder. Other officers include H. J. Ferguson, Victoria, B. C. — western vice president; W. M. McCance of Sarnia, Ont. — eastern vice president; and Frank L. Murray, Toronto — treasurer. The organization's executive vice president is John Caulfield Smith.

(*Continued on page 36*)



CORALUX
ACOUSTICAL PLASTER
"Shushes" school noises
SOUNDPROOFS-FIREPROOFS-INSULATES





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In this Outstanding Apartment Building Assures Comfort, Dependability, Lowest Maintenance Cost

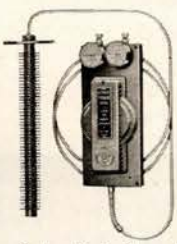
Temperature of hot water supply to convectors in this modern building is controlled by a Powers **MASTROL** System.

How It Operates—A Powers Master Thermostat with its sensitive bulb in a special housing for sun-wind effect and outdoor temperature is located on outside wall of zone being controlled. It operates in conjunction with 4 Room Thermostats on the 4th, 9th, 14th and 19th floors of each zone through Averaging Relays to establish the control point for Series 100 Sub-Master Controllers. A manually operated switch on the main control panel is provided to raise or lower the control point when desired.

A program clock automatically reverts the controls to night operation during which period the outdoor Master Thermostat readjusts Series 100 Sub-Master Controller to a lower control point than used during day operation. Other types of Powers controls regulate various fans supplying heating and ventilating to other spaces in the building.

Experience gained by Powers in all types of prominent buildings will be helpful to you. When problems of temperature and humidity arise, contact our nearest office.
THE POWERS REGULATOR COMPANY, Skokie, Ill.

OVER SIXTY YEARS **OF AUTOMATIC TEMPERATURE AND HUMIDITY CONTROL** **OFFICES IN CHIEF CITIES**


Outdoor Master Thermostat


Averaging Relay


Indoor Sub-Master Controller


METAFLOW Control Valve


ACCRITEM Regulator

POWERSTROKE

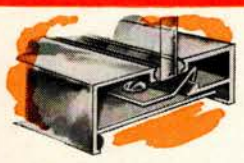

Damper Motor


AIRSTREAM Thermostat


Pneumatic Switches




FLOWRITE Control Valve



Mitered frame with no exposed screws. Spring clip construction allows glass to float safely within its strong, resilient support.



1/8" steel plate centered in dense honeycomb area provides solid support for surface hardware.



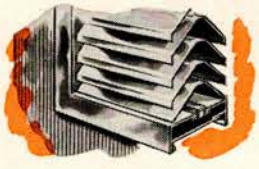
Aluminum skin is interlocked with solid aluminum stile for invisible skin-rail construction.



Styrofoam insert at the lock location prevents the infiltration of moisture.



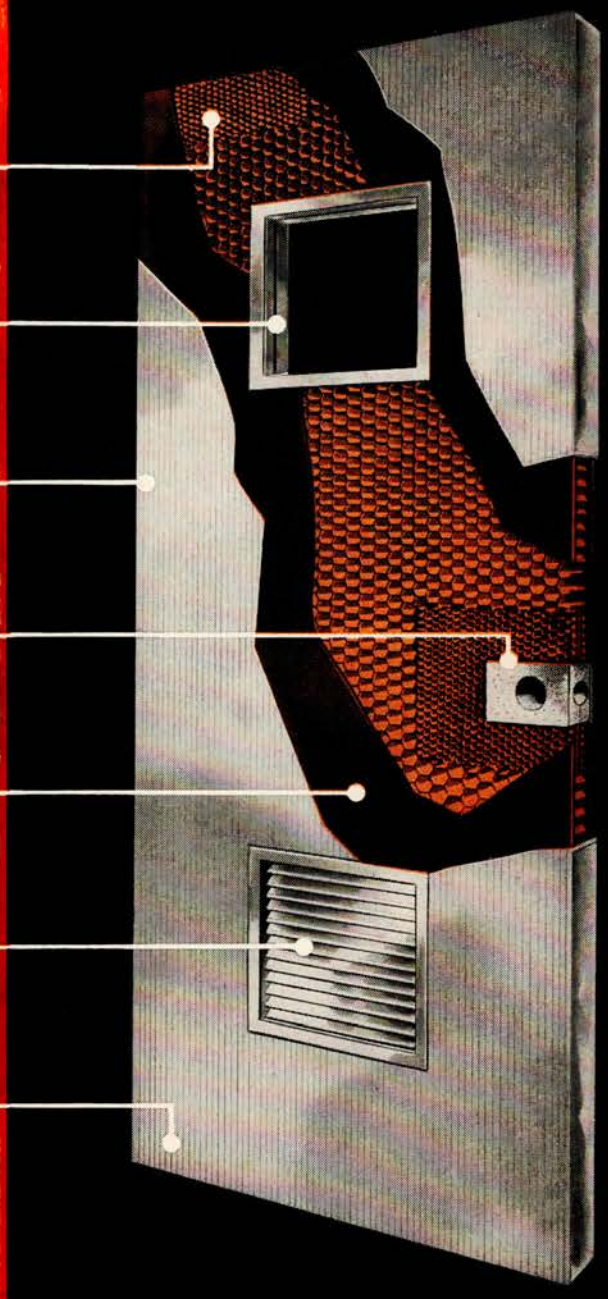
Attractive ribbed aluminum sheet laminated to hardboard backup sheet. Exceptionally high impact resistance is built-in.



Alumilited aluminum louver assembly for optional use in resilient frame.



For doors on floor closers, the concealed aluminum channel welded to pivot stile transmits reaction over the entire door area.



NEW TRIPLE-STRENGTH FLUSH DOOR

Sandwich with Honeycomb Core Formed on Hot Platen Press
Built like a sandwich with a honeycomb core, the new Kawneer Flush Door is 10 times stronger than the obsolete girder type and will last many years longer than ordinary doors. It has a high strength/weight ratio with great resistance to flexure and impact making it ideal for heavy use such as in hospitals or offices. Surface of *standard* door is handsome, *subtle-ribbed* aluminum with alumilited finish to insure lasting beauty. Special surfaces in aluminum and plastic can be provided on special order.

- Economically priced. Competitive with top quality wood core or hollow metal.
- Built for rugged duty in high traffic areas.
- Practically impossible to dent under normal use.
- Easily cleaned, virtually no maintenance.
- Suitable for both interior and exterior use.
- Absolutely cannot peel apart.

Kawneer

manufacturers of architectural metals, doors and entrances, and sun-control products, aircraft and appliance products.

Extremely *Rigid*
Remarkably *Moisture proof*
Passes Critical Tests

1,000,000 slam test



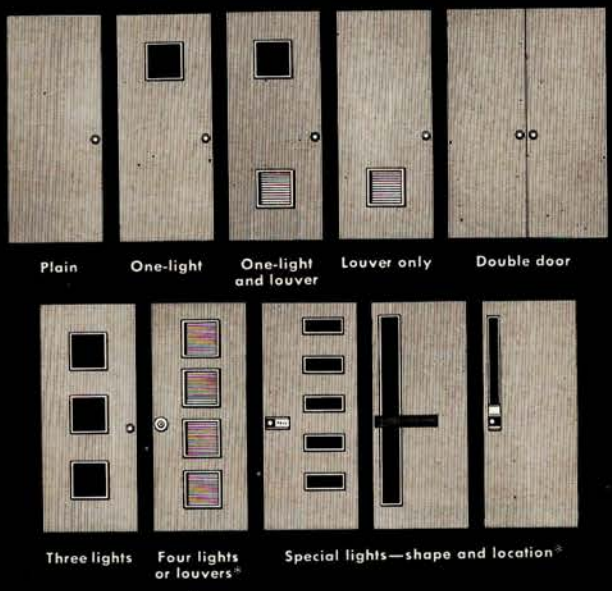
This new honeycomb door outperformed its girder-type competitor 10 to 1 in a slam test. This test specifies that the door be slammed repeatedly against a metal jamb until failure. The old-type door failed completely after 98,761 slams, whereas the new honeycomb core door was still plumb and true after 1,000,000 slams! It was needless to continue the test until failure. The test proves it will stand up many years in high traffic areas.

4 month saturated steam moisture test



Subjected to saturated steam day and night in a controlled chamber on one side for nearly 4 months and regular atmospheric conditions of late winter and early spring on the other side, this remarkable door survived without separation of laminations, warping or sagging. The new Kawneer door will withstand extremes in weather and still provide excellent service. The moisture resistance of this door makes it just as practical for exterior use as well as interior.

Freedom of design with Honeycomb



Because this new door is completely free of interior structural girders, there is a wide flexibility for positioning lights and louvers within the following limitations*:

1. One light not to exceed ⅓ of door area.
2. Two lights not to exceed ½ of door area.
3. Special size lights not to be placed closer than 1″ to edge of stile or 6″ from top to bottom.

BOTH STANDARD AND SPECIAL SIZES AVAILABLE...

To provide complete flexibility the Kawneer honeycomb door is available in both standard and special sizes. The standard frames are extruded tube type for double and single acting doors. Frames in aluminum or steel can be provided to meet structural requirements.

Standard Sizes	Special Sizes
Single doors—2′6″, 2′8″, 3′0″, 3′4″ x 6′8″ or 7′0″	From: 2′0″ x 6′8″
Double doors—5′0″ and 6′0″ x 6′8″ or 7′0″	To: 4′0″ x 8′0″

Hardware in COLOR

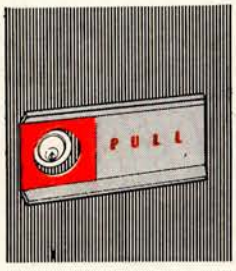
To blend the new honeycomb door with any room decor, push and pull hardware is available in color. An attractive band of color is silk-screened on the hardware in the area of the lock opening. Lock is semiconcealed behind hardware, yet is easily accessible. Blue-green color standard. Other special colors from which to choose.

Door knob hardware is attractive tear drop design. It is available with knob latch, thumb turn, or standard cylinder deadbolt.

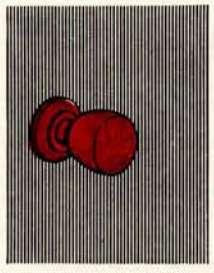
FOR DETAILED INFORMATION WRITE DEPT. AR



Lock is semiconcealed in distinctive Kawneer-designed push-pull hardware.



Push and pull plates for special doors available with or without attractive blue-green color band.



Tear drop design; available with knob latch, thumb turn, or standard cylinder deadbolt.

Kawneer
General Offices
NILES, MICHIGAN

ARCHITECTURAL PRODUCTS DIVISION



However challenging the demands of your next laboratory project might be, Hamilton has anticipated them — with the most complete and flexible equipment ever built. New All-Science tables in six handsome finishes for modern against-the-wall, open-center floor plans. Popular All-Purpose equipment for varying classroom needs. Equipment custom-built for institutions and industry, and "packaged" laboratories, too.

— when they ask you for Versatility

Hamilton
LABORATORY EQUIPMENT



This awareness of laboratory requirements is no accident. Hamilton engineers work constantly in the field with science instructors, technicians, administrators and builders. For consultation with such an engineer, and/or more equipment information, please write today, without obligation.

Hamilton
LABORATORY EQUIPMENT

HAMILTON MANUFACTURING COMPANY . Two Rivers, Wisconsin

THE RECORD REPORTS

CANADA

(*Continued from page 32*)

BID DEPOSITORY SCHEME ACCEPTED IN ONTARIO

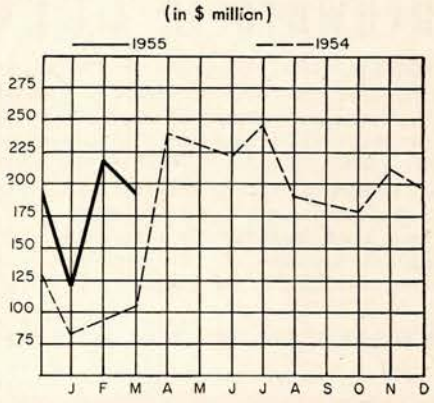
Intended to halt the practice of "bid peddling," a plan for mechanical and electrical subcontractors to submit their bids, when so directed by the architect, to a bid depository instead of to the general contractor has been accepted by the Council of the Ontario Association of Architects. The proposal, which is modeled in part on systems operating in Vancouver, Regina and the Lakehead, was prepared by the Ontario General Contractors Association, the Electrical Contractors Association of Ontario and the Ontario branch of the National Association of Master Plumbers and Heating Contractors of Canada.

The scheme will become effective in Metropolitan Toronto as soon as arrangements have been made with the Toronto Builders' Exchange to manage the bid depository. O.A.A. members have been asked to try the plan until the end of the year, although they may continue to call for separate and direct bids if the circumstances demand them.

CORRECTION

Keith L. Graham, described as a "designer" in the RECORD's story on the Steinberg supermarkets (February, p. 26), is an architect registered in Nova Scotia. Mr. Graham also designed the store at Manor Park, Ottawa, incorrectly credited to Eliasoph & Berkowitz.

Contracts Awarded: Comparative Figures *



* Compiled by the editor and staff of *The Building Reporter*, from information compiled by MacLean Building Reports

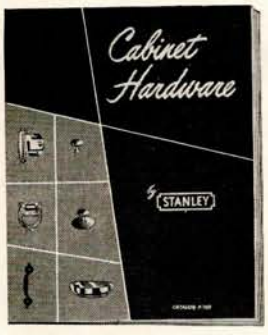
(*More news on page 38*)

Are you making the most of your opportunities

WITH

CABINET HARDWARE?

Cabinet hardware is becoming more and more important in modern homes. Every day builders and buyers are growing more aware of the decorative and useful values it adds to house salability. Are you making the most of your opportunities? See the Stanley pulls, latches, hinges, knobs and catches now available in decorator finishes, and in sizes and styles to suit every taste.



Stanley has just published this new 12 page catalog in color. It contains the *complete, compact, quality* Stanley line . . . solid brass, aluminum, chrome, distinctive Ranch Craft and Rustic Iron . . . the latter now available in new antique copper and familiar black finishes. Brand new items include the magnetic catch with the "floating" magnet, unique hinges for overlapping doors, smart decorator knobs, streamlined capped hinges and a versatile rubber roller cabinet catch.

See this new catalog and make the most of your opportunities with cabinet hardware. A card to Stanley at 165 Lake Street, New Britain, Connecticut, with "New Cabinet Catalog" and your name and address will bring you your copy by return mail.



By Ernest Mickel

FCDA PUSHES EVACUATION: ODM STUDIES DISPERSION

One approach to Federal Government policy on civil defense was reiterated in repeated appearances on Capitol Hill last month of Federal Civil Defense Administrator Val Peterson. He left no doubt of his conviction that major American cities must be evacuated in case of atomic attack.

Visits to the Hill took Mr. Peterson to the House and Senate Armed Services Committees, the House Appropriations Committee, and the Senate Subcommittee on Public Works.

Mr. Peterson acknowledged that presently anticipated warning time is not sufficiently long to permit complete evacuation from densely populated areas of all principal cities. Even with increased warning time, he said, many cities could not be completely evacuated because of inadequate highway systems. Mr. Peterson continued to urge "rapid improvement of our highway system" as a vital civil defense measure.

The Federal Civil Defense Administration also issued a new guide to be used in planning evacuation of target cities. Obtainable from the Superintendent of Documents, Washington 25, D. C., for five cents per copy, the bulletin answers questions on how states should plan for emergency evacuation of their cities. Title: "Evacuation of Civil Populations in Civil Defense Emergencies." Designation: TB–27–1. It is the first in a planned series describing evacuation techniques and operations of the various civil defense services.

Three types of evacuation are listed: 1) Strategic. During a period of international tension preceding actual warning, it may be desirable to move certain dependent, non-productive people away from danger areas. 2) Tactical. After warning that attack is probable, time may permit the mass evacuation of people from target areas. 3) Remedial. Following an attack, survivors not needed for civil defense services may be evacuated.

The President has asked Congress for $12 million with which to survey 92 target areas with a view to improvement of escape routes. If the money is forthcoming, the studies will begin with a dozen cities of about a million population each.

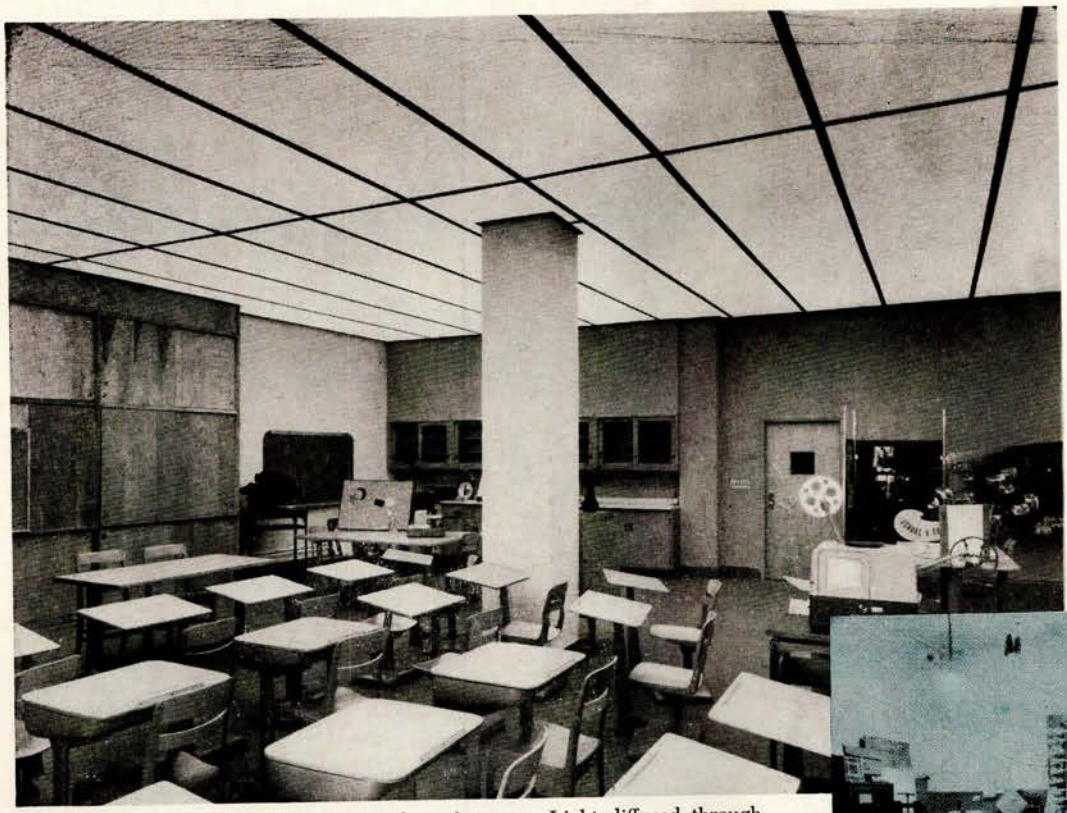
One such study already has been done on Milwaukee with this showing reported: existing routes would enable 600,000 to be evacuated with three hours' warning time during night emergency; first stage improvements with an outlay of $321,000 would raise this figure to 615,000; second stage with cost at $6,629,000 would push it to 680,000; and building a freeway system outside the city proper with improvement of 130 miles at a cost of $78 million would permit 825,000 to be emptied from the city under the prescribed circumstances.

ODM Restudies Dispersion

Also last month, the Office of Defense Mobilization established a new task force to revise its industrial dispersion policies. Composed of representatives from the Department of Defense, Federal Civil Defense Administration and the Department of Commerce, the group is

(*Continued on page 344*)

DEPENDABLE
Interior Communications & Fire Alarm Systems
PRIVATE TELEPHONE SYSTEMS
Couch BULLETIN 121
Simple and multiple phone systems for communication between two or up to 200 points.
APARTMENT HOUSE PHONES
Couch BULLETIN 128
Phone systems for communication between apartments, entrances, superintendent, office, trade entrances, garage, etc.
FIRE ALARM SYSTEMS
Couch BULLETIN 124
Manual and automatic fire alarm systems for coded and non-coded applications.
HOSPITAL SIGNALLING
Couch BULLETIN 125
Visual and audio-visual patient-nurse call systems. Staff in-and-out registers and paging systems.
DATA SHEETS AND BULLETINS AVAILABLE UPON REQUEST.
Built-in Dependability
S. H. Couch Company, Inc.
NORTH QUINCY 71, MASSACHUSETTS



3 R's go modern in this up-to-date classroom. Light diffused through ceiling panels made of BAKELITE Rigid Vinyl Sheets provides the bright uniform light so essential for schoolwork. Ceiling by **Luminous Ceilings Inc.,** Chicago 47, Illinois.



For comparison, here's what the lighting in classroom looked like before renovation. Notice high, broken, ceiling area – sharp shadows and dusty pipes. New plastic ceiling is much lower, conceals all light fixtures and ceiling projections.

SHADOWLESS LIGHTING FOR READING AND WRITING

...from an illuminated ceiling made of BAKELITE Rigid Vinyl Sheets

No eyestrain here! This model classroom* features the very latest in school lighting – continuous fluorescent strip units behind a ceiling of corrugated, milk-white plastic sheets. This diffused, high-level illumination kills shadows completely . . . bathes the entire room in soft uniform brilliance.

Ceiling panels are made of BAKELITE Brand Rigid Vinyl Sheets about as thick as heavy paper. They rest on an aluminum frame hung from the true ceiling. They're quickly installed and easy to remove for cleaning or maintenance. In place, they conceal pipes, ducts and other ceiling projections. But they don't interfere with sprinkler systems because they soften and fall at about 150 deg. F. Sound-absorbent pads fastened to the support frame will provide excellent acoustical conditioning.

These panels keep their good looks for years. They can be wiped clean or even scrubbed in soap and water, if necessary. And BAKELITE Rigid Vinyl Sheets resist yellowing, warping or cracking upon aging. They resist moisture, oil and combustion and are dimensionally stable.

Include practical, beautiful plastic ceilings in your future designs. And remember BAKELITE Rigid Vinyl Sheets for screens, lampshades, signs and scores of other architectural applications. For more data write to: Dept. AR-3.

**Model classroom designed by New York University School of Education in conjunction with officials of the National Education Association and Eggers and Higgins, New York architects.*

BAKELITE BRAND Rigid Vinyl Sheets

BAKELITE COMPANY, *A Division of Union Carbide and Carbon Corporation* UCC 30 East 42nd Street, New York 17, N. Y.

The term BAKELITE and the Trefoil Symbol are registered trade-marks of UCC



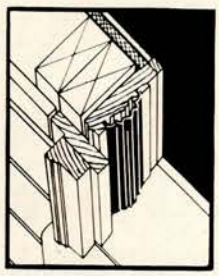
Design with Confidence with BILT-WELL

Quality Wood Products for the Home!





The famous BILT-WELL Double-Hung Unit Window



The Bilt-Well Exclusive Jamb-liner Weatherstrip

—Patented, thermostat-action weatherstrip provides twice the weathertightness with 1/10 the lifting effort.

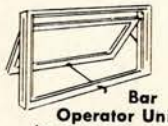
—Designed for use with plaster, drywall and all other conventional types of walls and construction.

—Precision manufactured jambs and sills. Comes knocked down with all weatherstrip factory applied.

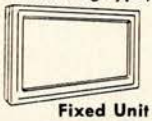
—Sash removable for easy plastering and painting during construction.

The most complete line of job-tested windows for the home!

Versatile BILT-WELL Awning Units



Bar Operator Unit (Awning type)



Fixed Unit



Locking Handle Unit (Hopper type)

—Designed for multiple application as awning, hopper, fixed or casement windows.

—Completely assembled, furnished with all sash hardware installed except locking handle. Storm and screen panels available.

—Economical...quick and simple to install...foolproof operation... easy to maintain.

The most complete line of job-tested windows for the home!

In this period of mass-produced homes, with the competition for the home-buyer's dollar growing keener, the danger of overlooking quality for economy is greatly increased. Experienced, far-sighted designers, however, know the importance of selecting quality materials made by reliable manufacturers.

That's why more and more architects today are specifying the full line of BILT-WELL woodwork for the homes they design. They know they can depend on getting the same high quality of materials and workmanship...the same high degree of client acceptance...the same labor-saving installation features...and the same assurance of product performance in every BILT-WELL product, whether it be a complete installation of windows or cabinets.

You owe it to your reputation to shun unknown, untried and unproved products in the homes you design. Look for the BILT-WELL trademark whenever you specify windows, doors, shutters, entrances, kitchen cabinets or any other millwork. It's your guarantee of quality and dependability.

SINCE 1866

For information, write

Build Well with BILT WELL WOOD WORK

BILT-WELL WOODWORK

Box 658 Dubuque, Iowa

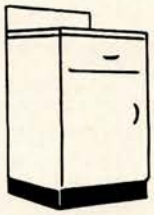
Manufacturers of the BILT-WELL Line of Outstanding Woodwork...BILT-WELL WINDOW UNITS—Awning, Double Hung, Casement, Basement, Storm and Screen, Gable, Sash & Louvers...BILT-WELL CABINET UNITS—Kitchen, Wardrobe, Multi-Purpose, Corner China, Mantels ...BILT-WELL DOORS—Interior, Exterior, Combination, Garage, Screen, Flush, Entrances.

88 YEARS OF WOODWORKING EXPERIENCE





BILT-WELL Cabinet Units for Kitchens



Units for any size or shape of room

—Over fifty different types and sizes to meet storage needs anywhere in the household.

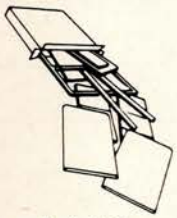
—Constructed in widths from 15″ up, on 3″ modular intervals.

—Doors are vacuum water-repellent treated to prevent warping.

—Satin-smooth, all clear, kiln-dried Ponderosa Pine. Ideally adapted to all finishes, natural or painted.

The most complete line of Home Storage Cabinets!

Multiple Purpose BILT-WELL Cabinet Units



Each Unit individually Carton Packed

—For Kitchens, and storage walls in Bedrooms, Bathrooms, Dining and Living Rooms.

—Modern, continuous-line design styled to harmonize with modern or contemporary settings.

—Precision-machined, factory prefitted and individually cartoned for easy handling and simple, time-saving, on-the-job assembly and installation.

The most complete line of Home Storage Cabinets!

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.

NEW YORK

Period	Residential		Apts., Hotels Office Bldgs.	Commercial and Factory Bldgs.	
	Brick	Frame	Brick and Concr.	Brick and Concr.	Brick and Steel
1930	127.0	126.7	124.1	128.0	123.6
1935	93.8	91.3	104.7	108.5	105.5
1939	123.5	122.4	130.7	133.4	130.1
1946	181.8	182.4	177.2	179.0	174.8
1947	219.3	222.0	207.6	207.5	203.8
1948	250.1	251.6	239.4	242.2	235.6
1949	243.7	240.8	242.8	246.4	240.0
1950	256.2	254.5	249.5	251.5	248.0
1951	273.2	271.3	263.7	265.2	262.2
1952	278.2	274.8	271.9	274.9	271.8
1953	281.3	277.2	281.0	286.0	282.0
1954	285.0	278.2	293.0	300.6	295.4
Dec. 1954	285.8	278.5	293.1	301.6	294.6
Jan. 1955	286.5	279.4	293.2	301.7	294.8
Feb. 1955	286.5	279.4	293.2	301.7	294.8
	% increase over 1939				
Feb. 1955	131.9	128.2	124.3	126.1	126.5

ATLANTA

Period	Residential		Apts., Hotels Office Bldgs.	Commercial and Factory Bldgs.	
	Brick	Frame	Brick and Concr.	Brick and Concr.	Brick and Steel
1930	82.1	80.9	84.5	86.1	83.6
1935	72.3	67.9	84.0	87.1	85.1
1939	86.3	83.1	95.1	97.4	94.7
1946	148.1	149.2	136.8	136.4	135.1
1947	180.4	184.0	158.1	157.1	158.0
1948	199.2	202.5	178.8	178.8	178.8
1949	189.3	189.9	180.6	180.8	177.5
1950	194.3	196.2	185.4	183.7	185.0
1951	212.8	214.6	204.2	202.8	205.0
1952	218.8	221.0	212.8	210.1	214.3
1953	223.3	224.6	221.3	221.8	223.0
1954	219.6	219.1	223.5	225.2	225.4
Dec. 1954	220.9	220.6	225.1	226.7	227.3
Jan. 1955	221.0	220.8	224.9	227.0	227.6
Feb. 1955	221.0	220.8	224.9	227.0	227.6
	% increase over 1939				
Feb. 1955	156.0	165.7	136.4	133.0	140.3

ST. LOUIS

1930	108.9	108.3	112.4	115.3	111.3
1935	95.1	90.1	104.1	108.3	105.4
1939	110.2	107.0	118.7	119.8	119.0
1946	167.1	167.4	159.1	161.1	158.1
1947	202.4	203.8	183.9	184.2	184.0
1948	227.9	231.2	207.7	210.0	208.1
1949	221.4	220.7	212.8	215.7	213.6
1950	232.8	230.7	221.9	225.3	222.8
1951	252.0	248.3	238.5	240.9	239.0
1952	259.1	253.2	249.7	255.0	249.6
1953	263.4	256.4	259.0	267.6	259.2
1954	264.6	257.9	263.7	273.3	266.2
Dec. 1954	266.2	259.7	265.3	275.1	268.6
Jan. 1955	266.6	260.2	265.4	275.1	268.7
Feb. 1955	266.6	260.2	265.4	275.1	268.7
	% increase over 1939				
Feb. 1955	141.9	143.1	123.5	129.6	125.7

SAN FRANCISCO

1930	90.8	86.8	100.4	104.9	100.4
1935	89.5	84.5	96.4	103.7	99.7
1939	105.6	99.3	117.4	121.9	116.5
1946	159.7	157.5	157.9	159.3	160.0
1947	193.1	191.6	183.7	186.8	186.9
1948	218.9	216.6	208.3	214.7	211.1
1949	213.0	207.1	214.0	219.8	216.1
1950	227.0	223.1	222.4	224.5	222.6
1951	245.2	240.4	239.6	243.1	243.1
1952	250.2	245.0	245.6	248.7	249.6
1953	255.2	257.2	256.6	261.6	259.7
1954	257.4	249.2	264.1	272.5	267.2
Dec. 1954	260.6	252.6	266.9	276.1	270.6
Jan. 1955	260.8	252.8	267.2	276.3	270.8
Feb. 1955	260.8	252.8	267.2	276.3	270.8
	% increase over 1939				
Feb. 1955	146.9	154.5	127.5	126.6	132.4

The index numbers shown are for combined material and labor costs. The indexes for each separate type of construction relate to the United States average for 1926–29 for that particular type — considered 100.

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 = 110
index 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 A.

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

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.

These index numbers will appear regularly on this page.



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• Mr. A. O. Leighton, Partner of Irwin and Leighton, General Contractors, says: "In the new Wanamaker store in Wynnewood, Pa., a lath and plaster ceiling, serving as membrane fireproofing for the floor beams, eliminated the need for individual encasement of structural members with heavy concrete.

"This construction substantially reduced the dead load weight of the building, thereby cutting framing costs, and reducing the construction time by 30 days. An over-all saving of approximately $60,000.00 was effected!"

The technique of using lath and plaster ceilings to fire protect structural floor beams and "shell" or perimeter fireproofing to protect columns, has advanced sharply in recent years. Fire resistive ratings up to 4 hours for beams and columns are provided with lath and plaster that weighs as little as 12 pounds per square foot. These constructions permit a reduction in dead weight of as much as 50%, thereby reducing the cost of steel framing.







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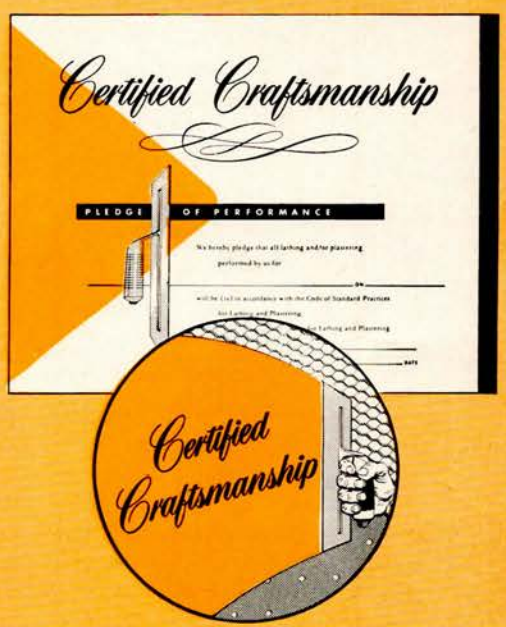
We suggest a thorough reading of the Code of Standard Practices which appears on the back of every certificate. Ask your lathing and plastering contractor for a copy, or write National Bureau for Lathing and Plastering, 1401 K Street, N.W., Washington 5, D. C.



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Edmond F. Venzie, Plastering Contractor presents Certified Craftsmanship Certificate covering Wanamaker Store to Brigadier General Brenton C. Wallace, president, and R. R. Fields, vice president, Wallace and Warner, Architects.

The Housing Act of 1954 requires that a community develop a "workable program" for urban renewal as a prerequisite for Federal aid. The Housing and Home Financing Agency's official circular on the workable program states that: "In preparing its 'Workable Program' the locality must submit with respect to each of the essential elements . . . a statement of its present status and the steps by which it proposes to reach the established goal. . . . The purpose of the 'Workable Program' is that of helping the community: (1) face up to its slum and blight problem, (2) recognize the work which remains to be done, and (3) make the commitments, which, when completed, will result in a program of action which promises success."

The circular adds that "There must be a well-planned and well-organized action, using all the tools of slum prevention, physical rehabilitation, neighborhood conservation and slum clearance. No one tool will do the job."

This monumental task involving not only the mechanics of planning but also the esthetics of planning, is obviously one in which architects should take a leading role from the earliest stage. Accordingly, the RECORD, *with the cooperation of the* URBAN LAND INSTITUTE, HHFA, THE PUBLIC ADMINISTRATION SERVICE, AMERICAN SOCIETY OF PLANNING OFFICIALS *and Professor Christopher Tunnard of the Department of City Planning, Yale, has prepared a reading list in the hope that it may be of use to the architect who may be connected with community plans to develop a 'Workable Program.'*

URBAN RENEWAL AND THE ARCHITECT

By EDMUND N. BACON, *Executive Director Philadelphia City Planning Commission*

Urban Renewal, for the first time in decades, places before us as a real issue the question, "What constitutes a good urban environment?"

Today there are available to us millions of dollars and powerful legal tools to recast significant sections of cities. Someone has got to figure out what the new environment is going to be like. The question is, "Who is going to do it?"

In many ways architects as a group are the ones least fitted to play the decisive role here. For years they have accustomed themselves to solving the problem as the client presents it to them, to confining their concern to a definite program and a definite site, usually a very small part indeed of the city in which it finds itself. Here, under urban redevelopment, there can be no dependence on the client's program, here the first task is the writing of the program itself.

On the other hand, the traditional approaches of the planner, the sanitarian, the public administrator, based on parallel and uniform concepts — "density," "floor area ratio," "Housing standards" — important as they are, cannot of themselves produce an environment capable of injecting new life into dying areas.

The element of design must be present. If it is not the whole cumbersome superstructure of finance and administration will fall flat on its face.

But how can you get design without designers?

The thing that is needed is design on a new, or third level, between that which is customary for either planner or architect. This is the kind of design that uncovers the basic structure of the neighborhood, that enhances and makes significant its salient features, that provides a skeletal framework within which its various parts may be left alone, refurbished, or rebuilt.

In architectural terms, it will provide a matrix to give form and urban scale to a series of individual projects. Because it is strong and well conceived of itself, it will permit great latitude of design by the individual architects designing around it, and still achieve a total unified urban expression far broader than could be obtained had one designer done the whole area.

Design at this scale falls outside the traditional role of either the architect or the planner, but needs something of the skill of both. Unless the creative design element is present, the whole is doomed to failure. And this element is not something that can be added at the last minute, after the relative procedures have been crystallized. It must be present from the first legislative discussion through policy formation to administration in the field. And that means that the designer must be on the job at every step.

Until the architectural profession takes a strong and effective role in basic policy formation, until the best of architectural designers take on the burdens and privileges of administrative posts where policy is made, urban redevelopment will fail to achieve its full purpose, and the "new" environment it produces will fall short of the potential that our day is capable of.

(Reading list on page 48)

INSULATED METAL WALLS

for INDUSTRIAL and COMMERCIAL BUILDINGS

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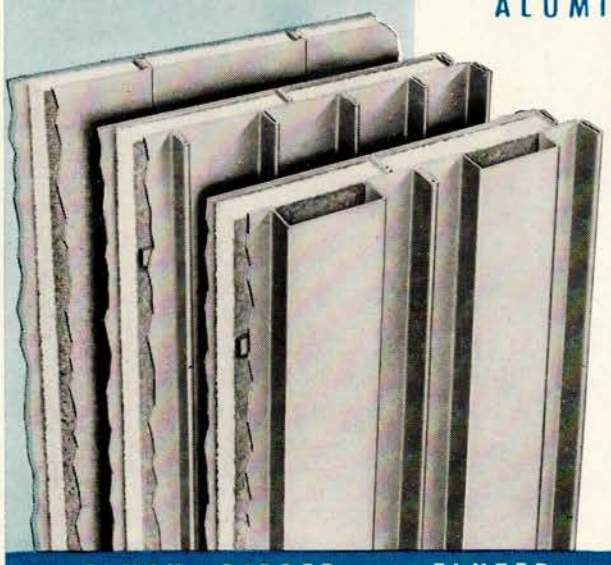

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More and more architects every day are taking advantage of the low-cost permanence of light weight Stainless Steel or Aluminum curtain wall construction. New buildings and complete industrial plants with bright metal exteriors are appearing all over the country. In the past five years, one industrial concern alone has built nine complete new plants employing Mahon Metal Curtain Wall construction throughout—the plant illustrated below is typical. When you plan your next building, call in a Mahon engineer and let him tell you more about Mahon Insulated Metal Walls . . . let him show you some outstanding examples of architectural treatment in ALL-METAL exterior design, or, if you prefer, some attractive exteriors with metal in combination with brick, glass block or other materials. Have him give you cost figures, too . . . because, in this type of construction, important building economies are realized through lower material cost, lower labor cost, and the cumulative savings and advantages deriving from reduced construction time. Mahon Insulated Metal Walls are available in the three exterior patterns . . . the "Fluted" or "Ribbed" wall can be field constructed up to sixty feet in height without a horizontal joint—a feature of Mahon Walls which, from an appearance standpoint, is extremely important in powerhouses, auditoriums or other types of buildings where high expanses of unbroken wall surface are common. See Sweet's for complete information including specifications, or write for Mahon Catalog B-55-B.

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Ford Motor Company's Louisville Assembly Plant No. 2, Louisville, Ky. Mahon Aluminum Curtain Walls were employed for both plant and powerhouse. In addition, more than 1,500,000 Sq. Ft. of Mahon Steel Deck was employed in the roof construction. F. A. Fairbrother & Geo. H. Miehls, Archs. & Engrs., Albert Kahn Associates, Inc., Consultants. Huber, Hunt & Nichols, Gen. Contrs.

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Dept. F55, Michigan City, Indiana

REQUIRED READING

(*Continued from page 46*)

READING ON URBAN RENEWAL

Urban Redevelopment: Problems and Practices and *The Future of Cities and Urban Redevelopment.* Edited by Coleman Woodbury. University of Chicago Press (5750 Ellis Ave., Chicago) 1953. 764 pp, $9.00.

These two volumes (which are bound in one) were unanimously mentioned as the most complete and concise references for urban renewal studies. They bring to attention the policies, measures and activities that can abolish the major forms of physical blight in cities.

Urban Redevelopment: Problems and Practices relates the actual planning experiences of leading city planners and deals with major operating problems and methods.

The Future of Cities and Urban Redevelopment includes an analyses of factors in urban growth and discusses the broad objectives and values of urban life that underlie many of the actual programs and policies.

How Localities Can Develop a Workable Program (The Prerequisites for Certain Federal Aids). U. S. Housing and Home Finance Agency (Washington, D. C.) 11 pp.

Published in October 1955 to clarify the "Workable Program" requirement on the 1954 amendments to Title I of the Housing Act of 1949.

ALSO RECOMMENDED

A Guide to Urban Planning Assistance Grants (Requirements and Procedures as authorized by Section 701 of the Housing Act of 1954). By Cole, Follin and Augur. HHFA, Urban Renewal Administration (Washington, D. C.) 1954.

An Appraisal Method for Measuring the Quality of Housing. American Public Health Assoc., Committee on Hygiene of Housing (New York) 1948–1950.

An Approach to Urban Planning. By Gerald Breese and Dorothy Whiteman. Princeton University Press (Princeton, N. J.) 1953.

Includes a comprehensive 37-pp bibliography.

Approaches to Urban Renewal in Several Cities. Urban Renewal Bulletin No. 1. HHFA and URA (Washington, D. C.) 1954. 31 pp, illus.

Included are significant aspects of combined programs of slum clearance, re-

(*Continued on page 374*)

ARCHITECTURAL
RECORD

WESTERN SECTION

Western Editor: ELISABETH KENDALL THOMPSON

2877 Shasta Road, Berkeley 8, Calif.

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THERE ARE MANY WAYS TO CREATE A DESERT

Paul Thiry, F.A.I.A., has had his own office in Seattle since 1940 and has taken an active part in community as well as professional affairs. As a native and life-long resident of the Northwestern part of the continent, he is concerned that the natural beauty of the region should be preserved and that its rich natural resources should be wisely used. Both as architect and as member (and past president) of the Seattle Planning Commission, he has had opportunity to be well acquainted with the problems of land use. Intelligent planning, on a region wide basis, is, he says, the only solution to them.

Your comments and discussion are welcome on this page. Send them to the Editor, Western Section, 2877 Shasta Road, Berkeley 8, Calif.

As we build great dams and reservoirs for flood control and for the irrigation of new lands, and as we reclaim vast arid areas, there is a striking contrast between our efforts on this one hand and our complete indifference to the preservation of the good lands abundantly provided us by nature on the other.

It could be that in our anxiety to progress and to develop we have lost sight of basic land use principles.

We see industry heading for the country and we see decentralization of communities, and we might well ask ourselves a few questions: Can we afford to use our fertile fields for such things as industrial plants, storage dumps, warehouses and depots, railroad yards, towns and cities, housing developments, shopping centers and parking lots? Can we afford to pollute our brooks and waterways by careless disposal of waste? If we plow up and pave over the arable lands, what will be left to satisfy our own needs — not to mention the needs of our ever-increasing population? Is it unreasonable to think we can have both industry and agriculture without conjecturing with the question, either, or? Wouldn't it seem plausible to believe that true and lasting wealth should include all the good things and not continually make them a matter of choice?

The distribution of people and of towns and industry should be contiguous to and not on the rich soil. Soil that should rightfully give forth our food must be saved for its best use. Less desirable ground is available for other purposes.

Undoubtedly the problem starts with the first settler. He usually lives on and by the good earth. He picks the green valley; he chooses land that is flat and clear and near a stream and plows it up and seeds it to make his crops grow. To him come the roads, the railways and electric power. And with these come neighbors and with neighbors come towns and other uses for the land — industry, commerce, business and more neighbors and pollution, sewage disposal, superhighways and airfields.

Why towns, platters, subdivision builders and industry want farm land is understandable: the ground is flat and undeveloped, there is water and there are roads and services. The ground work has been done. But we can be sure that to let them have it all is suicidal.

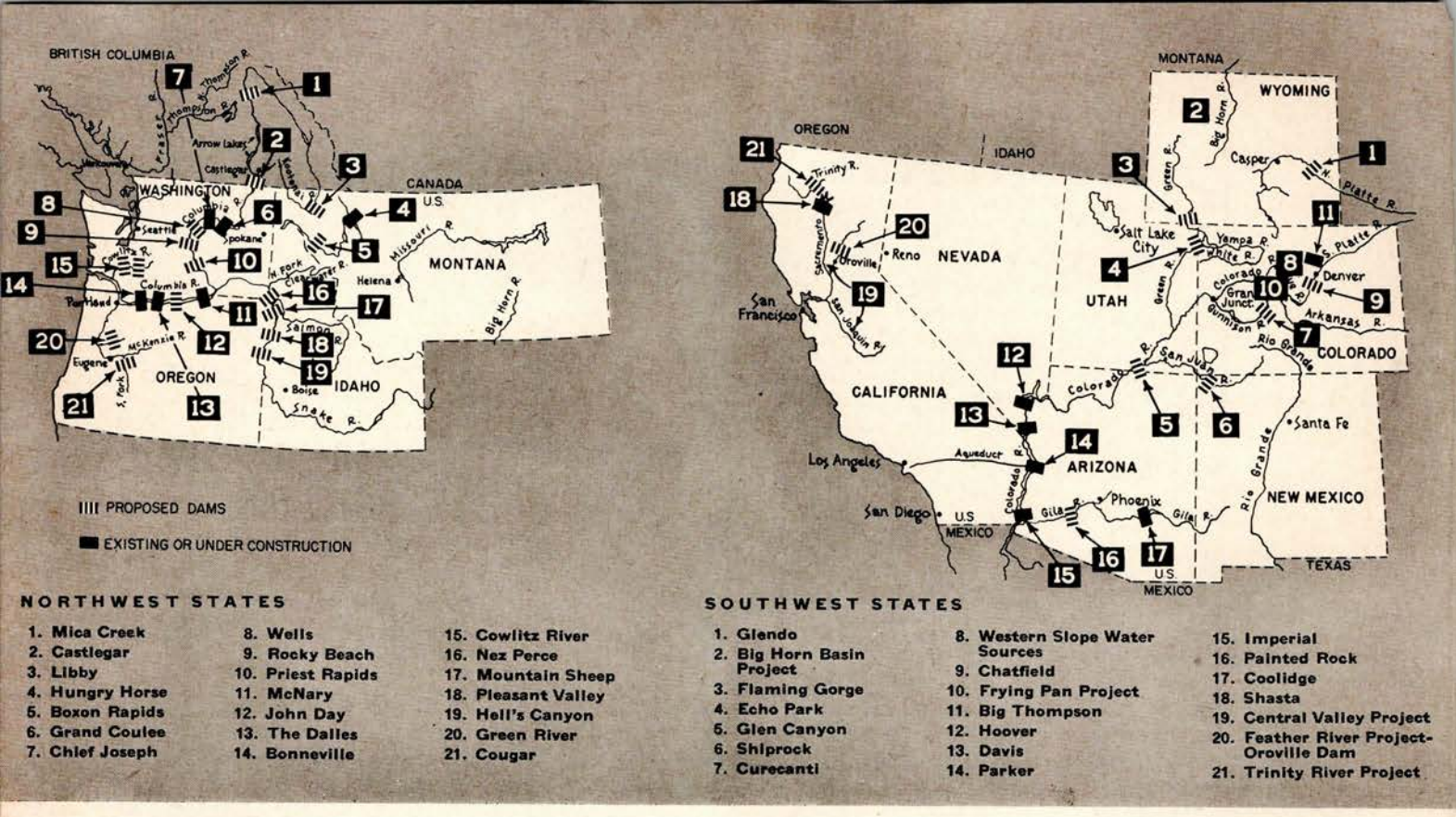
Viewing the congested areas of the Eastern seaboard and the story they tell, it is difficult to understand why the Ideal could not be achieved on the Western seaboard. The rapid growth of the West Coast, the valleys of Washington, Oregon and California, make one wonder why some recognition of great problems does not prevail.

We need resources planning, we need to recognize the importance of watersheds and the differences between one kind of soil and another. We should be educated to the fact that the right to waste is not ours; that what is ours is a God-given trust: the land is for our use and we should manage it wisely and pass it on to coming generations improved, not depleted.

It is a characteristic of man not to worry when nature is bountiful and everything is plentiful. But there are many ways to create a desert. Our principal hope lies in an early appreciation of what we have. Our solutions lie in intelligent planning.

What do *you* think?

—Paul Thiry



NORTHWEST STATES

1. Mica Creek
2. Castlegar
3. Libby
4. Hungry Horse
5. Boxon Rapids
6. Grand Coulee
7. Chief Joseph
8. Wells
9. Rocky Beach
10. Priest Rapids
11. McNary
12. John Day
13. The Dalles
14. Bonneville
15. Cowlitz River
16. Nez Perce
17. Mountain Sheep
18. Pleasant Valley
19. Hell's Canyon
20. Green River
21. Cougar

SOUTHWEST STATES

1. Glendo
2. Big Horn Basin Project
3. Flaming Gorge
4. Echo Park
5. Glen Canyon
6. Shiprock
7. Curecanti
8. Western Slope Water Sources
9. Chatfield
10. Frying Pan Project
11. Big Thompson
12. Hoover
13. Davis
14. Parker
15. Imperial
16. Painted Rock
17. Coolidge
18. Shasta
19. Central Valley Project
20. Feather River Project-Oroville Dam
21. Trinity River Project

WATER AND POWER FOR THE EXPANDING WEST

If the West is to keep up with present — and meet future — needs, it must have new water and power sources. There is little argument on this score. The extent of the problem faced by Western states is reflected in the number and size of hydroelectric projects being proposed by both private and public groups. These proposals, affecting the future development of each of the eleven Western states, should be of paramount concern and interest to architects and engineers, for the development of new areas and the expansion of industry are basic to their professional future. The trend of that future, as that of the whole West, will be strongly influenced by the plans now under consideration. Here is a survey of some current proposals for the hydroelectric development of the West

WATER AND POWER — the keys to the future development of the West's great inland valleys — are the two most far-reaching problems in the region today. If there are to be more farms, if cities are to be able to expand their boundaries, if new towns are to be established, there must be water; if industry is to expand in a sound economy, if there are to be more jobs and greater production and more varied materials, if there are to be household conveniences for the continually growing population, there must be electric power.

How to get the water from where it is to where it is needed, who shall pay for doing this, where dams shall be built and how many and what types these shall be — these are some of the complexities of the questions now being debated both in the West itself and in Washington. To solve these problems, bills have been introduced in the Congress which would provide hydroelectric projects in the most acutely affected areas: the Northwest where power is a primary shortage and in the Mountain states and California where water is a pressing need. Drouth-threatened Eastern slope Colorado — especially the Denver area — is desperately trying to find sources of water to increase its supply; and California, watching the plans for developing the upper basin of the Colorado River as a supply for western Colorado, Utah, Wyoming and New Mexico, is as desperately fighting any move which it feels would deprive it of the water which it must have to survive.

The tenor of the discussions about water and power is anything but calm. It is, in fact, a bitter controversy, as bitter as any that has confronted reclamation and power development plans at any time in the 53 years since the first reclamation act was signed by Theodore Roosevelt. Even if it were not for the fact that hydroelectric development of rivers has always involved the basic controversy of private capital versus public funds as the means of this development, there would be ample opportunity for controversy because of the number of groups upon whose interests any such project impinges. There are conservationists, fisheries commissions, the

Northwest *Columbia River drops over 2000 ft in its course from Canadian Rockies to Pacific Ocean. System of dams and power plants utilizes this drop for production of electricity, controls floods, diverts water for irrigation. Dams like Grand Coulee, Chief Joseph and Dalles have been federally financed; proposed John Day, Rocky Reach and Priest Rapids dams will be "partnership" project. Mica Creek and Castlegar dams in Canada, near Columbia's source, are privately financed proposals. Libby Dam, already authorized, is government project, will add substantial amount to firm power for Northwest, and control flooding in U. S. and Canada*

Southwest *Several plans for Colorado River Storage Project are being studied by state and national legislators. All mention four major dams, Flaming Gorge, Echo Park, Glen Canyon and Curecanti; two bills name six; all add supporting projects on tributaries. Project would serve Colorado, Utah, Wyoming and New Mexico; full program is source of bitter dispute between Upper Basin states and California, whose southern area uses Colorado River water. Frying Pan project, once abandoned, is again under study. Controversial proposal would bring west slope water from near Aspen to Arkansas River valley on east slope via tunnel under continental divide. Arizona would benefit from proposed Gila River dam, Painted Rock. California has two large plans to consider: state-financed billion-and-half-dollar Feather River Project to bring water from northeast part of state to southern part, and quarter-billion-dollar Trinity River project*

Corps of Engineers, reclamation bureaus, public utility groups, private utility companies — on local, state and national levels.

It is almost classic that there should be controversy between proponents of privately financed power and proponents of publicly financed power. It is this issue which underlies the long-winded debate on the proposals for dam construction in Hell's Canyon on the Snake River between Idaho and Oregon. Last fall, however, a new concept in power development was introduced when President Eisenhower signed what is called the "partnership" act: the government and a utility group (public or private) under it go into partnership on a project with the government building the dam and the utility group building and operating the power plant at the site. Three projects have so far been authorized under this plan: Priest Rapids on the Columbia 25 miles below Vantage, Wash., Cougar on the South Fork of the McKenzie in Oregon and John Day on the Columbia 30 miles upstream from the Dalles Dam. Advocates of development by private capital see in this plan the means to obtain the necessary power plants to meet the tremendous power needs of the Northwest without engaging vast sums in public funds for projects of the size of Grand Coulee. The partnership plan makes possible more small projects, such as Cougar, a joint venture of the federal government and the Eugene (Ore.) Water and Electric Board. Advocates of public power would rather see larger projects, producing power at low rates.

(*Continued on page 48-12*)

Bur. of Reclamation, Ephrata



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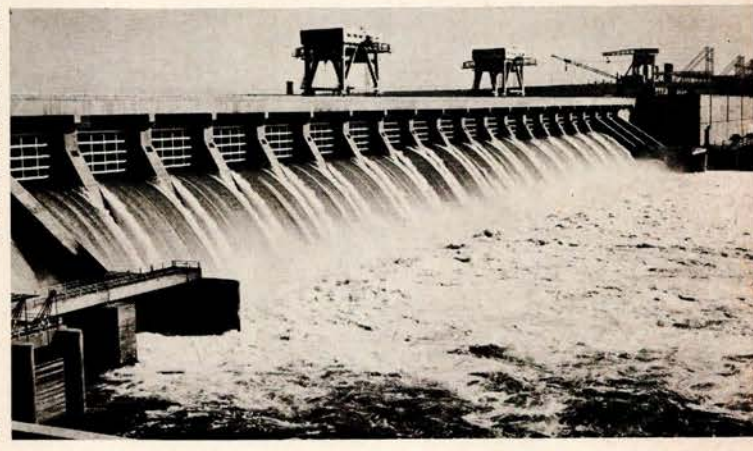
2

Walla Walla Dist., Corps. of Eng

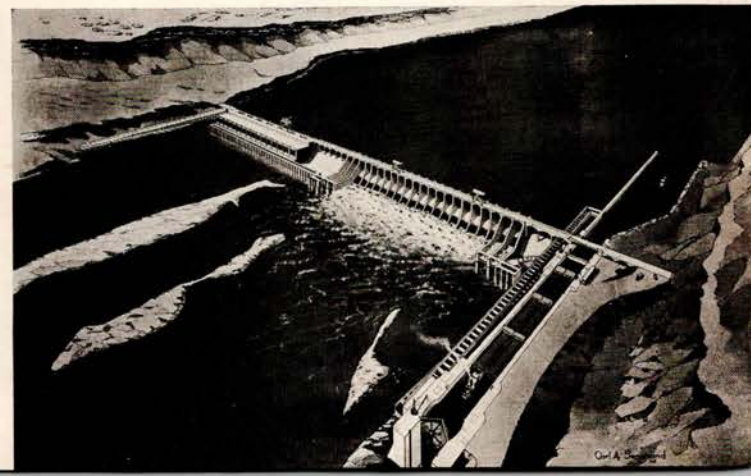


3

Grand Coulee (1), water and power source for Columbia Basin project and other Northwest areas, is largest operating project to date. The Dalles dam (2) on Columbia River at The Dalles, Ore., is under construction, will be fully operative in 1960. McNary Dam (3), 94 miles upstream from the Dalles, has, like Dalles dam, multipurpose features of power production and navigation improvement with incidental benefits for irrigation and recreation. McNary will be completed next year

John Day dam (4), 30 miles up Columbia from the Dalles, will be partnership project between government and utility group which will build and operate power plant at damsite

4

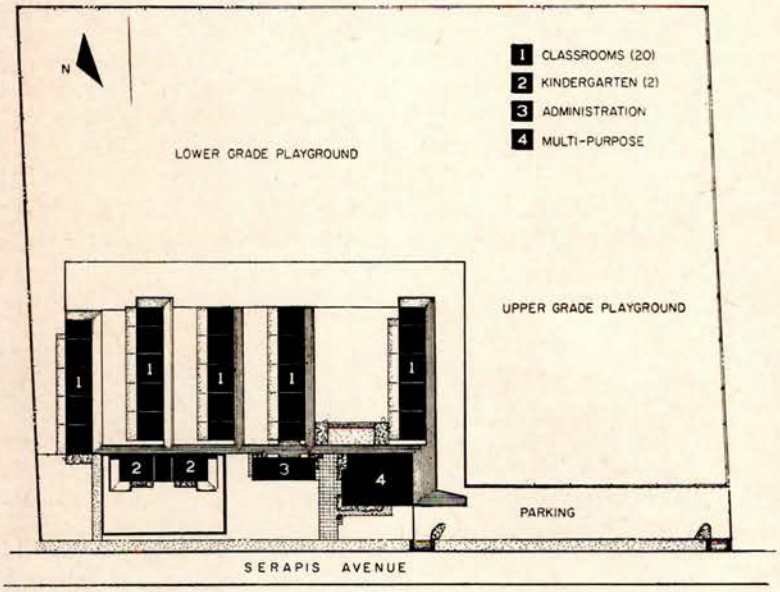




LAWRENCE T. MAGEE ELEMENTARY SCHOOL

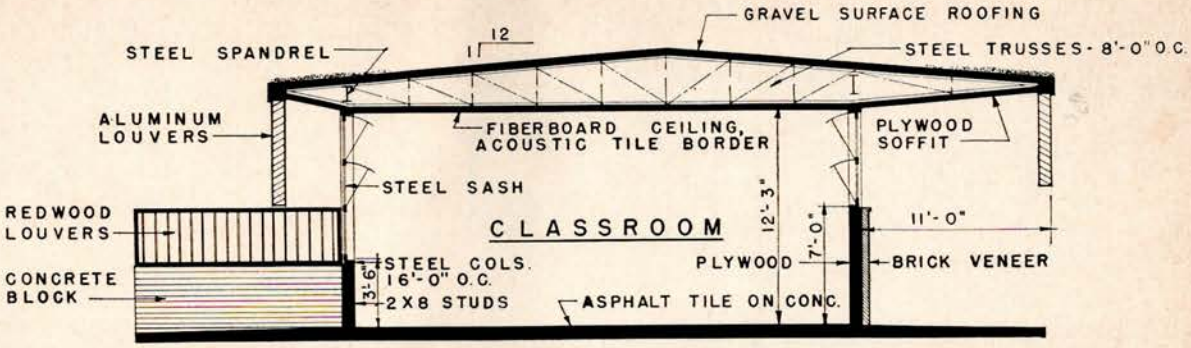
Rivera, California

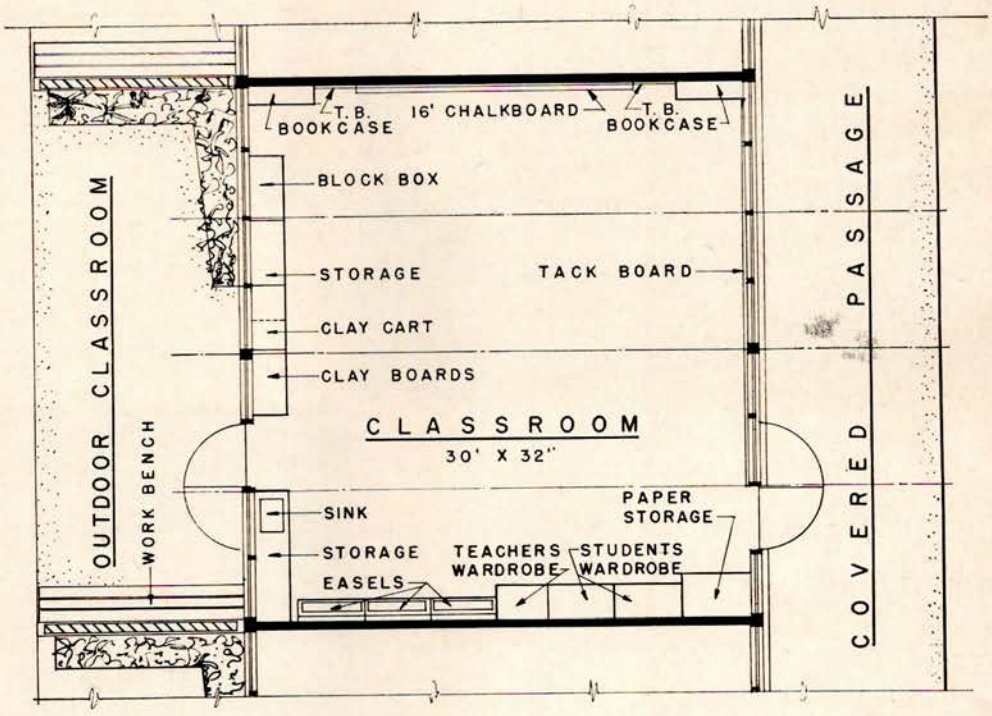
Kistner, Wright & Wright
Architects and Engineer



THE SCHOOL NEEDS of the Rivera district, greatly increased through unexpected population gains like those of many another Western school district, exceeded its ability to issue bonds for new buildings. State aid, however, made possible construction of the Lawrence T. Magee school which provides 16 classrooms and two kindergartens for 750 children from kindergarten through sixth grade. The 12-acre site on which it is located gives ample space for two playgrounds and teachers' parking area.

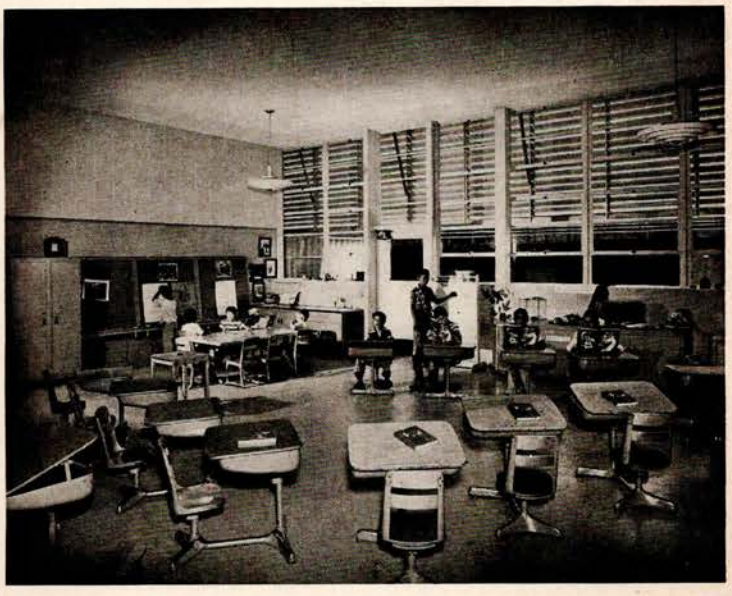
Light steel members were used to frame the buildings. Finish floors are asphalt tile over concrete slab. Brick veneer along the exterior walls on the corridor side, and redwood louvers above concrete block walls enclosing the outdoor classrooms, provide contrast in color and texture. Aluminum louvers suspended from the overhangs control light and glare.



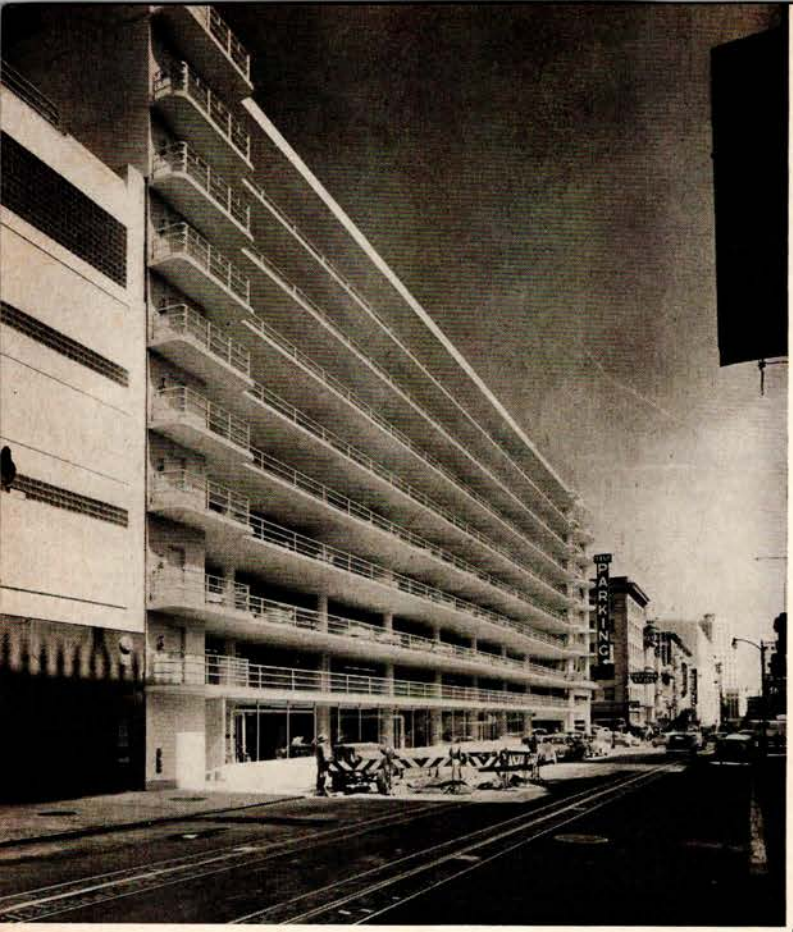


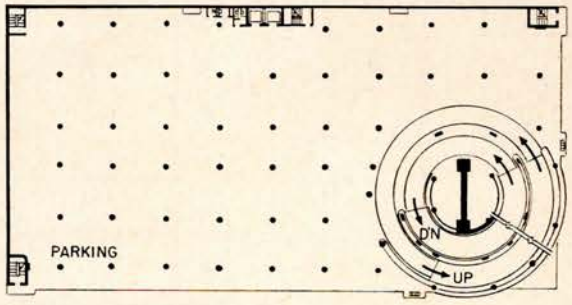
Julius Shulman



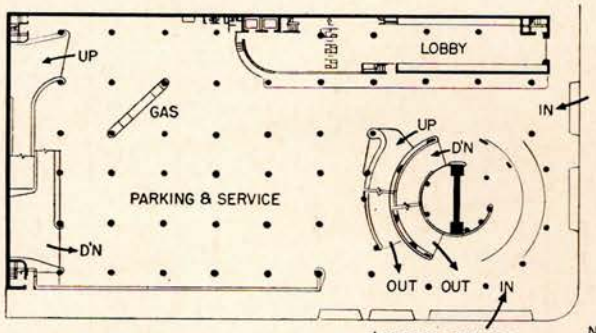


Multi-use room, used for community as well as school programs, is located near thoroughfare and parking area for easy access. All classrooms open onto fenced-off, outdoor area. Aluminum louvers hung from overhang control light in classrooms. School cost $444,480, or $12.96 per sq ft





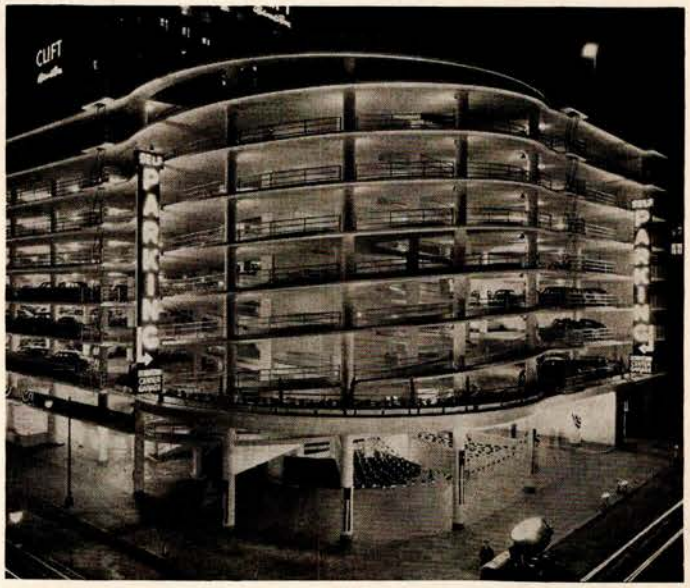
TYPICAL FLOOR PLAN



FIRST FLOOR PLAN 0 10 50

A SELF-PARKING GARAGE FOR DOWNTOWN SAN FRANCISCO

Downtown Center Garage
George A. Applegarth, Architect
William H. Ellison, Structural Engineer
J. Marion Thomas, Mechanical Engineer





Moulin Studios

Since garage is self-service, easy grade on ramps which patrons use is essential: Downtown Center's ramps are wide, have 9.5 per cent grade. Nine floors, basement and roof provide 1100 parking spaces

LOCATED IN THE CENTER of San Francisco's hotel and theater district and near the central shopping area, the Downtown Center Garage provides 1100 stalls on its eleven levels (nine floors, basement and roof). Its circular ramps (one up, one down) have a 9.5 per cent grade and are 14 ft wide. Cars are parked at 45 deg angles in 8 ft and 8½ ft stalls.

Guided by electric signs controlled by a traffic director, the patron proceeds to a level where there are empty stalls, parks and locks his car and proceeds to the street by elevator. When he returns to pick up his car, he pays his check, goes through a turnstile, takes the elevator to the proper floor and gets his car himself. This self-service system requires only a skeleton crew of attendants and makes possible a quick turnover in cars since it eliminates the waiting period for delivery of cars.



Modern lighting for modern buildings

No modern building would be complete, even with its "curtain walls" of glass or aluminum spandrels, without an integrated lighting environment. With this premise in mind, Sunbeam Lighting Co. offers a new series of architecturally designed luminous cells. These are surface-type units (#6600 series) with a very shallow appearance and engineered to produce high levels of low brightness lighting. For maximum interior design and illumination potential over six types of modern diffusing mediums are available. Translucent white, "drop" Plexiglas panels and miniature-celled plastic louvers are particularly attractive for contemporary plans. For detailed information on these Sunbeam Visionaires and our surface-type 2 by 4-foot and 4-foot square "large area" cells please write for bulletin #A47.

SUNBEAM visionaire LIGHTING COMPANY

SUNBEAM LIGHTING COMPANY, 777 E. 14th PL. LOS ANGELES 21

WESTERN BUILDINGS
IN THE NEWS



Community Center

This new community center, to be built in Southwest Sportsmen's Park, Los Angeles, will provide a combined gymnasium-auditorium with a seating capacity of 1000 when used as an auditorium, and activity rooms for various recreational programs. Stiles and Robert Clements, architects

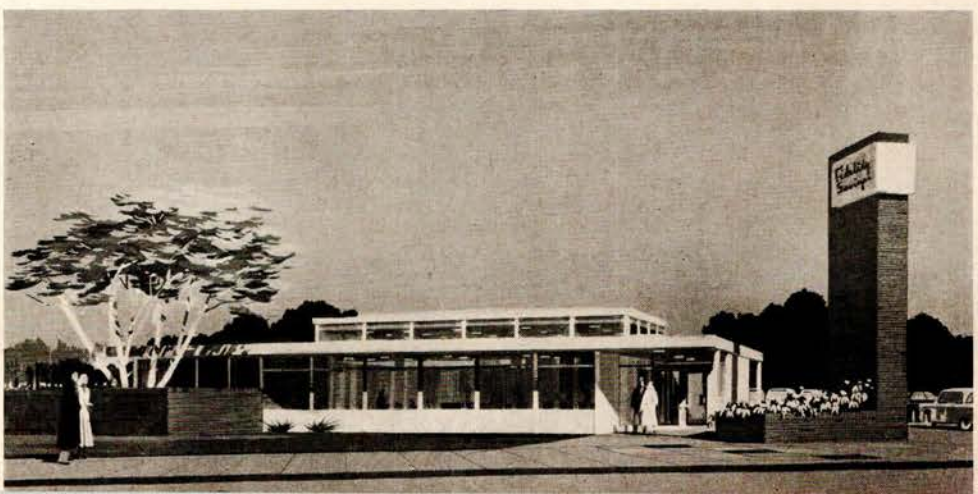


Office Building

An office building for Bethlehem Pacific Coast Steel Corporation's new Fabricating Works at Torrance, Calif., is under construction. The building is of all-steel construction: floors are of cellular steel sections, interior partitions are steel and are movable, and exterior wall panels are of porcelain enamel on steel. The exterior will be colorful: porcelain enamel panels are charcoal and white; exposed structural steel members are to be painted bright red. Albert C. Martin & Associates are the architects

Drive-In Bank

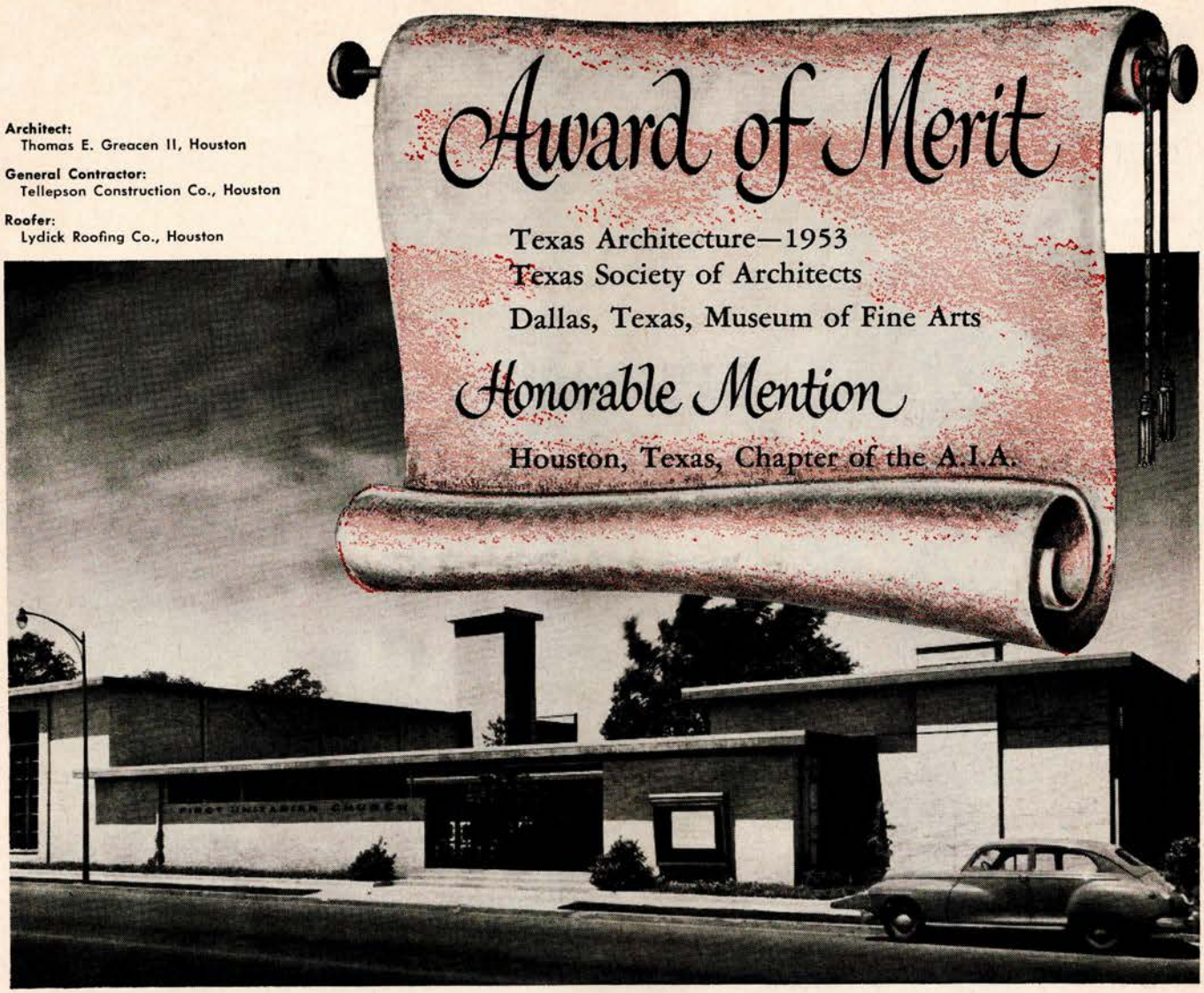
The new building for Fidelity Savings and Loan Association's branch bank in Rainier Valley, a suburb of Seattle, will be a drive-in. Brick veneer, porcelain enamel and aluminum panels are used on the exterior. Durham, Anderson and Freed are the architects



Architect:
Thomas E. Greacen II, Houston

General Contractor:
Tellepson Construction Co., Houston

Roofer:
Lydick Roofing Co., Houston



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see our catalog in ARCHITECTURAL FILE or write for copy

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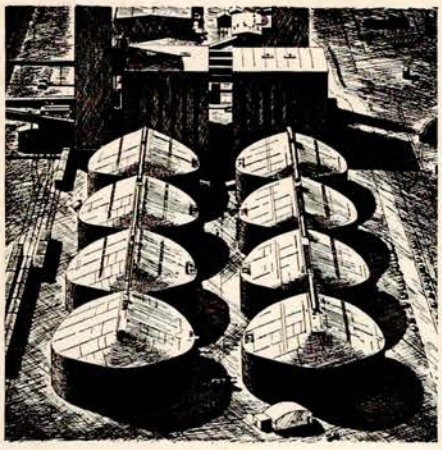
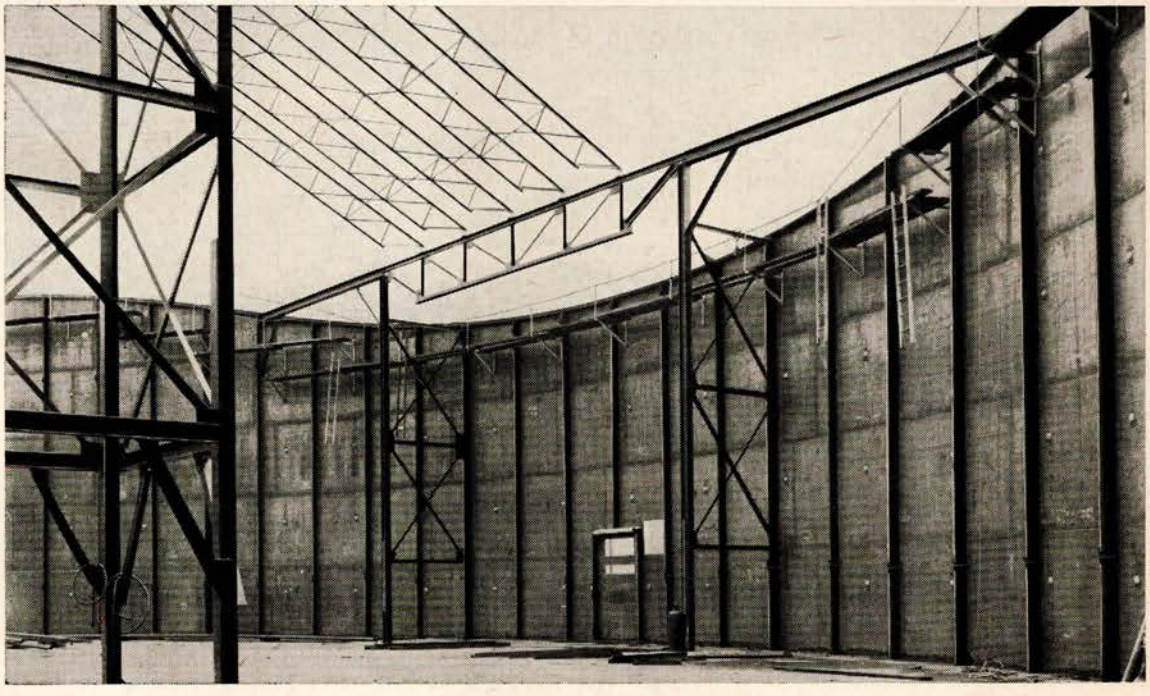


STORAGE TANKS
for Oregon grain
completed this year.

Architect & Engineer: Mentor C. Addicks for Cargill, Incorporated
Chief Engineer: H. M. Anundson, Portland Commission of Public Docks
Fabricating & Erection: American Pipe and Construction Company, Northwest Division

Storehouses of steel...



Taken inside a bin (before roof installation), photograph illustrates wall construction and "sway-back" dipping eave line. This unique feature gives roofs a shorter reach to bins' oval ends.

New on the Portland waterfront, built by the city's Commission of Public Docks, are eight huge, oval-shaped bins, each measuring 190 feet in length, 135 feet across. Filled to capacity, these steel storage bins hold 5,400,000 bushels of grain (in terms of wheat, for example, that is enough to make 350 million loaves of bread). To save erection costs, American Pipe & Construction Co. laid roof plates one over another, shingle-like, then welded them in place. The siding construction of the 60′ high bins is made up of three separate courses of graduated thicknesses: the bottom plates are 7/16″ gauge, middle 5/16″, and the top courses ¼″ gauge. Flooring is steel, too . . . and all this steel came from the mills of United States Steel.

USS Products for Heavy Construction

United States Steel Corporation · Columbia-Geneva Steel Division

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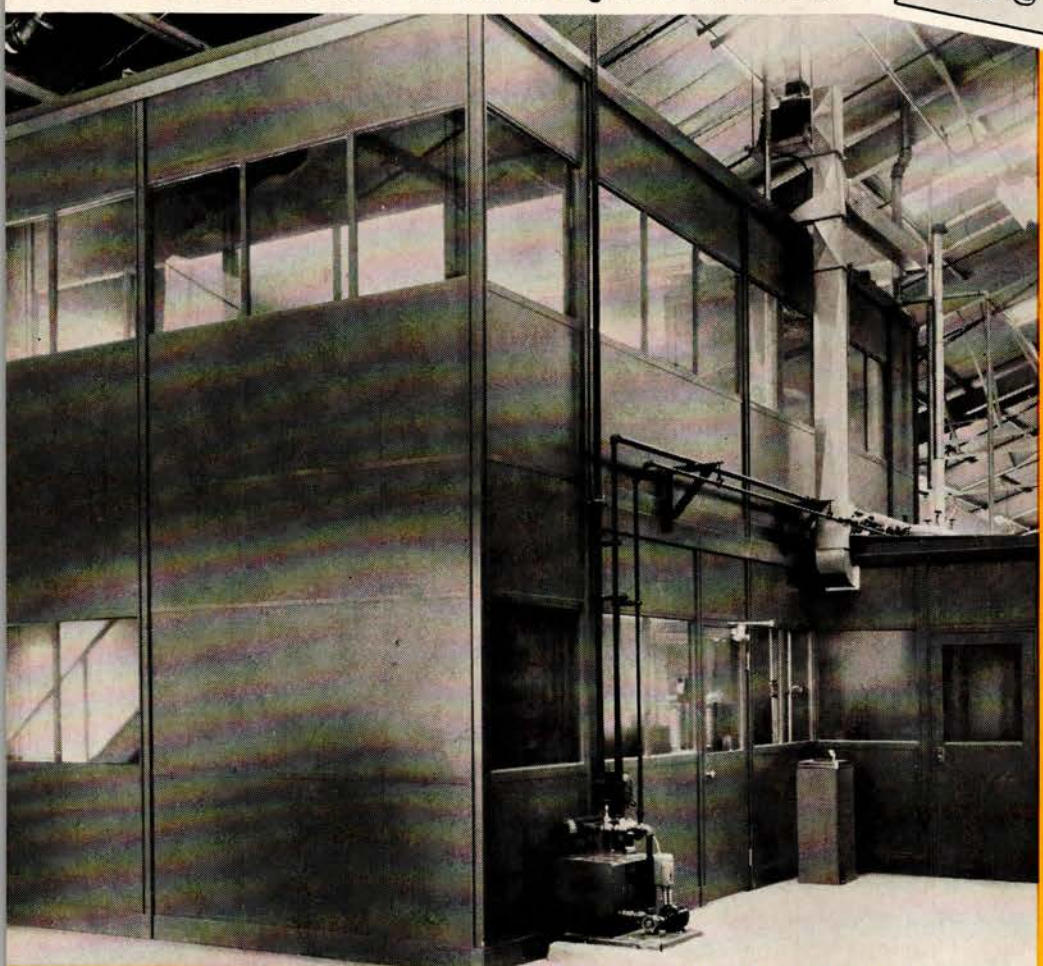
CLIENT Joseph Schlitz Brewing Co.

REPORT



SECTION OF JOSEPH SCHLITZ BREWING CO., VAN NUYS

ARCHITECT: *Harley, Ellington & Day, Detroit*
GENERAL CONTRACTOR: *P. J. Walker Co., Los Angeles*

For this large building project, WeberWall ¾″ semi-flush 2″ thick panel partitions were selected.

The 2-story high partitions illustrated, with solid posts running from floor to cornice, and with both solid and glazed panels tiered between posts, are typical of the special conditions easily solved through the use of WeberWall.

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Robertshaw-Fulton Controls Company, Los Angeles
General Petroleum Corporation, San Mateo
Campbell Soup Company, Sacramento
Phelps-Dodge Corporation, Los Angeles
Bakersfield City Hall, Bakersfield
Shell Oil Co., Los Angeles
Chrysler Corporation, Los Angeles



WEBER IS ON THE MARCH

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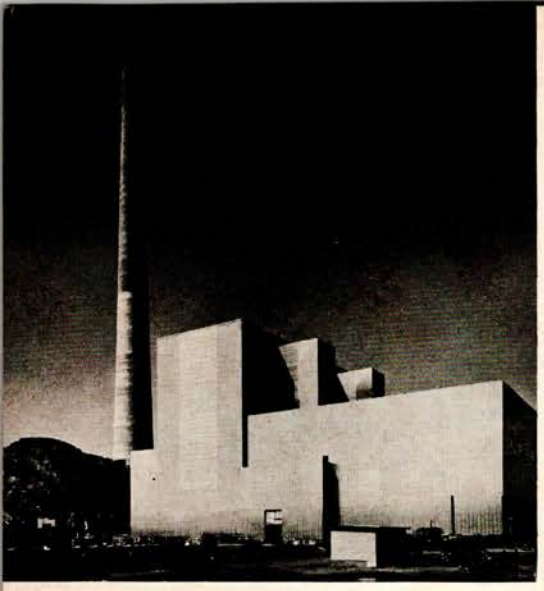
STEEL PARTITION SYSTEMS ★



P. G. & E. News Bureau

5

Morro Bay (Calif.) Steam Electric plant (5), one of 16 such built and operated by Pacific Gas and Electric Company, uses sea water evaporators to produce fresh water for boiler operations. Process is familiar on ships, but this is probably first industrial application. Steam electric plants supplement hydroelectric output which is dependent on river flow

Hell's Canyon high dam (6), if authorized, would look like this. High dam is government proposal; Idaho Power Company wants to build three low dams along canyon. Bureau of Reclamation wanted dam at Nez Perce but abandoned plan for two-dam proposal at Mountain Sheep and Pleasant Valley. Private power company combine has applied for permit to build at these sites also



Bur. of Reclamation, Boise

6

7



Hungry Horse dam (7) at head of Flathead Lake in Montana is Bureau of Reclamation irrigation project

WATER AND POWER

(Continued from page 48-3)

Complex as are the problems involved in these basic philosophies, the problems created by rivers which cross international boundaries can be even more complicated. Three projects which are currently being studied involve the boundary between the United States and Canada. These are Libby dam, to be located on the Kootenai River which rises in British Columbia, traverses Western Montana and the Idaho Panhandle and then reenters Canada; Mica Creek dam and power plant, proposed for a site on the Columbia River above Revelstoke, B. C.; and Castlegar dam, which would be placed at the lower end of the Arrow Lakes in British Columbia. Before any of these can go ahead the international questions must be ironed out and agreements reached. Libby Dam, upstream from the town of Libby, Mont., is a public power project and the problems connected with it have been referred to the International Joint Commission, a body formed to handle such situations. The other two projects are to be privately financed, and the problems which they bring up are currently being studied both in this country and in Canada where the dominion as well as the provincial government must be reckoned with.

Mica Creek is a proposal of the Puget Sound Utilities Council which is made up of three power companies, Puget Sound Power & Light, Seattle City Light and Tacoma City Light, and two public utility districts, Snohomish and Chelan. The dam which the Council would build above Revelstoke, a town at the Western end of the Columbia's 190-mile "big bend," would cost an estimated $300,000,000, would impound some 10,500,000 acre feet of water and add 1,200,000 kilowatts of firm (uninterruptible) power to downstream Columbia River power plants in the United States. If Canada builds a power plant at the damsite, the installed capacity would be $1,400,000 kilowatts; no decisions have been made yet as to this possibility.

The other project proposed for the upper Columbia River on a Canadian site is the Castlegar dam, a plan proposed by the Kaiser Aluminum and Chemical Company which would like to be sure of firm power all year for its northwest aluminum plants. The plan suggests a dam at Castlegar Narrows, the lower end of the Arrow Lakes which the Columbia forms between Revelstoke and the United States border. This would be a low-level dam (Mica Creek would be a high dam) and offers no possibilities for development of a power plant at the site. The dam would back up water for a 3,000,000-acre-foot reservoir which would make possible release of 30 to 40 per cent more water in winter months for downstream plants than has been possible heretofore, adding some 300,000 kilowatts of prime power at Grand Coulee, Bonneville and other lower Columbia projects. In return for the site in British Columbia, Kaiser would give the province 20 per cent of the power added to the downstream plants, delivered free at the border. Kaiser would build the dam at an estimated cost of $25,000,000. The plan is being studied in Ottawa now. British Columbia is reported to favor the proposal but the dominion is reported to be standing on its statement that the provinces should not "export their natural resources."

Of all the rivers involved, in large or small ways, in the ways and means of adding water and power to the West's dry lands and expanding industries, the Colorado is probably the most controversial. This is partly due to the fact that four states share its water directly, but it is also due to the fact that for most of the land through which it flows it is the only large source of water. Even tributaries are scarce in some parts of its course after it leaves the Rockies where it rises.

There is little doubt that the bitterest arguments on water are currently being exchanged by Colorado and California, one state at the source, the other at the mouth of the river. Each wants — and needs — the water the river carries; each has accused the other of perfidious designs on that water. California gets 7,500,000 acre feet of Colorado water annually under a compact made in 1922. Now that Southern California — the area which uses the Colorado water — has grown so populous, any threat to this water supply is a serious matter.

But it is an equally serious matter to

(Continued on page 48-16)

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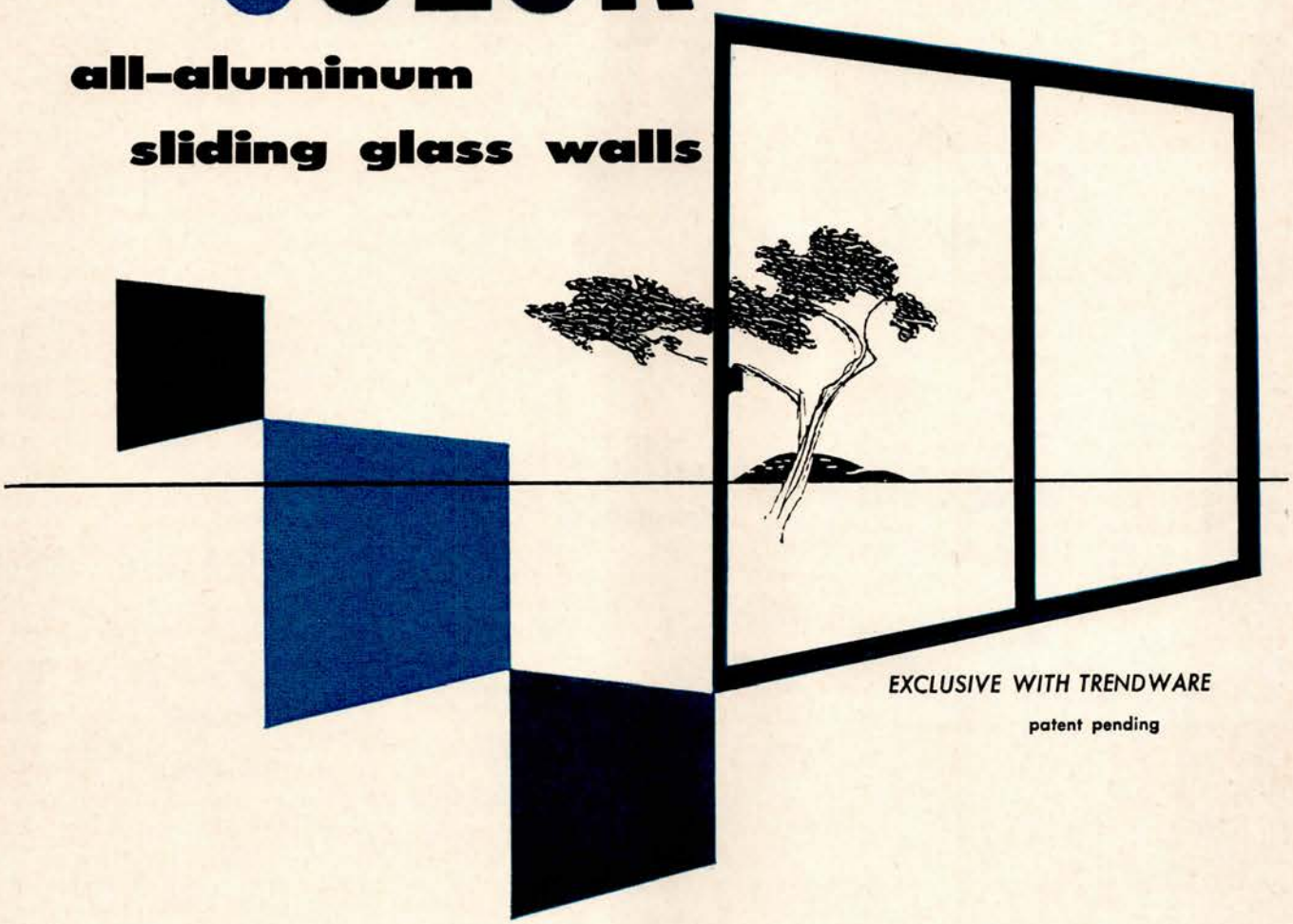

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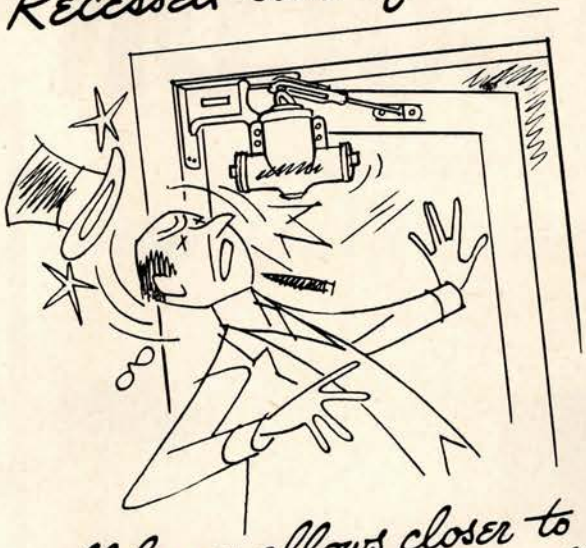

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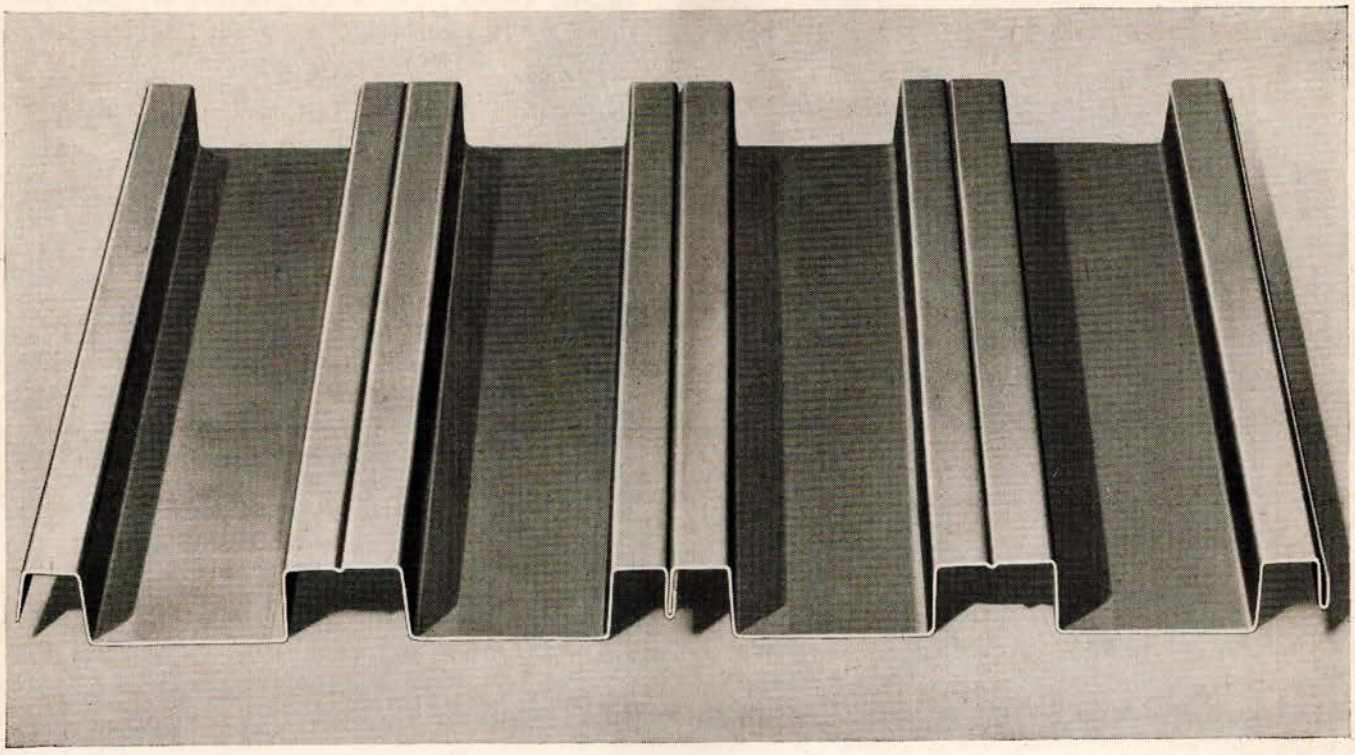
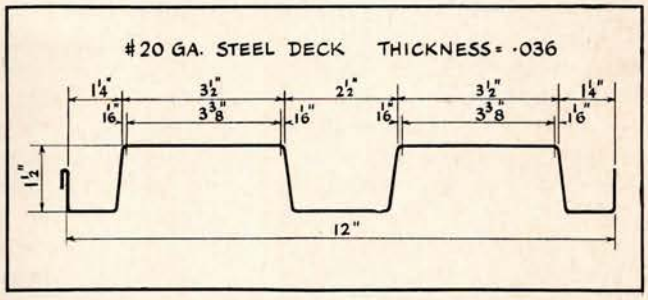


Easily-fabricated steel decking gives greater strength, extra span width!

Formed out of light gauge steel coils from USS, a new "Pirib" decking made by Pacific Iron & Steel Corporation of Los Angeles, can be easily fabricated, offers excellent strength and maximum span. Each section covers 12 inches in width and sections are crimped together easily. In the new Broadway Department Store Warehouse in Los Angeles, for example, "Pirib" 20-gauge decking is being laid in 18-foot sections with a nine-foot span. "Pirib" decking is available in various gauge thicknesses and is also being considered for use as a combination exterior-roof and interior-ceiling unit in low-cost housing.

You can specify decking of this type for many kinds of industrial buildings. Made of high-quality steel, decking like this cuts down building costs, allows lower per-square-foot price. And, of course, it meets all requirements and specifications, assures you a better, more dependable job.



Dimensions and cross section of the "Pirib" decking as made by Pacific Iron & Steel Corporation of Los Angeles.

Steel decking is produced by steel fabricators, not by United States Steel. If you would like further information on specifications we will be happy to put you in touch with a decking manufacturer.

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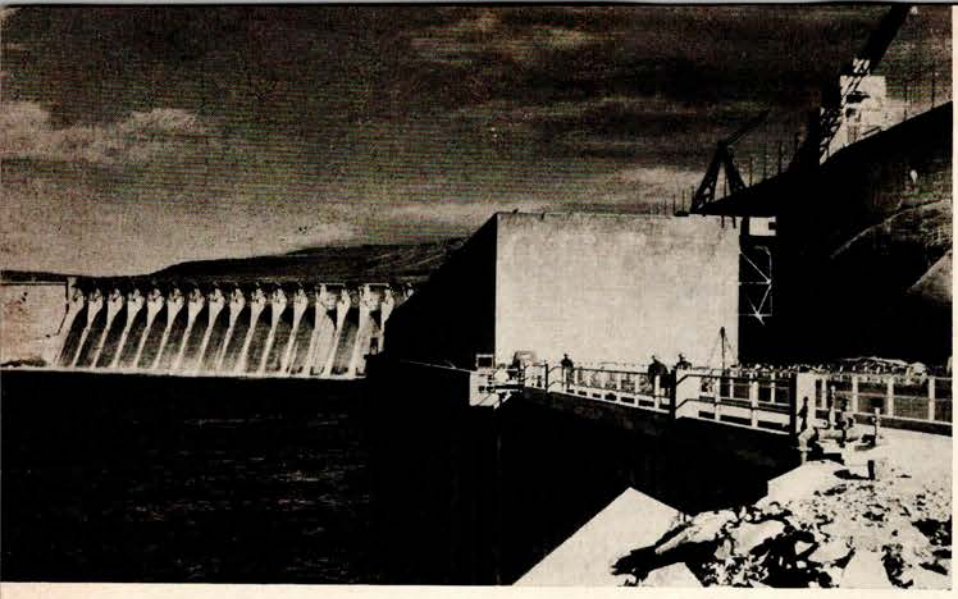
UNITED STATES STEEL



Seattle Dist., Corps of Eng.

Spillway for Chief Joseph dam on Columbia near Grand Coulee is nearing completion, will be exceeded in power output only by Coulee and Dalles dams. Spillway is 922 ft long, 220 ft high

WATER AND POWER *(Continued from page 48-12)*

Colorado's Western slope region, now bridging the relative isolation in which it has existed for many years. The development of that part of the state, and of parts of Utah, Wyoming and New Mexico, hinge on the execution of the program for the Upper Colorado Basin, say advocates of bills now before the Congress. There are several plans under study. One would authorize construction of six dams on the Colorado and tributary streams, and 34 supporting projects (including 18 which Colorado Governor Johnson requested), and would provide for the sale to Denver of water from the Blue River (which it has sought unsuccessfully to get in its own courts). Another proposes construction of four dams and 13 supporting projects, and omits the provision about Blue River water for Denver. Still another would authorize building of six dams and 14 supporting projects. All of these bills include dams at Flaming Gorge in Wyoming on the Green River, a tributary of the Colorado; at Echo Park on the Green and Yampa Rivers at the Colorado-Utah line; at Glen Canyon in southern Utah near the Arizona line; and at Curecanti on the Gunnison River near Gunnison, Colo. Of these Glen Canyon has so far received the widest support, Echo Park the least. Glen Canyon would be a high dam and its advocates say that it would "pay its way" by the sale of the power it would produce. Echo Park would be situated near Dinosaur National Monument, in wild and rugged country. Conservationists — government and private individuals — say that the dam would ruin a wilderness area of rare beauty; the dam's enthusiastic supporters say that it would not and that the dinosaur remains would be untouched by the project.

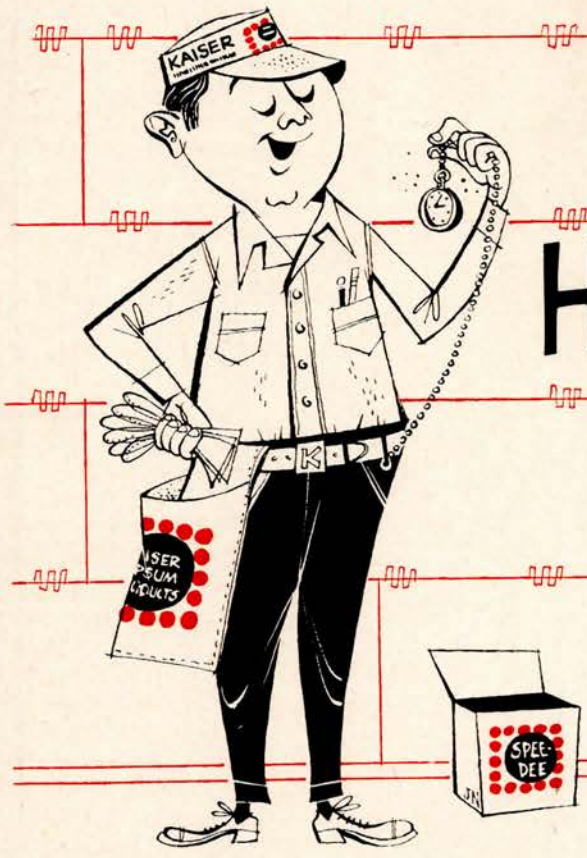
As for publicity, however, the fight over the dams across Hell's Canyon on the Snake River between Oregon and Idaho takes all the honors. For over a year hearings on the various proposals went on in Washington — they were concluded, finally, early this year — and more were held in the West this Spring. The government wants to build a high dam — 602 ft high — at Hell's Canyon's lower end; Idaho Power Company, a privately owned utility company, wants to build three low dams, one at about the same site as the proposed high dam, the other two upstream. Since no partnership factor is involved, the fight over the Hell's Canyon dams is taken to be a clear-cut one between public and private financing of hydroelectric projects.

Other dams have also been proposed for the Hell's Canyon region. The government had proposed a high dam at Nez Perce, said by Interior Secretary McKay to be the best site on the river from an engineering standpoint; but since the location would have blocked migratory fish runs from the Salmon River, and since construction of the high Hell's Canyon dam cannot be counted on, the bureau of reclamation has abandoned its plans for Nez Perce. Instead it is proposing two dams, one at Mountain Sheep, the other at Pleasant Valley. A combine of four investor-owned companies, Pacific Northwest Power Company has also suggested dams at these sites and has filed application for their development. Engineering studies are under way on the feasibility of the projects.

Although the largest hydroelectric projects to date have been built by the federal government, some large-scale proposals involving private — and State — funds have been made. Under the partnership act the number of these will undoubtedly grow. Now being studied in the California legislature is a plan to move water from the Feather River in Northeastern California through the Central Valley down to the Mexican border, 750 miles away. The plan involves construction of a 730-ft dam and reservoir at Oroville on the Feather, a reservoir at San Luis in Merced County, and an aqueduct from Oakland to San Diego. This gigantic project — it would be the biggest single water works project yet attempted — would cost around $1,500,000,000 and would probably be financed by general-obligation bonds issued by the State of California. It would be costly, but it would take care of the water problems of the central and southern parts of the state. Also being studied is the proposed Trinity River project, on which Pacific Gas & Electric Company has made application to build a power plant under the partnership act. This project is estimated to cost $219,066,600.

There is another solution to the water-and-power problem: conversion of sea water to fresh water by atomic energy and of atomic energy to electricity. Both are possibilities of the future. Neither may be able to supplant today's method, but may be used to supplement present sources. The cost of dams has increased so much that for the future other means will have to be studied. Even now, steam-electric plants are being used where feasible (PG&E had 16 such in operation in addition to its 57 hydroelectric plants); the Washington State Power Commission has proposed a $45,000,000 program for construction of a steam-electric plant. Other Northwest groups are considering the use of atomic power as "fuel" for power generation.

Until these new developments become available on an economic basis, however, the West will have to use its water more wisely, as Prof. Martin Huberty of the University of California at Los Angeles has warned. Even more important, we shall have to master plan our hydroelectric projects with a maximum of foresight and a minimum of error, for the costs are great and the needs are immediate.



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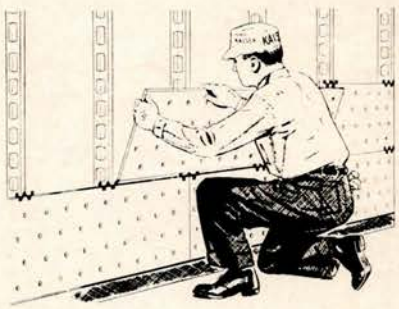

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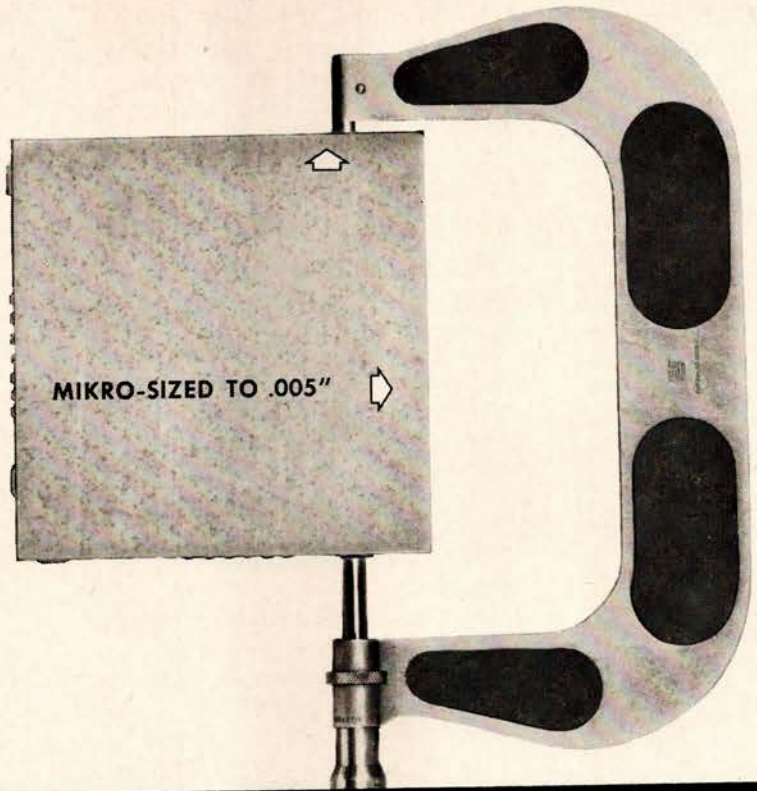

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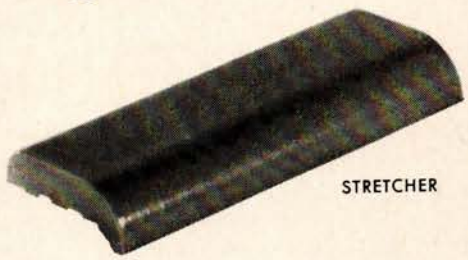
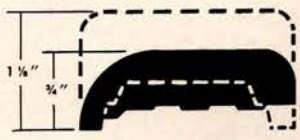


STRETCHER



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PAUL THIRY SPEAKS TO OREGON ARCHITECTS

IF THERE EVER was a time when we should be conscious of the fitness of things it is now. Now, if ever, we should shake ourselves of preconceived formulas for architecture. I suppose we could be mundane about all this and assuredly we could be most practical. We could build . . . we could be modern architects . . . we could streamline our buildings . . . and give lip service to architecture. We could reap the harvest and satisfy man's acceptance of the mediocre . . . but, after all, is that what we want? Or should we worry a little more about what we are doing? Should we suffer the possibilities of being idealistic? Could we dare to innovate? We MUST."

Paul Thiry, F.A.I.A., of Seattle, presented this challenge to the members of the Oregon chapter, A.I.A., at their annual dinner held in February. Speaking on the subject, "So What About This Architecture," he emphasized the real purpose of architecture and the essential need to differentiate between true and false standards, whether in designing a building or in judging its merits.

"Can't we realize that architecture is just simply what it is . . . the end result of how we solve our problems?" he said. "If we superimpose a lot of false theories and preconceptions of appearance what do we hope to gain? A building is not like a modernistic painting . . . if it does not suit the purpose for which it was built no amount of explanation as to subleties of form and ethereal meaning will quite satisfy. Maybe it's because we emote and conjure and philosophize and get mystic that we sometimes have difficulty in our findings.

"It is hard to deny that if a building is properly planned for its use, if it suits its primary function of privacy and shelter, if it withstands the elements without fault, if its structure is sound and sensible and its material substance well conceived that it will be a good building . . . and that it will have come a long way in its fulfillment of purpose. If it has these inherent qualities it will give a sense of pleasure to its user and generally to those who behold it. But in so declaring let us not underestimate the function of that intangible thing called beauty . . . that essence construed by so many and achieved by so few.

"Beauty is a functional necessity . . . I would like to dissipate the idea that it is something apart. Architecturally speaking, beauty can be many things . . . a dancing shadow of a tree branch on a wall, maybe a stream of sunlight, a curve, a contrast of surfaces, a texture, perhaps a reflection in the water. Sometimes it is achieved by a fresco or a mosaic. Somehow beauty is not something acquired but it is inbred . . . it is woven into the fabric of a building . . . it is not divisible."

AIR ACADEMY SITE WORK WILL BEGIN THIS MONTH

SITE CLEARING for construction of the new airforce academy at Colorado Springs, Colo., will get under way this month, the academy construction agency has announced. First part of this work, to be completed by the end of the year, involves putting in roads, moving of earth in the airfield area and some utility construction.

Structural work is scheduled to begin in about a year, the agency says, and the academy expects to be ready for its first cadet class in the fall of 1957.

Skidmore, Owings and Merrill are architects for the academy. They have opened an office at 3333 N. El Paso Road, Colorado Springs.

WESTERN EDUCATORS MEET TO DISCUSS CURRICULA

THE ARCHITECTURAL CURRICULUM has much to contribute to theories of general education since it combines both the technological and the cultural aspects of the educational process, Dean Sterling McMurrin of the University of Utah's University College told the heads of nine Western schools of architecture at their recent meeting at the University of Utah. Among the problems facing educators today is that of the quality of secondary school education which, he said, does not provide colleges and universities with students who are ready for the university level of work. Dean McMurrin spoke at one of two luncheon sessions during the conference.

At the other luncheon session, Dr. Homer Durham, academic vice president of the University, said that the professional curriculum appeared to have a fundamental integrating principle which liberal arts curricula do not have. He urged the educators to remember that the teacher may very well be more important than the subject in the education process; that it is not enough to assume that qualities of leadership in an individual derive from the genes he carries; and that quality of imagination and breadth of knowledge need to be given as much play as possible in our schools.

These and other problems came in for informal discussion in the other meetings of the conference which was attended by heads of nine architectural schools and members of their staffs. The schools represented were Stanford, California, Washington, Washington State College, U.S.C., Oregon, Utah, Montana and British Columbia. Special guests were Walter Taylor of Washington, D. C., A.I.A. director of education and research; Fred Markham of Provo, Utah, president of the National Council of Architectural Registration Boards; Eugene Brazier, Utah chapter, A.I.A., president; and Elisabeth Thompson, senior associate editor, Architectural Record, and Western Section editor.

Discussion centered around registration for practice, "refresher" courses for practicing architects and specific curricula. A suggestion by Roger Bailey, head of the Utah department of architecture, that the schools of the region offer graduate courses in which research in special fields related to the resources or special problems of the school's location (i.e., lumber in the northwest, concrete in Utah, city planning in Los Angeles), was also considered.

FOR CHEAP ATOMIC POWER, MORE BASIC RESEARCH

MORE BASIC RESEARCH — "the search for a deeper understanding of the universe and of the living and inorganic phenomena within it" — is the great need today in our atomic energy program, Dr. Glenn Seaborg, Nobel prize winner and professor of chemistry at the University of California, recently told a meeting of industrialists and scientists in San Francisco. Only basic research can increase our knowledge, presently so small, of the many forces in the atom, he said.

Only five per cent of the money that goes into research is used for basic science, he said; the other 95 per cent is used on research for direct application on technological advances. If the five per cent for basic research were doubled, he said, it would "bring the greatest bargain that the American people ever received for their money." At the same time he emphasized that "money does not directly beget new ideas. We need to attract increasing numbers of people who are capable of creative thinking."

One problem which he mentioned as specifically requiring more basic research is that of disposal of waste radioactive products. Present solutions to this problem are inadequate and for that reason

(Continued on page 48-24)

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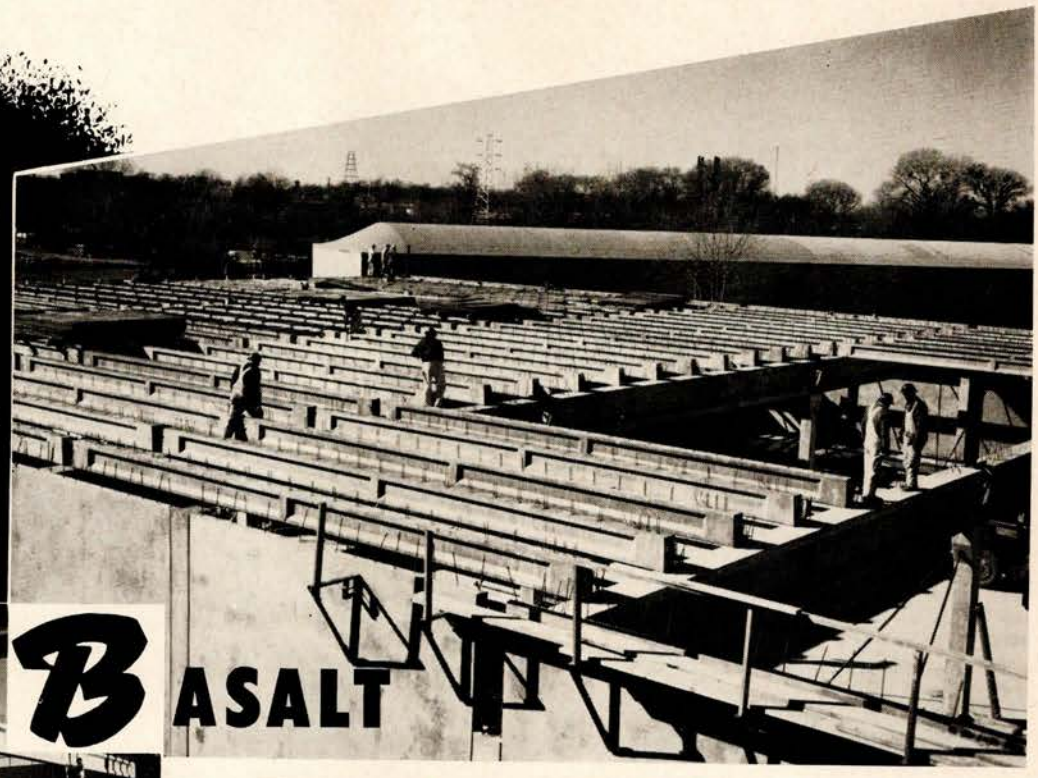

FROM THE TOP, installation of a large portion of the 180 BASALT-manufactured Purlins. Each weighs 4,800 lbs. and was pre-stressed by the Freyssinet Method, using 18 (0.196" dia.) wires.

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FROM THE GROUND, showing BASALT Pre-cast Girders supporting Purlins. Girders were also pre-stressed by same method, using five 18-wire cables. Cables were tensioning with a force of 92,600 lbs. each.

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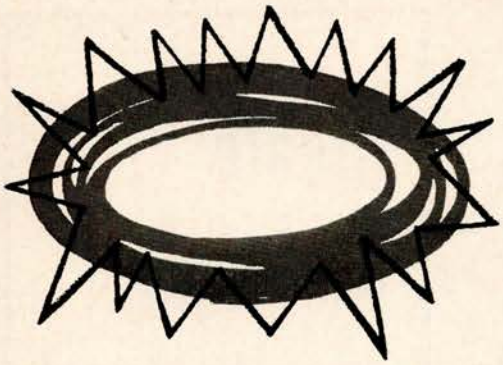
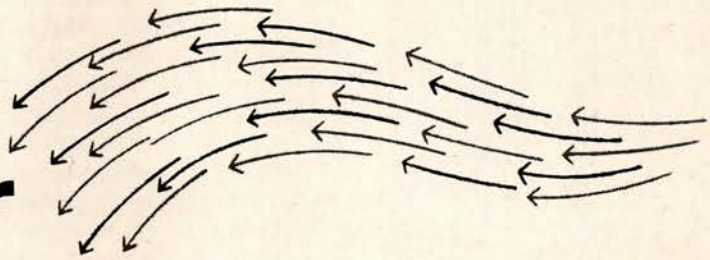


more light



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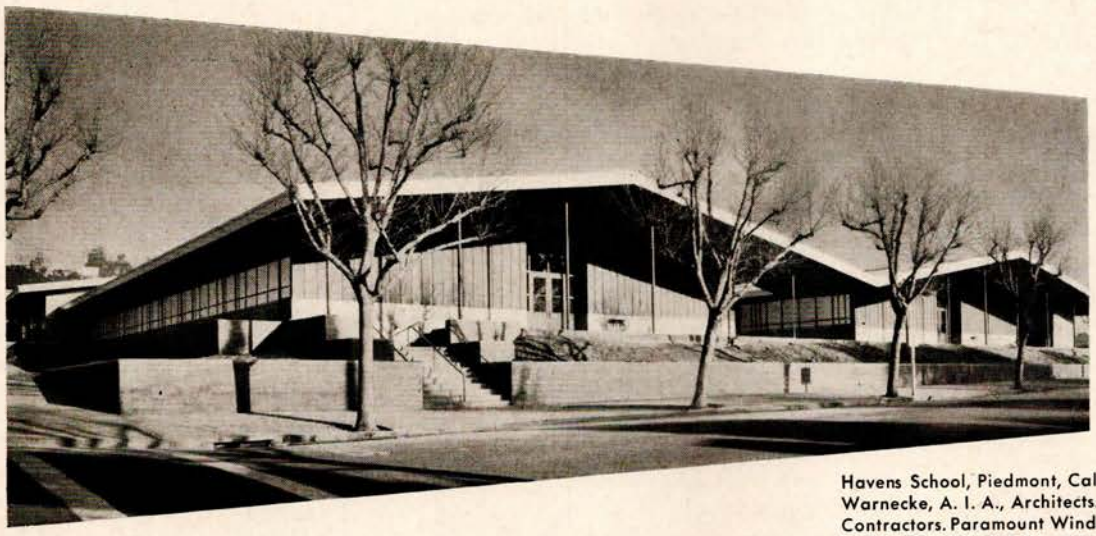

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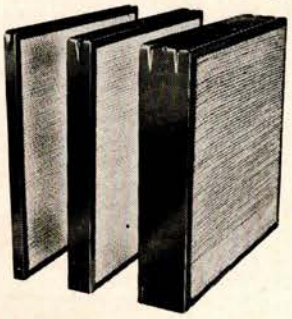

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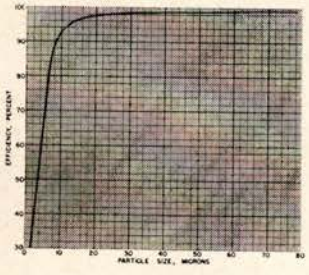

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ATOMIC POWER

(Continued from page 48-20)

further developments in the use of atomic power have not been able to take place.

Speaking at the same meeting, a forum on atomic energy in industry sponsored by the Stanford Research Institute and the Atomic Industrial Forum of New York, Dr. Edward Teller, professor of physics at the University of California, predicted that in 20 to 30 years, "abundant power, cheaply produced, will be possible through the atomic reactors being developed today." Government regulations on reactor construction are necessary, he told the industrialists, because one accident, although perhaps not catastrophic, would turn public opinion against the use of atomic power and so delay further advances in production of this abundant cheap power.

Other speakers at the session agreed that, at the present time, power produced by atomic energy cannot compete economically with power produced by other means; with further research, however, they said that the cost should eventually be reduced.

WAR HOUSING BY NEUTRA FOR SALE BY LAHA

CHANNEL HEIGHTS, Richard Neutra's deservedly famous housing project on a site overlooking San Pedro, Calif., has been put up for sale by the Los Angeles Housing Authority under the terms of the Lanham Act, as amended. Built in 1943 under FPHA's permanent war housing program, Channel Heights contains 600 apartments in 222 two- and four-unit buildings, a community building and child care center, shopping center and garden craft center (a recreation project center which encouraged better care of the project's grounds by its residents).

Offered as "an excellent investment opportunity," the project will be sold to the highest bidder on May 17th at 2:30 P.M. PST. Bids will be publicly opened and read at that time. Bids may be all cash, or a cash down payment of not less than 10 per cent plus a deed of trust and note for the balance of the purchase price payable in no more than 20 years, with interest at five per cent. Further details and descriptive folder on the project are available from Howard Holtzendorf, executive director, Housing Authority, City of Los Angeles,

(Continued on page 48-26)

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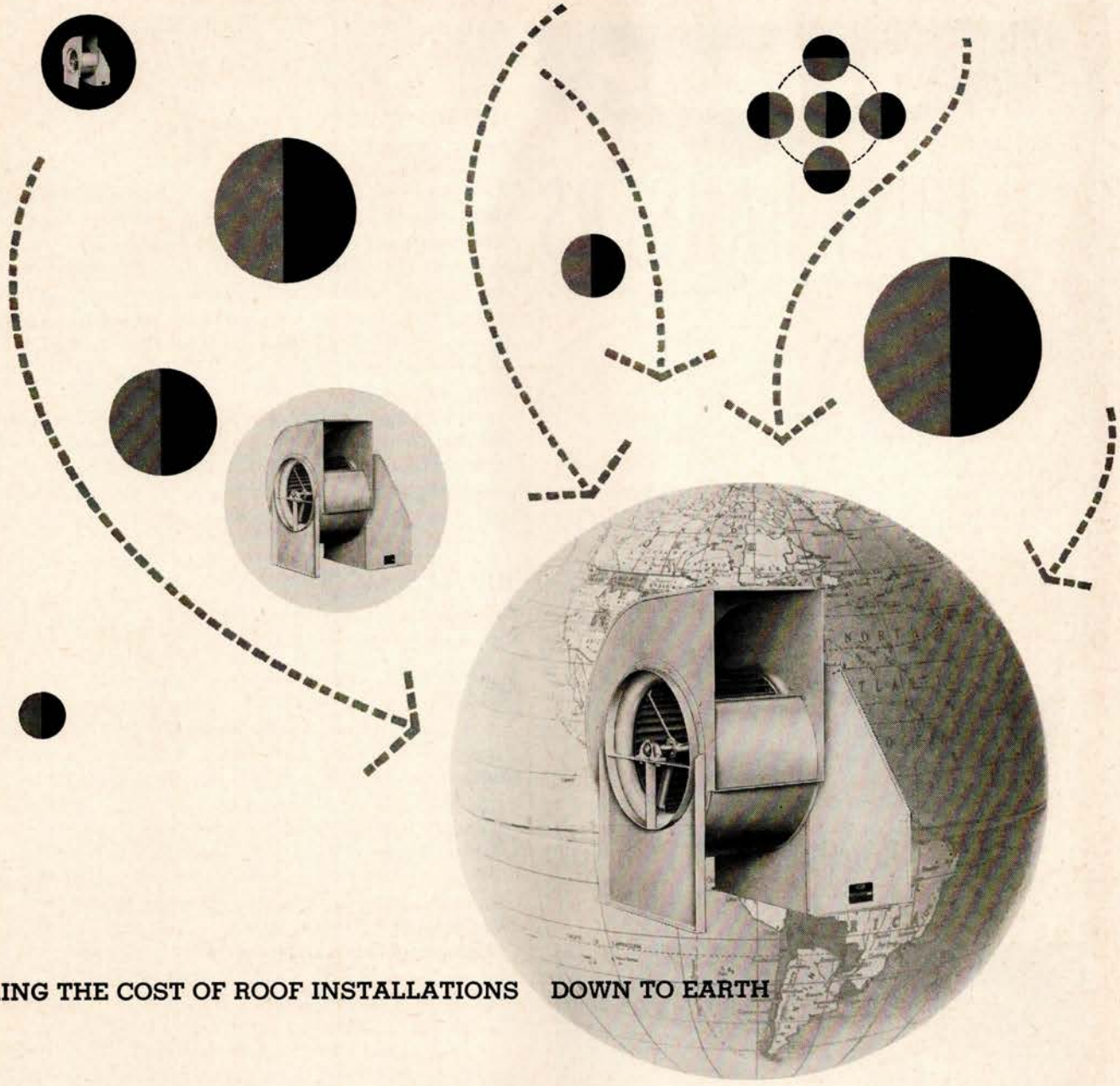

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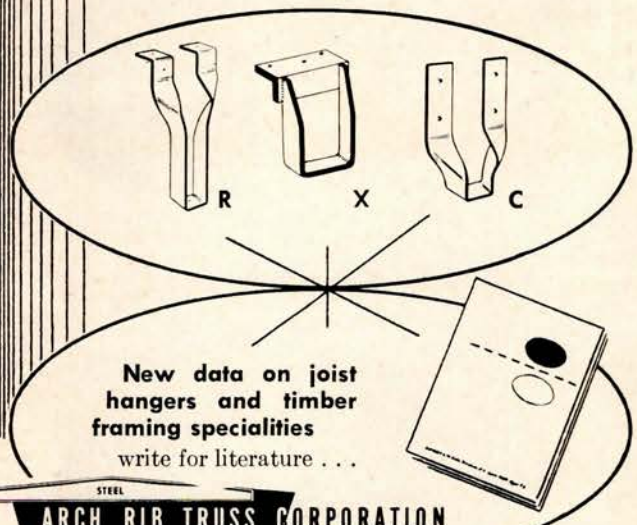

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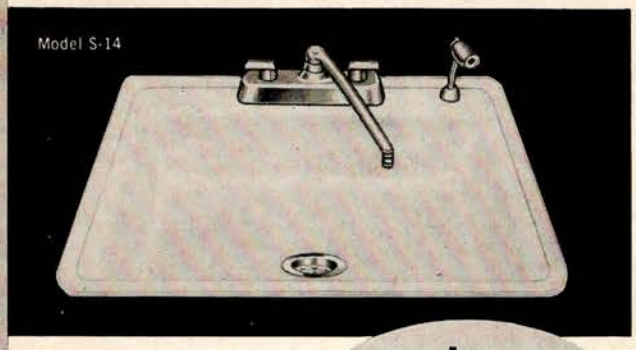

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 (Continued from page 48-24)

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L.A. HOME SHOW TO HAVE FIVE MODEL HOUSES

THE LOS ANGELES HOME SHOW, to be held June 9–19 at the annual Construction Industries Exposition at Pan Pacific Auditorium, will feature five model houses, two of which will be designed by architects. The "Home with a Heart," with a circular plan in which the kitchen is the "heart," will be designed by Happ Gilman and Associates, architects. The other, the all-electric "Tenth Anniversary Home" (in honor of the Show's tenth anniversary), will be designed by Ayres and Fiege, architects.

Of the other three houses to be shown, one will be designed and constructed by Pasadena City College students. A construction company, Braemar Corporation, will build the other two which will be "exact replicas of an ideal modern apartment and of a model cooperative house."

PROFESSIONAL NEWS

Washington Chapter A.I.A. Sponsors Professional Series

A series of six seminars — one a week for six weeks — has been under way in Seattle under the sponsorship of the Washington State chapter, A.I.A., of which Robert L. Durham is president. The series, which began on March 3, was open to non-members as well as chapter members. Over 200 persons registered for the seminars.

Subjects, especially angled toward young architects, covered practical aspects of architectural practice which are a part of experience rather than academic education. Among them were client relations, office practice, execution of work, law, and standards of professional practice.

Members of the various panels were Seattle architects Lister Holmes, John Rohrer, Omer Mithun, Lawrence Waldron, William H. Carleton, James Greco, Carl Forssen, Leonard Bindon, Lloyd Lovegren, Gene Zema, Francis Huggard, David Anderson, J. H. DeHart, Lamonte Shorrett, Waldo Christenson, Robert Durham, John Detlie and Victor Steinbrueck. Moderators were John Morse, Fred Bassetti, Robert Dietz and Paul G. Carlson. Albert O. Bumgardner and Aaron D. Freed were chairman and vice chairman for the series.

East Bay A.I.A. Opens Chapter Office with W.A.L. Staff

A chapter office in the Claremont Hotel, Berkeley, Calif., has been opened by the East Bay chapter, A.I.A. Members of the Women's Architectural League of the East Bay will staff the office on a volunteer basis.

Chapter Publication Promotes Good Relations

The Job Clinic, a multigraphed publication of the Southern California chapter, A.I.A., Technical and Materials Committee, is "an exchange of ideas between the architect and the building trades." In it the committee reports the results of joint meetings with trade groups and makes recommendations for better specification writing, checking of labor jurisdiction over trade groups to avoid conflicting directions, and other good practice requirements.

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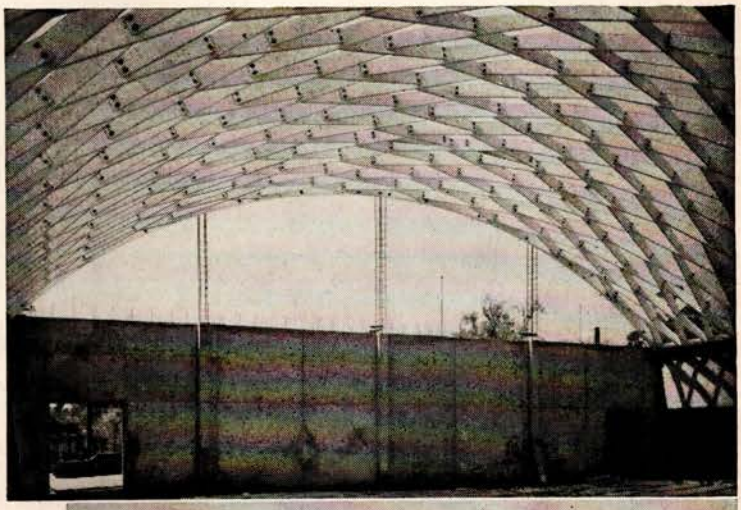



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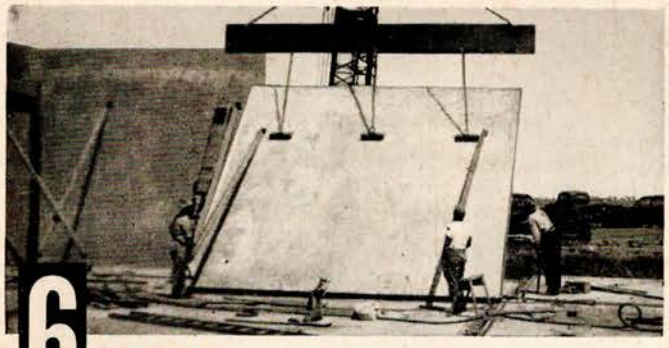

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CALENDAR OF WESTERN EVENTS

• May 7: Society of Architectural Historians, Western Section meeting, San Francisco. Further information from Arthur Waugh, Librarian, School of Architecture, University of California, Berkeley

• May 22–26: National Association of Architectural Metal Manufacturers, annual convention, Broadmoor Hotel, Colorado Springs, Colo.

• June 2: Annual Honor Awards dinner, Washington State Chapter, A.I.A., Seattle

• June 9–19: Construction Industries Exposition and Home Show, Pan Pacific Auditorium, Los Angeles

• June 13–18: International Design Conference, Aspen Institute, Aspen, Colo. Further information from Charles Saul, The Aspen Company, Aspen, Colo.

• June 20–23: Forest Products Research Society, Seattle, Wash. Further information from Perry Culp, Jr., 601 Tacoma Bldg., Tacoma, Wash.

• July 12–14: Plant Maintenance and Engineering Show, Pan Pacific Auditorium, Los Angeles

• August 22–23: Electronics and Automatic Production symposium in San Francisco, sponsored by Stanford Research Institute and National Industrial Conference Board

• September 9–11: Northwest Region, A.I.A., annual conference, Many Glacier Hotel, Glacier National Park, Mont.

• October 6–8: California-Nevada-Hawaii Region, A.I.A., annual convention, Biltmore Hotel, Santa Barbara, Calif.

• October 6–8: Structural Engineers Association of California, annual convention, Ahwahnee Hotel, Yosemite National Park, Calif.

WESTERN SECTION

INDEX TO ADVERTISING

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Catalogs of the firms listed below are available in the 1955 Sweet's Catalog Files as follows:

a — Architectural File (green)
ic — Industrial Construction File (blue)
lc — Light Construction File (yellow)

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	Smoot-Holman Company	48–21
	Soulé Steel Company	48–23
	Summerbell Roof Structures	48–27
a-ic	Sunbeam Lighting Company	48–7
	Thompson, E. A. Co., Inc.	48–28
	Trendware, Inc.	48–13
	U. S. Porcelain Enamel Co.	48–26
	United States Steel Corp.	48–10–15
	Utility Fan Corp.	48–25
	Weber Show Case & Fixture Co.	48–11

. . . . . .

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.



LAMINATED BLOCK FLOORING
SPEC: 7/16"x9"x9" squares — tongued and grooved—slightly beveled edges — prefinished waxed and polished—installed with mastic over suspended concrete, concrete slab on-grade, wood, asphalt tile — ideal for radiant heat installation—available in Appalachian Oak (Natural, Toast-Brown, Rose, Coral, Gold, Green and Blue); Natural Walnut and Birch. Type I Waterproof Plywood Construction. Meets U.S. Department of Commerce Specifications CS35-49.

Above: TOAST-BROWN APPALACHIAN OAK LAMINATED BLOCK



CLUSTERED SQUARE PATTERN
SPEC: 5/16"x12"x12" solid parquetry squares—beveled edges—prefinished—installed with adhesive—available in Natural or Toast-Brown Oak; Gothic Oak; genuine Walnut and Teak.



HADDON HALL PATTERN
SPEC: 5/16"x12"x12" solid parquetry squares—beveled edges—prefinished—installed with adhesive—available in Natural or Toast-Brown Oak; genuine Walnut and Teak.



COLONIAL PLANK
SPEC: 13/16" x random widths x random lengths—solid or laminated—square or beveled edges—T&G — unfinished — available in plain or quartered Oak; Gothic Oak; genuine Walnut and Teak.



LAMINATED BLOCK IN COLORS
Now! the celebrated Wood-Mosaic Laminated block is available in gala, decorator's colors: Rose, Coral, Gold, Green and Blue—made of Appalachian Oak.

Modern living takes to the simple elegance of **hardwood floors**

Wood-Mosaic distinctively designed hardwood flooring is easily adapted to a wide variety of today's interior schemes and architectural design. Practical in every respect, these floors combine exquisite beauty with lifetime durability.

The Laminated Block, the Haddon Hall Pattern, and the Clustered Square Pattern are but a few of the many fine floors that Wood-Mosaic manufactures for the *Architect* of today. These distinguished floors are as economical as they are beautiful . . . shipped to your construction site ready for installation (prefinished, waxed and polished) . . . a time and money saver on any job.

Talk with us before you figure your next job . . . we have a floor for every requirement.

Refer to our Catalog in Sweet's

W Since 1883 M

PARKAY INC.

Division of

WOOD-MOSAIC CORPORATION

LOUISVILLE 9, KENTUCKY

Maker of the World's Finest Hardwood Flooring

MAIL COUPON FOR DETAILED INFORMATION ON THESE DISTINCTIVELY DESIGNED FLOORS

PARKAY, Inc. AR5
Division of WOOD-MOSAIC CORPORATION
5000 Crittenden Drive, Louisville 9, Kentucky

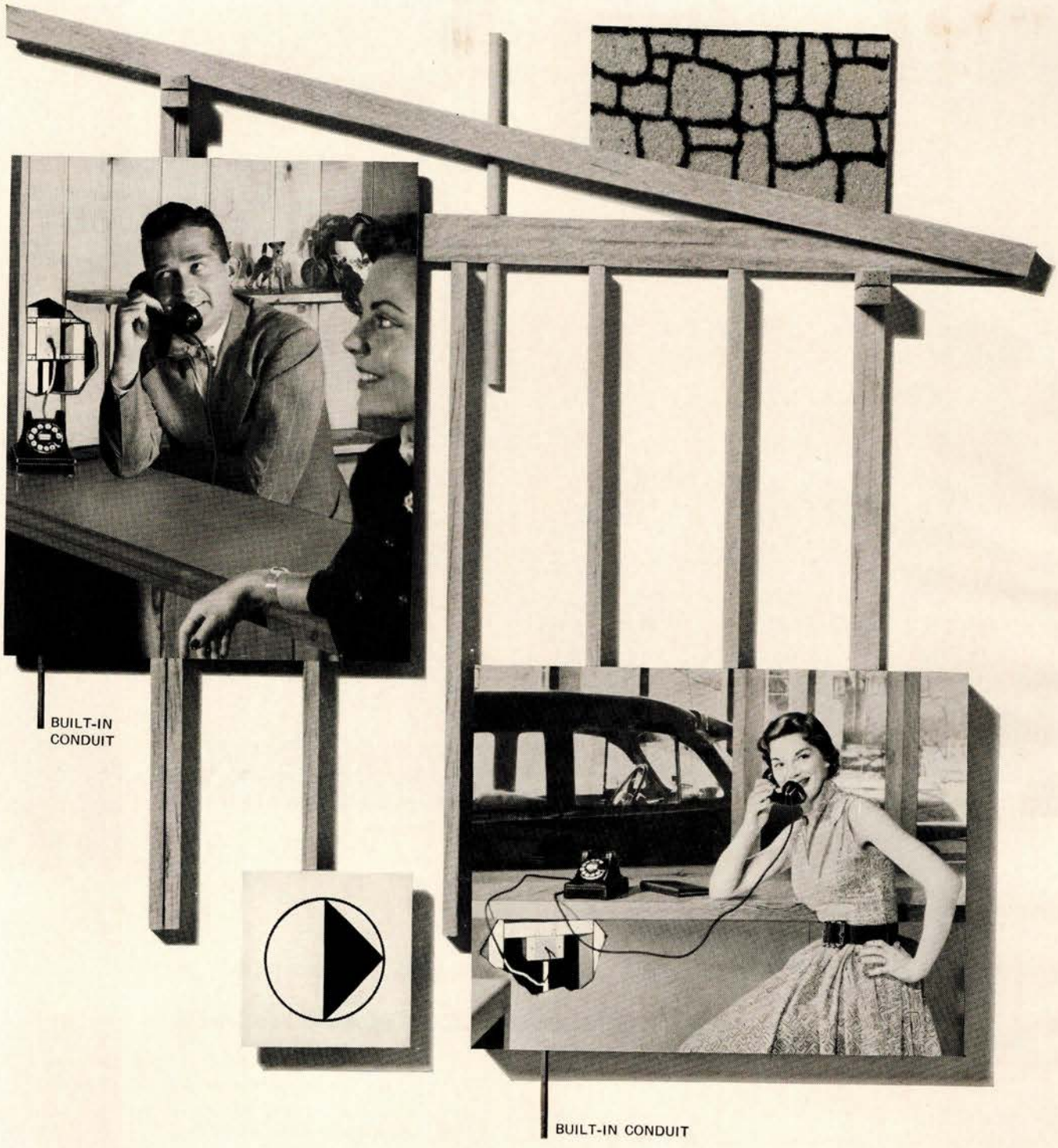
Please send me detailed information on the following floors: ☐ Laminated Block ☐ Haddon Hall Pattern ☐ Clustered Square Pattern ☐ Colonial Plank

Name_____

Address_____

City_____ State_____

Company_____



Providing for enough telephone outlets in the right locations is good long-range planning. It means your clients will always have the telephone service they want where they want it—with telephone wires concealed.

Your Bell telephone company will be glad to help you work out economical conduit installations. Just call your nearest business office. **BELL TELEPHONE SYSTEM**

®SCHLAGE© Design Originality

DRESSES UP DOORWAYS

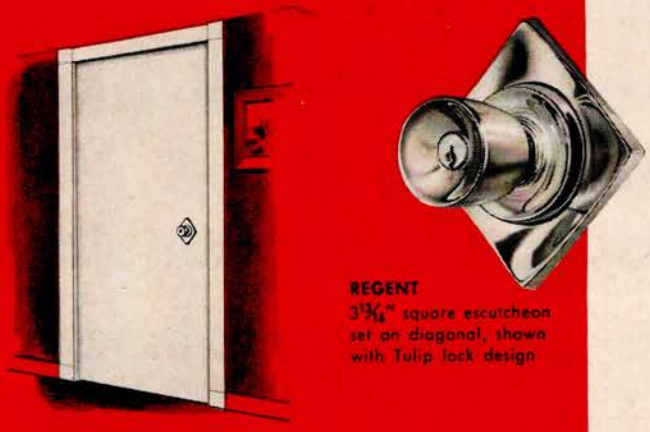
The distinctive square Imperial escutcheon is **more** than just a new design. Combined with its smaller companion, the Regent, it introduces an original lock design concept in door decor — matching motifs you can establish throughout your homes. And it gives you — together with Schlage's round escutcheons — an even wider range of novel entranceway effects . . . lets you feature Schlage quality and beauty at a cost well within the limits of a modest building budget.



IMPERIAL
5½" square escutcheon set on diagonal, shown with Tulip lock design

ORIGINAL . . .

When placed on the diagonal, the Imperial presents a dramatically different diamond effect . . . welcome variety without added expense for the volume builder . . . another example of tasteful originality in door decor made possible by these advanced escutcheon designs.



REGENT
3 3/16" square escutcheon set on diagonal, shown with Tulip lock design

VERSATILE . . .

The smart distinction of the Imperial can now be repeated on interior doors with the smaller Regent . . . adding a new note of beauty to interior styling . . . protecting the door surface from unsightly scratches.

DISTINCTIVE . . .

In a square setting, the beautiful new Imperial escutcheon forms a striking concave background for Schlage locks . . . adds just the right touch of distinction to entranceways. And, with Schlage's original long backset feature, greater freedom of lock placement creates even more possibilities for original doorway styling.



IMPERIAL
5½" square escutcheon shown with Tulip lock design

SCHLAGE ESCUTCHEONS . . . for the favorable first impression that helps sell discriminating home buyers.

***Send for* "NEW DESIGNS" FOLDER No. 626-A-5**

This new folder suggests many refreshing ways to feature door decor . . . incorporating Schlage's five beautiful new lock and escutcheon designs. Fully illustrated, with complete specifications.



The Imperial and Regent escutcheons are available in wrought brass, bronze or aluminum, in all standard finishes . . . can be used with a wide variety of Schlage lock designs.

®SCHLAGE©

SCHLAGE LOCK COMPANY
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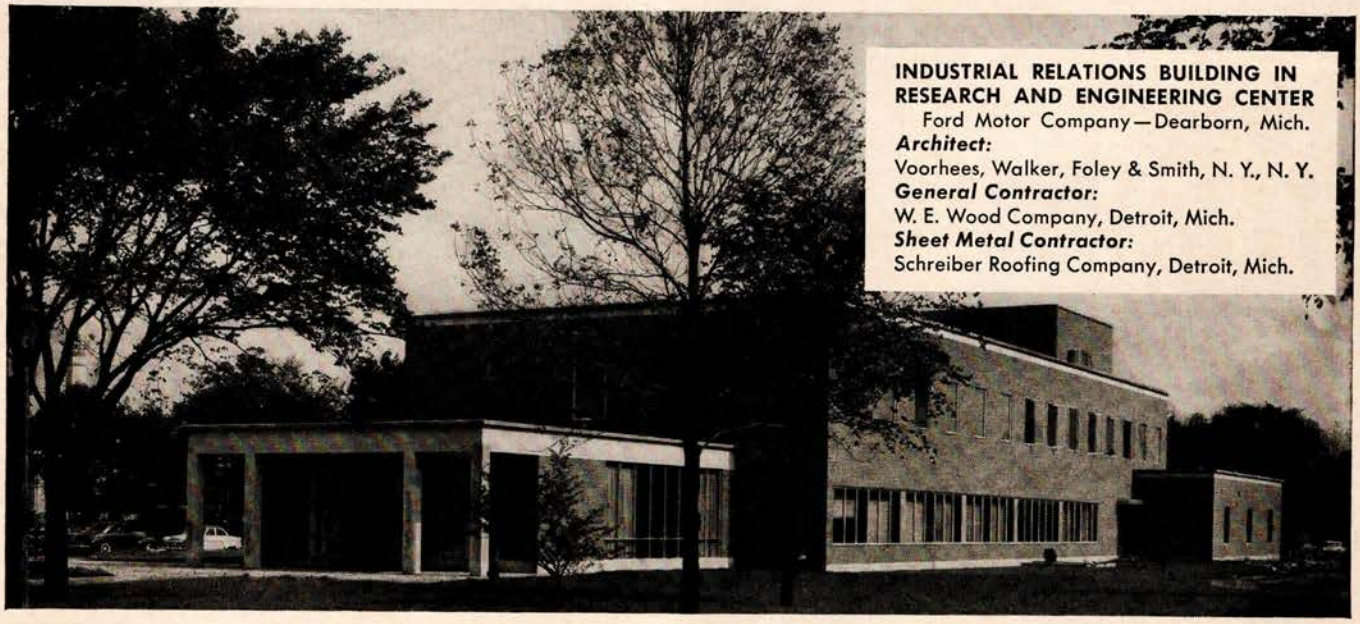
Address all correspondence to Schlage Lock Company, San Francisco

OUTSTANDING!



INDUSTRIAL RELATIONS BUILDING IN RESEARCH AND ENGINEERING CENTER
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General Contractor:
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Sheet Metal Contractor:
Schreiber Roofing Company, Detroit, Mich.

Another installation of Chase® Copper Base Flashing Expansion Joint!

More than 1600 feet of Chase Copper Base Flashing went into this new Ford Motor Company building, protecting the vital juncture where the flat, built-up roof meets vertical masonry walls.

A solid copper perimeter flashes the base, and though every seam is soldered, the unique Chase Copper Base Flashing Expansion Joint will allow for expansion and contraction of the metal!

Now, there is no need to allow for temperature changes by using loose-lock, "hope-for-the-best" seams. Simply install Chase Copper Base Flashing Expansion Joint! The push-pull of temperature change is absorbed safely and surely, while seams stay completely watertight!

See that *your* installations get the protection of Chase Copper Base Flashing Expansion Joint—for information and specifications, write Chase!



Installing Chase Copper Base Flashing Expansion Joint

Chase®
BRASS & COPPER CO.
WATERBURY 20, CONNECTICUT • SUBSIDIARY OF KENNECOTT COPPER CORPORATION
The Nation's Headquarters for Brass & Copper

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Charlotte†	Denver	Kansas City, Mo.	New Orleans	Rochester†	(†sales office only)

for homes . . . offices . . . stores . . .

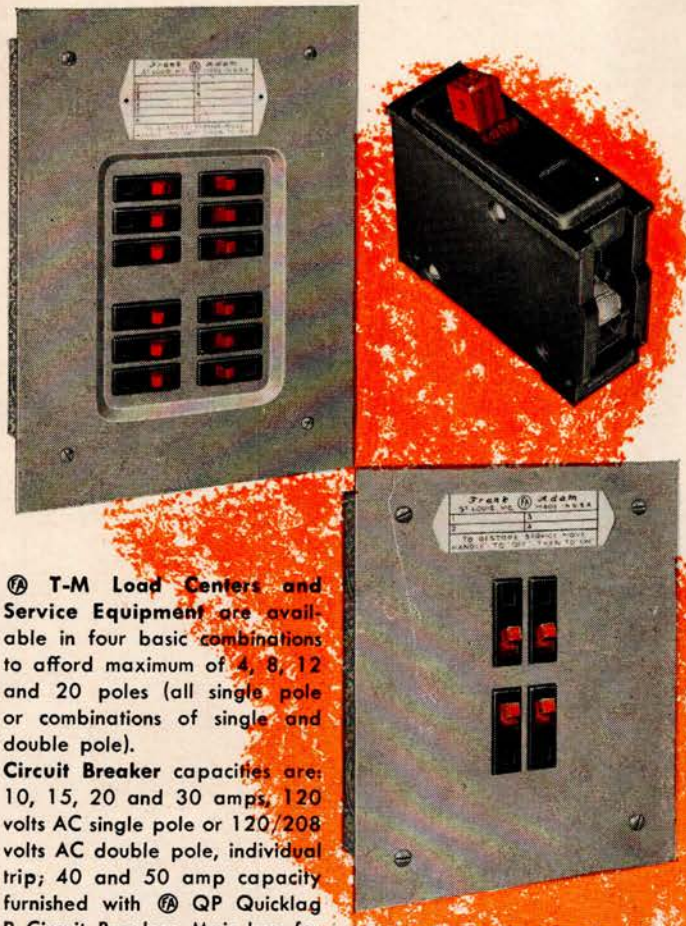


FA

T-M thermal-magnetic trip circuit breaker

LOAD CENTERS and SERVICE EQUIPMENT

(Panel Base Assembly Type)



Illustrated are Complete "On-the-Job" Assemblies

Ⓕ **T-M Load Centers and Service Equipment** are available in four basic combinations to afford maximum of 4, 8, 12 and 20 poles (all single pole or combinations of single and double pole).

Circuit Breaker capacities are: 10, 15, 20 and 30 amps, 120 volts AC single pole or 120/208 volts AC double pole, individual trip; 40 and 50 amp capacity furnished with Ⓕ QP Quicklag P Circuit Breaker. Main lugs for 100 amp, maximum 115/230 volts 3-wire single phase or 120/208 volts 4-wire three-phase mains.

Include these new assemblies in all plans for new or modernized residential or commerical construction — wherever safe, dependable automatic circuit protection is desired.

Approved by the Underwriters' Laboratories, Inc., for label service, these assemblies provide automatic circuit protection against service interruptions caused by short circuit, harmless or dangerous overloads.

The new units are of the "panel base assembly" type, which means that all components are available in one complete package from Ⓕ distributors' stocks for quick and easy assembly on the job. Circuit Breakers individually packaged also.

Features of the new assemblies are: Ⓕ T-M thermal-magnetic trip circuit breaker with quick-make and quick-break operation on manual or automatic trip and Ⓕ design magnetic blow-out; screwless assembly (just slip the breakers in); one pressure type connection between circuit breaker and bus bar, and "sequence bussing" to balance the load and permit double pole, individual trip combinations.

Use these new assemblies on all lighting and branch circuits. For additional information, consult your nearest Ⓕ representative listed in Sweet's.

Frank Adam Electric Co.

Phone JEfferson 3-6550
BOX 357, MAIN P. O. • ST. LOUIS 3, MO.

Makers of: busduct • panelboards • switchboards • service equipment • safety switches • load centers • Quikheter

Whitest by Any standard

The extreme whiteness of Trinity White Cement is obtained by selection of raw cement-making materials which are remarkable for absence of color. There is no off-color cast in Trinity White to detract from the beauty of the finished structure.



as white as snow

. . . plain or waterproofed

Trinity is the *whitest* white cement judged by any standard. It is whitest in the bag . . . whitest in the mix . . . whitest in the finished job! You can see the extra whiteness with the naked eye! Trinity White is a true portland cement. It meets all Federal and ASTM specifications. Use it for architectural concrete units; stucco, terrazzo; cement paint; light-reflecting surfaces; mass or contrast; or wherever the purity of white and the purity of color tints is desirable in concrete or masonry. Trinity Division, General Portland Cement Co.

Trinity White

THE WHITEST WHITE CEMENT

A Product of GENERAL PORTLAND CEMENT CO. • Chicago • Dallas • Chattanooga • Tampa • Los Angeles



International Business Machines Corporation, Heat Treat Plant, Endicott, New York.
Architects: Smith, Hinchman & Grylls, Inc., Detroit, Mich.
General Contractors: Sordoni Construction Co., Wilkes-Barre, Pa.

I B M USES UALCO AWNING WINDOWS

for efficiency and long-term economy

Efficiency experts that they are, IBM can be expected to accept only those materials which measure up to their own exacting standards. In specifying Ualco Aluminum Awning Windows for this job, architects Smith, Hinchman & Grylls, Inc. selected windows which, like the rest of the building, were designed and engineered for trouble-free operating efficiency.

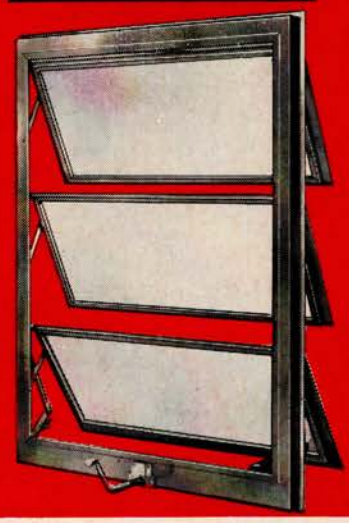
In addition, Ualco Awning Windows are made of heavy extruded aluminum which meets all architectural requirements for strength; will never warp, rot, rust or need painting — require no upkeep expenses ever!

Confidence in the extra measure of efficiency and economy in Ualco Aluminum Awning Windows is shared by leaders in every field of construction. Ualco deserves your consideration.

UALCO ALUMINUM AWNING WINDOW FEATURES: Exclusive Strip-Proof Operator with heavy-duty torsion bar built-in cam lock. • Completely weather-stripped with Koroseal. • Vents open and lock in any position up to 90 degrees. • Integral fin surrounds windows; takes brick fin and fin trim. • Jiffy-Quick Sill Clips slide in channel from each side, use as needed.

SEE OUR CATALOG IN SWEET'S ARCHITECTURAL FILE 16A/U OR WRITE US FOR COMPLETE INFORMATION.

Ualco® ALUMINUM WINDOWS





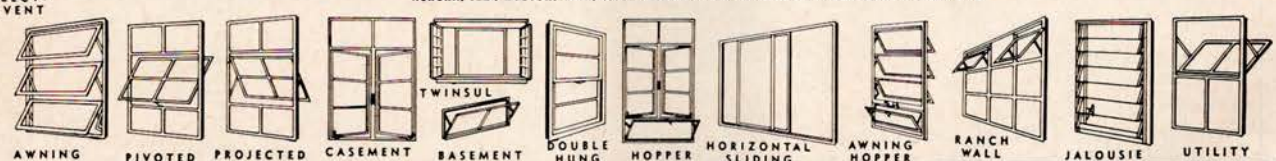
SELECT-A-VENT

UALCO WINDOWS ARE UNCONDITIONALLY GUARANTEED AGAINST DEFECTIVE MATERIALS AND WORKMANSHIP.

ENGINEERING PLANNING SERVICE: TO ASSIST ARCHITECTS, ENGINEERS AND CONTRACTORS IN MAKING "TAKE-OFFS" AND SOLVING WINDOW PROBLEMS.

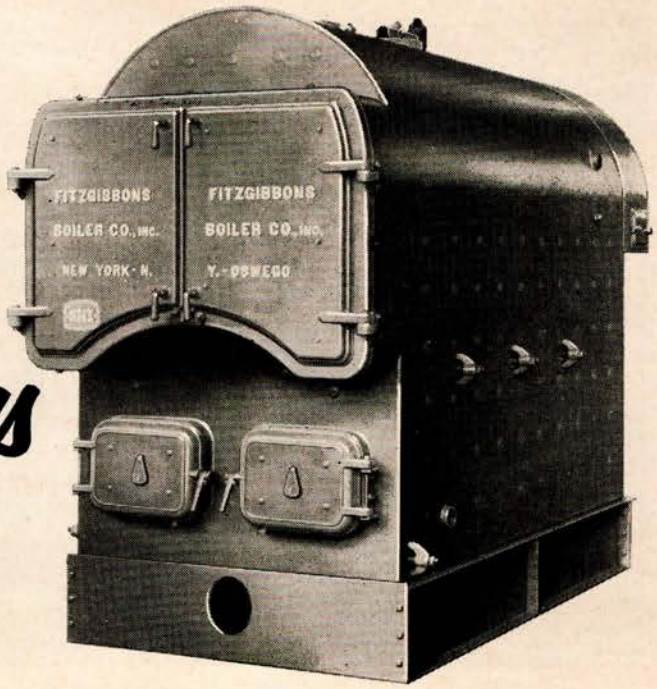
SOUTHERN SASH SALES & SUPPLY CO., SHEFFIELD, ALABAMA

SALES OFFICES & WAREHOUSES: CANTON, OHIO: ELIZABETH, N. J.: HIALEAH, FLA.: FLORENCE, ALA.: VAN NUYS, CALIF.: GREENSBORO, N. C.: AURORA, ILL.: RUSTON, L. A.: MONTGOMERY, ALA.: KANSAS CITY, MO.: WASHINGTON, D. C.



UALCO — WORLD'S LARGEST MANUFACTURER OF ALUMINUM WINDOWS

Modern Fitzgibbons heat...

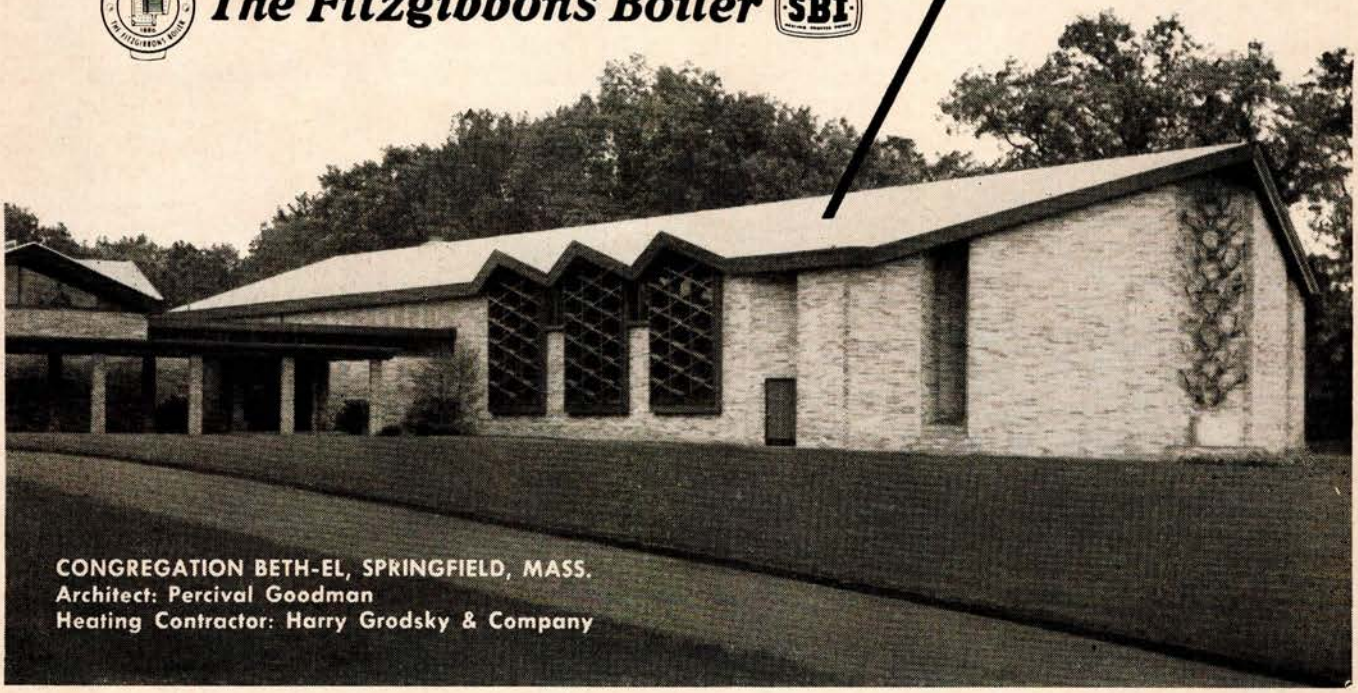


for a distinctive religious building

FITZGIBBONS "D" TYPE FIREBOX BOILER is a wise choice for heating big buildings everywhere. From an engineering standpoint, it makes an extremely efficient installation with simple, trouble-free operation and maintenance. From an operating or owner point of view, the outstanding fuel economy of the "D" Type Firebox Steel Boiler makes it particularly attractive. The Fitzgibbons "D" Type Bulletin gives complete information. Write to the Fitzgibbons Boiler Company, Inc., 101 Park Avenue, New York 17, N. Y. Ask for Catalog AR-5.

SINCE 1886

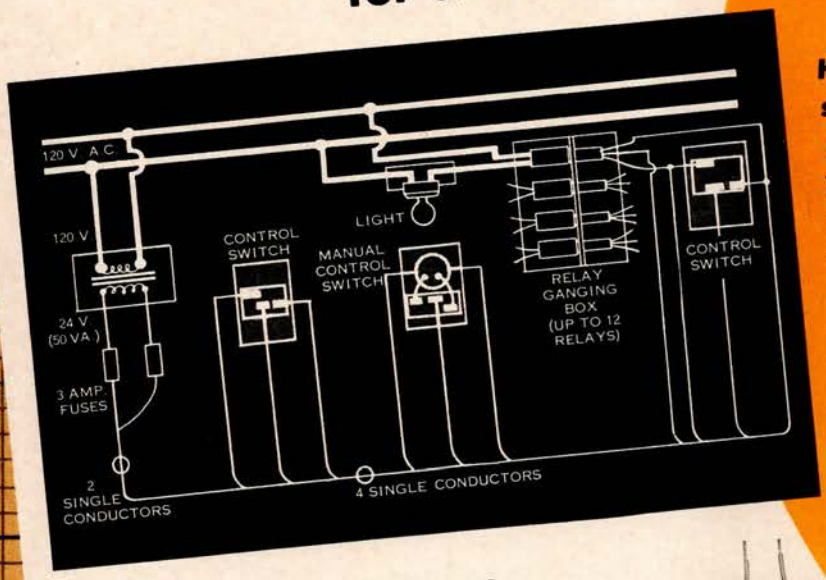
The Fitzgibbons Boiler® SBI



CONGREGATION BETH-EL, SPRINGFIELD, MASS.
Architect: Percival Goodman
Heating Contractor: Harry Grodsky & Company

The Swing is to LOW VOLTAGE CONTROL

. . . and you'll prefer SQUARE D for a lot of reasons

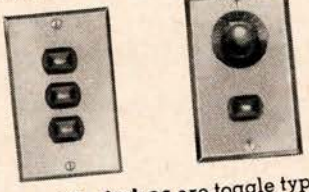


Here is a low voltage remote control system with all the features you've wanted . . .

Because it saves so much installation time, the cost of this very flexible system compares favorably with conventional systems. Actually less, in many cases. It offers a super-convenient means of switching lighting and appliance circuits. It has scores of applications—in homes, office buildings, schools, churches, warehouses, factories.



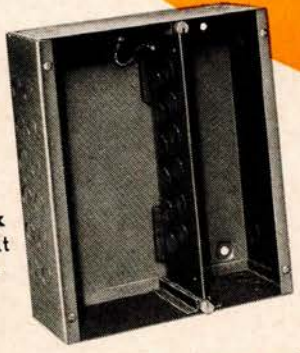
Relays are extremely rugged. 20 amperes, 120 volts A.C. Also 20 amperes, 277 volts A.C. for low voltage control of high voltage fluorescent lighting. All relays mount in ½" knockouts.



Control Switches are toggle type and fit Despard plates and straps. One, two, or three control switches (*left, above*) or one **Manual Selector Switch** and one control switch (*right, above*) can be mounted on a single strap. Manual selector switch controls from 1 to 9 circuits. Key-operated switch also available.



D.C. Power Unit, designed for consistent and trouble-free service. Eliminates A.C. hum.



Relay Ganging Box for speedy, convenient and quiet installations.



Master Controller automatically controls up to 23 individual circuits from any location.

Write *for Low Voltage Control Bulletin.*

Address
Square D Company,
6060 Rivard Street,
Detroit 11, Michigan.

ASK YOUR ELECTRICAL DISTRIBUTOR FOR SQUARE D PRODUCTS

SQUARE D COMPANY

Color Planning Service

The Pratt & Lambert Representative who calls on you is trained and equipped to render...

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- Your Pratt & Lambert Representative is conversant with colors and trends not only in paints, stains and enamels, but also in other surface treatment materials and finishes as well.
- He is trained to co-ordinate *all* color factors, at any stage of planning or construction, and to develop completely integrated, perfectly articulated color sequences which retain unity in central theme while developing refreshing individuality in specific rooms and areas.
- He does this realistically, based upon sound, economical painting specifications and methods which will assure the results *you* want, consistant with the project and budget.

Ask your Pratt & Lambert Representative for this service

or write to the nearest Pratt & Lambert Architectural Service Department: 3301 38th Avenue, Long Island City 1, N. Y. — 75 Tonawanda Street, Buffalo 7, N. Y. — 326 West 26th Street, Chicago 16, Ill. — 254 Courtwright Street, Fort Erie, Ontario.

Inquiries from registered, practicing architects, written on professional letterheads and relating to specific jobs, will receive preferred attention.

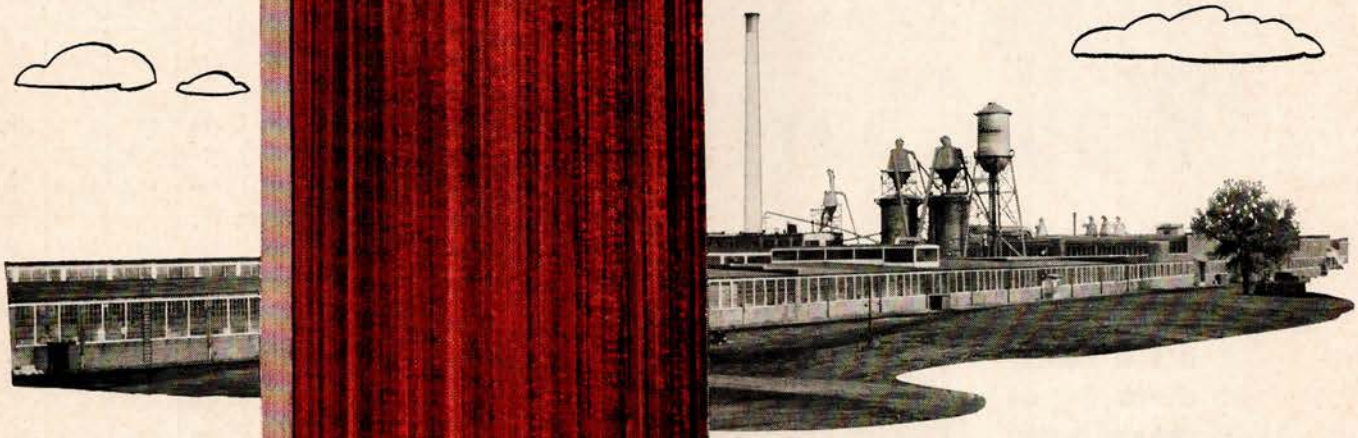
REGISTERED PL TRADE MARK

PRATT & LAMBERT-INC.

A Dependable Name in Paint since 1849

NEW YORK · BUFFALO · CHICAGO · FORT ERIE, ONTARIO

Look at the company behind your doors!



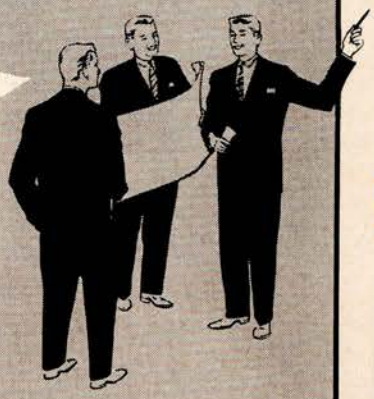
WHEN you specify or buy Mengel Doors, you get a *Guarantee backed by the world's largest manufacturer of hardwood products.** Mengel has "been here" for seventy-eight years, and builds all its products to the high standards required by a company which expects to be here *another* seventy-eight years.

This *means something* to you — for yourself, your clients, your customers. Mengel Doors are available in three different types, for every kind of job, "Palace or Project". *Each is competitively priced.* Write for complete information.

Door Department
THE MENGEL COMPANY
Louisville 1, Kentucky

* Mengel products include nationally-advertised Mengel Permanized Furniture, Mengel Kitchen Cabinets and Mengel Wall Closets.

Get this FREE Home Wiring Wall Chart!



It's a ready check list of typical home wiring loads and circuits!

LOAD AND CIRCUIT

KITCHEN

	Typical Wattage	Preferred Circuit	Volts	Wires	Breaker or Fuse	Number Outlets
RANGE	12000	10 KW.	120/240	3 #6	50A. 60A.	1
OVEN (Built in)	4500	6 KW.	120/240	3 #10	30A.	1
RANGE TOP (Heavy Duty)	6000	6 KW.	120/240	3 #10	30A.	1
RANGE TOP	3300	4 KW.	120/240	3 #12	20A.	1 or more
DISHWASHER	1200	2 KW.	120	2 #12	20A.	1
WASTE DISPOSER	300	2 KW.	120	2 #12	20A.	1
BROILER	1500	2 KW.	120	2 #12	20A.	2 or more
FRYER	1300	2 KW.	120	2 #12	20A.	2 or more
COFFEEMAKER	1000	2 KW.	120	2 #12	20A.	2 or more
REFRIGERATOR	300	2 KW.	120	2 #12	20A.	2
FREEZER	350	2 KW.	120	2 #12	20A.	2

LAUNDRY

	Typical Wattage	Preferred Circuit	Volts	Wires	Breaker or Fuse	Number Outlets
WASHING MACHINE	1200	2 KW.	120	2 #12	20A.	1
DRYER	5000	6 KW.	120/240	3 #10	30A.	1
IRONER	1650	2 KW.	120	2 #12	20A.	1
HAND IRON	1000	2 KW.	120	2 #12	20A.	2 or more
WATER HEATER	3000					

You'll want to post this handy and practical chart on the wall of your office or drafting room. Wherever it's used, you'll find it a valuable check list when you're planning the electrical systems of your homes.

AUTHORITATIVE!

The wiring facts shown by this chart were worked out in collaboration with leading electrical contractors and modern adequate wiring experts. You can be sure of the facts it contains.

Typical loads and circuits for kitchen, laundry, living areas and fixed utilities are shown. Also typical power center and circuit requirements for a six-room house.

KING-SIZED!

It's a real king-sized chart, twenty inches deep by two feet, 3½ inches wide. You'll find its large type easy to read. Printed in 2 colors on heavy stock, it stands up under long use. Send coupon for your FREE copy today!

Kennecott Copper Corporation

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CHART FOR HOME WIRING SYSTEMS

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Typical Outlets	Notes
	Use of more than one outlet is permitted, but not recommended.
	Appliance may be direct connected.
	Appliance may be direct connected.
	These appliances may be direct connected on a single circuit. Grounded receptacles required, otherwise.
	Heavy duty appliances regularly used at one location should have a separate circuit. Only one such unit should be attached to a single circuit at a time.
	Separate circuit serving only refrigerator and freezer is recommended.

	Notes
	Grounding type receptacle required.
	May be direct connected—must be grounded.
	Grounding type receptacle required.
	Consider possible use in other locations.
	Consult Utility Co. for load requirements.

LIVING AREAS

	Typical Wattage	Preferred Circuit	Volts	Wires	Breaker or Fuse	Number Outlets	Typical Outlets	Notes
WORKSHOP	1500	2 KW.	120	2 #12	20A.	2 or more		Separate circuit recommended.
PORTABLE HEATER	1300	2 KW.	120	2 #12	20A.	1		Should not be connected to circuit serving other heavy duty loads.
TELEVISION	300	2 KW.	120	2 #12	20A.	2 or more		Should not be connected to circuit serving appliances.
PORTABLE LIGHTING	1200	2 KW.	120	2 #12	20A.	2 or more		Provide one circuit for each 500 sq. ft. Divided receptacle may be switch controlled.

FIXED UTILITIES

	Typical Wattage	Preferred Circuit	Volts	Wires	Breaker or Fuse	Number Outlets	Typical Outlets	Notes
FIXED LIGHTING	1200	2 KW.	120	2 #12	20A.	2 or more		Provide at least one circuit for each 1200 watts of fixed lighting.
AIR CONDITIONER ¾ H.P.	1200	2 KW.	120	2 #12	20A.	1 or more		Consider 4 kw 3-wire circuits to all window or console type air conditioners. Outlets may then be adapted to individual 120 or 240 volt machines.
AIR CONDITIONER 1½ H.P.	2400	4 KW.	120/240	3 #12	20A.	1 or more		
CENTRAL AIR CONDITIONER	5000	6KW.	120/240					Consult manufacturer for recommended connections.
SUMP PUMP	300	2 KW.	120	2 #12	20A.	1 or more		May be direct connected.
HEATING PLANT	600	2 KW.	120	2 #12	20A.	1		Direct connected. Some local codes require separate circuit.
BATHROOM HEATER	1500	2 KW.	120	2 #12	20A.	1		Direct connected.

TYPICAL POWER CENTER AND CIRCUIT REQUIREMENTS

6 ROOM HOUSE 1500 sq. ft.

20-kw Service	main	100 amp 3w	240/120 volts	Dish Washer	1-2 kw	20 amp 2w	120 volts
10-kw Range	1-10 kw	50 amp 3w	240/120 volts	Oil Burner	1-2 kw	20 amp 2w	120 volts
3-kw Water Htr.	1-4 kw	30 amp 3w	240/120 volts	Freezer–Ref.	1-2 kw	20 amp 2w	120 volts
5-kw Dryer	1-4 kw	30 amp 3w	240/120 volts	Heater	1-2 kw	20 amp 2w	120 volts
1½-hp Cooler	1-4 kw	20 amp 2w	240 volts	T.V.	1-2 kw	20 amp 2w	120 volts
Clothes Washer	1-2 kw	20 amp 2w	120 volts	General Purpose	4-2 kw	20 amp 2w	120 volts
Ironer	1-2 kw	20 amp 2w	120 volts	Portable App.	3-2 kw	20 amp 2w	120 volts

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Please send me without obligation on my part, your free wall chart showing typical loads and circuits for home wiring systems.

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Which is
the best way
to air condition a
SHOPPING CENTER?



Acme Supermarket in Shoppingtown, DeWitt, N. Y., features a modern, year-round Carrier air conditioning system. Peripheral ducts carry cooled air from a 30-ton Weathermaker, warm air from two gas-fired duct-type unit heaters.



The Addis Company is an exclusive specialty shop in this new shopping center. It has its own 40-ton Carrier system complete with an evaporative condenser for 95% water saving, and gas-fired unit heaters for economical winter heating.



Candlelight Shop, Shoppingtown's gift center, packs a self-contained Carrier Weathermaker* into a side wall. The unit taps into ductwork previously installed for warm air furnace. New air-cooled Weathermakers require no water.

Carrier is the quickest way to the right answer

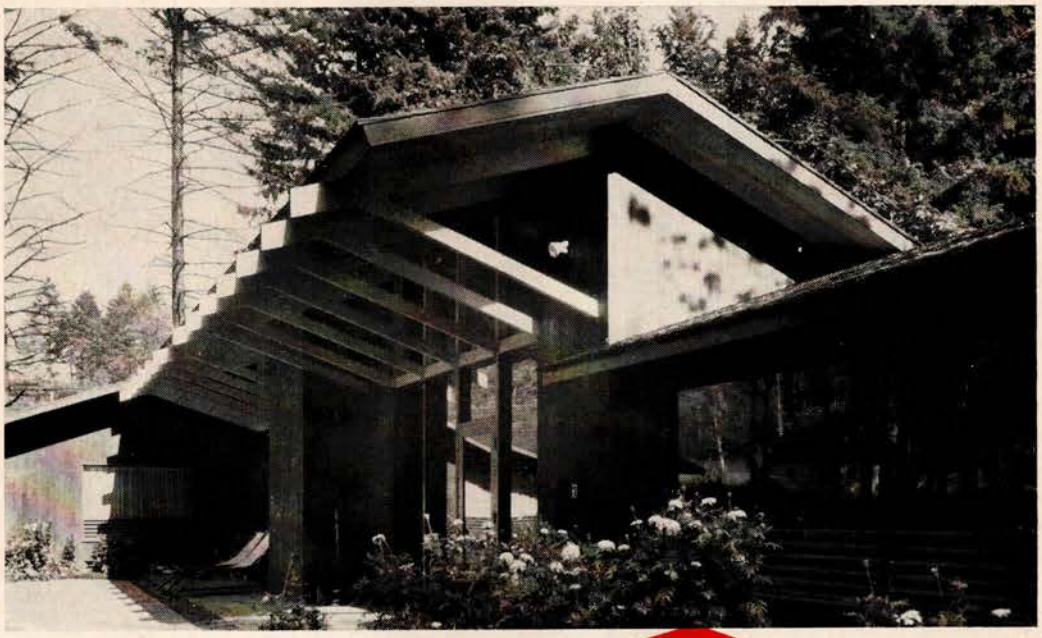
JUST 1–2 AND THE JOB IS THROUGH!

Carrier has all the ways to control the temperature on any job, summer or winter—and all Carrier equipment is engineered to the same uniform standard. So short-cut hours of selection by (1) using the Carrier line as your shopping guide and then (2) comparing values. Get in touch with your Carrier dealer or distributor—listed in the Classified Telephone Directory. Or write to us directly. Carrier Corporation, Syracuse, New York.

*Reg. U.S. Pat. Off.

Carrier

air conditioning · refrigeration · industrial heating





THERE ARE ALWAYS NEW USES FOR WEST COAST LUMBER

This striking "inside-outside" truss is one of the many interesting new uses of wood for home construction. Intended primarily to give a feeling of greater height in the living room, it also helps create a spacious, informal atmosphere. Outside, this truss application makes possible a post-free overhang for a protected patio and children's play area.

For freedom of expression, specify wood . . . the economical, ever-modern building material. For dependable lumber, specify the West Coast species . . . Douglas Fir, West Coast Hemlock, Western Red Cedar and Sitka Spruce.

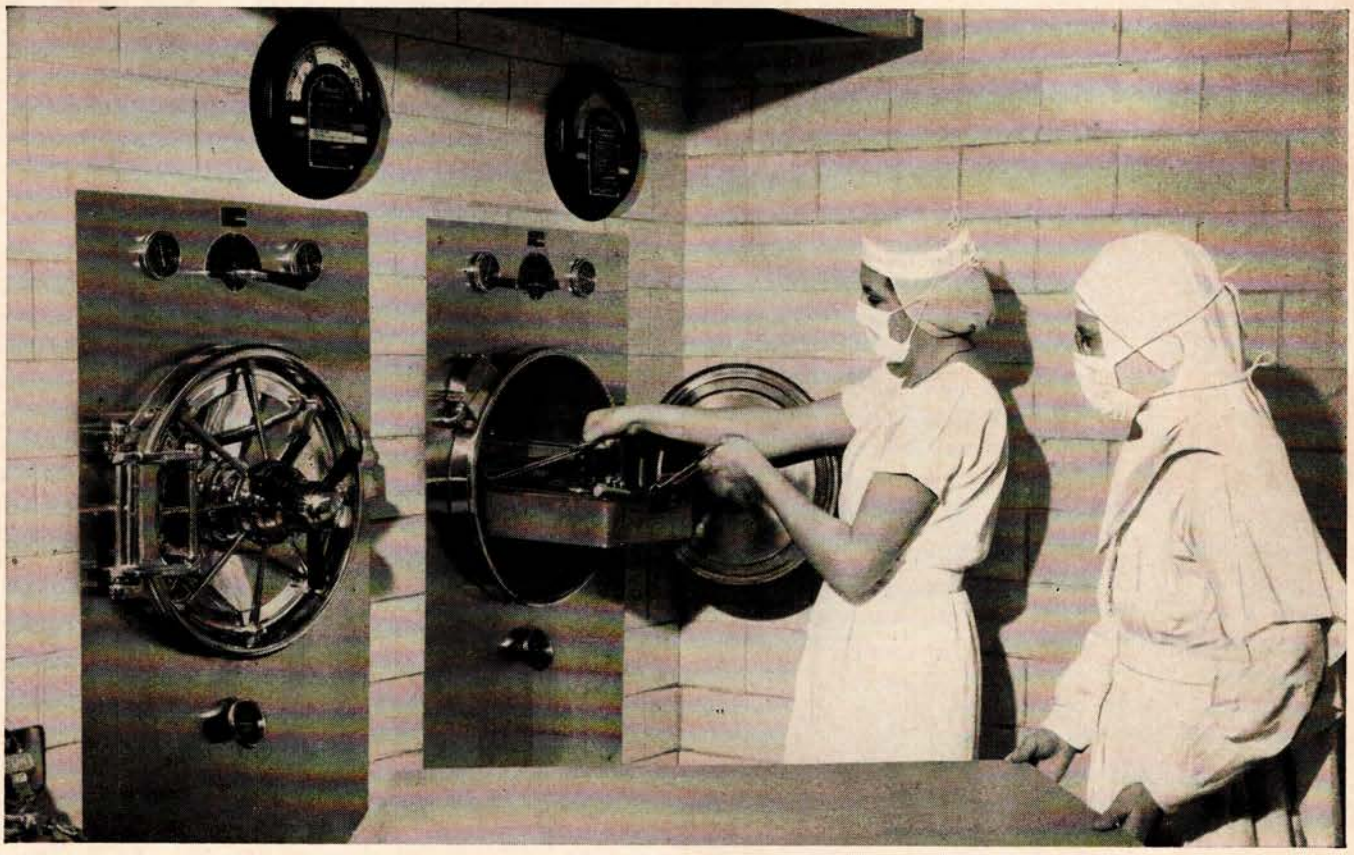
WEST COAST LUMBER

Douglas Fir • West Coast Hemlock
Western Red Cedar • Sitka Spruce

Send for folder describing free literature available for your reference files.
West Coast Lumbermen's Assn., 1410 S. W. Morrison St., Portland 5, Ore.

WALTER GORDON
Architect, AIA

Graduated from Princeton and later took his M.F.A. there. Also studied at University of Paris, and at Yale University graduate school. Has designed numerous homes, many of which have been featured in national magazines.



Nurses are enthusiastic about Castle's new 3-minute Emergency Instrument Sterilizer. Engineers say its all-welded Monel construction...

ups sterilizer efficiency still another notch

You get no corrosion inside these modern sterilizers. They're solid Monel®.

You get no chipping. No peeling.



Efficiency keynotes Resurrection's bulk units, too. Like the cylindricals, they were also supplied by Castle and have many of the same features. For economy, Castle makes them of Nickel-Clad Steel.

Units heat fast, clean easily. Their safety is extremely high. Their life is long. They aren't harmed by saline or other hospital solutions.

Now, for the outside, too

Engineers know that when inner and outer shells are different metals, they expand and contract at different rates. Monel has proven beyond question its value as an inner shell material. So now, Castle makes the outer shell and end ring (door collar) of Monel, too. Solid Monel. Then they weld all three into one solid unit that stays tight.

You reap the benefits. Corrosion resistance throughout. Long life.

Notice the other features of these Castle units

The photographs here show recent Castle installations at Chicago's new Resurrection Hospital... the 3-minute unit, top right . . . a 30-minute unit, top left . . . a Nickel-Clad Steel bulk unit in the small photo. Examine them closely. Notice the self-centering doors, the easy-to-use, clear reading Thermatic Control. Notice, too, the Monel trays.

For hospital planning help, write Wilmot Castle Hospital Planning Service, 1773 E. Henrietta Rd., Rochester 18, N. Y. Or call their local office.

THE INTERNATIONAL NICKEL COMPANY, INC.
67 Wall Street New York 5, N. Y.

INCO NICKEL ALLOYS

Monel . . . for low maintenance sterilizers

Why BRIXMENT IS WATERPROOFED

Brixment is waterproofed during manufacture, with the most effective air-entraining, water-repelling agent known.

The fact that Brixment is waterproofed can be demonstrated by making the crater test shown in Figure 1. Brixment's *effectiveness* in preventing the passage of water through the mortar can be demonstrated by making the test shown in Figure 2.

* * * * * *

Waterproofed Brixment gives you three practical benefits which are not available in ordinary cement-and-lime mortars:

1 HELPS PREVENT LEAKY WALLS

Even under pressure, water cannot readily pass through Brixment mortar. Therefore, if the face brick are backplastered with Brixment mortar, a barrier is set up against the passage of water to the inside of the wall.

2 GREATLY INCREASES DURABILITY

Water cannot readily penetrate Brixment mortar. This prevents the mortar from becoming saturated — therefore helps protect it from the destructive action of freezing and thawing to which it is subjected many times each winter.

3 HELPS PREVENT EFFLORESCENCE

Waterproofed Brixment mortar checks the passage of water and keeps it from percolating down through the wall, dissolving salts which may be in the masonry materials, and carrying them to the surface.

Louisville Cement Co., Louisville 2, Ky.

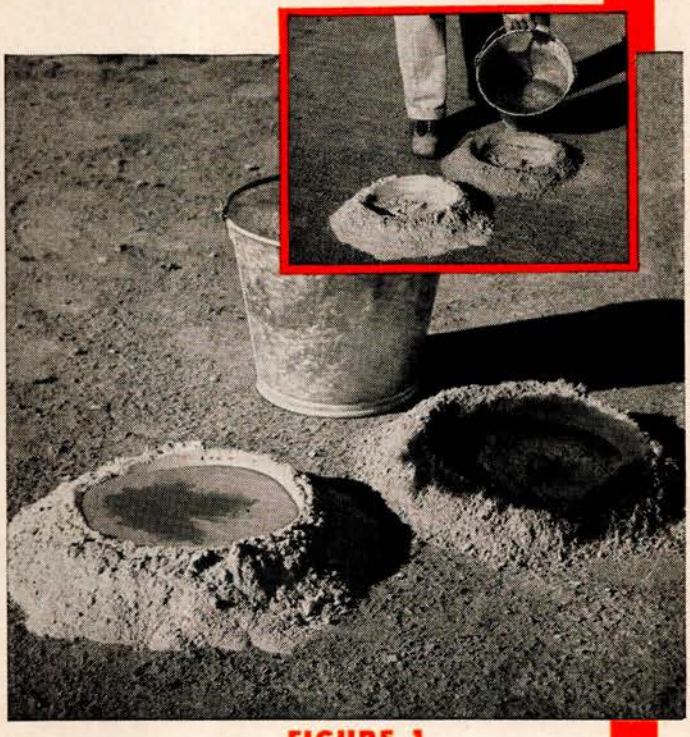
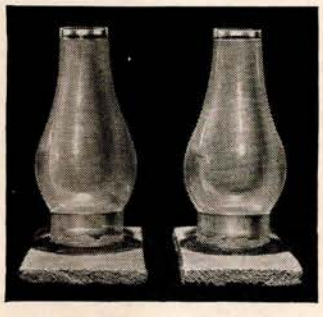


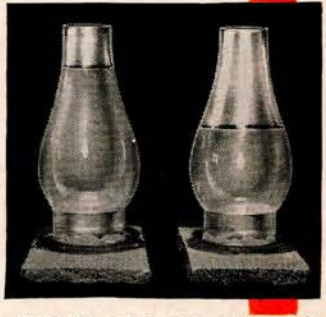
FIGURE 1

Pour out a pile of Brixment and a pile of ordinary cement and lime. Make a crater in the top of each pile. Fill each crater with water. Note how the cement-and-lime mixture absorbs the water immediately. Note how the waterproofed Brixment *holds* it.

FIGURE 2



Prepare two slabs of mortar, one with Brixment and one with ordinary lime-and-cement mortar. After mortars have hardened, seal a lamp chimney to each of the mortar slabs, using wax or candle grease, and fill with water.



After 24 hours, note how much water has gone into and through the non-waterproofed mortar, and how little water has gone into or through the Brixment mortar.

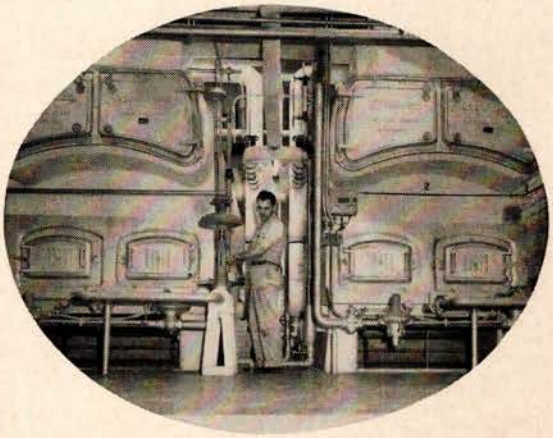
HOW "RESERVE STEAM" HELPS MRS. BAIRD'S BREAD CO. KEEP PACE WITH GROWING MARKETS



KEWANEE reserve plus rated

. . . BOILERS PROVIDE FOR FLUCTUATING LOADS AND FUTURE EXPANSION

It's "full steam ahead" for growth at Mrs. Baird's Bread Co., Dallas, Texas. That's because management looked well into the future in planning the company's modern plant. Take the boilers as an example. Past experience proved that boilers with reserve capacity could economically provide sufficient power to meet the needs of expansion. Kewanee Reserve Plus Rated Boilers were installed, with 50% extra power built in for additional capacity requirements. When fluctuating loads demand more steam at once . . . it's there with Kewanee. When expansion calls for more steam . . . it's there with Kewanee. So, when you consider boilers, don't be misled by promises that a boiler delivers enough steam to meet average daily requirements. Look for reserve to assure performance beyond the call of usual duty. Consider Kewanee Boilers, rated on nominal capacity to operate at "cruising speed". You'll get greater efficiency at lower cost, plus longer boiler life. Only a boiler rated on nominal capacity can make that guarantee.



Here are 2 Kewanee No. 5188 Boilers installed at Mrs. Baird's Bread Co.

KEWANEE BOILERS

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

Serving home and industry · American-Standard · American Blower · Church Seats & Wall Tile · Detroit Controls · Kewanee Boilers · Ross Exchangers · Sunbeam Air Conditioners

YOU can depend on KEWANEE engineering



LUDMAN Auto-lok AUTOMATIC LOCKING WINDOWS

LUDMAN LEADS IN WINDOW ENGINEERING

THIS GREAT WINDOW HAS ESTABLISHED STANDARDS BY WHICH ALL ALUMINUM AWNING WINDOWS MUST BE MEASURED

No matter what the standards by which aluminum awning windows are measured, the Ludman Auto-Lok always emerges as first choice. For this superb window established such high standards in its field, that in all its years of top performance no other window has come close enough to give the phrase "or equal" any meaning. This product clearly stands alone in the field of awning windows.

Auto-Lok is the *only* window that fully meets *all* of the ten most important requirements in a window that experts* agree are essential. Here is a window that only Ludman can produce . . . . the foundation upon which the fine family of Ludman products has been built.

The Auto-Lok Window permits complete control over both the quantity and the quality of ventilation. Fresh air is assured, even when it's raining. The bottom night vent **insures** ventilation with complete protection . . . . protection from the elements . . . . protection from prowlers.

The Auto-Lok Window is the tightest-closing window ever made — and *only* Auto-Lok will *stay tightly closed* for the life of the building without the periodic adjustment required by all other awning windows. Completely weatherstripped, the Auto-Lok Window is an ideal solution when True Climate-Control is sought. *Permanently weathertight* — it seals out both heat and cold, and substantially reduces demands upon Air-Conditioning systems and Heating plants.

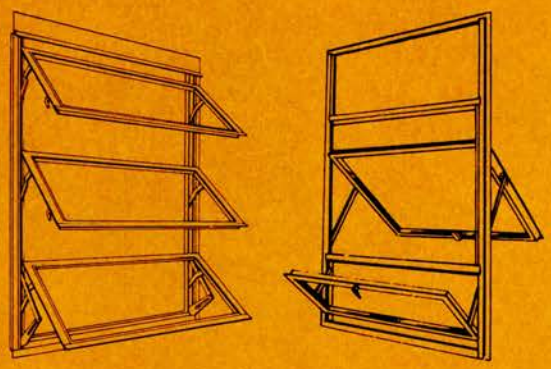
Quality-Controlled from raw aluminum to finished window, the Auto-Lok is the most nearly perfect window the resources of Ludman Corporation can produce.

*Geoffrey Baker and Bruno Funaro in "Windows in Modern Architecture"

AUTO-LOK WINDOWS CONFORM TO THE RECOMMENDATIONS OF THE AMERICAN INSTITUTE OF ARCHITECTS, MODULAR COORDINATION OFFICE.

(SEE NEXT PAGE) . . . . . .

IMPORTANT NEW PROOF THAT



"... your aluminum awning and intermediate projected windows are in accord with my recommendation, as Modular Coordinator, for windows to be installed in modular masonry walls."

William Demarest, Jr.
Modular Coordinator
American Institute of Architects

LUDMAN Introduces

WINDOW SIZES BASED UPON MODULAR MEASURE

Ludman takes the lead with a forward step of major significance to many architects. In commenting upon this important step, Mr. Demarest writes:

"The Ludman Corporation is to be congratulated for introducing window sizes based upon Modular Measure, the common-sense method of dimensioning which is being adopted by a fast-growing number of architects, builders and manufacturers of masonry and other building products."

This is just one more evidence of Ludman engineering leadership . . . just one more example of the foresighted kind of planning that has made Ludman products the instinctive first choice of so many progressive architects.

Ludman leadership in adapting design to Modular Sizing is a reflection of the thoroughness with which every Ludman product is planned and produced. From raw aluminum to finished product, Ludman products are produced under strict quality control. Every Ludman product is engineered to perform its task easily, to operate smoothly, and to insure the long operating life that delivers real economy.

LUDMAN LEADS IN *window engineering*



Uniform load tests and Hardware load tests were made on a window 4'-0⅞" wide and 8'1" high with 4-lite ventilators, which is the largest standard intermediate projected window as shown in our catalog.

Air infiltration tests were conducted on window units with 4-lite ventilators measuring 4'0" wide and 2'8" high— the largest opening ventilator as shown in our catalog.

Our interpretations of these tests reveal the following results:

10 Times Tighter

Ludman Intermediate Projected Windows allow only 1/10 as much air leakage as windows that only meet AWMA P-A2 specifications. This means reduced heating and air-conditioning costs. Tables are now available that prove how quickly these savings are reflected in the Operating Budget of a building. LUDMAN LEADERSHIP IN WEATHER-STRIPPED WINDOWS MEANS LASTING SAVINGS!

4 Times Stronger

Ludman engineers have established that a good Projected Window needs this added strength to insure proper performance.

4½ Times Stronger

The vital operating hardware in the Ludman Intermediate Projected Window is built to withstand daily abuse.

ALSO AVAILABLE IN STANDARD ARCHITECTURAL SIZES

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ESTABLISHED 1881

PITTSBURGH, PA.

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LABORATORY

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7461

REPORT

February 7, 1955

Report on Tests Conducted on

LUDMAN WEATHERSTRIPPED INTERMEDIATE PROJECTED WINDOW UNITS

For LUDMAN CORPORATION, North Miami, Florida

TEST RESULTS

The results of the air infiltration, uniform load and hardware load tests along with the specification maximum permissible requirements were reported below.

AIR INFILTRATION TEST

The air infiltration determined on the as received window unit in accordance with the procedure indicated in Paragraph 2.8.3.2 of Aluminum Window Manufacturers Association Specification P-A2 was determined to be 0.09 cubic feet per minute per foot at a static pressure equivalent to a wind velocity of 25 miles per hour.

Specification maximum permissible was 1.00 cubic feet per minute per foot.

UNIFORM LOAD TEST

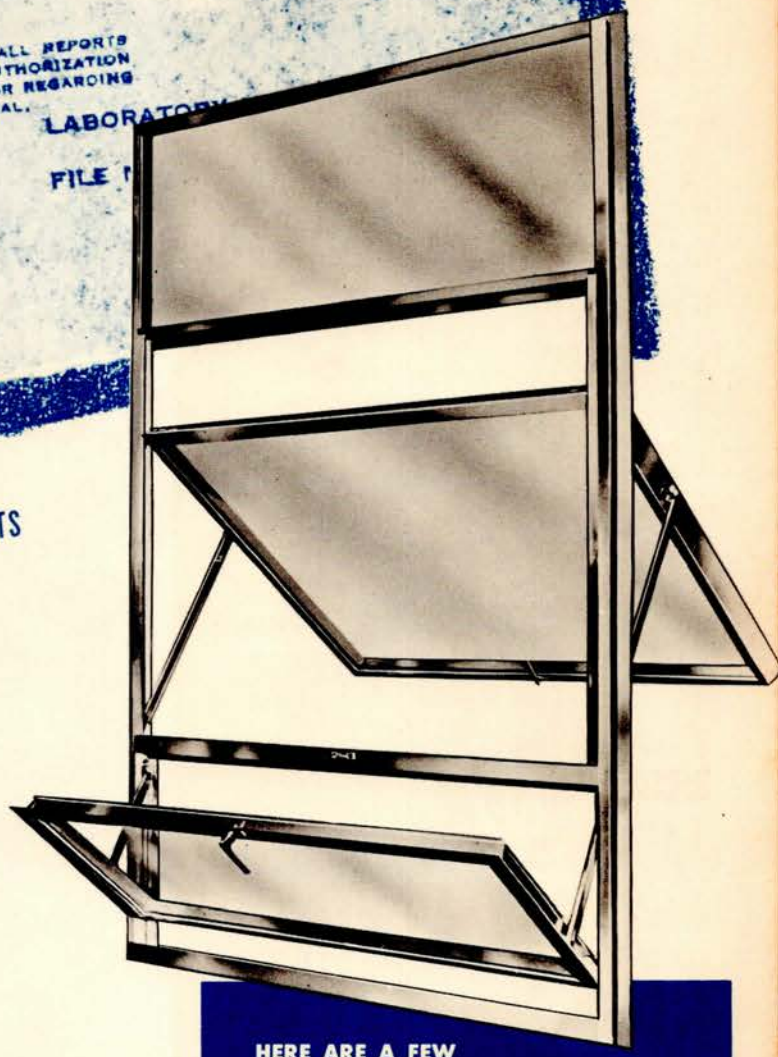
The maximum deflection of any window member under a load of 15 pounds per square foot as indicated in Paragraph 2.8.3.1B of Aluminum Window Manufacturers Association Specification P-A2 was determined to be 0.068 inches.

Specification maximum permissible was 0.274 inches.

HARDWARE LOAD TEST

The deflection at the free corner of the ventilator with friction shoes adjusted to a firm, but smooth, operating condition when tested as indicated in Paragraph 2.8.3.1A was determined to be 7/8 inches.

Specification maximum permissible was 3-1/2 inches.



HERE ARE A FEW OF THE ADDED FEATURES THAT PROVE LUDMAN'S SUPERIORITY IN WINDOW ENGINEERING

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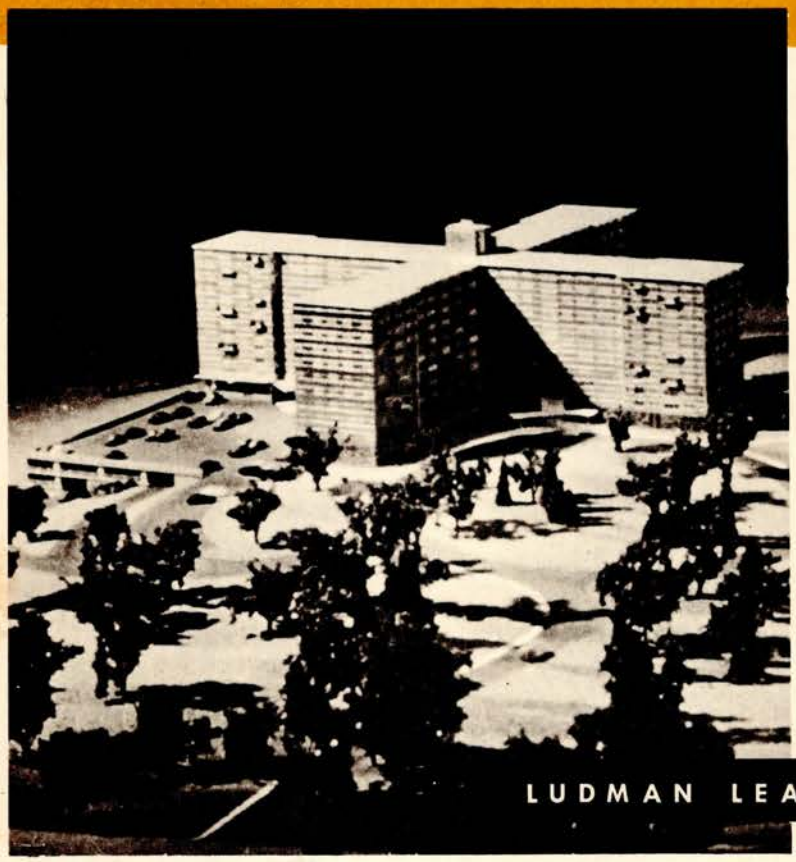
- Adjustable Friction Shoe Compression Spring
- Windows Can Be Inside or Outside Bead or Mastic Glazed
- Hardware & Screws Attached With Threaded Grommets
- Cam Handle With Concealed Strike For Project-In Vents
- Mullion Bars Provide Caulking Pocket For Weathertight Construction
- Mullions Fluted Vertically For Appearance and Strength
- Completely Weatherstripped

SEND COUPON ON NEXT PAGE....

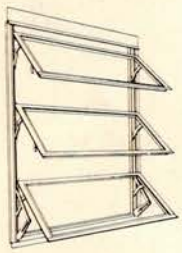
LUDMAN *Window Panels*



. . . . ANOTHER DEVELOPMENT OF LUDMAN ENGINEERING

Skin-wall . . . Curtain-wall . . . Panel-wall. To assist the progressive architects who are seeking new methods of gaining beauty and utility, while reducing construction costs, through these new building techniques, Ludman is proud to introduce **Ludman Window Panels.** An extremely efficient, very versatile, and thoroughly practical approach to a new construction method, Ludman Window Panels offer you almost unlimited scope in planning. **Consult Ludman engineers for full cooperation in developing your next building** . . . from the inception of the sketches to the final step in construction, **Ludman engineers are at your service.**

LUDMAN LEADS IN WINDOW ENGINEERING



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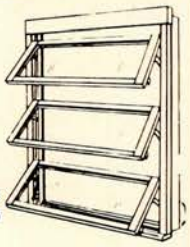
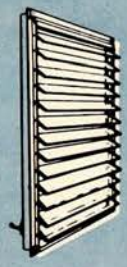
The window industry's most outstanding development . . . . the window that has solved so many of the architect's problems.



LUDMAN AUTO-LOK WOOD AWNING WINDOWS

The same Ludman quality . . . . the same tight closure . . . . available in wood windows through jobbers everywhere.



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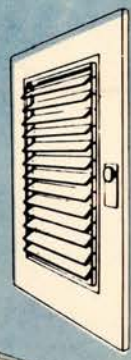
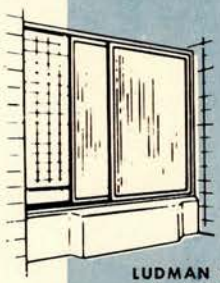
Ludman engineering has added more technical improvements to jalousie windows than any other company . . . . produced a jalousie you can specify with confidence.



LUDMAN JALOUSIES IN DOORS

Ludman engineered jalousies available also in doors.



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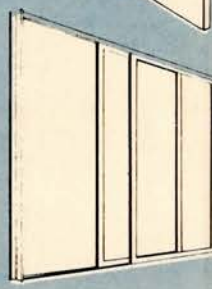
Built to high Ludman standards . . . the only door so completely weather-tight as to be suitable for all climate use.



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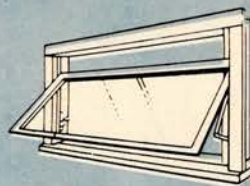
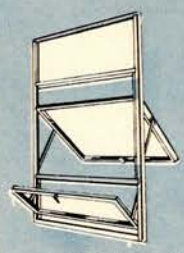
Top quality fibreglass panels set in beautiful Anodized Aluminum Frames. LUDMAN QUALITY CONTROLLED.





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A Single Sash Wood Unit with extraordinary design flexibility. Handled by wood jobbers everywhere.

LUDMAN INTERMEDIATE ALUMINUM PROJECTED WINDOW

The finest Projected Window ever made . . . . completely weatherstripped — engineered to high LUDMAN standards.

YOUR PRESTIGE IS REFLECTED IN THE PRODUCTS YOU SPECIFY

The architect, as do other professional men, cherishes his prestige . . . knows it as his most valuable asset. Fine products . . . products that look better . . . perform better . . . perform well and economically for the life of the building — these are major factors in supporting the reputation of the architect. And the best products cost so little more to install . . . cost so much less across the years. Protect *your* prestige when you specify!

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THE "OVERHEAD DOOR"
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MIRACLE WEDGE*

Weathertight Closure . . . *originated by Overhead Door Corporation in 1921, this feature is the basis of construction of every door, from the smallest residential garage door to the largest industrial door.*



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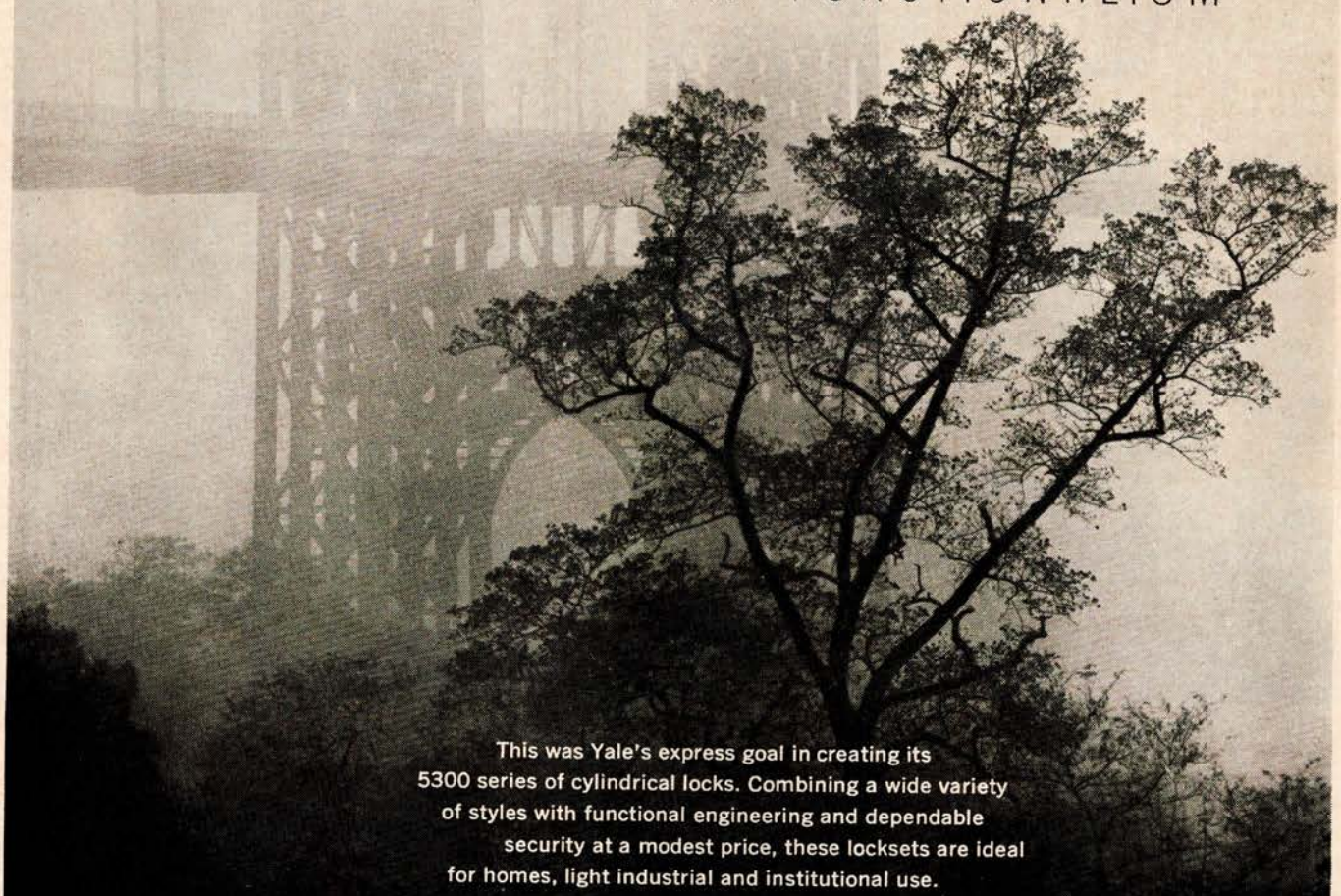
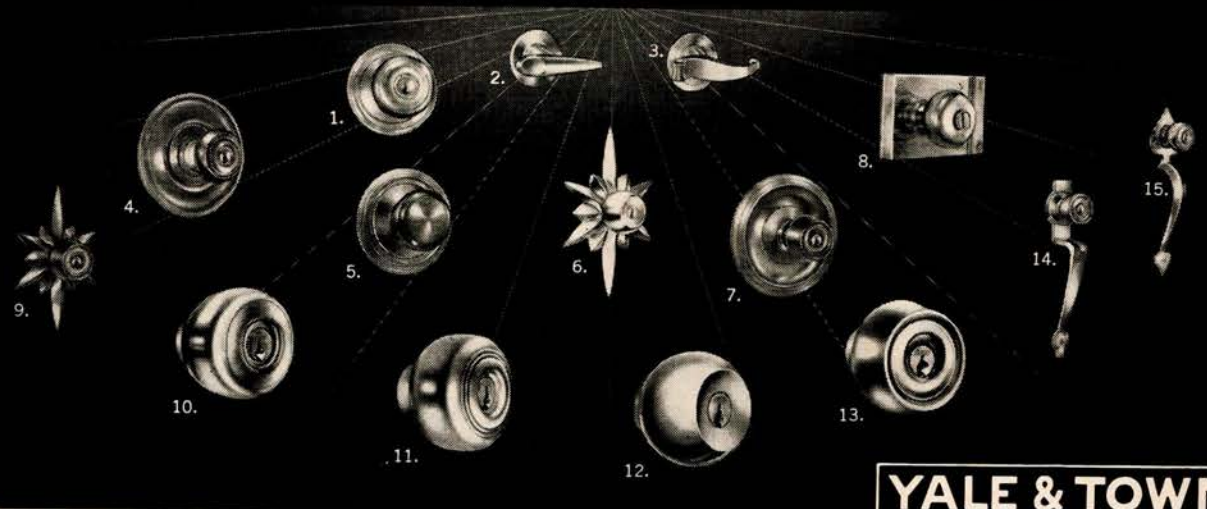


This was Yale's express goal in creating its 5300 series of cylindrical locks. Combining a wide variety of styles with functional engineering and dependable security at a modest price, these locksets are ideal for homes, light industrial and institutional use.

Yale 5300 series of cylindrical locksets



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WESTERN RED CEDAR LUMBER ASSOCIATION

4403 White-Henry-Stuart Building
Seattle 1, Washington

Write for FINISHING INFORMATION

Western Red Cedar Lumber Association, Dept. 104
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Seattle 1, Washington

Please send me your new bulletin entitled "Finishing Suggestions that Sing".
( ) I would also appreciate other information on the use of Western Red Cedar Siding in home construction.

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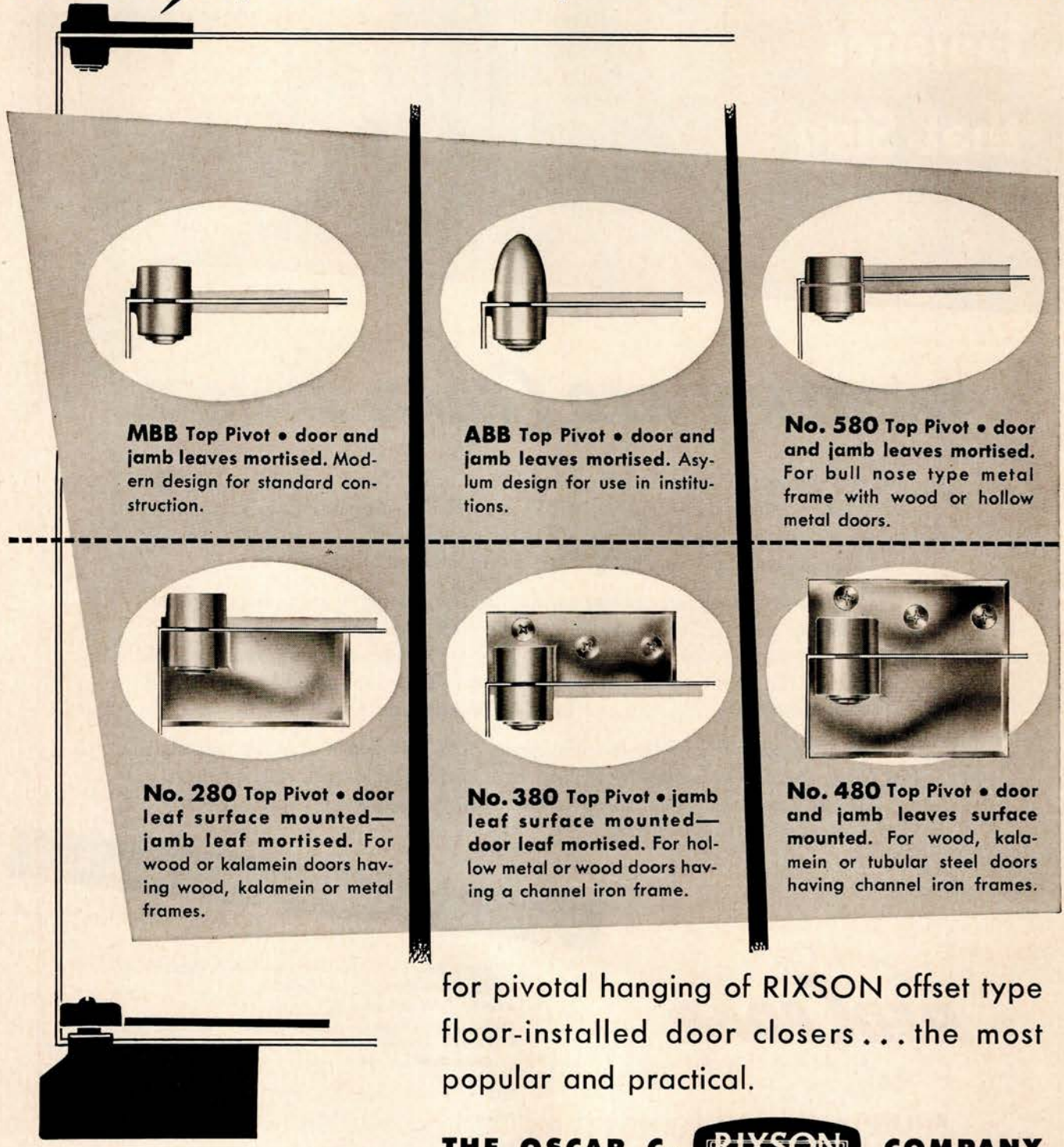
This coupon may be pasted on a postal card for mailing

now 6 RIXSON TOP PIVOTS

to meet all requirements of door–jamb construction and materials



MBB Top Pivot • door and jamb leaves mortised. Modern design for standard construction.

ABB Top Pivot • door and jamb leaves mortised. Asylum design for use in institutions.

No. 580 Top Pivot • door and jamb leaves mortised. For bull nose type metal frame with wood or hollow metal doors.

No. 280 Top Pivot • door leaf surface mounted—jamb leaf mortised. For wood or kalamein doors having wood, kalamein or metal frames.

No. 380 Top Pivot • jamb leaf surface mounted—door leaf mortised. For hollow metal or wood doors having a channel iron frame.

No. 480 Top Pivot • door and jamb leaves surface mounted. For wood, kalamein or tubular steel doors having channel iron frames.

for pivotal hanging of RIXSON offset type floor-installed door closers . . . the most popular and practical.

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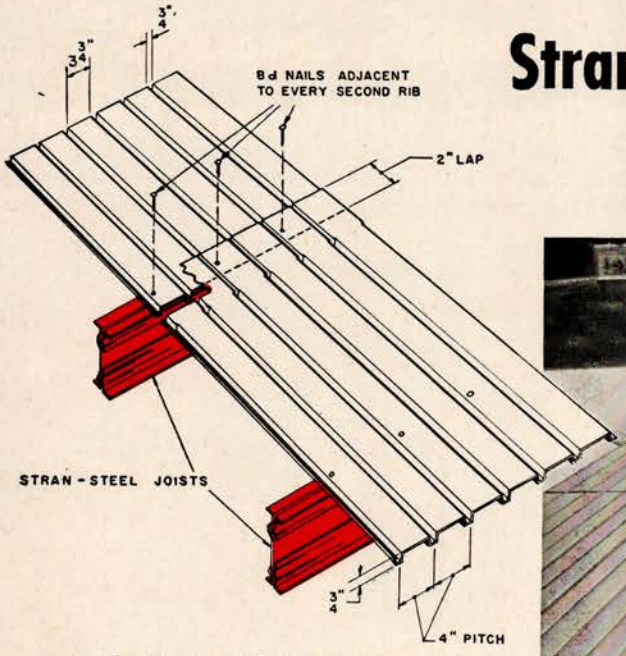
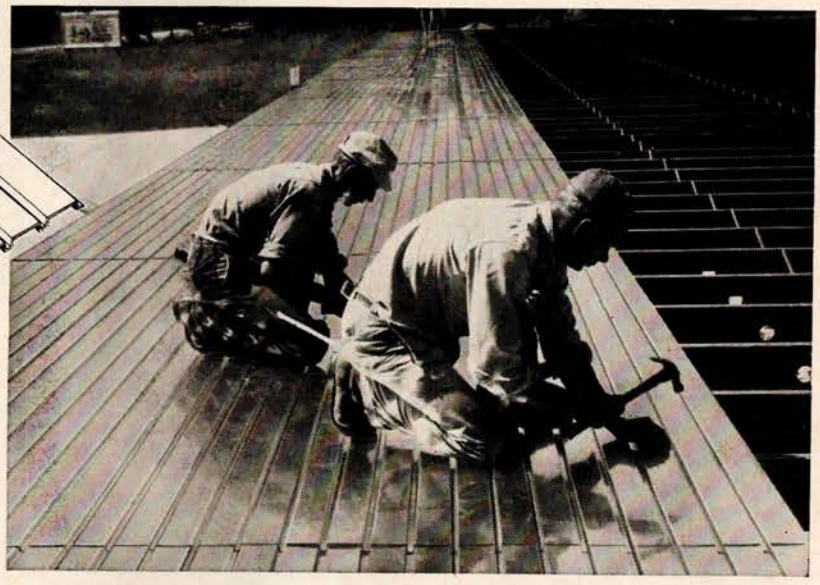
9100 w. belmont ave. • franklin park, illinois

Premium quality . . . at no extra cost

Stran-Steel® Galvanized Decking
for use with Stran-Steel Framing





Woodland Acres Shopping Center in Green's Bayou, Texas, utilizes 26-ga. Stran-Steel galvanized roof deck nailed to 9" Stran-Steel joists, on 24" centers. Built-up roof was applied over ½" fiber glass insulation. Architects: DUNAWAY AND JONES, Houston. Distributor: BUIE BLDG. MATERIAL CO., Houston.

STRAN-STEEL DECKING IS . . .

LIGHTWEIGHT but STRONG: Dead load savings up to 10 lbs. Total weight of this dry system, including 1" of insulation board, is less than 3 lbs. per sq. ft. Great strength-to-weight ratio assures maximum economy in materials.

ECONOMICAL: Competitive with poured-in-place decks. Galvanized coating assures long life . . . no painting is required.

EASY TO INSTALL: A 5-man crew can install up to 14,000 sq. ft. in an 8-hr. day. Insulation and built-up roofing can be applied *immediately* after erection. Erection is simplified by accurate fabrication and uniform pattern of decking.

AVAILABLE: On-the-spot distributors and dealers in all major building centers . . . with trained technical personnel to assist you in design and fabricating problems and adaptations to meet local conditions.



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Great Lakes Steel Corp.
Ecorse, Detroit 29, Mich.

Please have your representative give me your new catalog and other information, without obligation. I am a: Builder ☐ Architect ☐ Engineer ☐ Owner ☐ planning the design or construction of: School ☐ Church ☐ Hospital ☐ Dwelling ☐ Commercial or Industrial Building ☐ Interior Steel Partitions ☐ Other_____

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GREAT LAKES STEEL CORPORATION
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PRODUCER OF NAX HIGH-TENSILE STEEL

MAGNIFICENT PENN CENTER

—where nearly a score of buildings demonstrate a "new concept" of air conditioning with Yorkaire Systems!



Exciting 3 Penn Center Plaza nears completion —the first new office building to be erected in Philadelphia's fabulous Penn Center redevelopment area!

Franklin Institute—1
Rittenhouse Claridge—2
Rittenhouse Savoy—3
Bell Telephone Co. of Pa.—4
Central-Penn National Bank—5
Suburban Station Office Building—6
Packard Building—13
Insurance Co. of North America—7
3 Penn Center Plaza—8
Pennsylvania Building—9
1500 Walnut Street—10
Philadelphia National Bank—11
Western Saving Fund Building—12
John Wanamaker Store—14



York brought the right kind of air conditioning *to the Empire State Building, Cincinnati's Netherland-Plaza Hotel and to 27 of Miami Beach's largest, newest hotels. Denver's new Mile High Center, San Francisco's new Equitable Life Assurance Society Building and the striking new Colgate-Palmolive Building in New York have Yorkaire Systems, too. Famous York companions to 3 Penn Center Plaza are shown on the map above.*

York refrigeration air conditioning *the quality name in*

YORK CORPORATION HEADQUARTERS FOR



Superb new 3 Penn Center Plaza features two compact 800-hp. York Turbo Water Cooling Systems located in the basement. They provide the cooling for 1200 Model CF Yorkaire Conditioners in the individual rooms.

The ability to meet rigid specifications, to bring the *right kind* of air conditioning to a building—and to do it all at a reasonable price—appeals strongly to our first-time customers. They call it a "new concept" of air conditioning.

This concept is dramatically illustrated in the Penn Center area. As in all large buildings, heat loads and glass areas and floor areas and numbers of occupants . . . economic considerations, taxes, depreciation and a score of other factors varied from building to building all around the Center. Obviously, no one system—or even two or three—could air condition all these buildings best. That's why York carefully selected and then precision-engineered each Yorkaire System to fit the air conditioning needs of the particular building in which it is installed.

Your building can have the right kind of air conditioning, too. Call your York District Office (listed in the classified phone directory of every major city). Or write directly to York Corporation, York, Pa.

air conditioning and refrigeration

MECHANICAL COOLING SINCE 1885





Superior weather-tightness is an outstanding feature of Curtis Silentite double-hung windows. They've withstood sand storms, blizzards, floods, with their weather-tightness and ease of operation unimpaired.



Many beautiful combinations are yours with standard Silentite units, all the way from "ribbon" windows to enclosed porches and breezeways. Their slender mullions provide the wide glass area so desirable today.

See your Curtis Woodwork Dealer and consult Sweet's Architectural Catalog for full details about the many types and styles of Silentite windows—including double-hung, casement, convertible, awning and panel windows. Literature and dealer's name upon request. Curtis Companies Service Bureau, Clinton, Iowa.

Why Finger-Tip Operation is Assured with a Curtis Silentite Window

Thanks to the patented coiled-spring suspension method, combined with factory fitting of sash to frame and the use of sliding bars and double Z spring weather-strips, a Curtis Silentite double-hung window literally "floats" in the opening. Lifetime ease of operation is built right in.

Yet you can be sure that Silentite is weather-tight, too. For special "floating" weather-strips keep out dust and water, cut air infiltration to a minimum—offer the homeowner fuel and air conditioning savings, year-round comfort.

Available as complete units with frame, window, sash lock, interior trim, screen and storm sash, Curtis Silentite double-hung windows come in 7 different styles and in all standard sizes, allowing unlimited variations for beauty and utility.

CURTIS WOODWORK

Heart of the Home

1866 CURTIS WOODWORK SILENTITE PRE-FIT the "Insulated" window

Installed in more schools and colleges than any other make of gym seat.....

ALABAMA
Birmingham Public Schools, Birmingham
Gadsden City Schools, Gadsden
State Teachers College, Jacksonville
Marion Institute, Marion
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Globe High School
Peoria High School
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Arvin High
U. of Calif.
Long Beach
Alhambra Union
Oakland Public
Point Loma High
San Fernando High
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COLORADO
Rifle Union High School,
Union High School, Limon
Center Consolidated School, Center

CONNECTICUT
Southington High School, Southington
Windham High School, Willimantic

DELAWARE
Tower Hill School, Wilmington

DISTRICT OF COLUMBIA
Miller Jr. High School, Washington
Kramer Jr. High School, Washington

FLORIDA
Mainland High School, Daytona Beach
Lakeland High School, Lakeland
University of Florida, Gainesville
U.S.N. Air Station, Pensacola
St. Augustine Gym, St. Augustine

GEORGIA
Atlanta Public Schools, Atlanta
H.Q. Inf. Cen. Fld. House, Ft. Benning

IDAHO
N. Idaho Jr. College, Coeur D'Alene
Ind. School Dist. No. 148, Grace
High School, Montpelier
Idaho State College, Pocatello

ILLINOIS
St. Mary of Celle, Berwyn
South. Ill. Normal Univ., Carbondale
Lincoln High School, E. St. Louis
St. Anthony of Padua Church,
Knox College, Galesburg
Thornton Twp. High School,
Winnetka High School,
University,
Highland Park High School,

KENTUCKY
Cole's Jr. High School, Ashland
Berea College, Berea
Centre College, Danville
Estill County High School, Irvine
Camargo High School, Mt. Sterling

LOUISIANA
Baton Rouge Public Schools, Baton Rouge
Institute, Ruston

Board of Education,
Minneapolis Armory, Minneapolis
State Teacher's College, Moorhead
Cathedral High School, St. Cloud
Macalester College, St. Paul

MISSISSIPPI
U.S. Mer. Mar. Cadet Sch., Pass Christian
Pearl River Jr. College, Poplarville

MISSOURI
Brentwood High School, Brentwood
Southeast Mo. State Coll., Cape Girardeau
Wm. C. Bryant School, Kansas City
Bishop DuBourg High School, St. Louis
DeAndreis High School, St. Louis
St. Anthony High School, St. Louis
Washington University, St. Louis
Cent. State Teachers College, Warrensburg
Webster College, Webster Groves

MONTANA
Senior High School, Billings
School of Mines,
High School,
School

OHIO
Akron Public Schools, Akron
Grandview High School, Columbus
Euclid St. High School, Cleveland
Hamilton Public Schools, Hamilton
Miami University, Oxford

OKLAHOMA
U. S. Army, Fort Sill, Lawton
University of Oklahoma, Norman
Bonga Public Schools, Watonga

OREGON
High School, Baker
State College, Corvallis
Jr. High School, Nyssa
Schools, Parkrose
& Lent Schools, Portland

PENNSYLVANIA
Spring Summerhill School, Conneautville
E. Stroudsburg High, E. Stroudsburg
State Teachers College, Mansfield
Langley High School, Pittsburgh

SOUTH CAROLINA
Ean Claire High School, Columbia
Brewer High School, Greenwood
Y.M.C.A., Greenwood
Y.M.C.A., Rock Hill

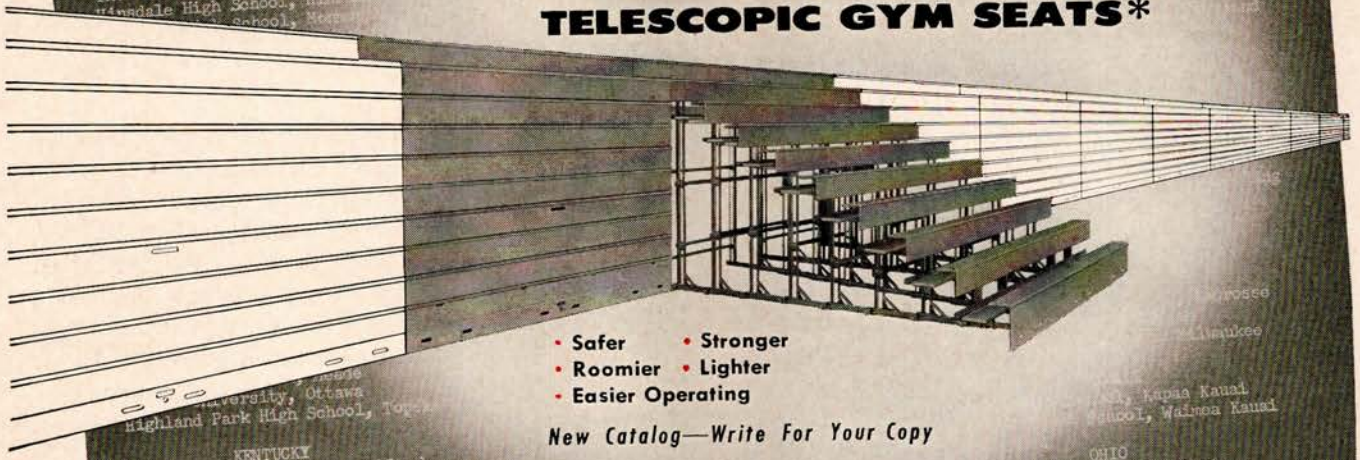
SOUTH DAKOTA
South Dakota State College, Brookings
City Auditorium, Chamberlain

TENNESSEE
Dandridge High School, Dandridge
Bearden High School, Knoxville
Central High School, Murfreesboro
David Lipscomb College, Nashville
Franklin Co. High School, Winchester

TEXAS
Amarillo Jr. College, Amarillo
San Houston Jr. High School, Amarillo
Burkburnett High School, Burkburnett
W. B. Ray High School, Corpus Christi
Rice Institute, Houston
Kilgore Public Schools, Kilgore
Levelland High School, Levelland

UTAH
High School, Murray
Schools, Ogden
Roosevelt
School, Salt Lake City

MEDART
TELESCOPIC GYM SEATS*



- Safer
- Stronger
- Roomier
- Lighter
- Easier Operating

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OHIO
Akron Public Schools, Akron
Grandview High School, Columbus

SPECIFY the best, then INSIST on it!

FRED MEDART PRODUCTS CO., INC.
3540 DeKalb St. • St. Louis 18, Mo.

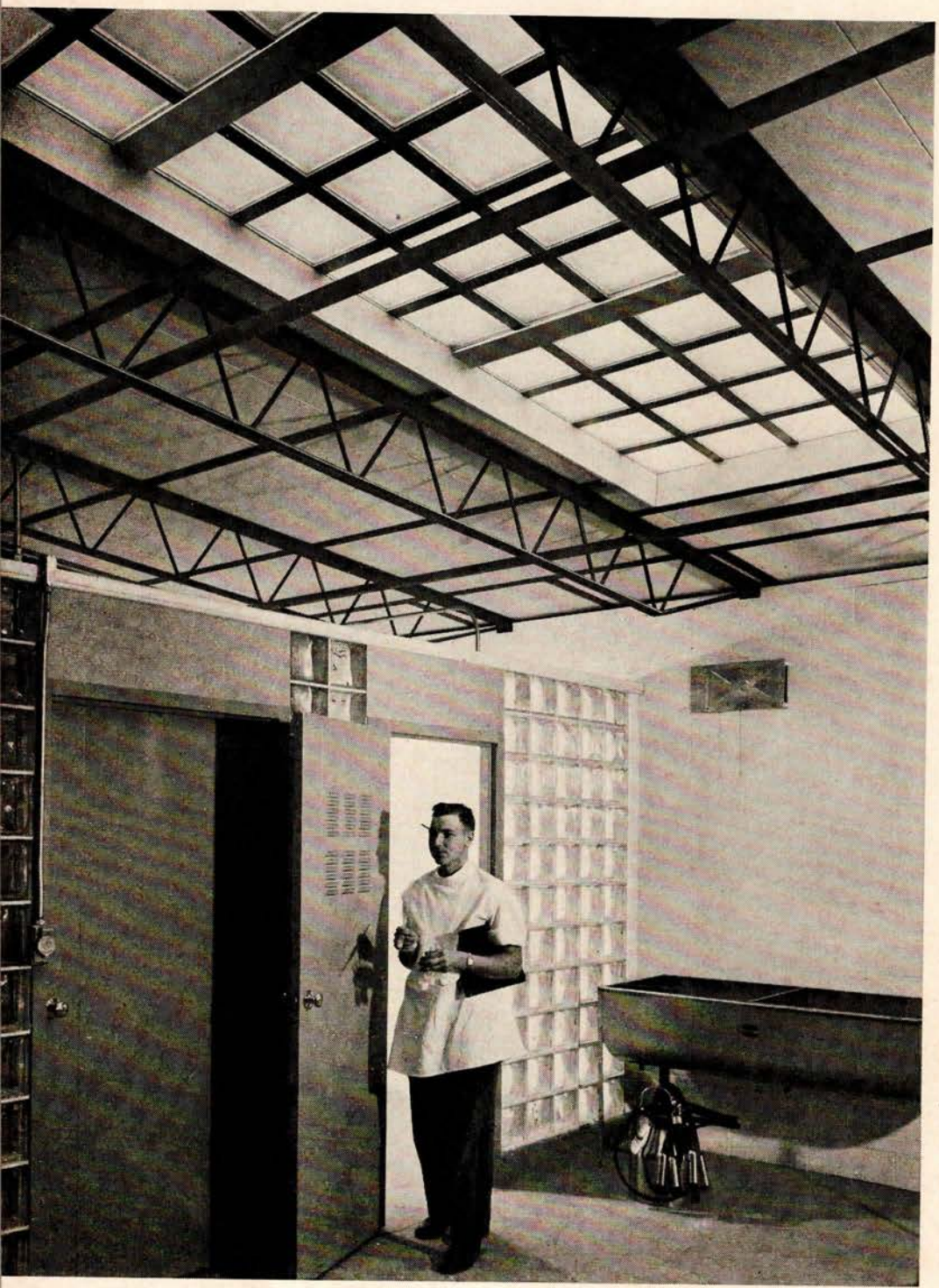
Medart

SEE OUR CATALOG IN SWEET'S

*Medart Telescopic Gym Seats are fully protected by U.S. Patents

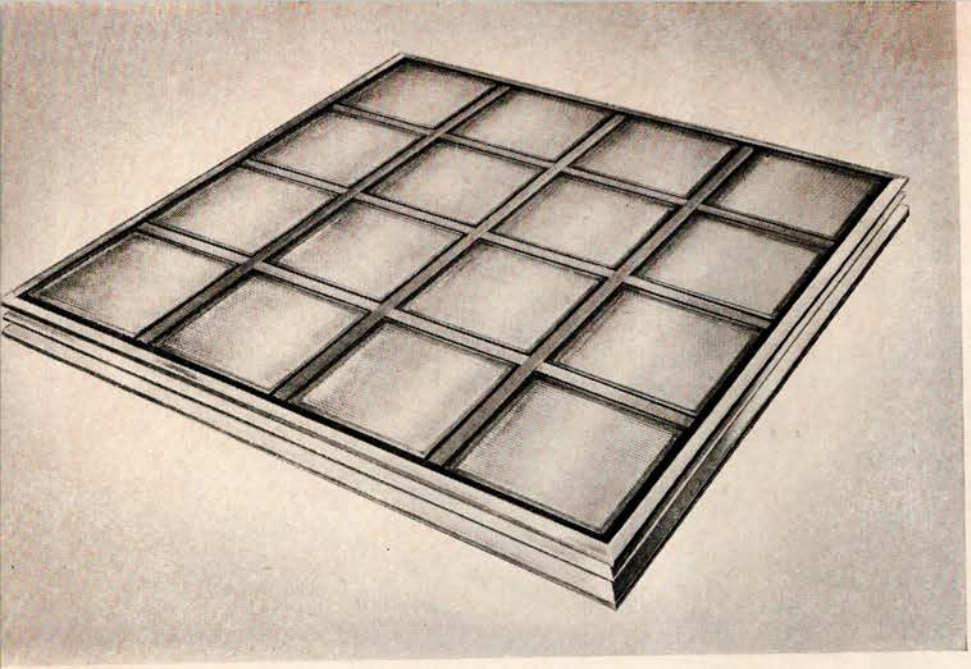
TESTED AND PROVED

Glass Panels bring cool daylight in through the roof...



Owens-Illinois Toplite installed in the North-Central Substation of the Ohio Agricultural Experiment Station near Castalia, Ohio. Acting as a daylighting team, the Toplite Panels and glass block provide sufficient daylight during normal days without need for artificial lighting.

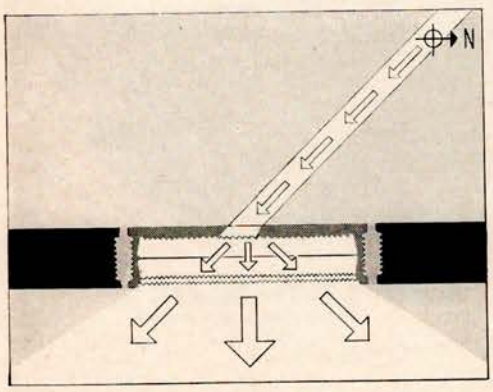
Toplite Panels may be installed in continuous strip, pattern, or in individual panels. Use a Toplite Panel as you do a lighting fixture. They permit daylighting of all building areas regardless of location or distance from exterior walls.



Toplite Roof Panels are factory-fabricated ... ready to install

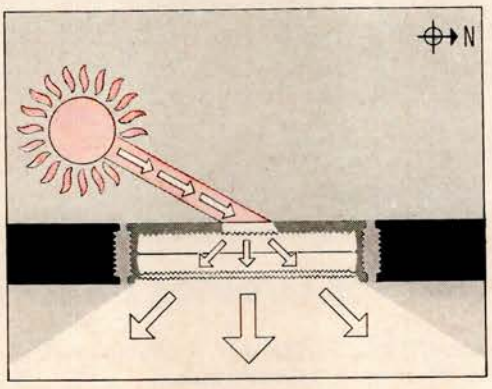
They are shipped in individual crates marked to show correct orientation and directional positioning; for speed and ease in installation. Panels arrive on job site ready to install. They are set on prepared curbs and anchored ready for flashing by the roofer.

Why Owens-Illinois TOPLITE meets the demand for good daylighting



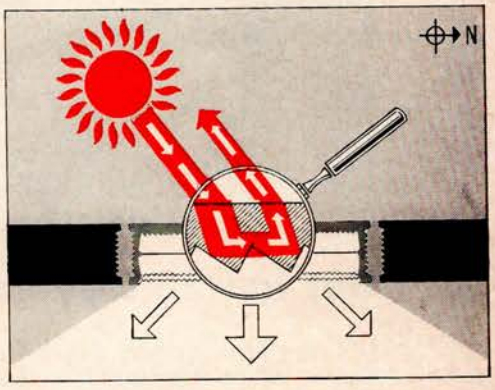
Transmits north light

Maximum transmission of north light is a desirable quality in toplighting because of its uniformity and freedom from glare and solar heat. Note how the prism structure of Toplite affords efficient transmission of north light.



Accepts winter sun

Since low winter sun is comparatively weak in relation to high summer sun as far as glare and solar heat are concerned, maximum transmission is again desirable. This illustration shows how Toplite accepts and transmits winter sunlight.



Rejects summer sun

Other materials which transmit north light and low winter sun also transmit high percentages of light during the hot, summer months. Toplite rejects direct light and heat from hot, summer sun, but transmits much of the cool, north light.



Write for free booklet on Toplite Roof Panels

The complete story of this great new advance in efficient utilization of free daylight is available in this new bulletin. For your free copy write today: Kimble Glass Company, subsidiary of Owens-Illinois, Dept. AR-5, Toledo 1, Ohio.

TOPLITE ROOF PANELS
AN (O) PRODUCT

OWENS-ILLINOIS
GENERAL OFFICES · TOLEDO 1, OHIO



Get full 28 Day Curing for Greater Density with CEM-SEAL

Unless properly sealed, a new concrete floor has a natural tendency to deposit alkaline salts on the surface as it cures. This causes surface powdering, called "dusting" or "bloom."

CEM-SEAL acts as a cap or dam to hold moisture down below the surface. This prevents formation of the damaging salts — and it also prolongs the curing period of the concrete. The surface comes through denser, harder, more resistant to wear.

Application is simple and easy. Treat acres of floor in a short time with big sheepskin applicators. Floors can be opened to traffic in just 4 hours.

CEM-SEAL is also an ideal primer for renewing old concrete floors.

Check these CEM-SEAL advantages — never before available.

1. **Goes on easy — just sweep floor and apply.**
2. **1-coat quick dry application — seals moisture in the concrete.**
3. **Complete curing of concrete gives you a dense, uniform surface with longer life.**
4. **Protects floor from stains while other building trades are at work.**
5. **Prevents "dusting" and efflorescence.**
6. **Gives you a smoother surface for easy maintenance.**

HILLYARD CHEMICAL CO.
St. Joseph, Mo.
Please send me full information about Hillyard CEM-SEAL.

.....for new concrete

.....for renewing old concrete

Name .....

Address .....

City ..... State .....

Mail This Coupon Today

Hillyard Maintaineers®, trained floor experts, are stationed in principal cities. There is one near you, who will be glad to consult with you on your problem of treatment or maintenance of any type floor. No charge, no obligation for this service.





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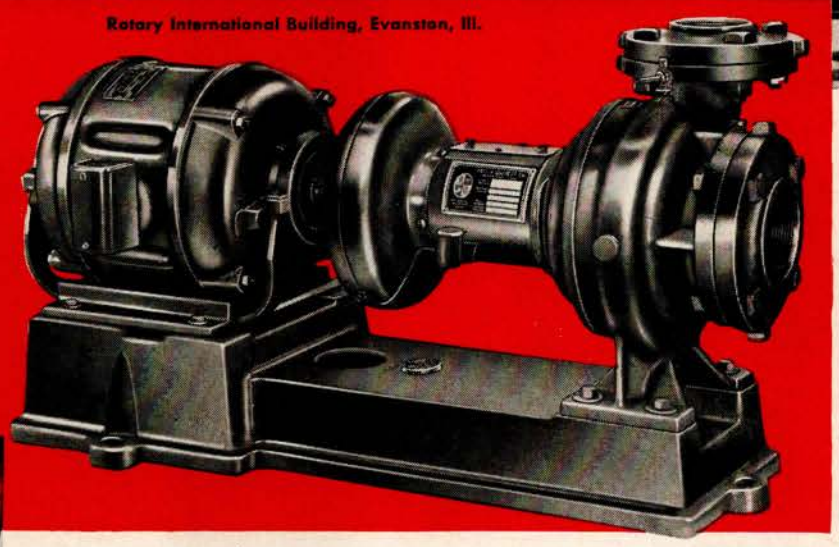
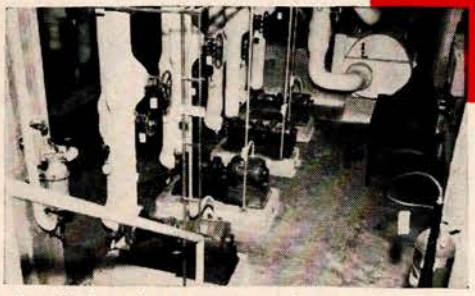
THEY WANTED *QUIET* OPERATION!



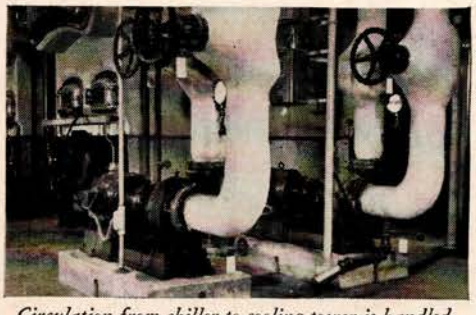
Rotary International Building, Evanston, Ill.

B&G
UNIVERSAL PUMP
designed specifically to operate *QUIETLY* in hot water heating systems

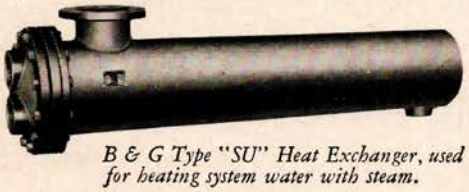




Installation of B & G Universal Pumps for circulating heating and cooling circuits.



Circulation from chiller to cooling tower is handled by B & G Universal Pumps.



B & G Type "SU" Heat Exchanger, used for heating system water with steam.

NEW ROTARY INTERNATIONAL BUILDING SELECTS *B & G UNIVERSAL PUMPS* AND *HEAT EXCHANGERS* FOR HEATING AND COOLING SYSTEM

The advantages of mechanically circulated water for both heating and cooling are well illustrated in this installation.

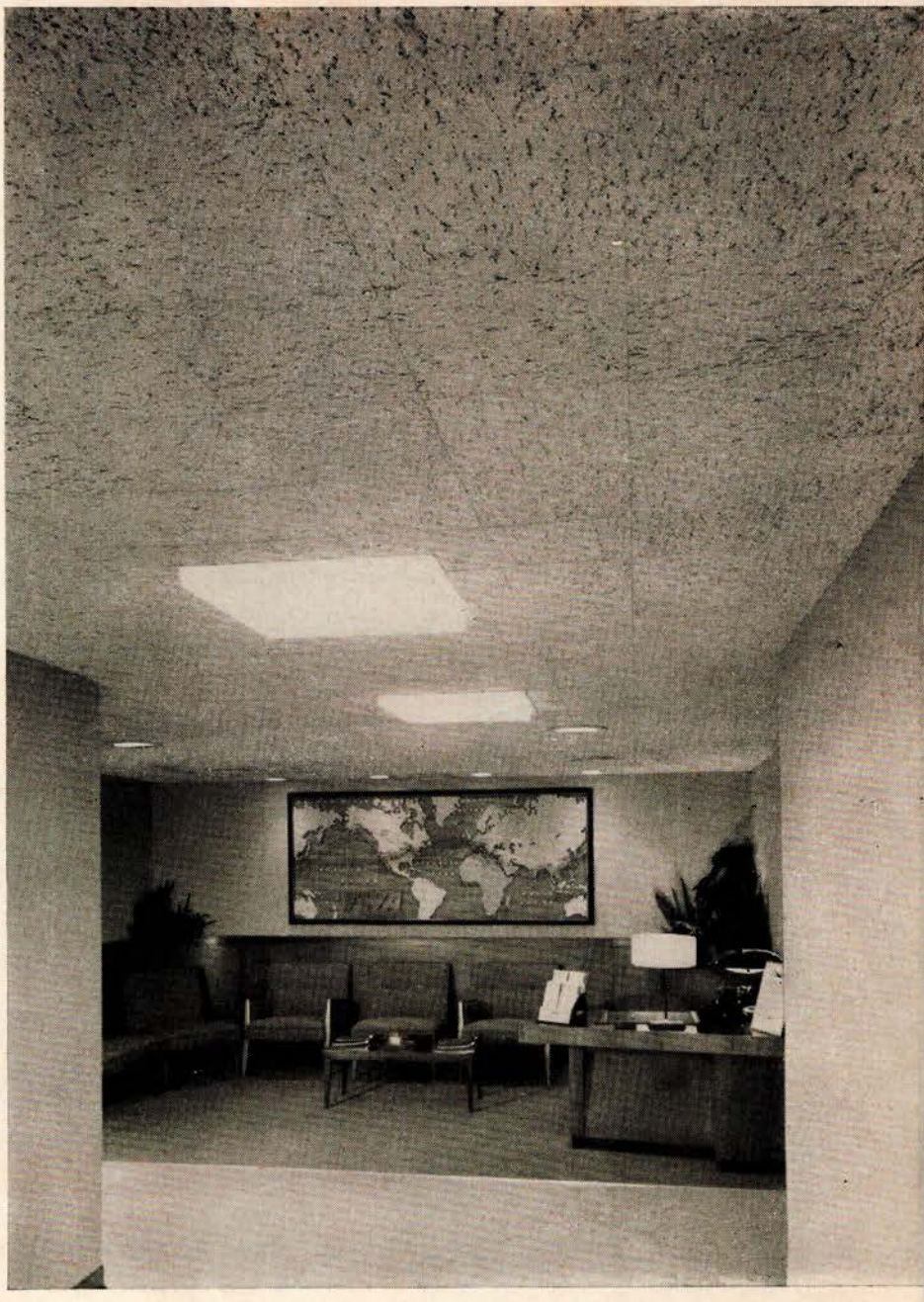
To assure *quiet* operation, B & G Universal Pumps are used to circulate all water, including that in the chiller and cooling tower circuits. The same piping system is used to circulate hot water in winter and chilled water in summer. Convectors with adjustable-speed fans act as room distributing units.

For ventilation, fresh filtered air from a main ventilating fan is introduced to the convectors through small flexible tubes. This air passes over the convector coils and is either heated or cooled.

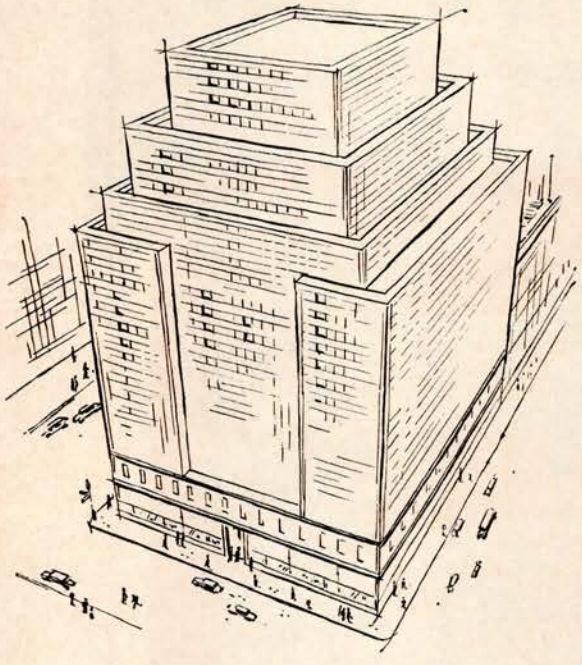
Water for the heating system is heated with steam in a B & G Type "SU" Heat Exchanger. Steam is also used to heat the service water by means of a storage tank with a steam coil installed.

Architects: **Mcher & McGrew, Evanston, Ill.** Construction Engineers: **Neiler, Rich & Bladen, Chicago.** Heating & Air Conditioning: **C. W. Johnson, Inc., Chicago.** Plumbing: **O'Callaghan Bros., Chicago.**

BELL & GOSSETT
COMPANY
Dept. DW-32, Morton Grove, Illinois
Canadian Licensee
S. A. Armstrong, Ltd., 1400 O'Connor Drive, Toronto



A comfortably quiet atmosphere welcomes visitors to TWA's smart reception area. The attractive Travertone ceiling contributes much to these surroundings by soaking up disturbing noise and carrying out the relaxed, modern décor.



TRANS WORLD AIRLINES,
New York City, N. Y.

TWA Architect: **C. Schlichtemier.**
General Contractor: **Cauldwell-Wingate Co.**
Acoustical Contractor: **William J. Scully Acoustics Corp.**

Planned for beauty—Sound conditioned for comfort

The latest developments in contemporary design are incorporated in the new executive offices of Trans World Airlines. Every feature contributes to office beauty, employee comfort, and over-all efficiency. Even the ceilings of Armstrong Travertone* were chosen with these objectives in mind.

Travertone's high acoustical efficiency and handsomely textured surface help provide office personnel with the quiet, attractive surroundings necessary for comfortable working conditions.

Travertone's fibrous mineral wool composition soaks up as much as 80% of the noise that strikes it, keeping mistakes caused by distracting noise to a minimum. Its smartly fissured surface blends well with the modern décor, and Travertone's white paint finish helps diffuse light evenly without annoying glare.

In addition, Travertone is completely incombustible and fully meets New York City's strict fire-safety regulations. Maintenance is easy and economical, too.

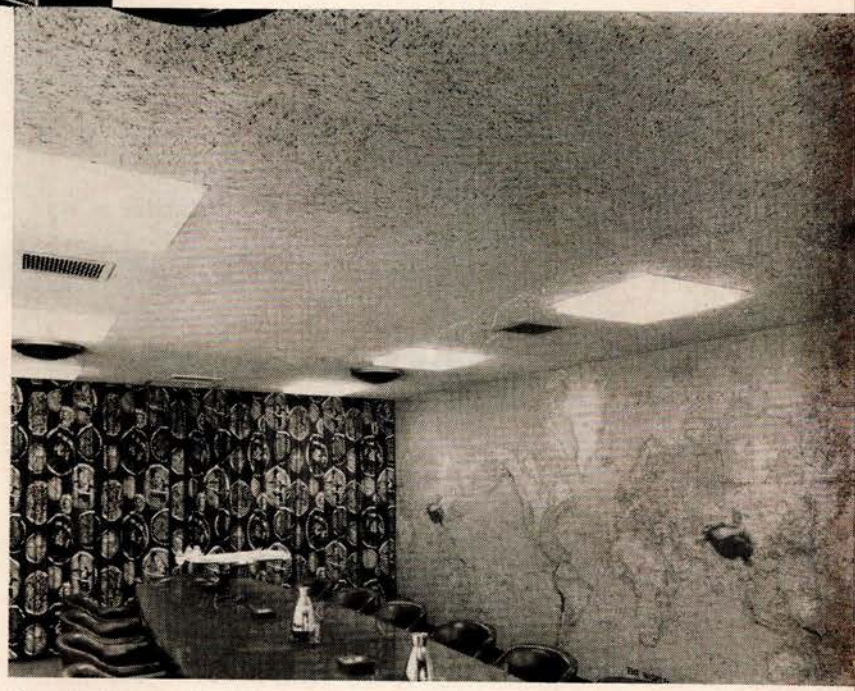
Travertone is just one of six Armstrong acoustical products. Get full details on Armstrong sound-conditioning materials from your Armstrong Acoustical Contractor.

For your free 1955 edition of "Armstrong Acoustical Materials," write Armstrong Cork Company, 4205 Rock Street, Lancaster, Pennsylvania.

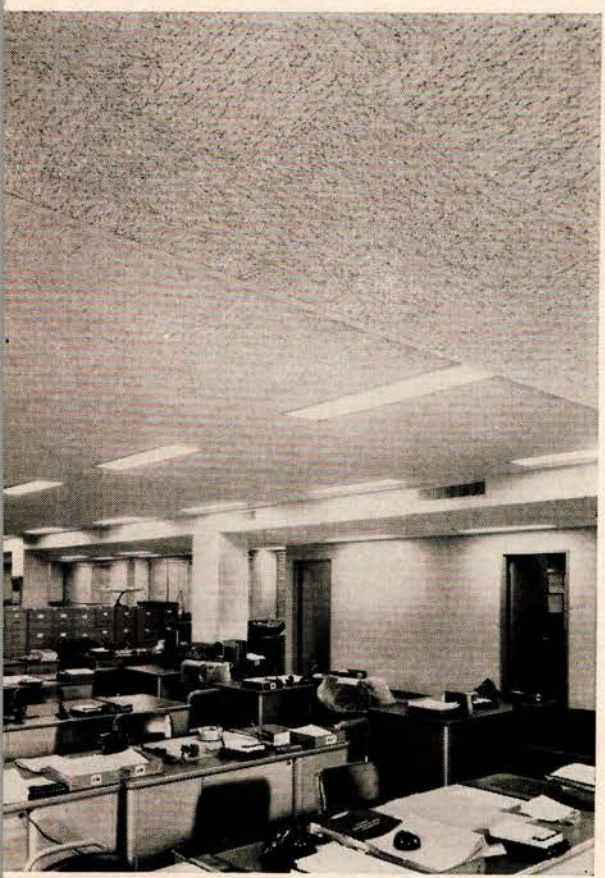
* Trade-Mark



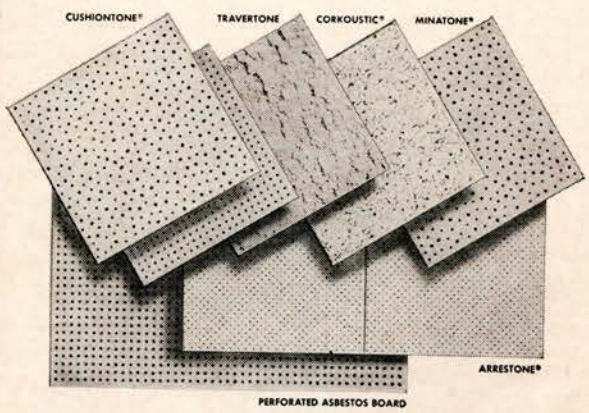
The high acoustical efficiency of this Travertone ceiling provides the undisturbed quiet needed for concentration. Travertone is quickly installed by cementing or suspension methods and can be scored and cut to fit around fixtures.



Completely incombustible, Travertone meets all fire-safety regulations. Its handsomely fissured surface resembles travertine marble and can be washed or repainted as often as desired without impairing its acoustical effectiveness.



Mistakes caused by distracting noise are reduced in this modern office area. Noise-muffling Travertone soaks up disturbing noise, prevents the clatter of business machines from building to distracting levels.



Armstrong ACOUSTICAL MATERIALS

Cushiontone® Travertone Arrestone® Minatone®
Corkoustic® Perforated Asbestos Board



Better, More Economical Hospitals Are Built with *CONCRETE*

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

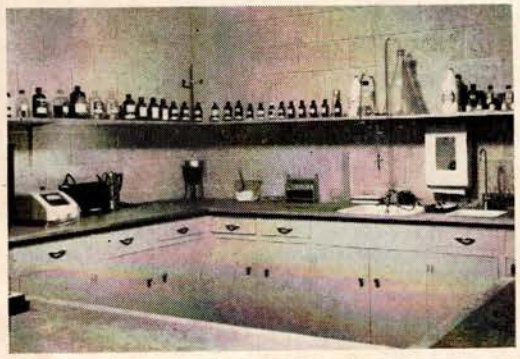
Concrete meets every structural requirement for hospitals. It has great strength and unexcelled resistance to destructive forces. Durable concrete protects patients and hospital staff against violent storms, 'quakes, explosions, atomic blasts and fire. *Remember, concrete can't burn.*

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

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

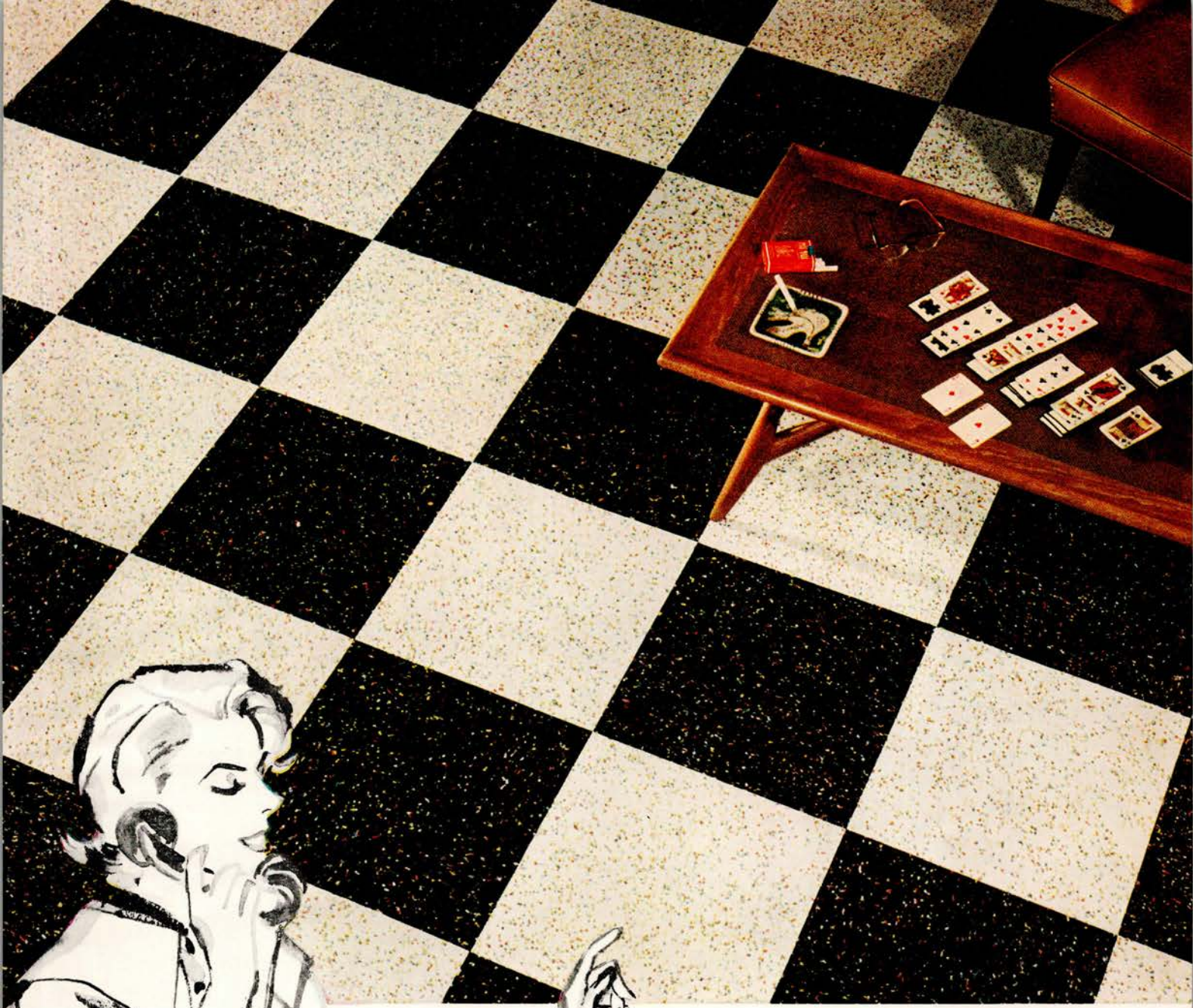
Concrete construction is versatile. It can be used in single or multi-story hospitals designed to meet the needs of any community. For more information, ask for free illustrated booklet. It is sent only in U.S. and Canada.

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



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





Inexpensive Luxury!

modernizes an old art, terrazzo in resilient type tile

There's a joy in possessing an unusual floor covering and this is true of Poly-Krome in a superlative degree . . . especially a gay floor tile with toughness built into it. You're never at a loss for a festive floor tile of many exciting colors and interesting terrazzo design possibilities if you remember Poly-Krome in Vinyl or Asphalt. Poly-Krome Vinyl is resistant to grease, fats, oils, alkalies, gasoline, and naphtha and can be used anywhere. The smooth surface keeps dirt from wearing in and an occasional waxing keeps it sparkling bright.

HAKO
Poly-krome
RESILIENT TERRAZZO TYPE TILE
IN VINYL OR ASPHALT

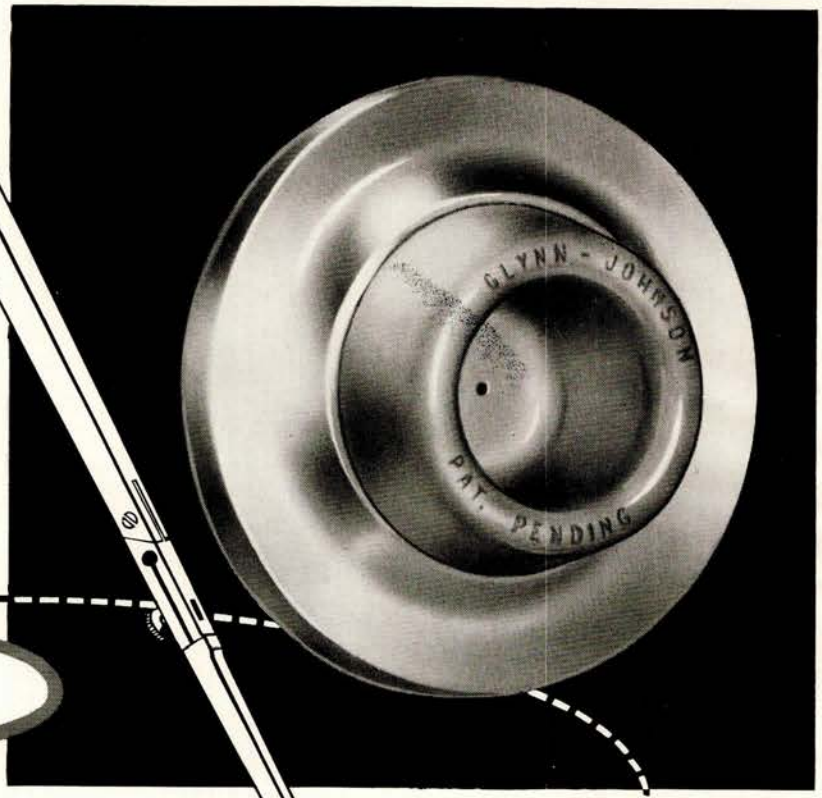
SINCE 1903
HACHMEISTER-INC.
PITTSBURGH 30, PA.

Guaranteed by Good Housekeeping

◆**FLOOR TILES**—Vinylflex, Asphalt, Parquetry and CorkAtile ◆**CORONET PLASTIC WALL TILES**—Majesty, Regal, Duke ◆**ADHESIVES**—for Building Products

ANOTHER G-J DEVICE

designed to solve specific door control problems



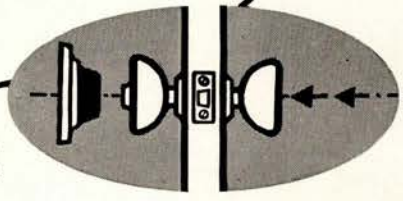
NEW

tamper-proof

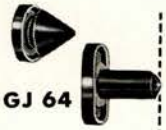
CONCAVE FLUSH BUMPER

ideal for button-type locks

Has no visible mounting screws . . . uses hidden method of attachment. Solves problem of unauthorized removal of bumper or rubber in public buildings. Concave bumper permits knob to strike without damaging or engaging button-type lock mechanism.



GJ devices that solve specific noise and latch problems

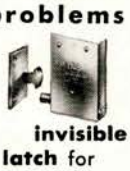


GJ 64

GJ 65
silence slams, prevent rattles.



GJ 30
roller latch
silent . . . no annoying click.



invisible latch for secret doors no hardware shows.



GJ 21A
4-way catch
holds by tension.

Write for complete details and template information.

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Sherarduct has other plus features as well: The Sherardizing process of galvanizing that alloys zinc with the conduit wall, (plus a baked-on Sher-enamel coating) fortifies Sherarduct against rust and corrosion for life. All surfaces, including the hill and valley of every thread, are securely protected against corrosion.

Finally, the gradual heating and cooling of the Sherardizing process normalizes the metal in an annealing like process. Result: easier working, forming and bending on the job.

Write for a free copy of our new Sherarduct facts book. You'll see why the Sherardizing principle makes Sherarduct "galvanized conduit at its best."

Listed by Underwriters' Laboratories, Inc.

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•
ZINC PROTECTED THREADS
•
STRONG COUPLINGS
•
THOROUGH GROUNDING
•
EASY BENDING

Sherardizing is galvanizing at its best . . . Sherarduct is galvanized conduit at its best

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PITTSBURGH, PA.

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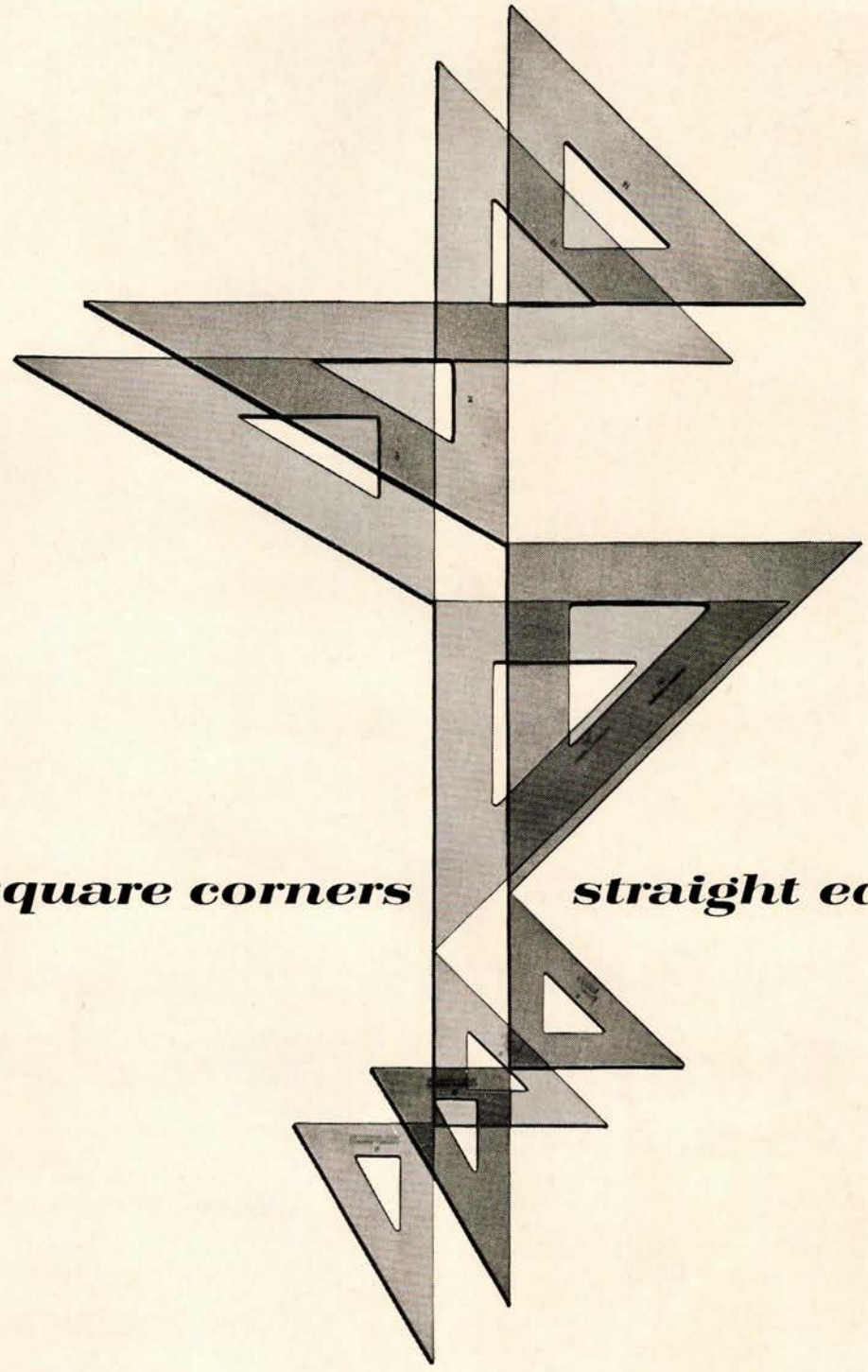

square corners straight edges

High-precision manufacturing equipment and constant laboratory checking enable us to make sure that every resilient tile we produce is straight-edged and square when it leaves the factory; efficient modern packaging keeps it that way until ready for installation. These precision-cut tiles fit together smoothly and easily for low installation costs, and minimize wastage. Uniform thickness, accuracy of cutting, trueness and clarity of color, surface smoothness, ease of maintenance and built-in durability—all of these qualities combine to make this line the world's most popular line of resilient tile floorings.

KENTILE, INC.

America's largest manufacturer of resilient floor tiles

KENTILE: Asphalt Tile . . . Carnival . . . Corktone • KENCORK: Cork Tile for Floors and Walls • KENRUBBER: Rubber Tile • KENFLEX: Vinyl Asbestos Tile . . . Carnival • KENFLOR: Vinyl Tile . . . also available by the yard • SPECIAL KENTILE: Grease-proof Asphalt Tile • THEMETILE, KENSERTS: Decorative Inserts • KENCOVE: Vinyl Wall Base • KENBASE: Wall Base

A QUALITY PRODUCT BY REVERE U.S.A.

COPPER BRASS 18 01 ALUMINUM

16 oz. C. R.

Now

For the first time you can tell, at a glance, that you are getting the exact copper you specify!

ALL STANDARD SIZES OF

REVERE

SHEET, STRIP AND ROLL COPPER

now come marked with gauge and temper

Effective with current production each sheet or strip of Revere Copper will be marked as to gauge and temper. All coils of Revere Copper will be marked on the outer copper wrap. Sample marking (actual size) is shown above. These markings also apply to LEADTEX, Revere's Lead-Coated Copper. The ink used for marking is water-soluble so that it is readily removed by a damp cloth or by water alone.

Now, you can be sure, at a glance, what gauge and temper copper you are getting, when you specify Revere. Also included is the Revere Seal (shown above) which identifies the manufacturing source of the copper as American. This seal and the line, "A QUALITY PRODUCT BY REVERE U.S.A." also appears on all shipping cases.

So in order to make sure that you get the gauge and temper of copper you specify, make certain the sheet, strip and roll copper you order, or use, bears the Revere stamp.

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Southern Hotel Gets Triple Bonus Using *Certain-teed* Firestop Bestwall®

REG. U.S. PAT. OFF.

See Chapter X, 1953-54 Edition, SOUTHERN BUILDING CODE, for rated constructions with Firestop Bestwall. (Gypsum Wallboard with Gypsum Core including Vermiculite.)

Fire Resistance Plus Ease of Application and Less Inconvenience During Construction Important Factors in This Air-Conditioning Job

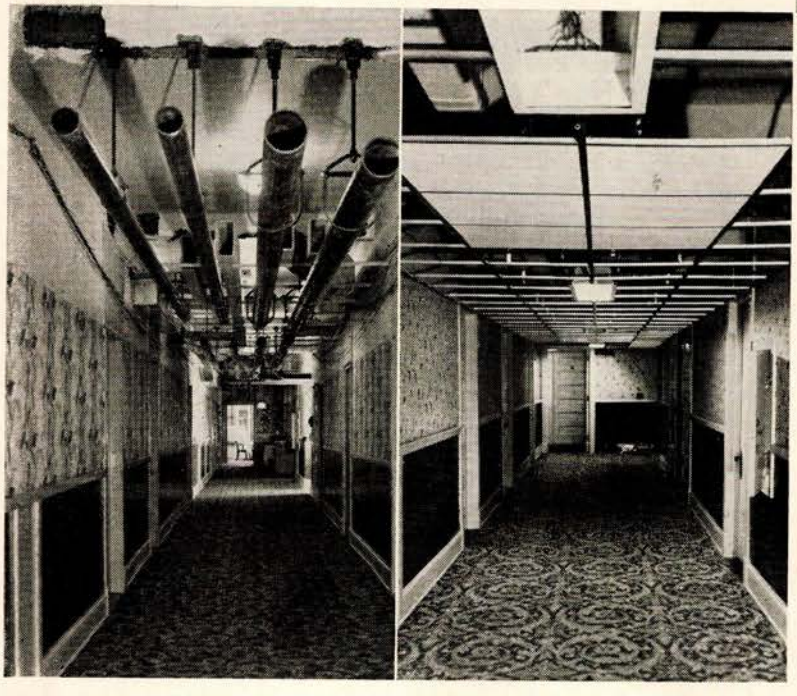
Guests at the Piedmont are safe as well as cool, thanks to the air-conditioning installation. Over 25,000 square feet of Firestop Bestwall Gypsum Wallboard was specified for all corridor ceilings—covering the air-conditioning ducts—because of its great resistance to fire, ease of application, and because it meant less interference with hotel operation during remodeling.

An interesting construction feature: Bestwall panels are left loose in the steel channels (see cut) to give easy access to air-conditioning ducts and to telephone and other wires.

Certain-teed Firestop Bestwall was the first gypsum wallboard to meet Code requirements for one-hour fire resistance over both wood and steel framing in single layer application. Firestop is much more fire resistant than ordinary gypsum wallboard. And it's stronger and more resistant to sound transmission.



Piedmont Hotel, Atlanta, Ga. Air-conditioning units and installation by Gowdy and Durkin, Inc., Atlanta, Ga.; Firestop Bestwall application by Acousti Engineering Co., Atlanta, Ga.; Cary B. Gamble & Associates, Consulting Engineers, New Orleans, La.



Builders get a bonus from Firestop too. It's light—cuts cleanly—and is quick and easy to apply, making for a neat remodeling job.

Certain-teed Firestop Bestwall is manufactured under Underwriters' Laboratories service and has been accepted by building officials in more than 200 cities. Recommend it for both new construction and remodeling . . . for any type commercial, institutional or residential building. Wherever one-hour fire resistance is required, Firestop Bestwall is one of the most effective building materials that can be used. Ask your Certain-teed representative for complete information, or write direct now.

Certain-teed

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Quality made Certain . . . Satisfaction Guaranteed

Certain-teed BUILDING PRODUCTS 50th YEAR

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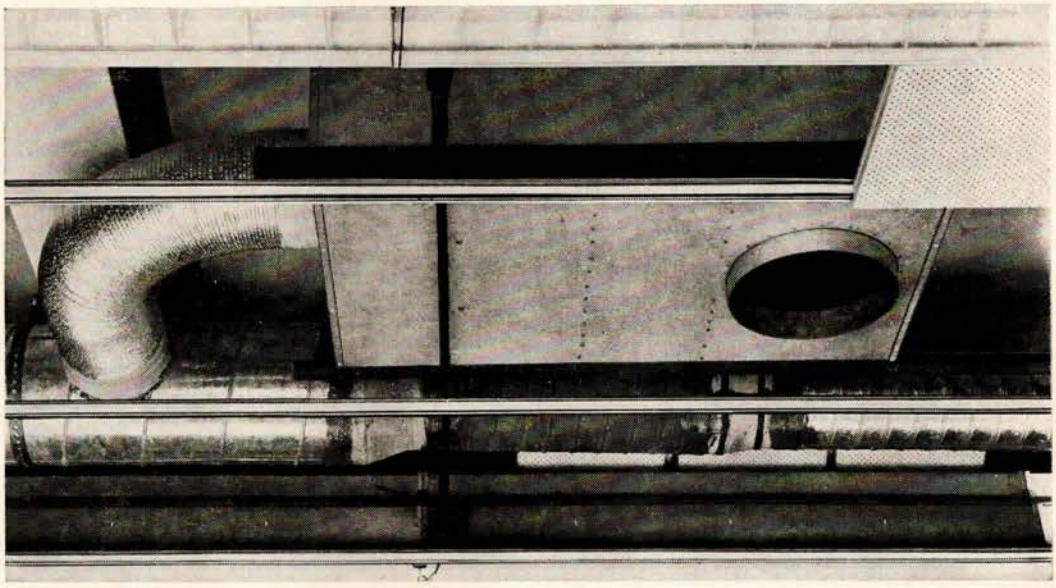
UNION CENTRAL Annex Building, Cincinnati, utilizes some 200 Kno-Draft High Pressure Air Diffusers for quiet, draftless, comfortable air distribution.



BEHIND THE SCENES photo shows typically compact Kno-Draft single-duct system. Note flexible connectors. Outlets at same level as ducts explain why...

High Pressure Saves Space

Space saving, of course, is only one advantage of high pressure air transmission. But it's important. High building costs make it worth while to reduce space allotted to air ducts; and in existing structures, small high pressure ducts have permitted central system air conditioning where space limitations prohibited conventional designs.

Additional advantages of Kno-Draft high pressure systems are: (1) flexibility to meet changes in air conditioning requirements without modifying the system, and (2) individual room temperature control from central station systems.

Kno-Draft High Pressure Air Diffusers are especially designed to handle air at branch duct velocities up to 3,000 feet per minute. Outlets are equipped with dampers and sound traps to eliminate noise. System provides even temperatures throughout the area *without drafts.*

For a full description of Kno-Draft High Pressure Air Diffusers and layouts for typical systems, read the Connor textbook on the subject. Write on your letterhead for a copy of Bulletin K33. Connor Engineering Corporation, Dept. E-55, Danbury, Connecticut.

see our catalog in ARCHITECTURAL FILE or write for copy

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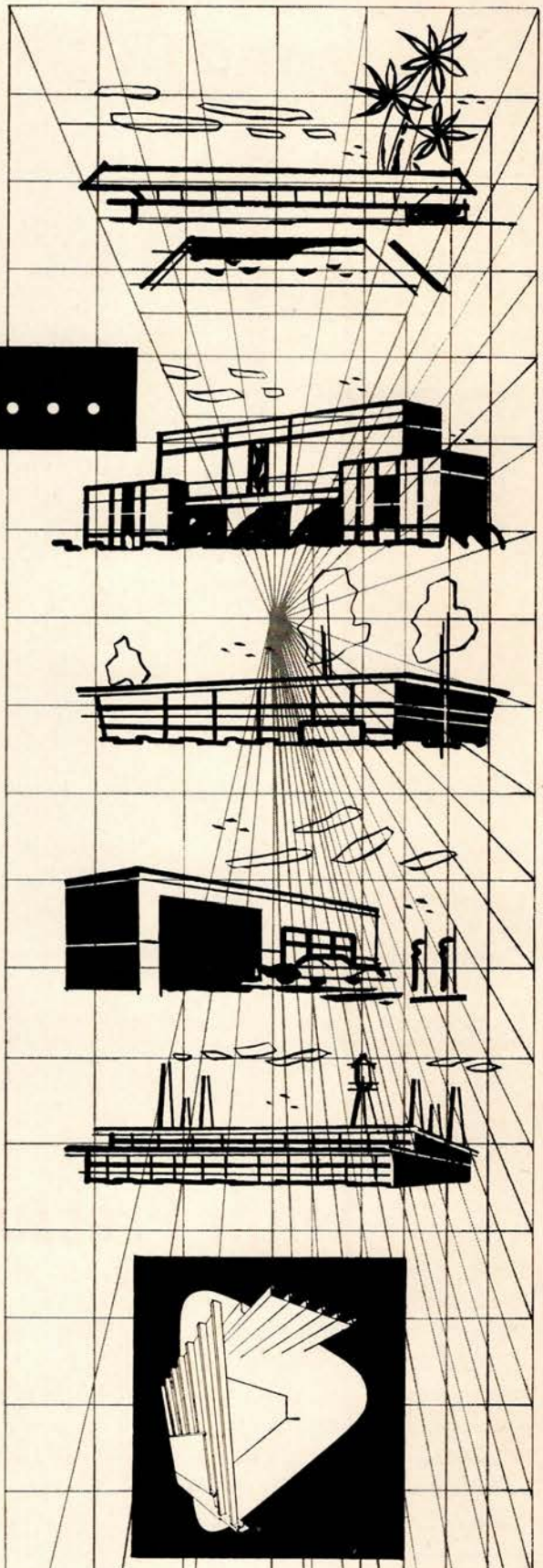

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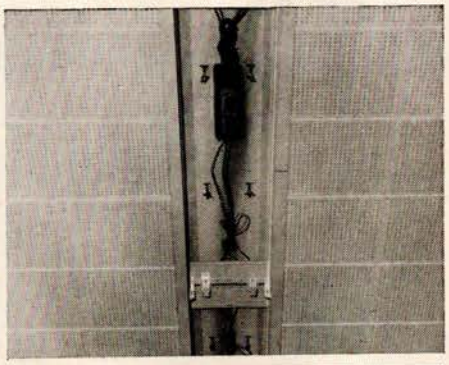






2,200 GUTH TROFFERS CREATE AN "ACRE OF LIGHT" AT LOVEMAN'S

Shoppers are greeted by a store full of lighting that says "come in and buy" as they enter Loveman's Department Store, Montgomery, Alabama.

Nicknamed "an acre of light", this beautiful new store has over 86,000 sq. ft. of sales area. Every inch is efficiently lighted by 2,200 Guth Recessed Troffers and 265 Guth Tile-Lites. Tile-Lites were used between fixtures and at row ends for added interest in the long lines of light.

This striking troffer installation looks as if it were custom-made for Loveman's. The fixtures blend harmoniously with the modern decor. Gleaming snap-on trim hides flange screws and "teebar gap" for a distinctive, tailored appearance. The effect of "arrow-straight lines of light" was made possible by the precision alignment of the troffers.

In a job this size, installation work is a big factor. According to the electrical contractor, this "acre of light" was . . . a breeze . . . one man could have handled it! The fixtures arrived in complete units . . . ready to mount. They fitted the "tile-wide" openings perfectly.

The troffers, with 35° x 30° metal eggcrate shielding provide 40 F. C. halfway between rows. Readings were taken at 34″ above the floor.

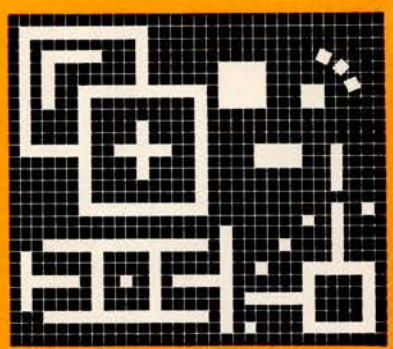
Another factor in the choice of Guth Troffers was maintenance economy. They have hinged shield frames for easy relamping or cleaning. Slide-in reflectors are simple to remove. Electrical apparatus may be replaced without taking troffers down.

Loveman officials give a great deal of credit to Guth Lighting for making their store a pleasant place to work, to shop . . . and to make profits!

Loveman's is part of the new Normandale Shopping Center—33 shops and stores, all lighted with Guth Troffers. It was developed by Aronov Realty Co., Inc.; Architect, Sherlock, Smith & Adams; Electrical Engineer, J. L. Phillips; Electrical Contractor, Long & McGhee Elec. Co.; General Contractor, Jehle Brothers, Inc.; Distributor, Noland Company, Inc.

Guth

LITE-BLOX TROFFERS
for sparkling lines of efficient light in any office or store
(See Loveman Article at left)



The most complete troffer line—

2 x 2's, 2 x 4's, 4 x 4's for unlimited pattern planning.

All types of shields from GrateLite* Louver-Diffuser to the new Paraflector and "Ro-Lo-B" Louvers.

WRITE ON YOUR LETTERHEAD TODAY FOR BIG NEW GUTH TROFFER CATALOG 50-J! FREE!

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

Guth

TRUSTED name in lighting since 1902

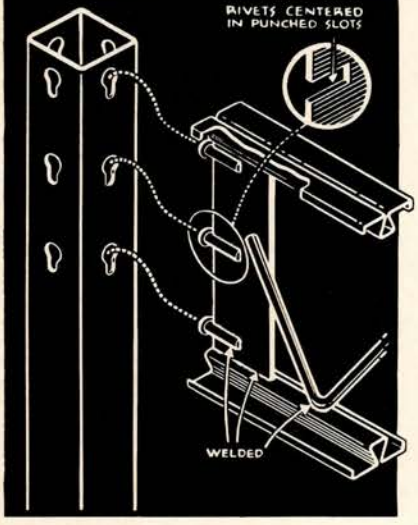
*T. M. Reg. U. S. & Can. Pats. Pend.

THE DRIVEN JOINT THAT LOCKS A STEEL BUILDING TOGETHER INSTANTLY



TWENTIETH CENTURY ACHIEVEMENT IN REDUCING CONSTRUCTION TIME

V-LOK INTERLOCKING STEEL FRAMING



V-LOK is Macomber's contribution to the men who design, to the general contractors who build and to the owners who want earlier occupancy in a steel framed building.

The driven joint—eliminating bolting, riveting and welding from the erector's job—builds ruggedness into a steel frame—locking it into a rigid structural unit in a very few days instead of weeks.

V-LOK simplifies the designing job — meets the load and span requirements of schools, commercial and industrial work and joins readily with all collateral materials.

If you have a school job—see what V-LOK will do to your costs per square foot. A framing system that puts you ahead of schedule in a one-trip erection job!

Write for Architects' and Engineers' Design Manual

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STANDARDIZED STEEL BUILDING PRODUCTS

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TIME



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1948 Advance originates compact, light-weight Lead-Lag slimline lamp ballast design.

1950 Improved Series — Sequence slimline lamp ballast design created by Advance engineers.

1950 Advance Series — Sequence design becomes standard for the lighting industry.

1954 Advance Lead-Lag design recognized as lighting industry standard.

1955 Origination by Advance of revolutionary 96-T-12 Rapid Start lamp ballast. More compact . . . lighter in weight . . . maximum efficiency.

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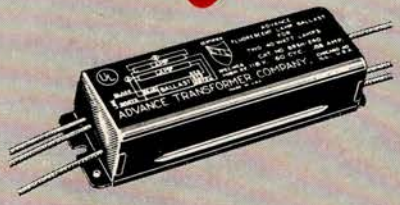

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ADVANCE TRANSFORMER CO.

Cable Address "ADTRANS"

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Leader in the field, Lowell "ear-level" sound equipment has proved superior for use in new and existing construction in more large installations (schools, hospitals, airports, railroad stations and factories) than any other make. All Lowell equipment is designed for easy installation and comes complete with full instructions and mounting instructions.

Lowell High Ceiling Type Baffle with "Floating Conical Action"

Lowell SR Series Chandelier Type Baffles (illustrated above) are especially designed for high ceiling areas, such as churches, auditoriums, railway stations and air terminals, where echo, reverberation and feedback are problems. Lowell "Floating Conical Action" assures uniform, *controlled* 360° sound dispersion. Diffusing cone supported through rubber grommets by ¼" formed aluminum rods, eliminating metallic resonance. Available for 7" to 12" speakers in natural satin finish or a variety of colored lacquers. Constructed of 18 gauge aluminum.



Lowell LCB Bi-Directional Speaker Baffle

Corridor or wall speaker installations give superior performance. Baffle directs clear, undistorted "ear-level" sound in a concentrated beam along the hall. Heavily loaded housing reduces feedback and eliminates metallic resonance. Made of 18 gauge spun aluminum with fine mesh metal grille. Three models for 5" to 8" speakers.

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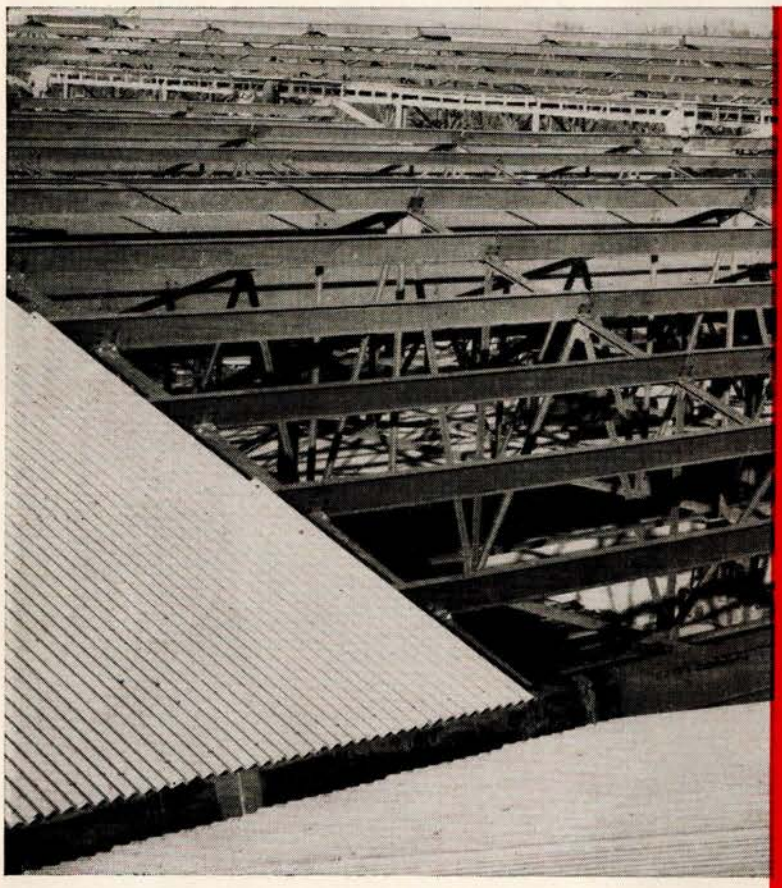
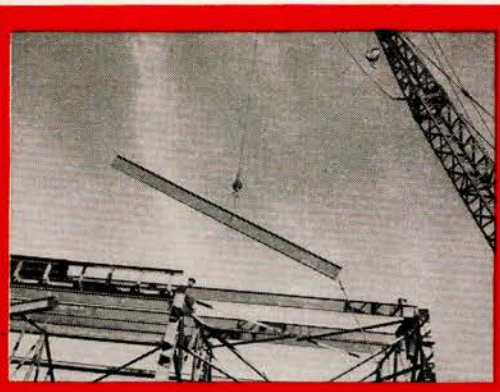
see our catalog in (S) or write for copy

BUILDERS BEAT A DEADLINE WITH J&L JUNIOR BEAMS



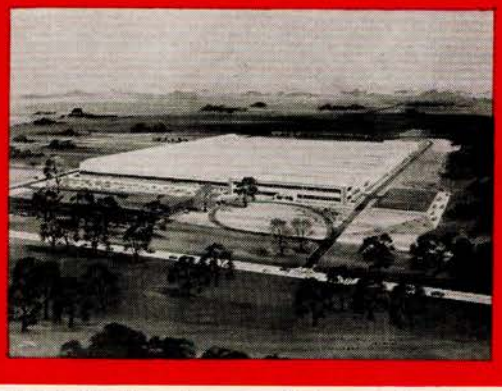


JOB DESCRIPTION
Marvel-Schebler Products Division
Borg-Warner Corporation
Automatic Transmission Department
Building
Decatur, Illinois

Engineers—
Alfred Benesch & Associates, Chicago

Structural Steel Fabricator—
Indiana Bridge Company, Muncie, Ind.

Contractor—
J. L. Simmons Co., Inc., Decatur, Illinois



2400 tons of steel structurals, including over 500 tons of J&L Junior Beams, in 75 days . . . that was the "unusual" erection schedule laid down for the new automatic transmission building of Borg-Warner Corporation's Marvel-Schebler Products Division. And the schedule was met with a few days to spare!

The men on the job give lightweight Junior Beam roof purlins a big share of the credit for this outstanding accomplishment. Here are just some of their reports.

"The time for delivery of steel . . . was the essence of the contract. We chose J&L Junior Beams because of their availability, simple fabrication and ease of erection."

H. E. WRAY, Assistant General Manager
INDIANA BRIDGE COMPANY

"We could never have met the schedule that was laid down without these J&L Junior Beams. They have a wider seating area and double footings which gave our workmen a safer, faster area of moving around aloft. If we had used the usual channels, we would have had to slow down for safety's sake. We would have had foot room on only one side of the bottom of the channels, compared with a place on either side for a man to get foot support on the beams."

CECIL STODGHILL, Construction Superintendent
INDIANA BRIDGE COMPANY

Take a tip from the men that are using them, J&L lightweight Junior Beams can help you cut building costs. Experience shows that J&L Junior Beams are the most economical hot rolled purlin sections available. They're adaptable, easy to install, rigid and vibration resistant.

Write today for more information on this modern lightweight J&L structural.

Jones & Laughlin Steel Corporation
466 Gateway Center, Pittsburgh 30, Pa.

☐ Please send me a free copy of your booklet on J&L Junior Beams.
☐ Please send me comparative cost figures on purlin sections.

Name_____

Company_____

Address_____

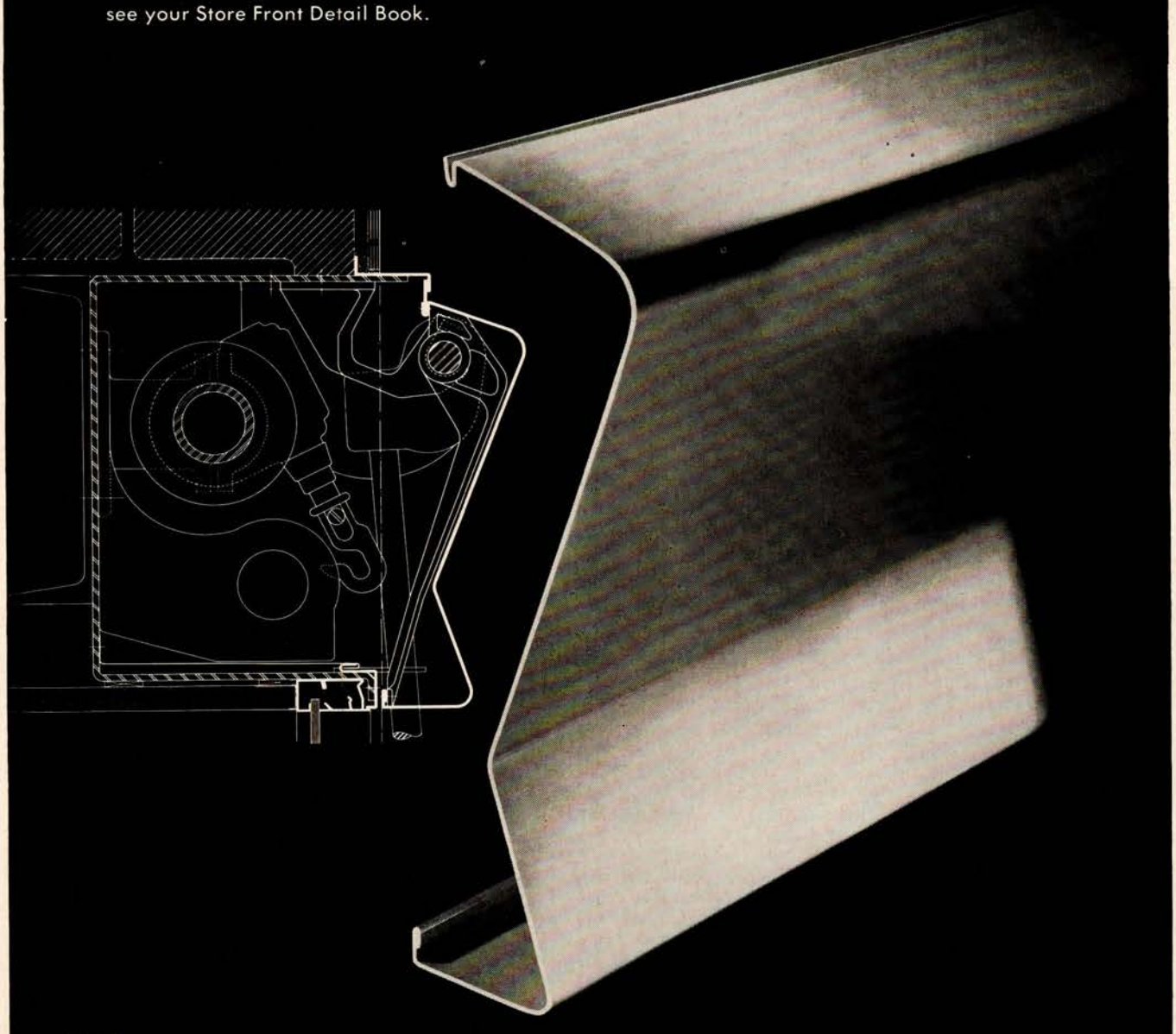
Jones & Laughlin
STEEL CORPORATION — *Pittsburgh*

J&L STEEL

JUNIOR BEAMS ARE READILY AVAILABLE FOR PROMPT DELIVERY

New Pittco NO. 90 Awning Bar

. . . combines beauty and function. The photograph shows how the profile creates a pleasing balance of light and shadow. The Pittco No. 90 Awning Bar will give added character to a store front, window or entrance. Factory or field fabricated. For complete information, see your Store Front Detail Book.



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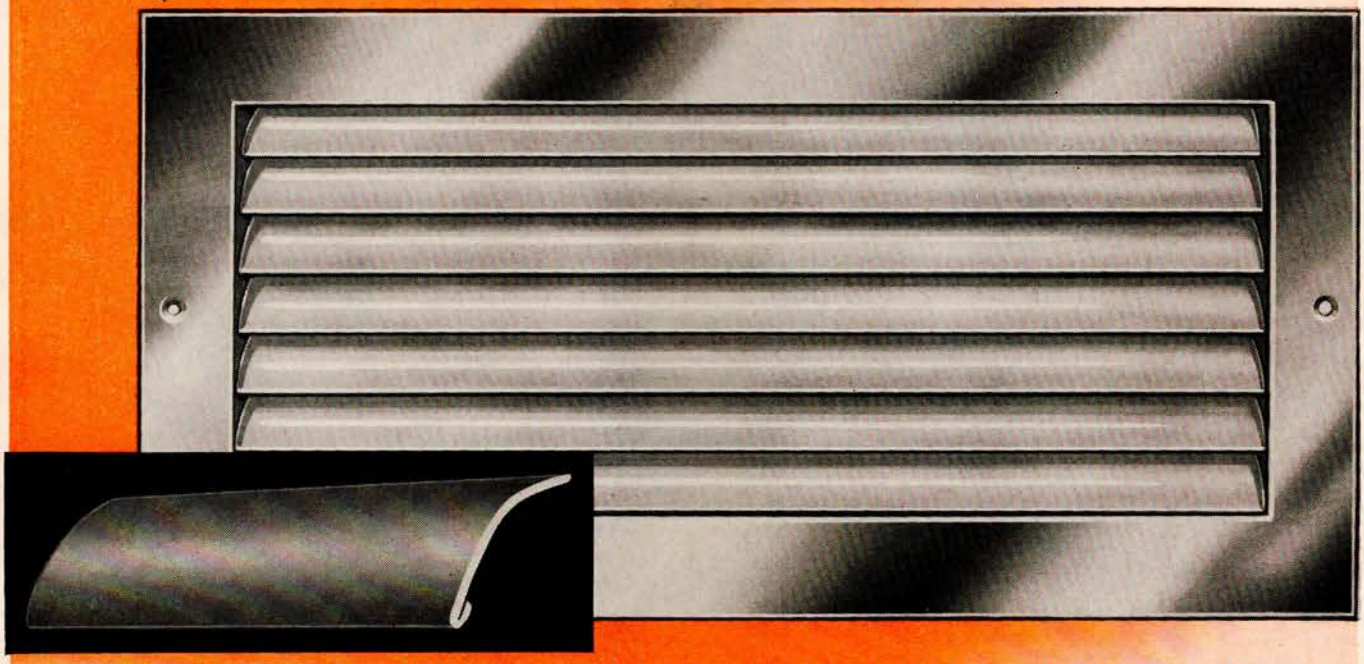
NEW IMPROVED

Return Air Grille



CURVED HEMMED FINS GIVE 80% FREE AREA

TITUS

designed by

Large free area means the Titus Return Air Grilles HANDLE MORE AIR PER SQUARE INCH. Makes it possible for a smaller grille to give superior performance . . . at lowest cost . . . and correct performance faults of other parts of an air conditioning or heating system . . . at the same time.

NEW BEAUTY

Matches design of supply grilles Curved outline of fins add beauty . . . at the same time make it easy for maintenance personnel to keep grilles clean.

ONE-PIECE ASSEMBLY . . . FOR ANY SIZE OPENING

This eliminates expensive labor of handling old-fashioned grilles that are made in sections. Cuts costs of fitting, butting and screwing together these sections. Brings labor and grille costs to a minimum.

MORE STRENGTH PER SQUARE INCH

The curved hemmed fin design adds rigidity and durability to resist lower wall abuse. There is no see-thru due to the special positioning of the fins.

WRITE FOR FREE CATALOG TODAY



TITUS MANUFACTURING CORP.
WATERLOO, IOWA

Gentlemen: I wish to improve the heating and air conditioning performance of my forced air systems . . . at the same time lower my grille costs. Please send me the new illustrated brochure on Titus Return Air Grilles.

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Company _____

Address _____

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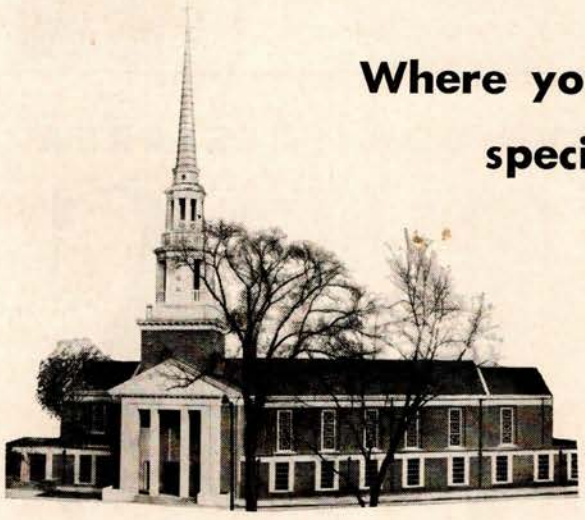
First Presbyterian Church
South Bend, Indiana
Architect: Harold Wagoner
Philadelphia, Pennsylvania
Contractor:
Sollitt Construction Co.
South Bend, Indiana

PROGRESSIVE VIEW of First Presbyterian Church, South Bend, Indiana. Contractor Ralph Sollitt reports: "Duraplastic gave us a more plastic, workable mix . . . less segregation and easier placement."

Where your design calls for concrete . . . specify DURAPLASTIC* cement



Yet Duraplastic costs no more

. . . Sells for the same price as regular cement and requires no unusual changes in procedure. Complies with ASTM and Federal Specifications. For more information and a descriptive booklet, write Universal Atlas Cement Company (United States Steel Corporation Subsidiary), 100 Park Ave., New York 17, N. Y.

Where your design calls for concrete, it pays to consider the advantages of Atlas Duraplastic air-entraining portland cement. This superior cement is recognized throughout the building field as an aid to rapid, efficient construction and attractive, durable results.

Contractors report that Atlas Duraplastic improves surface appearance—aids proper placement of concrete in forms and around reinforcements. That's because Duraplastic-made mixes are more workable. They hold together better and require less mixing water for a given slump.

Builders like the way Atlas Duraplastic minimizes water gain and segregation . . . gives finished concrete greater durability and increases its resistance to freezing-thawing weather.

OFFICES: *Albany, Birmingham, Boston, Chicago, Dayton, Kansas City, Minneapolis, New York, Philadelphia, Pittsburgh, St. Louis, Waco.*

**"Duraplastic" is the registered trade-mark of the air-entraining portland cement manufactured by Universal Atlas Cement Company.*

ATLAS® **DURAPLASTIC**

AIR-ENTRAINING PORTLAND CEMENT

AR D-168

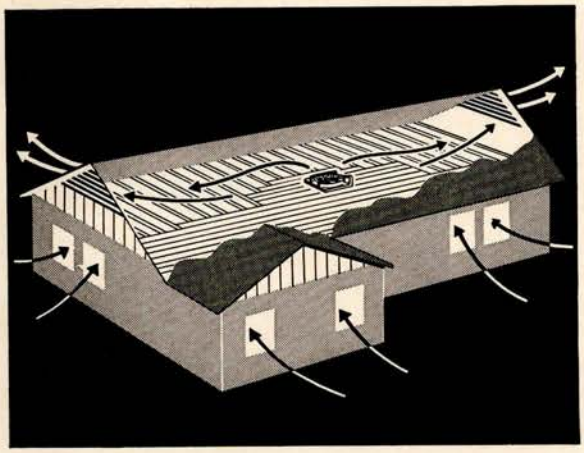


Makes Better Concrete at No Extra Cost

UNITED STATES STEEL HOUR—Televised alternate weeks—See your newspaper for time and station

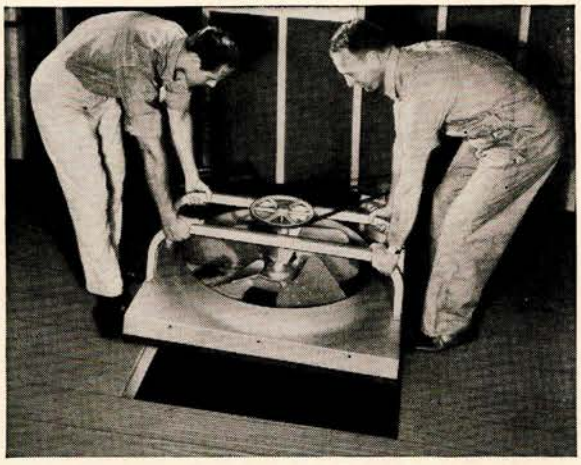
Cool your homes at minimum cost

Home buyers are seeking cool comfort



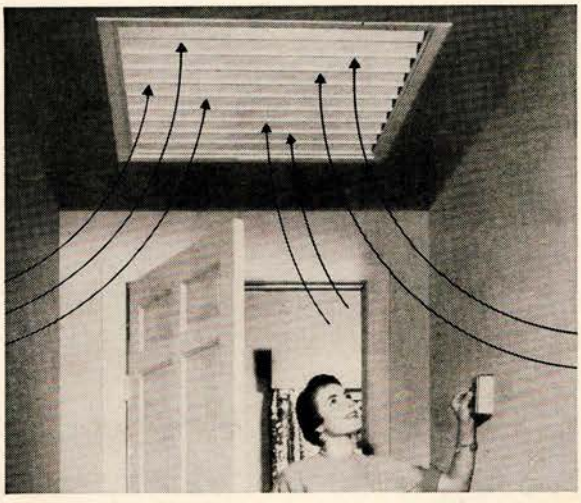
Cool breezes in every room

This inexpensive home cooling system fills the entire home with refreshing air on hottest summer nights. It pulls in fresh outside breezes . . . drives out hot, sultry air. Room temperatures drop 10 to 20°, bringing cool comfort to occupants.



Easily installed in any home

The new Hunter is the simplest of all attic fans to install in any home, old or new. Designed for quiet, trouble-free performance, it will cool any home for many years. Certified air deliveries range from 5000 to 16000 cubic feet per minute.



Hunter's new automatic shutter

This modern ceiling shutter opens or closes automatically at the flip of a switch, or with automatic timer. Finished in neutral shade of baked enamel, it blends with all room colors. Shutter will fit narrow hallways, and is easily installed.

HUNTER

Package

ATTIC FAN

Mail coupon for 1955 Hunter Catalog and copy of "Cool Every Home with a Hunter Attic Fan."

Hunter Fan and Ventilating Co.
396 S. Front St., Memphis 2, Tenn.
Send complete data to:

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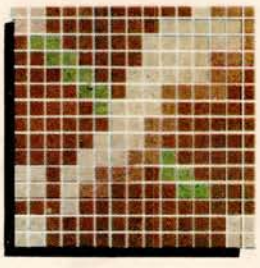
See our Catalog in Sweet's File



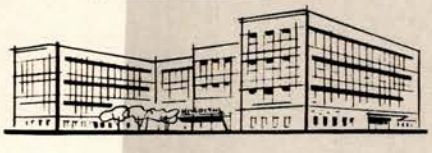


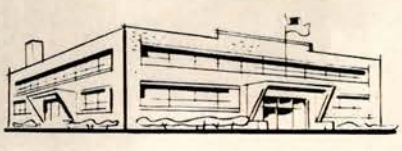










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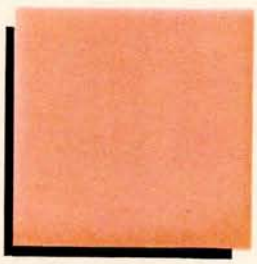
from America's largest ceramic tile manufacturer!

Know . . . and **work** with . . . MOSAIC® CERAMIC TILE









You'll want complete data on the complete Mosaic tile line. Ask your Mosaic Representative, or write us at Dept. 30-27, Zanesville, for these new Mosaic tile books: (A) The Mosaic Clay Tile Workbook for Architects; (B) The Mosaic Tile Book of Beautiful Homes; (C) The Mosaic Products Catalog.



A



B



C

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Your air conditioning problem can be a "breeze"—



THE BETTMANN ARCHIVE

How's this old-time gadget for air conditioning service! If you need advice on your clients' air conditioning problems, you can get specialized assistance from Airtemp.

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Airtemp can guide you in planning your commercial and industrial air conditioning

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Your needs get individual attention. Airtemp Construction Corporation, subsidiary of Chrysler Corporation, brings you the advisory service of engineering specialists.

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The Chrysler name brings you tremendous public acceptance. Airtemp's reputation is built on 18 years of experience and leadership in air conditioning *exclusively*.

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You save money on Airtemp's low installation costs, low operating costs. Extra economy like this results from Airtemp's efficient design and operation.

AIRTEMP SERVES ALL AMERICA



SOUTHWEST AMERICAN PUBLISHING COMPANY, Ft. Smith, Arkansas. Contractor: Harry G. Barr Company.



STUART INVESTMENT BUILDING, Lincoln, Nebraska. Contractor: Sidles Company. Built in 1937.

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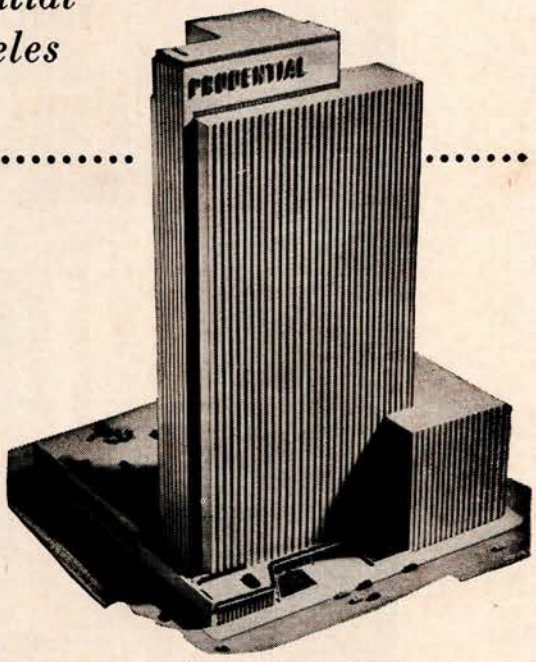
AIR CONDITIONING • HEATING FOR HOMES, BUSINESS AND INDUSTRY



• *FIRST in the Prudential Building... Los Angeles*



Architects: Naess and Murphy
General Contractor: George A. Fuller Co.
Plastering Contractor: McNulty Bros. Company

Now In the Prudential Building Chicago

There Must Be A Reason For

ZONOLITE® *Time-Tested* PLASTER!

- ☆ **Zonolite Plaster has stood the test of time in buildings built over 20 years ago. It has been proved reliable.**
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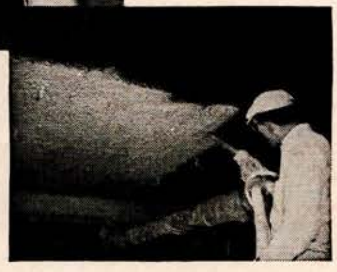
- ☆ **Zonolite Plaster gives added insulation value.**
- ☆ **Zonolite Plaster will help you cut building time and costs.**

Revolutionary Placing Methods

Plaster fireproofing applied by machine in Chicago's new Prudential Building.



Brown coat application of Zonolite Plaster machine-applied to beams for 4-hr. fire rating.



Scratch coat of plaster machine-applied direct to metal lath.

Time Tells The Story

Take the Prudential story, for example. In 1948, Prudential used Zonolite in its Los Angeles building (illus. top left). By using Zonolite vermiculite Plaster instead of poured concrete for fireproofing steel, the weight per running foot was reduced from 225 pounds to *25!* Cost per running foot was cut from $4.70 to $3.00. Zonolite saved weight; saved money, too. And *earned the highest attainable fire rating!*

No wonder Zonolite Plaster fireproofing is being used in Prudential's new Chicago building. Year after year, time-tested Zonolite Plaster has proved its worth in major buildings everywhere. A recent check of a group of blue ribbon buildings (some constructed over 20 years ago) shows the original plaster in A-1 condition.

Yes, there's a *reason* why America's leading building teams look to ZONOLITE, *the time-tested lightweight champion!*

Mail Coupon Today

Get new booklet "Systems of Lightweight Construction" with latest published information on Zonolite Plaster.

Zonolite Company, 135 S. LaSalle St.
Dept. AR-55, Chicago 3, Ill.

Please send me without obligation new booklet, G-66, "Systems of Lightweight Construction" with full details about time-tested Zonolite Plaster.

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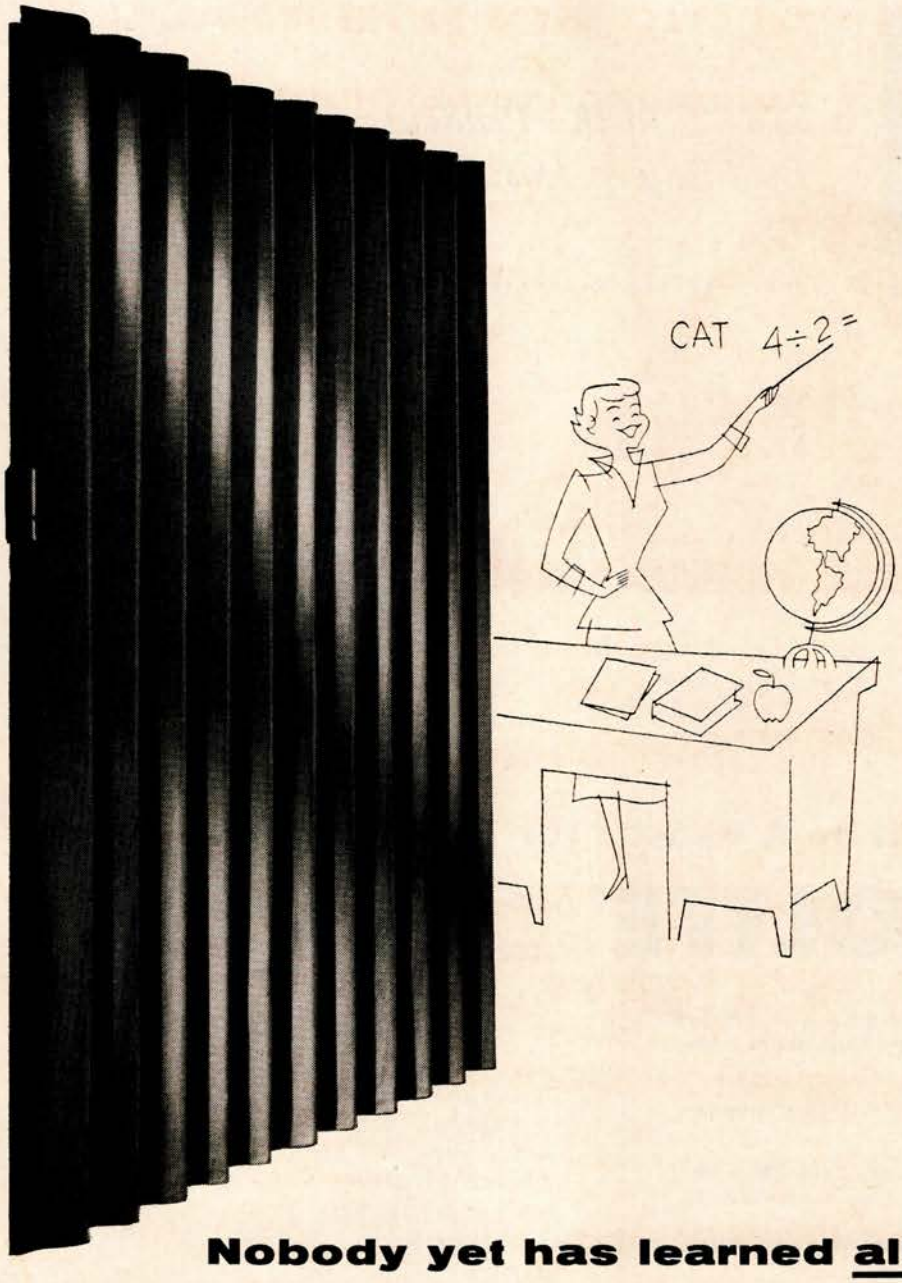

Nobody yet has learned all the ways Modernfold makes space flexible

From grade schools to colleges, from workshops to factories, space in today's buildings can be as fluid and versatile as an architect desires...for MODERNFOLD doors and walls have given design a new flexibility, as exciting as it is practical.

Space requirements which change hourly or daily can be met quickly and easily. And space needs which are likely to change months or years in the future need not require expensive, time-consuming remodeling if MODERNFOLD doors and walls have been installed with growth in mind.

MODERNFOLD doors are available in two lines: Custom, which comes in any size and a multitude of colors, and Spacemaster, which fits standard-size door openings and can be painted or slip covered.

In any size, MODERNFOLD doors assure an almost unlimited life of efficiency and service because of their balanced, double-strength steel framework. And their washable vinyl covering has to meet the most rigid specifications in the industry for flexibility, resistance to cold, abrasion resistance and flex resistance.

Switches and overhead tracks make it possible for one MODERNFOLD Custom door to serve in more than one location...to meet a variety of fast-changing demands for space. In fact, there's just no limit to the ways MODERNFOLD makes space more flexible.

If you have a problem in space division, the MODERNFOLD distributor (listed under "Doors" in classified directories) will be glad to show you the Custom line. Your building supply dealer has the Spacemaster line available. Or write New Castle Products, Inc., Dept. E30, New Castle, Indiana. In Canada: New Castle Products, Ltd., Montreal 6.

Full details in Sweet's file

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DOORS

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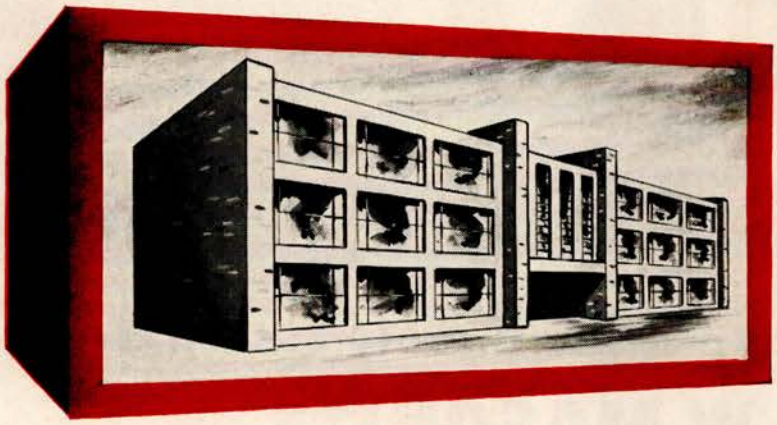
ENGINEERED TO FIT THE EXACT NEEDS OF THE INDIVIDUAL BUILDING

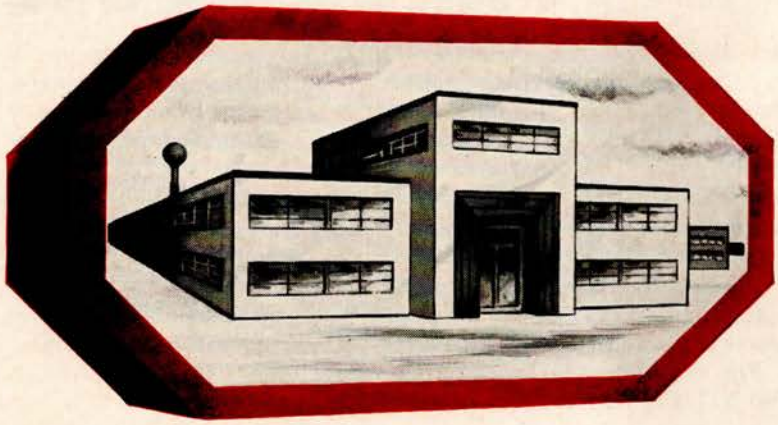
JOHNSON Automatic Temperature CONTROL



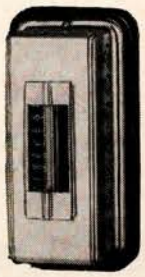
OFFICES, STORES, PUBLIC BUILDINGS



SCHOOLS, HOSPITALS, INSTITUTIONS



INDUSTRIAL BUILDINGS



Every building presents a different temperature control problem. So does its heating, cooling, ventilating or air conditioning system. That is why architects and engineers, seeking to insure the *finest* in control for their buildings, turn their temperature regulation problems over to Johnson.

The nationwide Johnson organization *originated* the idea that temperature control systems must be specially designed according to the requirements of the particular building and its heating, ventilating or air conditioning installation. *For over 70 years, Johnson has manufactured automatic temperature control apparatus and, beyond that, has planned and installed every one of its systems to fit the exact needs of the individual building.*

This undivided interest in and responsibility for the entire sequence of operations results in temperature control systems that are unsurpassed for efficiency, economy, comfort and convenience.

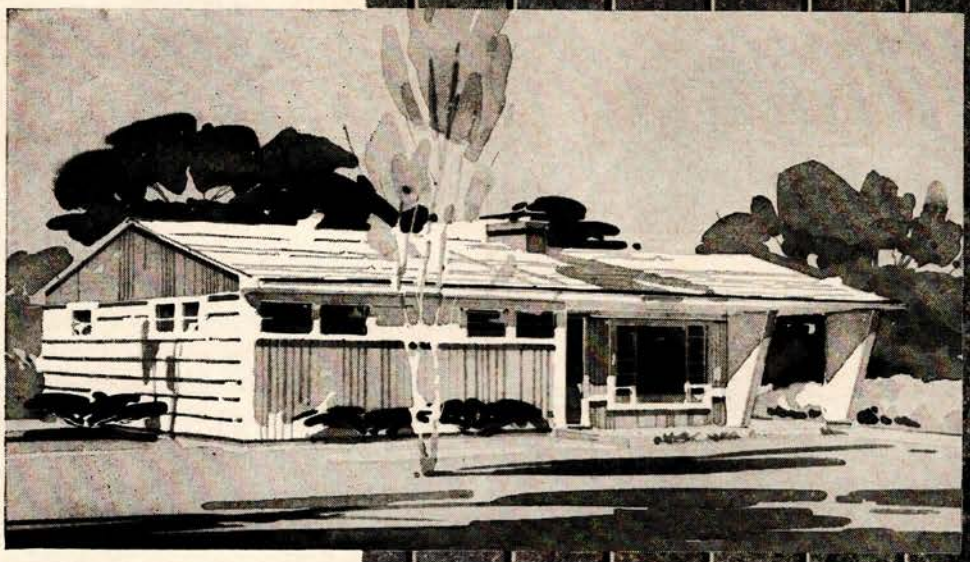
Any building—small or large, new or existing—can enjoy the benefits of Johnson Control. Why don't you take advantage of Johnson's unmatched experience on your next job and be sure of getting the finest in control? The recommendations of an engineer from a nearby Johnson branch are yours without obligation. JOHNSON SERVICE COMPANY, Milwaukee 2, Wisconsin. Direct Branch Offices in Principal Cities.

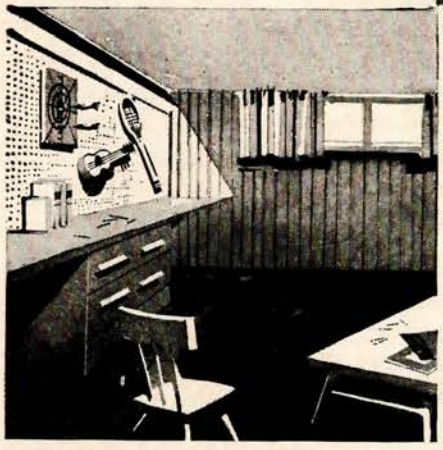
JOHNSON CONTROL

TEMPERATURE AIR CONDITIONING

PLANNING • MANUFACTURING • INSTALLING • SINCE 1885

It's different





Ideal for the game room, recreation room, den, study or modern living room. Panelgroove goes up quickly, takes and holds any surface finish, resists all kinds of bumps, scrapes and surface hazards. Use Panelgroove for interesting, serviceable walls in public rooms, too.

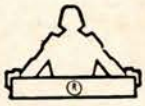
When Individuality Counts Use

NEW MASONITE PANELGROOVE

Different—distinctive—and desirable! Offers you a vertical accent for exteriors in homes of all types, for garages, shops, and many another structure. Creates a refreshing contrast to other design treatments. Makes good-looking gable ends—quickly! Perfect for use between and around windows, on short runs, and in featured areas.

Masonite Panelgroove needs no joint treatment...edges are shiplapped to create a continuous pattern. Square-cut grooves are 3/8" wide and 4" on centers. Panels are 4' wide, 5/16" thick and up to 16' long.

When you specify Panelgroove, you will be assuring your client all the weather-defying advantages of Masonite Tempered Presdwood®—plus a continuous high-styled design with great popular appeal. Sold by lumber dealers. For complete information write Masonite Corporation, Dept. AR-5, Box 777, Chicago 90, Illinois.

Look For This Man  He Makes The Difference

MASONITE PANELGROOVE

TEMPERED PRODUCT OF MASONITE® CORPORATION

Not immediately available west of the Rockies

Those who really know say:

CERTIFIED CBM CERTIFIED by ETL BALLASTS

give best results!

• No one knows better the value of CERTIFIED CBM BALLASTS than the manufacturers of fluorescent tubes. For the satisfactory performance of their lamps is vitally dependent on the ballasts that operate them. They know CERTIFIED CBM BALLASTS are Tailored to the Tube.

CHAMPION *says:*

"Fluorescent lamps are designed to operate at specific electrical values. The use of auxiliary equipment that has been proven to meet these agreed upon standards will assure the user maximum value for his lighting dollar with a minimum of operational failures. Certified Ballasts are inexpensive insurance."

GENERAL ELECTRIC *says:*

"The life and light output ratings of fluorescent lamps are based on their use with ballasts providing proper operating characteristics. Ballasts that do not provide proper electrical values may substantially reduce either lamp life or light output, or both. Ballasts certified as built to the specifications adopted by the Certified Ballast Manufacturers (CBM) do provide values that meet or exceed minimum requirements. This certification assures the lamp user, without individual testing, that lamps will operate at values close to their ratings."

SYLVANIA *says:*

"The light and life ratings of fluorescent lamps are based on three hour burning cycles under specified conditions and with ballasts meeting American Standards Association specifications. Ballasts marked with the CBM emblem and certified by Electrical Testing Laboratories, Inc., meet ASA specifications."

WESTINGHOUSE *says:*

"Use ballasts that are tested and Certified by Electrical Testing Laboratories or ones that are otherwise known to meet the specifications of the lamp manufacturer. These will give best results with Westinghouse fluorescent lamps."

That's why CERTIFIED CBM BALLASTS merit the slogan—Tailored to the Tube.

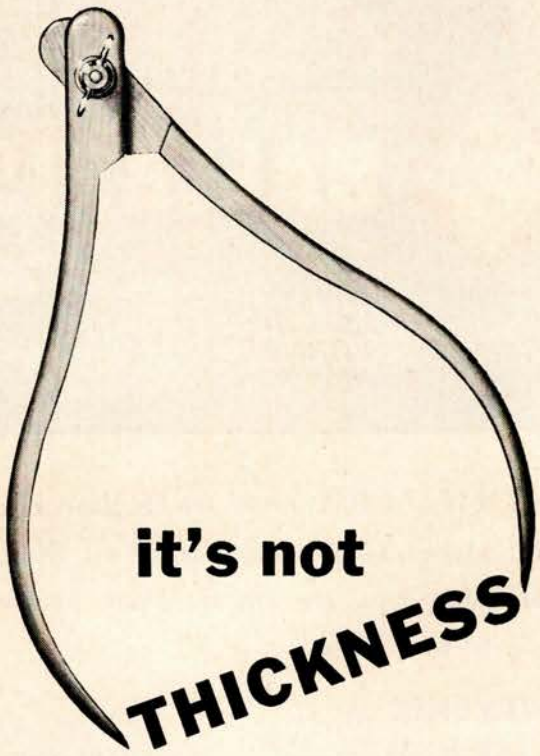
Certified CBM Ballasts are built to assure quiet operation and long trouble-free life.

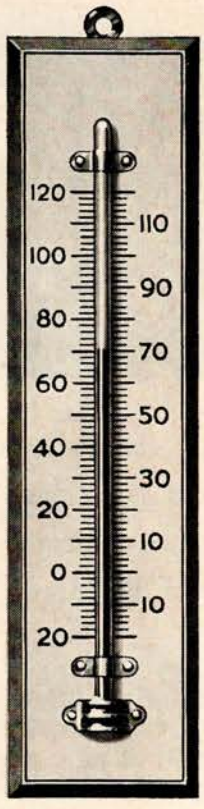


CERTIFIED BALLAST MANUFACTURERS

Makers of Certified Ballasts for Fluorescent Lighting

2116 KEITH BLDG., CLEVELAND 15, OHIO





but thermal efficiency that counts!

that's why more architects specify Fiberglas than any other roof insulation

Once upon a time it was the practice of architects to specify roof insulation by thickness. Today, this practice is obsolete because ¾-*inch* of Fiberglas* does the same insulating job as a *full inch* of most other materials. And in addition to its exceptionally low "k" factor, Fiberglas Roof Insulation is dimensionally stable, rot proof, moisture resistant. It has sufficient resilience to withstand normal traffic loads. Its light weight and easy workability also save time and labor costs. For complete technical data, see our listing in Sweet's File, or write either to one of the distributors listed below, or to Owens-Corning Fiberglas Corporation, Dept. 68-E, Toledo 1, Ohio.

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FIBERGLAS

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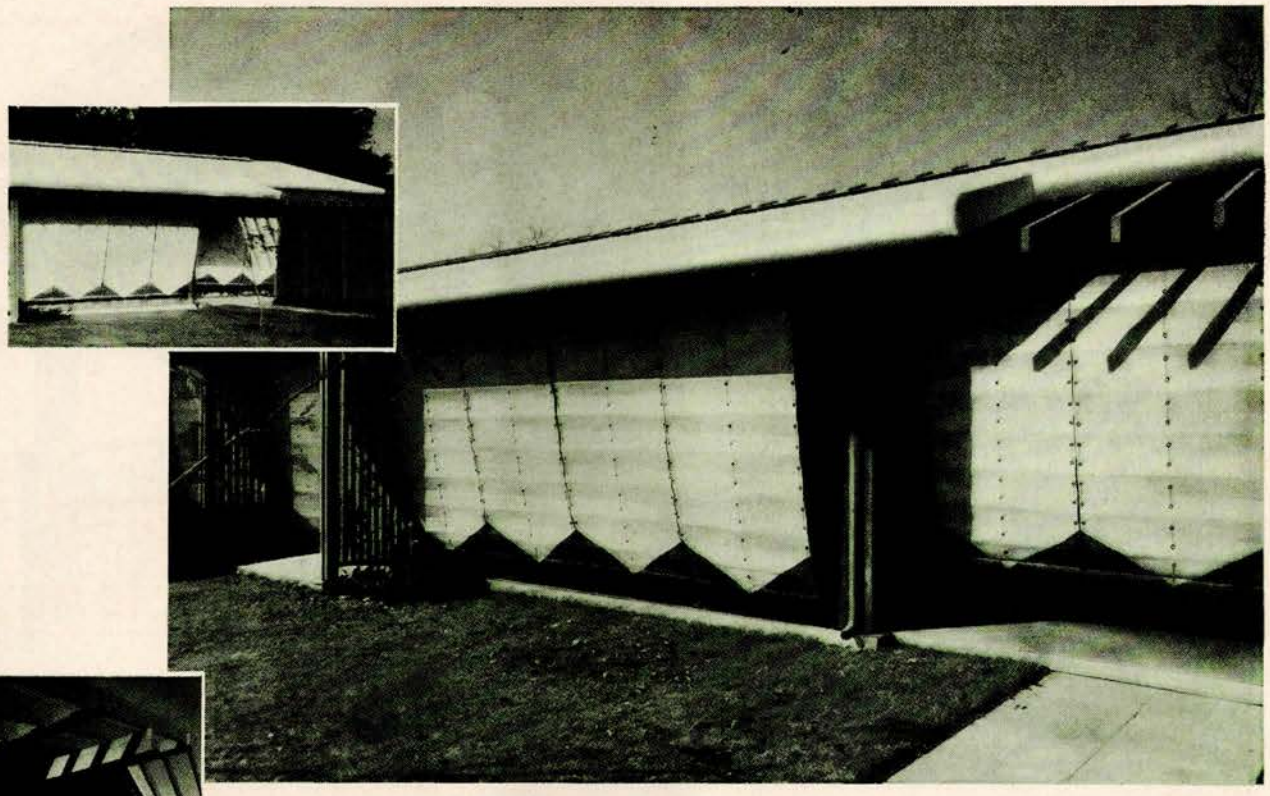
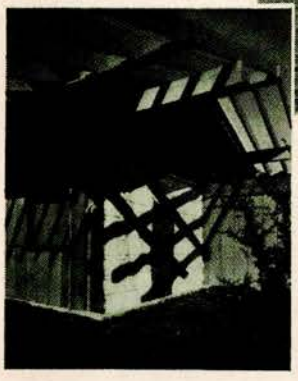




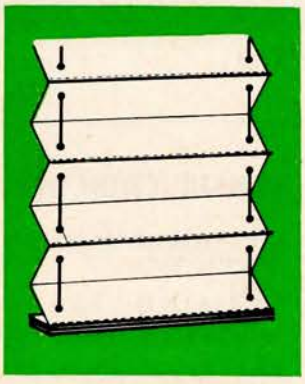
Canvas solves the sun problem in

House Beautiful's 1955 Pace Setter House

Shading walls from heat and glare of the summer sun can be more than a smart move to reduce capacity requirements and operating costs of cooling equipment. As the editors of House Beautiful discovered in their choice of canvas sunshades, it can be an exciting adventure in imaginative design.

The problem here was how to shade east walls under a roof overhang that provided little or no protection from the early morning sun. By 8 A.M., even in late summer, the outside of these walls was too hot to touch. Such a crucial source of heat intake can mean trouble for the occupants, with or without air conditioning. With custom-designed white canvas sunshades, the whole wall of wide glass areas is provided with complete protection and the ability to reflect away heat.

Because of its easy flexibility, its simplicity of fabrication, and its smart appearance, you'll find canvas the best solution to your sun problems. Talk over your design ideas with the canvas goods manufacturer in your locality. He'll gladly discuss specifications and costs without obligation. Look for him listed under "Awnings" in the yellow pages of your phone book.



Each lightweight panel has horizontally-stitched pleats that enables it to be drawn up into a neat package of four or five inches for integration under the overhang.

See our catalog 18f/Ca in Sweet's Architectural File or write for a free copy.
It contains original and practical ideas, plus helpful instructions for specifying canvas.

Canvas Awning Institute, Inc.

and National Cotton Council

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THE CANVAS AWNING INSTITUTE INC.

How to build a "LUXURY" HOUSE for $8 to $10 a □′



Framing for new home of Lewis R. Berry at Hanover, New Jersey

PM-58

Here is a seven-room, two-bath, ranch-style house, photographed during erection. The completed structure, which is top quality throughout, cost less than $23,000 to build.

The "key" to this low-cost luxury house is Penmetal LIGHTSTEEL structural sections. These sections are scientifically engineered for easy fabrication and erection. That is why you save in construction costs.

Joists, studs, track and bridging are designed to fit together for ease of assembly and welding in the shop or at the job site. Because of the light weight of the sections, complete wall units can be readily trucked to the job site where they can be erected in a few minutes. Precisely engineered openings in sections reduce cost of installing wiring and plumbing. These openings are also used for tying metal lath to the sections.

The finished house is firesafe, termite proof and virtually maintenance free.

LIGHTSTEEL houses are not mass produced; they are built to your own drawings and specifications. For further information, send for *new* 16-page illustrated catalog.

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General Sales Office:
205 East 42nd Street, New York 17, N. Y.
Plant: Parkersburg, W. Va.

METAL MARK Penmetal 1869 OF QUALITY

CONSTRUCTION DETAILS

OVERALL DIMENSIONS— 62′ x 36′.

FRAMING— Penmetal LIGHTSTEEL structural sections.

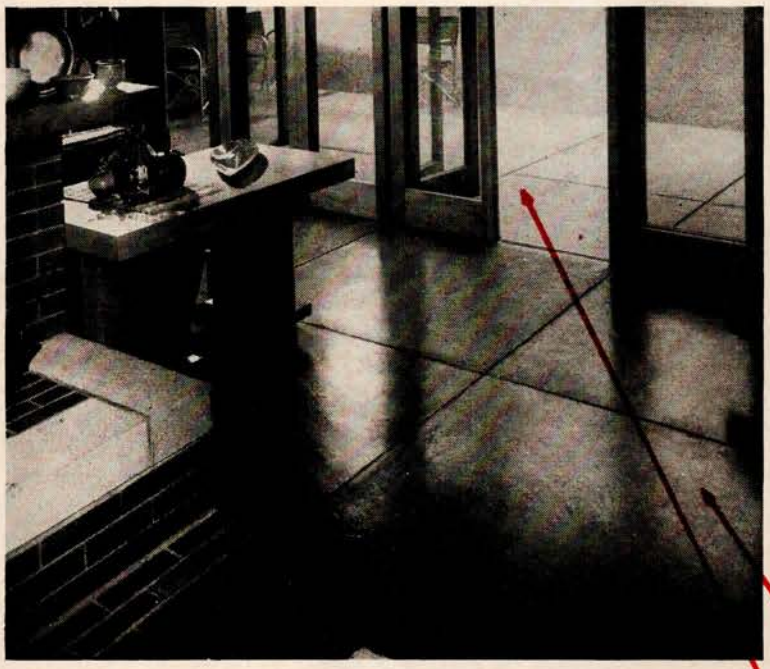
EXTERIOR WALL CONSTRUCTION— ⅜″ rib lath covered by two coats of Portland cement, and a finish coat of Oriental stucco.

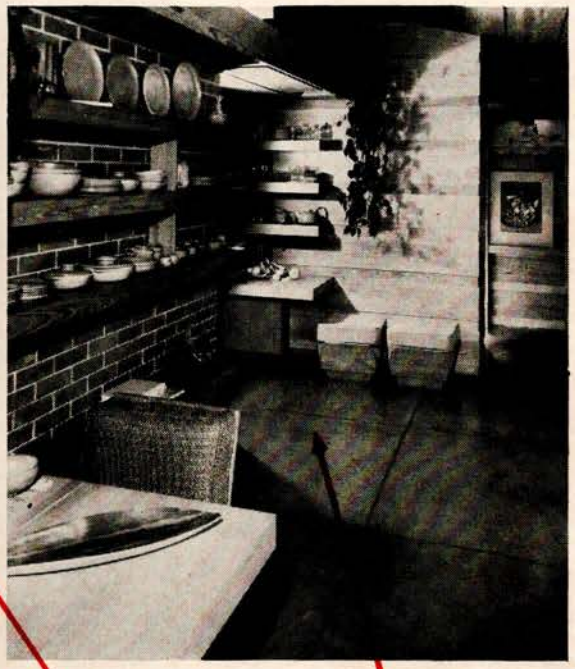
INTERIOR WALL CONSTRUCTION— Plaster over ⅜″ rib lath.

INSULATION— 2½″ cavity between interior and exterior walls filled with asphalt emulsion containing fiberglass and asbestos.



Home of Mrs. I. Zimmerman, Manchester, N. H.
Desiqned by Frank Lloyd Wright







From the first rough sketches . . .

Frank Lloyd Wright specified Colorundum floors for their warmth of color and beauty."

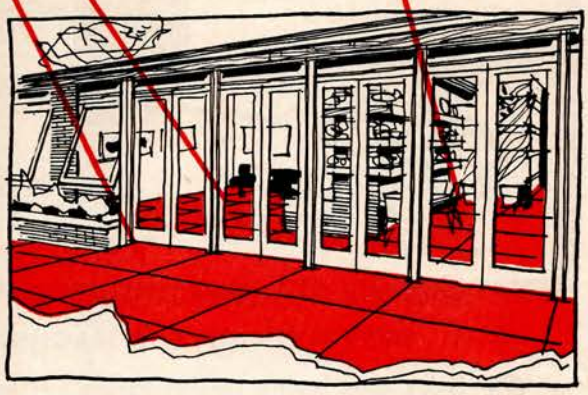
Mrs. I. Zimmerman, Manchester, N. H.

"Look at these photographs of our exciting new home and you can see why we just wouldn't consider drab, colorless concrete. From the first rough sketches," writes Mrs. Zimmerman, "we planned attractive, luxurious Colorundum for the patio and the service areas . . . especially when we found out how little it cost!"

Colorundum is the ideal solution to the problem of exposed or uncarpeted areas of plain concrete. It provides colorful, wear-resistant floors at just a fraction of the cost of tile.

Colorundum is far more resistant to traffic than ordinary concrete floors. It is a balanced formulation of nonslip aggregate (next to the diamond in hardness), water-repellent compounds, and durable colors . . . contains no silica, quartz, metal or sand. It is easy to keep clean, and since it contains no metal, it will not rust or stain.

Colorundum is available in eleven decorator colors.



Fused color. Not a paint or coating! Colorundum is troweled into the concrete topping and becomes an integral part of the surface, producing beauty and durability.

A Subsidiary of Sun *Chemical Corporation*

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A. C. Horn Co., Inc.

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A. C. Horn Co., Inc.
Dept. H12-515, 10th St. & 44th Ave., Long Island City 1, N. Y.

☐ *Please send me complete information on COLORUNDUM.*

Name_____ **Title**_____

Firm Name_____

Address_____

City_____ **State**_____

DIVISIONS OF SUN CHEMICAL CORPORATION

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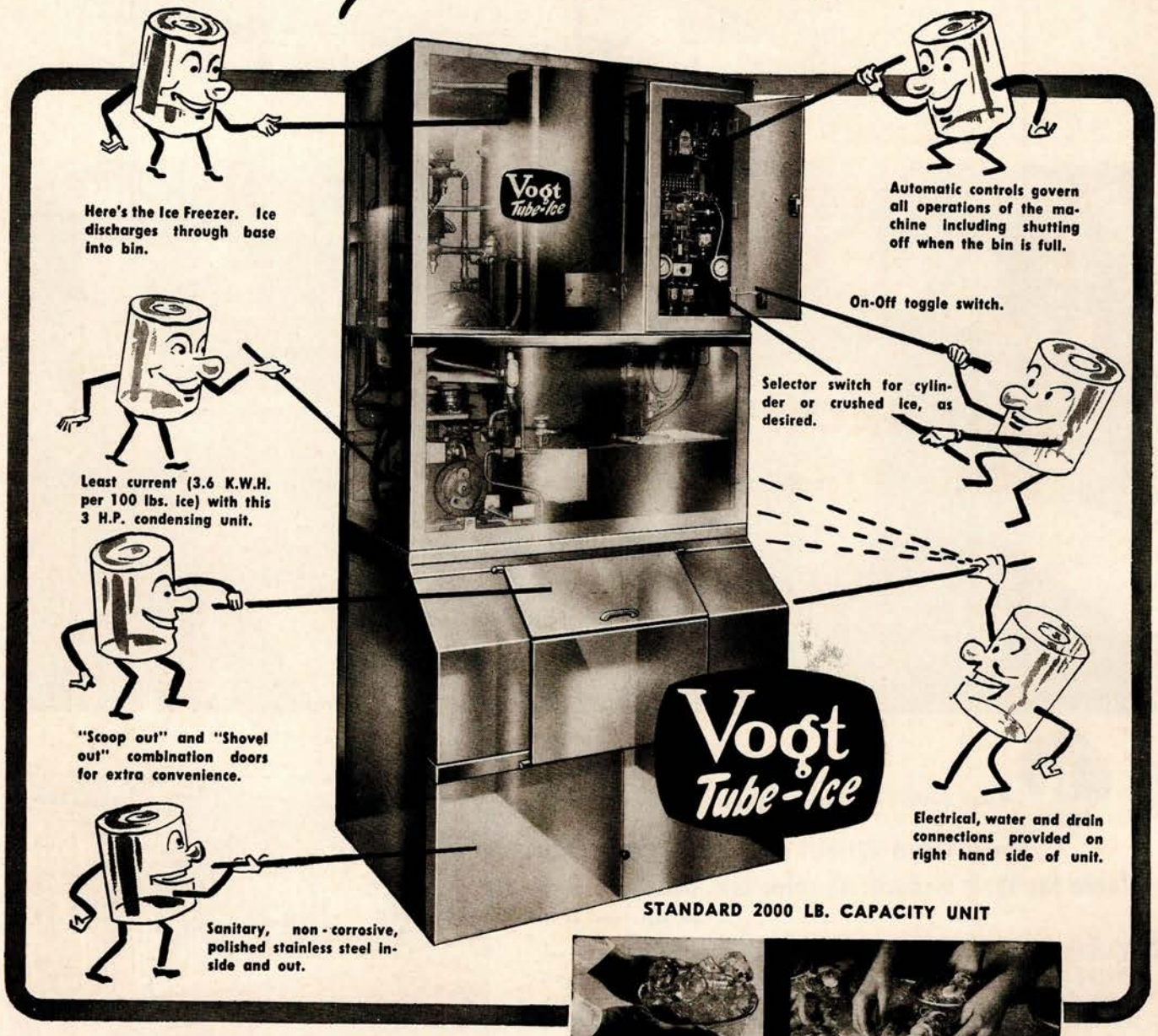
Here's inside information on the finest Ice making unit ever made



STANDARD 2000 LB. CAPACITY UNIT

CYLINDER TUBE-ICE CRUSHED TUBE-ICE

OPERATION OF THE MACHINE

1. Single toggle switch controls starting and stopping of unit. Ice discharges through base of freezer to patented ice sizing cutter.
2. A three-position selector switch provides automatic control of ice making unit to produce and store cylinder and crushed Tube-Ice consecutively (requiring two ice bin thermostats) or either type of ice exclusively.
3. Automatic blowdown in water pan maintains freshness and aids in reduction of concentrated solids.
4. An upper "scoop out" for small quantities of ice and a lower "shovel out" door are provided in storage bin.
5. Minimum of 3" Fiberglass insulation between storage bin walls. Bin has removable partition if but one type of ice is desired.
6. Copper or brass tubes used for freezer, condenser and refrigerant piping.
7. Tube-Ice Units are completely self-contained and conform to A.S.M.E. Code. Require only the addition of the refrigerant charge, and water and electrical connections.

WRITE FOR BULLETIN

HENRY VOGT MACHINE CO.
Louisville 10, Ky.

BRANCH OFFICES: New York, Philadelphia, Chicago, Cleveland, St. Louis, Dallas, Charleston, W. Va.

Write in the specification that keeps out failure . . .

CAST IRON SOIL PIPE



When house drainage and sewer lines run under basement floors, under driveways, landscaping and lawns there are just four words to write into your specs for permanence: **Cast Iron Soil Pipe** (with lead-locking ring in hub and beaded spigot).

And with the same tried and tested words, you'll guard soil stacks, drainage branches and vent stacks against costly repairs and replacement. Using cast iron, the plumbing drainage system you plan has the same life expectancy as any structure in which it is housed. It's good to specify **Cast Iron Soil Pipe** from sewer to rooftop.

PERMANENT CAST IRON SOIL PIPE

has *all* these advantages:

- Rugged metallic strength
- Zero moisture absorption
- Permanent tightness of joints, with flexibility
- The *only* pipe accepted in all codes for use from street to roof



CAST IRON SOIL PIPE INSTITUTE

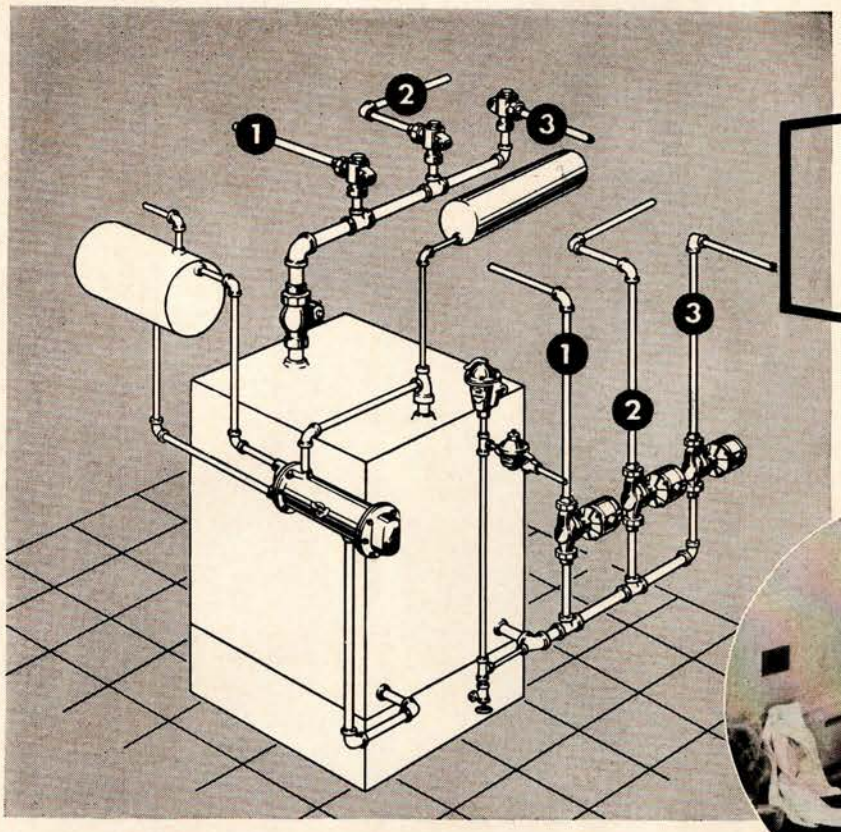
Dept. AR-5, 1627 K Street, N. W.
Washington 6, D. C.

☐ Send me_____copies of your new 12-page booklet "Best in the Long Run" that shows—with actual photographs and authenticated captions—what can happen to lines that aren't *Cast Iron*.

Name_____

Address_____

City_____ Zone_____ State_____



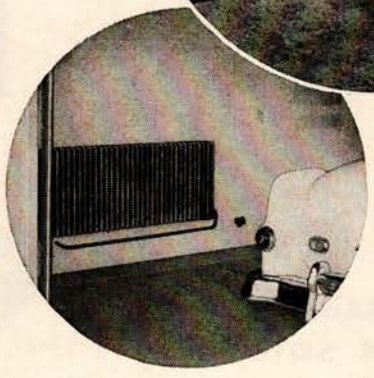
easy to ZONE...



74° in the Nursery



70° in the Bedrooms



65° in the Garage

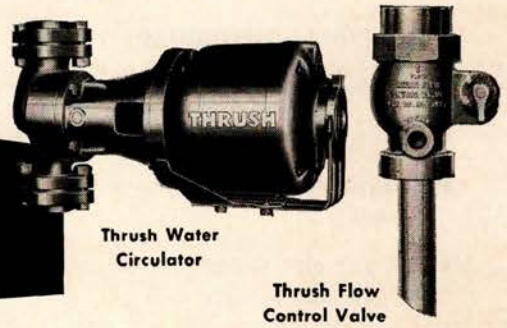
THRUSH

Radiant Hot Water Heat

Zoning a Thrush Radiant Water Heating System is simple and inexpensive . . . it's a big feature in selling the home. It increases comfort while reducing fuel bills . . . and the Thrush method of zoning is low in cost. Just three simple units are needed for each zone . . . a Thrush Circulator, Flow Control Valve and Radiant Heat Control. As many zones as may be required can all be supplied from one automatically-fired boiler.

Heat is transmitted only when needed in any zone, without affecting other zones. Here's the ideal heating method for apartments, motels and store buildings as well as homes. Hot water heat is mild, easily controlled, quiet and clean. Any home is a better home with Thrush Radiant Hot Water Heat.

For more information please see our Catalog in Sweets or write Department J-5 today.



Thrush Water Circulator

Thrush Flow Control Valve

H. A. THRUSH & COMPANY
PERU, INDIANA



A MODEL FOR EVERY TYPE OF DOOR IN ANY TYPE OF BUILDING

DOR-O-MATIC

CONCEALED-IN-THE-FLOOR DOOR CONTROLS



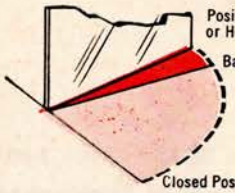


Diagram shows how door is controlled as it opens. Accidental openings are eliminated . . . as are accidental hold-opens. The control also cushions the closing of door.

- BUILT-IN HOLD-OPEN DEVICE
- POSITIVE BACK STOP
- POSITIVE CENTERING
- BUILT-IN LEVELING DEVICE
- NO ACCIDENTAL HOLD-OPEN
- TWO SPEED CLOSING ACTION
- PERMANENT HYDRAULIC OIL SEAL
- POSITIVE UNIFORM CONTROL
- NO SEASONAL ADJUSTMENT
- EASY INSTALLATION

Precision-built Dor-O-Matic door controls are at work in thousands of buildings from coast to coast . . . where they are providing more positive door closing action. There are twenty-five models in all. Each is designed for long service life under all conditions and complete adaptability to contemporary design and function. Only Dor-O-Matic provides all ten of the service advantages listed at left.

Write for Detailed Information and Literature

MADE BY THE BUILDERS OF THE INVISIBLE DOR-MAN  **AUTOMATIC DOOR CONTROL**

SEE SWEET'S ARCHITECTURAL FILE

17e
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DOR-O-MATIC

DIVISION OF

Republic Industries, Inc.

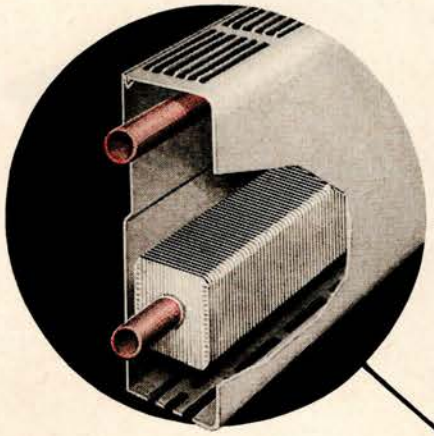
4444 North Knox Avenue • Chicago 30, Illinois

5563

a new major advancement...

Nesbitt

SERIES HOT WATER



Nesbitt Wind-o-line comes in attractive wall-hung enclosure or recessed in storage cabinets of The Nesbitt Package

Nesbitt Syncretizers and Wind-o-line may now be combined in a forced hot water heating and ventilating system in which the *Wind-o-line tubing becomes the supply and return main* to the Syncretizer in a series of classrooms—thus saving on construction, equipment, and installation costs.

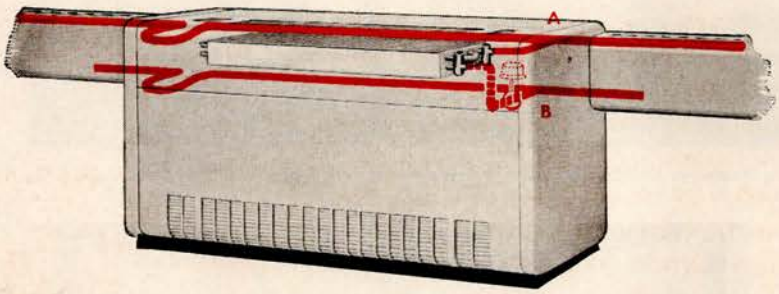
In this series system the water temperature at all times is related to the outdoor temperature, thus improving the individual room temperature control provided by the Syncretizer, and the protection against cold surfaces furnished by the Wind-o-line.

Telephone, wire, or write today for more information:

school mechanical system costs **reduced**

classroom comfort and protection **increased**

WIND·O·LINE SYSTEM



Packaged piping reduces installation cost. (a) Crossover return tubing, expansion loop, and air vent fitting come pre-assembled and connected to the heating element. (b) Crossover supply tubing, expansion loop, and balancing valve are furnished installed, leaving a minimum of piping at the site.

IF YOU are interested in school construction costs, it will pay you to study how this latest Nesbitt development meets today's needs and gives more for the school-building dollar.

In forced hot water applications Nesbitt Syncretizer heating and ventilating units with Wind-o-line radiation may be installed in series-loop circuits, in which the copper tubing of the Wind-o-line system serves as the only required supply and return piping for multiple-classroom groupings or entire wings.

COSTS REDUCED *Savings in equipment:* Smaller pipes and pumps are required because the Nesbitt System is designed to provide the needed heating capacity with water quantities of from one half to one third those required in conventional systems. Saves on both first cost and operating cost.

Savings in construction: Wind-o-line supplies Syncretizers, eliminating costly pipe trenches, mains, runouts and pipe covering in much of the building. Other piping is simplified.

Savings in installation: Mains and piping are smaller, shorter, simpler. Packaged piping within the Nesbitt Syncretizer unit ventilator reduces installation labor at the site. See above.

COMFORT INCREASED *Variable water temperature control:* Relating the available heat directly to outdoor temperatures improves the control of individual room temperature by the Syncretizer.

Improved cold surface protection: Because the system water temperature increases as outside temperature falls, Wind-o-line protection against cold window downdraft and bodily heat loss is continuously related to actual needs.

Off-time temperature maintenance: Without additional investment in equipment, the Nesbitt System maintains safe basic building temperatures during overnight, holiday, week-end shutdowns.

at no extra cost to you:

Nesbitt schoolroom equipment

upgraded

new hardtop sunboard

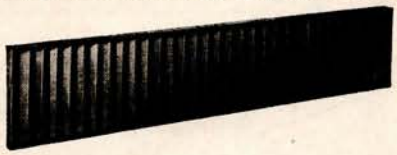
Durable laminated plastic, resists cracking, chipping, and abrasion. Easy to clean. Available in five decorative colors.

new attractive colors

Nesbitt Syncretizers, Storage Cabinets, Wind-o-line, and Sill-line Radiation are now available in six harmonious colors.

new shallow wall box

A new Nesbitt air intake ($2\frac{1}{8}$″ deep) is suitable for either prefab panel or masonry walls. Its vertical louvres provide better elimination of air-borne water than wall boxes of conventional design. Shown below.



Made and sold by John J. Nesbitt, Inc., Philadelphia 36, Pa. — Sold also by American Blower Corporation

CLEAR VISIBILITY—COMFORT—QUIET

for new Toledo Express Airport



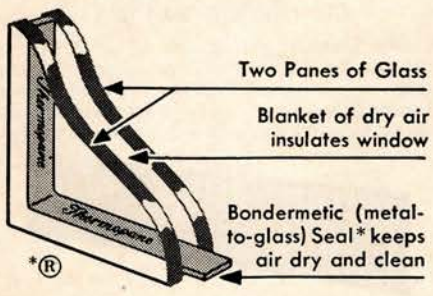
Architects: Stepleton, McDonnell, Barber & Evans Associated Engineers & Architects, Toledo, O.

All windows are large to provide sweeping views of the field and its approaches.

All windows are *Thermopane** insulating glass to reduce the possibility of condensation, to keep down fuel costs by blocking heat loss and to reduce noise. *Thermopane* thus serves as both a thermal and sound insulator.

The outer pane in each *Thermopane* unit is L·O·F Heat Absorbing Plate Glass. This reduces solar energy input in summer, adding to comfort. And it provides greater eye-comfort by reducing sun and sky brightness as well as reflections from runways and aprons.

The Toledo Express Airport is another example of applying special functions of specific modern glass products to provide more efficient, more livable buildings. If you would like performance data on *Thermopane* and on Heat Absorbing Plate Glass, write to Libbey·Owens·Ford Glass Co., 608 Madison Avenue, Toledo 3, Ohio.





Office of Commissioner of Aviation provides a clear view of loading ramps, field and approaches.



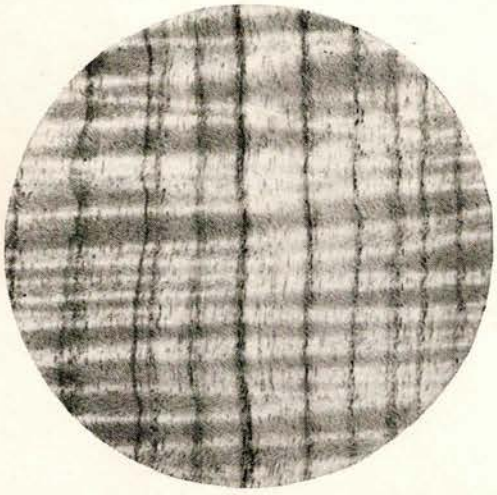
Main concourse is kept bright and cheerful through Daylight Walls of *Thermopane*. Waiting passengers and visitors enjoy a clear view of outdoors.

LOF GLASS

Thermopane INSULATING GLASS

LIBBEY · OWENS · FORD

a Great Name in Glass



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The King of Woods—you cannot specify a finer, richer, more beautiful paneling than Teak.

We have 325 different grain patterns of rare woods available in our architectural portfolio—the most extensive in the world—including Rosewood, Harewood, English Brown Oak, Satinwood, Butternut.

Include in your design these magnificent veneers. Consult our specialists.

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Surround Your Customers with the Practical Luxury of

Briggs Beautyware



Statistics show that the bathroom has an ever-increasing influence on the home buyer—*the finer the bath facilities, the faster the sale.*

Briggs has led the field in providing the building industry with the practical luxury of top quality, truly modern bath fixtures—*at a realistic price.*

And Briggs has set the pace in pioneering new safety, utility and ease of installation features—in the merchandising of color at popular prices—in the promotion of the second bathroom as "The New Standard for American Living."

Read below for additional facts about Briggs leadership in engineering, manufacturing and merchandising. Join the fast growing ranks of home building leaders who *surround their customers with the practical luxury of Briggs Beautyware.*

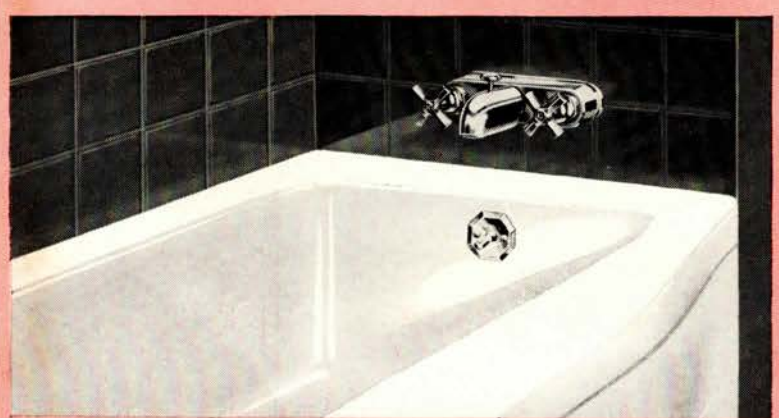
BRIGGS MANUFACTURING COMPANY

300 Buhl Building • **Detroit 26, Michigan**

Refer to Sweet's Catalog—Architectural File 24A, Light Construction File 9B, or A.I.A. File 29H.

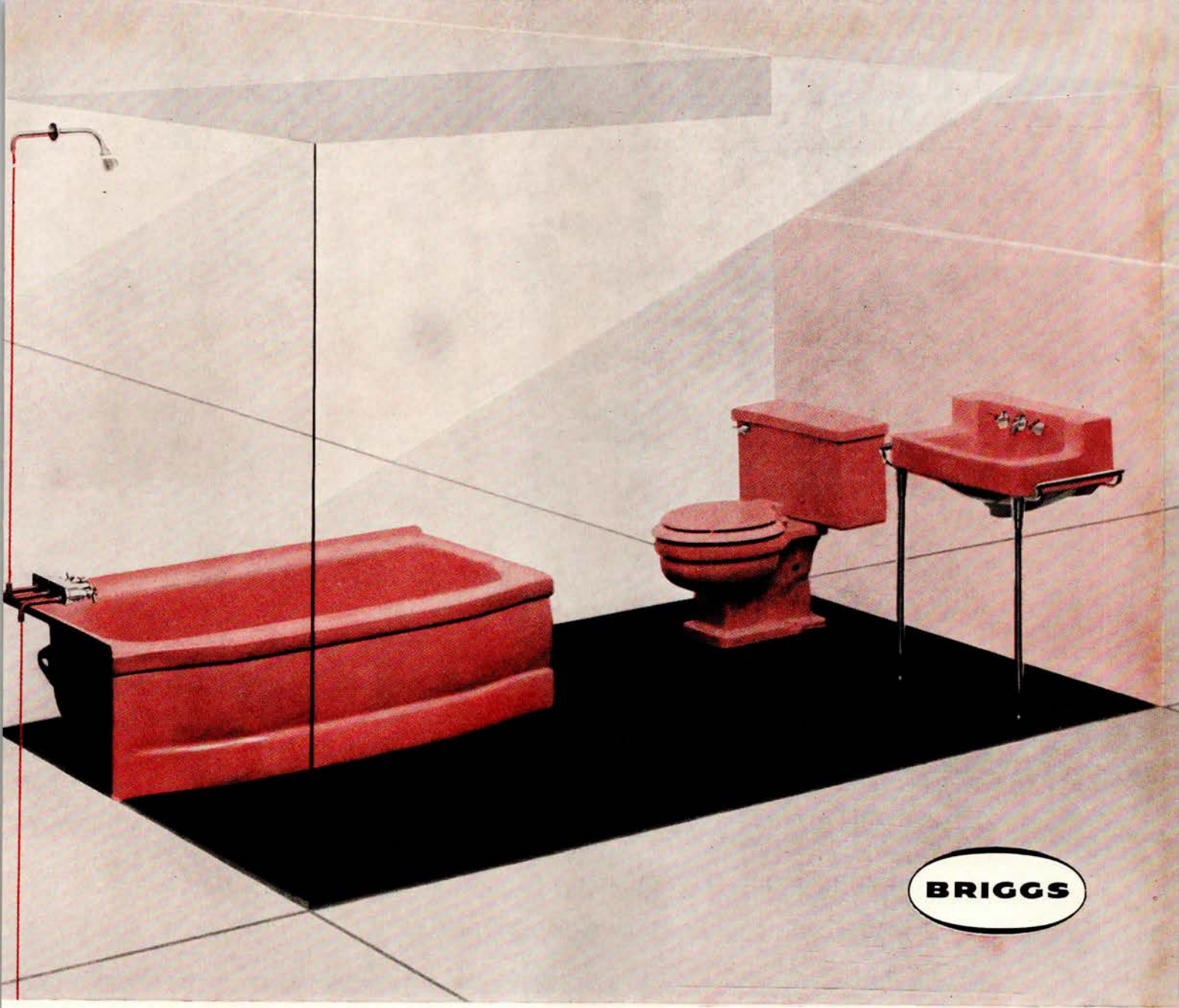
B-701 LaSalle Tub
B-6402 Carlton Closet
B-3250-HS Whittier Lavatory

Delightful distinctive design in fresh, bright colors is yours with Briggs Beautyware—at the cost of many *white* bath sets. Briggs craftsmen have developed new techniques in forming and finishing that provide new bonus benefits in contour, color and *value.* With Beautyware, two bathrooms in color can be a practical reality for a big majority of your customers.



Long-lasting quality is inherent in Beautyware design and materials. Bathtubs feature the traditional durability of the finest, heavy-gauge enameling steel, *pressure-formed* to exacting contours and reinforced with special rigid frame members. It is the surest blend of strength and scientific weight—with exclusive dividends in easiest handling and installation.

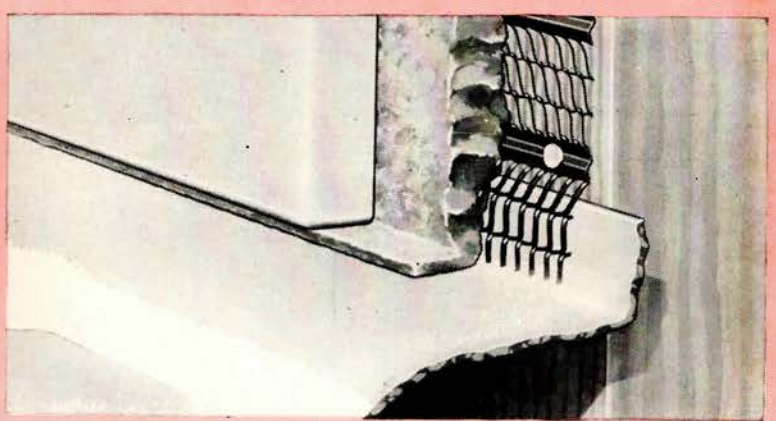




Surfaces hard as glass are fused to *every* Beautyware fixture —porcelain enamel fused to steel, and high-density vitreous china. Briggs' exclusive pioneering in manufacturing processes for Beautyware bathroom fixtures has brought *new* achievements in super-hard fixture finishes—glistening, easy to clean, and defiant of stains, acids and fading!

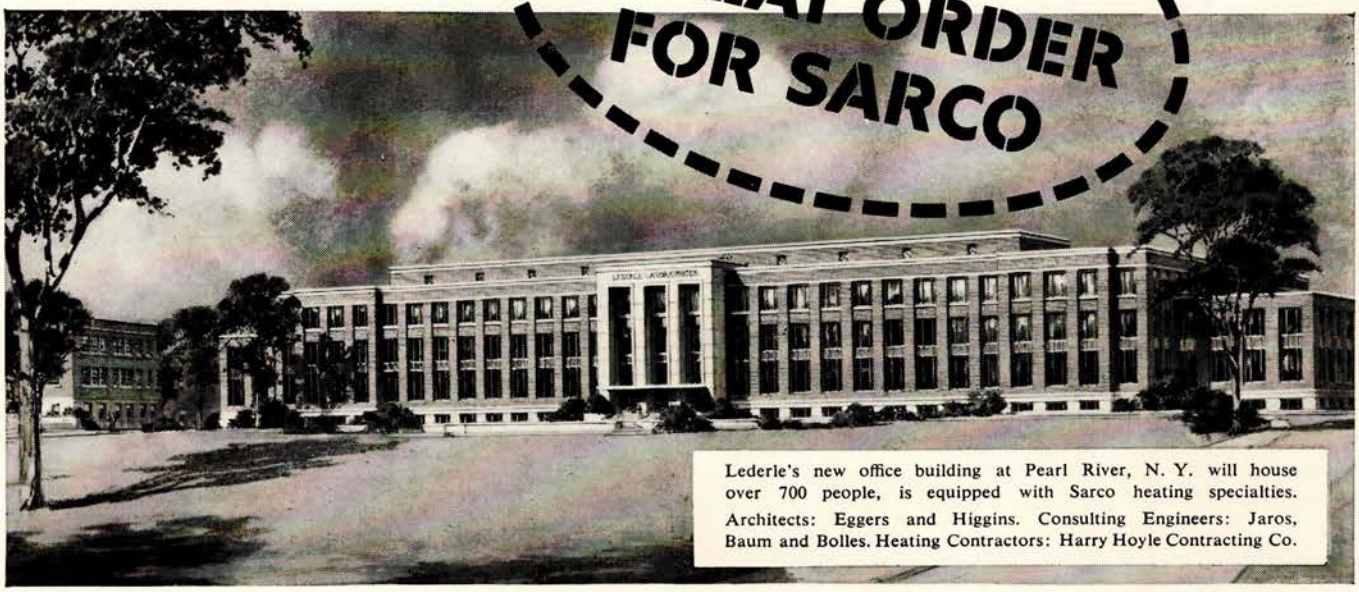
Important utility features—such as the square, straight ends and the leak-proof wall flange, found on all Briggs tubs—make Beautyware the most practical as well as the most appealing choice. The architect prefers Beautyware for functional styling, the builder appreciates its practical appeal, the plumber has confidence in Briggs' technical excellence.





The most convincing stamp of user satisfaction

ANOTHER REPEAT ORDER FOR SARCO



Lederle's new office building at Pearl River, N. Y. will house over 700 people, is equipped with Sarco heating specialties. Architects: Eggers and Higgins. Consulting Engineers: Jaros, Baum and Bolles. Heating Contractors: Harry Hoyle Contracting Co.

18 years of repeat orders *and now again . . .*

Lederle Laboratories Division American Cyanamid Co. Installs Sarco Heating Specialties

There's a good reason why Sarco Heating Specialties have been specified and used by Lederle again and again.

That reason is Sarco dependability.

Leading architects, engineers and contractors know from the long record of repeated user approval that they can depend on Sarco performance.

The Sarco heating specialties now operating in this new office building and other Lederle Laboratories buildings have been installed over a period of 18 years. Several thousand Sarco steam traps, radiator valves and traps, air eliminators, strainers, and temperature controls are giving satisfactory performance.

For dependable heating specialties and all around satisfaction, you can confidently specify Sarco.

On your request, we'd be happy to send you full information on Sarco's complete line.

FOUR REASONS WHY IT PAYS TO SPECIFY SARCO

1. Proven Dependability
2. Trouble-free Service
3. Complete Line from One Reliable Manufacturer
4. Nationally Known and Preferred by Users.

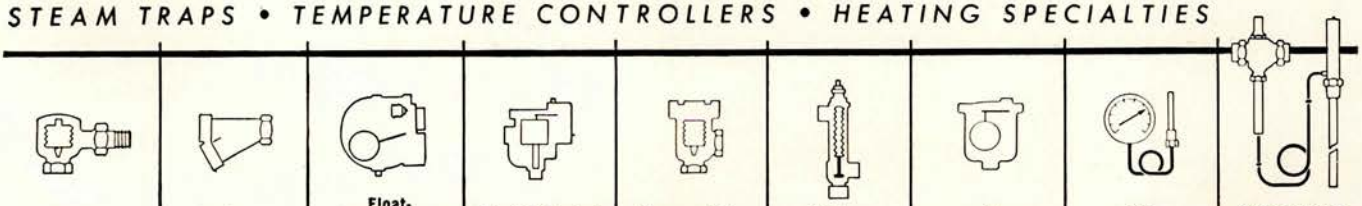
2026-B

SARCO SAVES STEAM

SARCO COMPANY, INC., Empire State Building, New York 1, N. Y.

Sarco Canada, Ltd., Toronto 8, Ontario . . . Represented in Principal Cities

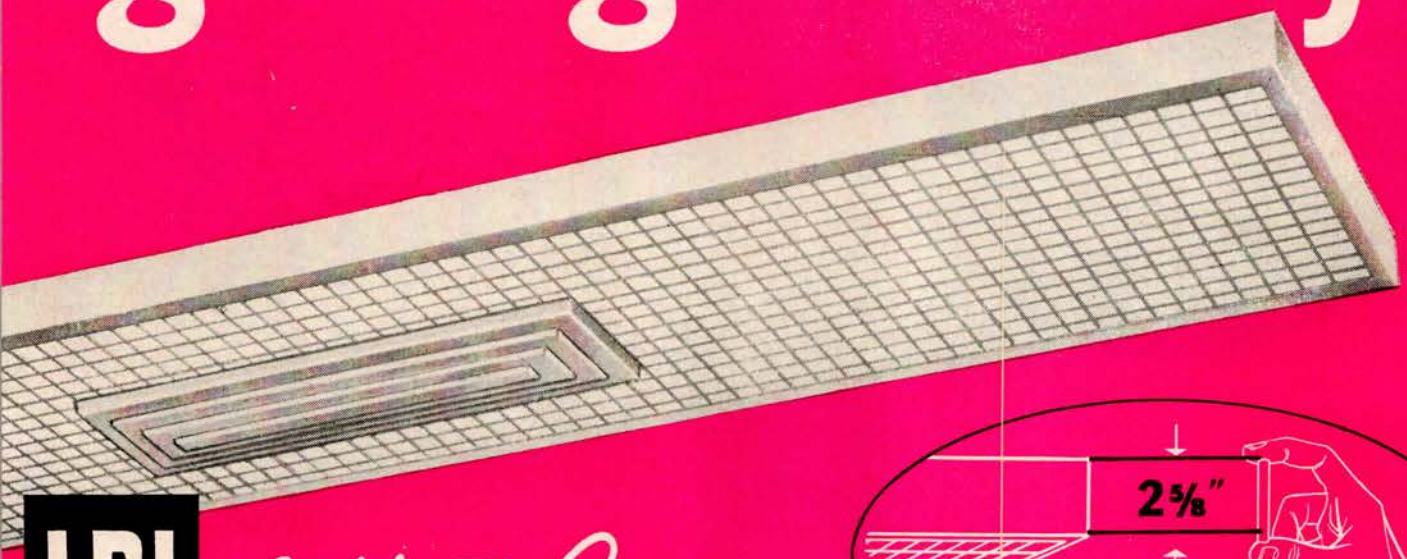
STEAM TRAPS • TEMPERATURE CONTROLLERS • HEATING SPECIALTIES

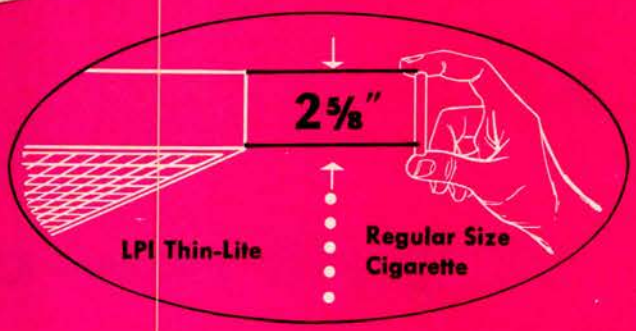


Radiator Valves • Traps | Strainers | Float-Thermostatic Traps | Camlift Bucket Steam Traps | Thermostatic Traps | Water Blenders | Air Eliminators | Dial Thermometers | Self-Operated Temp. Reg.

It's making

lighting history!





LPI *Thin-Lite*

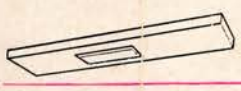
World's Thinnest Shielded Luminaire

No wonder Thin-Lite is creating such a sensation from coast to coast. Here, at last, is a surface mounted fixture so shallow that its depth below ceiling is essentially the same as that of troffers fitted with dished shields. Thin-Lite actually creates a semi-recessed effect.

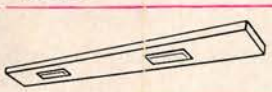
The four different models (right) can be mounted end to end or side by side, in any combination, to form an unlimited variety of lighting patterns up to any desired size. A few suggestions are shown below.

Thin-Lite luminaires feature metal-framed, molded plastic louver panels, secured by LPI's patented floating hinge which cannot be seen from any angle, and which eliminates unsightly latches and fastening devices.

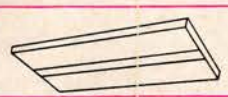
Available through leading electrical wholesalers, Thin-Lite luminaires are wired with standard E.T.L. ballasts.



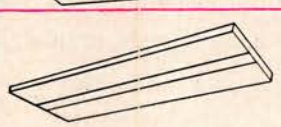
THR 240—49" long, 12¼" wide, 2⅝" thin. Two 48" Rapid Start lamps.



THS 296—97" long, 12¼" wide, 2⅝" thin. Two 96" 430 MA. lamps.



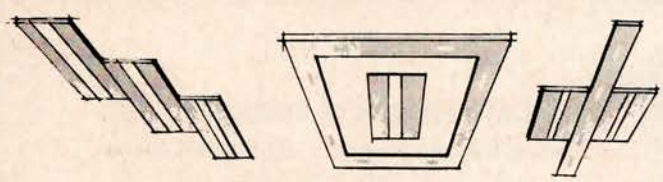
THR 440—49" long, 26¾" wide, 2⅝" thin. Four 48" Rapid Start lamps.



THS 496—97" long, 26¾" wide, 2⅝" thin. Four 96" 430 MA. lamps.

Mail Coupon for Detailed Information

LIGHTING PATTERNS UNLIMITED



5600

LIGHTING PRODUCTS INC. Dept. 7 Highland Park, Illinois

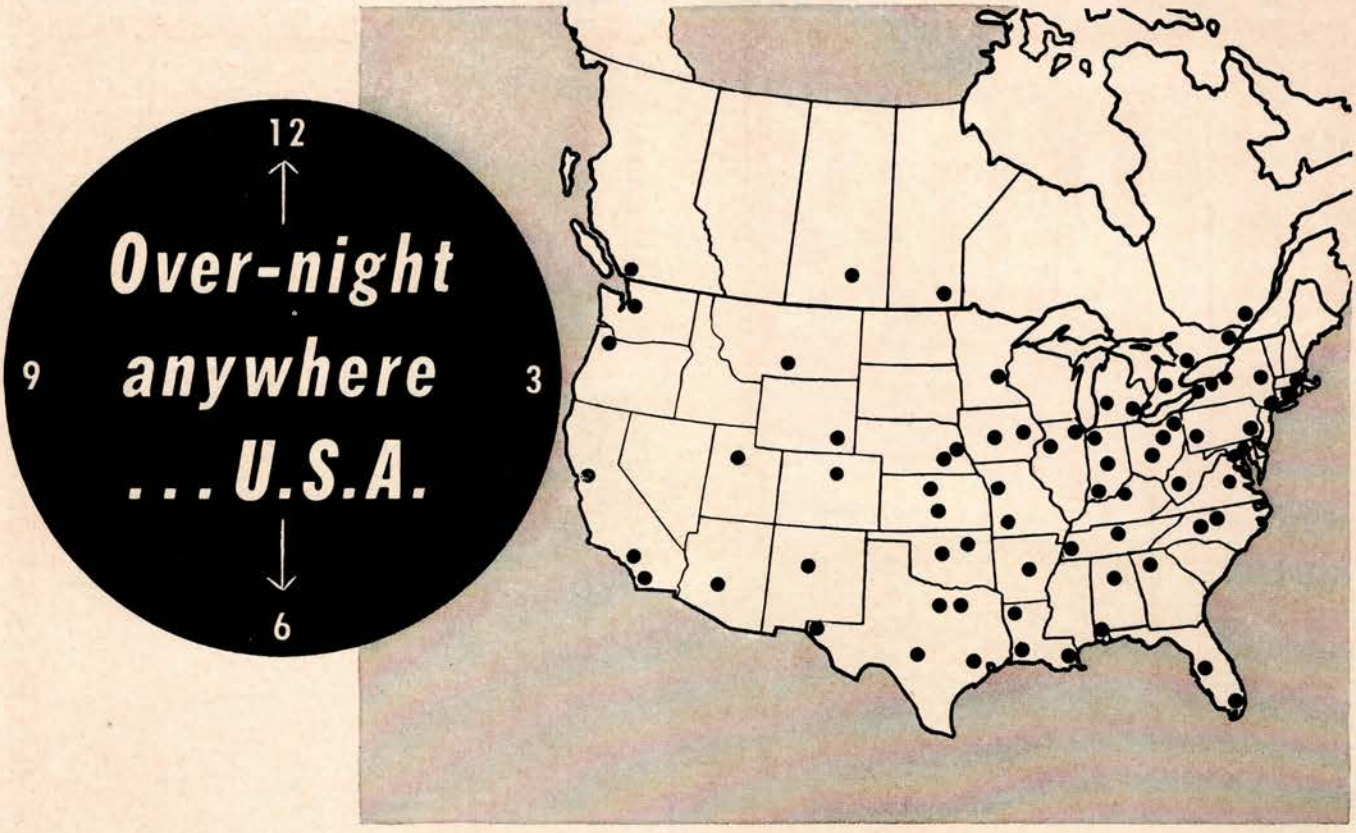
Please send me a copy of Thin-Lite Brochure No. 530.

Name_____ Position_____

Company_____

Address_____

City_____ Zone____ State_____



JENN-AIR **LOW-CONTOUR** exhausters

66 Distributors—Coast-to-Coast—Insure Fast Delivery and Service

In these days when speed's the need in building, it's good to know you can depend on fast delivery and service with Jenn-Air Low-Contour Exhausters . . . 66 distributing offices coast-to-coast mean over-night service anywhere in the U. S. A. And since Jenn-Air is the largest manufacturer of wall and roof exhausters in the commercial ventilation field, you can specify with confidence when you select Jenn-Air. So, if you're faced with a close building schedule, select Jenn-Air, and be assured your ventilating installation will be made on time and in time.

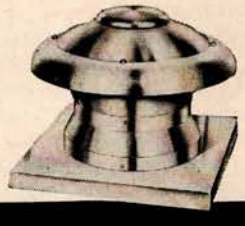
Jenn-Air, First with Low-Contour Exhauster Design

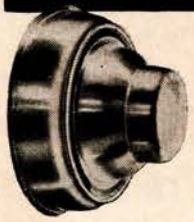
Jenn-Air is the originator of truly "low contour" exhauster design. In considering contour, two levels are important; the discharge level height, which must be sufficient to be above snow or blowing rain, and the over-all level height, which should be low enough to provide true low contour.

Jenn-Air Roof Exhausters with the nesting feature (power assembly nested into base of unit) give a high point of discharge near the top of the unit and still retain the lowest possible contour. In addition Jenn-Air provides a pleasing architectural effect. Write for the name of your closest Jenn-Air distributor.

Jenn-Air—World's Largest Producer of Commercial Wall and Roof Exhausters

Low-contour Roof Exhausters blend with architectural design of building





Wall Exhausters—architecturally sculptured button design spots ventilation control

JENN-AIR PRODUCTS COMPANY, INC.
Architects & Builders Building • Indianapolis 4, Indiana

the
news
is
BLUE

ALUMINUM INTEGRAL
COLORED PANELS DISTINGUISH
THIS CURTAIN WALL BY
CUPPLES

Cupples, foremost in curtain wall design, fabrication and erection, now adds the beauty of color to sound, economical "skin" construction. Spandrel panels for this magnificent skyscraper are Architectural Blue. This new color finish is not a paint or enamel, but is created as an integral part of the aluminum surface by Alcoa's electrochemical process. Many other colors are available.

Look to Cupples for the latest and best in curtain walls as well as for commercial aluminum windows, doors, architectural aluminum extrusions and special ornamental products. High standards of design and manufacture, plus tight control of costs, have established Cupples' leadership. Our catalogs are filed in Sweet's.

HENRY C. BECK BUILDING
Shreveport, Louisiana
Henry C. Beck,
Owner and General Contractor
Neild-Somdal-Associates,
Architects-Engineers



Cupples

CUPPLES PRODUCTS CORPORATION
2658 SOUTH HANLEY ROAD • ST. LOUIS 17, MISSOURI

when your planning includes

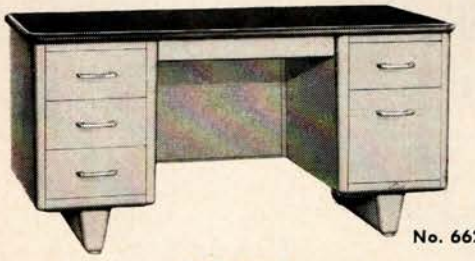
DESKS
CHAIRS
FILES
CABINETS
LOCKERS

specify

ASE

EQUIPMENT

your assurance of Beauty and Performance



No. 6629

DESKS

A complete line . . . matching tables, bookcases and credenzas for every office need.



No. 835



No. 810

CHAIRS

Swivel, Side, Arm and Posture types styled and built for comfort.



No. 5401

No. 5211



FILES

For every requirement. Superior quality . . . built for a life-time of service.

CABINETS

Storage, wardrobe, utility racks and "Unit Robes". High quality, sturdy . . . time tested.



No. 3487



Single-Tier



Double-Tier

LOCKERS

Single-tier, double-tier and box types. Use ASE engineering assistance on planning.

your reputation requires

quality equipment . . . the functional quality that is built into ASE products. ASE beauty is enduring . . . ASE quality is inherent. Maximum flexibility permits unusual latitude in solving your planning problems. You can design for tomorrow today! Write now for valuable pre-planning information on all ASE furniture.

ASE

ALL-STEEL EQUIPMENT INC., Aurora, Illinois

WRITE FOR COMPLETE INFORMATION, THERE'S AN ASE DEALER NEAR YOU

Marvibond* weds vinyl to metal

for new BEAUTY, new STRENGTH, new PERMANENCE!



Now you can enjoy all of the advantages of metal—*without the disadvantages of rust and corrosion*—with colorful surface effects that are practically unlimited!

Marvibond—Naugatuck Chemical's recently developed vinyl-to-metal laminating process—bonds tough Marvinol® vinyl sheeting to practically any kind of sheet metal, *permanently,* to give you all these "extras"...

- **permanent protection against rust and corrosion!** One of the most inert of all known materials, vinyl resists acids, alkalies, salt water, alcohol, household chemicals, corrosive industrial liquids and atmospheres.
- **lastingly beautiful surface effects!** Vinyl can be given practically any color, in many finishes, including leather-like grains, marble patterns, prints, weave-like designs.
- **superior abrasion resistance!** Marvinol vinyl finish resists abrasion far better than paints, lacquers, varnishes, phenolic or alkyd finishes, will not chip, crack, or craze.
- **greater utility!** Marvibonded metal eliminates many costly finishing operations—can be drawn, crimped, sheared, embossed, and otherwise formed *without damage to coating or bond.*

Investigate the unique advantages this new material combination offers *you*—in furniture, cabinets, wainscotting, tile-like walls, partitions, applications by the *building-full.*

* * *

Write us for further data, samples, or the names of the licensed MARVIBOND laminators nearest you.

*Patent applied for

Naugatuck Chemical

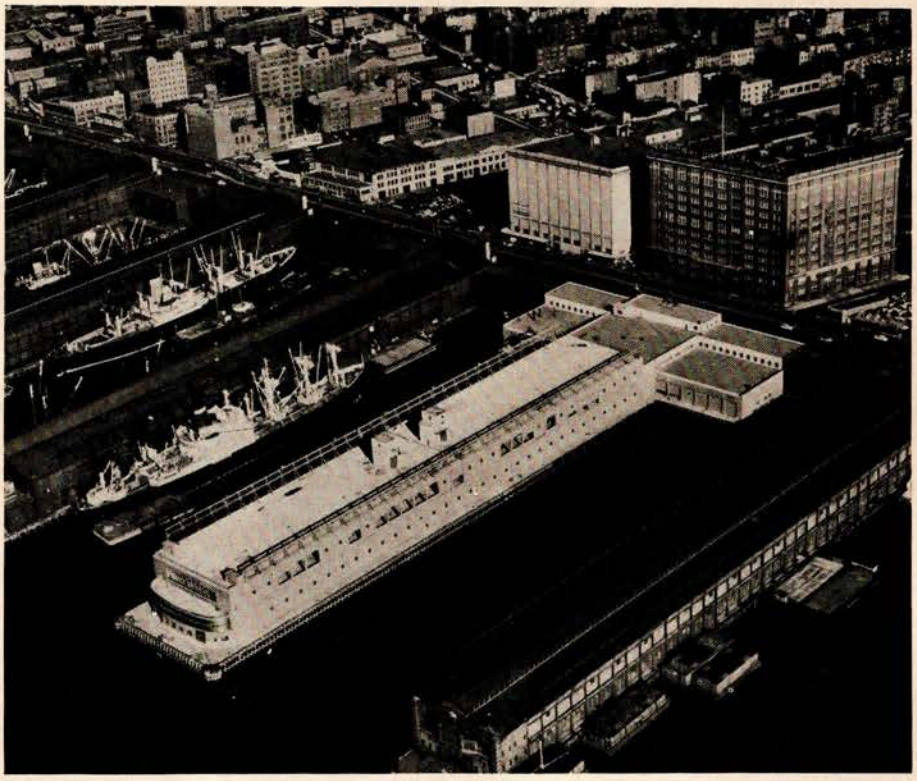
Division of United States Rubber Company
Naugatuck, Connecticut

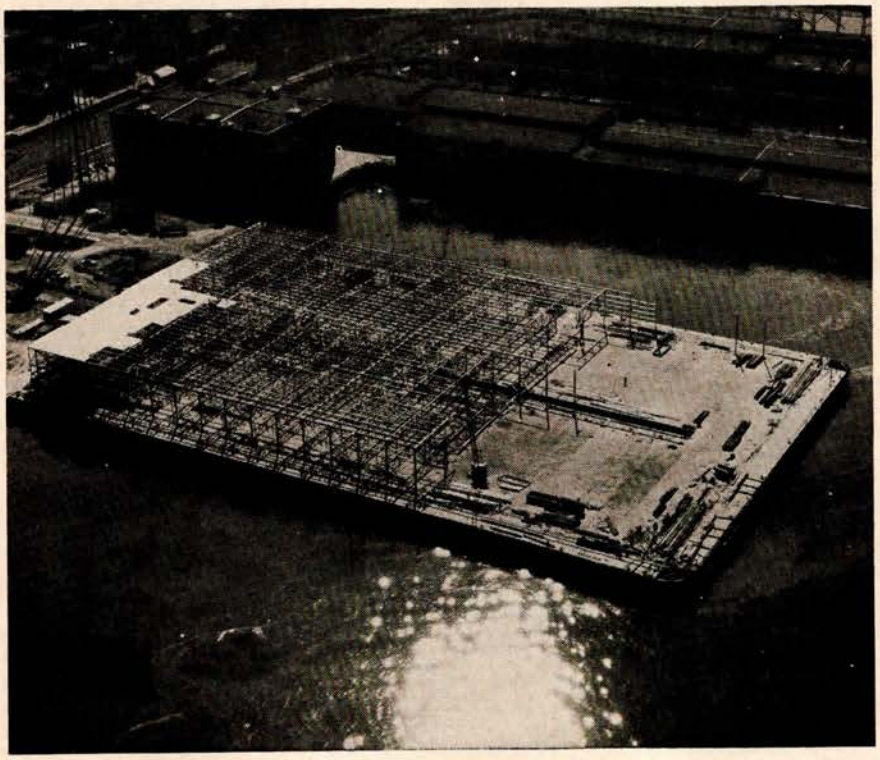
BRANCHES: Akron • Boston • Charlotte • Chicago • Los Angeles • Memphis • New York • Philadelphia • IN CANADA: Naugatuck Chemicals, Elmira, Ontario
Rubber Chemicals • Synthetic Rubber • Plastics • Agricultural Chemicals • Reclaimed Rubber • Latices • Cable Address: Rubexport, N. Y.

On the Newsfront with Structural Steel

NEW YORK'S MOST MODERN MARINE TERMINAL—This $12 million steel-and-concrete structure, Pier 57, is New York City's most modern marine terminal. More than 470,000 sq ft of usable space is provided, including two upper decks, accessible to trucks by ramps, and a huge underwater cargo area, reached by elevators. The roof can be used for the storage of automobiles, and is also designed as a helicopter landing area. Over 4700 tons of Bethlehem Structural Shapes were used in the construction.

Architect: Madigan-Hyland; *General Contractor:* Corbetta Construction Co.; *Steel Fabricator:* Harris Structural Steel Co., Inc., all of New York City.





NEW PIER IN EAST BOSTON HARBOR—Shown at left under construction is Pier 1 in East Boston Harbor. This $9½ million marine terminal and warehouse is 340 ft by 580 ft, and contains over 1600 tons of Bethlehem Structural Shapes. Besides regular pier facilities and tremendous storage capacity, the warehouse contains facilities for pumping liquid cargoes directly from ship to tank car.

Architects and Engineers: Fay, Spofford and Thorndike, Boston; *General Contractor (Superstructure):* Thomas O'Connor and Co., Inc., also of Boston, who also erected the steelwork; *Steel Fabricator:* West End Iron Works, Cambridge, Mass.

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 STEEL



EXCLUSIVE ELECTRICAL TESTS provide 100% check of G-E ballasts assuring you of rated output from ballast to lamp. When you buy or specify General Electric ballasts, you're assured of up to 30% more light and up to 50% longer lamp life. This helps you save lighting dollars.

Flora shows you why . . .*

G-E Lamp-matched Ballasts Give You Up to 50% More Lamp Life, 30% More Light

The life and light output ratings of fluorescent lamps are based on their use with ballasts which provide the required operating characteristics. General Electric lamp-matched ballasts meet all lamp requirements; in many ways they exceed prescribed lamp and CBM specifications.

An indication of the importance of the ballast to more economical lighting is given in a report issued by the General Electric Lamp Division which reads in part: "Tests indicate that ballasts which deliver improper values reduce lamp life by as much as 50% and light output by as much as 30%."

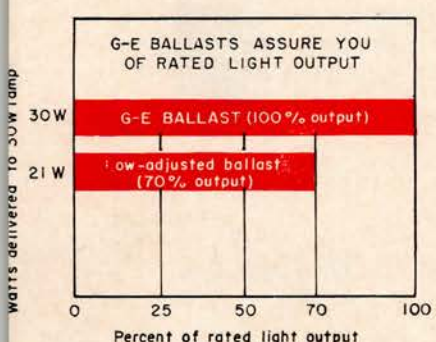
To fluorescent lighting users, this means G-E ballasts can save thousands of dollars in lighting costs.

Next time you specify equipment for a fluorescent lighting installation, make sure you get the best . . . specify General Electric lamp-matched ballasts.

A G-E ballast tag or sticker on your fixture is proof that it's equipped with the best in ballasts. It's the easy way to be certain. For further information on G-E ballasts, write Section 401-14, General Electric Company, Schenectady 5, New York.

***Miss Fluorescent Ballast, G.E.'s ballast mascot.**

Copyright 1955, General Electric Company.



RESULTS OF A SPECIFIC TEST show that light output can be reduced by as much as 30% when ballasts do not deliver specified electrical values. Specify G-E for rated output.

Five more reasons why

GENERAL ELECTRIC IS YOUR BEST BALLAST VALUE

- **EXCLUSIVE SOUND RATING SYSTEM**
- **SUPERIOR QUALITY CONTROL**
- **LONGER BALLAST LIFE**
- **PROVED PRODUCT LEADERSHIP**
- **COMPLETE CUSTOMER SERVICES**



Progress Is Our Most Important Product

GENERAL ELECTRIC



Here's a new twist on "memory power"!

Twist a good carpet yarn — and set it for durability. Untwist for weaving and then subject to a special treatment — the original twist returns! Bigelow gave this "memory power" to carpet yarns and put it to amazing use!

After years of pioneering, Bigelow developed Sculptwist, the "pull-down" yarn that makes a beautifully sculptured *multi-level* carpet.

Formerly at a prohibitive price for the economical project budget, sculptured carpet then became completely practical for specification . . . an ideal, luxurious selection for private rooms and offices at an affordable price.

In Sculptwist carpets you see one more reason why Bigelow is the number 1 name in carpets and the number 1 choice for architects.

Talk over your carpet needs with a Bigelow carpet specialist . . . to specify the best carpet at the best price. For complete details, write to Bigelow Contract Dept., 140 Madison Ave., New York 16, New York.

see our catalog in SWEET'S ARCHITECTURAL FILE or write for copy

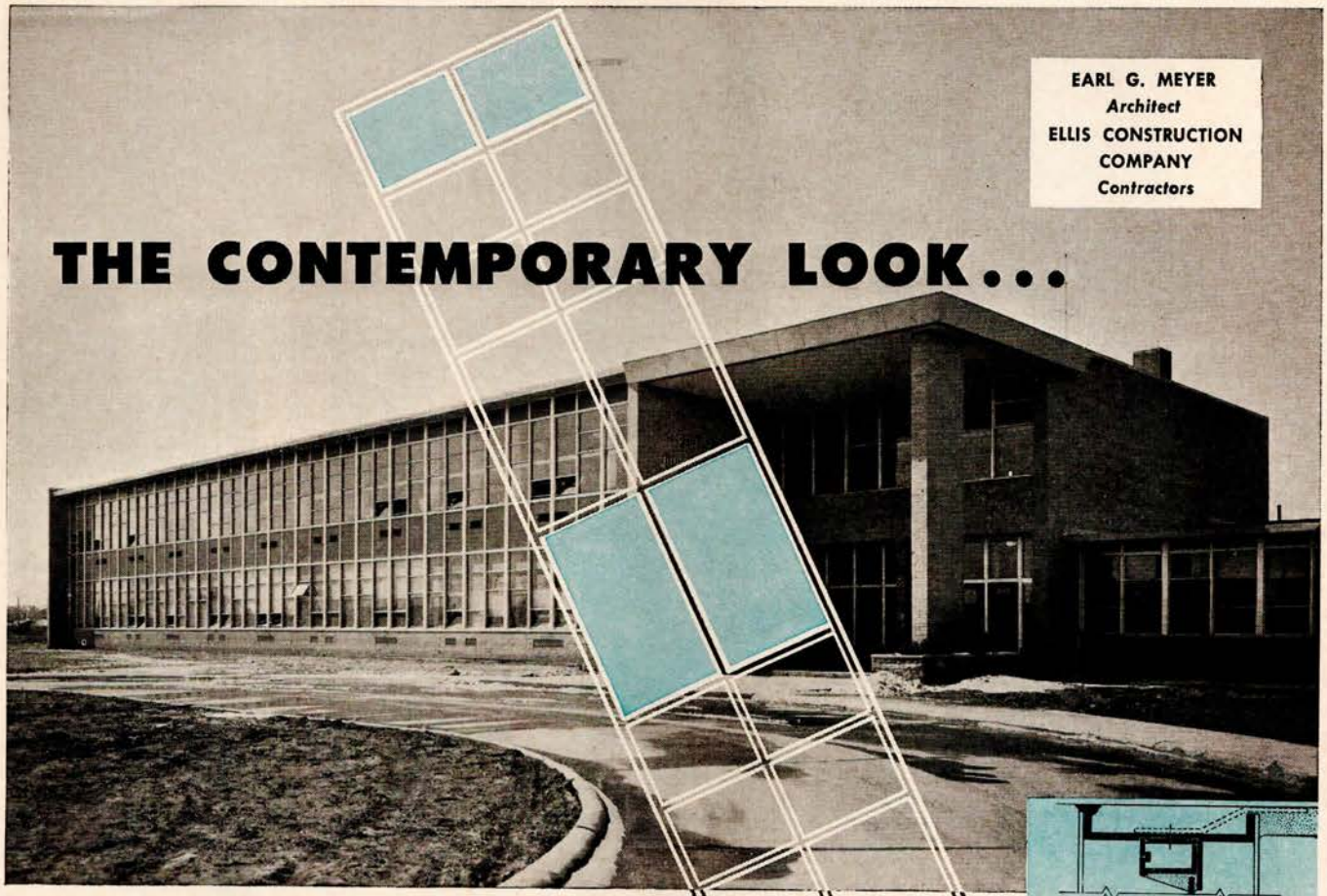
Bigelow

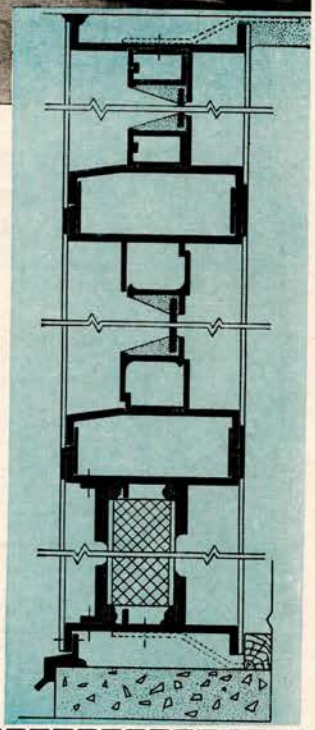
SINCE 1825 BIGELOW Rugs – Carpets

Number 1 name in Carpets

EARL G. MEYER
Architect
ELLIS CONSTRUCTION COMPANY
Contractors

THE CONTEMPORARY LOOK...





WITH *versatile* VAMPCO ALUMINUM WINDOWS

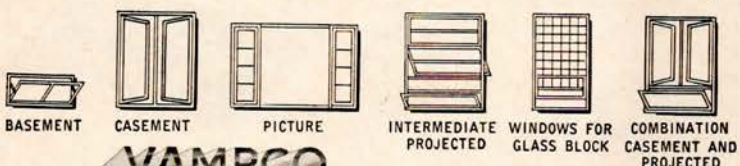
The beautiful new Redford Union Jr. High School, Redford, Michigan, is a fine example of how Vampco's unusual versatility provides the "contemporary look". The Vampco Window Wall containing the 2⅛ inch panels is of heavy construction. Special built-up mullions, sills and trim are of aluminum. Vampco Intermediate Pojected Windows are installed in the entrance and wing . . . Vampco Glass Block Ventilators at the rear. Unsurpassed lighting with proper ventilation . . . strength, beauty, durability . . . low cost; only Vampco offers them all in standard and custom aluminum windows. Write for complete details!

VALLEY METAL PRODUCTS CO.

PLAINWELL, MICHIGAN

SUBSIDIARY OF MUELLER BRASS CO., PORT HURON, MICHIGAN

See Complete File In Your Current Sweet's Catalog



VAMPCO®

A NAME THAT MEANS THE VERY FINEST IN LIFELONG ALUMINUM WINDOWS

VALLEY METAL PRODUCTS COMPANY
Dept. AR-55, Plainwell, Mich.

☐ Please send me 40-Page Catalog of Industrial and Institutional Windows.

☐ Please send catalog of Aluminum Windows for Light Construction.

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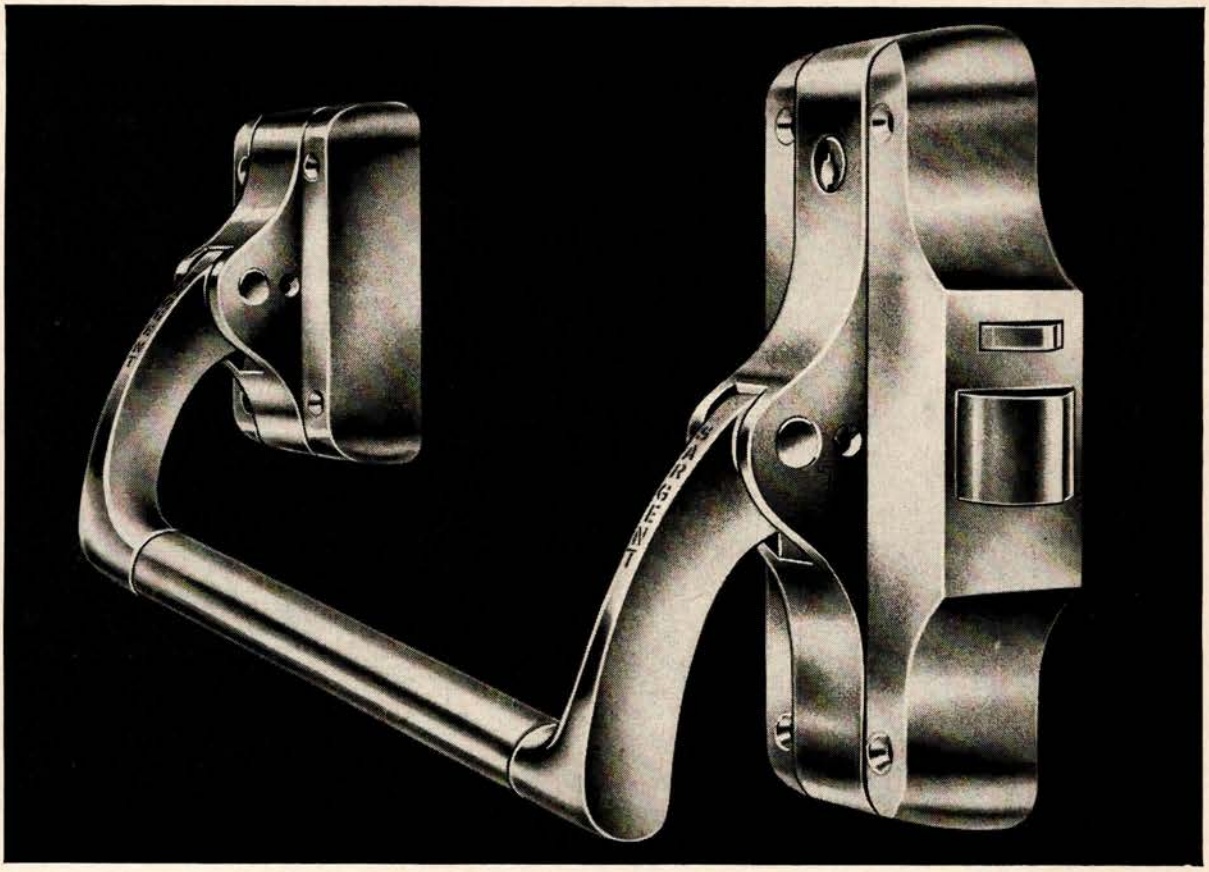
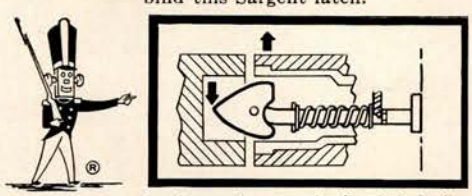


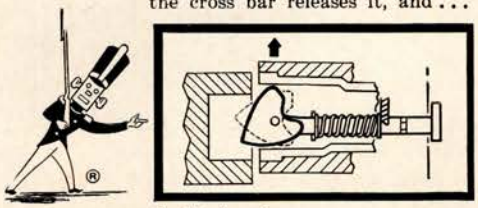
It cannot jam!

—either opening or closing

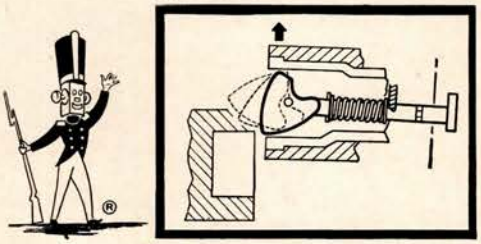
Outward pressure on a door *can't* bind this Sargent latch.



Look at the way the latch is built to pivot. Just a ¼" movement of the cross bar releases it, and . . .



the latch *rolls* . . .



and then *folds* out of the way. Pressure actually helps to open it.

The function of a panic device is to *prevent* panic! To open doors *instantly* and *easily* in every emergency.

So, when human lives are at stake . . . specify the *safest*. Sargent Quick Exit Devices.

The diagrams will show you *why*.

Study them. You'll see *why* they cannot jam. *Why* the Sargent latch does not have to be retracted by the bar. The slightest bar movement releases the locking mechanism, making the latch bolt free-floating. This same easy, roll-fold action works in reverse to *close* doors smoothly, too. (Contrast this with devices that require *complete* movement of the latch by crossbar . . . latch bolts that may bind when pressure forces the bolt against the strike.)

Here's another plus . . . *stainless steel* is used for crossbar bearings, latch bolt pins and springs to give your clients *lasting* protection.

These exit devices come in Rim, Vertical Rod and Mortise Types. With or without mullions and thresholds. And all three types of bolts harmonize when used together . . . and with other Sargent hardware . . . in the same building.

Play it *safe* . . . with Sargent Quick Exit Bolts. Write for full details. Dept. 7-E.

THE PRODUCERS' COUNCIL — AFFILIATED WITH THE AMERICAN INSTITUTE OF ARCHITECTS

SARGENT of New Haven ®

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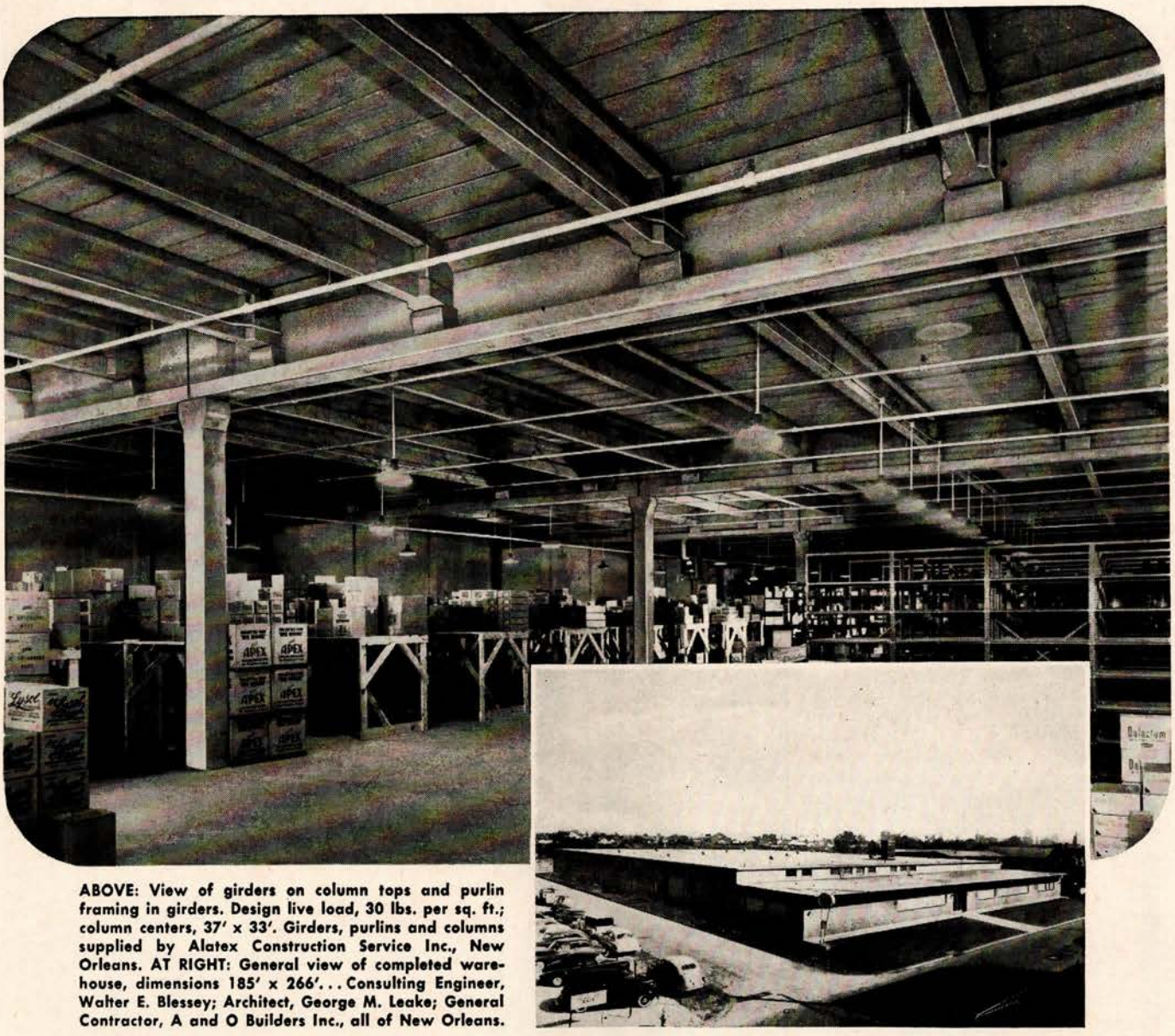


ABOVE: View of girders on column tops and purlin framing in girders. Design live load, 30 lbs. per sq. ft.; column centers, 37′ x 33′. Girders, purlins and columns supplied by Alatex Construction Service Inc., New Orleans. AT RIGHT: General view of completed warehouse, dimensions 185′ x 266′... Consulting Engineer, Walter E. Blessey; Architect, George M. Leake; General Contractor, A and O Builders Inc., all of New Orleans.

50,000 SQ. FT. PRESTRESSED WAREHOUSE ERECTED IN 18 DAYS

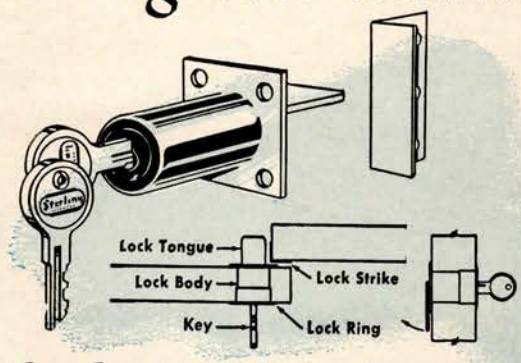
THAT'S THE STORY of the new Myer Brothers Drug Company warehouse and office building in New Orleans... the entire framework including precast Perlite roof slabs erected in 18 working days. Both the 36-in. deep "I" section girders and the 22-in. deep "T" section purlins are prestressed with Roebling ⅜-in. diameter 7-wire stress-relieved strands pre-tensioned and bonded to the concrete. The prestressed members plus the precast reinforced concrete columns were purchased at an in-place cost of only 70 cents per sq. ft.

Roebling engineers, pioneers in the development of prestressing techniques and tensioning elements in America, will welcome the opportunity to cooperate with you to help assure maximum efficiency on any specific prestressed concrete application. Write Construction Materials Division, John A. Roebling's Sons Corporation, Trenton 2, N. J.

ROEBLING

Subsidiary of The Colorado Fuel and Iron Corporation

New! Sterling® *sliding door locks...*

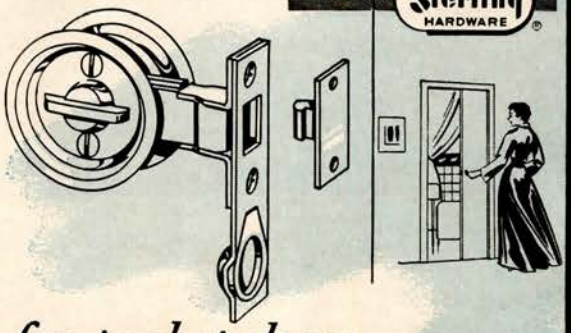


for by-passing doors

The first sliding door lock for by-passing doors. Now closets can be locked and contents kept secure from pilferage. Designed on a revolutionary new principle. One half turn of key raises tongue to locked position or returns it to unlocked position. Cylinder is geared to tongue and action is positive. Simple to install—bore one hole. Fits ¾" to 1¾" doors.



Sterling HARDWARE®



for pocket doors

A new type of lock for bathroom or bedroom doors. Privacy is assured by turning locking button on inside. Emergency button on outside permits unlocking with screw driver or coin. Neat, simple installation. Fits 1⅜" or 1¾" doors.

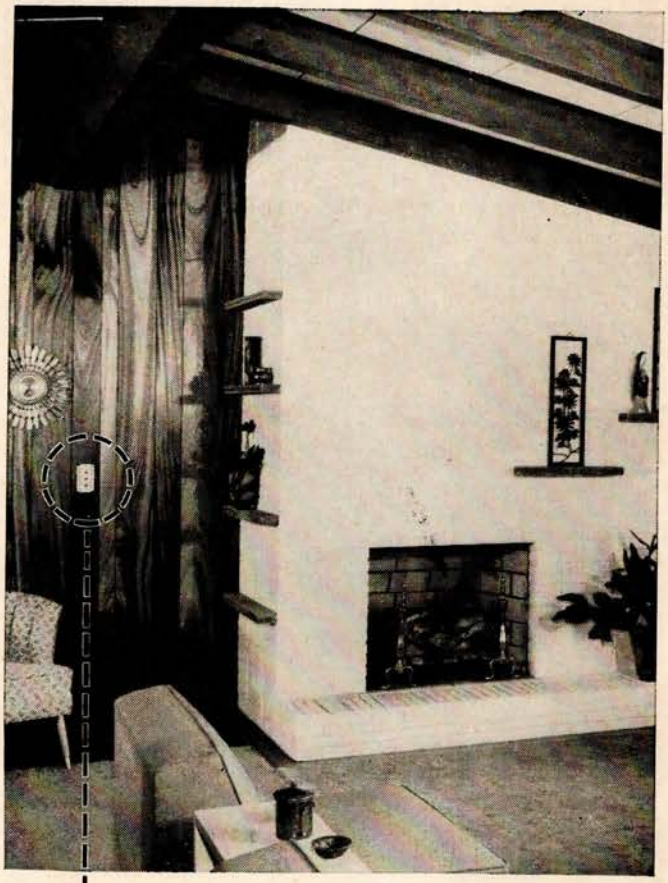


Sterling means Quality

STERLING HARDWARE MFG. CO.
Chicago 18, Illinois

SEE OUR CATALOG IN SWEET'S:
Architectural File • Light Construction File

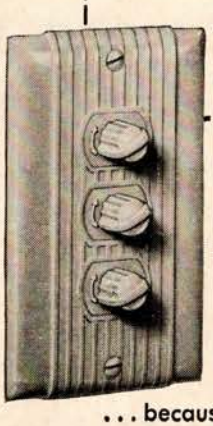
VISIT OUR DISPLAYS: Architects Samples Corporation, N.Y.C.
Chicagoland Home Building Center, 130 W. Randolph St.



Modern beauty

For modern buildings, specify P&S Roto-Glo . . . the only truly modern light switch. Combines functional design . . . feather-quiet operation . . . *glows in the dark.* Precision-built mechanism . . . 15 Amp, 277 Volts A.C. . . . designed to handle fluorescent loads with ease.

Write Dept. AR for the complete Roto-Glo story.



Available in P&S Despard and conventional strap types

it's a ROTO switch
it's a LUMINOUS switch
it's a QUIET switch

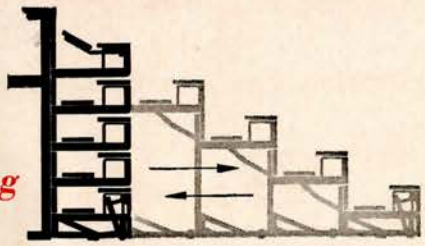
NEW ROTO-GLO Trade Mark
Quiet Switch

. . . because switches should be SEEN . . . not heard

PASS & SEYMOUR, Inc., Syracuse 9, New York
71 Murray St., New York 7, N. Y.
1229 W. Washington Blvd., Chicago 7, Ill.

WAYNE

Wayne Gymnasium Seating



FUNCTIONALLY
BEAUTIFUL
BEAUTIFULLY
FUNCTIONAL

In Gymnasium Seating for modern school plants this name commands respect. Wayne gym-seating successfully combines a smooth, smart, modern appearance with engineering advances that make Wayne stands remarkably efficient.

Select woods, fine finishing, and a completely vertical front when closed give Wayne gymstands the appearance of handsome wood paneling. Fully closed riser boards provide maximum safety and present a better appearance when extended.

Exclusive rotating alignment frames guide Wayne Rolling Gymstands to a straight, parallel position, free from jamming or side sway.

For complete reliability, modern, practical design, and attractive appearance, specify WAYNE.





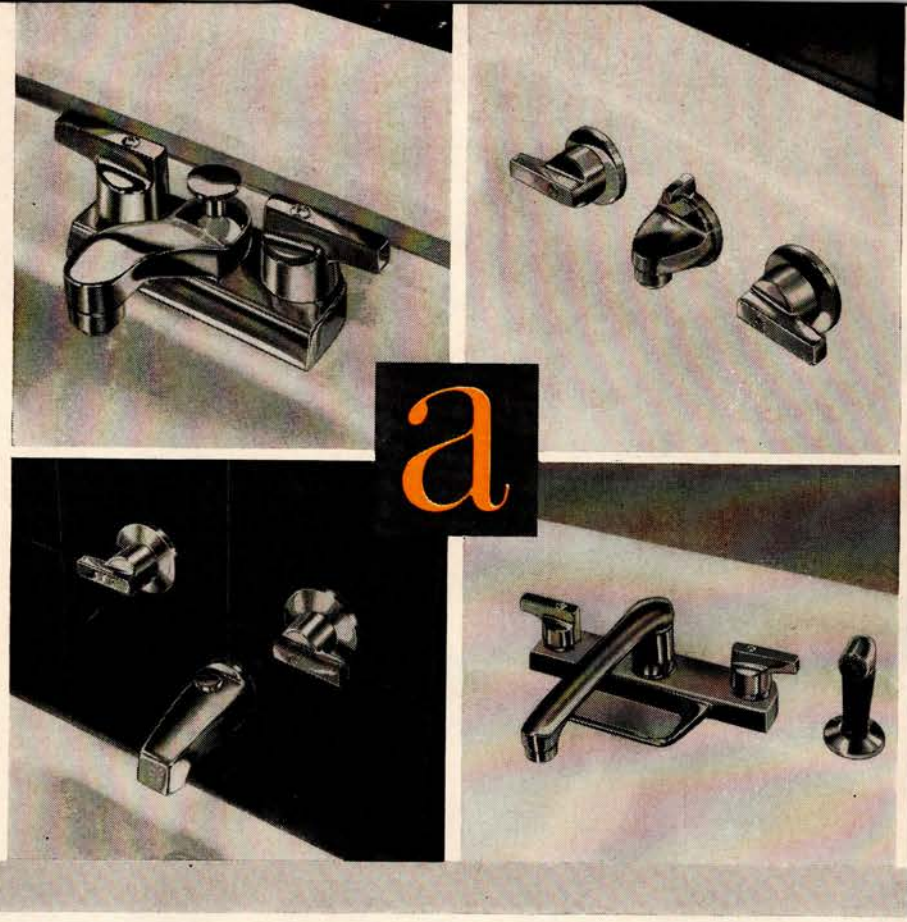


Rolling Gymstand Catalog R-54 free on your request...Write for it! Wayne Iron Works, 148 N. Pembroke Ave., Wayne, Pennsylvania.



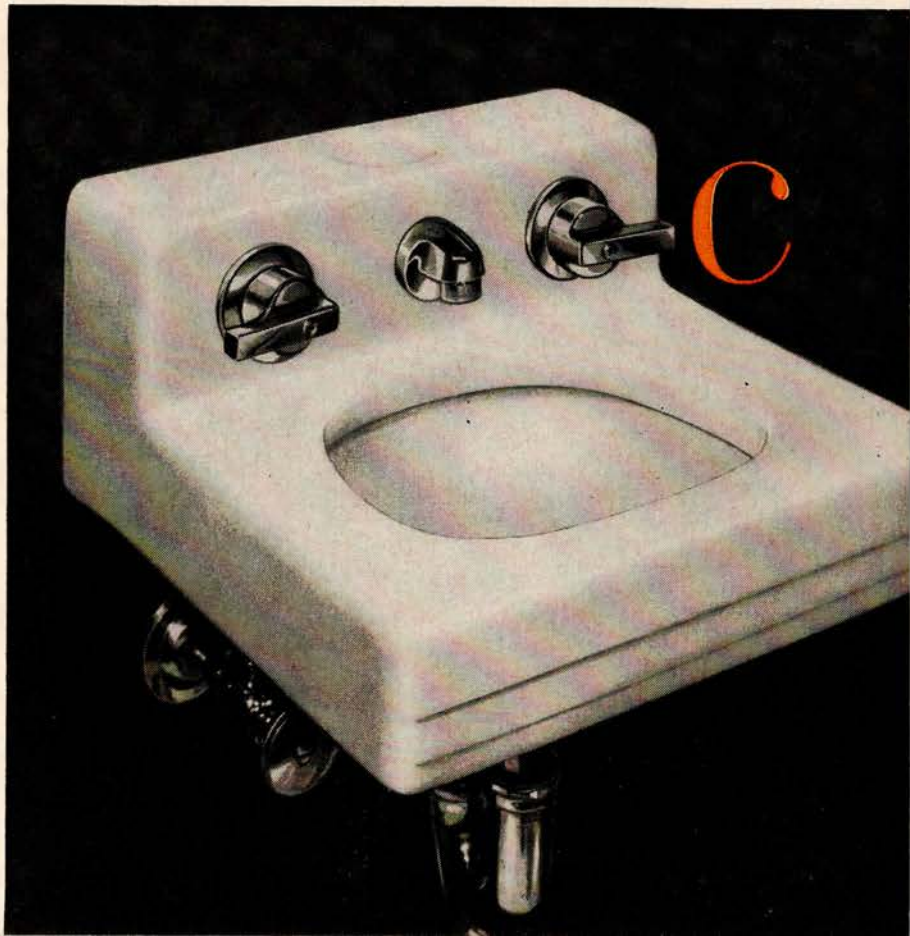
a **New Quality Line.** Here are smart, new fittings for the bath, lavatory and kitchen . . . in center-set and spread styles. They're designed to complement the modern lines of American-Standard plumbing fixtures, and will give long, dependable service. All Quality Line fittings are finished in gleaming Chromard for permanent beauty and easy cleaning.

b **New Monogram Fittings.** These luxurious fittings have a rich satin chrome finish, and can be personalized with the owner's initials. Distinctive Monogram fittings are available with clear or colored non-slip handles to blend with the bathroom color scheme.



Picture studies in function and

c **New Bathroom Fixture.** The Dentaledge is a useful and sanitary addition to the modern bath . . . it helps relieve bathroom "rush-hour traffic"! This 14" x 14" dental lavatory features a flushing rim with a back-flow preventer. Styled to harmonize with other American-Standard fixtures, it is made of genuine vitreous china.



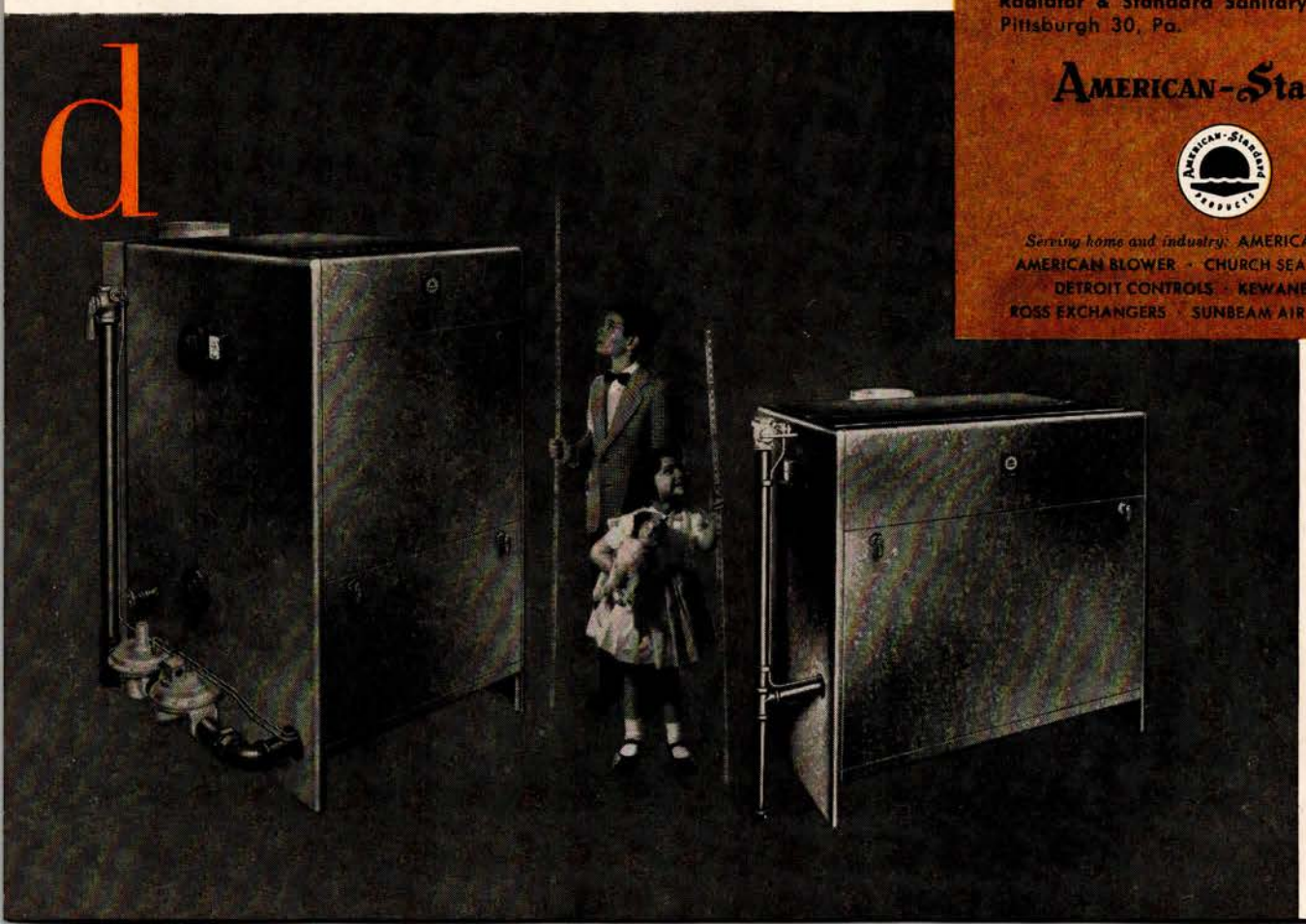
d **New G-6 and G-4.** They're new American-Standard gas-fired boilers that can be used with either hot water or steam systems. These boilers are compact and streamlined . . . drafthood and manifold are completely enclosed in a steel jacket. Service is simple because big, easy-to-remove access doors let maintenance men do their job quickly and thoroughly. These efficient boilers have A.G.A. approval. The G-6 boiler can be used singly or in battery to handle any commercial or industrial heating job. This compact boiler has a solid, one-piece cast iron base for reduced installation costs. The G-4 boiler can be used in large homes and small industrial and commercial buildings. Designed for quick, easy assembly.



b

design by American-Standard

d



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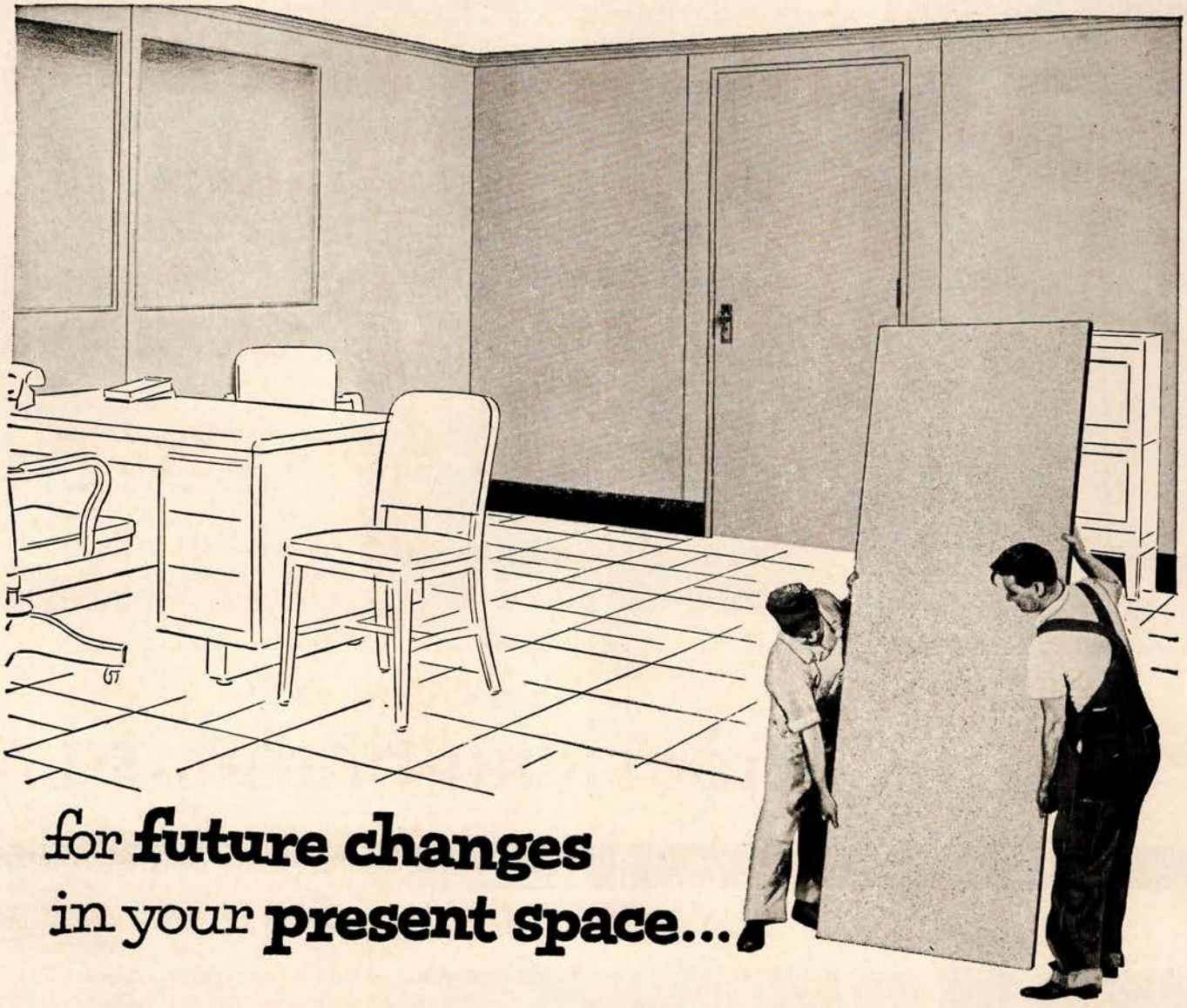

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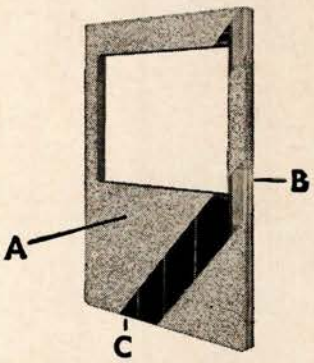

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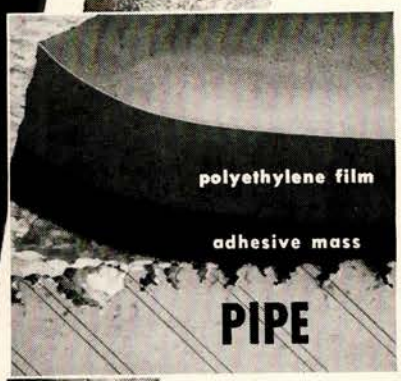

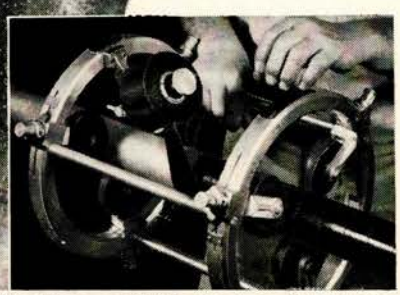

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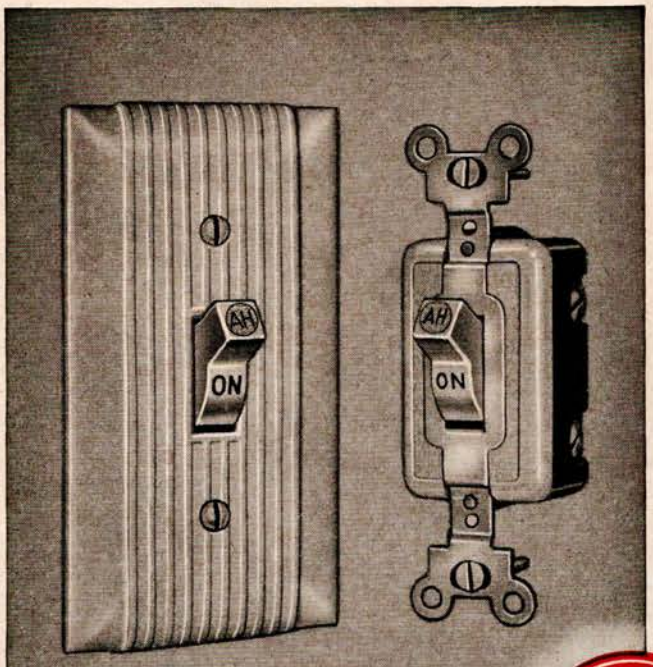

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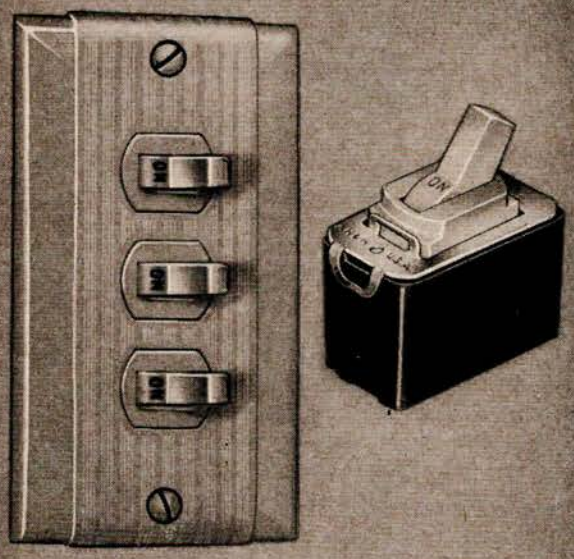

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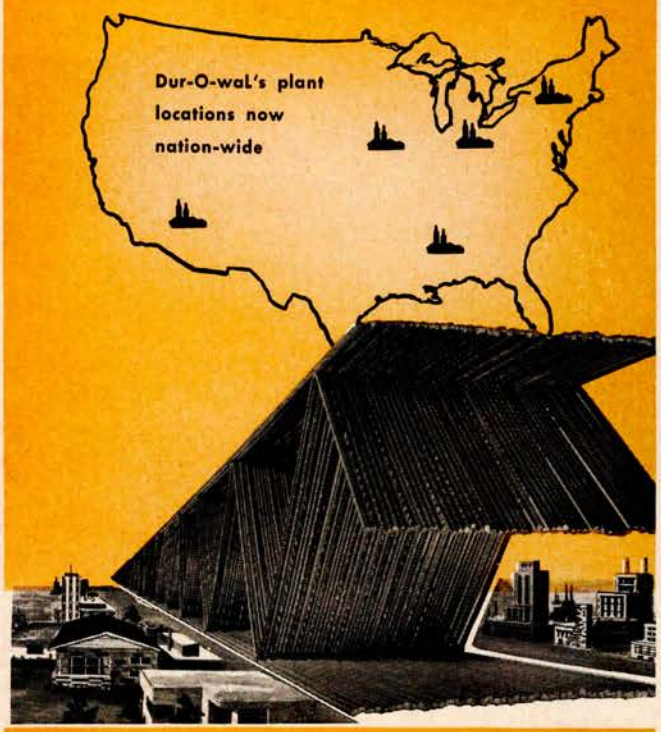

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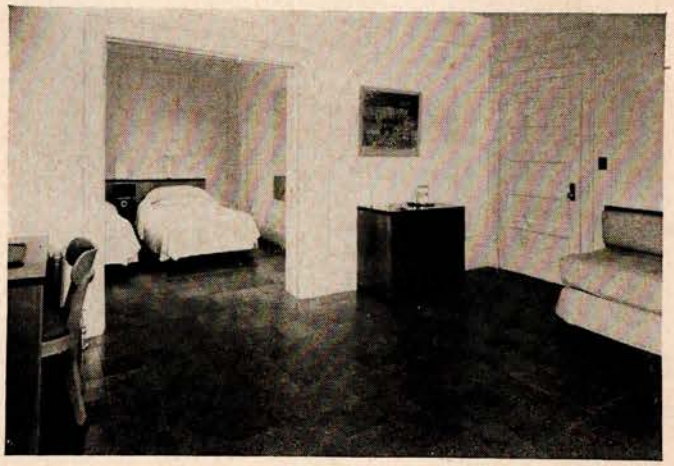

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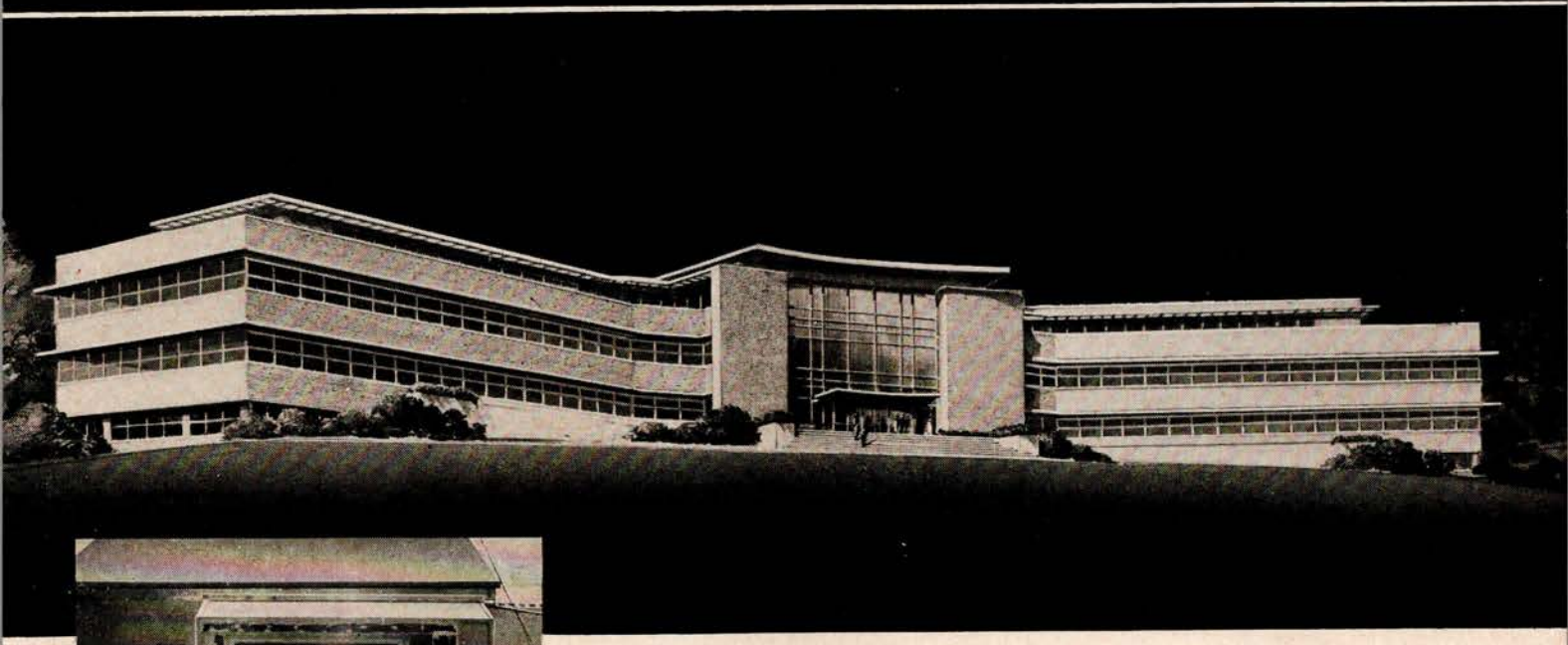
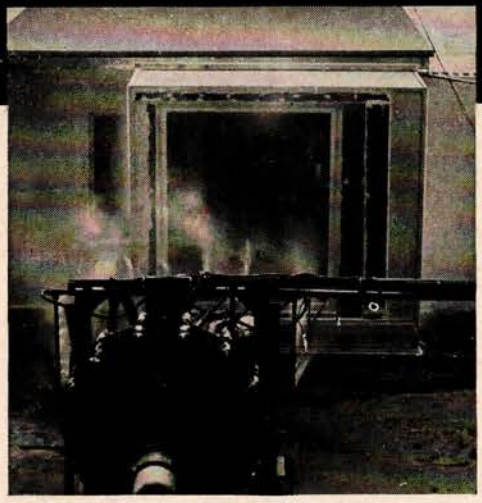
Selected for Standard-Vacuum Oil Co. Building after University of Miami "Hurricane Tests"*





* Photo above shows actual testing of 6' x 6' aluminum window at the University of Miami, Florida. This was a wind and water test to determine air and water leakage of entire assembly with winds of 100 mph accompanied by the equivalent of 4" of rain per hour, sustained for 10 minutes against the surface of the window.

Top photo:
Standard-Vacuum Oil Co. Office Bldg., Harrison, N. Y.
Architects: Eggers and Higgins
Contractor: Starrett Bros. & Eken, Inc.

When performance is one of the major requirements, you'll find more and more jobs calling for aluminum windows by GENERAL BRONZE.

It's no surprise to the building industry, therefore, that General Bronze's single-hung aluminum windows were selected for the new general office building of Standard-Vacuum Oil Company at Harrison, N. Y.

The selection of General Bronze windows, after extensive "hurricane tests" conducted by the University of Miami Testing Laboratory for air and water leakage, is another tribute to the design, engineering and fabricating skill of General Bronze.

The General Bronze single-hung window selected by the architects, Eggers and Higgins, and the builder, Starrett Brothers & Eken, Inc., is a new type window developed by General Bronze engineers and is proving extremely popular in many new installations. It is the same type window that has been selected for use in the New York Coliseum.

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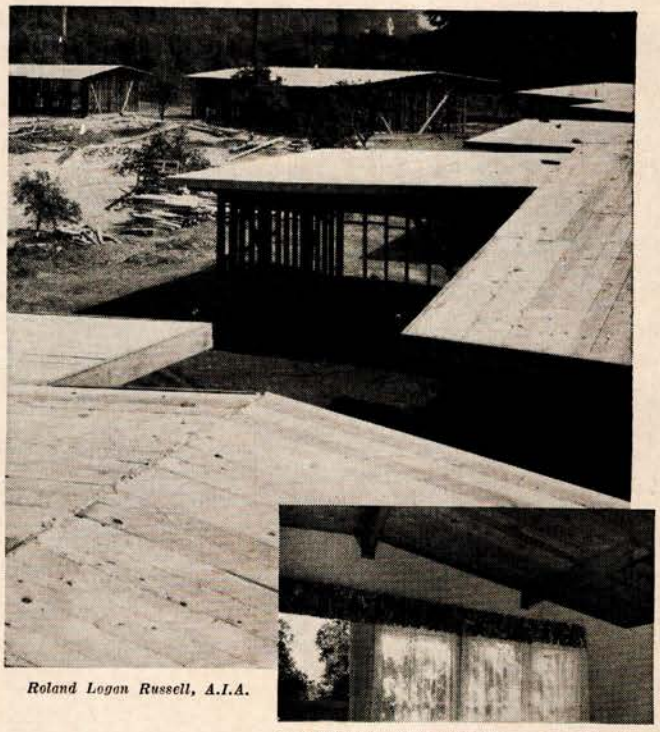

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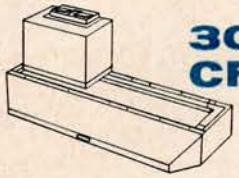

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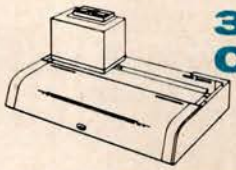

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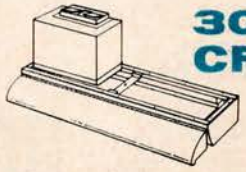

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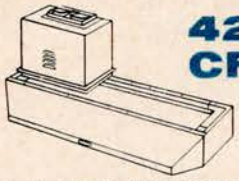

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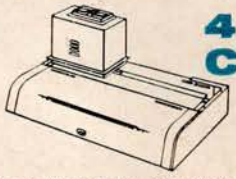

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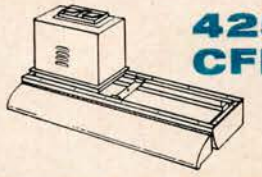

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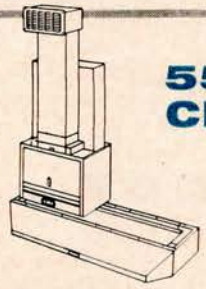

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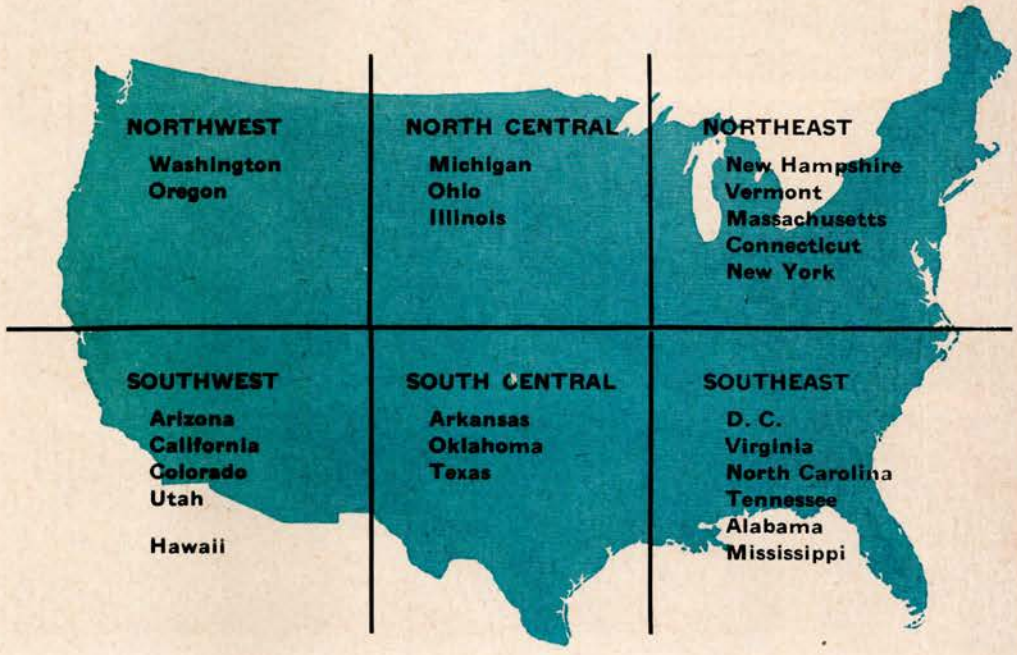
KECK, George Fred
Chicago, Ill.
KESSLER, Bernard
Bennington, Vt.
KOCH, Carl, and F. L. DAY
Cambridge, Mass.
LANDSBERG, William W.
Port Washington, N. Y.
LYMAN, William
Detroit, Mich.
MARKHAM, Fred L.
Provo, Utah
MATSUMOTO, George
Raleigh, N. C.
McCARTHY, Francis Joseph
San Francisco, Calif.
McCARTY, Bruce
Knoxville, Tenn.
MORSE, John M.
Seattle, Wash.
NEUTRA, Richard J.
Los Angeles, Calif.
ORMSTON, Harry S.
McLean, Va.
OSSIPOFF, Vladimir
Honolulu, Hawaii
RESNICK, Aaron
White Plains, N. Y.
RICHMOND, Carleton, Jr.
Cambridge, Mass.
ROESSNER, R. Gommel
Austin, Texas
SMITH, Moreland Griffith
Montgomery, Ala.
SMITH, William Rowe
Salt Lake City, Utah
SOUTHERLAND, Louis
Austin, Texas
STRAUB, Calvin
Los Angeles, Calif.
STRAUSS, Carl A.
Cincinnati, Ohio
VAHLBERG,
PALMER & VAHLBERG
Oklahoma City, Okla.
WILSON, F. Talbott
Houston, Texas
WONG, Worley K.
San Francisco, Calif.
WRIGHT, Thomas D.
Washington, D. C.
YORK, John G.
Harlingen, Texas



ARCHITECTS COAST-TO-COAST COMMENT ON DESIGN TRENDS

WHAT ARE THE TRENDS in today's house architecture in the United States? Are they regional? Do they point up certain structural systems, certain materials, or certain space arrangements?

Since such questions require comments from all parts of the country before they can be answered satisfactorily, the RECORD editors queried every architect whose house work we have published in the past two years or currently have in our files. We asked two questions: (1) What do you most like or dislike about today's custom-designed house? and (2) What do you consider today's major trends in house design as regards structure, materials, exterior appearance and space arrangement? A gratifying number of those queried replied — with the revealing results tabulated and quoted on the next two pages. The 13 houses which follow illustrate many of the same points.

— Florence A. van Wyck

MAJOR TRENDS IN HOUSE DESIGN

In the Words of 52 House Architects

	STRUCTURE	MATERIALS	EXTERIOR	SPACE
NORTHEAST	Economy Engineering *Exposed Modular Post & Beam Prefab parts Simplicity Steel Frame	Durable Intelligent use Plywood Prefab Simple *Synthetic Textured Variety Wood	*Horizontal emphasis Less self-conscious More color More open Simple lines Structural clarity Site relationship	Basic plan types Family room near kitchen Flexibility *Openness Privacy Separate dining space
SOUTHEAST	Concrete slab Economy Modular *Post & Beam Prefab parts Simplicity	Durable Expressive Locally available *Prefab Variety Wood	Functional expression Horizontal emphasis Large glass areas Less flat roof *More formality Site relationship	*Family living Family room Flexibility Mechanical cores Multi-purpose rooms Open plan, space dividers
NORTH CENTRAL	Articulate Dry-wall Modular Prefab parts Sensible	Durable Honestly used Natural *Synthetic	Common-sense Less flat roof More color Simple lines Structural expression	Family room Indoor-outdoor living Multi-purpose rooms *Privacy
SOUTH CENTRAL	*Exposed Modular Post & Beam Simplicity Steel frame	Colorful Double-duty Durable Masonry *Natural Prefab Textured Warm Wood	More color More mellow Return to masonry *Simplicity Site relationship Structural expression	All-purpose rooms Height changes Less formal Less open *Open plan, space dividers
NORTHWEST	Covered bones Exposed *More steel Post & Beam *Prefab parts Wood frame	Acoustic Brick Durable Natural Stone Variety *Wood	Applied detail *Horizontal emphasis Simplicity *Site relationship	Family activity *Family room near kitchen Flexibility *Good zoning Informality *Openness Simplicity
SOUTHWEST	Engineering Economy *Exposed Modular More steel Post & Beam Prefab parts Simplicity	Brick Colorful Cork flooring Durable Plastics Sheet Steel *Synthetics Warm Wood	Cedar shingles Expressiveness Large glass areas More color Simplicity Site relationship *Warmth	Better zoning *Family room—kitchen *Functional Indoor-outdoor living Logical for use Privacy

*Most frequently mentioned

"I like the simple house with large windows on garden side. I dislike large windows on street with lack of privacy." — **William J. Bain**

Like "care given to technical problems: heat, light, equipment." — **Fred Bassetti**

Like "the possibilities inherent in the proper use of site, materials and originality to arrive at a solution fitting to the problem and the clients' requirements." Dislike "stereotyped solutions that smack of clichés; too much openness and glass improperly used to suit most clients and climates." — **Baume & Polivnick**

"I see no special trend other than towards more thoughtfully and economically planned houses." — **Pietro Belluschi**

Like "efforts to recapture big space." Dislike "general sterility and self-conscious clumsiness of many examples." "Through simplicity of concept and elimination of some gadgetry, the effort to regain big space, I think, are presently most important." — **Thomas J. Biggs**

Like "the return of a certain restraint or formality, if you can call it such, imposed by the designer's adherence to an architectural pattern formed by a structural module or system filled with combinations of solid, translucent, or transparent materials." — **Noland Blass, Jr.**

"There seems to be a movement towards more organization in planning. One sees hints that there is some order in Design emerging from the chaotic helter-skelter searchings of the late 40's and the early 50's. In fact, it almost seems as if the Architects as a whole are beginning to see a path through this wilderness of Modern Architecture." — **Bolton and Barnstone**

Like "the study given to proper orientation, and the psychological impact of enclosed space." Dislike "too much glass facing on adjoining property or a thoroughfare." — **Leon Brown**

"In the field of custom-designed homes, design is becoming less biased, less an end in itself and more a process, as should be. The result is a demonstration of vigorous architecture as it evolves from contemporary family needs. . . . I think there is a clear departure from the two dimensional open plan toward a three dimensional open space. That is to say there is a utilization of vertical space interrelations as well as horizontal." — **Chas. Burchard**

QUOTES FROM PARTICIPANTS

"I like what I feel is honestly good design, and dislike what I know to be overdesigned junk. . . . Too many [architects] are beginning to follow a pattern. . . . There is a wide variety to be found, but there is also a great quantity of highly similar stuff being done. I do not exclude some of our own work. Some of this is due to the pressure of economics, but some I am afraid is a lack of imagination; and some of the worst we see is just plain bad taste. . . ." — **John Carden Campbell**

Like "use of materials in their natural state; the integration of the house with the landscape; the ease of building on difficult view property." Dislike "design trickery such as unrequired steel crossbracing on wood frame house." — **Wm. H. Carleton**

Like "the freedom of design to develop living facilities for mankind beyond just putting a roof overhead. Utilization of outside and inside areas blending them into a composite whole; freedom from traditional arrangements of functional areas." — **Eugene Kinn Choy**

"Like the best of them [custom-designed houses] because they are honest, unaffected, efficiently planned and humanized contemporary design. Dislike the worst of them because they have a mechanical appearance: surfaces which should be natural are slick; stone work which should look like masonry looks like gum drops or layer cake; unshuttered picture windows are placed where there is too much sun and perhaps no view (except from the outside-in, of papa in his suspenders reading the newspaper); many clichés are used, none with discrimination or taste." — **Clark and Beuttler**

"Very little study seems to be given to imaginative use of materials and structural methods." — **Walter H. Costa**

Dislike "lack of integration with community planning, lack of variety in various interior spaces, overemphasis on gadgets and equipment at the expense of space." — **Harold Edelman**

"I think the owner is receiving more livability per $ spent. . . . In some instances designs need softening. Can possibly be obtained by a more careful selection of materials and colors." — **Arthur Fehr**

Like "the unlimited sectional characteristics of the house which can result from enlightened solutions of site and spacial relationships." Dislike "the slavish imitation of contemporary styles of the great in architecture." — **Seth M. Fulcher**

"I don't like houses that strain tiresomely for effect. I don't like houses that look shabby and worn out after a few years. Both are common faults." — **Walter Gordon**

Like "the natural use of materials, openness of planning, recognition of climatic conditions, and tailoring to the client's needs rather than to a preconceived concept of design." Dislike "occasional straining at the leash to incorporate clichés or tricky materials uses which do not contribute anything to the net result." — **Fred M. Guirey**

Like "built-in features, opening of plan." Dislike "lack of work space and storage space for bulky items. Some houses are too open to public." — **Harold W. Hall**

Like "the way some homes are really designed for their own site and region; the way some homes express original thinking to meet the specific problems; open planning, limited by privacy, through an entire concept of a plan, limited only by property lines or defined views; an honest recognition of materials and their own characteristics." Dislike "the lack of understanding of the simplest of basic fundamentals — i.e., circulation, orientation." — **Henry Hill**

"I favor the trend toward flexible room uses, and means of combining spaces, but do not go along with some examples of excessive openness of plan with no means of control or subdivision for privacy or quiet — nor with some plans where circulation is overlooked. . . . The effects of mechanical equipment cannot be neglected in house design. The complex of kitchen and laundry equipment now available (and demanded by most clients) almost require more design efforts than all the rest of the house. Adding air conditioning, sun lamps, indirect lighting, panel heating, etc. can often make the house an engineer's paradise, but an architect's nightmare." — **Gerson T. Hirsch**

Dislike "excessive use of glass with resultant loss of privacy. The home should be a place of intimacy and not a fishbowl." — **James M. Hoffman**

"I believe that space is quite necessary for a family — space for individual privacy, and larger space that can give one a sense of freedom for thought and feeling as well as movement. . . . What I like about the better house is a character of domestic warmth and scale, a feeling for design within the framework of a philosophy that believes in individuals, as opposed to an expression of our highly industrialized culture. . . . Man's esthetic wants must be satisfied, perhaps even stimulated, in his home. . . . The house should have richness and warmth, and should be an organic unity, much as man himself. . . . I think there is, in favor of today's houses, a trend away from novelty for its own sake, in structure and in exterior appearance." — **Victor Hornbein**

Like "freedom from stylistic dogma in enough cases to give hope of the development of a great architecture in our time." Dislike "careless detailing of much work." — **M. K. Hunter**

Like "new disposition of functional spaces." Dislike "lack of clarity." Note "The discovery of basic house plan types as clearly recognizable as the 'Cape Cod' central chimney type: i.e., 'central core,' 'central court,' 'H' (which will be used extensively by speculative builders." — **John MacL. Johansen**

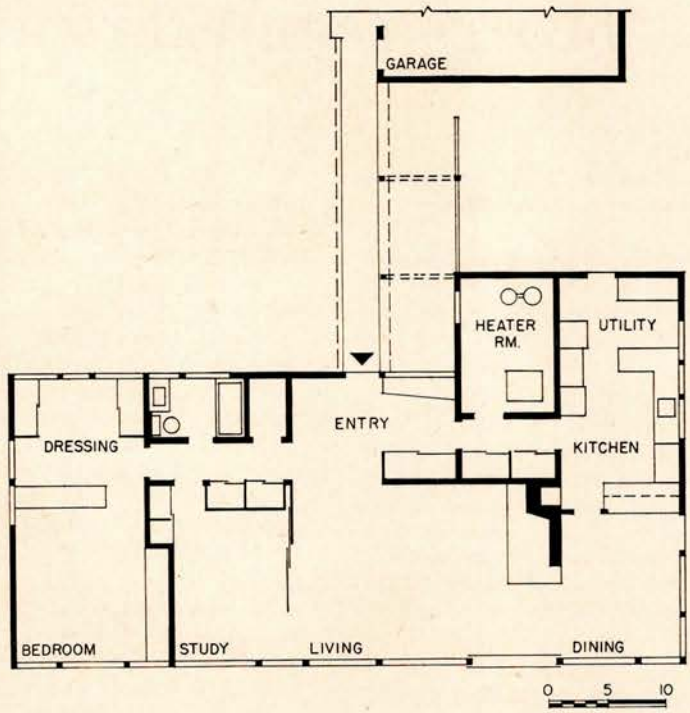
"The open plan is receiving some criticism in these days of sizable families." — **George Fred Keck**

Like "Straightforward use of the structural elements, the visual rhythm of the exposed beams and posts inherent in the architecture. Particularly, the use of the partially enclosed patios and terraces (away from the main view)." Dislike "complicated masses with excessive ornamentation." — **Bernard Kessler**

Like "the trend toward providing more and more people with well designed houses for less money and even on the custom design level." Dislike "the effect of magazines, and particularly ladies' magazines as well as recent architectural books on today's client. They believe that they can have everything they read about, all for a minimum budget. Magazines should refrain from quoting phony prices." — **Carl Koch and F. L. Day**

"Rising costs are keeping the size of houses generally small, but by ingenious planning and clever use of materials architects are creating the illusions of space where it really does not exist in large quantities. . . . New patterns of living have exploded the old familiar plans. Indoors and

(*Continued on page 302*)

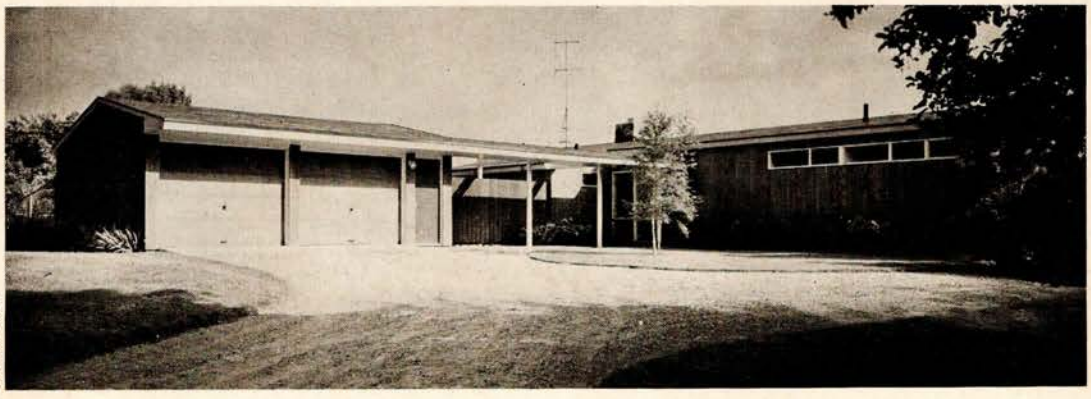




Flexibility. *House was planned for man and wife and occasional guest; one end of living room can be closed off as needed for owner's study or guest bedroom, or can be opened to considerably enlarge living-dining area for entertaining. Owner's hobby is book-binding, to which one corner of kitchen was assigned*

NORTHEAST

Arthur Hamilton House, Shrewsbury, Mass.
Carl Koch & Associates, Architects
Frederic L. Day, Jr., Associate



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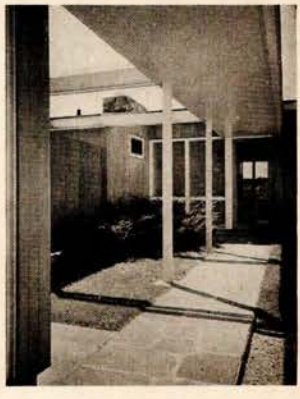
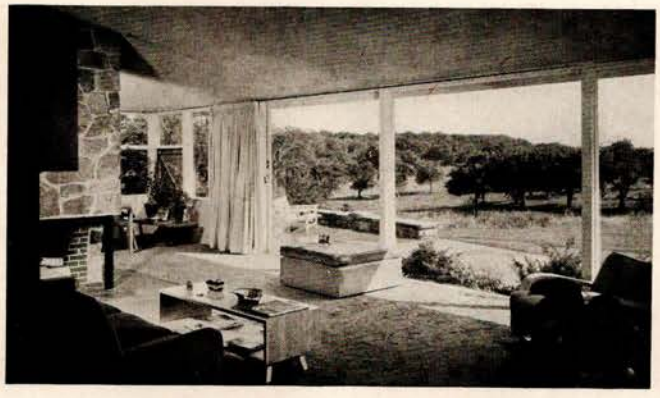


Site Relationship. *Site is large, with a long gradual slope at rear which low pitch of roof echoes; living room has floor-to-ceiling glass wall which extends room to far corner of site. Materials. Vertical T&G siding and painted (red) plywood panels on exterior; concrete floors*







Openness plus Privacy. *Main area of living room is closed off from entry by ceiling-high bookcase-storage unit; living and dining areas are separated by fireplace. Kitchen has direct access to carport through utility room and to entry by short enclosed hallway*

NORTHEAST

Arthur Hamilton House, Shrewsbury, Mass.
(continued)



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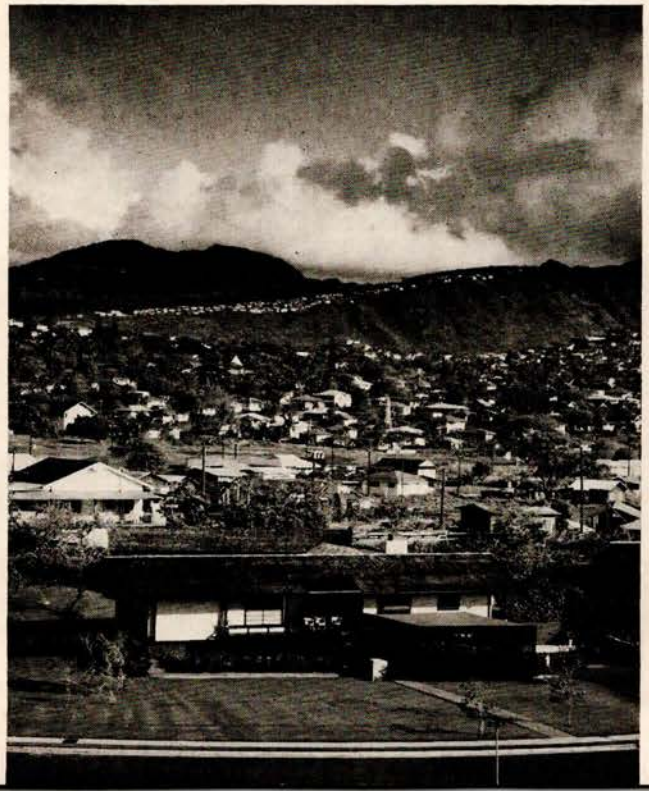
HAWAII

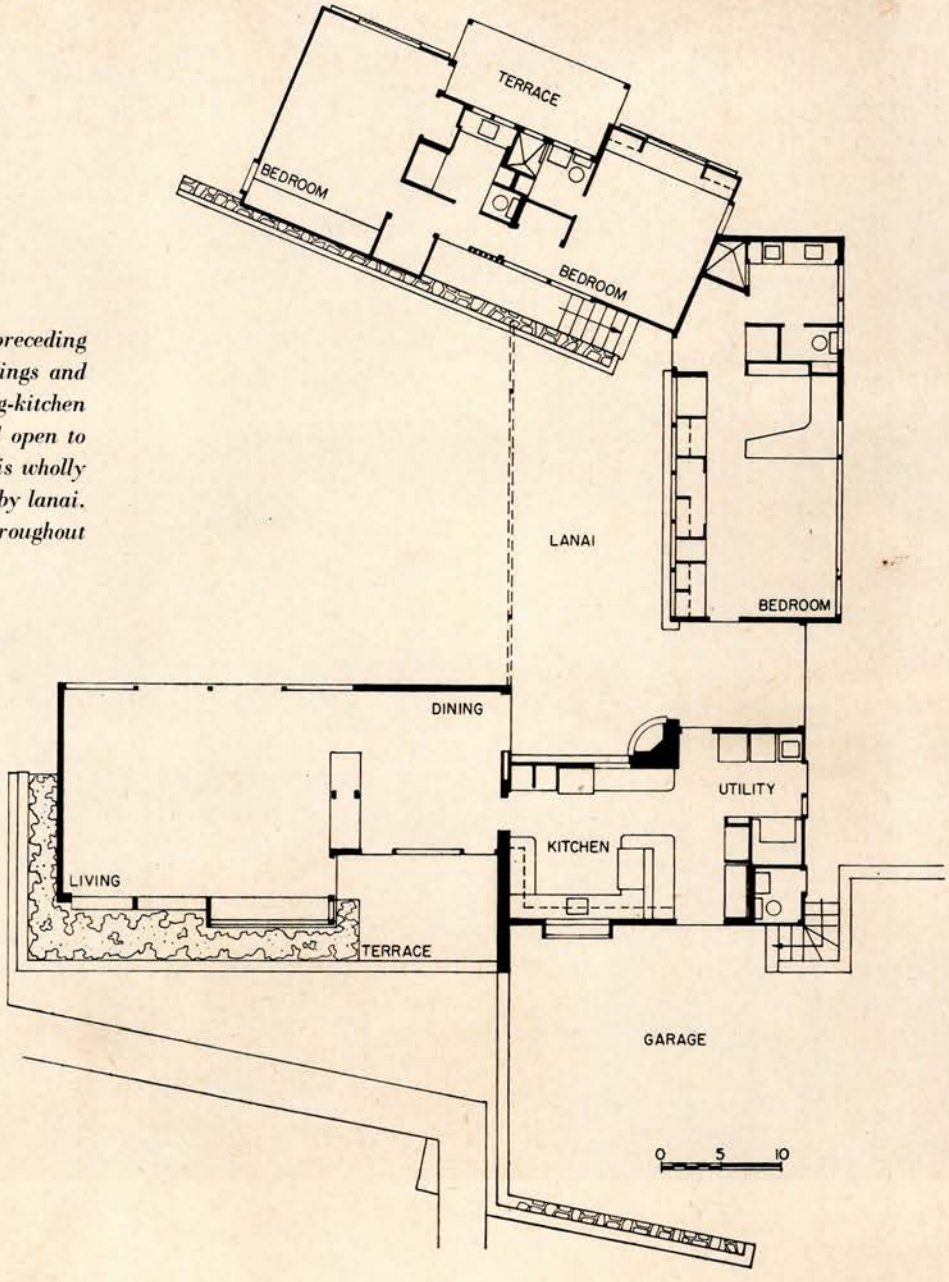
R. Wenkam



M. M. Goodsill House, Honolulu, Hawaii

Vladimir Ossipoff, Architect

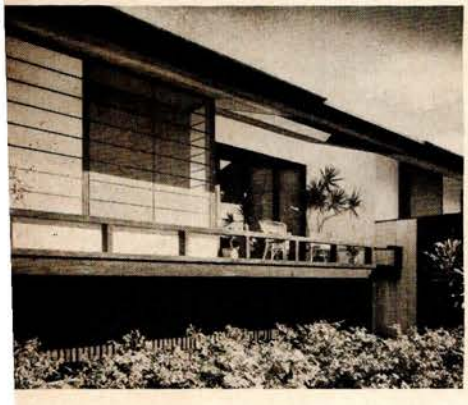
Privacy. *The lot this house occupies is relatively small, and in a well-populated residential area. Since provision for outdoor living is an absolute must in Hawaii, the problem was how to combine that requirement with a reasonable amount of privacy. As the plan (next page) shows, one wing of the house was placed at an angle to increase the area of the inner court, which every room in the house faces*



Zoned Plan. *Limitations of site (see preceding page) resulted in house with angled wings and unusually complete zoning: living-dining-kitchen areas stretch across front of house and open to lanai and patio; master bedroom suite is wholly separate, connecting with rest of house by lanai. Use of wood for ceilings and walls throughout house unites various plan elements*

HAWAII

M. M. Goodsill House, Honolulu, Hawaii
(continued)







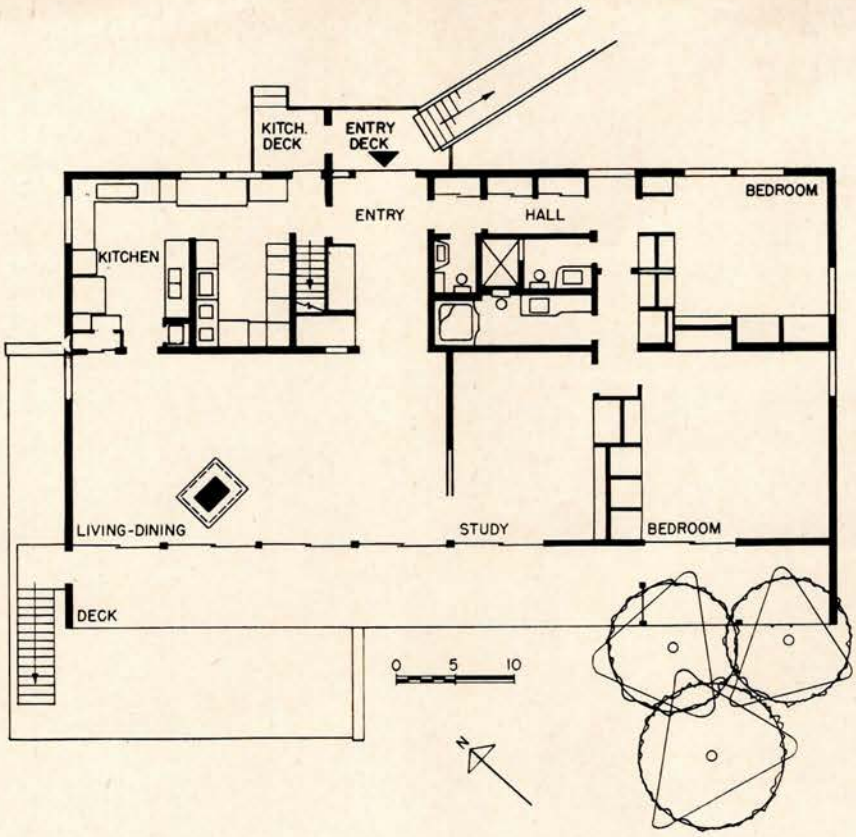








R. Wenkam



Site Relationship. *Site slopes steeply at rear toward fine view of Ohio River and city; carport at street level necessitated a bridge to main entrance. Owners wanted one-level house with maximum flexibility, easy access to outdoors, and minimum maintenance for both house and garden. Solution: all main rooms on upper level with connecting deck along whole view side; lower-level game room and covered terrace planned for future conversion to two-bedroom suite, so full bathroom is already installed*

NORTH CENTRAL

M. L. Cornelious House, Cincinnati, Ohio

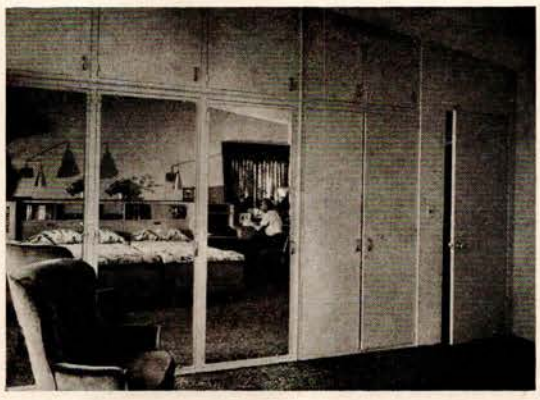
Carl A. Strauss, Architect

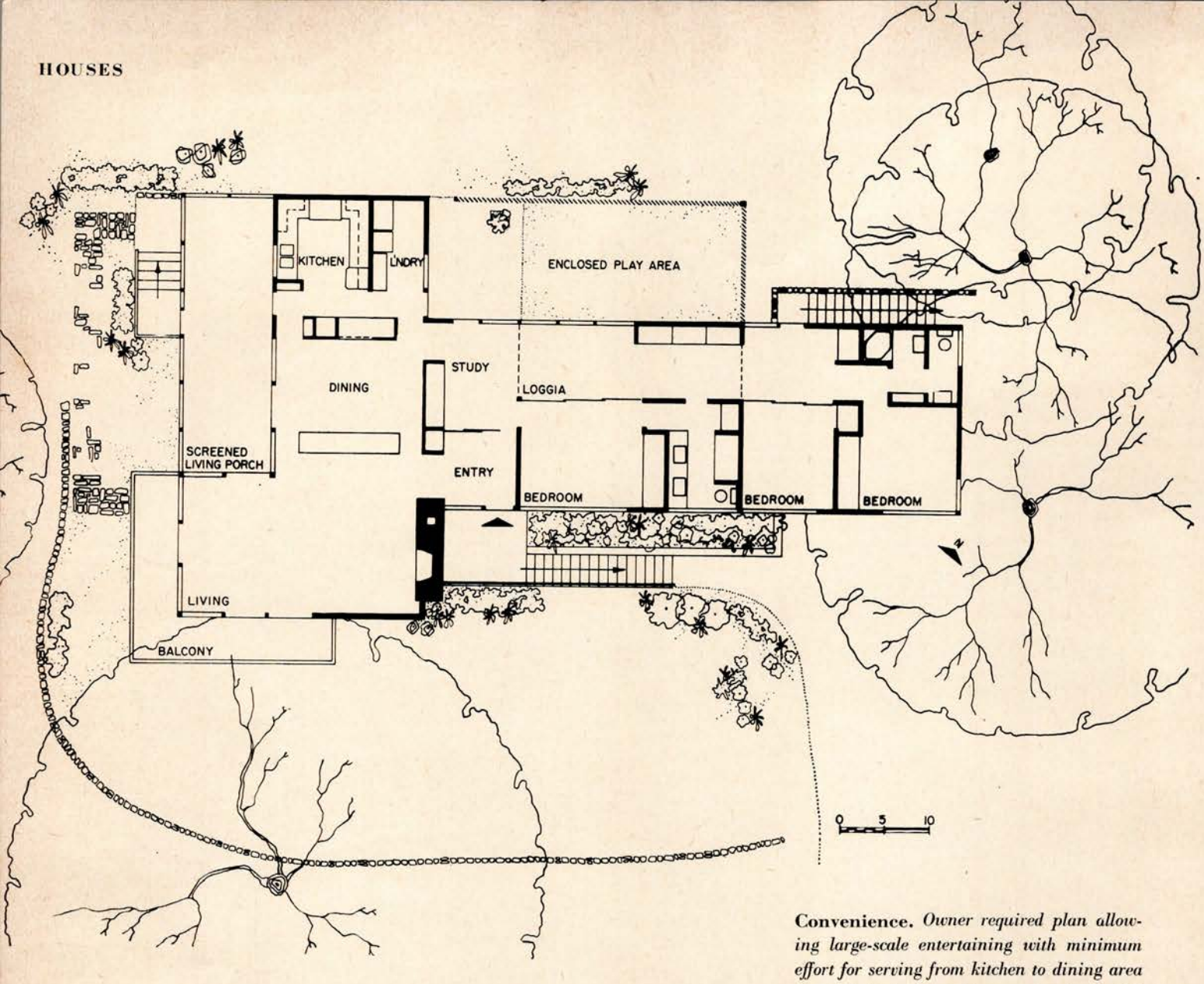




Structure. *Concrete block, concrete footings and piers; wood frame; exterior walls, redwood; floors, asphalt tile over plywood; plaster ceilings. Free-standing fireplace resulted from owners' desire for fireplace on view side without spoiling view. Roof is built-up with gravel and oyster shells*







Convenience. *Owner required plan allowing large-scale entertaining with minimum effort for serving from kitchen to dining area or porch; barbecue and terrace also demanded. Children must be able to come from play area at rear of property directly into house without stairs or ramps; children must also have an enclosed play area. Ample storage was another specific owner requirement*

SOUTH CENTRAL

Dr. Clifford G. Thorne House, Austin, Texas

R. Gommel Roessner, Architect



Mears Photography



Site Relationship. *Site was difficult, rising in grade from a creek at low point more than 40 ft to top. Slope was used partly for lower-level outdoor living area with required barbecue pit. Rest of house is on one level*

Materials. *Glass fiber insulation, cork flooring, fir paneling, 4-ply built-up roof*

Total Cost. *$32,765*







NORTHWEST

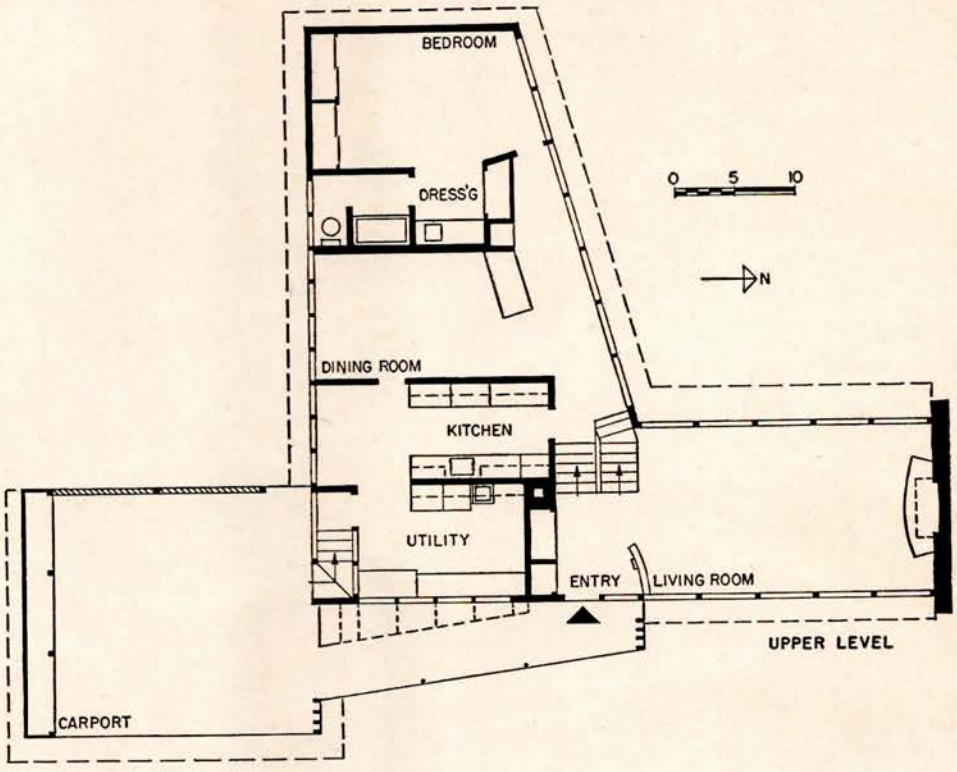
Harold W. Hall House, Everett, Wash.
Harold W. Hall, Architect

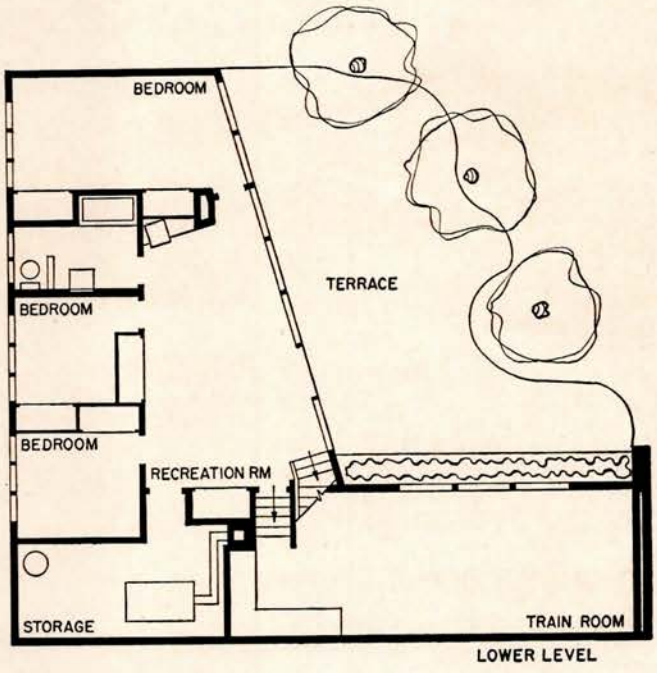
Utility Core. *"I have always felt that it was very important that the kitchen-utility area be located and planned as one unit relatively close to the front and also be large enough so that everything did not have to be put away in its particular place all the time" — H.W.H.*





Jos. G. Kennedy

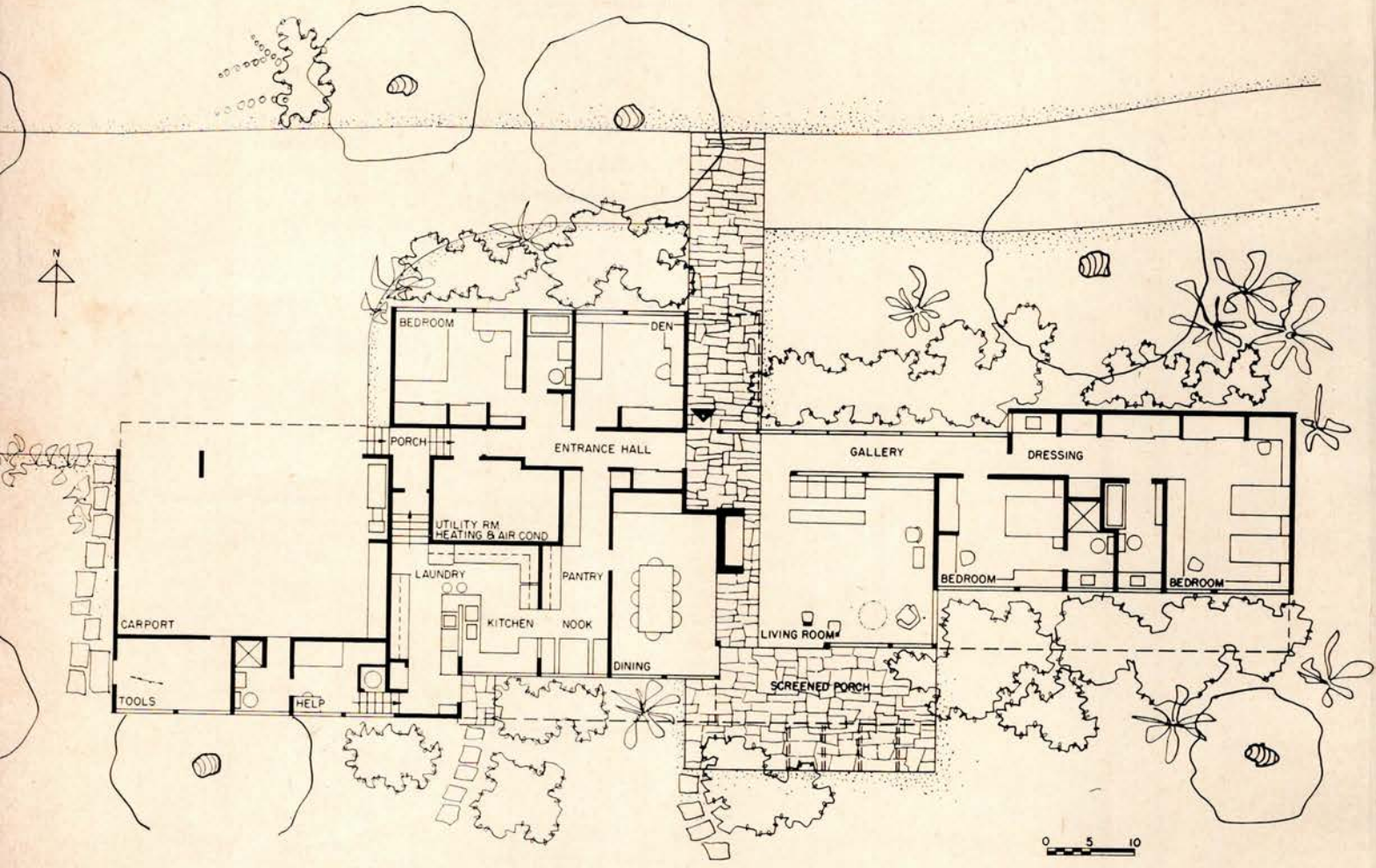




Activity Zoning. *Parents have upper level, four small children the lower. Children's bedrooms open to large play area and thence to terrace. Hot air radiant heating system on lower level keeps floor warm for children playing. Cost per square foot, $8.00*





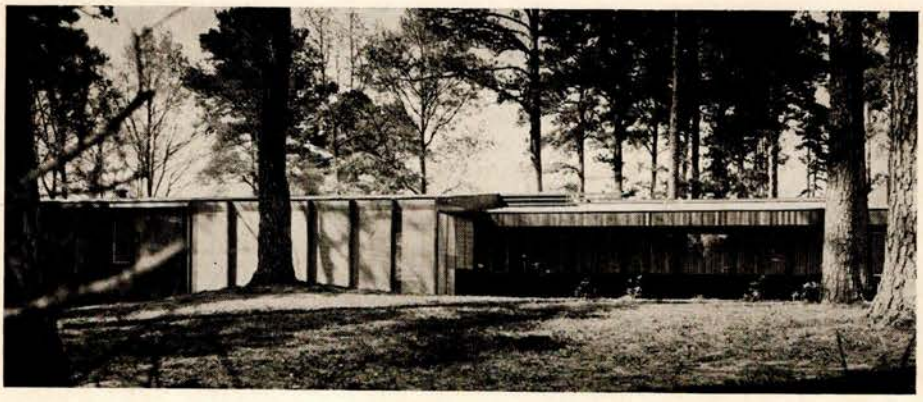


Privacy. *House was placed to preserve as many trees as possible for privacy in residential neighborhood. Main requirement for arrangement of rooms was provision for visits of married sons and daughters and small grandchildren, hence wholly separate master and guest bedroom areas (one son still lives at home)*

SOUTHWEST

James O'Brien House, Shreveport, La.

Richard J. Neutra, Architect

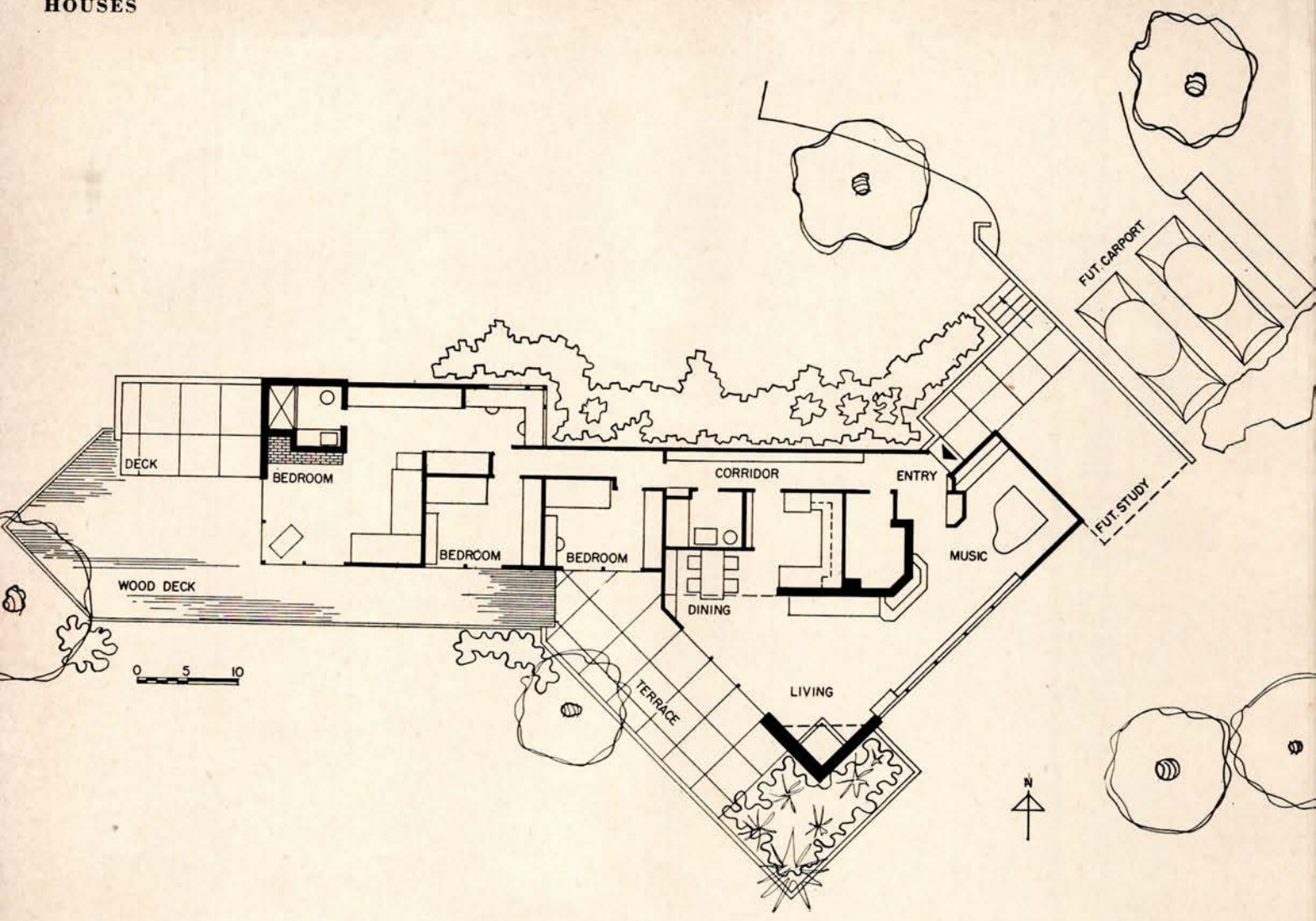




Warm Materials. *Construction is wood frame on concrete slab with exterior siding of T&G redwood in contrasting vertical and horizontal treatments; in living area ceilings are redwood, walls are white plastered; chimney is flagstone, as are floors in entry and screened porch*







Indoor-outdoor Living. *All main rooms open to decks a few feet above grade. Living room is V-shaped for views to southeast and southwest; fireplace shuts out unwanted view of another house directly to south, increasing sense of privacy*

NORTHEAST

Aaron L. Resnick House, Pleasantville, N. Y.

Aaron L. Resnick, Architect



Joseph W. Molitor

Activity Zoning. *Master bedroom and terrace were designed as secondary living room for parents' use when two young daughters entertain; shape of living room gives privacy to dining area.*
Materials. *Cement floors, brick and plywood walls, cypress siding. Interiors by Mrs. Resnick*







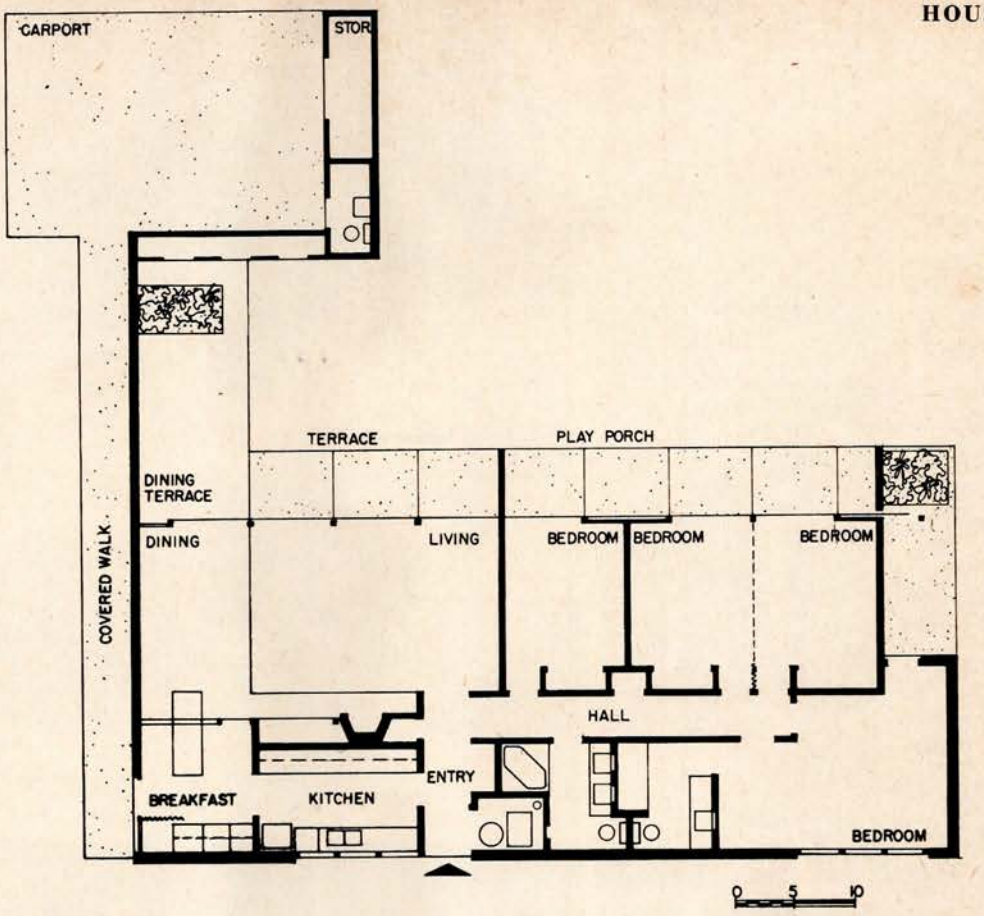
Structure. *Post and beam, with structural elements exposed throughout; 4 by 10 in. beams on 7 ft centers form module for glass sliding panels on south and fixed glass and glass louver panels on north; roof deck exposed and stained a rich brown to form the finished ceiling*



Ulric Meisel







Large Glass Areas. *All major rooms (except master bedroom) open to south through a wall-to-wall expanse of glass 10 ft high. Future plans call for extension of house to west property line, when present master bedroom will become a guest room-study and a new master suite, with southern exposure, will be added. Cost of house, excluding land, landscaping and fees: $36,000*

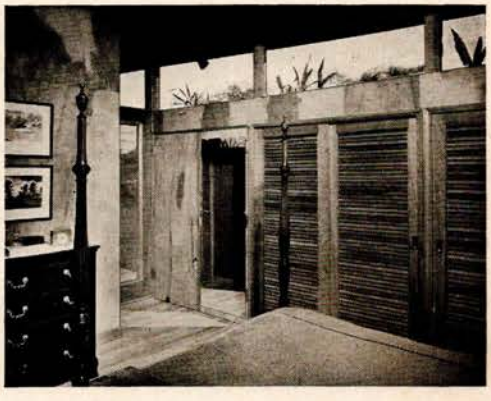
SOUTHEAST

Dr. Stanley Cohen House, New Orleans, La.

Curtis and Davis, Architects-Engineers

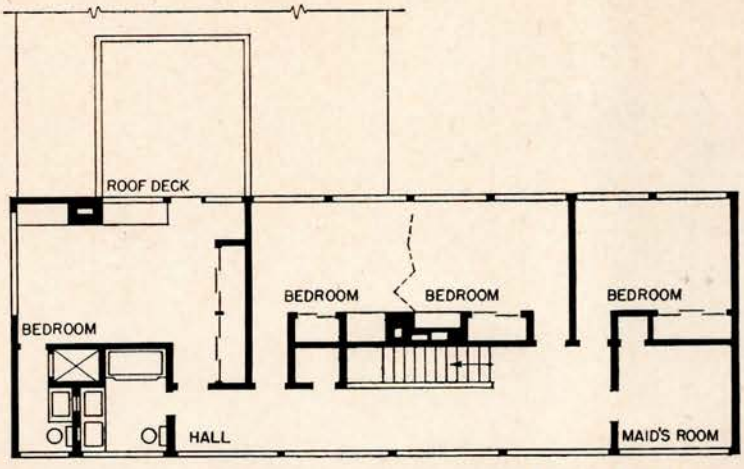




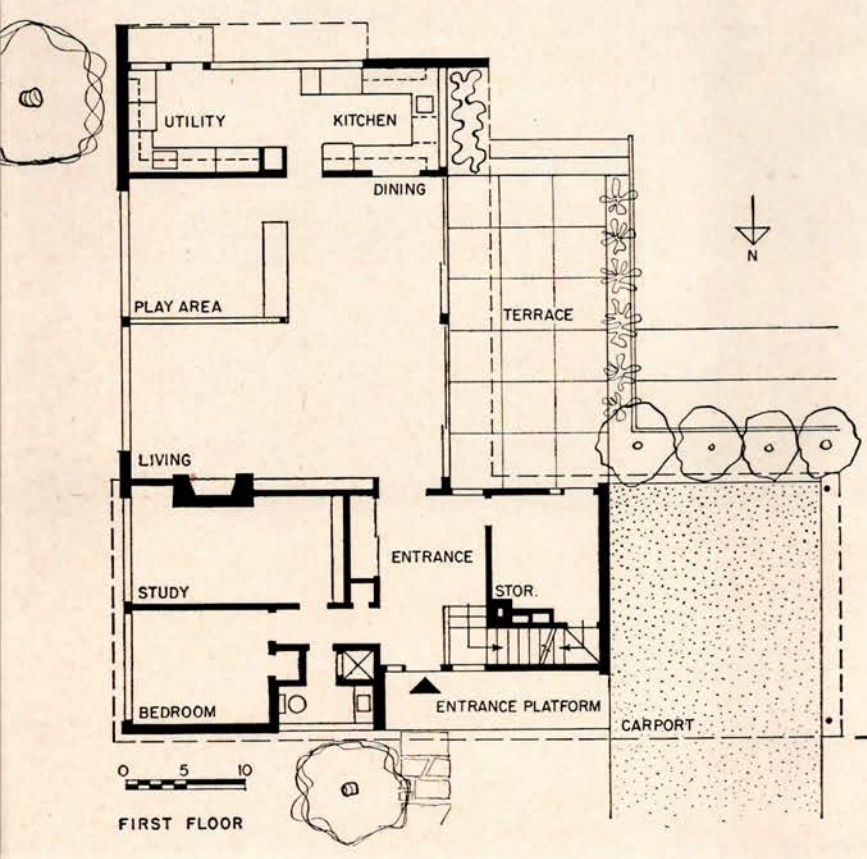


Exterior Appearance. *"The masses of the lower and upper floors were put perpendicular to each other to achieve southern exposure for the bedrooms, which the client requested. . . . This disposition of the two floors, together with the open carport, also serves the purpose of giving a feeling of lightness and openness to what might have been a heavy, ponderous building mass." — W. W. L. Cost of house without landscaping: $43,000*





SECOND FLOOR



FIRST FLOOR

Zoned Plan. *Household consists of four adults and three children, necessitating six bedrooms, three baths, play area and much storage space. Requirements also included a doctor's study and a private garden area. Site is relatively small (100 by 125 ft) corner lot; a 40-ft setback from each street was mandatory. Solution was L-shaped plan enclosing back corner of lot. Kitchen was located for southern exposure, convenient access to street for service entrance, and view of garden for supervision of children's play activities*

NORTHEAST

Dr. Rudolph Joseph House, Freeport, N. Y.

William W. Landsberg, Architect





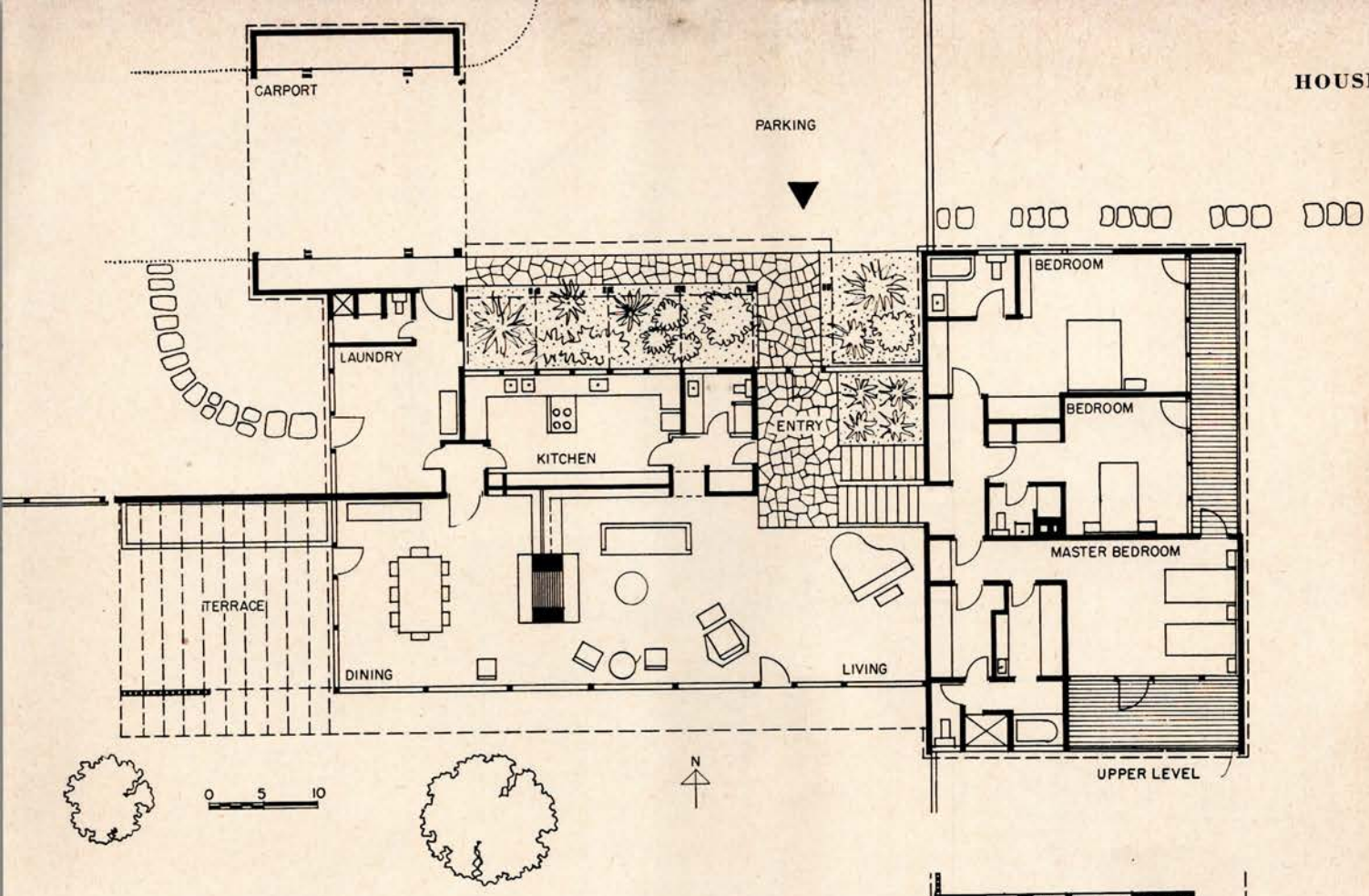
Ben Schnall

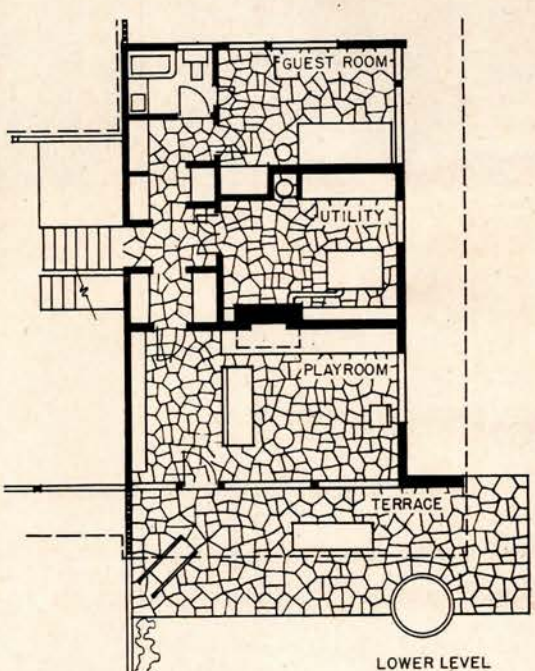
SOUTHEAST

Julian McGowin House, Chapman, Ala.
Huson Jackson, Architect; H. Seymour Howard, Jr., and Harold Edelman, Associates







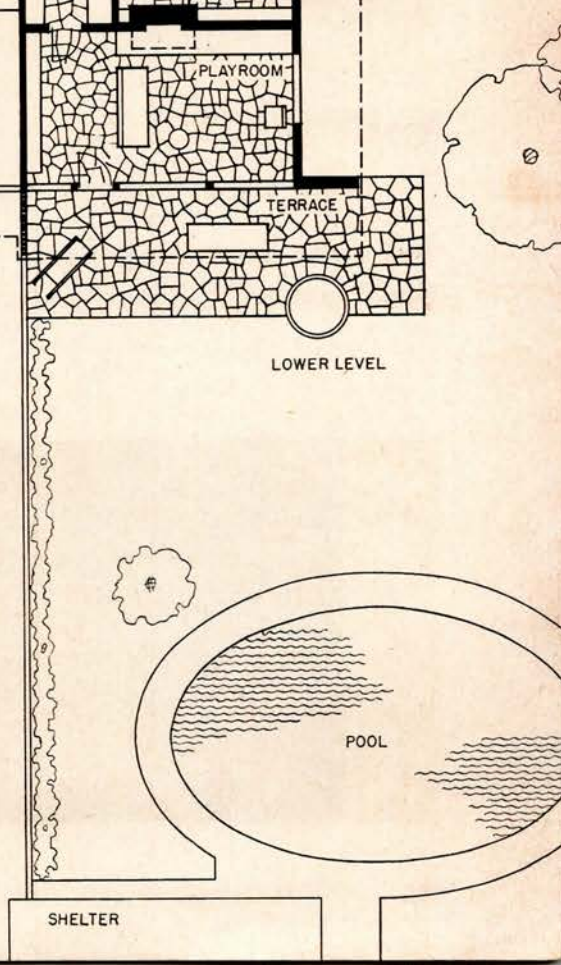


Family Living. *Family has three children, does a lot of entertaining, much of it centered around music: living room is planned to give illusion of music alcove although area is completely open; two-way fireplace and storage unit partially separate living and dining areas, increasing privacy without loss of free circulation of air or sense of space. Warm climate and family's liking for outdoor living resulted in the series of porches, terraces and pool*

Materials. *Since owner is head of a lumber company wood was used in both quantity and variety. Exterior walls are cypress and concrete block; interior walls are siding, block and wallboard; floors are oak, flagstone, or asphalt tile; ceilings are wallboard and siding. Approximate cost of house: $55,000*







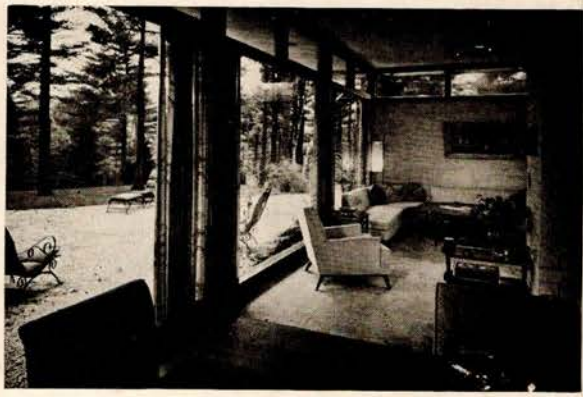
NORTHEAST

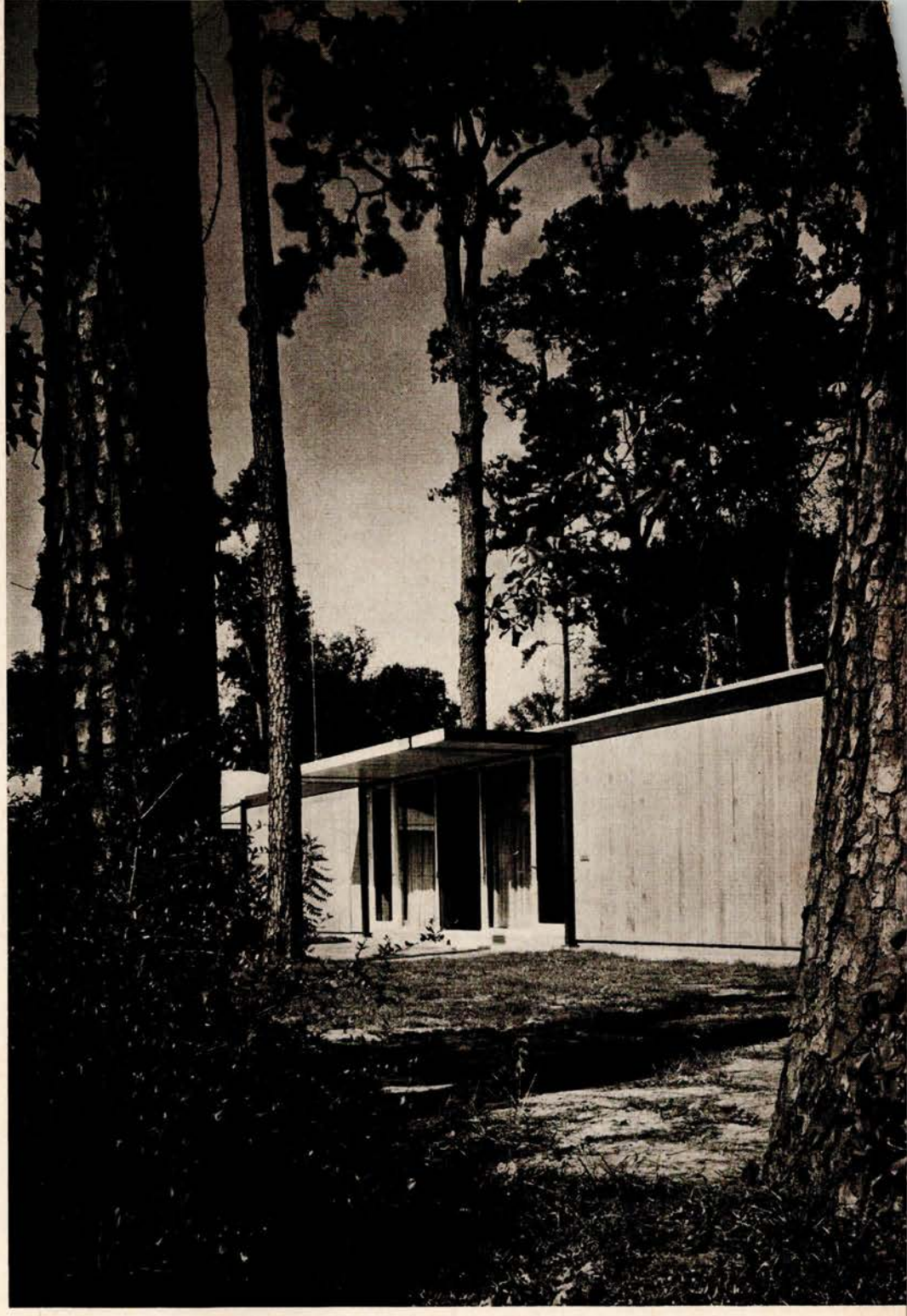
R. W. Colby House, Upper Brookville, New York
John Hancock Callender, Architect

Family Living. *House was planned for young couple with three small children; main living area consequently is well separated from rest of house, kitchen is central with playroom adjacent, and children's rooms form a unit with convenient bath and easy access to outdoor play area. Owner has hobby workshop in a separate building down the slope from the main house*



Joseph W. Molitor





Structure. *Steel frame: 2 by 12 in. fascia on eight 4-in. wide flange columns. Overhangs are redwood 2 by 6 members at 3 in. o.c., set in steel channels cantilevered from structural steel channel fascias*





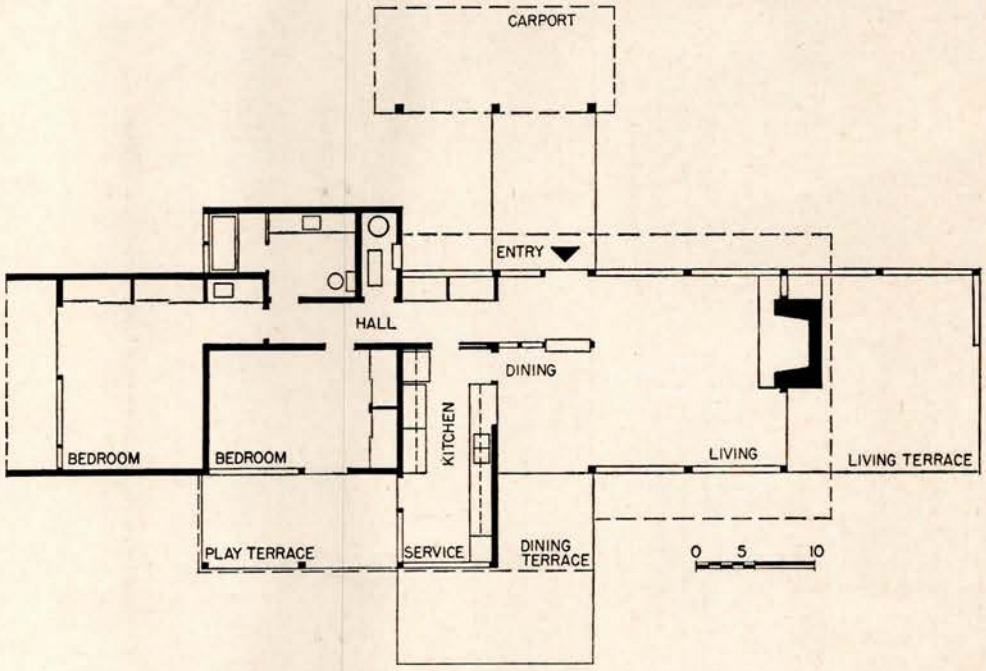
Openness plus Privacy. *Entrance is from carport through landscaped court directly to living room. Bookcase unit shelters dining area, creates a small entrance hall (additional photo on page 186). Landscaping and high redwood fences give privacy to end terraces on street side*



Hank Hoag





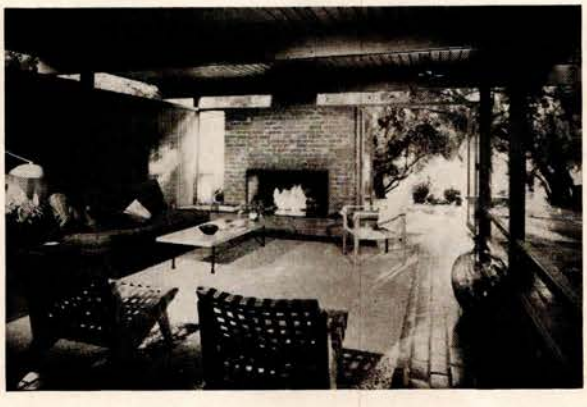


Indoor-outdoor Living. *Every room in house has its own terrace arranged for complete privacy from street. Play terrace adjoins kitchen as well as children's bedroom for easy play supervision. Materials: Vertical redwood siding, redwood and fir plywood interior walls and ceilings; brick or asphalt tile floors*

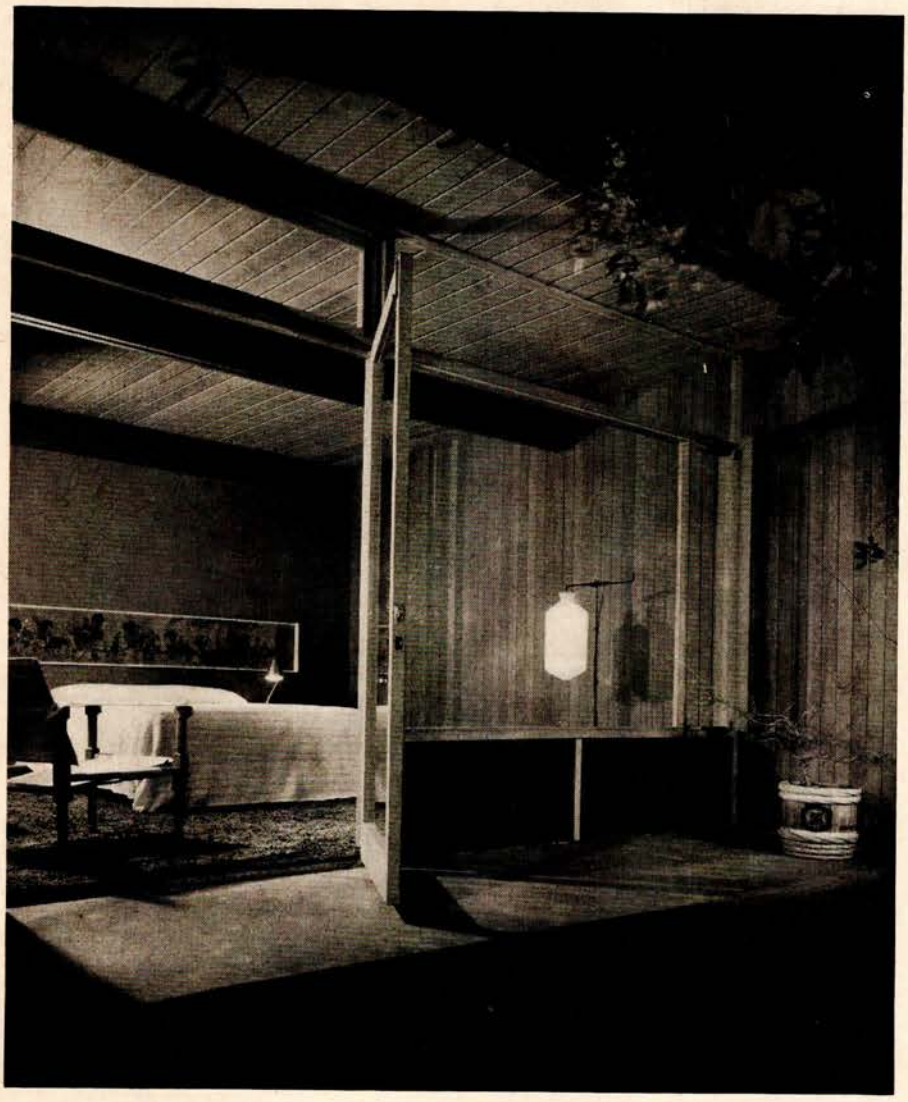
SOUTHWEST

Calvin C. Straub House, Altadena, Calif.
Calvin C. Straub, Designer





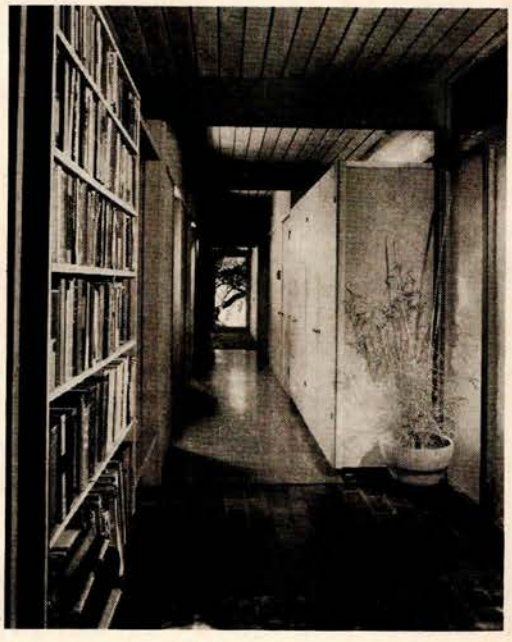




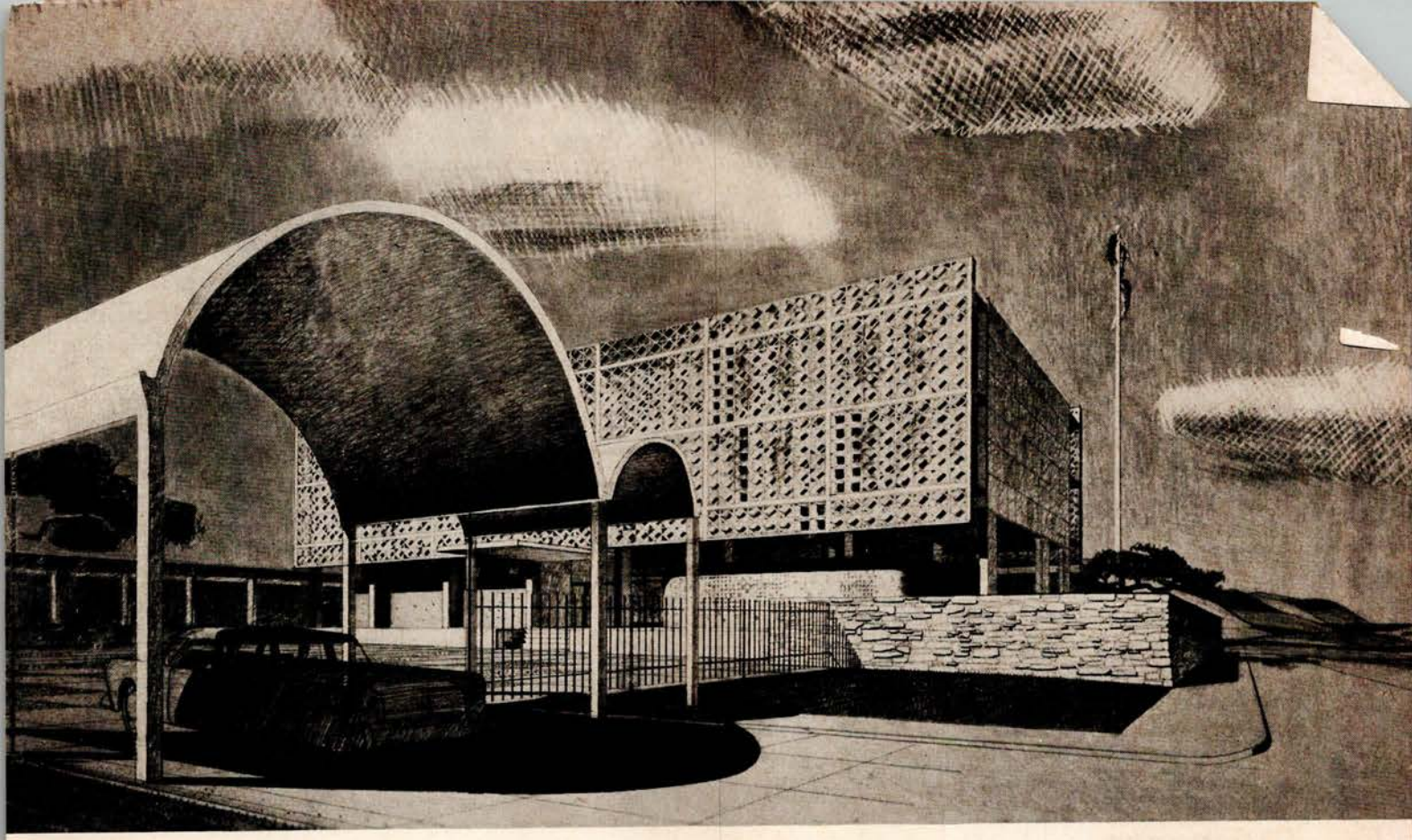
SOUTHWEST

Calvin C. Straub House, Altadena, Calif.
(continued)

Sense of Space. *Space is unbroken for full length of house from living room fireplace to terrace door of master bedroom; bedroom hall is lighted by high windows over storage cabinets*



Hank Hoag



U. S. Legation Office Building
Tangier, Morocco

Hugh Stubbins Associates, Architects

While this rendering is rather dominated by the arches at the entrance, other features will perhaps contribute more to the overall expression: pierced concrete sun screens shading the large glass areas of the three-story building, marble facing at the ends, an arcaded patio landscaped with water pools and orange trees. The Consular Court at ground level will have a surround of glass at the ceiling line with a dado of colorful mosaic tile. The three-story building is roughly in the center of a one-and-a-half-acre site, is surrounded by one-story elements which with it form the entrance court on one side and an enclosed patio on the other. Open arcades provide circulation at ground level. One-story buildings are wall bearing, with stucco finish.

ARCHITECTURE TO REPRESENT AMERICA ABROAD

Regional Expressions of American Architectural Thinking are Sought for State Department Buildings

THE NEW PROGRAM for State Department buildings in foreign countries might be characterized as a significant experiment in regional architecture for diplomatic objectives. Really now just getting to the first-look stage, the refurbished operation has a panel of famous architects to guide it and a clear statement of purposes. A dozen or so American architects have had plans for various buildings approved, and an appropriation decision is now in the making.

Objectives are given as two: (1) to represent American architecture abroad; (2) to adapt itself to local conditions and cultures so deftly that it is welcomed, not criticized, by its hosts. Here is a clear mandate to develop a sympathetic, regional expression of our own architectural thinking, all to a purpose whose importance transcends the normal challenges in design.

This was the need that led to the formation of the rotating Architectural Advisory Panel for the Foreign Buildings Operation, consisting of: Pietro Belluschi, F.A.I.A., dean of the School of Architecture and Planning, Massachusetts Institute of Technology; Henry Shepley, F.A.I.A., of Shepley, Bulfinch, Richardson & Abbott, Boston; and Ralph Walker, F.A.I.A., of Voorhees, Walker, Smith & Smith, New York. The panel is

chairmanned by Col. Harry A. McBride, former Foreign Service officer and Assistant Secretary of State, and, from 1939 until his retirement, administrator of the National Gallery of Art.

To state the objectives positively for the panel, Mr. Belluschi prepared this addendum to the State Department's instruction sheet:

"To the sensitive and imaginative designer it will be an invitation to give serious study to local conditions of climate and site, to understand and sympathize with local customs and people, and to grasp the historical meaning of the particular environment in which the new building must be set. He will do so with a free mind without being dictated by obsolete or sterile formulae or clichés, be they old or new; he will avoid being either bizarre or fashionable, yet he will not fear using new techniques or new materials should these constitute real advance in architectural thinking.

"It is hoped that the selected architects will think of style not in its narrower meaning but as a quality to be imparted to the building, a quality reflecting deep understanding of conditions and people. His directness and freshness of approach will thus have a distinguishable American flavor.

"The committee feels that if the above philosophy is adhered to, we need not fear criticism; on the other hand, if we act timidly, solely in the hope of avoiding any and all criticism from whatever quarters, we shall surely end up in dull compromises with the result that we shall have nothing but undistinguished buildings to represent us abroad. We would thereby have forfeited our opportunity to display the high American cultural achievements in the field of architecture generally recognized by architects of the more advanced nations of the world."

Architects invited by the Department of State — after consultation with the Advisory Panel — to participate in the program are sent to visit their assigned sites after intensive briefing by the department and the Panel. They normally then make two "presentations" before the officials and the panel: at the first, preliminary designs are presented and discussed; at the second, the final schemes incorporating any suggestions or amendments arrived at through the first discussion are submitted and — usually — approved. Architects are to visit sites a second time during construction. Although there has so far been no conflict of judgment, it should be noted that the function of the Advisory Panel is advisory only; and the State Department does not bind itself to accept Panel recommendations.

On following pages ten of the early projects in the new program are quickly shown in renderings or model photographs. The RECORD will report further as the program develops.

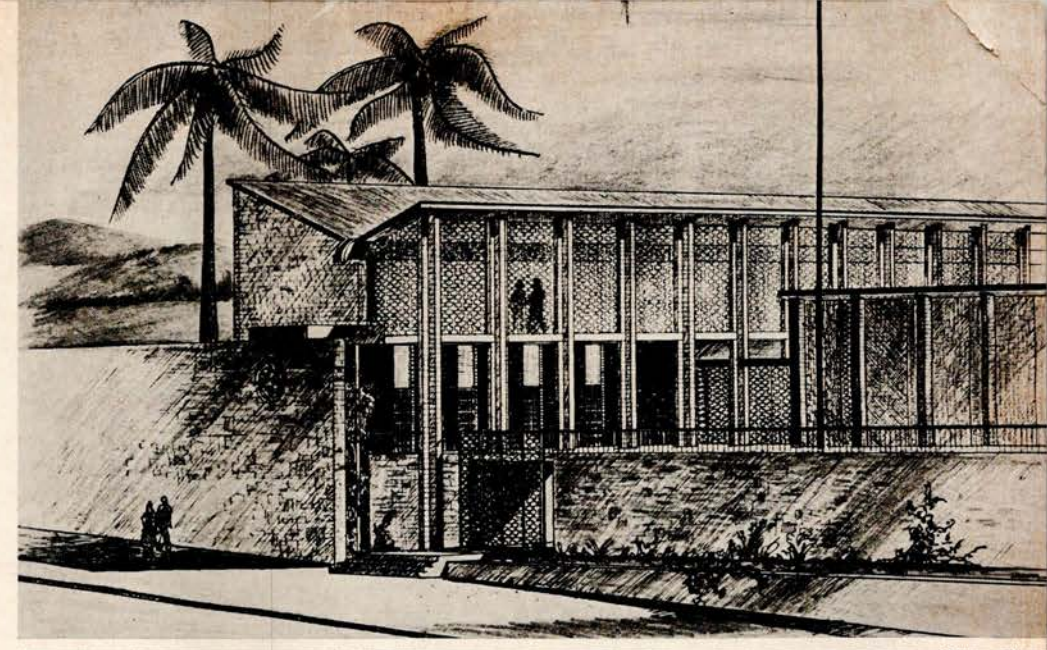


Office Building (above) and Embassy Residence, Asuncion, Paraguay

Keyes, Smith, Satterlee & Lethbridge, Architects

More than any other, this design was affected by difficulty of transporting materials. Both buildings will be of reinforced concrete columns and slabs with native brick interior partitions and stucco on brick exterior walls. Due to extreme heat, humidity and tropical rainfall, both buildings will have wide galleries and roof overhangs with an umbrella roof above the main roof. The entire office building and sleeping rooms of the residence will be air conditioned. Retaining walls and drainage ditches will be necessary to prevent excessive soil erosion.

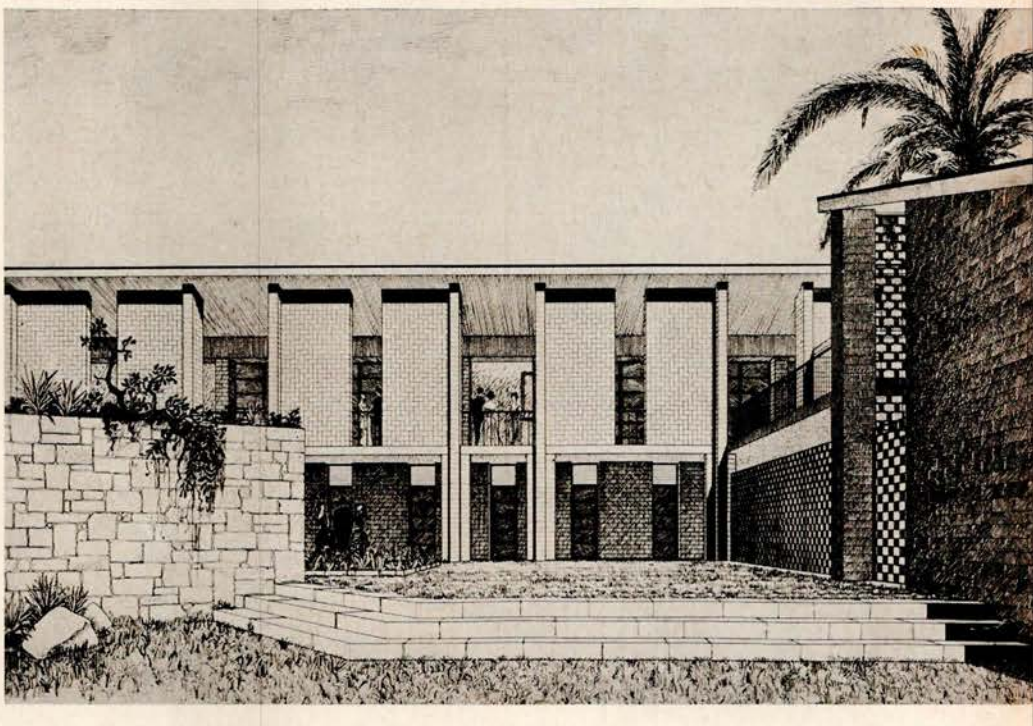


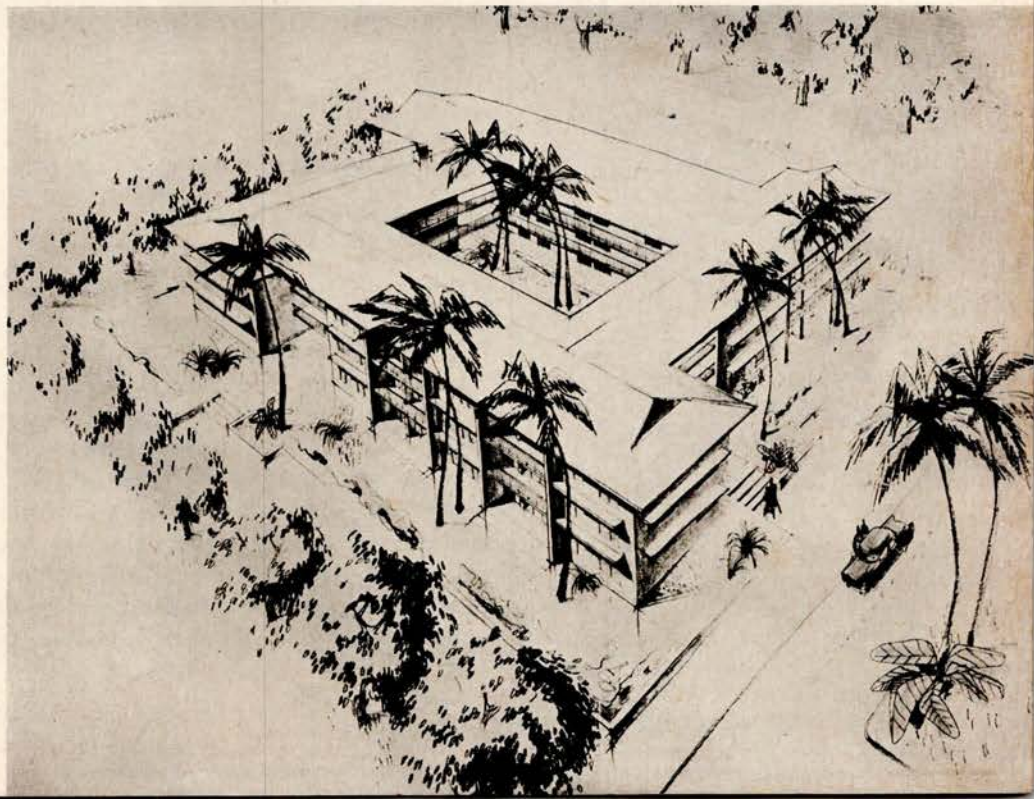


U. S. Embassy Office Building
and Residence
Tegucigalpa, Honduras

Michael M. Hare, Architect

Office building and residence in this instance are on two different sites, the office building in the city, the residence on a high site some miles away. Both buildings are similar in design, and employ such native features as small wall openings, high ceilings, patios and verandas, using materials and construction typical of the country. Structurally both two-story buildings will be wall bearing with reinforced concrete floor and roof slabs. No air conditioning will be used, as the climate is "ideal."

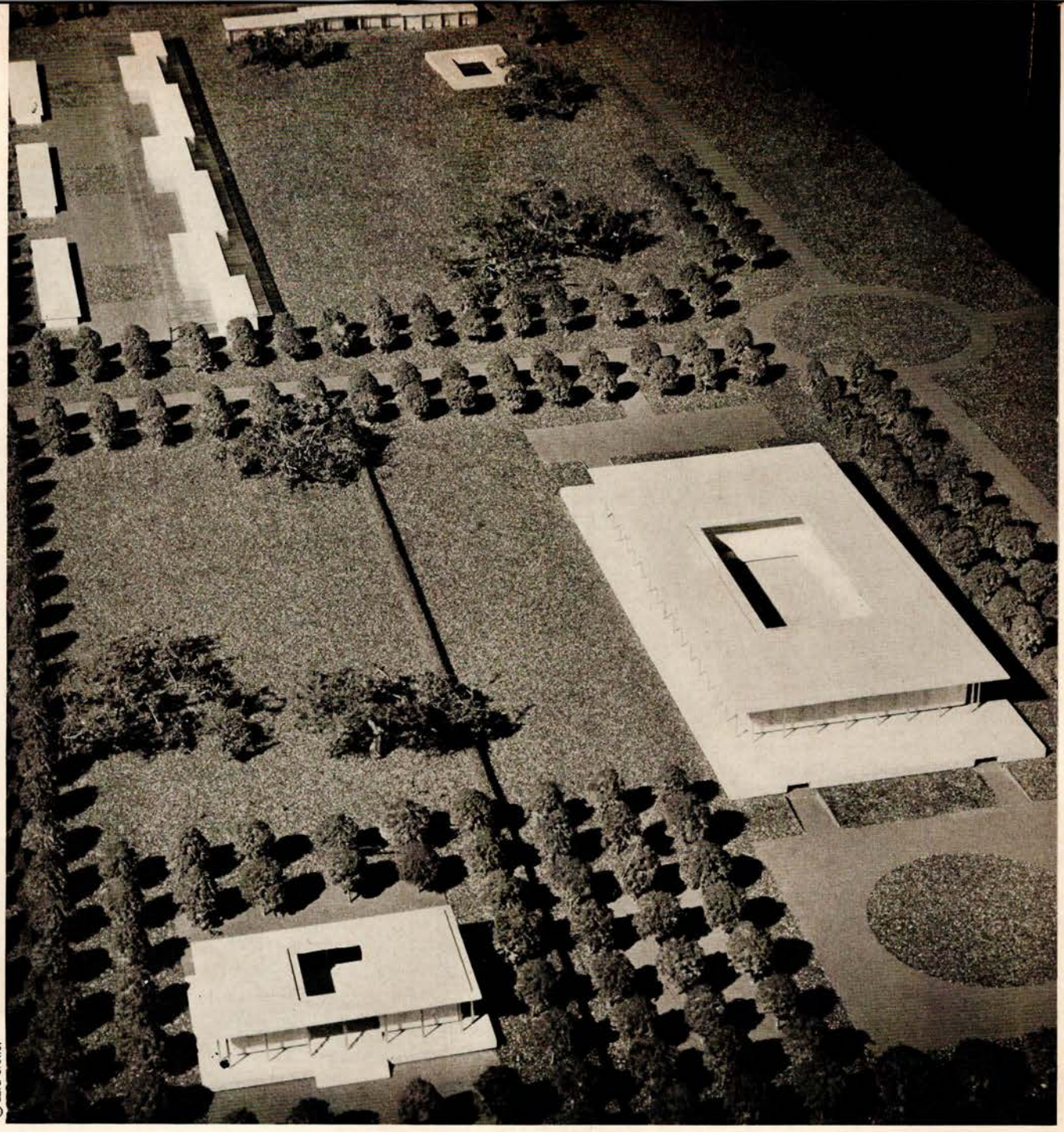




U. S. Embassy Staff Apartments
Manila, P. I.

Gardner A. Dailey, Architect

This apartment house, containing 30 units of from one to three bedrooms, is in effect four buildings around a planted court, joined together by interior corridor-balconies and a common roof. The open plan takes advantage of the prevailing breeze from Manila Bay. This will be the first of three proposed buildings on 23 acres.



© Ezra Stoller

U. S. Embassy Office Building and Staff Quarters, New Delhi, India
Edward D. Stone, Architect

To achieve a formal expression of both character and dignity, the general design of the office building resembles the traditional Greek or Indian temple. The two-story building encloses an open aquatic garden, which is to be covered by aluminum stripping suspended on cables. All offices are one bay in depth and all corridors become open balconies fronting on the central garden. The design employs the surrounding podium of the Indian temples in that locale. Exterior of the office building is of ornamental perforated tile, marble and concrete, with concrete frame. Space for a future residence for the ambassador has been provided adjacent to the office building. Buildings in the background are apartments for the staff, and quarters for servants. Central air conditioning will be provided for the office building; individual units for the staff quarters.



U. S. Consulate General
Office Building
Lagos, Nigeria

Weed-Russell-Johnson
Associates, Architects

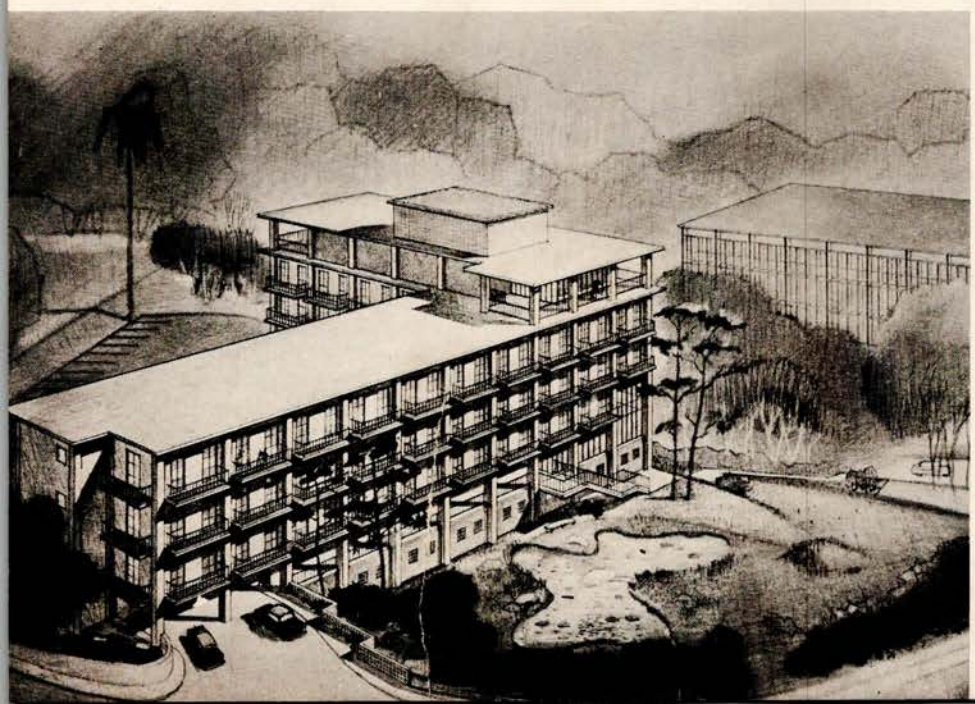
Designed for an enervating climate, the building exhibits a variety of sun control devices and venting ideas. Here the patio is designed as an entrance element, especially to serve the information center, which attracts many visitors. The library will be featured on the street side in window displays. Local stone will be used for facing.



U. S. Consulate General
Office Building
and Staff Quarters
Dakar, French West Africa

Moore and Hutchins, Architects
Georges Pellisier, Assoc. Archt.

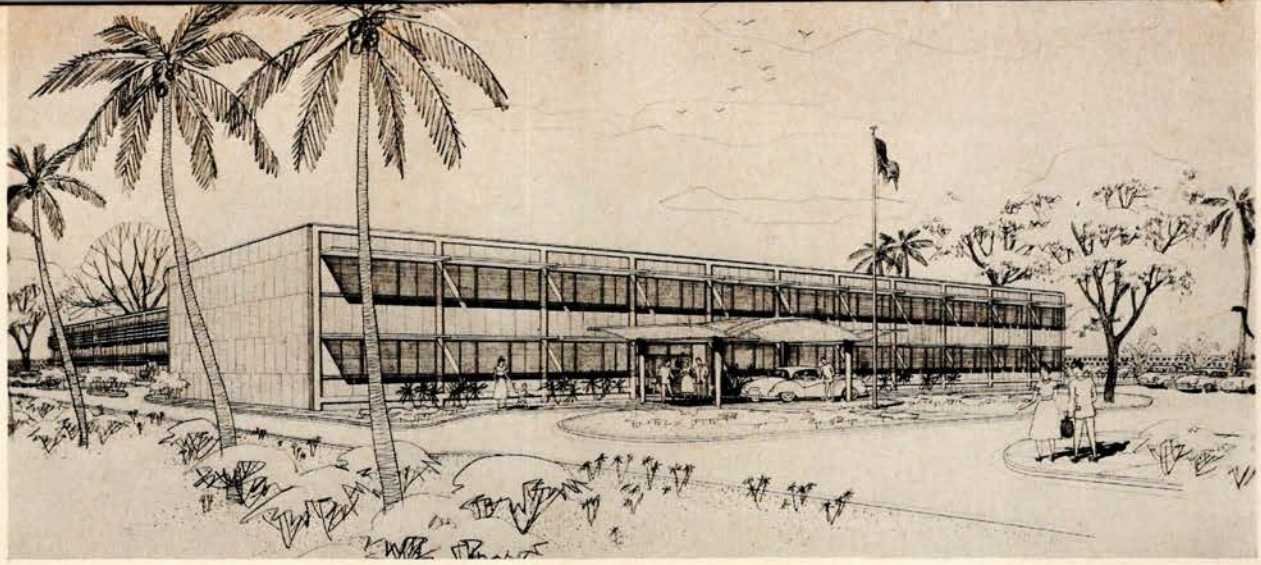
So far as local codes permitted, the three-story office building and the apartment building were oriented on the site to catch the prevailing breezes; all living units have through ventilation. Buildings have reinforced concrete frame: exterior facing is Italian travertine, marble and some tile. The design incorporates a great deal of glass, and glass jalousies behind the sunshades. Stainless steel was used for rails and trim, aluminum for windows and frames.



U. S. Consulate General
Hong Kong

Wurster, Bernardi and Emmons;
Feltham and Cumine; Architects

The office building is to be built on the side of a hill opposite the new Secretariat of the Hong Kong government in Victoria, and will overlook the harbor. It is of reinforced concrete construction with native granite facing. It has a fifth floor penthouse for the Consul General and his staff, can add complete fifth floor later.



U. S. Embassy Office Building
Djakarta, Indonesia

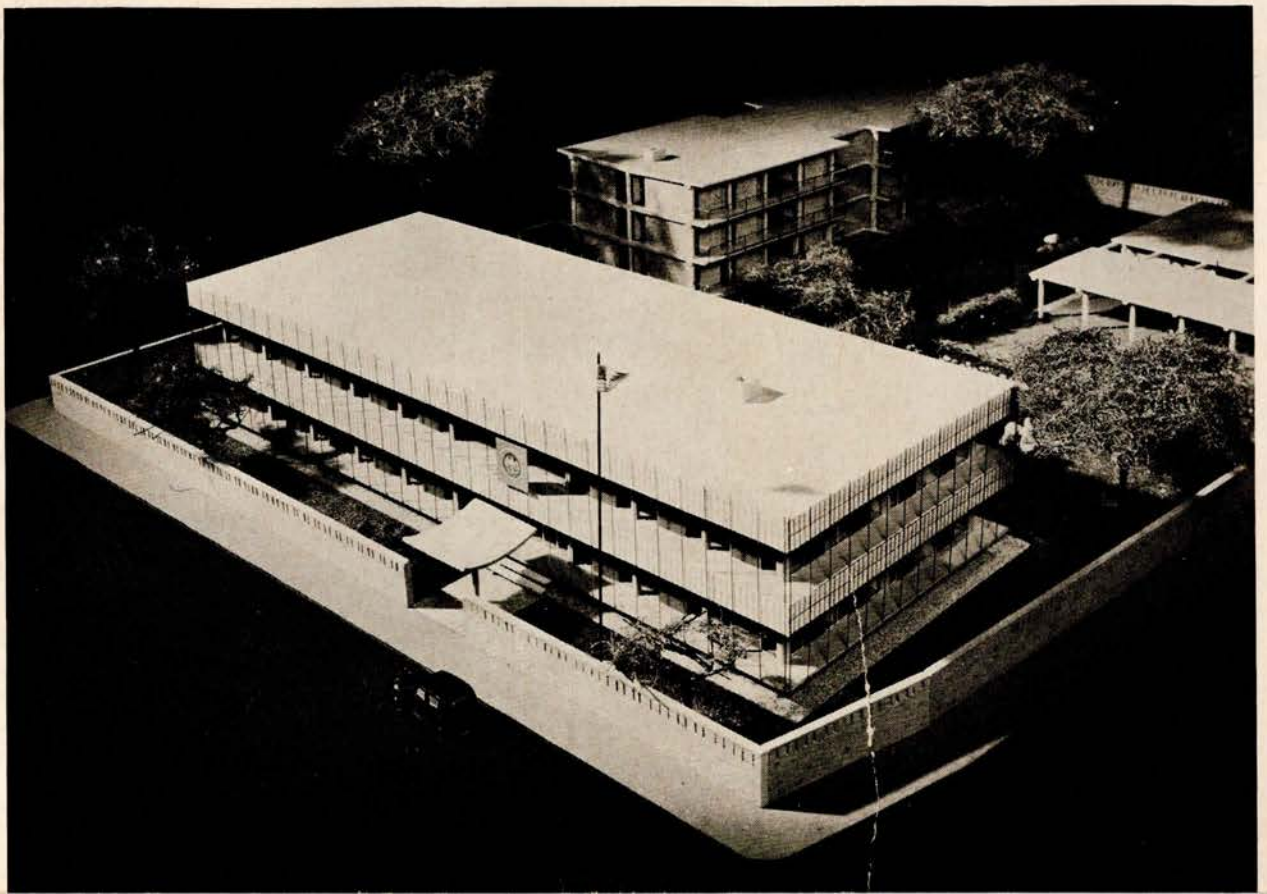
Raymond and Rado, Architects

The office building, of two stories, will have a reinforced concrete frame, faced with marble and stone and concrete overhangs. Underneath the sun shades there will be sun louvers of metal. Behind the office building there will be a service building housing generators, cooling towers and a garage. The service area will be separated from the office area by high open-type stone walls enclosing a garden court with reflecting pool and tropical planting.

U. S. Consulate
General Office Building
and Staff Quarters,
Kobe, Japan

Leinweber, Yamasaki & Hellmuth, Architects

This complex of office building apartment house and combined servants quarters and garage, will become an interesting addition to the search in Japan for contemporary methods combined with Japanese qualities in design. Office building will be reinforced concrete and glass, with fiber-glass sunshades to cut off direct rays of the sun but keep the light and views. In the apartments, living rooms will have sliding glass doors to balconies.



THE DILEMMA OF ARCHITECTURE

by John Ely Burchard

Dean of the School of Humanities and Social Studies, Massachusetts Institute of Technology

OF ALL THE ARTS, architecture stands in many ways in the most difficult position for it is the only one which must serve pragmatic as well as spiritual utility. There is never any architecture until there is a building. There have been a few times, and only a few, in the history of mankind when man has been able to afford purposeless buildings. Most of the time the very cost of a building has insisted that it could not be useless.

It is in this necessity that the dilemma of architecture arises. For a building which will not serve its user well is a bad building. But though it is necessary that the building serve well in a practical sense, this is not sufficient. There is another necessity, that of delight. There was a short time in the history of functional architecture when we all insisted that if the function were really well served the delight would follow as a matter of course. We know better now and we probably always did know better. A building which works well but is without delight is quite as much a failure as a building which is visually pleasurable but works abominably.

Thus every architect must be partly a Mary and partly a Martha. In any one man one trait or the other is sure to dominate. Of late years we have tended to praise the Marthas the more and it is perhaps time that a little more praise be awarded the Marys. But a building which does not reveal something of both personalities will not be a great building. I shall shortly return to the question of purpose in buildings.

Besides purpose three other forces condition the resulting building or should do so.

Does it matter to a building whether it is on a hill or in the valley, whether the sun never shines or beats down incessantly, whether the leaves change with the seasons or are always green, whether the winds are capricious or prevail in one direction, whether the surrounding vegetation is tropical or temperate or arctic or non-existent? In early days there was no doubt as to the answer. The walls of Spain were thick and the windows small as firm defense against the sun; the roof of Egypt was flat so that the house-dweller might recline upon its top in the cool of the evening; the roof of North Germany was high-pitched to shed most of the snow so that it could support the burden of what remained; the house of New England huddled for warmth around its great central chimney and fireplaces; the high ceilings and the through hall of tide-water Virginia made it possible to brook the humid heat of a summer on the James. All these things had their esthetics of course but they probably arose from practical considerations. Now it is hard to disentangle the pragmatic from the sensuous.

This is one of the tricky questions to consider as we go along. For modern technology has made many of the original practical considerations no longer relevant. You can successfully build a flat roof on a house in the Donner Pass if you want to, you can keep a thin-walled house cool in Spain, you can dispense with the fireplace in New England, although there are few of us prone to adopt these suggestions. Thus it is now possible to build a California house in the East and an Eastern house in California and to make both of them work, technically at any rate.

But it is still not certain that this ought to be done because after all logic has died away we do sense that even the miracles of modern engineering have not abolished nature, and that the building should have some relevance to the nature which surrounds it. People may not always agree as to what is relevant. Some think that a prairie house should lie flat on the prairie, others think the prairie needs contrapuntal pinnacles; some think that the pinnacle should enlarge the mountain as at Mont-Saint-Michel, others that it is precisely the mountain building which must nestle into the slope. But despite these major contradictions there is something, perhaps atavistic, that insists that the site and the climate do have something to say about what architecture is appropriate. In this sense there can be no such thing as a universal or transportable style.

Let me give one example. The national capital of Australia, Canberra, is set on a rolling hilly terrain, now brown, now green; the eucalypts are ubiquitous. In most respects it reminds one of a fine California landscape; it bears not the slightest resemblance to the misty and broad mouth of the James River in Virginia. Yet the United States, building its embassy on one of the most prominent hilltops of the Australian capital, has erected not a California house but something resembling one from Colonial Williamsburg. It was a disastrous decision by our country to build such a building. It is equally disastrous that many Australians like it. You see this is not even a question of contemporary or old, but of commodity to a site. Contemporary architectural thinking is certainly aware of and even



1



2



3 Samuel Chamberlain

"The walls of Spain (1) were thick and the windows small as firm defense against the sun . . . the roof of North Germany (2) was high-pitched to shed most of the snow . . . the house of New England (3) huddled for warmth around its great central chimney and fireplaces; the high ceilings and the through hall of tide-water Virginia (4) made it possible to brook the humid heat . . ."

enamored of technology. Still it has sought again to understand the site rather than to force a universal solution.

Materials must obviously exercise a profound effect upon the building. Again historically the materials had to be indigenous. Sundried bricks were used in dry and treeless Mesopotamia; stone in Greece and Rome, where there were timbers to be sure but not good ones in profusion; wooden architecture arose in wooded places. It was not always the case that the local material was desirable for the local need. For example, though wood is everywhere in the tropical rain forest, it also deteriorates rapidly there. But the over-riding consideration was historically one of supply.

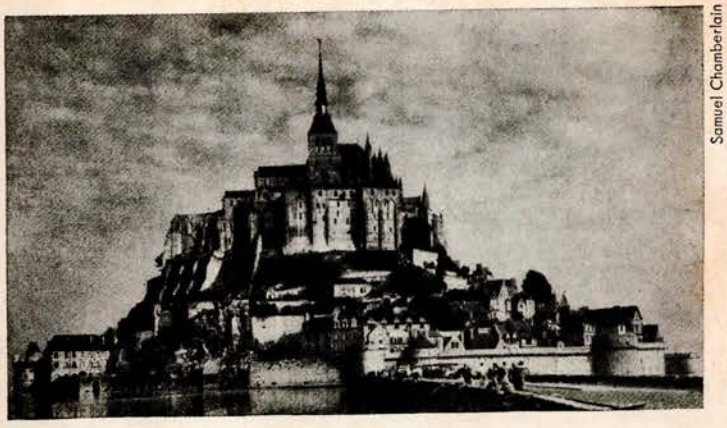
Think how few major building materials there really are; wood, brick and stone were the great three for thousands of years. Stone was burned to form plasters which when applied resumed the quality of stone. Bricks were burned in kilns instead of by the sun and thus other ceramics were developed but the tiles and terra cottas which emerged were used primarily for decoration or finish. Glass was used at first as a luxury and for esthetic purposes which culminated for a while in Sainte Chapelle in the thirteenth century and arose again in the greenhouse architecture of the Crystal Palace in 1851. Lead was used early enough for caulking joints and shedding rain. Copper and wrought or cast iron were used for decorative purposes or in minor functions as railings. But through all this time there were really only three basic materials — wood, brick and stone, with glass perhaps offering more suggestion than realization.

Then in the last hundred years we have added a few more, a kind of synthetic stone in the form of reinforced concrete which is more plastic than stone has been heretofore, steels which suggested hitherto impossible structural opportunities, most recently metals which can themselves be used as wall-facing materials. Thus today we have six materials of major importance where the long ages had but three, and I would not quibble if you said there were eight and not six today, since glass is almost certainly a material of enormous importance to the builder and it is possible, though not certain, that the future of plastics is not far away.

As the use of simple materials became more general, artists sought variety. Some variety, even great variety, is of course possible when transportation is available for there are enormous local differences in timbers, in clays, in stones, even in glass. But until very recently the artist architect was somewhat bound by economics to the use of what was available locally. Only the opulent client could import from afar and indeed the opulent client of the nineteenth century, abetted by the architect of that day, did often import less for the esthetic purpose than to demonstrate that he could import, again verifying Bevlen's theory of conspicuous waste. But for the most part local architects found outlets in modifying the materials, shaping them into forms, revealing unusual textures, or often and nobly yielding them to the ministrations of painters and sculptors. Even those architectures which we think of as the purest were not free of these ministrations. The Parthenon had sculptured friezes, and in polychrome moreover; the detail of the triglyphs, the metopes, the guttae, the column capitals and bases were not regarded as trivial. Yet some of these details were vestigial from wooden details and some were plainly fantasy. They were none the less beautiful for that.



4



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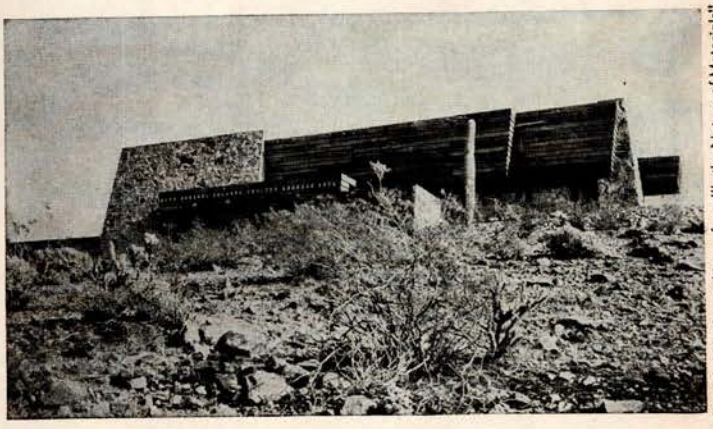
Samuel Chamberlain



6

Frank L. Wright, architect; from "In the Nature of Materials"

". . . some think that the pinnacle should enlarge the mountain as at Mont-Saint-Michel (5), others that it is precisely the mountain building which must nestle into the slope (6)."

Contemporary architecture is not seriously shackled by the limitations of economic transport. Very few buildings of any importance are now wholly constructed of indigenous materials. Almost the world supply of building materials is available throughout the United States at no very high premium for the use of the exotic. Moreover, the nature of modern American production is such that the architect may ship even unexotic materials or assemblies from long distances. The entire range of American resources provides his minimum palette, no matter where in America he lives and works. Thus technology in this matter as in the matter of climate and geography has freed the hand of the architect.

This freedom of course imposes a responsibility which has on the whole been well exercised. The effect of freedom of choice has been to diminish the desire to rework the materials, to increase the effort to let the materials stand for themselves and to seek effects by strong juxtapositions of unlikes, of wood and stone, of steel or concrete and glass. The fascination with the materials and with the framework, confronted by municipal fire laws, has even led at times to designs which purported to display simple materials and structures when they really did not. This is not honest but it is no more harmful, if the esthetic motivation is candidly admitted, than were the stone triglyphs and guttae, residues of wooden construction, on Greek temples; no more dishonest, but no less so, either.

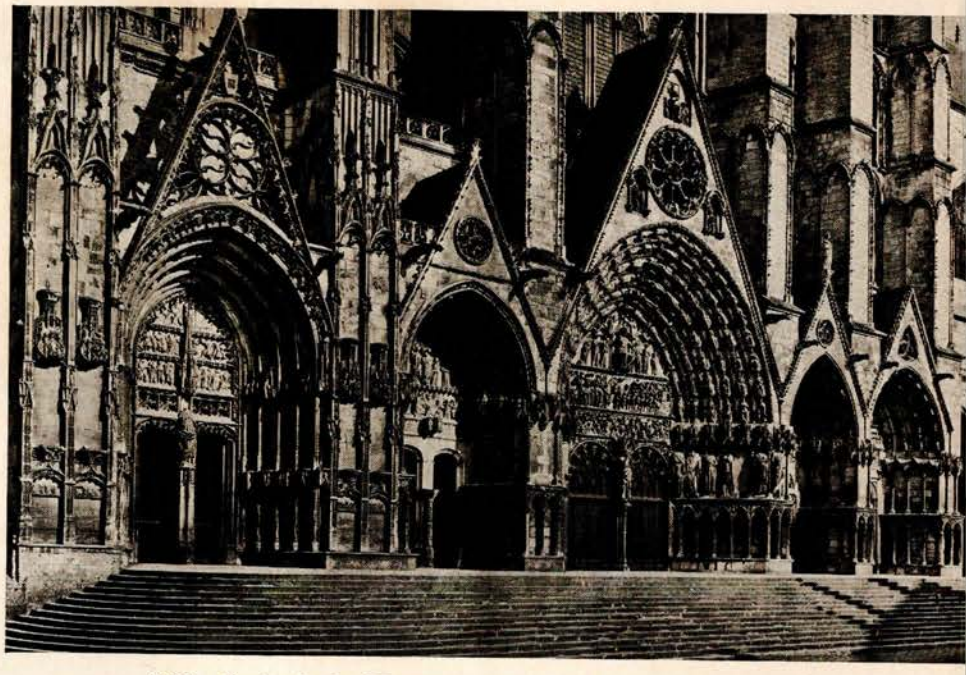
Besides the place and the materials, there is the question of the times. There is such a thing as a *Zeitgeist*. It is partly a matter of the technological life that is led and we must always remember that every new convenience brings a new inconvenience. When jets crowd the skies we will move faster from place to place but there will be fewer places over which the heavens will always be quiet. We have perhaps accepted the handicaps of technological progress as being too inevitable and we are likely to seek relief from their pressures by a synthetic ruralism almost in the manner of Rousseau. But we do live in the twentieth century and not the fifteenth or the twenty-fifth. And our century has its positions, not all technological. And these positions must be reckoned with in our buildings if they are to be successful. The people of the great periods often admired the work of an earlier period but this is quite a different thing from trying to turn back the clock.

The problem of the times as it affects architecture has been well summarized by Thomas Merton in *The Sign of Jonas*. This is what he says about church architecture:

> "The perfection of twelfth-century Cistercian architecture is not to be explained by saying that the Cistercians were looking for a new technique. I am not sure that they were looking for a new technique at all. They built good churches because they were looking for God. And they were looking for God in a way that was pure and integral enough to make everything they did and everything they touched give glory to God.
>
> "We cannot reproduce what they did because we approach the problem in a way that makes it impossible for us to find a solution. We ask ourselves a question that



" 'The perfection of twelfth-century Cistercian architecture. . . .' "



"The Cathedral of Bourges serves the Mass quite as well perhaps . . .

they never considered. How shall we build a beautiful monastery according to the style of some past age and according to the rules of a dead tradition? Thus we make the problem not only infinitely complicated but we make it, in fact, unsolvable. Because a dead style is dead. And the reason why it is dead is that the motives and the circumstances that once gave it life have ceased to exist. They have given place to a situation that demands another style. If we were intent upon loving God rather than getting a Gothic church out of a small budget we would soon put up something that would give glory to God and would be very simple and would also be in the tradition of our fathers. That is why the best-looking buildings around Gethsemani are the barns. Nobody stopped to plan a Gothic barn, and so they turned out all right. If they had built the gatehouse on the same principles as the hog house it would have been beautiful. Actually it is hideous.

"However, the twelfth-century Cistercians took good care to be architects. Saint Bernard sent Achard of Clairvaux out to study the village churches of Burgundy and see how they were built. And it is true that there was a clean kind of mysticism in the air of the age that made everything beautiful. One of the big problems for an architect in our time is that for a hundred and fifty years men have been building churches as if a church could not belong to our time. A church has to look as if it were left over from some other age. I think that such an assumption is based on an implicit confession of atheism — as if God did not belong to all ages and as if religion were really only a pleasant, necessary social formality, preserved from past times in order to give our society an air of respectability."[1]

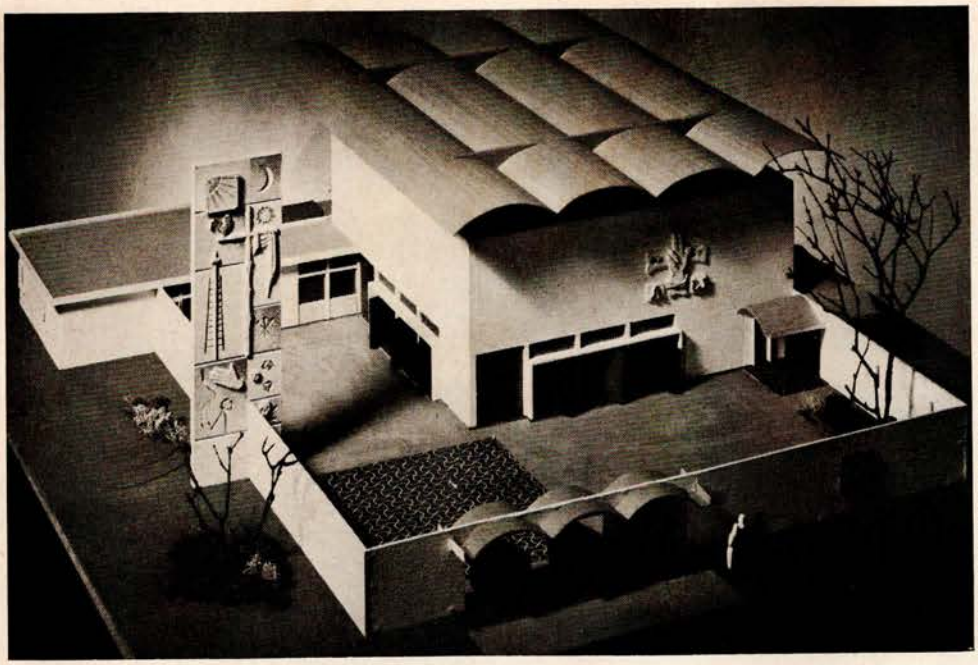
This seems obvious to many of us but unfortunately it is still far from universally clear.

Now if indigenous necessities have been diminished by technology and buildings are no longer limited by the local availability of materials and if they are to be buildings of their time, it might appear that something universal would develop in Western architecture. It was this sort of thing that people have had in mind in praising or castigating what was never really existent, the International Style. That is, it was existent only in the same sense that every other great style which has prevailed has had an international quality. Greek temples adorned hillsides far from the Aegean. Roman atria were built in misty England. The Gothic of France turned up later in Cologne and Milan. The Renaissance of Italy could be found in France and in Spain and in England. The work of the brothers Adam was imitated in climates very different from that of London — in India, South Africa, Australia, New Zealand.

The point to notice about this is that the great styles did spread from a center which was in some way at the moment the center of the cultural thrust in the broadest possible terms, in a military and an intellectual and a political and an economic as well as in an esthetic way. As the buildings were built in the outposts they were, to be sure, seldom as fine as those in the home land. If they were built by weak men they were shallow copies of what was being done better in the land of origin. If they were built by strong men they gradually took on their own characteristics. But they remained within a general tradition of purpose, of materials, and even of detail. Still only the unsophisticated could confuse an English Gothic with one of France, much less with one of Germany or Italy. And so it has always been. So it was with the International Style, if there was any such thing.

Not the least challenging of America's present ques-

[1] Thomas Merton, THE SIGN OF JONAS, Harcourt, Brace and Company, New York, 1953, pp. 86–88.



Church design by Weiner and Sert, architects

. . . . as the latest modern church in Brazil . . ."

tions is the wonder whether, standing as we now do at the heart of the economic, military, political and even to some extent the scholarly power of the West, we will decline the role which has traditionally gone with these others or else play it badly and let the esthetic mantle fall elsewhere. If the United States Congress were to have its way this might happen. What we build abroad ourselves may be controlled by the Congress but what we build here cannot be. And it is what we build here that will decide finally whether we furnish esthetic leadership. For it is better for a style to be transferred to another country by the builders of that country. Great thinker as he may be, the Swiss Le Corbusier will never think as a Hindu; brilliant designer as he is, the Finnish Aalto will never design as a Brazilian. So to use the term "International Style" as Mr. Philip Johnson seems to have done, to indicate a special domain of contemporary architecture which must not be invaded or polluted, is to act against all the evidence of history; but to use it as a term of reprobation as Elizabeth Gordon has done is to ignore the inevitable ripples which have always spread through the world whenever something important has been said anywhere.

Let me return now to the use of the building. As I have suggested, this use cannot be described in exclusively technical terms although this has been the pretense of some of our great contemporary architects. The plain fact is, of course, that very old buildings which we would not build now but which have survived are often very habitable. They are habitable even with archaic heating and lighting and plumbing systems and without big windows opening upon the landscape. The cathedral of Bourges serves the Mass quite as well perhaps as the latest modern church in Brazil or the Pyrenees.

But needs *are* partly functional and it was the crime of the eclectic architects of the nineteenth century that they forgot this altogether. If a sermon is the most important part of a religious service, as it is in some Protestant denominations, it is a crime to build a sanctuary which no matter how mystic offers nothing but reverberations to the preacher. And it is one of the great glories of the Roman Catholic Church that on the whole and with only modest wavering it has often chosen to build in the language of the current times. It is a crime to build a public library in the manner of the Farnese Palace if in so doing you make it impossible to find a book, to borrow it, or to read it. It was the kind of thoughtless excess that forced the revolution in architecture which began long ago but reached a crescendo in the early part of this century, the fruits of which are now blooming as the contemporary architecture of America.

When you are fighting a serious revolution you must be pure in your own attitudes. If iconography and details from the past are counter-revolutionary you must tear them down. If history may be cited against you, you must be opposed to history. If the proliferation of art on buildings is called for only by bad architects who use bad artists, then you may not use painting and sculpture to embellish your buildings. You seek first purity of line and principle; you overemphasize engineering and utility; you put washbasins nakedly in foyers; you adhere to purity knowing that to yield at all will corrode your entire effort.

And when you produce this clean-cut break, this antiseptic design, so different from anything any of your contemporaries are used to seeing, much less admiring, you need all the supporting arguments you can find. You sense the weakness in eclectic architecture to have


7


8


9


10

". . . the good work of peasants everywhere, the people who build beautiful houses in Tibet (8) and in the Swiss Alps (7), in Norway (10) and in the Congo (9), good works because they are honest . . ."

been twofold; one, esthetic incompetence, the other, functional failure. The argument on esthetic grounds is complex and hard for everyone to understand. But the argument on function is practical, it appeals to commonsense. So you start talking about form following function, and the house as a machine for living. Sometimes you even come to believe it altogether.

The fact is of course that you should believe it only in part. Modern buildings do sometimes work better than their predecessors. But not everything that goes into a modern building goes into it for practical reasons. Not every new chair, free form, or wall of glass is practical or sensible. Do not convince yourself that they ought to be. A much cited architectural writer, Vitruvius, said long ago that a great building must have firmness, commodity, and delight. The delight is not unimportant — and it will not always be rational. It is the great hope of contemporary architecture in its advance towards historical importance that it has finally become possible to do some things irrationally. It is of less hope that it still seems necessary to persuade some of the buyers of these ideas that they all rest on rational grounds.

What I am suggesting here is that the needs of a time are a combination of the rational and the irrational; some things must work physically; others are plainly symbolic or mystical; the mystique may be that of a medieval Last Judgment or of the modern hunger for an unimpeded space in the manner of Chirico. Great architecture will provide for these irrational needs and tastes while not making it too difficult to meet the rational physical requirements. Indeed, the main reason I believe that contemporary architecture has come of age is because it is recognizing this principle implicitly in the explanation of their work.

As a result of all this I hope you will agree with me that we are fortunate to live in a time when our architecture is so vital; that this architecture is not only strong and commodious but that it is often beautiful; that it is something to be happy about now while we live in it and to have some confidence in as our legacy to posterity. This confidence can be reinforced, I suggest, by the understanding that this architecture is not some strange and warped and incoherent diversion of the stream of our heritage but rather a continuation of the flow of that stream. It can compare favorably with the good work of peasants everywhere, the people who build beautiful houses in Tibet and in the Swiss Alps, in Norway and in the Congo, good works because they are honest and use simple materials simply. It can also compare favorably with the great times of Western architecture, with the times of Greece and Rome and Byzantium, with the Romanesque, the Gothic, the Renaissance, the Baroque, and the Georgian, — great times because they solved complex problems superbly, used structures boldly, exploited materials magnificently, met and expressed the challenges of their day. In examining the architecture of our times, and especially in examining the architecture that the next decades will present, it is wise to greet it with an affirmative effort to understand and believe; but if that is not possible, then at least one should say, as Hamlet did in the fifth act:

> **"If it be now, 'tis not to come; if it be not to come, it will be now; if it be not now, yet it will come: the readiness is all."**

4 STORES

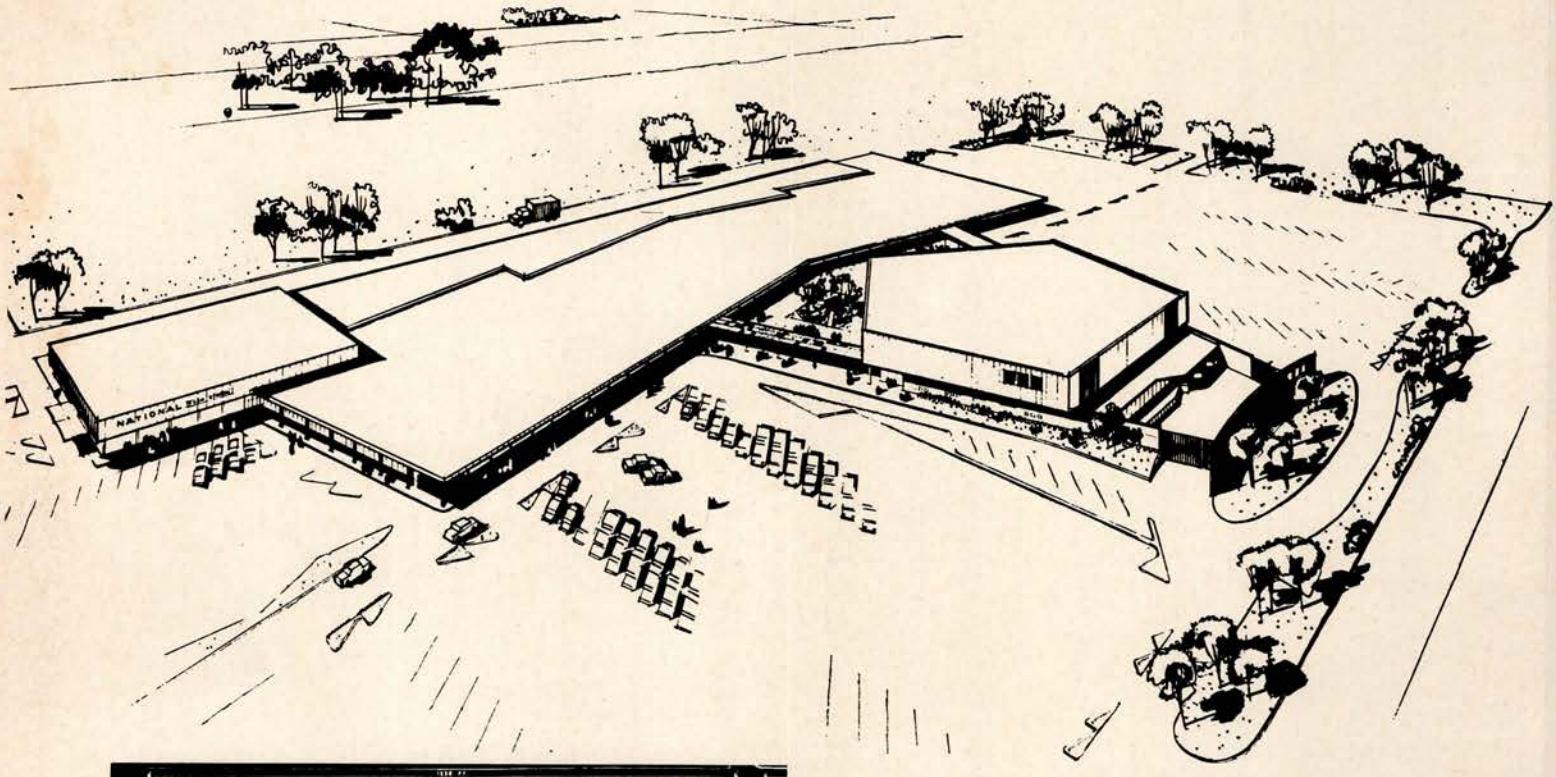


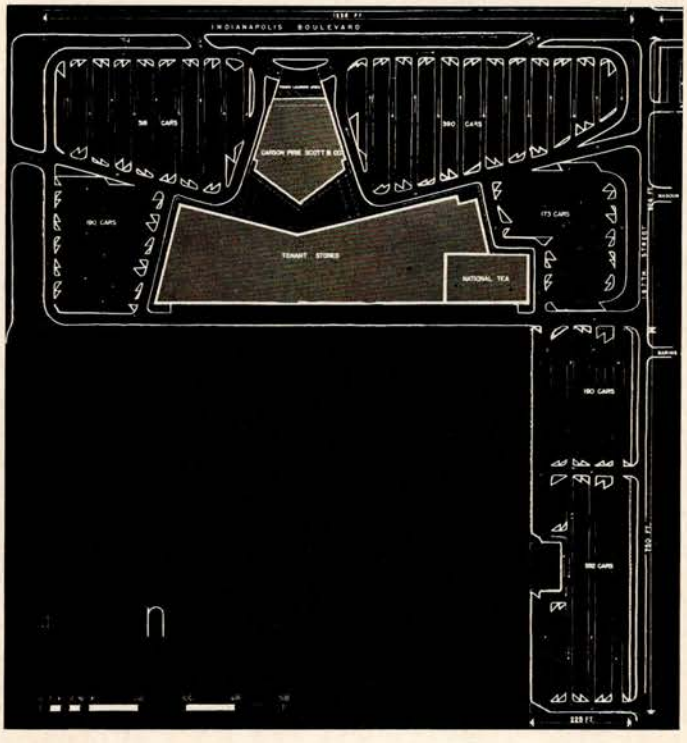
Carson Pirie & Scott Store; see following page

1 PENTAGON—ENTRANCE MALL—BENT STRIP

Store for Carson Pirie Scott & Co.
Woodmar Shopping Center, Hammond, Ind.

Landau and Perlman, Developers
Victor Gruen Associates, Architects
Karl Van Leuven, in charge
Sidney C. Finck, Associated Architect
George W. Barton Associates, Traffic Consultant
Inland Construction, Inc., Builders





THE PROBLEM was to place a department store, some 30 other stores, and parking for 1200 cars on a long, narrow, 18-acre site. The quite unusual result illustrates several sound planning ideas and holds considerable architectural interest.

The key to the scheme lies in pulling the department store forward to the highway and then turning it backwards with concealed front service and rear entrance. Its pentagonal form yields two glazed entrance and window-shopping walls facing a landscaped mall — this mall becoming the heart of the plan. The smaller store block faces the mall and the dual parking; is serviced from a rear drive; but this strip has been bent into a flat V for several very good reasons. The dihedral shape provides a more intimate relationship of all stores, shortens walking distances, and forces pedestrian traffic into the desired pattern, i.e., past the smaller stores and toward the department store. All stores are raised above the general street pattern for greater visibility from the highway.



Department store loading area is concealed by a curving screen of wooden louvers, above. The second floor volume is covered with white glazed brick; the first floor with red face brick

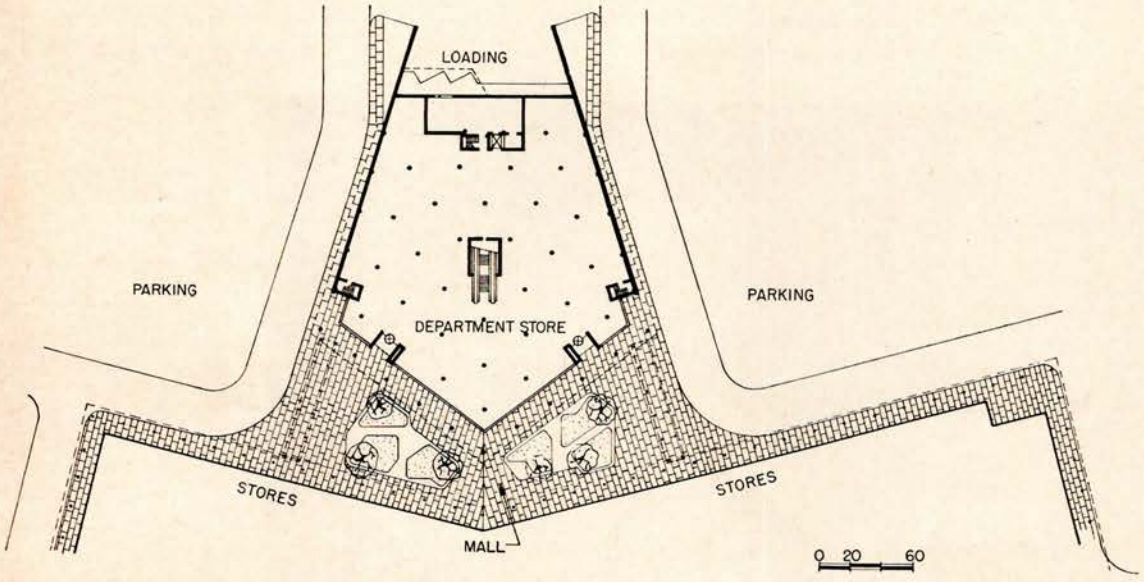


All photos (including p. 202) Hube Henry, Hedrich-Blessing

CARSON PIRIE SCOTT & CO., HAMMOND, IND.



Hube Henry, Hedrich-Blessing



The two sides of the pentagonal department store which face the landscaped mall at ground level are completely glazed, the surrounds being aluminum finished in matte black. At the two entrances adjacent the terminations of the two covered walkways, vertical piers are sheathed in white tile mosaic to add sparkle. All pedestrian walkways in the center are protected from the weather



2 BLOOMINGDALE'S NEW STAMFORD BRANCH

Bloomingdale Brothers
Stamford, Conn.

William T. Snaith, Architect for
Raymond Loewy Corp., Designers
The Austin Co., Engineers & Builders
Helen Wells, Store Designer for Bloomingdales



Gottscho-Schleisner

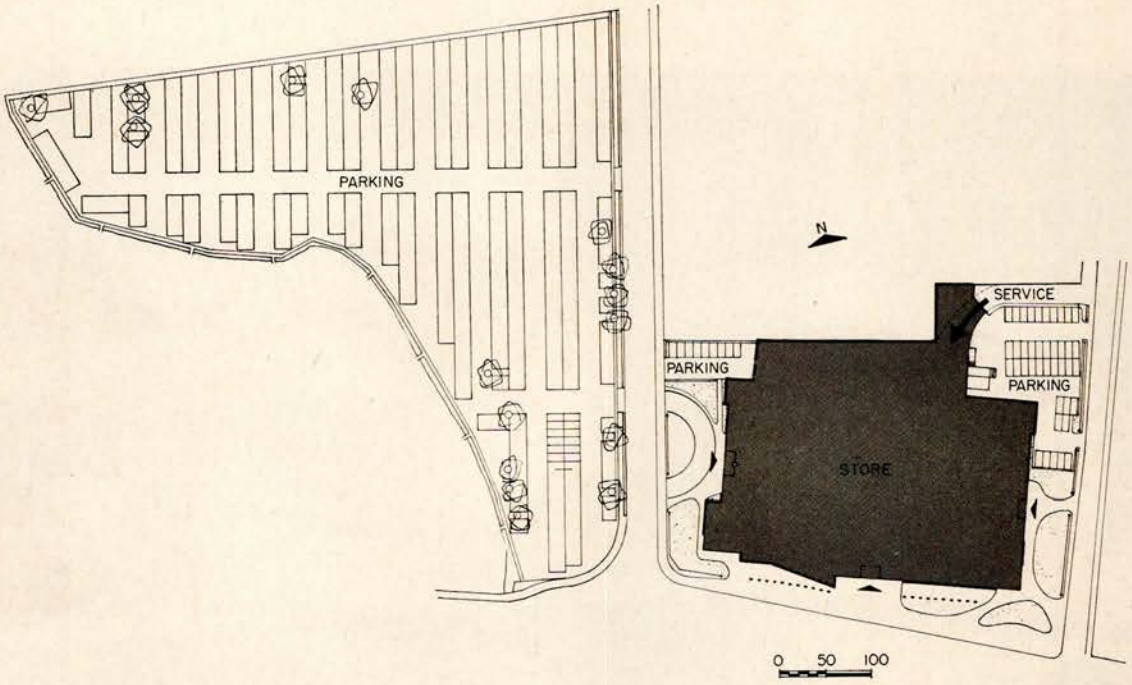
THE SITE for Bloomingdale's third and largest branch, located in a region of pseudo-Colonial houses and "country living," comprises about 85,000 sq ft and is bounded by three streets. Designing a modern department store for such an environment presented a challenge; for a stark, blank-wall and glass box was considered inappropriate — an essay in Colonial eclecticism insincere. This design tackles the problem by incorporating certain of the thinking from both directions; offers one kind of answer for an all too typical situation.

A natural six-foot differential in level was built up to make an incline to second floor level for delivery. Trucking takes place on this ramp, the beginning of which is at the extreme right in the picture above.

The lengthy façade extending 350 ft along Broad Street might have been, in strictly utilitarian terms, a monotonous strip of blank masonry and glass lacking both in proper scale and character for its surroundings. As executed, the design establishes a vertical-patterned mass of rock-faced salmon pink brick as a strong central element from which extend the two white painted brick wings.

The three entrances are sheltered by natural teakwood canopies. The cantilevered balcony at the principal corner (shown below and at near right) contains the Chanticleer Restaurant.

Materials, finishes, equipment: aluminum store fronts and entrance doors; terrazzo floored vestibules; sales floors of rubber tile or carpeting; ceilings of painted plaster or acoustic tile; interior spaces sprinklered and air conditioned; lighting is by a combination of incandescent and fluorescent fixtures.

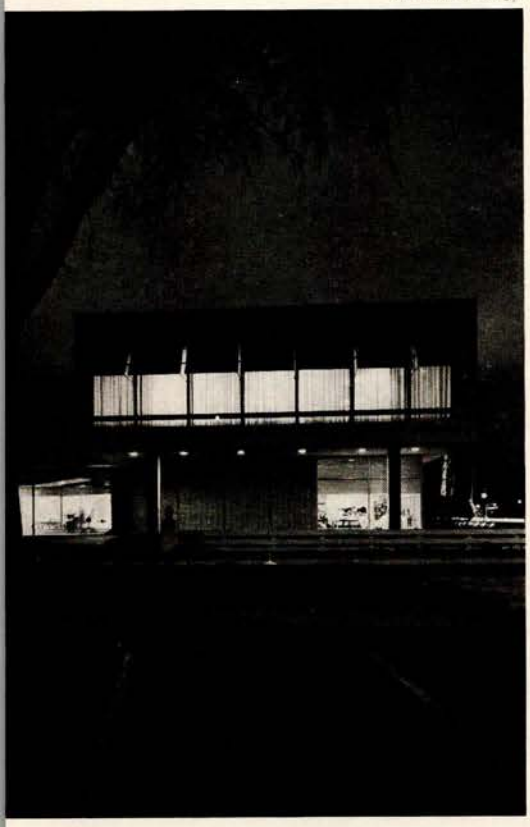


3 photos by Gottscho-Schleisner





Alexandre Georges



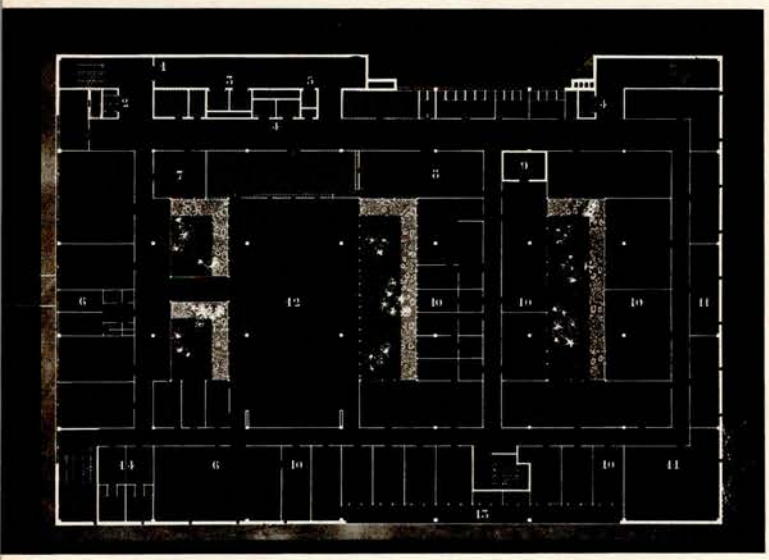


3 NETHERLANDS DEPARTMENT STORE REBUILDS

De Bijenkorf (The Beehive), Rotterdam

Marcel Breuer — A. Elzas, Architects

Daniel Schwartzman, Consultant



DISASTROUSLY FIRE-BOMBED by the Nazis in 1940 and serving its customers in makeshift quarters since then, the 85-year-old De Bijendorf department store plans to open its striking new building in the fall of 1956. The structure will face one of the entrances to Lijnbaan, Rotterdam's planned shopping plaza.

Its reinforced concrete slabs, of mushroom design, will require no joists; will be supported on columns spaced at 39 ft to provide maximum clear interior space. The gross area will be 387,000 sq ft.

The ground floor show-window strip — 262 ft total length — will be framed in Portuguese granite; while the closed upper floors — the first in Holland — will be faced with striated Italian travertine in a symbolic honeycomb pattern overlaid with widely spaced vertical lights. At one corner (nearest in the top rendering) an abstract sculpture by Naum Gabo will extend from show-window soffit to parapet.

In terms of the typical American department store, there will be several interesting features in the scheme. There will be a glass-enclosed automobile showroom (see plan and bottom rendering); a small cinema (recessed element, top rendering); offices and employes' facilities that open to roof gardens (4th floor plan).

FEET 0 10 20 30 40 50 60 70 80 90 100

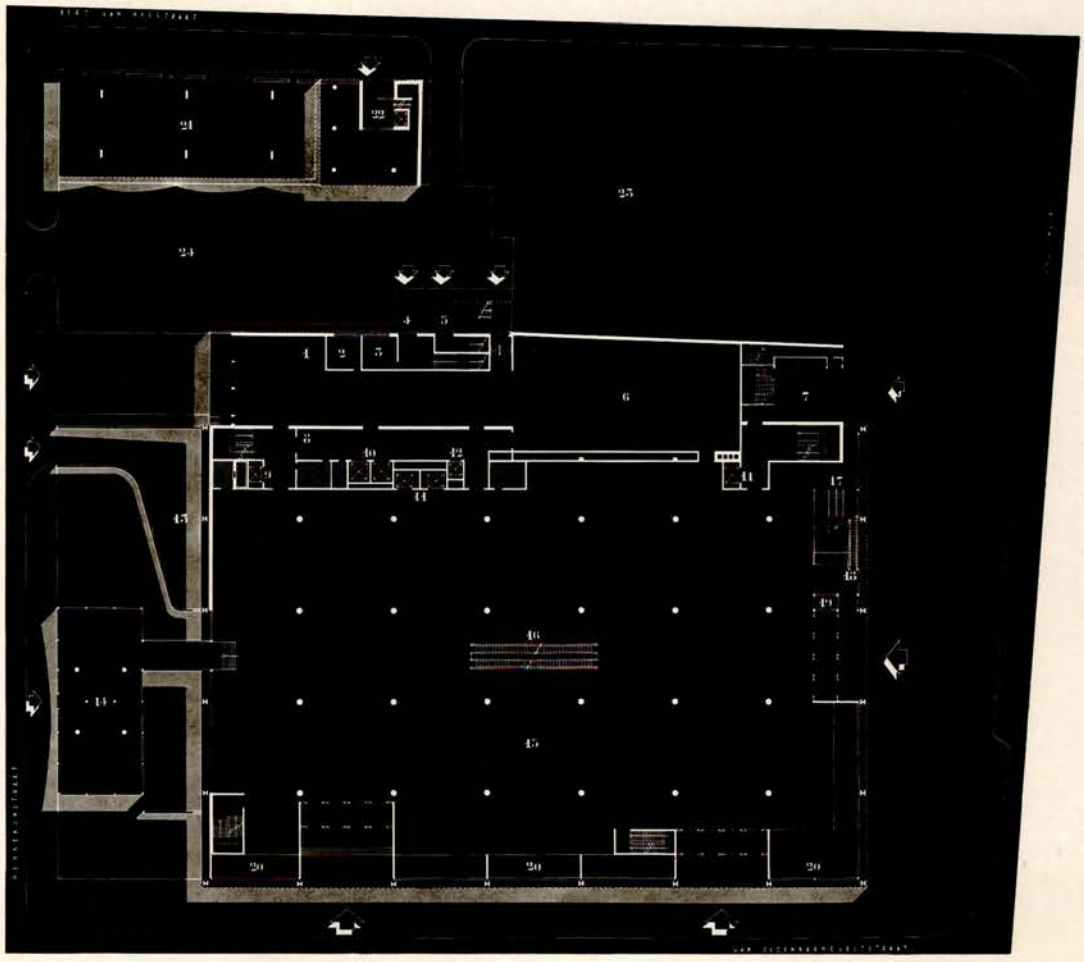
METRES 0 5 10 15 20 25 30

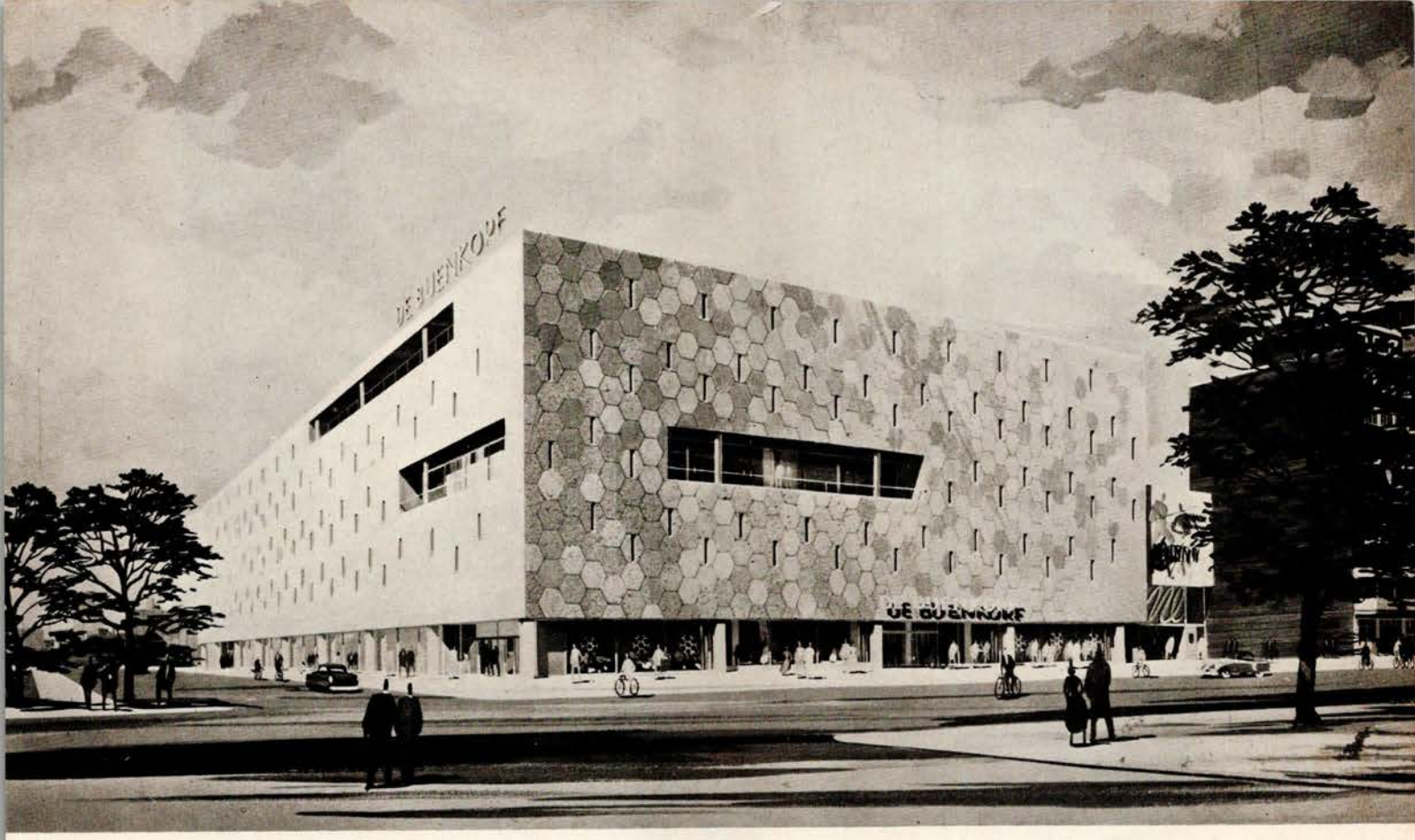
FOURTH FLOOR

1. Passage
2. Employes' Elevator
3. Freight Elevator
4. Public Elevator
5. Kitchen Elevator
6. Workshops
7. Rest Room
8. Executive Canteen
9. Vault
10. Offices
11. Storage Rooms
12. Personnel Canteen
13. Loggia
14. Lockers

GROUND FLOOR

1. Receiving Department
2. Office
3. Control
4. Employes' Entrance
5. Public Entrance
6. Accounting
7. Cinema
8. Employes' Passage
9. Employes' Elevator
10. Freight Elevator
11. Public Elevator
12. Kitchen Elevator
13. Basement Drive-in
14. Auto Show Room
15. Main Sales Area
16. Escalator
17. Basement Entrance
18. Basement Exit
19. Showcase
20. Displays
21. Bicycle Parking
22. Office Building Lobby
23. Hotel Atlanta
24. Auto Parking

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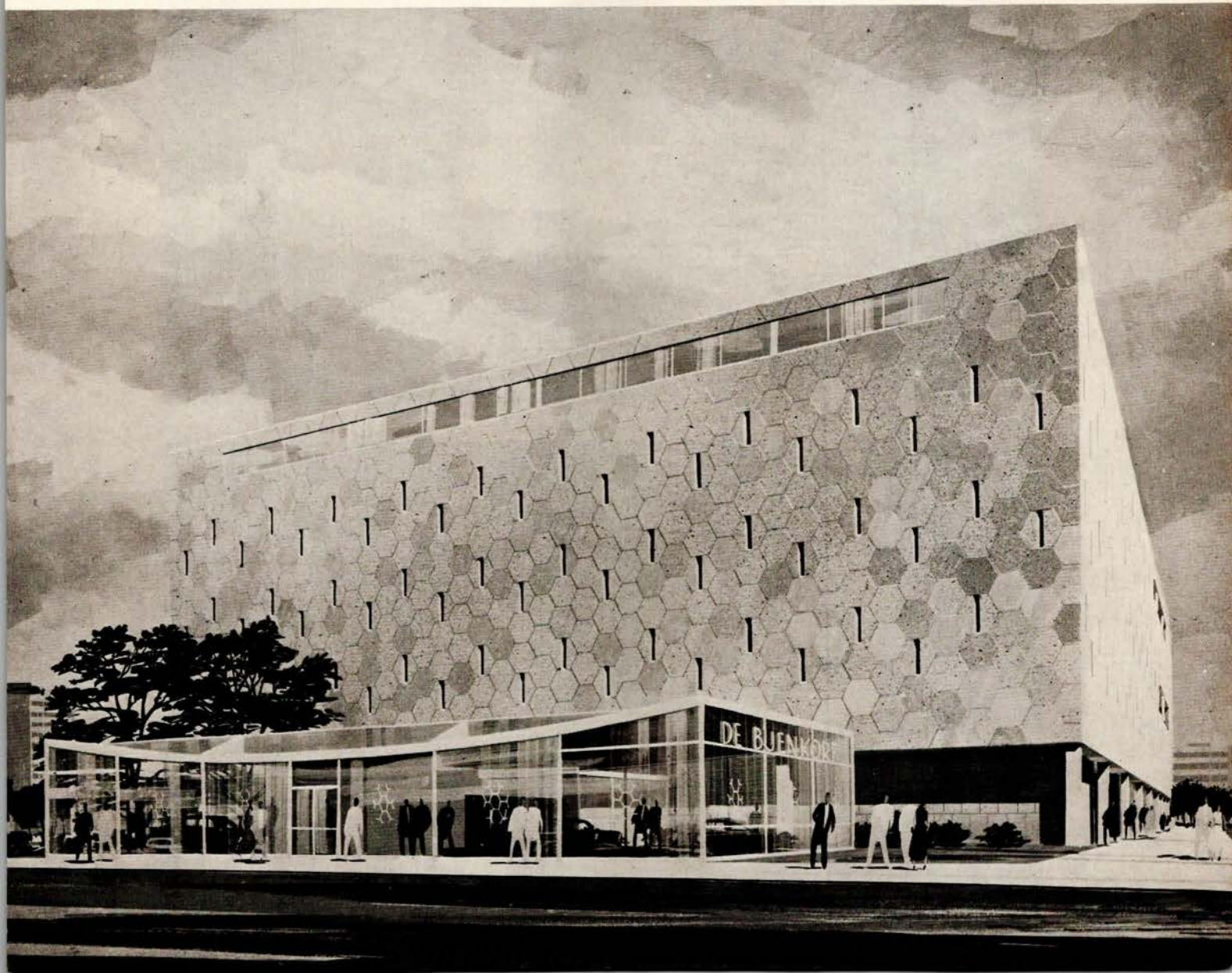
DE BIJENKORF


DE BIJENKORF



Ben Schnall





4 THREE-LEVEL PARKING AND RETAILING

The Hecht Co. Store
Baltimore, Md.

Abbott, Merkt & Co. and
Daniel Schwartzman, Architects

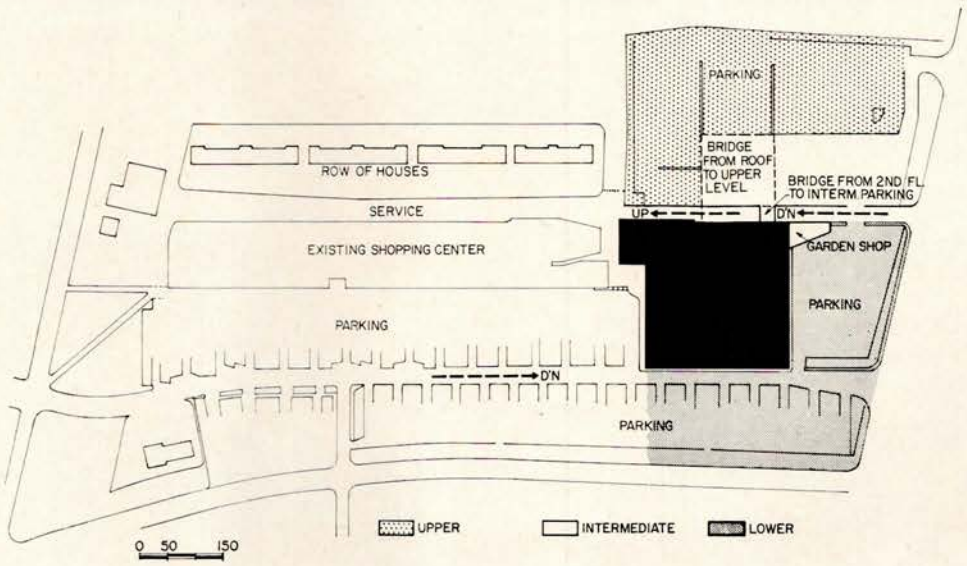
Consolidated Engineering Co., Contractors

BY TAKING ADVANTAGE of a natural slope it was possible in this suburban store design to arrange both parking and selling areas at three levels. A feature of the scheme is roof parking immediately adjacent the restaurant, which remains open for business during weekends when the store is closed.

The structure is located in a residential area densely built up in typical Baltimore fashion — this density relieved here by a nearby college campus and park. In an effort to achieve a suburban character, the design called for natural field stone and white painted brick for exterior finish, with turquoise color for the columns, awnings and lettering.

The gross area of the store is 155,000 sq ft, and its cost was $15 per sq ft, exclusive of site work.





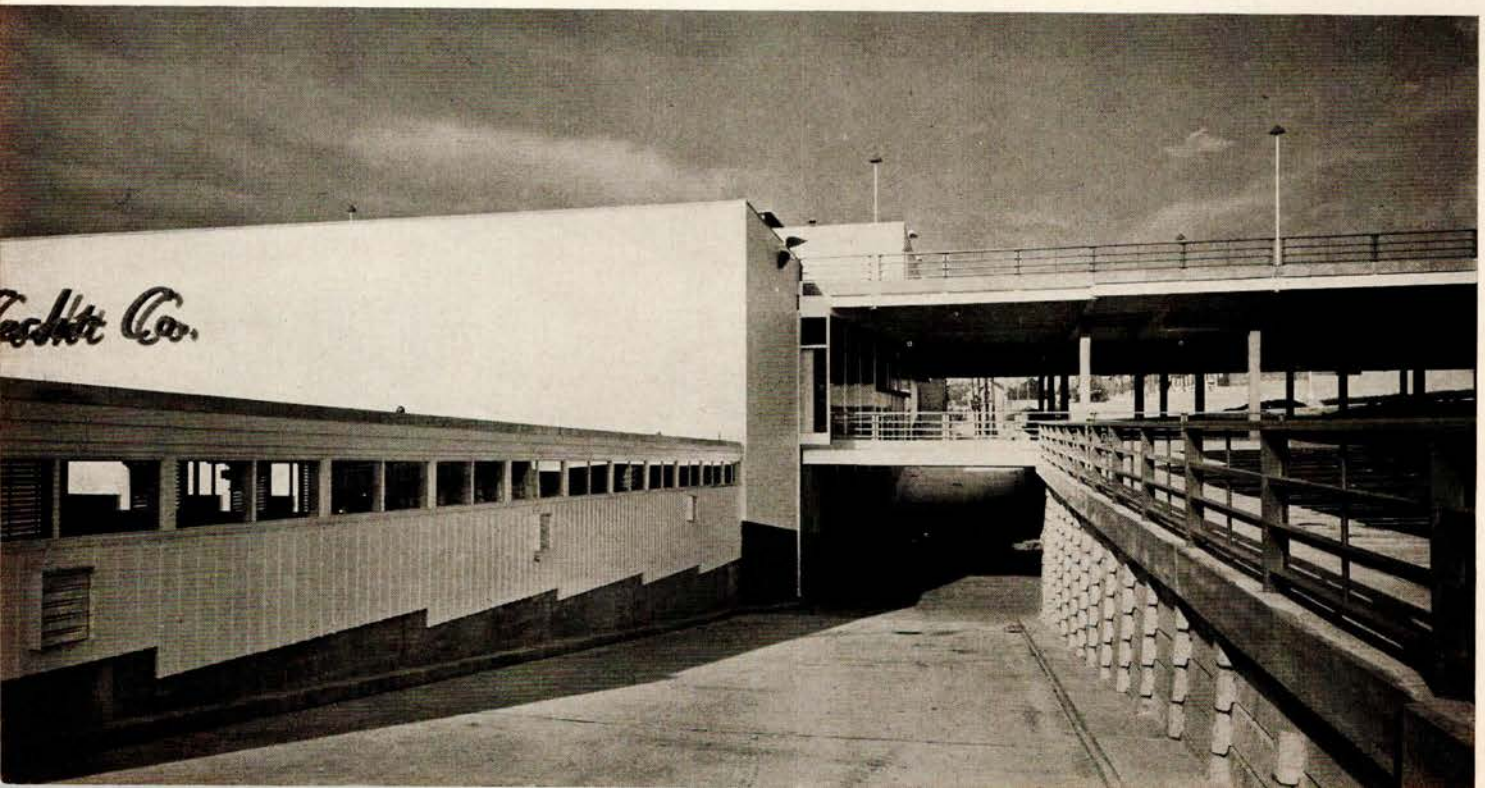
THE HECHT CO., BALTIMORE, MD.





Ben Schnall

Use of natural stone, white repeats, and light finish bronze on interior — as well as "look-through" windows — help establish the interior-exterior relationship of the scheme. In the lower photo can be seen the garden shop, a separate wing framed in wood and sheathed in vertical boards to recall the character of garden structures. Ramp leads to truck dock.





Bernard Rosenthal

Capri Theater, San Diego, Calif.

CONTEMPORARY ART IN A REMODELED THEATER

Faxon & Gruys, Architects

ONCE UPON A TIME the Mondrianesque movie theater whose façade appears at the right and on the following pages was a neo-Karnak palace. Even its name was *The Egyptian*. Now, its former impressive gloom replaced by light flooding through its glass wall (even the ticket-seller sits in a glass jewel-box), in its lobby is a gallery showing the best examples of contemporary painting and sculpture the owner can procure. Appropriately suspended from the lobby ceiling are bronze stars sculptured by Bernard Rosenthal. Its seats are new and ultra-comfortable. The movies it shows are of high quality; they are booked for runs of several weeks so busy people who really want to see them can plan ahead at leisure; and there is just one feature picture. The Capri's owner, Burton I. Jones, an experienced movie-house owner as well as a connoisseur, has found that this approach pays.



Julius Shulman



Julius Shulman



CAPRI THEATER

The old *Fox Egyptian*, whose portrait appears at the left, is hardly to be recognized in its suave new façade (above). True, this is just a remodeling job in which no great technical problems arose. Yet it does exactly what it should for the intelligent San Diego audience its owner wishes to attract, and it is successfully competing with numerous new drive-in theaters. Frank Gruys, its architect, obviously enjoyed himself while he was designing it. He is happy with the results, and so is the owner.

On its typical city street the Capri sends out a blaze of light after dark, and during the day its brilliantly colored lobby is wholly visible from the sidewalk. The traditional marquee has become an unobtrusive canopy. At the rear of the lobby is the gallery with special lighting for the continuing exhibition of contemporary painting, sculpture, etc.

Even the turnstile at the glass ticket booth is quietly worked into place; a simple sign announces the feature. Rosenthal's bronze stars dominate the lobby, both symbolizing light (and that American invention, the movie star) and casting a dramatic shadow that beckons to the shadow play within. While the stars were being hung the owner said to a hanger-on: "Most people don't realize that when they think of a five-pointed star they're thinking of an abstraction. This star is more like the real star you see in the heavens; it's more realistic. Your five-pointed star is really the abstraction." The kibitzer, we understand, was converted.



Julius Shulman





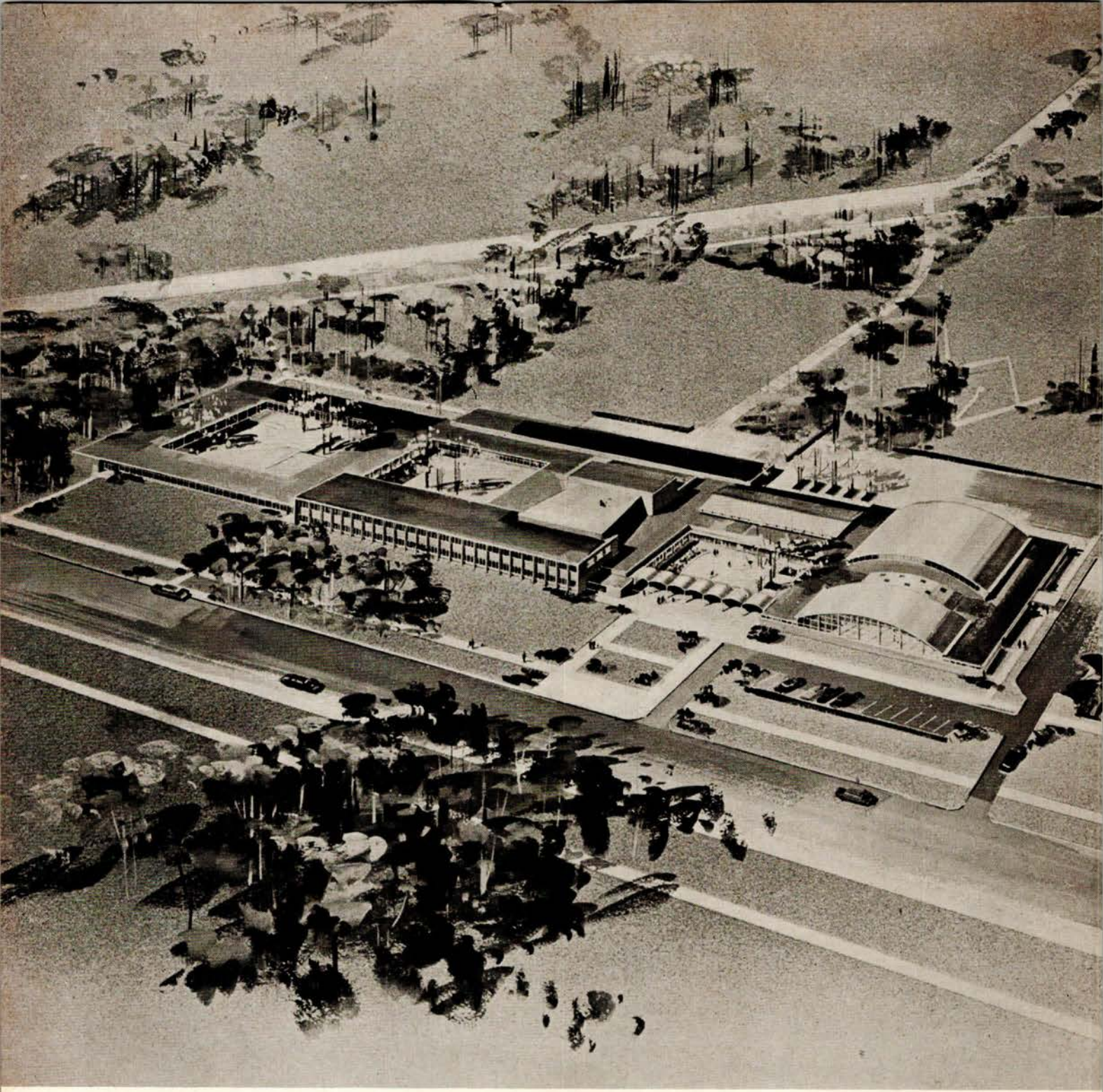
Julius Shulman





Lew Nichols

Primary and near-primary colors in the lobby are brilliant against clean white surfaces broken by black lines (photo above). At right, Bernard Rosenthal, sculptor of the lobby's bronze stars, at work. At far left, two photos show exhibit space leading to the auditorium, whose interior (center, left) was little changed except for installing comfortable seating and air conditioning, widening the screen, etc.



LARGE HIGH SCHOOL IS BOTH PRACTICAL

Edsel Ford High School, Dearborn, Michigan; Eberle M. Smith Associates, Architect-Engineers;



AND INSPIRING

A GOOD MANY YEARS AGO Henry Ford recreated, in five of the reconstructed historic buildings at Greenfield Village in Dearborn, the small, personal sort of school he had known as a child. One of the buildings is the Pennsylvania log cabin where William Holmes McGuffey, of *McGuffey Reader* fame, was born.

Today, less than a mile south of Greenfield Village, the city of Dearborn is building the great new Edsel Ford High School shown on these pages. At first glance this new secondary school plant is farther removed from the one-room school than the 1955 automobile is from the Model T. The contrast emphasizes how many more children we try to educate in these days than we did in the 19th century, how much more there is for them to be familiar with today, how much more money we spend per child and in toto on this job, how much educators have learned about the educative process itself and — not to be overly modest — how much architecture can enhance the process. So prominent a position does education occupy now in the public mind that we may sometimes forget that, for years prior to the end of World War II, one did not ordinarily regard it as a pressing problem unless one's own children were having difficulties.

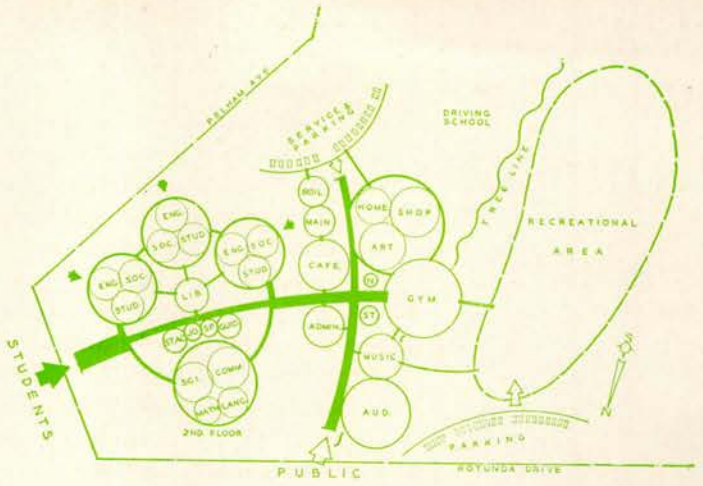
Fortunately most educators and a number of architects were meanwhile substantially occupied with the problems of evolving educational concepts and appropriate buildings to house them. True, most of the emphasis was placed on elementary schools, almost — it seems — without realization that the elementary school child would soon reach high school age, that the birth rate was zooming up, and that more youngsters were tending to stay in school more years. The secondary school now looms as a nation-wide problem of nearly the proportions the elementary school problem had attained only five years ago. Size, cost and nature of the secondary educational program are only three of the horns of this multi-pronged dilemma. Unit schools, campus plans, finger plans — all have been employed; too often, the high school building of the Twenties has merely been enlarged into a monstrous, inhuman monument. At times, too, each of these approaches to the design of a high school has been appropriate; no two school situations are alike and no two design concepts can be expected to be identical.

The Edsel Ford High School is an inspiring design of a nature both familiar and new. It retains the compactness and even the impressiveness of the pre-war high school, gaining thereby a unity of purpose and some qualities in which the community's children and adults alike can take pride — gains which some excellent contemporary high schools might be criticized for not having achieved. At the same time, much of Dearborn's new building is low, informal and, as the verbal cliché goes, "human in scale." Economy and appropriateness for this particular design worked hand-in-hand, however (as in good architecture they must), to cause some portions of the school plant to take on a second story and others almost to demand the application of highly imaginative structural techniques. Over the two gymnasiums and the swimming pool are thin-shell barrel vaults, concrete shells only 5 in. thick at the crown, spanning in one instance a room 130 by 110 ft. This type of construction, seldom attempted in this country, is here used for the first time in Michigan; these are the largest "short" barrel vaults in the United States.

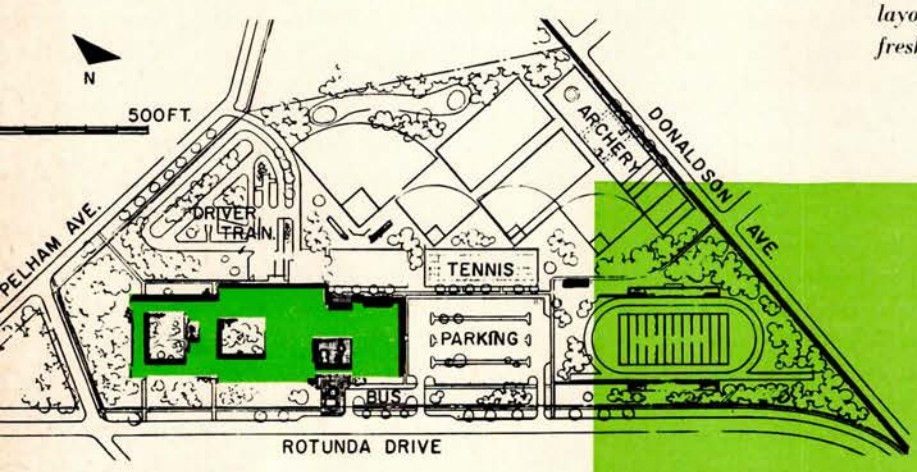
But the design is noteworthy for sounder reasons than bigness alone. Its plan is a positive reflection of the Dearborn school system's educational program. Learning is a process which, particularly in an industrial environment, needs to be made a pleasant, friendly, eagerly awaited experience to the student. On the other hand, economics dictated that this school must be planned for 1200 students, with the certain knowledge that, until more secondary facilities now envisioned could be built, at least 1800 would occupy it. The practical

Jonathan A. Taylor, Designer; Stewart S. Kissinger, Project Manager; Arthur T. Bersey, Mechanical Engineer

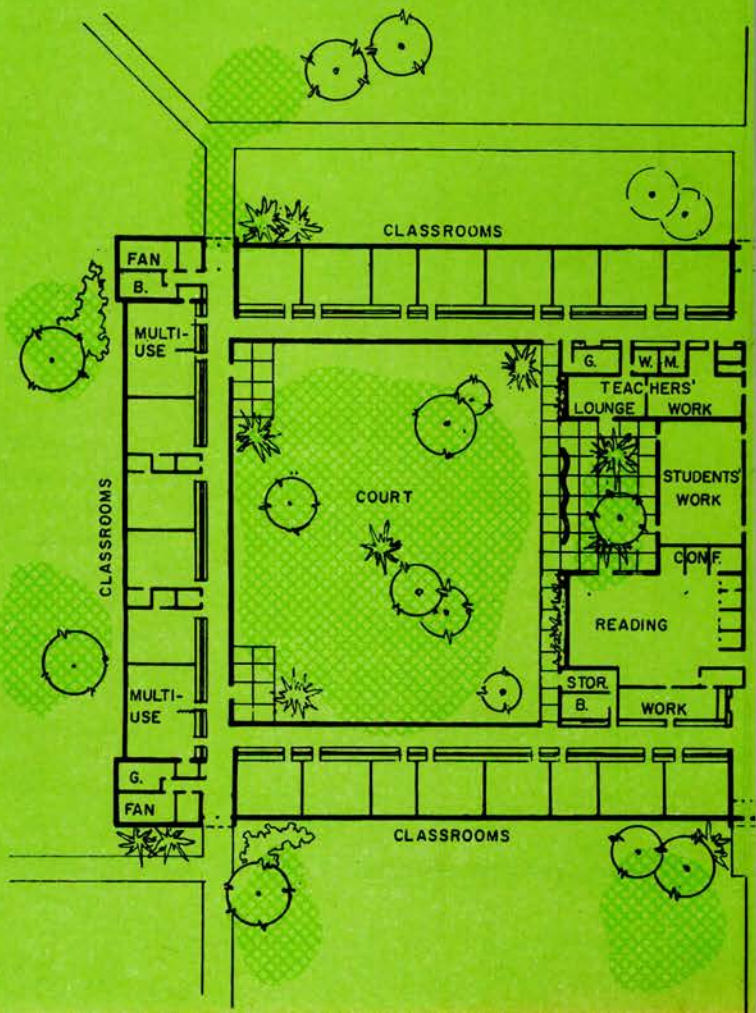
DEARBORN HIGH SCHOOL



Many studies preceded as well as accompanied actual designing. Above, in bubble-diagram form, is represented the organization of activities and areas as determined at one time. Site layout and building design developed from this, improving as fresh possibilities were realized

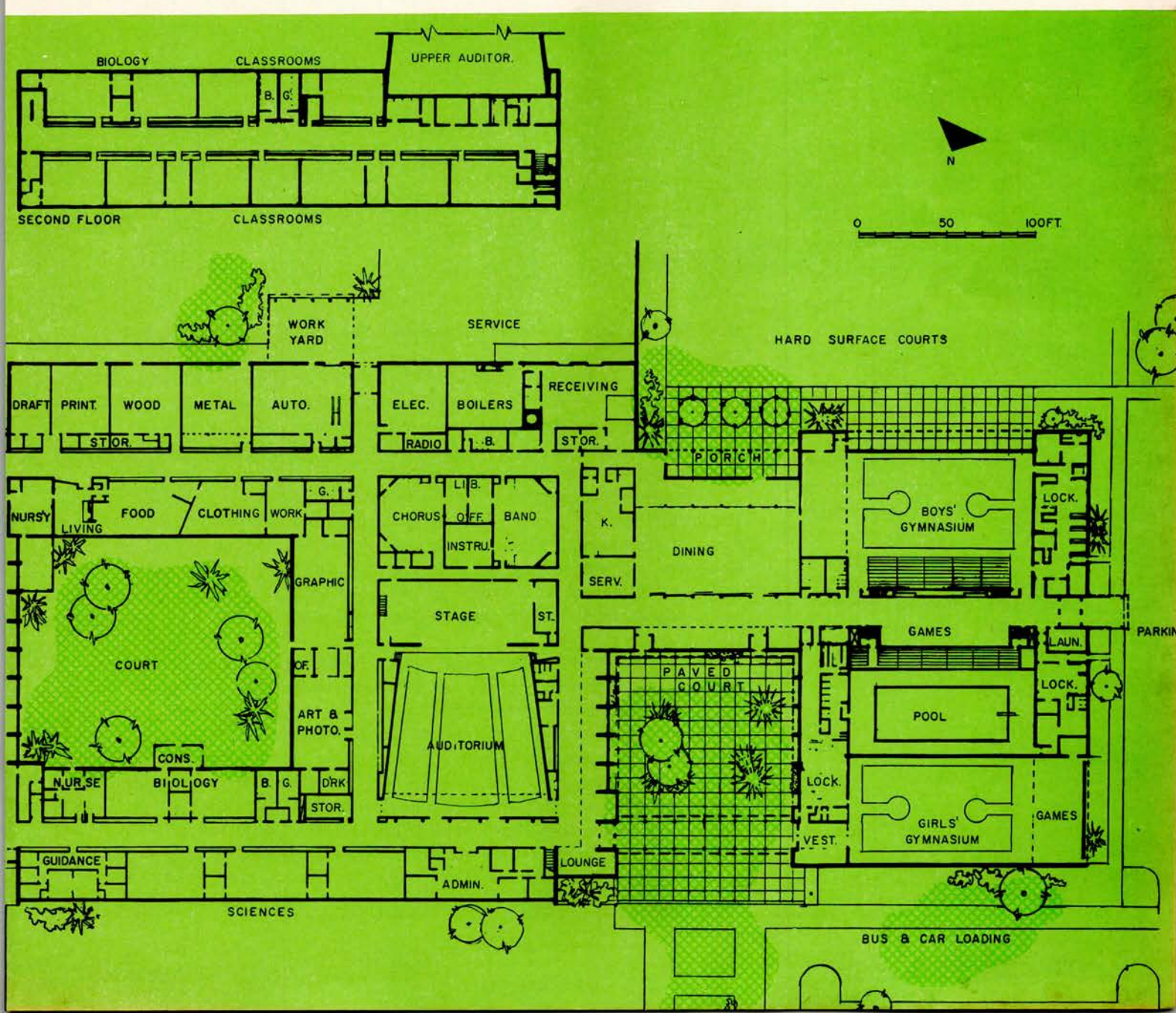


Of the fifty-acre site, twenty acres are heavily wooded, the remainder, mostly in the center, is open and was selected for games and sports fields. There was ample space for a one-story building scheme, although for certain portions two stories seemed best. The plan, right, was developed to accommodate the educational trend in Dearborn toward increasing emphasis on the "common learnings," and to provide a highly integrated activities program. Note the large student work center where coöperating classes may gather to use special equipment for projects. As this teaching technique expands, areas now labeled "multi-use" may become work centers



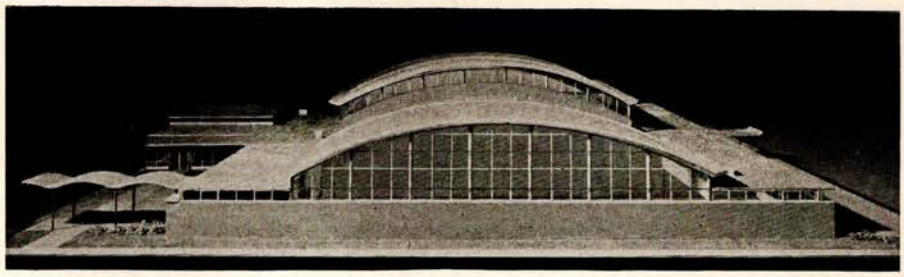
aspects of the problems size created were resolved by employing recognized architectural devices: movable, prefinished wood cabinets in a great variety of types, for instance, but all constructed to modular dimensions so they can be shifted and reorganized easily; demountable, acoustically retardant classroom partitions of steel, likewise easy to rearrange; free-standing steel corridor lockers; continuous perforated metal-pan ceilings, of "snap-on" type, in classroom areas, with radiant heating piping above and two inches of glass fiber over the piping for both thermal and acoustic purposes.

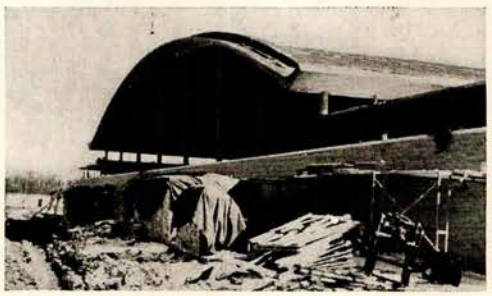
These meet the need for flexibility imposed by expected fluctuations in size of student body. A special, different kind of attention has been paid in design to the problem of making the student feel like a human being among other human beings. The entire building complex is planned around a series of courts, which sounds rather anticlimactic after the emphasis we have placed upon it. An examination of the plan indicates, on the contrary, its great importance. Here again both the imponderable and the practical helped to determine design decisions. To wrap the building units around a series of courts eliminates dead-end corridors, encourages two-way circulation and provides a focus for each group of related spaces. For economy, the "end-on" classroom, deeper than it is wide, was used; it could be since in one-story areas glass block



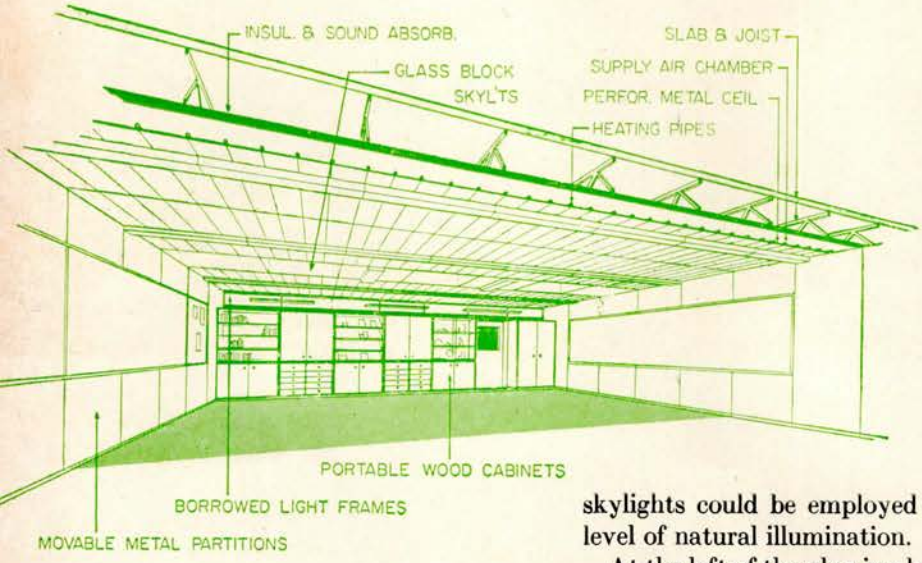
DEARBORN

HIGH SCHOOL









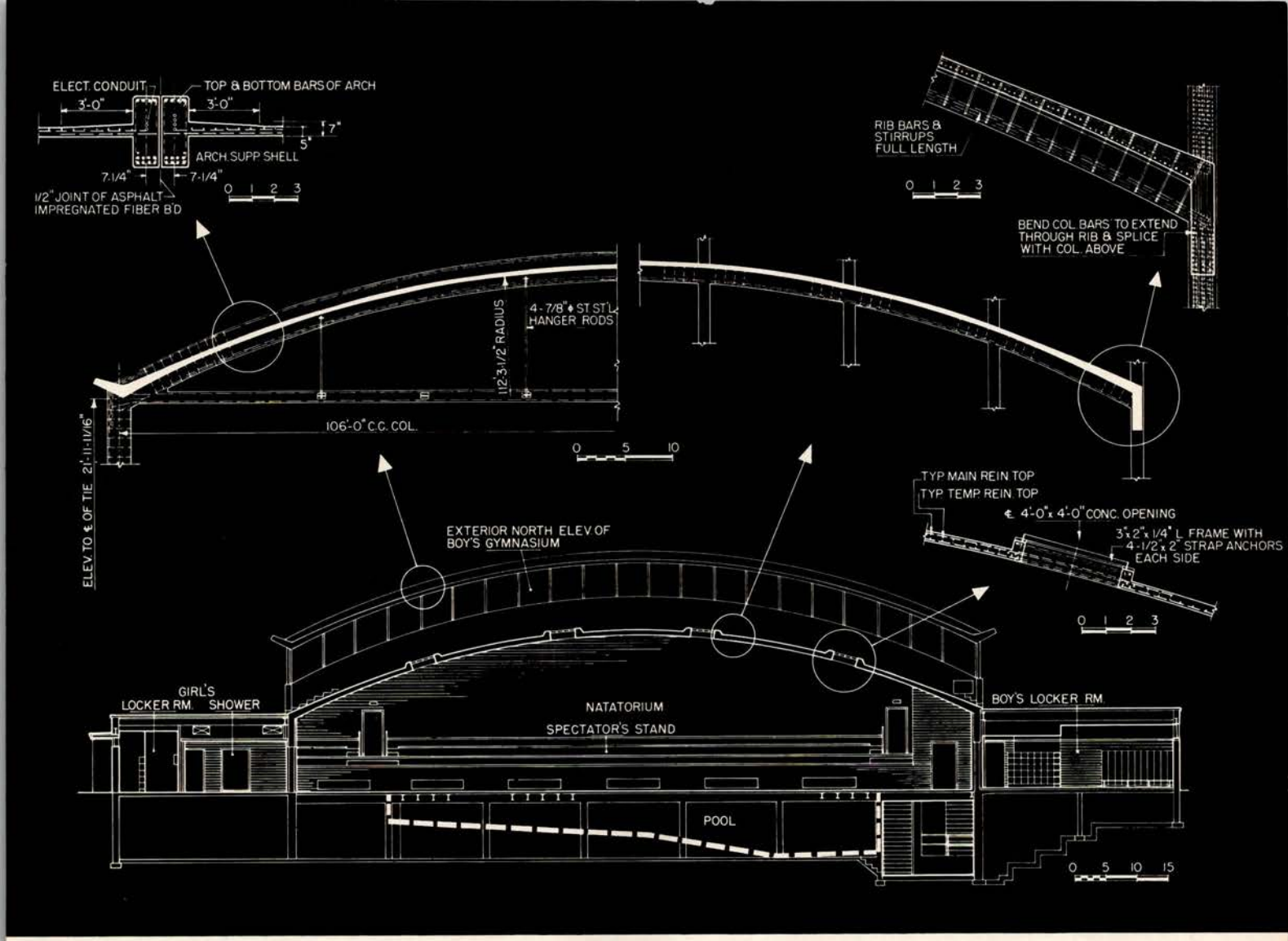
Classroom cabinets are of 4 basic types; there are 20 variations. All a modular dimension, 4 ft, they can be moved and interchanged; they are made of birch, prefinished in a furniture factory. Nearly 700 of these are required for the school, plus numerous special cabinets. Metal classroom partitions are movable, insulated to reduce noise transmission. Metal ceiling contains radiant coils, acoustic absorbent

skylights could be employed to maintain the desired 30-ft-candle minimum level of natural illumination.

At the left of the plan is what might be called the "quiet court," and around it are the more academic classrooms where noise elimination is necessary. Here, too, is the library with its seven adjacent conference, reference and phonograph-listening rooms, and an outdoor reading terrace. "The rooms surrounding the tree-shadowed quiet court," say the architects, "are by intention more cloistered than other portions of the school." In the center of the plan is the "project court," focus for the creative, active parts of the curriculum; grouped around this are classes which can take advantage of the outdoors such as: art, photography; biology, with greenhouse and horticultural beds; and in one corner a nursery school where girls in home-making courses may observe small children through one-way-vision glass, and at times assist in their care.

At the plan's right is the "social court," which not only provides access to parts of the school open to public use, but is also to function as a student forum. Its paved areas are relieved by planting beds; on one side is the student lounge and on another is a game area next to the dining room, for noon-hour recreation. In the dining room students will sit in groups of four to six, not at institutional boards; when the room is cleared of tables, 400 can be accommodated at a dance. The room's full-height sliding glass walls open to the student forum on one side and to a sheltered outdoor eating porch on the other.

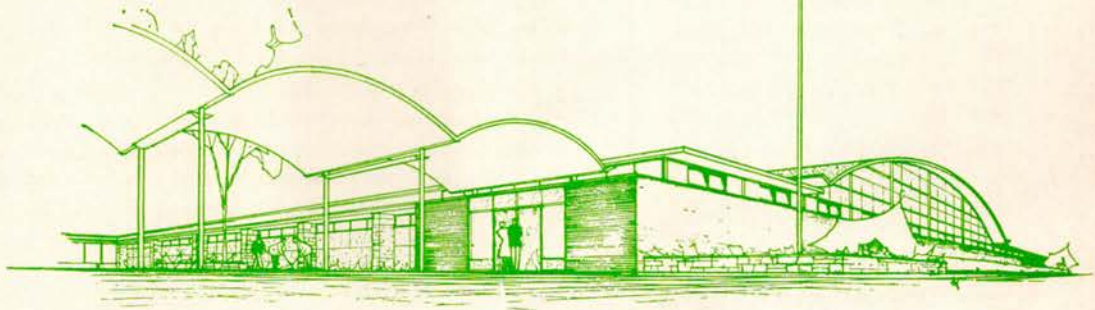
Between the "quiet" and "project" courts is a group of areas accessible to the entire school population, including the library, student work center, teachers' lounge and work center. The organization of spaces around the 900-



Because gymnasiums have clerestories on all 4 sides their thin shell roofs appear to float above the large rooms. Boys' gymnasium has a pair of shells in barrel-vault form with a double bowstring truss between. Gym ceilings are acoustic tile applied to the concrete. Swimming pool shell has special moisture-proof acoustic treatment of glass fiber behind perforated panels

seat auditorium is also convenient: band and chorus rooms are directly accessible for ease in handling musical ensembles; beneath the stage are dressing rooms; nearby are the art room and the clothing laboratory so stage sets and costuming can be executed close to their point of use. The five types of shops are toward the rear of the building for noise reduction and easy service; guidance rooms are adjacent to the health suite; the sciences are grouped for proper interrelation and to share offices and storage rooms.

In developing the 50-acre, partly wooded site, the 30-acre center portion has been laid out for nearly every sort of game with, perhaps, more than the usual emphasis on sports that can be carried on into adult life. These recreational facilities are available to the entire community. The expected cost of site development is about $350,000 including bleachers for 1500, temporary seating for 1000 more, and parking for 450 cars and 600 bicycles. This compares with the $70,000 cost of the modular classroom cabinets previously mentioned; or with the 15 per cent of the total building budget which cabinets, lockers, lab equipment, desks, seating and other furnishings are expected to cost. The "total building budget" is about $4,700,000, for 1800 pupils (maximum), in about 204,900 sq ft.



ECONOMICS OF WOOD HOUSE FRAMING

By William J. LeMessurier

Assistant Professor of Building Engineering and Construction, M.I.T., and partner in the consulting engineering firm, Goldberg and LeMessurier

MAJOR CONCLUSIONS FROM THE HHFA FRAMING STUDIES: 1. Most economical framing was studs and joists, 24 in. o.c., with a flat roof, followed closely by trusses, then rafters with joists. 2. Wide spacings for the primary framing, while decreasing its cost, does not necessarily yield a proportional decrease in the total structure — due to higher cost of finish materials. 3. The difference in cost between trussed framing and flat roof joist framing is so small that the final choice need not be based on economy. 4. Of clear span schemes incorporating trusses — trussed bents, three-hinged arches, and pitched roof trusses — only the last proved practical. 5. Among systems departing from conventional methods, post and beam generally gave the most economical designs. 6. The lack of stress grade lumber in 2 by 4's and smaller causes difficulties in the engineering of house structures. 7. A pitched roof can be built without ceiling joists or ridge girders.

Two aspects of HHFA's analysis have quite some significance: (1) the comprehensiveness of the cost data which makes possible accurate comparisons of costs for the wood framing of residences, and (2) the conclusion one must reach, as for the moment, that the principles of framing economy employed in large buildings do not necessarily apply to residences, and some of the structurally efficient designs cannot be built practically with types and sizes of materials now available. Some examples follow:

The stud wall, while it may seem to be an anachronism, is rather practical because of the convenient spacing for finishing materials — and in addition, it can be tipped up from flat on the floor to save construction time.

Economy in larger buildings is often attained with rigid frame members, but one type of rigid frame for a house, spanning 24 ft, 8 ft o.c., and comprised of three 2 by 12's for girders and 4- by 12-in. columns takes 216 bd ft of lumber; a similar structure designed as simple beams on posts takes only 200 bd ft.

Even the popular post and beam system, which harks back to the old mortise and tenon framing cannot be said to be structurally efficient as used today, but it gives flexible plans at fairly low costs, and has such auxiliary values as ease of installing large glass areas, increase in effective ceiling height and pleasing appearance of the ceiling.

It's not all dark, however, for efforts to achieve more efficient house framing systems: improved gluing techniques for site fabrication may furnish cheaper trusses; factory production of stressed skin panels may bring their cost down; honeycomb-core panels may work as load bearing walls; more accurate and fuller data on floor and roof loads will make possible more accurate design based on allowable deflection; tests by others have shown that bridging for floor joists is unnecessary most of the time; rafters sheathed with plywood transmit direct stress in rafters to the end walls, eliminating the need for ties.

How Analysis Was Done

In the course of its study the Small Homes Council surveyed the entire field of wood framing, selected 18 systems for detailed analysis, and then proceeded to determine material and labor costs by actually building sample units. The framing systems studied were chosen for their suitability for residential construction, their adaptability to usual methods of assembly and erection, and their representation of a variety of basic structural patterns. Nine of the systems which proved costly or impractical in the initial phases were eliminated before the final comparisons. Since it was essential that all units have equal structural strength for a valid comparison, the engineering analysis of design loads, materials, and framing methods is a particularly valuable portion of the paper.

All items making up the "shell" of the house were included in the cost comparisons. These items were roof, ceiling, wall, and floor framing; roofing, insulation, and vapor barriers; exterior sheathing; interior and exterior finish materials applied but not decorated; finish floors; and foundation, flashing, and rough grading.

Variables not considered in the comparisons were the cost of interior partitions, doors and windows, interior and exterior trim, plumbing, heating and wiring, and all painting and finishing.

The common denominator of the study was a 1000 sq ft, one-story basementless house. It was assumed without question that a rectangular plan with an unbroken roof line was fundamentally most economical. Circular plans, perhaps theoretically more efficient, were considered impractical to build with available materials. A 24-ft span was used as a basis for all cost data.

Cost data was developed with unusual care. Fully detailed plans were prepared for each structural system using consistent engineering criteria for all designs. Based on these drawings, units of one bay, generally 8 by 24 ft were then constructed to determine labor costs and erection characteristics.

After assembling time data and material quantities, costs for each system were developed based on prevailing wage and material rates in Urbana, Illinois, as of February, 1952. These costs were prorated to apply to a constant base of 100 sq ft of floor area. Although end walls were not actually built for all units, their effect was included in all cost figures. Overhangs of 18 to 24 in. were similarly considered. The cost comparisons do not, it should be noted, include allowance for a general contractor's overhead and profit.

As a subdivision of the cost compari-

A review and interpretation of a report on costs of house structural components, sponsored by the now-terminated Division of Research of the Housing and Home Finance Agency, which was headed by Joseph H. Orendorff. It was conducted at the University of Illinois Small Homes Council under the direction of James T. Lendrum, Director, and is now being published as Housing Research Paper 33, "*Material and Labor Analysis, House Framing Systems*"

sons, in addition to the major study of primary framing methods, separate evaluations were made of methods of sheathing, wall framing, floor framing, and foundation construction. These comparisons may be summarized as follows:

Roof Sheathing

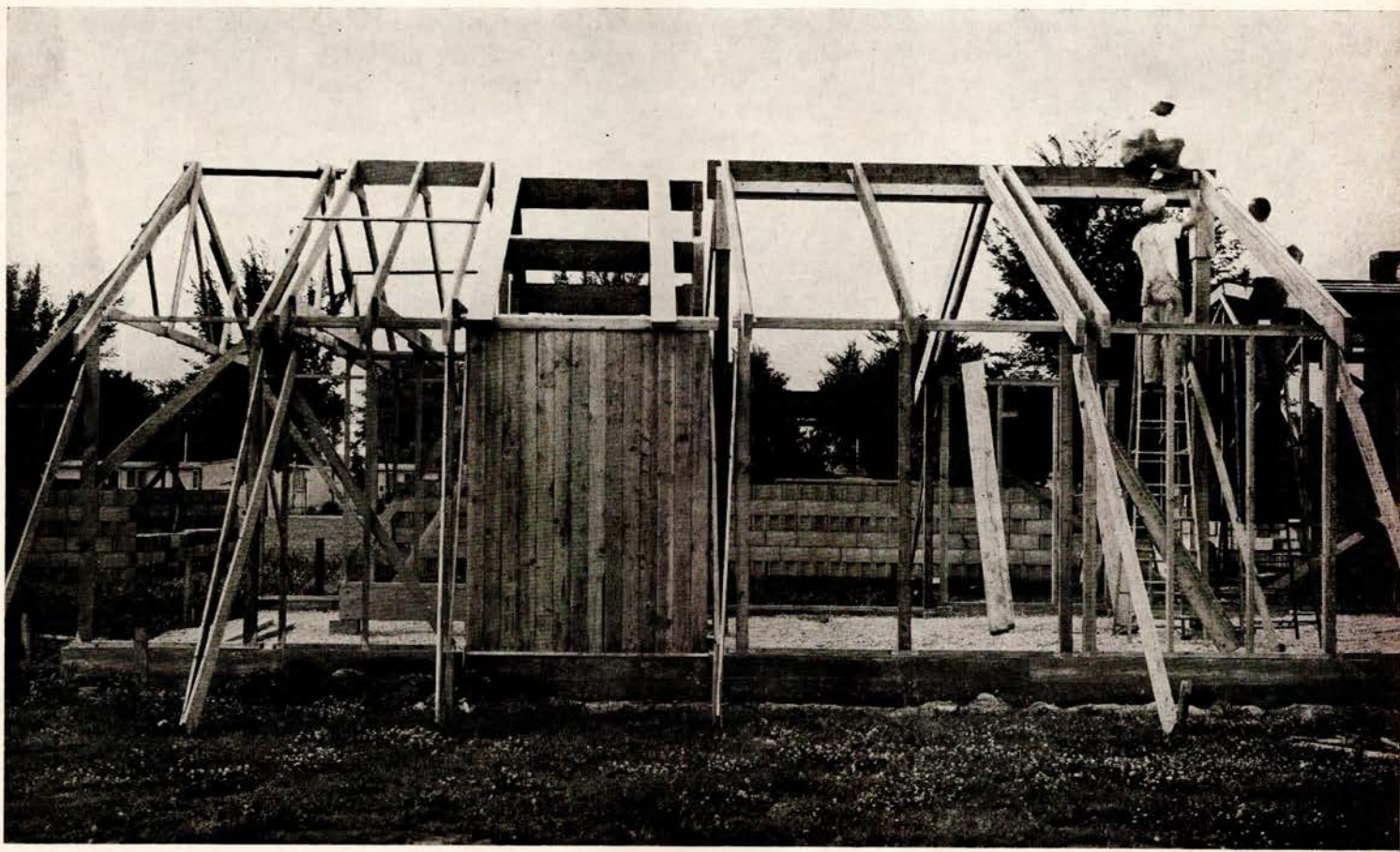
The important variable in the cost of roof sheathing is the spacing of supports provided by the primary framing. Maximum sheathing economy is provided with supports 24 in. o.c., no advantage being obtained with smaller spacings. The most economical material for this spacing is nominal 1-in. sheathing, applied parallel to the ridge. The cost per thousand square feet is $245. Due to higher material costs, ⅜-in. plywood at this spacing is a little greater at $266.

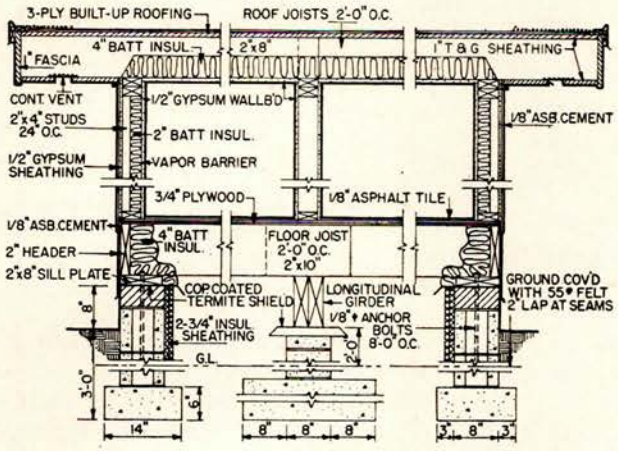
When primary supports are spaced at more than 24 in. o.c. up to 8 ft o.c., sheathing costs increase rapidly. Using 2- by 4-in. purlins at 24 in. o.c. between primary frames, costs become $368 with nominal 1-in. boards and $390 with ⅜-in. plywood. Nominal 2-in. planking, surfaced four sides, supported at 4 ft o.c. costs $481, while tongued and grooved planking in the same thickness costs $544 at spans up to 8 ft o.c. Most costly is ¾-in. plywood spanning 4 ft with blocking 4 ft o.c. at right angles to main supports. This system comes to $563, or more than twice the cost of sheathing supported at 2 ft o.c.

It is obvious that the increase in roof sheathing cost with span will largely offset economies gained by increasing the spacing of the primary supports. This principle is borne out in the data on total costs.

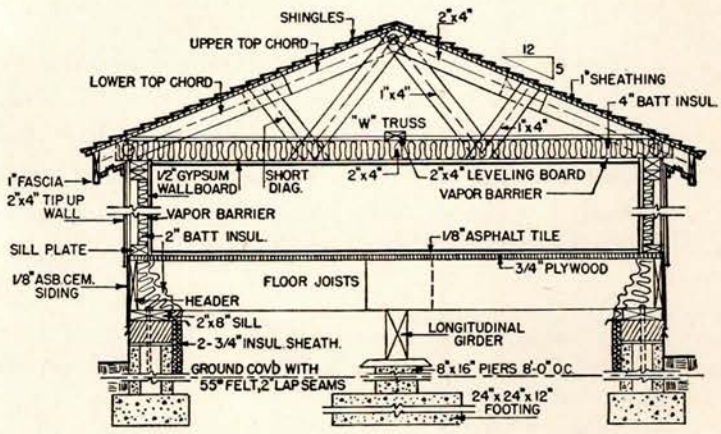
Floor Framing

Preliminary investigation of floor framing with the goal of finding the most economical system, including finish flooring, showed that asphalt tile and ¾-in. plywood subfloor over joists 24 in. o.c. gave best results. With a longitudinal girder supporting floor, bearing partition, and roof, this system cost $930 for 1000 sq ft. With the girder supporting the floor only, as is the case when trusses are used for roof framing, the





1. Conventional joists and load-bearing stud walls



2. Trussed rafters and load-bearing stud walls

cost of floor framing is reduced to $920.

Floor framing costs for post and beam systems showed little difference. The most economical system consisted of beams 8 ft o.c. with purlins 2 ft o.c. and ¾-in. plywood, costing $930. The similar case with beams 6 ft o.c. cost $960 while beams 6 ft o.c. used with nominal 2 in. tongued and grooved planking cost $950.

For all of the floor framing systems, cost of asphalt tile finish floor was $280.

Wall Framing

The study of wall framing showed that construction assembly and erection procedures significantly affected costs. Conventional stud walls fabricated on the floor and tipped-up into place, including exterior, interior finish and insulation, cost $720 for flat roof framing. The effect of gable ends raised this cost to $790 for rafter and joist framing. Asbestos-cement fiberboard laminated panels also cost $720 when used with flat roof post and beam framing with posts at 4 ft o.c. and floor slab construction. The most economical wall framing used with post and beam construction consisted of tip-up panels and posts 8 ft o.c. costing $710 for flat roofs and $860 for pitched roofs.

Exterior and Interior Finish Materials

A separate study was made to determine the most economical and satisfactory finish materials. Fundamental to this study was the assumption that dry materials would give lowest costs and plaster was not, therefore, considered as an interior finish. The finishes chosen for use with framing members spaced at 24 in. o.c. are as follows:

Interior: ½ in. by 4 ft by 8 ft gypsum board with taped joints.

Sheathing: ½ in. by 4 ft by 8 ft gypsum sheathing and 1- by 4-in. let-in diagonal braces at corners.

Exterior: ⅛ in. by 4 ft by 8 ft asbestos-cement sheets with 1- by 2-in. wood battens at nail lines and joints.

Where framing members were spaced at intervals larger than 24 in. o.c., other materials were used. For roofs of post and beam framing with bays 6 ft o.c. and 8 ft o.c., exposed 2-in. nominal planking was the finish ceiling.

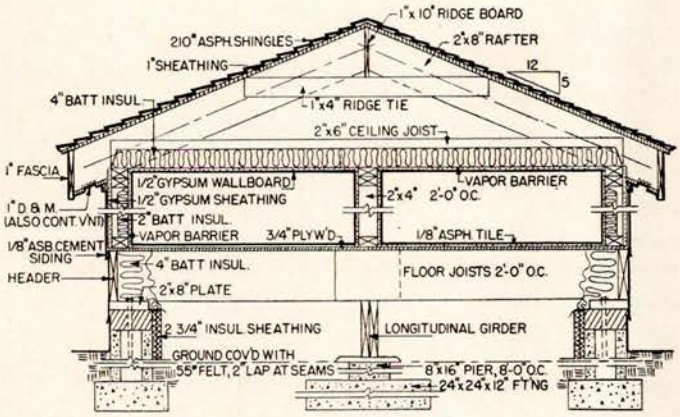
Foundations

An extensive study of foundations

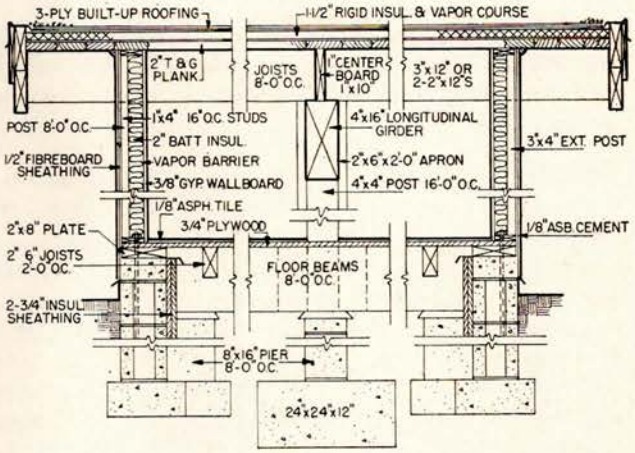
TABLE 1. COST OF ROOF AND CEILING FOR 1000 SQUARE FEET

FRAMING TYPE	ROOF TYPE	PRIMARY FRAME	SHEATHING, ROOFING AND PURLINS	INSULATION	CEILING	TOTAL	RATIO TO LOWEST
Joists 2′ o.c.	Flat	$150	$440	$100	$180	$870	1.00
Trusses 2′ o.c.	Pitched	250	400	100	150	900	1.03
Rafters & Joists 2′ o.c.	Pitched	310	400	100	180	990	1.14
Trusses 8′ o.c.	Pitched	160	530	100	240	1030	1.18
Trusses 6′ o.c.	Pitched	200	540	100	250	1090	1.25
Post & Beam 4′ o.c.	Flat	200	920 *	—	—	1120	1.29
Trusses 4′ o.c.	Pitched	230	560	100	240	1130	1.30
Quarter Beams	Flat	120	710	340	—	1170	1.34
Quarter Beams	Pitched	140	680	370	—	1200	1.38
Post & Beam 8′ o.c.	Flat	160	710	350	—	1220	1.40
Post & Beam 6′ o.c.	Flat	170	710	350	—	1230	1.41
Post & Beam 8′ o.c.	Pitched	200	700	370	—	1270	1.46
Post & Beam 6′ o.c.	Pitched	200	700	370	—	1270	1.46
Post & Beam 4′ o.c.	Pitched	240	700	370	—	1310	1.51

* Asbestos cement fiberboard laminated panels and built-up roof



3. Conventional rafters and load-bearing stud walls



4. Post and beam with non-structural stud walls

was not made as part of this project. While foundations of the grade beam and pier variety may have advantages over the conventional type, they were not studied, because the variables of soil type, presence or absence of frost action, and the relative importance of heat losses were too complex to evaluate. The conventional foundation used with post and beam framing is more expensive than when used with joist framing because of the extra cost of forming piers. For this reason, and because the study at this point had shown joist framing to be most economical, foundations for post and beam framing were not evaluated.

A comparison of slab construction versus crawl space was made for the two most economical types of framing. Floor joists 24 in. o.c. with flat roof and crawl space construction cost $440 more than slab construction. For pitched roof trusses 24 in. o.c. the difference was $490. Slab construction is relatively cheaper with trusses than with joists because no footing is required for a center bearing partition.

SYSTEMS ANALYZED FOR COSTS

Flat Roof Joist Construction

As will be seen in Tables 1 and 2, flat roof construction with joists 24 in. o.c. is the most economical type of house framing. This structural scheme is the most traditional of those studied. The essential character of this type is governed by the central bearing partition used to support the joists. In general the construction is standard with stud walls, 1-in. roof sheathing, batt insulation, and 3-ply built-up roof. Wall materials are as indicated before.

Rafters and Ceiling Joists

This system is also traditional and is similar to the corresponding flat roof construction in requiring the use of an interior bearing partition to carry the ceiling joists. All primary framing members are 24 in. o.c. and the roof is shingled with asphalt shingles. Other materials are, in general, identical with those used for flat roof construction.

It should be noted that the combination of rafters and ceiling joists is essentially a form of truss framing. The de-

TABLE 2. COST OF ROOF, CEILING, WALLS AND FINISH FOR 1000 SQUARE FEET

FRAMING TYPE	ROOF TYPE	ROOF AND CEILING	WALLS* AND FINISH	TOTAL	RATIO TO LOWEST
Joists 2′ o.c.	Flat	$870	$720	$1590	1.00
Trusses 2′ o.c.	Pitched	900	760	1660	1.04
Rafters & Joists 2′ o.c.	Pitched	990	790	1780	1.12
Trusses 8′ o.c.	Pitched	1030	760	1790	1.13
Post & Beam 4′ o.c.	Flat	1110	720 [1]	1830	1.15
Trusses 6′ o.c.	Pitched	1090	760	1850	1.16
Trusses 4′ o.c.	Pitched	1130	760	1890	1.19
Post & Beam 8′ o.c.	Flat	1220	710 [3]	1930	1.21
Post & Beam 6′ o.c.	Flat	1230	750 [3]	1980	1.25
Quarter Beams	Flat	1170	960	2130	1.34
Post & Beam 8′ o.c.	Pitched	1270	860 [3]	2130	1.34
Post & Beam 4′ o.c.	Pitched	1310	840 [1]	2150	1.35
Post & Beam 6′ o.c.	Pitched	1270	910 [3]	2180	1.37
Quarter Beams	Pitched	1200	1120 [2]	2320	1.46

* All walls 2x4″ studs, 24″ o.c., covered by sheathing, asbestos cement exterior finish, gypsum dry wall interior finish, except as noted below
[1] 2″ asbestos cement laminate both exterior and interior surfacing; cost on slab foundation only
[2] 3″ T&G with 1x2″ strapping and reflective insulation
[3] 1x4″ studs, 16″ o.c., asbestos cement exterior, gypsum dry wall interior

sign was carefully engineered on this principle and the connections of joists to rafters were made with sufficient strength to develop truss action.

Trusses

Although several clear span schemes using trusses were studied — trussed bents, three-hinged arches, and pitched roof trusses — only the last type proved economical. These trusses were of the Fink type with diagonals at the quarter points of the top chord and at the third points of the bottom chord. While larger spacings were considered as a means of economy in the trusses, the great savings in sheathing and finishing materials made a spacing of 24 in. o.c. clearly the most efficient. Since the trusses do not require the use of an interior bearing partition, this system is the most economical when planning requires a clear span of 24 ft or more. Furthermore, considering the total shell cost of slab construction, trussed framing at the 24-ft span is $2920 while flat roof joist framing is $2900. This insignificant difference means that the final choice between flat and pitched roofs need not be based on economic considerations.

Post and Beam Construction

Among those structural schemes which depart from conventional methods, the post and beam system generally gave the most economical designs. Two types of post and beam framing were studied: the first ("post and beam" in tables), having beams parallel to the 24-ft dimension of the house and an interior girder paralleling the long walls, is the more common variety; the second, called quarter-beam framing, used beams supported by interior posts with the beams 6 ft o.c. and running parallel to the long walls. In both cases, nominal 2-in. sheathing was used between beams, with the single exception that asbestos cement fiberboard laminates were used with posts and beams 4 ft o.c.

The quarter beam system gave the most efficient primary frame of any system studied, but complexities of wall framing made the total costs of this scheme higher than the other post and beam arrangements. With beams parallel to the 24 ft span, maximum economy was achieved by using 4 ft o.c. spacing and asbestos cement fiberboard laminate panels. Slightly more expensive ($100 in the total of roof and wall costs) was the case with beams at 8 ft o.c. and 2-in. plank. In both of these systems the central girder spanned 16 ft between posts, giving unusual freedom to planning, there being only two interior posts in a house 40-ft long.

Comparison of Framing Systems

Tables 1 and 2 summarize the cost data of the HHFA paper, giving total costs of roof construction and the cost of roofs and walls combined, respectively. Examination of these data will show several important facts. Of outstanding importance is the approximately inverse relation of the cost of the primary framing to the cost of sheathing and finishing. It can be easily shown that the cost of primary frames decreases as spacings increase. All members become more heavily loaded and consequently work more efficiently. This is a well-known principle. Sheathing and finishing materials, however, become more and more expensive as their span increases, and this rise in cost more than offsets savings in the primary frame. For these reasons, it can be seen that the three systems — joists, rafters, trusses — with primary structural element spaced at 24 in. o.c. give the least total superstructure cost.

When spacings are increased above 24 in. o.c. the economy relations change abruptly. Since nominal 2-in. planking or 2 by 4-in. purlins can span 8 ft, 8 ft o.c. spacings of primary supports lead to lower costs than spacings of 6 ft or 4 ft for the same sheathing system. The economy here is realized in savings in the primary structure. (The exception to this rule of flat-roofed post and beam with 4-ft o.c. spacings is explained by the special asbestos-cement panels used for sheathing, insulation, and finish ceiling.)

In view of the current interest in post and beam framing, it is interesting to note the higher cost of this system when compared to a flat roof built of joists 24 in. o.c. The combined cost of walls and roof, post and beam, with 8 ft o.c. bays and 2-in. planking, is 21 per cent higher than joisted construction. A large part of this difference ($250 out of a total difference of $340) is accounted for by the cost of 1½-in. rigid insulation compared to 4-in. batts. The $90 remaining in the cost difference between these two types represents the higher cost of 2-in. planking, compared with 1-in. sheathing and a separate ceiling of ½-in. gypsum board.

The Small Homes Council has made a diligent effort to discover the most economical framing system for houses, and we should not be surprised to learn that joists and a flat roof achieve the lowest cost. *This fact demonstrates that principles of structural economy developed for larger buildings cannot be extended to house construction without careful examination. The relation of finish materials to structure is so critical in the economics of house construction that any cost evaluation which neglects consideration of them is valueless.*

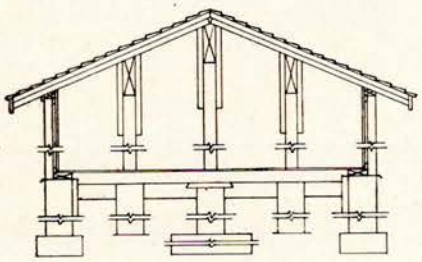
HHFA's paper will be of great usefulness to architects in choosing structural schemes, even though their choices may not be the most economical. It is important to know the premium paid for a slightly more expensive system. A cost differential of 34 cents per sq ft may be a small price to pay to gain the architectural values of post and beam framing, which may be lacking in joisted construction.

Limitations of the Study

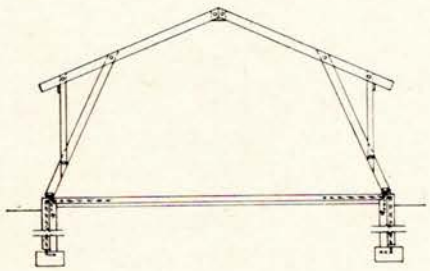
Any comparison of costs on a product as complicated as a house must, by necessity, be limited in terms of variables considered. The Small Homes Council and HHFA are to be praised, therefore, for the breadth and scope of their study. Certainly, no other investigation of this kind has examined so many different structural schemes with such thoroughness. There are, however, several restrictions which must be placed on the results.

First, and perhaps most important, it must be understood that the cost data given by HHFA are based on methods for building single houses one at a time. It is certain that the volume builder can cut material costs through quantity purchases, and in some cases can reduce the labor costs through production line assembly. An obvious place for the latter type of savings would be in the fabrication of roof trusses.

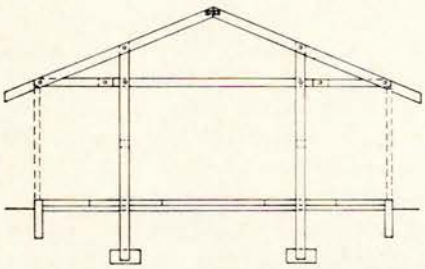
Another aspect of the study, which must be noted, is the wide variation in the adaptability of the structural schemes to different architectural plans. The least expensive, joists at 24 in. o.c., is also the least adaptable, since an essential part of the scheme is the use of an interior bearing partition. (Furthermore, HHFA, in its cost data, does not include the cost of this partition. While this may be justified, an objection may be raised to the inclusion of the cost of interior supports in totals in the case of post and



Plank and quarter beams



Three-hinged arch



Trussed bents, curtain walls

The 18 systems selected for analysis were: 1, 2. conventional stud wall, pitched and flat roofs; 3, 4, 5. trusses 2 to 8 ft o.c.; 6, 7, 8. post and beam 4 to 8 ft o.c.; 9. plank and quarter beams; 10. rigid frames, 8 ft o.c.; 11. stressed skin panels; 12. walls comprised of spandrel and lintel girders; 13. honeycomb-core panels; 14. semi-rigid trussed bents, 8 ft o.c.; 15. trussed bents, 8 ft o.c., columns at quarter points; 16. three-hinged arch; 17. walls of trussed frames; 18. rigid posts 8 ft o.c. with lateral girts

beam framing. In the case of posts and beams at 8 ft o.c., the use of interior posts at the same spacing as the beams would reduce the cost of this system by approximately $60, whereas ridge girders spanning 16 ft were actually used.) Since a rectangular plan was assumed in all cases, departure from this will change relative cost data. Joists and rafters are, for example, more adaptable to irregular plans than trussed framing.

Other Schemes Considered

Among other schemes studied, several merit discussion here. Because of its applications in prefabricated construction, the stressed-skin panel system is of special interest. The Small Homes Council made a special investigation of the cost of 4- by 8-ft panels to be used as roof members or wall panels spanning between primary supports, 8 ft o.c. The panels were built of 1- by 3-in. ribs, 12 in. o.c., and ¼-in. plywood faces, and the total cost for these materials was 42 cents per square foot. For comparison, it was found that a nailed panel, having no stressed-skin action, could be built of 1- by 4-in. ribs, 16 in. o.c., faced with ½-in. fiberboard sheathing and ⅜-in. gypsum drywall and taping, for 24 cents per square foot, material cost. As HHFA points out, the relatively high cost of plywood to other materials casts doubts on the economy of plywood stressed-skin panels in the sizes studied. No study was made of panels serving as primary structure for spans longer than 8 ft, and it is probable that only in this range do stressed-skin panels become truly efficient cost wise.

Two framing systems were investigated which are rigid bents, capable of independently carrying both vertical and lateral loads. The trussed bent system, suggested by architect Rene de Blonay of New Haven, Connecticut, uses pitched top chord trusses, supported at the ¼ and ¾ points of their span by interior posts. Using these frames at 8 ft o.c., it was found that they were a very costly primary structure. ($370 for the trussed bents versus $160 for regular roof trusses at the same spacing.) Although material costs were also high, the major difficulty with this scheme was erecting the bents.

The second rigid system, three-hinged arches spaced at 8 ft o.c., cost $310 for the primary frame. Of this total cost, $200 was for material and $110 for labor. This scheme was also much less efficient than ordinary roof trusses, and had the further defect of awkwardly cutting into the interior space.

Structural Factors Considered

In any comparative study of building costs it is essential, for realistic comparisons, that all systems studied have approximately equal resistance to loads. It was necessary, therefore, for the Small Homes Council to undertake a study of structural factors and methods as part of their work. Of prime importance was the choice of live loads. Based on examination of a variety of building codes, floor loads were taken as 40 psf and snow loads on both flat and pitched roofs were 20 psf on the horizontal projection. For wind loads, the recommendations of the *Building Code Requirements for New Dwelling Construction — BMS 107*, United States Department of Commerce, were followed. In general, maximum forces of 18 psf normal to walls, and 23 psf outward force normal to flat and pitched roofs were used.

Investigation of strength properties of building materials discovered many deficiencies in available information. The lack of stress graded lumber to meet the structural needs of house construction was a particular difficulty. Specified material for this study was the 1100 psi stress grade. In Southern Pine, 1100 psi grade is limited to 2-in. thickness. No Douglas Fir (C.R.) lumber graded for bending stresses is available in the 2 by 4 and smaller sizes (1100 psi grade applies to members 2 to 4 in. thick and 6 in. and wider).

In its study of pitched roofs, the Small Homes Council reviewed ordinary practice in the light of engineering principles, and concluded that it is possible to build a satisfactory pitched roof without ceiling joists or ridge girders. A design was made for a house 24 by 40 ft using rafters sheathed with ⅜-in. plywood, nailed on 4-in. centers with 8d nails on all edges. Calculations showed that this combination of rafters and sheathing was sufficiently strong to transmit all outward thrusts to end walls, thus creating a clear span framing system requiring supports only at the perimeter of the house. Such construction offers especially good resistance to wind loads. Unfortunately, this framing technique was not evaluated in the cost analyses, but it seems possible that it might have advantages as a particularly economical clear span framing method.

LIGHTWEIGHT METALS MAKE "SUPERSTRUCTURE" ADDITIONS FEASIBLE

Welded aluminum alloy structural members frame a second-story addition to an office building

An all-welded aluminum alloy structural frame rests on the 26-ft-wide by 75-ft-long flat roof of the single-story Ferodo Company office building in Chapel-en-Frith, England.

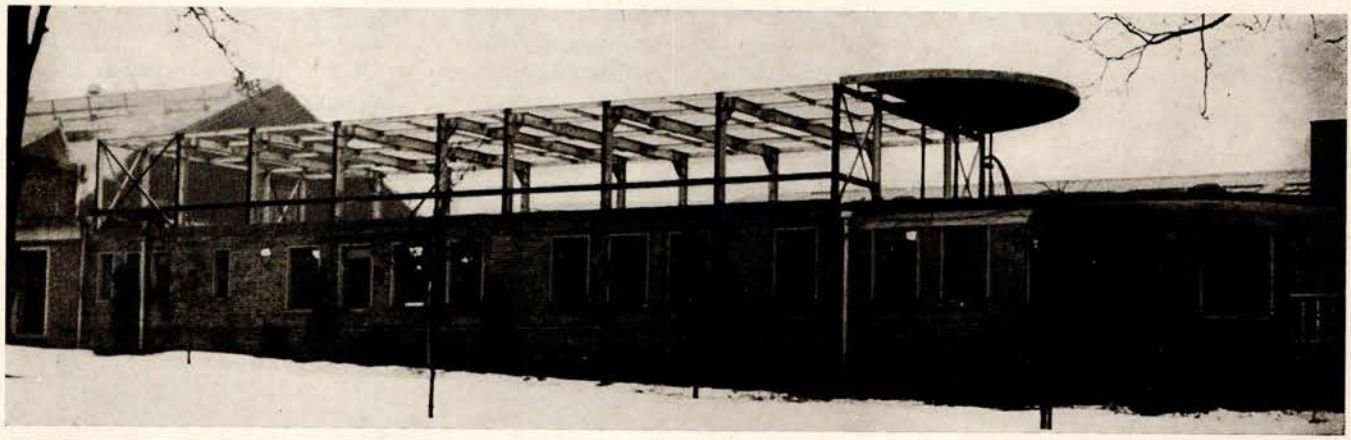
Lightness and ease of handling large prefabricated sections were the main advantages of the aluminum construction, said H. C. Husband, consulting engineer. In spite of adverse weather conditions, a team of four men, including a foreman, erected the whole structure in 382 man-hours. The heaviest element used in the frame weighed only 224 lb.

The welded rigid frame structure was designed to eliminate any bending moment on the walls of the existing building due to the fixing of the column bases. A two-pinned frame design was adopted for the main supports, with a special welded knee-joint detail (shown below right). An interesting base plate design, as pictured at left below, is curved to form a rocker which takes much of the load. The legs of the frame are welded to the base plate. The welded frame structure was practical also in this case, since the depth of the rafter had to be kept to a minimum anyway.

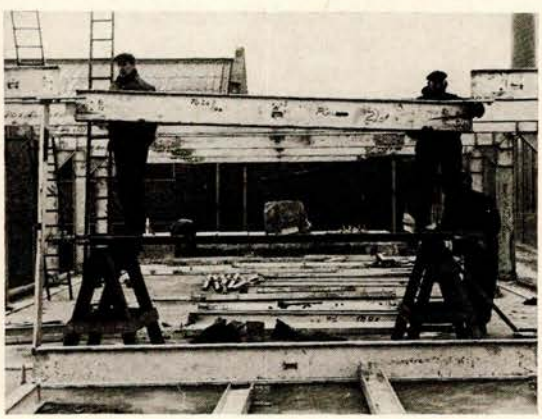
Flat aluminum alloy sheets cover the roof, and a false ceiling of flat asbestos sheets is suspended from the underside of the plate girders. A semicircular canopy cantilevered from the front of the framework consists of five aluminum alloy plate girders extending radially from the main structure and supported at the center by thin steel columns.

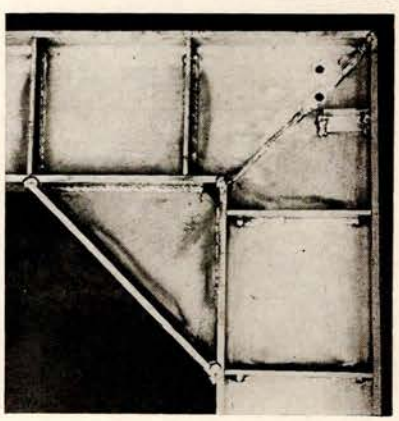
Head Wrightson Aluminium Ltd., English specialists in aluminum fabrication who designed, fabricated and erected the structure, point out that the initial cost of an aluminum alloy structure will be higher than a similar one in steel but that the following secondary advantages are sometimes desirable:

1. Saving on foundations to support the lightweight structure.
2. Reduced cost of machinery for moving elements.
3. Reduced transportation costs and erection time.
4. Lower maintenance costs. In most cases it is unnecessary to paint aluminum.
5. High disposal value of aluminum scrap.









Many overcrowded buildings can expand in only one direction — upwards. Lightweight metals make it possible by minimizing the dead weight on the existing foundations. Here are two recent examples

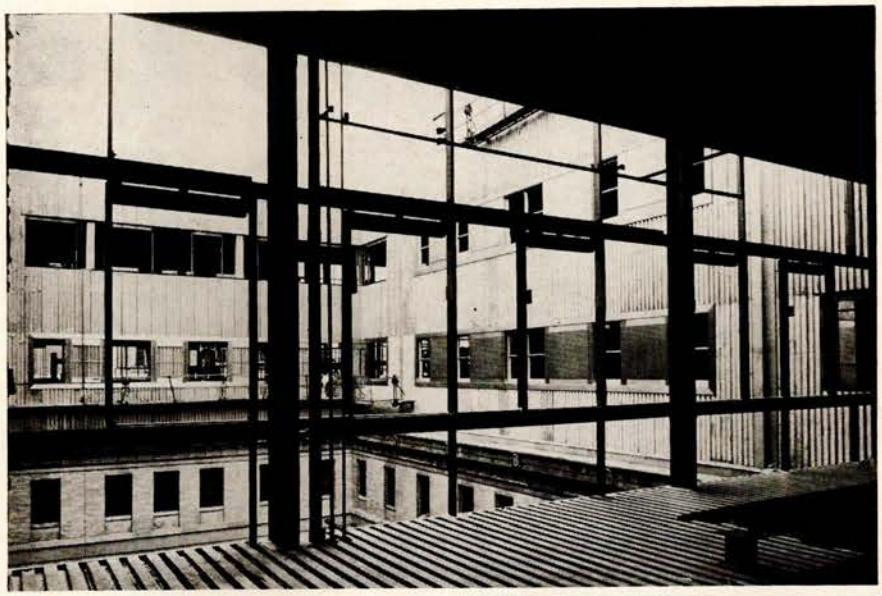
Insulated, prefabricated, stainless steel curtain wall panels enclose a city hospital addition

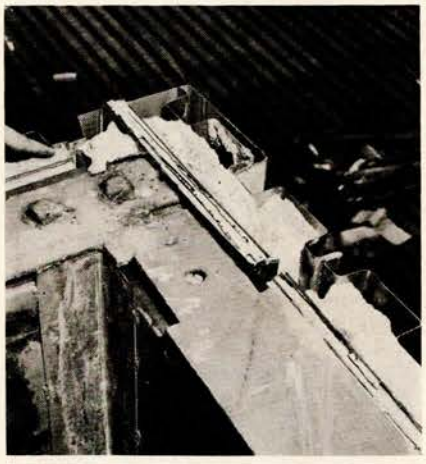
A sandwich-type, prefabricated, fire-code-approved curtain wall was erected on top of New York City's Bellevue Hospital after engineering investigations revealed that the structure could not support a masonry addition. Masonry construction that would have satisfied New York City's fire code would have weighed 140 psf, and the heavy structural steel needed to support this dead weight would have further burdened the old foundation. Consequently the architects, Fellheimer and Wagner, recommended insulated stainless steel panels that weigh only 14 psf and satisfy fire codes.

Each panel consists of a sandwich of metal and insulation. Twenty-gauge 2-D finish stainless steel, cold-rolled to a fluted cross section, is on the weather side, and a galvanized sheet of steel on the other. Two layers of 10-lb mineral wool, one layer of unsaturated asbestos felt and two sheets of gypsum board make up the filling, as shown in the photograph at the right.

The panels are shaped to fit on top of each other with an overlap of about 2 in. The bottom panel is die-formed with a slight inset, so that a smooth exterior is formed. The interior sheets of the panels butt against each other, making good walls that require only a decorative coating. No auxiliary installation or additional fireproofing is required. The thin, heat-resistant panels provide 2-hr fire protection, and their insulation value is superior to 12 in. of brick.

The penthouse addition was made by tying into the existing columns and erecting a light structural framework above what was once the roof, leaving a crawl space under the new eighth floor. Another weight-saving feature is the light-gauge, cold-formed floors, which have great strength with little bulk. The floor panels are fluted, so that wiring installation is simplified and future electrical obsolescence is prevented.





The prefabricated panels, of standard 2-ft widths and varying lengths, were identified for position before erection. They were hoisted into place, bolted at two points on the upper end and then welded to the structural steel with short beads on 1-ft centers, the entire operation for one panel being a matter of minutes. The stainless steel trim, coping, soffits, fascia, flashing and window panels were also completely fabricated and marked for position before delivery to the job site.

Although the texture of the panels harmonizes with the brick, sections of brickwork were carried up into some lower areas of the penthouse to avoid too severe a horizontal line.

Quicker completion of the construction and lower erection costs kept the job within the specified $2¼ million budget. The panels were fabricated and erected by the H. H. Robertson Co., which claimed that they had, in addition to high fire resistance and strength-to-weight ratio, high durability, weather-tightness and freedom from maintenance.

(Roundup continued on page 240)



OFFICE LITERATURE

TIMBER TRUSSES

• The following new catalogs are available from *Timber Engineering Co., 1319 18th St., N.W., Washington 6, D. C.*

The 1955 edition of *Teco Products and Service Catalog* contains a roster of timber fabricators equipped to supply fabricated lumber ready for assembly into roof trusses.

Typical Designs of Timber Structures, in a new edition, includes 102 typical designs that illustrate suggested methods of Teco timber connector wood framing for commonly encountered structural problems in timber roof trusses, bridges, towers, hangers, bleachers and farm buildings.

Copies of five new typical designs (Nos. 629 to 633) of segmental bowstring timber trusses, for spans of 60 to 100 ft, are available. Design No. 636 is a new segmental bowstring timber rafter for spans of 34 to 50 ft with 4-ft spacing.

Clear Span Wood Roof Trusses has been prepared as a guide for the selection of the proper and most economical roof truss design for particular building projects.

STAIR TREADS

• *Tri-Lok grating and stair treads* are explained in a 16-page brochure containing illustrations of applications and installation and a series of tables listing the grating weights, sizes and safe bearing loads. *Dravo Corp., 1203 Dravo Bldg., Pittsburgh 22, Pa.**

STAGE LIGHTING EQUIPMENT

• *Stage lighting* information and equipment is presented in three new bulletins from *Century Lighting, Inc., 521 West 43rd St., New York 36, N. Y.:**

The C-I Board describes the first all-electronic system — the Century-Izenour system — for stage lighting control. 10 pp, illus.

Catalog 4 covers television lighting equipment. 24 pp, illus.

Stage Lighting Facilities for the School and Community Theater includes lists of equipment and recommended quantities for each type of theater. 8 pp, illus.

• *Lighting Control Switchboards* for schools, universities, theaters, TV studios, and auditoriums are cataloged in a 21-page illustrated bulletin, with circuit diagrams. *General Electric Co., Distribution Assemblies Dept., Plainville, Conn.**

AIR CLEANERS, CONDITIONERS

• *Electronic air cleaners* for homes are described in an 8-page brochure, which includes section drawings and specifications. *Electro-Air Cleaner Co., 1285 Reedsdale St., Pittsburgh 33, Pa.*

METAL BULLETIN

• *Architectural Metal Bulletin No. 20* gives illustrations and detail drawings of the Philadelphia International Air Terminal. *Nat'l Assoc. of Architectural Metal Mfrs., 228 N. Lasalle St., Chicago, Ill.*

MOISTURE PROTECTION

• *Protect New Home Construction from Destructive Moisture* explains the cause and effect of destructive moisture and includes illustrations and a description of *Seallight* premolded membrane vapor seal. *W. R. Meadows, Inc., Elgin, Ill.**

**Other product information in Sweet's Architectural File, 1955.*

FIRE PROTECTION

• Information on *metal lath membrane fireproofing* for steel structures is available in the revised edition of Technical Bulletin No. 3. Specifications and descriptions of metal lath membrane fireproofings as well as details and fire resistive ratings for columns, beams, girders, trusses and floor and roof deck assemblies are included. 22 pp. *Metal Lath Mfrs. Assoc., Engineers Bldg., Cleveland, Ohio.**

• *Firesafe Churches* gives details of church construction and remodeling jobs using vermiculite plaster aggregate, insulating concrete, insulating fill, acoustical plastic and precast concrete roof tile. *Zonolite Co., 135 S. Lasalle St., Chicago 3, Ill.**

• A folder containing literature giving data and information on the design and fire resistance of machine-applied vermiculite concrete walls can be obtained from the *Vermiculite Institute, 208 S. Lasalle St., Chicago 4, Ill.*

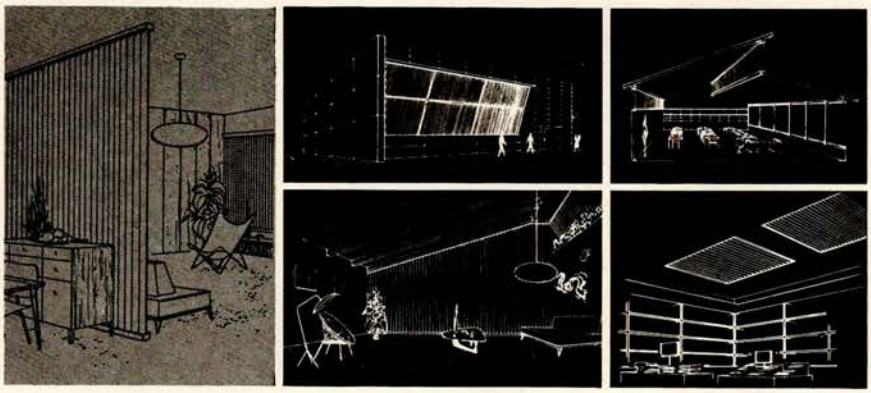
PORCELAIN PANELS

• A 12-page, illustrated catalog covers the subject of *porcelain enamel panels* and includes architect's details and methods of application. *Davidson Enamel Products, Inc., 1109 E. Kibby St., Lima, Ohio.**

DICTAPHONES

• *Telecord dictation systems*, basic installation, manual and automatic selection and dictaphone service are covered in a 12-page illustrated brochure from *Dictaphone Corp., 420 Lexington Ave., New York 17, N. Y.**

(*Continued on page 288*)



Details, specifications and illustrations of the applications of *Louverdrape* vertical blinds are included in a 4-page folder available from the *Vertical Blinds Corp. of America, 1936 Pontius Ave., West Los Angeles, Calif.*

HOME FURNISHINGS PRODUCTS CITED. *Eleven products from a field of over 300 entries in the National Home Fashions League's fifth annual competition have won Trail Blazer Awards for representing "a genuine departure in the design and styling of contemporary home furnishings, and a significant contribution toward the advancement of the industry as a whole." Professor James Marsten Fitch, of the School of Architecture at Columbia University, who served on the awards jury, explained the significance of the winners at award ceremonies. Each of the winners, some of which are shown below, is mass-produced in the United States and was introduced between June 1, 1954 and Feb. 15, 1955.*

Wall refrigerator-freezer combination, cited as best in "Major Equipment" and also winner of an honorable mention in the 58th Annual Gold Medal Exhibition of the Architectural League of New York, hangs on the wall and looks like a kitchen cabinet. Available in the G-E "Mix-or-Match" five colors and white, the unit has an 8.7-cu ft refrigerator section and a 2-cu ft freezer compartment. Doors open by means of finger grips at the base, so there are no protruding handles, and they are sealed closed by a magnetic device. Panels along the bottoms of the doors are replaceable so that they can match the design and material of the counter top. *General Electric Co., Major Appliance Div., Appliance Park, Louisville 1, Ky.*





Color-flecked steel kitchen cabinets, winner in the "Finishes — Hard Surface" class, are available in six color-flecked shades to color-match cabinets to kitchen appliances. A special paint with a heavy colloidal suspension dries slowly and results in a multi-color effect. Should chipping occur, the finish can be touched up with no area color differences. The Capitol Roto-Base Corner Cabinet in color-flecked finish is shown at left. *Capitol Kitchens, Roselle, N. J.*

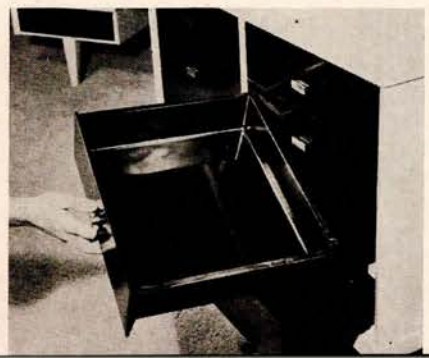
"Counterpoint," a 100 per cent wool, tufted carpet, won in the "Floor Coverings — Soft" class. The first to be placed on the market, the Gulistan carpet has a rough, tweedy appearance and is available in nine colors. *A. & M. Karagheusian, Inc., 295 Fifth Ave., New York 16, N. Y.*

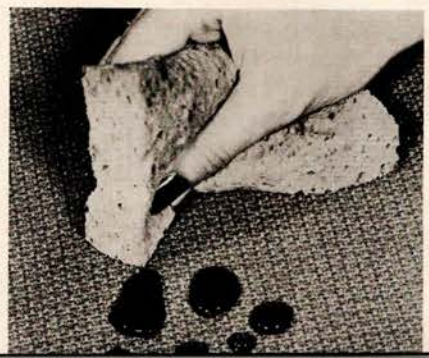


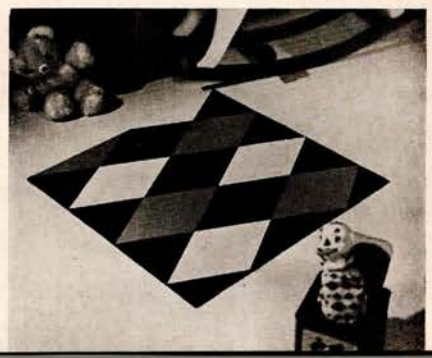
Plastic pull-out drawers, molded of Bakelite phenolic plastic, took top honors in the "Furniture" class. The units, made in one piece with molded-in runners and center guide flanges, have rounded corners for easy cleaning and molded-in color. Resistant to swelling and warping, the drawers can be used as decorative pieces in furniture or as storage units. *Boonton Molding Co., Boonton 1, N. J.*

Sylmer finish for upholstery fabrics, top entry in the "Finishes and Finishing Materials — Soft" class, is a silicone-base finish which forms a thin, resilient, invisible envelope around each fiber of the material. It provides resistance to liquids, which form beadlike shapes for sponging, permits easy removal of oil and grease stains and increases resistance to wear and wrinkling. *Dow Corning Corp., Midland, Mich.*

Patterned resilient floor tile, "Geometile" was declared best in the "Floor Coverings — Hard Surface" class. The pre-cut vinyl tiles are made in a series of modular geometric units in a variety of slim diamond, regular diamond, hexagonal and octagonal shapes and come in bold and solid shades, marbleized and terrazzo patterns. *Robbins Floor Products, Inc., 535 Fifth Ave., New York, N. Y.* (*More products on page 244*)







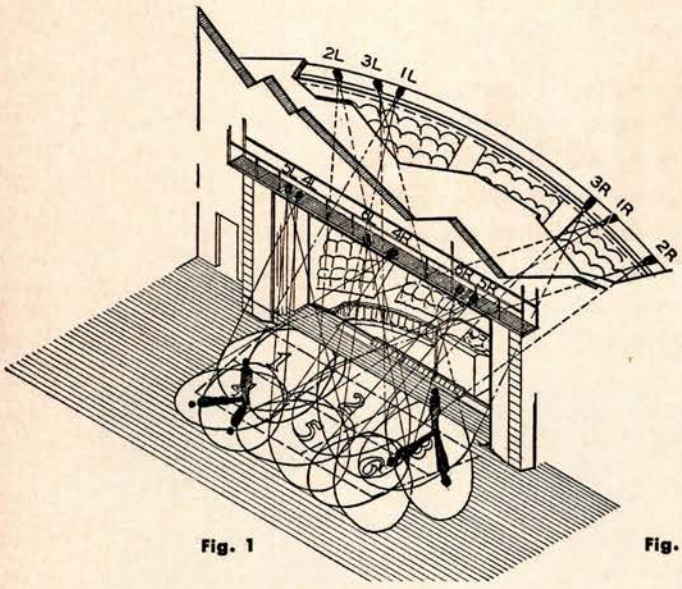


Fig. 1

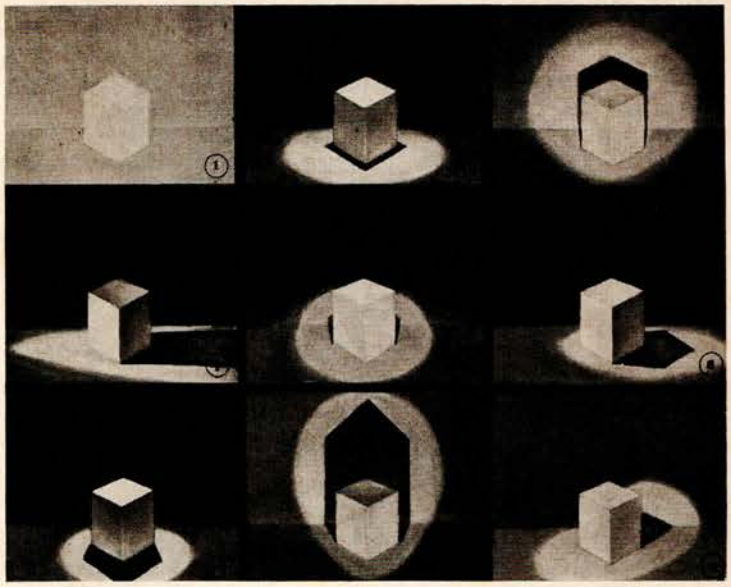


Fig. 2

Illustrations from, "A Method of Lighting the Stage "by the author published by Theater Arts, Books

LIGHTING THE SMALL SCHOOL STAGE

By Stanley McCandless

Professor of Lighting, Yale University
Research and Development, Century Lighting, Inc.

LIGHTING techniques for the school stage have changed as radically as the structural methods and design concepts of the school as a whole. Yet, lighting layouts for these stages often are based on outmoded practices of twenty-five years ago, with the result that obsolete equipment is bought and thus stage uses are extremely limited.

There are perhaps several reasons for this: First the idea still persists that footlights and borderlights are the basic essentials, whereas they are only of secondary importance (sometimes they are not used at all). Second, a guide is needed for the design of the school stage along professional lines at a cost that will match the budget available.

The purpose of this article and the Time-Saver Standards on pp. 233 and 235 is to explain briefly the functions of stage lighting equipment and to present a typical up-to-date layout, with the minimum equipment required even if only one play a year is to be presented. The extensiveness of the lighting layout will depend on just how much the stage is to be used as a teaching medium for dramatics and for school programs, and whether it is to be used as a community theater.

The fundamental uses of light on the stage are so simple, and so obvious from every-day experience, that even the beginner can produce results if he has a strong dramatic and experimental urge. A dramatic sense comes with an understanding of the functions of light on the stage.

Obviously, it is necessary to provide "visibility," and some ways are better than others for achieving it. Light must be directed to the areas of most importance (the actor's face usually) and kept off those of least importance (the scenery, usually). It is not true that a flood of general light from borderlights or footlights gives the best results. On the contrary, directional spotlighting from the front is much better because it localizes light where it is intended, and does not make the actor compete with the scenery for attention.

The figures above demonstrate how spotlights cover a stage, and how an object looks lighted from various directions.

Fig. 1: actor is lighted from both sides in six "acting areas." Pools of light merge to give even appearance.

Fig. 2: effect of different directions and distributions of light. (1) general distribution from all directions practically eliminates form; (2) downlight directly above gives little illumination on vertical faces; (3) center-front light as from balcony; (4) light as from side of stage — sharp contrast between vertical faces; (5) center-front at 45 deg, less shadow than (3) gives; (6) side lighting at 45 deg, good on top and one vertical face; (7) back lighting, good light on top and separation from background; (8) front lighting as from below, exaggerated shadow; (9) diagonal lighting, desirable balance of highlight and shadow.

Light can be made to simulate different times of day — to give the effect of sunlight and moonlight. In fact there is a danger that this "naturalism" can so intrigue the beginner, and sometimes the expert, that it tends to "steal the show."

The professional designer in the theatre spends considerable time balancing the lighting of each scene. With a wide selection of colors, and each source on a dimmer, he is able to modulate the intensities and colors from various directions so that a carefully composed picture results. The whole visual effect must be appropriate to the type of play, and, strange as it may seem, many small dimmers are included in the layout, not for changing light during the performance as much as to provide a proper static balance.

The last function of light on the stage, and probably its most important one, is creation of mood or atmosphere. For example we know that bright light is consistent with comedy, dim with tragedy; warm with comedy, cool with tragedy. Thus visibility, naturalism and composition comprise the interrelated objectives of stage lighting.

Another **Adlake** aluminum window installation



East Unit, Baptist Memorial Hospital, Memphis, Tenn.
Architects: Office of Walk C. Jones, Jr.
Consulting Architects: Samuel Hannaford & Sons
General Contractor: Harmon Construction Company
Equipped with Adlake Series 1000 Reversible Window

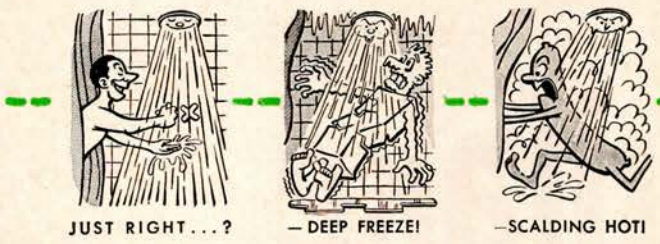
- **Minimum air infiltration**
- **Finger-tip control**
- **No painting or maintenance**
- **No warp, rot, rattle, stick or swell**
- **Guaranteed non-metallic weatherstripping (patented serrated guides on double hung windows)**

Adlake
PROVEN QUALITY WINDOW

This window meets or exceeds all quality industry specifications for aluminum windows.
THE Adams & Westlake COMPANY
Elkhart, Indiana

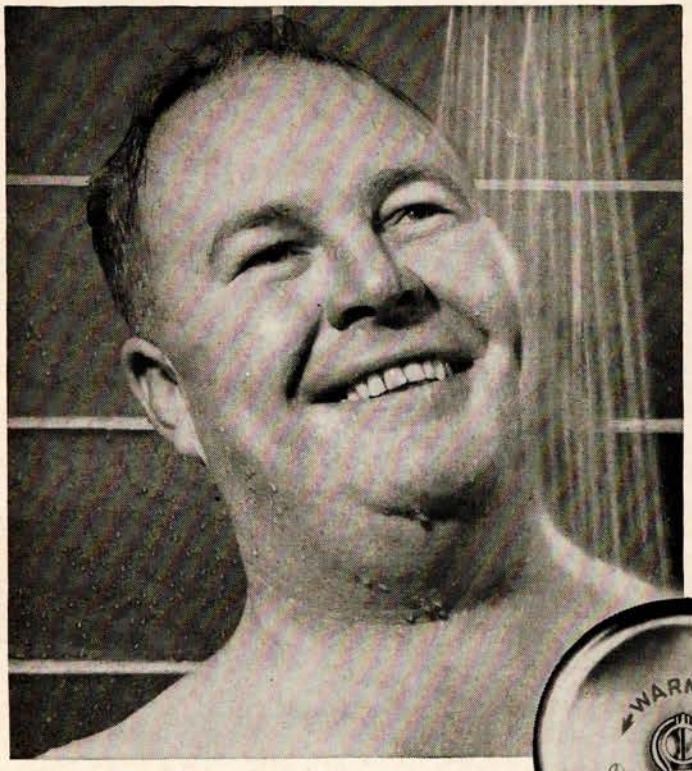
Adlake
98th year
of serving the transportation and building industries

The Adams & Westlake Company
Established 1857 • ELKHART, INDIANA • Chicago • New York





Public Liabilty Insurance Will Not Protect Shower Users from personal injuries, nor does it, in case of accidents, protect property owners from damaging publicity or time consuming lawsuits.



End Shower Complaints

with

Double-Safety

of

POWERS

Thermostatic WATER MIXERS

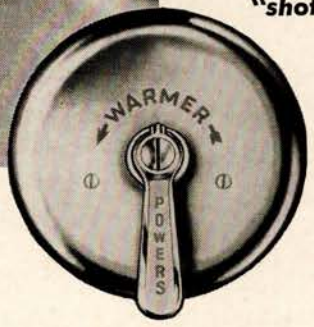
They protect bathers from scalding and "shots" of hot or cold water, caused by—

★1 **PRESSURE or**

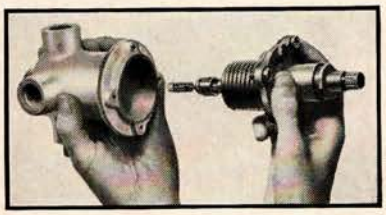
★2 **TEMPERATURE**

fluctuations in water supply lines

Only a **thermostatic** water mixer gives this **double-safety**



Refreshing, Relaxing Safe Showers
and water economy too, are assured by Powers Thermostatic Water Mixers



One moving part easily accessible from the front. Easy removal of thermostatic motor and valve assembly with only a screwdriver makes it possible to inspect, clean or flush out mixer. Powerful thermostatic motor gives quick, positive shut off if cold water supply should fail.

No Shower Is **MODERN** Without This Protection

Powers thermostatic water mixers *always* hold shower temperature constant wherever the bather wants it. They are completely automatic. Failure of cold water supply instantly shuts off the shower. Delivery is *thermostatically* limited to 115° F.

POWERS Mixers Save Water. No time or water is wasted by bather having to get out from under shower because of fluctuating shower temperature. Water conservation feature alone makes Powers mixers a profitable investment.

"Minimum of Maintenance" . . . report many users of Powers Type H Thermostatic Water Mixers. Their simple, durable construction insures years of dependable service. (b63r)

For Utmost Comfort, Safety and Economy Specify Powers Mixers • See SWEET'S Catalog

Established in 1891 • THE POWERS REGULATOR COMPANY • SKOKIE, ILL. • Offices in Over 50 Cities

LIGHTING THE SMALL SCHOOL STAGE: 1

By Stanley McCandless

Professor of Lighting, Yale University
Research and Development, Century Lighting, Inc.

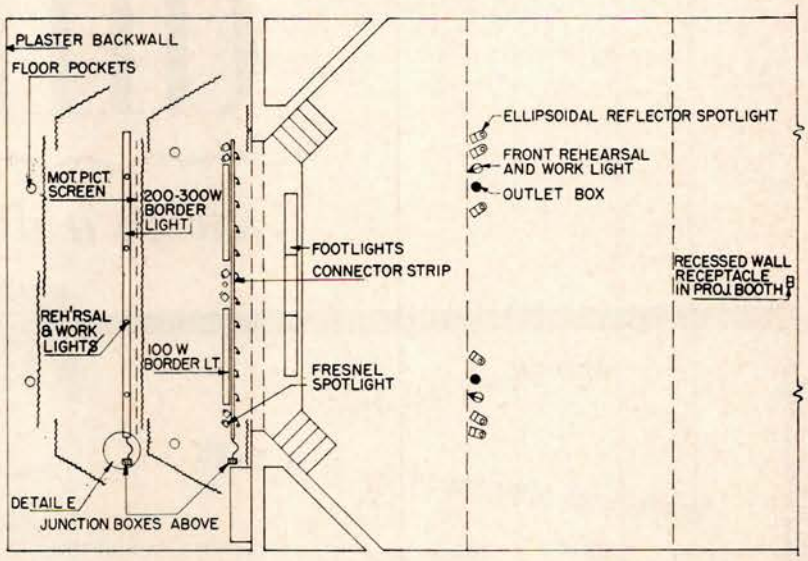
These pages show a suggested layout and equipment for a small stage. Anything less should be considered a speaking platform and be treated as such. Equipment listed in the tables is a conservative minimum. A discussion of the lighting equipment and some special portable units follows:

Spotlights: generally there should be acting area lights directed so that the actor is lighted from the front diagonals with a warm and a cool color. Ellipsoidal spotlights are used in front of the proscenium because they will not spill light on the audience; fresnel lens spots behind the proscenium blend the lighting of adjacent areas easily.

Border and Background Lights: There should be a borderlight behind each masking border to light the next cloth border or back curtain. Background lights are for lighting the back-drop or cyclorama (plastered back wall in this case), window backings, ground rows, and all parts of the scene visible to the audience but outside the acting area. These instruments are used primarily for exterior scenes. The back-drop or plastered back wall calls for considerable wattage. Strips placed close to the base at the foot of the back-drop can give effects of sunset, etc.

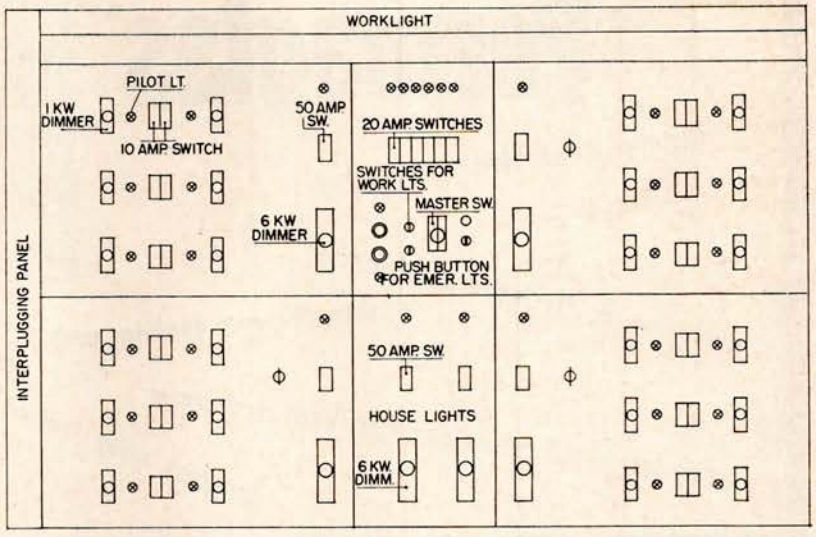
Special Lights: (1) instruments used for emphasizing doorways and special pieces of furniture (generally spotlights); (2) high-powered units to

(*Continued on page 235*)



Lighting Layout

Switchboard Diagram



LIGHTS

UNIT	FUNCTION	QUANTITY
6-in. Ellipsoidal Reflector Spotlight, 250–750-w	Lighting front acting areas	6
Disappearing Footlight, 100-w, nine lamps	Toning of faces and set	3
6-in. Fresnel Spotlight, 250–750-w	Lighting rear acting areas	6
Borderlight, 100-w, 8-ft long, 16 lamps, four colors, one work light	Blending of acting areas	2
Borderlight, 200–300-w, 25 ft, 4 in., 36 lamps, three colors, four work lamps	Lighting background	1
Front Rehearsal and Work Lights, 500-w, R-40 lamps, adjustable sockets	As indicated by name	2

OUTLETS

UNIT	QUANTITY
Connector Strip, 24-ft long	1
Surface Mounted Outlet Box	2
Floor Pockets, 4-way	4
Recessed Wall Mounted Receptacle, 2-way, 50 amp	1

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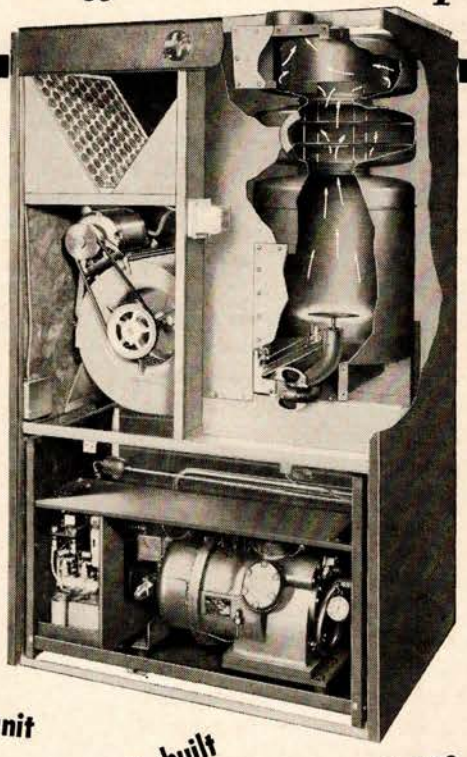

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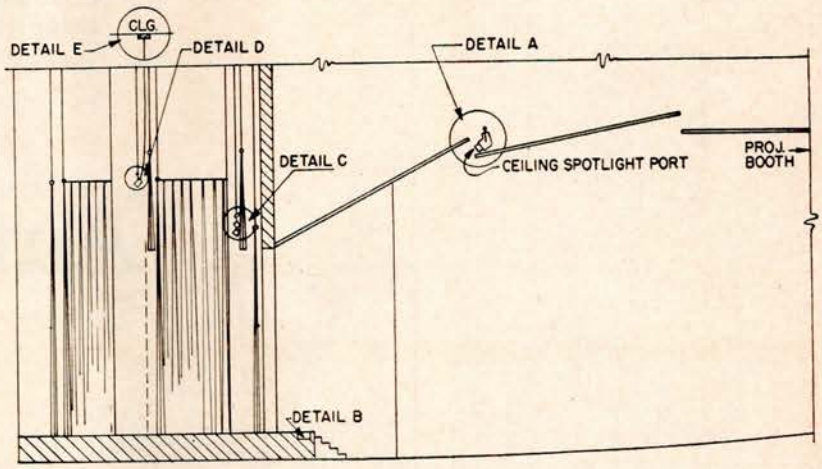
LIGHTING THE SMALL SCHOOL STAGE: 2

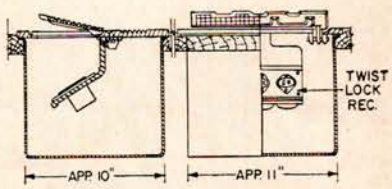
By Stanley McCandless

Professor of Lighting, Yale University
Research and Development, Century Lighting, Inc.

simulate sunlight and moonlight (3) "effect machine" to project patterns or Linnebach Lantern for shadow patterns; (4) a 2000-w ellipsoidal reflector follow spot for musicals, which should be mounted on a stand not over 75 ft away from the stage. As a measure of safety and reliability, all portable connections should be made by 20-amp twistlocks.

Dimmers: lighting equipment is useless without a certain number of dimmers to permit (1) color mixing and intensity balancing, (2) individual or group dimming or brightening at some course of action in the play. In theory each circuit should be dimmed separately, but cost will probably necessitate a compromise. A practical way for grouping several circuits is through use of an interplugging panel. With this panel any one or group of load circuits can be connected to any dimmer control. Auto-transformer type dimmers are used because they will dim any load proportionally up to their rated capacity; this is not true of resistance dimmers. Note on the drawing of the switchboard that house light dimmers are separate. Large dimmers can serve as proportional masters over the six smaller dimmers, or be used as individual large dimmers for controlling background lighting. In the patch panel, the 1000-w dimmer controls have two jack pockets and the 6000-w units have four jack pockets. Each load circuit representing outlets placed about the stage is protected by a circuit breaker, and the whole panel has a locked door to prevent tampering with the setup. As far as possible, switchboards should be placed so that the operator can see the stage.





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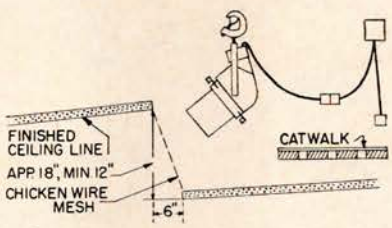

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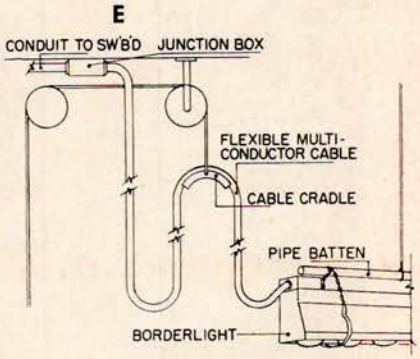

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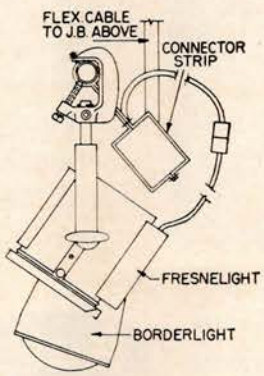
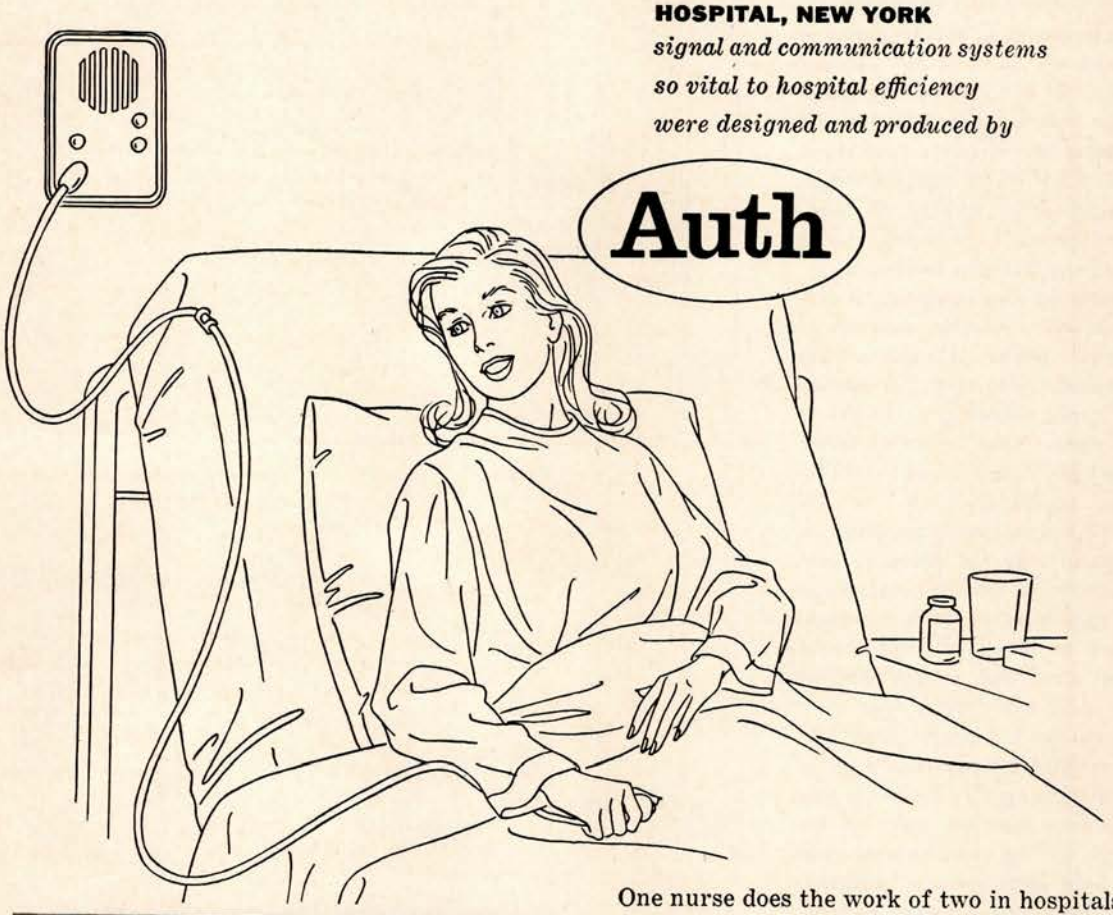


C

. . . and for

COLUMBIA PRESBYTERIAN HOSPITAL, NEW YORK

signal and communication systems so vital to hospital efficiency were designed and produced by





One nurse does the work of two in hospitals equipped with the new Auth VOKALCALL audio-visual nurses' call system. The nurse uses her VOKALCALL control board for two-way voice communication with the patients in her care. She can learn their needs and talk directly to them without leaving her station. VOKALCALL doubles the nurse's effectiveness, and saves her countless unnecessary trips to bedsides each day.

For literature that describes this and other types of Auth systems, write to:

Auth Electric Company, Inc.
Long Island City 1, New York

SIGNAL, TIME and COMMUNICATION SYSTEMS

Auth SINCE 1892

NORTH AMERICAN BUILDING STONES—16

Presented through the cooperation of the International Cut Stone Contractors' and Quarrymen's Association

INDEX OF BUILDING STONES—(To be continued in a later issue)

65 WINONA TRAVERTINE STONE
Company Name: Biesanz Stone Co., Inc.
Quarry Location: Winona, Minn.
Geological Designation: Dolomitic Limestone
Texture: Travertine
Color: Yellow, white, buff, pink and gray
Chemical Composition: Large magnesium content (not tested by this company)
Physical Tests: Specific gravity—2.53%; abrasive hardness—13.9%; absorption of moisture by weight —2.8%; percentage of porosity by volume—9.8%
Strength: Compressive strength, against grain—17,000 psi, with grain—8900 psi; tensile strength, against grain—960 psi, with grain—550 psi
Weight: 158 pcf
Furnished As: Dimensional, Ledgestone, Splitface. Brick heights for 2¾" coursing. Lengths to 8'
Surface Coverage: 40 sq ft per ton

66 "YASU"
Company Name: Nevada Flagstone Quarries, Inc.
Quarry Location: Goodsprings, Nev. (Mail address: 2840 Fremont, Las Vegas, Nev.)
Geological Designation: Sandstone
Texture: Medium
Color: White, yellows, gold, pink, purple, red and brown
Furnished As: Dimensional, Splitface. Splitface: Heights — 1"–10". Lengths — 8"–48". Dimensional: Heights — 1"–2½"
Surface Coverage: Dimensional (strataface) — 120 sq ft per ton. Splitface — 40–50 sq ft per ton

ADDENDA

67 ALLEGHENY (reg. U. S. Pat. Off.)
Company Name: Allegheny Natural Stone Co.
Quarry Location: Jersey Shore, Pa. (Mail address: 1237 Belmont Ave., Paterson 2, N. J.)
Geological Designation: Quartzite
Texture: Fine-grained
Color: Allegheny Bluestone—Variegated shades of green, red, blue, lilac, gun metal
Furnished As: 1" rock-faced veneer. Each stone bonded with adhesive, interlocked with special clip and mechanically tied with screw, completely processed, ready for application
Surface Coverage: 235 sq ft per ton 1" veneer

68 ARKANSAS CHERRY BLEND STONE
Company Name: Arkansas Cherry Blend Stone Co.
Quarry Location: Paris, Ark.
Geological Designation: Sandstone
Texture: Medium
Color: Brown, gray, cream, buff, pink, pink variations
Furnished As: Dimensional, Splitface, Ledgestone. Heights — 1"–5". Lengths — 12"–48"
Surface Coverage: 45 sq ft per ton

69 ARKANSAS RAINBOW LEDGE
Company Name: Rainbow Stone Co.
Quarry Location: Paris, Ark.
Geological Designation: Sandstone
Texture: Medium
Color: Brown, tan, yellow, pink, white gray, variegated with swirls
Chemical Composition: Silica — 95.2%; aluminum oxide — 2.5%; iron oxide — 0.6%
Physical Tests: Absorption of moisture — 1.33%
Strength: Crushing strength — 13,400 psi
Weight: 159 pcf
Furnished As: Dimensional, Ledgestone. Heights — 1"–6"; 1"–4". Lengths — 12"–48"
Surface Coverage: 1"–6" coverage — 40 sq ft per ton. 1"–4" coverage — 50 sq ft per ton

70 CLEARCREEK CUT-FACE
Company Name: Missouri Native Stone Co.
Quarry Location: Dederick, Mo.
Geological Designation: Sandstone
Texture: Fine-grained
Color: Mixtures of buff, gold and brown
Furnished As: Ashlar Veneer. Heights — ¾"–8½". Lengths — 10"–30"
Surface Coverage: 50–60 sq ft per ton
Other Facts: Each piece has outline of sawmark top and bottom

71 CLEARCREEK SNAP-FACE
Company Name: Missouri Native Stone Co.
Quarry Location: Dederick, Mo.
Geological Designation: Sandstone
Texture: Fine-grained
Color: Mixtures of buff, gold and brown
Furnished As: Splitface, Ledgestone. Heights —1"–6". Lengths — 10"–30"
Surface Coverage: 45–50 sq ft per ton

72 COLORADO BERTHOUD PINK
Company Name: Colorado Stone Co.
Quarry Location: Near Berthoud, Col. (Mail address: Longmont, Col.)
Texture: Very fine-grained, closely cemented, fine texture
Color: Light-colored stone of soft, delicate light pink to orchid shades
Geological Designation: Quartzitic Sandstone
Weight: 156 to 162 pcf
Furnished As: Dimensional, Splitface, Ledgestone, Flagging. Heights—1" to 3"; 1" to 6"; ¾" to 2"; 6" to 11". Lengths—12" to 12'
Surface Coverage: Splitface—40 to 44 sq. ft. per ton. Flagging—120 to 140 sq ft per ton
Other Comments: This stone is from the Lyons Ledgestone formation

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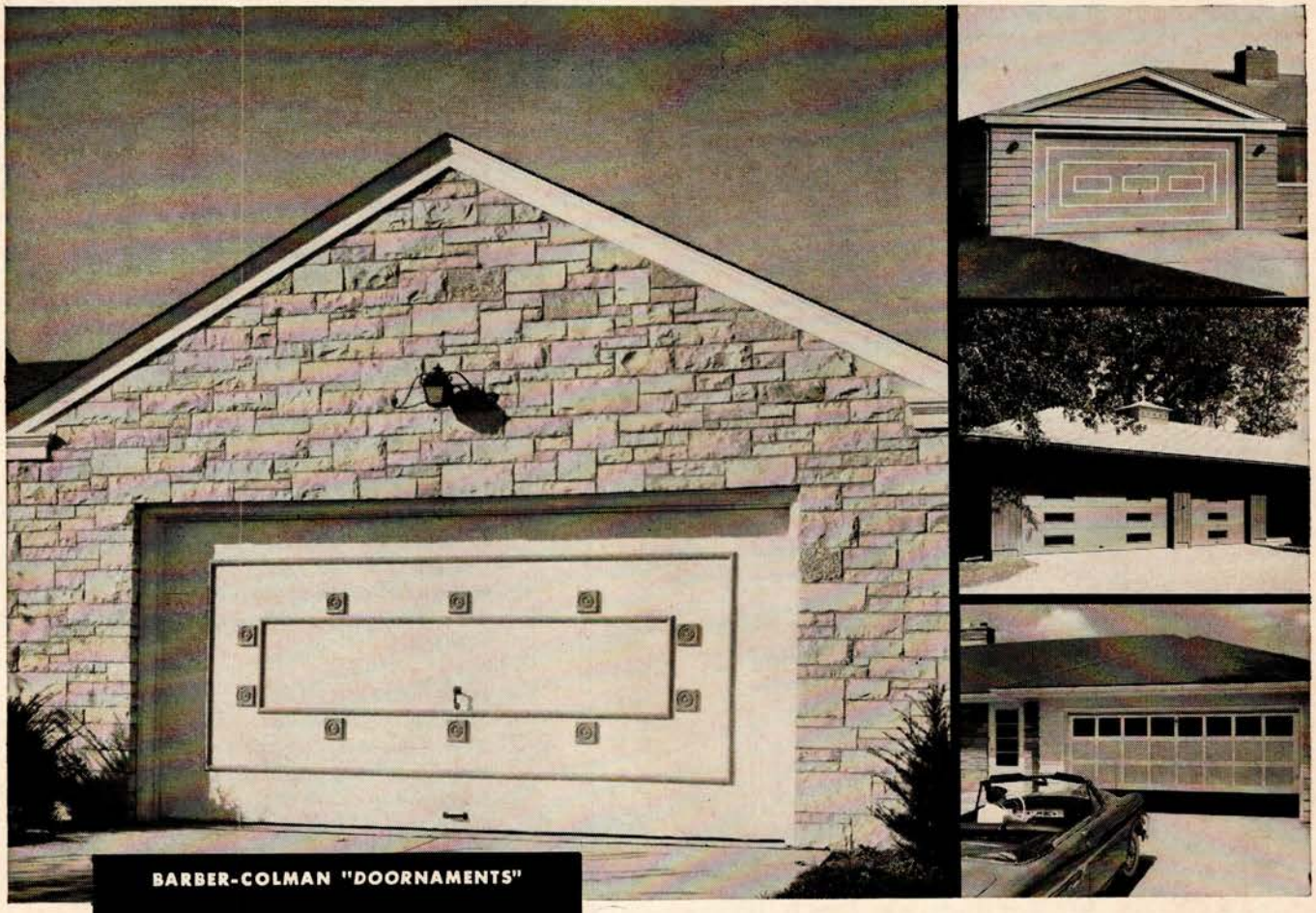
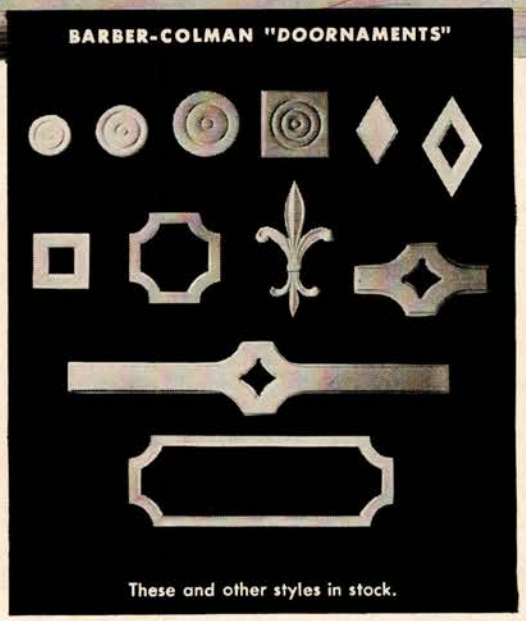
Barcol® OVERdoors

add distinctive individuality to modern homes with readily-available decorative "*Doornaments*"

You know the importance of good, *individualized* design in garage doors today. But do you know how extremely *easy* it is to achieve? Just take a *standard* Barcol OVERdoor—panel or flush type—and mount *ready-made* decorative "*Door*naments" in practically any design arrangement you want. Costs very little extra, adds a lot of extra character, extra value to the home! Shown below are but a few of the innumerable ways Barcol OVERdoors can be individualized. At first glance they look "custom-made" and expensive . . . but they're not. They are simply standard OVERdoors with attractively positioned, stock-item "*Door*naments." FREE DESIGN SERVICE makes it simple as A.B.C. for you to get the exact effects you want. Call your local Barber-Colman distributor now (listed under "Doors" in phone book).





Only Barber-Colman OVERdoors give you all three—

1. **CAM CLOSING** releases immediately for easy opening; exclusive pressure closing seals garage weathertight.
2. **WEATHER-KING SECTIONS**—panels guaranteed for life not to weathercheck, split, crack, or delaminate.
3. **INDIVIDUALIZED DESIGN** — New *Doornaments* make standard doors into custom designs at only fractional extra cost. For free design service, call your Barber-Colman distributor (under "Doors" in phone book), or write:

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Dept. P55, Rockford, Illinois

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BARBER COLMAN

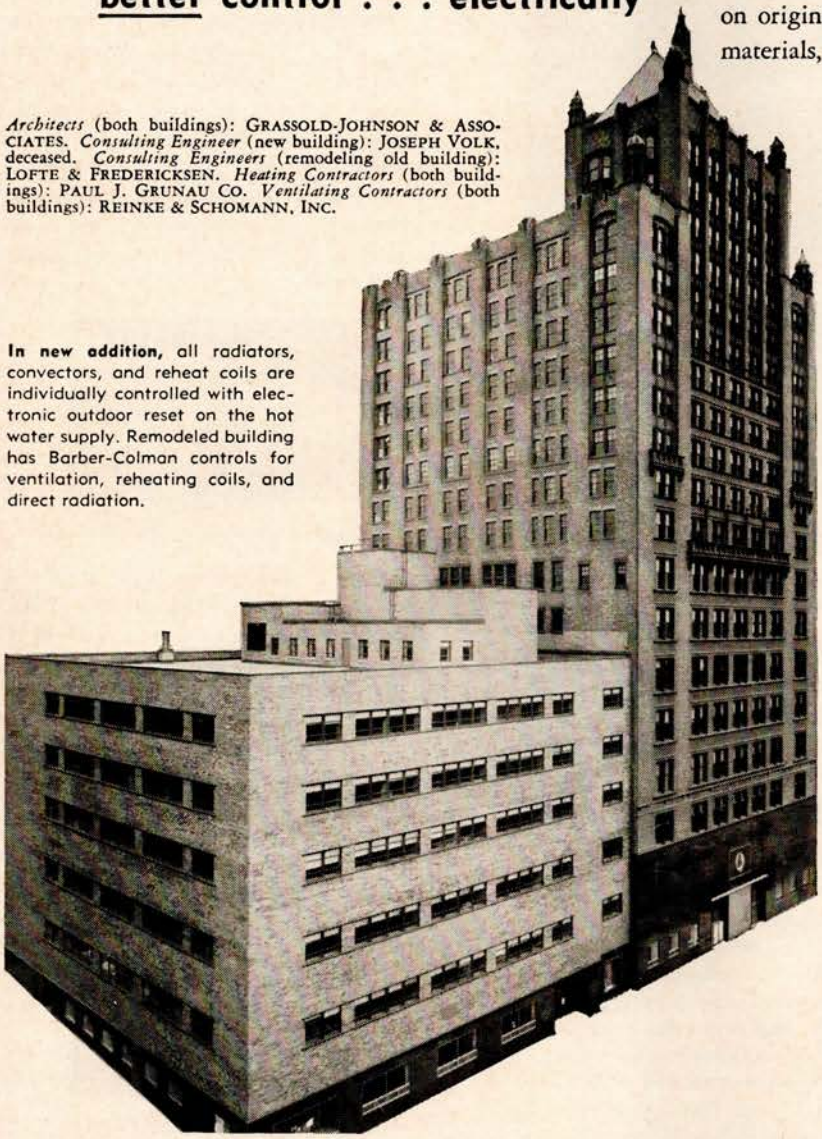
ELECTRIC-ELECTRONIC

Control Centers

In Milwaukee, Wisconsin Telephone Company engineers specify better control . . . electrically

Electric-electronic controls have been specified again by telephone engineers . . . this time in Milwaukee for the new and existing Headquarters buildings of the Wisconsin Telephone Company. Electric-electronic controls are used throughout the new six-story addition (foreground), completed late in 1954. Modernization of the nineteen-story older building is in process — electric-electronic controls have been installed on eight floors to date. The speed, flexibility, accuracy, and reliability of electrical equipment were big factors in the selection, plus savings on original cost of the controls, installing labor and materials, and maintenance.

Architects (both buildings): GRASSOLD-JOHNSON & ASSOCIATES. *Consulting Engineer* (new building): JOSEPH VOLK, deceased. *Consulting Engineers* (remodeling old building): LOFTE & FREDERICKSEN. *Heating Contractors* (both buildings): PAUL J. GRUNAU CO. *Ventilating Contractors* (both buildings): REINKE & SCHOMANN, INC.

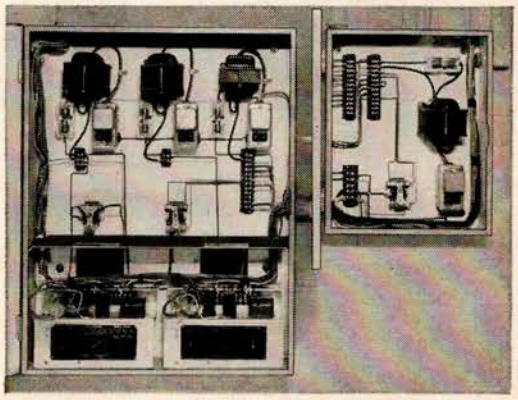


In new addition, all radiators, convectors, and reheat coils are individually controlled with electronic outdoor reset on the hot water supply. Remodeled building has Barber-Colman controls for ventilation, reheating coils, and direct radiation.

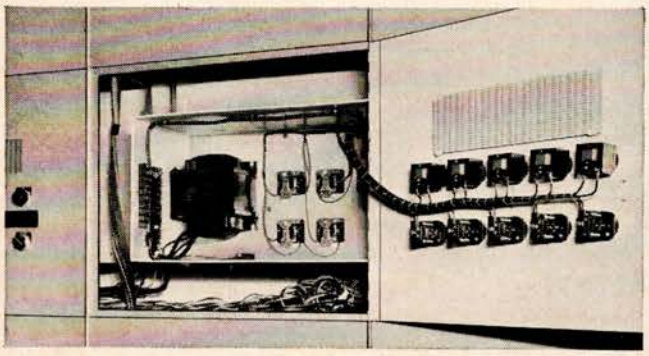


Modern "Control Center" (above) in remodeled building serves as central junction box, houses prewired accessories, numbered terminal strips, indicating lights, remote starting buttons, etc. A Uni-Flo "VF" Grille provides ventilation of each compartment.

Another "Control Center" (below) in new building serves as "nerve center" to speed field installation, expedite checking, simplify revisions and servicing. It's the fast, cost-saving method for modern buildings.



(Below) **One of twenty-four** compartments comprising the 8' x 16' "Control Center" in remodeled building. This type of installation exemplifies latest cost-saving techniques in automatic control system engineering.



Rapid response of electronic controls appealed particularly to the telephone engineers. Controls for the lobby compensate instantaneously for heat loss through front doors. Controls on fresh air supply adjust mixture continuously for improved comfort conditions. "Better control . . . electrically" is now practicable for most installations in large or small buildings. Phone your nearby Field Office, or write us for data, prices, and expert engineering service on any automatic control problem.

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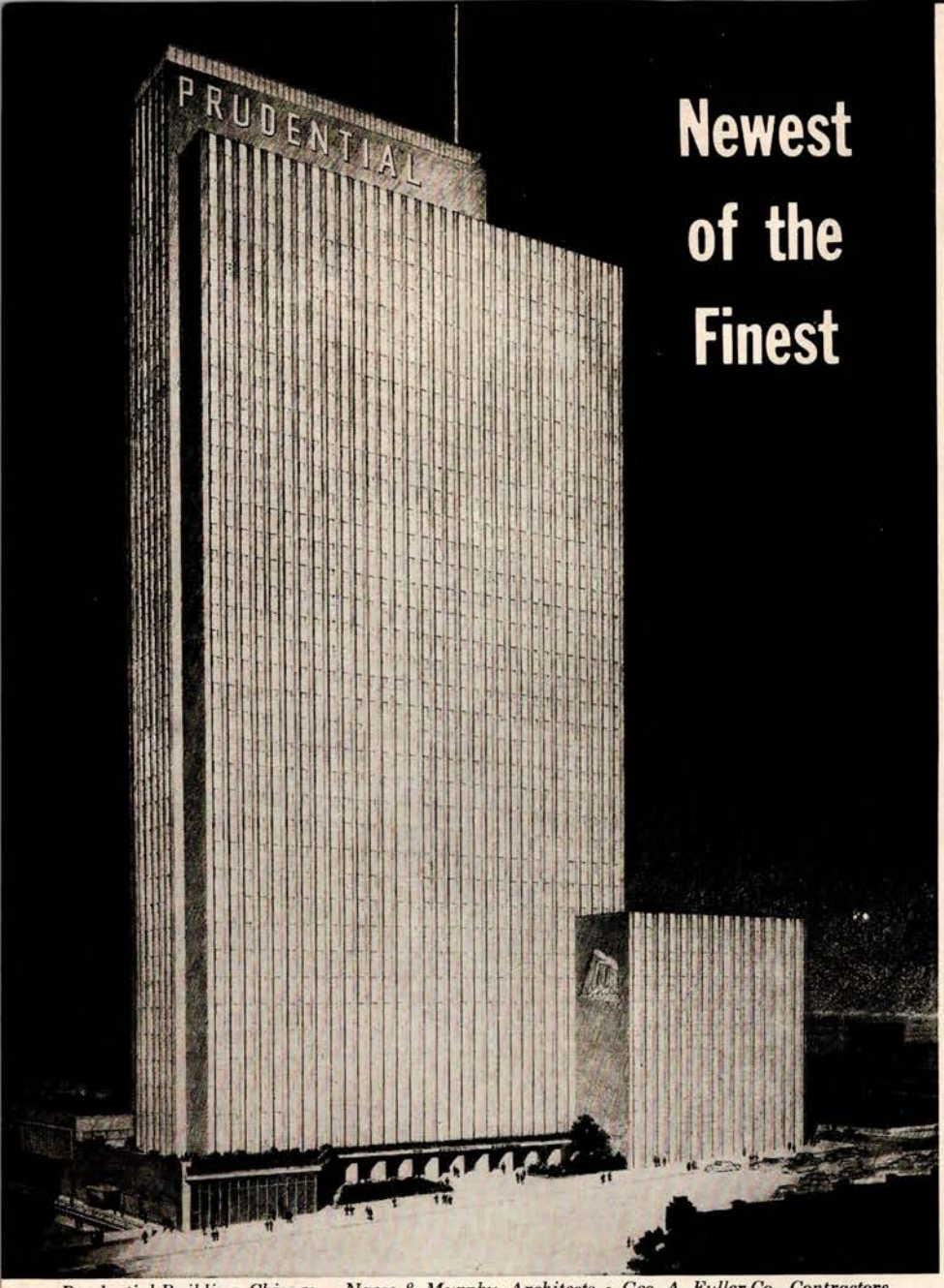


Newest of the Finest

Prudential Building, Chicago • Naess & Murphy, Architects • Geo. A. Fuller Co., Contractors

The new Prudential Building will soon rise 600 feet above the shore of Lake Michigan, and become a distinguished addition to Chicago's skyline. This mid-America headquarters of the Prudential Insurance Company will contain more space than any other building used exclusively for offices in Chicago.

As a building, it will take its place among our country's finest structures and is a perfect example of the features a well-informed investor is willing to put into the space he plans to use and rent. For instance, to prevent future obsolescence and to meet the increasing requirements of modern electronic office equipment, architects Naess & Murphy have prepared the new Prudential Building to handle the highest electrical load of any office building yet built. To do this job easily, and to permit layout changes and additions at minimum cost, Robertson Q-Floor construction is being used. This strong, light-weight, steel, cellular structural floor is the only construction material available which provides easy electrical access over every 6-inch area of the entire exposed floor. For more good reasons why fine new buildings all over America have turned to Robertson Q-Floor construction, see the opposite page.

Robertson

Q-Floor

Backed by 24 Years' Experience and Thousands of Installations

a product of **H. H. Robertson Company**

2404 Farmers Bank Building • Pittsburgh 22, Pa.

Offices in All Principal Cities **World-Wide Building Service**

A|E ROUNDUP

(Continued from page 227)

HUGE VENETIAN BLIND *for RCA Is Motor-operated in Control Room*

A huge Venetian blind, 88 ft long by 18 ft high, has been engineered for New York City's RCA Exhibition Hall in order to eliminate a serious sun problem.

The problem arose with the morning sun, which shone through the big windows of the Exhibition Hall, causing Dave Garroway to squint during his news program and also producing a shimmer on the receiving TV screens. RCA wanted to keep out the sun's rays without impeding the vision of sidewalk audiences, and the answer was a motorized blind.



Big blind assembled in Warner studio

Many considerations were involved in building the giant blind. Two of the most important were where to build it and how to install it without interfering with scheduled telecasts, and how to motorize it to be operated by remote control. The blind was assembled in an old Warner Brothers studio in Brooklyn, which had catwalks and balconies big enough for snaking in the two miles of slats and testing the blind. After completion the blind was delivered at midnight on a special 105-ft trailer.



Blind installed in Exhibition Hall

Three electric motors control the 1584 sq ft of blind. It can be raised, lowered, tilted either way or completely lowered for cleaning by pushing buttons in the TV control room. Special safety and electronic devices required 29 electric wires to complete the circuit.

The 114 slats of the blind, which was made by Levolor Lorentzen, Inc., are a special linen-like finish on metal which does not reflect highlights or show dust. Stainless steel cables are used instead of cord. Thirty-one extra-strong tapes are in a gray linen pattern to match the slats.

A/E ROUNDUP

PLYWOOD STANDARD *Issued on Performance and Appearance*

A new standard issued by the National Bureau of Standards sets forth basic specifications for nine grades of interior type and seven grades of exterior type Douglas fir plywood. Requirements are designed to provide the most economical stock panel possible for any given use need.

The standard, U. S. Commercial Standard CS45–55, affects annual production of about 4 billion feet, accounting for about 75 per cent of the nation's total plywood output, and calls for a number of changes in grading rules. Some of the most significant are:

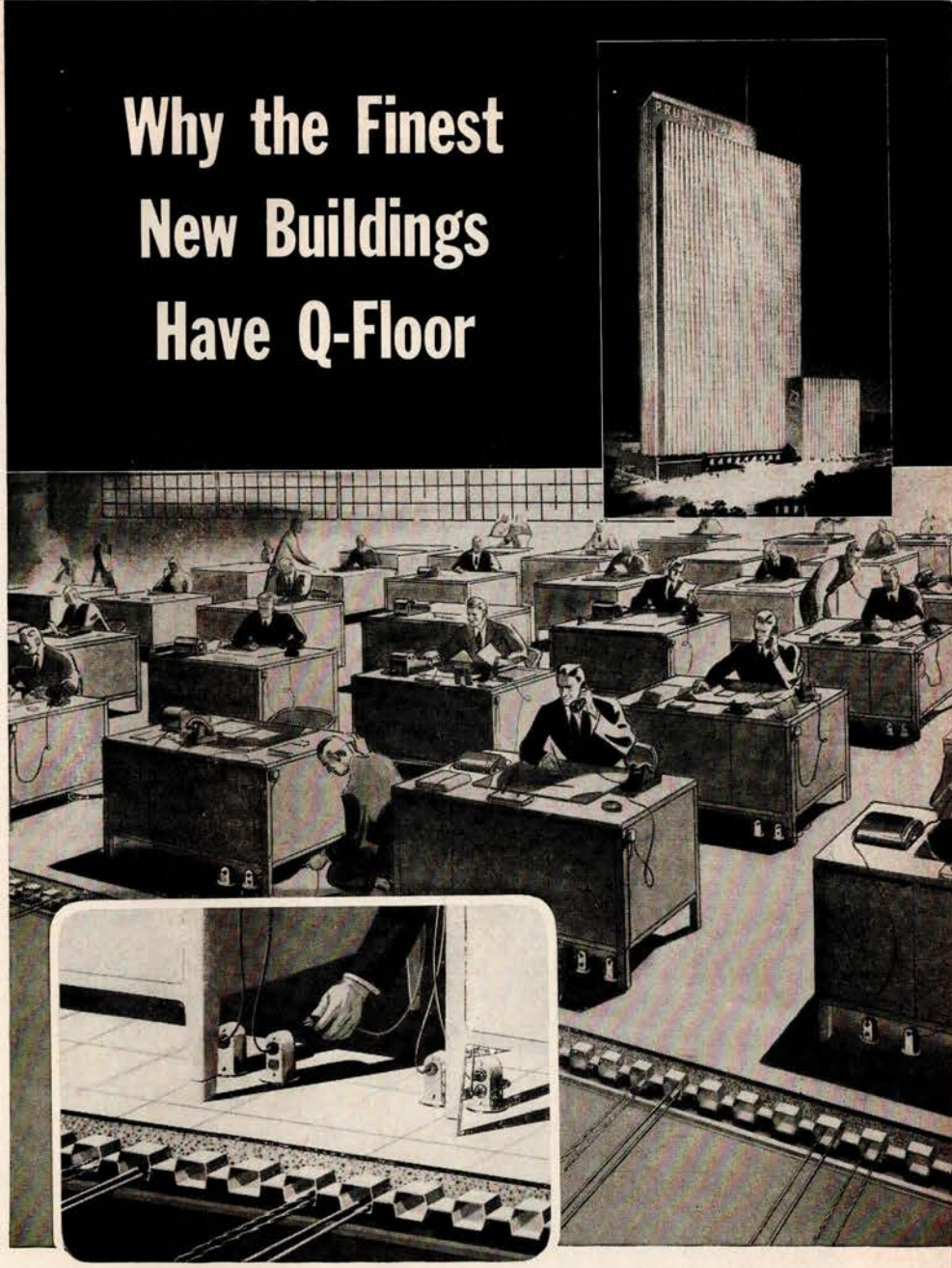
1. It establishes a new low-cost underlayment grade identified by the industry grademark Plybase. This is a sanded structural grade of fir plywood with one "repaired" surface smooth and solid enough to be used under all kinds of resilient flooring.
2. It sets up two new "special order" items with outstanding appearance quality for use with clear or natural finish.
3. It imposes new requirements improving the appearance of "A" veneer, which is the highest quality veneer presenting a smooth surface suitable for finishing or painting.
4. It sets up standardized requirements for overlaid fir plywood, which has smooth, resin-impregnated fiber surfaces permanently fused to both panel faces.
5. It provides for fortification of interior type adhesives used in structural grades of fir plywood.

Conformance with the standard's rigid performance requirements in panels bearing industry-owned grade-trademarks is assured by a joint system of industry-wide quality control and inspection administered by the Douglas Fir Plywood Association.

• **Fir plywood** will be acclaimed from June 19 to 21 in Portland, Ore., in celebration of the Golden Jubilee of the Douglas Fir Plywood Association.

• **The National Plumbing and Heating Exposition** will be held from June 6 to 9 at Navy Pier, Chicago. Approximately 175 manufacturers of plumbing, heating and home appliances will display their lines.

Why the Finest New Buildings Have Q-Floor



Beyond the fact that Q-Floor offers the greatest electrical availability of any structural floor in existence (as indicated in the above illustration), there are several other vital reasons why it has become a part of the finest new buildings in America.

Q-Floor saves construction time and money. The steel cellular units come on the job cut to fit so that two men can lay 50 square feet in one minute. In the case of the U. S. Steel-Mellon Bank Building in Pittsburgh, forty floors were installed in four months. Because Q-Floor provides a perfect platform for work and storage, 1,000 men were able to operate on the job without interfering with each other. Q-Floor saves steel as a result of its favorable ratio of weight to strength. Footings and structural steel can be lighter than with ordinary construction. Moreover, Q-Floor saves drafting room time since completely predetermined wiring and mechanical layouts are not necessary. Because no combustible forms and shoring are required, there has never been a construction fire on a Q-Floor job. Add these features to low cost on wiring changes in the years to come, and it's easy to see why Q-Floors are a feature of America's finest new buildings.

The Robertson Technical Library contains data books on Q-Floor which should be part of every architectural and engineering library. Write to us.

Robertson

Q-Floor

Backed by 24 Years' Experience and Thousands of Installations

a product of **H. H. Robertson Company**

2404 Farmers Bank Building • Pittsburgh 22, Pa.

In Canada: Robertson-Irwin Ltd., Hamilton, Ontario

In England: Robertson Thain Ltd., Ellesmere Port, Cheshire


PRUDENTIAL

PRUDENTIAL BUILDING, Chicago, Ill. (Now under construction.)
ROOFER: M. W. Powell Co., Chicago.
ARCHITECT: Naess & Murphy, Chicago.
GENERAL CONTRACTOR: Geo. A. Fuller Co., Chicago.

New "Gibraltar" over Lake Michigan

The Prudential Insurance Company has long used the Rock of Gibraltar as a symbol of its strength. Now Prudential can point with pride to a man-made "Gibraltar" of its own—the magnificent new Prudential Building on Chicago's lake front. It is the tallest building in Chicago, the fifth largest office building in America—architecturally and commercially one of the most outstanding construction projects in recent years.

Two other notable new "Gibraltars" are the Prudential Buildings in Jacksonville and Minneapolis—both far and away the most modern and capacious office buildings in their respective regions.

Newsworthy and significant is the fact that all three of these important buildings will enjoy the superior protection of Barrett Roofs!

For generations leading American architects have consistently recommended Barrett Roofs for the protection of our most important public, commercial and industrial buildings.

BARRETT DIVISION, Allied Chemical & Dye Corporation, 40 Rector Street, New York 6, N. Y.; 205 W. Wacker Drive, Chicago 6, Ill.; 36th St. & Grays Ferry Ave., Philadelphia 46, Pa.; 1327 Erie St., Birmingham 8, Ala.; Melrose Building, Houston 2, Texas.

Allied Chemical



PRUDENTIAL BUILDING, Jacksonville, Fla. (Now under construction.) ROOFER: Ferber Sheet Metal Works. ARCHITECT: Kemp, Bunch & Jackson. GENERAL CONTRACTOR: Daniel Construction Co.—All of Jacksonville.



PRUDENTIAL BUILDING: Minneapolis, Minn. ROOFER: John A. Dalsin & Son. ARCHITECT: Magney, Tusler & Setter. GENERAL CONTRACTOR: C. F. Haglin & Sons—All of Minneapolis.

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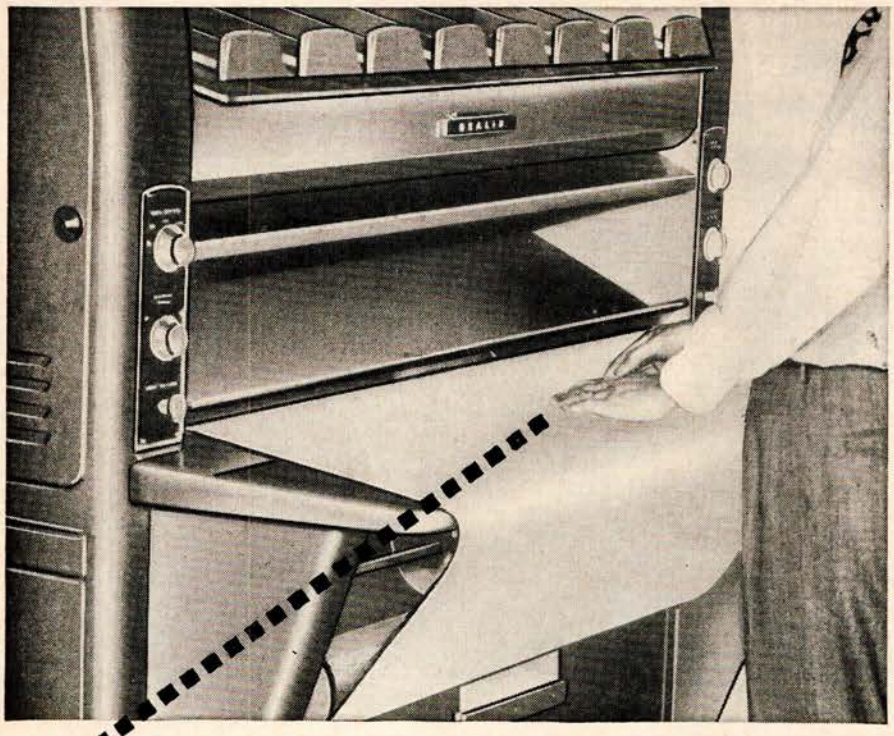

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New STREAMLINER *400... prints on sheets or continuous roll stock up to 42" wide, as fast as 24' per minute... improved design, superlative performance, best value among lower priced whiteprint machines.*

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OZALID

A/E PRODUCTS

(Continued from page 229)

KITCHEN, LAUNDRY EQUIPMENT

Hotpoint's Golden Anniversary year is being marked by the introduction of new lines in all product areas. Three new *disposalls* include two deluxe types (MW9 and MWP9) and one standard continuous-feed type (MW10). A new *built-in ensemble* of matched equipment includes an oven and surface units, two-door refrigerator-freezer and automatic dishwasher. Five new *refrigerators* comprise two single-door refrigerators and one two-door and two single-door refrigerator-freezer combinations. A new "Calrod" unit for faster cooking is featured on *surface cookers*. Three *automatic electric clothes washers* list a Super deluxe lighted pushbutton model (LK2), a deluxe pushbutton model (LJ2) and a low-cost rotary dial model (LH7). Two *automatic electric clothes dryers* are a deluxe model (LG2) and an air blower model (LB1). *Hotpoint Co., 5600 West Taylor St., Chicago 44, Ill.*

REFRIGERATOR-FREEZER

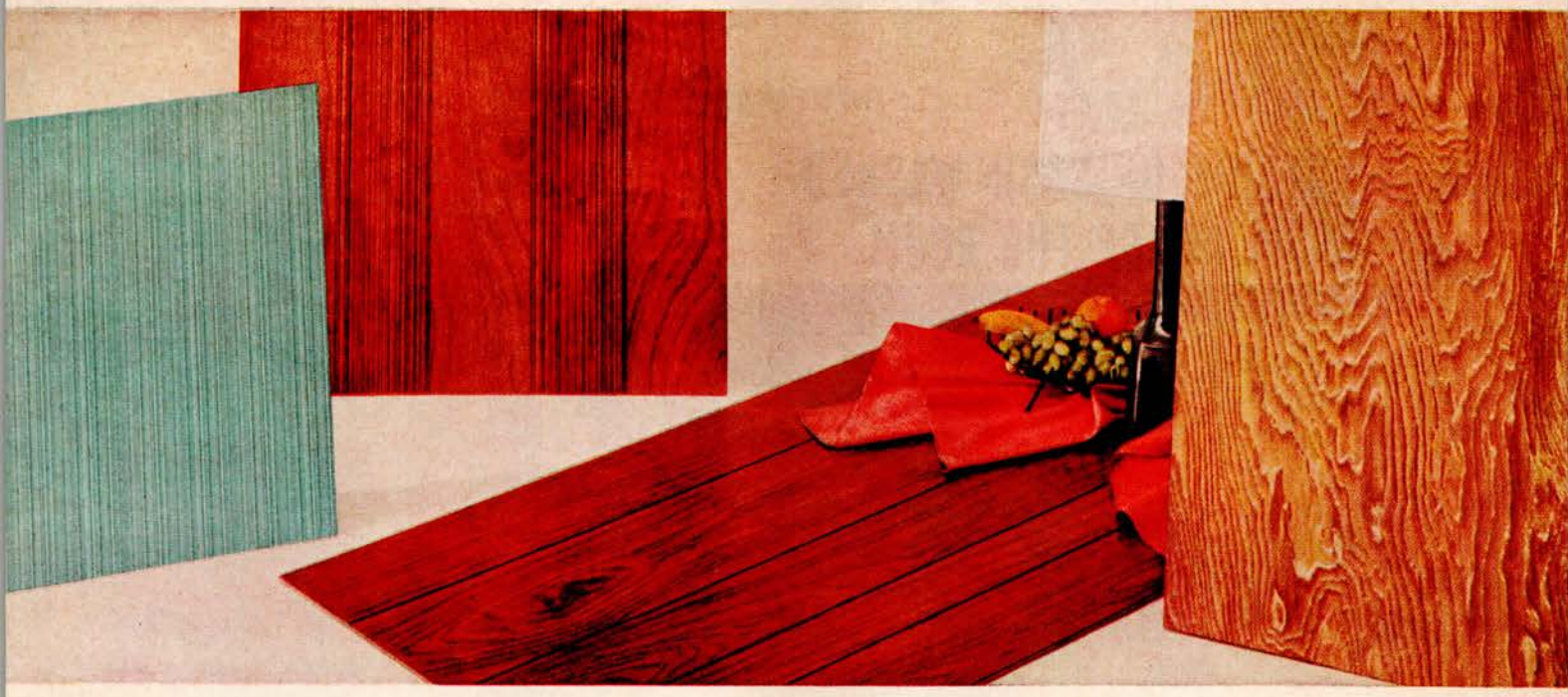


The Foodarama combines a freezer and refrigerator, each with separate upright doors, in one unit. The separately insulated freezer, on the left, stores 166 lb of food. The automatic defrosting refrigerator, on the right, has roll-out shelves and slide-out baskets. Both have in-the-door storage space. *Kelvinator Div., American Motors Corp., 14250 Plymouth Rd., Detroit 32, Mich.*

SHELVING EQUIPMENT

E-Z shelving equipment consists of three basic elements: metal standards, which are screwed into the wall; shelf brackets, which are clamped by a single bolt to the standard; and shelves, which rest on the brackets. The prefabricated elements can be combined in wall shelving, display cases, island displays or tables. *Standard Steel Works, 16th and Howell Sts., North Kansas City, Mo.*

(Continued on page 248)



WELDTEX. Here in painted fir; also in gum and Philippine mahogany. Prices from $25**.

PLANKTEX. In natural or pre-finished Philippine mahogany. Pre-finished costs $41**.

V-PLANK. In oak, walnut, Korina®, Honduras mahogany, Samara*. Starts at $44**.

SEA SWIRL. Clear, weathered-look paneling without knots—$30**; knotty Surfwood—$22**.



SAMARA V-PLANK in this basement recreation room costs only $44 for an 8′ x 12′ wall (for built-ins use regular Samara).

In Canada: Weldwood Plywood, Ltd., Montreal.

TEXTURED WOODS

Give homes new beauty, a new kind of appeal with Weldwood textured woods . . . at a cost as low as $23 for an 8′ x 12′ wall!

Weldtex®—*patented* by Weldwood. *Only from Weldwood* can you get the original striated paneling that started the textured wood trend; fine for natural or painted finish. Comes also in exterior grade for siding; striations assure no grain raising or checking. Thicknesses: interior 5/16″, ¾″ in fir only; exterior ⅜″.

Planktex* combines the striations of Weldtex with alternate bands of smooth wood. Comes unfinished or completely pre-finished ready to apply. Thickness—5/16″.

Sea Swirl® and Surfwood® look like weathered driftwood; fine for dens, playrooms, cabins; texture hides nail holes. Thickness—5/16″.

V-Plank* features vertical grooves that give the effect of random planking. Comes already pre-finished by skilled woodcraftsmen. Thickness—¼″.

Texture 111® siding is exterior grade fir with knots and unsanded faces; gives rough-textured, dramatic look; can be installed without sheathing. Also perfect for gable ends, soffits, carports, breezeways and fences. Thickness—⅝″.

All panels available in standard 4′ x 8′ sheets, as well as other sizes.

Send coupon for more details or visit your Weldwood lumber dealer or any of the 82 United States Plywood showrooms in principal cities.

**For an 8′ x 12′ wall.

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OUTSIDE OF SASH WASHED FROM INSIDE THE ROOM...



WITH NEW GETTY OPERATOR AND HINGE FOR POPULAR AWNING-TYPE WINDOWS

Easier window cleaning is but one of the advantages you can offer with this new No. 4711 Getty Operator and Hinge Set.

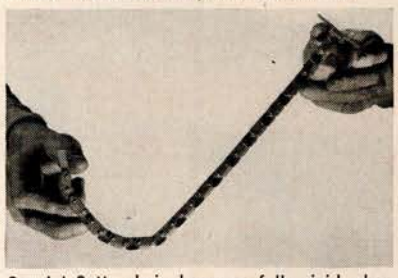
This Getty Operator works on a new and unique principle. It has a special kind of chain that becomes fully rigid when extended in opening an awning-type window. The operator holds the window firmly in any open position. It *closes and locks* the window securely without disturbing the screen—and without the separate lock many other operators require.

The hinge drops the sash from the frame, so that the outside of the window can be easily cleaned from inside the room. And both operator and hinge can be quickly and easily installed. There's no complicated hardware to fuss with or get out of order.

Specify Getty No. 4711 Sets for windows from 14 to 30 in. high and up to a maximum width of 48 in. Set #1 is for windows 14-17⅞ in. high; Set #2 for windows 18-23⅜ in. high; Set #3 for windows 23½-30 in. high. For complete information, including specification data, see your hardware consultant or write us direct now.



New Getty Operator and Hinge Set is easy to install. There's no complicated hardware.



Special Getty chain becomes fully rigid when extended—locks window in any position.

Remember — More Getty Operators Are Used on Casement Windows Today Than All Other Makes Combined!

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With this **ANNOUNCEMENT** of Porcenell Chalkboard, it is not an overstatement to say that a new concept in modern school chalkboard history begins. BENJAMIN ELECTRIC, long a pioneer in lighting, is proud to follow its advancements in school illumination with this further advancement in better seeing and instruction.

Never before a CHALKBOARD like this!

Writing and Erasing are a Pleasure!

Chalk "flows on" with minimum pressure due to micro-fine, super-hard, "suede-coated" surface which also facilitates erasure; eliminates ghosts.

Papers can be held to board with magnetic holders

Easier, Lower Cost Maintenance

Quicker, "care-free" cleaning with water restores board to original efficiency; there are no deep pores to retain chalk particles; dulling is thus eliminated.

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Never needs replacement due to age . . . will not become shiny in a lifetime of normal use; cannot fade . . . completely resistant to moisture . . . cannot warp.

Porcenell Triumphs Over the Cost Problem to Bring All Wanted Features Within the Means of All! New materials, methods and lighter weight steels cut initial cost; make possible easier and lower cost installation.

NEW BENJAMIN PORCENELL

NOT slate, glass or plastic...
NOT conventional porcelain enamel...
NOT composition board...
it's an ENTIRELY NEW TYPE VITREOUS ENAMEL Chalkboard

SEND NOW for complimentary copy of booklet: "PORCENELL, A NEW ERA IN CHALKBOARDS." Use your letterhead or this coupon, address BENJAMIN ELECTRIC MFG. CO., DEPT. Q-1, DES PLAINES, ILL.

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

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Chicago 39, Ill.

Educational Equipment Inc.,
2623 Woodhill Rd.,
Cleveland 4, Ohio

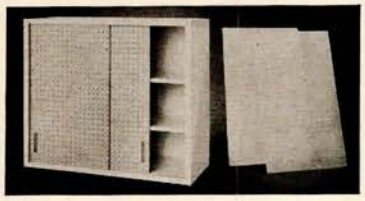
AIA PRODUCTS

(*Continued from page 244*)

FOOD WASTE DISPOSER

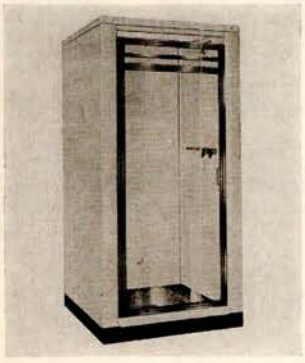
A new *food waste disposer* has a "telescoping" adjustment that allows the disposer to be moved up or down to fit any plumbing rough-in without changes in existing plumbing. The Telex Deluxe has a Robot-Rotor feature which is an automatic grind selector. *In-Sink-Erator Mfg. Co., Racine, Wis.*

SLIDING-DOOR CABINETS



Pic-A-Dor steel kitchen cabinets are equipped with sliding doors of textured glass or plain or perforated hardboard that can be painted to match any color scheme. The white steel cabinets are also available without doors, but fitted with grooves and runners for custom-cut sliding doors. All cabinets have adjustable shelves. *Tracy Kitchens, Edgewater Steel Co., 3125 Preble Ave., Pittsburgh 30, Pa.*

SHOWER CABINET



Five new *Craft shower cabinets* are now available — the Riviera, the Bermuda, the Saratoga, the Newport, the Capri and the Champion. Highlights of the new line include terrazzo receptors, smooth, rounded corners flanking the doorway and larger shower heads. *Cutler Metal Products Co., 1025 Line St., Camden 3, N. J.*

BREATHABLE UPHOLSTERY

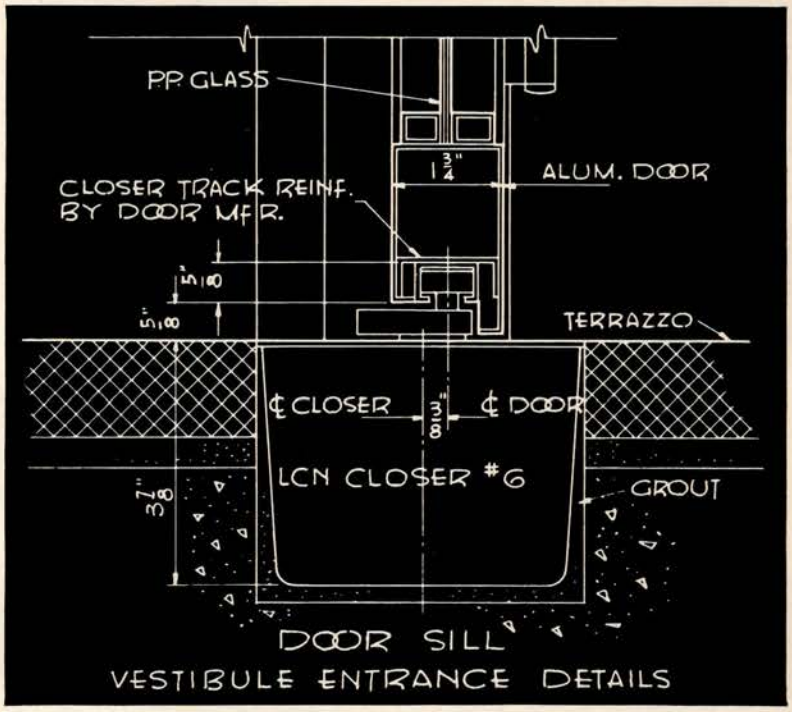
A *vinyl upholstery material* called "Castleton" and designed by Russel Wright is a plastic-coated fabric which permits the passage of air. *E. I. du Pont de Nemours & Co., Room D-7145 (Allan Perry), Wilmington, Del.*

CONCRETE BLOCK

• A *ceramic-glazed concrete block* makes possible the installation of a concrete block wall without the necessity of an additional finish. The Glasface block, in which a glassy finish has been applied to an aggregate-type concrete block, is available in a number of colors. *Ferro Corp., 4150 East 56th St., Cleveland, Ohio.*

• *Multiple-web concrete blocks* have five rows of spacings which increase strength, insulation and sound-proofing. Two outer spaces contain dead air, and the three inner spaces allow for circulating air. These spaces not only increase the insulating value but also provide maximum surface area to absorb sound. The Webco units, said to be 25 per cent stronger than ordinary blocks, decrease moisture penetration and require no furring. They are constructed to withstand all climatic conditions as well as termites, dry rot and fire. *American Webco Corp., 501 Broad St., Sewickley, Pa.*

(*Continued on page 253*)



CONSTRUCTION DETAILS

for LCN Floor Type Door Closer, Shown on Opposite Page

The LCN Series 2-4-6 Closer's Main Points:

1. Full rack-and-pinion, two-speed control of the door
2. Mechanism concealed; lever arm disappears under door
3. Door hung on regular butts, its weight carried independently of closer
4. Closer easily adjusted or serviced without taking door down
5. Installed with or without threshold; may be flush with threshold or with floor
6. Used with wood or metal doors and frames

Complete Catalog on Request—No Obligation
or See Sweet's 1955, Sec. 17e/L

LCN CLOSERS, INC., PRINCETON, ILLINOIS

Skidmore, Owings & Merrill, *Architects and Engineers*

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

NEW PLANT OF SAWYER BISCUIT COMPANY DIVISION OF
UNITED BISCUIT COMPANY OF AMERICA, MELROSE PARK, ILLINOIS
LCN CLOSERS, INC., PRINCETON, ILLINOIS

Construction Details on Opposite Page





EASY SOLUTION TO FIVE DIFFICULT DESIGN PROBLEMS

. . . Milcor Metal Lath and Plaster

GIMBEL BROTHERS	SOUTHGATE SHOPPING CENTER MILWAUKEE, WISCONSIN
ARCHITECT	GRASSOLD-JOHNSON & ASSOCIATES, MILWAUKEE
GENERAL CONTRACTOR	HUNZINGER CONSTRUCTION COMPANY, MILWAUKEE
PLASTERING CONTRACTORS	PAUL C. BAUMANN, MILWAUKEE JOHN E. GREGORY & SONS, INC., MILWAUKEE ALFRED SCHMITT, INC., MILWAUKEE

The architects of Gimbel's new Milwaukee store had several problems to solve: (1) They wanted an open, spacious interior appearance. Yet, (2) they wanted individual departments to be easily distinguished — with clean partitions that could do double-duty as panels for signs and decorations, and as storage-area enclosures. (3) They wanted to screen off the massive, overhead air-conditioning and heating systems. (4) They wanted the store to be well-lighted, without conspicuous light sources. And, finally, (5) they wanted it to be firesafe.

They found the answer to all these design problems in the exceptional versatility of Milcor Metal Lath and accessories.

Milcor Catalog No. 202 illustrates and describes the complete line of Milcor Metal Lath and accessories. Copies are available upon request.

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BALTIMORE, MARYLAND

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ELECTRICAL ENGINEERS:	EDWARD E. ASHLEY NEW YORK CITY
GENERAL CONTRACTORS:	CONSOLIDATED ENGINEERING CO., INC. BALTIMORE
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211,500 square feet of Milcor Celluflor are being erected in Baltimore's new Commercial Credit Building.

IT'S MILCOR CELLUFLOR FOR NEW COMMERCIAL CREDIT BUILDING

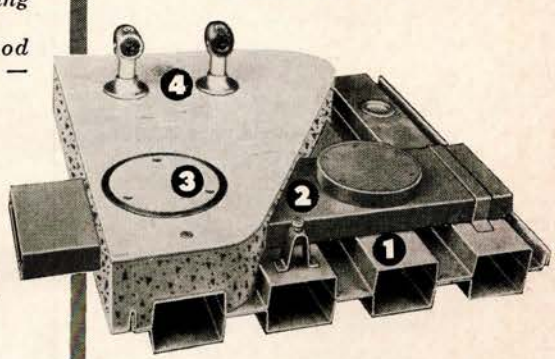
Baltimore's Newest — Designed by Harrison and Abramowitz and Constructed by Consolidated Engineering Company,— will have the Last Word in Electrified Sub-Floors

Milcor Celluflor, latest cellular floor development, is truly the "Floor of the Future". It meets the changing, growing need for electrical flexibility to provide for electronic office equipment and business machines. Its closely spaced raceways permit the installation of communications or power outlets at virtually any point on the floor. Furthermore, these outlets can be relocated — or new ones added — without expensive alterations.

Only Milcor Celluflor offers all these features:

- *Structural strength of close cell spacing — eight steel webs every 24 inches.*
- *Potential electrical outlet every 6" of exposed floor.*
- *Unexcelled protection of Inland TI-CO† galvanizing.*
- *Safe working floor for all trades during construction.*
- *Lower over-all building cost — wood forms, staging and shoring eliminated — faster construction — earlier occupancy.*

We'll be happy to send further information at your request.



Milcor Celluflor (with Walker electrification) has (1) closely spaced cells protected by Ti-Co galvanizing; (2) large header duct that carries wiring from distribution point to panel cell; (3) easy-access units that are inset to accommodate floor covering; (4) outlet fittings for telephone and power.

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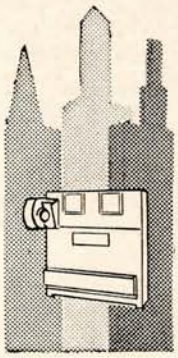
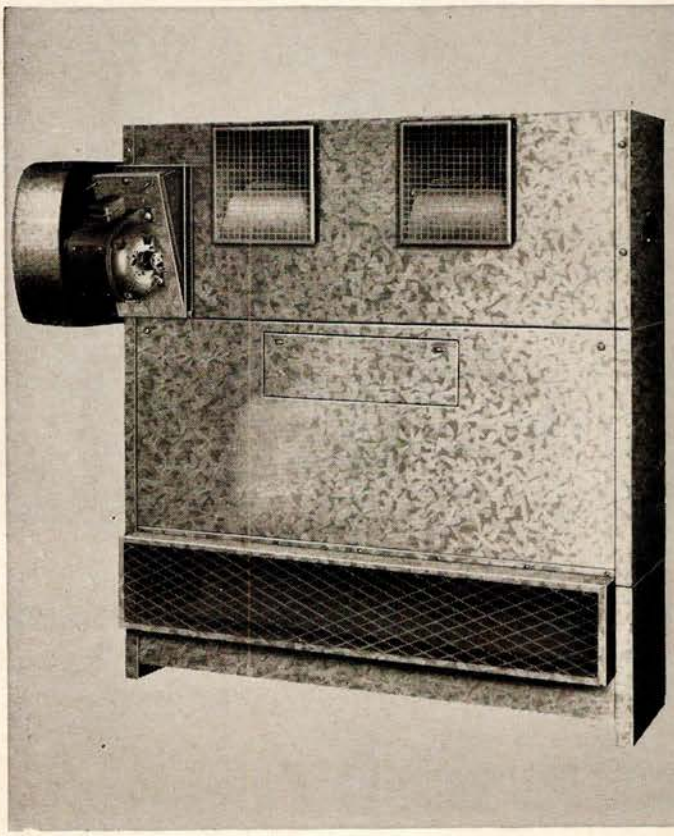


Acme WATER SAVING COOLING TOWER

with All-Metal hot-dip galvanized construction for longest life — fastest heat transfer



FEATURE FOR FEATURE Acme GIVES MORE

1. Modern, compact all-metal construction — no wood to rot, no painting required.
2. Steel is completely hot-dip galvanized after fabrication for maximum rust and corrosion protection.
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9. Can be installed in any location indoors or out.

Your clients will receive maximum cooling tower value for their dollars when you recommend and specify ACME. Built by a firm with 35 years' experience in serving the refrigeration and air conditioning industries, ACME cooling towers combine advance design with quality construction. This means top performance and long life service with minimum maintenance cost.
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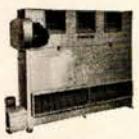
Dry-Ex® (Direct expansion) Liquid Chiller



Acme Cooling Towers and Evaporative Condensers



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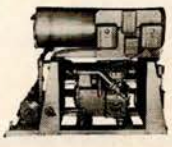

Flow-Cold Packaged Liquid Chiller

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Leo J. Freitas.....Dixon 9748
TEXAS, Corpus Christi
T. N. Inglis
TEXAS, Houston
Acme Industries, Inc.....Keystone 1418
TEXAS, San Antonio
L. S. Pawkett, Louis Hornor.....Fannin 1291
UTAH, Salt Lake City
Ted Brown.....9-8677
VIRGINIA, Richmond
E. Glenn Breeden, Jr.....88-1660
WASHINGTON, Seattle
Frank Ozanne.....SEneca 2377
WASHINGTON, Spokane
Hobart Teneff.....MAdison 19052
WASHINGTON, Tacoma
H. F. Warren.....MArket 4281
WISCONSIN, Milwaukee.....Broadway 1-1414
or Contact the Chicago Regional Office
CANADA, Montreal
Blair Livingston.....BElair 6102
CANADA, Toronto
Bernard Kaufman.....Murray 8185

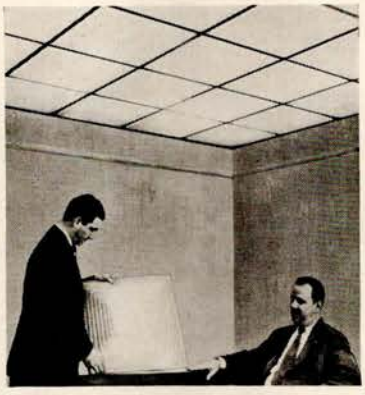
AIH PRODUCTS

(*Continued from page 248*)

AIR ENTRAINING AGENT

An *air entraining agent* for concrete incorporates controlled air into the concrete mix for better application and greater durability. Permite N-Tair, a low-viscosity, homogeneous solution, is guaranteed by the manufacturer not to segregate, settle out, become gummy or lose efficiency under adverse conditions such as low temperatures. *Permile Curing Compound Div., Aluminum Industries, Inc., 2438 Beekman St., Cincinnati 25, Ohio.*

LUMINOUS CEILINGS



• *Luminous ceiling panels* for wall-to-wall shadow-free lighting can be located close to the light source and so are particularly suitable for existing buildings with low ceilings. Guaranteed against deterioration by ultra-violet light, the panels are dimensionally stable and scientifically formulated for correct color. *The Watertown Mfg. Co., Watertown, Conn.*



• A *luminous ceiling* of white translucent, corrugated vinyl rests on extruded aluminum channels under Pittsburgh fluorescent or slimline strips. The "Luma-Ceiling" can also be installed with an auxiliary spun-glass acoustical baffle for sound absorption. The installation shown above is the Paramount Garment Shop in Philadelphia. *Pittsburgh Reflector Co., 403 Oliver Bldg., Pittsburgh 22, Pa.*

(*Continued on page 257*)

You owe it to yourself . . . to know the *important points of difference* between Arcadia and other types of sliding glass doors. Spend just a few minutes with Arcadia's new 1955 catalog and decide for yourself. See it in Sweet's—phone your Arcadia distributor —or wire us *collect* for prompt action.

there's more to

arcadia®

sliding glass doors than meets the eye!



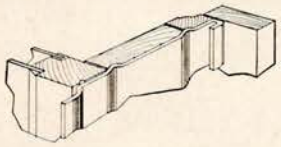
ARCADIA METAL PRODUCTS • ARCADIA, CALIF.
National member Producers' Council, Inc. and Natl. Assn. Home Builders. Also member Home Builders Institute and Building Contractors Assn.



Pella®

WOOD CASEMENT WINDOWS

the warm, friendly wood casement . . . with a backbone of steel



PELLA WOOD CASEMENT WINDOWS combine the beauty and insulating qualities of wood with the strength of steel. For a 16-gauge steel frame reinforces the sturdy wood lining to provide maximum rigidity. This steel frame extends the full width of the 5¼″ jamb and is continuous around all four sides of the windows. The hinge butt plate is anchored to the solid steel frame. That's why PELLA CASEMENTS always hang true and can be furnished with glass sizes up to 24″ x 60″— the largest wood casement sash on the market.

The wide range of PELLA stock sizes in modular widths, used singly or in combination, makes it possible to create perfect window arrangement for every design concept. Glass sizes are 16″, 20″ and 24″ in width and range up to 60″ in height. Furnished with both horizontal and vertical muntins, with horizontal muntins only, or without muntins.

PELLA CASEMENTS fit snugly in all types of wall construction. They are completely assembled with hardware fitted at the factory.
A quality window competitively priced. Investigate today. See our catalog in Sweet's or mail the coupon today for free literature. Distributors are located in major cities of U. S. and Canada.



ROLSCREENS—All Pella Casements are equipped with inconspicuous Pella Rolscreens—that roll up and down like a window shade. Need no putting up, taking down, repairing or storage.



DUAL GLAZING—The year-'round Pella self-storing storm window protects against winter cold and summer heat. Reduces street noises up to 40%. Glass sets in a neat aluminum frame, vinyl-lined to keep out dust.

Pella®

WOOD CASEMENT WINDOWS

CLIP AND MAIL TODAY

ROLSCREEN COMPANY, Dept. G-5
PELLA, IOWA

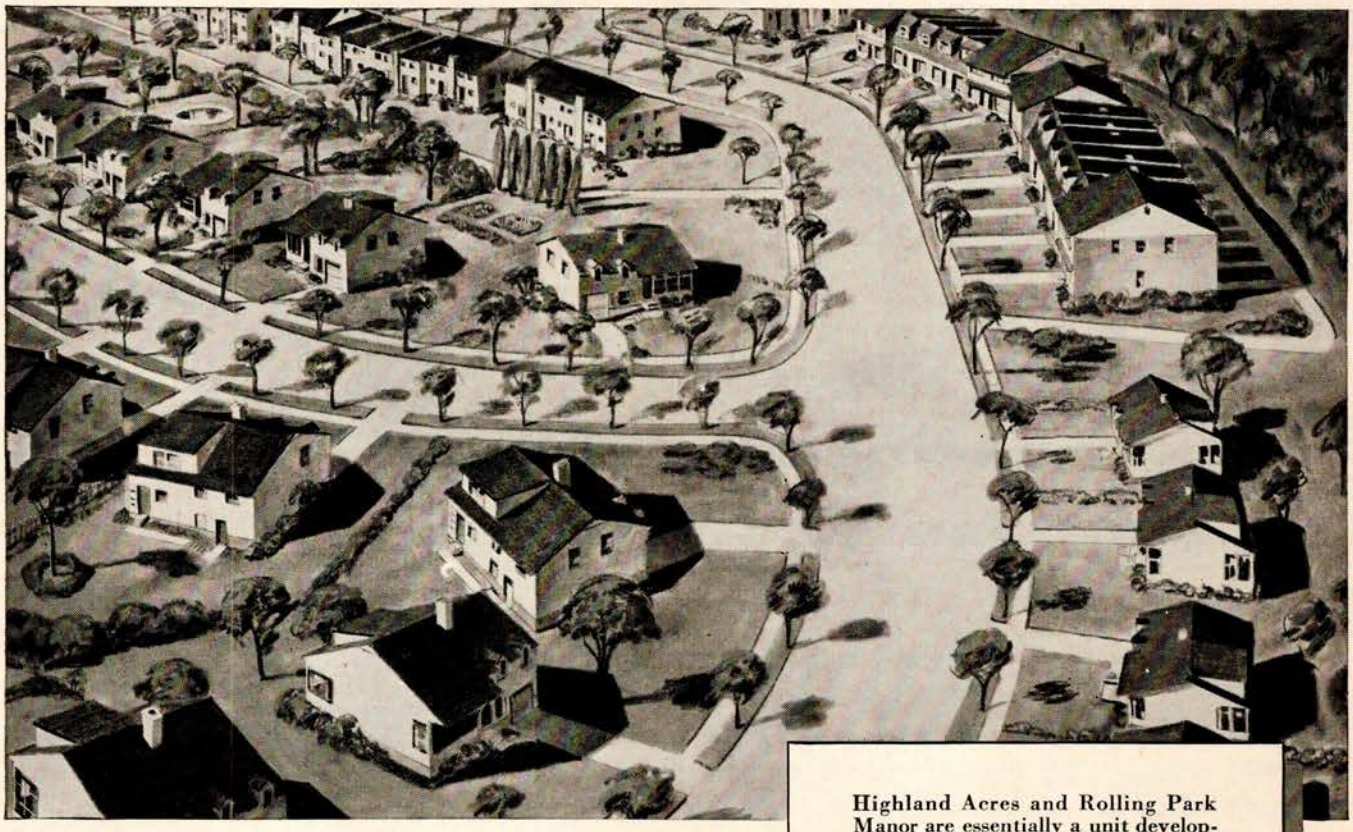
Gentlemen: Please send free literature on PELLA CASEMENT WINDOWS, with name of nearest PELLA distributor.

FIRM NAME _____

ADDRESS _____

CITY _____ ZONE STATE

ATTENTION MR. _____



Highland Acres and Rolling Park Manor are essentially a unit development featuring single-level and split-level homes in contemporary style. When completed, the area will comprise three hundred homes ranging from $10,000 to $14,000. All homes will be equipped with AllianceWare fixtures in color. The rolling topography and winding streets will provide a park-like appearance.

Builders—Ted Bentley and Fred Wallace, Jr.
Architect—Jack Swerman
Plumbing Contractor—Madsen Plumbing and Heating Company
Plumbing Wholesaler—J. Levitt, Inc.

Developer and Plumbing Contractor "team up" with AllianceWare Fixtures in Merchandising 300 Homes

When Ted Bentley and Fred Wallace, Jr. began planning Highland Acres and Rolling Park Manor homes sites in the City of Chester, a suburb of Philadelphia, Pennsylvania, their previous experience in home development made them realize the extreme importance of fine bathrooms as a home sales-feature.

So it was a natural for them to team up with their plumbing contractor—Madsen Plumbing and Heating Company—in selecting sanitary ware fixtures that will be sales features in each of the 111 multi-level units and 146 row-type houses which are planned.

Their selection is AllianceWare — chosen for several practical reasons. Both organizations believe in AllianceWare because of past performance on previous projects of similar character. Second, the wide choice of the beautiful colors of AllianceWare makes possible the keying of decoration arrangements in pleasing variety, and third, the popular acceptance of AllianceWare in the Philadelphia area will be a distinct aid in successful selling.

ALLIANCEWARE, INC.
Alliance, Ohio

BATHTUBS • LAVATORIES • CLOSETS • SINKS

Plants in Alliance, Ohio and Colton, California

AllianceWare
PORCELAIN ON STEEL

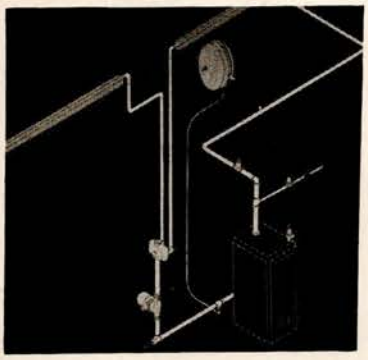
AIE PRODUCTS

(Continued from page 253)

TWO-TEMPERATURE HEATER

An *automatic gas water heater* with a solid aluminum tank supplies two temperatures of hot water. It provides 180 F water needed to maintain 160 F or higher tub temperatures in automatic dishwashers and clothes washers and also from the same tank 125 F water for bath, lavatory and other general use outlets. The extra hot water is piped direct to the automatic appliances and thus never comes in contact with the hands. *Ruud Mfg. Co., Kalamazoo, Mich.*

HOT-WATER HEATING



Forced hot-water heating in the Hydro-Heat System presents a new approach to air problems. A water accumulator which replaces the conventional expansion tank eliminates contact between air and water. A simplified purge header has a single purge valve for the entire system instead of a valve for each circuit. A semi-recessed, convector-type air conditioning unit is also available. *Warren Webster & Co., Camden, N. J.*

ALUMINUM BUS BARS

Bus duct with aluminum bus bars is 35 per cent lighter than its copper counterpart, has double silver-coated aluminum bars to provide low resistance contacts as joints. It is available in ratings of 225 through 4000 amp. *Westinghouse Electric Corp., P. O. Box 2099, Pittsburgh 30, Pa.*

ALUMINUM RAILINGS

Tubular aluminum railings have a bolt-through construction which ties the ⅛-in.-thick extruded members together making them vibration-free and impact-resistant. Welding is eliminated, so that discoloration at the rigidly reinforced joints is absent. *Newman Bros., Inc., Cincinnati 3, Ohio.*

(Continued on page 260)

HUBBELL top quality WIRING DEVICES installed in new SIKORSKY AIRCRAFT PLANT

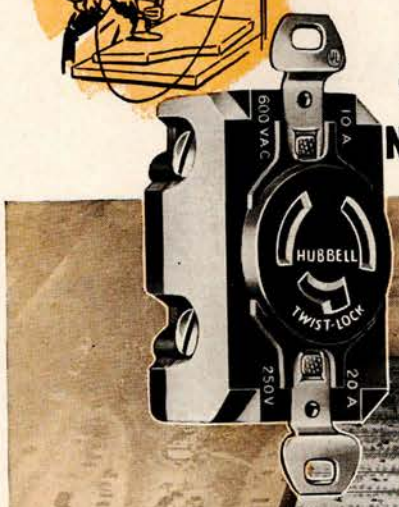
HUBBELL

REG. U.S. PAT. OFF.

Twist-Lock®

NO. 7310 20 amp. 250 v. 10 amp. 600 v.

used in production areas



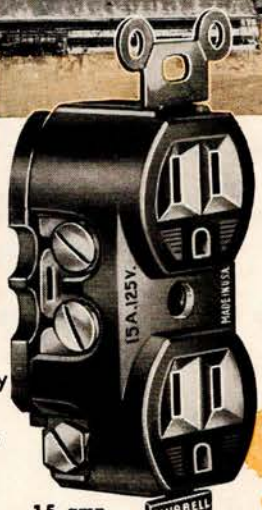
New plant — Sikorsky Aircraft, Div. of United Aircraft Corp., Stratford, Conn.

ARCHITECTS
F. A. Fairbrother — Geo. H. Miehls, Architect and Engineer; Albert Kahn Associated Architects and Engineers, Consultants, Detroit, Michigan

ELECTRICAL CONTRACTORS
* Fischbach & Moore, Inc., New York, N. Y.
Eastern Elec. Construction Co., Bridgeport, Conn.

HUBBELL SUPPLIER
Sprague Electric Supply Co. Bridgeport, Conn.

Specification Grade
NO. 5262
Convenience Outlet
used in office areas



15 amp. 125 volts



For over 20 years . . .
Sikorsky has used Hubbell Highest Grade Heavy Duty Wiring Devices in their factory locations. This new, ultra-modern plant at Stratford, Conn., is no exception. Hubbell devices are being installed both in factory and office areas.

In the Factory **. . .** 3-wire Twist-Lock separable connectors are being installed wherever motor driven tools or portable electrical apparatus will be used.

In the Office **. . .** specification grade, 3-wire, grounding-type convenience outlets will be standard equipment for electric typewriters, adding machines, and other business machines.

Hubbell devices are designed to meet the steadily increasing load requirements of industry. Specify Hubbell — for increasing electrical capacity . . . for safety and convenience . . . for pleasing appearance . . . and for grounding protection.

Highest Grade HEAVY DUTY WIRING HUBBELL DEVICES

REG. U.S. PAT. OFF.

★ FISCHBACH AND MOORE, INC.
Contractors for manufacturing plant.
EASTERN ELECTRIC CONSTRUCTION CO.
Contractors for boiler house, sewage disposal plant and manufacturing facilities.

FACTORY WAREHOUSE LOCATIONS ASSURE NATIONWIDE STOCK AVAILABILITY

37 South Sangamon Street, Chicago 7, Illinois
103 North Santa Fe Avenue, Los Angeles 13, California
11-15 Park Place, New York 7, New York
542 Natoma Street, San Francisco, California

HARVEY HUBBELL, INC. DEPT. AR, BRIDGEPORT, CONN.

19HH55

CLEAR PRISMATIC GLASS

AMCOLENS®...

tomorrow's lens lighting TODAY!

AMCOLENS, an advanced concept in lighting, is the ultimate for the improved illumination of tomorrow.

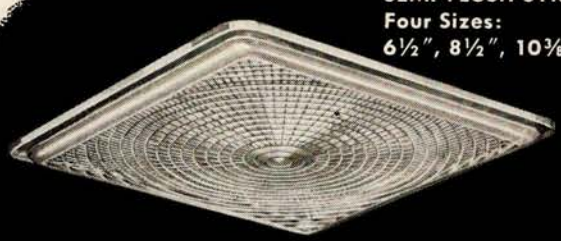
The precision engineering of AMCOLENS clear prismatic glass lens offers you the lighting of the future with all these unique advantages:

- **Crystal clarity**
- **Undiminished light transmission efficiency**
- **Unaltered white lamp light transmittance**
- **Precise light direction control**
- **Predetermined light distributions**
- **Minimum brightness in glare zone**
- **Edge-light on ceiling for contrast relief**

SEMI-FLUSH
Three Sizes:
8⅜", 10⅜", 13½" Dia.



SEMI-FLUSH SYMMETRIC
Four Sizes:
6½", 8½", 10⅜", 12" Sq.





This enlarged segment of Amcolens illustrates prism detail. AMCOLENS utilizes clear glass prisms, the most exact means known to science for controlling the direction of light.



A cross section of a typical Amcolens shows control of light. Precision engineering achieves multiplied useful light utilization below 60° with minimized glare zone brightness.

AMCOLENSES are the result of original ART METAL lens research and are available only in ART METAL complete lighting equipments.

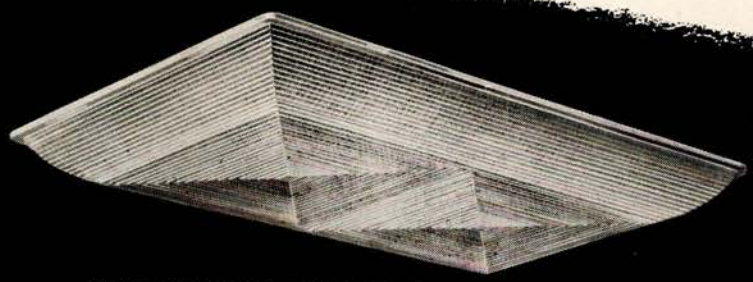
AMCOLENSES ARE ANOTHER *Lighting Research* DEVELOPMENT OF ART METAL

18 AMCOLENSES

are precision engineered
for specific lighting applications.



DEEP ASYMMETRIC
One Size:
10⅜" Sq.



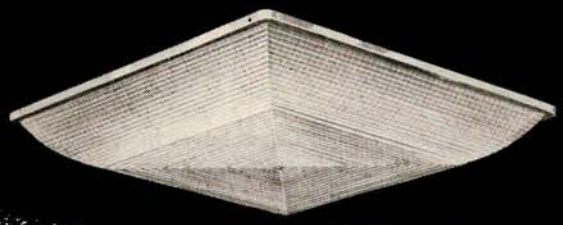


CONVEX
One Size:
7½" Dia.

TWO-LIGHT DEEP SYMMETRIC
One Size:
9½" x 16½"



LENSDRUM
Three Sizes:
9½", 11⅝", 13⅝" Dia.



DEEP SYMMETRIC
Three Sizes:
8½", 10⅜", 12" Sq.

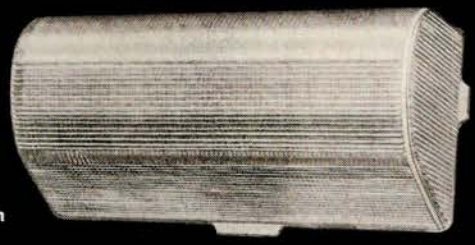
May we send the new catalog?

ART METAL Catalog 255, dedicated to the advancement of incandescent lighting through original research development, provides detailed information on Amcolens, plus factual data on all ART METAL lighting equipment with unbiased test data on lighting performance, evaluated by Electrical Testing Laboratories, Inc.

Write to:



AREALENS
One Size:
7½" Dia.



WALLENS
One Size:
11½" Length

THE PRODUCERS' COUNCIL INCORPORATED

The **ART METAL** *Company*

CLEVELAND 3, OHIO



Designer: H. J. Brunnier, Structural Engr.
San Francisco, Calif.

Genl. Contractor: Barrett & Hilp
San Francisco, Calif.

BYRNE BUILDS for UNITED

Byrne Canopy Type Doors have, for many years, been consistently specified by major air lines for their maintenance hangars. This Type K door is installed at the United Air Lines Maintenance Base at South San Francisco.

Built in two sections, one 103′ and the other 77′ wide, the door provides a closure 180′ x 50′. The sections may be operated individually or simultaneously. They are motor operated, upward-acting, with balanced suspension through cables which transmit dead loads to compact counterweights. Like all other Byrne Hangar Doors, this installation provides the features of fast operation . . . snug weathering . . . minimum maintenance . . . savings in floor space . . . and complete safety under all operating and weather conditions.

Byrne engineers have had over 25 years' experience in the development of doors of all kinds, and particularly in the design and construction of hangar doors. Their abilities can be put to work for you . . . at *any* time.



THIS NEW CATALOG contains full information on all Byrne Doors. Write for your copy.



BYRNE doors, inc.

1603 E. 9 Mile Road, Ferndale, Detroit 20, Mich.
101 Park Ave., New York 17, N.Y.
Dept. r-9 Cafritz Bldg., Washington 6, D.C.

AIA PRODUCTS

(*Continued from page 257*)

ALUMINUM ESCALATOR



Escalators with ribbed risers of die-cast aluminum are possible because of close tolerances in modern die-casting methods by the *Precision Castings Co., Inc., Fayetteville, N. Y.* They are expected to improve operation and increase safety, as well as reduce weight. *Otis Elevator Co., 260 11th Ave., New York 1, N. Y.*

SIDING



• *Shadowgroove siding* of $\frac{5}{16}$-in. Tempered Presdwood has $\frac{3}{8}$-in.-wide by $\frac{1}{10}$-in.-deep grooves, spaced 4 in. on center, which give the panels the appearance of vertical board construction. The shiplap edge treatment, with a $\frac{3}{4}$-in. overlap on one edge and a $1\frac{1}{8}$-in. underlap on the opposite edge, forms the groove at the joint. The siding is available in 4- by 8-ft panels or any combination of lengths that can be cut from a 16-ft panel. Shadowgroove can be nailed directly to studs or over sheathing. *Masonite Corp., 111 W. Washington St., Chicago 2, Ill.*

• *Colored asbestos cement siding* is made by a process which fuses two ceramic colors over a fireproof asbestos cement core. The striated siding can be washed off with soap and water and never needs painting. Shake Design Glatex comes in 27-in.-wide shingles and is available in Dover White, Meadow Green, Ranch Brown, Bamboo Ivory and Sheffield Gray. *U. S. Gypsum Co., 300 W. Adams St., Chicago 6, Ill.*

(*Continued on page 262*)

Something New Under the Sun

. . . Alodized Aluminum Roofing

No. 1 in a series on protective finishes for architectural aluminum.

On the Overly aluminum roof for Wyoming State Hospital, "Alodine" greatly increases corrosion-resistance, provides a matte-green finish that simulates the patina of copper and is sun-fast and stable, reduces glare, and masks reflectivity.



Wyoming State Hospital, Evanston, Wyoming

***Roof By:* Overly Manufacturing Co., Greensburg, Pa.**

What Alodizing is

AND WHY YOU SHOULD SPECIFY IT.

"Alodizing" is a process using the ACP chemical "Alodine" that converts the aluminum surface to a continuous non-metallic layer. It adds years to the metal's resistance to corrosion, and provides a perfect bond for paint, lacquer, vitreous enamel and adhesives.

One type of "Alodine" protects aluminum yet preserves the original appearance of the metal; another produces a sun-fast stable green that ranges from a grey-green iridescence to the deep patina appearance of weathered copper; still another produces an iridescent brown.

All types reduce glare and reflectivity. All add to aluminum's usefulness and durability, particularly at the seaside, in industrial areas, and in contact with mortar.

IF IT'S ALUMINUM, BE SURE IT'S ALODIZED.

A few of the many typical building products that should be Alodized: Roofing, Siding, Shingles, Gutters, Spouting, Jalousies, Screens, Hardware, Awnings, Blinds, Wall Tile, Sash and Door Frames, Curtain Wall Panels, Partitions, Heat and Vent Ducts, Trim, Cabinets, Refrigerating and Air Conditioning, Furniture Equipment, Light Fixtures.

For further information on Alodized aluminum, and other applications of the "Alodine" finish, write or call.

CHEMICALS ACP PROCESSES

Alodine Trademark Reg. U.S. Pat. Off.

Since 1914, Pioneering Research and Development in Metal Protection

AMERICAN CHEMICAL PAINT COMPANY

Ambler, Penna.

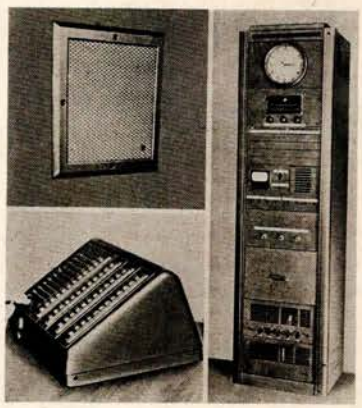
DETROIT, MICH. NILES, CALIF. WINDSOR, ONT.

(*Continued from page 260*)

COMMUNICATION SYSTEMS

• Two improved *communication systems* have been announced by *Executone* — one for schools and another for hospitals.

The *School* communication system incorporates into a single system two-way intercommunication, paging, public address, AM-FM radio, alarm program and time signal transmission. Single- and dual-channel facilities are both available. The dual system provides two separate channels for sound programs and an additional one for intercom, so that three activities can be in progress at once. The administrator's control station provides instant two-way voice contact with every classroom, while a sound control rack controls the other operations. Pushbutton classroom selectors are provided for program distribution at the rack. Electronically simulated siren and gong take priority over other transmissions in the system. Classroom stations in surface wall-mounted models, have red "privacy light" to advise teacher that classroom is being called.



Multi Audio-Visual Nurse Call, permits the nurse away from her station to identify and accept a patient call and carry on a two-way conversation without returning to the desk. The highly sensitive system provides faithful voice reproduction and can transmit even the faintest sounds. An emergency signaling circuit for toilets and other locations operates with repeating chimes and flashing light which can be extinguished only after the nurse has gone to the patient. *Executone, Inc., 415 Lexington Ave., New York 17, N. Y.*



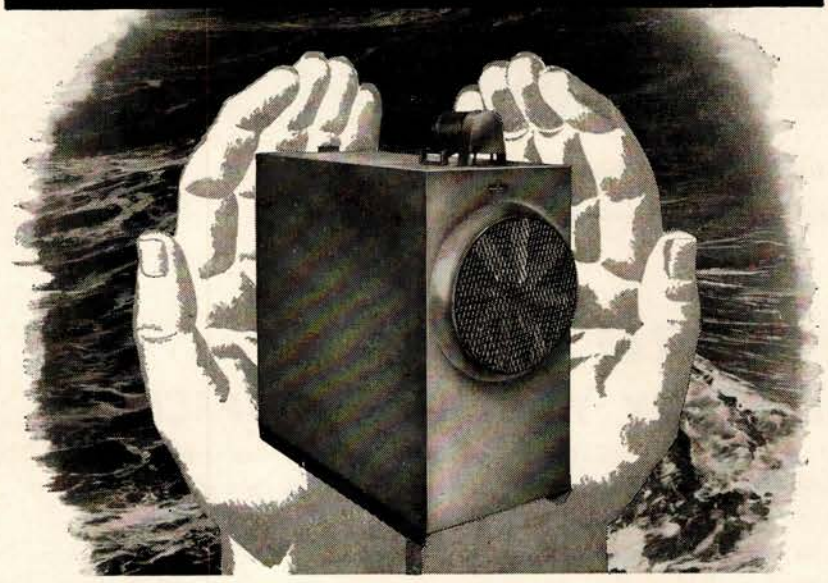
• The *Auth audio-visual nurse's call* enables the nurse, at her station, to monitor patients' rooms, individually or in groups. It consists of a two-way, amplified voice communication system with sensitive microphone-speakers at the nurses' stations as well as at the patients' bedsides. The nurse is also supplied with an auxiliary telephone handset. *The Auth Electric Co., Inc., Long Island City, N. Y.*

FORCED AIR HEATER

The *Lifeguard model* gas-fired, forced air heater is designed for the new home and modernization markets. Pyro-ceramic Armorcoat on the heating element ensures against rust or burn-out. Dual-Safe controls include a safety pilot, a high limit control against excessive temperatures and an extra 100 per cent watchdog control which will shut off all gas to the unit in the event extraordinary conditions impair the functioning of the standard controls. *Day & Night Div., Affiliated Gas Equipment, Inc., 700 Royal Oaks Drive, Monrovia, Calif.*

(*Continued on page 266*)

HALSTEAD & MITCHELL COOLING TOWERS



PROTECTED STEEL

for extra-long life!

Steel in cooling towers undergoes constant corrosive attack by both water and water treatment chemicals. H&M combats this rusting . . . adds *years to tower life* . . . by Protected Steel, a new concept in steel protection.

H&M steel cabinets are *hydraulically* painted with Vinsynite, Vinyl Zinc, and chlorinated rubber. Hydraulic painting *forces* these protections into openings . . . builds a solid wall against moisture. H&M fans and shafts are Stainless Steel, rust-proof, of course. Bolts are Everdur, for ease of future disassembly.

The Protected Steel concept is the concept of complete protection. That's what you get on every Halstead cooling tower.

and only HM *offers*

20-Year Guarantee!

on the wetted deck surface against rotting or fungus attack.

Write for Catalog WT & CT 583

HM Halstead & Mitchell

BESSEMER BUILDING • PITTSBURGH 22, PA.

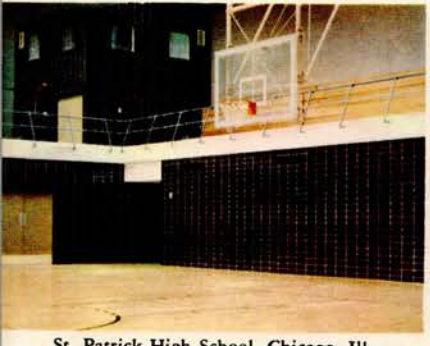


Cost-cutting combination: GLAZED and UNGLAZED

STRUCTURAL FACING TILE

Here is a way to keep school building and maintenance costs down — and make classrooms more cheerful, too.

Structural Clay Facing Tile builds load-bearing partitions and permanent, colorful interior finish in one operation. For this kindergarten, natural clay unglazed units and soft green glazed tile provide a pleasing contrast of colors and textures.



St. Patrick High School, Chicago, Ill.
Edo J. Belli, Architect



Y.M.C.A. Swimming Pool, Oak Park, Ill.
Philip D. West, Architect



Lincoln Elementary School, Sterling, Ill.
Louis Kingscott & Associates, Architects

FTI STRUCTURAL FACING TILE INSTITUTE

This seal is your assurance of highest quality Facing Tile.

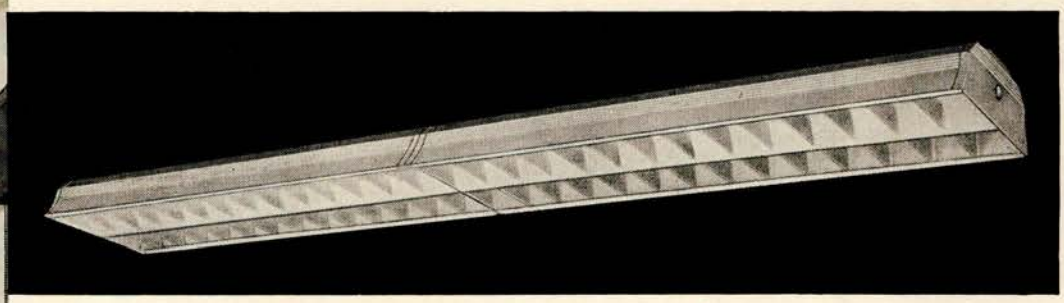
FACING TILE INSTITUTE

1520 18th Street, N. W., Hudson 3-4200, Washington 6, D. C.

In the interest of better Facing Tile construction these companies have contributed to this advertisement. **CHARLESTON CLAY PRODUCTS CO.,** Charleston 22, W. Va. • **THE CLAYCRAFT CO.,** Columbus 16, Ohio • **MAPLETON CLAY PRODUCTS CO.,** Canton, Ohio • **METROPOLITAN BRICK, INC.,** Canton 2, Ohio • **McNEES-KITTANNING CO.,** Kittanning, Pa. • **NATCO CORPORATION,** Pittsburgh 22, Pa. • **STARK CERAMICS, INC.,** Canton 1, Ohio • **WEST VIRGINIA BRICK CO.,** Charleston 24, W. Va.



Report card on the new "20/20"



newest, finest lighting for schools

First in its class! The new "20/20" is designed to rate highest in lighting efficiency, ease of installation and economy of operation. Restyled for added attractiveness, the complete line offers you new opportunity to provide more satisfactory levels of illumination within the limits of your budget.

Available in:

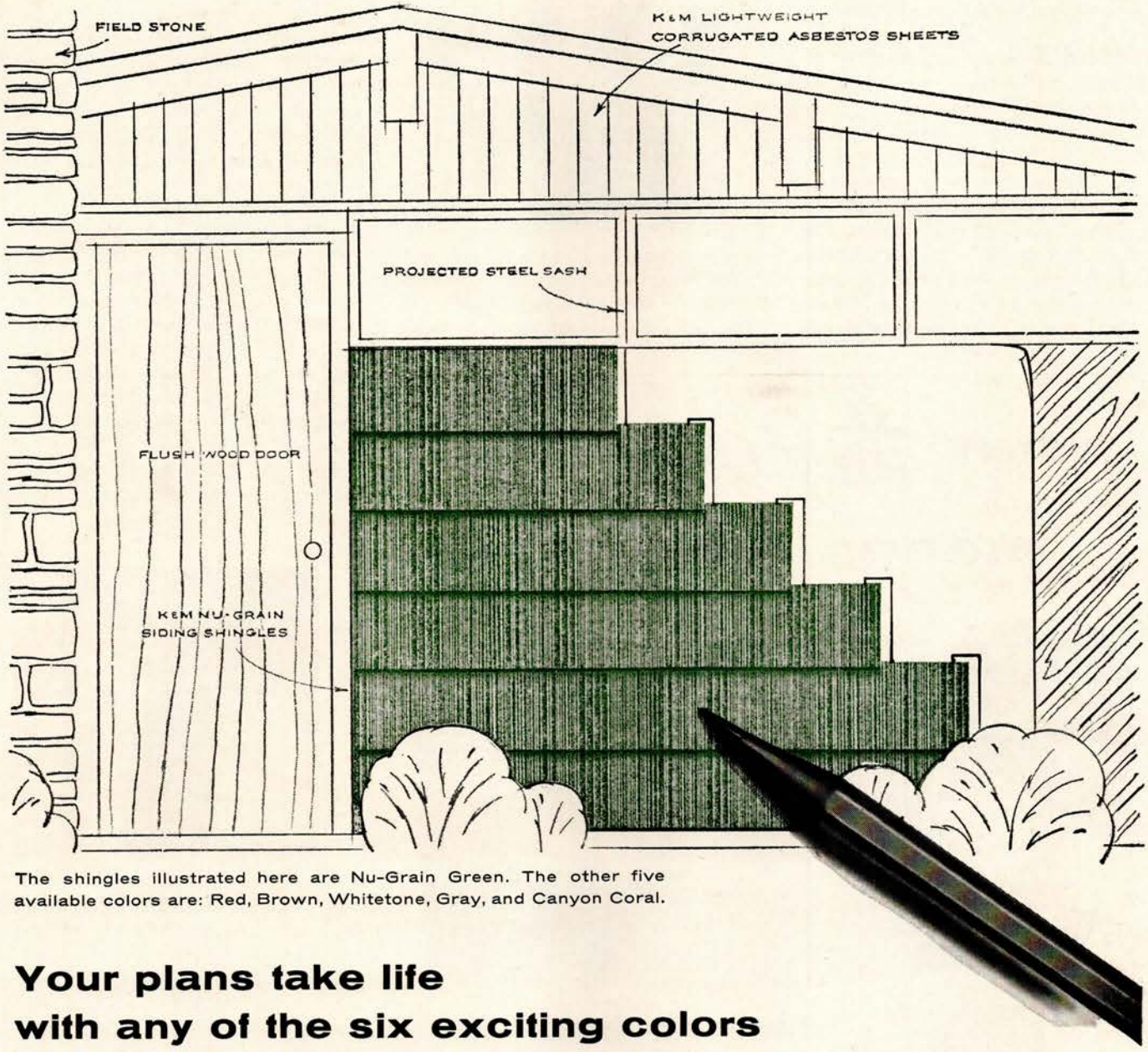
- 2-lamp and 4-lamp 40W Fluorescent or Rapid Start
- 2-lamp, 4 and 8-foot Slimline
- 4-lamp, 4-foot Slimline
- 1 piece 8-foot channel using 4 40W lamps, 2 in parallel—2 in tandem
- Metal or styrene side panels
  Available with Slide Grip Hanger for mounting anywhere along the channel.

Electro Silv-A-King, one of the industry's most comprehensive sources for every type of lighting, offers you two manufacturing and shipping points to insure rapid delivery of Fluorescent, Incandescent and Floodlighting fixtures for commercial and industrial use, indoors and outdoors. Only Electro Silv-A-King also offers you the "Basic Unit" which permits easy interchangeability of 7 luminaries on one basic chassis . . . and the "One-Man" Speedy Hanger that cuts installation man hours in half.

For completely illustrated catalog, write to . . .

ELECTRO SILV-A-KING CORP.

1535 S. Paulina St., Chicago 8, Illinois
Spruce and Water Sts., Reading, Pennsylvania



The shingles illustrated here are Nu-Grain Green. The other five available colors are: Red, Brown, Whitetone, Gray, and Canyon Coral.

Your plans take life with any of the six exciting colors in K&M Nu-Grain Siding Shingles

When you specify siding shingles, select those that add most to the home you're planning. Any of the six Nu-Grain colors add so much . . . whether used alone, or in combination with one another. There's appeal, too, in the attractive Nu-Grain wood shake pattern. And the clear, pronounced shadow lines of the shingles, when laid, give that extra touch that really satisfies a client.

Low upkeep. Maintenance costs are cut to a minimum, as K&M Nu-Grain Shingles never require protective painting. Made of asbestos fiber and portland cement, they won't burn, rot, or corrode. In fact, they become harder with age.

Details in Sweet's Files. See Sweet's Architectural Files for additional information on colorful K&M Nu-Grain Shingles. And while you're looking them up, check into K&M roofing shingles. They're partners in value with K&M siding shingles. For additional details, drop us a line. We'll gladly send complete data.



SILICONE-TREATED, so water runs off!

Water-borne dirt, which ordinarily causes streaks under window sills and other trim doesn't readily gain a foothold on K&M Nu-Grain Siding Shingles. Water "balls up" instantly, and runs right off these shingles.

KEASBEY & MATTISON
COMPANY • AMBLER • PENNSYLVANIA

K&M best in asbestos®

(*Continued from page 262*)

INSULATION

• An *insulation blanket* which is applied to the exterior side of studs rather than from the interior is pre-cut to the size needed on the job and packaged in compressed form, each carton containing an amount sufficient to insulate the walls of the average five-room house. After removal from the carton each sheet, as shown right, is stretched to its fullest dimension — 49 in. by 8 ft 3 in. Because the blanket is longer than the sheathing,



the extra length protrudes and seals any openings at the bottom plate. Reflective Kimsul "48" Sheathing Blanket is stapled to the sheathing board, which then is nailed to the exterior side of the wall studs, or, in the case of wood sheathing, stapled directly to the wall studs. It is installed prior to the placement of warm air ducts, electrical wiring and plumbing, thus minimizing mechanical damage to the insulation. *Kimberly-Clark Corp., Neenah, Wis.*

• *Combination asbestos and aluminum insulation blankets* are being manufactured for 16- and 24-in. joist centers to meet unusually rigid fire regulations. Known as Infra Insulation Type 6AP and Type 4AP, they are made with inorganic, inert asbestos. The asbestos itself will withstand temperatures of 800 F before disintegrating. It is shielded on both sides by aluminum sheets which have a melting point of 1220 F and absorb and emit heat rays at a 3 per cent rate. *Infra Insulation, Inc., 525 Broadway, New York, N. Y.*



• A *sprayed foam insulation* which adheres to practically any type of clean, dry surface and also to moist surfaces will cover any irregular surface evenly. It is sprayed as a liquid and, after a few minutes, has swollen to a thick, airy cushion. After 15 min the foaming action has ceased, leaving a normal-looking semi-rigid insulation. It is claimed that Poly-Cell can be applied at any desired thickness in one coat, the most economical thickness being ½ to 1 in. It is non-combustible and can be colored for coating. *Insul-Mastic Corp. of America, 1141 Oliver Bldg., Pittsburgh 22, Pa.*

INSULATING BUILDING BOARD

A *building board* which both insulates and decorates is designed for restyling in attics, garages, summer cottages, farm buildings and commercial structures. Strong, rigid and lightweight, No. 20 Insulating Board is finished in light-reflecting white. It protects against termites and dry rot and has a flame-resistant surface. The boards are ½ in. thick, 4 ft wide and come in lengths of 6, 7, 8, 9, 10 and 12 ft. *The Celotex Corp., 120 So. Lasalle St., Chicago 3, Ill.*

(*Continued on page 270*)

what *they do* means a lot to you





.... when specifying DRINKING-WATER EQUIPMENT

Here you see men testing, hour after hour . . . for capacity, for leakage, for accuracy of temperature and refrigerant controls, for correct setting of expansion valves . . . for every factor that can mean the difference between dependability and uncertainty.

It's factory-tests like these that make the Halsey Taylor nameplate your guide to assured performance, no matter what cooler or fountain you specify!



HALSEY TAYLOR

AS-42

THE HALSEY W. TAYLOR CO., WARREN, OHIO

TWO TECHNICAL AIDS

for architects and kitchen planners



Call for BOTH

Send now for this valuable complete engineering data on Blakeslee-Built Kitchen machines. If you have any problems on commercial dishwashing department layouts, our experienced representatives are available to you. There is no charge for their service.

INQUIRE ABOUT SHOWING OF COLOR MOVIE...

"NOW I'M IN BUSINESS"

FACTORY METHODS SAVE KITCHEN DOLLARS

G. S. BLAKESLEE & CO., 1844 So. Laramie Ave., Chicago 50, Illinois
New York Toronto

For multi-room air conditioning...

New smaller UniTrane Units

Everything you asked for in a completely new line, completely new design — the new Trane UniTrane air conditioning units! In 4 new sizes, 4 completely new models . . . same capacities but reduced dimensions!

You asked for a smaller, more compact cabinet. And the *new* UniTrane's got it! The *smallest* cabinet in UniTrane history. A scant *2¼ sq. ft.* floor area for the smallest unit. All models are surprisingly compact . . . save space, allow greater design freedom.

You asked for a new "slim look." And the *new* UniTrane's got it! The vertical model over-all depth—9 *inches slim!* Or *25% slimmer* than previous models. Hugs the wall—for clean, modern room design.

You asked for a low silhouette. And the *new* UniTrane's got it! The low, *low* look . . . vertical cabinet model is only 25 inches high. Top edge comes *below* the window line!

You asked for "whisper quiet" operation. And the *new* UniTrane's got it! Low coil face velocity is the reason. That means air is moved *gently* . . . without whistle, whine or wheeze!



. . . now 25% slimmer!

You asked for even greater flexibility. And the *new* UniTrane's got it! Round-edge end panels on cabinet model may be removed to facilitate butting unit to shelving. Rubber seal bonds unit to wall . . . gives free-standing models that built-in look. And the 4 new models—*each in 4 sizes*—that means you fit the air conditioning to the building . . . *not* the building to the air conditioning!

For year 'round comfort, plus outstanding beauty and operating efficiency, UniTrane is your answer. Single pipe circuit provides hot water for winter heating, cold water for summer cooling.

Want the Facts?

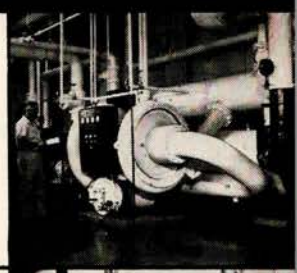
Get your advance copy of the new bulletin giving full particulars on the beautiful new UniTrane line. Just contact your nearest TRANE Sales Office or write TRANE, La Crosse, Wisconsin.

Furniture by Midwest Furniture Showrooms, Mpls.

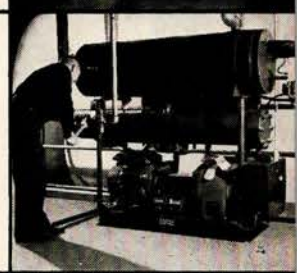


SPECIFY TRANE MATCHED EQUIPMENT

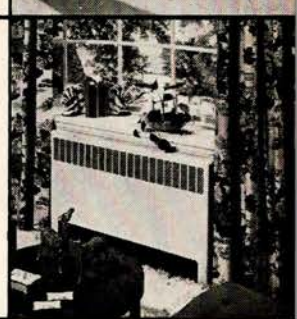
CenTraVac hermetic centrifugal compressor. Only one major moving part. Starts, stops, runs unattended. Automatically adjusts capacity and horse power from 100% to 10% of load.



Cold Generator is the packaged water chiller for smaller installations. Engineered, built, tested and refrigerant-charged at factory. 10 to 100 tons.



Convectors replace bulky radiators when it is desired to leave existing heating system intact and use transom model UniTrane units for cooling only.



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TRANE

MANUFACTURING ENGINEERS

One source, one responsibility for:
Air Conditioning · Heating · Ventilating
Heat Transfer Equipment

The Trane Company, La Crosse, Wis. • Eastern Mfg. Div., Scranton, Pa. • Trane Co. of Canada, Ltd., Toronto
90 U.S. and 17 Canadian Offices

(Continued from page 266)

INSULATING BLOCKS

A *cellular glass insulating material* which combines both insulation and ceramic finish in a single block is called Duraface Foamglas. It provides a durable, impact-resisting surface with high insulating and moisture-proof qualities. Foamglas is completely inorganic and so will not rot or deteriorate and is resistant to nearly all chemicals. The blocks, 18 by 12 in. and either 3 or 4 in. thick, are



applied with hot asphalt or a cold adhesive. *Pittsburgh Corning Corp., 307 Fourth Ave., Pittsburgh 22, Pa.*

Here's why

structoglas® IS NO. 1

plastic building panel



COLOR ● A choice of 21 beautiful colors

STRENGTH ● Shatterproof . . . withstands impact, fire, weathering

SIZES ● Corrugated and flat panels in complete range of sizes

FINISH ● Flawless permanent finish . . . exclusive new "pebbled" design

UNIFORMITY ● Special production process assures best quality control

COST ● Priced competitively in spite of superior quality and performance



INSTITUTIONAL



RESIDENTIAL



COMMERCIAL



INDUSTRIAL

More and more architects specify glass-fiber reinforced plastic building panels for functional and decorative applications.

Those wanting the best specify *STRUCTOGLAS.*

STRUCTOGLAS panels are made by an exclusive molding process that assures extreme and consistent accuracy and uniformity. That's why none can compare with STRUCTOGLAS for quality . . . durability . . . reliability.



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reinforced paneling

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PREFABRICATED FIREPLACES

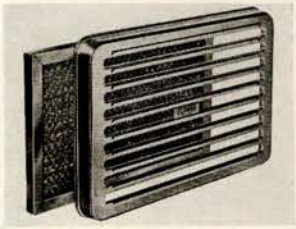


• The *Acorn Fireplace*, designed originally for Carl Koch's Acorn house, is now available commercially. Installation requires no masonry or structural changes and is easily adapted to existing house plans. It requires only a 6-in. flue. The Acorn can be hung from the wall with a modern cantilever effect or it can be mounted on black wrought iron legs, as in the picture above. *Acorn Designs, Inc., Dept. 5-AR, Concord, Mass.*



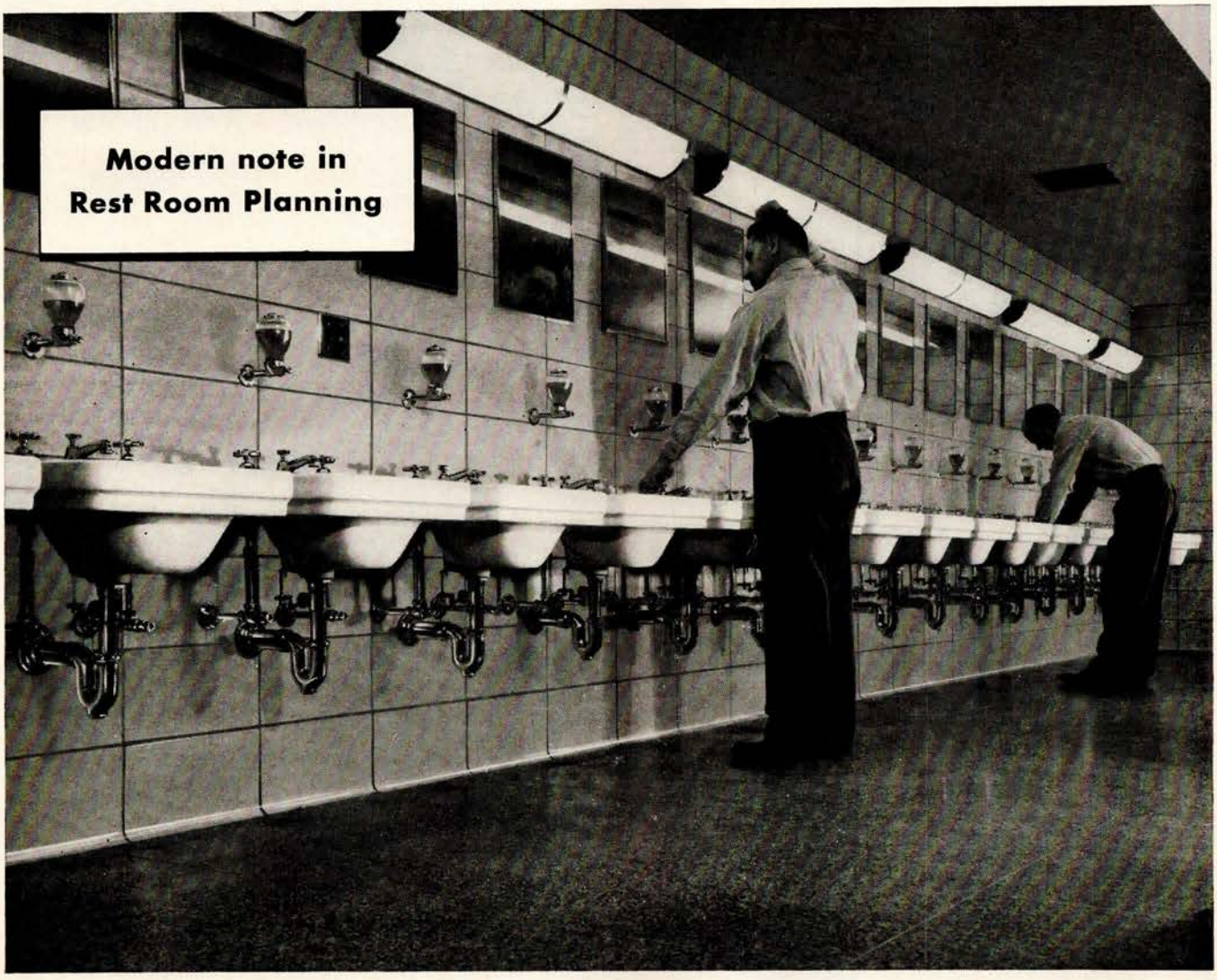
• The *Uni-bilt Fireplace* can be recessed into or mounted flush with any wall surface, combustible or non-combustible. The cantilevered hearth, 15 in. high, burns wood up to 27 in. long. Except for stainless steel trim, the unit is prime-coated ready to be painted. *Uni-bilt Div., Vega Industries, Syracuse 5, N. Y.*

ELECTRIC CEILING VENTILATORS



Electric ceiling ventilators with combination grille and filter unit screen out grease and dust. Trade-Wind Model 2501, which delivers 425 cfm, and Model 1501, with 300 cfm, are optionally equipped with the new filter. The design of the combination unit includes a special grille about 1 in. deep into which the cleanable metal filter is fitted. *Trade-Wind Motorfans, Inc., 7755 Paramount Blvd., Rivera, Calif.*

(Continued on page 274)



Simplified Open Expanse *design*

contributes to cleanliness . . . builds lasting good will

■ What keeps a rest room like this looking so new and spic and span over the years while other rest rooms become obsolete? Good planning. Planning for *improved sanitation.* Planning for *attractive decor.* Planning for *lowest maintenance.* Planning for *construction economies.*

You achieve all 4 of these desirable points when you use *open expanse* design. And the key to this is a *fixture-free floor.*

The pleasing effect of uncluttered spaciousness in this rest room was obtained by using American-Standard wall-type plumbing fixtures installed with and supported by Zurn System behind-the-wall carrier fittings. This combination of superbly designed fixtures, and rigid supporting fittings especially engineered to relieve the wall of all the load, gives you an "age-proof" installation that insures against the untimely obsolescence of your rooms.

If you would like to know more about the advantages of American-Standard wall-type plumbing fixtures and the Zurn System, we would be pleased to send you two interesting booklets which contain up-to-date information on these essential products. Just ask for the American-Standard "Better Rest Room Guide" and the Zurn booklet, "You Can Build It For Less A New Way."

American Radiator & Standard Sanitary Corporation, Pittsburgh, Pa.

J. A. Zurn Mfg. Co. (Plumbing Division), Erie, Pennsylvania

AMERICAN-Standard

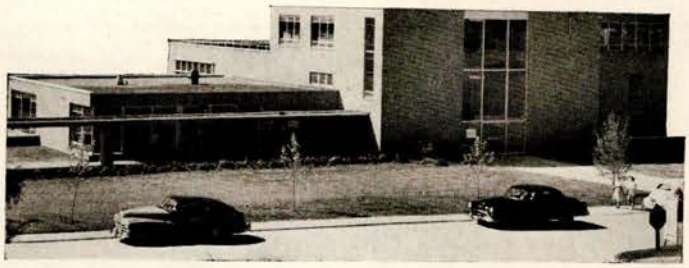
off-the-floor fixtures
installed with and supported by the

ZURN system®

give you these important benefits—

- ✓ **insured sanitation**
- ✓ **simplified maintenance**
- ✓ **modern appearance**

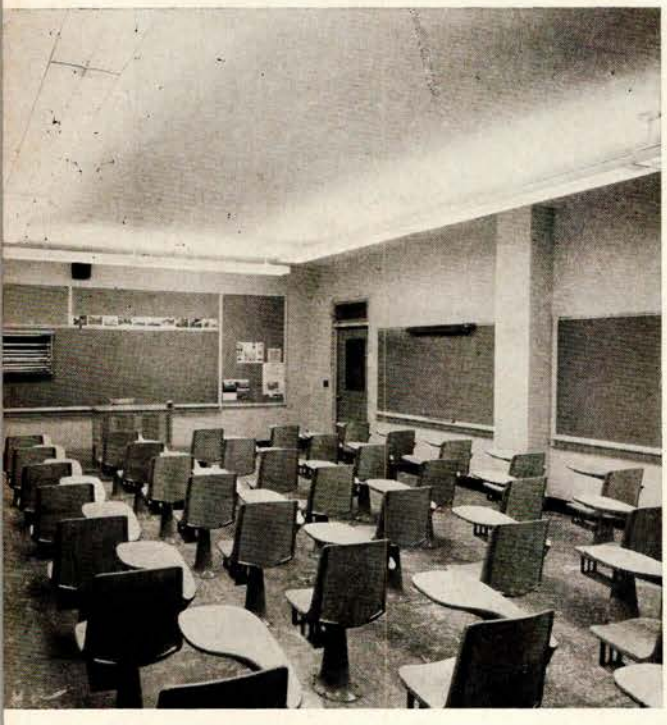
In the rolling hills





of North Carolina

Eye comfort is all important



The famous Day-Brite LUVEX "U" pattern for classrooms provides ample light on the desk tops and chalkboards and an emphasis of light on the teacher's desk.

Western Carolina College at Cullowhee installs Day-Brite LUVEX® fixtures in classrooms and departments, symmetrical strip in the library, big 4 by 4 units in the main reading room.

Six Associates, Inc., Architects of Asheville, designed these two recently completed science and library buildings... The famous Day-Brite LUVEX fixture was selected for classrooms and departments — mirrored surface reflector strips for book stacks — 4 by 4 units for the main reading room. How fully their choice was justified is shown in the interior views pictured on these pages.

Their comment on the installation is interesting.

"Please say that the owners and architects are pleased indeed with the lighting job that Day-Brite fixtures are doing at the College and that in the Library reading rooms, which are used a great deal at night, the lighting is such that seeing is effortless and at the same time the atmosphere is restful."

By installing LUVEX fixtures, full advantage was derived from the light-colored walls and ceilings — since LUVEX design combines 50% *upward* lighting with 50% *downward* lighting, ceiling gloom is "washed out." This results in adequate lighting PLUS all-important eye comfort.

CALL OR WRITE YOUR NEAREST DAY-BRITE LIGHTING REPRESENTATIVE FOR

Day-Brite Lighting, Inc., 5465 Bulwer Ave., St. Louis 7, Missouri.
In Canada: Amalgamated Electric Corp., Ltd., Toronto 6, Ontario.



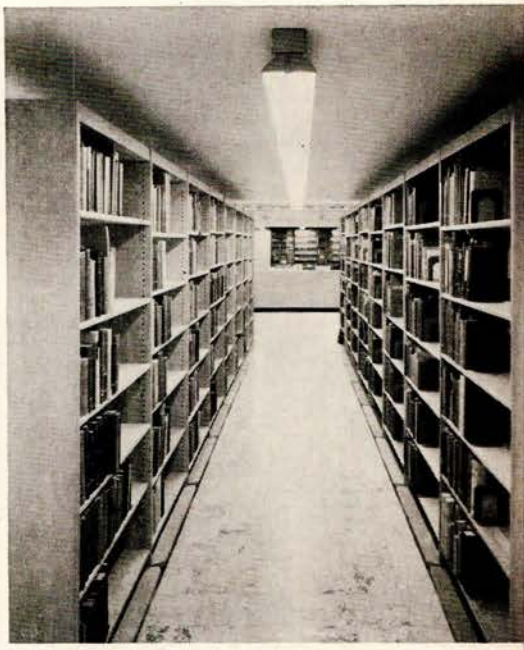
Large rooms such as this library reading room were, in the past, apt to suffer the discomforts of inadequate lighting. Not so with this one. Here, Day-Brite's big 4 by 4 units become integrated into this spectacular ceiling, and in addition, provide a minimum of 50 comfortable foot candles — enough light to read the smallest text with ease.

to Western Carolina College





Here, in the sewing lab and the home economics kitchen, LUVEX fixtures are mounted on eight-inch stems across the width of the room. Comfort is not dependent upon the orientation of this fixture to the working area.



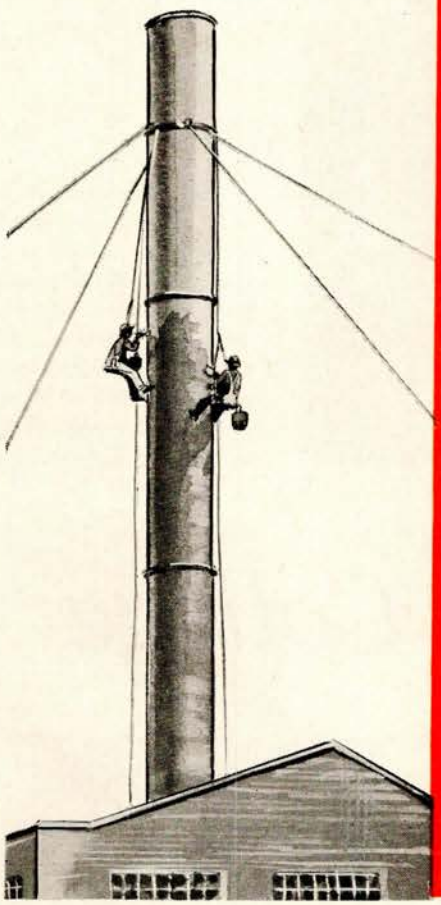
From the top to the bottom shelves in these stacks an ample 30 to 40 ft. candles allows swift and easy identification of any volume. A perfect application of Day-Brite's standard single-lamp STRIP units with symmetric polished alzak reflectors.

5424

INFORMATION ON ANY LIGHTING PROBLEM

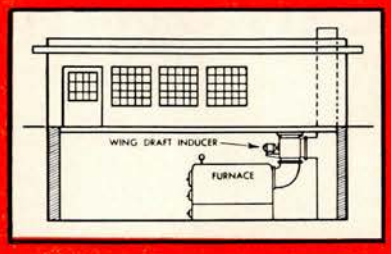
"DECIDEDLY BETTER"
DAY-BRITE®
Lighting Fixtures

Nation's Largest Manufacturer of Commercial and Industrial Lighting Equipment

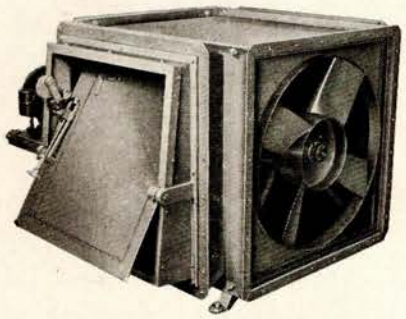


The next time your stack needs painting or repairing... ...think of

WING DRAFT INDUCERS



Natural draft is costly. Steel stacks require periodic painting; still they rust and corrode and need repair and replacement. Brick chimneys need periodic pointing. A Wing Inducer and an inexpensive stub stack to clear the roof, is all you need. And you get positive, adequate draft at all times, regardless of wind or weather. *Write today for bulletin. Use the coupon.*



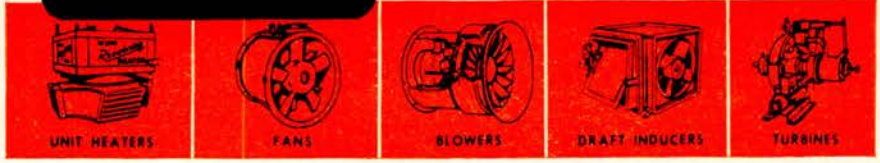
WING DRAFT INDUCER SHOWING AXIAL FLOW FAN AND BAROMETRIC DAMPER (Optional)

L. J. Wing Mfg. Co. 151 Vreeland Mills Road, Linden, N.J.

Factories: Linden, N. J. & Montreal, Canada

L. J. Wing Mfg. Co., Linden, N. J.
Please send me bulletin on WING DRAFT INDUCERS.
Name.....
Firm.....
Address.....
City..... Zone..... State.....

Wing



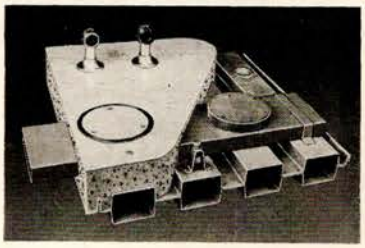
A|H PRODUCTS

(*Continued from page 270*)

SHEET PLASTIC

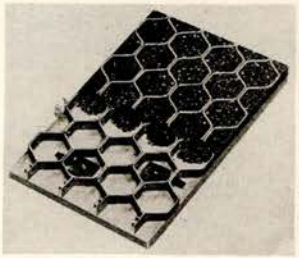
Cast acrylic sheet called Plexiglas R is lower in price than standard Plexiglas, depending on thickness and size. It has the same chemical and physical properties as standard Plexiglas and can be used for many of the same applications. *Rohm & Haas Co., Washington Square, Philadelphia, Pa.*

ELECTRIFIED STEEL FLOORING



Electrified cellular steel flooring combines Milcor Celluflor and Walker electrification. Milcor Celluflor is a steel subflooring which consists of hollow cellular panels made up of formed sections spot-welded together. The design of these structural panels provides longitudinal electrical raceways spaced on 6-in. centers. The raceways are electrified by a system of heater ducts and service fittings manufactured by *Walker Bros., Conshohocken, Pa.* The combined system gives any building complete electrical flexibility. *Inland Steel Products Co., 4157 West Burnham St., Milwaukee 1, Wis.*

SAFETY FLOORING



Hexteel safety floor armor can be used in new concrete floor installations or in conjunction with a mastic fill on existing concrete or new wood floors. It forms a continuous steel floor armor which is said to eliminate cracking, swelling, warping and shrinking and is designed to take the brunt of rolling loads. The exposed steel surface is 18.15 sq in. per sq ft of floor, and the weight of the Hexsteel is 1.7 psf. *Klemp Metal Grating Corp., 6603 So. Melvina Ave., Chicago 38, Ill.*

(*Continued on page 278*)

Modern way to create luxurious offices . . . economically



NEW FACTORY FINISHED

Craftwall

HARDWOOD PLYWOOD PANELING

RODDIS factory-finished Craftwall offers many practical and economical design opportunities in creating modern interiors. And Craftwall is as applicable to modernization as to new construction.

Manufactured so it can be used vertically or horizontally, there is no limit to the decorative combinations you can develop with Craftwall. The various styles and sizes cut economically, too — can be installed quickly — and there is but little waste.

Roddis factory-finished Craftwall is as beautiful as it is practical. Offered in 9 handsome hardwoods and Knotty Pine, panels are factory-finished to bring out natural beauties of the wood — and to provide a durable, long-lasting finish that requires a minimum of maintenance. Roddiscraft hardwood moldings and trim can be finished to match the paneling.

Ask your Roddiscraft representative for Craftwall samples or send the coupon below for information.

***Craftwall* design suggestions . . . No. 3 of a series**

Photograph is Walnut Craftwall, Style 100. This illustrates a design that solves the problem of ceilings in excess of standard height. Craftwall cut to short lengths completes the floor-to-ceiling paneling, and the joint is covered through use of a clever cove with indirect lighting.

Roddiscraft

RODDIS PLYWOOD CORPORATION • MARSHFIELD, WISCONSIN

WAREHOUSES IN PRINCIPAL CITIES

RODDISCRAFT, RODDIS PLYWOOD CORP.
Dept. AR-555, Marshfield, Wis.

Gentlemen: I want to know more about factory-finished Craftwall.

Please send me illustrated literature and cost information.

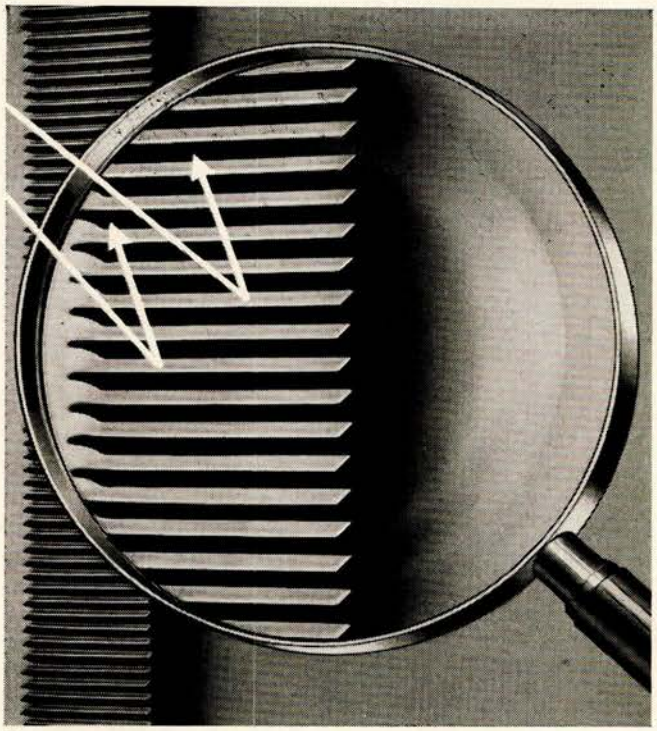
Name .....

Firm .....

Address .....

City ..... State .....

FOR BETTER DESIGN, ECONOMY



1. SHADE SCREENING made with Kaiser Aluminum blocks hot sun rays—keeps interiors as much as 15° cooler. Reduces glare. Won't stain, corrode or rust. Improves exteriors by providing clean, uniform, handsome window lines.



2. STAIR RAILINGS made with Kaiser Aluminum provide bright modern accent. And aluminum's beauty lasts with minimum maintenance. Requires no painting. Light weight means easier installation, lower costs.



3. WEATHERSTRIPPING and thresholds made with Kaiser Aluminum give more economical protection against dirt, dust, weather. Non-corrosive, and won't rust. Aluminum weatherstripping retains spring tension after years of continuous use.

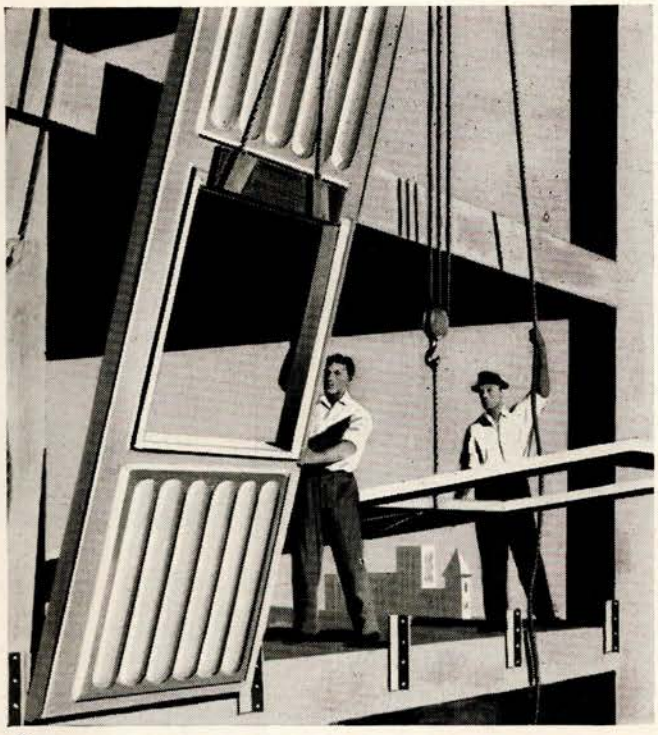


4. REVOLVING DOORS made with Kaiser Aluminum are light in weight, light in feeling. Clean and modern in appearance. Far easier to operate than old-style revolving doors. Can't rust or corrode.

AND BEAUTY...SPECIFY ALUMINUM



5. WINDOWS of any style made with Kaiser Aluminum give a bright, light look that lasts for years. Won't shrink, rattle, or leak. Never need paint. Never can mar exteriors with red rust streaks.



6. WALL PANELS prefabricated with Kaiser Aluminum are light in weight, easy to handle, economical to erect. Can be fabricated in various handsome exterior designs. Narrower wall section may be used—increasing interior floor area.

ARCHITECTS and builders specify *aluminum* building products for commercial buildings to complement their designs, to lower the cost of construction, to provide modern beauty.

Almost any building product is *better* in aluminum because aluminum offers a *combination* of advantages no other material can match—including light weight with strength, corrosion resistance, long life, low maintenance, economy.

As a basic producer of aluminum our efforts are put behind the job of serving manufacturers—to help improve their products and reduce costs.

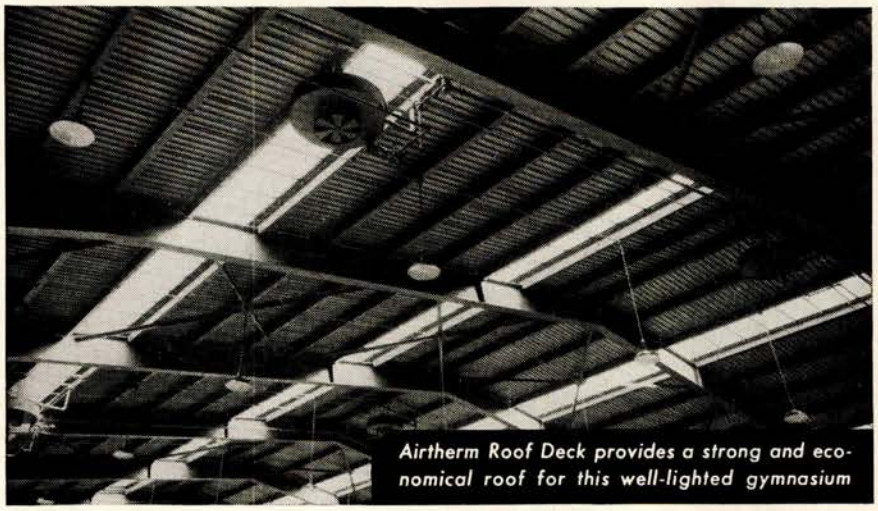
Engineering assistance is available from our qualified aluminum engineers. Or for names of building products manufacturers who will be glad to work with you, contact the Kaiser Aluminum sales office listed in your telephone directory. Kaiser Aluminum & Chemical Sales, Inc. *General Sales Office,* Palmolive Bldg., Chicago 11, Illinois; *Executive Office,* Kaiser Bldg., Oakland 12, California.

Kaiser Aluminum

setting the pace—in growth, quality and service

Kaiser Aluminum helps build demand for aluminum building products like these through consistent, colorful advertising in national magazines like Saturday Evening Post and Time.

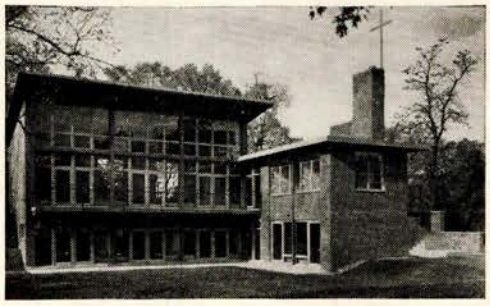
WIDER
Airtherm ROOF DECK



Airtherm Roof Deck provides a strong and economical roof for this well-lighted gymnasium

designed for a wide range of applications

Airtherm Steel Deck Sheets are furnished in 30″ widths (the widest in the industry) with five ribs spaced on 6″ centers. These ribs, 1⅝″ deep, have a bearing surface of ⅝″ and a top opening of only ¾″ wide. These wider, self-aligning sheets mean fewer longitudinal laps with resultant savings in construction time and costs.



In this church the attractive appearance of painted Airtherm Roof Deck adds functional beauty to the clean design

Airtherm Decking provides a strong, safe and durable steel roof in flat, pitched or arched construction. It has been proved in installations as side walls, partitions, canopies, and as a sub-base for concrete or aggregate flooring. This versatility, plus its attractive appearance, has led to many unique applications in a wide range of structures.

18-GAUGE AIRTHERM ROOF DECK	PROPERTIES
Section Modulus (in.) 3	.220
Moment of Inertia (in.) 4	.263
Resisting Moment (in lbs.)	3960

To care for all contingencies relative to geographical areas and various purlin spacing, Airtherm Decking is also manufactured in No. 22 Gauge and No. 20 Gauge metal thicknesses.

FABRICATED PRODUCTS DIVISION
Airtherm

see our catalog in S or write for copy

For more complete information consult our catalog in Sweet's 2dAi, or write . . .

MANUFACTURING COMPANY
747 South Spring Avenue
St. Louis 10, Missouri

Member: Metal Roof Deck Technical Institute

AIA PRODUCTS

(Continued from page 274)

WATER COOLING

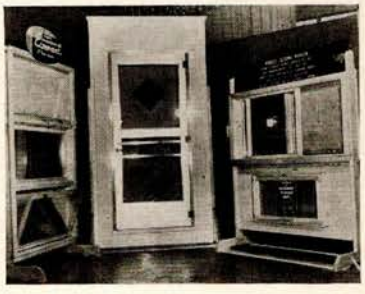
A *single-stage turbo water-cooling system* uses a new design approach utilizing a single-stage, cast-aluminum impeller wheel. This design is said to produce high efficiency compression, rugged construction with minimum weight and bulk, simplification of mechanical details, simplified and improved lubricating system, minimum of gasketed joints, ease of servicing and suitability for automatic operation. *York Corp., York, Pa.*

ALUMINUM SLIDING DOORS



Aluminum sliding glass doors that have a two-piece sill allow installation of a sub-sill before laying of the finished floor. The sill track is installed after all work is completed, so that there is no damage to the track. Bulb-type weatherseal is used in the jamb frame, and double pile-type in the bottom rail. *Ludman Corp., North Miami, Fla.*

WINDOWS AND DOORS



Three new products displayed at the annual exhibit of the Northeastern Retail Lumbermen's Assoc. in New York are shown above. The Econovent (left) is an awning window designed to give more flexibility in fenestration without extra cost. The E-Z Hung door (center) is a combination self-storing screen and storm door. The Woodco sliding window (right) also has interchangeable screens and glass panels. *General Woodcraft Co., Inc., North Bergen, N. J.*

(Continued on page 280)



now...the water heater that revolutionized an industry **does it again...**

Permaglas®

America's leading glass-lined water heater!

Now . . . America's *first* stylized water heater—*in color.*

Plus . . . America's *first* "Eye-Hi" temperature control.

Plus . . . famous exclusive *HEETWALL* design—*and* higher inputs.

And . . . the *only* glass-lined tank proved by over 2,500,000 families.

All this in the *most accepted, most popular,* glass-lined water heater in the industry!

Through research A.O. Smith *. . . a better way*

A.O.Smith
CORPORATION

PERMAGLAS DIVISION • KANKAKEE, ILLINOIS



THIS COUPON BRINGS YOU NEWEST DATA ON INTERNATIONAL-ENGINEERED DOORS

INTERNATIONAL STEEL COMPANY
2051 Edgar Street, Evansville 7, Indiana
Send me without obligation my personal copy of the new 1955 International Doors for Industry and Aviation.

NAME AND POSITION_____
FIRM_____
ADDRESS_____
CITY_____ ZONE____ STATE_____

INTERNATIONAL - BUILT TURNOVER CANOPY DOORS: three 60' x 19' and one 90' x 19'. General Contractor: VOLLMER CONSTRUCTION COMPANY, Wichita, Kansas, for CESSNA AIRCRAFT COMPANY, Wichita, Kansas.

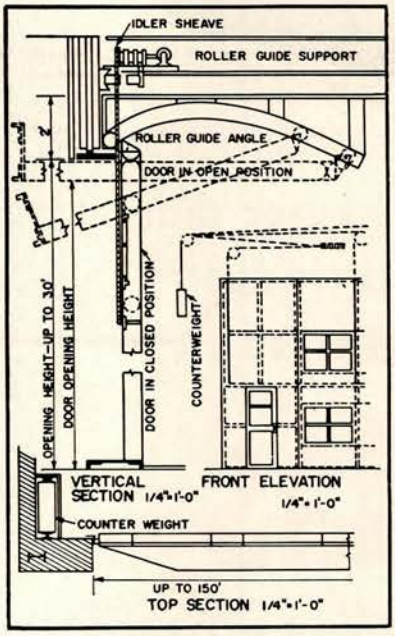
Cessna AIRCRAFT COMPANY

newest addition to the famous names served by

INTERNATIONAL HANGAR DOORS

International installations at Cessna mark the newest such entrance completed for a major aircraft manufacturer . . . ranging in size up to the world's largest.

For Cessna the problem was similar to that for other manufacturers supplied by International — building a door that would provide a tight closure; operate easily in all weather; and could be produced economically. International's experience with every type of aviation door resulted in Cessna selecting those illustrated. The growing list of leading names served by International Doors, in aviation and in all industries, merits your consideration when planning a structure demanding doors engineered to provide the most efficient entrance . . . most economically. See Sweet's Architectural File.



The above detailed drawing of a typical International Turnover Canopy Door illustrates its special suitability for small to medium openings — where floor space and interior clearance are limited. Door rises vertically, then swings out and up, with approximately 50% of door height projecting outside as a canopy. Offers extra protection against bad weather. Always clear of usable floor space in opening or closing.

INTERNATIONAL SERVICE

2051 EDGAR ST. • EVANSVILLE 7, INDIANA

INTERNATIONAL STEEL COMPANY

A/E PRODUCTS

(*Continued from page 278*)

CHALKBOARD

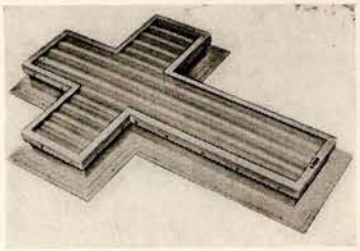
A *classroom chalkboard* which is claimed to be easier to install, write on and erase from is called the Benjamin Porcenell Chalkboard. Its surface is an inert, vitreous finish which will not fade or discolor with age. Porcenell, being moisture-proof and non-absorbent, will not loosen or become mildewed due to excessive use of water. *Benjamin Electric Mfg. Co., Porcenell Chalkboard Div., Des Plaines, Ill.*

COMBINATION DISPLAY BOARDS



A *combination display board, chalkboard and corkboard,* framed in aluminum and ready to hang on the wall from concealed hangers, is recommended for office, conference room, schoolroom, sales room, laboratory or shop. The Modular-4 Multi-Units have an "Easy-Tilt" device which permits the bottom of the unit to be adjusted outward 11 in. from the wall. The corkboard can be used as an easel. The display board has holes drilled on 1-in. centers to receive a variety of hooks and hangers. *Weber Costello Co., Chicago Heights, Ill.*

SKYLIGHTS



Two new *Marcolite skylights* are produced in a cross design (shown above) and an octagonal shape. Both have self-contained curb and roof flanges, thus eliminating the need for curb construction and curb flashing. Corrugated, translucent, structural, plastic panels diffuse all light and filter out a majority of ultraviolet and infrared rays. *The Marco Co., 45 Greenwood Ave., East Orange, N. J.*

(*Continued on page 284*)



No Lunch Served

One look and it is obvious that this is a financial institution. Yet the same Formica that has been so effectively used here for all "heavy traffic" surfaces is hard at work in the colorful lunch counter on the corner, the hotel down the street, the hospital, school, and thousands of homes.

Formica brings long-lasting beauty with low maintenance to surfaces in nearly any surroundings. In the Formica Sunrise Line, styled by Raymond Loewy, are the high style colors and dignified wood grains to fit any fashion.

See Sweets $\frac{13\ a}{FO}$ or write for copy of new architectural catalog.

FORMICA 4632 Spring Grove Ave., Cin. 32, Ohio

In Canada:
Arnold Banfield & Co. Ltd.
Oakville, Ontario.

DEMAND THIS CERTIFICATION

This mark certifies genuine

REMOVE WITH SOAP AND WATER

Beauty Bonded FORMICA Reg. U. S. Pat. Off.

Guaranteed by Good Housekeeping IF NOT AS ADVERTISED THEREIN REPLACEMENT OR REFUND OF MONEY

Pays in Performance

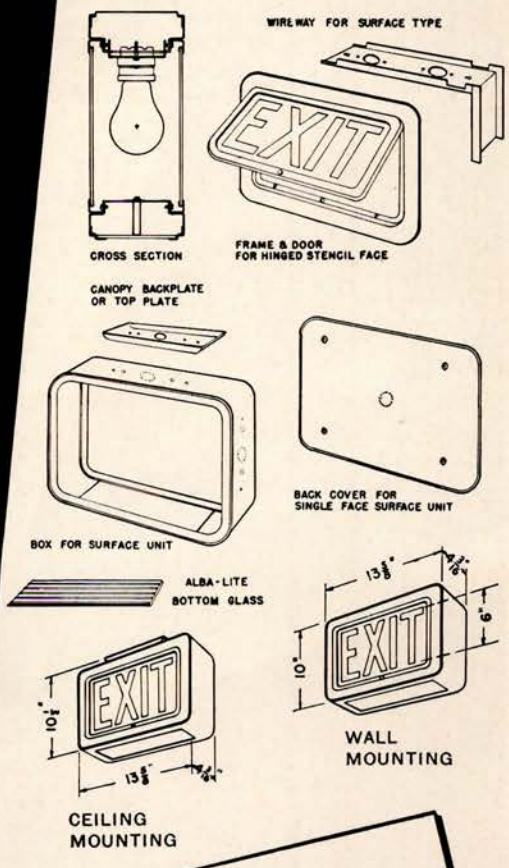
Southwestern Savings & Loan Assn., Houston, Texas
Zimmerman and Bible, Architects
Storecrafters, Formica Fabricator

Seeing is believing. If this wash-off identification is not on the surface, it's not FORMICA.



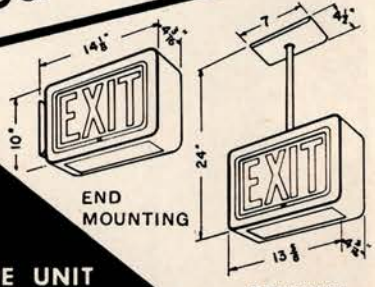
SURFACE TYPE UNIT
STENCIL FACE STYLE

Now it's possible to use one basic die-formed exit sign throughout an entire building. Quickly converted to single or double face use, The Perfeclite Surface Unit, is mounted from top, back, side, or from a pendant, depending on your requirements. Wiring is no problem. The wireway simply disengages through key slots. Two face styles available: hinged metal stencil face, 6″ letters on fired green or red glass backing — or 6″ letters on fired ceramic glass panel — in four color combinations.



ADAPTABLE — is the word for PERFECLITE'S new hinged exit unit

Specify Perfeclite Recessed Mounted Illuminated Exit Signs . . . die-formed, easy-to-install, easy-to-service. Two face styles: hinged metal stencil face, 6″ letters on fired green or red glass backing, or 6″ letters on fired ceramic glass panel — in four color combinations.



RECESSED TYPE UNIT
GLASS FACE STYLE



All signs are fired ceramic colors — unconditionally guaranteed. *Units are Underwriters Laboratories, Inc., approved, and comply with National Electrical Code.*

PERFECLITE PRODUCTS
THE MARK OF LIGHTING SERVICE

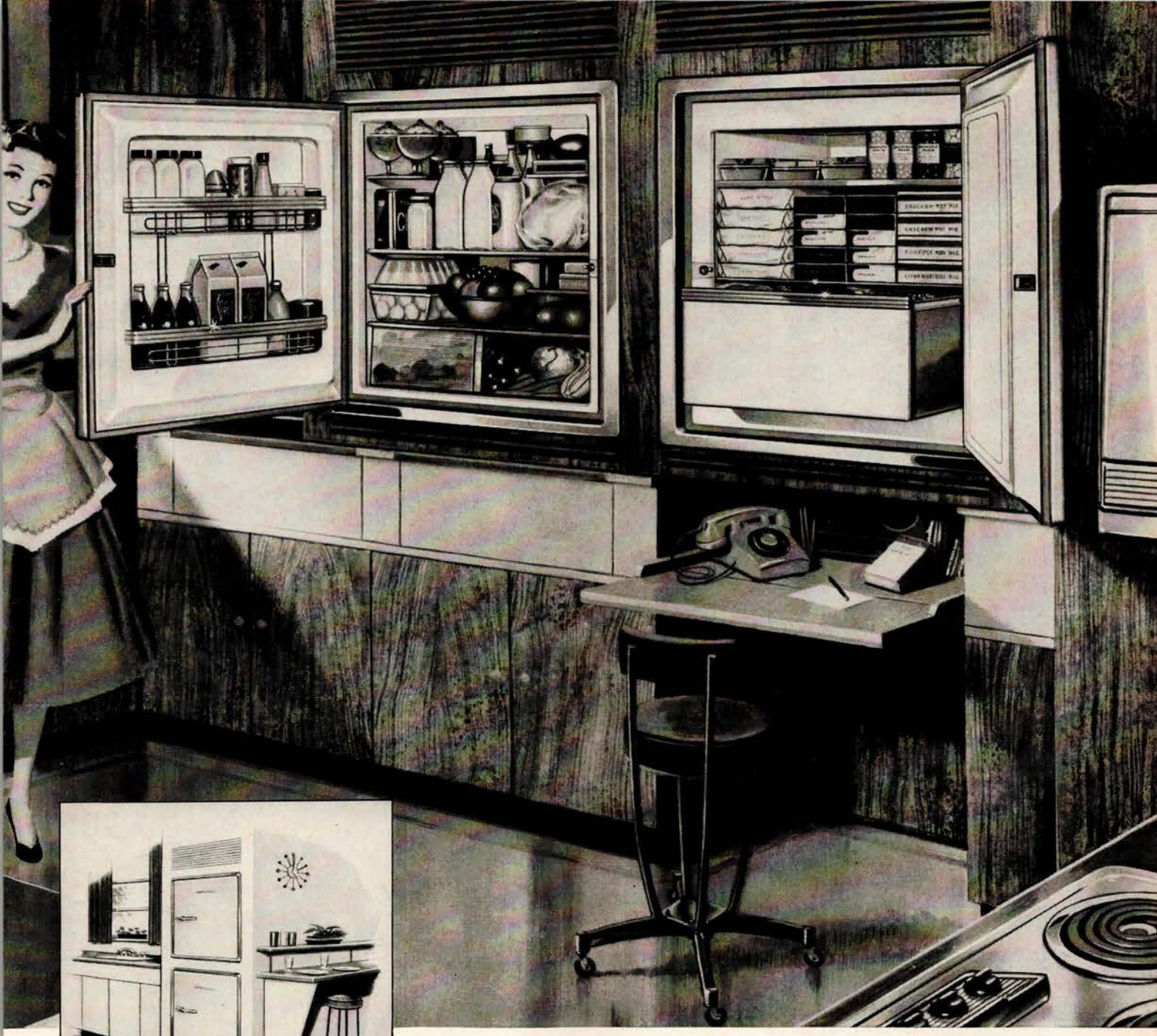
THE PERFECLITE COMPANY
1457 East 40th Street
Cleveland 3, Ohio

Please send me The Perfeclite Data Folder EX-55A.

NAME.....

ADDRESS.....

CITY. .....STATE.....



FLEXIBILITY of arrangement: side by side, one over the other, on opposite walls. Each has compressor and condenser in one unit for easy, nearby installation.

Design kitchens with greater freedom!

New Westinghouse Built-in Refrigerator and Freezer

No longer need you be restrained by conventional refrigerator and freezer requirements when you design contemporary kitchens. These handsome, new built-in appliances offer wide flexibility of arrangement; a high degree of space organization; and well-integrated storage of all foods, fresh and frozen. Available in Brushed Chrome, Sunshine Yellow, Cascade Aqua or Gleaming White, this built-in pair will keynote the trend to modern living.

The 8.3 cu. ft. Westinghouse Built-in Refrigerator, Model BRH-80, has automatic defrosting, adjustable shelves, door shelves and a giant double-door crisper. The companion 6.3 cu. ft. Freezer, Model BFH-60, has a roll-out drawer for odd-shaped frozen packages and a 220-lb. frozen storage capacity.

For complete details, contact your distributor or write direct.

✦ ✦ ✦

WESTINGHOUSE ELECTRIC CORPORATION
Electric Appliance Division • Mansfield, Ohio

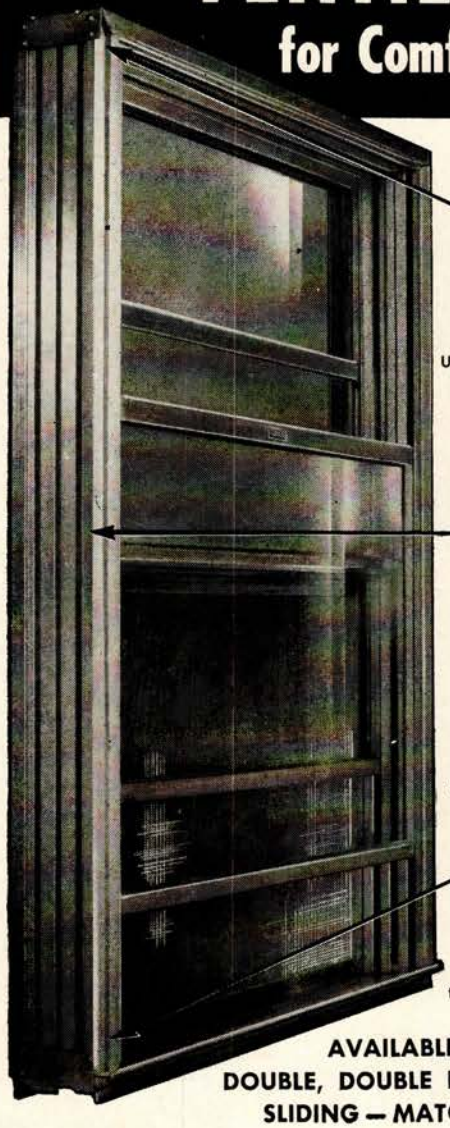
Betty Furness says:
"These built-in appliances reflect the accent on modern living... their beauty, convenience and compactness insure the homeowner's satisfaction."

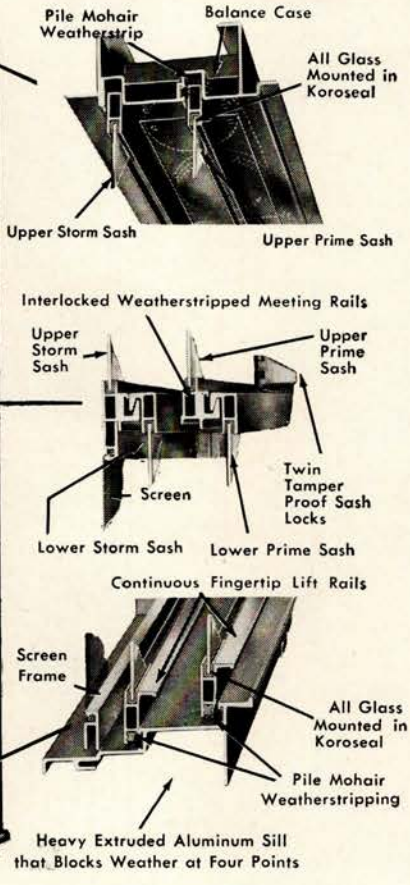


YOU CAN BE SURE... IF IT'S Westinghouse

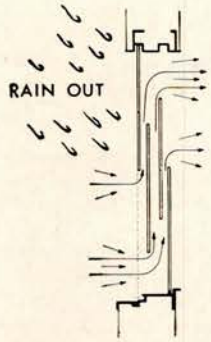
Makers of Refrigerators • Home Freezers • Ranges • Laundromats • Clothes Dryers • Dishwashers • Water Heaters • Vent Fans • and Food Waste Disposers

Fleetlite DOUBLE WINDOWS that Insulate — yet CONTROL VENTILATION for Comfort of Occupants





AVAILABLE IN MANY SIZES OF DOUBLE, DOUBLE HUNG — DOUBLE HORIZONTAL SLIDING — MATCHING PICTURE WINDOWS



All-sash removable from the inside for easy cleaning. Made of heavy extruded aluminum. Complete with window frame. Factory glazed. No Maintenance. Nothing to store. Never needs painting or puttying. Write for information.

- ☐ Chart of Standard Window Sizes
- ☐ Typical Installation Details
- ☐ Location of Fleetlite Installation in my area
- ☐ Quotation on Windows for Attached Plans.

Gentlemen: Please rush the material checked above.

Name.....

Address.....

City.....

Fleetlite
AMERICA'S Finest WINDOW

FLEET OF AMERICA, INC., 506 New Walden Ave., Buffalo 25, N. Y.

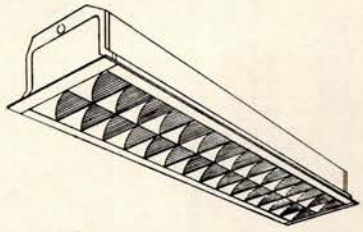
AH PRODUCTS

(*Continued from page 280*)

DESK PUSHBUTTONS

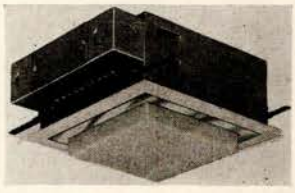
New *desk pushbutton selectors*, in one-, two-, four- and six-button models, are magnified and have 42 printed designations to save problems of lettering, printing or typing. The case is molded of high-impact styrene and the finish is lustrous gray. *Edwards Co., Norwalk, Conn.*

LOW-BRIGHTNESS LOUVER



A *low-brightness louver* for use with Lite-Blox recessed troffers has a high "visual comfort index" because of parabolic design and new precision-rolled cross baffles designed for excellent diffusion and low brightness. It is made of #1 reflector aluminum and finished with Alzak. The center V and cross baffle can be removed by pressing the hold locks. The assembly is supported on chains for relamping. *The Edwin F. Guth Co., 2615 Washington Blvd., St. Louis, Mo.*

RECESSED LIGHTING



A *recessed incandescent lighting fixture*, available in square and rectangular styles, is prewired and comes with a variety of lenses and a broad range of sizes, from 60 to 300 watts. The reflector is fabricated from a single piece of aluminum chemically brightened to obtain maximum light output. *Lilecraft Mfg. Corp., 8 East 36th St., New York 16, N. Y.*

COOLING TOWER

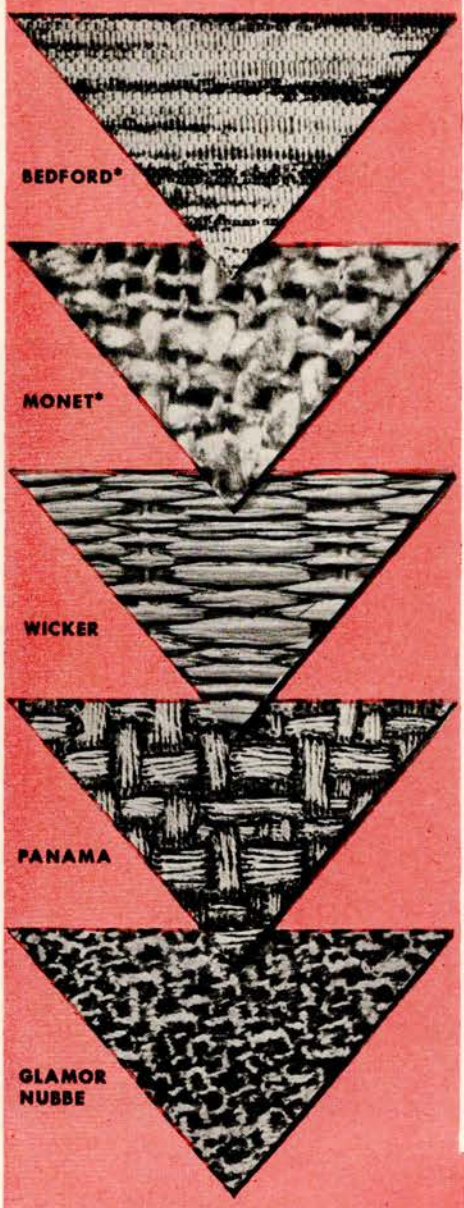
A *cooling tower* claimed to be an ideal outdoor water saver has a wetted deck of redwood and corrosion-resistant parts. It has a low silhouette and a natural green color that requires no painting. The fan is driven by a low pumping head water turbine which eliminates outdoor electrical connections. *Kennard Corp., 1819 So. Hanley Rd., St. Louis 17, Mo.*

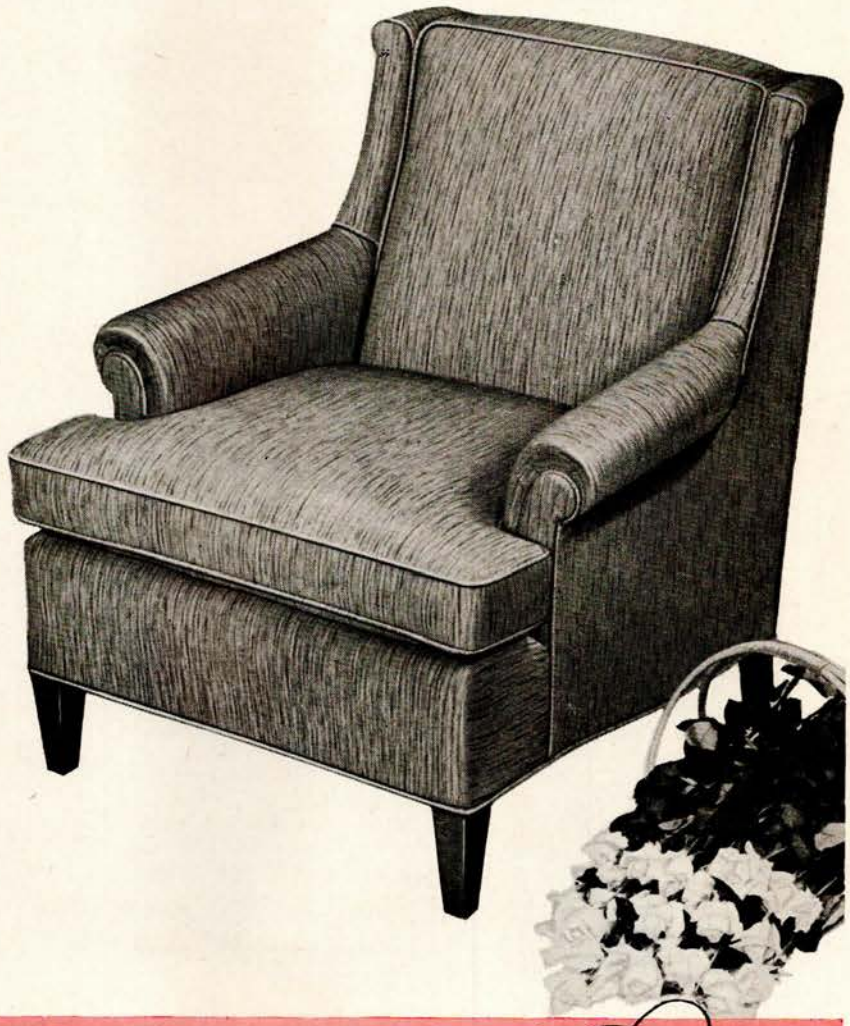
beautiful and practical for any interior TEXTURED

Elastic FABRIC back

Masland Duran®

PLASTIC UPHOLSTERY





Give the finishing touch of good taste and convenience to that home or commercial establishment you are planning. You can with Masland Duran. Colors and patterns for unusual beauty on chairs, booths, stools . . . and all types of furniture. Clients will like its scuff-resistance, durability and the quick, easy way it can be kept clean by occasional wiping. Many luxurious new patterns, including textured effects. Write for samples.
The Masland Duraleather Co., Dept. 36, Phila. 34, Pa.



* © Design 1954

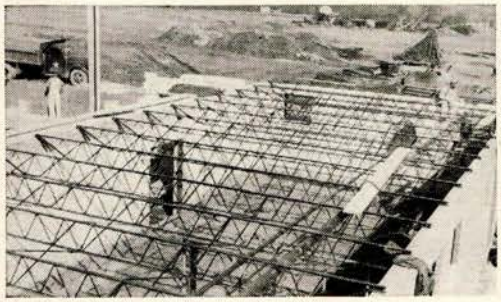
ONLY MASLAND MAKES DURAN
THIS TAG IS YOUR PROTECTION



Safeguarding the Sight of

TRUSCON

Always Specify Truscon-Engineered Building Products — Including:



Truscon "O-T" Steel Joists for floor and roof supports. They are light, strong, and fire-resistant. Easy to handle, they lessen the time and labor required for erection, save material in supporting framework and foundations.

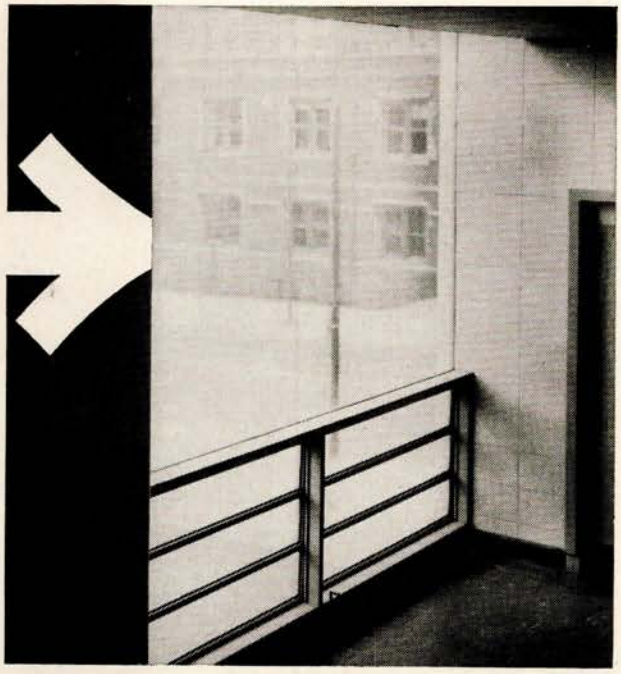
Truscon Metal Lath for better, faster plastering. Accepted by *all* building codes . . . easy to erect, easy to form, easy to work over. Special accessories to meet every plastering requirement.



Tomorrow's Physicists

Steel Windows

in University of Pennsylvania Physics Lab, Philadelphia, Pa.

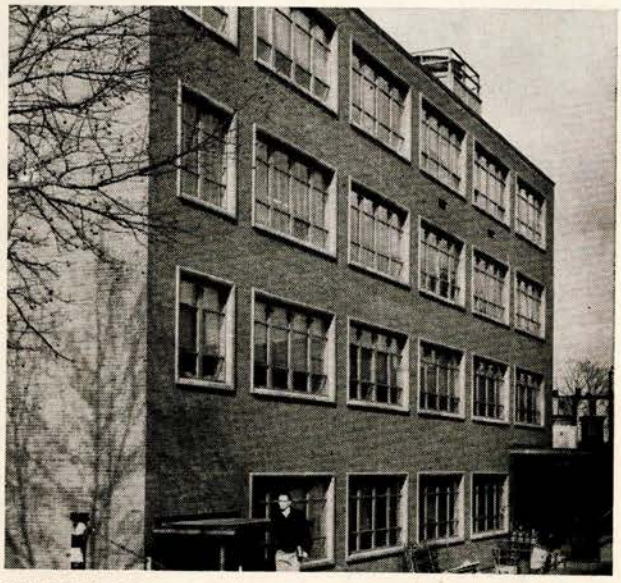


In corridors and classrooms, a variety of Truscon Steel Windows provides an abundance of natural illumination in the new University of Pennsylvania Physics Lab.

Functional in design, handsome in appearance, and economical to maintain, Truscon Steel Windows are especially adaptable to modern school requirements. Rigid, heavy frame sections insure long, satisfactory service. Solid bronze hardware will not rust or corrode. And you can choose from an almost endless variety of sizes and types, when you specify Truscon—the foremost line of metal windows available anywhere.

Many designs have combined varieties of Truscon Steel Windows to achieve beautiful as well as functional architectural effects. The Truscon line includes casement and awning windows in both steel and aluminum, picture, double-hung, ranch, basement, Donovan, detention, and an unexcelled choice of variations.

Send the coupon for your copy of the complete Truscon Window Catalog for your files. In a hurry? You'll find details, sections, and sizes in Sweet's.



UNIVERSITY OF PENNSYLVANIA PHYSICS LAB., Philadelphia, Pa.
ARCHITECTS: Jas. R. Edmonds, Jr., Baltimore, Md. and Willing, Sims & Talbutt, Philadelphia, Pa.
GENERAL CONTRACTOR: The Baton Construction Corp.
TRUSCON WINDOWS USED: Donovan, Architectural Projected, Commercial Projected, and Maxim-Air Steel Windows.

REPUBLIC STEEL

World's Widest Range of Standard Steels and Steel Products

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Please send me more details on:
☐ Truscon Metal Windows ☐ Truscon Metal Lath
☐ Truscon "O-T" Steel Joists

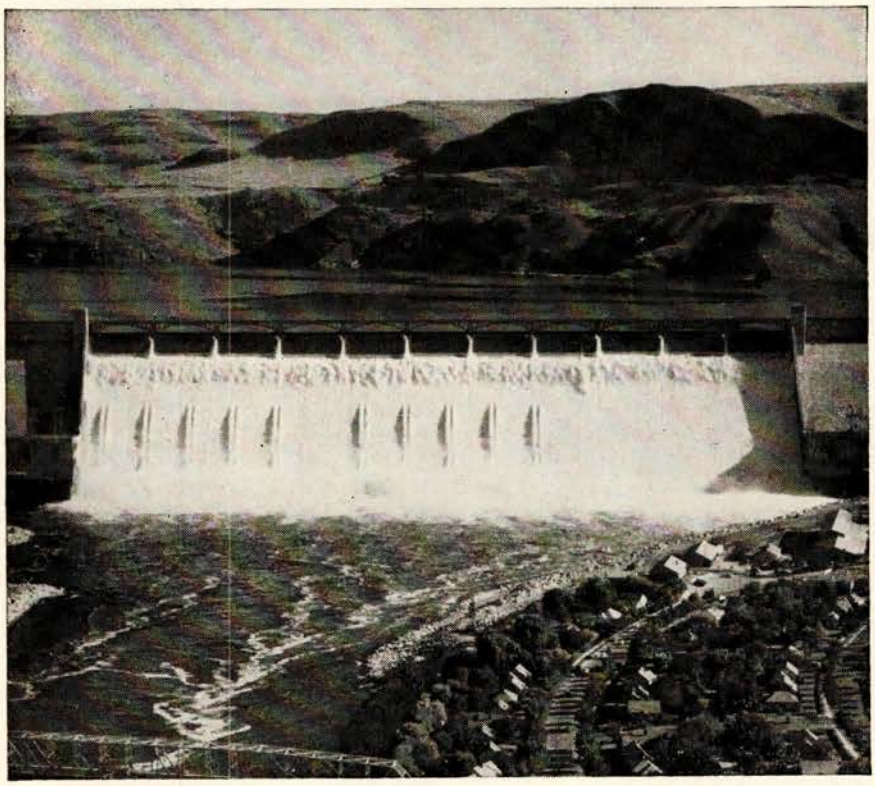
Name_____ Title_____

Company_____

Address_____

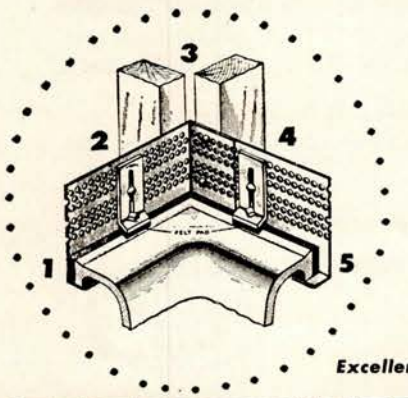
City_____ Zone____ State_____

K-8294



It's Never "Water Over the Dam" with LUCKE Leakproof TUB HANGERS

Quality can be built into every bathroom when the vital spots around a tub are permanently leakproofed with LUCKE Tub Hangers. You can always rest assured of complete customer satisfaction with this easy solution to a sometimes extremely bothersome problem. Check the advantages . . . the cost is so little for so much. All the new Statler Hotel bathtub installations are being safeguarded with LUCKE Leakproof Tub Hangers:



1. Seals rim permanently against water seepage.
2. Tub is easily levelled with Lucke Tub Hangers.
3. Equal support on all studs . . . eliminates strains . . . prevents sagging.
4. Perforations on upper part of hanger form base for wall material.
5. No unsightly cracks occur at tub rim to harbor dirt, grease and germs.

Excellent for masonry and all types of wall construction.



Write for complete information.

THE LUCKE LEAKPROOF TUB HANGER

WILLIAM B. LUCKE, INC.
WILMETTE, ILLINOIS

A/H LITERATURE

(*Continued from page 228*)

DIRECTIONAL SIGNS

• *Directional Signs* is a 15-page booklet containing illustrations and specifications of interior illuminated directional signs for banks, hotels and other large buildings. *Price Bros. Inc., 4301–4305 W. Madison St., Chicago 24, Ill.**

CEMENT

• Information on the uses, applications and specifications of portland cements, waterproofings and tile grout cement is contained in a 25-page catalog. *Medusa Portland Cement Co., 1000 Midland Bldg., Cleveland 15, Ohio.**

• An eight-page illustrated folder on *Embeco Pre-Mixed grout* and a 4-page illustrated folder on Embeco *Pre-Mixed mortar* give complete directions for their use, as well as describing their characteristics. *The Master Builders Co., 7016 Euclid Ave., Cleveland 3, Ohio.**

• *Toplighted Roofs* presents information on Vanco stage ventilating skylights and the following Vanco Plexiglas skylights: Domelite, Domelite and Ceiling-Lite combination and Dome-Air. 12 pp. illus. *E. Van Noorden Co., 100 Magazine St., Boston 12, Mass.**

SKYLIGHTS AND VENTILATORS

• *Daylighting with Wascolite* contains specifications, detail drawings and photos of a complete line of daylighting products. 12 pp. *Wasco Products, Inc., 93P Fawcett St., Cambridge 38, Mass.**

MAIL CHUTES

• Specifications, photographs and detail drawings of mail chutes are given in a 4-page folder from *Cutler Mail Chute Co., 76 Anderson Ave., Rochester 7, N. Y.**

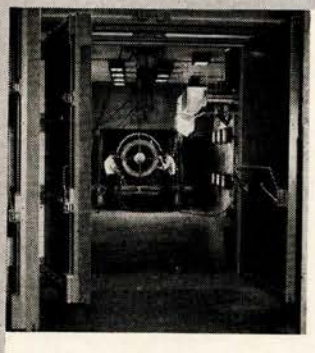
HEATING SYSTEMS

• A complete line of equipment for forced hot water heating systems and chilled water cooling systems is described in a 24-page, illustrated catalog. *Bell & Gossett Co., Morton Grove, Ill.**

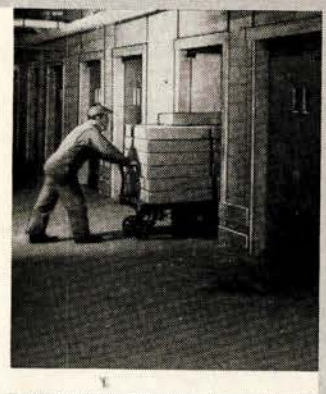
• A 32-page handbook on *electric heating* contains information on designing, cost estimating and installing electric heating systems. It includes a review of heating fundamentals and charts for determining heating capacities of specific spaces. Booklet B-3768-B. *Westinghouse Electric Corp., P. O. Box 2278, Pittsburgh 30, Pa.*

(*Continued on page 292*)

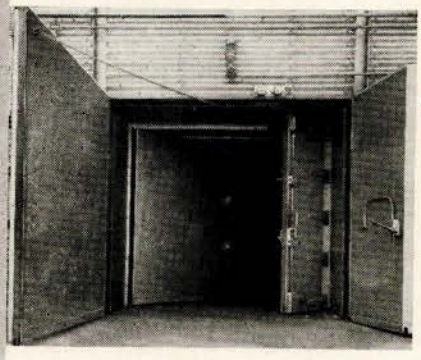
Whatever a Plant Door Must Do...



reduce noise



save heat



withstand pressure



speed handling



resist humidity



isolate gas

JAMISON Will Build It

When a door must do more than merely open and close, the effective and trouble-saving solution is a Jamison Engineered Door. It's the answer to many different problems: sound reduction, temperature, pressure, humidity, materials handling, gas isolation, corrosion, impact, visibility, safety or security. Or maybe you need a door that's unusual in size, shape, or the way it opens. Whatever the problem, Jamison brings to it more than 50 years of experience in developing cold storage and special-purpose doors. Send the coupon now for specific information.

JAMISON

engineered doors

For 50 years the leading builder of cold storage doors

ENGINEERED DOOR DIVISION
JAMISON Cold Storage DOOR COMPANY
HAGERSTOWN, MD., U.S.A.

Without obligation, I'd like your recommendations on a door that must_____

_____

_____

Name_____ Title_____

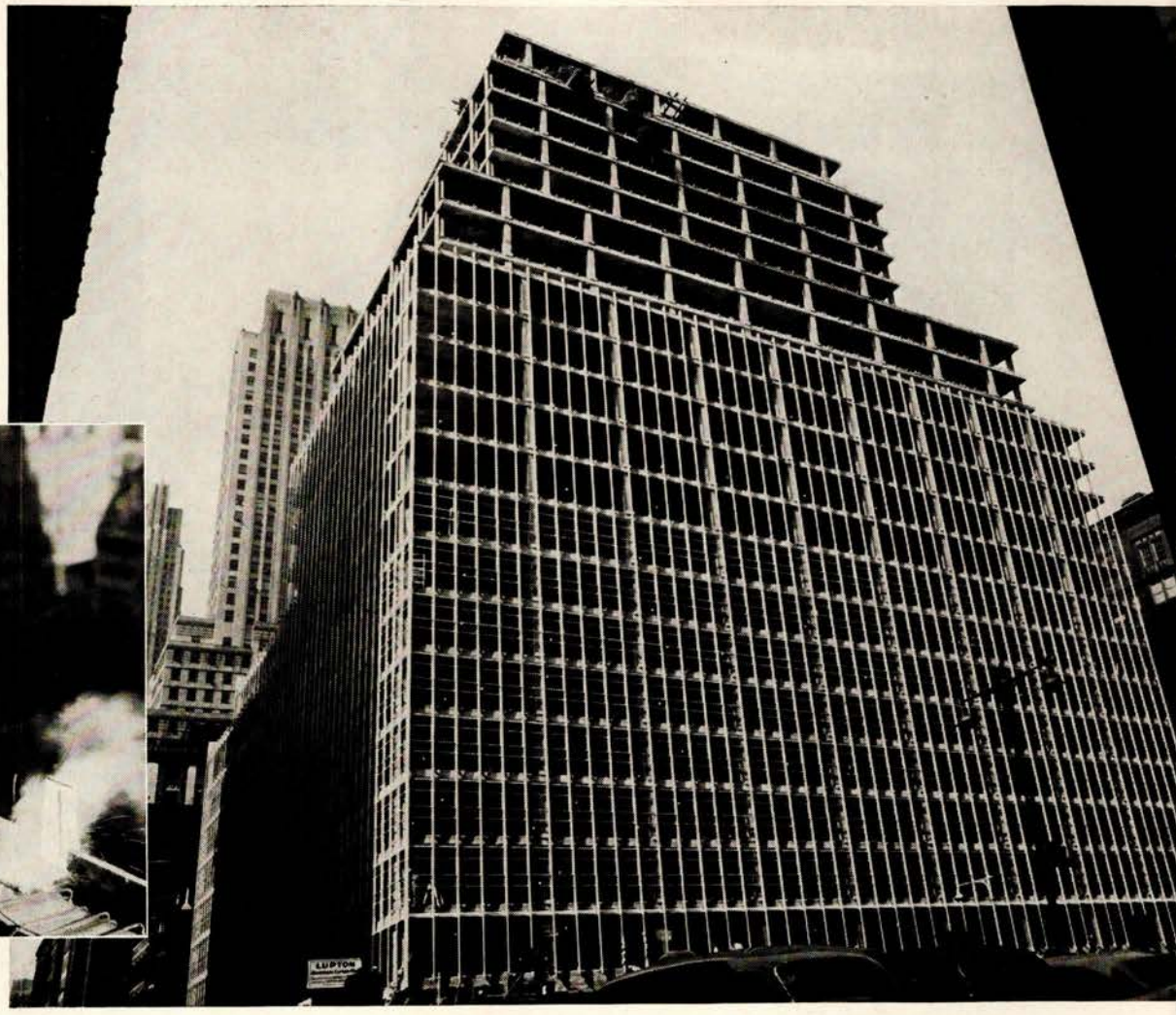
Company_____

Address_____

300 PARK AVENUE, NEW YORK. Arch: Emery Roth & Sons. Contr: Uris Brothers. Lupton Curtain-Wall, Type H. Width module, 4′-5″. Structural opaque colored glass from floor to sill with clear glass above. Ventilators open out. New York building code requires a masonry back-up wall to sill height.

Welding anchor clips to the building frame, at locations established by a Lupton Engineer.

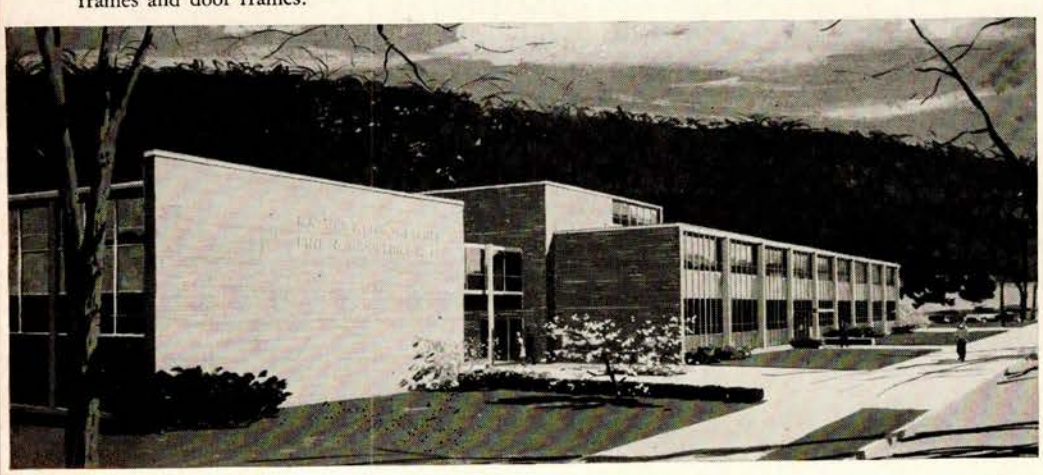




New Lupton *Simplified* Curtain-Wall System

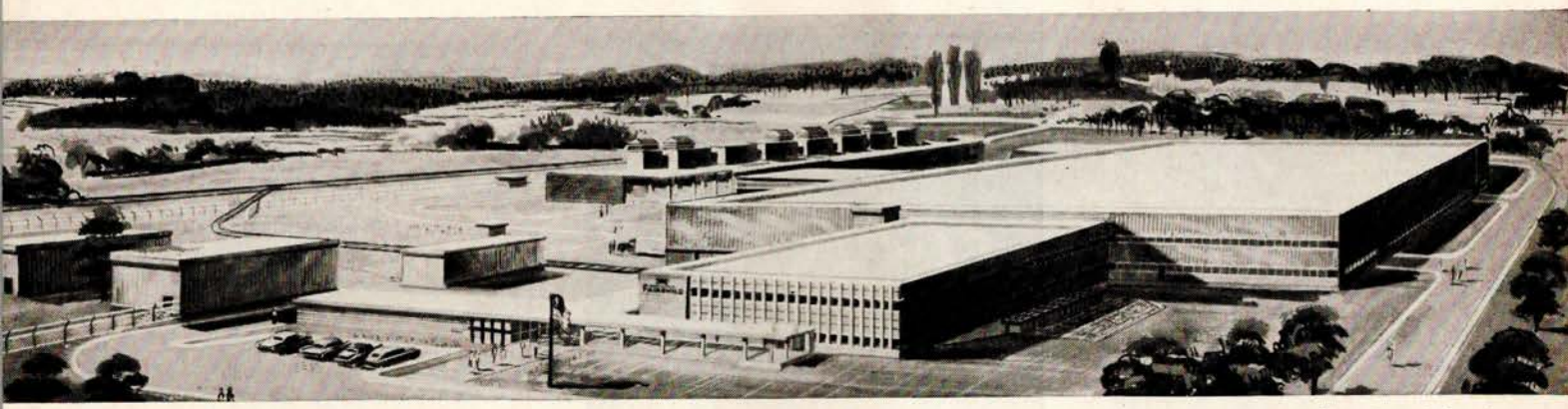
Lupton-Engineered . . . Lupton-Made . . . Lupton-Installed

NEW JERSEY STATE TEACHERS' COLLEGE, MONTCLAIR, N. J. (2 bldgs.) Arch: Emil Schmidlin. Contr: Martin Infante Co., Inc., Lodi, N. J. Lupton Curtain-Wall System, Type H. Width modules 3′-9″ & 4′-1″. Fixed glass and projected-in ventilators. Opaque areas are ⅛″ thick embossed, fluted aluminum, alumilited. Special features: Heavy aluminum subframes and door frames.



Exterior view of building frame showing anch clips in position. Clips provide for horizontal a vertical alignment of the curtain-wall units.





FAIRCHILD ENGINE & AIRCRAFT COMPANY, DEER PARK, LONG ISLAND, N. Y. (3 bldgs.) The Austin Company, Designers and Builders. Lupton Curtain-Wall System, Type H in office building. Width module 5′-0″. Fixed glass, no ventilators. Opaque areas are ⅛″ embossed fluted aluminum sheet with 1″ thick insulation and galvanized steel sheet on inside. Lupton steel industrial windows in factory.

Here's the curtain-wall *you* design — Lupton *Manufactures* — Lupton *Installs*

This new exterior wall system offers new flexibility of design, aesthetic appeal and decided economies.

The Lupton Curtain-Wall System uses prefabricated units and aluminum mullions, designed for varying conditions and wind loads. Completely adaptable to single-story and multi-story buildings.

The Lupton Curtain-Wall System has been engineered to overcome inherent problems in curtain-wall construction — condensation — expansion and contraction — corrosion — warping and buckling.

Through standardized factory operations the Lupton System of construction offers custom-designed units at reduced costs. The design elements and construction features incorporate Lupton's more than 40 years experience in the production of metal windows. Now, you can specify type of fenestration, choice of wall unit materials, texture and color — and get what you specify. Your problems are simplified because Lupton Curtain-Walls are manufactured, shipped and installed by one responsible organization.

A COMPLETE SYSTEM

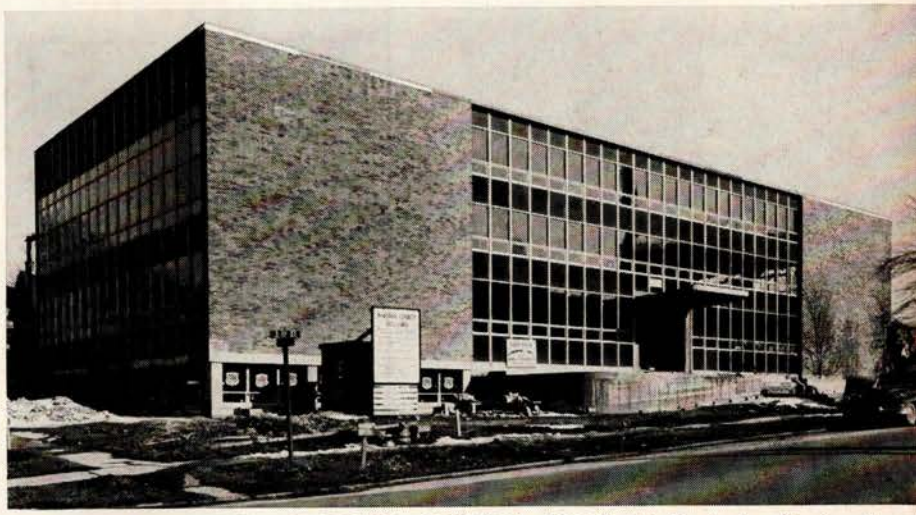
Lupton installation includes everything—anchor clips adjustable to assure accurate alignment—all aluminum framework — custom-built units with or without ventilating sections — thorough, complete inspection and checking every step of the way.

INSTALLATION ECONOMIES

All-season installation from within the building — maximum prefabrication, less to do on the site — simplified on-the-job storage at needed floor levels . . . no ground storage. All aluminum units handle easily, go into place quickly.

For data sheets and Lupton help in your planning, write or wire . . .

MICHAEL FLYNN MANUFACTURING CO.
MAIN OFFICE AND PLANT: 700 E. Godfrey Ave., Phila. 24, Pa.
NEW YORK — 51 E. 42nd St., New York 17, N. Y.
LOS ANGELES — 672 S. Lafayette Park Place, Los Angeles 57, Cal.
STOCKTON — 1441 Fremont St., Stockton, Cal.
KANSAS CITY
(Herb W. George) 9209 Cherry St., Kansas City 5, Mo.
CINCINNATI—De Sales Bldg., 1620 Madison Rd., Cincinnati 6, O.



NIAGARA COUNTY BUILDING, NIAGARA FALLS, N. Y. Arch: Charles F. Obenhack. Contr: Walter S. Johnson Building Co. Lupton Curtain-Wall System, Type G. Width module, 4′-0″. Double glazing, 1″ thick fixed lights, ½″ thick in ventilators. Ventilators open in. Opaque areas are double panel construction. Outside face is green-black porcelain enamel laminated with honeycomb core, galvanized back. Inside face is galvanized steel sheet covering 1″ thick insulation. Back-up wall to sill height.



SCHOOL OF DESIGN, NORTH CAROLINA STATE COLLEGE, RALEIGH, N. C. Arch: F. Carter Williams. Contr: Dickerson, Inc. Lupton Curtain-Wall System, Type H. Width module, 5′-8″. Fixed glass and ventilators are inside bead glazed. Ventilators open out. Spandrels and column faces are covered by aluminum sheet .102″ thick, alumilited.

LUPTON

Metal Windows and Curtain-Walls

MARLO COOLS A TEXAS-SIZE BUILDING





ARCHITECT:
Gill, Harrell & Associates

CONSULTING ENGINEER:
Zumwalt & Vinther

AIR CONDITIONING CONTRACTOR:
Sam P. Wallace & Company

(All of Dallas, Tex.)

The Women's Activities Building on the Texas State Fair Grounds, Dallas, is the largest air conditioned banquet area in the Southwest. The scene of international displays at Fair time, and of innumerable conventions and banquets throughout the year, this massive hall demands air conditioning of great capacity and flexibility to offset widely varying heat loads.

These cooling requirements are met with a series of Marlo Ceiling Type Air Handling Units—compactly designed and unobtrusively installed to provide the greatest cooling efficiency in the least amount of space.

The complete line of Marlo quality equipment provides a practical answer to any air conditioning problem, large or small. Write to Marlo today for complete information and literature.

SEE OUR BULLETIN IN SWEET'S CATALOG

Marlo COIL COMPANY

Manufacturers of COOLING TOWERS • EVAPORATIVE CONDENSERS • INDUSTRIAL COOLERS • AIR CONDITIONING UNITS • MULTI-ZONE UNITS • BLAST HEATING & COOLING COILS

Saint Louis 10, Missouri

AIA LITERATURE

(*Continued from page 288*)

KITCHENS

• A 20-page brochure presents kitchen layouts and gives suggestions for color coordinating accessories. 25¢. *Capitol Kitchens, Newark, N. J.*

• *Appliances for your Electrical Home* contains 24 pages of illustrations, descriptions and specifications of home appliances including water heaters, laundry equipment, air conditioners and kitchen equipment.

• A 24-page brochure offers descriptions and illustrations of kitchen storage cabinets and accessories. *General Electric Co., Louisville, Ky.**

SPACE SAVERS

• The use of *Unitfold* and *Unitslide* folding walls to create flexible room space is covered in a 4-page, illustrated folder from *John T. Fairhurst Co., Inc., 45 West 45th St., New York 36, N. Y.**

•Multi-purpose foldaway equipment, including band stands, bleachers, stages, tables and benches, is described in a 4-page illustrated brochure. *Haldeman-Homme Mfg. Co., 2580 University Ave., St. Paul 14, Minn.**

• A detailed description of movable metal walls is provided in a 68-page catalog illustrated with sectional drawings and photographs. *The Mills Co., 965 Wayside Rd., Cleveland 10, Ohio.**

INCINERATION PLANTS

Incineration plants for cities is the subject of a 24-page brochure which offers descriptive data, photographs and engineering drawings. *Pittsburgh-Des Moines Steel Co., Neville Island, Pittsburgh 25, Pa.*

CONSTRUCTION SYSTEMS

Systems of Lightweight Construction outlines uses, installation procedures and specifications of vermiculite products and includes a summary of fire tests and ratings. *Zonolite Co., 135 S. LaSalle St., Chicago 3, Ill.*

SUSPENDED CEILINGS

Specifications for suspended ceilings of metal lath and plaster are available in a 4-page illustrated folder. *Metal Lath Mfrs. Assoc., Engineers Bldg., Cleveland 14, Ohio.**

(*Continued on page 296*)

ARCHITECTURAL RECORD

this issue of Architectural Record carries the largest volume of advertising ever published by an architectural magazine 281 pages

Why? Unprecedented sales opportunities in the architect- and engineer-designed building market of course, but equally important—

increasing recognition by building product advertisers that one magazine, Architectural Record, gives them thrifty, VERIFIABLE coverage of those architects and engineers who plan . . .

. . . 94% of all architect-designed nonresidential building
. . . 73% of all architect-designed residential building

BUILDING TYPES STUDY

OFFICE BUILDINGS 221

APRIL 1955

Through its many years of extensive research SEALUXE engineering takes long strides forward in creating eight new products and a

⇨ STARTLING NEW

aluminum grid and window frame become one

the BROWNE Bi-Folding Facade

(Model 11 Series 200)

something new under the sun!

- COMBINES FACADE GRID WITH WINDOW FRAME. Eliminates window frame which is now a part of the grid.
- AFFORDS A WATER BAR AROUND ENTIRE PERIMETER OF WINDOW.
- AFFORDS A CONVENTIONAL REVEAL.
- ELIMINATES CAULKING.
- COMPLETE aluminum grid, no steel.
- Tested at 30 pounds per square inch under hydraulic pressure.
- Eliminates all screws.
- Opens for inside cleaning and/or controllable draft-free ventilation.
- Equipped with special air conditioning locks . . . manual or mechanical operation.
- Accommodates single or double glazing with removable glazing beads. It may be table glazed. Replacements can be made by building maintenance department without disturbing occupants.
- Custom made in any size. Maximum width of 10′ 0″.

Available in aluminum, bronze or stainless steel

Watch for these new products. Available soon ➧

SERIES 100, Model 60 (operates to inside)
SERIES 100, Model 61 (operates to outside)
SERIES 300, Model 43-A

Sealuxe Engineering has created a *Manual of Techniques* and a *Dictionary of Devices* for metal glass facading. Write for TECHNICAL & PICTORIAL DATA.

NATIONWIDE FIELD SERVICES

Universal Corporation

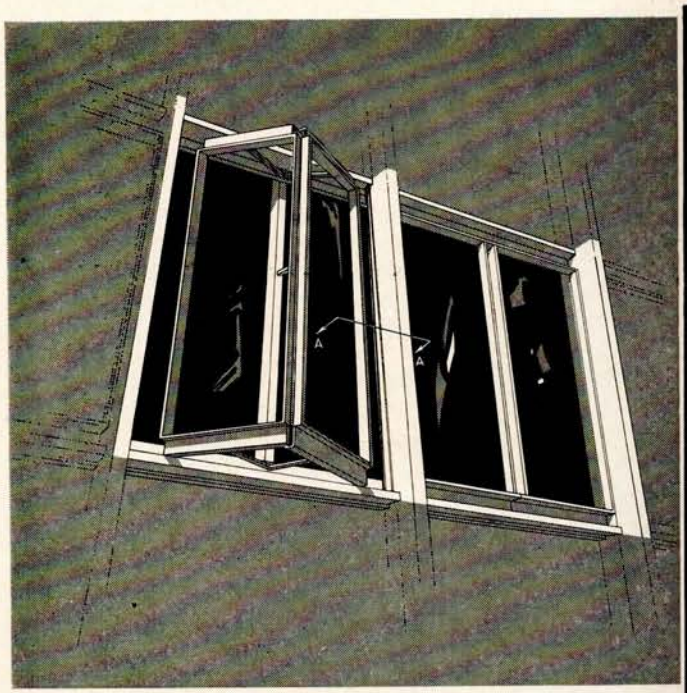
"Miracles in Metals"

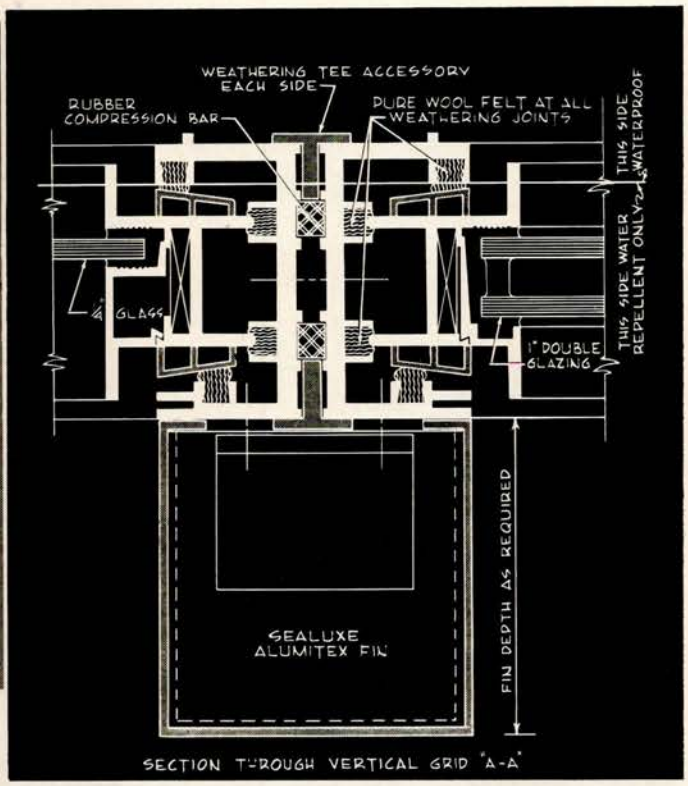
J. P. TRAVIS, *President*

Dallas • New York • Chicago • Los Angeles • Des Moines

CONCEPT IN FACADES

heavier, better, improved facades at lower cost!





BROWNE Bi-Folding Facade*

(Model 11 Series 200)

other **SEALUXE ENGINEERED** *products:*

BROWNE Windows
- **Folding Flue**
- **Psychiatric**
- **Underwriter's Labeled**

Thermo-Vista Model 51-A

Ventilating Picture Window Model 42-A

Uni-Core Panels

Uni-Fins (Rectangular and Polygonal)

Cellular Spandrels and Fascias

Dormer Surrounds

Horizontal Solar Shades

Vertical Weather Controls

Solar Canopies (Eyebrows)

Display Frames

IMPORTANT NOTE! UNIVERSAL, the leader for over 30 years, continues to set the pace in window and metal glass facading. There are no better materials available than non-ferrous metals and glass, if used properly.

INCLUDING ERECTION ON ALL PRODUCTS

"Miracles in Metals"

*PAT. PEND.

- Engineering
- Manufacturing
- Installation

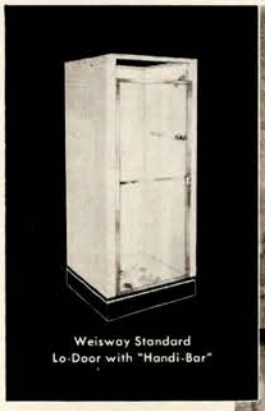
Universal Corporation

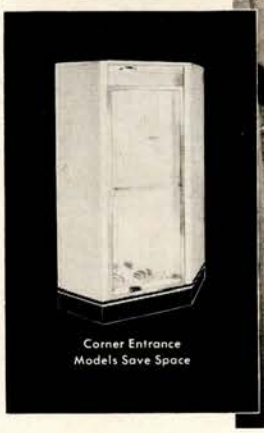
J. P. TRAVIS, *President*

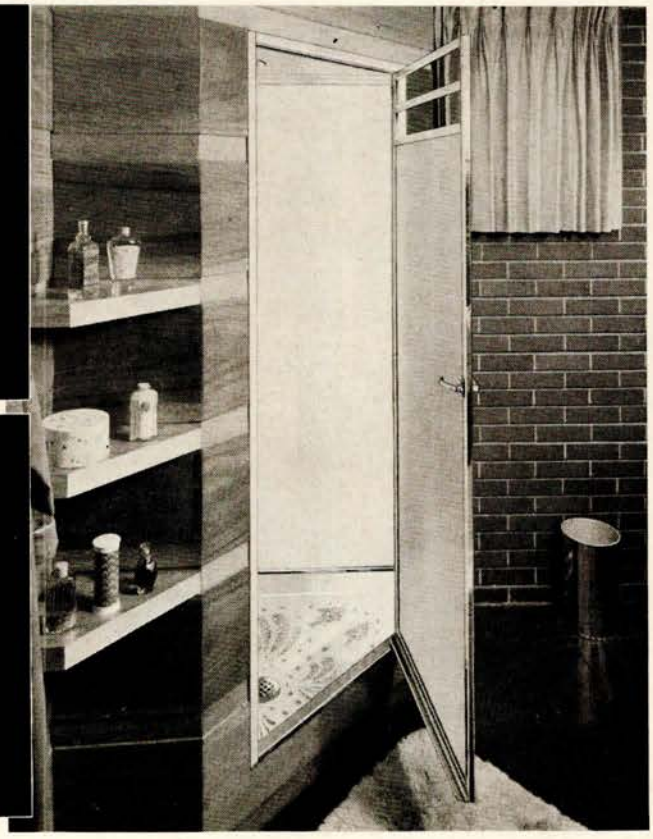
Dallas • New York • Chicago • Los Angeles • Des Moines

Sealuxe engineered
BROWNE
Bi-Folding Facades

Luxury of Built-in Showers Plus Enduring QUALITY ...at LESS COST!







"In-a-Wall" Weisway Cabinet Showers provide the luxurious effect of built-in construction at a cost which makes them practical for homes in almost every price class. Weisways are complete, self-contained units—entirely independent of the building structure—not affected by shrinkage of surrounding materials.

Precision-built, of service-tested materials, Weisways are guaranteed leakproof, provide long years of dependable service. Vitreous porcelain enamel on one-piece receptor or heavy guage iron. Foot-Grip, No-Slip floor is equally safe, wet or dry; easy to keep clean and sanitary. No lead pans required, no special treatment of building walls or floor.

Write now for catalog showing complete Weisway line with detailed specifications.

Weisway CABINET SHOWERS

HENRY WEIS MFG. CO., INC., *503 Weisway Bldg., Elkhart, Indiana*

AEH LITERATURE

(*Continued from page 292*)

ENTRANCES, REVOLVING DOORS

Crane aluminum entrances, window walls, doors, revolving doors and hardware are detailed in a 12-page illustrated brochure. *Crane Fullview Glass Door Co., 4500-10 No. Clark St., Chicago 40, Ill.*

SILENCER

A 20-page booklet describes *Aircoustat* units for silencing air conditioning systems. Included are complete specifications and an outline of how to solve air conditioning noise problems. *Industrial Sound Control, Inc., 45 Granby St., Hartford, Conn.*

LIGHTING

• *RLM Standard Specifications* covers 47 different types of incandescent and fluorescent industrial lighting units. *RLM Standards Institute, Suite 818, 326 W. Madison St., Chicago 6, Ill.*

• A 20-page *Booklet B-4556-B* gives the basic requirements for school lighting systems. It discusses both new installations and relighting projects and includes several lighting layouts. *Westinghouse Electric Corp., P.O. Box 2099, Pittsburgh 30, Pa.*

WINDOWS

• Wood window units are explained in detail with section drawings and photographs in a 22-page catalog available from the *Andersen Corp., Bayport, Minn.**

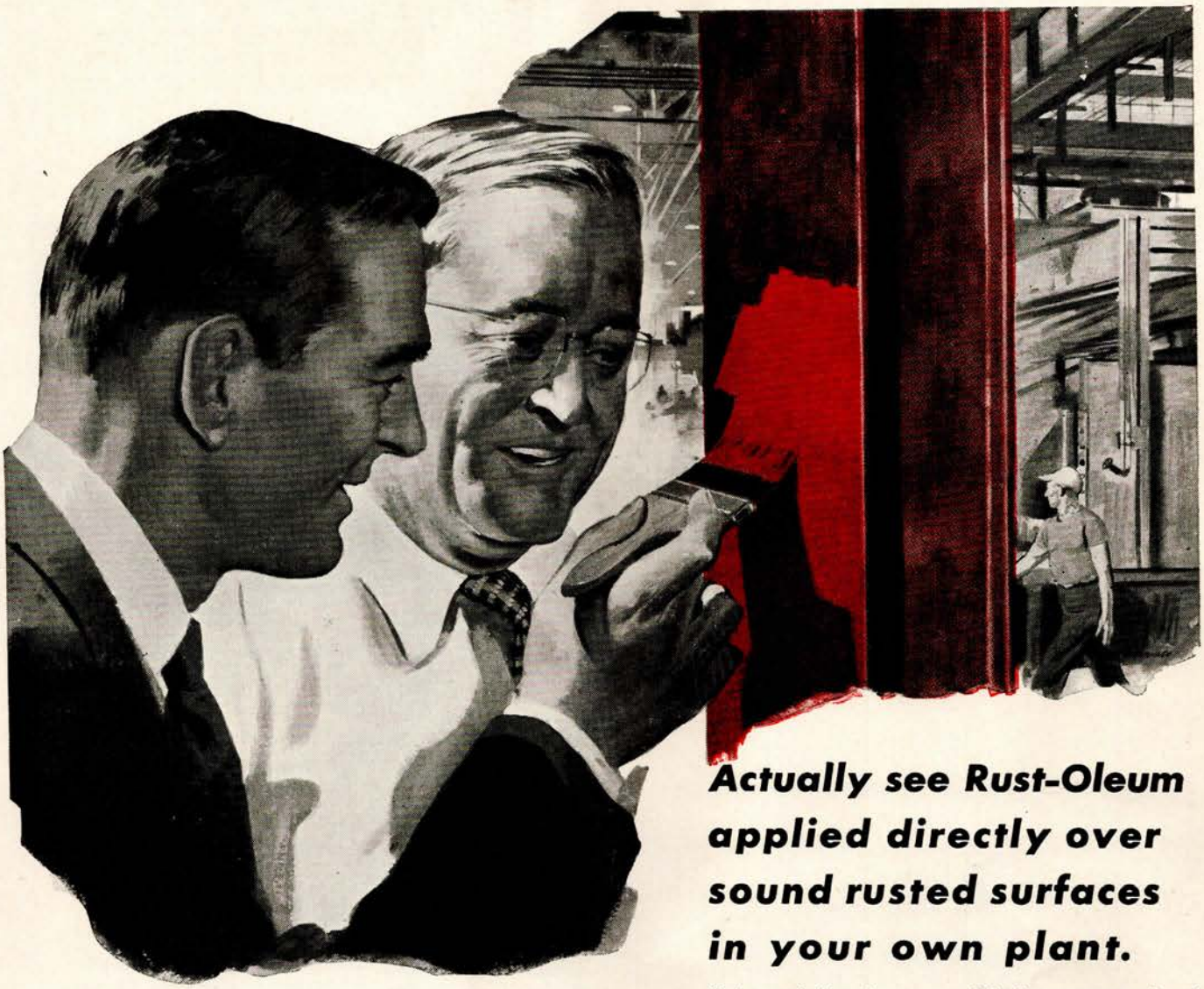
• *Aulo-lok* windows with torque bar operation are described and illustrated in a 4-page folder. *Ludman Corp., 14100 Biscayne Blvd., No. Miami, Fla.**

• Insulating windows and screens are discussed in a 4-page folder issued by the *Small Homes Council, University of Illinois, Urbana, Ill.*

GLASS BLOCKS

• A 4-page folder describes Owens-Illinois No. 80-F glass block designed for southern exposures, and includes a light prediction chart. *Kimble Glass Co., Toledo 1, Ohio.*

• An 8-page booklet shows in detail the performance of *Suntrol* glass block. *Pittsburgh Corning Corp., 1 Gateway Ctr., Pittsburgh 22, Pa.**



Actually see Rust-Oleum applied directly over sound rusted surfaces in your own plant.

RUST-OLEUM®

STOPS RUST!

Get proof of performance right in your own plant! See Rust-Oleum 769 Damp-Proof Red Primer applied over *your own* rusted metal after simple scraping and wire-brushing to remove rust scale and loose rust. Rust-Oleum's *specially-processed* fish oil vehicle penetrates rust to bare metal—saving time, labor and money.

Rust-Oleum finish coatings in Aluminum, Gray, White, Black, Orange, Blue, Yellow, Green and others provide both *Rust Prevention and Decorative Beauty!* Specify Rust-Oleum for new construction, maintenance and re-modeling. See Sweet's for catalog and nearest Rust-Oleum Industrial Distributor, or clip coupon to your letterhead . . .



There Is Only One Rust-Oleum. It is as Distinctive as Your Own Fingerprint.



See local classified telephone directory under Rust Preventives or Paints for nearest Rust-Oleum Industrial Distributor.

ATTACH TO YOUR BUSINESS LETTERHEAD AND MAIL TO:

Rust-Oleum Corporation, 2505 Oakton St., Evanston, Ill.

- ☐ Please Show Me the Rust-Oleum "Rusted Panel Demonstration."
- ☐ Test Application of Rust-Oleum Over Rusted Metal Surfaces in My Plant.
- ☐ Complete Literature with Color Chart.
- ☐ Nearest Rust-Oleum Industrial Distributor.

Modern Lighting for a Modern Library

NEO-RAY LOUVRED CEILING

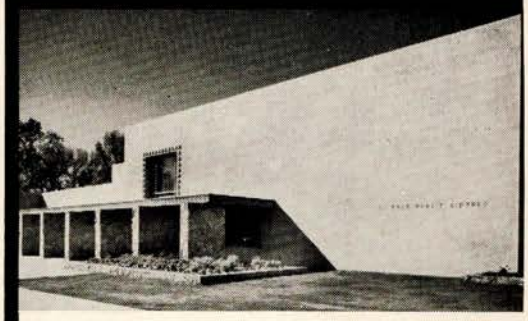
with Factory Prefabricated Alignment

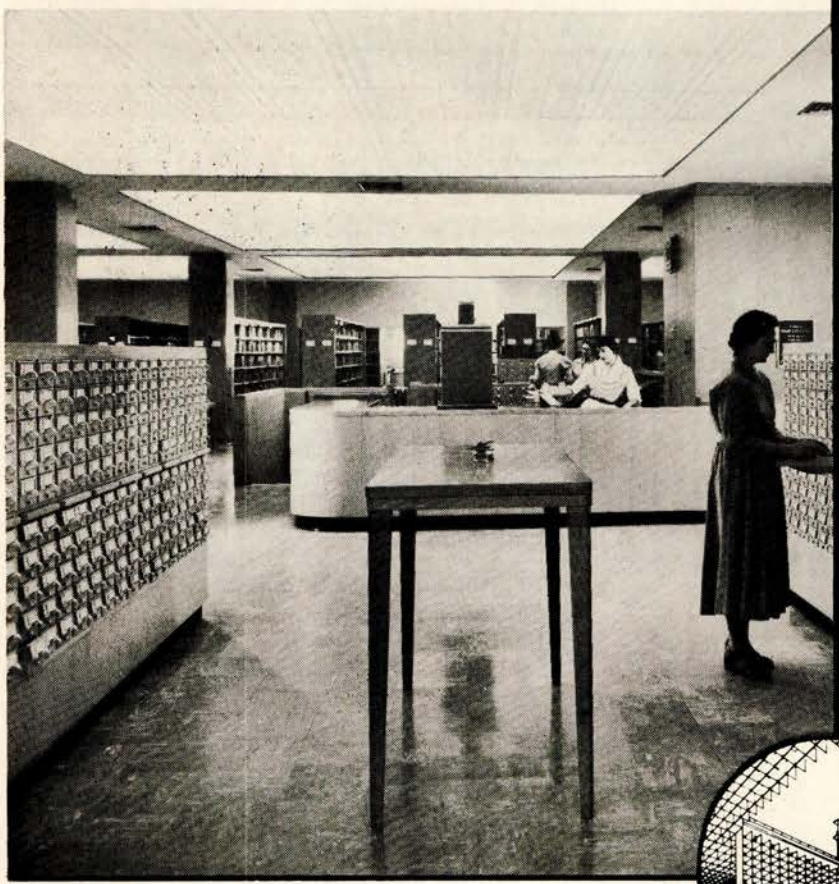
Pat. No. 2,689,026

El Paso Public Library—El Paso, Texas

Architect: Carroll & Daeuble

Contractor: Robert E. McKee

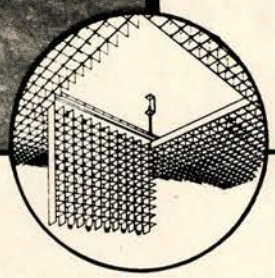




And when it comes to lighting, the specs called for NEO-RAY CU Louvred Ceilings with 3" x 3" x 3" cells . . . hinged sections, continuous unbroken louver pattern in all directions. It blends perfectly with the modern surroundings . . . and provides correct, comfortable lighting so necessary in a library.

". . . the new library had to be not only a fine functional building, but also genuinely expressive of El Paso and the Southwest." Utility plus beauty to create a structure of maximum efficiency.

Perhaps Neo-Ray LOUVRED CEILINGS can fit into your plans. Our engineering staff is ready to assist in the creation and development of any special louvred ceiling designs.



See our catalog in Sweet's Architectural File sec. 30a/NE

Send for NEW LOUVRED CEILING catalog No. 544

MANUFACTURERS OF LIGHTING FIXTURES INCLUDING:

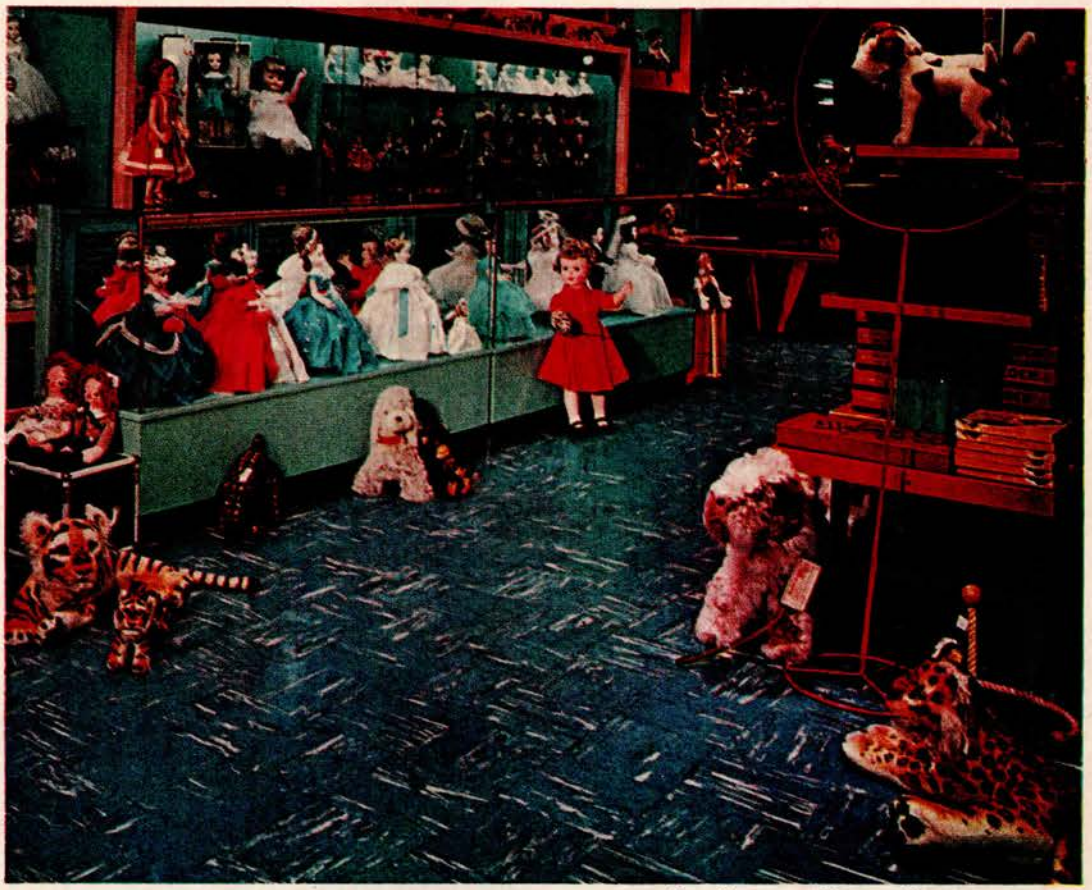


Louvred Ceilings • Roto-Strip • Luminette • Kleen-VU KVT Troffers

NEO-RAY PRODUCTS, Inc.

315 East 22nd St. • New York 10, N. Y.

Vina-Lux ..showcase floor for smart shops



Toy Shop · Neiman-Marcus · Dallas



Sales-wise merchants know the importance of proper merchandising surroundings. No part of the store "backdrops" goods for sale more than the *floor*.

So naturally, retailers are turning to Vina-Lux vinyl-asbestos tile as a basic "selling floor surface". Its balanced range of colors with superior light reflectance — its cushioned resiliency underfoot — and its smooth easy-to-clean surface all combine to make it a logical choice.

America's leading stores, in increasing number, are choosing Vina-Lux to help sell goods—and to keep floor costs down. Architects are finding it the answer not only to store floor problems, but for schools, hospitals and other kinds of public buildings.

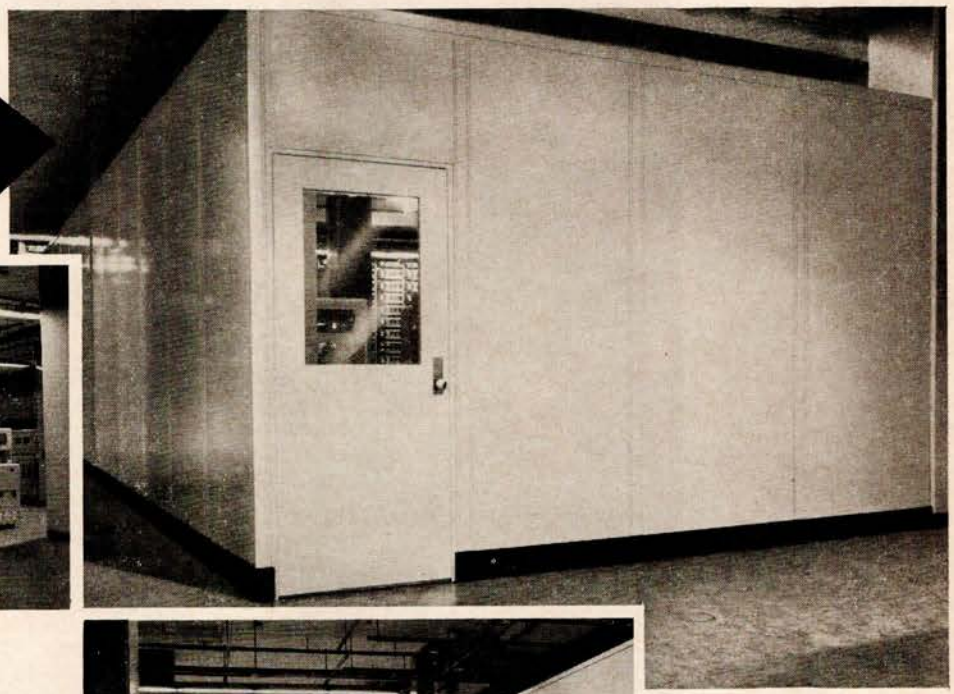
Perhaps Vina-Lux can help you solve a knotty floor problem. Drop us a line and we'll be glad to have a representative give you the whole story on this better resilient flooring.

Vina-Lux®

REINFORCED VINYL TILE

AZROCK PRODUCTS DIVISION • UVALDE ROCK ASPHALT CO.
FROST BANK BUILDING • SAN ANTONIO, TEXAS
MAKERS OF VINA-LUX • AZROCK • DURACO • AZPHLEX

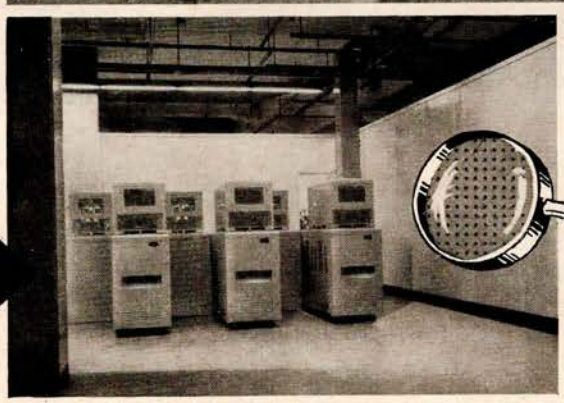
Another TECHNICAL ACHIEVEMENT for AETNAWALL



Time-saving economies are guaranteed with AETNAWALL prompt delivery and years of installation experience.



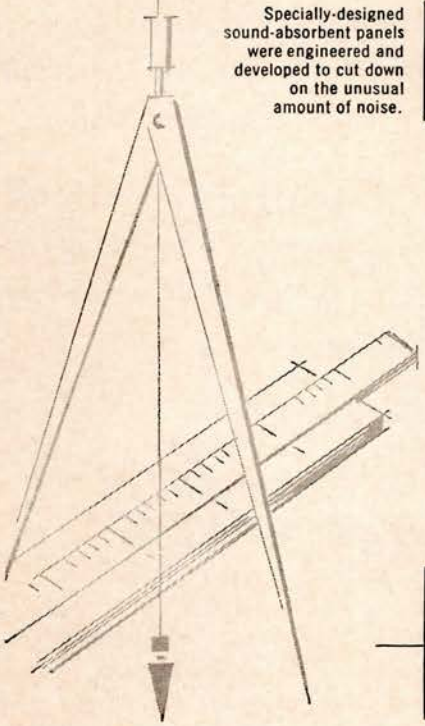
Dust can ruin valuable instruments. Usual clean AETNAWALL installation assured trouble-free operation, even during drilling.



Specially-designed sound-absorbent panels were engineered and developed to cut down on the unusual amount of noise.



Magnified view of perforations for sound absorption.



The housing of this sensitive electronic equipment presented a three-way problem—sound control, dust control and speed of installation.

AETNAWALL was the obvious answer!

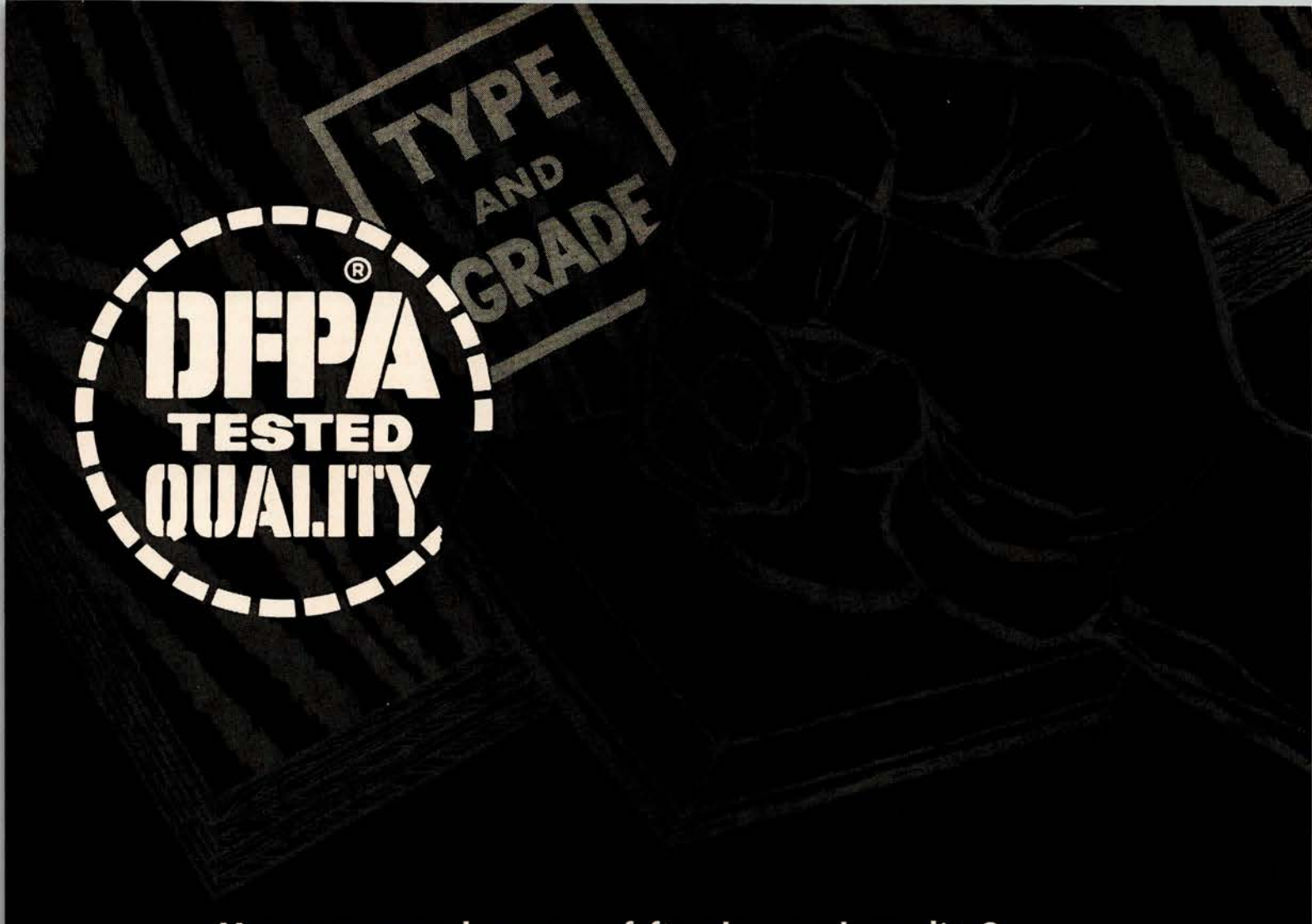
Wherever quality production, experienced engineering ability, faithful follow-through and prompt delivery are essential, American industry, as it has for over a quarter of a century, specifies **AETNAWALL.**

The best in pre-fabricated movable walls for all uses . . . Product of

AETNA STEEL PRODUCTS CORPORATION

E. J. BOYLE DIVISION

14 Charlton Street, New York 14, New York



How can you be sure of fir plywood quality?

LOOK FOR THE DFPA* TRADEMARK!

Play it safe! Your reputation is on the line with every panel you buy, sell or specify. Insist on genuine DFPA trademarked panels. DFPA grade-trademarks are hallmarks of quality used only on plywood manufactured under the industry's rigid quality control program. These marks are your very best assurance of reliable quality.

***DFPA**—Douglas Fir Plywood Association, Tacoma, Washington, is a non-profit industry organization devoted to product research, promotion and quality maintenance.

INTERIOR-TYPE PLYPANEL DFPA TESTED QUALITY

PlyPanel® for Interior finish

GENUINE PLYSCORD SHEATHING DFPA TESTED QUALITY

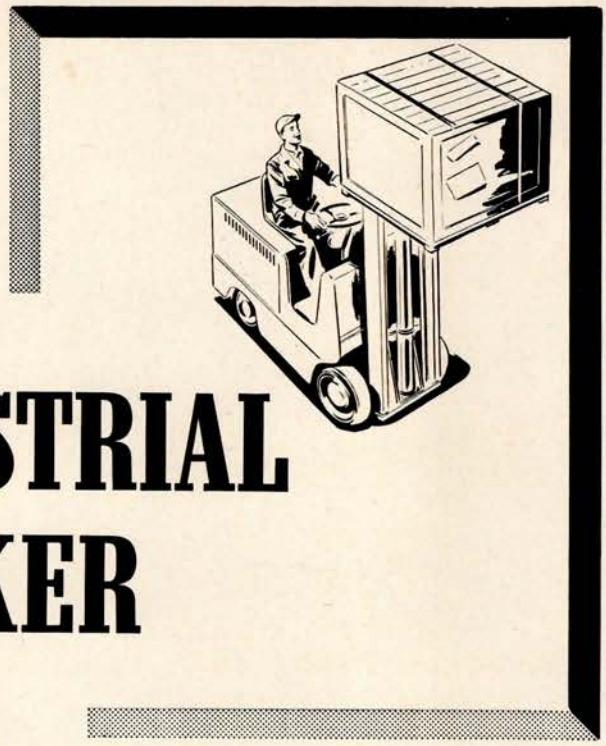
PlyScord® for structural uses

EXT-DFPA TESTED QUALITY

EXT-DFPA® for outdoor uses

...other grades for other uses.

FIR PLYWOOD 1905 1955 GOLDEN JUBILEE



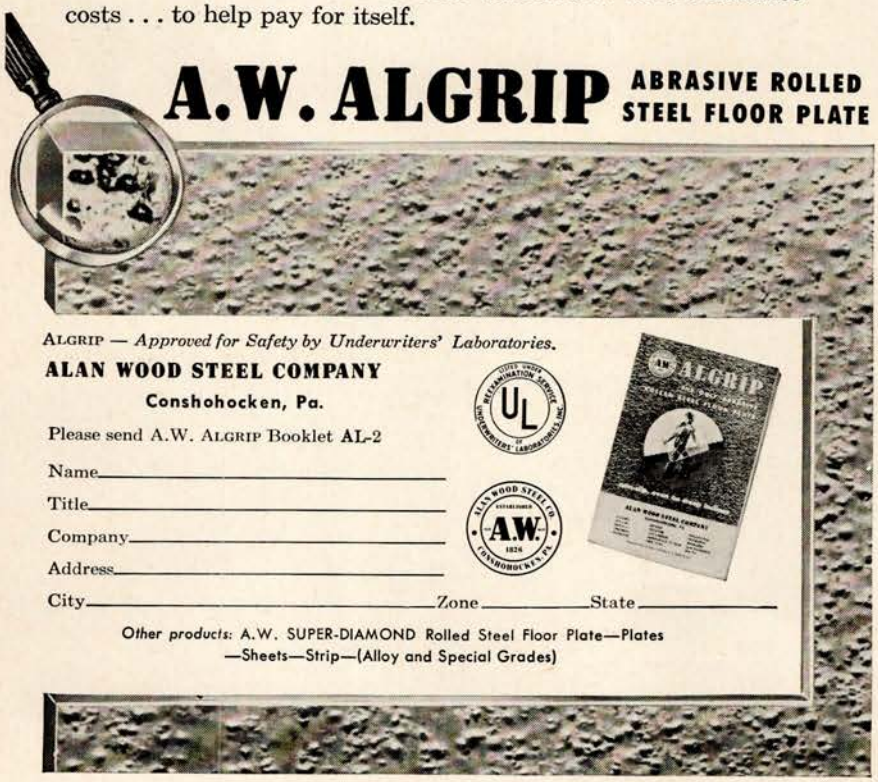
The INDUSTRIAL WORKER knows

—and he knows at close range—that an accident means serious personal tragedy to the worker as well as financial and production problems to the plant.

It's a fortunate worker who is employed by one of the progressive firms which have taken the practical step that *assures* safety against slipping accidents . . . by installing ALGRIP . . . the world's only Abrasive Rolled Steel Floor Plate. Oily, wet or greasy—level or on slope—the ALGRIP floor is foot-safe for the worker . . . safe against skidding for material-handling equipment . . . because ALGRIP's uniformly and deeply embedded abrasive keeps it safe . . . year in, year out.

ALGRIP maintains itself . . . cuts accidents . . . and insurance costs . . . to help pay for itself.

A.W. ALGRIP ABRASIVE ROLLED STEEL FLOOR PLATE



ALGRIP — *Approved for Safety by Underwriters' Laboratories.*

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Other products: A.W. SUPER-DIAMOND Rolled Steel Floor Plate—Plates —Sheets—Strip—(Alloy and Special Grades)

QUOTES FROM PARTICIPANTS

(*Continued from page 157*)

outdoors are merging. . . . The tendency is toward the free flow of space to achieve the illusion of more space than exists. Living rooms, dining rooms, entry halls, stair halls, play areas, even kitchens (in servantless households) are becoming subdivisions of the major living area. Fortunately, the bedrooms are still private." **— William W. Landsberg**

"Architects should think a little more about two problems: (1) providing more privacy — to make up for what we are losing in our work-a-day lives and (2) thinking in terms of fewer materials — more and more good design is becoming a process of elimination." **— Wm. Lyman**

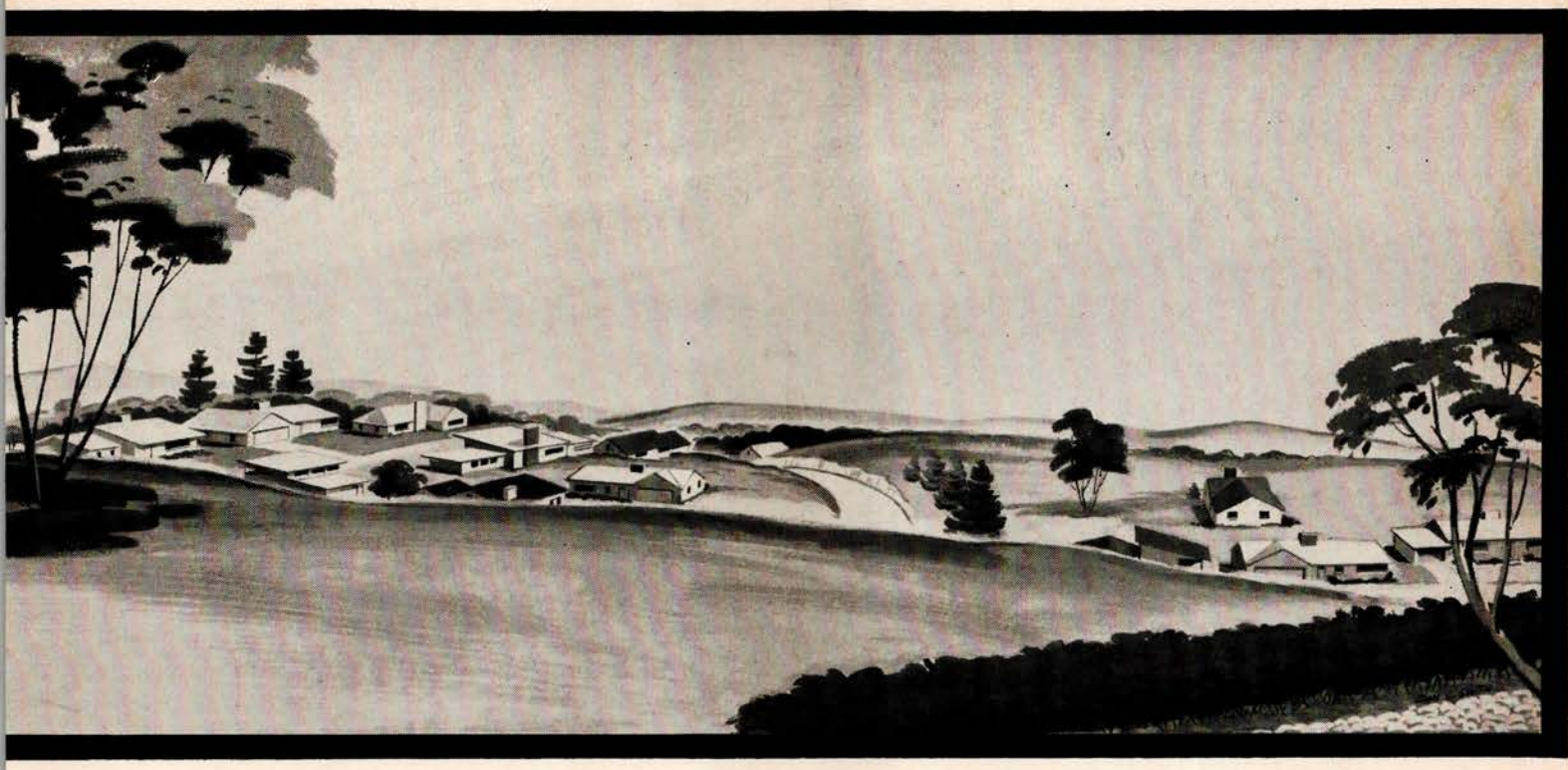
Like "plan freedom together with pleasing space concepts for interiors and a close relationship with the exterior." Dislike "a frequently found clumsy heaviness in exterior expression." **— Fred L. Markham**

Like "visual spaciousness even in limited space; abundance of light, air, sunshine; easily maintained, hard and smooth surfaces; convenience of built-in equipment and furniture." Dislike "arbitrary and undisciplined freedom with structure and form; lack of coördination of mechanical work with structure. House is basically 'cellular,' each requiring *privacy* from sound, vision, odor, moisture, light, etc. Open 'space dividers' ignore this fact." **— George Matsumoto**

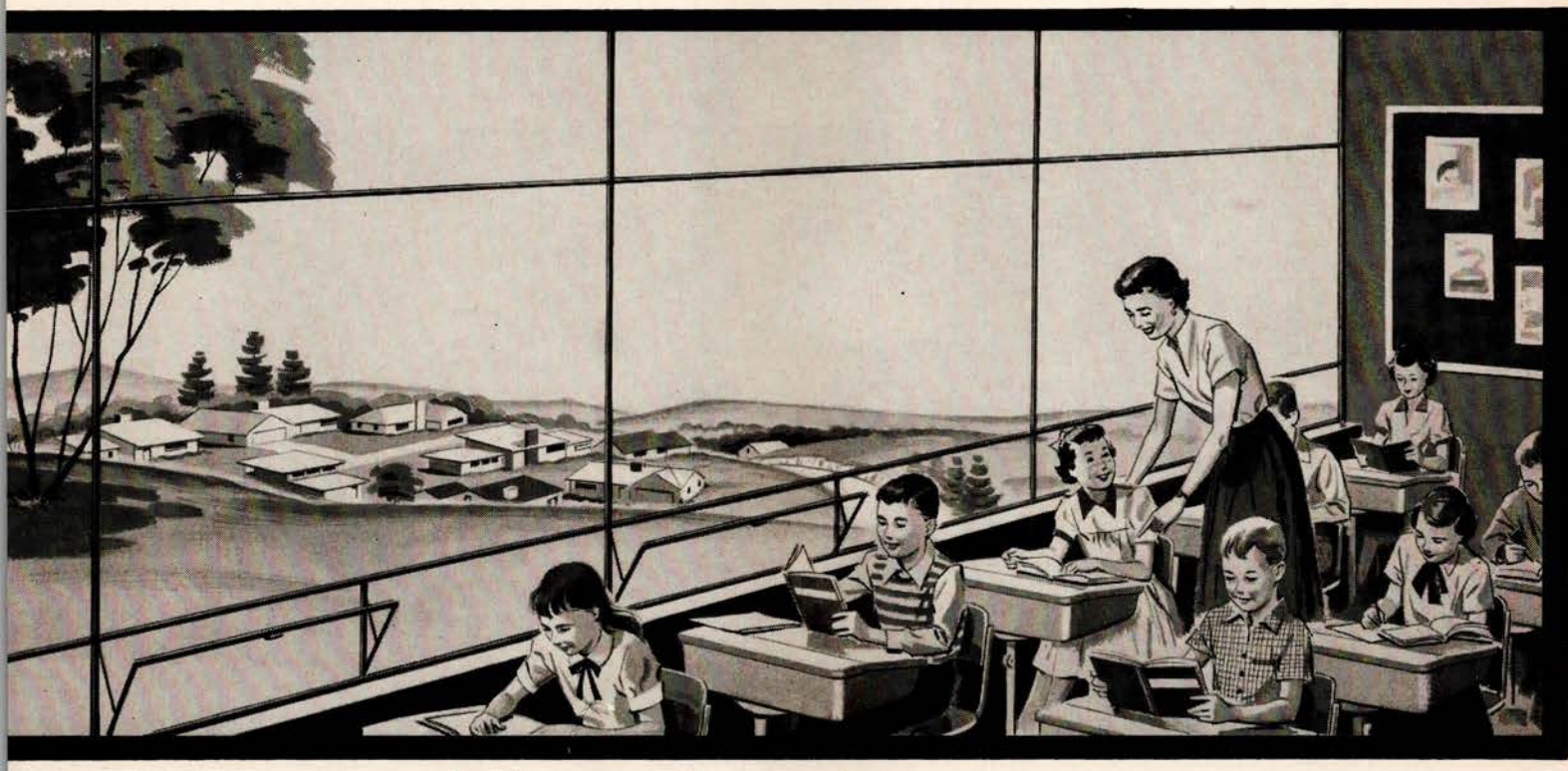
"The house is getting smaller as we get more gadgets, e.g., a dishwasher costs $200, so we take $200 out of the house size. I think that we are reaching the point of diminishing returns. One can make space multi-usable as in a trailer, airplane or pullman-car, but the cost of that multi-use is reaching the point where it would be cheaper to build more space. . . . A change in thinking concerning the living room, study, etc., seems to be taking place though not yet completely realized. The old-fashioned farm kitchen — a family room with kitchen, piano, T.V., sewing, fireplace, hobby (not shop) — seems to be coming back. The old-fashioned sitting room or parlor (a small formal living room) is provided for quiet and for guests not yet taken into the inner family circle — the Japanese foreigners' room idea." — **Francis Joseph McCarthy**

Like "trend toward simple straightforward solutions reflecting contemporary trends; honest use of materials; use of the module to achieve discipline and to make use of components; inter-relating rooms and parts to the whole; emphasis on exterior space planning." Dislike "buildings not related to their sites; too much

(*Continued on page 306*)



Nature is a happy part



of the modern classroom

A "Daylight Wall" classroom is a happier classroom because it doesn't shut nature out . . . or children in.

Clear glass from wall to wall and sill to ceiling gives the whole room a feeling of bright alertness and openness.

Cuts costs, too. Artificial lighting isn't needed so much. There's less wall area to paint and maintain, and building costs are lower than in many other types of construction.

In cold climates, your daylight walls should be *Thermopane** insulating glass for maximum comfort and heating economy. Write for your free copy of *How to Get Nature-Quality Light for School Children.* Dept. 4155, Libbey·Owens·Ford Glass Company, 608 Madison Avenue, Toledo 3, Ohio. ®

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DAYLIGHT WALLS

...THAT LET YOU SEE

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WHY CRANE DURACLAY IN LARGE HOSPITAL

New Mazel House Addition to Chicago's Edgewater Hospital specifies CRANE

Large hospital plumbing fixtures are frequently subject to severe thermal shock while in use. The result is crazing and cracking of the fixture . . . and a need for replacement long before it has given its money's worth in service.

But that doesn't happen when you specify Crane fixtures.

Because large Crane hospital fixtures are made of Duraclay—a special vitreous glazed earthenware developed in the Crane laboratories.



Mazel House Addition, Edgewater Hospital, Chicago, Illinois. Architect: Edward P. Steinberg. General Contractor: Gust K. Newberg Construction Co. Plumbing Contractor: World Plumbing Company.



Crane Mayo surgeons scrub-up sink of Duraclay, permits surgeon to scrub to shoulder without touching non-sterile parts of fixture. Dial-ese foot pedal mixing valve for hot or cold water, or mixed flow.

CRANE

IS A MUST FIXTURES

Duraclay is unaffected by thermal shock and is impervious to acids and stains that affect ordinary hospital fixtures.

Crane offers a complete line of hospital fixtures, all designed in cooperation with hospital authorities for specific hospital use. All are equipped with famous Dial-ese controls.

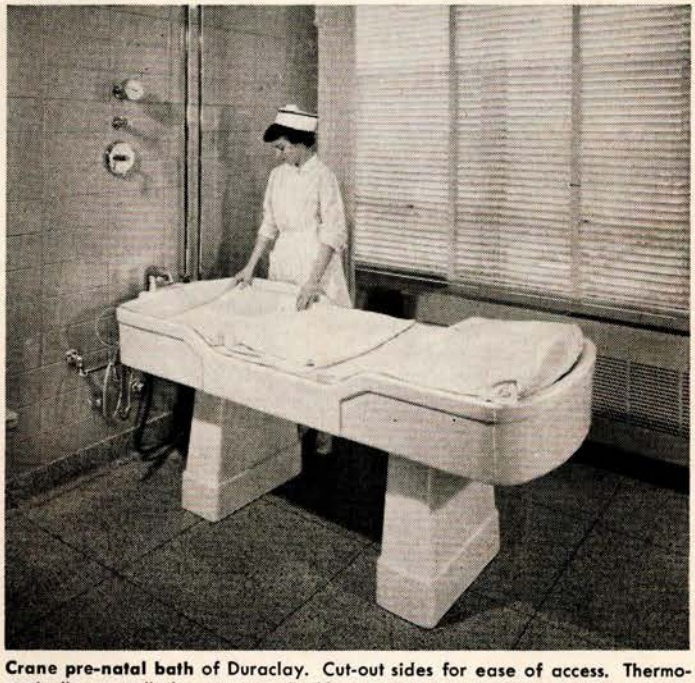
Before you finish your plans for building or remodeling a hospital, it would be a good idea to check up on Crane hospital fixtures. Don't you agree?



Crane Yale wash-up sink of Duraclay with foot pedal mixing valve which may be elevated to clean the floor. At left of picture, is pre-natal shower with thermostatic control valve and dial thermometer volume control. Hose and shampoo attachment. Vacuum breaker safeguards sterile water supply.



Patient's bathroom with Crane Whirlton siphon jet closet with integral bedpan lugs. Crane bedpan cleansing fixture, Neuday porcelain enamel bath, and Norwich vitreous china lavatory.



Crane pre-natal bath of Duraclay. Cut-out sides for ease of access. Thermostatically controlled water supply. Vacuum breaker safeguards sterile water supply against siphonage. Deviator spout for diverting water to spray.

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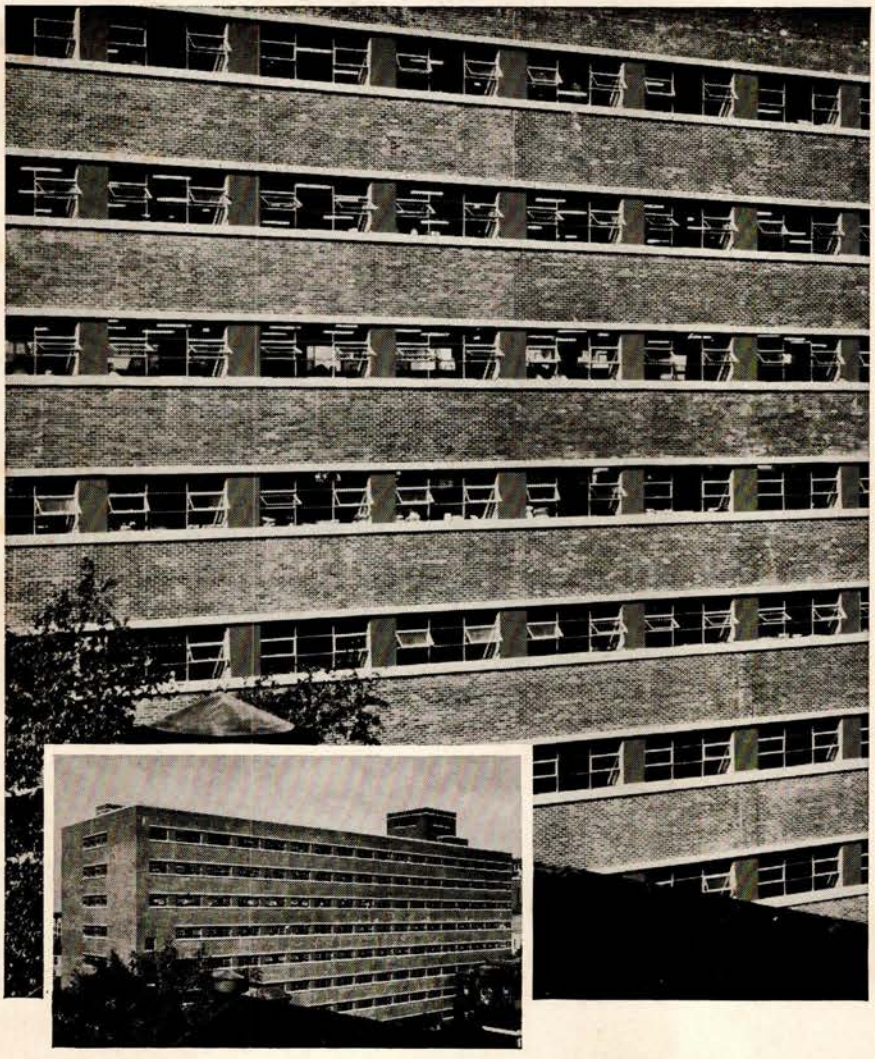

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Alberene Stone – *the natural silicate* stone – offers durable "dark accent" beauty. Its low absorbency, fine grain and absence of stratification prevent chipping and cracking in freezing weather. Its all-silicate mineral components resist chemical attack and loss of surface polish.

Alberene Stone can be cut into sections as thin as 7/8" and 1¼". It offers designers economy, and increased flexibility in design – such as greater depth of reveal in spandrels.

For information and technical assistance, address: Alberene Stone Corporation, 419 Fourth Avenue, New York 16, N. Y.

ALBERENE STONE

provides LOW ABSORBENCY protection

QUOTES FROM PARTICIPANTS

(*Continued from page 302*)

reliance on worn clichés; over-use of glass as a substitute for design." — **Bruce McCarty**

Like "experimentation, *disciplined* design, economical detailing." Dislike "sentimentalism, ostentation." — **John M. Morse**

"Space arrangement is a multi-sensorial affair with quite a few senses involved apart from the eye. We listen subconsciously to minute reverberation coming to us from room expansions here and there, our locomotion has sense impressions as its accompaniment. The space is never without material enclosure with thermal and olfactory appeal. And architectural space has different form from Euclidism space — always 'direction,' emphasized by surface and color treatment and by openings of the enclosure. . . . Materials are overstressed, psychologically speaking, as 'novelties.' Material assembly must endure for an amortisation period, without fatiguing impression of obsolesence. The human material with its responsibilities is the oldest the architect has to handle." — **Richard J. Neutra**

Like "simple design, open planning, use of color, large glass areas if properly orientated for view, privacy and climate." Dislike "use of too many different materials, bad circulation in planning, tricky non-essential detail." — **Harry E. Ormston**

Like "consideration of individual's needs not only physical but emotional; increasingly greater deliverance from the shackles of trends; functionalism without early attendant stability." Dislike "fadism; use of the same tricks, mannerisms and clichés; apparent disregard in plan for the fact that certain aspects of housekeeping, in spite of mechanical inventions, are still disagreeable, particularly from the standpoint of noise, such as garbage disposers, dishwashers, etc." — **Vladimir Ossipoff**

"The custom-designed house may be considered the most complicated of buildings. It is designed to satisfy functions that are often in conflict with each other. Usually there is a limiting budget to further frustrate the architect." — **Aaron Resnick**

"The need for planning for economy is a challenge that is evolving a vocabulary of special design with an applicability to contemporary needs that is beginning to rival that of the standard plans of the past." — **Carleton R. Richmond, Jr.**

Like "the honest attempt by many of the leaders in the profession in trying for an architecture indigenous to the locale." — **R. Gommel Roessner**

(*Continued on page 310*)



Year 'round comfort for institutional or commercial installations . . .



without costly duct systems!

Modine AIRditioners* are the modern, economical way to air-condition old or new buildings

Modine AIRditioners eliminate expensive duct systems and structural alterations. Cold water from a central chiller is piped to each unit for summer cooling. Heating water is supplied by a central boiler. The same piping — water supply and drain — serves for both cooling and heating. Yet, AIRditioners are individually controllable by room occupants.

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



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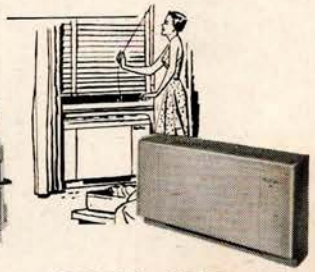
CONCEALED MODELS — (front panel cutaway) Designed for easy, in-the-wall installation.



CONSOLE MODELS — for free-standing installation. Can also be recessed so only 6 inches of cabinet shows.

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...because this structural floor

1



2





3

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Milwaukee, Wis.
Architect: Milwaukee County Architects' Office
Contractor: Milwaukee County Const. Dept.
2. Central Office Bldg., Dept. of Employment
Sacramento, Calif.
Architect: Calif. State Dept. of Public Wks., Div. of Architecture
Contractor: George A. Fuller Co.
3. General Telephone Co., Santa Monica, Calif.
Architect: Albert C. Martin & Assoc.
Contractor: George A. Fuller Co.
4. City-County Bldg., Detroit, Mich.
Architect: Harley, Ellington & Day
Contractor: Bryant & Detwiler
5. Ford Motor Administration Bldg.
San Jose, Calif.
Architect: Albert Kahn Associated Architects & Engineers, Inc.
Contractor: J. H. Pomeroy
6. State Office Bldg., Pittsburgh, Pa.
Architect: Altenhof & Bown
Contractor: Navarro Corp.
7. Office Building for the Norfolk Division of The Texas Co., Norfolk, Va.
Architect: E. Bradford Tazewell
Contractor: Doyle & Russell
8. Standard-Thompson Co., Vandalia, O.
Architect: Lorenz & Williams
Contractor: Maxon Construction Co.
9. Pennsylvania Thresherman & Farmers Insurance Co., Harrisburg, Pa.
Architect: Edmund G. Good
Contractor: Ritter Brothers
10. West Penn Power Co. Office Bldg.
Greensburg, Pa.
Architect: Hoffman & Crumpton
Contractor: O. H. Martin Associates



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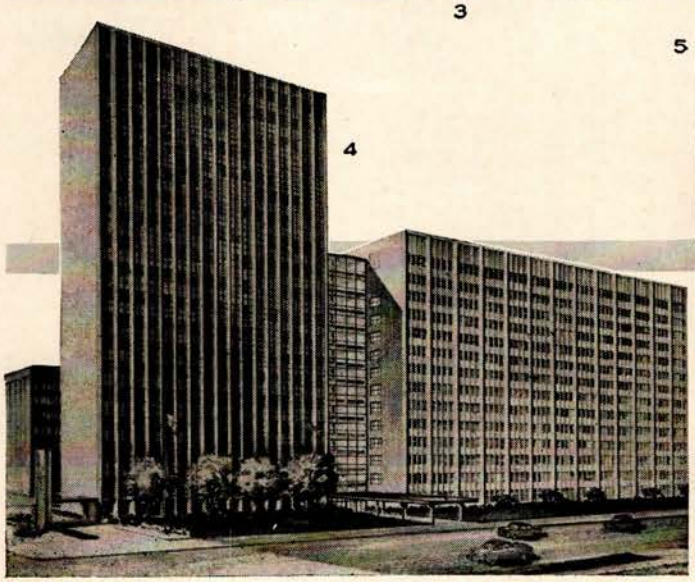

4

5



7



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First, you can install electrical, telephone or intercommunication outlets in any or every square foot of floor space . . . *any time.* Desks and partitions can be moved, office layout changed, or new electrical equipment installed without the trouble and expense of tearing up walls and floors for new wiring.

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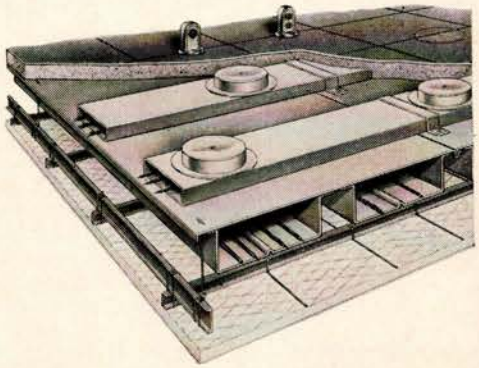

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5. Designed for greater strength with lighter dead weight, giving you unusual structural design economy.

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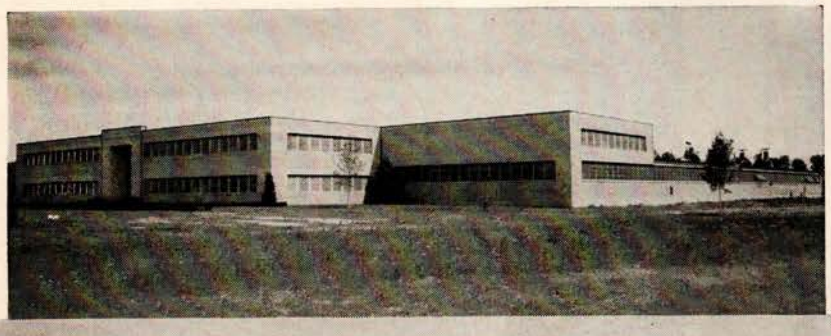

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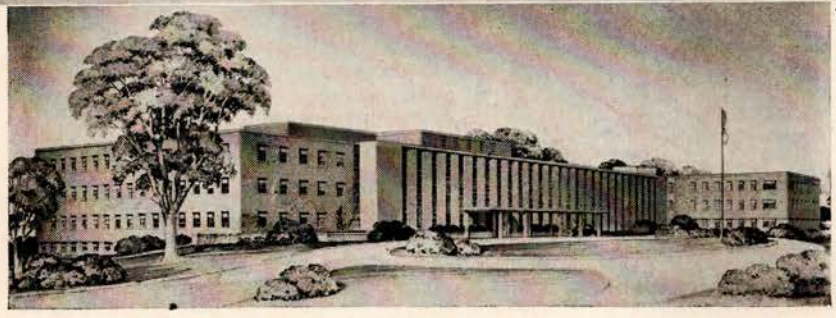


How To Specify An Abrasive Tread

that will last the life of your building

clip and file

There are four factors that make an abrasive metal tread safe *and* durable: (1) Weight of the abrasive granules per square foot, (2) size of the granules, (3) uniformity of distribution, (4) average number of granules per representative square.

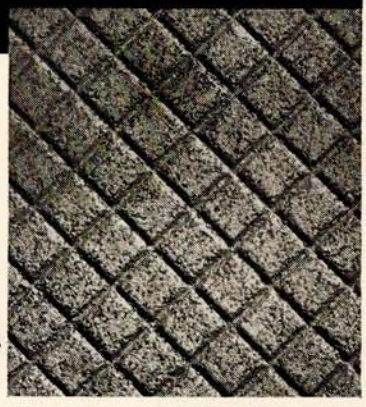
Feralun abrasive metal treads are quality-designed and made. They have a full measure of non-slip granules. And they are cast to last the life of your building. For handy reference, here's a simple short form specification:

Treads, Thresholds, Elevator Door Sills, Floor Plates, Trench Covers – Exposed wearing surface to contain not less than two (2) ounces per square foot of abrasive granules embedded in the top metal surface not less than 1/16 inches while the matrix is in a molten state. Size of non-slip granules shall range from #16 to #24 and distributed uniformly over the surface in such a manner that not less than an average of ninety (90) individual granules can be counted in any three representative 1/2" x 1/2" squares of any portion of the finished surface.

Pattern of finished abrasive surface shall be either "hatched", "fluted" or "plain", as required. Of (Feralun, Alumalun, Bronzalun, Nicalun) non-slip abrasive metal, as fabricated by the American Abrasive Metals Company, Irvington, N. J., or of approved equivalent in kind, quality, function and characteristics.

Why FERALUN provides lasting safety

Here is an unretouched photograph of a *Feralun* tread taken after acid treatment. (Paint is removed and acid is used to eat away the metal base so as to isolate the actual abrasive content of the tread.) Note the full and even distribution of abrasive—for greater safety, longer wear.



Here is an unretouched photograph of an abrasive tread, purchased on the open market of the type often offered as an equal of Feralun, after the identical acid test. Note the meager amount of abrasive and spotty distribution.



SEE SWEETS CATALOG—12b/Am.

FERALUN

AB 125

AMERICAN ABRASIVE METALS CO. • IRVINGTON 11, N. J.

QUOTES FROM PARTICIPANTS

(*Continued from page 306*)

"The thing that we like most about present-day houses is the improvement in kitchen and bath design, and also the general use or family room. We dislike very much materials . . . that date or cheapen a house." — **Moreland Griffith Smith**

Houses "are getting more open, airy and larger. I especially like the fact that more floor space is being devoted to the living areas of the house." — **William Rowe Smith**

"Houses are becoming less stark, having more warmth and a better feeling for materials." Dislike "the box-like glass type that generally seems foreign to its setting." — **Louis F. Southerland**

Like "recognition of patterns of 'family' life in design resulting in new opportunities for creative living." — **Calvin C. Straub**

Like "simplicity of plan; ease of maintenance; directness; flow of space; indoor-outdoor living; informality." Dislike "misuse of large glass areas; clichés such as 'planters'; lack of storage for bulky articles; too 'clinical' look." — **Carl A. Strauss**

On fewer partitions: "all elements should appear to float — as all space seems larger by the use of glass or open space above head height." — **Robert W. Vahlberg**

Like "open planning, forthright use of materials, general clean lines." Dislike "lack of thorough study often evident, resulting in disturbing forms, — exhibitionism." Note "slight retirement from uninhibited open planning, still seeking its virtues." — **F. Talbott Wilson**

"I like the keener awareness by the public of the beauty of structure in houses, which is sweeping across the country. I believe that from this acceptance, newer forms in structure will emerge in creative work. . . . I dislike the seeming similarity in usage and appearance of exposed structure, the horizontal beam and the vertical glass. . . . Lack of imagination could lead to stagnation." — **Worley K. Wong**

Like "thoroughly integrated design of space, form, detail, function so that living in a house is a motivating experience which enhances the owner's particular way of life." Dislike "misused clichés." — **Thomas W. D. Wright**

Like "warmth of natural woods, bright colors for contrast, simple planning and detailing, proper use of modern materials — minus frills." — **John G. York**

Announcing

AN IMPORTANT COMPETITION

The Upholstery Leather Group, a non-profit association of American tanners of upholstery leathers, announces a Leather in Decoration Design Competition.

The purpose of this competition is to encourage American designers to use leather for home decoration in imaginative ways. Because Europeans have used leather in exciting as well as practical ways for centuries, and as a salute to the A.I.D. Floating Conference and Tour of Europe, this competition will be sub-titled "European inspired—American created."

Awards will total $6000: $1000 being given for the best entry in each of five classifications, and an additional $1000 being awarded for the most original use of leather in any one of the five classifications.

The coupon below will bring you an amplification and explanation of the competition rules, as well as a wealth of information on the latest developments in upholstery leather. Fill it out and return it today!

COMPETITION RULES

The Leather in Decoration Design Competition includes five classifications: I Furniture; II Architecture; III Decorative Accessories; IV Decorative Design for Printing, Tooling, or Embossing; V Complete Room Setting.

1. The competition is open to all practicing designers, decorators, and architects. A cordial invitation is issued especially to members of the A.I.D., I.D.I. and A.I.A. to participate.

2. Entrants may submit a single design in one or more of the five classifications. The bonus prize of $1000 will be awarded in addition to one of the five winners.

3. Each design submitted must be presented on 18 by 24 inch white artist board. Designs may be in black and white or color.

4. Entries will be tabbed with numbers on labels so that judging will be done without identification. Designers are requested to have designs photostated prior to mailing.

5. Winning designs will become the property of The Upholstery Leather Group and will be presented at the 1956 Leather in Decoration Show in January. Any other designs selected to be presented at the show will be included only with the written permission of the designer.

6. Winning designs in the Leather in Decoration Show will receive national magazine, newspaper, TV and radio publicity and advertising. All publicity and advertising will be handled by The Upholstery Leather Group.

7. The competition will run from May 1 through July 15. All entries must be postmarked prior to July 15, 1955, and sent to Design Competition, The Upholstery Leather Group, 141 East 44th Street, New York 17, New York.

8. Winners will be announced at the 1956 Leather in Decoration Show in January, 1956.

The decision of the judges shall be final.

Judges for the competition will be leading designers and authorities on design, headed by C. Eugene Stephenson, President, American Institute of Decorators.

Only genuine leather wears as well as it looks

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Please send me amplification of the rules for the Leather in Decoration Design Competition. Also send me your kit of up-to-date facts on genuine upholstery leather.

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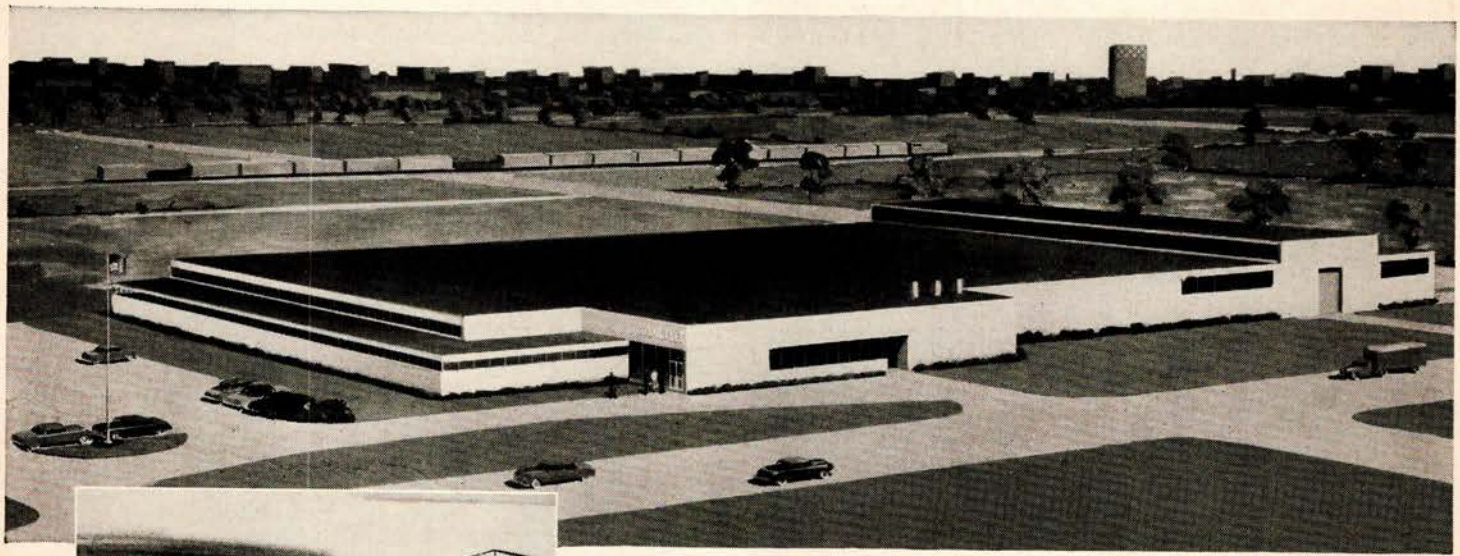
Skokie, Illinois





Contemporary precision keynotes the entrance to Panellit, Incorporated's new home. Seven landscaped acres, with ample parking space, provide an ideal setting for Panellit's engineering and manufacturing of industrial controls – many vital in Atomic Energy production.

Congratulations to *Dubin and Dubin*

Here is Dubin and Dubin's successful solution to special problems in lighting, air conditioning and communications. They provided many quiet, well-lighted and ventilated work areas – all virtually dust-free – for Panellit's designers and engineers.

This new 82,000 sq. ft. building of steel, concrete and brick houses office, factory and assembly space.

Also, special attention was given to the personal comfort of the employees: immaculate First Aid and Rest Rooms, Lockers, Kitchen and Cafeteria. The Reception Room, too, reflects the progressive outlook found at Panellit. Naturally, Westinghouse Water Coolers were specified to contribute to this atmosphere of quiet and comfort.



Dubin and Dubin, Architects, made sure with

Westinghouse Water Coolers

– the choice of more and more leading architects and construction engineers. This ever-increasing stamp of approval is in recognition of the superior quality and performance built into every Westinghouse Water Cooler.

Quiet...Dependable Operation

is assured with the new Solenoid Water Valve. There's no stem packing to leak, no moving parts to wear out. And the entire water system is completely sealed in – for years of maintenance-free service.

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from Automatic Stream Height Regulator. No spurt, no splash, no dribble – regardless of water pressure changes. Patented Pre-Cooler and Super Sub-Cooler deliver more cold water for less money. Cold waste water pre-cools incoming water . . . sub-cools hot refrigerant.

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– Only Westinghouse offers Dual Electric Control at no extra cost. Either the finger tip or toe tip control operates bubbler valve electrically. Stainless steel, splash-proof top is sanitary, unbreakable. And every Westinghouse Water Cooler is covered by 5-year Guarantee Plan.

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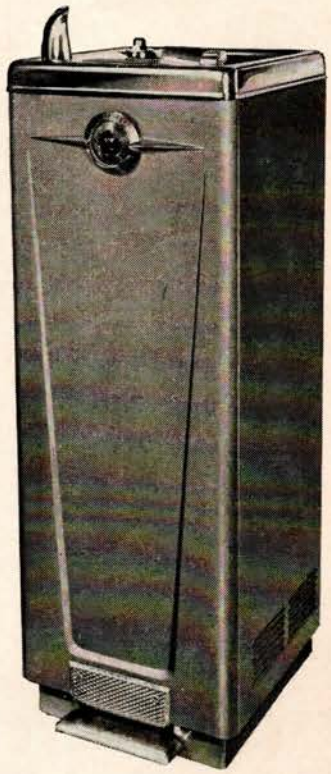
shows at a glance how many hundreds of dollars the Westinghouse Pay-Way Plan can save every year. Based on extensive time and motion studies, this Plan can indicate savings of as much as $350 for every 50 employees! To determine savings under the Pay-Way Plan see this handy Westinghouse computer. Call your Westinghouse Water Cooler Distributor today. He's listed in the Yellow Pages of your telephone directory.





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WSC2
Compartment
Pressure Cooler



WSBC1
Compartment
Bottle Cooler

THE RECORD REPORTS

(*Continued from page 16*)

the 36th annual convention of the Associated General Contractors of America, Inc.

The contractors long have thought that this paradox of unusually tight competition in a steady or rising market might reverse the prosperity trend, but the builders of heavy works are in what appears sure to be their tenth consecutive record year judged by construction put in place. They now are confident that they enjoy the capacity to handle any increase in volume they might face; the President's $101 billion highway improvement and construction program projected for the next 10 years would not impose too heavy a burden on their facilities, they say.

The convention installed new officers elected earlier by mail ballot. George C. Koss, Koss Construction Co., Des Moines, Ia., is the 1955 president, succeeding John MacLeod of Paramount, Calif. Mr. Koss heads a firm which is one of the country's largest builders of highways and airports. Frank J. Rooney, of Frank J. Rooney, Inc., Miami, Fla., building contractors, was installed as vice president. William Muirhead, of the William Muirhead Construction Co., Durham, N. C., rounding out a decade as A.G.C.'s secretary-treasurer, was re-elected to that position. The officers serve one-year terms.

Twenty-four newly elected national directors also were installed at New Orleans. These officers are elected from the states by the membership and form a portion of the total board membership of more than 80 chosen each year.

The Building Contractors' Division report, the one of greatest significance for architects, was handled by Mr. Rooney, chairman, and Welton A. Snow, division manager. It covered these points:

1. A recommendation that to free credit frozen by retained percentages, the A.G.C. should continue to work with other industry groups toward a policy similar to that contained in standard Federal contract forms. It was decided that the general contractors would not try to devise a new formula of their own at this time. (A New York meeting on retained percentages held early last month moved the groups toward closer agreement.)

2. American Institute of Architects standard document forms are being studied jointly with the Institute to improve insurance coverage for both owners and contractors.

3. More emphasis should be placed on apprentice training if the tremendous personnel demand for future work is to be met.

4. Continued use of Invitation to Bid forms in inviting bids from subcontractors was recommended.

The general contractors were urged to continue and strengthen their protests against subcontractor efforts to secure national legislation forcing listing of bid prices on government work.

There was no new "bid-shopping" bill before Congress last month, but the general contractors expected some such legislation to be introduced before Congress adjourned.

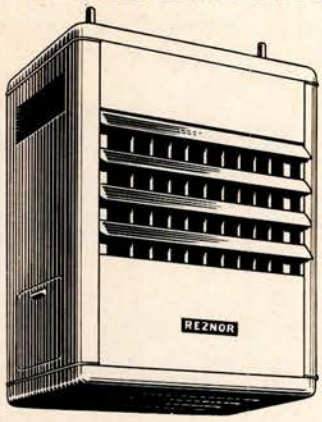
The 1956 A.G.C. convention will be at the Waldorf-Astoria Hotel, New York City, next February 13–16. The organization's mid-year board meeting will be held in Minneapolis September 28, 29, and 30, this year.

— Ernest Mickel

Specify the heating system your building can't outgrow:



for all industrial and commercial buildings



You don't have to choose between a heating plant which is too big for the present and one which may be too small for the future. Specify Reznor gas unit heaters for all your commercial and industrial buildings. You can start with just enough heaters to meet original requirements. As the building is expanded, or heating requirements increase, additional units can be added quickly and economically to carry the extra load.

Reznor heat is on-the-spot heat. Each unit acts independently, producing and distributing heat as it is needed in the immediate area. More area — more heaters. Hang them, connect gas and electric lines and the installation is completed. Reznor heaters are easily shifted to accommodate partitions and other internal remodeling, too.

Bulletin SA-541, "Application of Gas Unit Heating," is full of helpful hints on how to plan a successful unit heater installation. If you haven't seen it yet, write today for your free copy.

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THE WORLD'S LARGEST-SELLING GAS UNIT HEATERS

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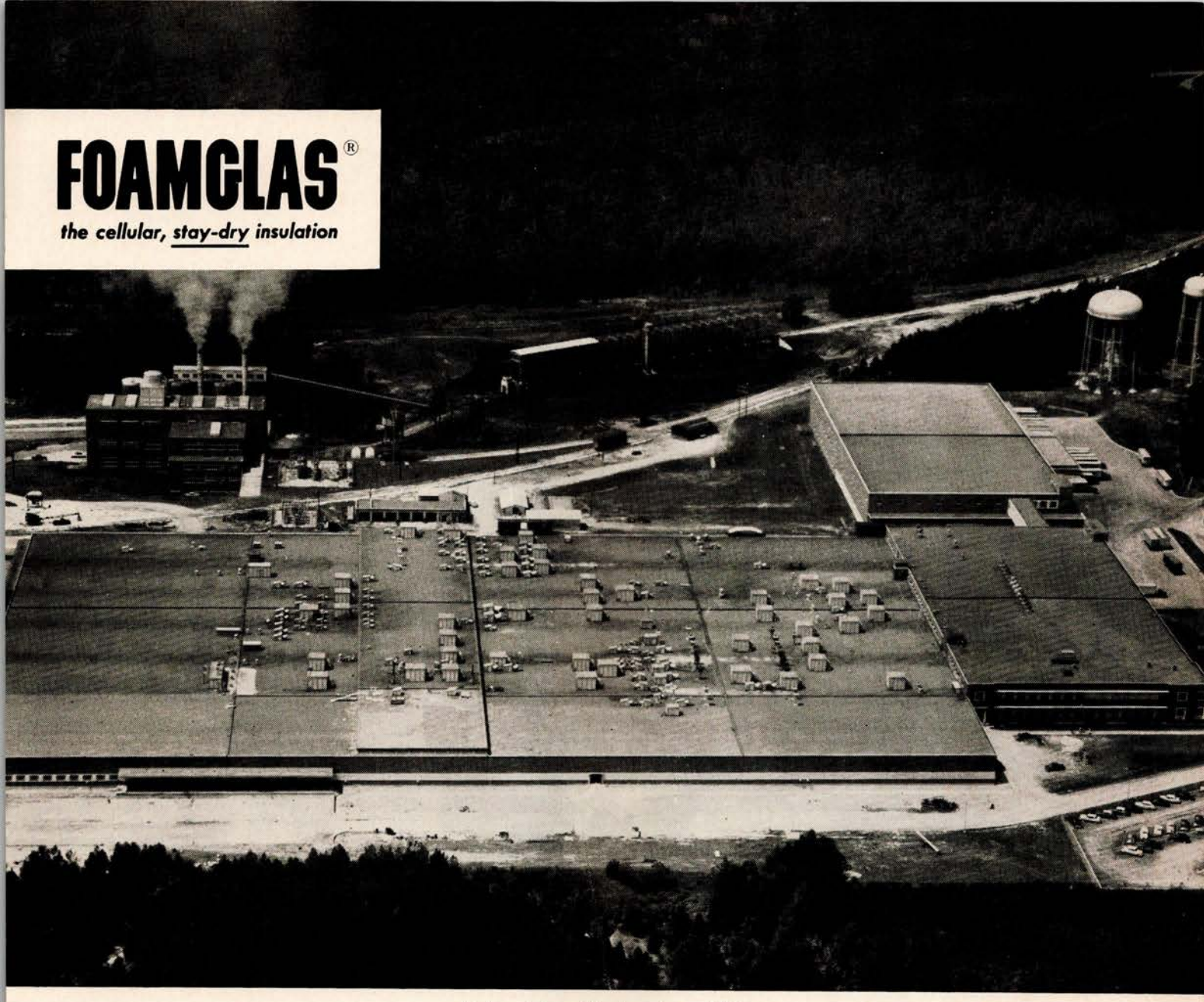
the cellular, stay-dry insulation



Airview of Grace Bleachery, the world's largest . . . recently enlarged by The Springs Cotton Mills at Grace, S.C. *Engineers and Architects:* Robert & Co. Associates, Inc., Atlanta, Ga.; *Roofers:* Ingold Company, Inc., Hickory, N.C. and Arvett & Ledbetter Roofing and Heating Co., Charlotte, N.C.

On Springs Cotton Mills' 16-acre bleachery roof FOAMGLAS insulates effectively because it stays dry

On this 16-acre roof of their Grace Bleachery, The Springs Cotton Mills has found that FOAMGLAS insulates effectively because it can't absorb moisture and lose insulating efficiency.

Installed in 1947 on the original bleachery roof, FOAMGLAS has effectively kept down condensation on the roof slab and conserved heat in the winter. Seven years later it was picked again to insulate the roof of a major addition to this bleachery, the largest in the world.

This unique cellular glass insulation has been used extensively by the Springs Mills in other ways . . . on 350° steam lines . . . in cold storage spaces . . . and on 20 additional acres of mill roofs including one in Lancaster, S.C. covering more looms (7,500) than any other roof in the world.

It will pay *you* to get the full story on the use of FOAMGLAS for buildings, cold storage space, piping, or tanks and equipment. Please write today for a sample and literature indicating your specific interest.



Pittsburgh Corning Corporation

Dept. B-55, One Gateway Center
Pittsburgh 22, Pennsylvania
In Canada: 57 Bloor St. W., Toronto, Ontario

THE RECORD REPORTS

(*Continued from page 314*)

ON THE CALENDAR

May

1–4 Annual Meeting, Chamber of Commerce of the United States — Washington, D. C.

5–7 Regional conference of the A.I.A. South Atlantic District — Fort Sumter Hotel, Charleston, S. C.

6 Second Annual Conference for Engineering, a review of engineering progress and prospects — Ohio State University College of Engineering, Columbus, Ohio

9–13 Annual convention, National Restaurant Association, including architectural and remodeling exhibit — Navy Pier, Chicago

12–13 Annual meeting, Steel Joist Institute — The Greenbrier, White Sulphur Springs, W. Va.

12–14 Automation — Engineering for tomorrow; a symposium on the application of automation to building design and construction, sponsored by the School of Engineering, Michigan State College — East Lansing, Mich.

16–20 Annual meeting, National Fire Protection Association — Netherlands Plaza Hotel, Cincinnati

16–20 Material Handling Exposition; theme, "The Concept of Obsolescence" — International Amphitheater, Chicago

18–20 Midyear Division Conference, Porcelain Enamel Institute — Edgewater Beach Hotel, Chicago

22–26 The 48th Annual Meeting of the Air Pollution Control Association — Sheraton-Cadillac Hotel, Detroit

25ff Annual Exhibition, Philadelphia Chapter, American Institute of Architects; until June 5 — Philadelphia Art Alliance, 251 South 18th St., Philadelphia

29ff Ninth International Congress, International Hospital Federation; until June 3 — Lucerne, Switzerland

30ff American Hospital Association Hospital Planning Institute and Workshop; until June 3 — Shamrock Hotel, Houston

30ff Canadian International Fair; until June 10 — Exhibition Park, Toronto, Ont.

June

2–4 Annual meeting, National Society of Professional Engineers — Philadelphia

5–19 Fourth Annual Boston Arts Festival, including an exhibition of New England printing, sculpture, graphic arts and architecture — Public Garden, Boston

7–10 National Spring Meeting and Welding Show — Hotel Muehlebach and Kansas City Auditorium, Kansas City, Mo.

8–11 The 1955 British Architects' Conference — Harrogate, England. For program: C. D. Spragg, Secretary, Royal Institute of British Architects, 66 Portland Place, London W. 1

8–18 Conference of International Organization for Standardization — Stockholm

10 Opening of international exhibi-

(*Continued on page 320*)

another New HAWS FOUNTAIN!

a product of modern styling



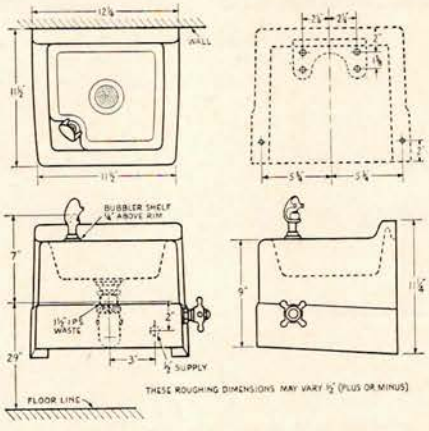
Model No. 7X

Acid resisting enamel cast iron drinking fountain

***Designed by* CHANNING WALLACE GILSON**
Industrial Designer

FOR PERFECT ADAPTATION to current architectural trends . . . and constructed of durable acid-resisting enameled cast iron to withstand the severest abuses of the school yard, this new HAWS drinking fountain assures lasting trouble-free service.

HAWS Model No. 7X drinking fountain contains HAWS *complete sanitation* features . . . with raised, shielded, angle-stream fountain head of chromium plated brass. Water pressure and volume is automatically controlled . . . it's anti-squirt!



WRITE TODAY for full details of HAWS Model No. 7X . . . a complement to new construction . . . a vast improvement for modernization! *It's designed to meet ALL city, county and state material and operational sanitation requirements.* Specify HAWS with confidence!

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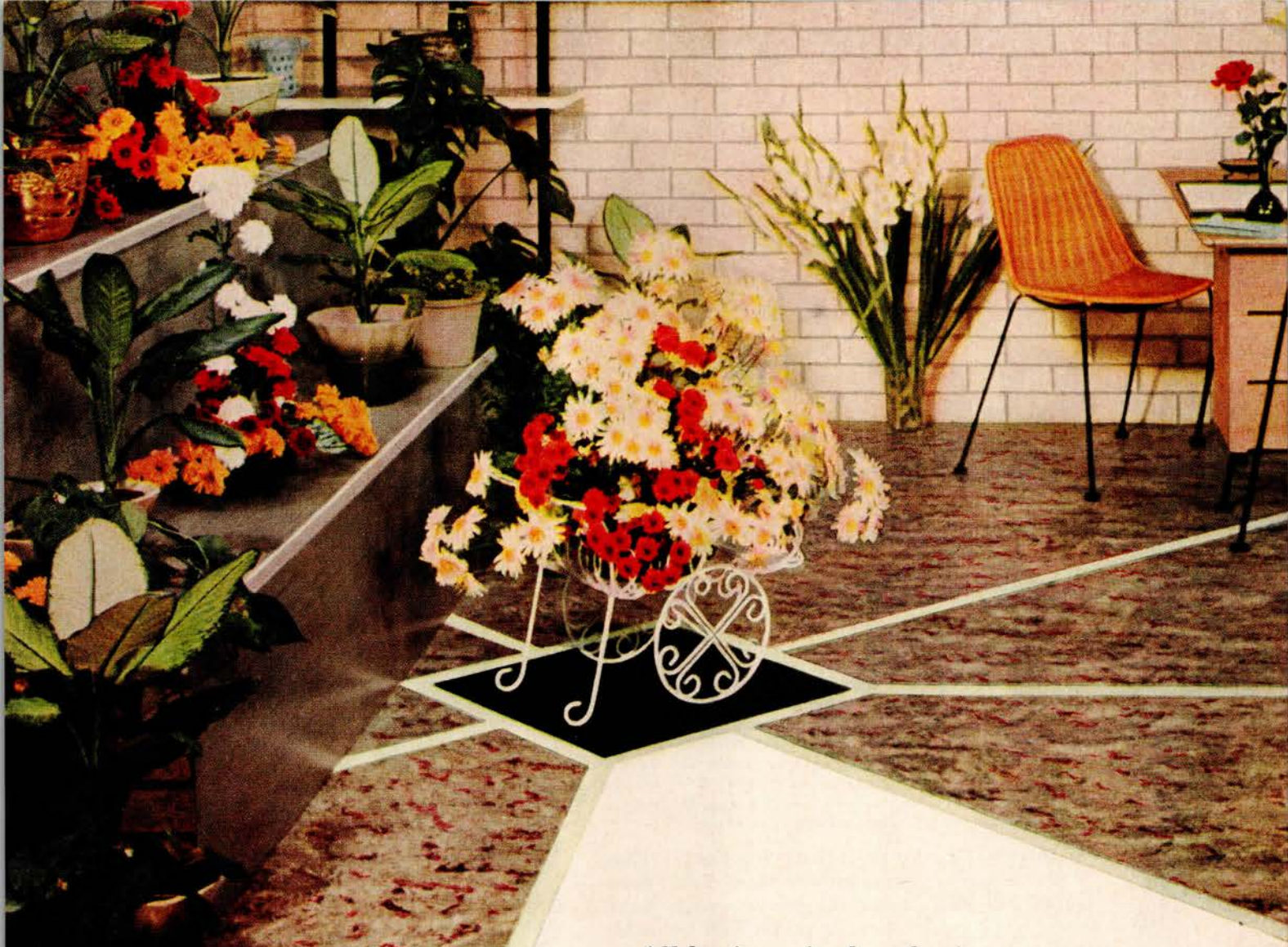

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INLAID LINOLEUM

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GOLD SEAL INLAID LINOLEUM is the *only* inlaid linoleum in America made by a natural oxidation process for greater resilience and durability. It gives extra comfort, reduces foot fatigue, resists indentation, dirt, grime and grease. Cuts maintenance time and costs; rarely pits, scars or cracks.

Specifications: Commercial gauge (⅛″) for heavy traffic, commercial, industrial and institutional areas. 6′ wide by-the-yard and 9″ x 9″ tile. Burlap back. *Patterns:* 21 Veltone®, 4 Plain, 6 Battleship, 5 Jaspe. Install over suspended subfloors of wood or concrete.

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FLOORS AND WALLS
CONGOLEUM-NAIRN INC., KEARNY, N. J.



CLAY PIPE

Sewers and Drains
New CHEVROLET Engineering Center

More than seven miles of Vitrified Clay Pipe, in diameters up to 27-inch, have been installed in the drainage and sanitary systems of Chevrolet's new $20 million Engineering Center near Detroit. Architectural and engineering work was handled by the Argonaut Realty Division of General Motors. Installation was under the supervision of Clay Langston of Bryant & Detweiler Co., general contractors, and Charles McGee Jr., of Holloway & Thompson Construction Co.

In the new Chevrolet Engineering Center, Clay Pipe drainage and sanitary lines have been combined with a privately owned sewage treatment plant to create what might well be called "the industrial waste disposal system of the future." Clay Pipe is the company's assurance of trouble-free service, and the privately owned treatment plant is the community's insurance that industry will continue to be a good neighbor.

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For *permanent* drainage lines and storm sewers —to protect *permanent* construction—always specify Vitrified Clay Pipe. *It's guaranteed for half a century!*

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CLAY PIPE FITTINGS SIMPLIFY INSTALLATION

You never have a "patchwork" of materials when you install Vitrified Clay Pipe. This Hub, for example, permits connection of two spigot ends. It's only one of dozens of readily available fittings made of the same never-wear-out Vitrified Clay as the pipe itself.

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CLAY
CLAY PIPE NEVER WEARS OUT!
PIPE

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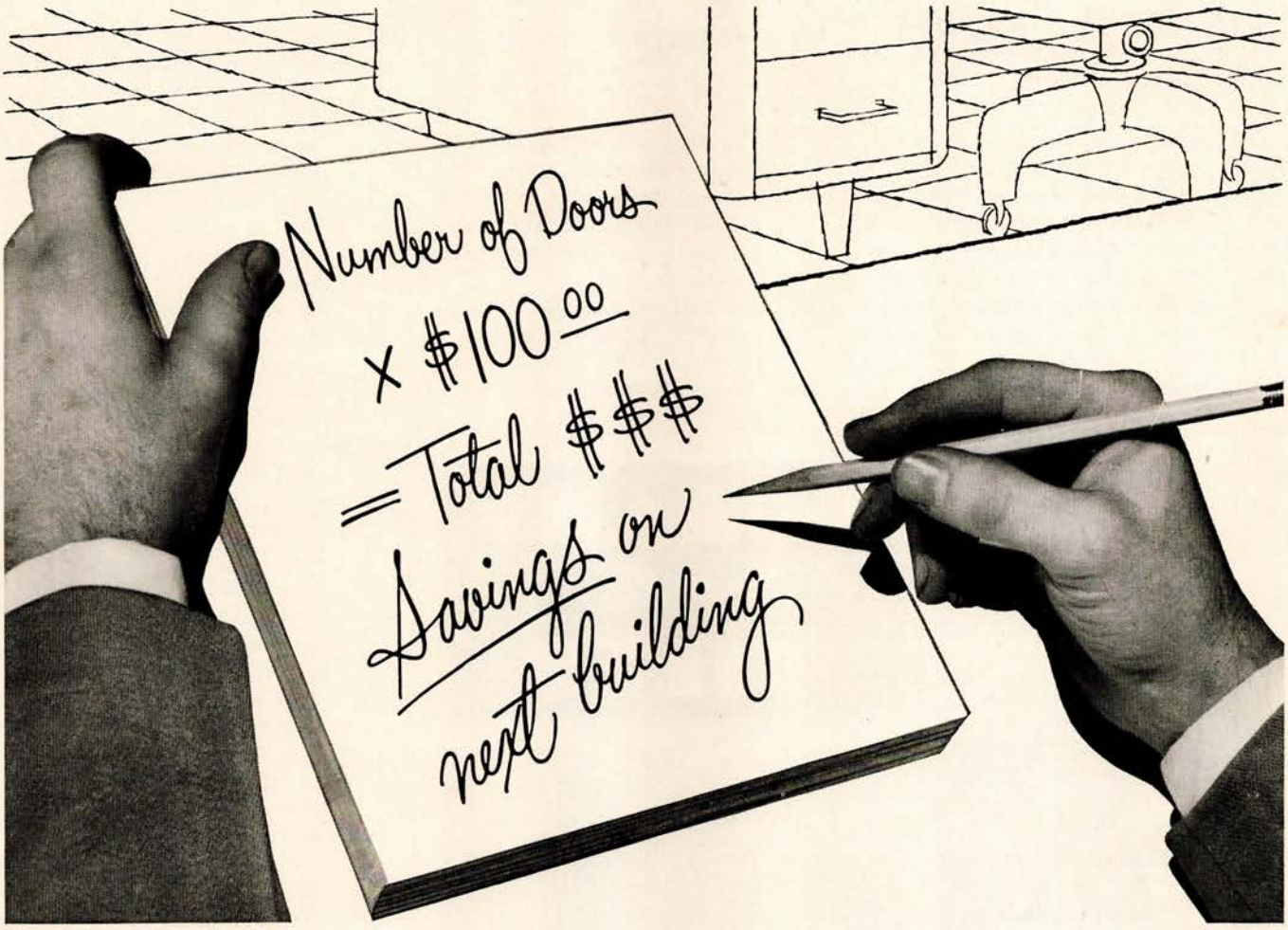

What formula for saving could be simpler?

Simply compare the installed cost of Fenestra* Hollow Metal Door-Frame-Hardware Units with other hollow metal doors. You'll find three good reasons why Fenestra doors save you as much as $100 per opening—yet are as fine doors as money can buy! (1) They cost less to buy because of Fenestra's highly mechanized production. (2) They cost less to install because units come complete with pre-fitted Frames and Hardware. No cutting or fitting, etc. Doors and Frames come with a baked-on prime coat of paint. (3) They cost less to maintain because they can't warp, swell or splinter.

For complete information on Fenestra Entrance Doors, Flush or Regular Interior Doors with glass or metal panels, and Doors with the Underwriters' B Label, write: Detroit Steel Products Co., Dept. AR-5, 2252 E. Grand Blvd., Detroit 11, Michigan.

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Architectural, Residential and Industrial Windows • Metal Building Panels
Electrifloor* • Roof Deck • Hollow Metal Swing and Slide Doors

THE RECORD REPORTS

(*Continued from page 316*)

tion of architecture and allied arts — Helsingborg, Sweden

13–18 International Design Conference — Aspen Institute, Aspen, Colo.

14–24 Plastics in the Design of Building Products: a special summer program covering technical fundamentals and design principles — Massachusetts Institute of Technology, Cambridge, Mass.

19ff Second annual material handling training conference; until July 2 — Lake Placid, N. Y. For information: James R. Bright, Director, % Harvard Business School, Boston 63, Mass.

20–23 National Convention, Forest Products Research Society — Seattle

20–24 The 63rd Annual Meeting, American Society for Engineering Education — Pennsylvania State University, State College, Pa.

20–24 The 87th Annual Convention, American Institute of Architects — Hotel Radisson, Minneapolis

22–25 National Conference on Instruction in Landscape Architecture — Allerton Park (country conference center of the University of Illinois) Monticello, Ill.

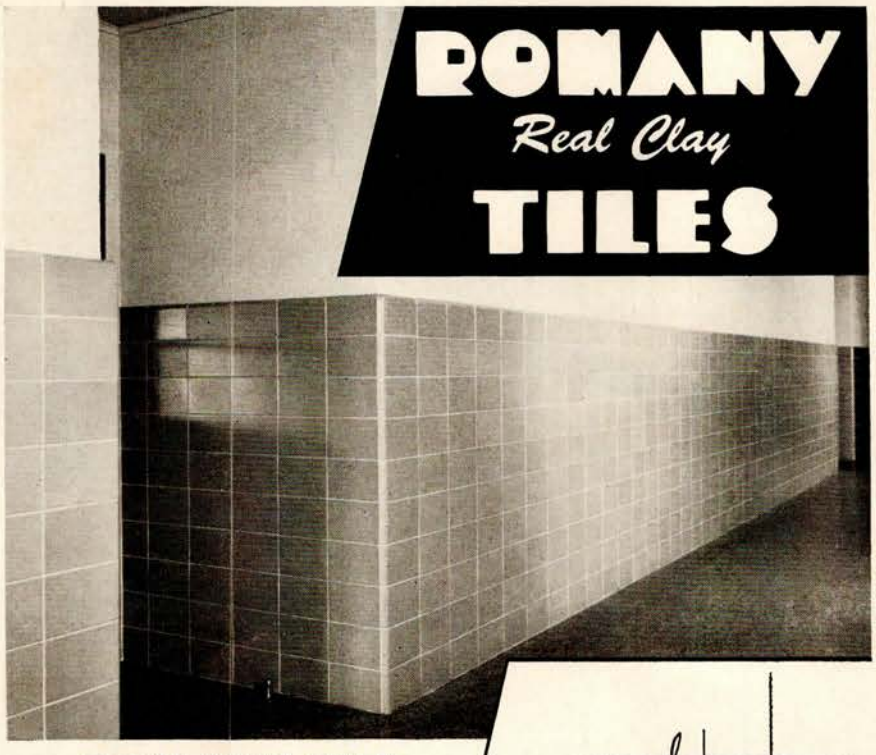
26ff Annual meeting, American Society for Testing Materials; until July 1 — Chalfonte-Haddon Hall, Atlantic City, N. J.

27–29 First Annual Meeting and Technical Conference, American Nuclear Society — Pennsylvania State University, State College, Pa.

27ff Summer General Meeting, American Institute of Electrical Engineers; until July 1 — New Ocean House, Swampscott, Mass.

28ff Built in Latin America; an exhibition of examples of 20th century Latin American architecture selected by Henry-Russell Hitchcock and photographed by Rosalie Thorne McKenna; until Sept. 5 — Museum of Modern Art, 11 West 53rd St., New York City

29ff III Biennial of the Museum of Modern Art of São Paulo; until Oct. 12 — Parc d'Ibirapuera, São Paulo, Brazil



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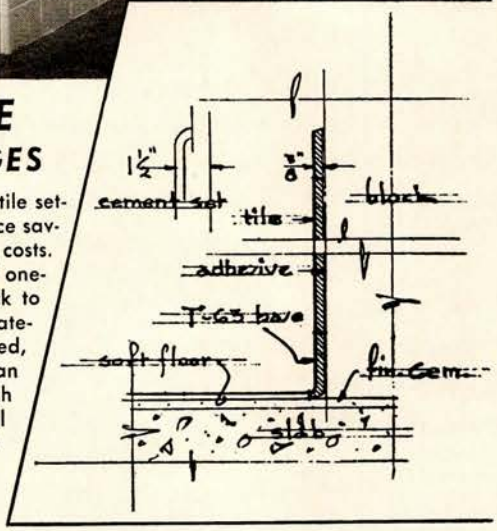
SPACE ADVANTAGES

Now with *direct adhesive* ROMANY tile setting, tile of any color offers real space savings applicable to high cubic foot costs. Consider the difference of a total of one-half inch thickness from rough block to finished tile as opposed to approximately 1½". When a long corridor is figured, this saving in cubic area amounts to an interesting item. It makes useful much space previously allotted to vertical wall areas, or it materially reduces overall cubage with less room and floor. It also offers lower cost dry wall construction where desired.



Every Architect should have our Sample Tile Chart No. 15. It's free.

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July

3–8 The 93rd Annual Convention, National Education Association — Chicago

3–9 Annual conference, American Library Association — Convention Hall, Philadelphia

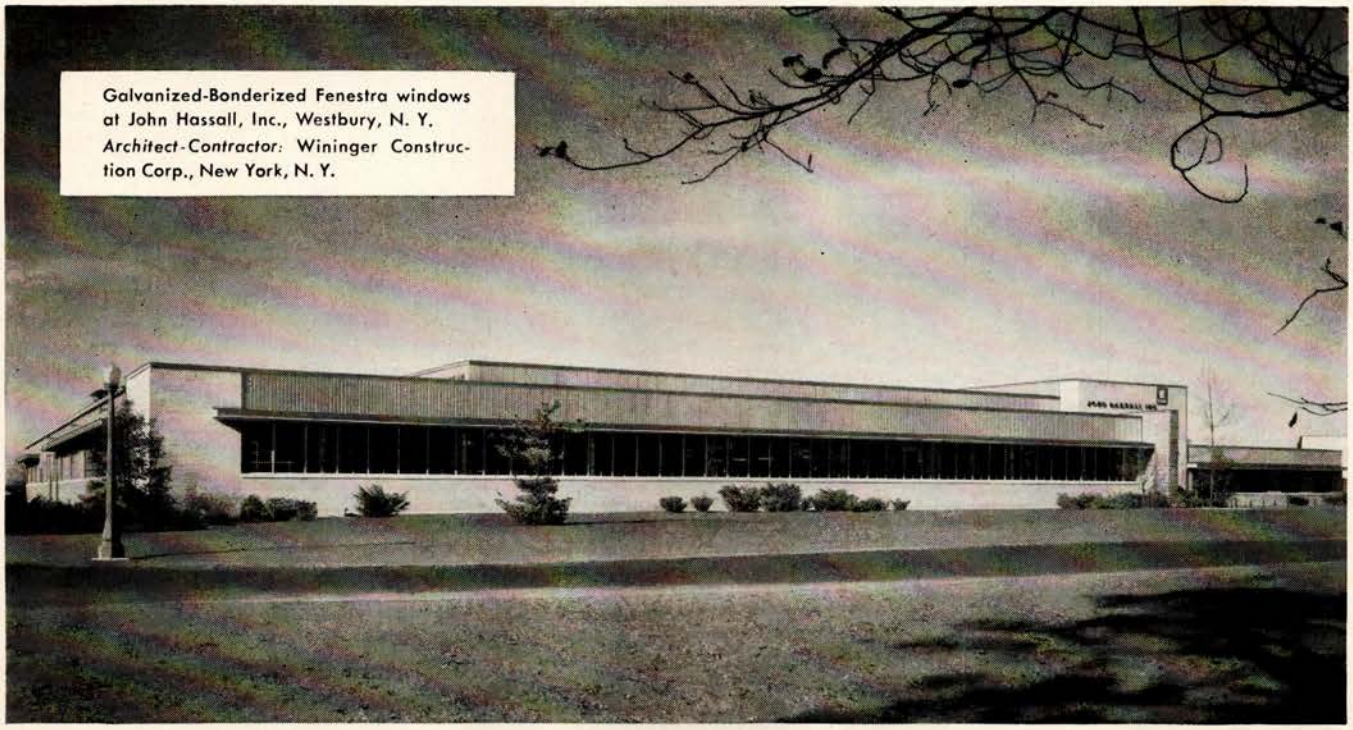
5–15 Soil Engineering for Airfields and Highways; a special summer program under the direction of Dr. T. William Lambe, associate professor of soil mechanics, Department of Civil Engineering — Massachusetts Institute of Technology, Cambridge 39, Mass.

10–19 Ninth Panamerican Congress of Architects (postponed from March) — Caracas, Venezuela

11–16 Fourth Congress of L'Union Internationale des Architectes — The Hague-Schveningue, The Netherlands

14ff Sixth annual architecture and planning workshop; until Aug. 24 — Instituto Tecnologico de Monterrey, Mexico

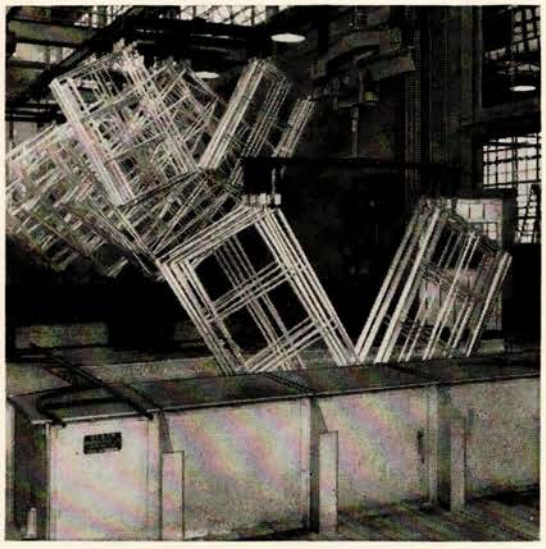
(*Continued on page 322*)



Galvanized-Bonderized Fenestra windows at John Hassall, Inc., Westbury, N. Y.
Architect-Contractor: Wininger Construction Corp., New York, N. Y.

THESE WINDOWS ARE GALVANIZED AND BONDERIZED FOR A

Far Lower lifetime window cost!



Super Hot-Dip Galvanizing is done in Fenestra's own special plant—the only one of its kind in America. A uniform coating is assured by complete immersion in molten zinc.

To start with, they're *stronger,* because they're made of solid bar steel sections. And this strength is permanently preserved by an exclusive *double* protective coating. Super Hot-Dip Galvanizing alloys a thick zinc coating with the steel. This is done in Fenestra's own special plant. Then a process called Bonderizing adds a nonmetallic coating over the zinc. The result is the most maintenance-free windows ever made! And the cost of this modern, durable finish is as little as the cost of two inside-outside field coats of paint!

For complete information, contact your local Fenestra* representative. He's listed in the yellow pages of your phone book. Or write for our free booklet on Fenestra Super Hot-Dip Galvanizing and Bonderizing. Detroit Steel Products Co., Dept. AR-5, 2252 East Grand Boulevard, Detroit 11, Michigan. *®

These steel windows also give you . . .

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GALVANIZED-BONDERIZED-STEEL — THE STRONGEST MATERIAL, CORROSION-PROOFED FOR LIFE!

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ELECTRIFLOOR* • ROOF DECK • HOLLOW METAL SWING AND SLIDE DOORS

THE RECORD REPORTS

(*Continued from page 320*)

OFFICE NOTES

Offices Opened

• Dudley Dean & Associates, Consulting Engineers, have opened offices at 58 Second St., San Francisco, for the practice of mechanical and electrical engineering.

• Norman H. Freedman and James Edward Clements have announced the establishment of their firm, Freedman & Clements, Architects. Offices are at 1201 San Marco Boulevard, Jacksonville 7, Fla.

• J. Craig Weaver and William E. LaLonde have formed a partnership to be known as Weaver & LaLonde, Architects; the firm's offices are located at 204 Central Building, Twelfth and Main, Vancouver, Wash.

• Stanford Woodhurst Jr., A.I.A., and Gilbert J. O'Brien Jr., A.I.A., have announced their association in a partnership for the practice of architecture. Their address is the WBBQ Building, 515 15th St., Augusta, Ga.

Firm Changes

• Seelye Stevenson Value & Knecht, Consulting Engineers, have announced the admission of these men to partnership: Gilbert D. Fish, A. Roger Kelly, Erik B. J. Roos, Stephen D. Teetor and Harold S. Woodward. The firm's offices are at 101 Park Ave., New York 17.

New Addresses

Alfred Benesch & Associates, Consulting Engineers, 111 W. Jackson Blvd., Chicago 4, Ill.

Dollar, Bonner and Blake, Architects, 1103 Madison St., Wilmington, Del.

George F. Harrell, Architect, 819 Republic National Bank Building, Dallas.

LaPierre, Litchfield & Partners, 292 Madison Ave., New York, N. Y.

Ryder, Struppmann and Neumann, Architects, 90–04 161st St., Jamaica, N. Y.

Laurence Schwall, A.I.A., 51 Meadow Dr., Northfield, Ill.

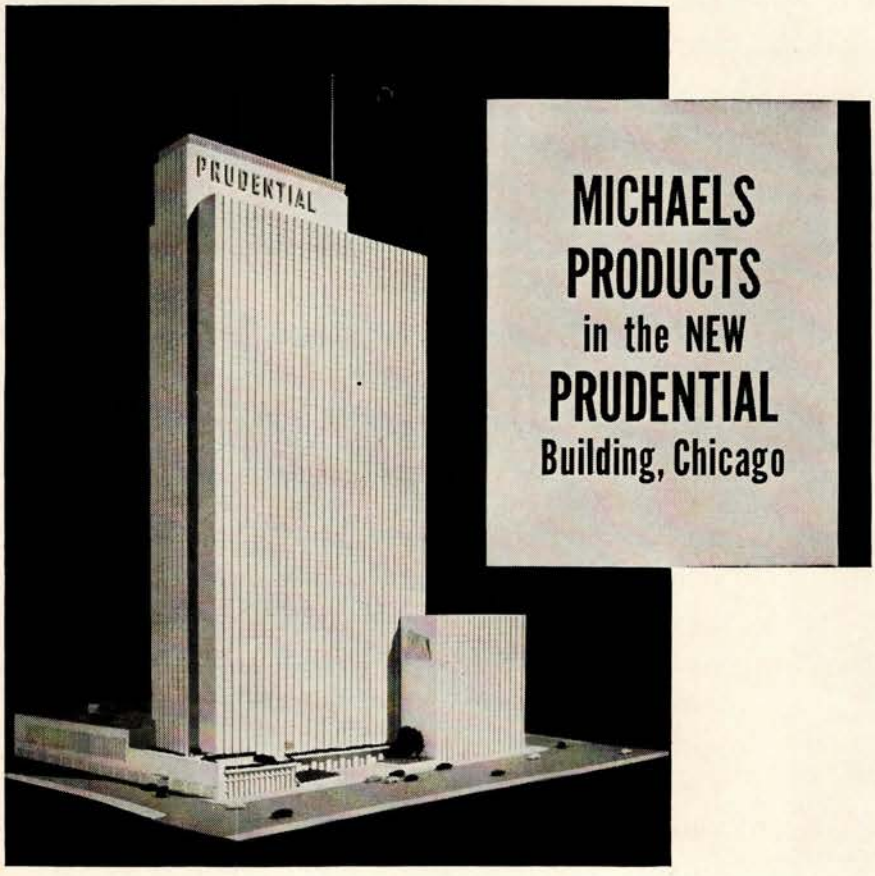
George A. Spooner, Architect, 717–61st St., Des Moines, Iowa.

Allan Scott Wales, A.I.A., E. J. Kennedy Associates, 2 Niles St., Bakersfield, Cal.

Engineering Award to Winne

THE JOHN FRITZ MEDAL for 1954 was awarded in February to Harry A. Winne of Rexford, N. Y., electrical engineer and a retired vice president of General Electric Company, "for service to his country in war and peace through his distinguished leadership in the electrical industry." Winner of the Medal, which was established in 1902, is selected by a committee from the four founding societies — the American Institute of Electrical Engineers, the American Society of Mechanical Engineers, the American Institute of Mining and Metallurgical Engineers and the American Society of Civil Engineers. Previous recipients have included George Westinghouse, Alexander Graham Bell, Thomas A. Edison, Orville Wright, Guglielmo Marconi, Elmer A. Sperry, Herbert Hoover, Charles F. Kettering, Vannevar Bush and Benjamin F. Fairless.

(*More news on page 326*)



MICHAELS PRODUCTS in the NEW PRUDENTIAL Building, Chicago

Builders of the Mid-America Home Office of the Prudential Insurance Company used Michaels as one source of supply for many of the metal building products being used in its construction. Michaels fabricated all aluminum components except windows and curtain wall panels. These included the letters "PRUDENTIAL" at the top of the building; store fronts; the 20 story high louvers, said to be the world's highest, also all bronze work, and the 24-foot lobby columns of stainless steel. Michaels ferrous and nonferrous metal building products have become an important part of many of the nation's prominent structures.

Recently Michaels moved into a new factory and office building which contains 85,000 square feet of floor space. Here expanded facilities mean even better service for you. Contact Michaels on your next project. The high quality of their products is well known, and you'll find them a thoroughly reliable source of supply.



The Michaels Art Bronze Co., Inc., P. O. Box 668-R, Covington, Ky.

Since 1870 the name Michaels has been a symbol of exceptionally high quality

AT RESEARCH VILLAGE . . .
new ideas bring more livability, comfort, safety and value to these homes.

Architect: Jones & Emmons, Los Angeles, Calif.
Team-Mate Builder: J. L. Eichler, NAHB, Palo Alto, Calif.
Gen. Contractor: Maxon Construction Co., Barrington, Ill.

A design with unusual flexibility in interior partitioning and in orientation. With all steel framing, there are no load bearing partitions, either inside or out. Radiant hot water heat, by ½" copper tubing in the 4" concrete slab, gives even comfort in any area, regardless of room arrangement. Heat is furnished by a Janitrol Gas-Fired Boiler.





Architect: Brooks & Coddington, Columbus, Ohio.
Team-Mate Builder: W. A. Simms, NAHB, Dayton, Ohio.
Engineers: Ralph & Curl, Columbus, Ohio
Gen. Contractor: Maxon Construction Co., Barrington, Ill.

A two-story, split level home offering extra floor space for small ground area. Upper story provides maximum privacy for family living . . . lower level is an isolated living-recreation room. Balanced winter comfort for each of these levels is provided by radiant baseboard heat supplied by a Janitrol Gas-Fired Boiler.

The U. S. Gypsum Research Village is an outstanding example of architect-builder-manufacturer cooperation in conceiving new methods and ideas for bringing home owners quality housing at reasonable cost. This extra quality adds little to the original price, yet means substantial savings in maintenance and operating expense for the life of the home.

This is the essence of Janitrol's "Crusade For Quality Heating," now being carried to the consumer for the third year. If you would like full information on this program . . . how to design, install and sell extra comfort quality, write for your free presentation.

Photos courtesy United States Gypsum Research Village • Photos by Hedrich Blessing

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Versatile

U.S.G. PLASTERING SYSTEMS

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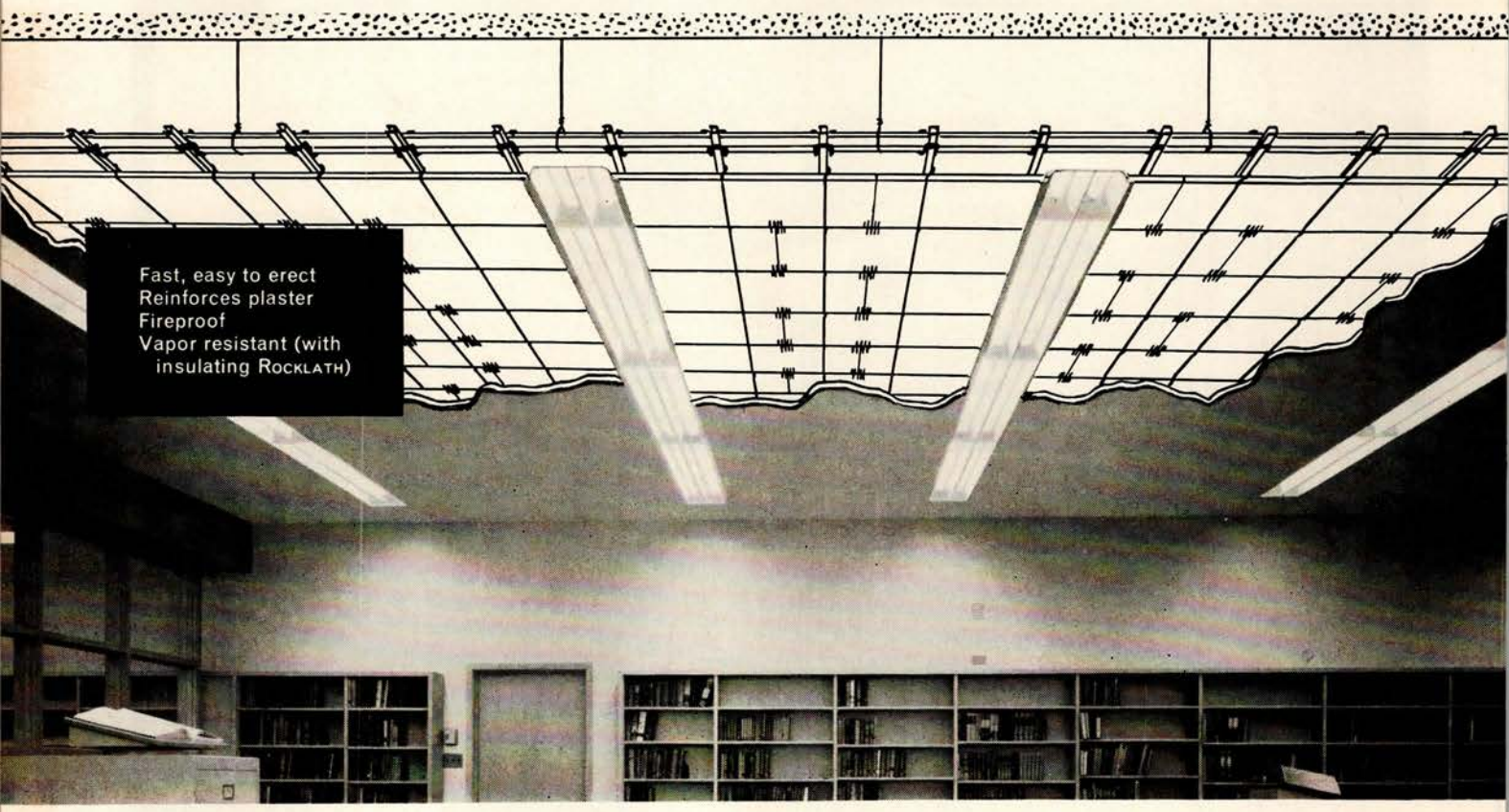
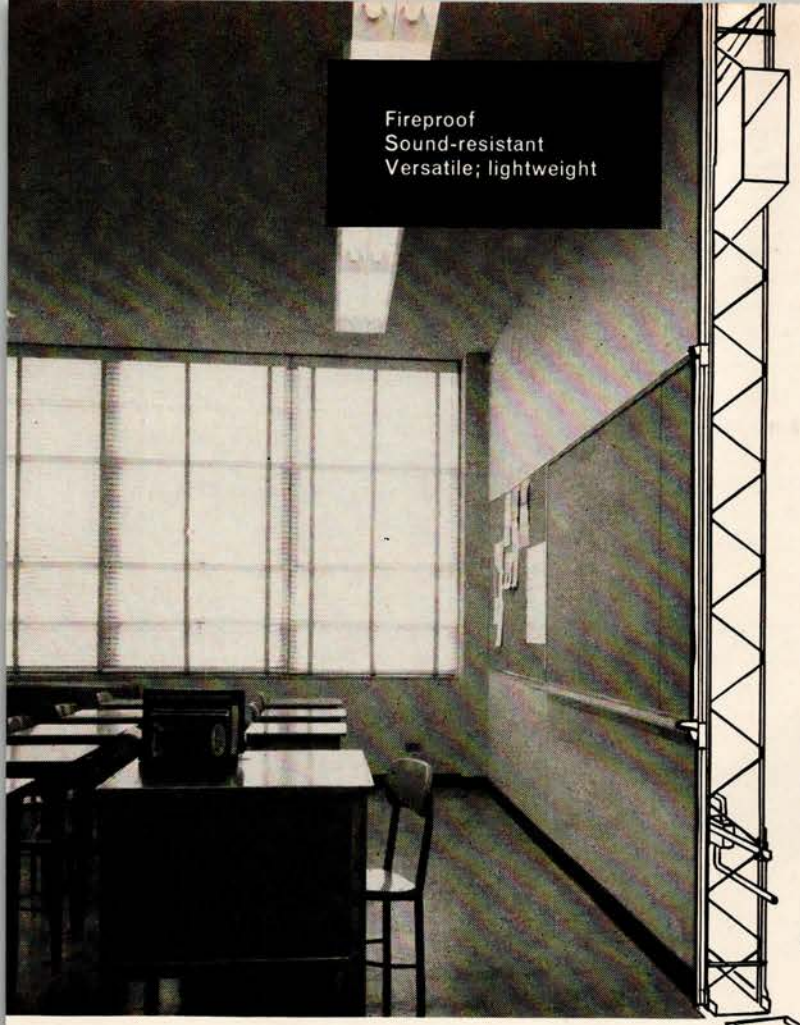


Complete information

For full details about these and other U.S.G. wall and ceiling systems, contact your U.S.G. Architect's Service Representative; see Sweet's, sections 11/a, b, c, d; or write Dept. AR-2, 300 W. Adams St., Chicago 6.



FOR HOLLOW PARTITIONS

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The open-web design of non-load bearing TRUSSTEEL Studs permits quick, low-cost installation of mechanical services horizontally or vertically without weakening the partition structurally by chasing. And with no more than fingertip pressure, TRUS-LOK Clips anchor either plain or perforated ROCKLATH* Plaster Base to the studs *in seconds*, further saving valuable time and labor.

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BRACE-TITE* LATHING SYSTEM

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CLASSROOMS—Specify TRUSSTEEL STUD-ROCKLATH Partitions . . . for required fire protection . . . for extraordinary quiet (up to 48.0 db sound transmission loss ratings) . . . for various wall thicknesses . . . for light weight which can mean savings in structural framing.

CORRIDORS—Specify TRUSSTEEL STUD-ROCKLATH Partitions . . . for strength from steel studs of efficient truss design . . . for simplified concealment of pipes, ducts, conduits . . . for low material costs and economical erection.

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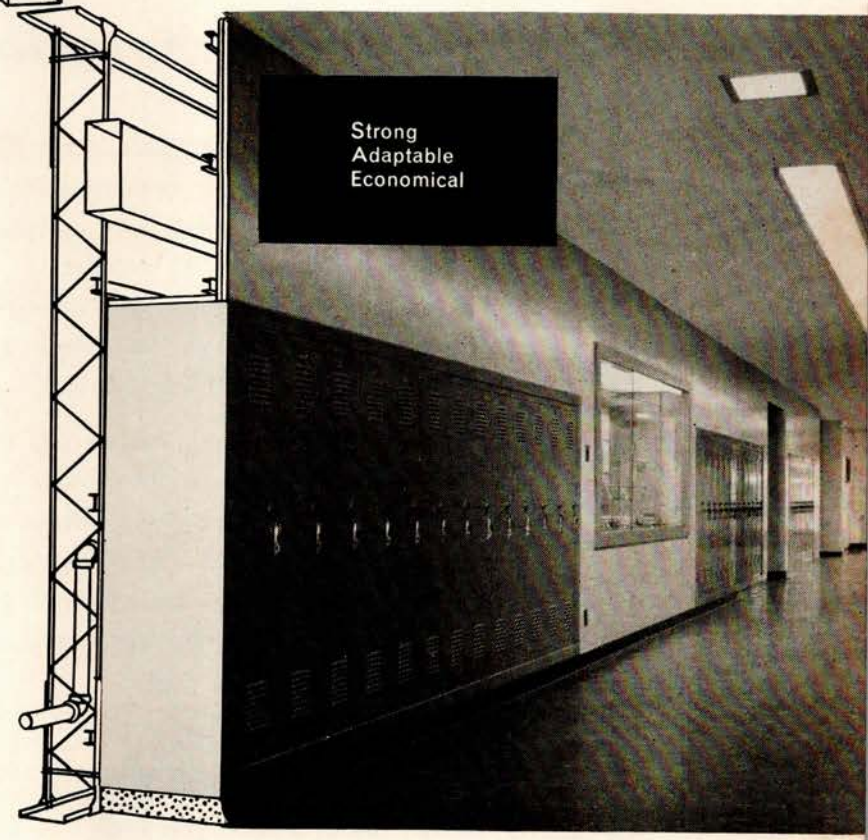
NOTE: a special BRACE-TITE Clip is available if acoustical tile is to be cemented directly to the ROCKLATH.



USG
UNITED STATES GYPSUM

UNITED STATES GYPSUM

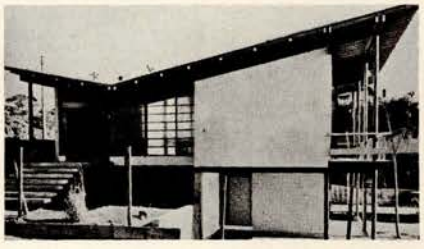
The greatest name in building

(*Continued from page 322*)

SINKENTIKU, February 1955. Reversing an old Western custom, the Japanese monthly examines the impact of the Occident on Japanese architecture. The lead article, "Architecture and the People" by Kon Waziro, discusses the breaking up of traditional Japanese manners and customs by the force of "capitalism." "Modern architecture in Japan," he observes in the English translation, "is a kind of fashion in its broad sense like dress, hair and beauty art fashion. Therefore, in the modern world, there is no discussion concerning the eternal beauty. Japanese people are seeking for [this] modern beauty. . . . From this point of view, there is apparently some question in imitating traditional Japanese design, the beauty of which was created by aristocrats." Concluding, Mr. Kon says that "it is necessary for architects to seek for the traditional beauty, at the same time to do their best to give unexpensive pleasure for the busy working people. These two contradictory aims are the inevitable consequence of capitalistic society."

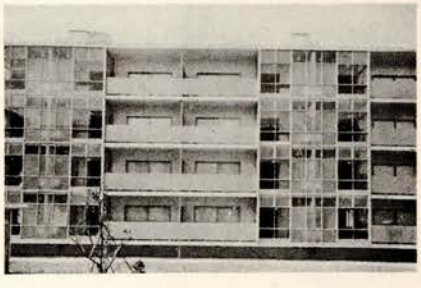


Above: the old—classic farm architecture near Nara. Below: the new—house in Tokyo designed by architect Nagamatu Wataru for a family of eight. Sinkentiku *says, "Nagamatu is one of hopeful, young architects"*

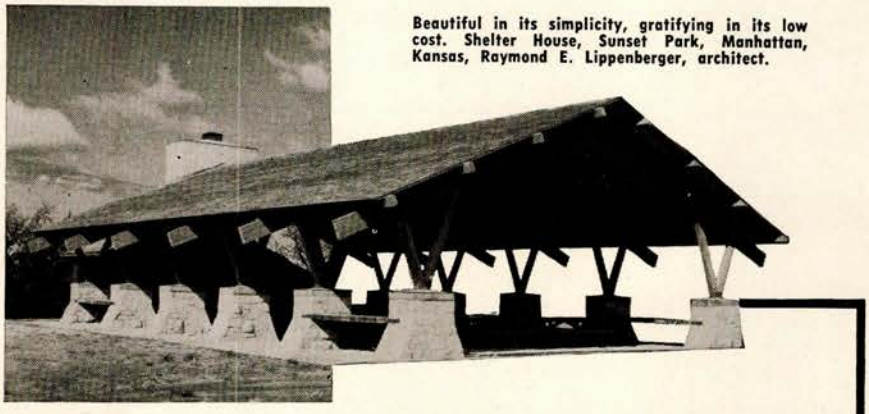


Richard Haag, in a "Memo to Japanese Designers," is somewhat less resigned to compromise. Mincing no words, Mr. Haag says, "Japan is sick." He continues, "This nation suffers from a chronic disease of indigestion resulting from the over-consumption of under-cooked foreign recipes and half-baked ideas. You have many apologists, soothsayers and cultists, but few doctors who properly diagnose the disease, and even fewer who prescribe correctly. . . . And you designers, who should be the doctors, are the cooks who serve up this conglomeration of reheated rehash."

(*Continued on page 330*)



Above: The Nakai Apartment House, one of the buildings in a housing project built by the Asahi glass factory for its workers; design by Sibaoka Iso



Beautiful in its simplicity, gratifying in its low cost. Shelter House, Sunset Park, Manhattan, Kansas, Raymond E. Lippenberger, architect.

"ONE *of the finest materials...*"

Raymond E. Lippenberger, architect, of Manhattan, Kansas, writes "One of the finest materials that the architect has to use as a medium of expression is laminated wood as a structural material . . . Since the development of wood laminates it has extended the use of wood as an economical structural material . . . keeping a simplicity of line and form."

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Do glass blocks make a building look CHEAP?

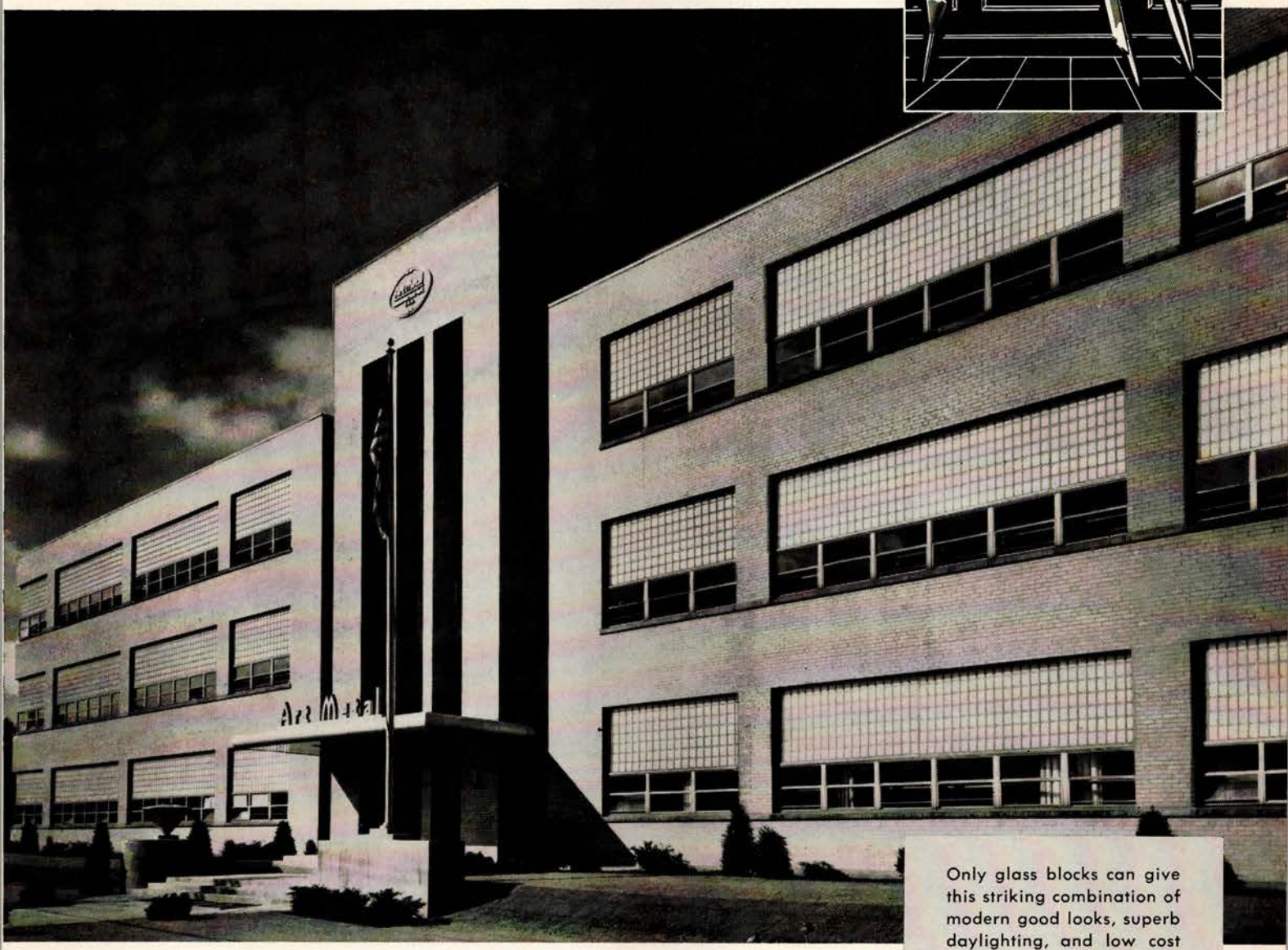
When the all-glass block was first introduced by Pittsburgh Corning back in 1938, it was frequently misused. Tavern keepers bought them, and put red and blue lights behind them. Thanks to the almost indestructible quality of PC Glass Blocks, many of these installations are still in existence to plague us.

Today, as you know, PC Glass Blocks are radically different from the early blocks. PC Functional Glass Blocks are engineered *optical units* that give the architect a wonderful new light-controlling tool. And when sound design principles are followed, a panel of glass blocks has a delightful, pleasing texture.

The whole technology of glass-making has been up-graded. An increasing variety of patterns and sizes is being made available, until today many architects consider the glass block panels to be an important part of the *aesthetic* effect of the building. Imaginative design, daringly applied, has resulted in glass block panels that literally seem to float in air.

In matters of design, no two architects think alike (thank heaven!). But we think that the photograph on this page proves that glass blocks can look mighty attractive when properly used.





Only glass blocks can give this striking combination of modern good looks, superb daylighting, and low cost maintenance. The building is owned by Art Metal Construction Company, Jamestown, N. Y. Architects: Freeburg & Lindquist, A.I.A., Jamestown.

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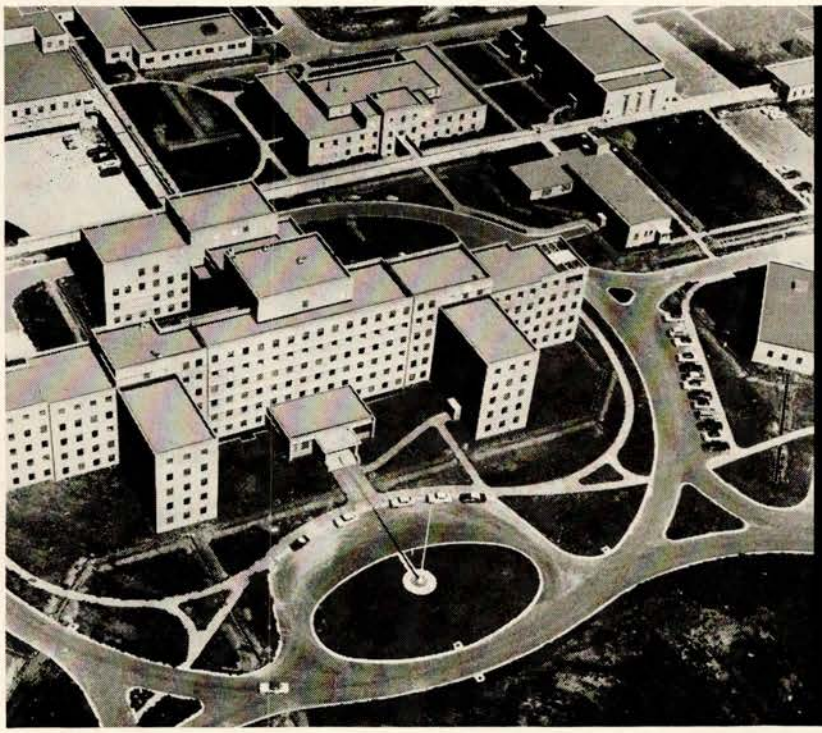
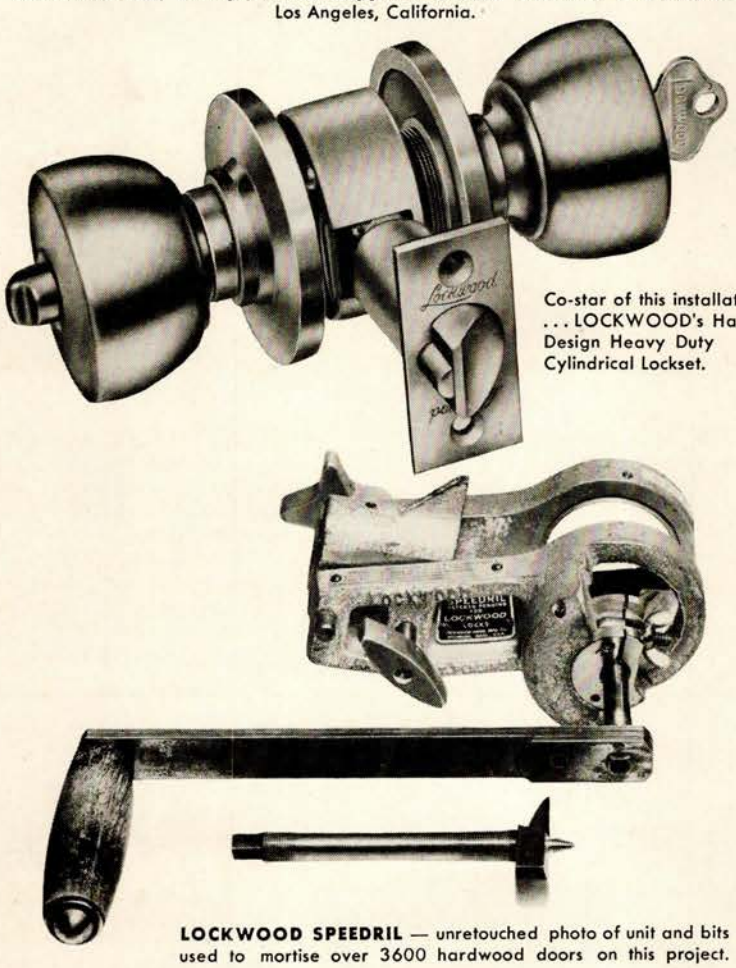


LOCKWOOD *SPEEDRIL* lockset installation really pays off!

Project: U. S. Veterans' Administration Hospital, Sepulveda, California (comprising over 20 buildings). **Designer:** U. S. Veterans' Administration. **Contractor:** Gust K. Newberg Construction Co., Chicago, Illinois. **Supplier:** Builders' Hardware & Supply Co., Los Angeles, California.



Co-star of this installation ... LOCKWOOD's Hartley Design Heavy Duty Cylindrical Lockset.

LOCKWOOD SPEEDRIL — unretouched photo of unit and bits used to mortise over 3600 hardwood doors on this project.

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(This advertisement implies no endorsement by the Veterans' Administration of any products.)

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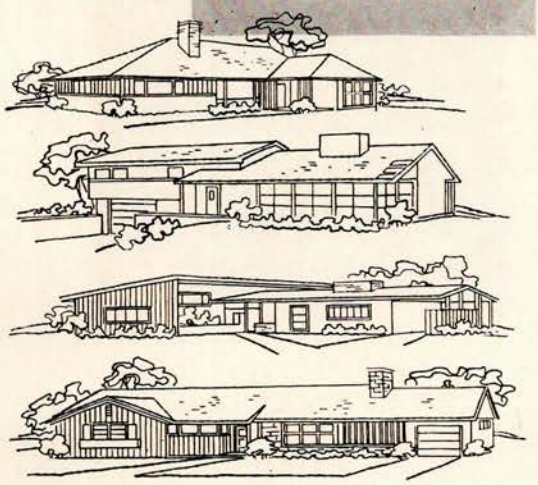

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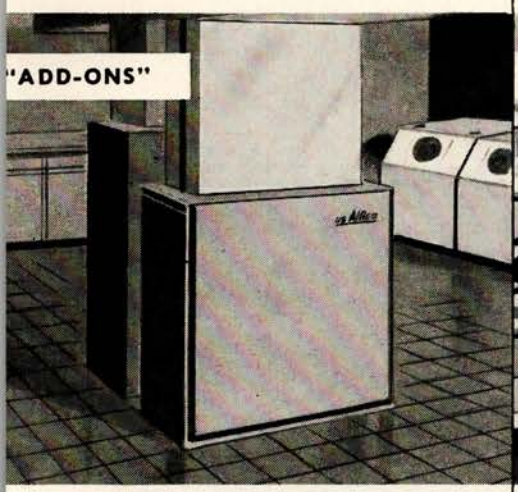
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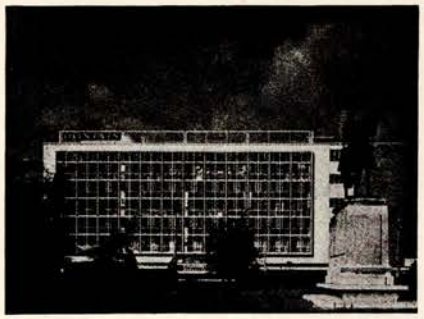
RECENT PERIODICALS

(*Continued from page 326*)

THE ARCHITECTS' JOURNAL, Jan. 20, 1955. In its "New Year Issue," the British weekly features "Buildings of the Year: 1954." J. M. Richards, the magazine's house editor, assesses the accomplishments of English architects during the year and observes these trends: the level of commercial design, particularly among office buildings, is "disappointingly low," although stores "are less dreary and tasteless"; schools "maintained the standards of thoughtful design they have been setting since the war"; "high-density housing schemes are of unusual interest" — particularly in London and in the new towns; and factory architecture, in the new towns, at any rate, shows "a remarkably high standard."

Taking a look at the possibilities for 1955, the author notes that the Government's discontinuation of licensing for new building should encourage public and commercial activity in construction, which has, since the war, been mostly confined to housing, schools and factories.

(*Continued on page 334*)

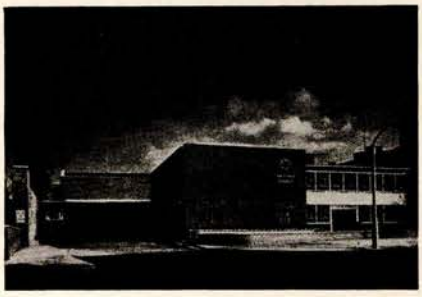


Above: department store in Broadgate, Coventry; architects Rolf Hellberg and Maurice Harris. "It handles a contemporary idiom in a workmanlike way and takes its place impressively but not too aggressively. . . ." Below: school at Hunstanton; architects Alison and Peter Smithson. "It is by no means the year's best school, being a hard, doctrinaire building, but it has been of great value in preventing other school architects from getting smug"





Above: flats in Paddington; architects Tecton, Drake and Lasdun. "Multi-story flats have gone much further towards resolving the esthetic problems the repetition of identical elements sets them." Below: Brixton Bus Garage; architects Adie, Button and Partners. "Another type of industrial building that has produced plenty of good design lately. . . ."



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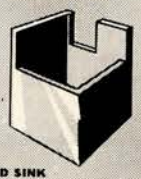
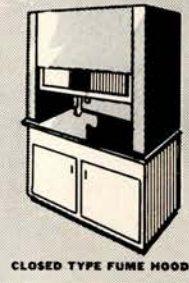


END SINK FOR CENTER TYPE TABLE



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Fairmont Hotel Ballroom
San Francisco, Calif.

Ford Motor Company, Styling Center
Dearborn, Mich.

General Motors Styling Studios & Shop
Gen. Motors Tech. Center,
Warren, Mich.

International Business Machines Corp.
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National Broadcasting Co.
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New Jersey State Teachers College
Jersey City, N. J.

Philadelphia Bulletin
Philadelphia, Pa.

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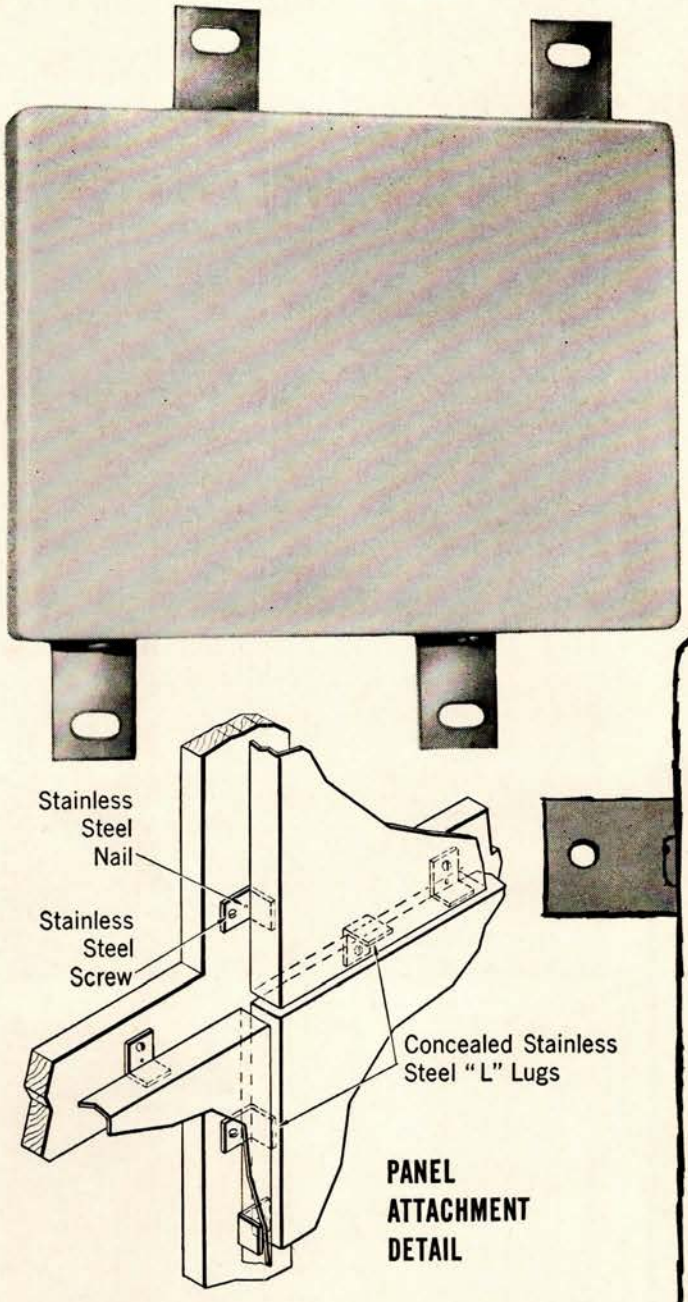

PANEL ATTACHMENT DETAIL

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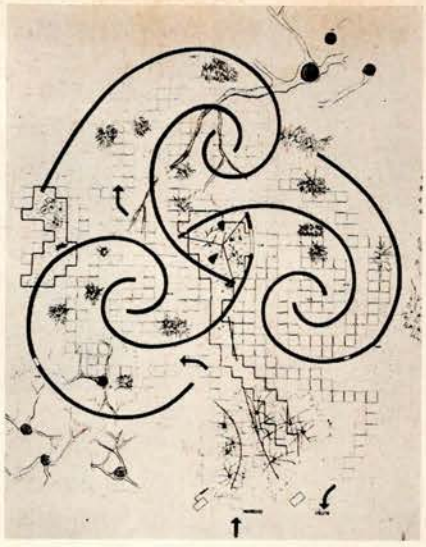
WORLD'S LARGEST MANUFACTURER OF ROLLED, FIGURED AND WIRED GLASS

RECENT PERIODICALS

(*Continued from page 330*)

DOMUS, November 1954. Dedicating the entire issue to a review of Milan's tenth Triennale, the lead article in the Italian monthly describes the building which seems to have stolen the show — the children's labyrinth (see cut 1) designed by Belgiojoso, Peresutti and Rogers, and decorated with a Saul Steinberg mural and an Alexander Calder mobile. The remaining pages review countries represented at Milan.

AUJOURD'HUI, Numero 1. Subtitled "Art et Architecture," this is a new bimonthly issued by the publishers of *L'Architecture d'Aujourd'hui*. This issue (see cut 2) contains sections on art, "Art, Science and Technique" (in this case, aerial photography), architecture (a 16-page section containing examples of South American, U. S. and Japanese building), furniture, "Forms in Movement" (here airplanes and automobiles); and a review of the Milan Triennale. Offices are at 5 rue Bartholdi, Boulogne-sur-Seine, Seine, France.



1



2

ARCHITECTURAL DESIGN, January 1955. The British journal reports a French suggestion for sheltering men on three projected French Antarctic expeditions to be held in 1956–57–58. The design (see cut 3) calls for prefabricated light metal units, with which 10 men can enclose 100 sq meters in five days. The circular form was selected for ease of standardization. The metal envelope can be treated to reduce the build-up of static electricity caused by windblown snow and ice. The base will be painted orange, traditional French camping color. The design and research was carried out by a team of French architects, engineers and "consultants" under the coordination of V. Bodiansky.

3



(*More news on page 338*)

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Color photographs and tile descriptions for a variety of actual installations in schools and hospitals. The many ideas it contains for planning school and hospital jobs make this new booklet valuable for architects.

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These ads put in the hands of your prospects a powerful sales tool... the fascinating booklet "Five Little Bathrooms and How They Grew." Every page makes every reader want new home beauty...with bathroom fixtures by Richmond!



Sell a New Approach! A dual purpose bathroom-darkroom design color-keyed by Richmond fixtures in lustrous Fern Green. Present, the BRESLIN bathtub, the VOGUE lavatory, the EMPRESS toilet.

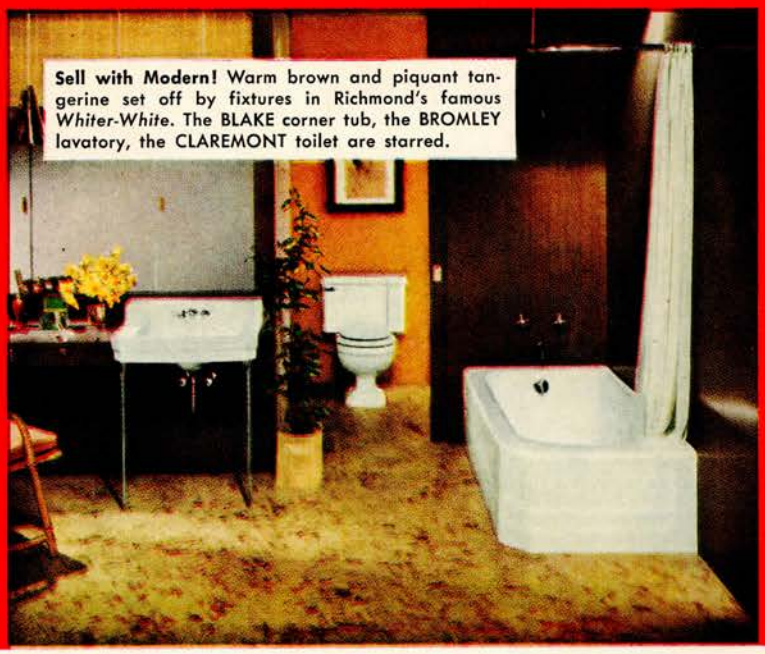


Sell with Drama! The BRESLIN recess bathtub is raised for elegance. The BROMLEY lavatory has a roomy ledge. The "Hush-Quiet" EMPRESS toilet is a marvel of advanced design.

Salesmaker Bathrooms by *RICHMOND*



Sell with Charm! The Bermuda Coral of the Richmond fixtures blends beautifully with warm wood tones. Featured: The COUNTESS lavatory, the EMPRESS toilet, the BRESLIN bathtub.



Sell with Modern! Warm brown and piquant tangerine set off by fixtures in Richmond's famous *Whiter-White*. The BLAKE corner tub, the BROMLEY lavatory, the CLAREMONT toilet are starred.



Decorator designed to create homebuyer interest... full of new ideas... these "bathrooms by Richmond" run the gamut from Empire to Colonial to Contemporary.

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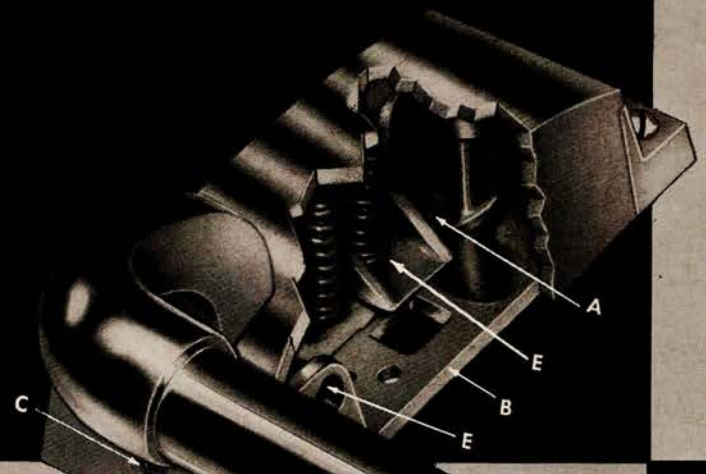

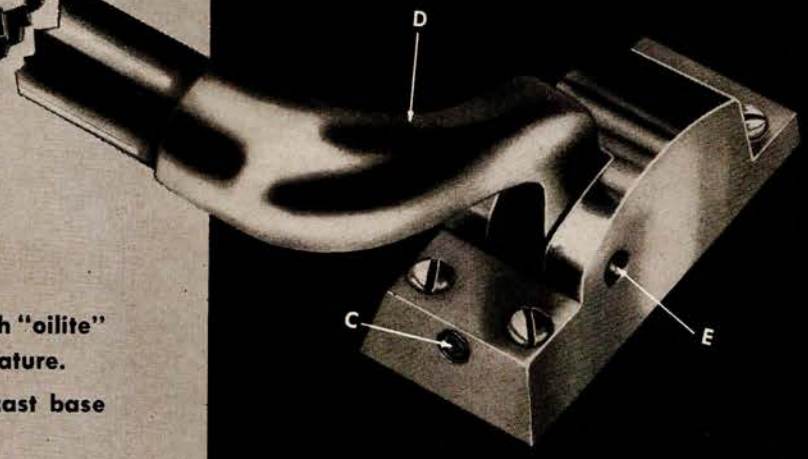

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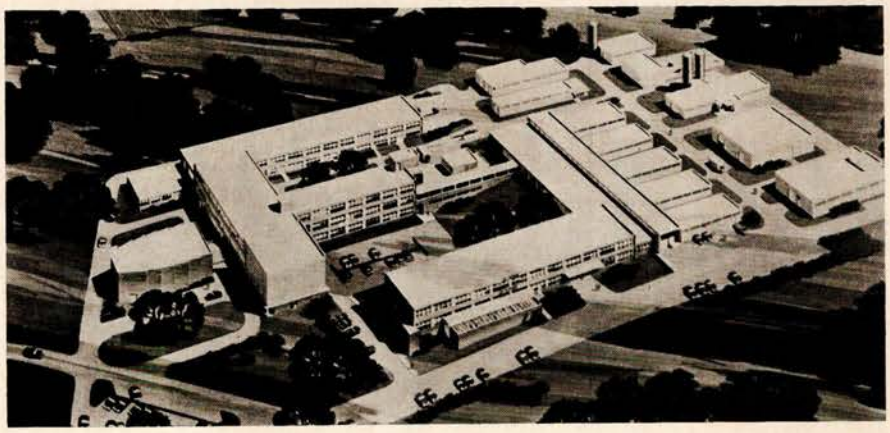
THE RECORD REPORTS

(*Continued from page 334*)

N. Y. VETERINARY COLLEGE GETS 19 NEW BUILDINGS



A new 14-acre campus has been planned for the New York State Veterinary College at Cornell University in Ithaca, N. Y. The 19 new buildings, designed by New York architect Isadore Rosenfield, will include two basic science buildings, an auditorium, clinic building, surgery and medicine building, physiology and anatomy barn and four surgery barns. Other facilities to be built are a mastitis barn, a bull barn, dairy barn, central feed and bedding storage building, garage and farriery and a two-family house for the caretaker and the groom.

Basic Sciences Building

The main basic science building will be a three-story structure, with the auditorium to the west of it and a library wing to the south. This building will house offices, operating, autopsy and animal recovery rooms, seminar and conference rooms, and various laboratories. On the third floor will be located animal quarters, a sterilizing room and other laboratories.

The smaller basic sciences building, to the north of the central building, provides a pathology museum and a medical artist's room, as well as surgery, dissecting and embalming rooms and animal pens. A research laboratory, a ruminant physiology laboratory and an optical laboratory will also be located in this building.

To the south of the main building lies the clinic building, which will house facilities for a small animal hospital. The surgery and medicine building, which is attached to the clinic, is also connected by a breezeway to five barns: physiology and anatomy barn and four surgery barns. The caretaker's house lies to the southeast of the site (not visible in the rendering) along with some livestock paddocks.

Materials used for the main buildings will be a combination of red and buff-gray brick, with bluestone trim, while the barns are to be of concrete blocks trimmed with bluestone. The two-family house will be built of red brick and vertical wood siding.

(*More news on page 370*)

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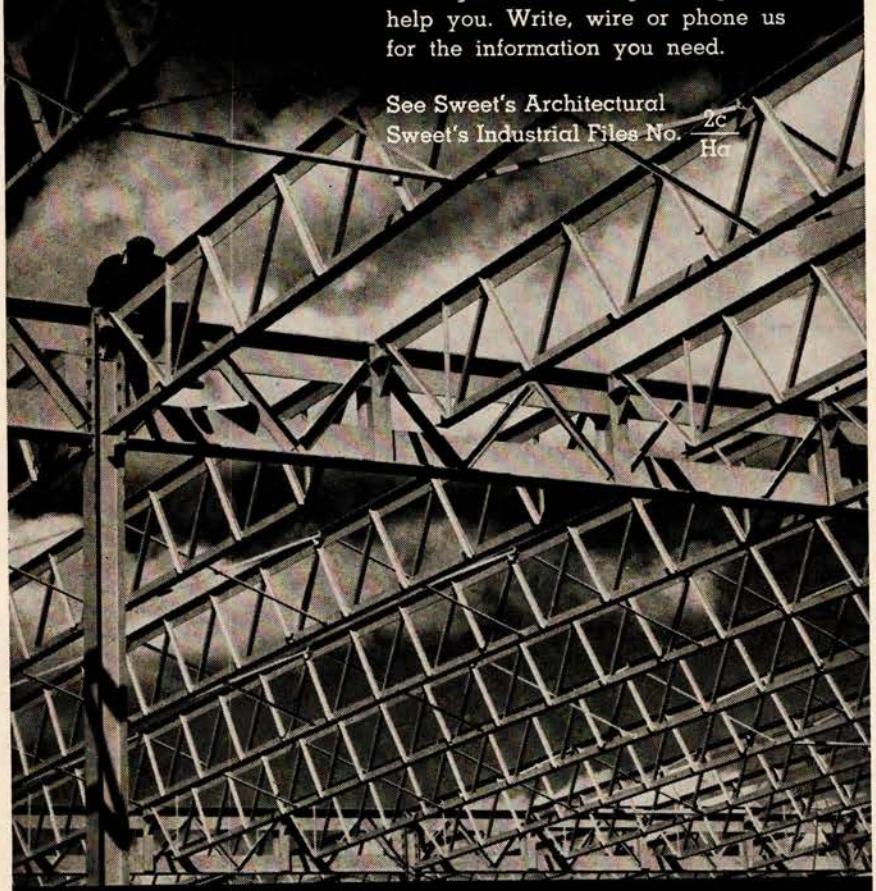

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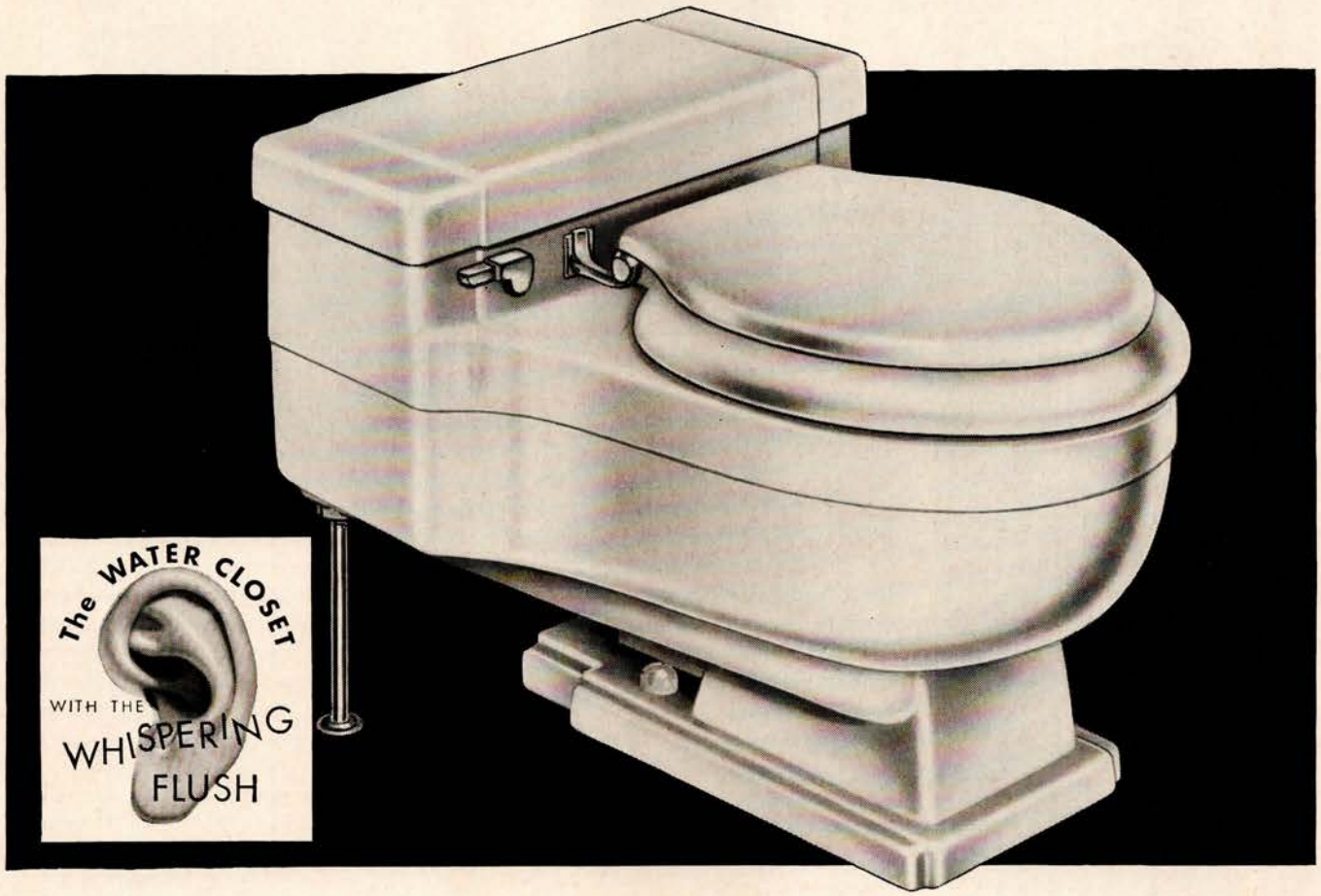

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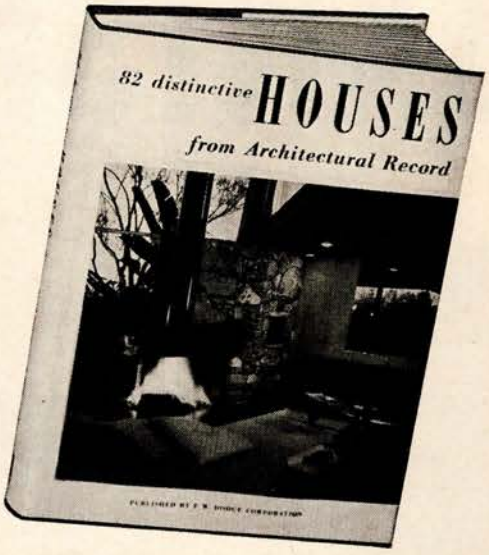
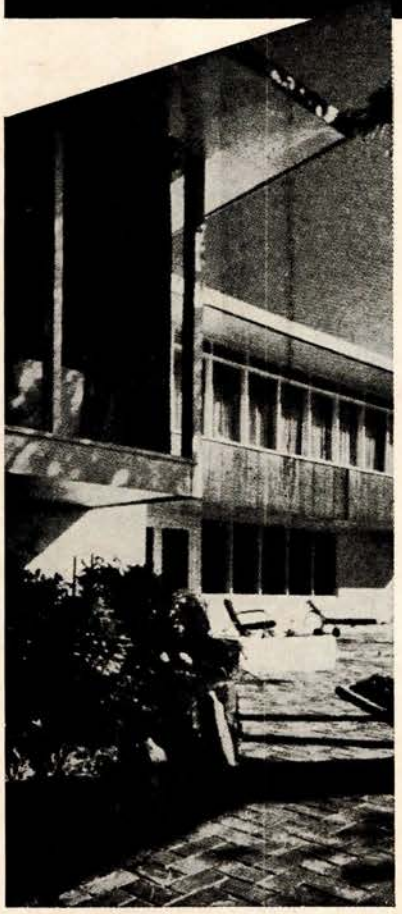
82 distinctive HOUSES

from Architectural Record







The pages of *Architectural Record* have long been a display-case for house designs which, in the trained opinion of *Record* editors, deserve the widest possible dissemination among members of the profession. Only one criterion has ever governed choice of a house for editorial presentation: quality architecture. Neither size nor price nor the architect's fame (or lack of it) has influenced the selections in any way.

Eighty-two of these quality designs have now been consolidated in permanent book form, reprinted exactly as they first appeared in *Architectural Record*. Among them can be found an inspired design solution to virtually every client requirement, desire, demand, and whim an architect will be called upon to satisfy. There are houses for young couples with small children . . . houses for retired businessmen . . . houses that double as offices for professional men . . . houses for people who lead vigorous outdoor lives . . . houses for the sedate, quiet family . . . houses for people who entertain frequently, houses for those who entertain almost never.

Here, too, are houses for folks who live simply on modest budgets, as well as houses for those with unlimited funds. But whether expensive or not, all the houses have one thing in common: superior design that makes each one an architectural success.

Moreover, there are a full 80 pages of Time-Saver Standards for Houses, "how-to-do-it" reference data on questions of size, volume, area, weight, materials and methods applicable to house design and construction.

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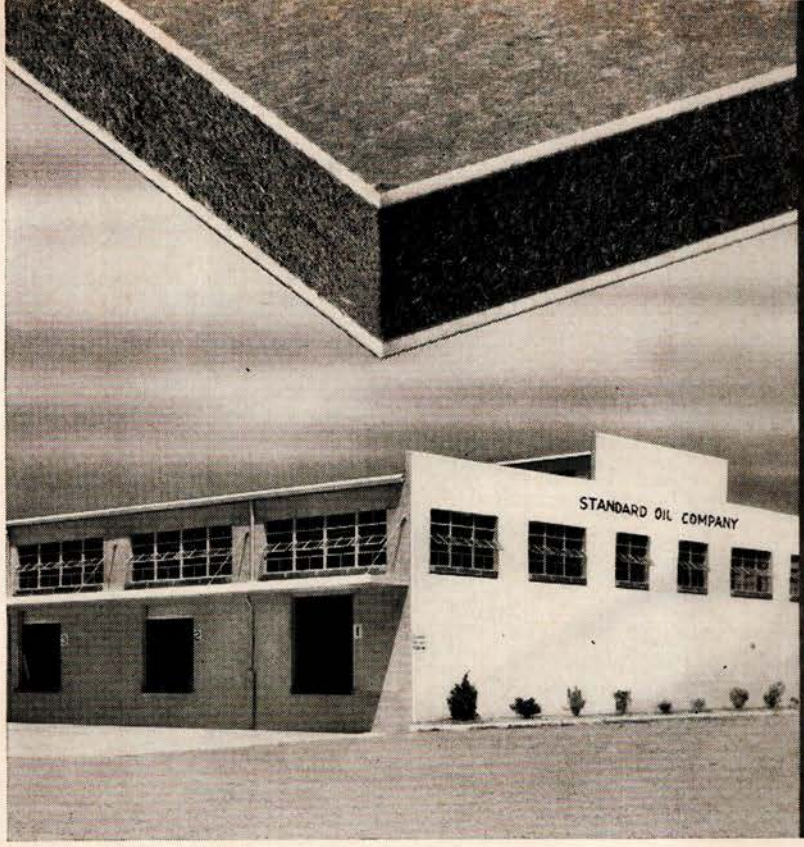
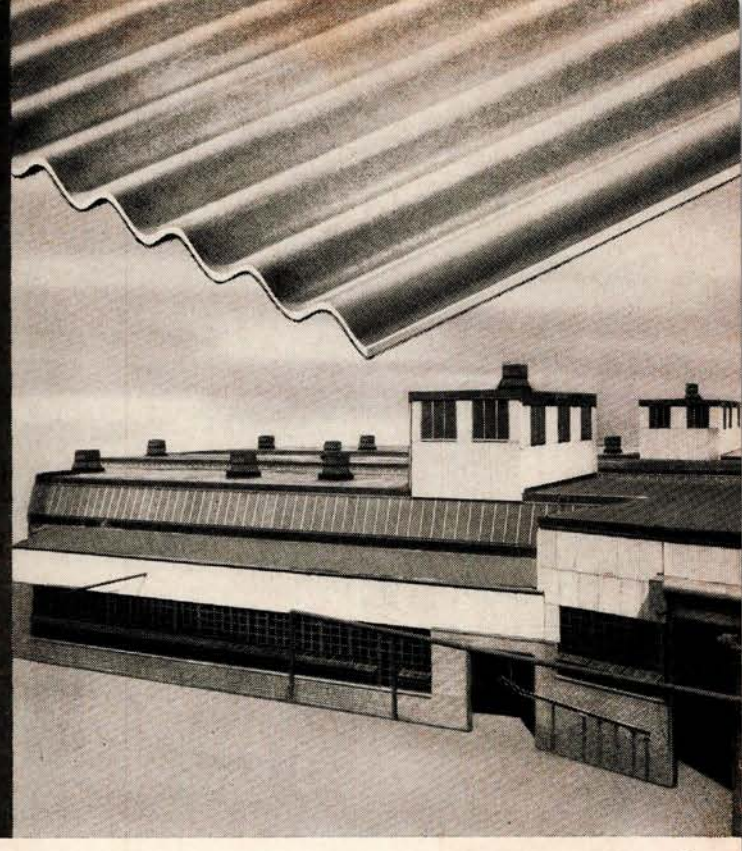


One material — Carey Thermo-Bord structural insulation panels —does work of three at this Standard Oil Co. (Ky.) warehouse. Combines roof deck, insulation and interior ceiling finish.



Ease and speed of erecting exterior sidewalls of **Careystone Corrugated** helped Superior Foundry Company, Cleveland, Ohio build new 60,000 sq. ft. plant in six weeks — economically!

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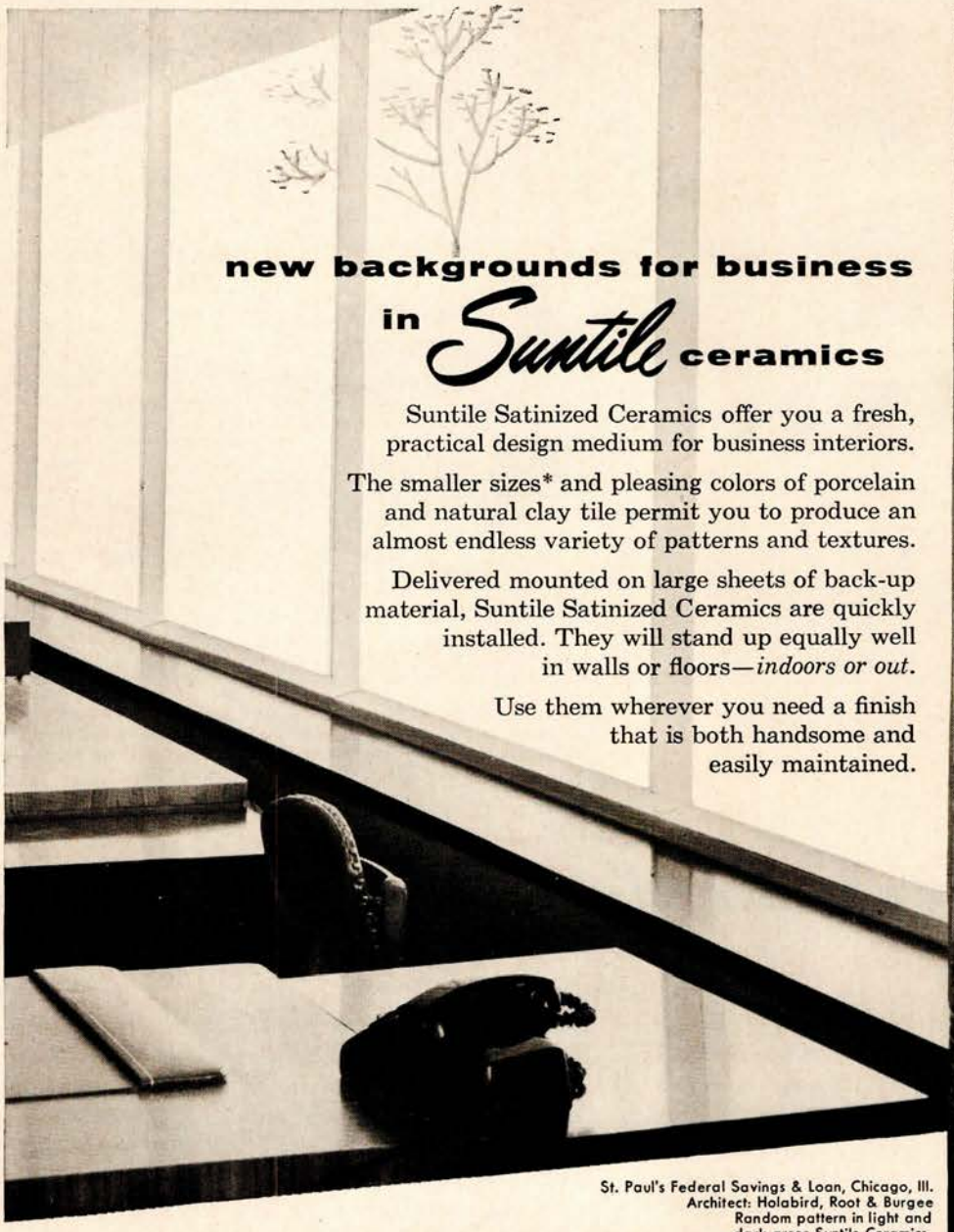

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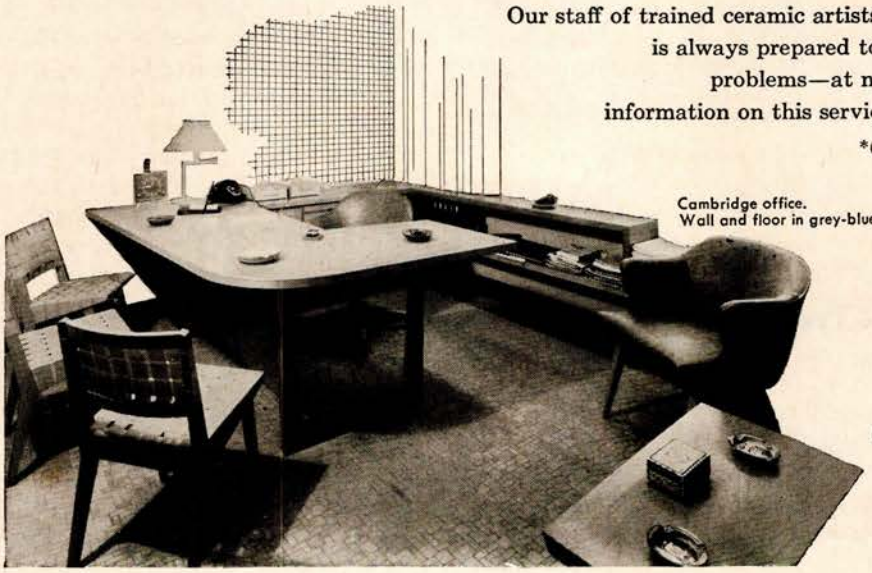

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Titan in Tennessee

The giant mill shown above is Bowaters Southern Paper Corporation's newsprint plant on the Hiwassee River at Calhoun, about 40 miles northeast of Chattanooga. Put into operation in mid-1954, the British-owned plant was designed to produce 130,000 tons of newsprint and 55,000 tons of kraft pulp per year.

Dominating the plant is the huge main building. Over 1000 feet long and covering 5½ acres, it includes a pulp-drying and machine room, a storage-and-shipping bay, a bleaching plant, a stock-preparation room, a grinder room, and shop and stores facilities. Nearby stands the power house which contains four boilers and two 10,000-kw turbo-generators. The third structure serves as a pumping station and filtration plant.

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attempting to work out a new plan based on individual need to replace the old concept of a single set of criteria applicable in all situations.

The previous idea has been that new defense facilities should not be located less than 10 miles from the perimeters of certain designated target areas of industrial and population concentrations — a standard obviously outmoded by the H-bomb.

WASHINGTON (*Cont. from page 38*)

ODM Director Arthur Fleming has told Congress that a mileage yardstick conforming to the increases in weapons capabilities could not now be applied in any practical manner to all situations in all parts of the country and therefore a revision of the dispersion policy is in order. The new approach will take into account special local problems of cities and states.

The new attempt at policy revision will try to look ahead at least 10 years on bomb potentials, extent of dispersal required, transportation facilities, etc. Pending formulation of new rules, ODM is advising any industry planning new facilities to get as far away as possible from target areas.

Inter-Agency Coordination

The President also has approved a request from Mr. Peterson for the creation of an inter-agency board for coordination of civil defense activities in Federal agencies. The panel will be known as the Civil Defense Coordinating Board.

Included will be top-ranking officials representing the Departments of Defense, Commerce, Treasury, Health, Education and Welfare, Interior, Agriculture, the Post Office and Justice, as well as the Office of Defense Mobilization, Federal Power Commission, Veterans Administration, and General Services Administration.

HOOVER GROUP WOULD END MANY LENDING PROGRAMS

The fourth of some 20 reports being prepared for submission to the Congress by the (Hoover) Commission on Reorganization of the Executive Branch of the Government advocated sharp curtailment or return to private hands of a large number of the Federal Government's lending services.

Among the Hoover group recommendations:

1. Reorganization of the mortgage loan insurance program of the Federal Housing Administration to obtain its financing from private sources, subject to Federal regulation.

2. Authorization for the President to raise down-payment requirements for FHA-insured home loans.

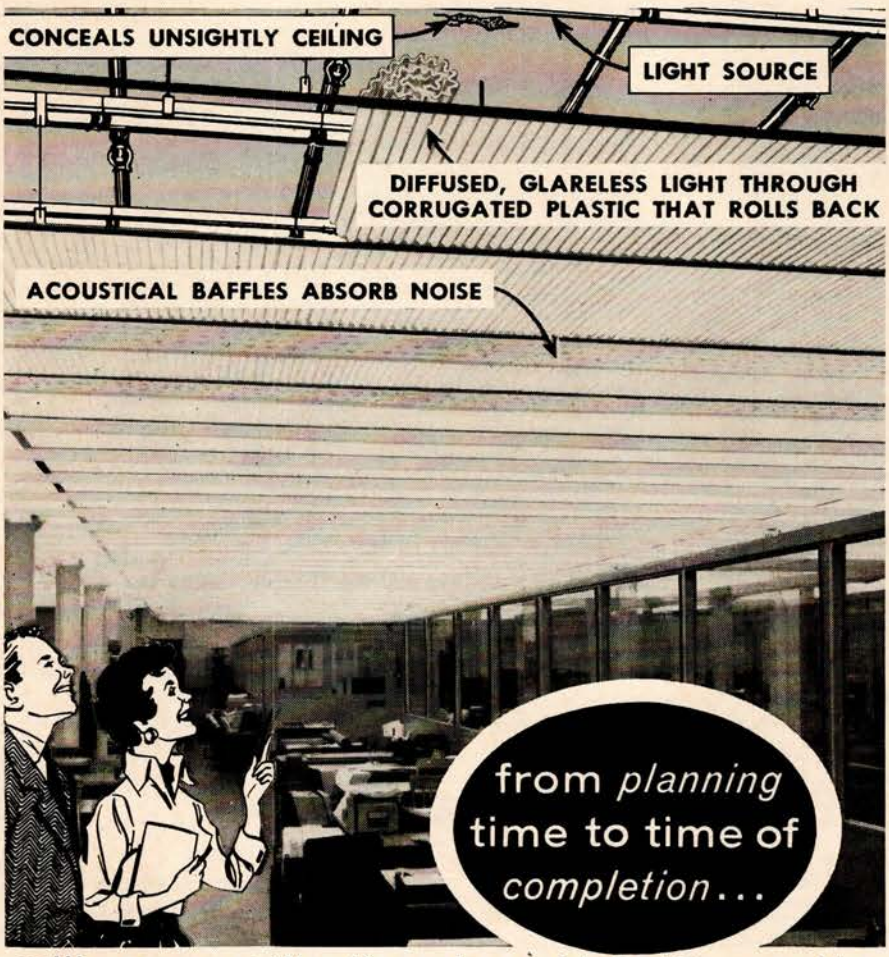
3. Abolition of the college housing loan program administered by the Housing and Home Finance Agency.

4. Abolition of advance-planning loans to aid cities in establishing a reserve "shelf" of public works, also administered by HHFA.

5. Repeal of the authorization of HHFA to lend money for public works "except as they are necessary for public housing."

The Commission also recommended that studies be made of prospective foreclosure and loss experience of all phases of the government's housing programs; and that, with a view to assuring better appraisal and cost estimates, securing

(*Continued on page 348*)



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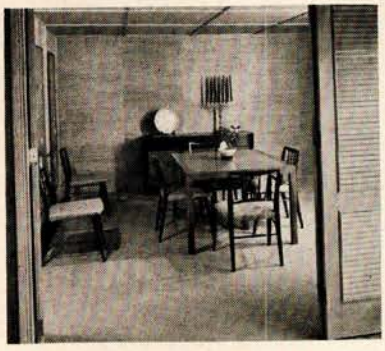

PRACTICAL HOUSES for CONTEMPORARY LIVING

by Jean and Don Graf





● Here, for the first time, is a book especially written to help eliminate much of the indecision and confusion on the part of clients. Too often a client seems to be working at cross purposes with his architect, and invariably it's because he has ignored the three cardinal rules of home planning: *Know what you want—Know what you need—Know what you can pay.*

PRACTICAL HOUSES FOR CONTEMPORARY LIVING helps chart a course around the pitfalls of hazy thinking and hasty planning in which many home-planners are trapped. It presents forty success stories in wise planning for home ownership. These houses have been selected not because they are expensive show-places, but simply because they admirably fulfill the living requirements of their owners. Like a good suit of clothes, they fit well, wear comfortably, and have a distinctive appearance. Price-wise, the houses range from $7500 upward, and display a wide variety of architectural styles—Colonial, Georgian, the popular ranch-type, and "modern".

Jean and Don Graf, the authors, let you explore these forty houses inside and out, and give you capsule case-histories of the thinking and planning that preceded building. They show how each house took shape from dream to reality (and how it sometimes changed shape when the site wasn't quite right, or desired materials couldn't be had, or costs were too steep). Every house is exhibited in four or more pages of photographs, floor plans of uniform scale, with brief text which points up useful ideas adaptable to the client's particular needs and desires.

The book is divided into six main sections, to conform with basic types of dwellings that meet virtually all shelter requirements: Houses for One Person; Good Small Houses (for the budgeteers); Houses Planned for Children and Adults; Houses for Limited Lot Lines; Houses for Irregular Land; and They Knew What They Wanted (houses where money was no factor).

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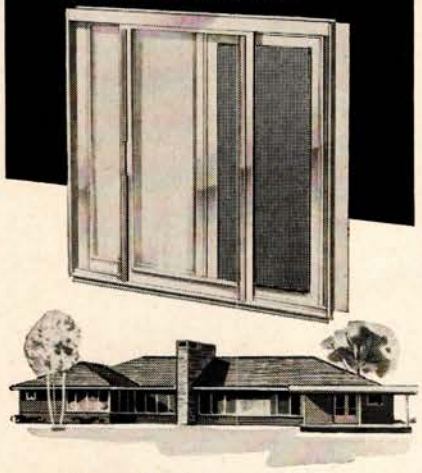

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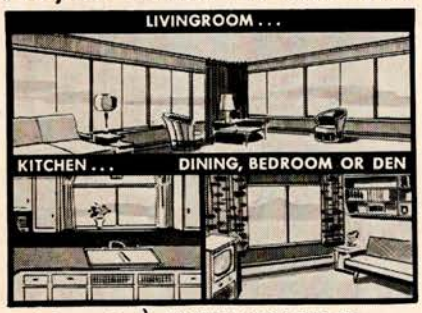

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THE RECORD REPORTS

WASHINGTON

(Continued from page 344)

more substantial and continued owners' interest in maintenance, and eliminating windfalls, the whole organization of the apartment house program be further tightened up and full advantage taken of "the commendable provisions of the Housing Act of 1954."

The Commission would have HHFA use its Federal grants-in-aid to provide security for private loans to slum clearance projects and would terminate the lending and guaranteeing functions of HHFA. It suggested that either the name Public Housing Administration be changed to "Federal Slum Clearance Administration" or that the name of the Federal Housing Administration be changed to "Federal Mortgage Insurance Administration."

It is also urged that liquidation of the prefabricated housing lending program and the Alaska housing loans be accelerated.

COUNT $27.7 MILLION IN "PLANNED" PUBLIC WORKS

The Census Bureau reported last month on its survey of "planned" public works of state and local governments: it found a total of 71,639 public works projects of some 4000 state and local governments having an estimated cost of $27,710 million.

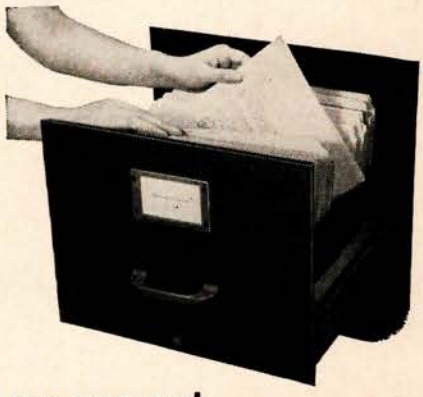
This work was planned by the various governments as of Oct. 1, 1954 and does not include work scheduled to start before June 30, 1955, or state and local projects for which Federal aid has been approved. Thus, it is felt, the projects counted constitute a true "reserve shelf" of planned public works.

All are not in the ready-to-go category, however. The Census Bureau found, in fact, that only 5620 jobs have their plans and specifications finished, land obtained and funds on hand or arranged for. Work on these could be undertaken, or bids advertised, within a matter of weeks. Construction cost of these was estimated at $1814 million; land cost at $169 million.

States and cities reported 17,215 "planned" projects — those with partially completed plans which could be brought to a "ready" status within six

(Continued on page 352)

On Asphalts for building and paving



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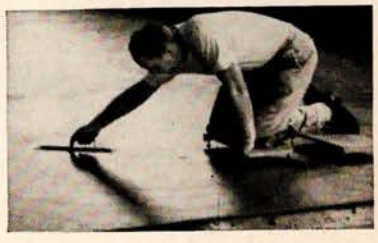

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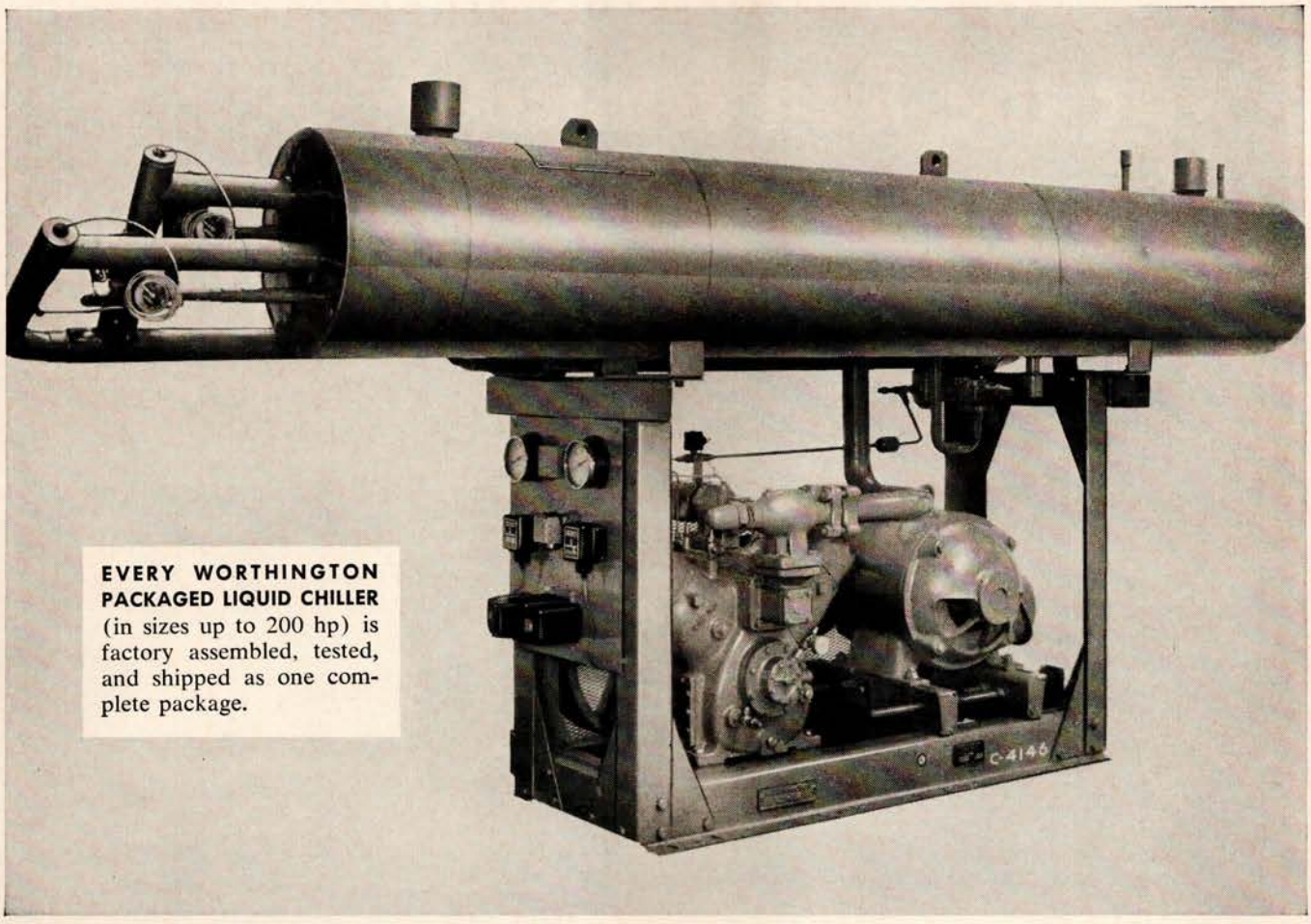

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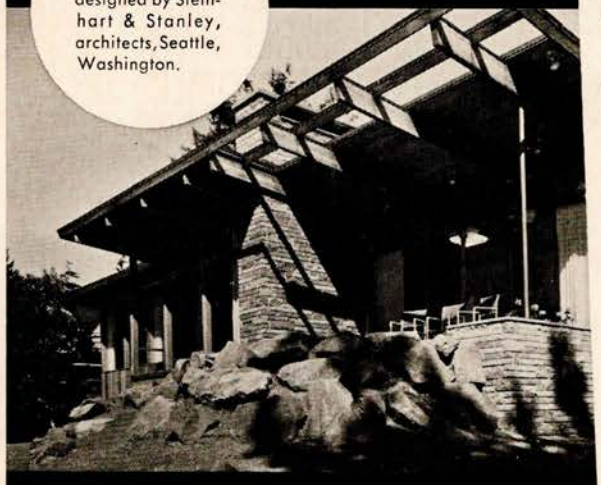

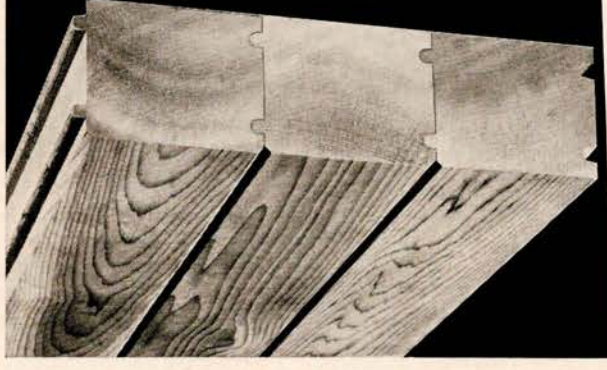

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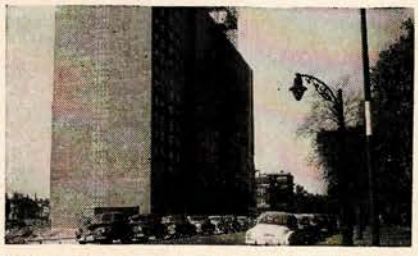

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THE RECORD REPORTS

WASHINGTON

(*Continued from page 348*)

months. Here construction cost totaled $5759 million; land cost $431 million.

Most of the jobs fell in the "programmed" category. These, 48,804 of them, are included and classified in a master plan or capital budget for which preliminary cost estimates and tentative descriptions only are available. Construction cost, $17,776 million; land $1761 million.

Significantly, half the governments reporting planned projects said they lacked funds to complete the planning process. One fourth lacked authority to complete the planning job. In the entire "programmed projects" category, almost four fifths of the governments said plans could not be completed for lack of funds, and 46 per cent lacked authority.

The Census Bureau survey covered all 48 state governments and the largest local governments of each type. The survey was conducted at the request of the President's Council of Economic Advisers and the Housing and Home Finance Agency.

The government units surveyed were said to have accounted for a substantial portion of all construction activity undertaken by state and local governments according to 1953 figures.

HILL-BURTON FUNDS KEEP '55 LEVEL IN HOUSE BILL

The first fiscal 1956 appropriation bill to clear the House of Representatives cut by nearly one fourth the Administration's request for Hill-Burton hospital construction funds.

The full House followed its committee recommendations in reducing the asked-for $125 million to $96 million, the same amount voted for 1955. Also as in this year's funds, $75 million was earmarked for regular Hill-Burton construction, the other $21 million for the new types of facilities added to the legislation last year — diagnostic or treatment centers, chronic illness facilities, rehabilitation buildings, and nursing homes.

The same measure (Departments of Labor-Health, Education, and Welfare) also carried $24 million to aid states in construction of schools in "Federally-impacted" areas. These are locations

(*Continued on page 358*)

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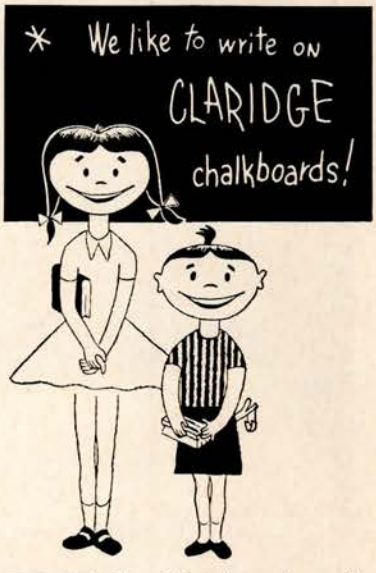

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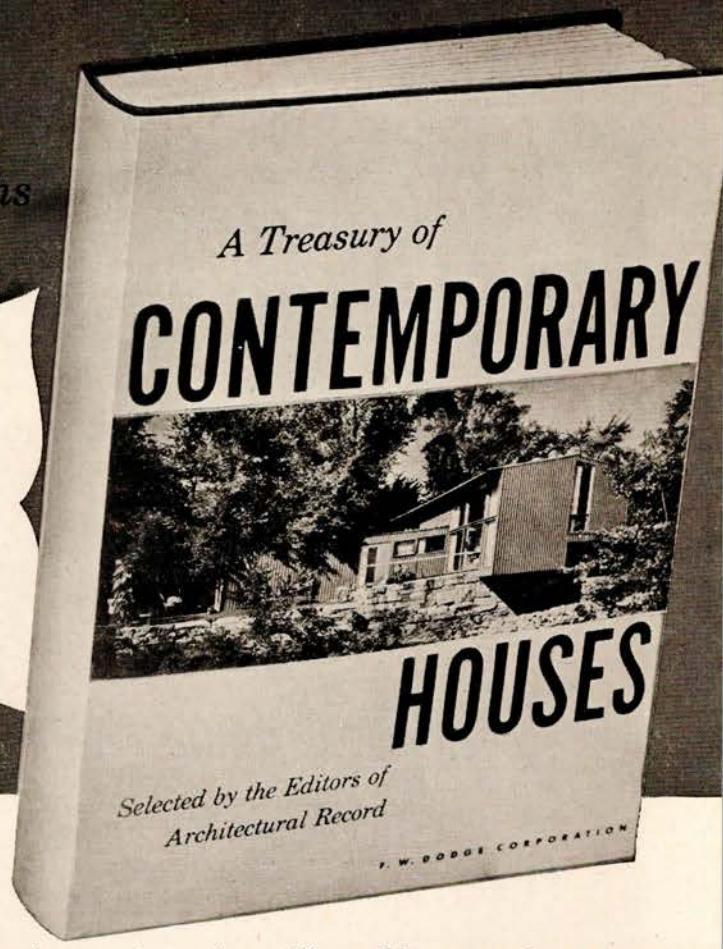

A Treasury of CONTEMPORARY HOUSES

by the editors of *Architectural Record*

Here, depicted in truly superb photographs and detailed drawings, are fifty houses that meet the most exacting demands of quality architecture. Chosen for publication from among hundreds of candidates, these houses are tributes to their creators and sources of genuine pride and delight to their owners. Most of them are illustrated in at least ten fine photographs of interiors and exteriors, plus skilled drawings of floor plans, plot plans, and intriguing details of design. Explanatory text tells the story of each house, what its owners wanted, and how the architect met and solved the problems confronting him. Here indeed is a treasury of houses rich in ideas and inspiration from the planning boards of some of America's foremost architects and designers.

220 Pages • 8¾ x 11⅝ • Over 600 Illustrations • $5.95

To convey the spirit of this book we herewith reprint in its entirety the introduction written by Emerson Goble, managing editor of Architectural Record:

"House design today is in a state of delightful confusion. Confusion because ideas seem to change so rapidly, or maybe because there are so many ideas, so many new things to work with. Delightful because we want our houses to be delightful. You might even say that delight is the current fashion.

"Our forefathers—unnumbered generations of them—might laugh at the idea of delight being a current fashion. The age-old summary of architecture speaks of 'commodity, firmness and delight.' But it is still true that architecture has newly discovered the word, or at least has new visions of its realization.

"It is important to realize that this represents a step forward, not backward. When contemporary architecture, many years ago, began sweeping out the sentimental litter of by-gone styles, it was going forward. It was recognizing that ancient styles, beautiful as they were in their day, were anachronisms in our time. They were merely stage settings. They did not satisfy our intellect, and if they satisfied our emotions, weren't we a little mixed up?

"So architects set about developing an architecture that would satisfy our sharpened intellects. They began developing new forms, new materials and techniques, new esthetics, new combinations of space, new ways to design houses for their purposes.

"What's new is not the negation of all that. It is rather the conscious effort to use it all for the delight of man's soul. *It's as simple as that.*

"A noteworthy result is variety. And what could be more delightful in house design than variety? Why should a modern house have to have a flat roof? Or a glass wall? Or an open kitchen? Why should it have to have its structure exposed? Why shouldn't it have anything its owners really want, including a curve or two, even a Victorian curve?

"Well, that's where modern architecture is today. That is why, incidentally, there is much variety in the houses in this book. All are modern. All were considered good enough to publish in ARCHITECTURAL RECORD. All are very recent selections. But not all take their academic theory in the same doses. What's more to the point, all have ideas in them, and nowadays there is no dogma, intellectual or otherwise, against using whatever ideas may appeal to you."

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DODGE REPORTS

The Construction News Division of

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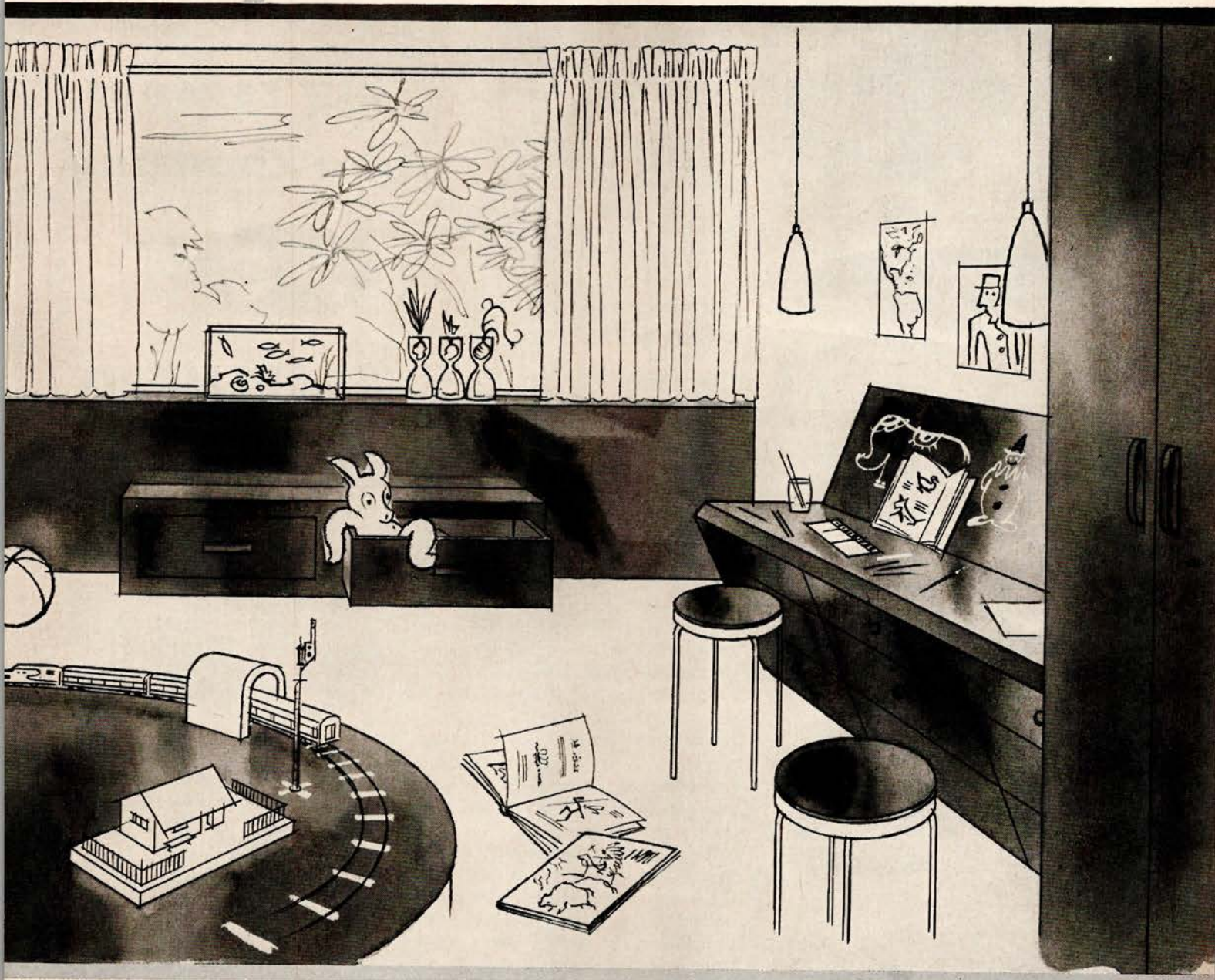
Preview
by Monsanto

How melamine* laminated plastics can play-proof a playroom



The most versatile and decorative of plastics is coming out of the kitchen where it has been very much at home for years. Colorful laminates made with melamine resins are now contributing beauty and utility throughout the house.

This sketch of a children's playroom suggests just a few of the practical new applications for this smooth, durable surfacing material.

The "hobby window" has a melamine laminated sill. It won't be harmed by water splashing from the aquarium or plants.

The dado, closet doors and drawing table are covered with melamine that can take hard wear and is easy to clean. The built-in drawing board provides a richly-hued surface from which chalk and crayon marks erase with a damp cloth.

The train table, toy chest and stools are also topped with melamine laminate. That means they're resistant to scratching and chipping.

Melamine laminates* in scores of colors and patterns are carried at most building supply stores. The lightweight sheets, from 1/16" to 1/10" thick, cut neatly with a saw and are cemented permanently to any rigid surface. They are also available already glued to plywood or hard board. Melamine laminates do not swell or warp, are unaffected by ordinary acids and alkalis.

*Monsanto supplies melamine and phenolic resins for decorative laminates sold under these trade names:

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THE RECORD REPORTS

WASHINGTON

(*Continued from page 352*)

where Federal activity of one sort or another has imposed undue burden on the local school systems.

Headed for the Senate, the measure also contained $100,000 for the White House Conference on Education to be held in November and December, half the amount requested to supplement the $900,000 voted last year.

HOUSING COUNCIL ADVICE ASKED AFTER LONG LAPSE

The long-dormant National Housing Council has been revived by Housing Administrator Albert M. Cole, who said his intention was to provide for close study of housing activity, particularly the heavy continuing volume of new single-family houses. Some observers feel this rising construction rate threatens the general economy with inflationary influences, but Mr. Cole will not admit to this. He says only that any subject generating so much public attention should be watched closely by the Federal agencies interested.

The NHC has had little to do since it was authorized by one of the early postwar housing laws. It operated during the Korean crisis in connection with Regulation X, setting limits on down payments, terms, etc. Other than that, it has scarcely convened.

Holding its first new meeting late in March, the Council was attended by important observers outside its membership: Treasury Secretary George M. Humphrey; Dr. Arthur Burns, chief economic adviser to the President, and Woodlief Thomas, Federal Reserve Board representative.

Also attending were Franklin G. Floete, Defense Department; Walter Williams, Commerce Department; Harvey Higley, Veterans Administrator; Secretary of Labor James P. Mitchell; and representatives from the Department of Agriculture, the Home Loan Bank Board, Public Housing Administration and Federal Housing Administration. Mr. Cole presided as chairman of the Council.

The group waited less than a week to hold its second session, attending with data gathered from the various agencies on the housing picture.

(*Continued on page 362*)

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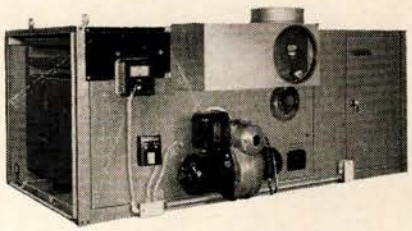

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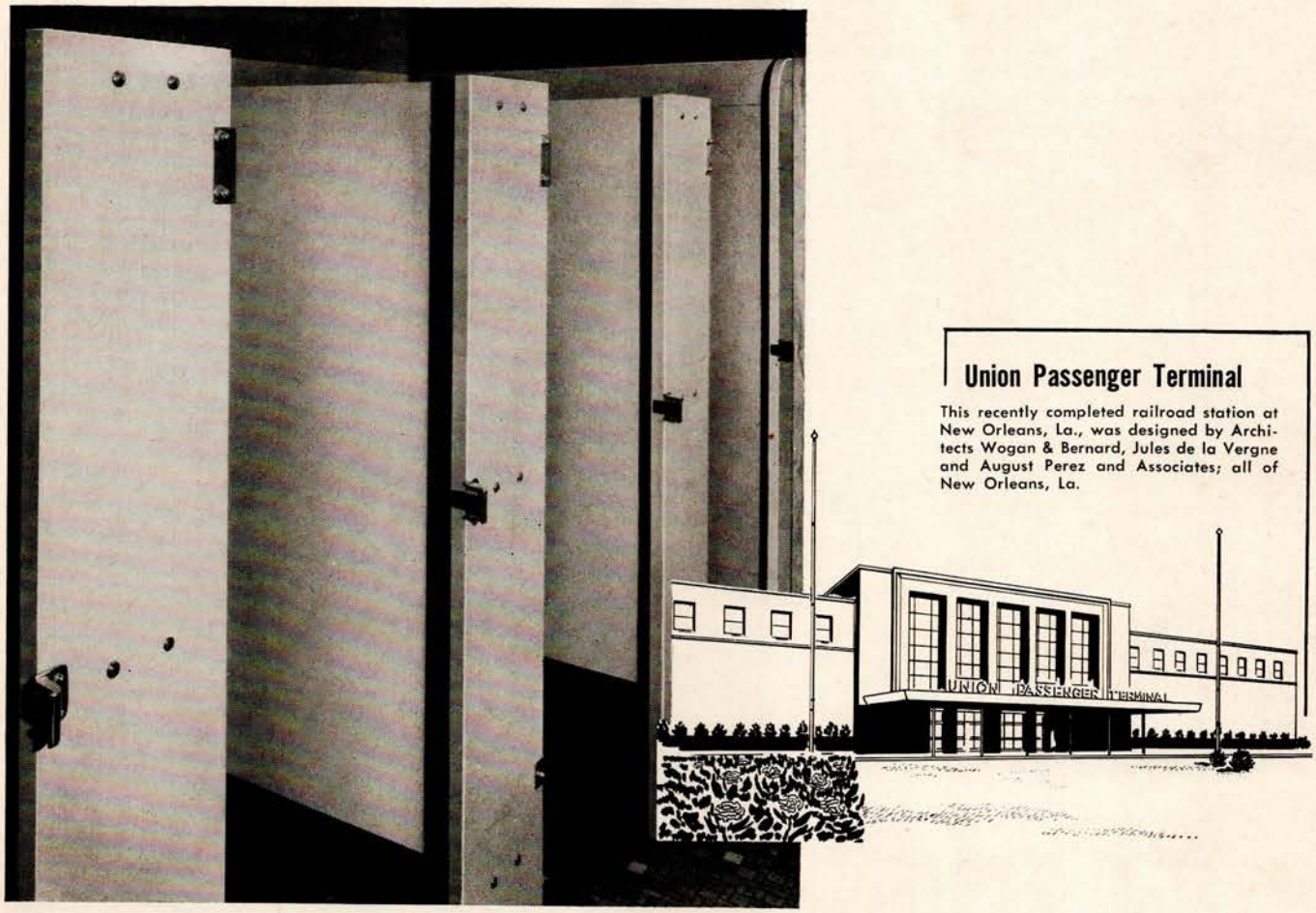

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This recently completed railroad station at New Orleans, La., was designed by Architects Wogan & Bernard, Jules de la Vergne and August Perez and Associates; all of New Orleans, La.

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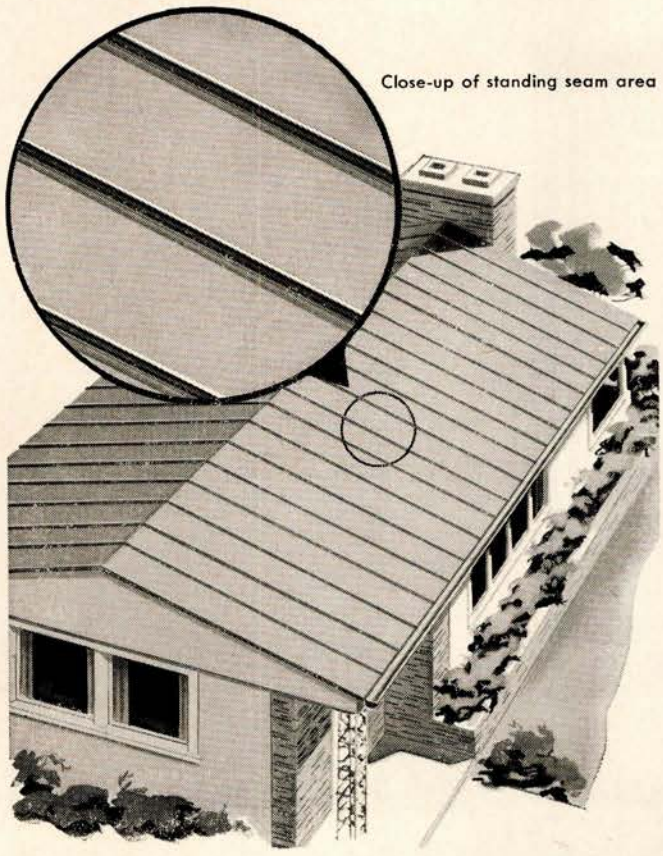

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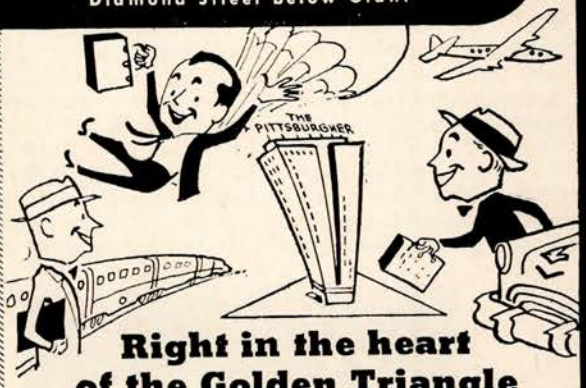

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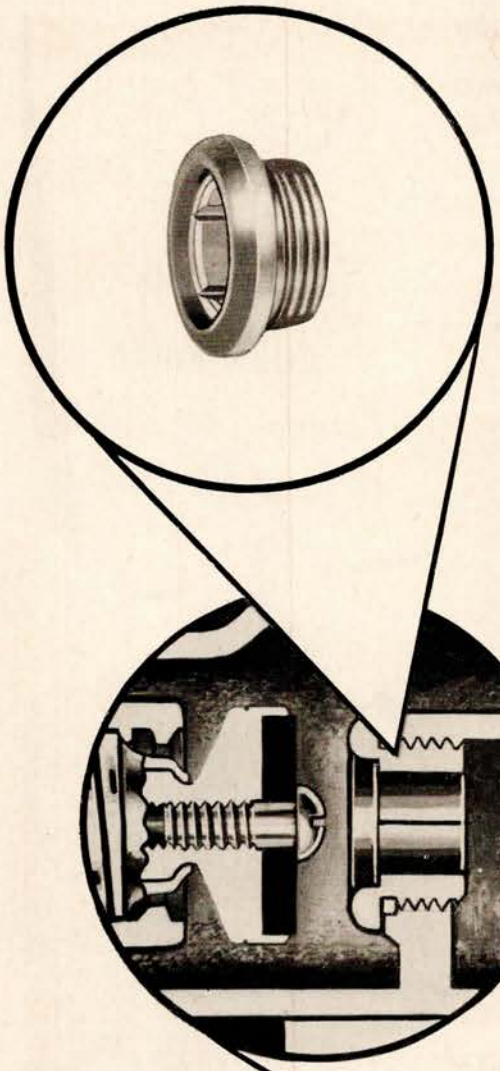

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This *Monel* Renewable Valve Seat is just one of the precision-built *Monel* parts which distinguish every Speakman COMMANDER Valve.

Speakman *Monel* Valve Seats resist water corrosion indefinitely. And wear on Speakman Valve Seats is minimized through the use of the swivel disc principle.

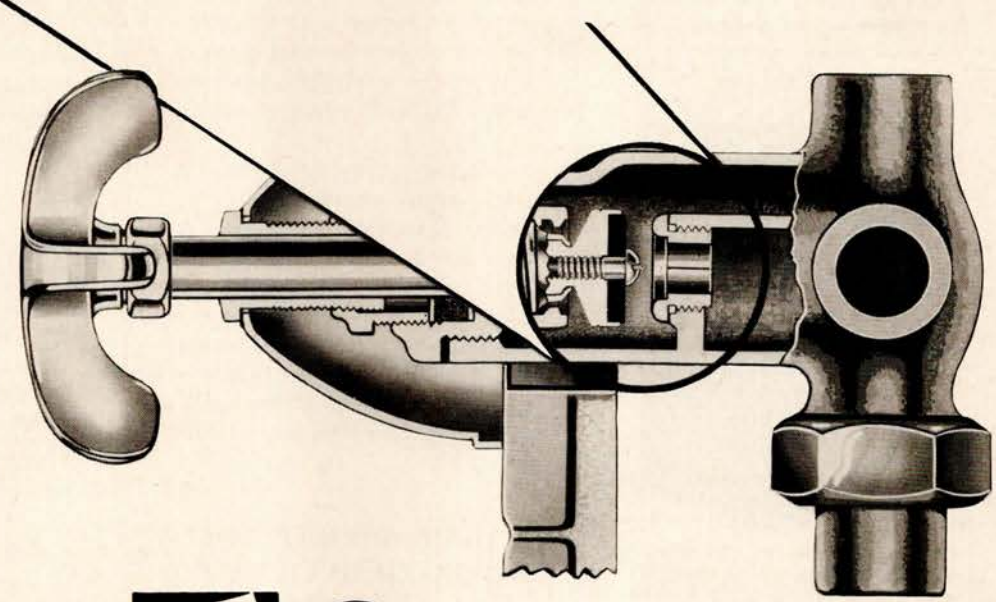
Monel Valve Seats, *Monel* Washer-Retaining Screws, *Monel* Swivel Discs, all precision-machined, are typical of the construction of Speakman COMMANDER Line products. They also help explain why the Speakman Company never has been called upon to replace a complete COMMANDER Shower or Fixture Fitting because it wore out.

Write today for information on the Speakman COMMANDER Line. See for yourself why architects and engineers specify "Speakman COMMANDER" when they want dependable performance, distinctive design, sensible price.

Remember, our reputation is *built* by the products we make, your reputation is *protected* by the products you specify.

Why is this Monel Valve Seat Different?

Because the valve seat is one of the most vulnerable wearing parts in any valve, in the Speakman COMMANDER Valve it is machined of heavy, durable, non-corrosive *Monel*. Note the Hi-Seat construction which raises the valve seat to give an unrestricted waterway area and positive seating action.



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NAME .....

FIRM .....

STREET .....

CITY .....**STATE**.....

THE RECORD REPORTS

WASHINGTON

(*Continued from page 358*)

BRAB WORKING FOR FHA ON GROUND SLAB STUDY

The Building Research Advisory Board has undertaken its first study on a technical question specifically allied to the field of housing. This is a four-month investigation of the slab-on-ground construction method. The new BRAB contract with Federal Housing Administration pioneers a better all-around understanding of field problems.

The new project stems from FHA Commissioner Mason's talks with industry leaders last fall. Those conferences brought up the limitations on technical knowledge in the housing field as they considered advisory services and revision of the MPR's. With the better known research activity of HHFA killed off by Congress, more emphasis on outside activity of this kind can be expected.

Under the contract with FHA, BRAB will do two things: 1) define and analyze the problems of slab construction in order to provide answers to problems wherever satisfactory information exists; 2) define problems requiring further research.

For two years an inter-departmental government committee has worked with FHA's technical division on problems of moisture movement in slabs. This committee recommended research and field studies which BRAB will examine before making its own recommendations to FHA.

The research board undertook its work immediately, moving toward the convening of consulting groups of specialists. The research will not overlap the work of the new FHA advisory committee on technical standards, being concerned with technical questions only while the FHA advisory committee will consider application of the results of the study and their adoption for MPR adjustment.

SCHOOL DEFICIT OUTLOOK REPORTED MUCH IMPROVED

The chances for new legislation this year supporting a greatly enlarged school construction program were watered down considerably when Mrs. Oveta Culp Hobby, Secretary of Health,

(*Continued on page 366*)

*Cordley— for en forfriskende drikk koldt vann



Architects and contractors the world over know that the client who demands the best requires Cordley drinking water coolers.

For a Cordley is no ordinary water cooler. It is the end result of sixty-five years of specialized effort devoted to the design, manufacture and sale of more than a million drinking water coolers. Every Cordley Electric Cooler is fully covered by a generous five-year guaranty.

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Cordley
NEW YORK

*Cordley—for a refreshing drink of cool water.

Solving noise problems and moisture problems, too...

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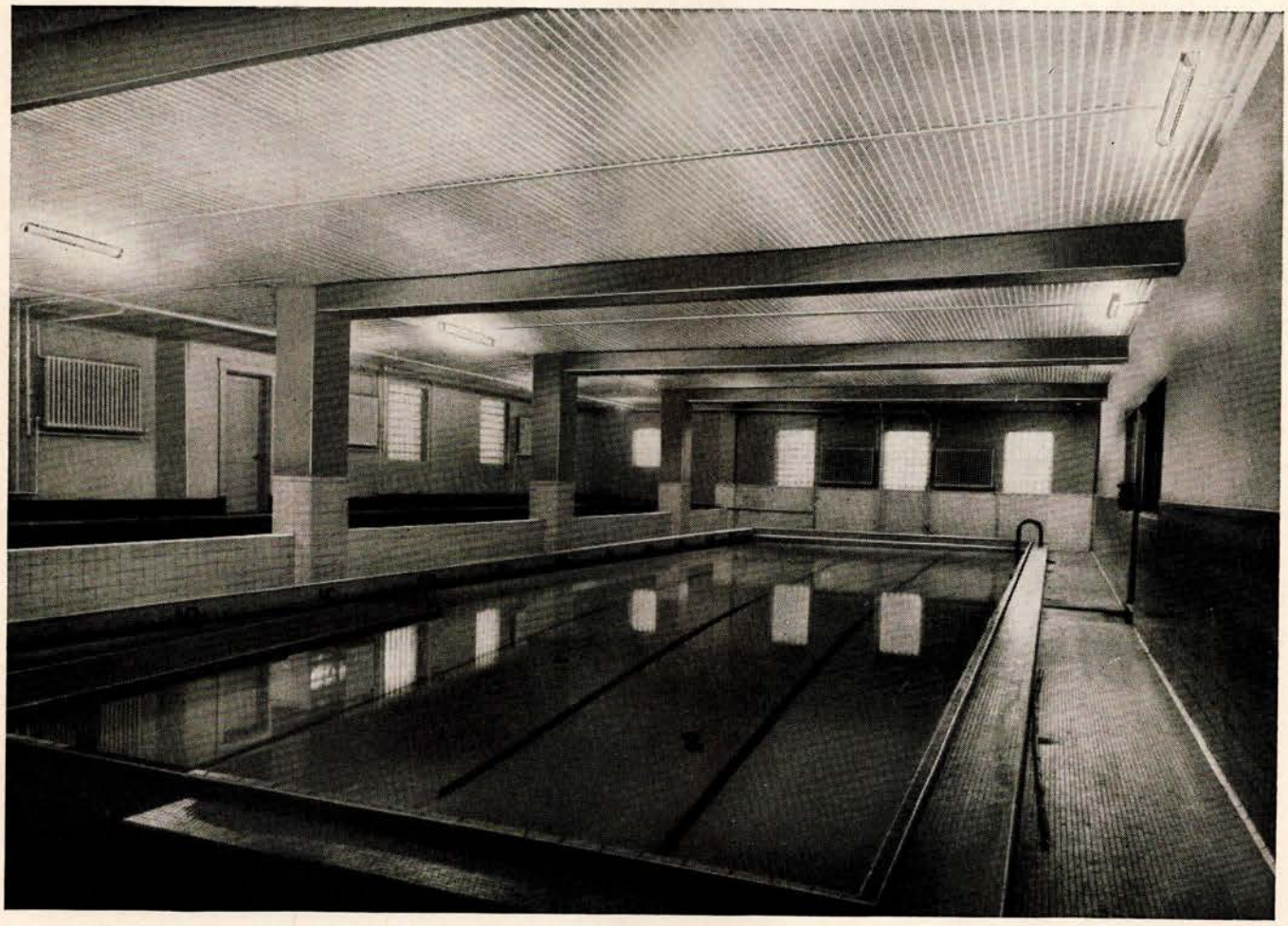
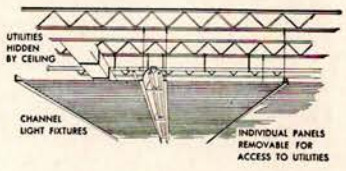


Wherever noise problems exist ReynoCoustic aluminum acoustical system offers an efficient solution in attractive form... combined with minimum maintenance and ready access to utilities above the ceiling. Incombustible, high in light reflection and easily cleaned, the ReynoCoustic system also has high thermal insulation value.

In addition, this YWCA natatorium at Charleston, West Virginia, demonstrates another advantage. These rustproof aluminum panels combined with glass fiber blankets, are unaffected by moisture, a common problem in acoustical treatments. The result is ideal for swimming pools and many other applications where high humidity conditions exist.



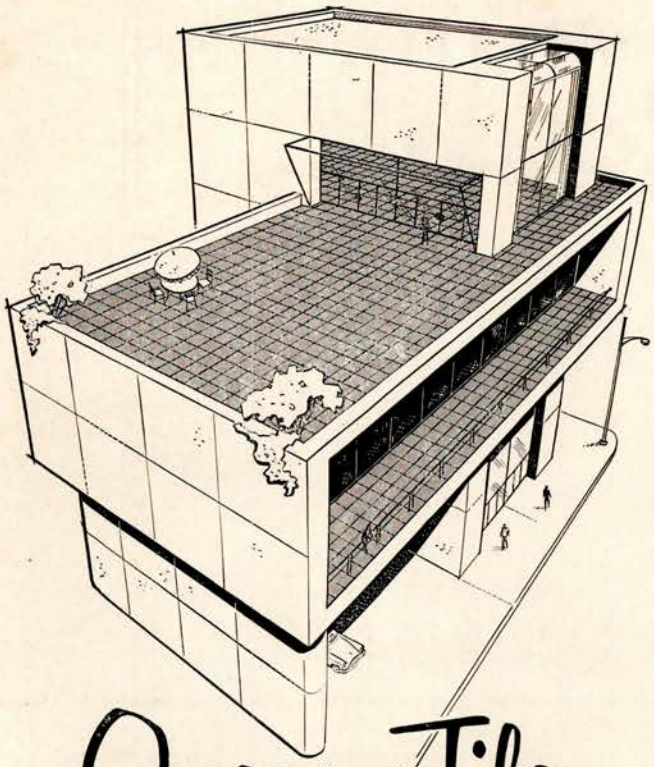
Typical installation showing method of support for ceiling members and lighting fixtures. This system provides a noise reduction up to .90—uniformly high at all frequencies.

A complete installation service is available. For name of nearest franchised acoustical applicator, call the Reynolds office listed under "Building Materials" in classified phone books of principal cities. For complete literature write to Reynolds Metals Company, Building Products Division, 2020 South Ninth Street, Louisville 1, Kentucky.

REYNOLDS ALUMINUM

BUILDING PRODUCTS

SEE "MISTER PEEPERS," starring Wally Cox, Sundays, NBC-TV Network.



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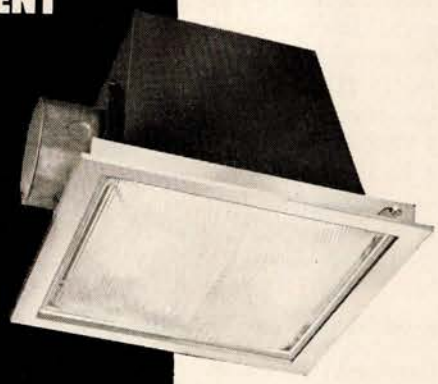
NEW CURTIS SCHOOL CORRIDOR LIGHTING UNITS

INCANDESCENT SQUARE RECESSED



A square recessed incandescent downlight that can be recessed into a 12″ opening in any type ceiling construction.

This new Curtis recessed unit is for use with either 150-W, 200-W or 300-W incandescent lamps. A specially designed lamp holder plate permits easy adaption for correct positioning of these three different wattage lamps. The hinged door accommodates either a variety of lenses or a louver. Units pass Underwriters approval when installed singly or when grouped or patterned together.

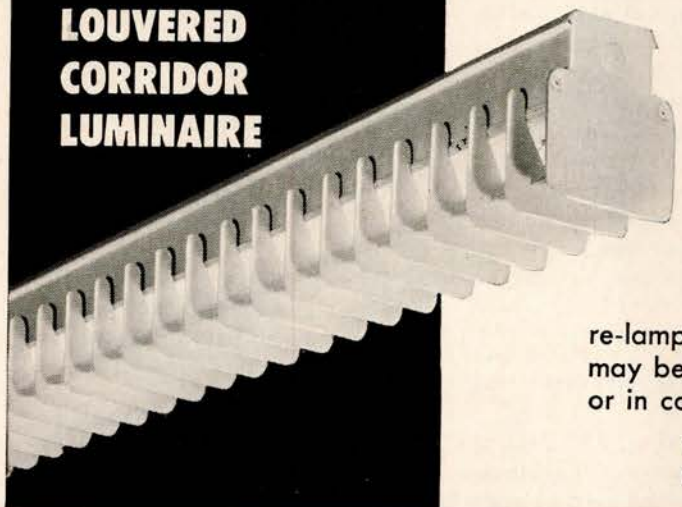
PRINCESS CORRIDOR LUMINAIRE



A new completely enclosed Fluorescent Luminaire for 4′ and 8′ Rapid Start or Slimline lamps.

This completely enclosed luminaire is ideal for corridors and other areas where wide light distribution is desirable. The white plastic polystyrene plastic panels may be easily removed for cleaning or lamp replacement. Units may be installed individually or in continuous lines, close-ceiling or pendant mounted.

LOUVERED CORRIDOR LUMINAIRE



A distinctive Fluorescent Luminaire, with attractive white enameled steel louvers for 4′ and 8′ Rapid Start or Slimline lamps.

This new Curtis all steel luminaire is finished white baked Fluracite enamel. It is a highly efficient direct unit designed to give 25° lengthwise shielding. The louver is hinged from either side for fast, easy re-lamping or cleaning without the use of tools. Units may be close-ceiling or pendant mounted individually or in continuous lines.

Write for complete, descriptive literature on these new Curtis corridor units.

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For that "something extra" to add sales appeal without increasing cost, put Veni-Flex in your plans. Veni-Flex is smartly adaptable to dozens of modern applications, and in compact homes, it adds much-needed space to every room. Available in beautiful natural wood finish or a choice of 10 decorator colors. Whatever the building plan, specify the space-maker . . . Veni-Flex.

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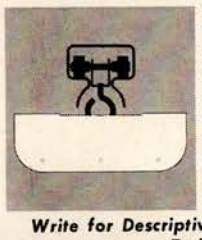

Exclusive brass Rol-Trak hardware in rugged steel track assures fingertip control . . . years of trouble-free service . . . smooth dependable operation. A typical top-quality Veni-Flex feature.

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THE RECORD REPORTS

WASHINGTON

(*Continued from page 362*)

Education, and Welfare, told the House Education Committee that earlier estimates of classroom deficiencies by 1959–60 were no longer valid. The U. S. Office of Education (a HEW agency) dropped its deficiency figure from 312,000 classrooms to 176,000. The drastic change was based on new information reaching the Office of Education from state school officers in response to Phase II of the School Facilities Survey.

At 60,000 Classrooms a Year

The new figure assumes that the annual construction rate of 60,000 classrooms will be continued during the next five years. If the need is to be satisfied entirely by that time, the rate will have to increase to around 90,000 to 95,000 units put in place per year.

Increased enrollments, population mobility, replacement of obsolete and otherwise unsatisfactory facilities, and reorganization of local school administrative and fiscal units are some of the factors going into the new calculations.

The Phase II study produced estimates from 34 states and three territories.

The need by 1959–60 remains at 476,000 classrooms, but the increasing rate of building promises to chew into this backlog requirement more quickly than the Office of Education had anticipated it would. In the last three years the annual construction rate has climbed from 50,000 units to 60,000. This was one fact that placed the earlier estimates in the wrong perspective. Also, it is probable that states have meanwhile found more buildings which they feel they can fix up and use, Mrs. Hobby said.

TO AID SCHOOL BONDS

REP. CARROLL D. KEARNS (R-Pa.) introduced a bill to encourage investment in school bonds. He said his plan might be the answer to the school construction problem. Text of the bill would amend present statutes to permit Federal Reserve member banks to deal in securities of regulated investment companies that invest solely in school bonds and other tax-exempt government obligations.

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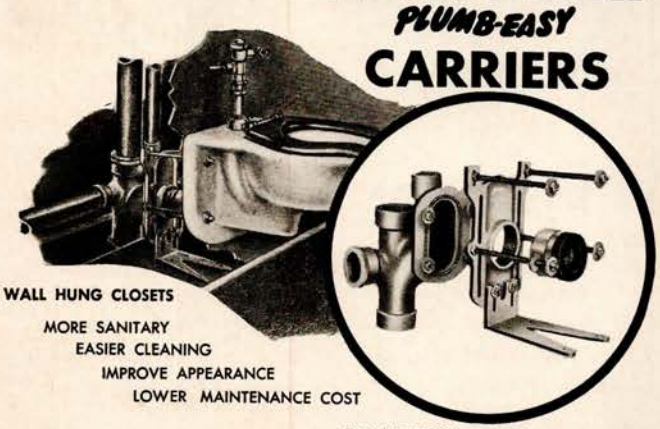

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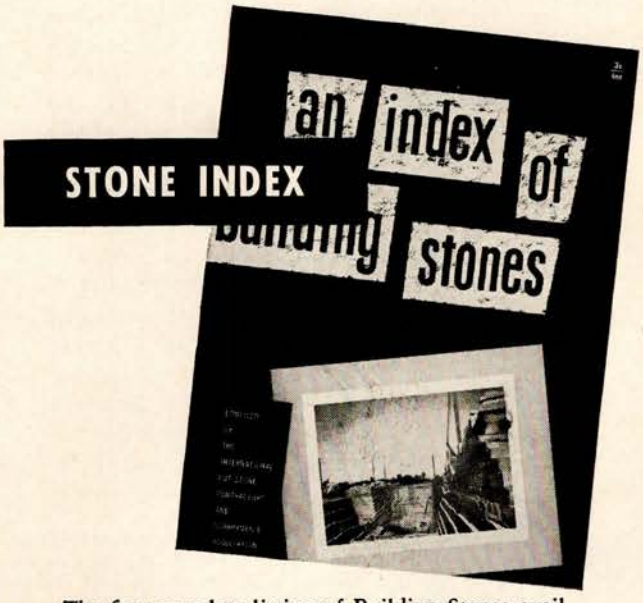

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Write to Stone Council, a department of Building Stone Institute
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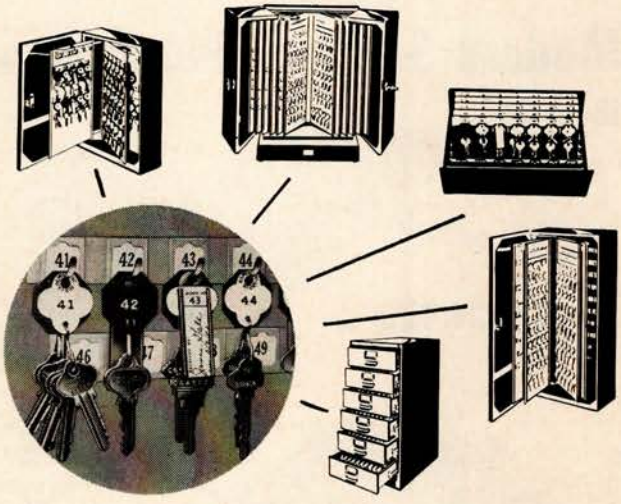

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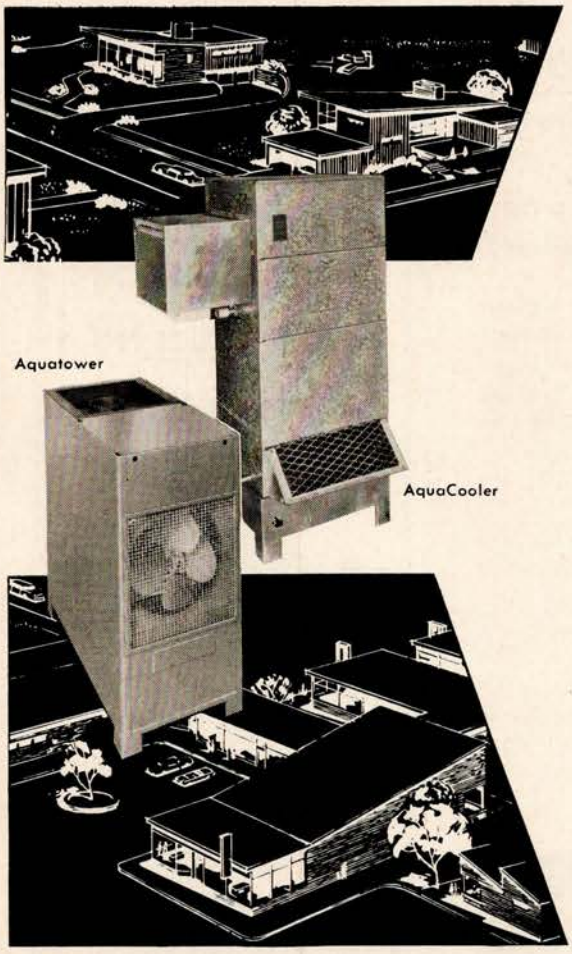

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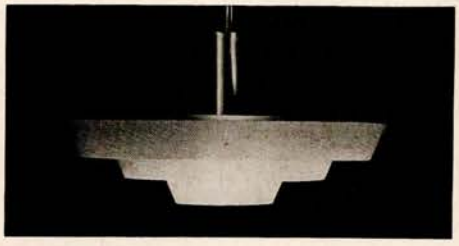

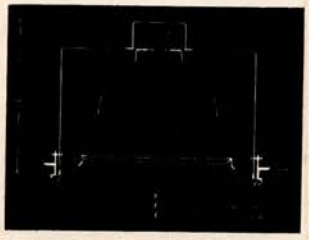

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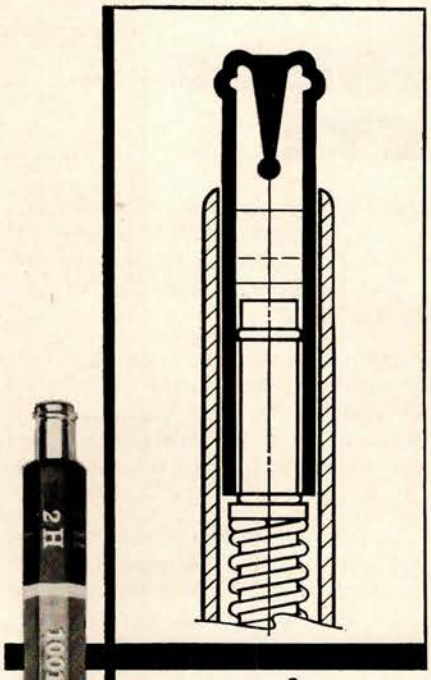

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Now it's the new, sturdy, solid brass lead sharpener built into the Technico Mars-Lumograph push-button lead holder. Saves you work, time, money.

Get the imported Mars Technico lead holder and leads today— they are the best, yet cost no more.

The 1001 Mars Technico clutch mechanism holds leads securely; light in weight, perfectly balanced; $1.50 each, less in quantity.

1904 Mars-Lumograph leads are so opaque, inking-in is unnecessary; won't flake or smudge, give better reproduction. Perfectly graded in 18 degrees—EXB to 9H; $1.20 doz., less in quantity.

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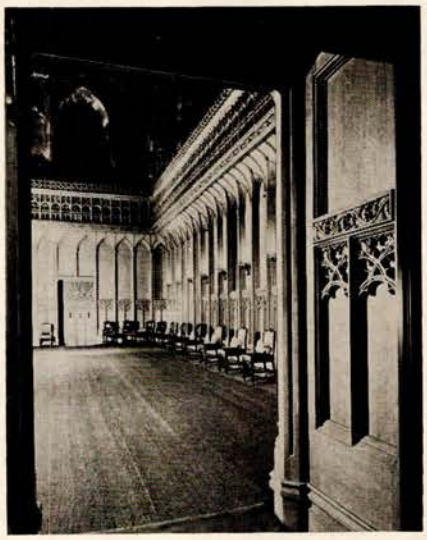
THE RECORD REPORTS

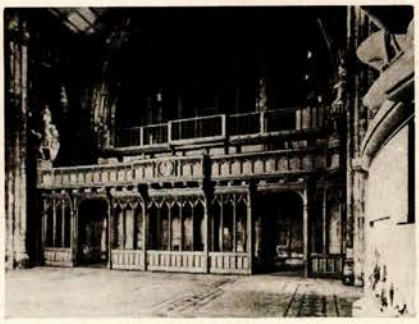
(*Continued from page 338*)

ENGLISH CRAFTSMEN WORK TO REPAIR THE GUILDHALL

Badly damaged during the wartime bombings, the Guildhall, center of many of the City of London's ceremonies, is now being repaired and reconstructed. The building, which was gutted by fire, has lived through catastrophe before — the Great Fire of 1666 left only the walls standing.

Reconstruction of the paneling and the carved woodwork, some of which will conceal the burnt and scarred walls, is going forward under the direction of the Maple-Martyn Organization. The painted and gilded figures of Gog and Magog, which are carried every year in the Lord Mayor's Procession and which were also lost in the bombing, were sculptured by David Evans.





Above: the East End of Guildhall, where new oak paneling conceals damaged stone walls. Below: West End of the hall; oak screen, left undamaged is topped by the Public Gallery and Minstrels Gallery, guarded by "the last of the giants," Gog and Magog

When the problem calls for LOW COST, DEPENDABLE HEATING — let the plans call for NELEX MI HEATER UNITS!



Now on the market, after years of research and testing, Nelex MI Heater Units offer the perfect solution to hundreds of annoying heating problems. Nelex MI Heater Units provide clean, uniform and rapid heat with no maintenance whatever. Designed to operate up to 500° F. in open air, they can tolerate a working temperature of 1,000° F. when oxygen is excluded.

The combination of low first cost, quick and easy installation, and complete absence of maintenance problems makes these rugged, flexible heater units ideal for de-icing and freeze prevention. You have no control problems, either; specially designed thermostats provide accurately controlled temperatures and supply heat *only* when it is needed.

For further information, write for Bulletin No. 1603. Or, if you need assistance in figuring applications for any special heating problems, just call on Nelson engineers; they'll be glad to help you. Nelex MI Heater Units are distributed nationally through Nelson sales offices and authorized distributors.

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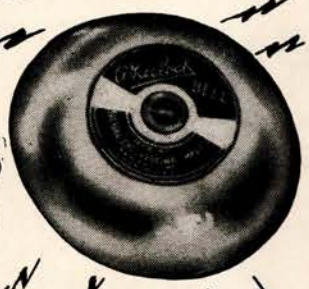

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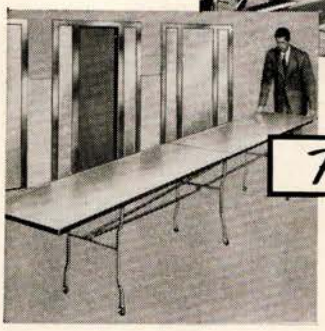

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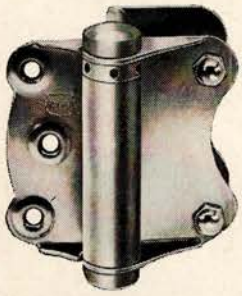

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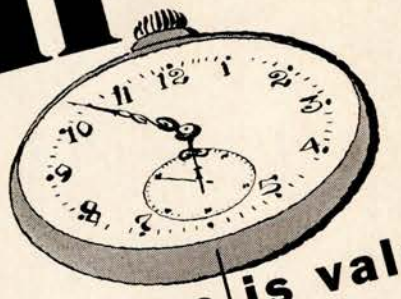

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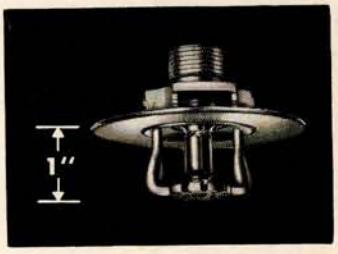

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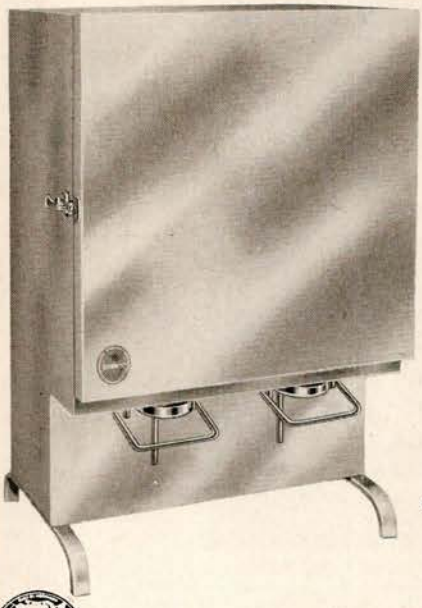

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habilitation and conservation in operation or contemplated in ten cities, ranging in size from nearly 4 million to less than 100 thousand.

A Proposed Housing Ordinance Regulating Supplied Facilities, Maintenance and Occupancy of Dwellings and Dwelling Units. American Public Health Assoc., Committee on the Hygiene of Housing (New York) 1952.

City Fights Back, The. By Hal Burton. Urban Land Institute (1737 K St., N. W., Washington, D. C.) 1954. 318 pp, illus., $5.00.

A nation-wide survey of what cities are doing to clear slums, keep pace with expansion, etc.

City of Man, The. By Christopher Tunnard. Charles Scribner's and Sons (New York) 1953. 424 pp, illus. $8.50.

A plea for the beauty in city building.

Local Development and Enforcement of Housing Codes. HHFA, Div. of Research (Washington, D. C.) 1953. 55 pp.

Local Planning Administration. The International City Manager's Assoc. (1313 E. 60th St., Chicago) 1948. 337 pp, illus., maps, graphs, tables. $7.50.

Tells the "how" of Planning Administration in detail.

Metropolis in the Making. Regional Plan Assoc., Inc. (205 E. 42nd St., New York) 1955. 88 pp, illus. $2.00.

The prospects for the development of the N. Y. Metropolitan Region for the next 25 years.

Mill Creek Redevelopment Area Plan. Philadelphia City Planning Commission (Philadelphia, Pa.) 1954. 32 pp, illus.

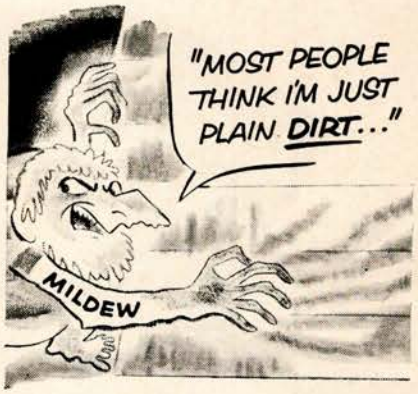
Planning the Neighborhood. American Public Health Assoc. Public Administration Service (Chicago) 1948.

Principles for Planning a Comprehensive Program for Redevelopment. Chicago Planning Commission with Cooperation of the Housing & Redevelopment Coordinator (City Hall, Chicago) 1952. 19 pp.

Recommendations on Government Policies and Programs. U. S. Gov't Printing Office (Washington, D. C.) 1953. 377 pp.

A report on the President's Advisory Committee on Gov't Housing Policies and Programs.

(*Continued on page 378*)



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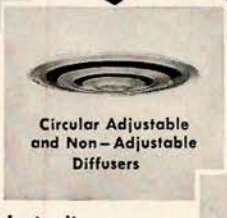



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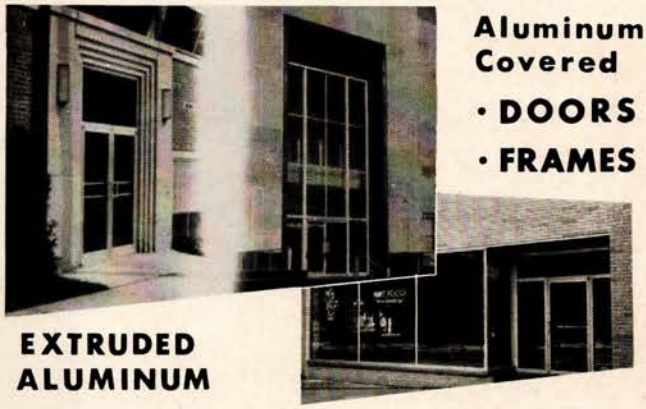

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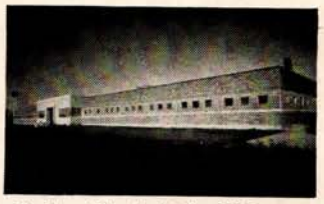

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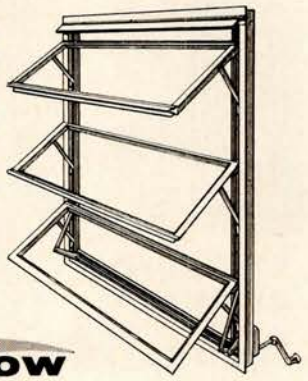

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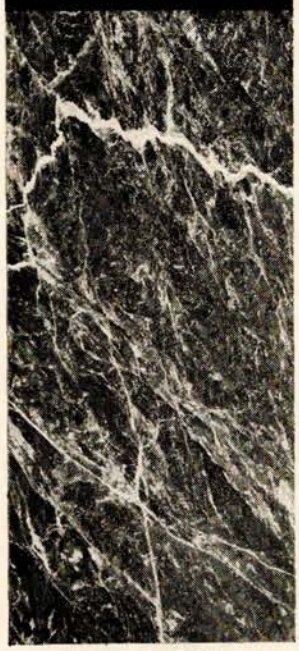

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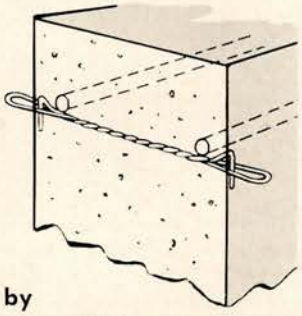

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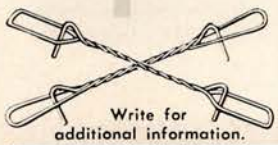

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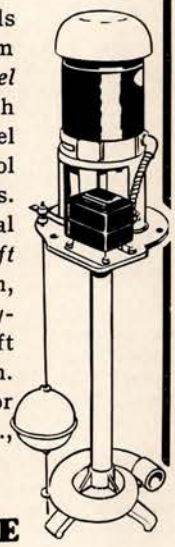

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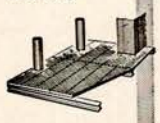

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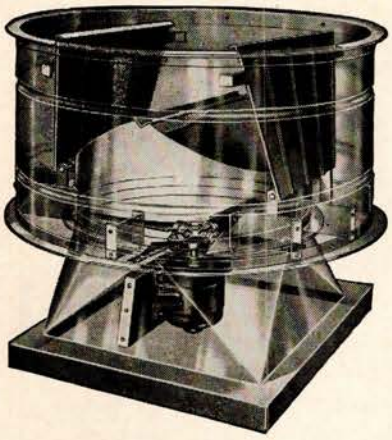

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(*Continued from page 374*)

Rehabilitation as a Business. Nat'l Assoc. of Real Estate Boards (1737 K St., N. W., Washington, D. C.) 1952. 99 pp.

Renewing Our Cities. By Miles L. Colean. Twentieth Century Fund (New York) 1953. 181 pp, illus.

Rethinking Urban Redevelopment. By Coleman Woodbury and Frederick A. Gutheim. Public Administration Service (Chicago) 1949. 26 pp.

Slum Prevention Through Conservation and Rehabilitation. By Jack M. Siegel and C. William Brooks. Advisory Committee on Gov't Housing Policies and Programs. (Washington, D. C.) 1953. 143 pp.

Towards New Towns for America. By Clarence S. Stein. Univ. Press of Liverpool (Liverpool, England). Distributed by the Public Administration Service, Chicago.

The Urban Pattern, City Planning and Design. By Arthur B. Gallion in collaboration with Simon Eisner. D. van Nostrand Co., Inc. (New York) 1950. 445 pp.

Covers the entire field of planning, dealing primarily with what planning is rather than the technical details of how to do it.

Urban Traffic: A Function of Land. By Roger B. Mitchell and Chester of Rapkin. Institute for Urban Land Use and Housing Studies — Columbia University (New York) 1954. 226 pp, illus. $5.

YEARBOOK 6

Architect's Year Book 6. Edited by Trevor Dannatt. Elek Books Ltd. (London, England) 1954. 260 pp, illus.

The sixth edition of a yearbook, which is not given to statistics and a list of names but rather to an evaluation embracing the entire scope of architecture by men prominent in their fields, contains a stimulating group of articles.

This edition includes a discoursive commentary by Maxwell Fry (who is on the editorial board of the Yearbook), an essay, "Harmony of Forms in Space and Time," by Giuseppe Vaccaro, an article on LeCorbusier as a painter, and a well illustrated article on the works of Nervi by G. C. Argan, as well as an article on the rarely-discussed subject of contemporary stained glass by John Baker.

In the town planning section, Paul Kriesis offers a critique on the origin of the plan-type common to most of England's post-war "Newtowns," illustrated with many planning maps.

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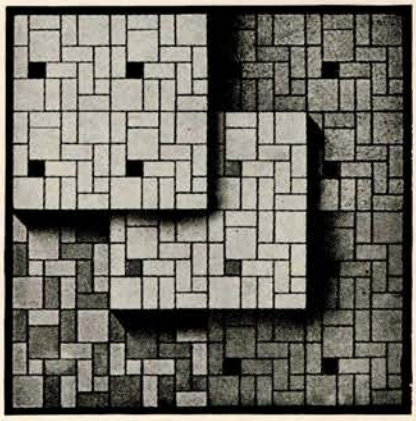

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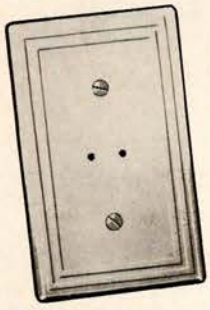

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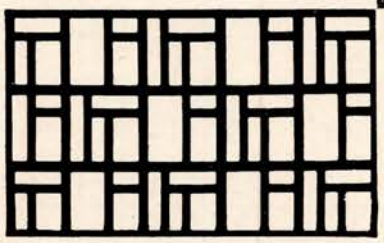

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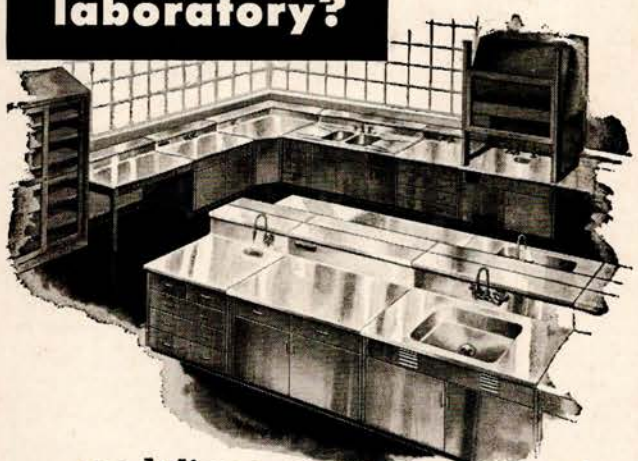

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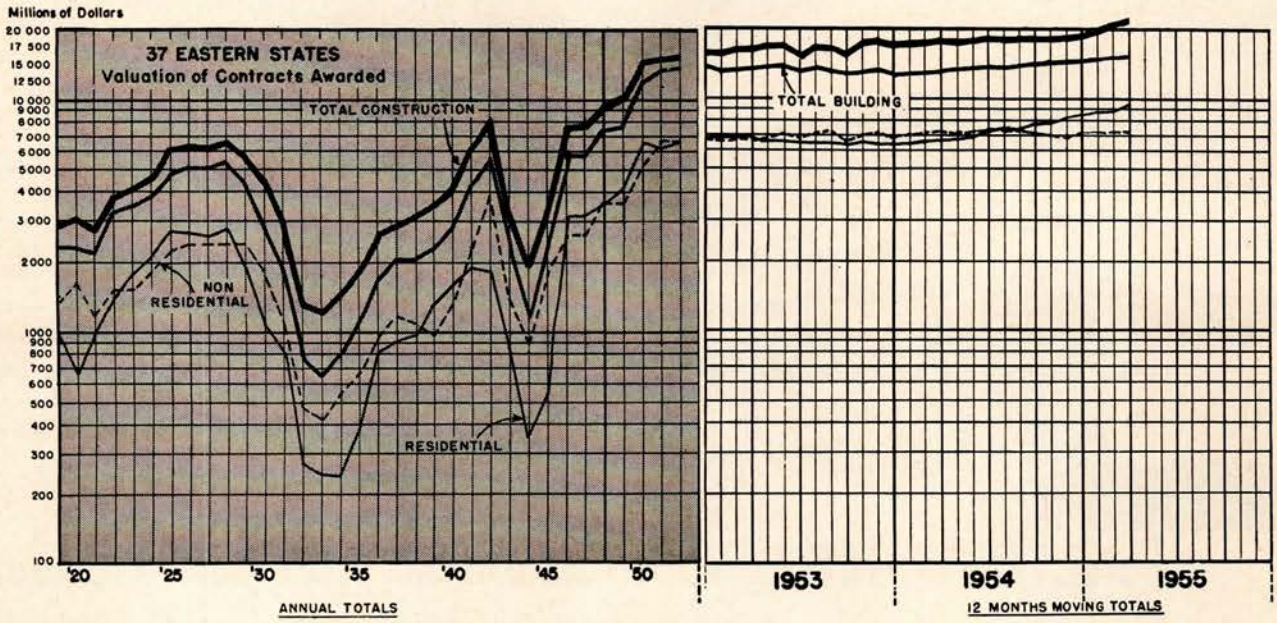


FIRST QUARTER OF 1955 AT NEW HIGH

Charts by Dodge Statistical Research Service

THE LATEST REPORT FROM F. W. DODGE Corporation on construction contracts awarded in the 37 states east of the Rockies put the first quarter of 1955, with a total dollar volume of $5,220,142,000, a cool 34 per cent ahead of the same period in 1954, the previous record first quarter of any year. Every one of the three basic Dodge categories contributed to the new record: nonresidential construction, at $1,858,121,000, up 26 per cent; residential, at $2,424,187,000, up 48 per cent; heavy engineering, at $938,104,000, up 19 per cent. The dollar volume total of $2,134,819,000 for March alone topped the equivalent figure for March 1954 by 40 per cent and was the biggest monthly total ever recorded by Dodge with the single exception of May 1951, whose total was swelled by huge atomic energy contracts. Dodge Vice Chairman Thomas S. Holden commented that "while current records are rather spectacular in comparison with those of the past, they do not appear to be out of line with the current needs of our fast-growing economy."

Source: F. W. Dodge Corporation

ONE-FAMILY DWELLINGS FOR OWNER OCCUPANCY*
Contracts Awarded—37 Eastern States
Floor Area (in thousands of sq ft)

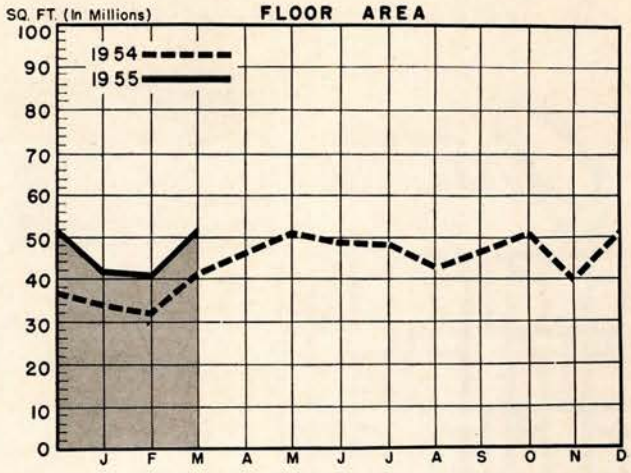
Year	Annual Total	Monthly Average	Year	Annual Total	Monthly Average
1932	35,971	2,998	1951	171,715	14,310
1935	57,860	4,822	1952	154,873	12,906
1943	1,082	90	1953	163,993	13,666
1947	95,022	7,918	1954	176,831	14,736
1950	211,727	17,644	1955— 3 mos.	35,865	11,955

Year 1954—By Regions

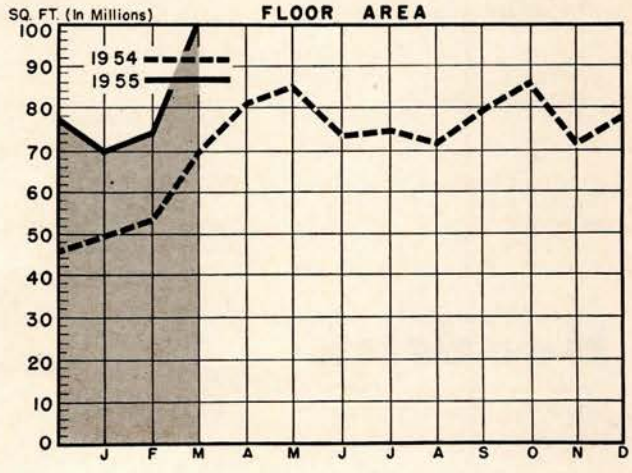
New England	16,074	Southern Michigan	11,217
Metro. New York	13,508	Chicago	31,409
Upstate New York	4,069	St. Louis	5,416
Middle Atlantic	19,650	New Orleans	6,768
Southeastern	21,963	Minneapolis	6,812
Pittsburgh	5,618	Kansas City	6,613
Cleveland	13,482	Texas	5,975
Cincinnati	8,265	37—states total	176,831

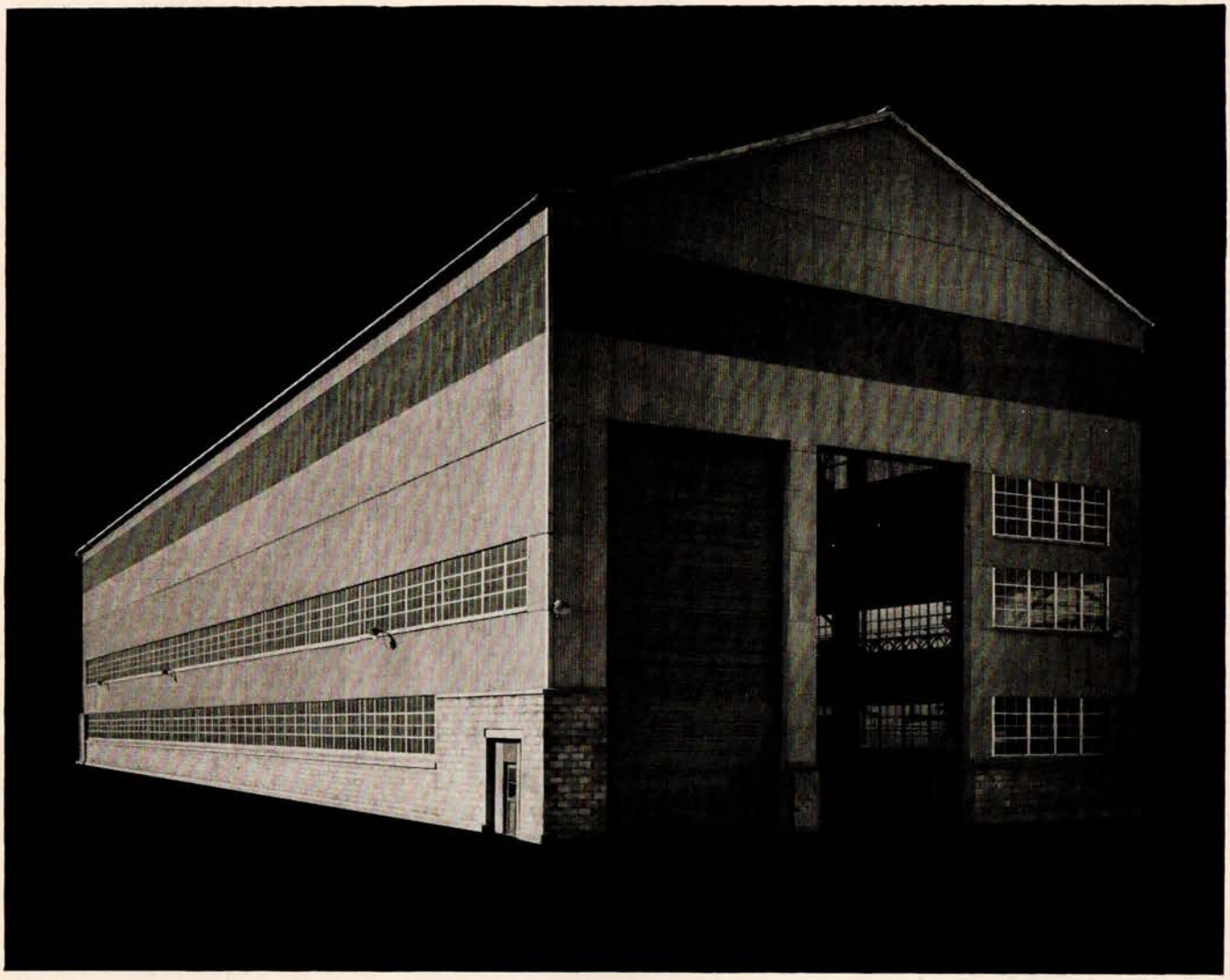
*Houses are the subject of Building Types Study No. 222, pages 155–186.

NONRESIDENTIAL BUILDING (37 EASTERN STATES)



RESIDENTIAL BUILDING (37 EASTERN STATES)





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A-LC	Trade-Wind Motorfans, Inc.	153
	Trane Company	268–269
A	Trinity White	54
A-IC-LC	Truscon Steel Division	286–287
A-LC	Ualco Aluminum Window	55
	Union Carbide and Carbon Corporation	39, 353
A-IC	United States Air Conditioning Corp.	329
	United States Ceramic Tile Co.	320
A-IC	United States Gypsum	324–325
A-LC	United States Plywood Corp.	245
A-LC	United States Rubber Company	133
IC	United States Steel Corp. Subsidiaries	104
A	Universal Atlas Cement Company	104
A	Universal Corporation	294–295
	Upholstery Leather Group Inc.	311
A	Uvalde Rock Asphalt Company	299
A-LC	Valley Metal Products	137
A-LC	Visking Corporation	43
	Vogt, Henry Machine Co.	118
	Voorhees Walker Smith & Smith	367
A	Vulcan Radiator Company	373
A	Wayne Iron Works	141
A	Weis, Henry Mfg. Co., Inc.	296
	West Coast Lumbermen's Association	63
	Western Pine Association	152
	Western Red Cedar Lumber Association	73
A	Westinghouse Electric Corp., Electric Appliance Division	283, 312, 313
A	Wheeling Corrugating Company	22–23
	Whizzer Products Co.	348
A	Wing, L. J. Mfg. Co.	274
A	Wood-Mosaic Corp.	49
A-LC	Woodco Corporation	21
A	Worthington Corporation	349
	Yale & Towne Mfg. Co.	72
A-IC	York Corporation	76–77
A-IC-LC	Zonolite Company	109
A-IC	Zurn, J. A. Mfg. Co.	271

MANUFACTURERS' PRE-FILED CATALOGS

Catalogs of the firms listed below are available in the 1955 Sweet's Catalog Files as follows: (A) Architectural File (green), (IC) Industrial Construction File (blue), LC Light Construction File (yellow).

A-IC	Pittsburgh Corning Corporation	315,327
A-LC	Pittsburgh Plate Glass Co.	102, 359
A-LC	Pittsburgh Steel Products Company	380
	Polyken Products Dept. Kendall Company	145
A	Portland Cement Assoc.	86
A	Powers Regulator Co.	33, 232
A	Pratt & Lambert, Inc.	58
	Red Cedar Shingle Bureau	347
A	Republic Industries, Inc.	121
A	Republic Steel Corp.	286–287
A-IC-LC	Revere Copper & Brass, Inc.	91
A-LC	Reynolds Metals Co.	363
A-IC	Reznor Manufacturing Co.	314
	Richmond Radiator Co.	335–336
A	Rilco Laminated Wood Products Inc.	326
A	Rixson, Oscar C. Company	74
	Robbins Flooring Co.	331
A-IC	Robertson, H. H. Company	240–241
A-LC	Roddis Plywood Corporation	275
	Roebling, John A. Sons Corporation	139
A-LC	Rolscreen Company	254–255
A-IC	Rotary Lift Co.	2–3
A-IC-LC	Ruberoid Co.	154
A-IC	Rust-Oleum Corporation	297
	Sarco Company, Inc.	128
	Sargent & Company	138
	Sargent & Greenleaf Inc.	337
A	Schieber Sales Company	371
A	Schlage Lock Company	51
	Schundler, F. E. & Co., Inc.	32
A	Seaporcel Metals, Inc.	373
A-LC	SelecTemp	355
	Selck, Walter E. & Co.	380
	Signal Engineering & Mfg. Co.	371
A-IC	Sloan Valve Company	4th Cover
	Smith, Jay R. Mfg. Co.	367
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A	Smithcraft Lighting Division	375
A-IC-LC	Sonoco Products Company	372
A-LC	Southern Sash Sales & Supply Co.	55
A	Sparta Ceramic Co.	378
A	Speakman Company	361
	Square D Company	57
	Staedtler, J. S. Inc.	370
A	Stanley Works	37
A	Steelcraft Manufacturing Company	27
	Stem, Chester B. Inc.	125
A-LC	Sterling Hardware Mfg. Co.	140
A	Stocker Manufacturing Co.	374
A-IC	Stran-Steel Division	75
A	Structural Slate Co.	330
A	Summitville Tiles Inc.	364
A	Sun Chemical Corp.	117
	Sunroc Corporation	373
	Surface Combustion Corp.	323
A	Swedish Crucible Steel Company	25
A-IC	Taylor, Halsey W. Co.	266
A-LC	Thrush, H. A. & Company	120
A	Timber Structures, Inc.	351
A	Titus Manufacturing Corp.	103
	Todd Shipyards Corp.	380
A-LC	Trade-Wind Motorfans, Inc.	153
	Trane Company	268–269
A	Trinity White	54
A-IC-LC	Truscon Steel Division	286–287
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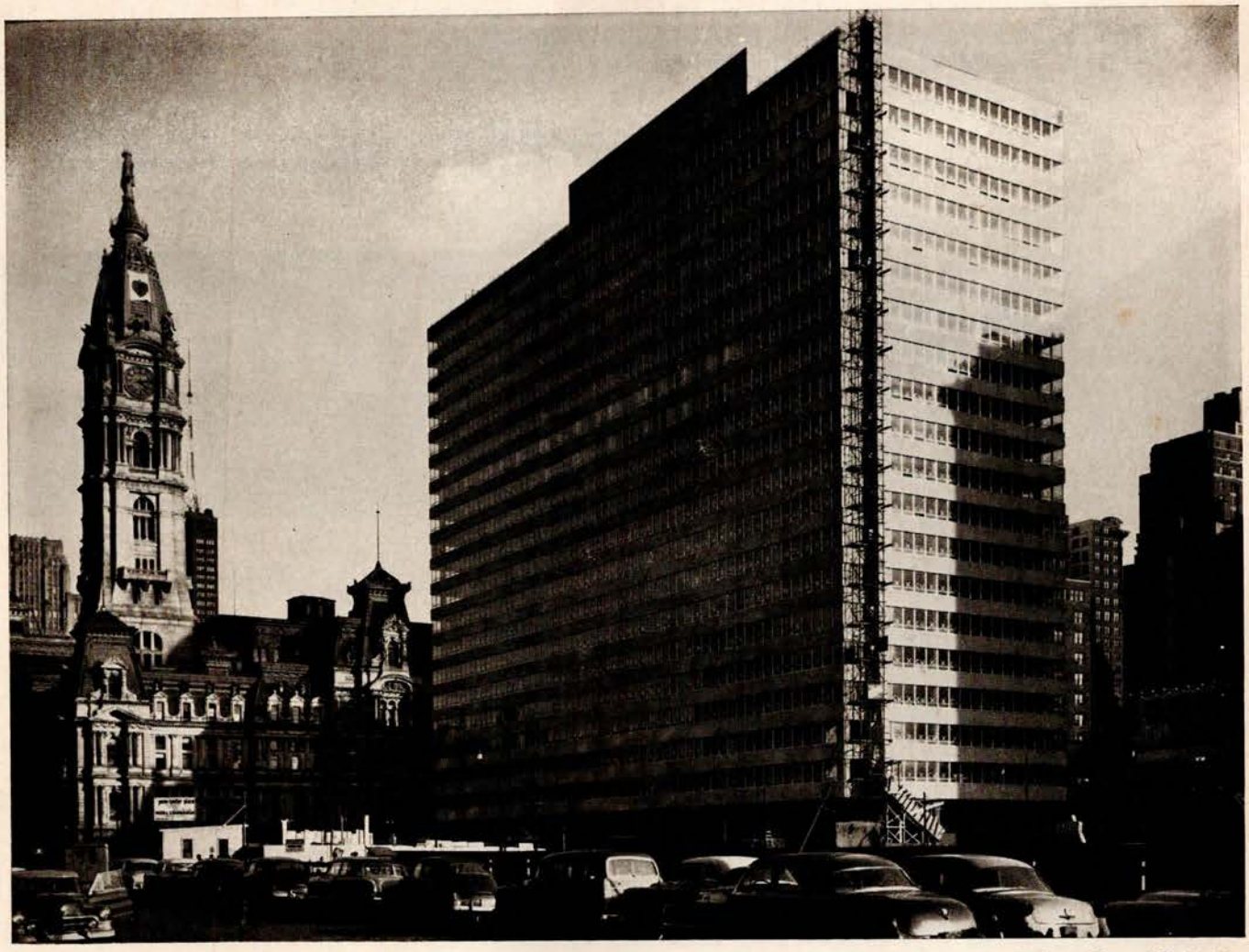

Emery Roth and Sons, New York, designed the first Penn Center building. *Owner and Builder:* Uris Brothers; *General Contractor:* Cauldwell Wingate Co.; *Engineer:* James Ruderman, all of New York. *Steel erector for joists:* G. & H. Steel Service, Philadelphia.

FIRST PENN CENTER BUILDING HAS 17 STORIES OF OPEN-WEB JOISTS

Built on the site of downtown Philadelphia's old Broad Street Station, where the demolished "Chinese Wall" once began, is this 20-story, multimillion-dollar office building, first unit in the city's new Penn Center.

This heart-of-the-city redevelopment program includes the entire 8-acre area between City Hall and 18th Street, from Market Street to Pennsylvania Boulevard. The completed Center will include additional office buildings, similar to the one shown, and a 1000-room hotel, all flanking a 1000 by 80 ft landscaped esplanade. Modern shopping facilities will be located on the ground floors of the buildings, and an underground shopping concourse is planned.

Scheduled for occupancy later this year, this first office building is a glass and limestone structure providing approximately 400,000 sq ft of office space. Continuous windows surround the building with glass bands, giving maximum natural lighting.

For floor and roof construction, from the third to the 20th story, Bethlehem Open-Web Steel Joists were used.

The advantages of using Bethlehem Joists were many. They were delivered to the job site tagged and ready for placing at an approximate rate of one floor a week, with no delays to the construction schedule. They required only field welding to secure them in place, and to provide a rigid, permanent construction. Pipes and conduits could be run right through the open webs, and installation of recessed lighting fixtures was simplified. In addition to these advantages in construction, the use of Bethlehem Open-Web Joists also gives added fire-protection to the entire structure.

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

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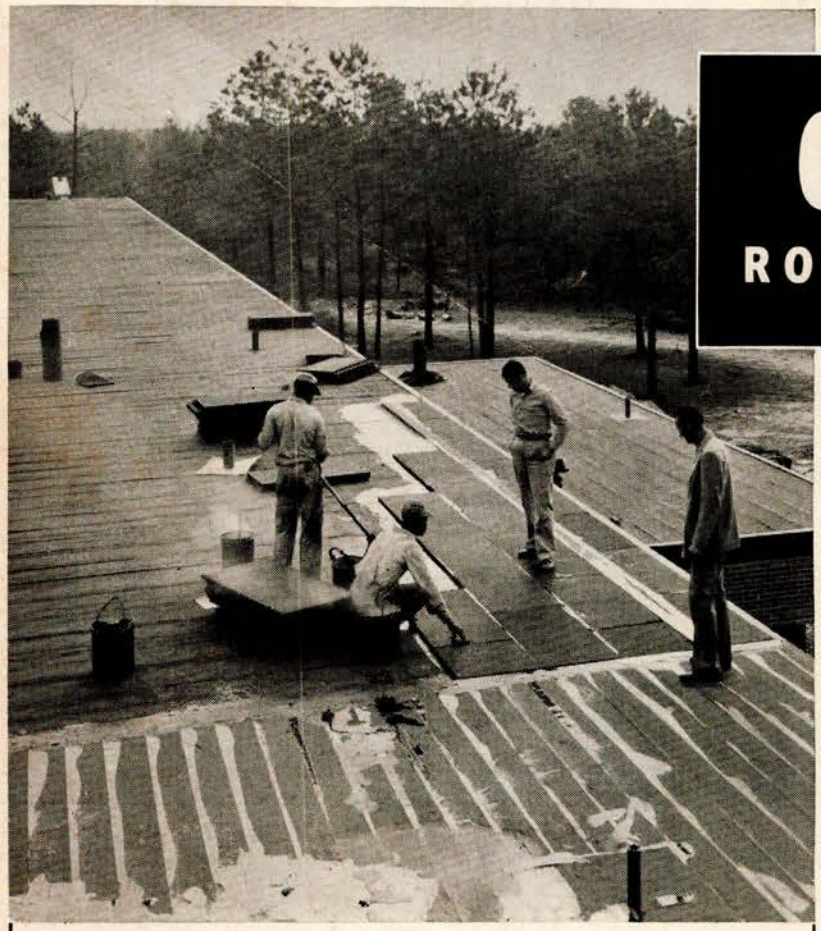
Job-preferred, job-proved ...for the nation's roofing needs



RESISTOL HAT COMPANY, Fur Felting Plant, Longview, Texas. Most modern in the world. Architect specified two car-loads of Celotex 1" Preseal Roof Insulation applied over vapor barrier (two fifteen-pound felts) on a steel deck.

Architect: Wyatt C. Hedrick, Dallas, Fort Worth, Houston
Roofing Contractor: H & C Sheet Metal Works, Longview

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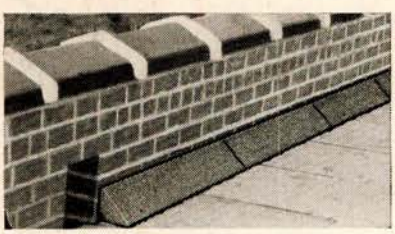

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Strong, light, easy to handle and cut. Low in cost. Made of tough, rigid cane fiber board. Extends 4" up from deck and 4" out from wall—size 5⅝" x 46½". Cut-off right angle corner assures snug fit of roofing to wall, deck. Protected against dry rot and termite attack by exclusive Ferox® Process.

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1. Resists Compression and Defies Rough Handling—So tough, loaded carts can be wheeled over it without damage.

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4. Low-Cost—Low initial cost, low applied cost, low maintenance cost.

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