PROGRESSIVE ARCHITECTURE

newsletter

June 1950

blished monthly by REINHOLD BLISHING CORPORATION, 330 est 42nd Street, New York 18, Y., U. S. A. Ralph W. Reinhold, airman of the Board; Philip H. bbard, President; H. Burton we, Executive Vice President and easurer; Fred P. Peters, Vice esident and Secretary; Francis Turner, William P. Winsor, hn G. Belcher, Gilbert E. Coch-n, Vice Presidents. Executive and itorial offices: 330 W. 42nd St., w York 18, N. Y. Subscriptions yable in advance. Subscription ces to those who, by title, are *chitects, engineers, specification iters, designers,* or *draftsmen,* d to government departments, de associations, college libraries, udents, publishers, advertisers, spective advertisers and their ployes—$4.00 for one year, $6.00 two years, $8.00 for three ars; to all others—$10.00 per ar in U.S., U.S. Possessions, nada, and Philippine Republic. tin America—$10.00 for one ar, $16.00 for two years, $20.00 three years. All other foreign scriptions—$15.00 for one year, 5.00 for two years, $30.00 for ee years. Single copy—$1.00. nted by Lotus Press, Inc., 508 st 26th Street, New York 1, Y. Volume XXXI, No. June 1950. Indexed in Art Index.

- Sheill-Howard Michigan law case, involving use of standard A.I.A. contract form, has still not been decided by higher court. All architects are urged to read Bernard Tomson's first comment on this important case in It's the Law column this month.

- Figures for first quarter indicate that home building activity, now generally called a new "boom," will outstrip anticipated figures. March starts were greatest for any month in history. Some economists are worried about rise in mortgage debt (about $38 billion at end of last year) and possible effects if a depression should come, but fact that ratio of mortgage debt to national personal income is less than prewar relationship seems reassuring.

- 1950 census will include fact-finding about residential financing. On selected sample basis information will be sought by questions about total and distribution of outstanding mortgage debt, characteristics of mortgages, relation to indebtedness to family income, etc.

- Co-operative housing for middle-income group is not a dead issue despite recent defeat in Congress. It will undoubtedly become a political campaign factor this fall.

- Home remodeling is expected to reach $6 million this year. Many building product manufacturers are working actively for this market.

- Construction volume in categories other than housing is also holding up remarkably well—beating last year's figures, according to available statistics. Effect later in year may be shortages in some materials, possible manpower shortages in some trades and a pressure to raise some prices.

- Twelve German city-planning trainees have begun four-month course at Dept. of City and Regional Planning of U. of North Carolina. This is part of State Dept.'s reorientation program.

- Building Research Advisory Board announces that Proceedings of its recent conference on Weather and the Building Industry can be bought for $3.50 a copy, less in quantities. Information is most useful.

- Prefabricated Home Manufacturers Institute announces that 35,000 prefab homes were sold last year and that about 50,000 will be marketed in 1950. Meantime Macy's in New York is selling a Norwegian "streamlined log cabin" with some success.

- Institute of Design, Illinois Tech, announces an intensified six-week Foundation Course, beginning June 26, as preparation for advanced study in architecture, industrial design, and allied arts.

(Continued on page 2)

newsletter

- New magazine to be called trans/formation, a thrice-yearly review dealing with "the arts, communication, environment," will appear with a June issue. Harry Holtzman and Martin James are editors; editorial board includes such names as Le Corbusier, Giedion, Buckminster Fuller, Marcel Duchamp.

- M.I.T. will conduct a three-day conference on the mechanical properties of plastics, June 20 to 22, during which research workers will report findings for discussion. The third day, according to M.I.T. Plastics Committee, is especially designed to interest architects.

- Usonia Homes, co-operative community near New York for which Frank Lloyd Wright is consultant, in which houses have been designed by Schweikher & Elting, Alden Dow, Robert Bishop, David Henken, and others, announces that it has secured mortgage financing on the first group of completed houses, after two-year effort. Circular plots devised by Wright will "be preserved by internal agreement," the mortgages being secured by rectangular plots.

- Architects will find a number of commissions in $300 million which can be loaned to educational institutions for campus housing, under Housing Act of 1950. Complex method of figuring interest rates on these loans results at present time in 2¾% figure.

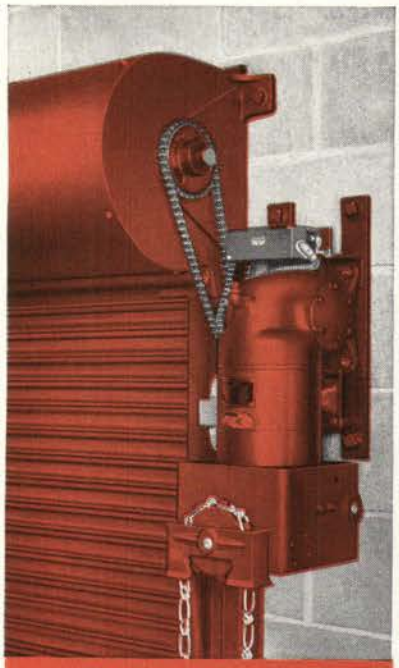
- Chicago Fair of 1950 will open on June 24 and continue through Labor Day, dedicated to "dramatizing achievements of science, agriculture, commerce and industry." Holabird & Root & Burgee are official architects and engineers.

- Special fund is being raised by Producers' Council and A.I.A. to promote better understanding of modular co-ordination. A new member will be added to Institute staff to specialize in this work.

- There were 287 elevator accidents last year. Otis Elevator Co. has analyzed them, reports that 111 were serious and 50 were fatal; 62 serious and 31 fatal accidents occurred with freight elevators, 49 serious and 19 fatal with passenger elevators. Most prevalent cause of bad accidents remained people's tendency to open hoistway doors and fall down empty shafts. One-third of serious and fatal accidents occurred at car entrances and could be attributed to lack of or faulty gates and gate contacts.

- If architects or engineers want to explain to clients what modular co-ordination is, they can use a pamphlet prepared and issued by HHFA, for sale at 15 cents by Gov't. Printing Office, called Modular Co-ordination, What Is It? In elementary terms and with good simple drawings it tells the whole story in twenty pages.

Rolling Steel DOORS



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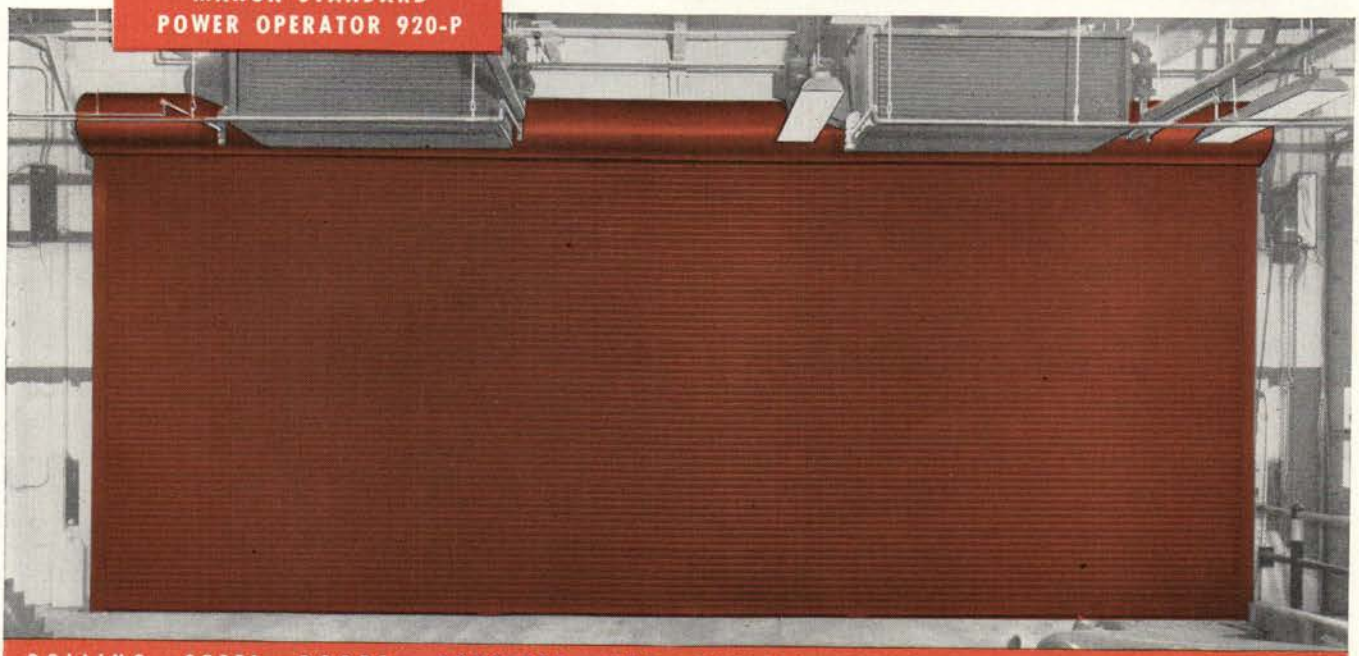

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On this building of the St. Regis Paper Company, Tacoma, Washington, the concrete roof deck is insulated with PC Foamglas. The strong, rigid blocks lie flat, stay in place and form a firm level base for roofing felts. Other important reasons why prominent roofers prefer PC Foamglas insulation are its light weight and consequent ease of handling by minimum crews.

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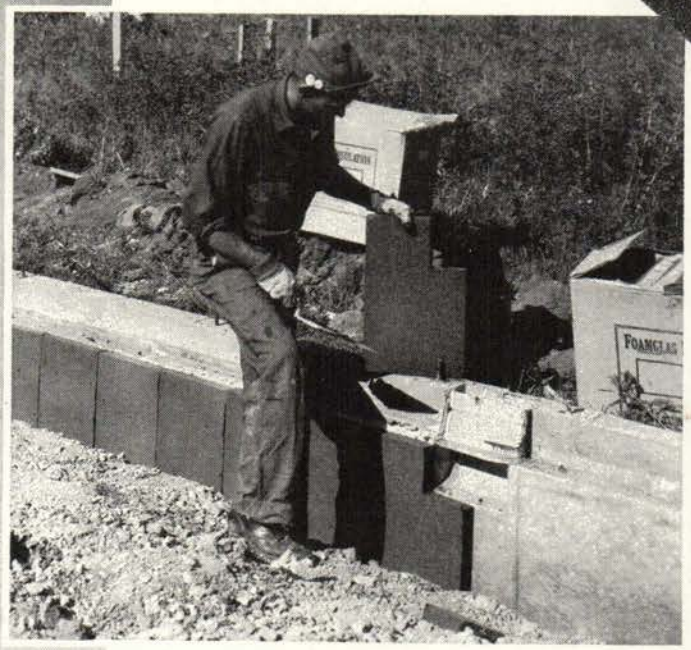
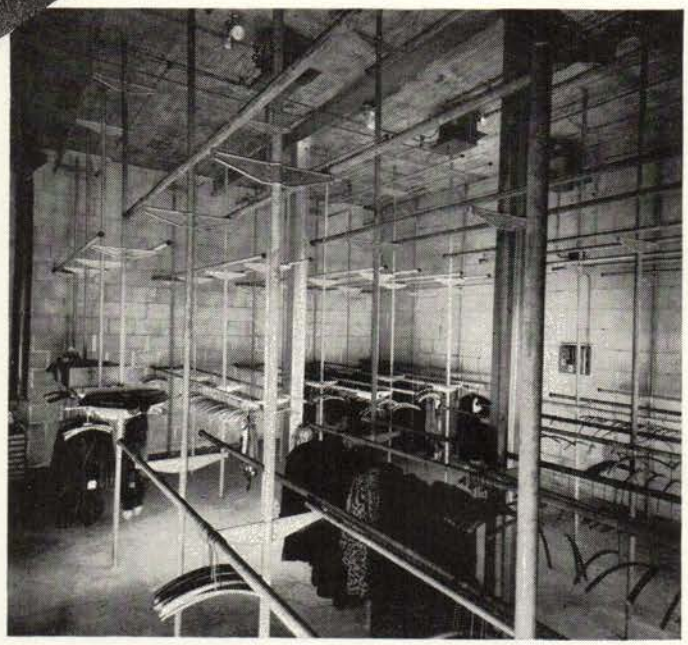


In many modern homes, PC Foamglas is used to insulate foundation walls and concrete floors on ground. PC Foamglas is strong and durable. When installed around the perimeter or under the entire floor slab it reduces heat losses, bears heavier-than-usual loads without danger of crushing. Architects and Engineers: Lundeen and Hilfinger, Bloomington, Illinois.



PC Foamglas is used as insulation on the concrete roof deck and to line the masonry walls of this fur storage vault. The strong, rigid blocks readily support their own weight in wall construction, cannot pack down. PC Foamglas is also widely used in core walls, laid up between many types of backing and facing materials. Our specifications and instructions for installation tell you how to get long, effective insulating service in cold and refrigerated areas with PC Foamglas.

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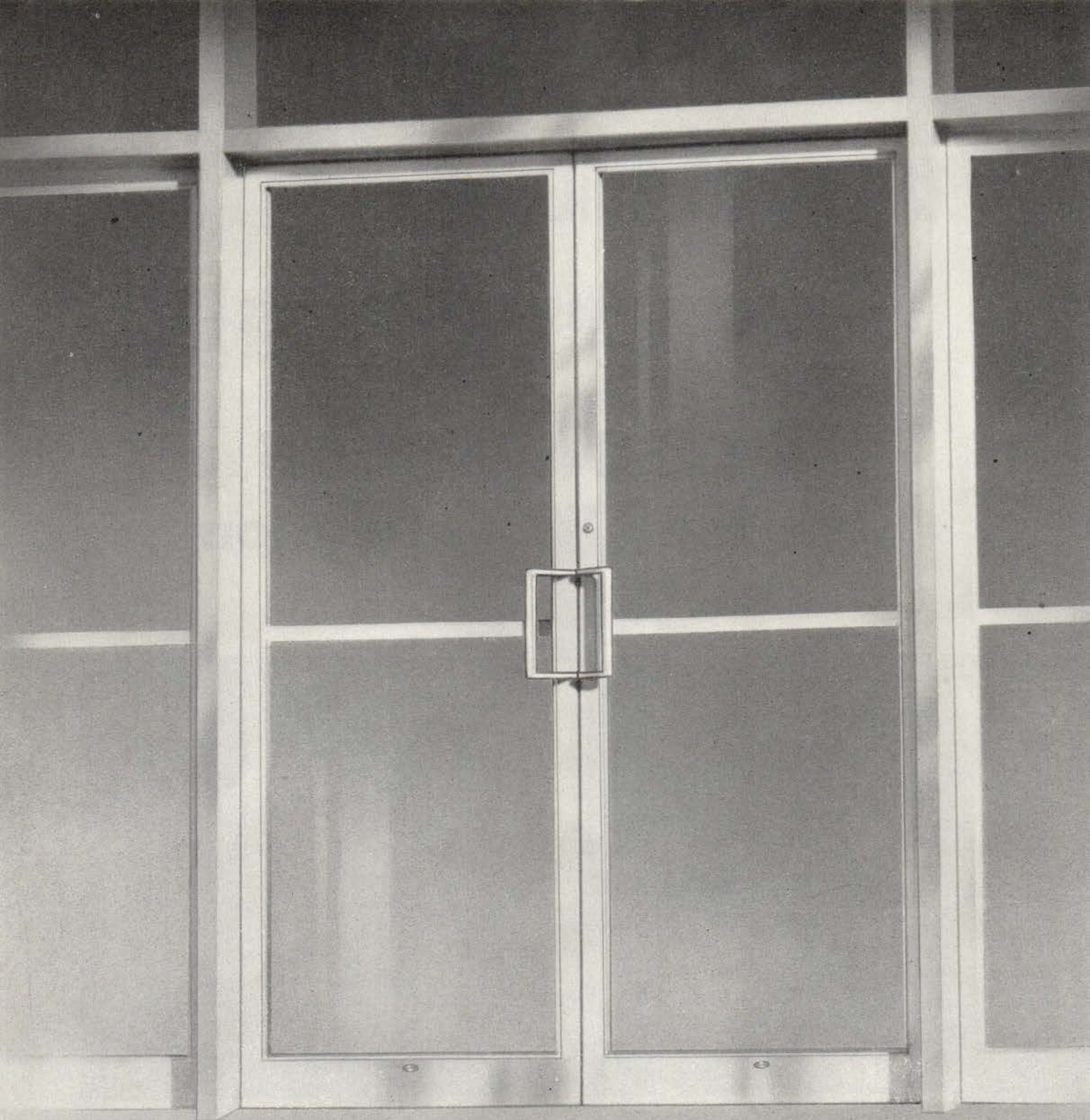

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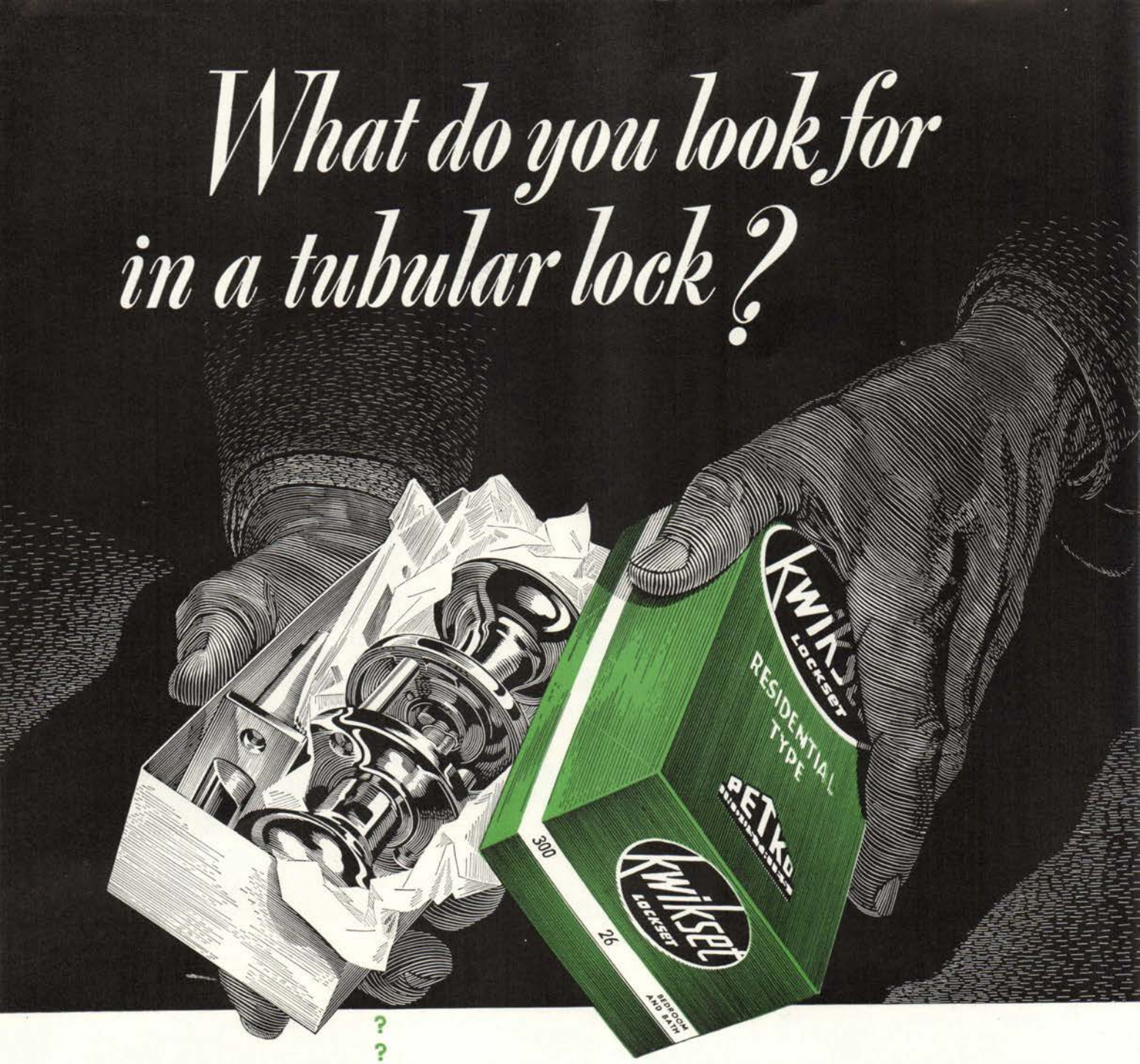

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p/a

VIEWS

CLEVELAND PLAIN DEALER, FRIDAY, MARCH 17, 1950

Field No Spy, Wife Says, Asks Aid to Stop 'Mistake'

"I want my fellow Americans to know that Hermann is worthy of their fullest support, a loyal American who has never spied for anybody, whose only fault is his belief in mankind," Mrs. Kate Field, whose husband has been missing behind the Iron Curtain, wrote to the Plain Dealer yesterday.

Field is an architect who had been working for Cleveland College, Western Reserve University, before his disappearance.

In her letter, dated March 12, from 82 Corringham Road, London N. W. 11, Mrs. Field wrote:

"I want to thank you for the interest you have shown in the case of my husband, Hermann Field, and beg space to say the following words to our fellow Americans.

"When Hermann failed to arrive in London last August, I told the American Embassy right away. I have been trying to get him traced ever since. But although we knew the actual plane he planned to take and his name was on the signed manifest, the State Department has not found him.

On Way Home

He was flying from Warsaw to Prague on his way home, and I know he wasn't free after going to catch the plane on Aug. 22 because he did not get in touch with Herta Field (who went to meet it) or with me.

"At first I did not make a press statement because I was told it was not necessary. My first statement, in December, was not published anywhere and hardly quoted at all. The same has happened to later statements by me.

"It now looks as if the Czechoslovak government is being persuaded that Hermann was spying. I want everyone to know that he has never been connected in any way whatsoever with the intelligence service of any country. If the Czechoslovak government makes this ghastly mistake Hermann will not be the only victim, but many innocent Czechs too.

"Hermann is a warm-hearted fellow. That is why he volunteered to save refugees fleeing from Hitler in 1939. That there were Communists among them was because the policy of the refugee committee for which we worked (I, too) was to let all types of refugee have British asylum.

"It is not Hermann's fault that the international situation has changed; he is a victim of that change.

"Hermann is an architect, not a politician. Since he led a Columbia University tour of architects in 1947, which included Czechoslovakia, it was not unnatural for him to think he could go again. He was reluctant to believe that the world was so far divided into two camps that even cultural interchange was no longer possible. He went there after he knew his brother was missing, being shown around, taking photographs and asking questions, some of the time with his brother's wife, Herta.

"Doesn't this show that he did not think Czechoslovakia had any cause to arrest his brother, nor had caused his disappearance? Clever spies don't behave like this, only blessed innocents.

"I still hope to stop this horrible, tragic mistake. I want my fellow Americans to know that Hermann is worthy of their fullest support, a loyal American who has never spied for anybody, whose only fault is his belief in mankind."

Field, director of building plans at Cleveland College, left his British-born wife in London with his two sons and went to the continent in July, 1949.

Last Seen in Warsaw

He as last seen boarding the plane at Warsaw. He was to have been met in Prague by Herta Field, wife of Noel, who is Hermann's brother. Noel and Herta are now missing. 1

Repeated inquiries by the American State Department about Hermann's whereabouts have been met with denials from the Czech and Polish governments. 2

In 1938-39 Field and his wife worked with the British Committee for Refugees from Czechoslovakia. Thousands secaped Nazi persecution and were given haven in England through efforts of the committee, supported by voluntary contributions. 3

Among those who escaped Hitler through work by the Fields was Vilem Novy. Novy was editor of Rude Pravo, Communist daily in Prague. He is now awaiting trial in Prague as a western collaborator.

1. He was not actually seen to board the plane. Friends left him at customs.
2. The State Department has not made public the text of these replies.
3. 1939 - 1940

VICTIM OF CHANGE

Dear Editor: I would like to write you a personal letter about my husband Hermann Field, but there is always so much to be done trying to secure his release, that I know this is the only way I can get all the letters written. I am sending you a recent article from the *Cleveland Plain Dealer* quoting a letter I wrote them, and adding a little of their own.

The key sentence is "It is not Hermann's fault that the international situation has changed; he is a victim of that change." So are many other people. Actions taken during the war cannot rightly be judged on the basis of the international situation existing in 1950. This is a mistake which is being made frequently nowadays, and in many quarters. It leads inevitably to the wrong conclusions being drawn. That is why I am anxious for as many people as possible to see this affair in its true perspective.

KATE FIELD
82 Corringham Road
London, England

THE FIRST ART

Dear Editor: Fascinating—your January issue about a half-century of architectural evolution, as well as the VIEWS of your readers in the March copy. Congratulations to you and the other editors.

However, like most recent analyses on these questions, it fails to explain the deep underlying reasons for architecture's peculiar changes during this period. Neither does it reveal their relationship with the preceding architectural "styles." Architects whose imagination is not limited merely to the structural or constructive aspects of their calling, are left wondering and at a loss to understand the profoundly rooted causes for this peculiar phenomenon.

Architectural changes (like changes in any other sphere of culture) cannot be properly understood, unless they are projected against the general background of culture as a whole, in mutual relationship with the changes in other cultural fields: in literature, in music, in philosophy, in sculpture, in mathematics, etc. The changes in all of these cultural expressions have had as their ultimate causes, in the last 200 years, two mental attitudes of the Occidental mind familiar to any student of philosophy, namely: Rationalism and Irrationalism.

In his "Philosophy of History," Hegel says that "architecture is always the

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first art," thereby meaning that architecture is always the first art to react and to register any impending changes in the cultural outlook. Present day architecture, with its over-estimation and almost religious reverence for "functionalism" is only registering the direction toward which the Western mind is now turning: Rationalism. The architectures of the 18th and 19th centuries were born and grew under the opposite sign: Irrationalism, bearing the specific sub-titles: Historicism and Eclecticism.

From this Irrationalism, our present architecture has only recently broken away; violently and in accordance with Hegel's law (the first one to react). Other cultural expressions are still in the clutches of Irrationalism (Mind you, the word Irrationalism is not used here in any derogatory or pejorative sense. All Baroque Art is the child of Irrationalism).

Today, Irrationalism in philosophy is called Existentialism; in literature it is called Kafka (or William Faulkner, there in U.S.); in painting it is called Picasso, Dali and Co.; in music it can still be called Debussy, and so on. The infant "functional" architecture of today, is just the first-born child of a new and still young Rationalism. Its future children will be (if Hegel's law holds true) a new way of painting, a new way of thinking out philosophy, a new sculpture, a new music, which will look like their elder sister, functional architecture and Scholastic Philosophy, looked like each other.

However, let the "functionalist" architects of today take care, because the Temple of Architecture, like the Academy of Ancient Athens, bears the inscription: *Enter not he who is not a Geometer;* but also beneath, in smaller letters, we read: *Nor enter he who is too much a Geometer.*

HORACIO MOYANO NAVARRO
Cordoba, Argentina

(FROZEN) MUSIC, MUSIC, MUS . . .

Dear Editor: I still have a certain birdcagey feeling about the U.S. War Memorials abroad. Due to the fact that I know now the method of picking the architects, I would say it seems a little foolish that if the Army decided to construct comfort stations at all their camps, we would find the same architects doing the comfort stations who did the memorials. And, in like manner, if the United States Government decided to construct federal banks throughout the country we would again have the same architects. Which leads me to the unavoidable conclusion that this method leads to a group of architectural designs where comfort stations, banks, and memorials all look alike.

It is a pleasant thought.

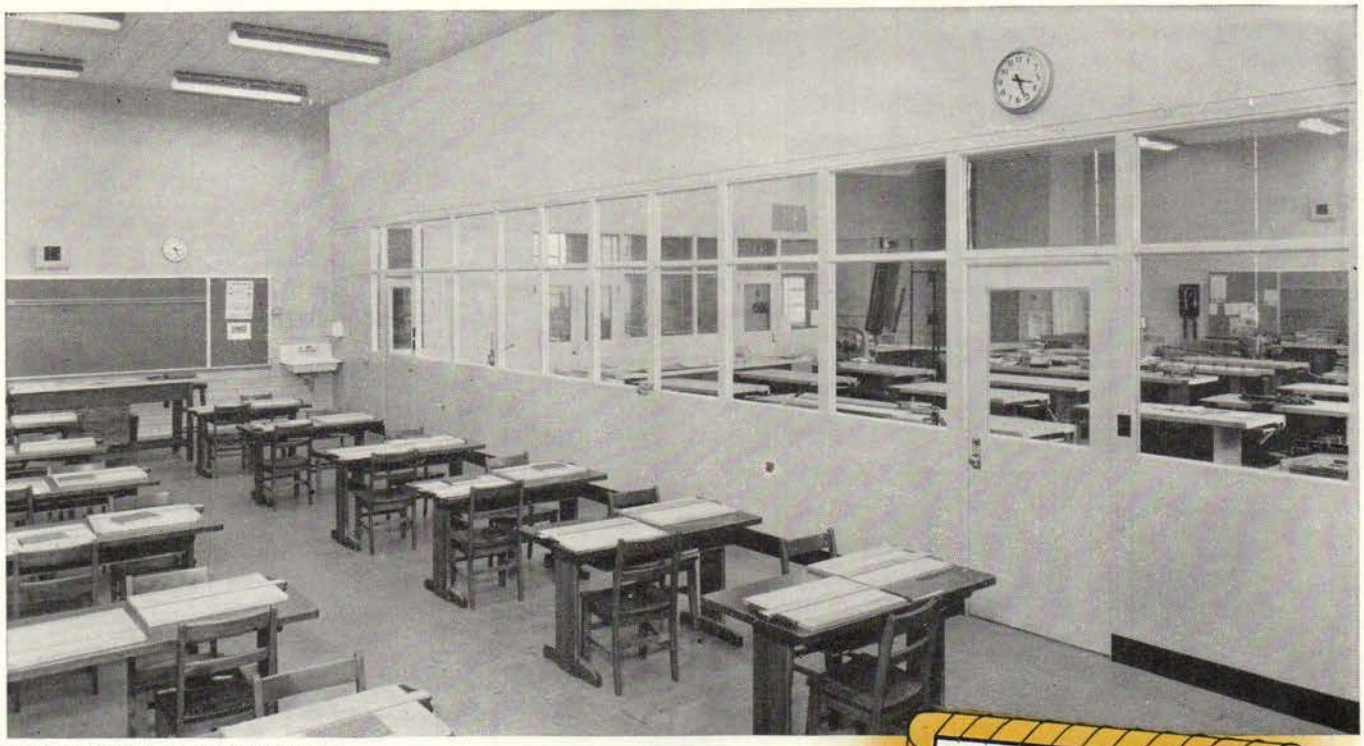
CALEB HORNBOSTEL
New York, N. Y.

ARCHITECTS: DECORATING

Dear Editor: Mr. Lewis Baldon of the Baldons and Affiliates, Los Angeles, has appeal in his letter concerning co-ordination between architect and interior design. If the American Institute of Decorators would adopt the plan he outlines and make it known to the practicing architect, I believe everyone would be happier.

In this region we have been severely criticized because of our decorating

(Continued on page 12)



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p/a VIEWS

(Continued from page 10)

services in connection with our clients' projects. We have been forced to take a firm stand and will continue to do so as long as the decorators do not educate themselves concerning contemporary furnishings and working with the architect.

However, if the decorator does not show promise soon, we will start operation of our own furniture and furnishings store. At the recent local home show we collaborated with a modern furniture wholesale outlet in Kansas City for a booth. Public interest was high and many expressed enthusiasm at being able to find out where they could purchase well designed modern, locally.

ROBERT E. BUCHNER
Wichita, Kansas

NOTICES

NEW ADDRESSES

JOHN VINCENT ANDERSON, Architect, Route 2, Woodstock, Ill.

EDWIN C. BRUNO, Architect, 4120 Oakton St., Skokie, Ill.

NORMAN J. HAMILL, Architect, 408 Lewisohn Bldg., Butte, Mont.

ROBERT STAUBER & ASSOCIATES, 3325 N. Lincoln Ave., Chicago, Ill.

IRVING W. RUTHERFORD, Architect and Engineer, 49 Garden St., Hartford, Conn.

GOTHAM LIGHTING CORP., Architectural Lighting Equipment, 37-01 31 St., Long Island City, N. Y.

NEW PRACTICES, PARTNERSHIPS

ERNEST J. KUMP, Architect, 262 California St., San Francisco 11, Calif.

HOWARD F. ECKERLIN, P.E., Consulting Engineer, 100 Stafford Ave., Syracuse 6, N.Y.

The firm of MAX ALPER, Architect, announces the admission of ZALMAN ALPER, Architect. Henceforth, the firm will be known as ALPER & ALPER, Architects, 8 South Dearborn St., Chicago 3, Ill.

RICHARD M. BARANCIK AND ASSOCIATES, Architects, 919 N. Michigan Ave., Chicago, Ill. RICHARD M. CONTE, Associate Partner in charge of production.

WILLIAM HUDSON BORTHWICK, Architect, 43 Kenneth St., Hartford 6, Conn. ROBERT S. RICHARDS, Architect, Seward Bank Building, 96 Genesee St., Auburn, N. Y.

ELIOT NOYES, Architect and Industrial Designer, 85 Main St., New Canaan, Conn.

EDWARD TWISS DUNLAP, Architect, 1656 33 St., N.W., Washington, D. C. and "Edlee," Bethesda, Md.

CLAYTON KRANTZ, Architect, 1739 Yuba St., Redding, Calif.

CHARLES B. MCELROY, Architect, Wise, Va.

WALTER J. HUBBARD, Architect and STEPHEN M. STOLTZ, Associate, 404 W. 4 St., Ottumwa, Iowa.

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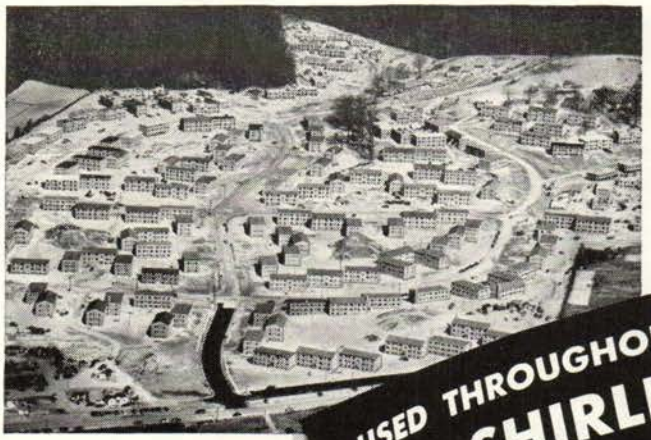
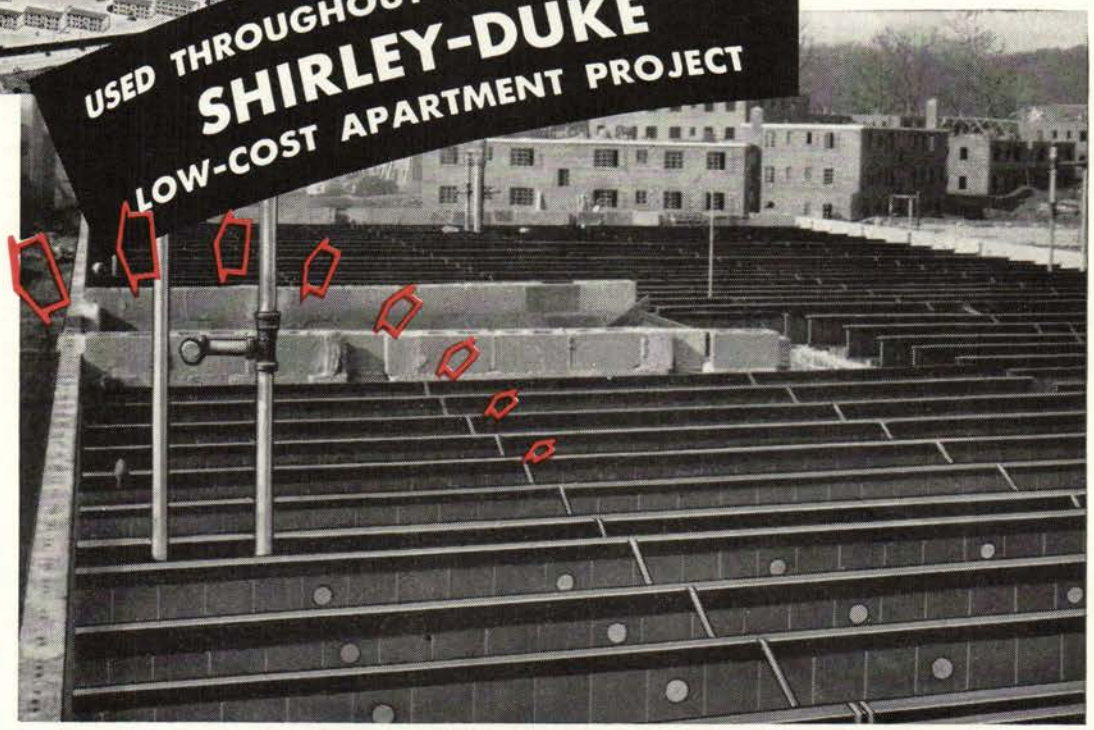


USED THROUGHOUT HUGE 2106-UNIT SHIRLEY-DUKE LOW-COST APARTMENT PROJECT

The 83-acre Shirley-Duke project is the largest post-war apartment development near the nation's capital. Credit for its conception and pre-planning goes to Mr. Don A. Loftus, who arranged for land purchase, financing and builders.



Builders of the large, low-cost Shirley-Duke 200-building project specified Stran-Steel Nailable Floor Joists *throughout* for quicker erection, quicker occupancy—lower costs. Rents start at $59.75, go to $72.50 for two-bedroom unit.

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Stran-Steel nailable floor joists bring to the Shirley-Duke project *proved* quality, strength and durability . . . keep expenses down, help make possible the low rentals which feature this development.

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INFRA-RED HEAT RAYS PIERCE 331 MILES OF DUST & FOG

"With infra-red sensitized plates, views of mountains as far as 331 miles distant from the photographer have been taken, though the mountain itself was invisible to the eye because of intervening haze and fog." From Transactions of the 45th Annual Meeting, Amer. Society of Heating & Ventilating Engineers,* by C. S. Taylor and J. D. Edwards, of the Aluminum Co. of America Research Laboratories.

"A mirror, consisting of glass with a silvered surface on the back of the glass, is an excellent reflector of light but it is a very poor reflector of infra-red radiation corresponding to room temperature. In fact, such a mirror would have about the same reflectivity for infra-red as a heavy coating of black paint," state Profs. G. B. Wilkes, of Mass. Institute of Technology and E. R. Queer and F. G. Hechler of Eng. Experiment Station, Penn. State College, in "Thermal Test Co-efficients of Aluminum Insulation for Buildings."*

"The visible brightness of a surface is not a gauge of its emissivity, for a surface may appear to have lost its reflective value and yet have a comparatively low emissivity as tested by a radiometer or emissivity-testing instrument," writes P. D. Close, as Technical Secretary of the Insulation Board Institute, in his book, "Building Insulation."

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PROGRESS REPORT

The Seventh Panamerican Congress of Architects was held in Havana, Cuba, April 8 to 16. Among the approximately 600 delegates from the various American countries were 50 or 60 representatives from the United States—official delegates from the A.I.A. and "guests and observers."

Most important decision of the Congress was to form a permanent organization to replace the loose framework under which previous meetings have been held: from now on, a Federation of Panamerican Architectural Associations will have permanent being between, as well as during, the biennial Congresses. Julian Clarence Levi was immediately named the representative of the A.I.A. on the executive committee of the new organization. The most gratifying event for architects in the United States was the fact that the huge exhibit of U.S. architecture won first all-over prize in the competitive exhibition of contemporary work from the various American republics.

●

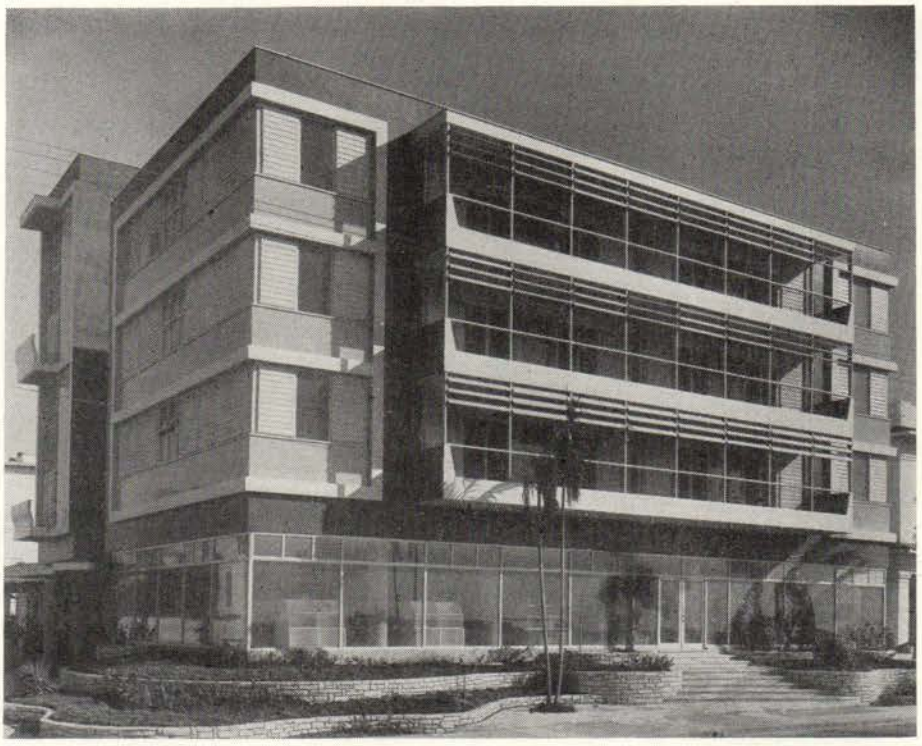
The method of conducting the Congress is an effective one, which might well be studied by those planning large professional meetings in this country. Through a large part of the week, committees met on various topics or themes, considering carefully prepared statements and papers that had been presented to the Congress. It was possible for any interested delegates to sit in on the sessions of these committees. Then, when certain conclusions had been reached, sometimes after long debate and thoughtful discussion, the committees reported their findings to plenary sessions of the full Congress. Again these were debated and finally adopted, rejected, or revised.

Along with the business sessions that ran through the week were innumerable receptions and social events which kept the delegates (and especially their wives) in a continuous social dither. Even the monolingual guests soon learned that *traje de calle* meant street clothes and *traje etiqueta* implied a black tie. From the President of the Republic to lesser dignitaries and many local architects, the hospitality was offered in lavish quantity and handsome quality.

●

The architectural exhibition, occupying so much space in the Centro Gallego

(Continued on page 16)



Among the examples of good contemporary Cuban work which the visitors to the Panamerican Congress saw, were the buildings illustrated, by the firm of Nicolas Arroyo and Gabrielle Menendez. The house is in the Miramar residential district of Havana and the apartment house, just now being completed, is on a main street leading out of the central part of the city.

p/a

PROGRESS REPORT

(Continued from page 15)

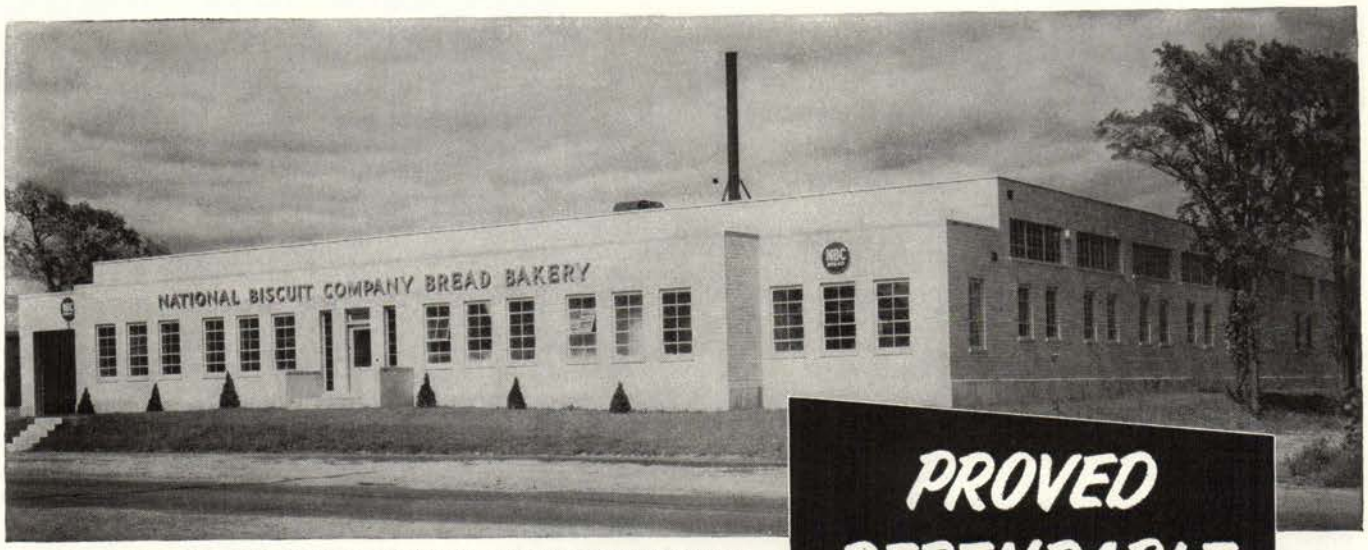
Palace that it required several hours of walking to view it even casually, was the subject of much discussion. (One decision of the Congress was that in the future no awards will be given, thus removing the competitive aspects of the exhibit, which are often unfair to the smaller and more slowly progressing countries.) There was no doubt in anyone's mind that the U.S. show, prepared over a period of months by a committee headed by Chloethiel Woodard Smith of Washington, D.C., was the most instructive and impressive of those presented. This despite the fact that some of the South American countries presented models of vast scale and astounding quality. The point was that the work from the United States was carefully selected and represented the *best* of what we had to offer, while some of the other nations continued to exhibit *representative* work, which was of no particular interest to an observer trying to learn and to profit from the display. The credit due Mrs. Smith and her committee was emphasized not only by the comments of the various delegates, but by the fact that a number of other delegations appeared anxious to have the United States show travel independently to their parts of the hemisphere.

While the United States took first grand prize (Mexico was second, and Cuba third) many individual projects from this country also won individual awards or mentions. Neutra, Mies van der Rohe, Weed, Kump, Chiarelli & Kirk, Skidmore, Owings & Merrill, Belluschi, Wudemann & Beckett, Hoyt, and others scored in the prize giving. Mexico (which also had an independent, more selective separate show of its own) came to second place on the general quality of its demonstrated work; and Cuba rose to third place largely because of three individual awards to the firm of Arroyo & Menendez.

●

In the conduct of the business of the Congress, the official delegates from the United States did not appear to any great advantage. It seemed to many observers that in the future our delegation might be better prepared to enter into the debates with the same gusto and understanding that some of the others did. Despite the fact that an effective system of simultaneous translation had been provided, with earphones available to many more than used them, the active and sometimes most interesting debates that took place were exclusive of any English-speaking participation.

Themes for discussion included architectural education, planning, housing and related social problems, esthetics, construction methods, and architectural practice. Among the papers submitted, excellent ones from the United States by Henry Churchill, Louis Justement, Fred Severud, Chloethiel Smith, Wells Bennett, and Kenneth Johnstone added spice to the discussions that took place. The conclusions, in many cases seemed tepid, but when, for instance, the Congress solemnly adopted the statement that "architecture and city planning should be only one discipline," and further that "the architect must design as a creator and have in charge as a coordinator the direction of the urbanistic conception," the effect in many parts of this hemisphere, officially as well as morally, may be great. It was the impression of this reporter that most of those who attended the Congress from the United States felt very proud of the U.S. work that was exhibited, and were most anxious that the next meeting (in Mexico City in the fall of 1951) should have an equally well-selected show. Also that the official delegation from our constituent society—the American Institute of Architects—should another time be more prepared to take serious and contributory part in the business sessions of the Congress. A pleasant vacation in a tropical environment is most enjoyable, but it probably should not be the sole reason for belonging to a serious federation of architects from all the Americas.



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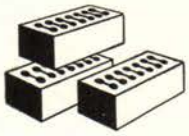

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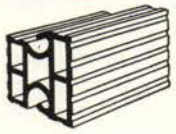
Loadbearing Tile scored and unscored 12" x 12" face size in standard wall thicknesses

Non Loadbearing Tile scored and unscored 12" x 12" face size in standard wall thicknesses



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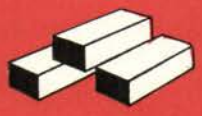

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NOTICES

AWARDS

1950 Lloyd Warren Scholarship, 37 Paris Prize in architecture of the Beaux-Arts Institute of Design, with a stipend of $5000 was awarded to WILLIAM H. SIPPEL, JR., of Pittsburgh. WILLIAM J. SCHEIDEMANTEL, Forest Park, Ill., was chosen as alternate.

Five members of the firm of SKIDMORE, OWINGS & MERRILL, Architect-Engineers, were winners in the Chicago Tribune $25,000 fourth annual Better Rooms Competition, making the third consecutive year the firm has claimed winners. They are: GYO OBATA, JOHN WEESE, JOHN MACSAI, ROBERT DIAMANT, and AMBROSE RICHARDSON.

APPOINTMENTS

Announcement is made of additional staff members appointed to the School of Architectural and Allied Arts, University of Oregon: WILBERT P. LEI, Visiting Critic in Architectural Design; STANLEY W. BRYAN, Assistant Professor of Architecture; ALLEN MCNOWN, Instructor in Architecture; FREDERICK H. HEIDEL and RICHARD PRASCH, Instructors in freehand drawing.

CHANGES IN FIRMS

THOMAS D. BROAD and DONALD S. NELSON announce the association with them of W. J. B. SULLIVAN, Architect, as chief of building planning, and S. M. MELTON, educator, as educational plant adviser in the firm of BROAD & NELSON, Architects, Engineers, Planners, Reserve Loan Life Bldg., Dallas 1, Tex.

FREDERICK R. HARRIS, INC., Consulting Engineers, announce the association with them of WALTER D. BINGER, Consulting Engineer.

SAMUEL E. LUNDEN, ROGER HAYWARD and BEN H. O'CONNOR announce their association under the firm name of LUNDEN, HAYWARD & O'CONNOR, Architects, 520 Security Building, 510 S. Spring St., Los Angeles, Calif.

METCALF & EDDY, Engineers, Statler Bldg., Boston, Mass. and 111 Butter St., San Francisco, Calif. announce as new partners in the firm SCOTT KEITH, JOHN W. RAYMOND, JR., and RUSSELL J. RICE.

DR. HARRY AGNEW has been admitted as a partner in the firm of CHARLES F. NEERGAARD and DR. ALLAN CRAIG, Consulting Service in Hospital Planning, Organization and Management. The firm will henceforth be known as NEERGARD, AGNEW & CRAIG.

ROBERT P. SIMON and GERHARD RETTBERG announce the establishment of the firm of SIMON & RETTBERG, Architects, 406 S. Russell, Champaign, Ill.

NEW ADDRESSES

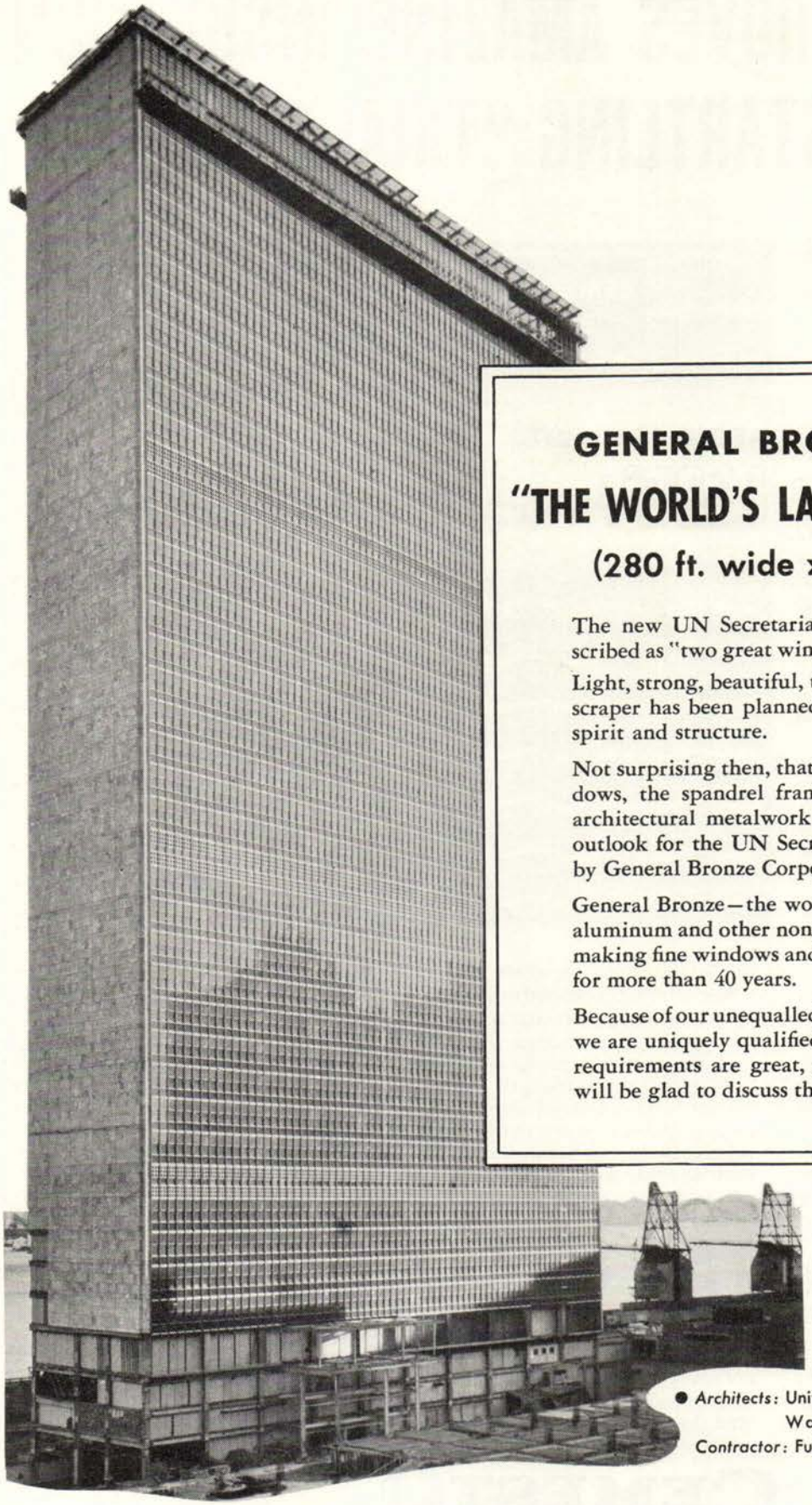
FETHERSTONHAUGH, DURNFORD, BOLTON & CHADWICK, Architects, 901 Victoria Square, Montreal 1, Canada.

M. MICHAEL KANE, Architect, 1457 E. 68 St., Chicago, Ill.

OLIUS P. BOIS, Architect, 3448 Iberville St., Montreal 34, Canada.

UNDERSTATED

In announcing the new quarterly magazine of tropical arts and architecture last month (see page 124, May 1950 P/A) we failed to give the entire title, through inadvertently omitting the + from Design+. We regret this error and also apologize to Architect Alfred W. Harris of Cleveland, Ohio, for misspelling his name in the May PROGRESS REPORT (see page 15, May 1950 P/A).



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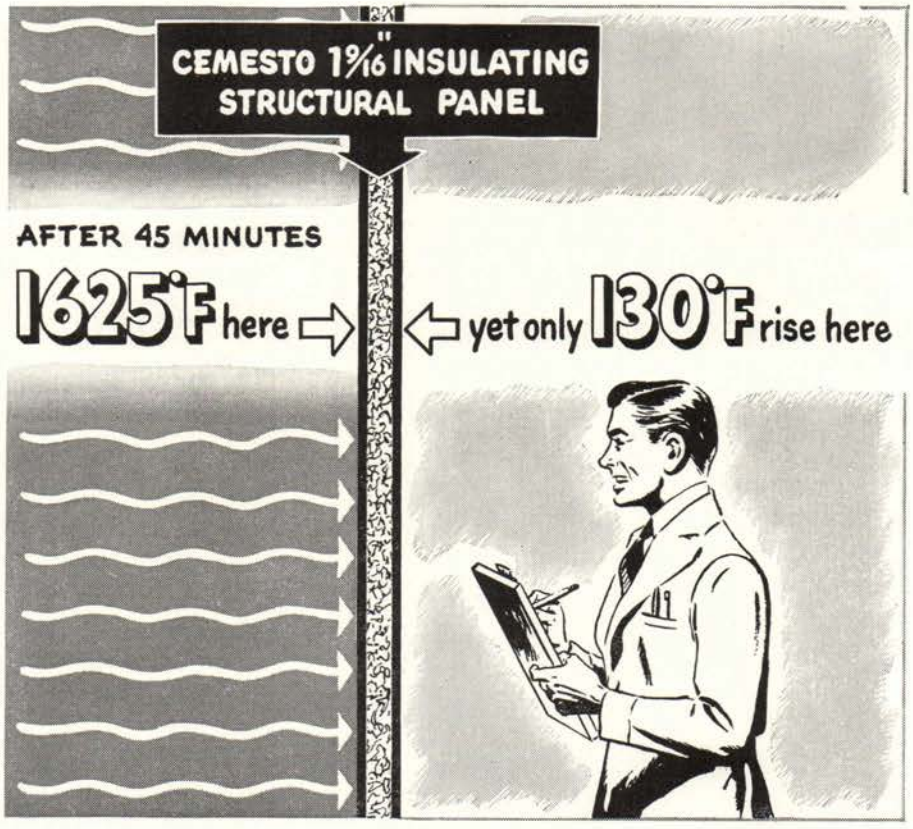

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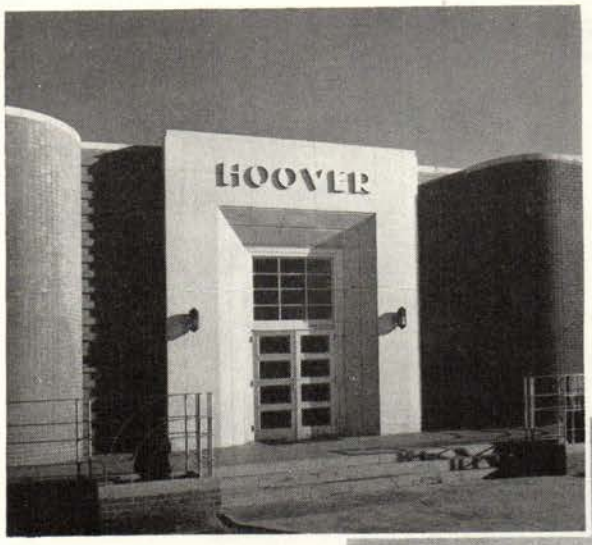

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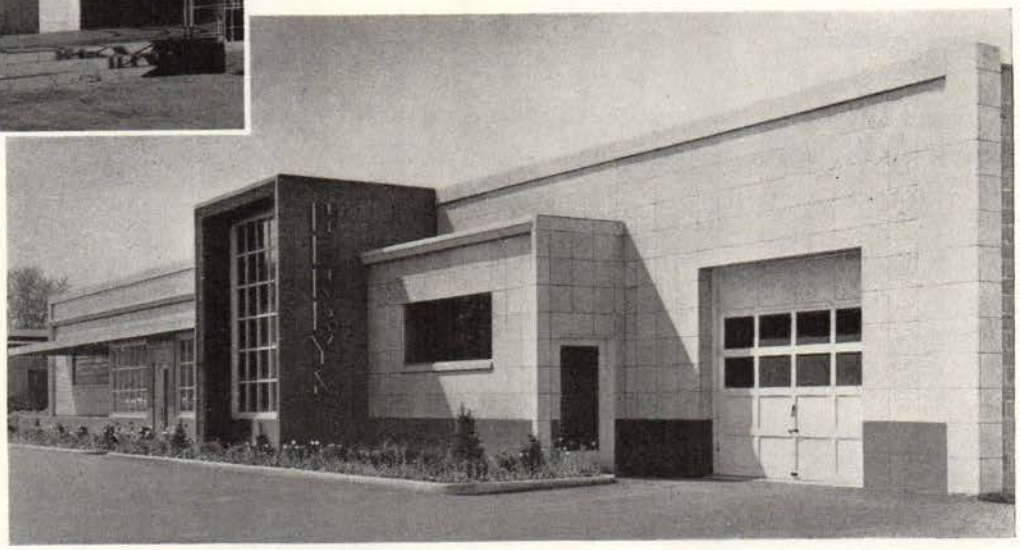

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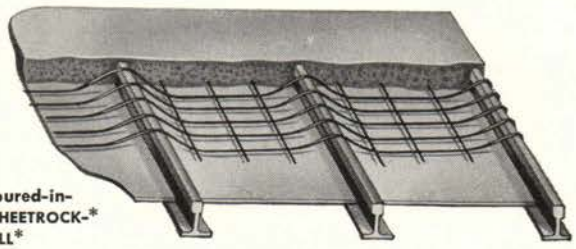

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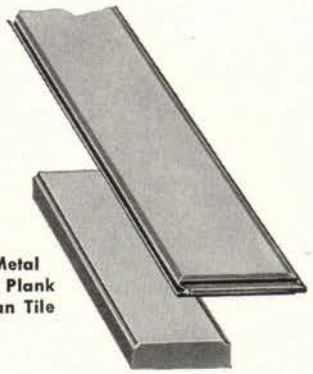

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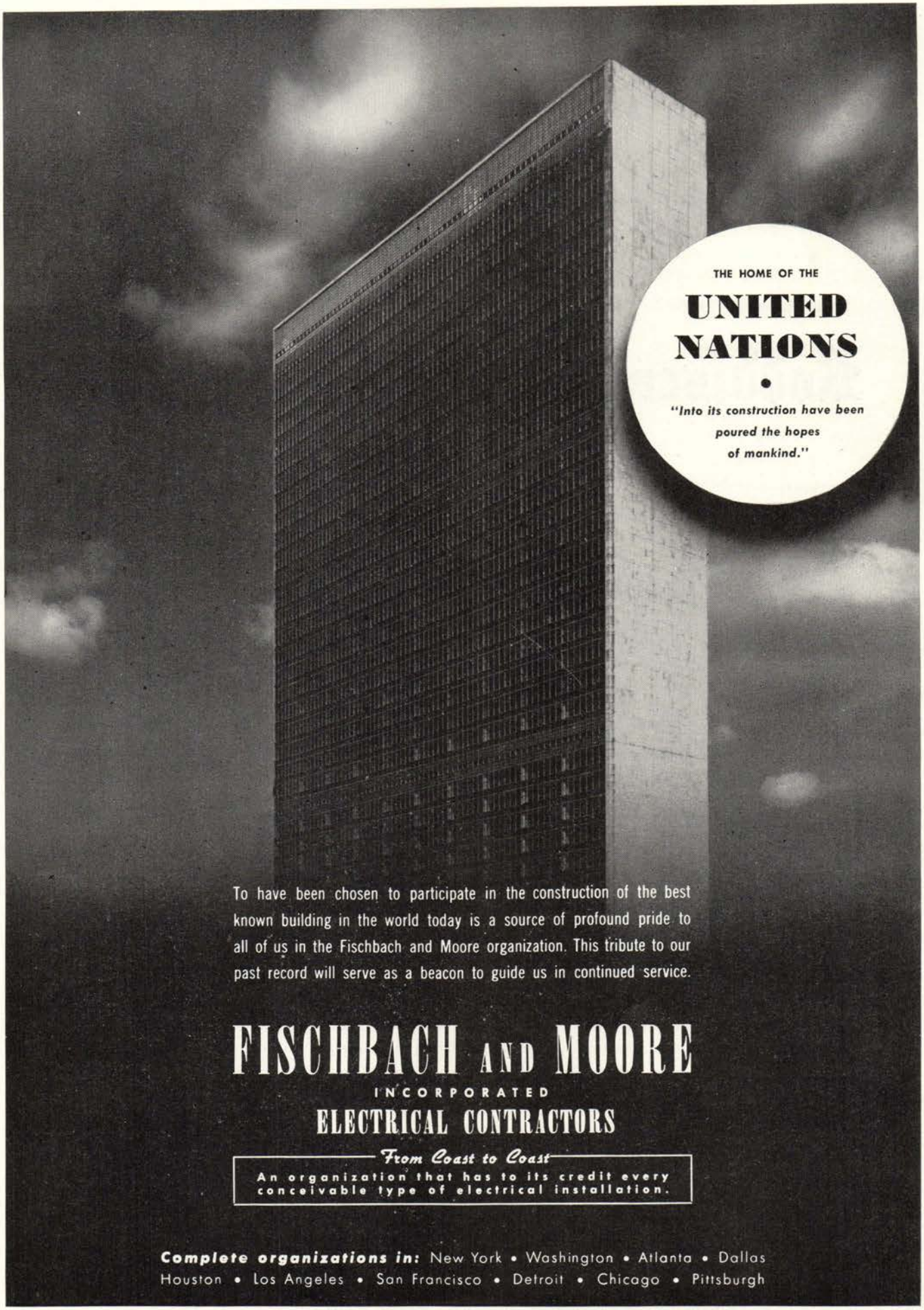

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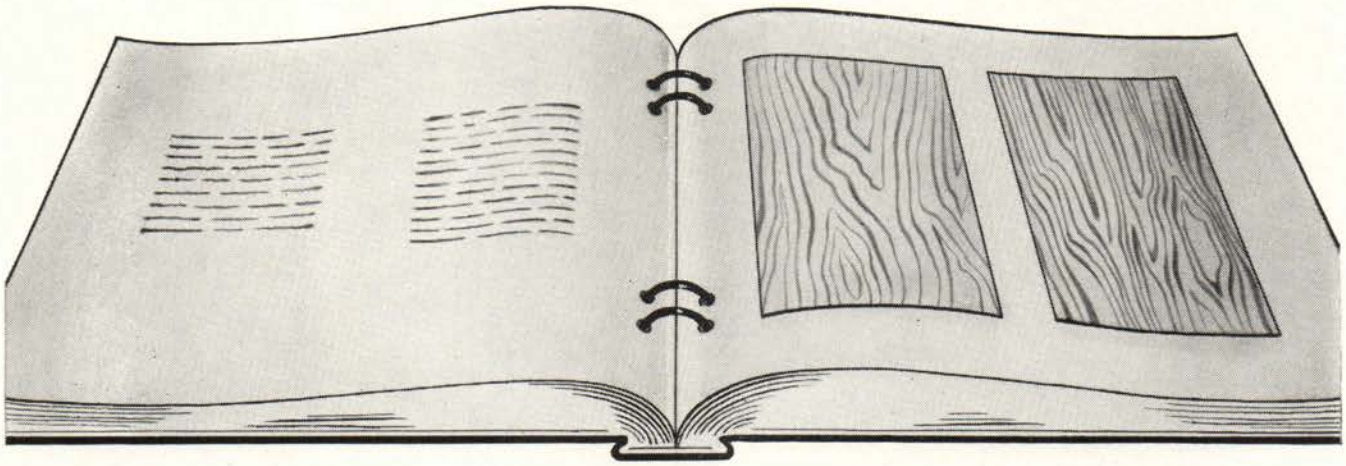

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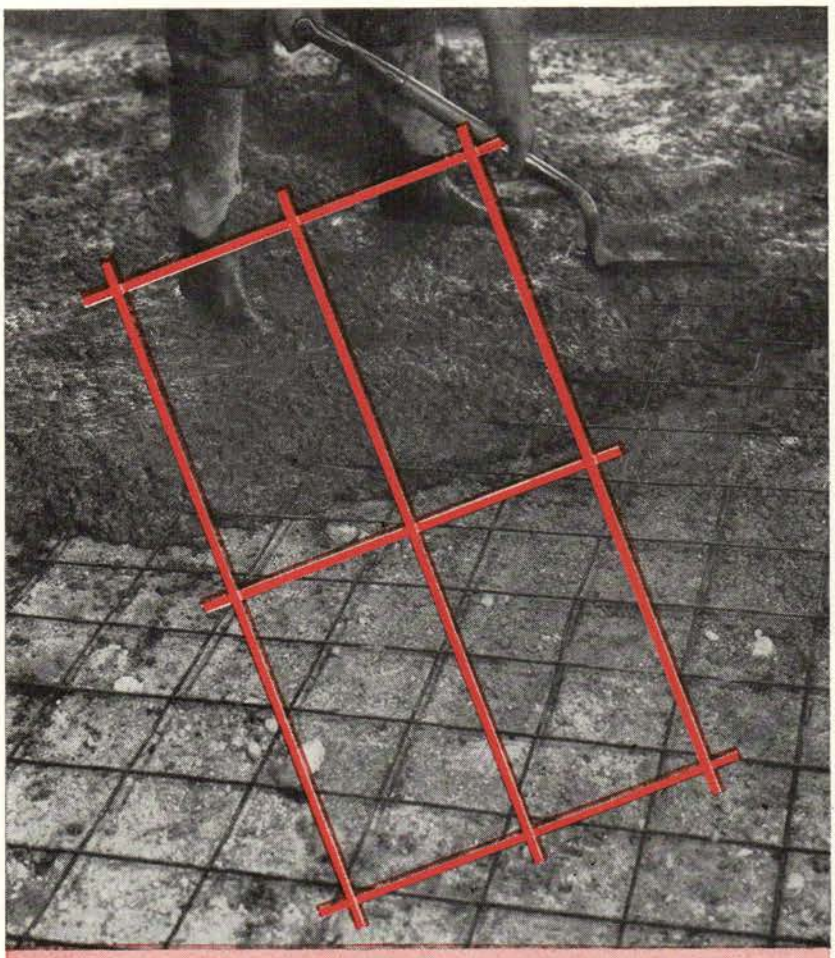
For crack control in concrete ground slabs

specify American Welded Wire Fabric



In the Continental Can Company's new plant at Pittsburgh, Pa., acres and acres of concrete flooring were laid on the ground. These slabs will be subjected to ponderous loads of machinery, to the customary heavy traffic encountered in industrial plants. They are laid on a tamped subgrade and, as further insurance against excessive cracking, are reinforced with American Welded Wire Fabric.

Architects and construction engineers have long recognized the need for distributed reinforcement in concrete slabs which rest on the ground. That is why so many of them specify American Welded Wire Fabric for concrete factory floors, driveways, sidewalks, etc.

Closely and accurately spaced, the many high tensile strength steel members of American Welded Wire Fabric fortify all parts of the slab. They minimize the effect of crack-causing stresses and strains, such as the impact of superimposed loads, friction with the subgrade during expansion and contraction of the slab, and unequal loading caused by unevenness of the sub-grade.

The world's most widely used reinforcement for concrete, American Welded Wire Fabric, has proved—during years of practical use and in sample slabs tested to destruction—to be definitely superior to other types of reinforcement. American Welded Wire Fabric is easily handled, quickly laid, so it helps you reduce material cost and construction time.

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Plumbing Contractors: Eugene Duklauer, Inc.

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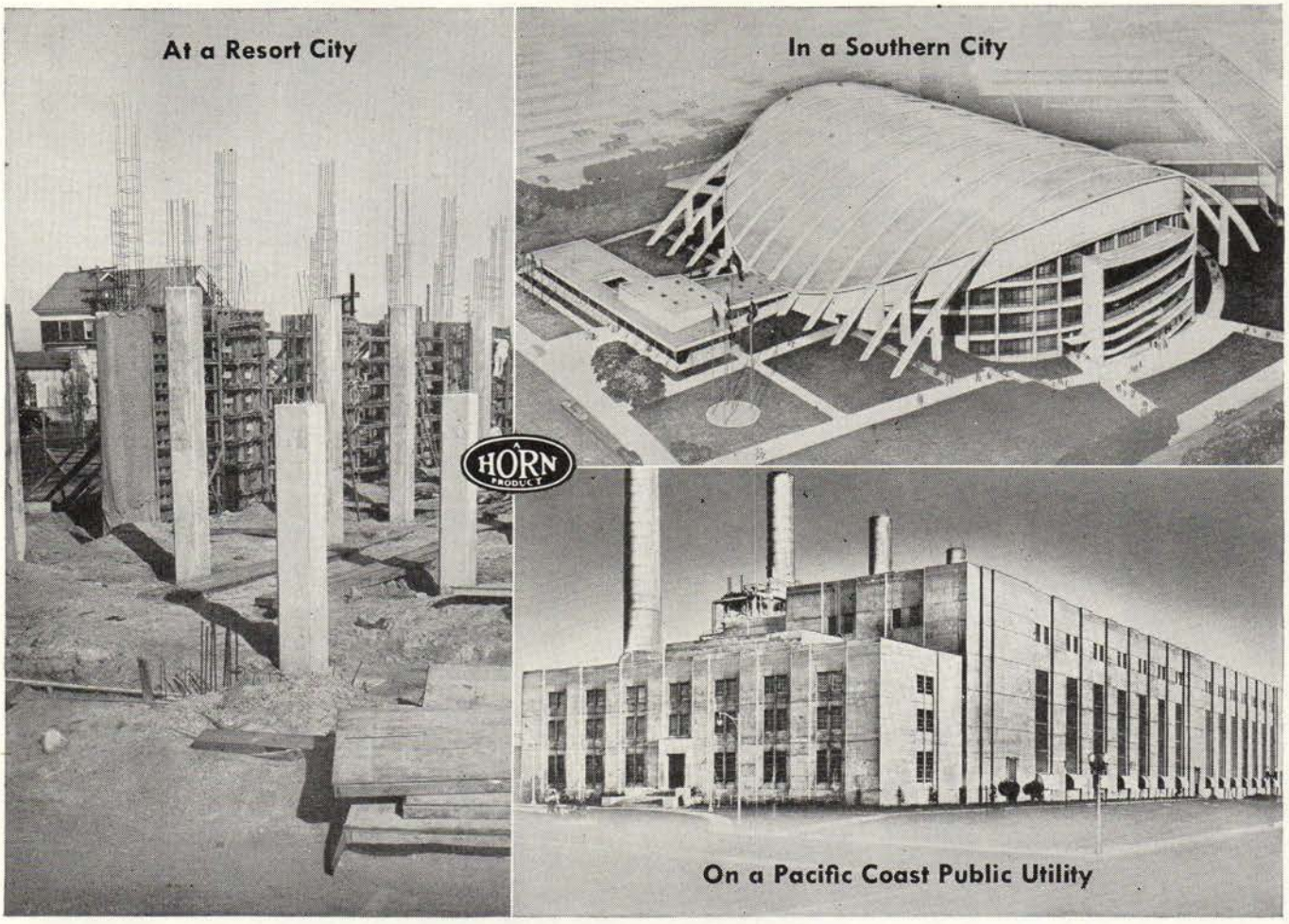

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Photographs taken at Sky Line Inn, Manchester, Vt.

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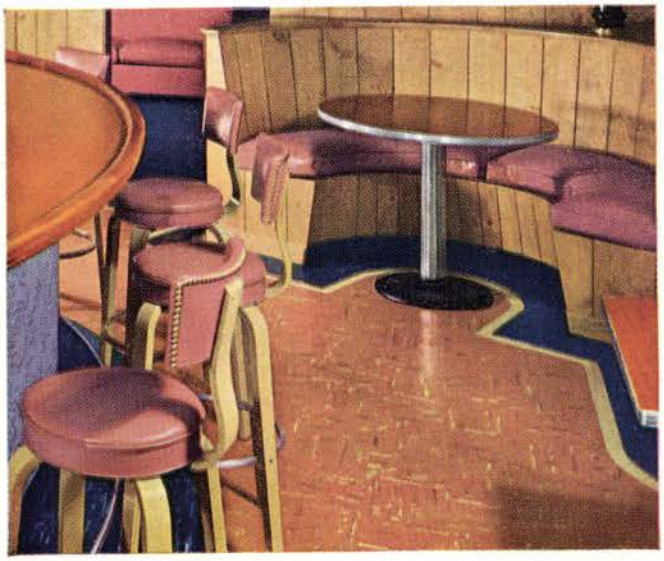

Furniture made more beautiful with VINYLITE Brand Plastics . . . is slashing maintenance costs in restaurants, hotels, hospitals and public buildings across the land. Besides being beautiful and durable, VINYLITE Plastic upholstery materials are:

- **Washable, resisting strong alkalies and most strong acids**
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- **Available in limitless fast colors and embossed designs**
- **Easily applied**
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YOU CAN SEE WHY these upholstery materials are being specified more and more. Like the floor coverings shown here—also of VINYLITE Brand Plastics—they blend in with—even create—room decor. They lend themselves perfectly to original pattern and design effects. They are easy to apply.

We'll gladly furnish technical data, and a list of representative suppliers of upholstery materials made from VINYLITE Brand Plastics. Write Dept. HV-58.

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How to put Sales Appeal in Gutter and Downspout Specifications...

Beauty, Performance and Economy are the three points upon which any architect or builder must satisfy his client. If he also presents something new, modern—not merely repeating specifications of fifty years ago—it is an additional advantage.

Reynolds *Lifetime* Aluminum Gutters meet all these requirements. They have beauty of design, plus the softly gleaming neutral tone that goes with any concept. They are rustproof, need no painting, cannot produce rust-streaks or stain. And their cost is about half that of other rustproof materials—with added economies in installation, since the lightweight lengths are put up with simple slip joints: no soldering.

Shown at the left are Reynolds *Lifetime* Aluminum Gutters, Ogee style, on the House of Charm, Detroit. Below are details of two residential and one industrial style.

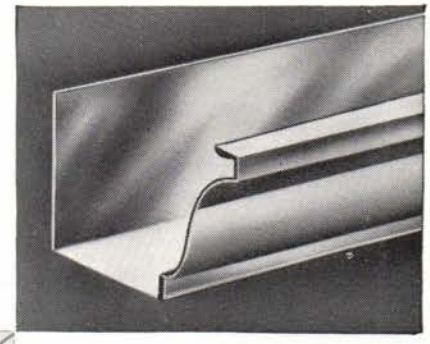
For folder in A.I.A. file form, please address **Reynolds Metals Company,** Building Products Section 2014 So. Ninth St., Louisville 1, Ky. Offices in 32 principal cities.

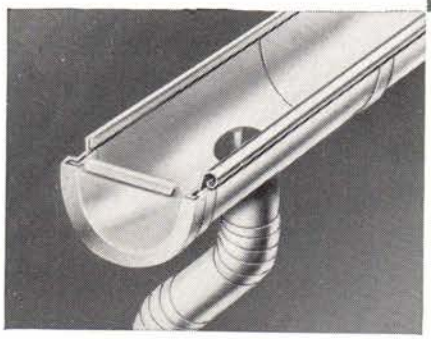
REYNOLDS *Lifetime* ALUMINUM GUTTERS AND DOWNSPOUTS

IF YOU SEE RUST YOU KNOW IT'S NOT ALUMINUM — REYNOLDS *Lifetime* ALUMINUM BUILDING PRODUCTS

RESIDENTIAL CASEMENT WINDOWS
(also Fixed and Picture)
REFLECTIVE INSULATION
ARCHITECTURAL SHAPES
5-V CRIMP and CORRUGATED ROOFING AND SIDING
WEATHERBOARD SIDING
INDUSTRIAL CORRUGATED
BUILT-UP ROOFING
NAILS
FLASHING
ROOFING ACCESSORIES

Profile of 5" Ogee style Gutter, supplied with 3" square Downspouts, both in 10' lengths. Allow one downspout for each 700 sq. ft. roof area. Fittings include Slip Connectors, End Caps, Sections with Outlet, Outside and Inside Mitres, Strap Hangers, 60° and 75° Elbows, Pipe Bands, Strainer, Aluminum Nails. *Available in either smooth or stipple-embossed finish.*





Reynolds 5" Half-Round Gutter, supplied with 3" Downspouts either plain round or corrugated. Allow one round downspout for each 700 sq. ft. roof area, one corrugated for each 600 sq. ft. Matched fittings as for Ogee. *Available in either smooth or stipple-embossed finish.*

ALSO 6" HALF-ROUND INDUSTRIAL GUTTERS, stipple-embossed only, with 4" downspouts to drain 2,000 square feet of roof area.

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Whether you plan lighting, buy lighting or install lighting, ask for the services of a Westinghouse lighting engineer. J-04283

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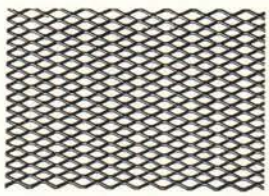
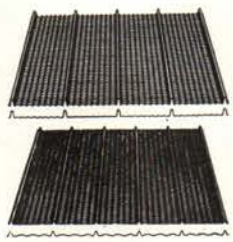


Wheeling Diamond Lath
Standard and Bantam Mesh

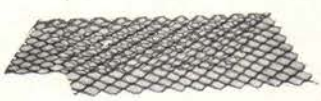
Wheeling Bar-X-Lath
With solid steel ribs

Wheeling Flat Rib
Metal Lath

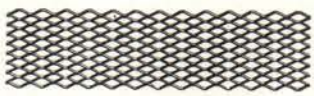


Wheeling ¾" and
⅜" Rib Lath

A FULL LINE OF HIGHEST QUALITY STEEL BUILDING PRODUCTS TO CHOOSE FRO



Wheeling Corner Lath
An improved cornerite

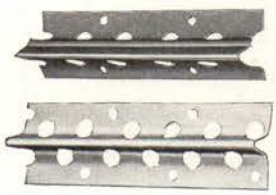


Wheeling Strip Lath
For strengthening joints

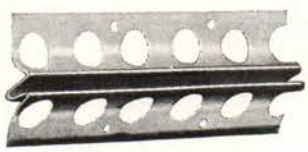
Wheeling
Bar-Z-Partitions
Studs, track, and Shoes

Wheeling Cold
Rolled Channels

WHEELING PRODUCTS ARE ALWAYS QUICKLY AVAILABLE AT 15 CONVEN

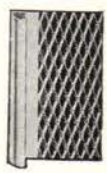


Wheeling Curved and
Straight Point Base Screed



Wheeling Metal
Picture Mould

Wheeling Bull
Nose Bead



Wheeling Casings
and Corner Grounds

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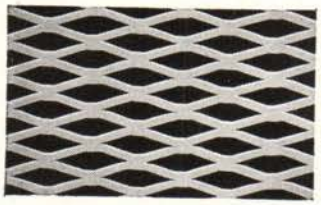

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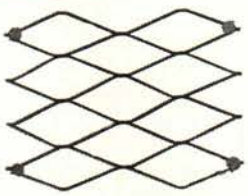

Wheeling Stucco Binder Mesh

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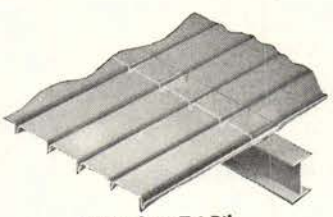

Wheeling Tri-Rib Roof Deck

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HERMAN MILLER'S IS 19 YEARS OLD

Laid in 1931, this Bruce Block Floor in Chicago's Merchandise Mart still looks like it's brand new!

WHEN officials of Herman Miller Furniture Company looked over the space for a new showroom in the Merchandise Mart, they had a pleasant surprise. The floor of Bruce Hardwood Blocks, despite 19 years of constant use, was in perfect condition except for a few stains and scratches in the finish.

So, instead of spending several thousand dollars on a new floor or floor covering, they had the Bruce Block Floor refinished at a cost of only a few hundred dollars. In their own words: "We were both surprised and pleased that the Bruce Block Floor in the Merchandise Mart space could be so handsomely used for our display at so low a cost."

Floor dramatizes modern furniture

The modern block design gives a clean, fresh look to the Herman Miller showroom. An ideal setting for beautiful furniture is provided by the natural beauty of oak, with its interesting grain pattern and rich, mellow coloring. Although the floor is decorative, it is also a "good mixer," blending with and complementing the smooth, functional beauty of Herman Miller's fine modern furniture styles. Small rugs are used to accent furniture groupings, leaving complete latitude for future changes.

Designer Nelson calls Bruce Floor "the most attractive and impressive design element."

George Nelson, who plans all Herman Miller showrooms, says: "We were able to refinish this old floor so that it became perhaps the most attractive and impressive design element in the whole architectural ensemble. Seen in relation to the floor, Herman Miller furniture looks better than it has in combination with any other flooring material we have used in showrooms. From the expense standpoint, had we carpeted the showroom, the cost would have been from $3,000 to $5,000. The cost of refinishing the old floor so that it looked like new was less than $500. In other words, we not only got a more attractive showroom, but there was a substantial saving to boot. I might add that in the New York showroom, currently being redesigned, we are moving some of the existing floor covering to put in a section of Bruce Blocks."

How to make 4,000 sq. ft. do the job of 6,000

By completely avoiding conventional room settings, Designer Nelson turned the Herman Miller space into one of the most attractive showrooms in the Merchandise Mart. Basically, the solution was a one-room scheme with dividers in the form of curtains and low partitions, a sharp deviation from conventional furniture showrooms. The room has no color except in the furniture itself, the floor with small rugs, and the hanging draperies. Ceiling and walls are painted white. An ingenious lighting system consists of hanging ducts on which fixtures can be snapped at any point.

"NEW" BRUCE FLOOR

Nineteen years of constant use haven't marred the beauty of this Bruce Block Floor in the Chicago showroom of Herman Miller Furniture Company. *Photograph taken March, 1949.*

Photo by Hedrich-Blessing

This modern floor is ideal for homes, offices and other areas.

Homes, apartments, schools, stores and offices all become beautiful "showrooms" when you use Bruce Hardwood Blocks. These distinctive floors provide a perfect background for furniture and furnishings . . . whether modern or traditional. They make possible substantial savings on decoration because their natural beauty is at its best when used with small scatter rugs. But the most important saving is in the lifetime durability and easy, economical upkeep of Bruce Block Floors.

This modern hardwood floor is also most practical from a construction standpoint. Bruce Blocks can be laid in mastic directly over concrete—without nails or splines. Or they can be nailed over wood subfloors or old wood floors. Installation is fast and economical. Where *prefinished* Bruce Blocks are used, no sanding or finishing on the job is required. And you get the finest finish ever given a hardwood floor!

Over 100 million feet of Bruce Blocks are now giving most satisfactory floor service in homes and buildings throughout the nation. You'll find these "floors that last a lifetime" in beautiful small homes and in largest housing developments.

Write for New Booklet in Color

Write "O. K. Bruce" on your letterhead or a postcard, and we'll send you the new full color booklet on Bruce Block Floors. Every architect and builder will find it valuable for reference on all types of jobs.
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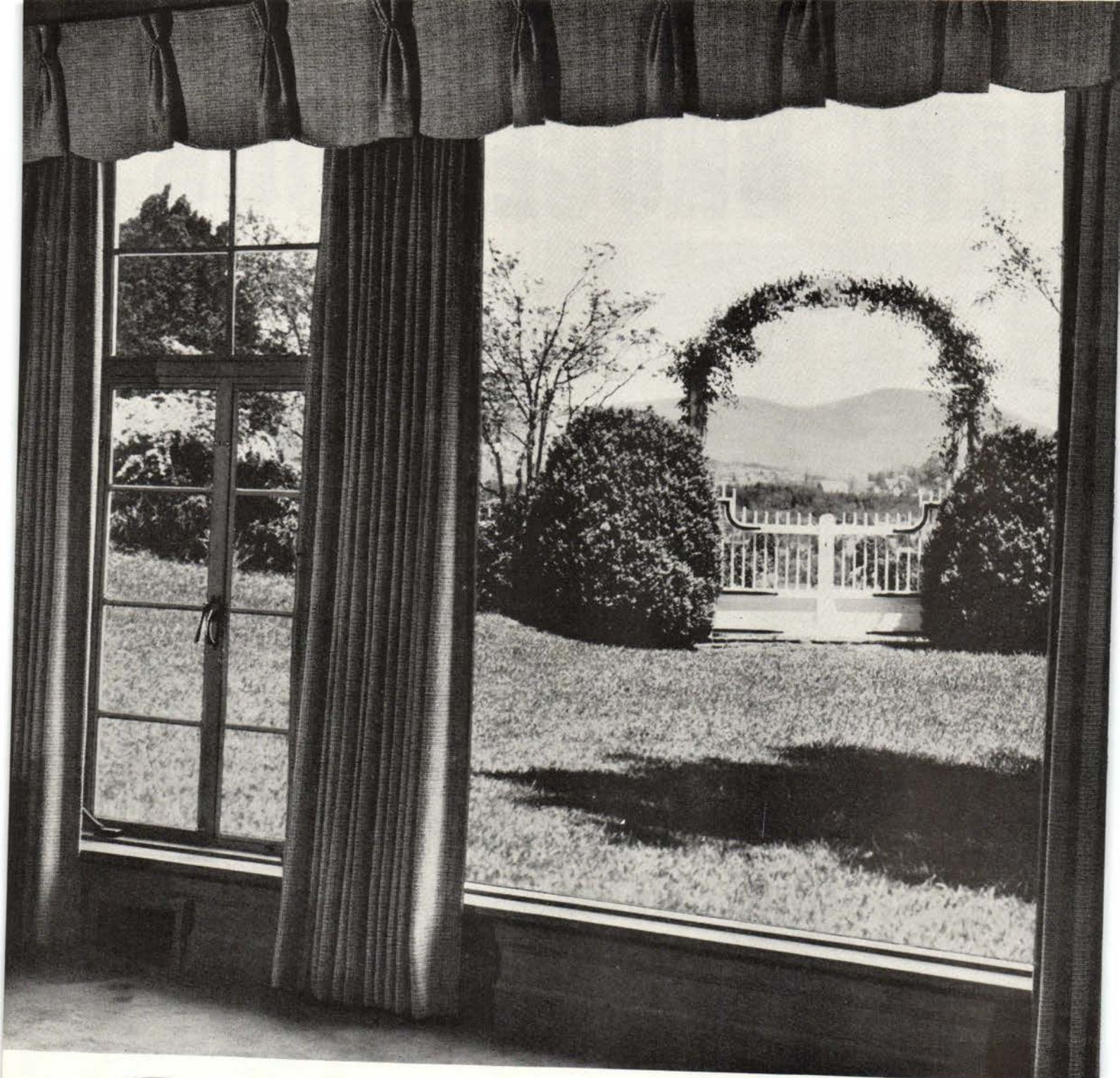

How to Make a Home

It's easy to bring nature right into the home with Ceco Picture Windows of Steel to make each room truly live. There's movement in the murals of the vibrant outdoors framed by these handsome window creations. Distant views, ever changing with the mood of the hours, bring relaxing thoughts and a sense of better living. All this is possible because there's less interruption of vision. The eye is drawn easily to the outside world of motion—barriers are minimized due to slender frames and muntins. And to have Ceco Steel Windows is to know truly sound value. They're engineered to

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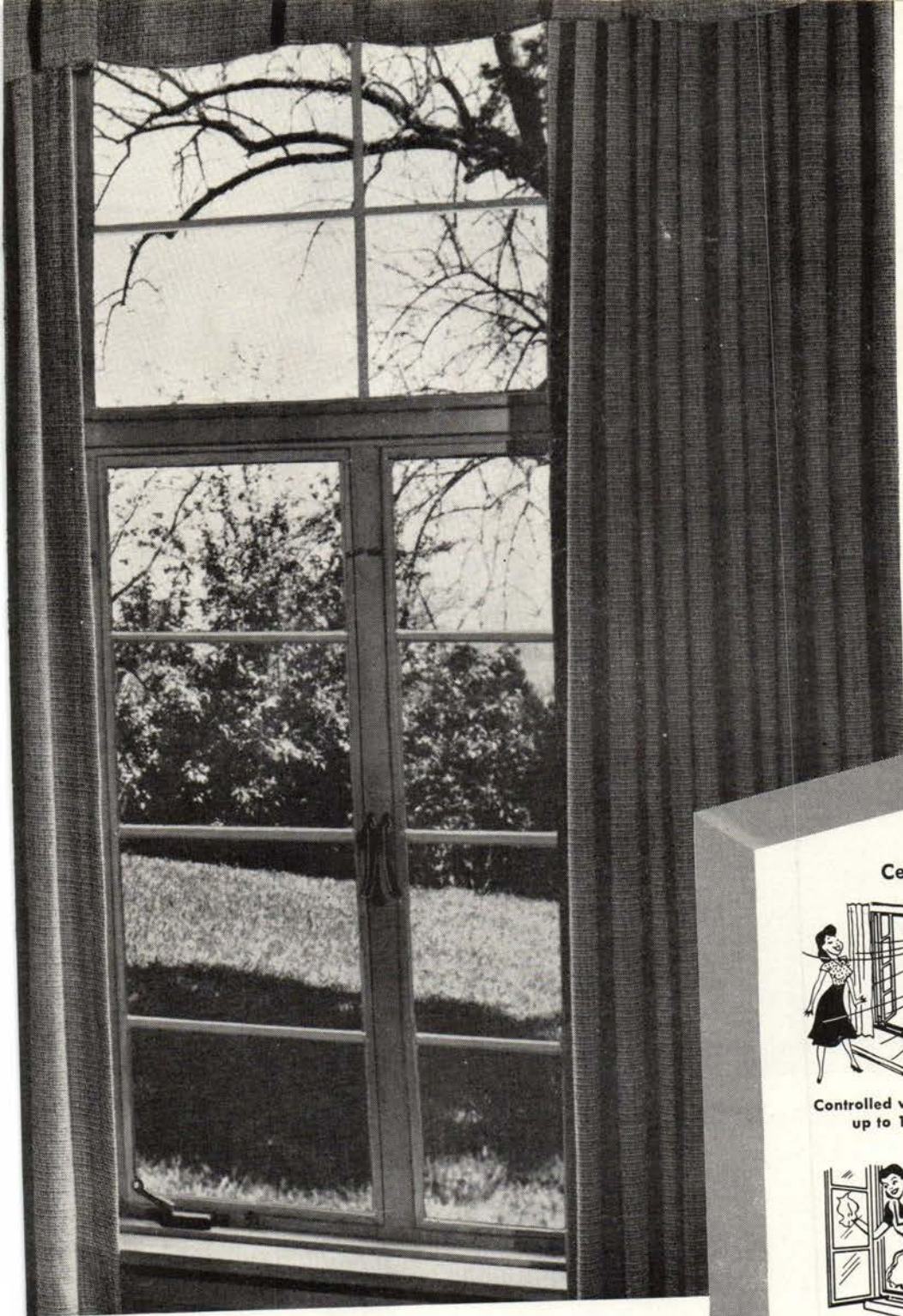

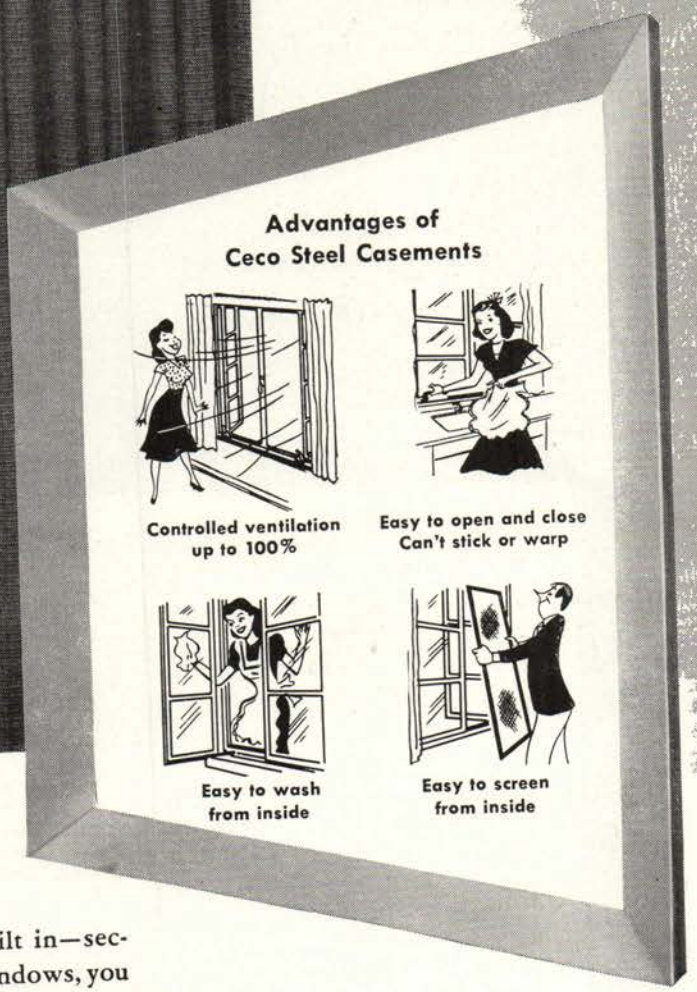

Come Alive . . .

provide the tightest weatherseal ever—with extra strength built in—sections are 1 1/16 inches deep. Yes, when you specify Ceco Steel Windows, you know you've chosen the very best—you're sure of economy too—you're modern as tomorrow.

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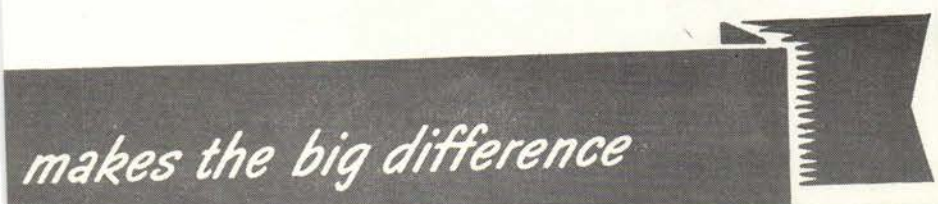
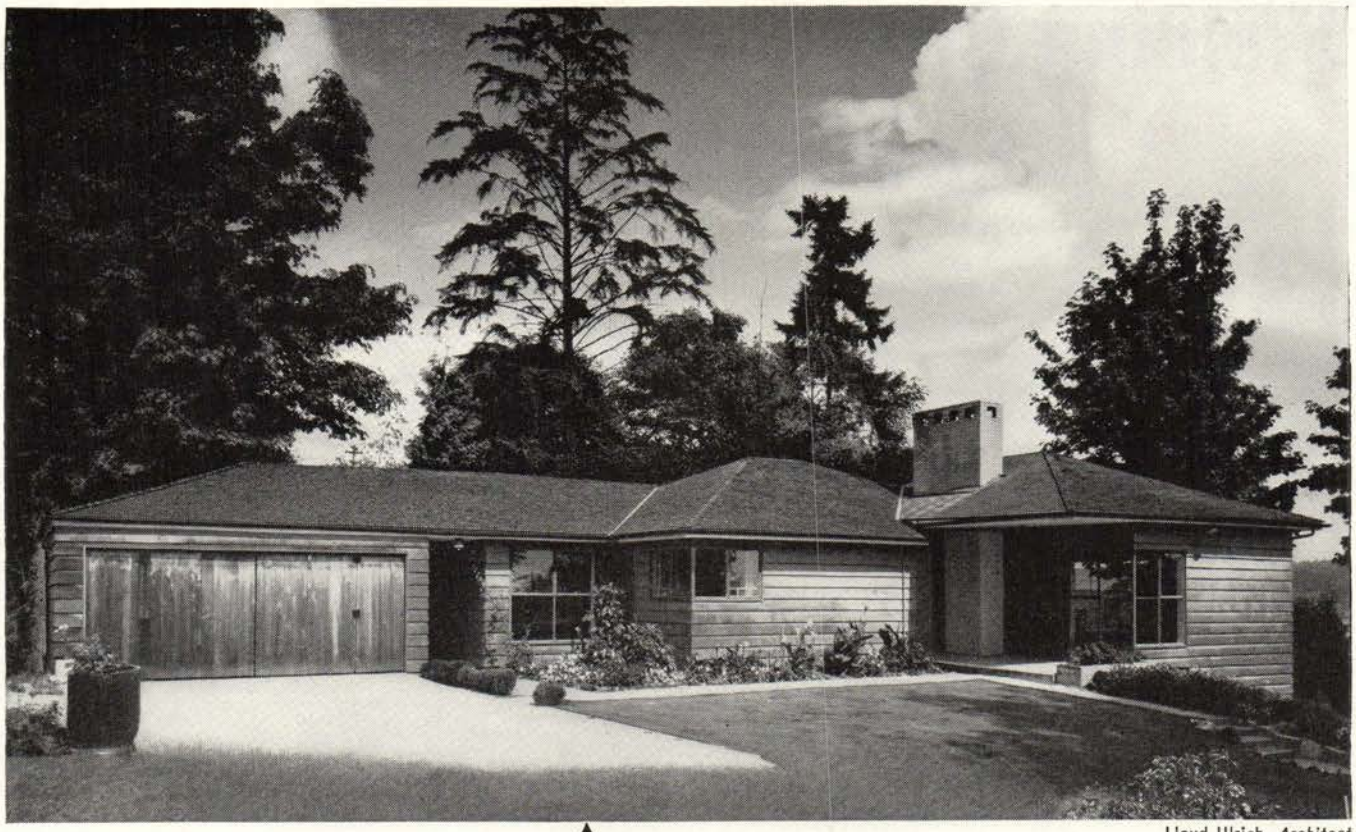
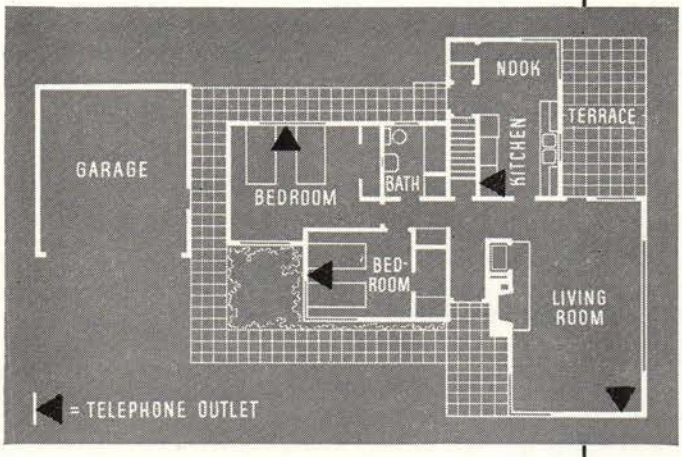




Lloyd Ulrich, *Architect*

THE BEST LAID PLANS INCLUDE TELEPHONE RACEWAYS



Concealed telephone wiring is one detail today's home buyers inquire about—and appreciate.

Built-in telephone facilities involve little work, little cost. Just mark locations for telephone outlets on your plans. Then, during construction, a few lengths of pipe or tubing can be built into the walls to carry telephone wires to the outlets.

Your Bell Telephone Company will be glad to help you in planning telephone wiring facilities. Simply call your nearest Telephone Business Office and ask for "Architects and Builders Service."

BELL TELEPHONE SYSTEM

Welding Cuts Structural Costs 12%
Saves 7% on Steel

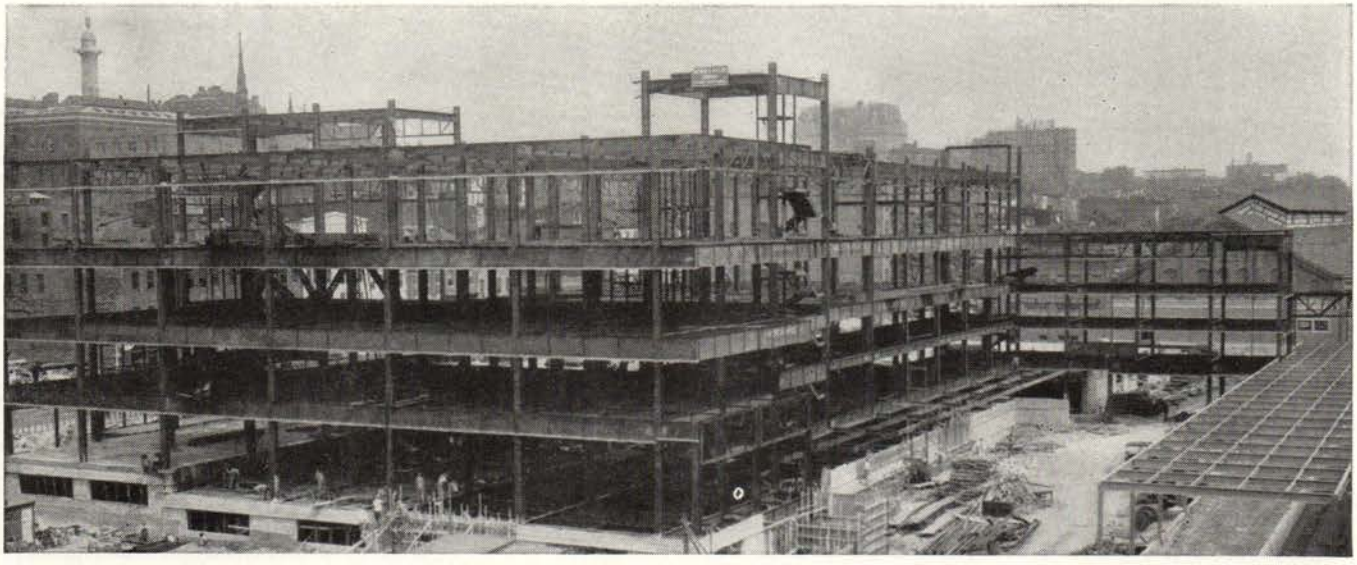


Fig. 1. Framework partially complete for the 5 story plant of Baltimore Sun, Baltimore, Md. Architects: Palmer, Fisher, Williams and Nes; Consulting Engineer: Van Rensselaer P. Saxe; General Contractor: George A. Fuller Co.

By VAN RENSSELAER P. SAXE
Consulting Engineer
Baltimore, Md.

A SAVING of $68,522 has resulted from the adoption of welded design for the publishing plant of the Baltimore Sun and Evening Sun shown in Fig. 1. Structural weight was cut by over 7%. A sizable amount of money was saved also on concrete and form work, as well as on reduced building height made possible by continuous beam design involving shallower structural members.

Typical framework connections illustrating the simple details for field erection are shown in Figures 2—3. Beams are positioned on erection seats or clips and then field-welded with Lincoln® "Fleetweld 5" electrodes using 400 ampere Lincoln "Shield-Arc" motor driven arc welders. In the design of frame members, bevel cuts for connections were so planned as to make maximum use of fast, easy downhand welding.

The quotation of the low bidder for riveted construction was $551,508. The actual cost of the welded frame was $482,986. This accounted for the $68,522 saving in the structure.

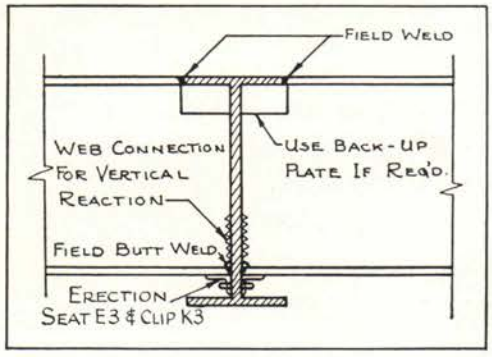


Fig. 2. *Typical beam to girder connection.*

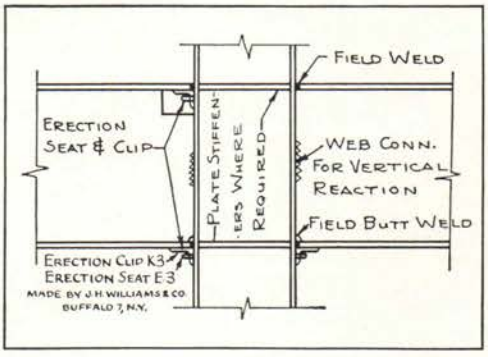


Fig. 3. *Typical beam to column connection.*

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Combines . . .

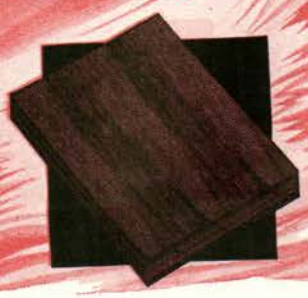
PERMANENT BEAUTY + FIRE PROTECTION AT LOW COST

MELAMINE RESIN VENEER

Provides a beautiful pre-finished laminate in natural or simulated wood finishes that resists scratches, burns, acids and water . . . will retain original beauty throughout the years—and never need refinishing.

PROTEXOL IMPREGNATED WOOD CORE

Gives complete safety from the spread of fire . . . and assures dimensional stability and freedom from damage by rot or vermin. Fox wood fire doors have been tested and approved by national fire authorities—and are available in 45, 60 and 90 minute ratings.



MELAMINE PRE-FINISHED FIREPROOFED PANELING ALSO AVAILABLE

Fox Bros. furnishes this beautiful material either in custom millwork to your specification, or as a basic material. SEND THIS COUPON for a free sample and complete information.

FOX MADE

FOX BROS. MFG. CO. ☆ *75 Years Experience*

MANUFACTURERS OF ARCHITECTURAL WOODWORK

Custom-built Millwork

2700 SIDNEY STREET • ST. LOUIS, MO.

FOX BROS. MFG. CO.
2700 Sidney Street, St. Louis, Mo.

☐ Send me a sample of your new melamine pre-finished fireproofed wood.

Name.....

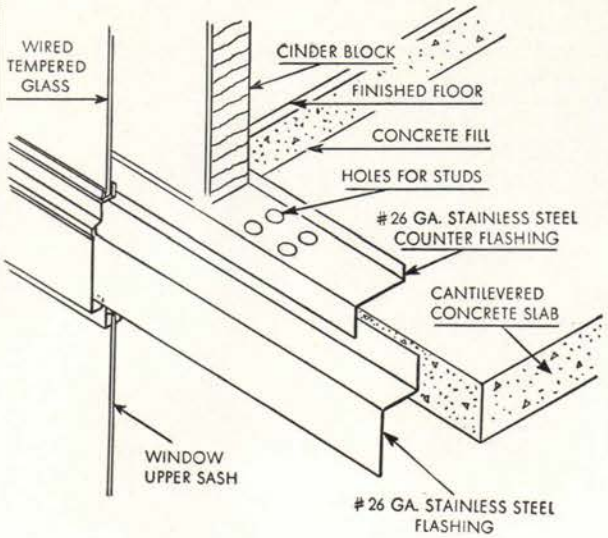
Address.....

City..... Zone.... State.....

ENDURO—FLASHING WITH NEW IDEAS

UN SECRETARIAT BUILDING
—39 Stories High—
and Every One
Flashed with **ENDURO**
* * *
Designed by U. N. Headquarters Planning Office. Constructed by Fuller, Turner, Walsh, Slattery, Inc. New York

Rising high above the East River in New York City is this unusual structure with the two narrow sides of marble, the two wide sides a myriad of glass windows. To retain condensate and leakage, to divert it into window weep holes and thus prevent drainage down the mullions, ENDURO was pre-formed and soldered into continuous strips on every floor. The sketch below shows details of installation. The photo at the left demonstrates soldering of four-foot sections into continuous spandrel flashing. Holes shown accommodate vitreous ferrules of Nelson studwelds used to anchor windows.



There seemingly is no limit to the useful applications for Republic ENDURO Stainless Steel in architectural design, in building construction.

Here you see it used for flashing between floors of a famous building. You probably have seen it used, too, for mullions and spandrels, windows, curtain wall panels, entrance doors, stair railing, elevators, roof drainage materials, spires, marquees and countless other component parts of a building.

That's because ENDURO is so versatile . . . because it gives the designer a vast medium for expressing his ideas . . . because it gives the engineer a sound construction material.

ENDURO ranges in finish all the way from a soft, satiny lustre to the brightness of a polished mirror. It may be used both for harmonizing and contrasting effect. It cleans easily. It is sanitary. Its striking beauty lasts indefinitely.

Functionally, it is tough and strong—with a high strength-to-weight ratio that permits safe use in thin sections. It resists rust and corrosion. It is equally strong at elevated or sub-zero temperatures. It cuts maintenance and replacement costs to lowest levels.

ENDURO is easily obtainable—readily workable. Distributors carry stocks and competent fabricators are located in principal cities.

Now, wouldn't you like to know more about this "magic metal" and the ideas it may bring to you? See Sweet's—or write us.

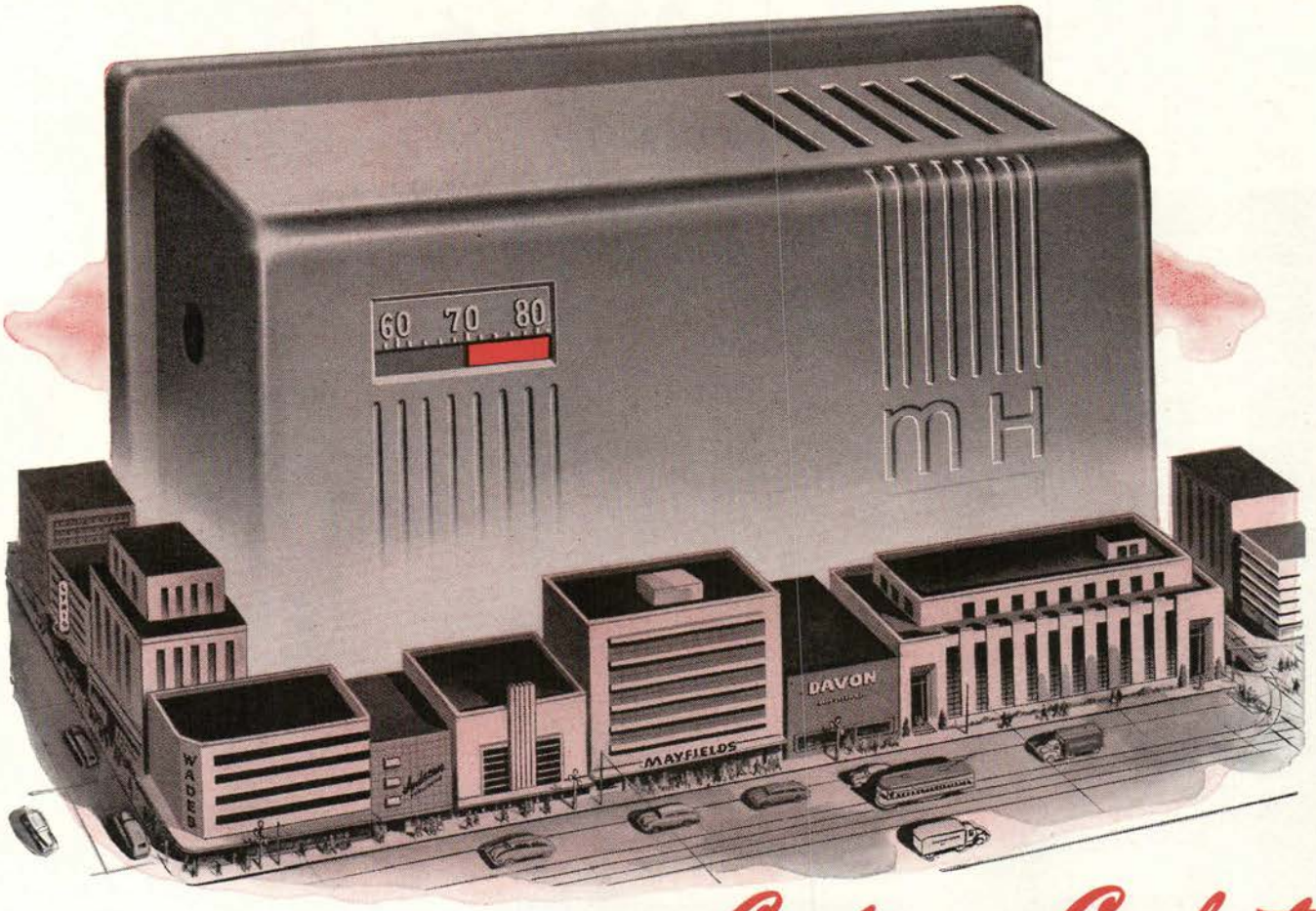
REPUBLIC STEEL

Enduro® STAINLESS STEEL

RUST-RESISTANT • CORROSION-RESISTANT • HEAT-RESISTANT • ATTRACTIVE • SANITARY • EASY TO CLEAN
EASY TO FABRICATE • STRONG • LONG-LASTING • LOW IN END COST • What more can be desired in a material?

REPUBLIC STEEL CORPORATION • *Alloy Steel Division, Massillon, Ohio* • **GENERAL OFFICES, CLEVELAND 1, OHIO**
Export Department: Chrysler Building, New York 17, N. Y.

As important as the buildings...



...the controls that give *Customer Comfort*

THE room thermostat illustrated above is smaller than your hand—but we're showing it *big* to dramatize its importance. The progressive owners of shops and office buildings realize that personal comfort is necessary to attract customers and keep tenants satisfied. Air conditioning, for example, is no longer a luxury; it is just plain good business. So these owners are installing the most modern heating, ventilating and air conditioning equipment.

ROOM THERMOSTAT
The Symbol of Modern Temperature Control

Whether you specialize in commercial buildings or in homes, you know that no heating or air conditioning system can be better than the controls that regulate it. For more than 65 years, Minneapolis-Honeywell has been the leader in developing automatic controls and control systems. Honeywell-trained engineers are available for consultation on any of your control problems. Just contact the Honeywell office in your city or write to Minneapolis-Honeywell, Minneapolis, Minn.

MINNEAPOLIS **Honeywell**
FIRST IN CONTROLS

ELECTRIC, PNEUMATIC, ELECTRONIC CONTROLS:

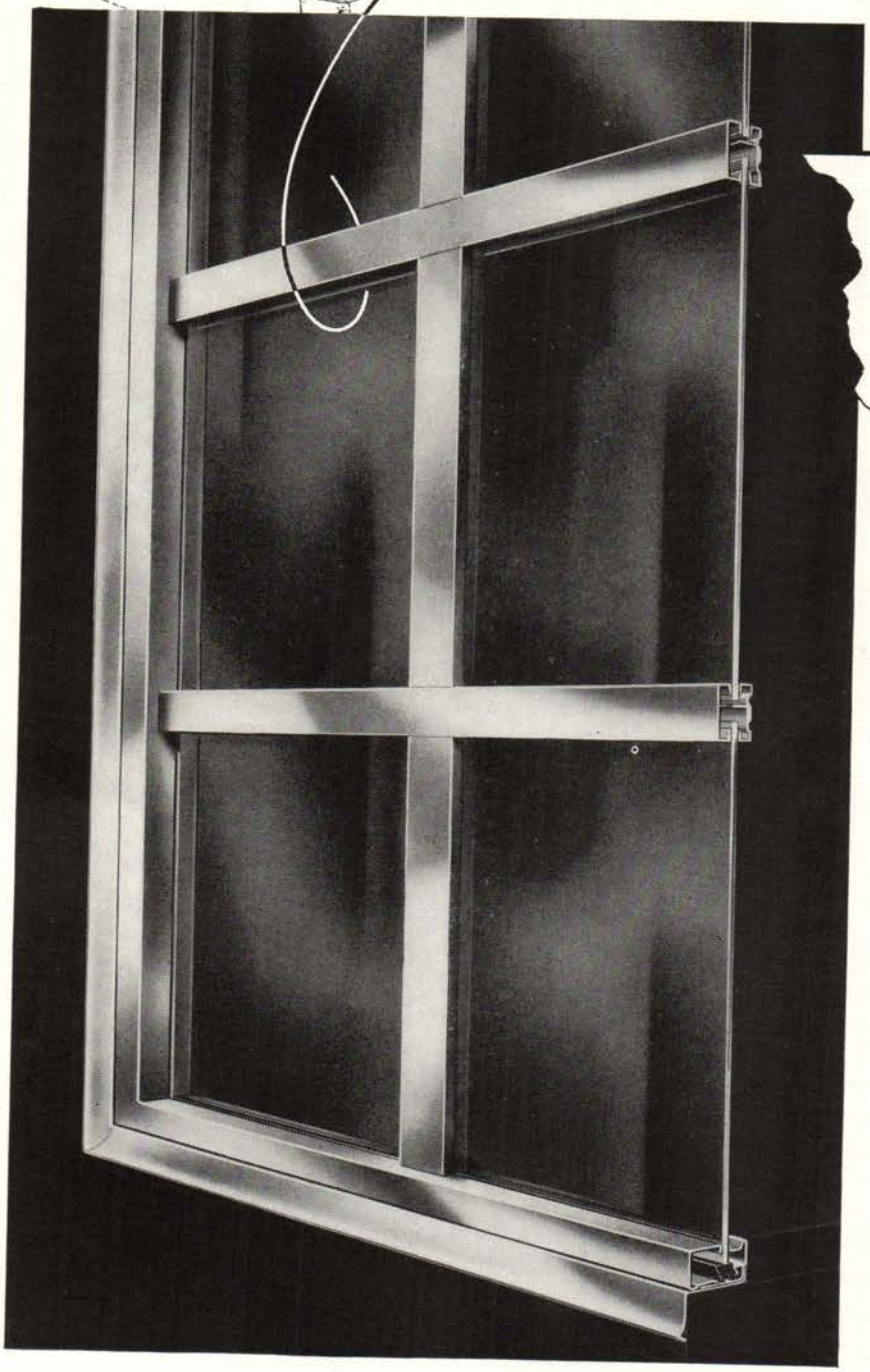
For home heating • for hotels and apartments • for schools and hospitals • for commercial heating and air conditioning • for refrigeration • for industrial process • for aviation • for rail, highway and water transportation.

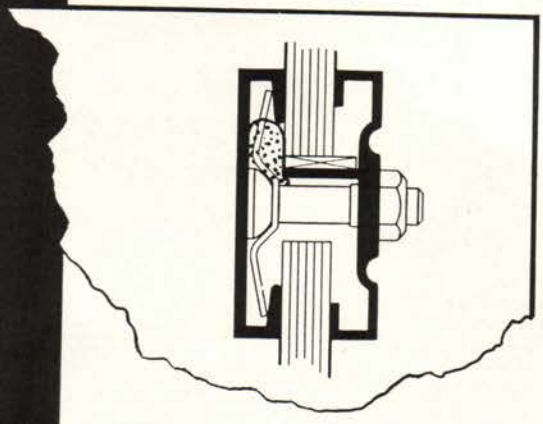
77 BRANCHES FROM COAST TO COAST WITH SUBSIDIARY COMPANIES IN: TORONTO • LONDON • STOCKHOLM • AMSTERDAM • BRUSSELS • ZURICH • MEXICO CITY

A NEW, LIGHT-DUTY

Muntin Bar

IN PITTCO STORE FRONT METAL





● This new Muntin Bar (No. 32) was designed in answer to numerous requests for a light-duty bar. It can be reinforced with all standard Pittco stiffeners, and may be used both horizontally and vertically. A concealed connecting strap fastens intersections securely. Because of its shallow profile, this Muntin Bar is ideal for the Colonial-type store front with its small rectangular lights, and in other installations where heavy supports are not required.

Muntin Bar No. 32 possesses the same rich, satin-smooth finish, sharp profile and rigid strength found in all other Pittco extrusions.

You can examine this bar and all the principal Pittco members in the Pittco Metal Sample Case, which our representative will gladly show you. See Sweets Architectural Catalog for the address of our nearest office.

PITTCO STORE FRONT METAL

PAINTS · GLASS · CHEMICALS · BRUSHES · PLASTICS

PITTSBURGH PLATE GLASS COMPANY

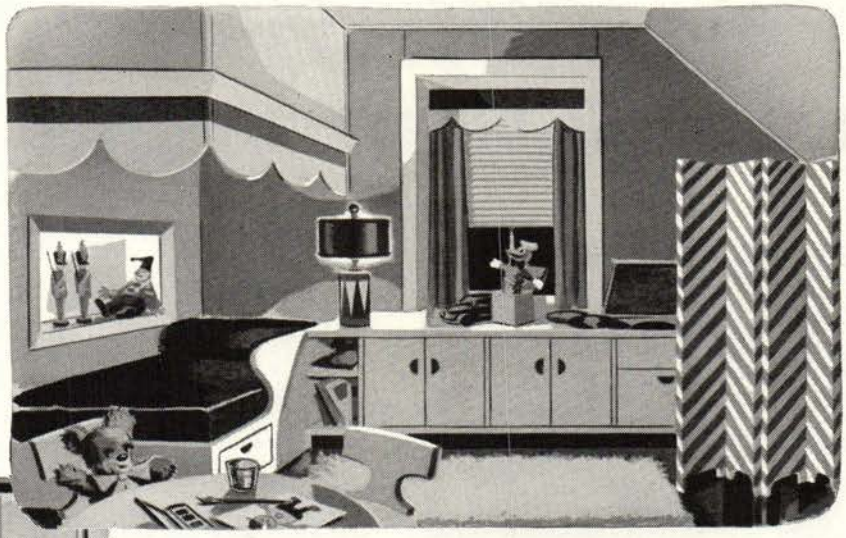
HOW to shorten the trip from here to here

with the MASONITE HARDBOARD FAMILY

From plan to finished structure, the trip is shorter—smoother—when you use the Masonite* Hardboard family! These hard, smooth, grainless wood panels—available in 19 types and thicknesses—speed construction all along the line—reduce building costs—assure quality and owner satisfaction. For example—

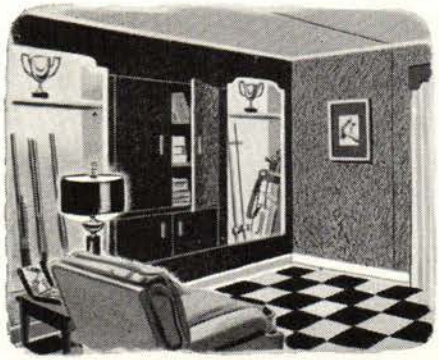
HOW to Speed Dry-Wall Construction . . .

Specify super-smooth panels of the new Masonite ¼" Panelwood*. These big, sturdy panels, 4′ wide and 8, 10 and 12 feet long, go right over open framework. Panelwood won't crack, split, splinter or dent—takes any applied finish—gives lifetime service.



HOW to Provide Low-Cost Built-Ins

You can cut the cost of built-in features by specifying Masonite Hardboards. Above, the handy cabinet under the laundry trays has ends of 3/16" Tempered Presdwood*. Doors are ⅛" Tempered Presdwood on wood frames. Masonite Hardboards save construction time because they are so easily worked with ordinary carpenter tools.



HOW to Make Owners Say "Ah"

Masonite Leatherwood—a Masonite Hardboard with the rich texture of Spanish-grain leather—gives you wide scope in planning beautiful rooms at moderate cost. Leatherwood is ⅛" thick, comes in sturdy panels 4′ wide and up to 12′ long—can be nailed or fastened with adhesive over any solid backing—and even bent to modern contours.

MASONITE CORPORATION

*Trade-marks Reg. U. S. Pat. Off. "Masonite" signifies that Masonite Corporation is the source of the product.

Useful Information—Yours for the Asking—Mail the coupon!

Masonite Corporation
111 West Washington Street
Chicago 2, Illinois

Gentlemen:

For my files, please send me information and literature about Masonite Hardboards.

Name.....

Address.....

City.....*State*.....

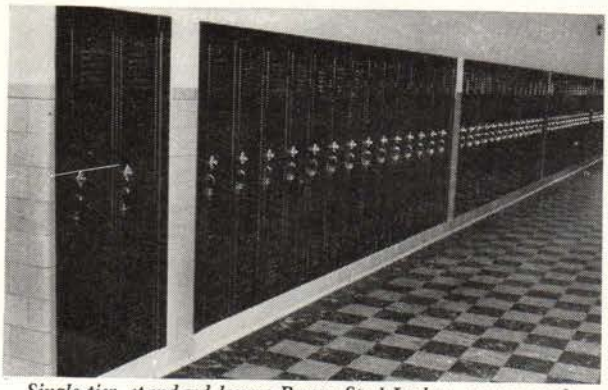
PA-6

There are 19 Types and Thicknesses of MASONITE HARDBOARDS for 1000 Uses

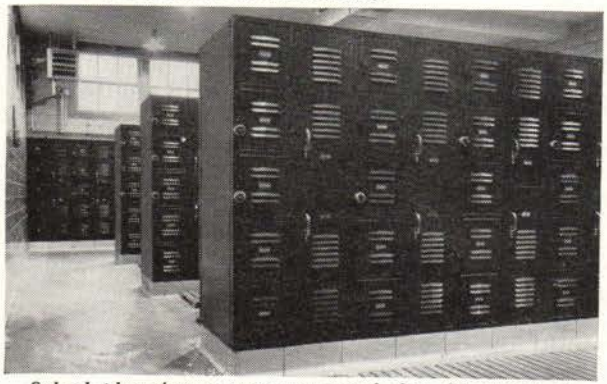
Junior High School, Livingston, N. J. Supervising principal, Frank B. Stover; architect, F. A. Elsasser, Union, N. J.; general contractor, Arthur Venneri Company, Westfield, N. J.

New Jersey Junior High

STANDARDIZES ON BERGER STEEL LOCKERS



Single tier, standard louvre Berger Steel Lockers are recessed in corridor walls. Each is furnished with a combination lock, number plate, coat hooks and hat shelf.



School planning experts recommend that the number of individual gymnasium box lockers provided be equal to ½ of 110% of the building's capacity for each sex. Lockers for street clothes need not exceed 150, as more than this number of persons seldom use the gym at one time.

Livingston Junior High School is equipped with BERGER steel corridor and gymnasium lockers

Conforming beautifully with traditional colonial architecture, this new building has followed another growing school tradition—the use of Berger Steel Lockers wherever safe, convenient storage is required.

Architects and builders of Livingston Junior High School—with the assistance and cooperation of local Berger representatives—have assembled an efficient, workable grouping of Berger single tier recessed corridor lockers, plus a highly functional gymnasium grouping of double tier and individual box lockers.

As largest suppliers of steel school storage equipment to America's schools, Berger serves the educational world completely . . . from kindergarten to university. Berger service relieves you of all details. It starts with sound recommendations—based on long experience—as to numbers and types of lockers needed, while your school job still is in the planning stage. Then, it follows through until the school is completed and in use.

Whether your latest school job already is underway or still is in the future, call in your Berger representative for ideas, *now*. See Sweet's Architectural File, or write us for more information.

BERGER MANUFACTURING DIVISION
Republic Steel Corporation
CANTON 5, OHIO

BERGER STEEL SCHOOL EQUIPMENT ®

REPUBLIC STEEL ®

"A complete steel equipment service for the schools of America"

STEEL Lockers, Wardrobes, Storage Cabinets
STEEL Office Equipment and Furniture
STEEL Cabinets for Kitchens, Laboratories. Dispensaries
STEEL Shop Equipment, Shelving
STEEL Book Shelf Units, Library Stacks

Johns-Manville Floorings—

THERE ARE TWO!

J-M ASPHALT TILE

J-M TERRAFLEX

1. J-M ASPHALT TILE . . .

Standard of quality . . . chosen for United Nations Building

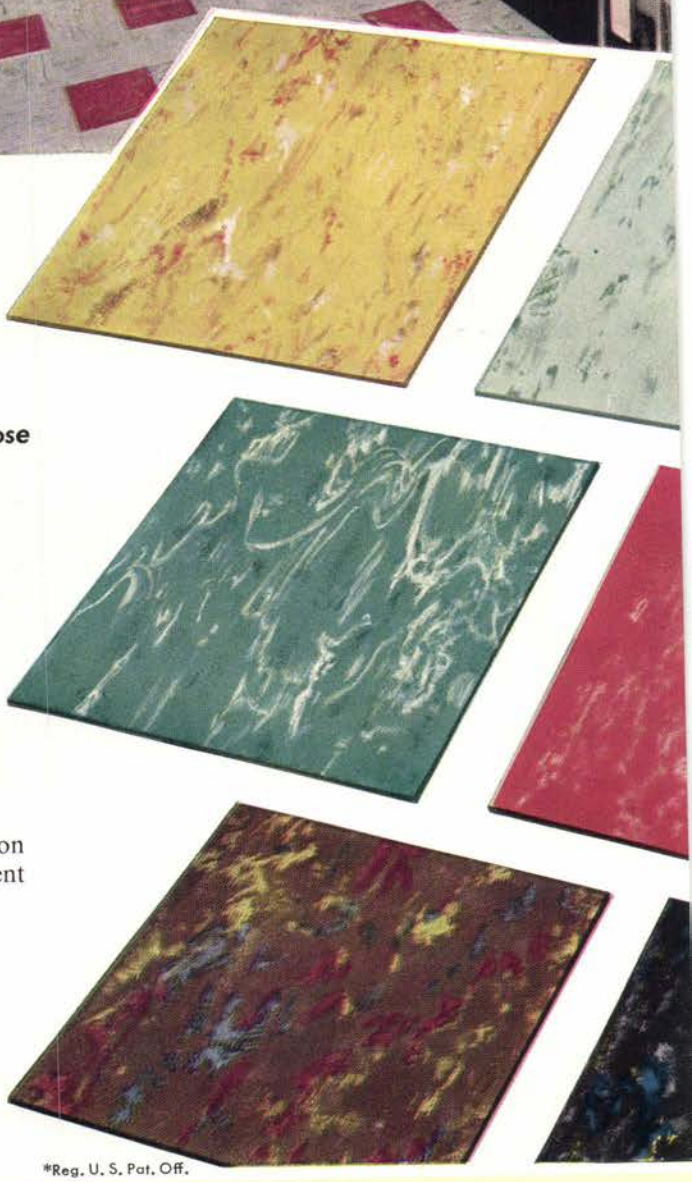
2. AND J-M TERRAFLEX . . .

New plastic-asbestos tile—nearest approach to an ideal all-purpose flooring ever developed!

● When you want a quality floor covering at *low initial cost*, you have every reason for preferring J-M Asphalt Tile. It is long-wearing, easy to maintain, and the units come in a wide range of attractive colors. Today asphalt tile is the most widely used and accepted floor covering for all types of commercial and institutional buildings!

BUT, when your preference is for the *best* there is, look to Terraflex! It is the revolutionary *new* flooring made of *plastic-asbestos*, pioneered and developed by Johns-Manville. Terraflex will outwear all other types of decorative flooring *two to one*. The resilient tile-like units are *unaffected* by greases, oils, alkaline moisture. They come in clearer, brighter colors . . . can be safely used on concrete floors in contact with the ground...withstand normal movement of wood sub-floors without breaking.

Whether you select J-M Terraflex or J-M Asphalt Tile, your flooring choice will be on a firm foundation. See your J-M Approved Flooring Contractor, or write for our new flooring brochures. Johns-Manville, Box 290, New York 16, N. Y.



Johns-Manville

*Reg. U. S. Pat. Off.

J-M ASPHALT TILE FLOORING has the Mark of Distinction ... the label of the Asphalt Tile Institute

NOW.. STANDARD CASEMENTS

FOR THERMOPANE GLAZING

(WITHOUT MUNTINS)

To meet the growing use of *Thermopane** insulating glass in windows throughout the house, several steel casement manufacturers are now producing standard units with sections of proper width and depth to assure a good installation.

This simplifies the insulation of casement windows and makes it economical to u e *Thermopane* units in them. It answers the problem of how to insulate casements used to flank *Thermopane* picture windows. Home owners can enjoy the benefits of double glazing without the bother of storm sash.

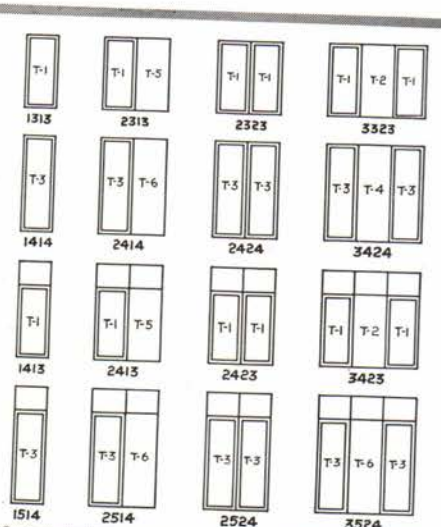
The diagrams below show standard casement windows in wood and steel designed specifically for *Thermopane* glazing. The *Thermopane* units can be obtained in 1/8" Polished Plate Glass or DSA Window Glass, with 1/4" air space. For full information, see your Libbey·Owens·Ford Glass Distributor, or write us.

*®

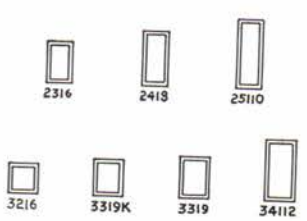
Residential Steel Casements for *Thermopane* Glazing

Thermopane Standard Sizes for Steel Casements

T-1 $15\frac{15}{16}$ x $35\frac{5}{16}$
T-2 $15\frac{15}{16}$ x $36\frac{11}{16}$
T-3 $15\frac{15}{16}$ x $47\frac{11}{16}$
T-4 $15\frac{15}{16}$ x $49\frac{7}{16}$
T-5 $17\frac{3}{16}$ x $36\frac{11}{16}$
T-6 $17\frac{3}{16}$ x $49\frac{7}{16}$



Pella Standard Wood Casements for *Thermopane* Glazing

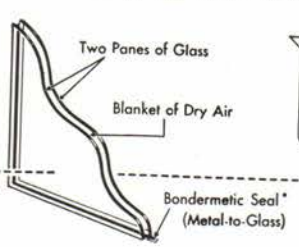


These sash units may be used in multiples and as flanking casements.

Thermopane Standard Sizes for Pella Casements

20" x 36"
20" x 48"
20" x 60"
24" x 24"
24" x 32"
24" x 36"
24" x 48"

FOR BETTER VISION SPECIFY THERMOPANE
MADE WITH POLISHED PLATE GLASS



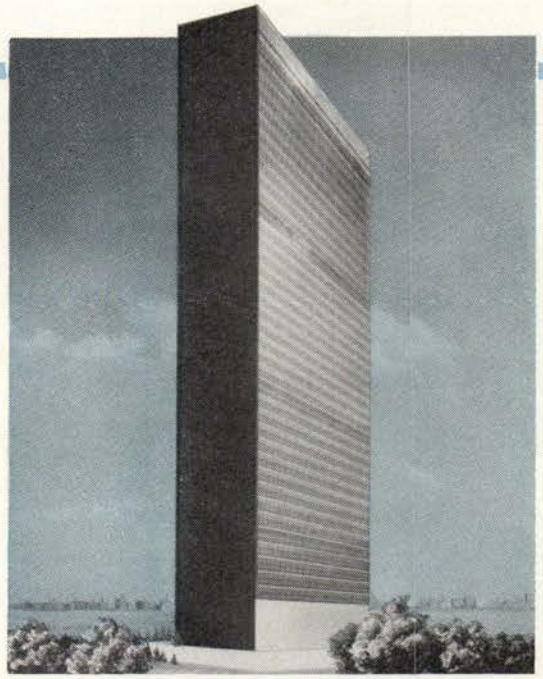
L O F

Thermopane

MADE ONLY BY LIBBEY·OWENS·FORD GLASS COMPANY
4765 Nicholas Building, Toledo 3, Ohio

UNITED NATIONS
SECRETARIAT BUILDING

. . . tall, serious, structurally efficient forerunner of World history in the making . . . "workshop" for member delegations and specialized agencies in their efforts for World organization for peace...



. . . located on the East River in the heart of New York City . . . potential site of man's most beneficent work . . . a beacon for the peaceful aspirations of the World.

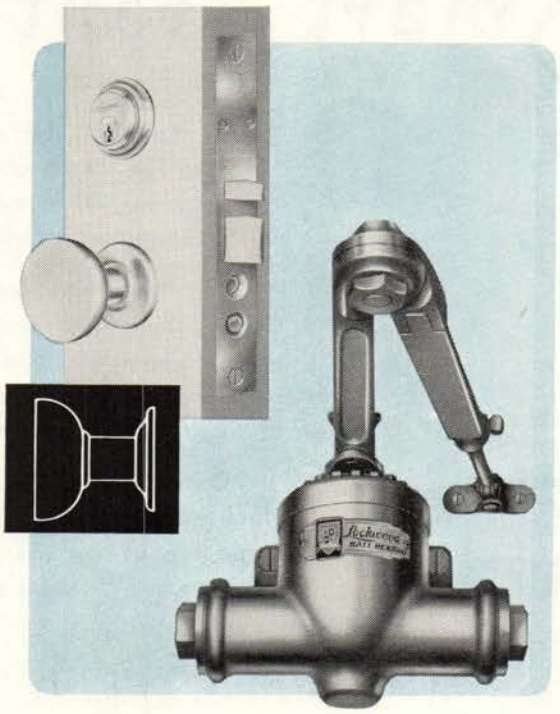
Wallace K. Harrison, Director of Planning.

• SYMBOL OF WORLD'S HOPE FOR SECURITY •

"Finishing Hardware by Lockwood"

SYMBOL OF HARDWARE INDUSTRY'S STANDARD OF SECURITY . . .

Lockwood's "5100 SERIES" HEAVY DUTY, STANDARDIZED MORTISE CYLINDER LOCKS . . . attractive, specially designed urn-shaped knobs with concealed screw roses...secure "Lockwood 12 Section Grand Master Key System" . . . efficient, precise Lockwood Ball Bearing Door Closers . . . specially designed door pulls and many other Lockwood engineered items. We are sincerely proud of our part in this historical project.



Lockwood

LOCKWOOD HARDWARE MFG. CO.
Division of Independent Lock Company
FITCHBURG • MASSACHUSETTS

Archts. Hadley & Worthington, Springfield, Illinois

Smart Front.. Smart Store

FIRST IMPRESSIONS count heavily when milady is off on a shopping spree. The artistry of alluring window display, expertly framed, presents irresistible appeal to eye and purse. Trim and beautiful Brasco Settings add the touch that completes the picture and sets it off to best advantage.

Architects detail Brasco not only for its sound structural strength but also for the variety of custom designed effects easily obtained with our wide selection of standard stock members. Choice of either handsome stainless steel or anodized aluminum offers quality store front metals to suit varying conditions and budgets.

see our CATALOG in SWEET'S FILE ARCHITECTURAL

Owners prefer Brasco because its distinguished appearance helps to identify the store as smart, up-to-the-minute and pleasant to shop in. Regardless of the size of your store front job you can build it better with Brasco. Write for our 1950 catalog and full size construction details.

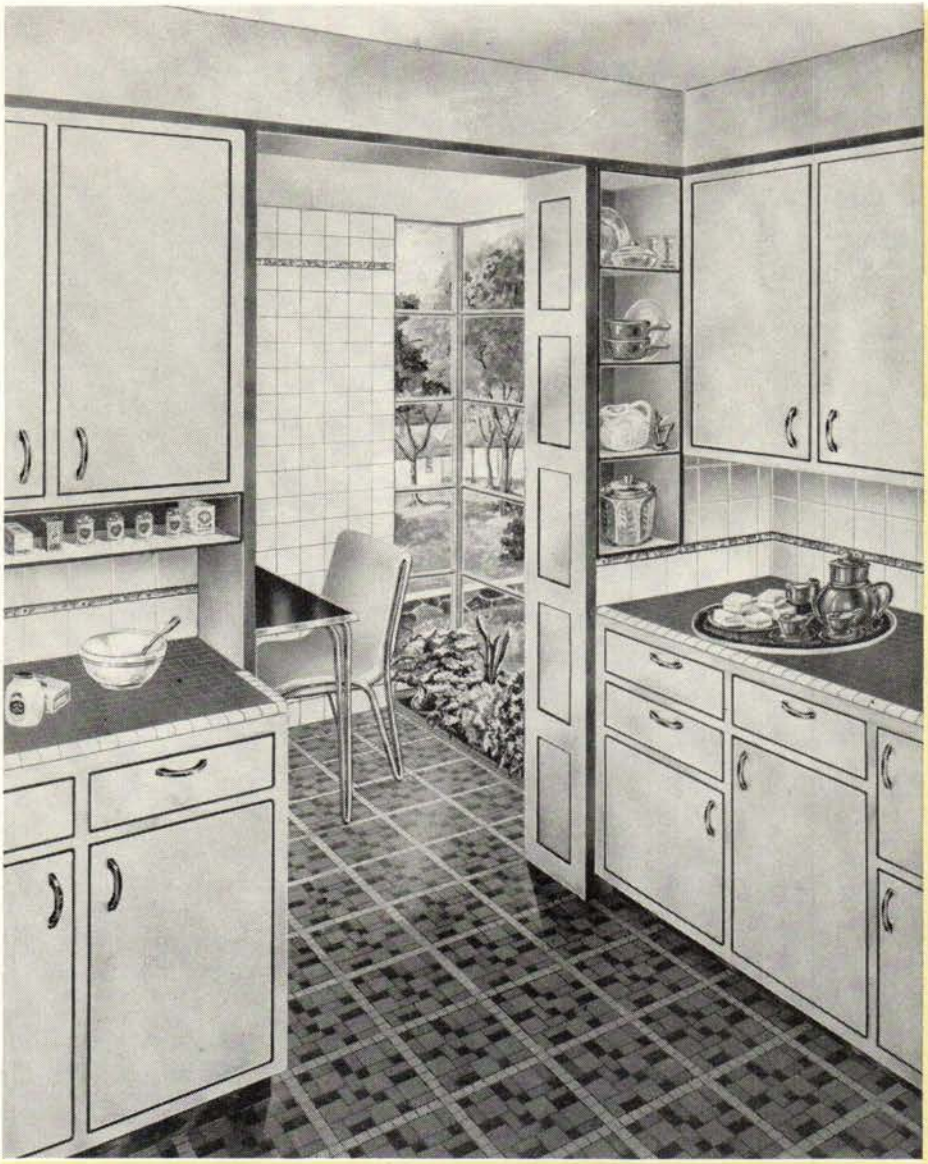
★ ★ A COMPLETE LINE FOR EVERY DESIGN ★ ★

Brasco SAFETY-SET STORE FRONTS

BRASCO MANUFACTURING CO.

HARVEY · (Chicago Suburb) · ILLINOIS

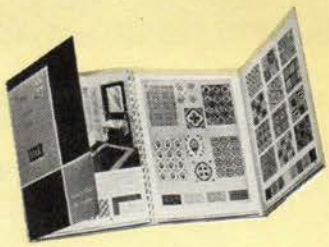
Specialists in Metal Store Front Construction for more than 40 Years



One of many full color illustrations in The Color Book of Tile. Complete tile specifications are given for each installation.

Quick Easy Way To Specify TILE

See it... PICTURE it in COLOR



in THE New COLOR BOOK OF TILE

For big homes and little homes, for country homes and city apartments . . . specifying tile is quick and easy with American-Olean's new Color Book of Tile.

You select and specify glazed and unglazed tile, patterns, strips, inserts and accessories from full color illustrations of tiled bath, kitchen, powder and game rooms . . . see side-by-side comparisons of alternate colors and patterns.

You save time, and assure exact follow-through, with ready-to-copy, 42-word specifications for each installation.

Satisfy yourself and satisfy your clients by specifying tile this amazingly quick, sure way from the American-Olean Color Book of Tile.

FREE **To Every Architect**
American-Olean
Color Book of Tile

The most complete, most helpful tile book ever produced. 100 pages, including 30 of typical installations in full colors; plus color charts of wall and floor tile, trim, and hand decorated inserts. Full architectural data and ready-to-use specifications. If you have not yet received your copy, or if you need another, write today.

American-Olean Tile Company
Executive Offices
950 Kenilworth Ave., Lansdale, Pennsylvania

IT'S REAL CLAY TILE

UNITED NATIONS HEADQUARTERS

SECRETARIAT BUILDING

NEW YORK CITY

TO HAVE

TYLER

ELEVATOR ENTRANCES AND CARS

Elevator Entrances, designed by United Nations Headquarters Planning Office, Wallace K. Harrison, Director, to be furnished by Tyler in the Secretariat Building.

THE W. S. TYLER COMPANY • • • CLEVELAND, OHIO

o: Gottscho-Schleisner

U. N. HEADQUARTERS PROGRESS REPORT

director of planning:
Wallace K. Harrison

board of design consultants:
G. A. Soilleux (Australia)
Gaston Brunfaut (Belgium)
Oscar Niemeyer (Brasil)
Ernest Cormier (Canada)
Ssu-ch'eng Liang (China)
Le Corbusier (France)
Sven Markelius (Sweden)
N. D. Bassov (U.S.S.R.)
Howard Robertson (United Kingdom)
Julio Vilamajo (Uruguay)

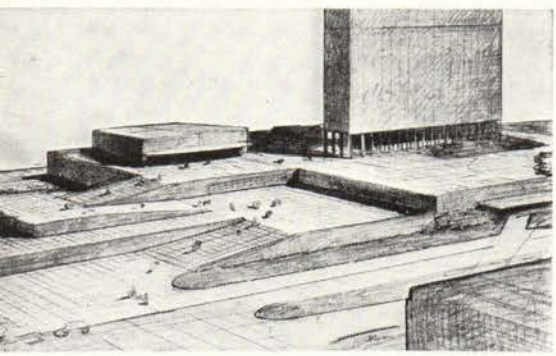
associate architects and engineers:
Louis Skidmore
Gilmore D. Clarke
Ralph Walker

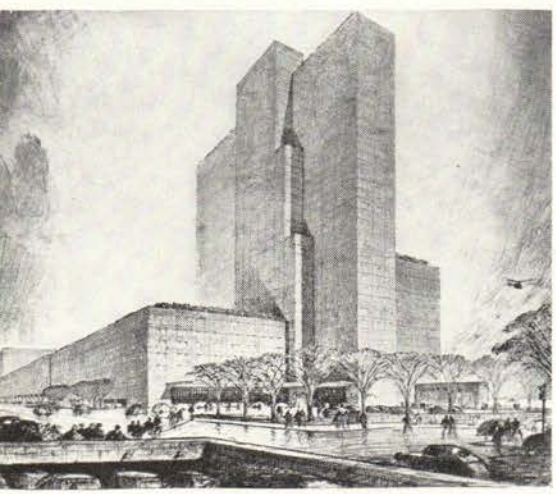
special consultants:
Josef Havlicek (Czechoslovakia)
Vladimir Bodiansky (France)
John Antoniades (Greece)
Matthew Nowicki (Poland)
Peter Noskov (U.S.S.R.)
Hugh Ferris (U.S.A.)
Ernest Weissmann (Yugoslavia)

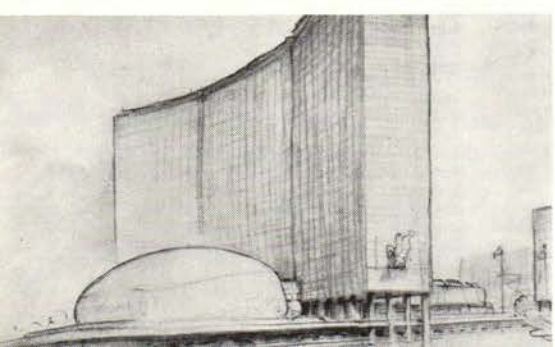
The site, with 42 Street in immediate foreground; First Avenue, left. All of the buildings, except the white city building (which will become the U.N. Library) were torn down.

Below and at extreme right, facing page: typical Hugh Ferris sketches of various proposed schemes. *Photos: United Nations*

Photo: United Na







U. N. HEADQUARTERS PROGRESS REPORT

The development of the permanent headquarters for the United Nations is undoubtedly the most notable homebuilding venture the world has ever known. The moment the world organization was born in 1945 in San Francisco, the need for a home for this multi-lingual, multi-faceted entity was evident. As with many another new family, the immediate problem was to find temporary lodgings, and this was done—first in London; then, at Hunter College in New York; and later at Lake Success and Flushing Meadows, Long Island.

Now, at last, the rooftree is up on one of the major wings of the permanent home—the Secretariat—and the ground is cleared and construction begun on succeeding elements of the permanent headquarters in New York City. With the virtual completion of the shell of the Secretariat and installation of a few actual suites of typical offices, PROGRESSIVE ARCHITECTURE brings to its readers this progress report on what has variously been referred to as "the most important building program in the world" and "the workshop for world peace."

Decision to locate U.N. headquarters in the United States followed an invitation from the U. S. Congress at the end of 1945. During 1946, U.N. committees inspected various sites that were offered throughout the States, particular consideration being given to those in Philadelphia, Boston, San Francisco, and the metropolitan area of New York. While the second part of the first regular session of the General Assembly was in session in New York in 1946, John D. Rockefeller, Jr.'s offer of $8,500,000 for the purchase of a site along the East River boundary of Manhattan, extending from 42 Street to 48 Street, was made and quickly accepted. The gift was contingent upon the city's willingness to contribute the street areas, riverfront rights, and other portions of land that would make the site continuous and uninterrupted—a condition that the City was prompt to meet.

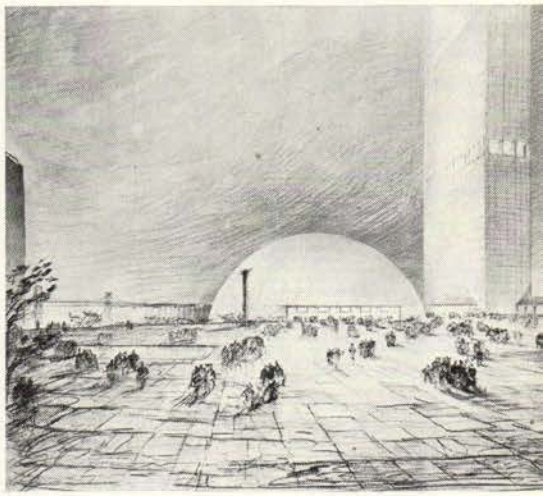
Throughout 1947, the Headquarters Planning Commission, composed of an outstanding group of architects from many nations, with Wallace K. Harrison of New York, as Director of Planning, worked literally day and night to develop the parti and site-development

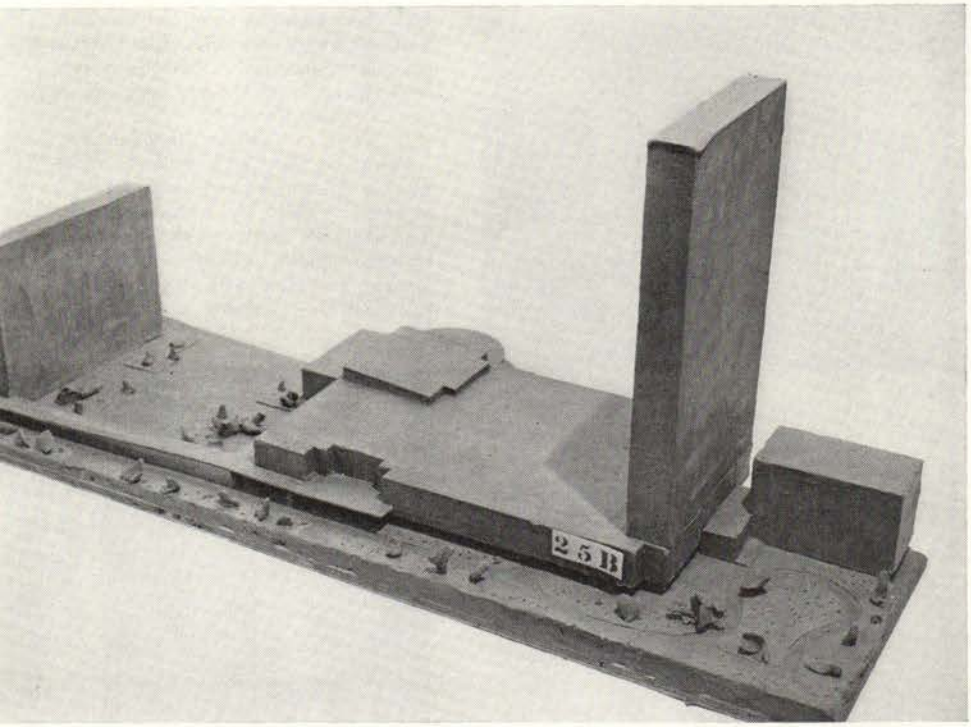
plan, and the U. S. Government extended a $65,000,000 interest-free loan agreement to finance the project. Daily meetings were held; each of the architects pooled his independent studies with those of the others; models were made to study mass possibilities; untold numbers of sketches of proposed schemes were made by Hugh Ferris for joint consideration; and, as the weeks went on, the basic forms and arrangement of major elements on the site jelled into the adopted pattern.

With the program thus stated, the site was cleared during 1948; architectural and engineering details were refined and actual construction began in the Fall of that year. October 5, 1949, the U. N. flag was raised to mark the completion of the Secretariat's steel framework. Today, this 39-story "workshop," glittering with walls of glass along its eastern and western facades and terminated with sheer end walls of marble, is receiving its interior finishes; the structure of the adjoining meeting hall area and General Assembly Building is taking shape. By the end of this year, the Secretariat is expected to be ready for occupancy. Completion of the meeting halls and the General Assembly is scheduled for some time in 1951.

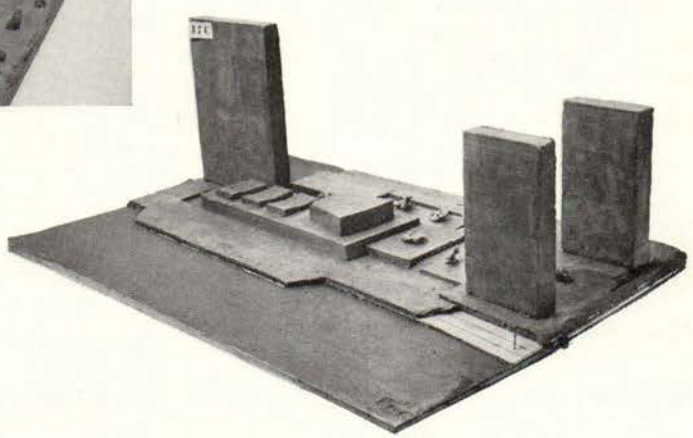
When the editors of **P/A** recently had an opportunity to visit the designing offices, as well as the building in its present stage, it struck us that many readers might enjoy seeing the project as it now exists and as it is still being designed. This study, then, is in the nature of a progress report—a report on the status of the construction, a report on decisions that are being made as to materials and equipment . . . a report on the design studies that are still progressing. Through these pages we attempt to let the reader visit the U. N. design headquarters with us, to watch the confident contemporary concept grow.

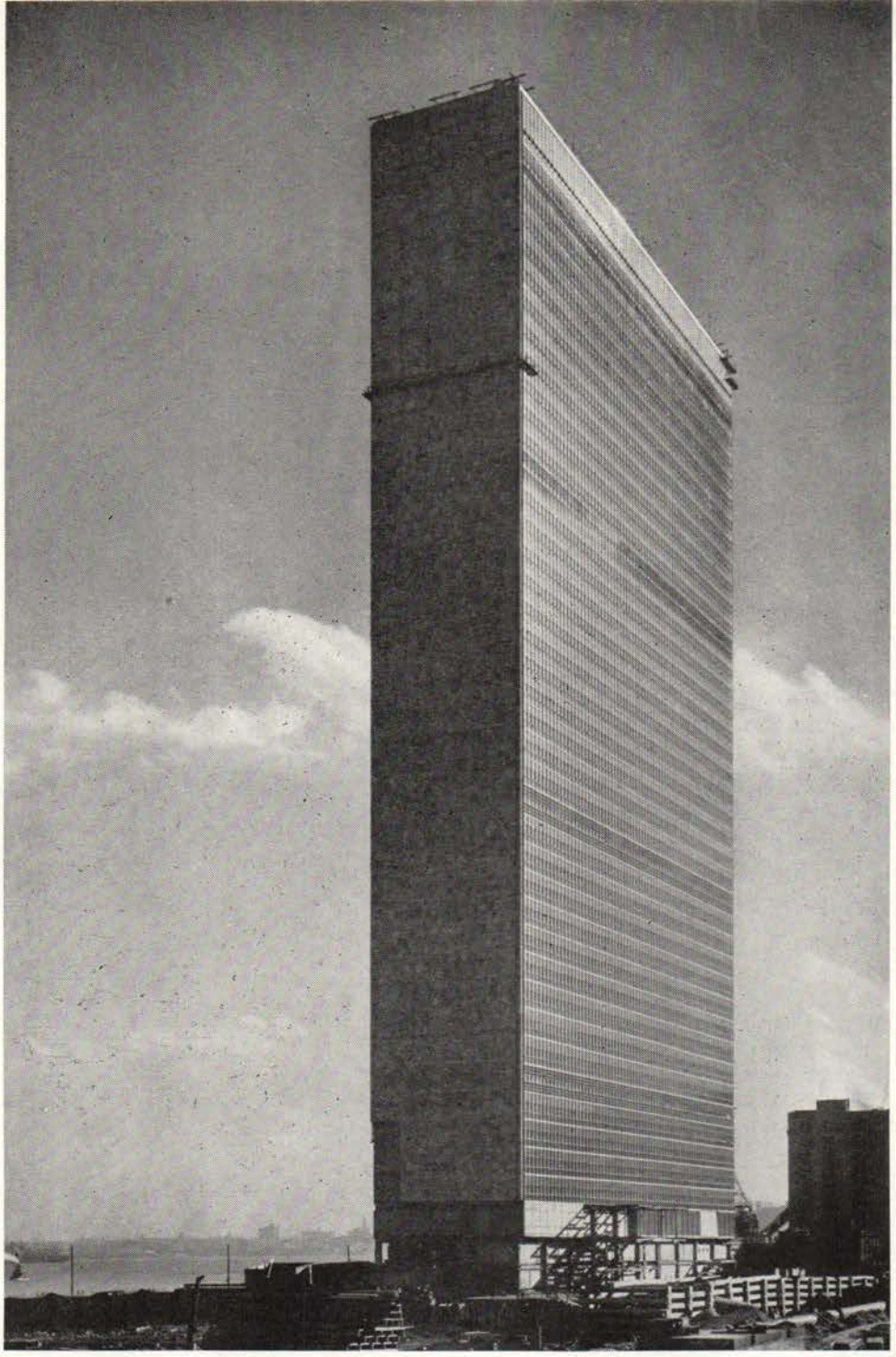
preliminary studies





At left and below: models made in the process of studying arrangements of building masses. *Photos: United Nations*

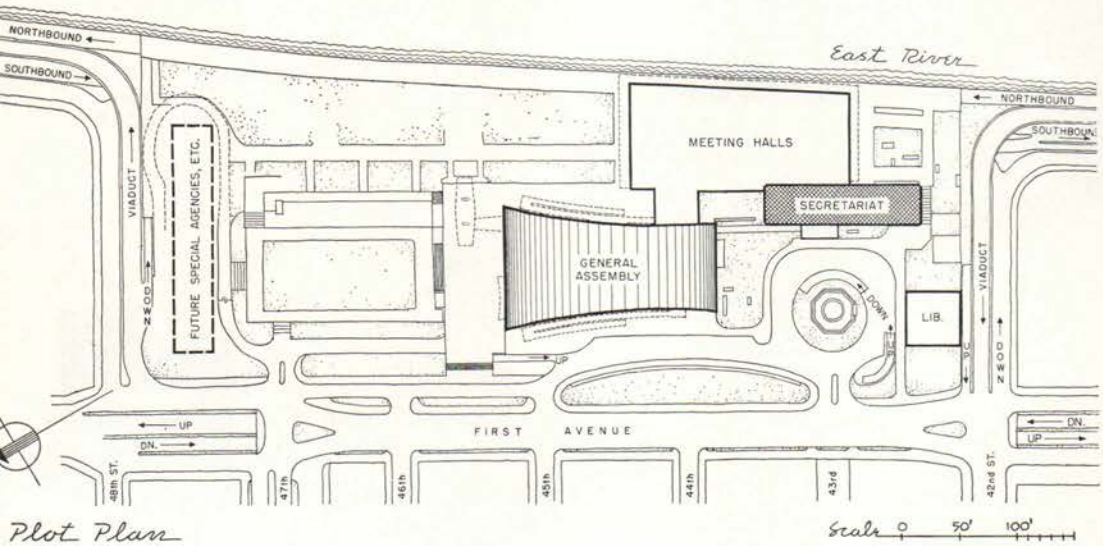




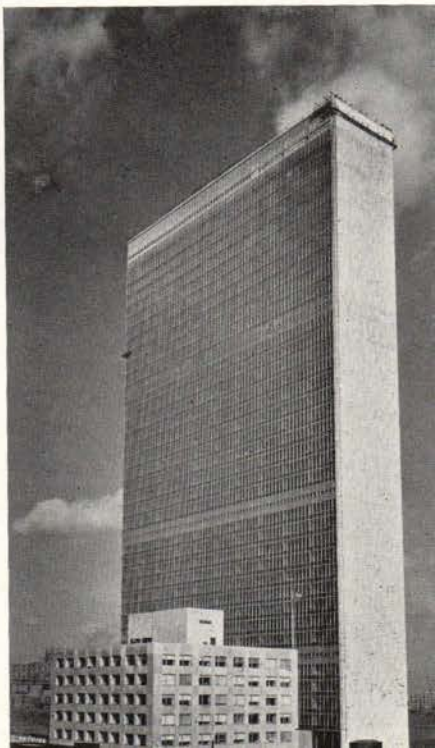
Left: the Secretariat, seen from the northwest corner of the site. First Avenue (immediate foreground) will be a two-level highway when the city completes its part of the development.

Photo: United Nations

Below: the Secretariat, from the southwest—a 39-story-high window, set in a frame of marble. The foreground building, originally built for the New York Housing Authority, will serve as the U.N. Library, connected with the Secretariat by tunnel. *Photo: J. Alex Langley*



Plot Plan



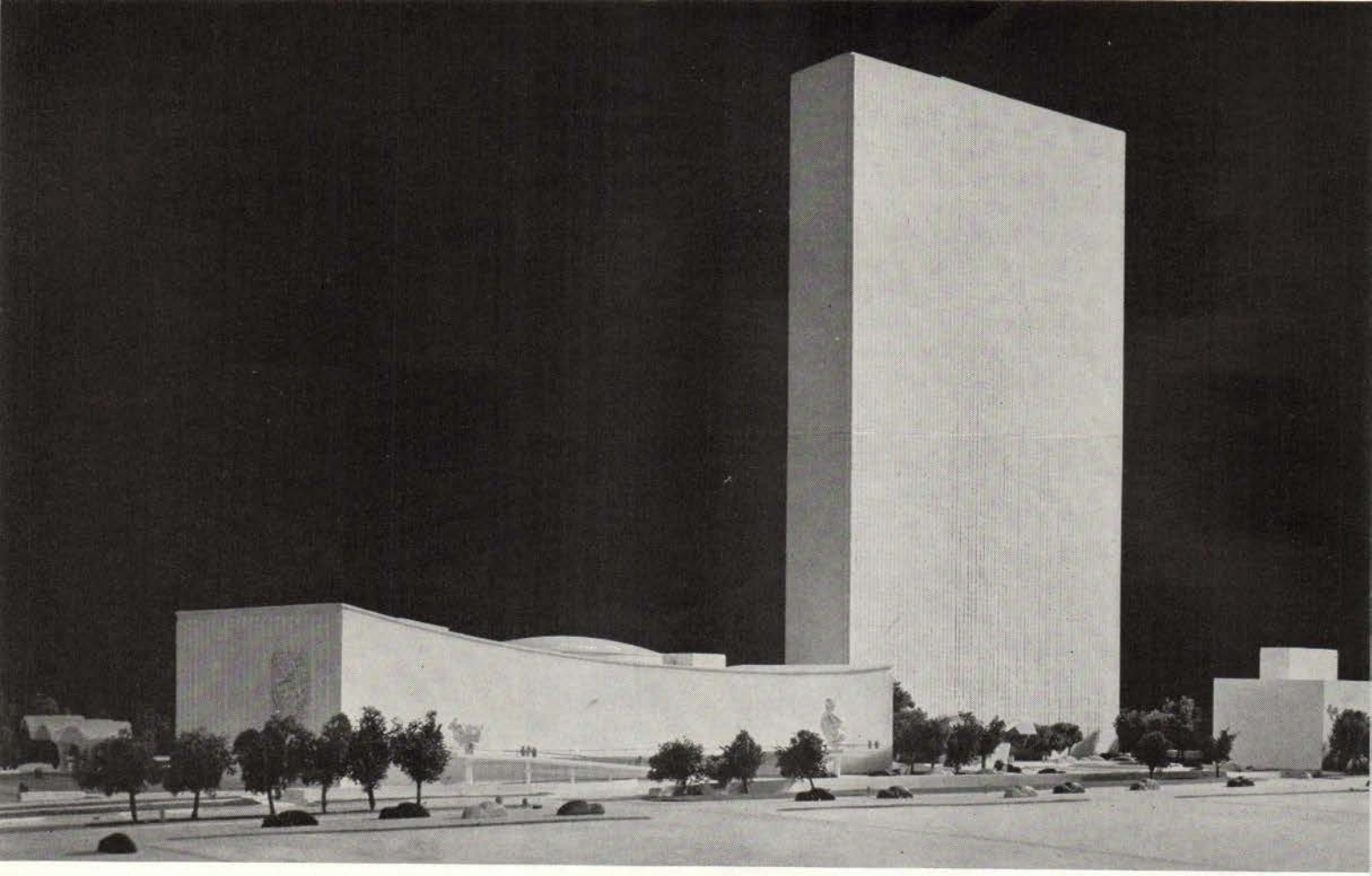
In the Secretary-General's initial report on the basic scheme for the U.N.'s permanent headquarters, the site was described as follows: "The East River site, extending 1500 feet from 42 to 48 Streets and from First Avenue to the edge of the water, has sufficient scale for applying the fundamental elements of modern urbanism—sunlight, space, and verdure. Protected, yet given spaciousness by the wide expanse of the East River, the site has breadth enough to be made into a living unit of strength, dignity, and harmony."

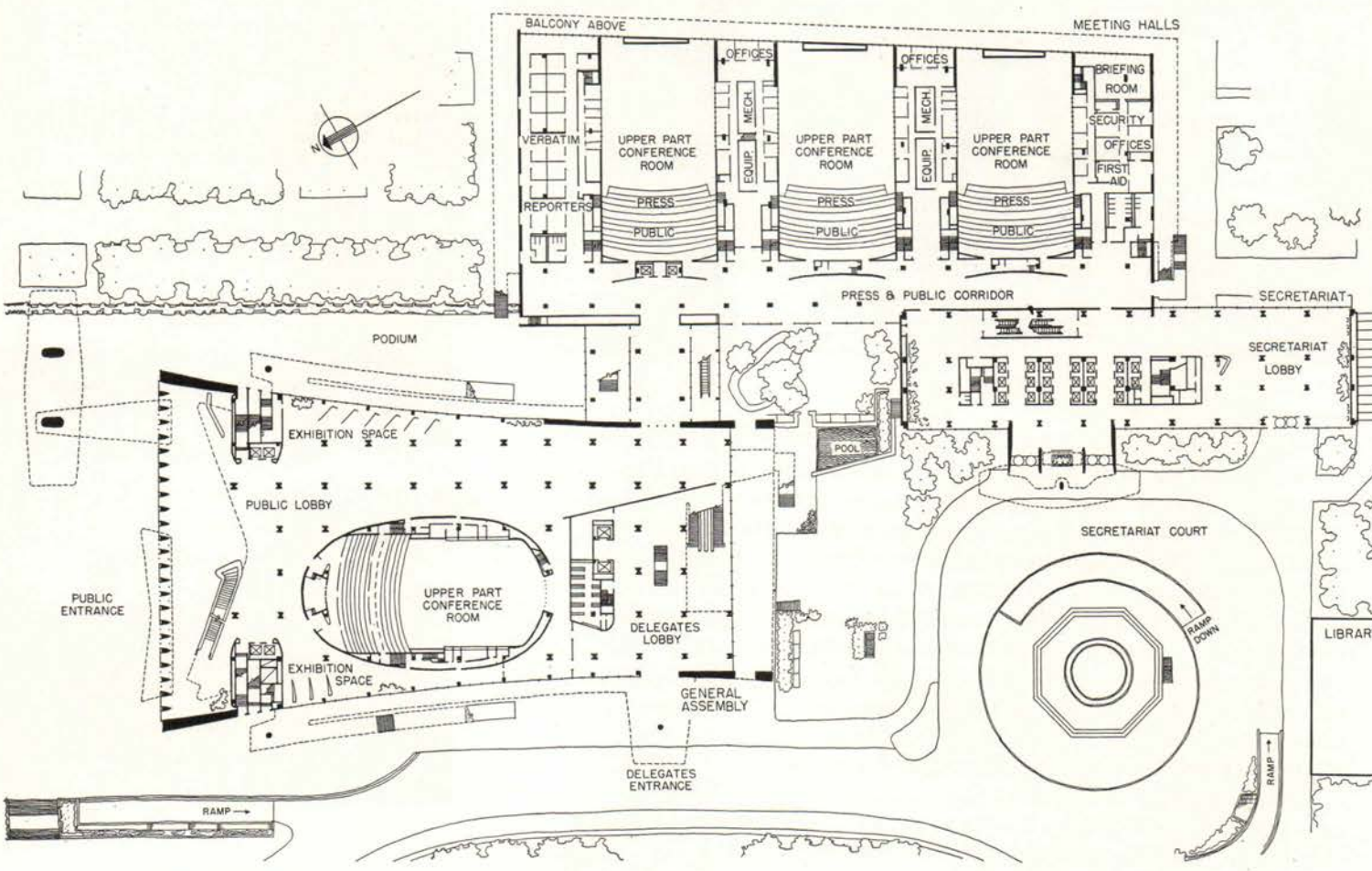
As finally organized, the General Assembly Building occupies the heart of the site, flanked by parks and courts of honor. A large open space for ceremonial and public entrance occurs at the eastern terminus of 47 Street. At the south of the site, set well back from First Avenue, is the tall Secretariat Building, with a low block of meeting halls adjoining on the river side, overhanging Franklin D. Roosevelt Drive. The Secretariat will house executive offices of the Secretary-General and Assistant Secretary-General; offices for the major U. N. Councils; many general business offices for such branches as the legal department, public information, transportation, translators, interpreters, typing pools, etc.; and dining rooms of various sorts. Space for a future building, to house offices for Delegations and Special Agencies, has been left at the northern end of the site. Although there are now 59 member nations, initial facilities will provide for 65, and space enough allotted for an eventual total of 80. The Secretariat was schemed on a north-south orientation by the desire to minimize the shadow it will cast on the site; aligned east-west, the building would have kept the site in almost continuous shade.

Left: the eastern side of the building, viewed from Welfare Island in the middle of the East River. The vertical line is a construction hoist.

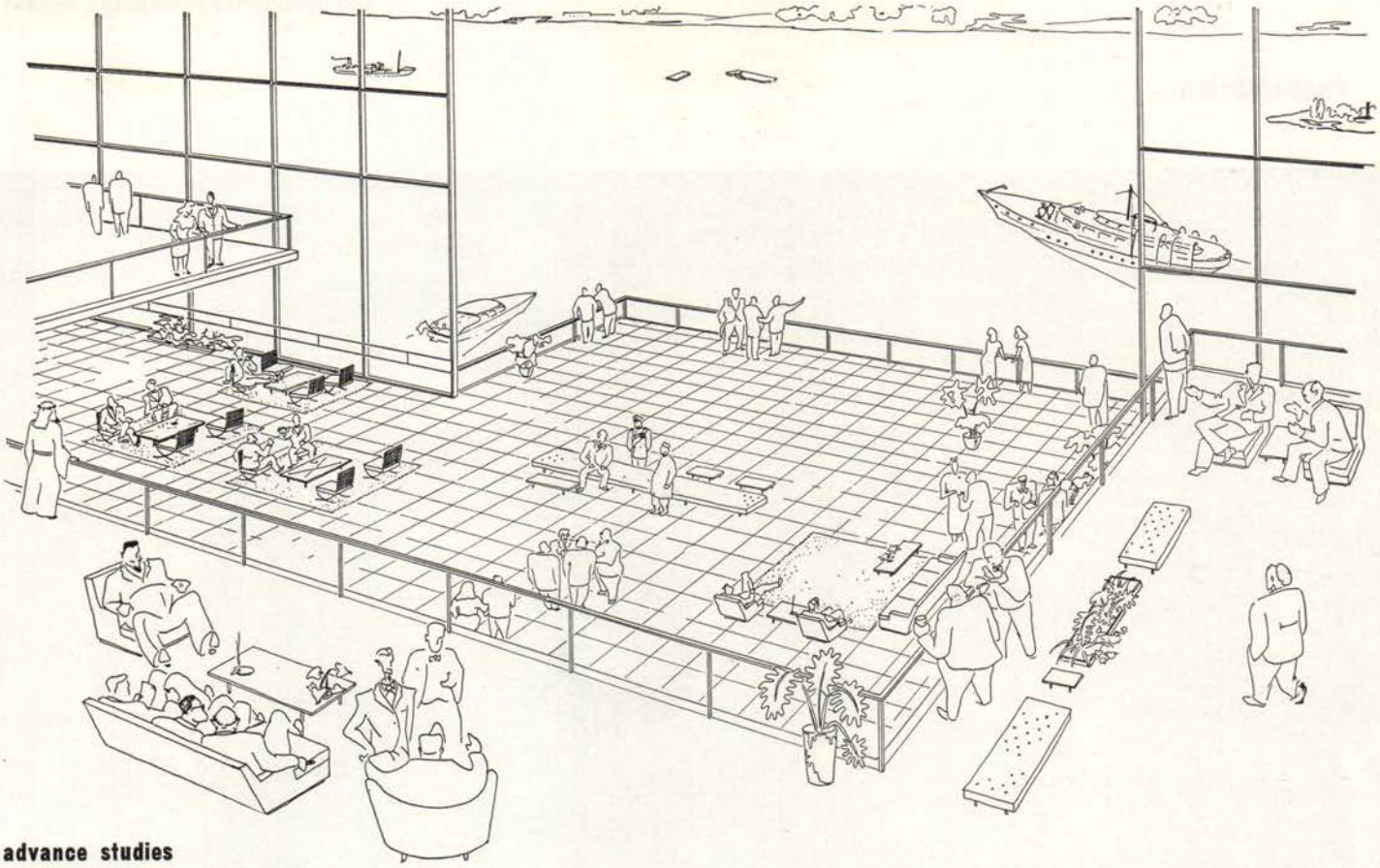
Below: evening along the East River—the U.N. Secretariat at extreme left of photo. Towers to the right include Tudor City, the Daily News Building, Empire State Building, Chrysler Building, River House, the Waldorf-Astoria Hotel (twin-eared); the General Electric Building, and Rockefeller Center.

Photos: Gottscho-Schleisner





Main Entrance Level (BASIC SCHEME)

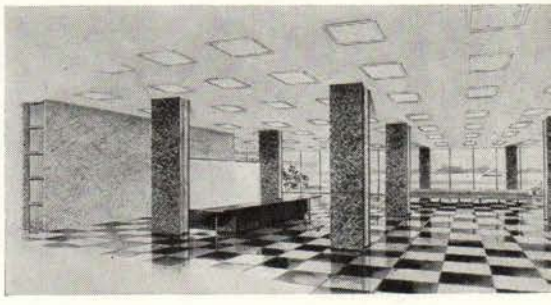


advance studies

The sketch plan on the facing page represents a preliminary stage in the development of the main entrance level to the Secretariat-Meeting Hall-General Assembly complex. Details of the Secretariat proper are fast reaching their final form, as subsequent pages will illustrate. Study and refinement of the other areas will proceed up to the deadline moment. In the General Assembly-south court area, below the level shown are two lower levels, chiefly for underground parking. Three basements occur beneath the Secretariat structure—maintenance and mechanical services, a delivery and shipping level reached by a drive under the eastern side of the building; and a floor for document reproduction, storage, etc.

Circulation at the entrance level includes direct access to the Secretariat (the entrance the press will also use) from the southern court, where there is also a ramp entrance to the underground parking garages; the Delegates entrance, at the southern end of the General Assembly Building, from which (via escalators and elevators) Delegates may proceed directly up to their lounge area, the meeting halls, or the General Assembly auditorium (on the floor level above the one shown) ; visitors' entrance, on the north side of the General Assembly structure. At this latter entrance, there will be exhibit areas and public circulation to conference rooms while, by means of stairs or elevators, guests will proceed to upper levels and so to spaces set apart for public attendance at sessions of the General Assembly or of one of the Councils (Security; Trusteeship; Economic, and Social) whose chambers occur above the conference rooms shown on this plan. While channels for employes, Delegates, the press, and visitors are all schemed for efficient, nonconflicting movement of the different groups, balconies and mezzanines are so planned on the floors above that the visitor will have a good view of all that is going on.

Inter-floor movement of things—messages, mail, documents, packages, and the like—will be handled by an integrated system of electric conveyors or dumb-waiters, coupled with pneumatic tubes operating from a central distribution point.



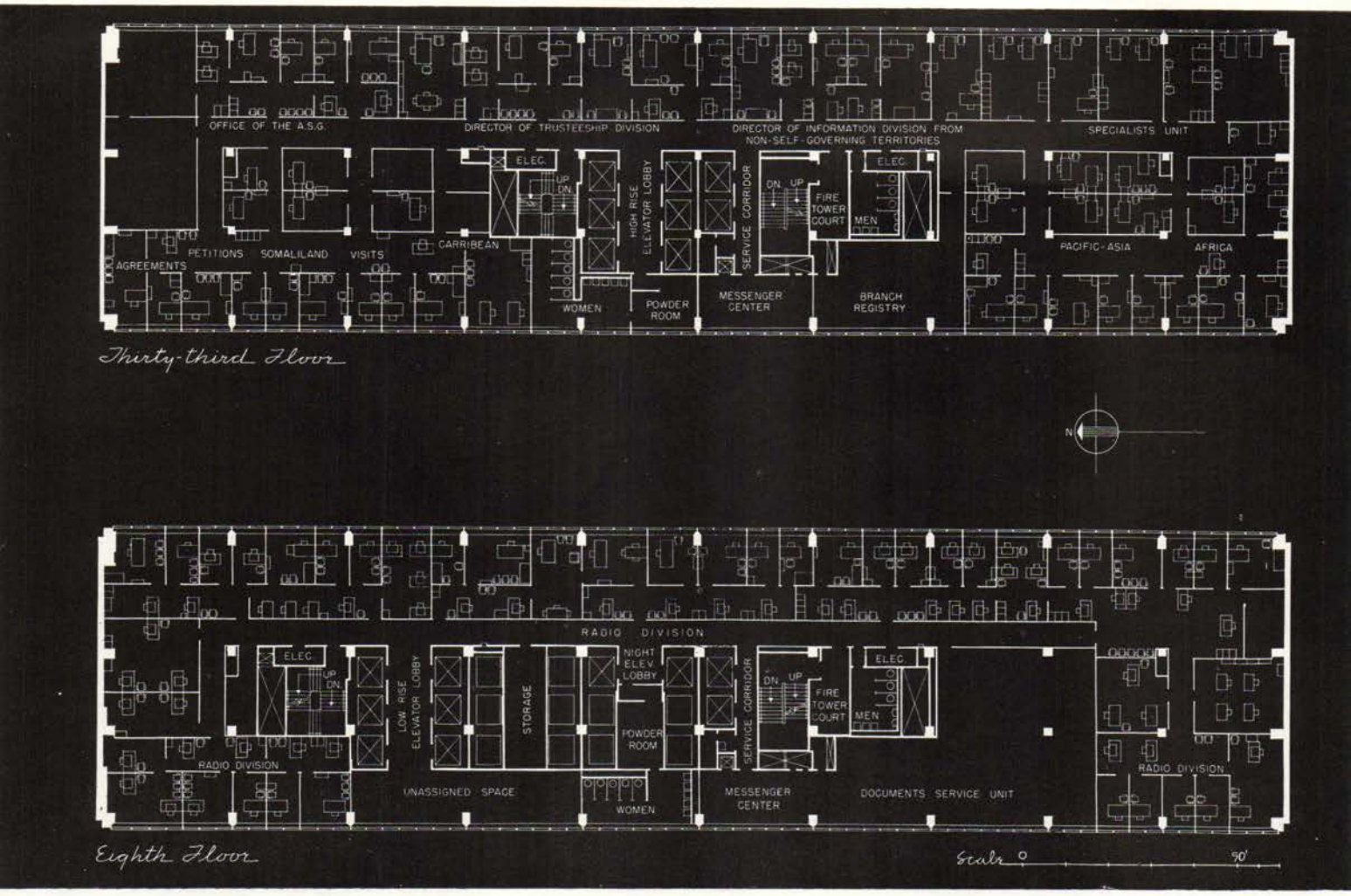
The photo of the official model across page is a detail shot of the General Assembly Building (left) and the 39-story Secretariat.

Above, top: a sketch study of the Delegates Main Lounge overlooking the East River from an upper level.

Immediately above: a recent study of the Secretariat Lobby at the south end of the main-entrance level.

Photos and renderings: United Nations

construction



Eighth Floor: typical office floor served by the low-rise elevator bank (through the 15 floor). This particular floor is for the radio division of the Department of Public Information—the northwest corner suite of which is shown in photographs on page 66.

Thirty-third Floor: typical floor served by high-rise elevator bank (above the 28 floor). In the northeast corner are offices of the Assistant Secretary-General; the remainder is made up of offices for the Department of Trusteeship and Information From Non-Self-Governing Territories.

OUTLINE SPECIFICATION

CONSTRUCTION: reinforced concrete foundations. **Frame:** structural steel. **Walls:** east and west—metal grid; aluminum and glass; north and south—masonry, marble surfaced. **Interior walls:** marble, canvassed plaster, painted plaster, glass, aluminum, painted steel, rough masonry painted. **Floors:** combination mesh and rod-reinforced concrete, finished with terrazzo, asphalt tile, carpeting, or cement (hardener). **Roof:** 5-ply built-up roofing; promenade tile over reinforced concrete slab. **Waterproofing:** trowel-on, brush-on, and membrane types. **Insulation:** acoustical—perforated metal pan ceilings, acoustical plaster; thermal—cellular glass in roof and walls; spray-on asbestos fiber in wall areas under windows. **Roof drainage:** cast-iron fittings and steel pipe. **Fenestration:** aluminum sash; spring sash balances; double-hung and architectural projected sash; fixed aluminum sash; heat-absorbing plate glass. **Partitions:** movable unit steel; marble; flush steel. **Doors:** hollow metal; rolling; swing and revolving; tempered plate glass at entrances. **Hardware:** mortise lock sets; floor-checking hinges; ball-bearing flush hinges; self-releasing panic exit equipment. **Paint:** oil paint or enamel (on plaster and ferrous metal); natural finish lacquer (on wood).

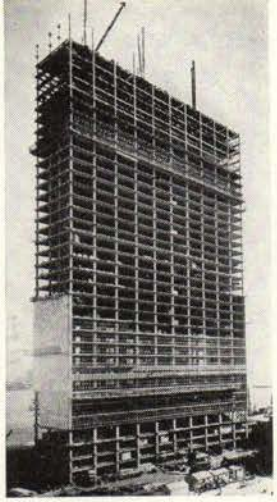
EQUIPMENT: Heating and air-conditioning: hot water convectors; copper and wrought iron pipe for radiant floor and wall systems; magnesia pipe covering; steam unit heaters; pneumatic controls; induction-type window air-conditioning units; refrigerant, ethylene glycol; centrifugal steam turbine compressor; adjustable wall-type grills; square-pattern diffusers; centrifugal-type blowers; filters: activated carbon, glass fiber, oil; pneumatic and hand-operated controls; chilled water coils. **Vertical transportation:** dumb-waiters; conveyors; moving stairways; electronic-control type elevators; wood frame cabs, finished in hardwood veneers; solid plastic handrails; entrance doors and surrounds: stainless steel (first four floors); baked enamel on furniture steel (typical). **Electrical:** low-reactance bus; 3-tube under-floor fiber duct system; copper wire; rigid conduit; circuit breakers; 4-foot long flush-louvered 3-tube fluorescent troffers, spaced 7'-0" o.c. across ceiling. **Plumbing and sanitary:** vitreous china, floor-type water closets; exposed quiet flushing, diaphragm type flush valves, with vacuum breaker and oscillating handle; hard rubber, open-front toilet seats; drinking fountains; group wash fountains; vitreous china lavatories; butt-welded steel water heater, copper lined. **Piping:** cast-iron; steel; brass; lead; copper tubing; vitreous clay sewer pipe. Water supply—gravity house tank supply; duplex, automatic centrifugal house pumps; sewage ejectors; wet-type sprinkler system.

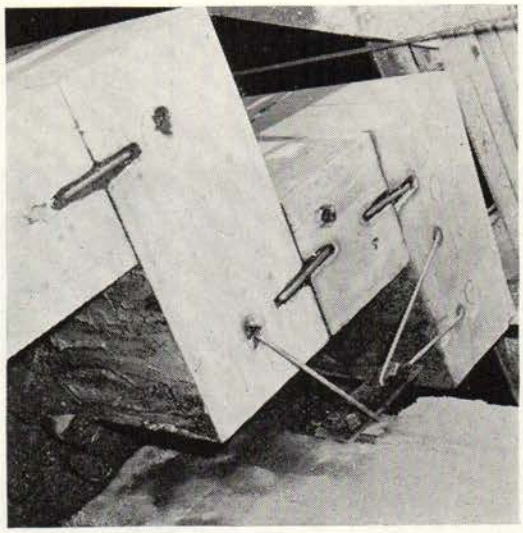
structure: A simple rectangular plan, 287 ft. long and only 72 ft. wide; 39 above-grade floors; three lower levels. Three banks of passenger elevators (6 to each bank) to serve three separate zones (low rise, serving the 15 lower floors; medium rise, 16 to 27 floors; high rise, 28 floor up); two freight elevators. Ten 28-foot bays constitute the steel-framing scheme in the north-south dimension, while the transverse bays are irregularly spaced—a western bay of 20′-8″; a central bay 18′-2″ wide (clearance required for elevator shafts), and a 27′-8″ bay toward the eastern or river exposure. Pipe galleries, visible as horizontal grillages in any of the exterior views of the building (at 6, 16, 28, and 39 floor levels), contain all the fan rooms and air-conditioning equipment for the zones they serve.

walls: The vast window walls on the east and west are cantilevered 2′-9″ beyond the structural steel columns (see details, next page) and support, within the light aluminum framework (based on a 4′ x 12′ grid unit), double-hung aluminum sash (seven 4-foot divisions in each 28-foot bay) fitted with blue-green heat-absorbing plate glass which, in combination with Venetian blinds and air-conditioning system, is designed to provide interior comfort and good light levels at all times of day and year. Spandrels between window bands are of heat-absorbent glass (painted black on the inner face).

temperature control: The building is completely air conditioned, with an unusually flexible control system so that persons from many climes can obtain the working environment of their choice. Two related but independent systems constitute the installation, with exterior portions of the building (up to 12 ft. back from window walls) served by a high-velocity system, with conditioning units under six of the seven windows that make up each bay. At every other unit, hand-operated controls allow a choice over a 12-degree range. The interior portions of the floors will be served by a ceiling-installed low-velocity system, with inlet diffusers and exhaust outlets in the suspended, perforated acoustical pan ceiling (diffusers being integrated in design with flush-mounted eggcrate fluorescent lighting fixtures). Numerous heating systems occur in the building—hot water circulated through the window units; steam unit heaters in pipe galleries; first floor heated by hot-water floor coils, and the solid, insulated end walls equipped with hot-water radiant wall panels. A master outdoor thermostat and a sub-master room thermostat maintain the indoor temperature. For summer conditioning the system is designed for a maintained temperature of 78 degrees, with 50% relative humidity. In winter, base temperatures of 70-72 are maintained with humidity controllable for prevention of condensation. Chilled water (drawn from the East River) is supplied to each dehumidifier from a central refrigeration plant; two centrifugal compressors supply 2300 tons of cool air.

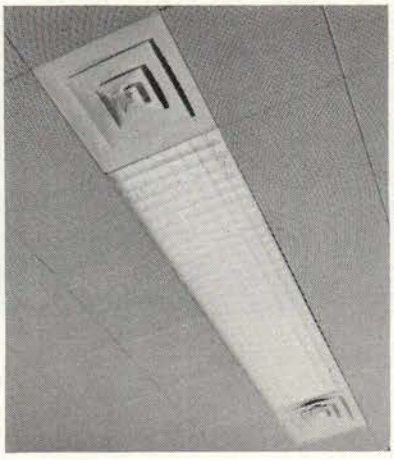
Photo credits *(counterclockwise): Republic Steel Corp.; American Steel & Wire Co.; (U. S. Steel Corp.); General Electric Co.; Anemostat Corp. of America; Vermont Marble Co.; J. Alex Langley*





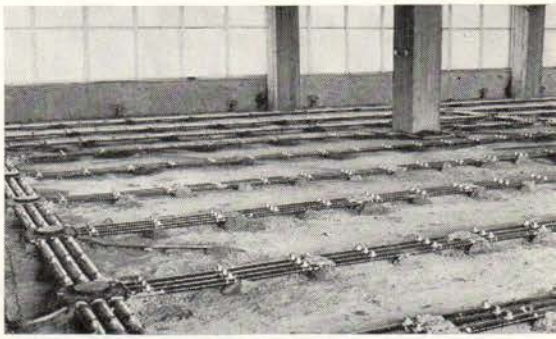
Corner detail of end-wall bond course

Air diffusers, integrated with light fixture and perforated metal-pan ceiling

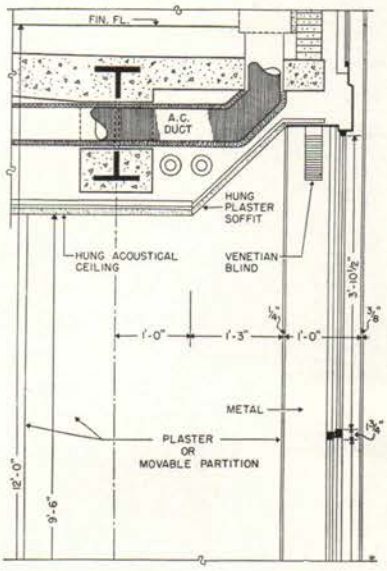


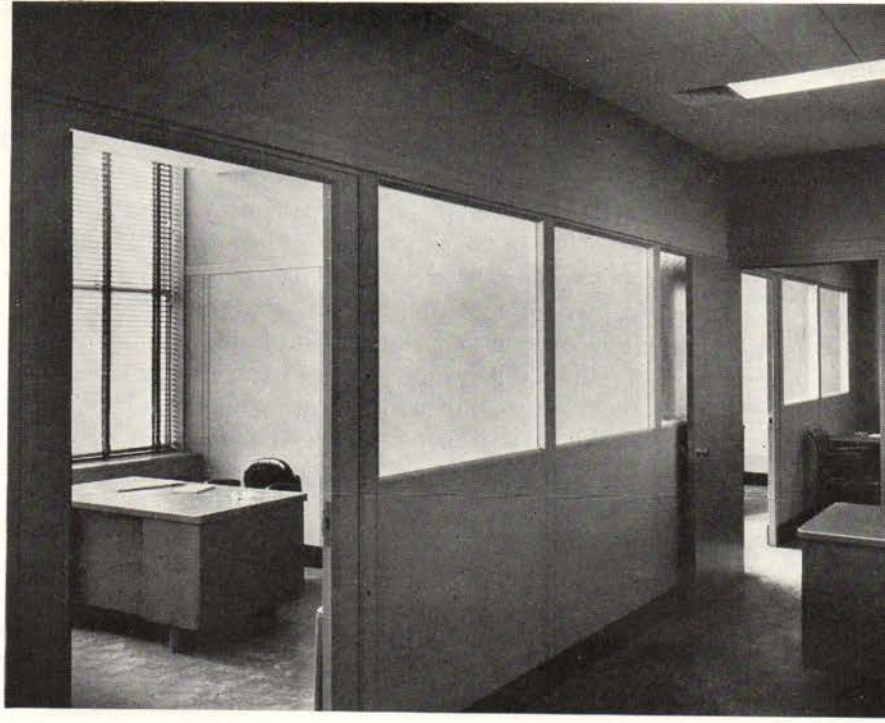
Stainless steel spandrel flashing at all floors

Welded wire mesh for floor-slab reinforcement



Fiber triple-duct grid for underfloor wiring



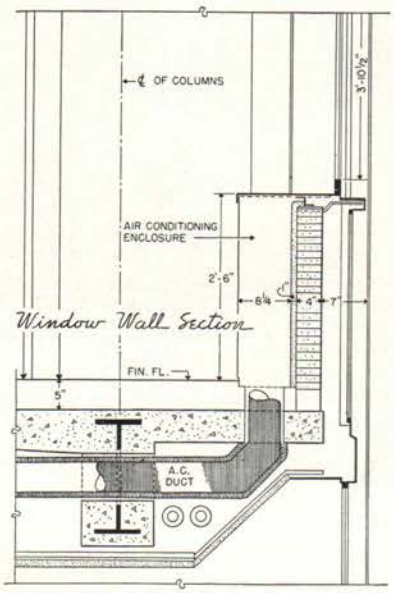


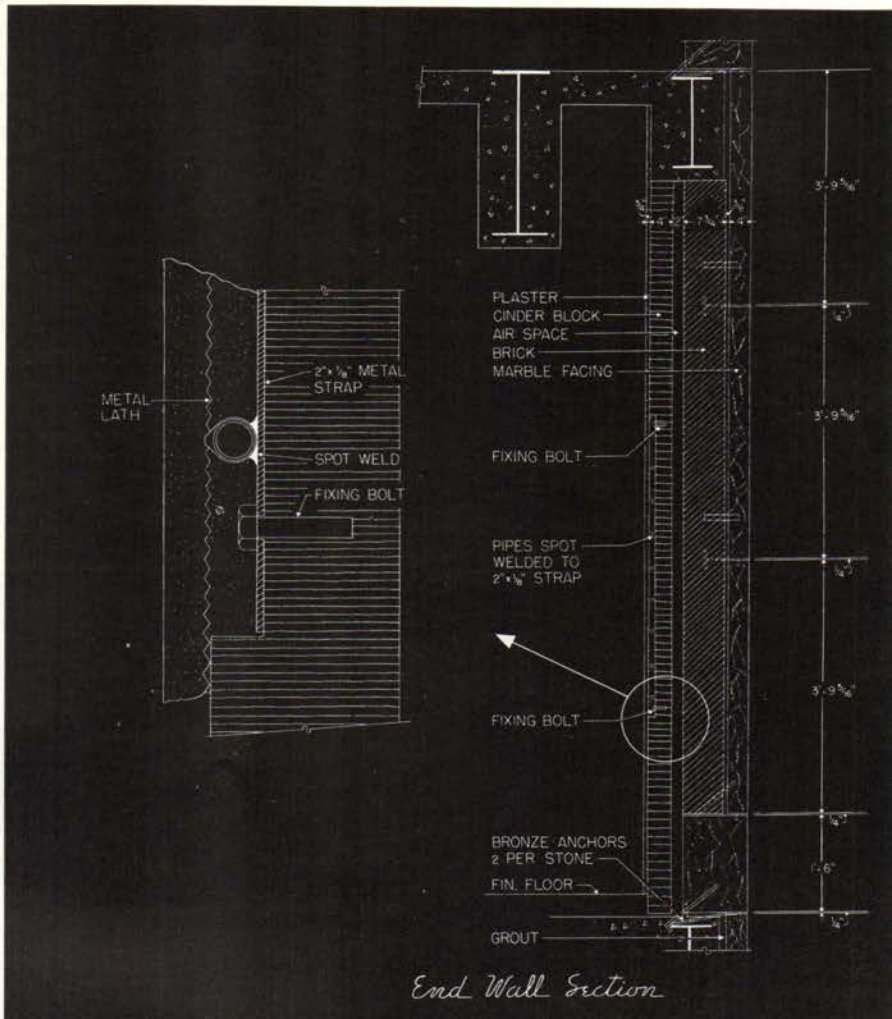
Above: typical office suite (northwest corner of the 8 floor—Radio Division). Details to note: 4-foot-long 3-tube troffer fluorescent light fixtures, integrated in design with square air diffusers, mounted flush in the perforated metal-pan ceiling; movable metal partitioning; asphalt tile flooring.

At left (and drawings above and below photo) —typical window wall, along the west facade. Notice upsweeping ceiling margin that assists the narrow-line effect on the exterior; Venetian blinds; double-hung sash, and under-window air-conditioning units.

Below: detail of one of the marble-surfaced end walls, including radiant-heating wall panel.

Photos: Gottscho-Schleisner

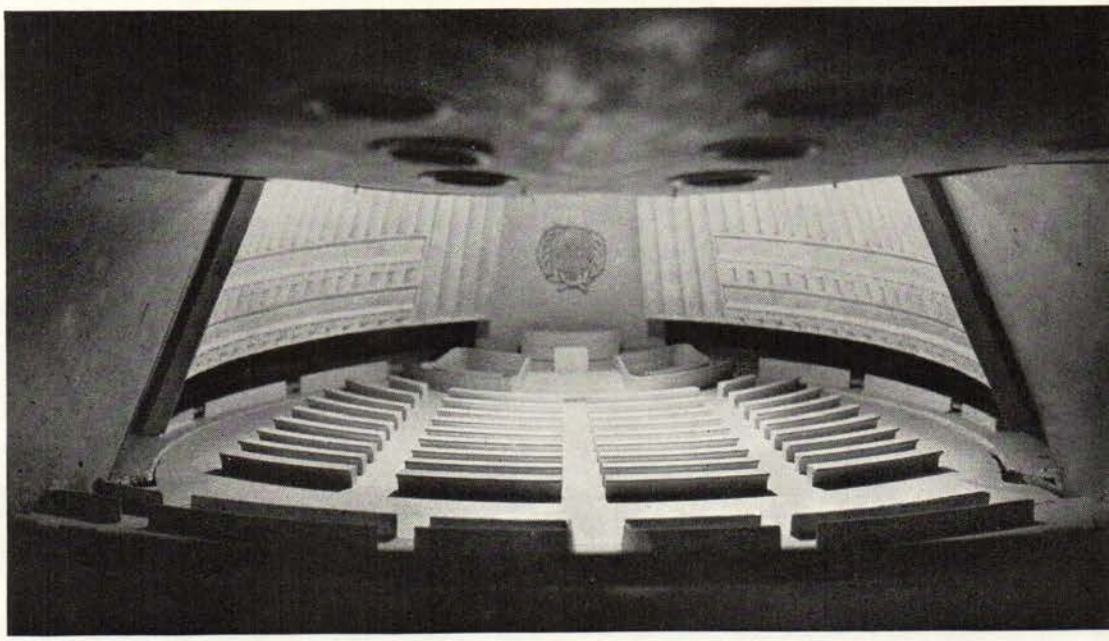




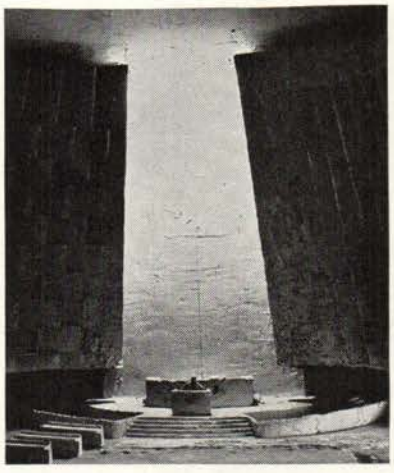
general assembly model studies

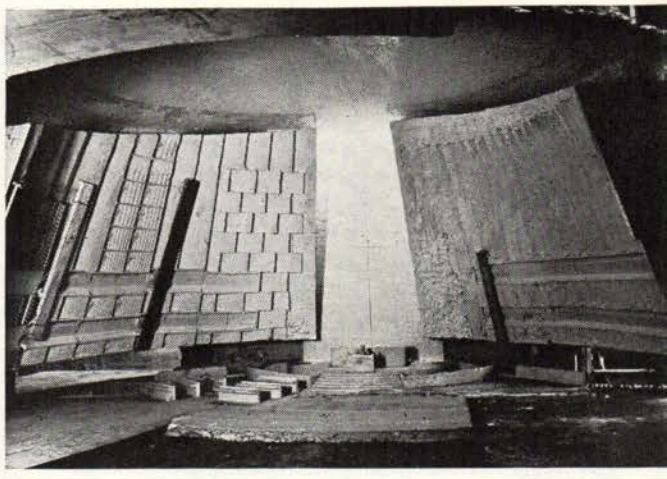
While many details remain to be settled regarding the treatment of the General Assembly Building, the photographs on these pages illustrate the exhaustive approach to study of the problem that the Headquarters Planning Commission employs. Chief element of the building is a large auditorium for the plenary sessions of the Assembly. Immediate facilities are planned for 65 U.N. member nations, each represented by five delegates and five advisers; but space must be provided for the eventual possible membership of 80 nations. For certain occasions, in addition, there has to be room for 300 additional advisers and special observers or special guests. Another complicating factor is the need to provide for the press (320 seats) and for the visiting public (1000 seats). These are arranged in galleries at the rear of the auditorium, reached by circulation channels that never cross those used by Assembly personnel.

Along the side walls of the auditorium will be what are called "the eyes and ears of the world"—tiers of technically equipped booths for Public Information personnel—photographers, motion-picture cameramen, radio and television broadcasters. Accommodation for simultaneous translation of meetings into the accredited, official languages must also be provided.

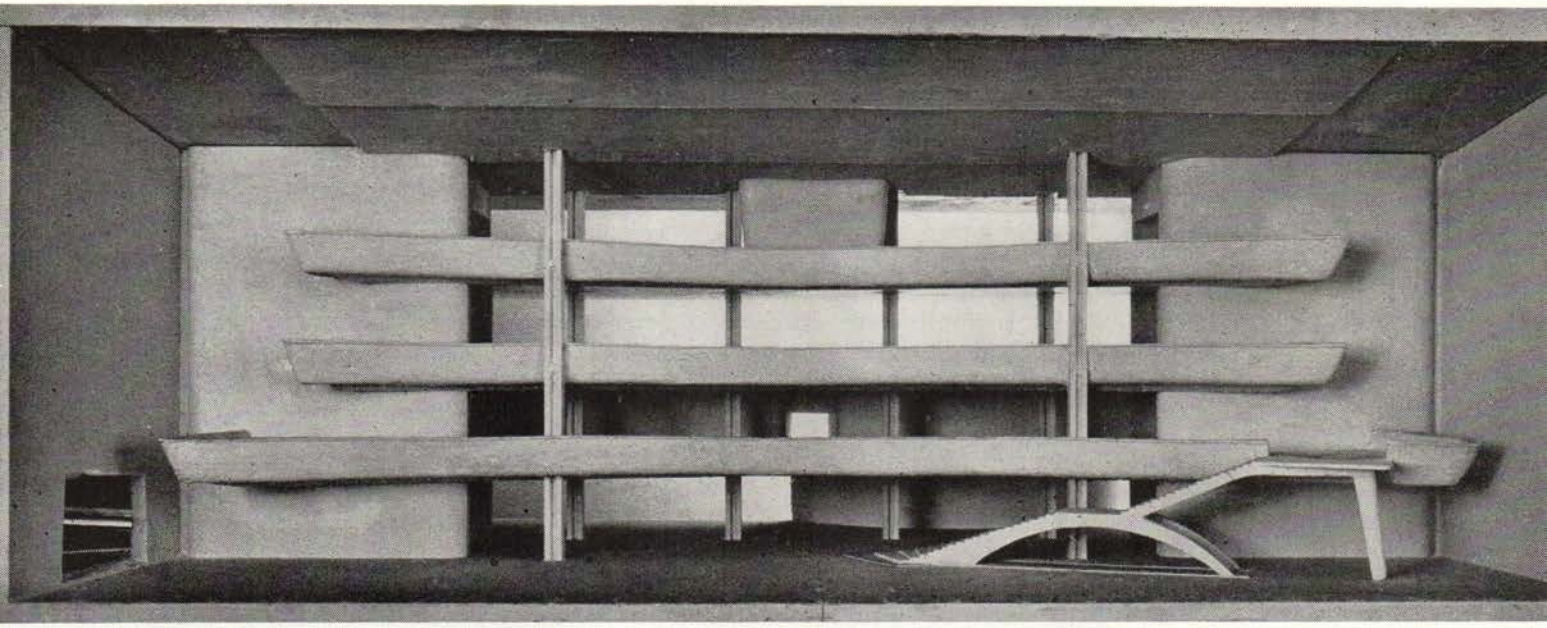


Right: an early study of the General Assembly auditorium, in completed model form, viewed from press and public gallery area. A subsequent model (photos below right) shows recent studies of arrangement of the speaker's rostrum, wall textures, ceiling-dome treatment, and lighting. *Photos: Gottscho-Schleisner*





Directly behind the speaker's rostrum and President's desk is an office suite for the Assembly President, the Secretary-General, and their staffs. Here, too, is the Delegates entrance area, which leads eastward to their main lounge overlooking the East River or, by means of an access corridor, to direct entrances to the working floor of the three Council Chambers. Photographs of advanced studies of the two main lobby entrances—the one on the south, for Delegates; the one toward the north, for the public—appear over page.



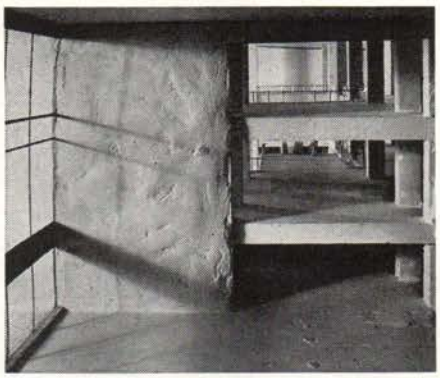
A recent model study of the public-entrance lobby (north end) of the General Assembly Building. On the ground floor, directly ahead, is the entrance to public seating in one of the conference rooms; up one flight is the main floor of the General Assembly; the two upper balconies, leading to galleries for the press and the public, are reached by either stairs or elevators.

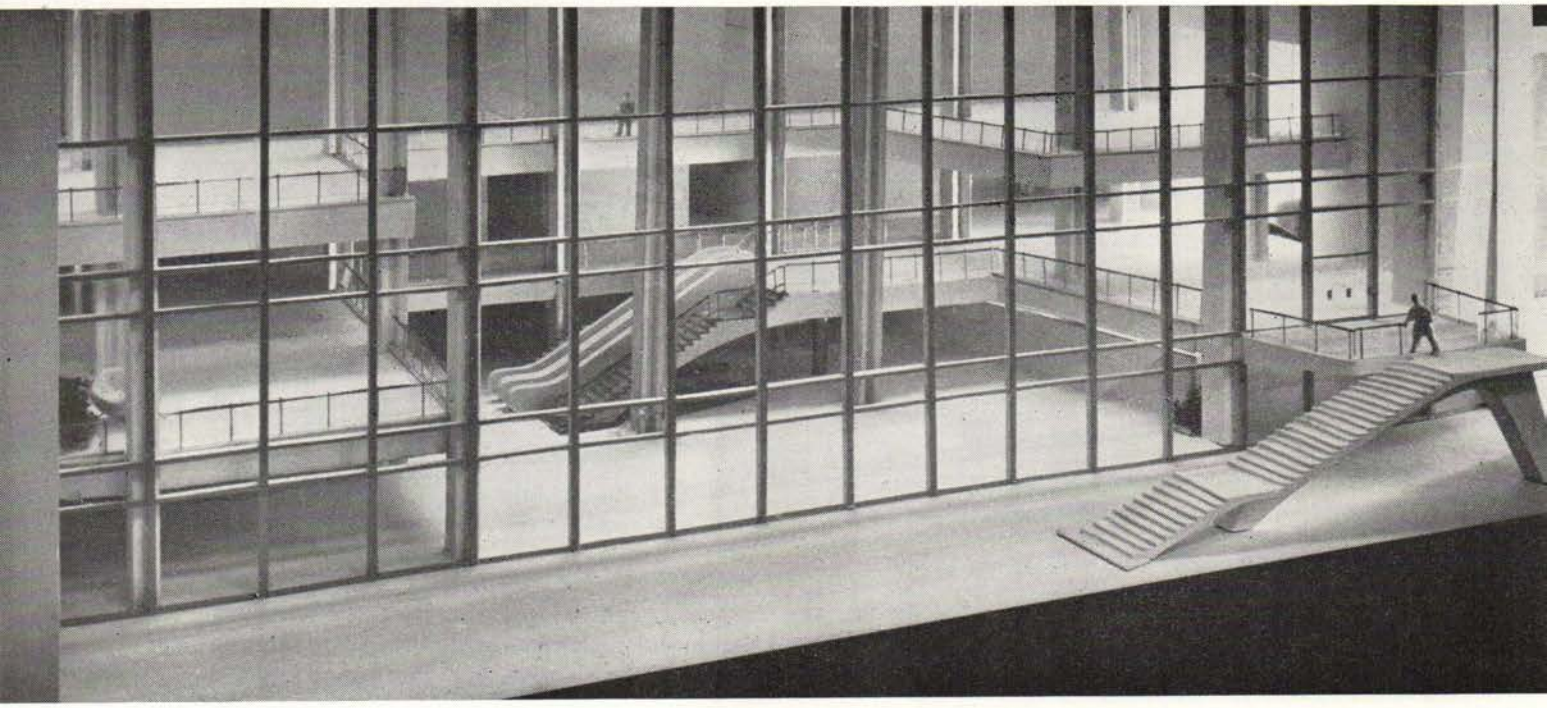
Below: model of Delegates entrance lobby (south end) of General Assembly Building. Stairways, moving stairways, or elevators take Delegates up to their main lounge and entrances to the floors of Council Chambers and General Assembly room. The outside stair is provided for staging ceremonies when important dignitaries are visiting.

Right: cutaway detail, from Delegates lounge area, looking back to galleries and (on second level) the top of the electric stairway.

Photos: Gottscho-Schleisner

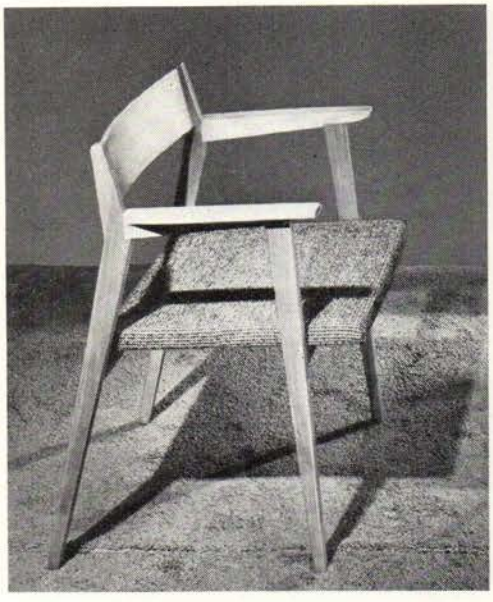
U. N. HEADQUARTERS PROGRESS REPORT





Furniture designers, comprising one of the most important design groups closely related to the architectural field, have gained in industry acceptance in the last few years, with the result that markedly higher standards are now met in the commercial market. Thanks to support of progressive manufacturers and merchants, to educational and professional competitions, and to alert museums —notably Museum of Modern Art in New York, Walker Art Center in Minneapolis, Akron Art Center, Rhode Island School of Design, and Detroit Museum—pieces appropriate to best contemporary interiors have been shown to the public and now are offered for sale. The few examples shown here indicate favored materials and construction types—and promise to be popular.

In the opening months of the "Good Design" Show being conducted at the Chicago Merchandise Mart, with Museum of Modern Art as co-sponsor, 8130 consumers and buyers were polled separately to pick the 10 most popular objects from more than 250 chosen for display. Both groups voted for the adjustable armchair (above) designed by Edward Wormley for Dunbar Furniture Manufacturing Co., Berne, Ind.; and the side chair (right) by Eero Saarinen, distributed by Knoll Associates, New York. Consumers also chose the armchair (below) by Ray Komai, for J. G. Furniture Co., Brooklyn, N. Y. Cushions of all three are foam rubber.



Also designed for the mass market are these light chairs in the low-price category. The birch chair (above) designed by Paul McCobb for Winchendon Furniture Co. is sold by B. G. Mesberg, New York. The electrically welded all-steel folding chair for outdoor use (right) is by Russel Wright, for Shwayder Bros., Inc., Detroit, Mich. The armchair (below) is by Conant Ball Co., Gardner, Mass., and distributed by Macy's. Cushions are rubber.

p/a critique

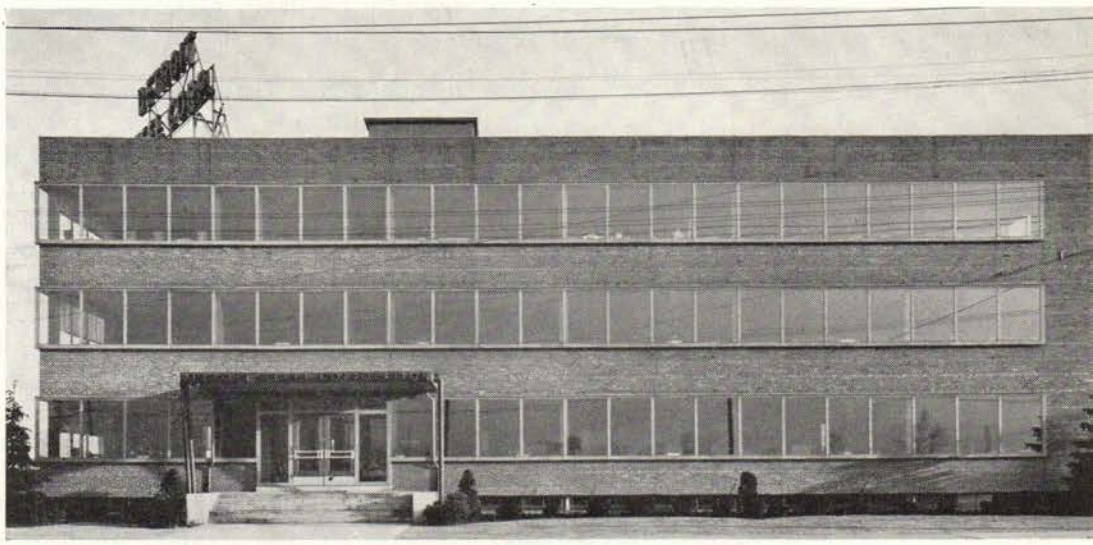
Small Office Buildings

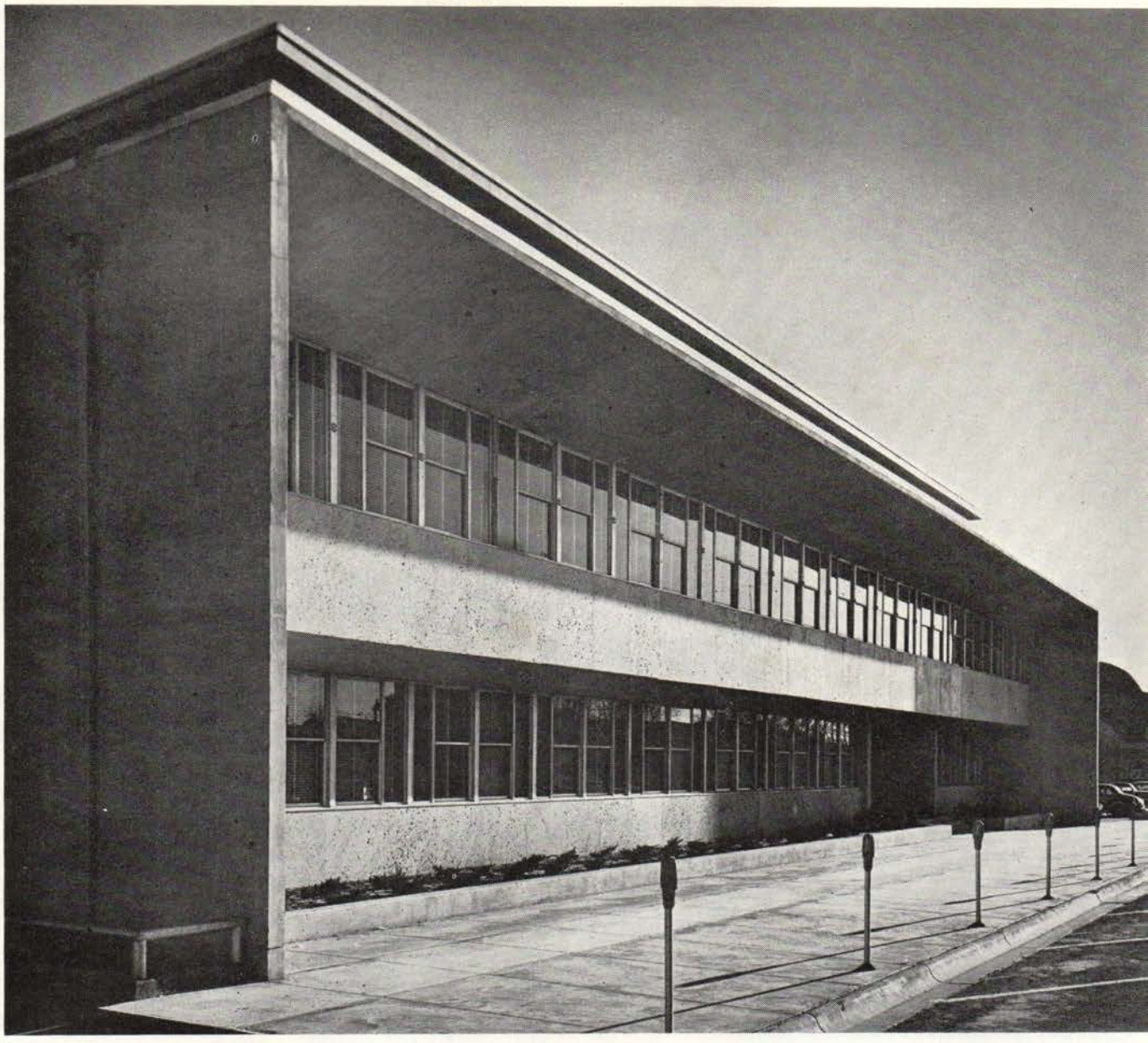
The three office buildings discussed in this critique are of the nonspeculative type—buildings that were specifically designed and built for predetermined tenants.

Above: Office Building for Honolulu Oil Corporation (John Ekin Dinwiddie, Architect; Richard Maxwell, Associate).

At left: Office Building for the Council of Hollywood Guilds and Unions, Hollywood, California (Gregory Ain, Architect; Joseph Johnson and Alfred Day, Collaborating).

Below: Office Building for Detroit Steel Corporation, Detroit, Michigan (O'Dell, Hewlett & Luckenbach, Architects).





Midland, Texas

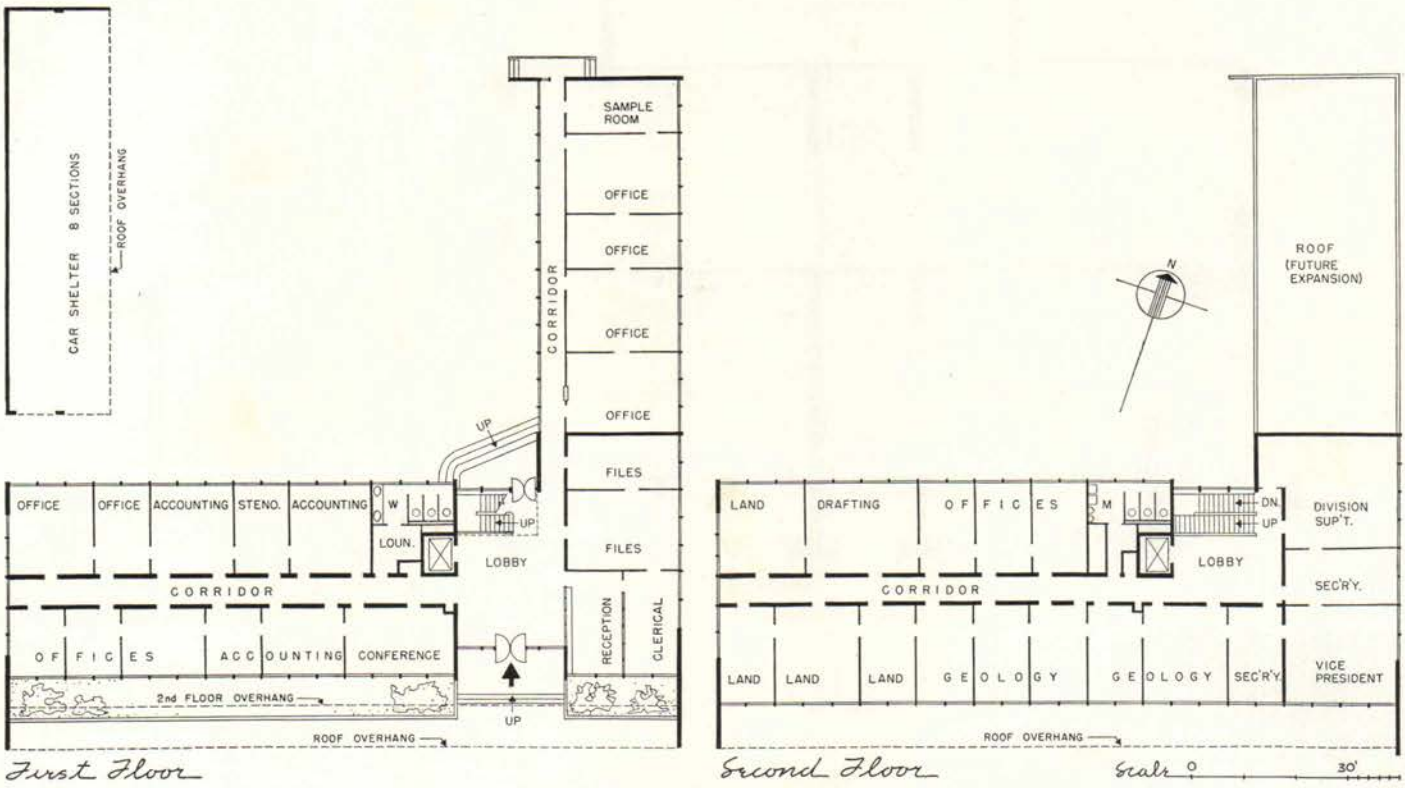
JOHN EKIN DINWIDDIE, ARCHITECT, RICHARD MAXWELL, ASSOCIATE

program Headquarters, Texas Division, Honolulu Oil Corporation. Complete air conditioning specifically requested. Special problems: intense summer sun, occasional vigorous dust storms.

site Flat, corner plot, with main street (hence entrance front) due south of property. Ample space for inclusion of an on-site car shelter.

solution L-shaped plan, along the two streets; car shelter on west side of property. By minimizing windows on the west and by recessing the southern wall (step-back fashion, see section page 74) objectionable sun is excluded during the three summer months. To cope with dust storms, the building is tightly sealed, with minimum of horizontal projections on which dust might gather. Soil conditions consisted of about two feet of sandy soil over tough rock, making extensive excavation prohibitive; hence penthouse location of air-conditioning equipment. Any future expansion will be on second floor, above wing to the north.

materials and methods CONSTRUCTION: *Frame:* reinforced concrete (pan construction). *Walls:* exterior, on front, surfaced with native shell-stone; interior walls finished with plaster and paint. *Floors:* concrete, surfaced with



terrazzo or carpeting. *Roof:* concrete, tar-and-gravel. *Partitions:* steel stud and plaster. *Fenestration:* aluminum sash; double insulating glazing.

EQUIPMENT: Heating and air conditioning: gas-fired boilers; radiant piping system in both floors; convectors in penthouse; heating coils in year-round air conditioning system; four separate control zones; ducts installed in furred ceiling space; air diffusers. *Electrical:* rigid steel conduit; both incandescent and fluorescent units.

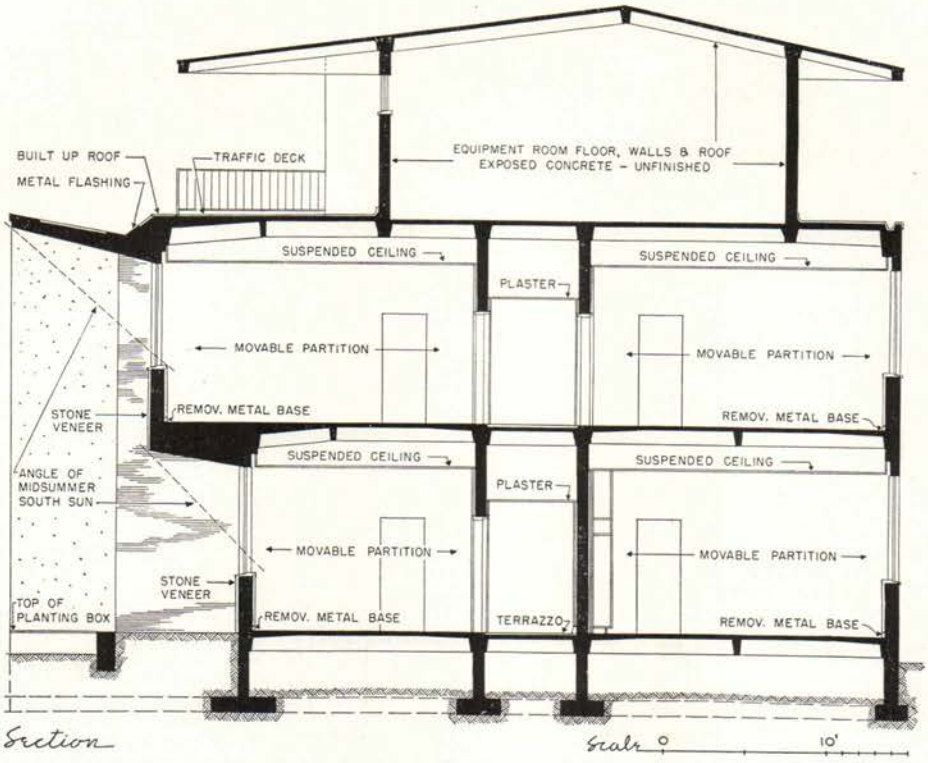
the architect

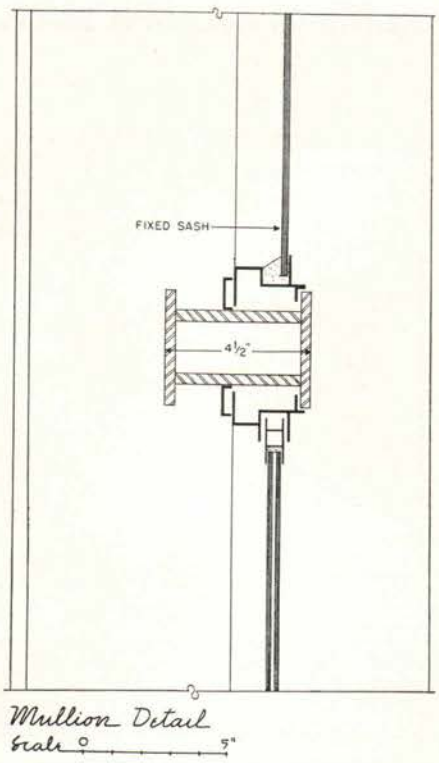
John Ekin Dinwiddie: U. of Mich.; post-graduate work with Eliel Saarinen; own practice established 1932. Partnership with Henry Hill, 1938; joined by Eric Mendelssohn after war; firm later dissolved. During Dinwiddie's two-year bout with TB, Richard Maxwell became full partner and ran the office; firm is now in full swing again.

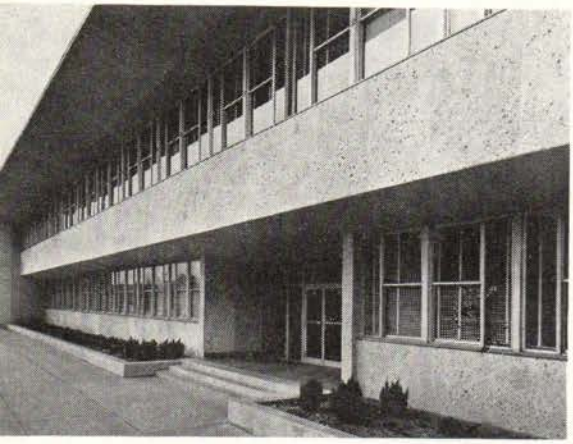
critique

In planning, structural concept, and finished design, this job strikes **P/A** editors as a distinguished piece of design. Out of the functional need to protect the southern wall against sun attack in summer, the form of the deep frame with building walls recessed within it was developed; mullions between the glazed portions of the continuous fenestration are actually a series of small, welded columns that tie in with the otherwise reinforced concrete structure to produce the clean, uninterrupted appearance of the finished design. Perhaps, as a Division headquarters office building, it can better afford to be innocent of blatant signs than most office buildings but, whatever the reason, it is certainly refreshing to find a commercial structure of such classic simplicity and dignity.

DINWIDDIE

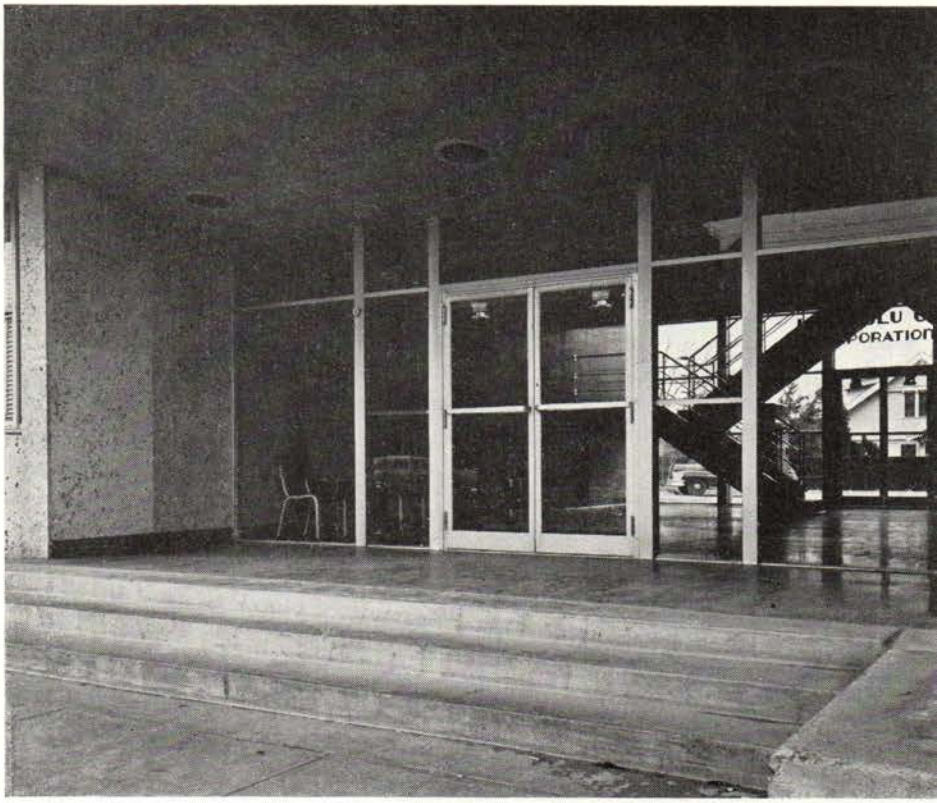


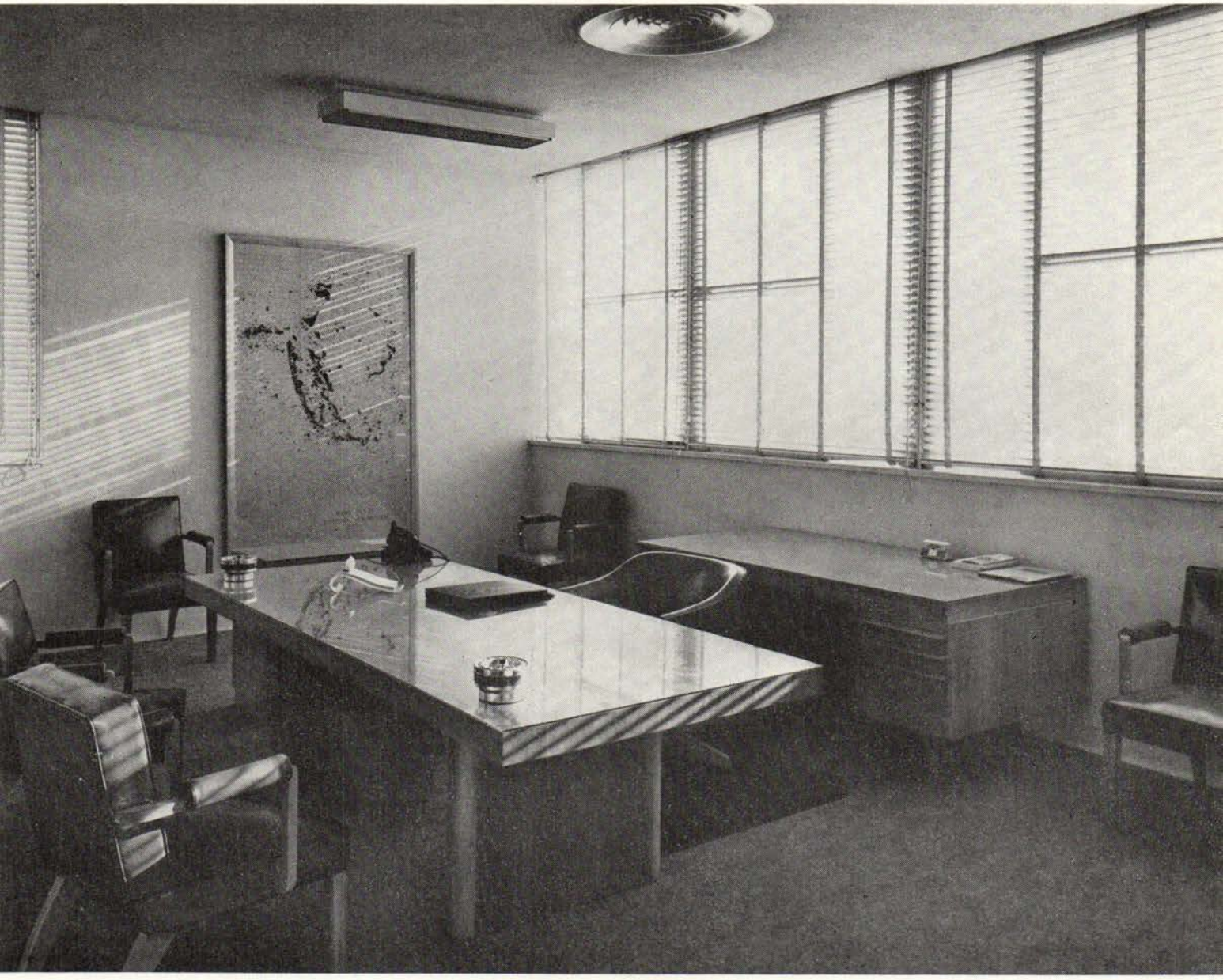




The photos and drawings above indicate the method of sun control provided by the overhangs on the southern wall. "We did not do this with geometric exactness," Mr. Dinwiddie comments, "but the overhangs are sufficient so that sun does not get in during the three summer months." The mullion detail shows the specially fabricated, small welded column that makes possible the continuous fenestration band.

Right: the main entrance, looking through to the rear door leading out to the parking area. Wall surfacing is a veneer of native shellstone. *Photos: Photo Associates: Ulric Meisel*



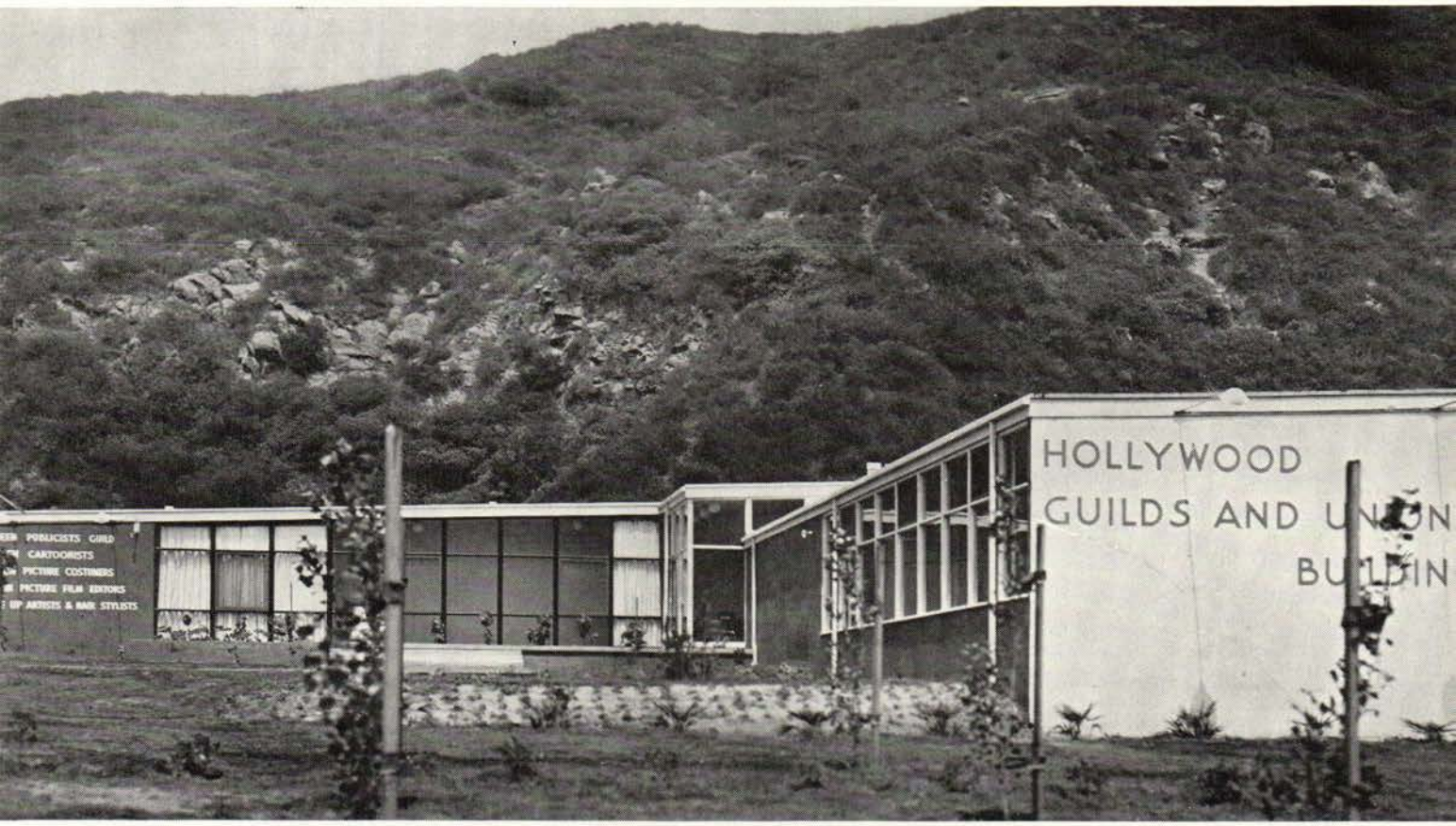


Vice-president's office in southeast corner of second floor; window at left faces east, which is not an objectionable orientation "due to cold nights and cool early mornings typical of the region." With the complete airconditioning, sound insulation became a particularly important factor; and the architect tells us that he employed acoustical materials such as special ceiling plaster, etc., yet the problem was solved chiefly by such design elements as the following: "making joints in walls, pipes, etc., that carry sound; steel studding for partitions does not come in direct contact with the structure or with ceiling framing; pipes have sound-stopping sections, etc."

At left, top: the two-story glazed wall at the rear (north) entrance, that leads in from the parking area and executives' car shelter. The penthouse is entirely given over to storage and housing air-conditioning machinery and equipment.

Below: lobby and corridor detail; duct space occurs above furred-down ceiling. Both corridor floors and stairs are finished in terrazzo; the stair rail is aluminum.

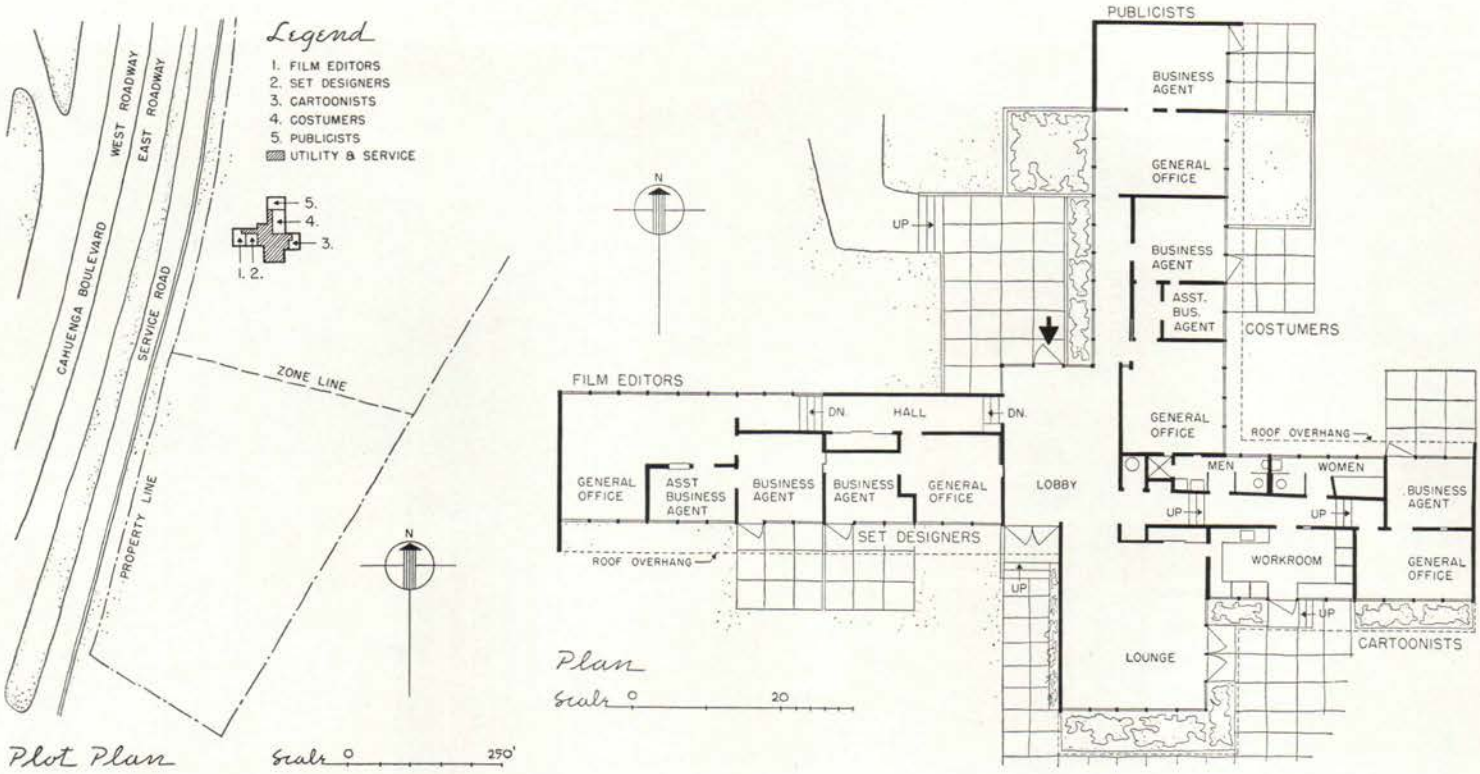
MIDLAND, TEXAS



Hollywood, California

GREGORY AIN, ARCHITECT, JOSEPH JOHNSON AND ALFRED DAY, COLLABORATING

Color plays an important part in the design of this spread-out office structure—larger stucco wall areas (as in entrance court, above) medium dark brown or blue; walls beneath smaller windows (as in one of the rear-wing courts, photo below), light blue; posts, sills, transoms, and fascia, white; small window stiles, bright red. *Photos: Garber-Sturges*



program Five separate but related offices, with central facilities for reception, meetings, and recreation. Protection from western sun and traffic (also to the west) major design considerations.

site Sloping terrain, at foot of Hollywood hills.

solution A cross-type plan, with offices radiating from the central facilities. Private terrace adjoins each of the five office spaces. Fenestration so planned that undesired western sunlight enters building only in a passageway and through secondary windows in one office. Off the central lounge is a natural bowl, protected by the wings of the building, that is used for large outdoor meetings. Posts (placed on a modular 4-foot spacing), lintels, and a portion of the bracing are left exposed to form the design and decorative pattern of the building. Cost—$7.80 per square foot.

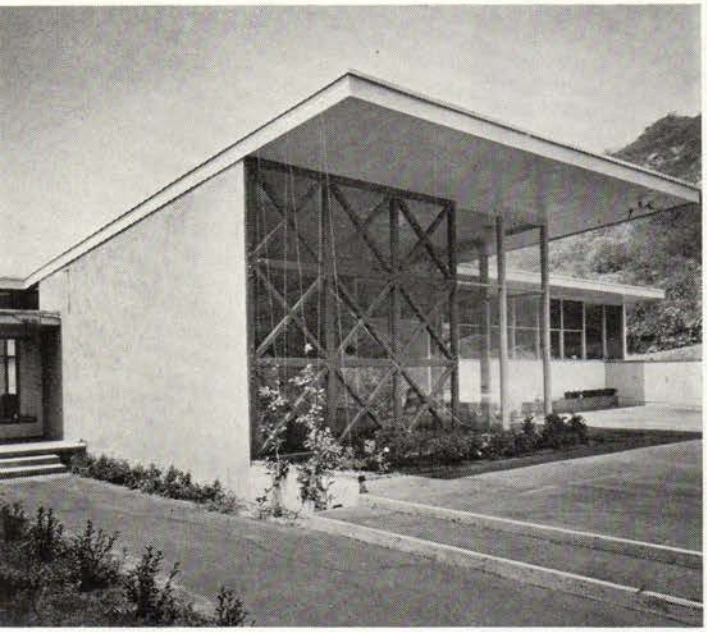
materials and methods: CONSTRUCTION: concrete foundations. *Frame:* 4″ x 4″ posts, 4 feet o.c.; 4″ x 4″ lintels, spliced to posts with tee straps and carriage bolts. *Walls:* outside—stucco; inside—painted plaster. *Floors:* concrete slab; asphalt tile. *Roof:* frame; built-up roofing. *Insulation:* thermal —reflective type in ceilings; acoustical—exposed insulation board. *Fenestration:* wood sash; double strength glass.

EQUIPMENT: *Heating:* gas unit heaters. *Electrical:* round, flashed-glass, ceiling-mounted fixtures; wall-mounted, spun aluminum gooseneck units.

the architects *Gregory Ain* (photo shown) and his collaborators, *Joseph Johnson* and *Alfred Day,* have worked together since the end of the war, chiefly on group housing and private residences. Architects of the house built this year in the garden of the Museum of Modern Art, New York.

critique The architects took good advantage of an ample plot to spread the plan out and provide privacy for the various interests housed. Orientation and structural economy have been handled with resourcefulness. A quick look at the photographs suggests an over-Spartan design approach, but examination reveals the burgeoning of a landscaping plan which will dissipate this impression in due course. The economical, modular structural scheming contributes to design unity.

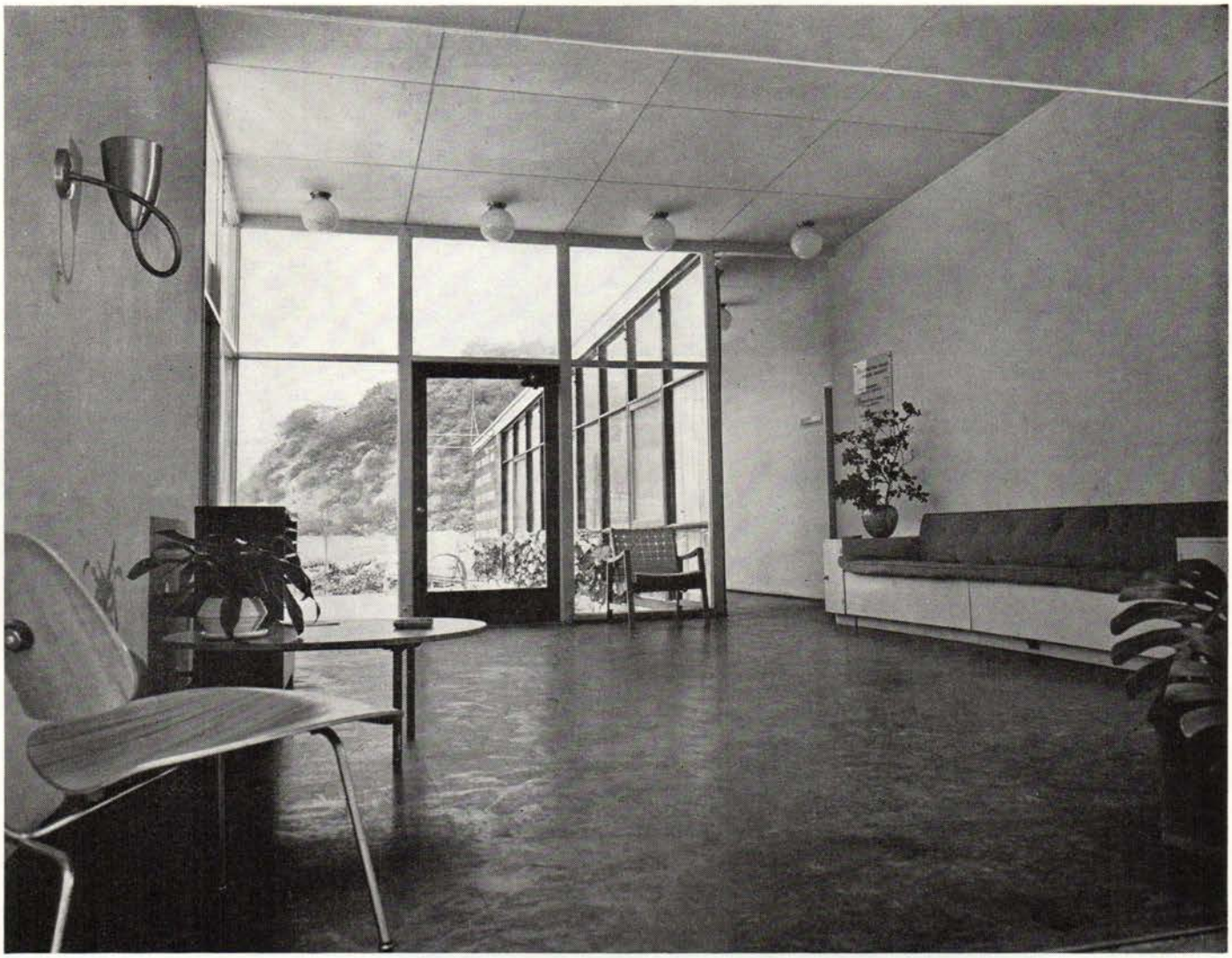
HOLLYWOOD, CALIFORNIA



Above: south front of building with communal lounge at center.

Left: detail of lounge bay (with rear door from building at left). This glazed south wall is chiefly made up of an exposed truss designed to resist earthquake forces; western wall is wholly windowless.

Below: the entrance door, seen from the central lobby. Passage at right of entrance leads to two office suites. Walls, painted plaster; ceiling, insulation board; flooring, asphalt tile.



Detroit, Michigan

O'DELL, HEWLETT & LUCKENBACH, ARCHITECTS

Top of page: detail of building front, showing the clean lines of the projecting steel sash.

Immediately above: rear of building, adjoining parking lot; tall window provides excellent daylight for the stairwell.

Left: entrance detail, with canopy and supports designed of steel.

Photos: Joe Munroe

program Executive offices for the Detroit Steel Corporation—an addition to an existing building. Specific requirements: utmost flexibility to anticipate future needs; total air conditioning; easy maintenance.

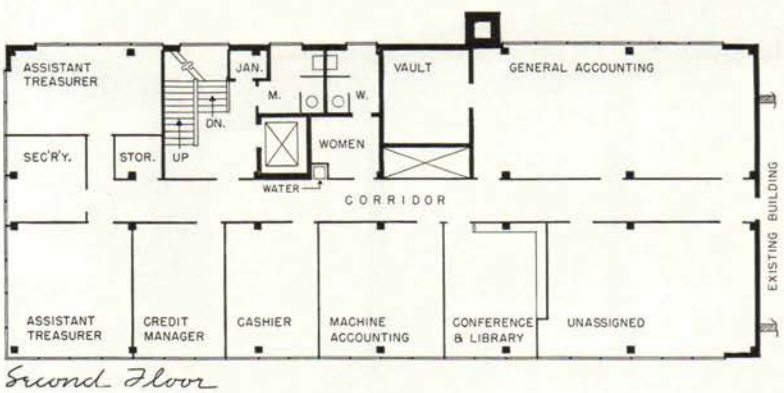
site Flat plot adjoining existing smaller office structure.

solution To provide complete flexibility, a simple, three-story steel and masonry shell (based on a 4′-3″ module) was provided, with movable steel partitions and wainscots, and strip windows wherever possible. Sole permanent partitions—those surrounding the "mechanical core." First two floors contain purchasing, accounting, and personnel departments; top floor is used for executive offices. A boiler room, equipment room, vault, and two meeting rooms occupy a full basement with above-grade daylighting. The wish to seal the building and air condition it led to the development of the specially detailed projecting sash (made up of steel angle and plate sections), fitted with double insulating glazing. Maintenance, too, is thereby assisted, since there is no problem of rainwater washing down the sash and staining the brickwork.

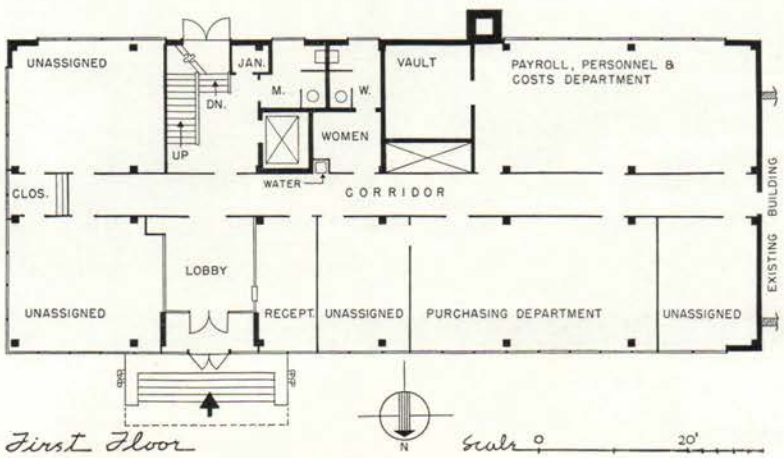
materials and methods CONSTRUCTION: reinforced concrete foundations. *Frame:* steel. *Walls:* face brick; cinder block backup. *Floors:* concrete slab over steel joist; asphalt tile surface. *Partitions:* movable, steel. *Insulation:* acoustical—mineral acoustical tile; thermal—semi-rigid, mineral wool batts. *Fenestration:* fixed steel sash; double insulating glazing.
EQUIPMENT: *Heating and air conditioning:* boiler; convectors; complete year-round conditioning; temperature controls. *Electrical:* all recessed fixtures.

the architects See biographical notes page 64, November 1949 **P/A.**

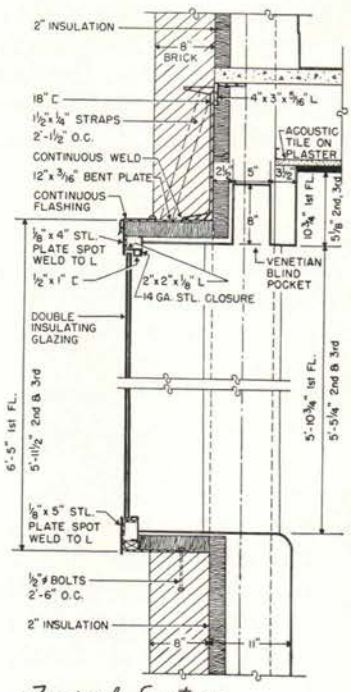
critique This small office building illustrates admirably the benefits of flexible planning. Partitioning may be relocated without altering the structure; hence, the "architecture" is free to shift as company personnel or policies change. The ingenious detail of the continuous, fixed, projecting sash (see detail, next page), which has considerable to recommend it on the basis of function, also provides an arresting esthetic variation helping to avoid the club-sandwich look of so many buildings that are more arbitrarily treated to window ribbons. An exceptionally pleasing industrial office building, we think.



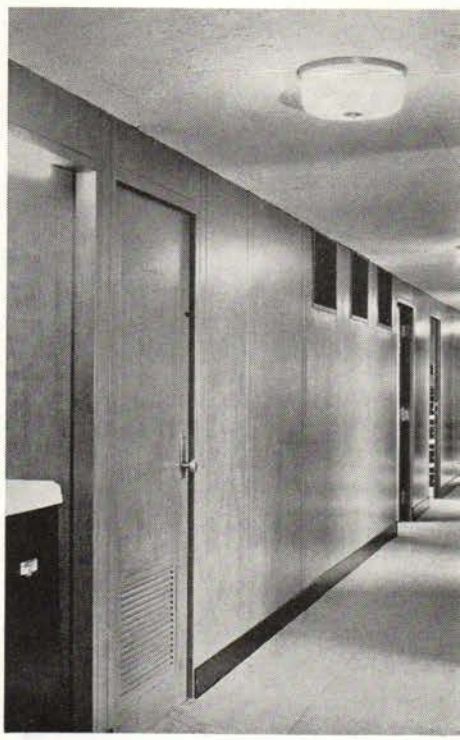
Second Floor



First Floor



Typical Section



The movable steel partitioning (photo above) and continuous window detail of outer walls (photo at left: top-floor corner office) offer the potential of varied arrangements as new developments occur. One other attribute of the projecting window detail is that it eliminates the need for masonry sills on the outside and provides a deep useful sill within. Window wall at left of the office photo faces north. Where sun-control is needed, adjustable blinds occur in a pocket above the window head.

On Blowing Your Own Horn

By THOMAS H. CREIGHTON

No amount of publicity will help an incompetent architect produce better work. Before you can promote your services you must have proved that you have worthwhile services to offer. Those are trite, obvious statements. Equally true and obvious, however, is the converse—that an able practitioner who hasn't in any manner called his ability to the attention of possible clients will never be of service to the community. By one means or another, sad as the fact seems to some, it is necessary to blow your own horn. The unpublished book, the unwitnessed dance, the unheard aria, the architectural design that never had a client to pay for its execution—these are the tragedies caused by our dependence on commercial sponsorship of cultural expression, as contrasted with a patron system or some other. Deplore the resultant fact as we may, it looms in any discussion of architecture: architecture is a business, along with its other aspects, and if an architect wants to get work done, he must make his capabilities known.

How does one go about making himself known to potential clients? This article will discuss several possible publicity methods very briefly. In the first place, there is always magazine publicity. I don't mean the architectural magazines—I am thinking of the magazines that reach potential client groups. One architect writes that he owes practically all of his renown to publicity in this sort of publication. Another tells me—and peculiarly, I believe him—that he has never actively solicited a job in his life; that all of his clients (after the first ones, who were friends or friends of friends) came from publication of his work. The only exaggeration about this statement, I think, is that work in his own area has come largely through new clients who have seen his finished buildings, but the fact remains that his commissions have been scattered all over the country, and the out-of-town ones have come solely through magazine publicity.

Of what media am I speaking? Here is a sample check list. It is admittedly incomplete, and some of the editors of these publications may not thank me for sicking you on them. Yet, by and large, they are very glad to hear of publishable work in their specialized fields, and will tell you very frankly whether or not they can use submissions.

In the school field:

Nations' Schools, 191 N. Michigan Ave., Chicago, Ill.
School Executive, 470 4th Ave., New York 16, N. Y.
American School Board Journal, 540 N. Milwaukee St., Milwaukee 1, Wis.

In the hospital field:

Modern Hospital, 919 N. Michigan Ave., Chicago 11, Ill.
Hospitals, 18 E. Division St., Chicago 10, Ill.
Hospital Management, 100 E. Ohio St., Chicago 11, Ill.

In the church field:

Liturgical Arts, 7 E. 42 St., New York 17, N. Y.
Church Property Administration, 20 W. Putnam Ave., Greenwich, Conn.

In the store and shop field:

Chain Store Age, 185 Madison Ave., New York 16, N. Y.
Stores, 100 W. 31 St., New York 1, N. Y.
Merchants' Trade Journal, 1912 Grand Ave., Des Moines, Iowa.

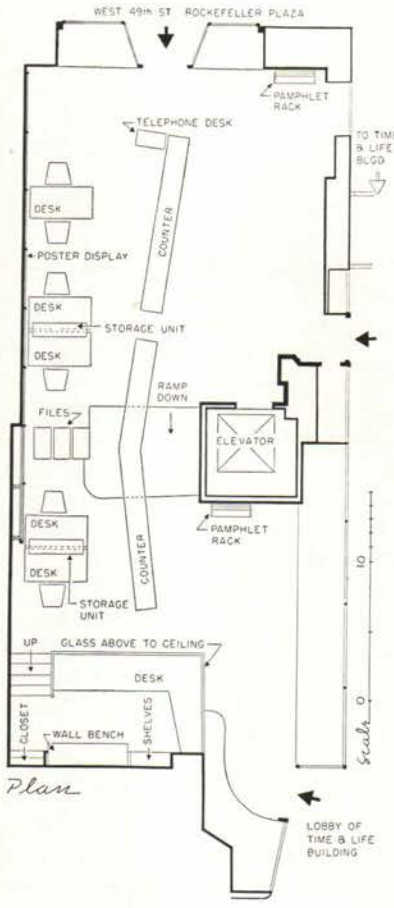
If you want to get more specialized, you can find magazines like:

Laundry Age, 9 E. 38 St., New York 16, N. Y.
Tourist Court Journal, 107 S. First St., Temple, Texas.

and so on down the line. A publication called *Standard Rate & Data Service*, which you can probably find in your local library, lists them all, gives addresses, circulation statistics, etc. You may correspond with an editor who is pleased to hear from you, one who is not interested, one who may buy the idea of publishing architecture for the first time, or one who is experienced and discriminating in what he will use, and will tell you exactly how to submit material. In any event, you have lost nothing by such a try. If you succeed in getting something in the magazine, you will presumably have accomplished two things: publicity for yourself, and a bit of architectural education for the readers of a specialized journal.

How about newspapers? I know there is a lot of griping, most of it justified, about the fact that newspapers publish "artists' conceptions" of buildings, name the owner, the contractor, the real estate man who consummated the deal, and ignore the architect. And yet, in a town where the architects were complaining bitterly about this sort of treatment, I talked to a Sunday feature editor on the biggest daily, and he asked *me* where he could get a good story on local residential design. Newspaper publicity, of the sort that you would be proud of and that would do you good in the community, does not come as a result of sending out news releases, or letting the builder send some out with your name on the bottom. It means cultivating the editors, helping them develop stories that will interest their readers, working with them intelligently, step by step, in the building up of local interest in design problems and design results. No one can tell me this doesn't work, because I've seen proof of it in one city after another across the country. There isn't a newspaper editor alive who wouldn't be interested in an architectural story if it were presented to him as worthwhile, circulation-getting news. And there's scarcely a one alive who would bother with a story simply because it was presented to him as something he should run "for the good of the profession." It's not his profession, after all.

This sort of publicity—in magazines and in newspapers—is only one way of blowing your horn. For the architect who is beginning to worry right now about the next job, which seems slow in coming, advice of this sort is probably too late. For the man who is reasonably busy now, and who wants to keep work flowing at a reasonable rate, the time to begin searching for legitimate publicity, the sort which educates the general public at the same time that it spreads his name, is right now.



Travel Agency Offices: New York, N. Y.

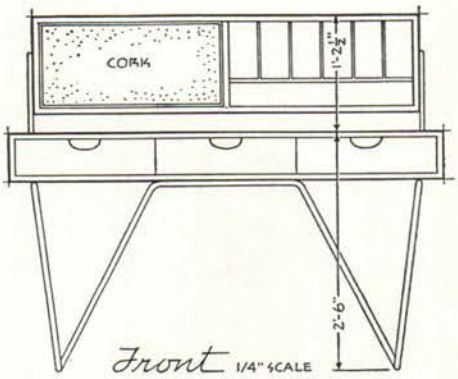
SERGE CHERMAYEFF AND KETCHUM, GINA & SHARP, ASSOCIATED ARCHITECTS

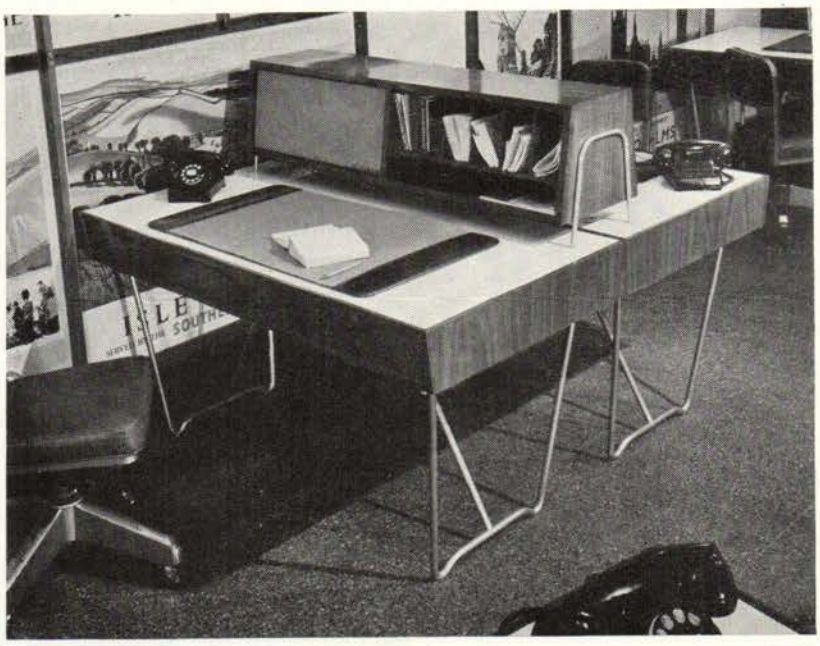
program Design and equipment of an up-to-date travel bureau for the British and Irish Railways that would have sales appeal and attract public attention. Desired character: inviting, dignified atmosphere.

site Two adjoining rental spaces in Rockefeller Center (one, the agency's former offices; the other, an ex-florist's shop with an 8′-6″ difference in ceiling height between the two spaces). Ground-floor location, with frontage both on the street and into the building lobby.

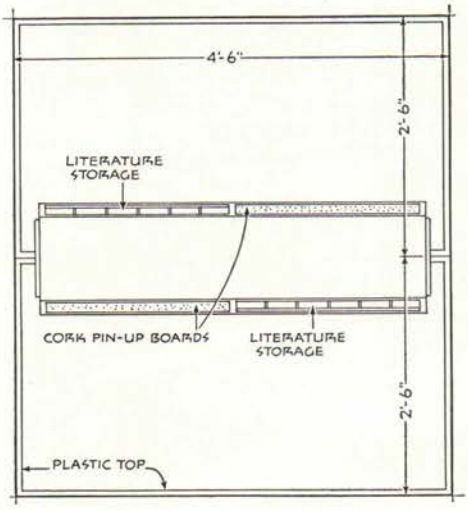
solution All changes confined to the interior; chief integrating elements come from an over-all eggcrate ceiling (with air-conditioning ducts and fluorescent lighting above), the huge, flexible poster-display unit along one wall (see Selected Detail, page 86), and a long, plastic-topped selling counter angled to give comfortable clearance around an intervening private elevator to client's second-floor space. White-painted walls further assist in integrating the room and provide a sense of increased space. The elevator-shaft walls are painted light gray to diminish the mass as a visual barrier. Changes in level of finished floor between old and new spaces is handled by a ramp. Special work desks (see detail, opposite page) conform in design to the selling counter.

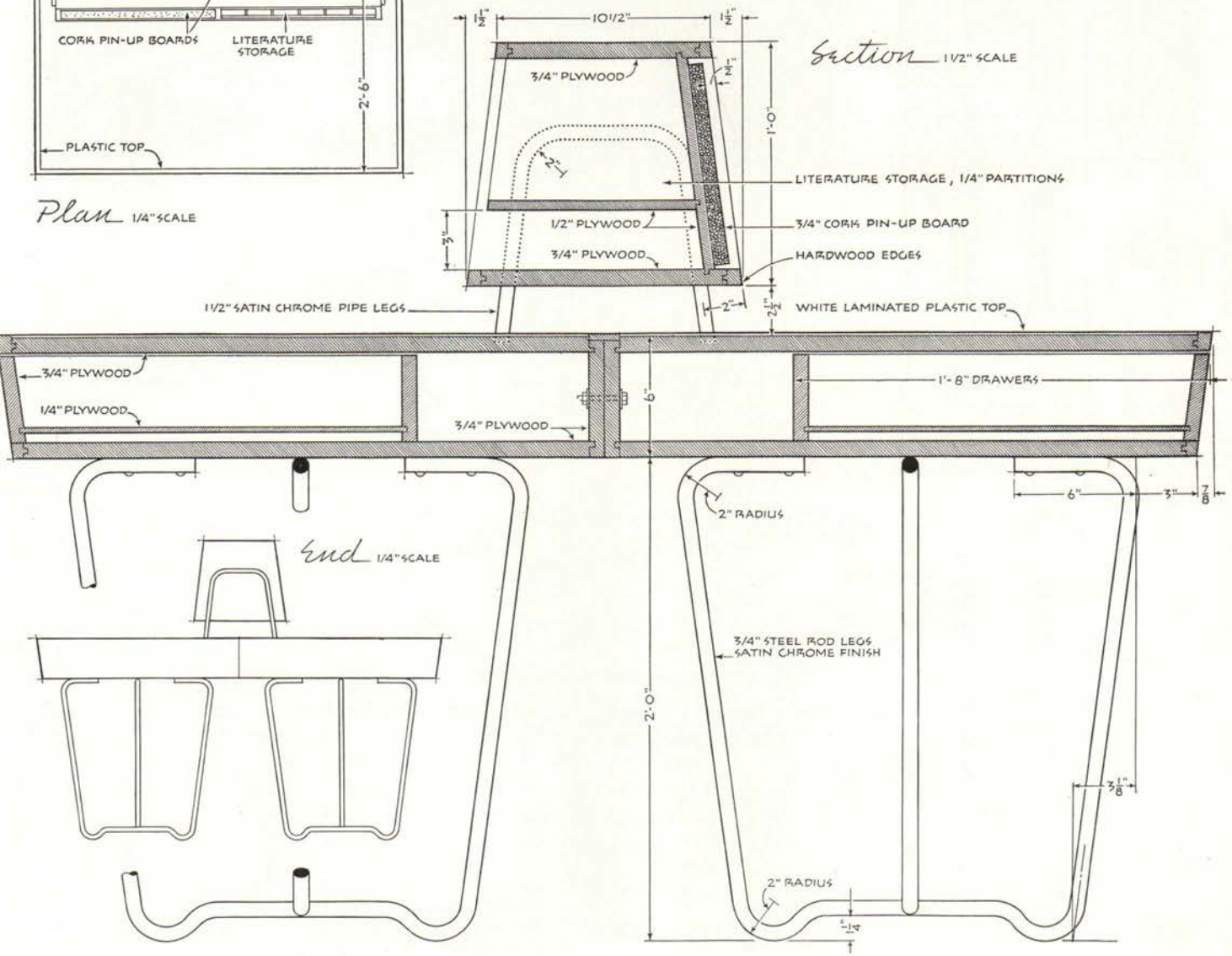
materials and methods CONSTRUCTION: all existing. *Floor:* new terrazzo, to match old. *Walls:* plaster. *Partitions:* channel studs, wire lath, plaster.
EQUIPMENT: *Air conditioning:* new ducts from existing air-conditioning machinery; air diffusers. *Electrical:* general area lighting—aluminum eggcrate with fluorescent lamps above; downlights.





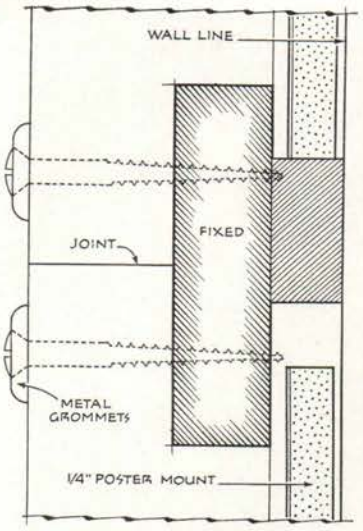
LIONEL FREEDMAN : PICTOR





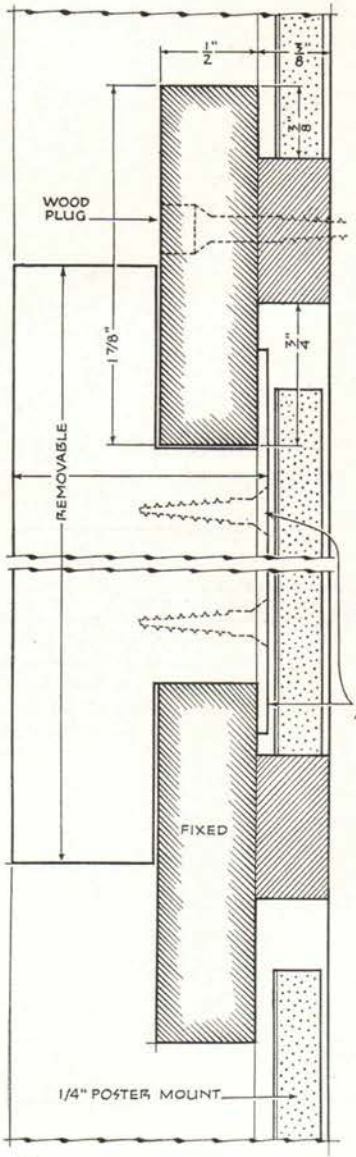
BRITISH RAILWAYS INC., New York, N. Y. SERGE CHERMAYEFF and KETCHUM, GINA & SHARP, ASSOCIATED ARCHITECTS

TRAVEL AGENCY: wall display



Section at A FULL SIZE

LIONEL FREEDMAN : PICTOR



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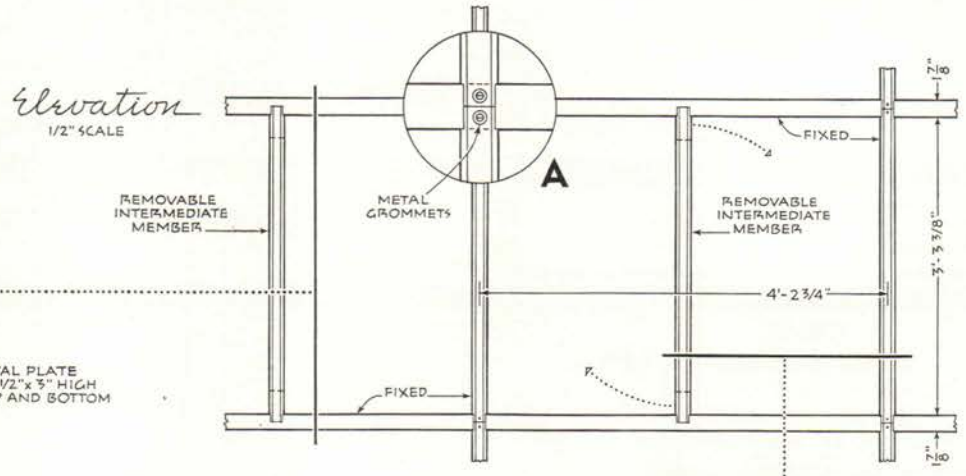
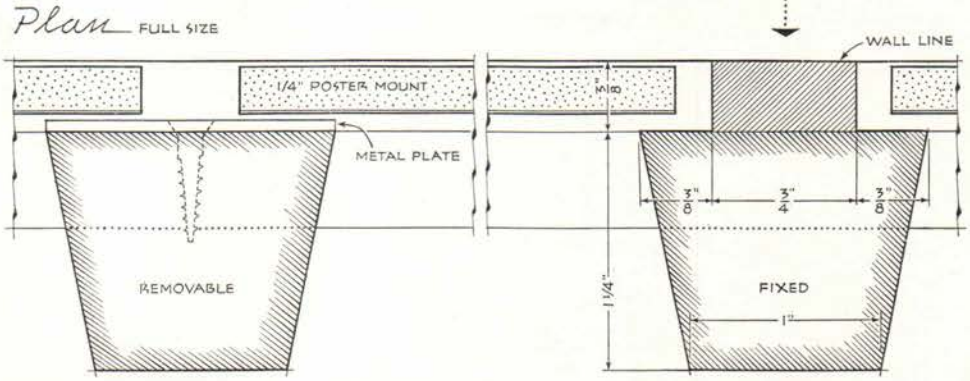




BRITISH RAILWAYS INC., New York, N. Y. SERGE CHERMAYEFF and KETCHUM, GINA & SHARP, ASSOCIATED ARCHITECTS

The two-story side of the house faces south. Below—the big upstairs window in the wall surfaced with cypress is a corner of the living room; immediately beneath, at terrace level, is the dining room.

Photo, right—view in the opposite direction: bedroom wing (upstairs) at left; workshop window and terrace door at ground level; in right foreground is the dining-living room bay.

Photos: Gilbert Ask

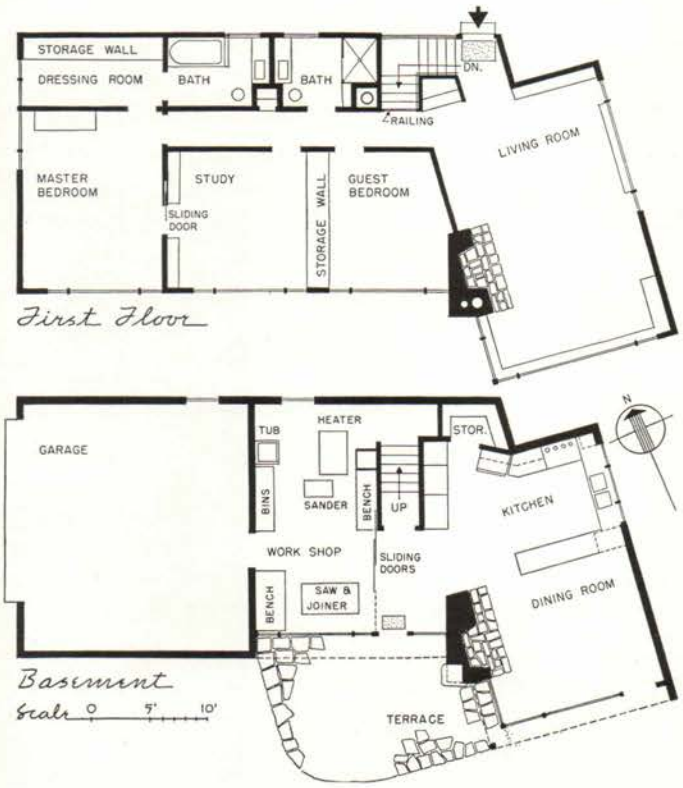
House: Syosset, New York

HUSON JACKSON AND JOHN HANCOCK CALLENDER, ARCHITECTS

program Home for a man and wife who prefer informal living. The wife does her own housekeeping and the husband is a skilled amateur cabinet maker. A study and workshop were wanted, in addition to customary home requirements.

site A handsome, wooded hillside, sloping abruptly toward the south.

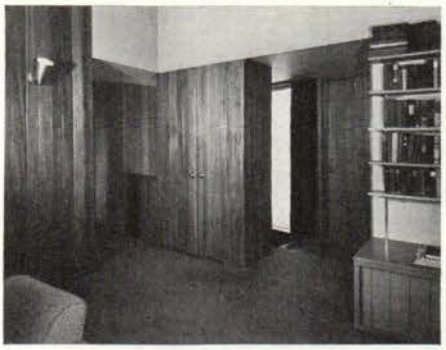
solution A two-level scheme, with a single story on the north side and full two stories for most of the other three orientations. Living room, bedrooms, and study on the upper floor; garage, workshop, kitchen, and dining room, downstairs.



materials and methods CONSTRUCTION: concrete foundation. *Walls:* frame, vertical cypress siding; concrete block for portions of the lower floor. Interior wall surfaces: plasterboard; vertical cypress siding. *Floors:* vermiculite-insulated concrete slab (lower floor) surfaced with asphalt tile; standard wood construction upstairs, with oak strip flooring. *Roof:* wood, surfaced with built-up roofing. *Insulation:* glass wool blanket. *Fenestration:* aluminum casements; ¼" plate glass; fixed glass set to wood frames.

EQUIPMENT: *Heating:* oil-fired furnace; forced, hot-water radiant panel system, with copper piping, ceiling mounted; convectors in garage; controls. *Kitchen:* electric range and refrigerator; stainless steel sink and drainboard.

the architects See biographical notes page 43, November 1949 **P/A**.



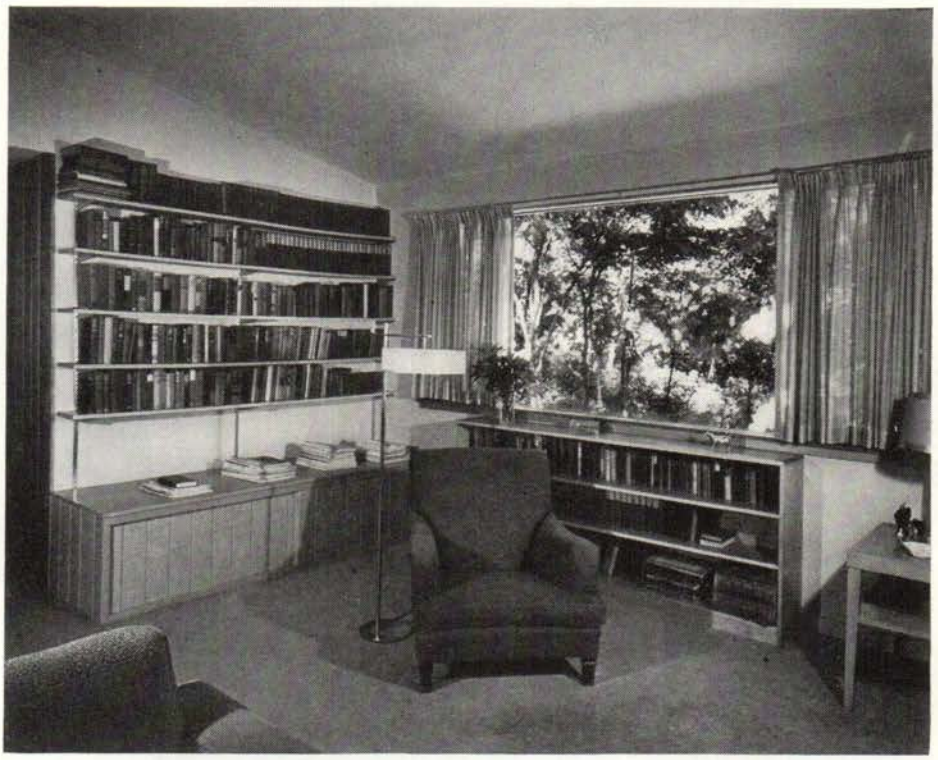
Picture on facing page: general view from downhill side.

Above: the front door; windows at left are in living room (kitchen windows underneath); at right of entrance door are full-height panels of patterned glass.

Right, above: entrance corner of living room; wall surface is cypress siding; stairs to lower floor are immediately at left of door.

Right: the book corner of the living room, with wide fixed-glass southern window; casements (behind draperies) at either side.

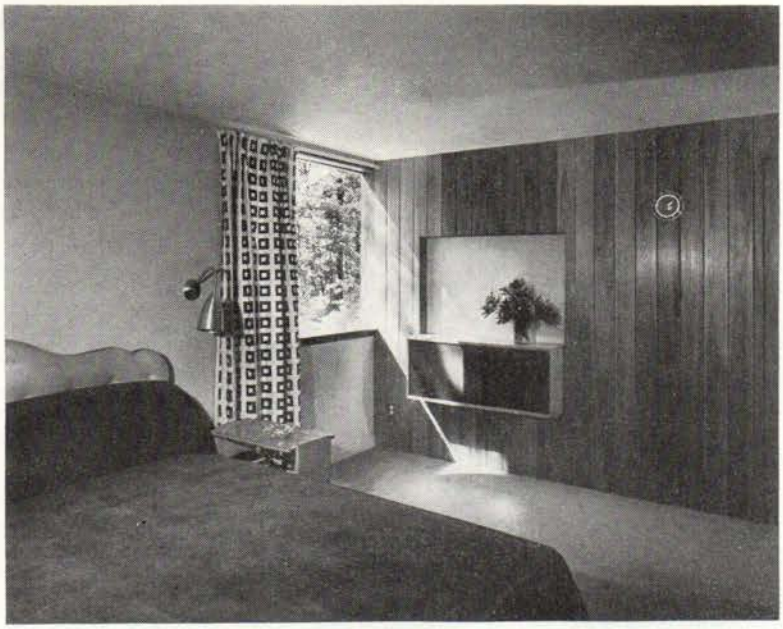
Right, below: living-room fireplace corner.



Above: dining room fireplace; window looks out to terrace.

Right: south wall of dining room, with aluminum casements above fixed glass panel at right; flooring is asphalt tile.

Below: northwest corner of master bedroom. Here again, the window combines a fixed-glass panel set in a wood frame and (behind drapery) an aluminum casement.



HOUSE: SYOSSET, NEW YORK

Prefab Bathroom Units Offered On Market

After several years of study devoted to the design and production of prefabricated bathrooms, designer Guy G. Rothenstein has announced that six varying models of his enameled units may now be ordered from the Fiat Metals Manufacturing Company. (To review Rothenstein's original layouts and models, see June 1948 P/A.) Suitable for both public and private housing, hotels, commercial buildings, and other types of occupancies, these low-cost, prefabricated bathrooms are very easily installed. No extra structural supports, other than the floor itself, are required, and in approximately five hours a qualified laborer and his helper can erect the floor, wall panels, and ceiling of the unit illustrated on this page. The general contract for these bathrooms does not include the tub, lavatory, and toilet fixtures; however, they will be co-ordinated under the plumbing contract which permits their installation by the local plumber in the conventional manner.

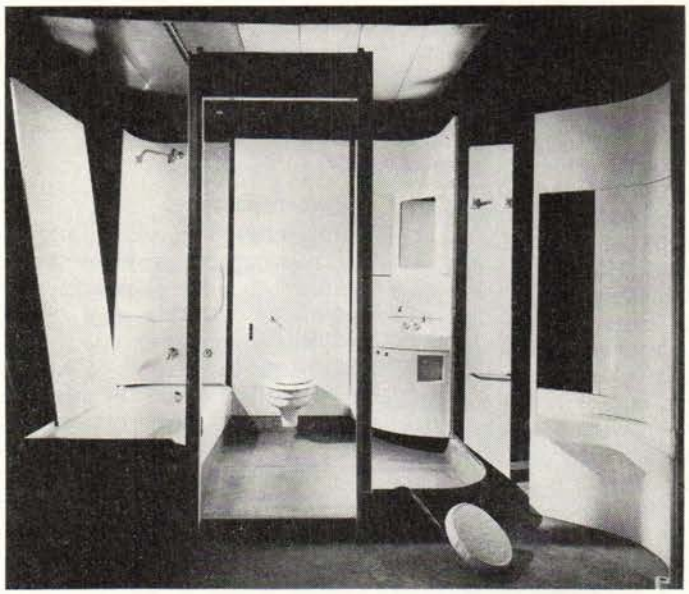
Although a black and white terrazzo floor is normally supplied, other colors may be had at a slight additional cost. Ceiling panels are perforated and can be obtained in either aluminum or painted steel. Sound absorbing material may be easily placed above the ceiling panels, and an exhaust vent may also be located there if the bathroom is an interior unit. Enclosing partitions can be practically any material; studding and plaster will probably be the cheapest and most commonly employed. Windows and heating openings, not a part of a unit, can be placed in any panel on request.

Two 75-watt incandescent lamps, affording sufficient light for an area of 40 square feet, are located behind the mirror. A 2" glass border extending around the periphery of the mirror has been sandblasted to permit diffused and shadowless light. Enclosed cabinet space is amply provided at either side of the mirror; the cabinet side walls are perforated to admit light from the two incandescent lamps. For additional illumination, the designer recommends that a fluorescent fixture be mounted in the ceiling. Below the lavatory a generous area has been designed to contain a linen hamper and bathroom supplies; a convenient dressing table with a comfortable, free swinging seat beneath it, is located in the corner near the entrance door. Above the stamped metal tub, a shower curtain rod runs flush between the ceiling panels.

Excluding the three fixtures, F.O.B. prices for the six models range from $180 to $300 depending on the volume of an order and the quantity of accessories desired. Immediate savings over standard bathroom installations are said to be from 10 to 30 percent. Another major economy, up to 50 percent of the capital investment, can be realized on maintenance and repair over a 30 year period. Although it does not possess exclusive rights to the pending patent for these units, Fiat is the only manufacturer of this product at the present time. With plants located in Long Island City, Chicago and Los Angeles, national distribution will be facilitated and delivery may be expected in three to four months time. Individual panels and fixtures may also be ordered.

Below: exploded view of this unit shows the various elements in their approximate locations before installation. The ceiling, the floor, and each wall panel requires about 30 minutes to fix in position.

Right: inside dimensions of the room are 7'-5" x 4'-11"; floor to ceiling height is 7'-5". Integral terrazzo floor and base have thicknesses of 1½" and 1" respectively. *Photos: Lionel Freedman: Pictor*



If outside vision is not a requirement, various types of structural glass blocks effectively direct light, eliminate glare, and reduce the amount of heat ordinarily radiated into a room by the sun. The stairway in this view leads to the chemical laboratory of the South District Filtration Plant, Chicago. *Photo: Hedrich-Blessing*

Sun Control Methods: PART 2

By GROFF CONKLIN

sun control by the window itself

Exterior sun control devices can by a logical extension be made to include the actual glass used in the wall opening. Of course, unless special glasses or types of glass installation are used, the window will not exert any control over either solar energy or solar brilliance.

However, various kinds of glass and windows have been developed for sun control. The simplest and oldest, as far as glass goes, is the frosted type which eliminates glare (and clear vision at the same time) but has little or no effect on the incoming heat. Translucent glasses, in general, are effective for room areas where outer vision is unimportant, such as hallways, stair wells, reception rooms, and the like. The more expensive glass block not only does away with glare, but it materially reduces the radiated heat of the sun, dissipating it in the dead air space inside the block. Directional blocks lift transmitted light upward to the ceiling whence it is reflected evenly throughout the room.

However, none of these sight-barring glasses actually serves the major purpose of a wall opening, which is to permit vision out and sunlight in while barring the violences of weather from the occupants of the room and controlling solar glare and radiation. Neither, of course, do the standard window glasses, d/s or plate, which are transparent indeed, not only to visible radiation but also to heat and glare.

heat absorbing glass

An effective method of controlling the summer sun's heat without special devices is by the use of heat-absorbing plate glass. Though its cost is somewhat higher than standard plate, and two to three times as high as d/s, its effectiveness in reducing solar radiation and glare is so great that the higher price is unimportant in the long run. Particularly when used in conjunction with summer cooling systems, these glasses prove a profitable investment, since they cut down the operating costs of the systems noticeably.

Their chief disadvantage is that they are just as effective in barring solar radiation in the winter when it is desirable in the rooms, as in the summer when it is not. Furthermore, this glass is only moderately effective in the summer when installed in a regular single-pane thickness window frame—the reason being that while about five percent of the solar radiation is reflected and 55 percent is absorbed, a good part of the latter heat is reradiated into the room. True, the reradiation is on a longer wavelength which is not as hot or as destructive to materials and dyes as the shorter infrared wavelengths; nevertheless, it is "warm heat." Despite this fact, claims are made that a room provided with a single thickness of heat-absorbing plate will be from 10 to 20 degrees cooler in summer weather than one without it, particularly on the hottest days.

The average heat-absorbing plate glass also cuts out about 30 percent of the visible light of the sun, while still permitting clear vision; this materially reduces glare. Its watery green color is cool-appearing, too; though some clients may not like the slightly atrabilious effect it casts over the landscape. The light-barring factor of heat-absorbing glass must always be considered when scaling wall openings for a certain level of daylighting in the room; for a given level the opening must be at least 30 percent larger than when a plain plate glass is used.

It is obvious from the above facts that, though heat-absorbing plate is moderately effective in single thickness installations in the summer, it is actually detrimental to the solar heating principle in the winter. Consequently the most effective use of this material is in double windows if the winter climate is severe, and in some sort of awning or jalousie installation where heat is the major problem.

glass awnings

Heat-absorbing plate in a projected window frame provides the most efficient sun control window for warm climates or any region in which the winters are not exceptionally severe. A projected frame of the awning type with a height of anywhere from two to four feet, depending on the height of the total window area to be protected, will, when opened out, serve to reduce room temperatures very markedly since the heat reradiated from the inner surface of the glass would be *outside* the building

rather than inside. Like any other awning a projected frame can be raised or lowered at will to meet the various angles and intensities of sunlight. Practical daylighting can be achieved with such a window without the intense heat which such daylighting often brings with it.

Where winter temperatures are low, the fact that an awning frame with heat-absorbing glass provides only a single glass thickness means reducing the efficiency of the solar radiation in supplementing the heating system. It could, however, be installed as a permanent storm window, certainly in existing buildings and perhaps even in new ones, if the economics of such a job proved satisfactory. Actually the glass jalousie or the double window would serve the purpose better, though the summer efficiency of these types of windows will not be quite as high as the awning installation.

glass jalousies

In the old days most residences were provided with workable wooden shutters with small movable slats which were used by the occupants to bar the hottest rays of the sun while still permitting a little air to enter. They were also useful protection against rain and snow, and proved a nuisance to burglars, too, when bolted shut.

Today most of the shutters seen on "Cape Cods" and "Dutch Colonials" are phonies. The new house that has usable wood shutters today is eccentric; a reactionary standout against the march of progress. However, the principle of the shutter was always a good one; its major disadvantage was the fact that it killed vision along with solar glare.

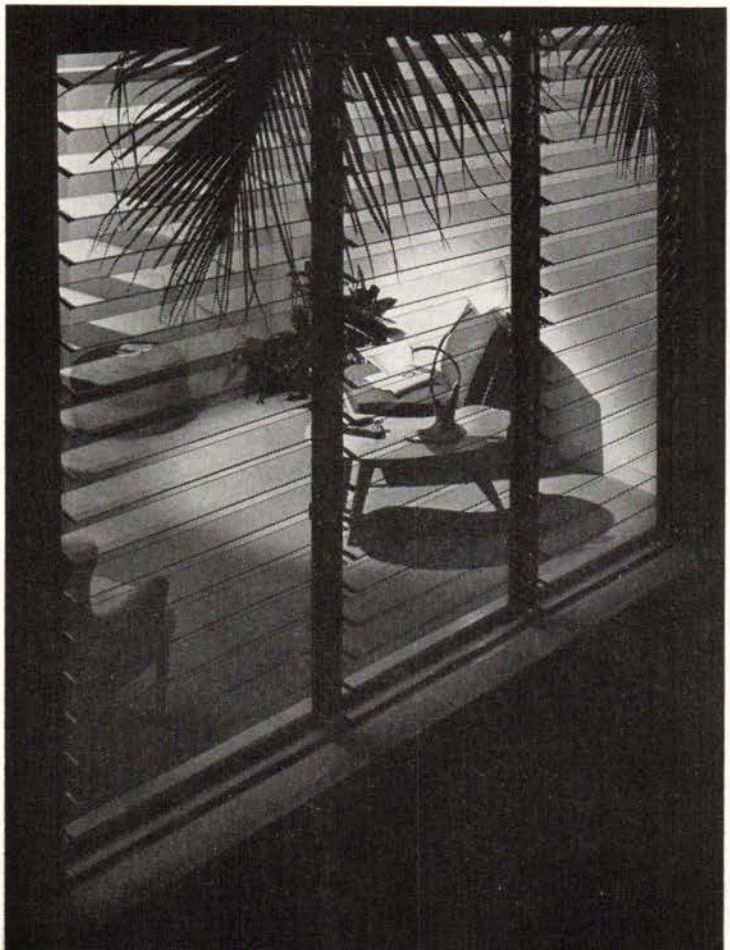
Glass jalousies are nothing more or less than a modern dressed-up version of the old-fashioned shutter, permanently fixed in the window opening. They are quite common in the warmer states where intense solar heat is always a problem. Instead of wood slats, narrow strips of heat-absorbing glass are put into a frame which is adjustable from inside the room. When the slats are open, excellent air circulation results inside the room, glare is minimized, and a large part of the sun's heat is kept outside. Furthermore, when correctly slanted, the slats of the jalousie keep out the hardest of rains while ventilating the room.

In the north, glass jalousies could serve as storm windows when used in addition to regular windows; and, since most types are furnished with their own screens, they can be left in place the year round instead of being removed in the spring and put in place again in the fall.

One limitation of the jalousie is, of course, that it interferes with vision to some extent, since the slats give the window a markedly striped effect. However, it is quite true that many clients will like the effect the jalousie makes in a window; and the ease with which one can be adjusted is a distinct point in its favor.

Glass jalousies are common in the warmer states; clear, obscure, tinted, or heat-absorbing glass may be specified. They can minimize glare, keep out a large part of the sun's radiated heat, permit excellent air circulation, and are easily operated from inside.

Photo: courtesy of Pro-Tect-U Jalousie Corporation



double glazing

In the long run, probably the single most effective method of sun control the year round in localities having both hot summers and cold winters is the double-glazed window with the outer light made of heat-absorbing glass. Double windows have been sold mainly as effective insulating units for large window areas in regions needing considerable winter protection, and there is no question of their efficiency in that regard. However, when the outer light is made of heat-absorbing glass, the double-glazed window is also effective in the summer as well, though some exterior shading, whether it be trees, awnings, eggcrate overhangs or some other device, will be advisable to protect the interior from the hottest attacks of the sun. Certainly for large commercial, industrial, and institutional buildings in which heating and cooling costs are a major factor, the considerably higher original cost of the double-glazed, heat-absorbing window will soon be amortized by savings in operating the heating and air-conditioning plants the year round.

For residences the same savings also exist, but on a smaller scale. It will often be a matter of deciding whether the savings in operating an all-year-round air conditioner in a solar house will be greater than the capitalized value of the added cost of the double-glazed window over the life of the mortgage. Furthermore, many financial institutions still do not recognize the full economic value of the double window in setting appraisals and mortgage values on new homes, so that often the added cost of such windows has to be paid as part of the cash investment the home owner is required to make.

Double glazing is certainly more valuable in the winter than in the summer, particularly in cold climates. Not only does it cut down the heat loss through large glass openings, but it also eliminates condensation, prevents fogging or frosting on the glass

Among several types of inside sun control devices are vertical metal louvers. Those illustrated here are in the general office area of the Guarantee Insurance Company, Los Angeles. *Photo: Woro Studios*

surface, and does away with drafts around the opening which usually result from the cold entering through a single sheet of glass. Perhaps it should be mentioned in this connection that the double-glazed window with the outer light of heat-absorbing glass often has a special value even in winter. Many solar homes have had to be protected by drapes or venetians even on the coldest days: since on a very sunny day, no matter how cold the air, the sun's rays can heat up a room to a nearly insupportable temperature, entirely unassisted by the furnace. The heat-absorbing glass in the outer light of a double-glazed window will, of course, eliminate this unusual hazard.

It seems obvious that were it not for the high cost of the original installation and of breakage replacements, the double-glazed window with heat-absorbing glass in the outer light would soon become standard in all but the most minimum priced buildings.

polaroid windows

This extremely novel window which provides absolute control over glare depends upon the principle of polarized light for its success. For the most part such a window is far too costly for general architectural use, its present applications being limited to airport control towers, trains, or buses, and illumination control filters in art museums and similar locations.

The window comes in two types. One has a fixed single glazing which provides a predetermined intensity of light; this is typically used in air port control towers and also can be effective in window visor flaps or in projected windows, if the high cost can be warranted. The other type is double and provides variable transmission. It is being used currently on a few trains and ships. The inner pane is movable (a limitation being that for effective control the pane must always be circular) and will vary the light entering the area all the way from full value down to blackness.

Data on the heat-eliminating power of this type of installation is lacking; it undoubtedly prevents a certain amount of heat from entering, but if it does not affect the infrared band it will not really create comfortable coolness on the hottest summer days.

inside sun control devices

Methods of controlling solar radiation inside the room are well known and in wide use; they need not detain us long. They include shades, venetian blinds, glass curtains and drapes, and (much more important than often realized) methods of interior decoration. As pointed out previously, few of these techniques satisfactorily control solar heat inside the room—not, at least, without at the same time practically eliminating all sunlight.

shades

Cloth shades, one of the oldest methods of controlling glare and giving privacy, probably provide the least effective method of controlling solar heat in a room. According to Table 1*, they eliminate no more than five or six percent of the solar radiation entering through a window at most hours of the day and in the late afternoon actually permit more to enter, by about five percent, than would normally come in through an unshaded window. These figures may vary somewhat with different types and colors of shades, but they undoubtedly will be of the same order of magnitude whatever the material.

Of course they are wholly effective in controling glare: that is, they eliminate practically all of the light when pulled down. Their only merit is their cheapness and the fact that they require somewhat less maintenance than do venetian blinds. On the other hand their useful life is relatively short, particularly if they are not operated with great care.

Where very low-cost glare control, without reference to radiation control, is desired, as in certain types of schools and other institutional buildings, the double shade, hung across the center of the window, can be effective. One shade pulls up over a pulley, the other down in the normal fashion. It is true that this type of installation calls for nearly hourly adjustment by the supervisor, teacher, or foreman, if it is to be at all efficient but correctly handled it can give any room adequate light on a clear day, while eliminating glare.

In many modern window-walled homes bamboo-strip roll shades are effectively used as interior glare-control devices; these bamboo blinds may also be useful in offices and in institutional buildings. Low in cost

* *From "Heat Gain Through Western Windows With and Without Shading," by F. C. Houghten and David Shore.* Transactions of the American Society of Heating and Ventilating Engineers, *Vol. 47, 1941.*

and relatively durable, the bamboo strip shade is also an extremely attractive decoration element. However, the fact that it eliminates a great deal of the sun's light, and admits what it does admit in a series of narrow parallel stripes, is a defect in any installation where a high level of daylighting is essential.

venetian blinds

Ordinary metal or wood slat venetian blinds are a much more adaptable solution of the glare problem in most buildings. They also are more effective in eliminating heat, according to Houghten and Shore, since they cut out as much as 25 percent of the sun's radiation on a hot day. Nevertheless this actually is inadequate protection against heat, when compared with any exterior sun control device.

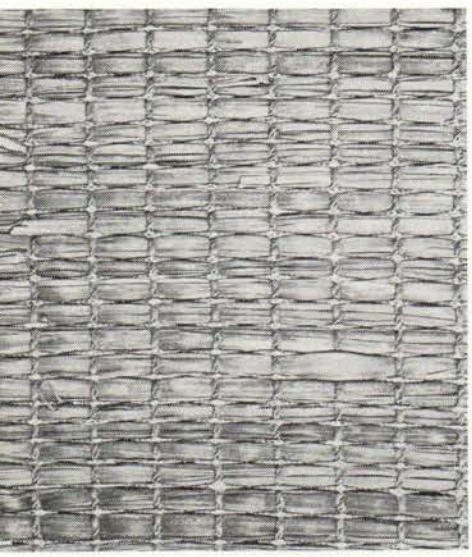
Although the Houghten-Shore table does not include it, the combination of venetian blinds and heat-absorbing glass provides a fairly economical and effective sun control device in the summer months. It is this combination which will be used in the United Nations buildings now being erected in New York (see illustration on page 66. The efficiency is much less than it would be in an installation of double glazing with the outer light of heat-absorbing glass, plus interior venetians; particularly in the winter, the United Nations installation is going to result in high operating costs for the heating plant. Nevertheless, such a combination will provide considerable client satisfaction, especially considering its relative inexpensiveness.

Vertical cloth venetians, developed by Architect Henry Wright, provide effective protection against the sun's glare and serve as a partial bar to its heat, particularly since dense cloths, like drapes, serve to absorb some of the radiation. These vertical venetians are so designed that when pulled back they appear practically the same as any drape. The 5" to 7" cloth "slat," if it can be so termed, can be turned to regulate the entry of the sun's rays as they change angle during the day, by means of an ingenious magnetic device. Though Wright's venetians are noncompetitive with standard venetian blinds, their price is within reach of anyone who is planning to use full drapes made of the usual heavy materials either in a residence or an office.

drapes

Drapes are useful not so much for solar control as for decorative purposes and for privacy. Non-opaque materials, light in color, make the best draperies for sun control purposes, just as glass curtains, which are translucent, most effectively bar solar radiation. Both of these materials admit some light during the day and at night give enough privacy for most purposes.

Drapery materials, of course, suffer from the common complaint of all dyed fabrics: they fade under sunlight. No dyed fabric is absolutely sunfast. A Bureau of Standards rating of 100 hours for a fabric



Above: roll shades of various kinds have long been employed to control the sun's glare. This delicate material found in the office of architects Wurdeman & Becket, Los Angeles, subtly diffuses the light entering a south window wall.
Photo: Julius Shulman

Left: this washable, handwoven, window shade material of royal palm, metallic yarn, and green yarn, was a first award winner in the American Institute of Decorators 1949 Home Furnishings Design Competition. Geraldine Funk, of the Puerto Rico Industrial Development Company, was the designer.
Photo: Samuel A. Santiago

means that it is "good" as to sunfastness. It is a high rating, but none of the technicians will call it "excellent."

Other factors enter as well. Some fabrics tend to wear out faster after repeated washings or dry cleanings than others; some get dirtier much faster than others. No ideal fabric from the points of view of dirt resistance, washability, durability, and sunfastness exists. The best solution is to select a fabric which has good average ratings in these various fields, and is available at a reasonable price.

Some new glass fiber fabrics that rate well in all these respects are now on the market. Heretofore fadability and short life after repeated washings have militated against wide use of these fabrics, despite their high value in fireproofness, insect and dirt resistance, and extreme ease of laundering (glass fabrics in general do not have to be ironed). The new glass textiles are available both in solid and screen printed colors which equal in fade resistance any cotton, wool, silk, or mixed cloths of equal quality. They will resist raveling and breaking—a somewhat common complaint about the older glass fabrics—because of a new method of crimping the fibers in place after they are woven; and will, of course, continue to be fire, insect, moisture, and dirt resistant to a high degree. The price, too, will be competitive with good-quality animal or vegetable fiber textiles for the same purposes. Some combination glass and wool fabrics are already available; they are extremely handsome, and make good drapery materials.

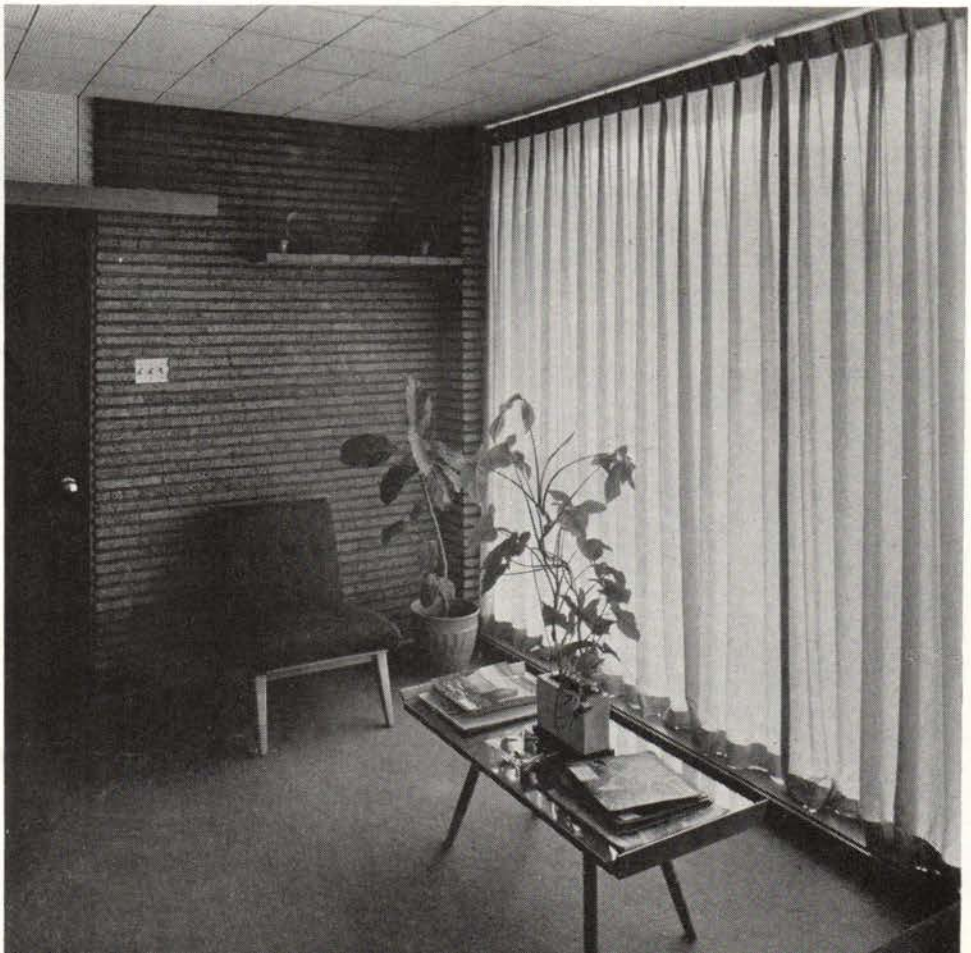
interior decorating

Drapes are only a small part of any interior decoration plan for the control of solar glare. It is surprising how greatly the sharp radiance of the sun can be minimized in any room by careful attention to the surfaces and colors of walls, ceilings, and even floors.

There are two essentially opposite goals to be achieved in glare control: one, in commercial, industrial, and institutional buildings, where the purpose is to *distribute the light evenly throughout the room* with fullest possible efficiency; the other, in residences, where the purpose is to *minimize glare even at the cost of full lighting efficiency.*

Daylighting experts have proved that dark-papered or painted walls have an adverse effect on the efficiency and the health of individuals engaged in occupations calling for high visual acuity. In such buildings light-colored, highly-reflective paints or other finishes will satisfactorily distribute the sunlight throughout the room, and venetian blinds or some other method of reflecting the light from the upper part of a window will throw it as far back into the room as possible, thus reducing or eliminating the need for artificial light along the back wall. Mirrors, picture glass, and other shiny surfaces should be avoided in such rooms, and any glare spots that remain should be veiled, according to George W. Thomas, daylighting consultant to the Truscon Steel Company. In Mr. Thomas' words, "Daylighting is free. Get it into the room in abundance, then control it and use it wisely."

The practical rule of thumb advocated by illuminating engineers, according to Mr. Thomas, is to adjust the brightness of the interior of any room in which close work is being done "so that the ratio of the brighter areas to the brightness of the darker



Draperies of non-opaque materials make highly efficient sun control devices and at the same time provide privacy. Here they are used with heat-absorbing glass in the reception room of the Seismic Exploration Incorporated Building designed by MacKie & Kamrath.

Chalmers-Marvins Photographers

TABLE 1: DESIGN HEAT GAIN DATA FOR SEVERAL WINDOW ARRANGEMENTS ON AUGUST 1, AT 40° LATITUDE; PLAIN 3/16-IN. SHEET GLASS AND WOOD SASH

Sun time	Solar radiation August 1 40° lat. west window	Air to air transmission 95F day	Design radiation gain in Btu per square foot per hour and in percent of design solar radiation intensity on window															
			West window															
			Unshaded one light		Outside venetian blind[a] light colored		Shading screen outside dark colored		Inside venetian blind[b] aluminum finish		Inside roller shade[c] dark green		Single light heat absorbing glass (unshaded)		Double glazing			
															Two sheets plain glass		One sheet plain glass and one sheet heat absorbing glass[d]	
	Btu	Btu	Btu	Per-cent	Btu	Per-cent	Btu	Per-cent	Btu	Per-cent	Btu	Per-cent	Btu	Per-cent	Btu	Per-cent	Btu	Per-cent
9-10	22	3.0	4.0	18.3	1.9	8.8	1.3	6.0	5.3	24.0	6.8	30.7	3.3	14.8	3.6	16.5	2.9	13.0
10-11	24	6.2	10.5	43.7	9.0	37.5	2.0	8.2	6.3	26.4	10.0	41.7	7.4	30.7	9.5	39.6	6.2	26.0
11-12	25	9.8	15.5	62.1	14.6	58.3	2.7	11.0	7.1	28.2	15.1	60.4	8.3	33.0	14.0	56.0	7.4	29.6
12-1	60	13.0	39.8	66.4	29.3	48.8	7.3	12.2	20.7	34.5	38.8	64.6	26.6	44.3	36.1	60.1	24.1	40.2
1-2	123	15.0	88.4	71.9	39.1	31.5	18.5	15.0	55.3	45.0	83.9	68.2	57.9	47.1	79.7	64.8	53.1	43.2
2-3	180	18.0	153.0	85.0	57.2	31.8	32.8	18.2	106.2	59.0	144.4	80.2	104.6	58.1	138.6	77.0	94.7	52.6
3-4	206	18.0	175.5	85.2	67.6	32.8	48.4	23.5	136.0	66.0	166.0	80.6	120.1	58.3	163.3	79.3	112.9	54.8
4-5	186	17.5	165.9	89.2	62.1	33.4	58.6	31.5	133.9	72.0	153.5	82.5	113.8	61.2	151.0	81.2	104.1	56.0
5-6	120	15.0	123.0	102.5	43.4	36.2	52.0	43.3	98.4	82.0	115.2	96.0	84.0	70.0	114.0	95.0	76.8	64.0
6-7	40	12.2	43.9	109.7	28.9	72.2	27.7	69.2	36.4	91.0	46.0	115.0	32.8	82.0				

a—So arranged as to keep sun off window.
b—Venetian blind slats at 45°.
c—Shade one-half drawn.
d—Double-glazed window—plain glass inside; heat absorbing glass outside.

From Transactions of the American Society of Heating and Ventilating Engineers, Vol. 47, 1941. Used by permission.
Note: Table is incomplete.

areas does not exceed 3 to 1, preferably, and 5 to 1 maximum." "Recommended Practices of Daylighting," issued by the Daylighting Committee of the Illuminating Engineering Society, establishes standards such as this, and recommends methods of achieving good daylighting which should be very useful to the architect who has to cope with this sort of headache.

In residential work, however, other factors may enter. Except in kitchens, sewing rooms, and other areas in the home where close eye-work during the daytime takes place, a high efficiency in daylighting often is not desirable. The psychological effect of low-level light diffusion is more pleasant in such rooms than the bright and highly reflective lighting achieved by glossy surfaces. If a wall or so, or even the ceiling, is decorated in dark tones—particularly if the room has large glass areas—uncomfortable solar brilliance will be considerably reduced, and a restful and relaxed air will result. Similarly, floor coverings of a nonreflecting type, such as carpets, low-toned materials like flagstone, or wood or tile floors finished with a dull wax rather than a high-polish finish, will reduce solar glare at the major source of first reflection.

They will not eliminate glare entirely, of course, nor will they have any pronounced effect on the amount of solar heat entering the room (except psychological—they will *look* cool!). Some sort of sun control treatment at or outside the window will still be required in all south or southwest rooms.

conclusion

Scientific control of solar heat gain and solar glare is an extremely complicated and difficult problem. George V. Parmelee published a study called "Transmission of Solar Radiation Through Flat Glass Under Summer Conditions" from *Transactions of the American Society of Heating and Ventilating Engineers,* Vol. 51, 1945 which contained *44* numbered mathematical equations of astonishing complexity. He was followed by F. W. Hutchinson and W. P. Chapman of Purdue University, whose paper, "A Rational Basis for Solar Heating Analysis from *Transactions of the American Society of Heating and Ventilating Engineers,* Vol. 52, 1946, contained 38 numbered equations, the key one of which read as follows:

$$Q = F \sum_{n=1}^{n=5088} \nabla_n - 5088(U_e - U_w)\ (t_i - t_o')$$

"In which 'Q' equalled the annual saving (based on October 1 to May 1 heating season) in Btu due to replacing one square foot of non-transmitting *south* wall with a double glass *solar* window which is 100 percent in the shade (due to roof overhang) *only* at solar noon on June 21 and 100 percent irradiated by noon sun (solar time) *only* on January 21."

From that equation it is obvious that sun control, technically speaking, is not a simple problem! The need for expert technical advice from daylighting engineers and heating and air-conditioning experts on any job above the level of the small private home or the minimum-cost commercial or industrial building is again made clear from these highly complex computations.

The one thing that this review should have made absolutely clear to any architect, however, is that he must never under any circumstances, if he hopes to retain his clients (particularly the large ones with difficult sun control and air conditioning problems), ignore the sun and let its radiations fall where they may. Whether he handles it himself or calls in outside advice, he must meet the sun on its own terms, and control it in accordance with the client's needs.

Streamlined Specifications: COPPER ROOFING AND SHEET METAL WORK: PART I

By BEN JOHN SMALL*

Reference numbers appearing in this specification pertain to detail sheets found in Copper and Common Sense, *Chapter III, second edition, published by Revere Copper and Brass Incorporated, New York; copies may be obtained from the publisher without cost. The specification should include a note pointing out that these details are referred to in order to assist the contractor in understanding more readily and visualizing more accurately the legal requirements of the specification itself. The author acknowledges the assistance of Revere Copper and Brass Incorporated in the preparation of this specification. Part II will appear in a subsequent issue of* **P/A**.

1. general:

(a) Applicable provisions of "General Conditions" govern work under this Section.
(b) These specifications are of the abbreviated or "streamlined" type and include incomplete sentences. Omissions of words or phrases such as "the Contractor shall," "in conformity therewith," "shall be," "as noted on the Drawings," "according to the plans," "a," "an," "the," and "all" are intentional. Omitted words or phrases shall be supplied by inference in the same manner as they are when a "note" occurs on the Drawings. Words "shall be" or "shall" shall be supplied by inference where colon (:) is used within sentences or phrases.
(c) The Contractor: provide all items, articles, materials, operations, or methods listed, mentioned, or scheduled on the Drawings and/or herein, including all labor, materials, equipment, and incidentals necessary and required for their completion.
(d) CRC in these specifications means cold rolled copper.
(e) LCC in these specifications means lead coated copper.

2. materials:

(a) Sheet metal: copper, A.S.T.M., B5 for composition; A.S.T.M., B152 for finished sheets. Where CRC is specified use cornice temper. Where soft copper is specified use hot rolled or roofing temper. Use 16 oz. CRC for sheet metal not otherwise indicated or specified.
(b) LCC: A.S.T.M., B101; copper: coated on both sides with lead weighing 6 to 7½ lbs. per square, per side. Apply lead coating by hot dip process. Specified weights of lead coated copper: weights of sheet copper exclusive of lead coating. Lead coated copper finish: not rougher than (as approved).
(c) Thickness tolerance Sheet copper, exclusive of lead coating: not less than following thickness:

Nominal weight	Nominal thickness	Minimum thickness
10 oz.	.0135"	.012"
16 oz.	.0216"	.019"
20 oz.	.0270"	.0245"
24 oz.	.0323"	.030"
32 oz.	.0431"	.0405"

(d) Nails used for fastening copper: copper or hardware bronze of (approved type) with large flat heads and needle points; not smaller than 12 Stubs' gage, sufficient length to penetrate roof boarding ⅞".
(e) Screws, bolts and other accessories used for fastening copper: copper, bronze or brass.
(f) Expansion shields: lead, bronze or equal non-ferrous alloy.
(g) Cleats: 2" wide, 3" long, 16 oz. CRC, unless otherwise specified. Lock one end into seam or into folded edge of copper sheets; nail other end with two nails; fold back over nail heads.
(h) Solder: A.S.T.M., B32; 50% pig lead and 50% block tin where used on plain copper; 40% lead and 60% block tin where used on LCC.
(i) Flux: muriatic acid killed with zinc, or approved brand of soldering paste. Wash off acid thoroughly after soldering is completed.
(j) Bituminous plastic cement: asphalt and asbestos fiber mixture, F.S. SS-C-153.
(k) Roofing felt: saturated with asphalt or pitch, weigh 14 to 15 lbs. per 108 sq. ft.
(l) Rosin-sized paper: smooth, unsaturated building paper, about 6 lbs. per square.
(m) White lead paste: A.S.T.M., D81.

3. workmanship:

(a) General. Surfaces to be covered with sheet metal: free from defects of every description. Clean off dirt, rubbish, other foreign material before sheet metal work is started. Drive projecting nails flush with roof boarding.
(b) Tinning. Tin edges on both sides of uncoated copper sheets to be soldered for 1½" width. No tinning required on LCC; thoroughly wire brush lead in contact with solder to produce bright surface.
(c) Soldering. Solder slowly with well heated coppers. Heat sheets thoroughly. Completely sweat solder through full seam width. Use ample solder. Apply 1" of evenly flowed solder on seam. Solder seams a second time on slope steeper than 45 degrees. When soldering LCC, use liberal amount of flux; brush into seams.
(d) Soldering coppers. Solder with heavy soldering coppers of blunt design; tin properly before using. Solders for flat seam work, gutters, LCC: weigh not less than 10 lbs. per pair, except when gas heated soldering torch is used; copper itself: weigh not less than 3 lbs.
(e) Cross folded loose seams.[3] Where copper is folded in one direction, then folded at right angles to first fold, i.e., slip joints of base flashings, expansion joints and similar cross folded joints, slit folded portion of copper at cross fold; solder patch of copper over slit to avoid binding at cross fold.

4. flat seam roofing:[12]

(a) General. Divide long roof runs into sections not more than 30'-0" square. Separate each section with wood battens 3" wide at top, 2¼" wide at bottom, 1⅝" high. Cover batten with 20 oz. CRC in 48" lengths; lock and solder together. Form batten cover with right angle bends in one piece with 4" wide horizontal flanges that extend onto roof deck. Lock, solder horizontal flanges to roofing pans.
(b) Felt. Cover roofing surfaces with roofing felt; lap seams 2"; nail with copper nails driven through sheet copper washers not less than 1" square.
(c) Roofing sheets: 20 oz. CRC, 16" by 18" or less; lay in courses parallel with eaves, with shorter sheet dimensions at right angles to course. Stagger cross joints. Pre-tin sheet edges. Bend to form ¾" locked, soldered seams. Notch corners.
(d) Cleats. Form cleats of 20 oz. CRC. Place cleats on longitudinal seams at center of each pan and over

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intersection of each transverse seam. On transverse seams, place cleat at center of each pan.

(e) Eaves. At eaves, also at rakes which do not abut vertical surfaces, turn roofing sheets over roof sheathing edge; hook ¾" over 20 oz. CRC edge strip. Make edge strip from 8'-0" long pieces; lap ends 2". Secure edge strip to roof deck with nails spaced 4" on centers. Edge strip face nailing: not permitted.

(f) Soldering. Solder seams thoroughly. Produce watertight joints.

5. standing seam roofing:[7, 8]

(a) Paper. Cover roofing surfaces with roofing felt. Over this apply rosin-sized paper. Lap each ply not less than 2" in direction of flow. Nail with copper or bronze nails; drive through sheet copper washers not less than 1" square. Space nails in roofing felt not more than 6" on centers on lapped seams.

(b) Pan method.[8] (Pan method may be used on roofs with slopes of 6" to foot or steeper.) Form roofing pans of 20" by 48" 16 oz. CRC sheets bent up 1½" at one edge, 1¾" at opposite edge, with loose locked seams at upper and lower edges. Form cross seams with ¾" fold on lower end of upper pan, with 2" fold on upper end of underlying pan. Slit transverse seams to avoid cross folded seams where they turn up at standing seams. Locate slit in fold at lower end of upper pan 1" away from standing seam. Solder slit edge in lower fold at upper end of lower pan to standing seam vertical leg. Begin alternate pans at eaves with half length sheets; stagger transverse seams. Space cleats 12" on centers on each standing seam. Place one cleat at each transverse seam center.

(c) Roll method.[7] Double lock together 16 oz. CRC sheets, 20" by 48" to form strip 20" wide by length equal to roof slope length. Form standing seams at job with roofing tongs. Install loose locked, unsoldered seam connections to gutter or eave flashings. Stagger cross seams. Space cleats 12" on centers on each standing seam.

(d) Standing seams.[8] Finish standing seams 1" high, except on curved roof surfaces where they shall finish ¾" high. First fold: single fold ¼" wide; second fold: double fold ½" wide. Locked portion of standing seam: 5 plies in thickness. Fold over lower ends on standing seams at about 45 degree angle or turn down in tapered fold.

(e) Spacing of standing seams: 16¾" or 20¾" to use 20" or 24" copper sheet widths without waste. If 24" widths are used, copper: 20 oz. instead of 16 oz. Size of copper sheets: 24" by 48" instead of 20" by 48".

(f) Ridges and hips.[8] Provide ridges and hips with standing seams constructed as specified for standing seams on main roof.

(g) Valley.[7] Valley sheets: 16 oz. CRC not exceeding 8'-0" in length. Lap each sheet over lower sheet not less than 6" in direction of flow. Extend valley sheet under roofing sheets on both sides not less than 6". At valley line adjacent to lower edge of roofing sheets make ¾" double fold to engage ¾" single fold at lower ends of roofing sheets or solder continuous strip of 16 oz. CRC to valley sheet to form lock for lower ends of roofing sheets. Fold valley sheet outer edges ½" for cleating; install copper cleats on 12" centers in these folds.

(h) Eaves.[8, 11] At eaves, where no gutters occur, hook each pan over previously placed 24 oz. CRC edge strip. Form edge strips from sheets 8'-0" long or less. Lap each length 2" over preceding one. Extend edge strip up on roof boarding under copper roofing 4" or more; secure with nails spaced 4" on centers. Place nails along upper edge. Edge strip face nailing: not permitted. Where box gutters occur at eaves, loose lock roofing pan ends into gutter as specified under "Built-In Box Gutters."

(i) Gable rakes.[8] Turn up pans against gable rakes vertically 1½"; lock into 16 oz. CRC fascia strip forming standing seam 1" high. Attach 24 oz. CRC continuous edge strip to roof boarding edge with bronze nails spaced 4" on centers. Hook fascia strip lower edge ¾" over edge strip to form drip.

6. batten seam roofing:[9, 10]

(a) Battens, of indicated size and spacing: furnished and installed under "Carpentry" Section.

(b) Battens are 1¾" wide at top, 1½" wide at bottom, 1⅝" high. Spacing: 17½" or 21½" on centers to use 20" or 24" width copper sheets without waste.

(c) Paper. Before installation of battens under "Carpentry" Section, cover required surfaces with roofing felt; lay with 2" laps; nail with copper nails driven thru sheet copper washers not less than 1" square. Apply rosin-sized paper over roofing felt, between battens, immediately preceding copper roofing application.

(d) Copper pans.[9] Form 16 oz. CRC pans; install between wood battens. Form pans from sheets 8'-0" long, except starting pans in alternate courses which shall be 48" long at eaves; stagger transverse seams. Turn up sheet sides to batten height plus ½" with ½" folded to form horizontal flange at batten top edges.

(e) If pans are formed from sheets over 24" wide, use 20 oz. CRC instead of 16 oz. CRC.

(f) 3" to 6" slopes.[10] For roof slopes of 3" to 6" to foot, form cross seams with ¾" fold, in direction of flow, in both upper and lower pans. Solder 16 oz. copper lock strip 1½" wide to underlying pan 3" below pan upper edge. Hook ¾" fold in lower end of upper pan into lock strip.

(g) 6" slopes.[10] For roof slopes of 6" or more to foot, form cross seams with ¾" fold on lower end of upper pan and with 2" fold on upper end of underlying pan. Slit folds in cross seams at each pan corner to avoid cross folded seam. Locate slit in fold at lower end of upper pan 1" away from batten. Solder slit edge in fold at upper end of lower pan to pan vertical leg.

(h) Cleats.[9] Space cleats not more than 12" on centers on each vertical side of battens. Provide one cleat at center of each transverse seam. Nail batten cleats to vertical sides of battens.

(i) Cover strips.[9] Form cover strips of 16 oz. CRC; apply over battens. Lock cover strips edges into ½" horizontal pan flanges; mallet down against vertical sides of battens. Cover batten ends with copper cap folded and locked into tabs ½" long on top and two vertical sides of cap. Tabs: ½" extensions of cover strip and vertical legs of pans.

(j) Hips and ridges:[10] copper covered battens, similar to roof battens. At roof slope intersection with ridge or hip battens, turn up roof pan edges against ridge or hip battens; terminate in ½" horizontal flange at batten tops. Install cover strips as specified for roof battens over top of hip and ridge battens; lock into pan flanges; mallet down over hip and ridge batten sides.

(k) Valleys.[9] Valley sheets: 16 oz. CRC not exceeding 8'-0" in length. Lap each sheet over lower sheet not less than 6" in direction of flow. Extend valley sheet under roofing sheets on both sides not less than 6"; fold ½" on each edge for cleating. Install copper cleats 12" on centers in these folds. At valley line adjacent to lower edge of roofing sheets make ¾" double fold in valley sheet to engage ¾" single fold at lower ends of roofing sheets, or solder 16 oz. CRC continuous strip to valley sheet to form lock for roofing sheet lower ends. Notch under edge of wood battens to permit folded edge of valley sheet to pass under battens.

(l) Eaves.[9, 11, 24] At eaves, where no gutters occur, hook each pan over previously placed 24 oz. CRC edge strip. Form edge strips from sheets 8'-0" long or less; lap each length 2" over preceding one. Extend edge strip up on roof boarding under copper roofing at least 4"; attach with bronze nails 4" on centers. Edge strip face nailing: not permitted. Where box gutters occur at eaves, connect roofing sheet ends to gutter.

7. flashings:

(m) Gable rakes.[10] Set a roof batten flush with gable end. Cover strip on this batten shall lock into roof pan; cover top of batten; extend down over face of batten where it shall be locked into previously placed 24 oz. CRC edge strip as specified for edge strips at eaves.

(a) Through-wall flashing.[3, 4, 34, 35] General. Extend through-wall flashings under copings ½" beyond inside face of wall; bend down at 45 degree angle to form drip when flashing does not form cap over base flashing. Through-wall flashings that also form cap flashings: bent so that a 4" wide cap will lap base flashing at least 3". Flashings in exterior walls: (terminate within ½" of exterior face of wall and edge of flashing: bent over ½" to form hook dam)** or (project ½" beyond exterior face of wall and edge of flashing bent down at 45 degree angle to form drip).** Form flashings in walls other than parapet walls for such items as sills, heads of openings, belt courses, cornices and spandrels to indicated details. Use 16 oz. copper for exposed flashings above roof line. Use 10 oz. copper for concealed flashings.

(b) Where required. Install through-wall flashing in masonry walls or parapets for connection to following items and elsewhere as indicated.

Base flashings on built-up roofs and on flat seam copper roofs.
Built-in gutters.
Copper cornices or copper covering over wood or stone cornices and belt courses.
Directly under all stone copings.
Under stone cornices and belt courses.
Under window sills.
Over all exterior windows and door openings.
Continuously over all spandrel beams.
At tops of all grade walls above grade.
Continuously over seat angles attached to concrete spandrel beams.

(c) (Approved brand) 3-way bond or equal.[3] Install through-wall flashings where indicated. Use flashing of mechanically keyed interlocking type, having undercut sawtooth bonding ribs formed in sheet to provide mechanical bond in mortar bed in all directions—vertically, longitudinally, transversely. Undercut sawtooth bonding ribs: so designed as to insure complete filling of bonding keys, top and bottom, with mortar. Undercut ribs: extend transversely of sheet and occur at intervals of not more than 3". Install through-wall flashings with mortar layer above and below flashing. Total thickness of two mortar layers and flashings shall equal regular mortar joint. Interlock end joints. Do not solder except for special conditions.

(d) (Approved brand) 2-way bond or equal.[4] Install through-wall flashing where indicated. Flashing: specially formed to provide mechanical bond in mortar bed to prevent lateral movement in all directions. Bonding features shall occur at intervals of not more than 3" and: series of raised ribs and buttons that traverse sheet. Install through-wall flashing with layer of mortar above and below flashing. Total thickness of two mortar layers and flashing shall equal regular mortar joint. Lap flashing sheet ends at least one raised rib, forming lap joint 2" wide or more. Do not solder except for special conditions.

(e) Reglets.[34] Install (approved brand) for metal flashing in concrete where indicated. Reglet: closed friction type, made from 16 oz. CRC. Join ends of each length together by 1" locking tongue forming lap slip joint. Fasten reglet to concrete forms with special double-headed copper nails spaced 12" on centers. Use not less than 10 oz. copper insert flashing when concealed; use 16 oz. copper where exposed. Insert flashing full slot depth; secure by indenting reglet face with dull pointed center punch every 12".

(f) Spandrel flashings.[34] Concealed wall flashings at spandrel beams and water table: 10 oz. copper formed with (undercut sawtooth bonding ribs that provide mechanical bond in mortar in three directions—vertically, laterally, longitudinally; bonding features shall occur at intervals of not more than 3". Interlock end joints. Do not solder except for special conditions)** or (series of raised ribs and buttons that provide mechanical bond in mortar to prevent lateral movement in all directions; bonding features shall occur at intervals of not more than 3" that traverse sheet. Lap ends of each flashing length over at least one raised rib. Do not solder except for special conditions.)**

(g) Install flashing over spandrel beams as indicated.[34] Extend continuously through wall flashing (to within ½" of exterior face of wall) (and project ½" beyond exterior face of wall; bend down at 45 degree angle).** Turn up flashing rear edge 2" against interior wall face unless otherwise indicated. At columns, turn up flashing into copper reglets preset in concrete. Lay flashing with mortar layers above and below. Total thickness of two mortar layers and flashing shall equal regular mortar joint.

(h) Where concrete spandrels form head of windows and doors, provide copper reglets as heretofore specified near beam bottom to receive copper lintel flashing as indicated.[34]

(i) Where continuous seat or shelf angles are attached to face of concrete spandrels, provide copper reglets as heretofore specified in concrete above angle leg. Extend reglet continuously across face of columns. Install copper flashing over angle as indicated. Make flashing continuous from 10 oz. copper with sawtooth ribs ⅛" high traversing sheet. Interlock ends of each flashing length to form 2" wide unsoldered lap joint. Terminate flashing within ½" of exterior wall face. Turn up to engage with reglet.[34]

(j) Sill and head flashings. Install sill and head flashings where indicated. Form flashing (to provide mechanical bond in mortar bed in three directions—vertically, laterally, horizontally; bonding features shall consist of undercut sawtooth ribs that traverse sheet at 3" intervals)** or (to provide mechanical bond in mortar bed and prevent lateral movement in both directions; bonding features shall occur at intervals of not more than 3" and: series of ribs that extend transversely of sheet.)** Use copper not less than 10 oz. per sq. ft.

(k) Extend flashing under masonry sills for full depth of sill and 4" beyond masonry jambs. Place flashing front edge ½" back of wall face. Turn up back edge 2", unless otherwise indicated.[35]

(l) Head flashings shall overlap vertical leg of lintel at least 2"; extend full lintel length. In masonry walls, turn up flashing and extend through wall one brick course above structural lintels. Turn up back edges of flashing 2" against interior wall face. Where concrete spandrels or lintels occur, copper flashing shall overlap vertical leg of steel lintel angle 2" with flashing top edge inserted into closed friction type copper reglet preset in concrete.[35]

***Delete specifications not desired.*

(m) Base flashings.[3] Extend base flashings up on vertical wall at least 8" and horizontally onto roof 4" unless otherwise indicated. Form base flashing of 16 oz. or 20 oz. CRC; use sheets 8'-0" long except where shorter lengths are required. Make up base flashing straight runs in units about 16'-0" long when 16 oz. copper is used and 24'-0" long units for 20 oz. copper. Connect these units together with 3" wide loose lock slip joint filled with bituminous plastic cement before hooking units together. Provide similar slip joint not more than 8'-0" from any external or internal roof corner on long straight runs. Straight runs less than 24'-0" in length shall have similar slip joint at center of run. Make loose lock slip joints as specified for "Cross Folded Loose Seams." Seams, joints between slip joints: ¾" wide, locked, soldered seams. Solder seams in flat position. Give copper portion in contact with built-up roofing coat of approved asphaltum paint before flashing is set in place. Hold outer edge of base flashing on built-up roofs in place with bronze nails of (approved) type spaced 3" on centers.

(n) Shingle or stepped base flashing. Where slate, flat tile or shingle roofs abut vertical brick or other masonry surfaces, weave separate pieces of copper flashing in with each course. Extend each piece of flashing out onto roof at least 4" and up on vertical wall 4". Extend flashing pieces from top edge of shingle on which it rests to within ½" of butt of course placed over flashing. For slate or tile extend flashing piece 2" above top edge of slate for nailing, or make two lugs about 1" wide at top of each flashing piece bent to hook over top edge of slate or tile.

(o) Counter flashings. Install counter flashings in masonry walls in conjunction with base flashings where it is unpractical to use through-wall flashings, such as intersection of pitched roofs with vertical masonry surfaces, vent stacks, chimneys and the like. Make wall and counter flashing of separate pieces. Install counter flashing after base flashing is in place. Extend wall flashing into masonry 4" with back edge turned up ½". Form outer edge with double fold, one fold projecting ¾". Counter flashing strip 4" wide formed of 16 oz. CRC shall have upper edge formed to engage preformed lock in wall flashing. Bend center of strip to provide spring action against base flashing. After inserting counter flashing into wall flashing lock, tightly mallet down projecting fold. Where flashing is installed in steps, each step shall overlap underlying step not less than 4".

(p) Cant strips.[21, 33] Form cant strip for slate, tile and wood shingle roofs of 16 oz. CRC from strip of copper 2" wide and with raised V or ridge at center ½" high. Place cant strip on apron flashing about 3" up from butt of starter course of slate, shingle, or tile. Tack solder cant strip along both flanges to gutter apron flashing at intervals of 6"; butt together ends of each length.

(q) Valley flashings.[13, 14] Use open valleys only when valley slope is 4½" or more per foot. Where intersecting roofs are of different area or slope, form inverted V, 1" high in copper along valley center line.

(r) Use closed valleys when valley slope is less than 4½" per foot or where unequal quantity of water is delivered into valley by intersecting roofs of different area or slopes.[15]

(s) Open valleys.[13, 14] For valley flashings use CRC in lengths not exceeding 8'-0". Copper, where used with wood shingles, shall weigh 16 oz. per sq. ft. Copper, where used with slate or tile roofing, shall weigh 24 oz. per sq. ft. Extend copper 5" or more under roof covering on each side of valley; fold side edges ½" for cleating. Lap sheets not less than 6" in direction of flow; nail upper end of each sheet to roofing construction. Secure side edges with copper cleats spaced 24" on centers. Open portion of valley: not less than 4" in width at top; increase in width ⅛" per foot towards eaves. Where intersecting roofs are on different slopes, form inverted V, 1" high in metal along valley center line; increase lap of valley sheets to 8" unless otherwise indicated.

(t) Closed valleys.[15] Build in with each course of roofing material separate pieces of 16 oz. copper flashing, at least 18" wide and as long at diagonal of shingle as at center of valley. Where slate or tile is used as roofing material use copper weighing 24 oz. per sq. ft. Bottom edge of each flashing piece: ½" short of shingle butt line in succeeding course. Nail each piece of flashing along upper edge with copper or bronze nails.

(u) Hip and ridge flashings.[36] Make hip and ridge flashings of indicated design, from 16 oz. CRC in 8'-0" or 10'-0" lengths. Lap each length ends not less than 4". Do not solder lapped joints. Fasten flashing on both side flanges by brass screws and washers spaced about 24" on centers. Cover screw heads and washers with copper caps soldered to flashing. Make screw holes through copper ¼" larger than screw shank diameter.

(v) Gravel stops and roof edge fascia.[16] Form gravel stops and roof edge fascia of 16 oz. CRC in 8'-0" lengths. Extend one edge onto roof 4" or more; nail along outer edge with nails of (approved type) spaced 3" on centers. Provide wood nailing strips in concrete, gypsum or on steel roof decks.

(w) Bend copper to form 1" high gravel stop; extend down to bottom of fascia; hook ¾" over previously placed 24 oz. CRC edge strip. Bend lower hooked edge outward at 45 degree angle to form drip. Lap ends of each 8'-0" length 4"; on fascia, hold ends tight together with copper clips soldered to fascia underside; insert ends of adjacent lengths between clip and fascia copper. Face nailing of end lap joints: not permitted. Where copper is in contact with built-up roofing, apply coat of approved bituminous paint previous to setting.

(x) When fascia is 5" or more in width, form raised V or ridge ½" high in copper as close to lower hooked edge as possible to reduce waviness to minimum.

(y) Form edge strip of 24 oz. CRC in 8'-0" lengths; butt together ends of each length. Secure edge with nails of (approved type) in wood nailers or copper wall plugs built into mortar joints.

(z) Door sills. Flash with copper door sills leading onto flat roofs except where sill bottom is at or above level of cap flashing. Extend copper flashing under sill; turn up behind and at two ends of sill 2". Solder sill flashing to base flashing; make joints watertight.

(2a) Flashing of pipes through roofs. Flash with copper pipes projecting through roofs. Flashing shall consist of base 18" square to which solder copper tube extending 8" above roof line. Over base tube install cap; flange down into pipe not less than ½"; lap down over base tube not less than 4".

(2b) Provide clearance between vent pipe and flashing to permit free pipe movement due to expansion, contraction. Build in flashing on pitched roofs with roofing materials. Mop in flashings on built-up roofing with roofing plies.

(2c) Scupper flashings. Scupper flashings shall cover interior of opening provided in wall. Extend lining through and project outside wall as indicated. Make lining of 20 oz. CRC; provide ½" clearance between masonry and copper. On roof side, provide scupper lining of sufficient length to be built into membrane base flashing at least 4" and to copper base flashing with locked, soldered joint. Extend bottom edge at least 4" into built-up roofing; where required, form ¾" high gravel stop ridge around scupper inlet.

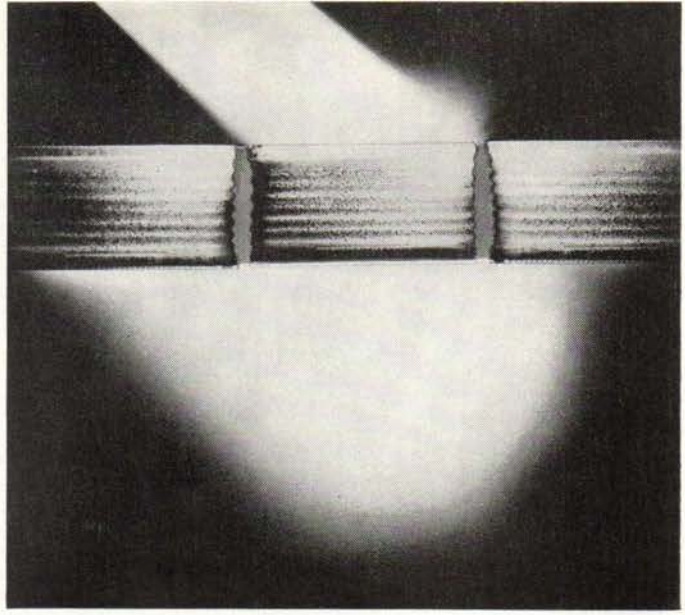
(2d) Chimney on roof slope. At chimney front extend 16 oz. CRC apron flashing over roofing material not less than 5" and up on chimney face at least 4". Along chimney sides, weave in with each course of roofing material separate pieces of 16 oz. CRC at least 8" long bent to extend 4" onto roof and up on chimney wall. At chimney corners, connect base flashing to apron flashing by lapped or locked soldered seam. Cover with copper crickets in back of chimneys; extend copper under roofing material at least 8". Lap or lock and solder joints. Where slate or tile is used as roofing material use copper weighing 24 oz. per sq. ft. for stepped base flashings at chimney sides and crickets.

(2e) Extend cap flashings of 16 oz. soft copper through chimney wall; turn up back edge 1" against flue lining. Pieces of stepped cap flashing shall lap base flashing at least 3" and each other not less than 3".

(2f) Chimney cap. Extend 16 oz. copper flashing under chimney cap from outside face of chimney through to flue lining, then vertically against flue lining with edges bent down 1" into flue. Bend down outside edges of flashing at 45 degree angle to form drip at exterior face of chimney walls. Lap or lock and solder joints.

(2g) Flashing on doors and blinds. Cover top edge of exterior out-swinging doors and exterior blinds with 16 oz. cold rolled LCC channels. Form strips to exact size of fitted doors and blinds; bed in white lead; nail with copper nails not over 3" on centers along edges. Turn edges down ¼" on sides, ends.

p/a products



Designated as Insulux Light-Directing Glass Block No. 363, this product diffuses light more uniformly to all portions of the room. Note pattern created by beam simulating early morning or late afternoon light.

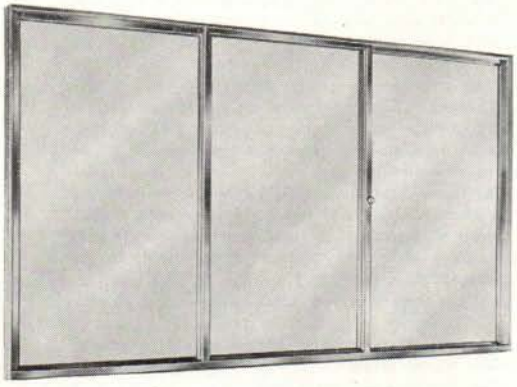
new type light-directing glass block

After two years of research directed by Dr. H. B. Vincent and Dr. R. A. Boyd, University of Michigan physicists, a new type of light-directing glass block has been developed by the American Structural Products Company to provide better distribution of daylight for school classrooms.

The principal improvement in daylight control is accomplished by the addition of "azimuth-correcting" ribs on the outside and inside faces of the blocks. These exterior ribs accept more light even when the sun is at an angle normally considered unfavorable for adequate classroom lighting. In this way, the amount of light which enters the room is increased considerably in the early morning and late afternoon. Further, the specially designed ribs spread daylight sidewise to direct more light during these hours to front and rear work areas.

By means of prisms on both inside faces, these blocks, like others, direct a major portion of available light toward the ceiling from where it is reflected downward onto working surfaces. Although it accepts more daylight than any previous light-directing glass block, it is claimed that the new product offers less surface glare when viewed from below normal eye level. Insulux Division, American Structural Products Company, Toledo 1, Ohio.

perfects horizontal-sliding-type aluminum window



These windows, available in a wide variety of standard and special styles, require no maintenance. No putty is used and no painting is needed.

A new aluminum, horizontal-sliding-window has been perfected by the Peterson Window Corporation and is now available in a wide variety of standard and special styles. There are no sash balances, concealed sash springs, operating cranks, or projecting hinges, and as the sliding panel lifts out, all washing is done from the inside of the room. A high pile, woven, wear-resistant, and frictionless weather strip eliminates metal to metal contact and scratching.

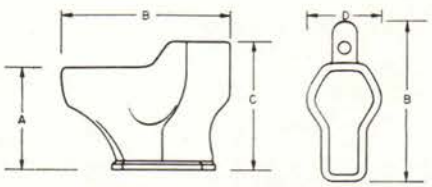
Screens, composed of a rewirable aluminum frame and aluminum colored plastic screen cloth, cover the ventilating portion of the window. Storm sash panels of double strength glass are installed from the inside for winter comfort. Moisture condensation is substantially reduced because all parts of the frame exposed to outside cold are of hollow construction. The combination of tubular construction and double glazing makes the insulation superior to that of solid section windows.

An advantage emphasized by the manufacturer is the possibility of installing the window in a continuous span of any length without danger of buckling due to unequal expansion of aluminum and masonry. Knockdown shipment permits substantial freight savings and the normal assembly time is but 15 minutes; a screw driver is the only tool needed. Peterson Window Corporation, 20500 Mound Road, Detroit 34, Michigan.

urinal developed for women's public rest rooms

American-Standard is now producing a new fixture for women's public rest rooms—a woman's urinal. Known as the Sanistand, this vitreous china fixture is available in white and various pastel shades. Although it can be used as a regular water closet, the Sanistand has no seat and is offered primarily as a urinal; it should be installed along with ordinary toilets.

Before proceeding with mass production plans, these urinals were field tested in railroad and bus terminals, hotels, department stores, theaters, factories, office buildings, service stations, and a woman's college. Of 5000 women who tested the Sanistand, 90 percent voted in favor of its use. American Radiator & Standard Sanitary Corporation, P.O. Box 1226, Pittsburgh 30, Pa.



NOMINAL DIMENSIONS

A	B	C	D
18"	28¼"	23"	12¼"

this month's products

air and temperature control

"Quiet-Fire" Burner: gas-fired, gravity furnace, single port type, designed for easy installment; 85,000 Btu capacity; cabinet finished in two-tone blue baked enamel. For use with natural, manufactured, or LP gas. Armstrong Furnace Co., 851 W. 3 Ave., Columbus, Ohio.

A-LUM-O: oilless, permanent air filter for forced air heating systems, made of nonrusting aluminum wool fibers packed in aluminized steel frame with cadmium-plated retaining mesh; eliminates fire hazard because no oil is used; can be washed clean in 60 seconds. Available in all standard sizes to fit any forced-air heating system. Bard Mfg. Co., Bryan, Ohio.

System Weathermakers: two new air-conditioning units—Models 39S and 39T—in sizes to cover range of from 5 to 75 tons refrigeration capacity; completely sectionalized to provide ready assembly on job; unusually heavy, noncombustible insulation in fan section prevents condensation and rusting on outside of unit. Easy access to all sections, for maintenance and service. Carrier Corp., Syracuse, N. Y.

"Visi-Float" Air Filter Gage: low-priced device for quickly determining condition of filters in forced air heating plants; designed for mounting on outside of furnace; plastic tube passing through filter announces when filter needs renewing or cleaning; may also be used on window ventilators and air-conditioning units. F. W. Dwyer Mfg. Co., 317 S. Western Ave., Chicago 12, Ill.

Cooling Fans: complete line for home, business, and industrial use; capacities range from 2500-300 to 6950-8400 cfm; all units operated by Type "Q" fan wheel, designed to move greater air volume more quietly than any other fan wheel of comparable size. ILG Electric Ventilating Co., 2850 N. Crawford Ave., Chicago 41, Ill.

New 501 Hi-Boy Winter Air Conditioner: oil-fired unit with 70,000 Btu capacity; front flue for easy access to all controls; compactly constructed (56" high, 23" wide, 25" long). Thatcher Furnace Co., Darwood, N. J.

De-Hu-Matic Air Cooler: unit automatically adjusts evaporation rate with temperature change; complete air change provided every one or two minutes; cools without dampness in any kind of weather; in all climates, dry or humid. U.S. Air Conditioning Corp., Como Ave. S.E., & 33 St., Minneapolis, Minn.

Baseboard Rod Hanger: designed to speed up installation by suspending baseboard radiation elements directly from backing; eliminates spotting, drilling of holes, and insertions of screws required for installation of conventional hangers; design provides for easy adjustment of pitch of radiation. Vulcan Radiator Co., 26 Francis Ave., Hartford 6, Conn.

Watrola Heat Generator: companion unit for any year-round heating and cooling air-conditioning installation; built-in features include modulating flame control and 100% safety pilot control; top capacity of 120,000 Btu. Watrola Sales Co., Berkeley, Calif.

construction

Hand Sighting Level: device made of brass, 5 in. in length, for accurate alignment when laying foundations and drains, contouring grading, etc.; said to be accurate within 1/20 of a degree. Binoscope Co., P.O. Box 9384, Philadelphia, Pa.

doors and windows

Fenestra Windows: residential Casement Window with steel outside-inside trim, screen, storm sash, bronze-lacquered hardware; construction provides simplified, low cost installation, with only simplest rough opening preparation needed. Also redesigned, weather-tight utility window for use along drives, alleys, or street fronts; one size only (2'-9¾" wide x 3'-6⅝" high). Detroit Steel Products Co., 3209 Griffin St., Detroit 11, Mich.

S-540 Door Lock: master-keyed, built-in lock with patented reset key that can change locker combination in matter of seconds; key is inserted in lock and combination set to new series of numbers with one change of dial; 40 dial divisions provide for 64,000 possible 3-number combinations. Available for right or left hand doors; satin-finish steel escutcheon plate fits all locker piercings. Dudley Lock Corp., 570 W. Monroe St., Chicago 6, Ill.

Alwintite Sliding Window: made with trim, narrow aluminum frames, especially adapted to modern houses; can be used either as single unit, in multiple openings, or in walls where combination of sliding windows and fixed double glazing are used; stainless steel weather stripping and plastic glazing beads provided with window. General Bronze Corp., Stewart Ave., Garden City, N. Y.

Self-Aligning Cylindrical Locks: new series, including bathroom lock set with push-button locking, emergency release; all models may be used on right or left hand doors; solid brass or bronze finishes; easily installed, self-aligning. Hollymade Hardware Mfg. Co., 4865 Exposition Blvd., Los Angeles 16, Calif.

Perfect Door Check: special lever action assures complete engagement of lock, with door remaining firmly closed; stop washer holds door open at any angle; gray baked enamel finish. K. Kolbus Corp., 1594 W. Hopkins St., Milwaukee 6, Wis.

electrical equipment, lighting

Dual Purpose Porcelain Receptacles: for installation on either 3¼" or 4" outlet boxes; flexibility of application accomplished by providing 4 11/16" diameter base, with open holes for 4" mounting, and knockouts for 3¼" mounting. Manufactured with chain and 3' cord, 7" chain, or chain and insulator. Arrow-Hart & Hegeman Electric Co., Hartford 6, Conn.

Sentry TC Starters: new thermal control for fluorescent lighting, designed to overcome disadvantages in glow switch type starters; uninterrupted filament preheating starts tube in one cycle, resulting in longer lamp life. Industrial Starter Corp., 6 Pell St., New York 13, N. Y.

Floodlights: new line of corrosion resistant, aluminum alloy constructed floodlights for use in lighting garages, gardens, walks, and general outdoor areas, as well as for industrial application. Various models, all with housing extended beyond bulb for lamp protection against breakage. Moldcast Products, Inc., 68 Clifford St., Newark, N. J.

T-12 Slimline Fluorescent Lamps: full line, incorporating starterless instant-start operation; high loading capacity ranging from 400 to 600 ma. Available in five "white" colors: white, 4500 white, daylight, warm white, and soft white. Westinghouse Electric Corp., Bloomfield, N. J.

finishers and protectors

Pentachlorophenol: now available in 1-to-10 concentrate as a permanent, nondiscoloring, paintable wood preserver, and termite repellent for home and industrial use; may be brushed or sprayed to protect existing structures or employed as dip for fence posts, etc. Monsanto Chemical Co., 1700 S. 2 St., St. Louis 4, Mo.

Clear Coat: tough, clear vinyl coating for concrete flooring; resists gasoline, oils, and many chemicals; traffic may be resumed two hours after application. Wilbur & Williams Co., Greenleaf & Leon Sts., Boston 15, Mass.

insulation (thermal, acoustic)

Strip Blanket: new method of packaging rock wool blanket insulation eliminates distortion to insulation material, assures easier and quicker installation. Philip Carey Mfg. Co., Lockland Station, Cincinnati, Ohio.

interior furnishings

Knoll Furniture Polish: basic cleaner, wood preserver, and polisher, particularly suitable for light woods, such as birch, beech, and maple. Packed with very fine steel wool pad for removal of persistent spots or stains before liquid is applied. Knoll Assoc., Inc., 601 Madison Ave., New York 22, N. Y.

Multi-purpose Platform Bench: slatted birch top, ebonized legs, or all ebonized; serves as base for cases and cabinets, as low table or extra seating piece. Designed by George Nelson. Herman Miller Co., Zeeland, Mich.

sanitation, water supply, drainage

Multiple-Head Drinking Fountain: wall hanger type, equipped with enameled iron receptor and cast iron wall brackets for quick, simple installation; three chrome plated brass antisquirt, angle stream heads, offering complete sanitation while drinking. For installation in schools, gyms, large offices, industrial plants, etc. Haws Drinking Faucet Co., Berkeley 10, Calif.

Util-Ty Fitting: cast iron fitting for connecting additional fixture, such as dishwasher or garbage disposer, to existing kitchen sink drain and vent stack. Available in 1½" and 2" sizes. Kuhns Bros. Co., 1846 McCall St., Dayton 1, Ohio.

Combined Paper Towel Dispenser and Waste Receptacle: recessed unit, flush with wall, with towels dispensed at convenient shoulder level. Dimensions: 14" wide x 6'-2" high x 7½" deep. Scott Paper Co., Chester, Pa.

specialized equipment

Kitchen Sink Cabinet: streamlined unit, made of heavy Bonderized steel, with baked enamel inside and out; contains enough drawers, shelves, and sections for practically everything, including sliding shelf tray for heavy appliances, linoleum-lined cutlery compartment, large section for mixing bowls and other utensils, tilting vegetable hopper, etc.; hidden hand-grips on drawers and shelves; spring hinges hold undersink cabinet doors in fully opened or firmly closed position, eliminating half-open, swinging doors. American Radiator & Standard Sanitary Corp., Bessemer Bldg., Pittsburgh 22, Pa.

Paraline: pocket-portable drafting machine constructed of tough plastic section containing 32d in. scale, protractor design, and precision-machined metal moving parts; combination useful as T-square, parallel rules, triangle, or drafting machine without any adjustments or additional parts. Loomis Industries, 516 Park Way, Piedmont, Calif.

Model 920 Perfection Gas Range: designed for small homes and apartments; one giant and three standard size nonclog burners; fully insulated oven with automatic heat control; broiler of roller drawer type; exterior of range finished in white titanium porcelain enamel; unit adaptable for use with city or bottled gas. Perfection Stove Co., 7609 Platt Ave., Cleveland 14, Ohio.

Explosion-Proof Speakers: two new models for sound, paging, and intercom installations in highly hazardous areas. Model 7101 is UL approved for locations in which flammable, volatile liquids and gases are manufactured, used, or stored; Model 7102 approved for same, as well as for locations containing combustible dust suspended in air, and in places where such dust collects on motors and other electrical devices. University Loudspeakers, Inc., 80 S. Kensico Ave., White Plains, N. Y.

surfacing materials

Celotex Wainscot: interior finish wainscot board made from cane fiber and beveled on all four edges; deeply textured surface can be painted. Board size is 48" x 64", making possible beveled dados of either 32", 48", or 64" heights without waste of material. Celotex Corp., 120 S. La Salle St., Chicago 3, Ill.

Smoothgrain Permatones: improved asbestos siding shingles with deep-grained appearance of weathered wood; surface is actually smooth to prevent dirt and soot from clinging, with advantageous results in maintenance and wear. Available in attractive range of colors. Johns-Manville, 22 E. 40th St., New York 16, N. Y.

MANUFACTURERS' LITERATURE

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

AIR AND TEMPERATURE CONTROL

Two bulletins on automatic and cell type electronic precipitators; also bulletin describing air filters for air compressors, Diesel and gas engines. Principles of operation, design features, installation data, capacity and dimension charts, maintenance, suggested specifications. American Air Filter Co., Inc.:

1-25. Automatic Electronic Precipitator (250-E)
1-26. Cell Type Electronic Precipitator (252)
1-27. American Air Filters (120D)

1-28. Air Recovery Cells (S-26), 14-p. illus. bulletin on air purification cell unit for installation in all year heating and cooling systems; each cell, containing especially processed granular activated carbon, will absorb about 7 lbs. of gaseous and vaporous impurities. Typical assembly arrangements, various types of applications, capacity and resistance curves chart, details, specifications. W. B. Connor Engineering Corp.

1-29. Johnson Control, 30-p. catalog presenting automatic temperature and humidity control equipment for heating, cooling, ventilating, and air-conditioning systems. Operation of units in schools, hospitals, commercial buildings, etc., descriptions and illustrations of thermostats, humidity controls, valves, dampers, pneumatic switchboards and clocks, and air compressors. Johnson Service Co.

1-30. Niagara Controlled Humidity Method, portfolio containing general information and engineering data on controlled humidity method of air conditioning, using hygienic liquid absorbent. Simplified method of calculating load conditions and selection of equipment, Bulkeley psychometric chart, its method of use. Niagara Blower Co. ($2.50 per copy; make check or money order payable to Niagara Blower Co.)

★ **1-31. U. S. Radiant Baseboard** (AR-312), 34-p. illus. booklet describing operating characteristics of radiant baseboard heating. Design, installation, and engineering features, comparative installation costs, test reports, typical isometric layout, floor plans, photos. U. S. Radiator Corp.

1-32. Webster Baseboard Heating (F-104), 8-p. illus. folder pointing out advantages of metal enclosed, baseboard heating system for houses and apartments. Isometric view, specification details. Warren Webster & Co.

CONSTRUCTION

3-18. The Care and Cleaning of Marble, AIA 22-A, 16-p. booklet. Suggested methods and materials for use in cleaning and maintenance of marble; photos, contents table. Marble Institute of America, Inc.

3-19. Bric-Block, 4-p. illus. folder describing standard cement building block to which colored cement brick-like facing is bonded; fire-, weather-proof. Advantages. National Bric-Block, Inc.

3-20. Unistrut Concrete Insert, AIA 14-G (CI-2), 4-p. illus. folder on metal channel with continuous slot permitting attachment of fittings anywhere along channel run without disturbing other attachments. Advantages, typical applications, load data, specifications, ordering information. Unistrut Products Co.

3-21. All-Glued Laminated Rafters, 12-p. illus. catalog showing several types of laminated wood roof structures, pre-cut, drilled, and trimmed to meet all requirements for every type of farm, commercial or industrial building. Typical installations, elevation and detail drawings, dimension tables, accessories. Unit Structures, Inc.

DOORS AND WINDOWS

4-28. Air View, portfolio containing bulletin, specification sheets, and installation instructions for glass-louvered venetian windows and doors with aluminum frames. Detail drawings, photos. Air-Vue Products Corp.

Folder on glass-louvered venetian windows, both modular and custom-built, for all types of new and old buildings. Construction, installation details, sizes. Also, specification manual on outside aluminum venetian blinds and doors, awning shutters, glass jalousies for porches, breezeways, and doors, hardware accessories. Installation instructions, diagrams, drawings, photos. Clearview Venetian Window Co., Div. of Outside Venetian Blind Co.:

4-29. America's Most Beautiful Window
4-30. Architect and Engineer's Specification Manual

Booklet and folder describing pre-assembled aluminum double-hung and picture window units for residential installations. Advantages, available sizes and combinations, details, specifications, construction, typical installations. Fleet of America, Inc.:

4-31. Complete Window
4-32. America's Finest Window

Catalog covering stock line of woodwork for ranch type houses; includes doorways, exterior and interior doors, shutters, blinds, windows, mantels, various types of cabinets. Dimensions, sizes, renderings. Also, portfolio of woodwork detail sheets illustrating traditionally designed doors, windows, and other items similar to those in catalog. Index. Morgan Co.:

4-33. Morgan Woodwork for Ranch Type Homes
4-34. Morgan Woodwork Details, AIA 19E

4-35. Specification Guide to Schlage Locks, AIA 27B (631), 4-p. folder offering brief information on lock mechanisms, designs, finishes; selector chart gives simplified data on types, uses, operation. Schlage Lock Co.

4-36. Solar Air-Flo Windows, 4-p. illus. folder describing dual-glazed stationary window units with louvered sections which can be placed at sides, top, or bottom of pane, according to design requirements. Construction features, advantages. Solar Air-Flo, Inc.

4-37. Lower Building Costs, AIA 16-A, 8-p. folder giving technical data on four types of easily installed, all-metal door and frame units; no studs, plaster, or hardware needed. Description of types and styles, details, construction features, sizes and dimensions. Virginia Metal Products Corp.

ELECTRICAL EQUIPMENT, LIGHTING

Three catalogs illustrating theatrical, television, and architectural (stores, restaurants, night clubs, museums, etc.) lighting equipment. Types of units, dimensions, special equipment, accessories, diagrams, lamp data, prices, contents table. Century Lighting, Inc.:

★ **5-17. Theatrical Lighting**
5-18. Television Lighting
5-19. Architectural Lighting

Bulletin presenting line of all-steel commercial and industrial fluorescent fixtures. Types, wattages, dimensions, accessories. Other bulletin describes fluorescent fixtures with louvers easily removed and cleaned separately in matter of seconds. Advantages, installation details, co-efficients of utilization, ordering data, photos. Lighting Products, Inc.

5-20. Two Aces in the Hole, AIA 31-F (460)
5-21. Luv-R-Lok, AIA 31-F (455)

5-22. Planned Lighting for Modern Banks and Offices, 12-p. illus. booklet showing photos of typical installations of fluorescent and incandescent lighting. Pittsburgh Reflector Co.

5-23. "Pry-Lite," AIA 31-F-23 1, circular describing two recessed lighting fixtures, requiring no framing-in, for hallways, vestibules, display, and commercial installations. Construction, wattages, housing sizes. Pryne & Co., Inc.

FINISHERS AND PROTECTORS

★ **6-6. Painting With Aluminum** (AD-228), 32-p. illus. brochure explaining uses and classifications of aluminum paint. Selections for correct usage, application photos, questions and answers, paint coverage table. Aluminum Company of America.

6-7. Malex 101 Wood Sealer, 8-p. illus. folder on sealer forming thick, protective covering that seals in sap, pitch, and moisture; may be used on any porous surface, as well as wood, and will preserve natural wood colors without bleaching, glazing, or liming. Advantages, specifications, description of wall sealer enabling one coat of any paint or enamel to cover any surface. Malex Chemical Corp.

INSULATION (THERMAL, ACOUSTIC)

9-19. Sound Control (AC-35A), 16-p. illus. booklet presenting three types of acoustical material, including Sanacoustic Units, Transite Panels, and Fibretone. Descriptions, advantages, application, construction details, dimensions, data chart. Johns-Manville.

INTERIOR FURNISHINGS

9-20. Contemporary Hand Printed Textiles and Wall Coverings. Portfolio of photos illustrating hand printed fabrics, price list sheet with data on deliveries and special services. Ruth Adler.

9-21. Arlington Seating Company, 8-p. illus. booklet on classroom desk and chair units, typing desks, tablet arm chairs, and various types of auditorium chairs. Specifications, dimensions, shipping weights. Arlington Seating Co.

9-22. The Key to Modern Living, circular illustrating contemporary bedroom furniture available at moderate price levels. Finishes, colors, general information. Sheffield House Furniture Co., Inc.

SANITATION, WATER SUPPLY, DRAINAGE

Two 4-p. folders on enameled iron and stainless steel wash fountains for group use in industrial plants and institutions. Advantages, specifications, other equipment. Also, 12-p. booklet offering number of typical washroom layouts. Bradley Washfountain Co.:

19-22. Group Washing Equipment (D713)
19-23. Presenting New Bradley Washfountains (M613)
19-24. Washroom Layouts (D637)

★ **19-25. Swimming Pool Drainage Products,** AIA 35-F-2 (SP 3), 34-p. illus. manual describing complete line of drainage products for swimming pools and related areas. Supply fittings, gutter drains, outlet and main drains, vacuum cleaning outlets, hair and sediment interceptors, etc.; also drains for walkways, decks, promenades, dressing, shower, and toilet rooms. Installation diagrams, details, typical pool diagrams, technical data, index. Josam Mfg. Co.

19-26. Cycling Jet Pump (5030), 4-p. illus. folder on self-priming, nonclogging pump for handling any liquid that will flow through pipe lines; for use in food processing and chemical plants, and other industries. Advantages, performance, specifications, diagrammatic drawing. Penberthy Injector Co.

19-27. Swim in Drinking Water (5C), 12-p. booklet dealing with sanitation and chlorination of swimming pools. Methods of chlorine application, chlorination equipment, typical recirculating system layout. Wallace & Tiernan.

SPECIALIZED EQUIPMENT

Booklet and folder on bronze tablets, plaques, signs, architectural letters and numerals in aluminum, sheet bronze, or stainless steel. Illustrations, ordering information. A. J. Bayer Co.:

19-28. Hand Chased Bronze Tablets, Plaques and Signs

19-29. Architectural Metal Letters

19-30. Nurses' Bedside Call Stations Bulletin (HLS-2), 6-p. folder containing typical floor wiring and schematic wiring diagram of locking push-button nurses' call system, dimensional sketches, photos of various parts and accessories. Cannon Electric Development Co., Div. Cannon Mfg. Corp.

19-31. The Green Book, 24-p. booklet on different types of chalkboard, cork bulletin board, aluminum and steel-chalkboard framing. General information, specifications, illustrations, details, typical installations. New York Silicate Book Slate Co.

19-32. Television Antenaplex System (2R-6301), 4-p. brochure describing multiple receiver antenna system for apartment houses, hotels, institutions, and wherever it is desired to operate large number of television receivers from one central antenna unit. Schematic drawing. Radio Corp. of America.

SURFACING MATERIALS

19-33. Firestop Bestwall Gypsum Wallboard (5600), 4-p. folder on new type of gypsum wallboard with high fire-resistant properties (single ⅝" layer applied on both sides of wood stud partition has fire-resistant rating of one hour). Advantages, specifications, ratings. Certain-teed Products Corp.

19-34. Corrulux, AIA 26-A-9, 4-p. illus. folder describing translucent, reinforced, corrugated plastic panel in various colors, for partitions, awnings, skylights, greenhouses, and numerous other uses. Advantages, applications, colors. Corrulux Corp.

19-35. Mastipave, AIA 23m (4034), 4-p. illus. brochure and installation data sheets. Illustrates low-cost, heavy traffic flooring material composed of bituminous wearing surface and permanent nonfading pigments, with asphalt treated felt base coated on back with waterproof bituminous material. Typical installation photos, specifications. The Paraffine Cos., Inc.

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5-19	5-20	5-21	5-22	5-23	6-6	6-7	9-19
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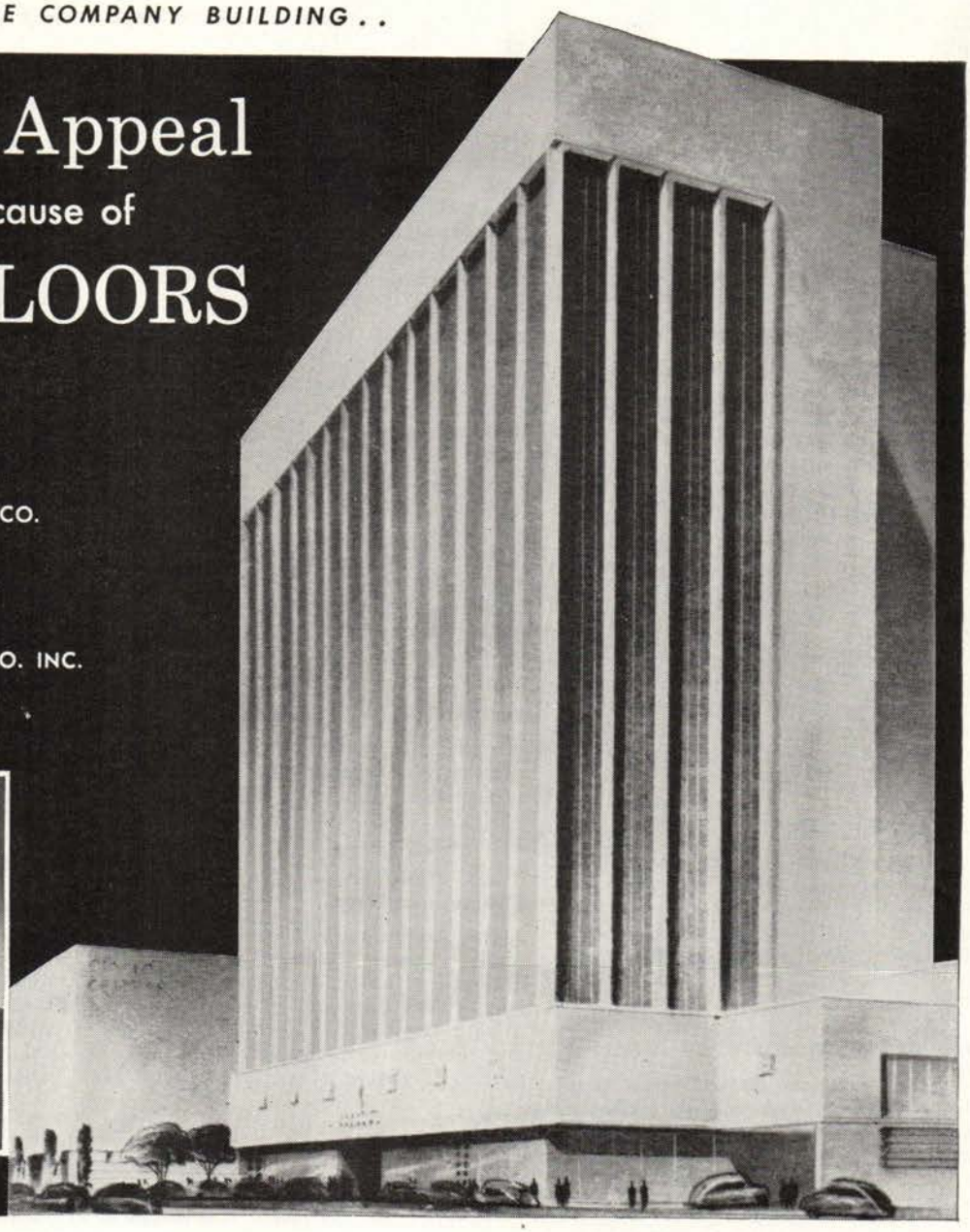

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GEORGE DAHL
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JAMES STEWART AND CO. INC.
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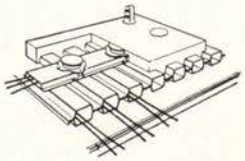

Architect George Dahl knows Q-Floor is not the lowest-priced floor on the market, but the best interests of a client are served by examining the final cost of a building and by specifying that material which brings about the best end result.

The quoted price of Q-Floor should be considered in relation to all other factors which are changed by the use of Q-Floor:

lightweight Q-Floor construction saves other materials in foundation and frame;

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quick, inexpensive, easy electrical change attracts tenants, helps fill building quickly;

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Floor so influences other elements of a building, structurally, that the cost of a square foot of Q-Floor can be properly judged only in regard to its ability to decrease the cost of other component parts of the building. However, Q-Floor is more than economical—it is a modern essential for any building which must earn a living in this age of electricity.

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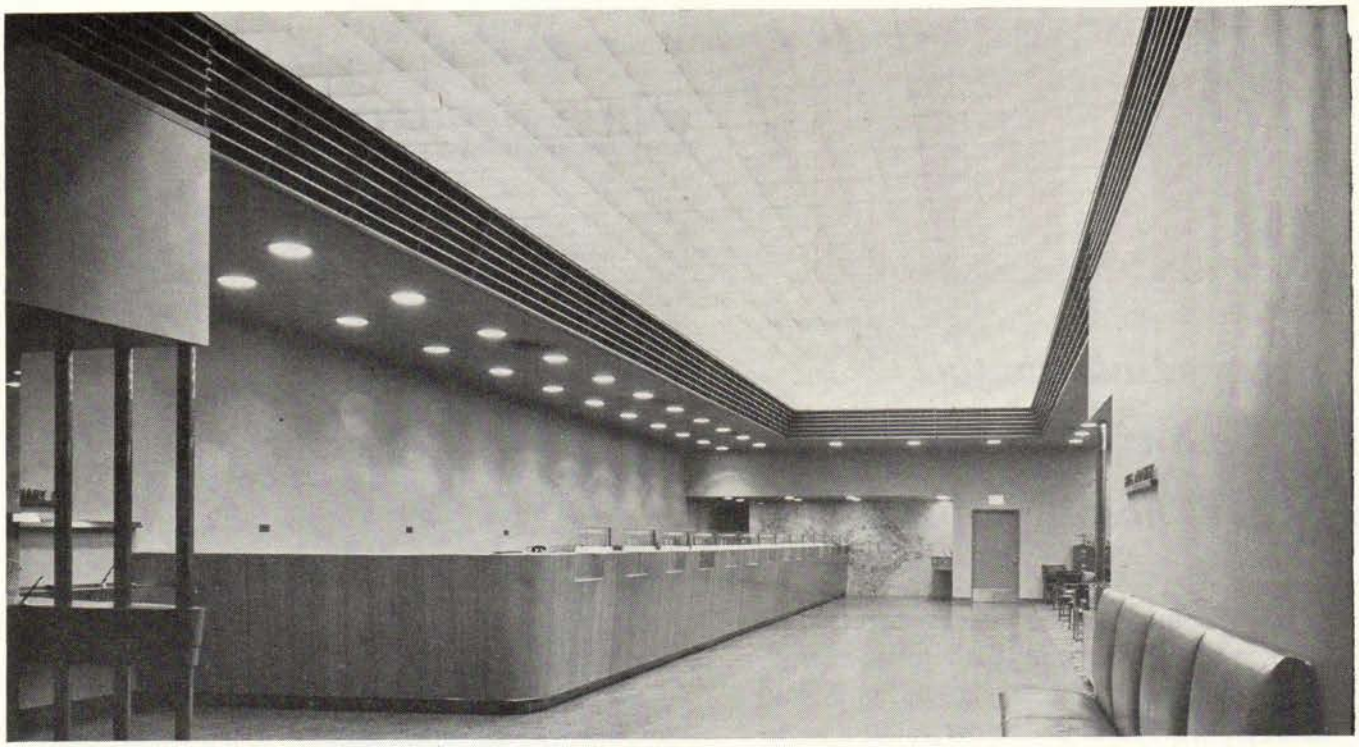

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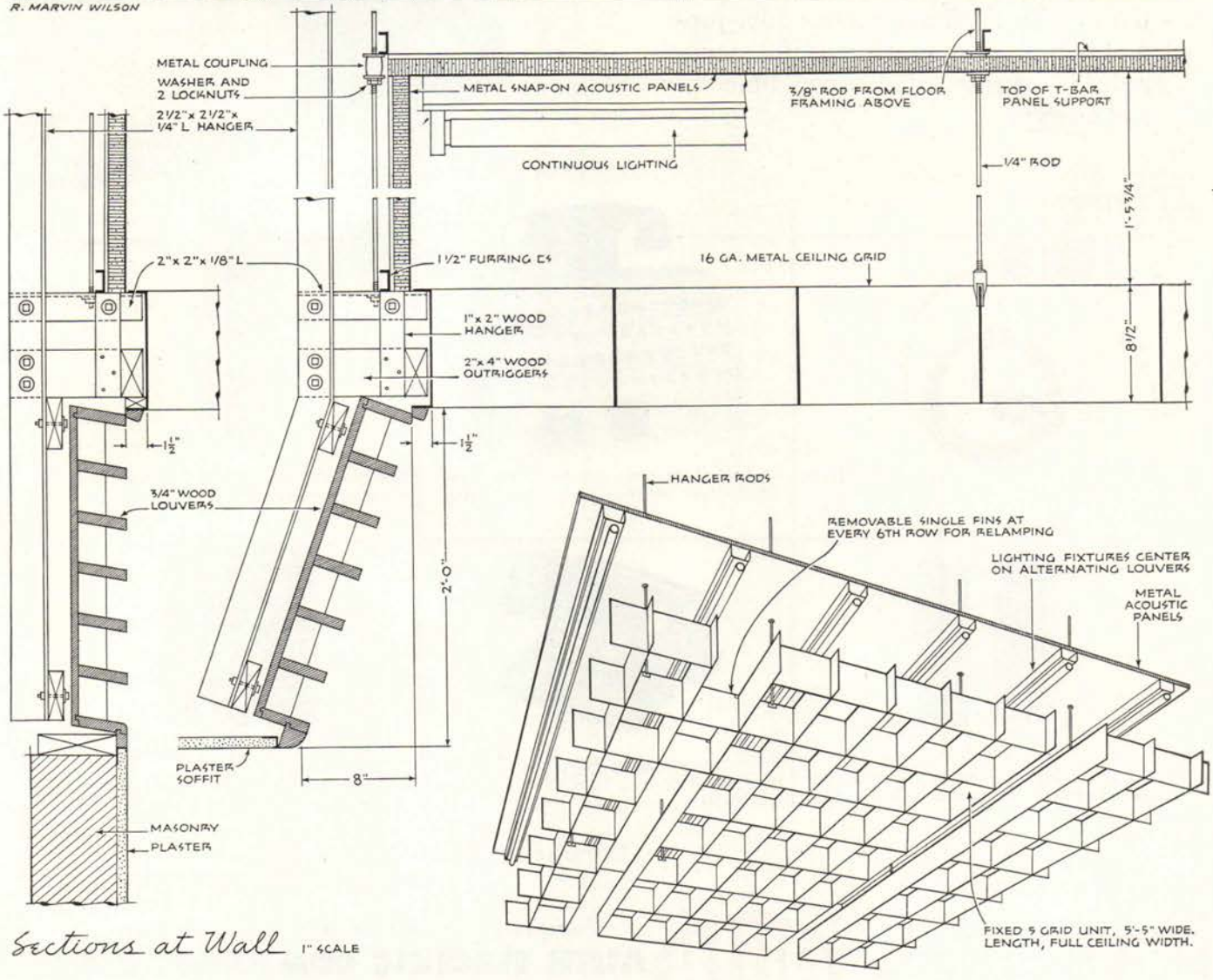


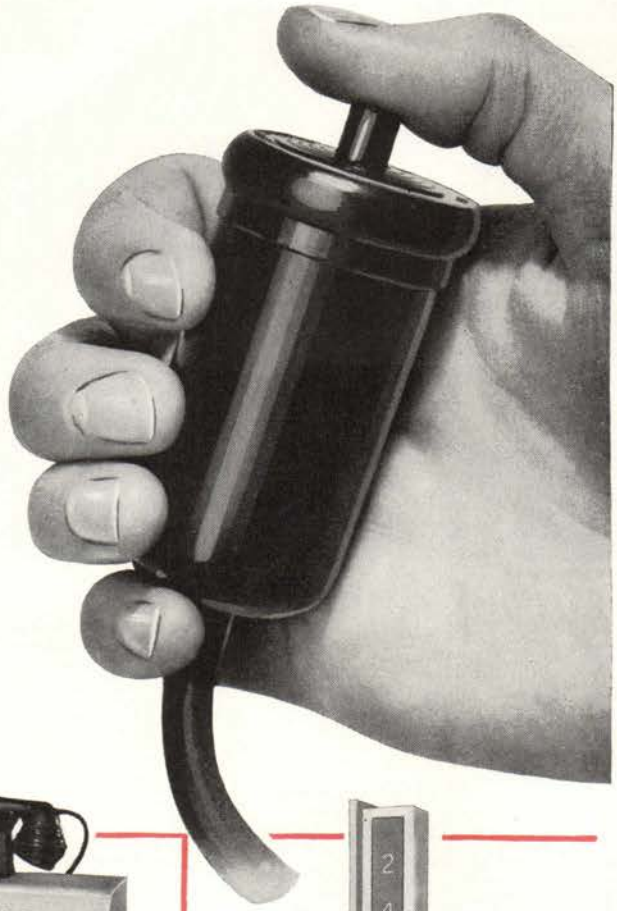
Sections at Wall 1" SCALE

CENTRAL NATIONAL BANK, Cleveland, Ohio

CONRAD, HAYS, SIMPSON & RUTH, ARCHITECTS

HELP *when needed*

immediate contact is a vital necessity in successful hospital operation

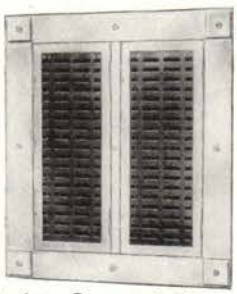


AUTH communication and protection systems for hospitals provide facilities for quick contact between patients and nurses, nurses and doctors, staff executives and staff. They protect life, promote greater operating efficiency, reduce expense, and save time and energy.

Nurses calling Systems signal from patient to nurse.

Vokalcall Systems provide voice communication between patient and nurse.

Doctors' Paging Systems locate doctors in emergencies.



Staff Register Systems indicate presence or absence of Doctors and staff executives.

Intercommunicating Telephone Systems provide voice communication between key points.

Fire Alarm Systems warn fire brigade of existence and location of fire.

In addition—

- Night lights to provide soft illumination in corridors and rooms
- Centrally controlled clock systems
- Elapsed time indicators for measuring time in operating rooms.

Literature is available describing these and other Auth products and systems.

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Complete Systems • One Responsibility

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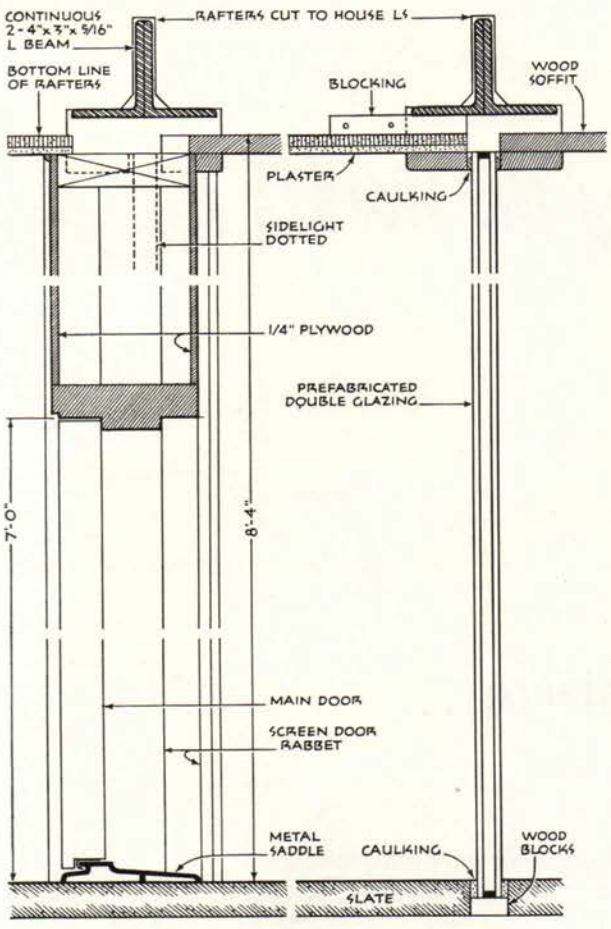
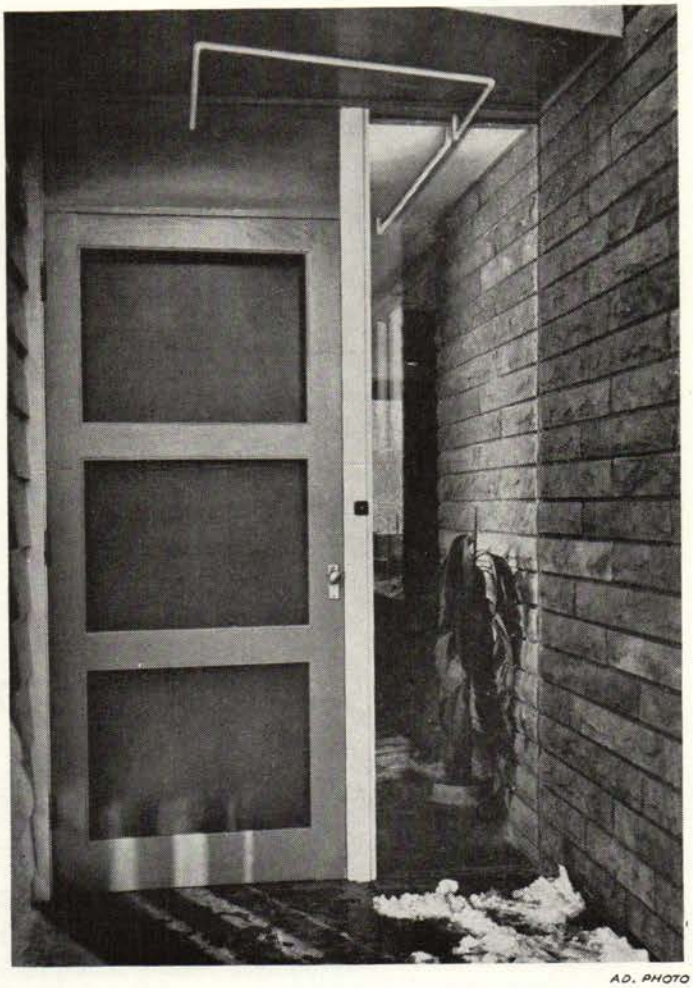
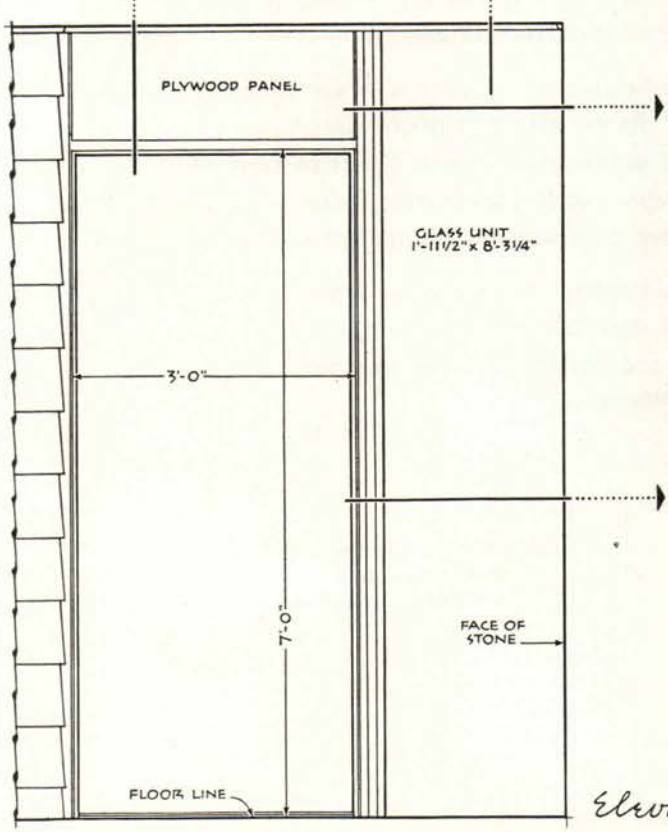


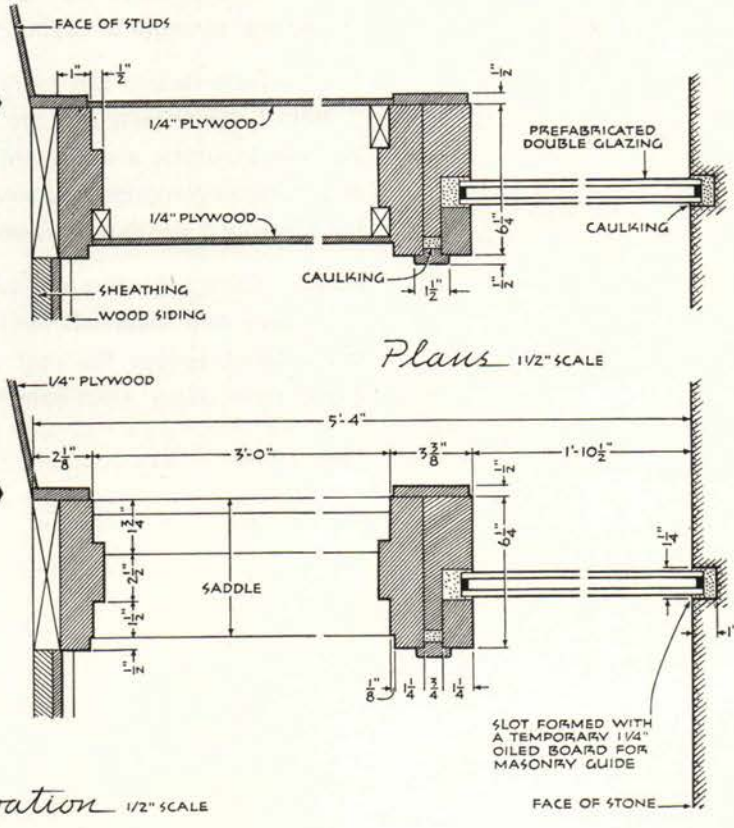
Sections 1 1/2" SCALE



A.D. PHOTO



Elevation 1/2" SCALE



Plans 1 1/2" SCALE

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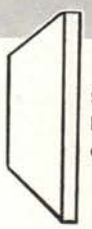
Further facts behind the overwhelming acceptance of Ware windows ...Ware Laboratories, Inc. are charter members of the Aluminum Window Institute, a non-profit organization whose aim is to promote and foster engineering and mechanical standards which must provide the aluminum window consumer with windows of highest quality.

Finally, Ware engineers are constantly striving for new methods, machinery and materials that may still further improve the product, reduce the cost and better serve the ultimate consumer of Ware Aluminum Windows.



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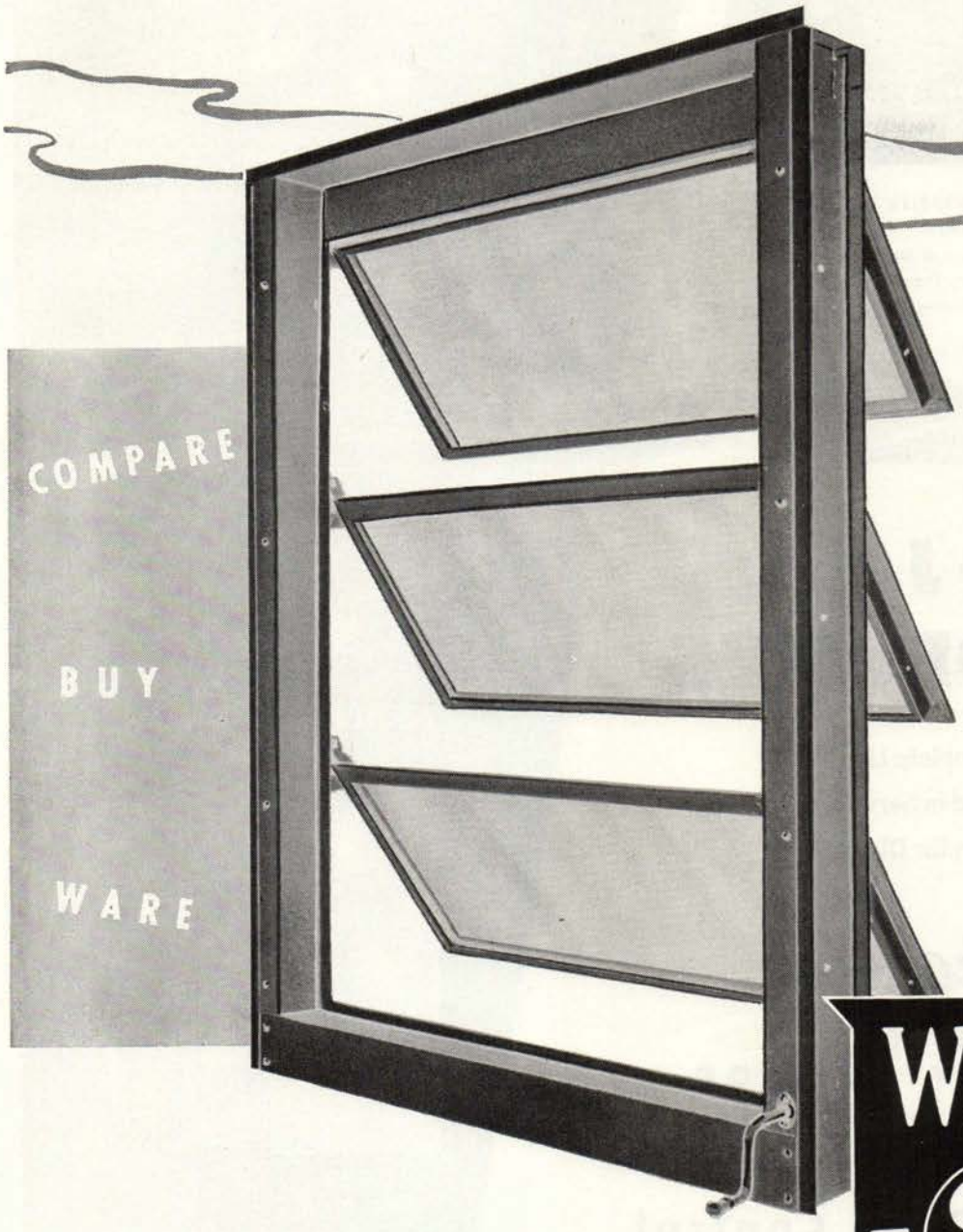

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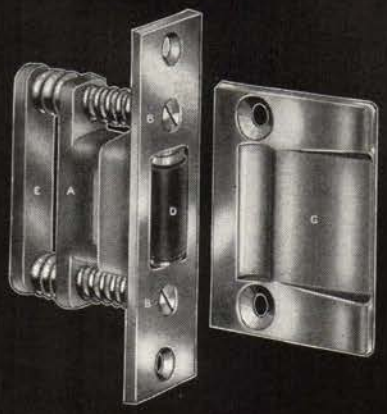

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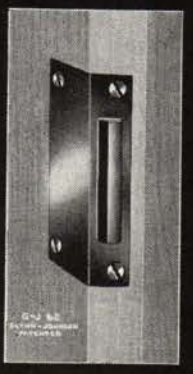
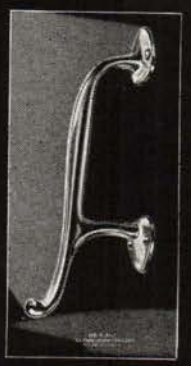


G-J 62
Door Mute



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Mechanical Engineers: Syska & Hennessy, New York, N. Y.
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Modern air conditioning systems of every type depend upon Johnson Automatic Temperature Control for successful performance. The modern "Carrier" air conditioning units, located in the rooms on the periphery of the Secretariat, are controlled by a Johnson "Heating-Cooling" thermostat located in each unit. The temperature bulb, connected to each thermostat by a capillary tube, is mounted close behind the recirculating air grille, where it quickly responds to the average temperature in the room. Thus, every room will enjoy its own individual temperature control, for a Johnson valve, on the hot and cold water supply to the coil in each unit, is operated by the thermostat and determines the amount of heating or cooling effect to be applied to the recirculated air.

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United Nations Secretariat. All window framing of Alcoa Aluminum fabricated by General Bronze Corp. Architects: United Nations Board of Design, Wallace K. Harrison, Director of Planning, Max Abramovitz, Deputy Director of Planning. General Contractors: Fuller-Turner-Walsh-Slattery, Inc.

No. 5 of 5 SOUND Reasons Why Simpson Acoustical Tile is PREFERRED

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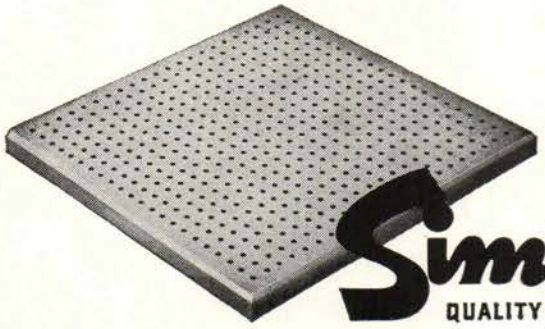

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technical press

By JOHN RANNELLS

illuminating engineering

The Illuminating Engineering Society has at last formulated a "Recommended Practice of Daylighting" (published in *Illuminating Engineering* for February and available as a pamphlet for 50 cents).

The data is almost entirely from previously published material, for the society has had committees working on the problem since 1924 and there has been a great deal of attention paid to the subject by others, especially in connection with schools and factories. Now the whole subject is summarized in these recommendations for utilizing daylight effectively, backed up by references to a very extensive bibliography and a set of appendices with the design information needed for calculations. The recommendations are worked out specifically for schools, offices, factories, and homes, but the methods can be applied to all types of buildings.

The facts of seeing, as developed by various researchers and the facts of sky brightness distribution as developed by the United States Weather Bureau are among the most important factors in the problem. The conflict between the need for light from the sky as against the need for screening out direct sun gives us one of our most challenging dilemmas affecting design. Practical solutions (fixed louvers, monitor roofs, directional glass block) have become standard in school and factory design. More nearly ideal solutions were achieved a century ago by engravers and lithographers (at the expense of frequent hand manipulation) by use of diffusing and reflecting screens for lighting the work. We have a far way yet to go in this field but the I.E.S. "Recommended Practice" sets a milestone.

Another "Recommended Practice" (of library lighting) is published in the March *Illuminating Engineer*, also available in booklet form for 50 cents. This one is a bit more specific and practical and it shows, too, how we can correct the bad lighting in so many of our over-architected, high, dim-ceilinged reading rooms. (When it's a very bad case just leave the so-lovingly-detailed light-trap chandeliers hanging and use strong down-lights above the ceiling to supply the deficiency.) What must be the editor's nightmare at I.E.S. prevailed this time: Appendix D is titled "Comparison of Filament and Fluorescent (sic) Light Sources."

There is a good brief write-up of fluorescent lighting in the January "Construction and Construction Materials" industry report of the U. S. Department of Commerce. It covers the phenomenal growth of this industry in ten years, how fluorescent lamps operate, the advantages of cold-cathode systems, and recent developments.

Handbook of Kitchen Design. *Technical Series No. C5.32R. Small Homes Council, University of Illinois, Urbana, Ill., 1950. 73 pp.*

A painstaking analysis of space patterns in small kitchens using stock cabinets and equipment (under a research grant by Hotpoint, Inc.). The previous circulars on "Cabinet Space" and "Kitchen Planning Standards" (8 pp. each, Nos. C5.31 and C5.32) give

(Continued on page 118)

technical press

(Continued from page 117)

a much more intelligible picture of what is a kitchen but this one makes a big contribution by spreading out the plans for all feasible arrangements (three to a page, for limited, medium, and liberal storage) in various types and widths of kitchens. An index to these plans by room type (arrangement of doors and windows) makes it possible to run down all the possibilities of size and shape for a given plan. With each plan is a tabulation of the various storage and work areas, window area and counter length as well as the score, determined by the method developed in Circular C5.32. The scoring method grew out of analysis of kitchens in mass-produced houses which proved, on the whole, to be woefully deficient in basic requirements. This handbook should go far toward correcting the trouble by furnishing the builders with stock solutions. Architects will find the earlier circulars quite adequate as guides to planning.

Stack Venting of Plumbing Fixtures. *BMS 118, 1950. Superintendent of Documents, U. S. Government Printing Office, Washington 25, D.C. 21 pp., illus. 15 cents*

This booklet is well worth careful consideration by anyone wishing to take advantage of the economy of stack venting—especially in one-story houses or on the top set of fixtures in a taller building. By experimenting with full-scale installations and using transparent plastic stack fittings the Bureau of Standards researchers found out just what conditions would justify eliminating the more costly back venting of individual fixtures. Only certain definite patterns worked successfully. This brings home the fact that plumbing layout is a less exact art than heating and depends to a greater extent on experiences against theory.

books

Applied Structural Design. *Thomas H. McKaig. Published by author, 881 Main St., Buffalo, N. Y., 1949. 505 pp., illus., tables, index.*

A tremendous job of assembling structural design information for all the usual materials and loading conditions with enough design theory and many, many spelled-out examples from practice. One might question the amount of standard handbook information which is included, but it is difficult to draw the line and the author chose to put it all in. It is very clearly printed except in the few cases where drawings were over-reduced. If you want just one book on structural design, this is it.

(Continued on page 120)

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A low-cost, photographic intermediate paper that produced positive copies directly was "big news" for Crompton & Knowles, world's largest manufacturer of specialty looms. To begin with, it meant that they could reorganize their filing system much faster and much more economically than had been estimated. *Here was the problem:* they had some 200,000 detail drawings —4 to 8 on each sheet of paper. Many of these were not in sequence, which slowed reference; and, when blueprints of only one part were needed, it meant a waste of paper . . . besides taking the attached drawings out of the files. *Solution:* the design sheets were reproduced on Kodagraph Autopositive Paper; then the prints were cut and filed correctly in the "master" file.

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Crompton & Knowles has adopted the rule: "*A Kodagraph Autopositive intermediate of every drawing.*" And this is paying off today in lower re-drafting costs. *Before,* the original detail drawings (described above) and scale drawings were used as the blueprint "masters" . . . were exposed to machine wear-and-tear, constant handling. When they no longer produced legible blueprints, they had to be redrawn. *Now* the valuable originals are kept safe in the files—available for reference and revisions only. The "Autopositives" do the "heavy work" . . . whenever needed.

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Kodak
TRADE-MARK

technical press

(Continued from page 118)

Specification Index of Construction Items and Materials. *Allen V. Rothermell. Published by author, Camp Hill, Pa., 1949. 69 pp. $2.50*

A tabulation of all the standard documents (A.S.T.M., Federal, A.S.A., etc.) for use by architects, engineers, and specification writers. There's a raft of items—three or four thousand of 'em, but where to draw the line short of completeness? The printing is overly small for easy reference and a bit cluttered, but this is a minor defect in a useful reference work.

TV-FM Antenna Installation. *Ira Kamen and Lewis Winner. Bryan Davis Publishing Co., 52 Vanderbilt Ave., New York 17, N. Y., 1949. 105 pp., illus., index. $2.00*

Here is a complete, authoritative manual for installers and service men covering all types of installation conditions. It is deep stuff to the layman, but fascinating, like the fascination of the crystal set a generation ago, or the fascination of the home-built radio receiver. It is a very complex set of conditions that makes the background for TV reception and the antenna with its connections is a major factor.

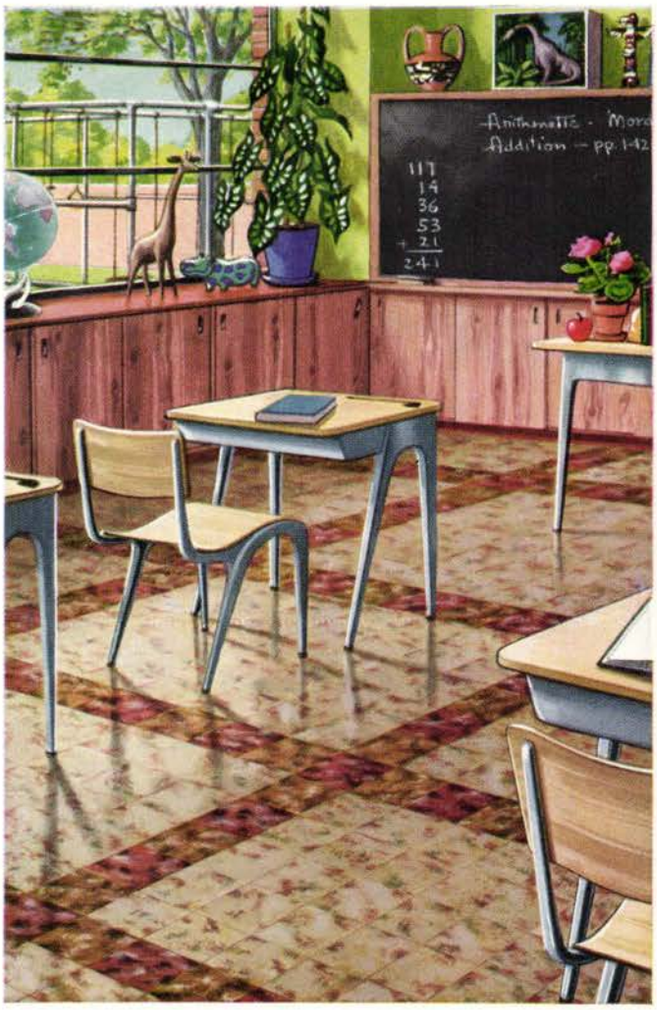
The authors have done a great service to their industry in producing this concise, well-detailed technical manual on actual shop and field procedures: from illustrated instructions on use of installation tools to tricks-of-the-trade electronics for getting "bugs" out of difficult installations. To an architect concerned with TV installations it gives, at the least, a good idea what the problems are and a realization that there's more than meets the eye (thank goodness!).

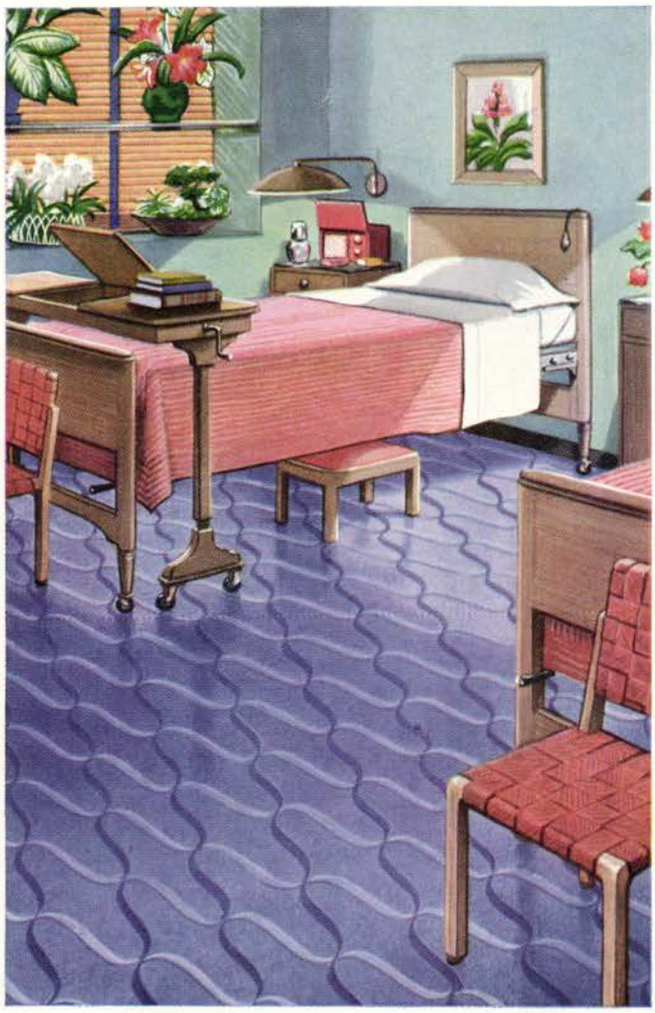
The Mechanical Properties of Wood. *Frederick F. Wangaard. John Wiley & Sons, Inc., New York, N. Y., 1949. 367 pp., illus., bibliog., tables, index. $6.00*

A very thorough text, giving particular emphasis to strength and the factors affecting it. The various processes of growth and seasons which may result in mechanical defects are lucidly explained and illustrated, also factors other than defects: density, position of the stick in the tree, age of trees, conditions of growth, microstructure, moisture content, preservative treatment, live vs. dead timber, season of cutting, etc. In those last two the popular prejudices against dead timber and in favor of winter-cut wood are proved fallacious by the investigations that have been made. Sections on "Working Stresses for Structural Lumber" (with normal defects) and "Timber Testing" are specific and detailed. Extensive reference notes and bibliographies add to the value of the book.

Woods of the Philippines

The leading article in *WOOD* for December '49 brings the reader up-to-date on the various timbers that we have been importing from the Philippines since the turn of the century. Most important are the lauans, still popularly known as Philippine mahogany, although the Philippine Bureau of Forestry (and the Mahogany Association) prefers the right name. Marketing is well regulated so the customer gets what he orders. (97.5% of the forest if government owned and administered.) Lands designated for agriculture are clean cut while on those designated for forestry only the larger trees are taken. The Philippinos apparently do not intend to repeat our mistake of adopting conservation after the bulk of the wealth is gone.





This is Armstrong's Asphalt Tile

When you're meeting a tight budget but still need an attractive floor that will stand up under hard wear, Armstrong's Asphalt Tile is a logical choice. The initial cost is low, and it's a floor that keeps maintenance costs at a minimum. Tough and long wearing, Armstrong's Asphalt Tile gives good service even under heavy school traffic.

Armstrong's Asphalt Tile can be used on any type subfloor. It is highly recommended for basements and other places where the subfloor is a concrete slab in direct contact with the ground. Armstrong's Asphalt Tile is made to resist the damaging effects of alkaline moisture found in such subfloors.

Armstrong's Asphalt Tile is available in a wide range of colors which makes it easy to work out a color scheme to fit any interior. It is made in two types, Standard for general use and Greaseproof for use in areas where oil and grease is a problem. It is available in two thicknesses, 1/8″ and 3/16″.

They're both Armstrong's Floors

This is Armstrong's Linoleum

Long famous for its handsome appearance and the way it stands up under hard usage, Armstrong's Linoleum is the most popular Armstrong Floor for institutions, stores, offices, and public buildings. Moderate in first cost, it offers the greatest choice of color, texture, and pattern. Its cushioning effect makes it quiet and comfortable underfoot.

Recent manufacturing improvements have made Armstrong's Linoleum tougher and more durable than ever before. Colors have been made brighter and richer. It has a smoother surface which further simplifies cleaning. Armstrong's Linoleum is made in six types and in three thicknesses to meet the various service requirements.

For additional data on Armstrong's Resilient Floors—Asphalt Tile, Linoleum, Linotile®, Arlon Tile, Rubber Tile, and Cork Tile—consult Sweet's Architectural File, section 13e, catalog 2. For samples and specifications, as well as help in solving unusual flooring problems, architects are invited to write to any Armstrong District Office or directly to the Armstrong Cork Company, Floor Division, 8906 State St., Lancaster, Pennsylvania.

p/a REVIEWS

BOOKS

CIVIL DISCOURSE

Heavenly Mansions. *John Summerson. Charles Scribner's Sons, New York, N.Y., 1948. 253 pp., illus. $1.75*

The validity of familiar architectural activities — conflicting design philosophies, systems of architectural control, and exertions of noted men of the profession, to name a few—and their influences on the social pattern are knowingly discussed by the curator of Sir John Soane's museum, London, in this rewarding collection of essays. Too few practicing architects bother to reflect on the philosophy of their life work: Summerson suggests a series of topics worthy of study and analysis.

Beginning with an original interpretation of Gothic design, the title essay, he comments on personalities and professional achievements from the Renaissance to the present. One of the most stimulating is his "The Mind of Wren", a surprisingly candid evaluation of that English hero. Summerson goes on to discuss John Wood and the English town-planning tradition; recalls the forgotten J. M. Gandy and his architectural fantasies that echoed Piranesi; dissects with sure hand the theory and heritage of Viollet-le-Duc; resurrects the frighteningly prolific William Butterfield and his many ugly Victorian churches; jumps to the relationship of modern architecture and painting as exemplified in the work of Le Corbusier. Having turned to modern times, he continues with an essay on "The Mischievous Analogy," the 20th century fear of decoration that tends to stultify design progress; and concludes with a recapitulation of the problem of saving local landmarks of intrinsic and/or sentimental value. This is one of those books dear to the heart of a busy man, who can find it profitable and pleasant reading for the occasional hour.

C.M.

STIMULATING REVIEW

The Architecture of Bridges *by Elizabeth R. Mock. The Museum of Modern Art, New York, 128 pages, 170 plates. $5*

Mrs. Mock, whose many contributions toward the development of contemporary architecture are deservedly well known, has set out "to raise the level of American bridge design." That laudable objective will be assisted by this presentation of admirable examples culled from centuries of splendid achievements.

The scholar who has himself tried to assemble a similar corpus of material will be impressed and grateful for her successful research. There is though an unevenness about the data presented, designers, dates, and dimensions being given in most cases but not all. A comparative table would have been an agreeable addition, but to be really useful it would have had to include more statistical and technical information; we would like to know where and by whom "a German" invented "the modern metal cantilever truss in 1867," and various weight-span-load ratios. Oriental, Roman and Medieval Bridges are illustrated, but the great bulk of the examples are modern, that is 20th century. The organic approach has caused the author to pass too lightly over the great Renaissance achievements. The bridges are classed by material: stone, wood, metal, and concrete.

(Continued on page 126)

Kitchen Ideas

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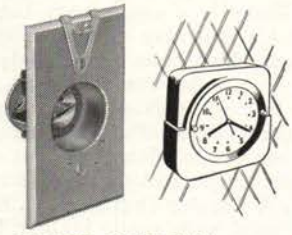
Adequate range outlets and circuits for apartments and homes add to convenience and utility. Simplify cleaning, decorating, etc. 50A, 250V, 3 wire. Also available in surface types.



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Clock hangs picture-fashion on the wall. No wires exposed. Recess for plug cap provides completely flush job. 15A, 125V; 10A, 250V.

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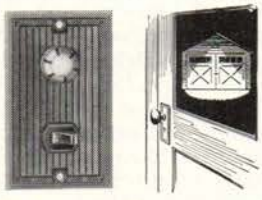
Will accept all appliances. Takes standard 2 wire cap as well as 3 wire grounding cap. Positive 3rd wire ground. Back or side wired. 15A, 125V.



PILOT LIGHTS

Kitchen switch control with pilot light to show when garage, cellar, or outdoor lights are lit.

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Those plans on your board mean someone is building for the future. Your skill and knowledge can contribute much to making that future complete, by making it more livable electrically. There's where the H & H line of wiring devices can do a job. You'll find just the device to meet every specification for adequate wiring. A quick review of the line stocked by electrical distributors may spark a good idea, or solve a special problem for you. Plan to investigate these smart, modern, dependable devices today.

For more information, write today to: 2306 Laurel Street, Hartford 6, Connecticut. Good Housekeeping Building Forum booklet "Electrical Planning in the Home" sent on request.

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p/a REVIEWS

(Continued from page 124)

From the point of view of esthetics, it would be more meaningful to arrange them as technical alternates, that is to compare all types of arches in one section. The amateur *pontophile* will be appalled to find that he has not been supplied with an index, the lofty intellectual standards of the liveliest museum in America have fallen here inexplicably to the level of *Quick*. The architect will feel that his potential clients are not going to be much better informed by absorbing such ludicrous definitions as "lintel: a horizontal beam supporting an opening" which is about as helpful as defining the point of a needle as a support for a number of angels, or "vault: an arched structure" which could mean a rib or a roof.

There is a consistency between Mrs. Mock's objective and those of the Museum which have successively promoted modern architecture, at first puristically, latterly with a greater emphasis on human values. The 1950 note is struck in her words, "Beauty is not automatic; technical perfection alone is not enough . . . A greater engineer . . . handles his material with poetic insight." However, she is often doctrinaire, as when she states the minimization of massiveness as the only acceptable esthetic. Surely no one attitude toward mass can be called right and all others wrong, any more than it is correct to allow of only one attitude toward structural revelation. It is all too common to assume that a current attitude is not only the proper one, but, as well, the measure by which to appraise the work of the past.

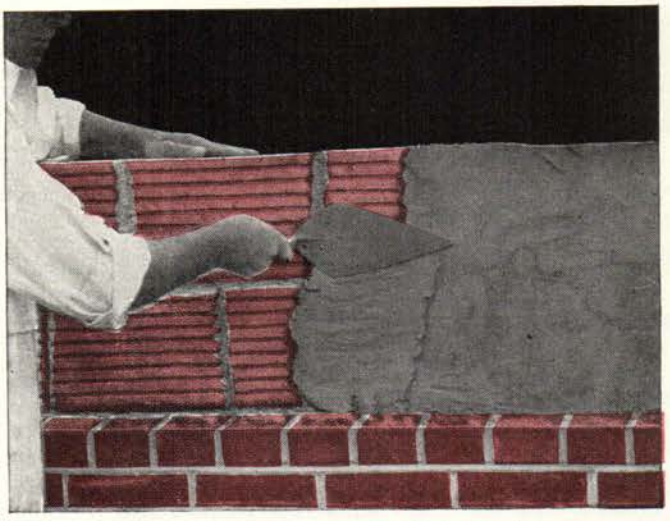
Curiously, for a writer whose roots in functionalism are so well established, the author is relatively indifferent to the specific function of her examples, not always noting that some of them are for railroads and some for vehicles alone. She pontificates that the arch and its roadway must intersect within certain narrow limits. True to her organic prejudice she admires vigor above grace and seems to imply that engineers ought to find some way to eliminate abutments which rarely please her, s masonry almost always fails to do, and in fact all mixed media. On at least two occasions, she notes with pain that the forms of a likeable bridge are not expressive of the material, to which one can reply that the laws of physics are more fundamental than man-made formulas. This dilemma might have suggested a re-examination of her premises.

One can disagree with many of the author's pet formulas, such as the relation between the arch and deck; separation or merging are both capable of

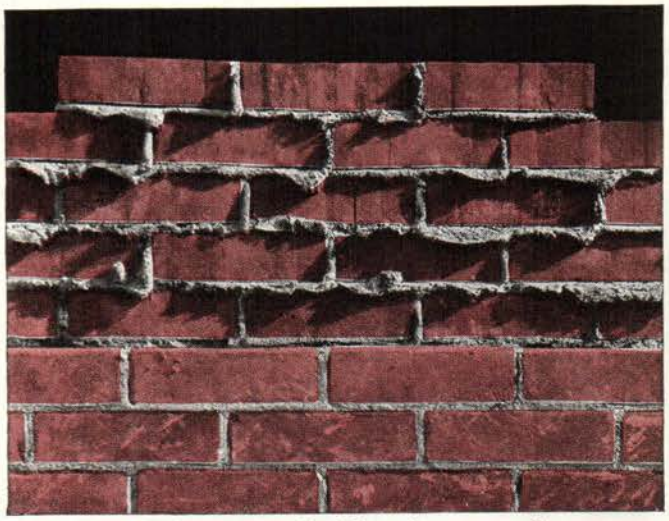
(Continued on page 128)

GOOD BRICKWORK = GOOD DESIGN + GOOD WORKMANSHIP + GOOD MATERIALS

The face brick should be backplastered.



If the back-up units are laid first, the front of the back-up units should be plastered.



Backplastering should not be attempted over protruding mortar joints.

PARGING

WITH

BRIXMENT

HELPS ASSURE

DRY WALLS

WE SUGGEST THAT—

The face brick should be backplastered with not less than ⅜ of an inch of mortar before the back-up units are laid.

Or, if the back-up units are laid first, the front of the back-up units should be plastered with not less than ⅜ of an inch of mortar before the face brick are laid.

Heavy rains don't make brick walls leak — they merely reveal the fact that the walls contain voids or passages through which the water may penetrate.

Dry brick walls are primarily the result of good design and good workmanship. Good materials are important, but still secondary. The more *plastic* the mortar used, the easier it is for the bricklayer to deliver good workmanship.

The photos at the left show some points of *good workmanship.*

Brixment mortar has greater plasticity, higher water-retaining capacity and better bonding quality. Because of this *combination* of advantages, architects, contractors and dealers all over America have for thirty years made Brixment the largest-selling mortar material on the market. Why not try it yourself?

LOUISVILLE CEMENT COMPANY, Incorporated, LOUISVILLE, KENTUCKY

p/a REVIEWS

(Continued from page 126)

producing vigorous, fluid elegance; nor are stone piers and metal suspension members inherently awkward together. The many highly subjective comments are, however, what make the reader race along looking for more, on the other hand they will of course seem funny to the next generation. We can overlook the frequent use of "charming" and even "pretty" but Mrs. Mock fails to note that Richardson's Fenway Bridge is so fluid in form as to suggest poured concrete rather than random ashlar; though she singles out for highest praise, in suspension bridges, the former Rodenkirchen Bridge at Cologne. The genius of Maillart, is a truism, but it has blinded her to the awkwardness of his "X" supports at the 1937 bridge over the Arve near Geneva.

Mrs. Mock is a good critic and often tosses off perceptive remarks such as "lightness is more readily accepted in horizontals than verticals" or that some architects are "picture-makers." Among the many high spots, such as the rare photographs, is the section dealing with new possibilities. The most interesting of these are Wright's which evidently have an ancestor in Hennebique's bridge over the Ourthe at Liege of 1905, using for a span of 180 feet reinforced warped concrete in curved planes, as Wright has proposed to do in 1947 and 1949, with exquisite grace and organic logic. Soleri's "undulated slab," is an exciting project.

The progressive architect will be more often kindled by this bridge collection than by any of the more traditional or specialized collections such as those of Steinman, Watson, and Emerson. The potential poetry of engineering has never been more convincingly demonstrated.

Edward L. Mills who has designed the book has shown commendable taste and a distinguished sense of arrangement, although the print is at times minute, and the titles and captions tend to run together.

C. L. V. MEEKS.

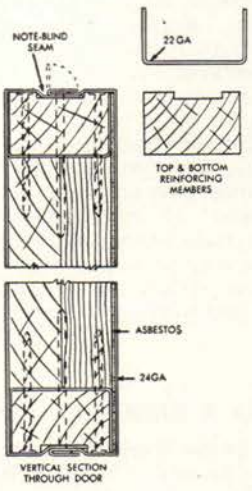
VALUABLE GUIDE

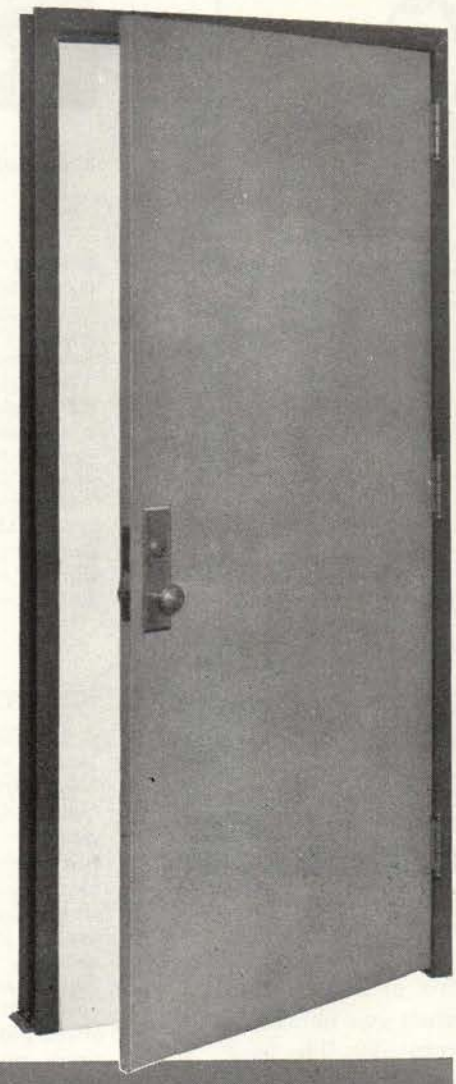
A Guide for Planning Facilities for Athletics, Recreation, Physical and Health Education. *The Athletic Institute, Inc., 209 S. State St., Chicago, Ill. 127 pp., drawings and diagrams, $1.50*

This is a photo-offset, paper-bound book prepared by the participants in the National Facilities Conference in 1947. Chapters cover community planning in

(Continued on page 130)

Seamless smooth asbestos lined steel reinforced





Richmond flush kalamein doors are 1¾" thick having two ply wood cores laminated for expansion. Cores have edges reinforced with metal and wood (left) and one side of each is insulated with a 1/16" thick asbestos sheet.

Richmond flush kalamein doors are built in accordance with the method approved by the Underwriters' laboratory and are eligible to bear labels for class B, C, D and E situations.

Steel reinforced and asbestos lined, with metal coverings glued to cores under enormous pressure, these doors are not only sturdy, fire resistant and corrosion resistant, they are smooth and rich in appearance and decidedly modern.

Richmond flush kalamein doors are being specified by an ever increasing number of architects for public and semi-public buildings ... wherever fire protection and easy quiet door action are essential. They are ideal also for exterior openings being waterproof.

Ask for details.

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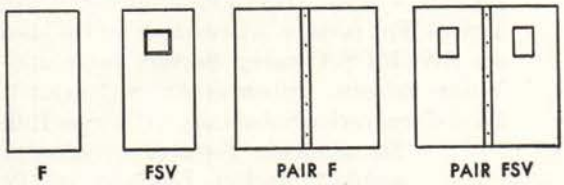
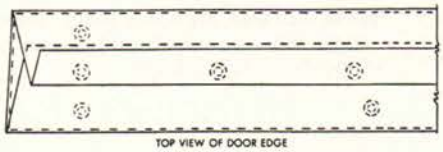
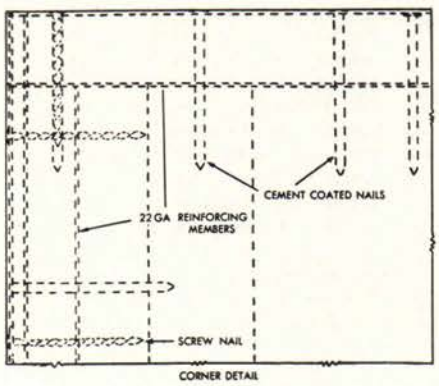
RICHMOND **Flush kalamein door**



DETAILS explain quality



NO SEAMS — All seams in the metal covering of Richmond flush kalamein doors are in the center of the door edges and are thoroughly filled with solder and ground smooth. All doors are prepared at the factory to receive hardware. That is — all necessary reinforcing, mortising, drilling and tapping for mortise hardware is completed before delivery. For most favorable insurance rates, Richmond labeled frames should be ordered with labeled doors.



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p/a REVIEWS

(Continued from page 128)

relation to recreational facilities, outdoor and indoor athletic and recreational spaces, health education and physical education rooms, and so on, from dressing rooms to swimming pools. The text provides extremely valuable information for the development of programs and for the planning of the most specific areas, and the many drawings are for the most part carefully noted as "suggestions" or "recommendations" rather than rigid standards. It would seem to be a very necessary part of the library of any architect who must consider these problems—and few do not.

T.H.C.

SELECTING A PAINTER

A Portfolio of the Work of Members of the National Society of Mural Painters, *1083 Fifth Ave., New York 28, N.Y. Unbound, 8½" x 11" $3.50 (postage paid)*

For the reference file of the architect and decorator a collection of plates illustrating representative work of members of the National Society of Mural Painters has been prepared by the Society and is now available for distribution. The prints are reproduced by offset process and afford a surprisingly good impression of the varied techniques, color values, and design abilities of the painters represented. On the practical side, the portfolio was sized to fit in the standard letter file and should be useful for quick reference when the time comes for selection of a painter. This portfolio also is an example of suitable, dignified public relations, originated by a national organization of professional artists.

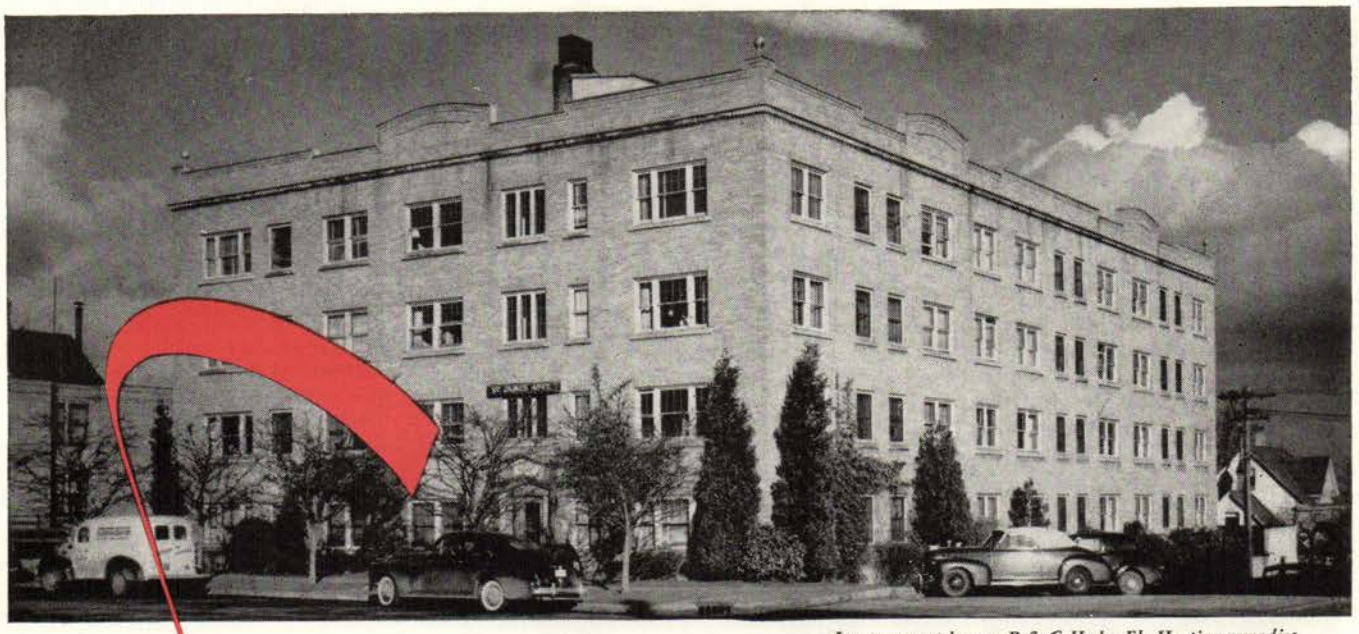
C.M.

REPORT FROM ISRAEL

Technion Yearbook. *Published by American Technion Society, 154 Nassau St., New York 7, N.Y., volume 8, December 1949. $2.50.*

This annual publication of the Technion Society, which is incorporated as American Society for the Advancement of the Hebrew Institute of Technology in Haifa, Palestine, Inc., has a number of articles of interest to architects. For example: a thoughtful article on planning in Israel, by Joseph Neufeld; a report on housing problems in Israel, by David Rose; an article on railroads in relation to urban development; one on harnessing the water power of the Jordan River; a paper by Serge Klein on Jews in American architecture.

T.H.C.



In apartment houses, B & G Hydro-Flo Heating remedies the lack of proper heat control. Apartments can be zoned for individual temperature control.

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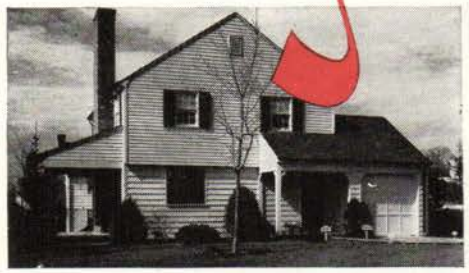

No over-heating—no under-heating—no fuel waste in this small home . . . it has B & G Hydro-Flo Heating.

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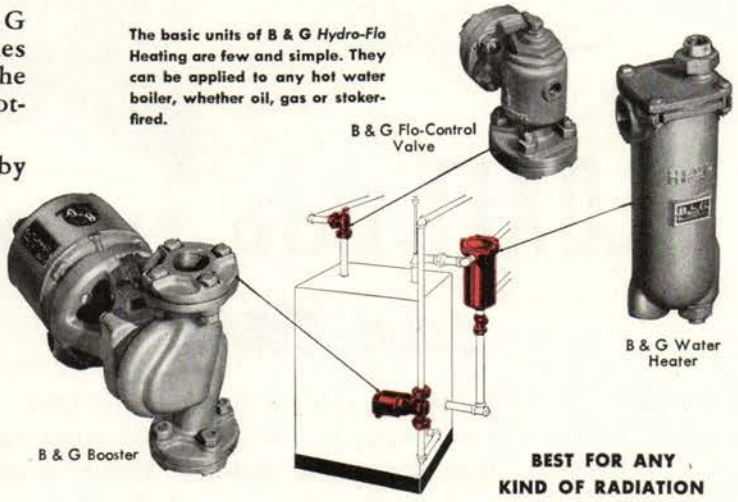
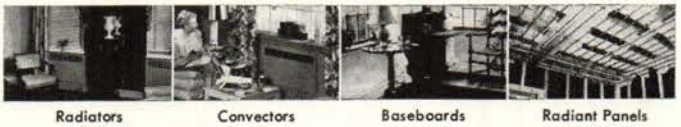


BEST FOR ANY KIND OF RADIATION



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out of school

By CARL FEISS

Glaucon—". . . as soon as a man has a livelihood he should practice virtue."

Plato—"Nay, I think that he had better begin somewhat sooner."

The Republic

Ramshackle, *adj.*: Pertaining to a certain order of architecture, otherwise known as the Normal American.
The Devil's Dictionary, Ambrose Bierce

To the June graduate when "Out of School":

There are many things to say in a commencement speech which I will not say here. I will not say, "Your's is to carry on the torch." Nor will I say, "Let your watchword be order and your beacon beauty." Nor will I say, "Make no little plans." You will, I hope, forgive me if in this short and unhallowed space I avoid these time-honored phrases and leave them to my betters.

I am now addressing myself to this year's graduating class of young architects and planners. In the cold impersonality of the printed word, in the narrow and ugly space of a column squeezed in by advertising which I have not seen and which is distracting to both eye and mind, I perhaps cannot cope with the subject, which is you. Forgive me, then, if I can neither discern your hopes, dispel your fears, or spur you on. Forgive me, too, if I fail to say what you would want me to say on such an occasion. There are so many of you this year, and you are from so many places.

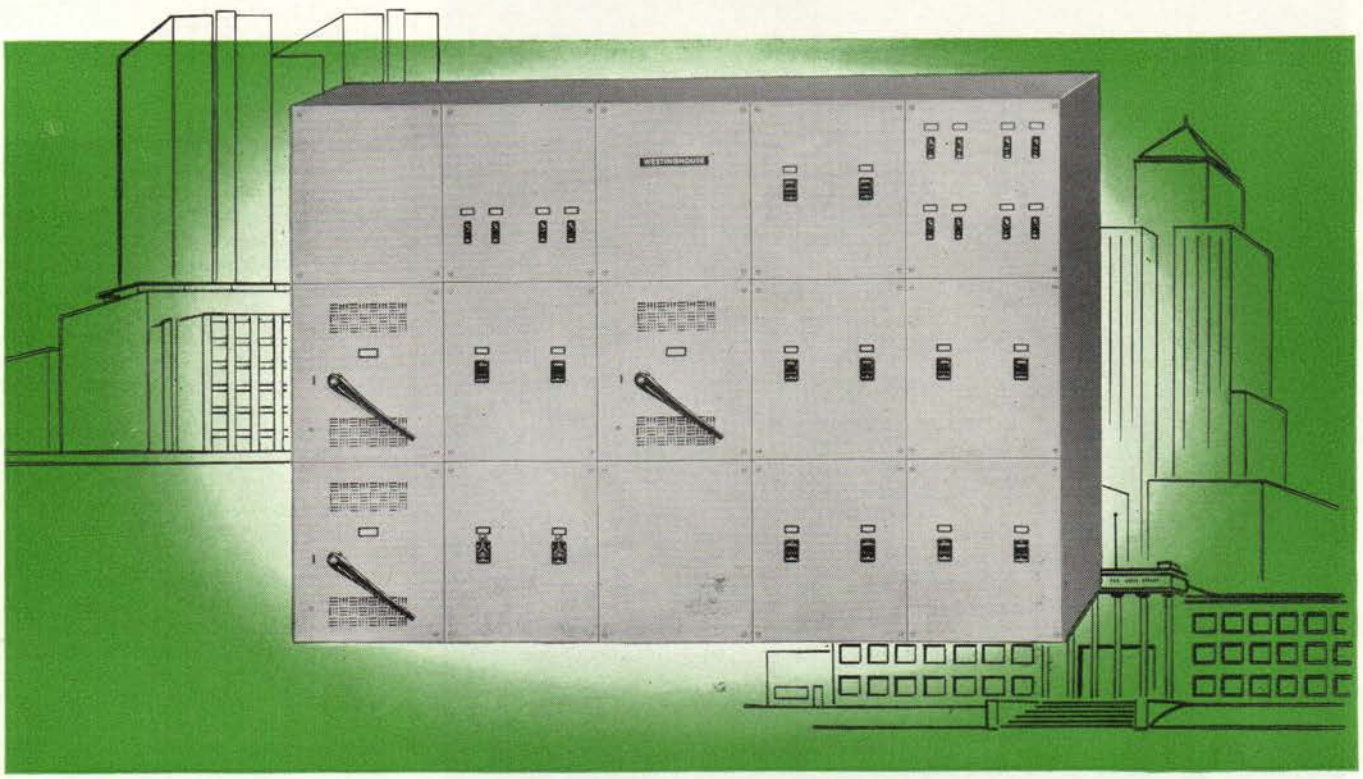
Whoever you are, and from wherever you come, and whatever may have been your past experience, you are now at a moment of change. Changing one's way of life can be both terrifying and exhilarating. A change, when deliberately made, or inevitable, must not ever be regretted. In modern life change *is* inevitable. One changes work, place, and ideas. So make changes with a spirit of adventure and a free curiosity. If I could jump back 20 years and graduate again (which God forbid) I would start exploring. In fact, that is just what I did. Explore the land and the people. Hunt out all the places and people you have heard of and would like to see. School can be an awfully limited place. Get in the jalopy, sleep along the road, and go places. I can remember one hot June night in a Minnesota corn field with the hard dusty ground to sleep on, the mosquitoes so thick that they clouded the stars, and a red hot dawn. I can remember my first view of the Grand Tetons from Jenny Lake, and walking across the flower-covered prairie into the center of Jackson Hole with nothing but space around me. If you have never found such a place where there is room to stretch the eyeballs, you have been nowhere. In fact, coming as you are, just out of school, like a bear after a long winter, wake up, get out and stretch your legs, sniff the fresh air and look away from the drafting boards at the sun. It's a fine world, even for young architects.

It's a fine world if you make it so. That is your job and there is no shirking it. It is a fine world and the only wrong things about it are what people are doing to it and to each other. The basic core of the thing is so damned good and there is so much positive that could be done that it is hard to understand why so many people waste their short lives in hate and destruction. Your job is to build, build well, and be a force for the better for all your life.

(Continued on page 134)

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

Westinghouse



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Westinghouse
SWITCHBOARDS

out of school

(Continued from page 132)

Don't look back at what your elders did unless you are sure of what to draw out of the heritage of the past. If you haven't learned how to pick and choose by this time, don't try.

●

What advice I can give you is limited by the frame of reference within which the American Architect of today is working. Your education has been seriously handicapped because only a very few of you know how to build. Architecture is hardly an entire, a whole, profession. It is only part of the building job. No one knows for sure what percentage of all the buildings in the United States are built by architects. Then the architect performs such a small part of the responsible putting together of any building. While he may specify materials, he has little or no knowledge of their fabrication. As a further safeguard of his own merit, he does not build, but lets his client take the responsibility. I have often wondered if one of the reasons that the architect is so little known and felt in his community is that he is so little responsible. The actual builder, the contractor, is replacing him in the esteem and, in a sense, the professional status which a true architect, who should be an *entire* builder, should have.

Another element missing in the field of architecture, which you will notice, is the ease with which the architect turns the keys of a building over to the client and then forgets and is forgotten. How many architects follow with any scientific interest the life of a building? All buildings begin to deteriorate from the moment they are completed. A building, well built, well located, and used as intended, will deteriorate at a slow rate. Few, if any, architects make periodic inspections or study and learn from what they have designed but not built. Many a dissatisfied client turns to a builder or even another architect to repair, modernize, or alter a building which should have had the maintained interest of the designer. The professional status of the architect is being challenged by this long-standing attitude. Remember that no building is ever finished until it disappears from the face of the earth.

The architect, who is neither the fabricator of materials, the laborer, the builder, the financier, the contractor, nor the maintainer of buildings, plays a partial role in the great job of building and rebuilding. Look at this situation frankly. It needs correction and you are the ones to do the correcting. This present generation of practitioners won't touch it for dear life.

(Continued on page 136)

The Windows in This Hospital Will Soon

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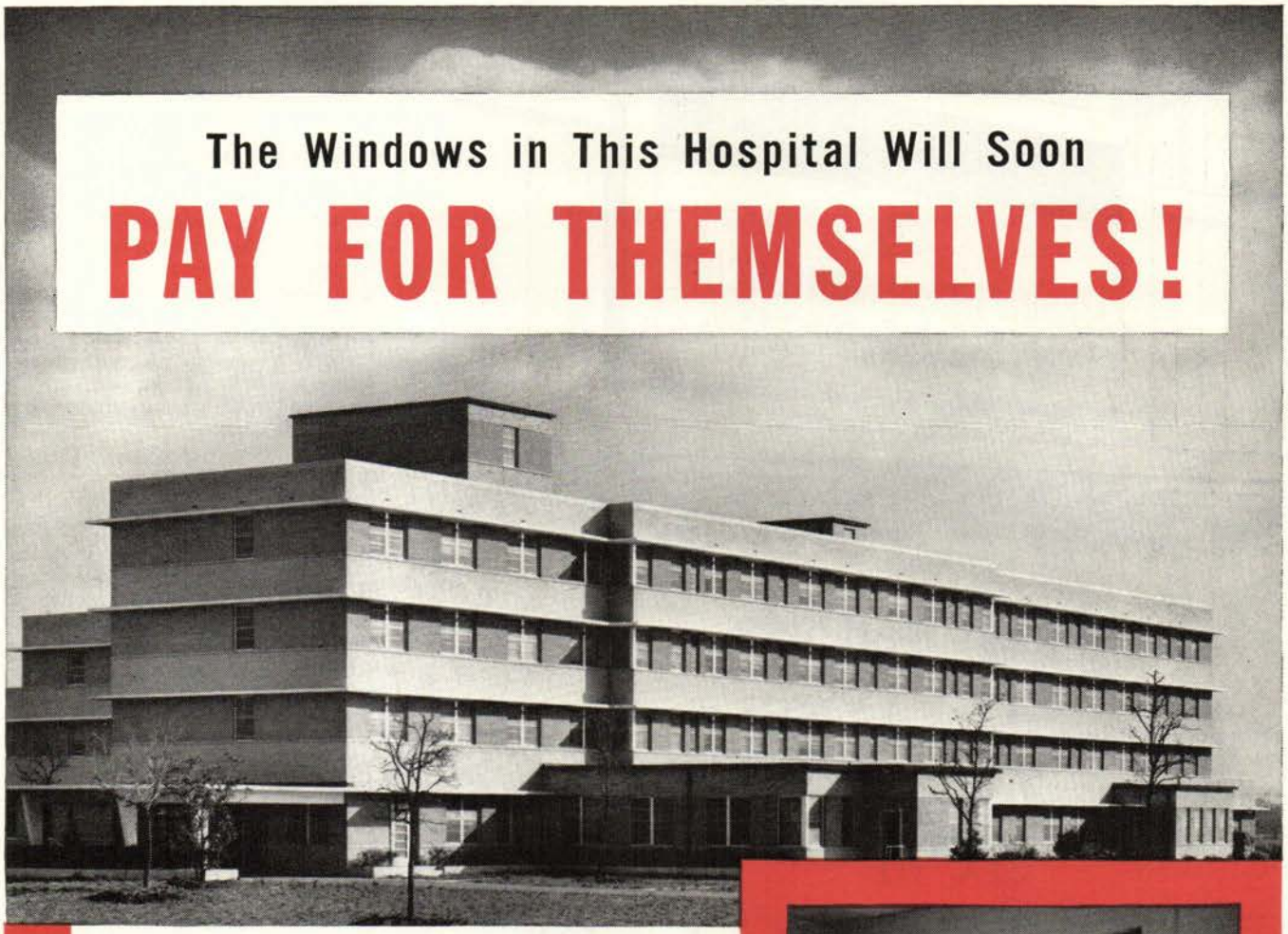

Baptist Hospital, Beaumont, Texas. *Architect:* Wyatt C. Hedrich, Dallas, Texas. *Contractor:* R. P. Farnsworth Co., Inc., Houston.

Yes, the ADLAKE Aluminum Windows in the Baptist Hospital, Beaumont, Texas, *will pay for themselves* — by eliminating all maintenance except routine washing. What's more, these windows will last as long as the hospital itself!

Only ADLAKE Windows have the combination of weather stripping and patented serrated guides that assures minimum air infiltration and absolute finger-tip control. And ADLAKE Windows never warp, rot, rattle, stick or swell. They retain their smart good looks and easy operation for the life of the building.

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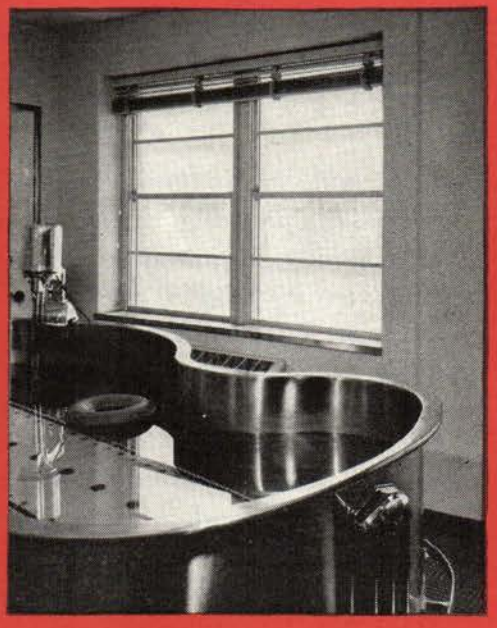

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out of school

(Continued from page 134)

There are many less serious clichés in professional practice. For instance, you will find that an architect is not supposed to advertise himself. Don't worry, he does. He'll endorse cigarettes or toilets or anything handy. And I don't know why not. Every time he is published in an architectural magazine he most naturally uses the article and pictures for promotion purposes. It is entirely proper and natural for him to do so and it isn't doing him or the profession any harm.

•

What I am driving at, you fledgling architects, is that opinion and truth are not necessarily similar and that habit of thought and custom in action are to be subjected to honorable scrutiny at all times. My attack on the accepted concepts of architectural practices may be incorrect, but I am sure that I am justified in raising the inquiry. Just so must you, in the years to come, constantly question the blind habits of your fellow men, the stale customs, the dry practice, the ineptitudes of any tradition which has only age and false prestige behind it. Your education is yet to begin. This education can only come from your own keen search for your own answers to the problems of your own world. No one else can do the thinking or searching for you and if your college training has been of any value to you, it has taught you how to search for an education. It can do no more, despite credits, professional dignities, honors, and degrees.

That reminds me to remind you that since your education is not yet begun and that the quest for architectural truth is continuing, approach your future life with zest and humility. Not long ago Joe Zilch came into my office looking for a job. Under his arm was a rather messy looking portfolio filled with a miscellany of materials. Joe had just graduated from the best architectural school in the country. With aplomb, he thrust the portfolio under my nose, scattering the papers on my desk, and unfolding drawing after drawing and photo after photo of his work—all design—he gloried in the praise he had received from *the* master. I could not judge too harshly, for just two hours before Richard Roe had been in, from the best architectural school in the country, with the same drawings and the same things to say. I knew that others would follow. That's O. K. It is what we expect. But don't be disappointed if we don't consider you architects and worth $7500 a year, first crack. Don't expect $2 an hour when you are only worth $.75. And if your

(Continued on page 138)

WHY SHOULD AN INSULATION BE WINDPROOF?

A 15-mile wind penetrates a 13-inch plain brick wall at the rate of 7 cubic feet per square foot per hour. It penetrates a conventional frame wall at .13 cubic feet per square foot per hour. If occupants of the house are to be comfortable, an efficient insulation must guard against such air infiltration.

The Balsam-Wool insulating mat is completely enclosed in a tough covering with special flanges for adequate windproof application of the insulating blanket. This *completely sealed* feature of Balsam-Wool reduces wind infiltration through a frame sidewall to .000242 cubic feet per square foot per hour—an almost irreducible minimum. Practically no cold air gets through to increase the fuel consumption and add to the heating costs.

No wonder, Balsam-Wool is *windproof* in its design!

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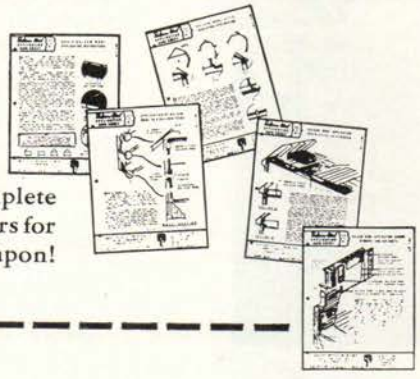
You'll want a set of Balsam-Wool application data sheets—a valuable library of data on insulation application problems. A complete set of these sheets is yours for the asking, mail the coupon!



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City.....*Zone*..... *State*.....

out of school

(Continued from page 136)

dean mistakenly thinks that he has had no responsibility in training you for office use (since he is interested in turning out architects, not draftsmen) take your medicine like a man. Your dean just happened to forget that there are a few years of transition between school and practice. A small matter of life and death, but a small matter.

●

One of the worst characteristics of most of you young graduates is that you are snobs. You don't want to join Rotary and you want to stay out of politics. In other words, you take the old-fashioned Ivory Tower attitude about life and your fellow man. Your immediate past experience hasn't helped. Part of your next educational experience will be to join the world. Some of you will have had military experience which has had a leveling effect. Don't rely on it though. Remember, for God's sake, that an architectural training, even at *the* school, does not make you one of *the* elite. The elite are only those who can supply a performance bond. That performance bond consists of buildings you have built and cities you have helped to build. Nothing else, believe me, counts for a tinker's dam.

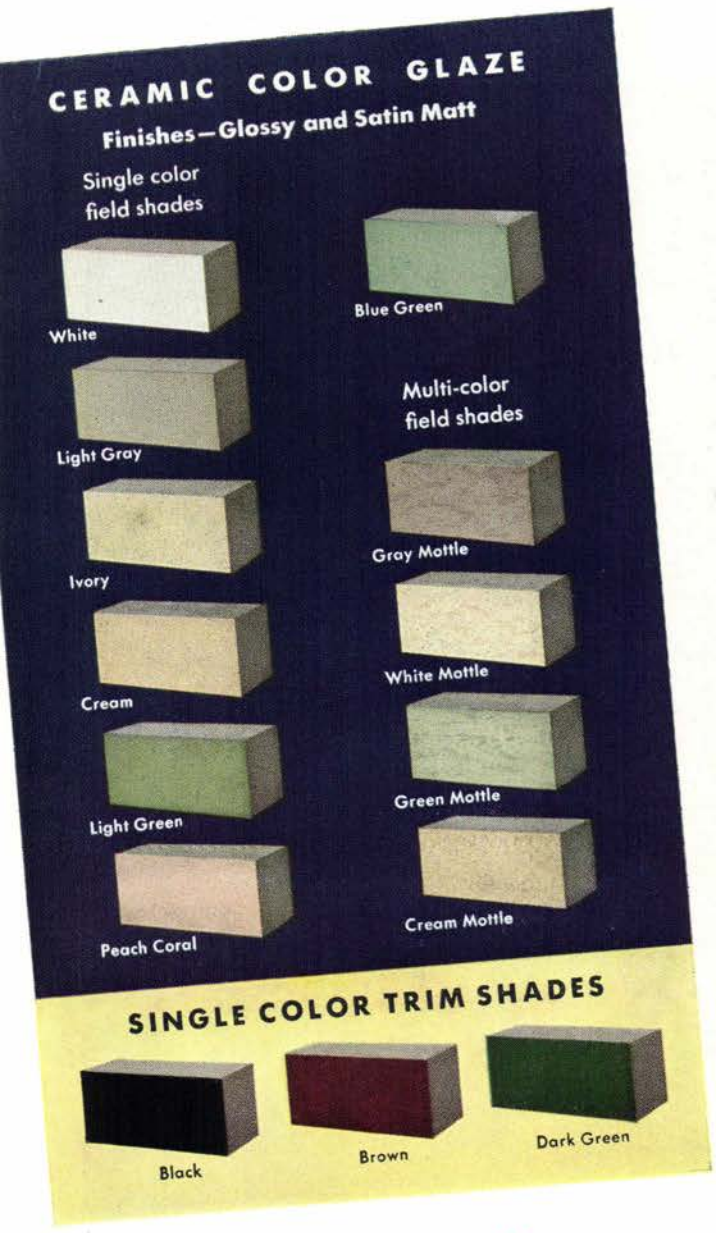
I wish that every graduating architectural student would actively join a political party. In our democracy we badly need college men in politics, to take responsible positions in government and stick their necks out. Government, of necessity, is constantly making decisions on technical matters such as housing, city planning, river basin control, highways, defense, recreation, and other innumerable questions involving design, construction, and technical competency. Don't leave this kind of decision to the lawyers and business men. Get in and pitch.

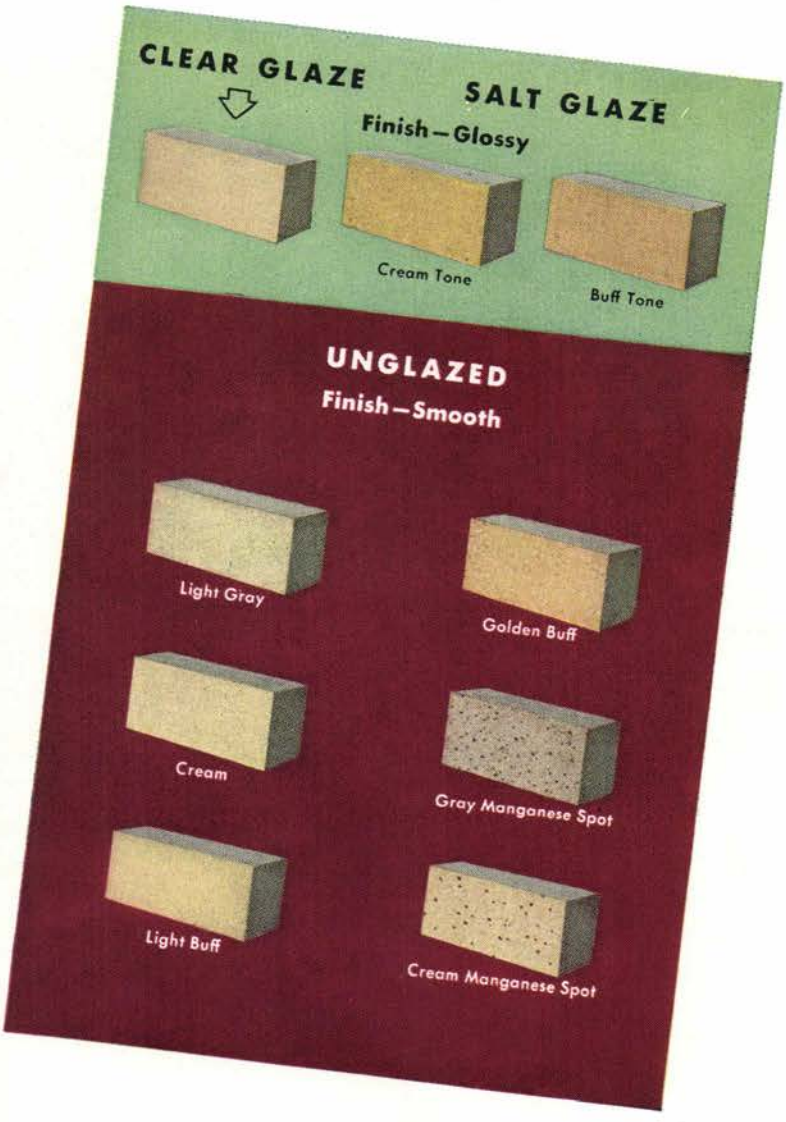
And at the local level, first, the young architect should join in community activities. Don't try to join the local chapter of the A.I.A. only. Get in on a church, fraternal, or service organization as soon as you can. Join a neighborhood improvement association. Go to zoning and city council hearings. Get into the life of your town. You have been privileged to receive a specialized training. Put that training to work for your community, otherwise neither you nor your community will benefit. You have not yet earned *any* privilege.

●

I should not be sermonizing to you this way at this commencement, A.D. 1950. The world is threatened by H-bombs and hamsters. The Juke Box reigns

(Continued on page 142)





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out of school

(Continued from page 138)

over the string quartet and we must preserve culture within the cloisters of our own souls in the approaching dark age. But, somehow, I look at you with hope—that is, hoping that you are not afraid and that you are not cynical. Fear and bravado go hand in hand in our shaky world. But if you young hopefuls can't maintain your calm ambition to build, and build better than your forefathers, then damn it all, there is no hope for anyone.

I guess that is my message in this last speech to you. You see, I'm not offering you any torch to carry on. You'll have to light your own. I'm not offering you a job. You'll have to find your own. I'm not bolstering up your ego. You have still to earn praise. I am only offering a world to work in which is not mine to offer, but which is yours to take. God bless you, for it will be a long, hard, and thankless task. It is the only one worthwhile.

●

letters to the schoolmaster

Dear Carl Feiss: I, too, turn to OUT OF SCHOOL first in P/A—but I think it is because it seems to be the most candid and open-minded thinking to be found in the North American papers. (The British papers indulge in friendly differences a bit more.) What you say about planning jobs and training for them (March) goes for Canada too. Yours for more searching, less pretense.

ALAN H. ARMSTRONG
Ottawa, Canada

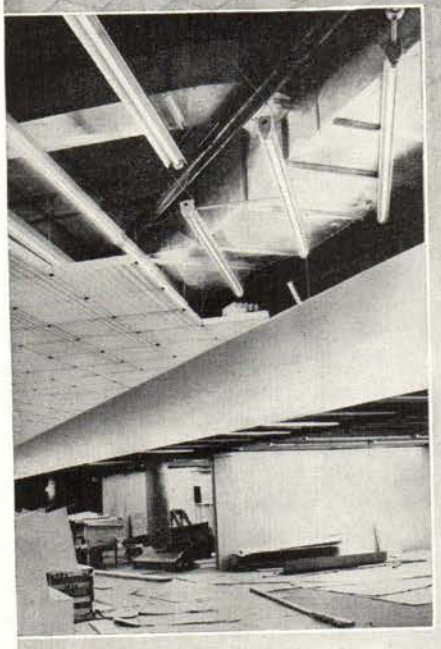
Dear Carl Feiss: How strange it is that the meteorological mystery of the flying disk should be disclosed by inference in the January OUT OF SCHOOL column. No doubt these strange phenomena were shining lights from the Feiss satellite system. Unfortunately, no criterion of product superiority exists on the training of architects.

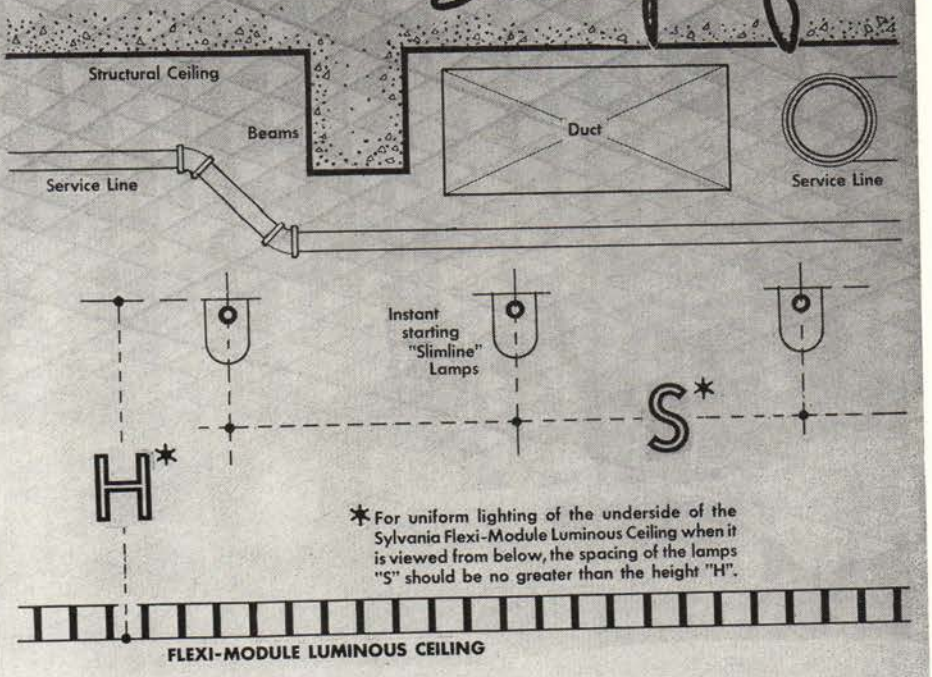
In industry, product superiority is measured by consumer demand. It would indeed be instructive and constructive to have a comparison of product resulting from the current various architectural curricula. What makes the manufacture so difficult is the lack of agreement on what the end product should be. Until we have an objective and purpose which we can be rather

(Continued on page 144)

The Eyes Should Have It . . .

—proper illumination for stimulating sales in the stores you design. The eyes also deserve consideration for effortless study and reading in the schools you plan, for efficient work at manual and visual tasks in offices, or for any other place where sight-saving illumination is desirable. "Flexi-Module" Luminous ceilings, as developed by Sylvania, eliminate the contrast-brightness of unit type lighting fixtures.





Photograph above and drawing at right show how Sylvania "Flexi-Module" Luminous Ceiling conceals beams, ducts, pipes. Sprinklers can be placed above the grids for safety coverage of the floor area, as tested and approved by the Associated Factory Mutual Fire Insurance Co. All such necessary and unsightly utilities are always accessible because the light "Flexi-Module" sections can be lifted out of the way and replaced in a moment.

LIGHT INTENSITY AND QUALITY—For the first time at low cost, intensities of 100 footcandles or more can be had without light-source glare. Using the new Sylvania "Slimline" single-pin, instant start lamps, any of several colors of light are possible. Combinations of Sylvania Warmtone, De Luxe Warmtone, Standard Cool White, and De Luxe Cool White permit the designer a range of light qualities ideal for any seeing task.

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SYLVANIA SERVICE—For assistance in planning a "Flexi-Module" Luminous Ceiling for a store, office, library, or school, write your local Sylvania Lighting Division Sales Office or to Advertising Dept., Sylvania Electric, 1740 Broadway, New York 19, N. Y.

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out of school

(Continued from page 142)

generally agreed upon, we will no doubt be deluged with glib talk and satirical criticism of the Beaux-Arts, the current galaxy, and those yet unborn.

KENNETH J. HEIDRICH
Professor of Architecture
The Pennsylvania State College
State College, Pa.

Dear Mr. Feiss: This will be a short dual-purpose note. I must write you, after reading those wonderful P/A articles, but I do not want to waste too much of your time.

My first purpose is of course to indicate to you something of the extreme interest, pleasure and positive stimulus with which your articles affect (or perhaps infect would be more accurate) me. Certainly they belong in a class with those wonderful pieces of Dean Hudnut and Lewis Mumford. By way of encouraging you to keep writing in spite of the new work you have taken up I want to indicate their uniqueness as informed social criticism of the profession. Neither architecture nor planning has developed a person to take your place.

JOSEPH R. TAMSKY
Cambridge, Mass.

Dear Mr. Feiss: I am a student in architecture at the University of Illinois and consequently always interested in your column.

The only thing I don't understand is your use of the past tense in speaking of the B.A.I.D. in the January and February issues. What you have described is the course I am now taking—analytiques, sketch problems and everything.

CHARLES SPEAR
Urbana, Illinois

Dear Mr. Feiss: Let me say that I think you are doing a wonderful job in P/A regarding the education of both the student and the practitioner. All this has been said before, perhaps, in many garbled words; yet for the first time, we are probably having an objective story that certainly needs to be told, and you are telling it in a way which is easy to read, and with most of the facts, as I understand it.

EUGENE J. MACKEY
St. Louis, Mo.

These Architects had different problems

...but they found an answer in common!

Office—Office Building, New York City.
Architect: Emery Roth & Sons, New York.
Contractor: Uris Bros., New York.

School—Robert N. Mandeville High School, Flint, Michigan.
Architect: Bennett & Straight, Dearborn.
Contractor: Karl B. Foster, Flint.

Restaurant—Seattle-Tacoma Airport Restaurant.
Architect: G. T. Treadwell, Seattle.
Contractor: Lease & Leigland, Seattle.

Laundry—Laundry, Bloomington, Indiana.
Contractor: Harlos Building Service.

Clothiers—Clothiers, Seattle, Washington.
Architect: G. T. Treadwell, Seattle.
Contractor: Lease & Leigland, Seattle.

For one, the problem was to create an atmosphere gay and gracious for dining travelers. Another needed a stream of fresh, clean air to wash a laundry free of steam and smell. Daylight and ventilation they all had to have . . . an *extra* amount.

The answer: beautiful Fenestra* Intermediate Steel Windows. Because slender muntins permit extra glass area. Because ventilators are arranged to permit controlled ventilation in any weather. Open-in vents deflect air upward, shed the rain outside . . . open-out vents form canopies to guard the openings.

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Fenestra Windows are economical in three important ways: *Low first cost*—standardization of types and sizes plus volume production. *Low installation cost*—modular sizes coordinate with wall materials. *Low maintenance cost*—precision fabrication of high-quality materials.

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it's the law

By BERNARD TOMSON

Architects misunderstand the effect of *Sheill vs. Howard*, the Michigan case where a lower court refused to permit an architect to recover for services rendered his client, "for the reason that it is based upon a written contract between the plaintiff and the defendant wherein the plaintiff agrees to do certain work which constitutes the practice of law, and since the plaintiff is not an attorney licensed to practice law in Michigan, such work is illegal and the contract is void."

The contract referred to is the *A.I.A. Owner-Architect Agreement Form* which contains the following paragraph:

"1. The Architect's Services.—The Architect's professional services consist of the necessary conferences, the preparation of preliminary studies, working drawings, specifications, large scale and full size detail drawings; *the drafting of forms of proposals and contracts;* the issuance of certificates of payment and the keeping of accounts, the general administration of the business and supervision of the work."

●

There were services rendered pursuant to this contract. Some payments were made. A disagreement then arose between the architect and owner as to balance due and the architect sued.

In a preliminary motion before answering the complaint the owner took the position that the *A.I.A. Owner-Architect Agreement Form* provided for the performance by the architect of legal services and since the architect was not licensed to practice law in Michigan, the contract provided for the performance of unlawful acts, which in turn, rendered the entire contract illegal and void.

The court found:

"It being and appearing to this Court that the plaintiff is not a licensed attorney, and that he did draw the contract between the defendant and the contractor, and *that the drawing of contracts is the practice of law, and that such part of the contract between the plaintiff and defendant is therefore illegal, the entire contract is therefore void.*"

●

Whether the Court's original decision was correct; whether on reargument it will be changed; whether it ultimately will be sustained by a higher court in Michigan, are all matters secondary to the important issue.

The primary difficulty is that the issue, once having been raised, may be raised again in any one or more of the 48 states. If the highest court in Michigan determines that the A.I.A. standard form is valid and not illegal, the determination will be persuasive, but not controlling, in other states.

The determination as to what amounts to the practice of law is a complicated and involved question. It is practically impossible to frame a comprehensive definition which could serve as a readily ascertainable standard for all cases, and the determination of the question must be left to the facts in each particular case. Yet the phrase "practice of law" does have a sufficiently definite meaning to enable courts when called upon to give it effect.

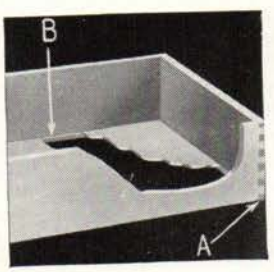
Contrary to wide belief the practice

(Continued on page 148)

Step Inside...

and see what CURTIS means by quality

Quality is a word that is easy to use—but often hard to demonstrate. But in Curtis *wood* kitchen cabinet units, "quality" becomes a definite, tangible asset—not only for the kitchen planner, but for the owner as well. Here are some of the many features of sound construction and good design that give the home-owner more for his money in Curtis cabinets.

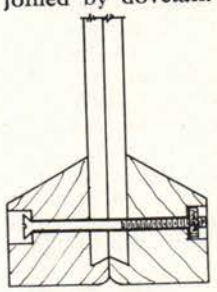


Sound Drawer Construction

Drawers in Curtis cabinets are dovetailed at all four corners (A). Back, front and sides are plowed near their lower side, (B), the Curtis Prespine bottom panel is inserted in plow before sides are joined by dovetail.

Strong and True

Illustrated on the right is a section of the union of two cases (front corner posts). The strong, space-saving construction of Curtis cabinets appeals to both home-owners and contractors.



Ample Toe Space

Note ample toe space at bottom of cabinets—two inches—to eliminate marring cabinet and scuffing of shoes. Beautifully styled hardware is furnished with cabinets, and they come painted two coats.

Curtis PRESPINE

Doors and panels are made of Curtis PRESPINE—a superior new Curtis wood product made exclusively for use in Curtis Woodwork. Prespine provides a beautiful paint surface—no grain raising or checking.

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Gentlemen: Please send me literature on Curtis kitchen cabinets and other Curtis Woodwork.
I am ( ) architect ( ) contractor ( ) prospective home builder ( ) student. (Please check above).

Name.....

Address.....

City.....*State*.....

it's the law

(Continued from page 146)

of law is not confined to practice in the courts. It extends to the giving of legal advice and counsel and the preparation of legal instruments and contracts involving legal rights, although these matters may not be pending in court. It has been said to include the giving of advice or rendition of service when use of any degree of legal knowledge or skill is required.

●

One of the most common ways in which the layman may be practicing law is in drawing *for others* papers conferring or involving legal rights. It is not always easy to determine when the drawing of a document amounts to such unauthorized practice. Efforts have been made to distinguish between the mere filling in of blank forms upon so-called simple instruments and the preparation of complex instruments. This distinction is itself difficult to apply in particular instances and many courts have refused it as an unsatisfactory test. Since the licensing requirement has been enacted for the protection of the public it would seem that written instruments drawn for others when calling for more legal knowledge then the average layman may be deemed to possess, readily fall into a category requiring expert legal attention.

However, how complicated the issue is and how difficult of solution, is exemplified by a case decided by the highest court in New York State. This case involved the question whether the Title Guaranty Trust Company which was authorized to guarantee bonds, mortgages and titles to real estate, engaged illegally in the practice of law by preparing *on a single occasion*, a bill of sale and chattel mortgage. The court held by a four to three vote that it did not, but there were four separate opinions written by members of the court upholding on different grounds the legality of the particular activity. There was also a dissenting opinion by Judge Cardozo in which it was stated that the acts were illegal. In this opinion, two additional judges joined. These separate expressions of opinion indicate that the problem is not easy of solution. The decisions will vary according to the facts of a particular situation and even where the facts are the same, the courts of different states may hold conflicting views.

●

In spite of the complexity of the issue, it is a practical necessity for the architect to reach some important immediate conclusions:

(1) *The architect is at perfect liberty to draw his own contract with the owner, or use the A.I.A. or any other architect-owner form. The Sheill case has no application to any agreement which the architect makes with his own client. It applies only to such agreements as are made with third persons by the architect acting for the client-owner.*

(2) *If the A.I.A. Owner-Architect or similar Agreement Form is used, the safest procedure is:*

(a) *to strike out the reference to the drafting of contracts, and if a substitute phrase is inserted, the duty to draw contracts and other "legal" papers should be placed on the owner;*

(b) *to use an attorney in the drafting of any contracts between the owner and persons other than the architect even where forms are employed.*

This does not in any way prevent, prohibit, or inhibit the architect from supplying the necessary technical information to be inserted in the contract, or from passing on the matters contained in the contract with respect to their accuracy or sufficiency, from the architect's point of view.

More simply stated, the necessary conclusions are:

1. You may draw your own contract with the owner.

2. The duty to draw other contracts should, express language, be placed on the owner.

3. All contracts other than the Architect-Owner contract should be drawn by a lawyer, although technical architectural matters should be supplied by the architect.

This column will, of course, follow the progress of the Sheill case and report further when other valid conclusions can be drawn.

NOTICE

AWARD

The 1950 LeBrun Traveling Scholarship of the New York Chapter of the A.I.A. has been awarded to Ralph E. Myers, of the architectural firm of Kivett & Myers, Kansas City Mo., it was announced by Robert Carson, chairman of the Chapter's LeBrun Scholarship committee. The award, $2800 for a trip of at least six months duration in Europe, was made for Mr. Myers' submission of the most competent design for a "Suburban Railroad Station" in a nationwide competition. The scholarship, an annual architectural competition, is sponsored by the New York Chapter of the A.I.A., trustees of the fund established by Pierre LeBrun in 1910.

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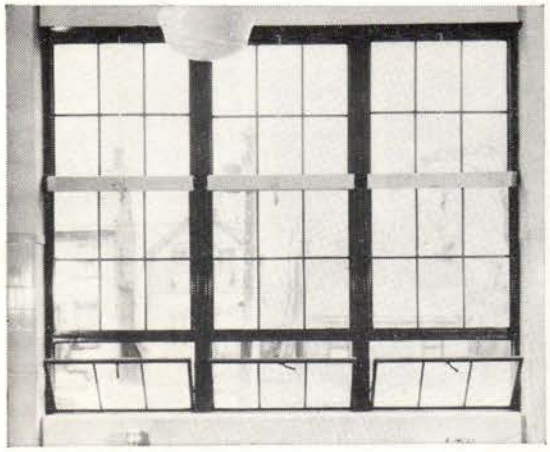

(Left) Interior and exterior views of Truscon Series 138 Double-Hung Steel Windows in North Street School, Hagerstown, Maryland. A. J. Klinkhart, Architect. N. S. Early & Son, General Contractor. Top photo shows window with sill ventilator. Bottom photo also shows Truscon Donovan Steel Windows used in school gymnasium.

Truscon Series 138 Double-Hung Steel Windows in Park Lake Apartments, Hempstead, Long Island, New York. Samuel Paul Associates, Jamaica, New York, Architects. Sol G. Atlas, Great Neck, New York, Contractor.

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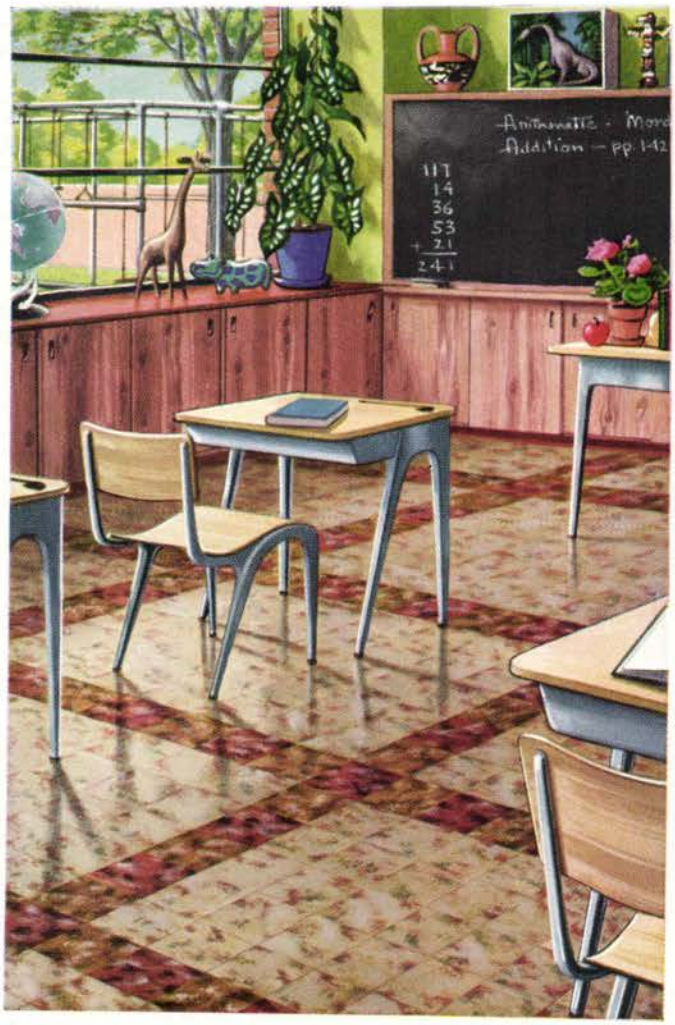

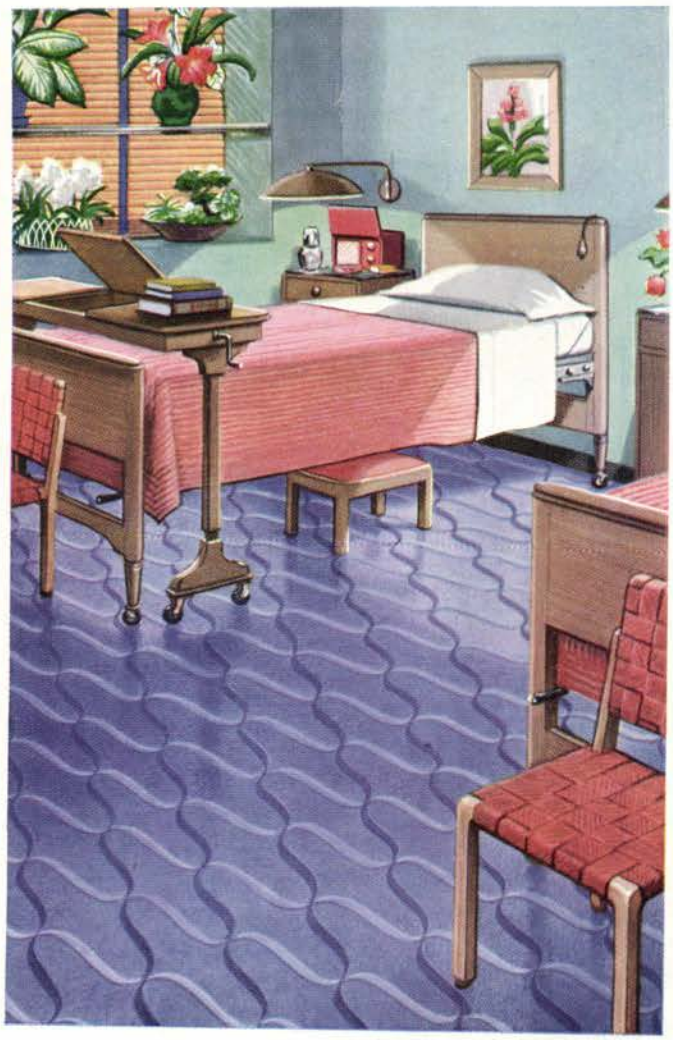

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Recent manufacturing improvements have made Armstrong's Linoleum tougher and more durable than ever before. Colors have been made brighter and richer. It has a smoother surface which further simplifies cleaning. Armstrong's Linoleum is made in six types and in three thicknesses to meet the various service requirements.

For additional data on Armstrong's Resilient Floors—Asphalt Tile, Linoleum, Linotile®, Arlon Tile, Rubber Tile, and Cork Tile—consult Sweet's Architectural File, section 13e, catalog 2. For samples and specifications, as well as help in solving unusual flooring problems, architects are invited to write to any Armstrong District Office or directly to the Armstrong Cork Company, Floor Division, 8906 State St., Lancaster, Pennsylvania.

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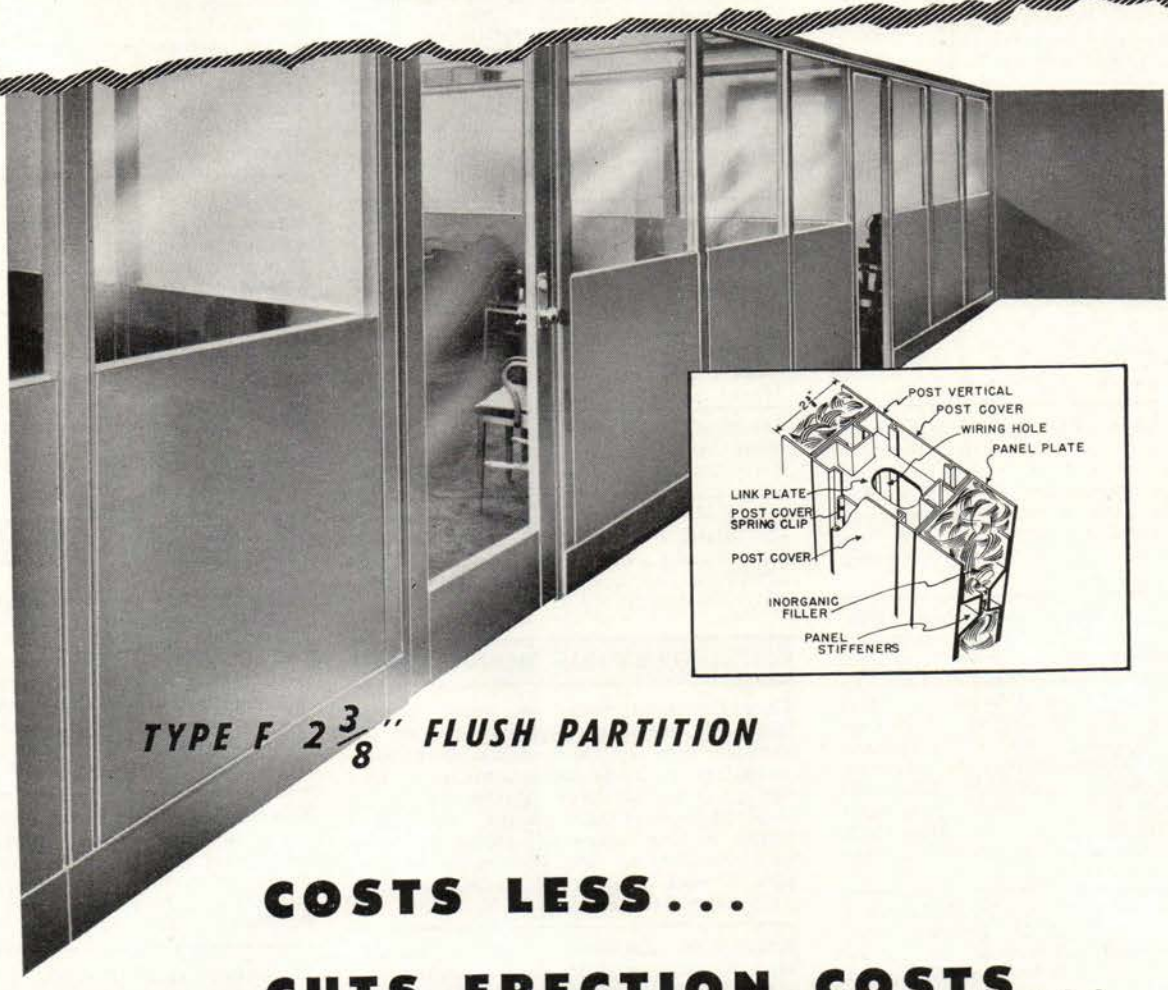

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ARCHITECTURAL ASSOCIATE WANTED—to assume responsibility for production of working drawings in busy architect's office. Qualifications: College graduate in architecture; about 35; good health; thorough knowledge of working drawings and building construction; excellent feeling for contemporary design; pleasing personality; executive ability. Extraordinary opportunity in one of the fastest growing regions of the United States. Must desire to do excellent work. If qualifications cannot be met, please do not apply. Write or call Golemon & Rolfe, Architects, 915 Woodrow Street, Houston, Tex.

ARCHITECTURAL DRAFTSMAN—wanted for hospital, school and commercial buildings work by established firm located in Columbia, S. Car. Opportunity for long employment in fast growing section. Write giving age and experience. Lafaye, Lafaye & Fair, Architects, 1226 Sumter Street, Columbia, S. Car.

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ARCHITECT OR SENIOR ARCHITECTURAL DRAFTSMAN—architectural engineer (structural), experienced in general practice including schools, permanent. Can begin work immediately. Submit details and example of recent work to Maurey Lee Allen, AIA, Architect, Zuelke Building, Appleton, Wis.

SPECIFICATIONS WRITER—architectural trades, for elementary school project. Can begin work June 1. Submit details to Maurey Lee Allen, AIA, Architect, Zuelke Building, Appleton, Wis.

ANTONIN RAYMOND—desires to contact immediately an able, experienced architectural man capable of taking charge of his busy office in Tokyo, Japan. Antonin Raymond, 101 Park Avenue, New York, N. Y.

ARCHITECTURAL DRAFTSMEN WANTED—one senior draftsman with experience on churches, schools, and large residences. One man with at least four years' experience on working drawings. Permanent positions for qualified men. Furnish complete experience record, references and availability. Shirley Simons, A.I.A., 1723 So. Broadway, Tyler, Texas.

ARCHITECTURAL DRAFTSMAN—with a minimum of eight years 'experience on good work. Preferably man with experience on housing work, schools, institutional work and modern houses. Specifications writing also desirable. Medium size Baltimore office with pleasant working conditions. State age, experience and salary. Box 317, PROGRESSIVE ARCHITECTURE.

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Standard charge for each unit is Five Dollars, with a maximum of 50 words. In counting words, your complete address (any address) counts as five words, a box number as three words. Two units may be purchased for ten dollars, with a maximum of 100 words. Check or money order should accompany advertisement and be mailed to Jobs and Men, c/o Progressive Architecture, 330 W. 42nd St., New York 18, N. Y. Insertions will be accepted not later than the 1st of the month preceding publication. Box number replies should be addressed as noted above with the box number placed in lower left hand corner of envelope.

SITUATIONS WANTED

DESIGNER-DRAFTSMAN—two years' diversified office experience. Vitally interested in working with architects doing work contemporary in design and construction. Renderings in various media. Precise draftsmanship. Married veteran receives architectural degree in June. Salary and geographic location secondary to right opportunity. Examples of work available. Bailey M. Cadman, 1718 Fifth Avenue, Troy, N. Y.

REGISTERED ARCHITECT—age 52, experience 30 years, employed as architectural designer in two reputable firms in N.Y.C. Outstanding work done. Good designer, knowing construction and plans. Desire partnership or interest with firm established in N.Y.C. or Westchester County. Best references furnished. C. E. Charbonneau, Witherbee Court, Pelham Manor, N. Y.

ARCHITECTURAL DRAFTSMAN AND EXPERIENCED DELINEATOR—graduating from major Eastern university in June. Married. Approximately one year general drafting experience on institutional buildings and residences. Have done free lance delineation in all mediums. Wish to settle permanently on West Coast. Seeking position with future with progressive firm. Box 313, PROGRESSIVE ARCHITECTURE.

ARCHITECT-DESIGNER—interested in partnership possibility in the West. Twenty years' experience. Five years' successful private practice in area of stagnant economy. Strong contemporary designer with historical training. Detailed plans, specifications, supervision. Two degrees, leading university. Pleasing personality, drive and initiative. Active in organization. Age 40, Box 314, PROGRESSIVE ARCHITECTURE.

SPECIFICATION WRITER—well-trained and experienced registered architect available for specification writing. Interested only in a high-grade connection. Box 315, PROGRESSIVE ARCHITECTURE.

ARCHITECTURAL DRAFTSMAN—holding pilot's license, desires position in architects office. Receiving B.S. in Arch. from University of Illinois, June graduating class. Veteran, age 26, short on office experience but long on ambition. Write Robert Nelmar, 2440 West 62nd St., Chicago, Ill.

MISCELLANEOUS

ARCHITECT-ARTIST AND DELINEATOR—of long experience, offers services for freelance architectural renderings and perspectives; bird's-eye-views of real estate developments, city-planning projects, engineering structures, highways and bridges. Instruction in Perspective and Rendering. Theodore A. De Postels, A.I.A., 644 Riverside Drive, New York 31, N.Y. Audubon 3-1677.

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ARCHITECT—with small office in best location N.Y.C., with lots of small and medium size jobs, architecture and interiors . . . seeks association with progressive architect or designer who has some following and can share designing and drafting work. Box 316, PROGRESSIVE ARCHITECTURE.

Architect's Traditional Design faithfully preserved with Gold Bond Plaster!

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There is a definite advantage to the architect when Gold Bond products are specified and used exclusively. The entire responsibility for all these materials is centered in one reliable manufacturer, National Gypsum Company. There are now over 150 trade-marked Gold Bond building materials, scientifically engineered to give the utmost in satisfactory results. They are fully described in Sweet's.

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Architect..... *P. J. O'Connell, Boston, Mass.*

General Contr..... *Patrick F. Beresford, Medford, Mass.*

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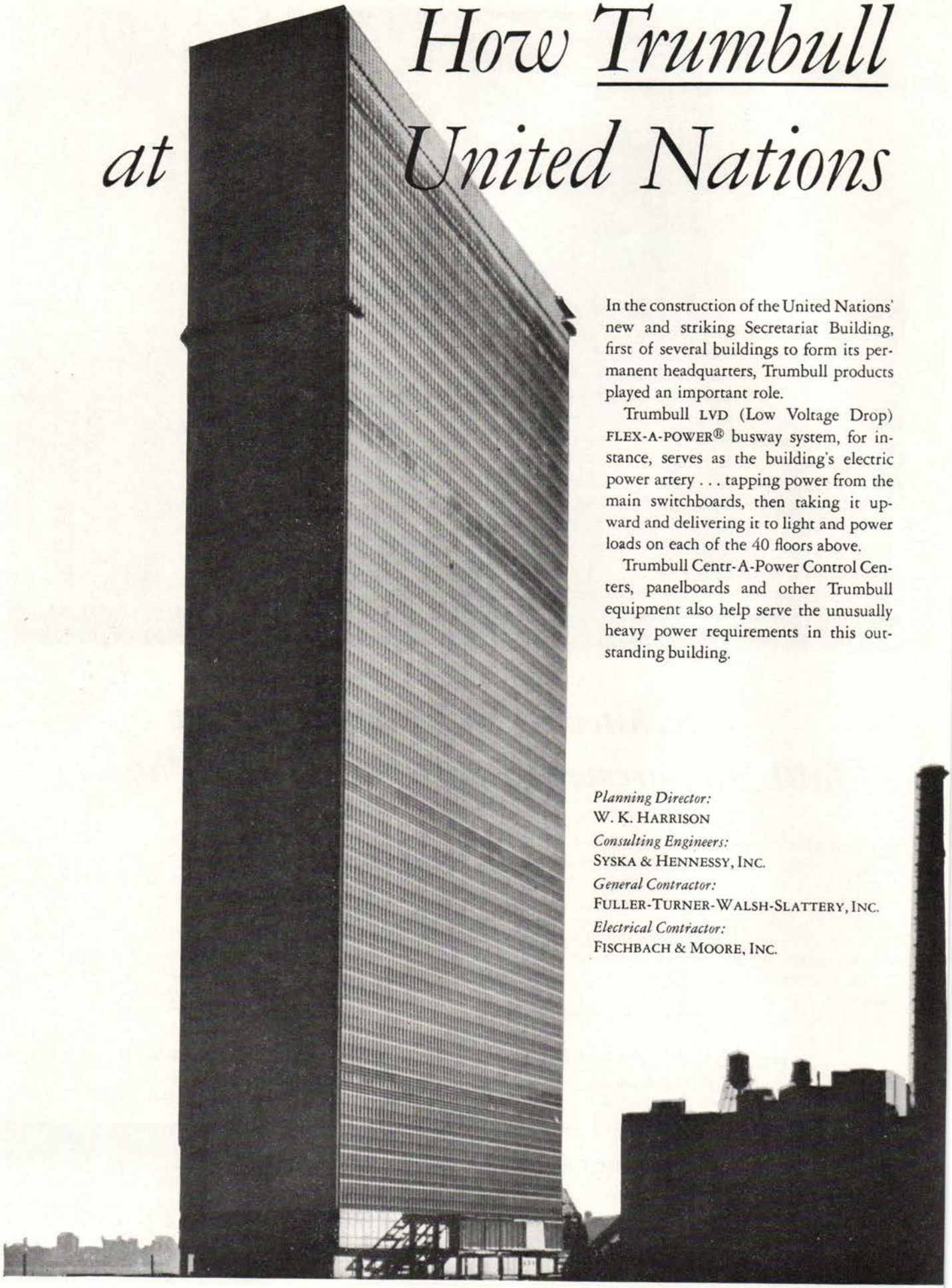
How Trumbull at United Nations



In the construction of the United Nations' new and striking Secretariat Building, first of several buildings to form its permanent headquarters, Trumbull products played an important role.

Trumbull LVD (Low Voltage Drop) FLEX-A-POWER® busway system, for instance, serves as the building's electric power artery . . . tapping power from the main switchboards, then taking it upward and delivering it to light and power loads on each of the 40 floors above.

Trumbull Centr-A-Power Control Centers, panelboards and other Trumbull equipment also help serve the unusually heavy power requirements in this outstanding building.

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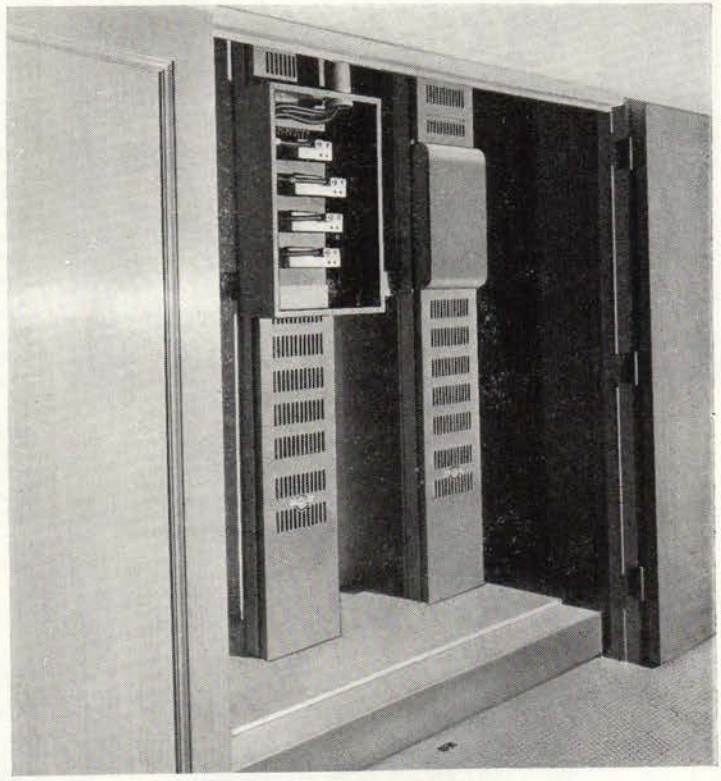
LVD is one form of Trumbull FLEX-A-POWER—prefabricated busway. It is used as main feeder from switchboard or as riser. Ease of installing 10-foot sections saves installation cost. Ease of rearranging sections and inserting cable tap boxes at any point gives utmost flexibility and makes it unnecessary to make costly investments in anticipation of future needs.

Other forms of FLEX-A-POWER include FVK for secondary feeder (15 outlets every 10-foot section) and LTG plug-in or trolley for light duty (can be tapped at any point).



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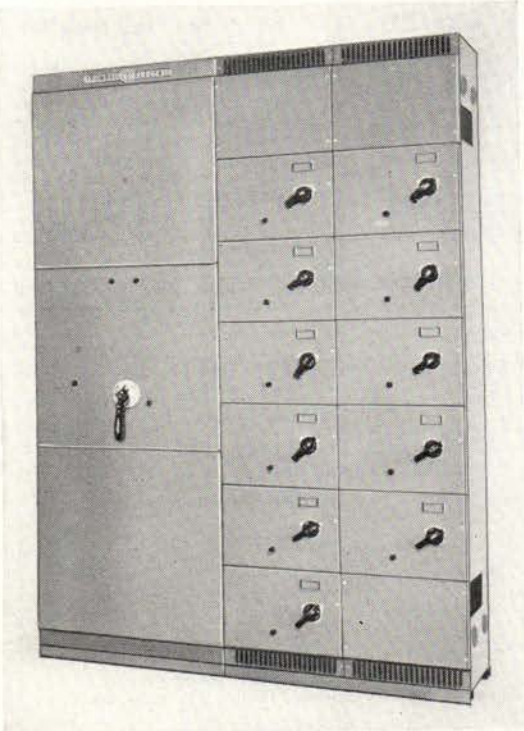

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(Plain and Waterproofed)

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Again Medusa White Portland Cements (Plain and Waterproofed) have been selected for an internationally famous building . . . the United Nations Permanent Headquarters located in New York City. It is interesting to note that these cements have been used in the construction of magnificent buildings in nearly all of the member countries that make up the General Assembly of the United Nations Organization. Their selection for this Secretariat Building enhances Medusa White's reputation as the world's finest white portland cement for making permanently beautiful constructions.

The Secretariat Building is unusual in that the East and West walls are constructed completely of aluminum and glass, while the North and South walls are solid marble with no openings, backed-up with brick. Approximately 1,000 barrels of Medusa Waterproofed White Portland Cement were used for the setting, pointing and the back-up brickwork and for setting and pointing the marble.

Medusa White Portland Cement was also used in the Terrazzo in the main lobby. The floor has 3 ft. by 4 ft. black and white rectangles in a checkerboard pattern, the white rectangles being made with Medusa White Portland Cement. Approximately 300 bags of Medusa White were used in this floor.

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MAX ABRAMOWITZ, New York—Deputy Director of Planning
JAMES A. DAWSON, Chief Construction Engineer
General Contractors: FULLER-TURNER-WALSH-SLATTERY, INC., New York
Masonry Contractors: JOHN B. KELLY, INC., New York
Stone Contractor: ROME CONSTRUCTION COMPANY, INC., Glendale, L. I.
Terrazzo Contractor: DEL TURCO BROTHERS, Newark, New Jersey

Medusa Waterproofed White Portland Cement for the brickwork and Plain White Portland Cement for the Terrazzo furnished by General Builders Supply Corporation.

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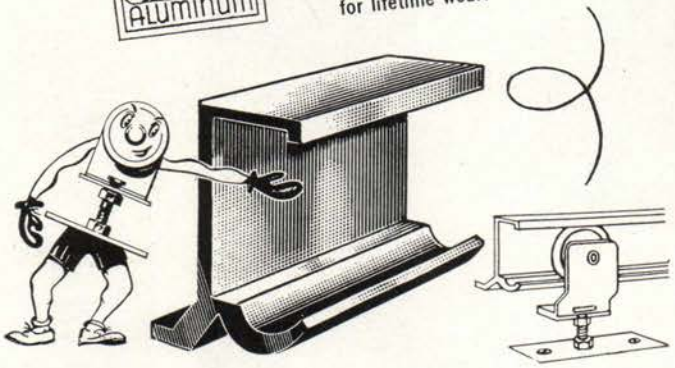

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Loading and unloading trucks and trailers presents a tough loading dock problem because (1) truck bed heights vary as much as 12 inches, and (2) the truck bed moves down or up as loading and unloading progresses. This problem has been made very serious by the use of platform and fork-lift trucks handling heavy unit loads.

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Write for architect's data file

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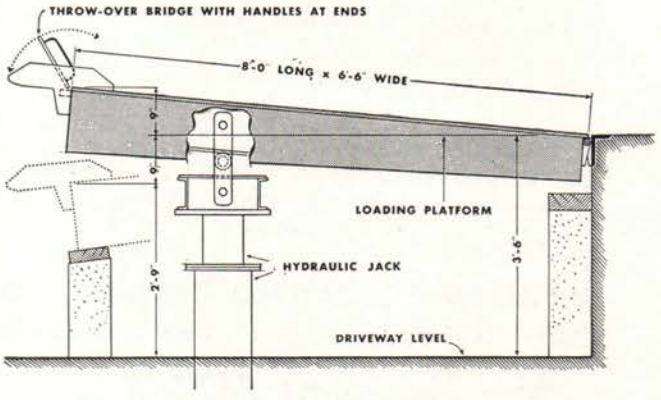

How the Leva-Dock Operates

The Leva-Dock is a hinged ramp, positioned by a hydraulic jack. Supporting arms and "throw-over" bridge connect ramp and truck bed. Platform automatically travels up or down as truck springs are relieved or compressed during loading and unloading.

Isn't this a pretty kettle of fish?

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A greater part of the 8% of the sales dollar is reinvested in the business to expand and improve plant facilities which protects employment and creates new jobs for more workers.

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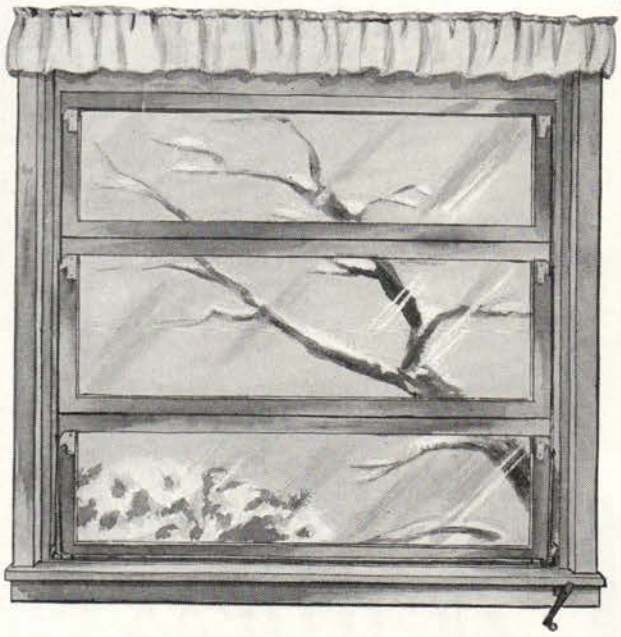

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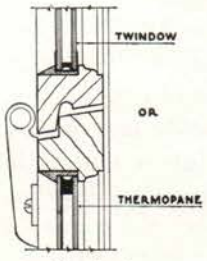

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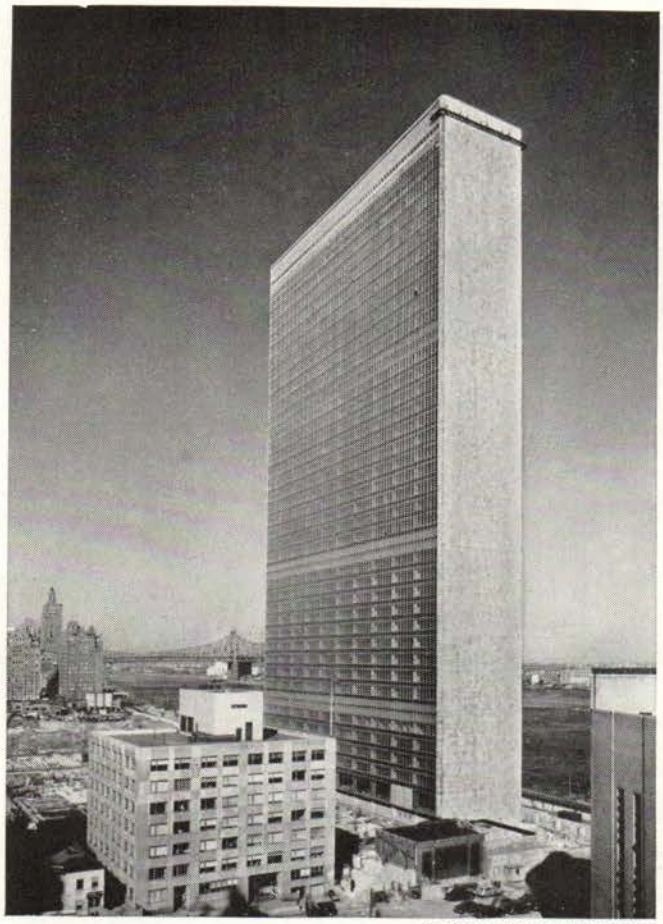

Photograph by J. Alex Langley

United Nations Secretariat Building, New York, N. Y., United Nations Hdqrs. Planning Office, Wallace K. Harrison, Director of Planning. Vermont Pearl Exterior Marble.

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UNITED NATIONS HEADQUARTERS

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Preeminence in monumental character and excellence in structure and composition are united in Vermont Pearl marble, which has been selected and is now being fabricated for the entire North and South walls of the Secretariat Building. The beauty of marking and purity of the white background of the marble will add interest to the modern architectural design and stand as a beacon among the nations.

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Scott Special Adhesive comes in rubber pad form surfaced on both sides with a silver colored adhesive. It will form a strong bond on any firm, clean surface such as glass, metal, tile, marble, brick and hard enamel. It's easy to use.

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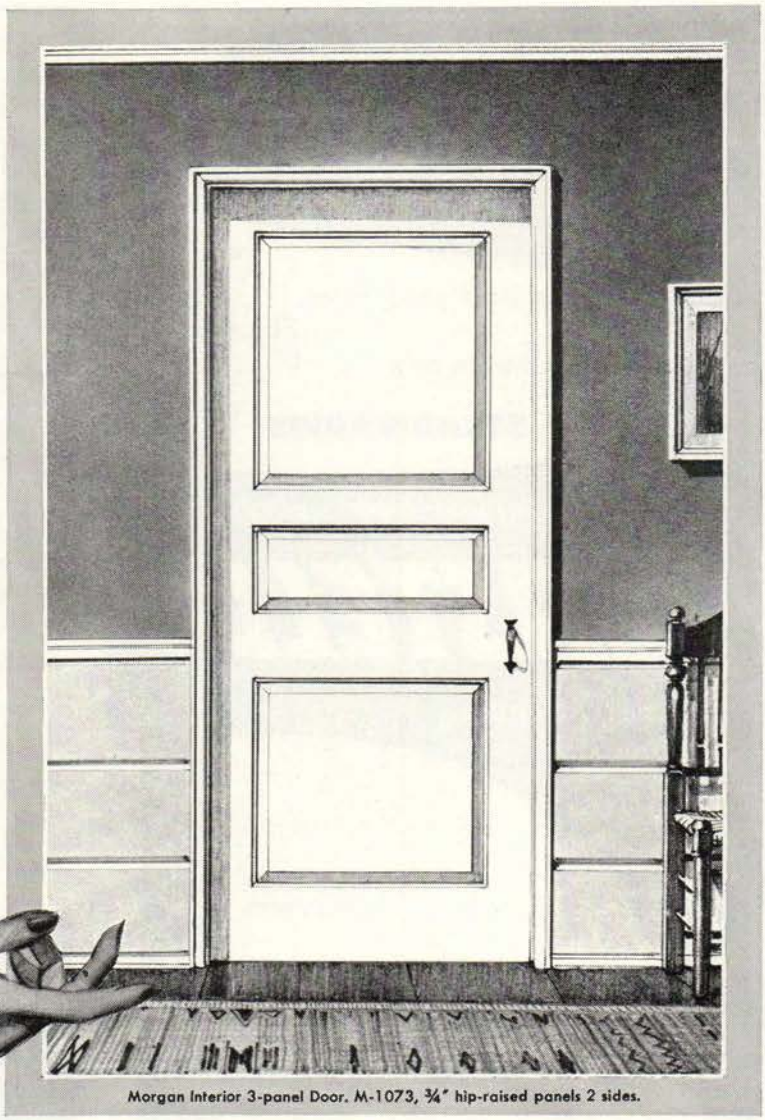

Morgan Interior 3-panel Door. M-1073, ¾" hip-raised panels 2 sides.

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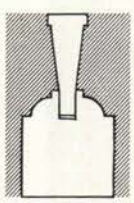

Detail shows M-1073 Architect-Designed Interior Door . . . No. 1 Pine, Wood Life Dipped, with ¾" Hip-Raised Panels 2 sides.

This perfectly proportioned Morgan 3-panel door is receiving the most enthusiastic response of home owners everywhere. Architecturally correct in every respect, Morgan 3-panel doors M-117 (Exterior) and M-1073 (Interior) are made of carefully selected, properly Kiln dried, Ponderosa Pine, by experienced Morgan craftsmen, and specified with confidence by those who plan, supply, and build better homes. Send for complete new book featuring this outstanding new door and other Morgan woodwork for American Modern Ranch Type Homes.

Above: Morgan 3-panel, M-117 door with 1⅛" hip-raised panels, in M-33 Morgan Entrance.

Below: Morgan M-125 door with M-510 Door Blinds

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As you know, we used Kimsul insulation in our Model Modern Revere Home here in Prairie Village, Kansas. While our home was under construction there was a good deal of speculation as to whether we could heat a modern house in this climate. The owners have moved in and we have no heating problem. The model house was one of nine houses we are building on a cul-de-sac and there are fifteen more projected houses and we intend to use Kimsul in all of them.

Yours very truly,

D. H. Drummond

DHD:brb

The striking new Revere Quality house in Prairie Village, Kansas. David S. Runnells, architect; Donald H. Drummond, builder.

In today's low to medium-priced homes—where maximum efficiency with *low true cost* is an absolute requirement—more and more designers and builders are specifying KIMSUL* insulation.

The many-layer stitched KIMSUL blanket provides *lifetime* uniform protection over every inch of covered area. Can't sag or settle to leave heat-leaking thin spots. It offers high thermal efficiency ("k" factor 0.27), plus resistance against fire, vermin and mold. In easily handled, *measured* rolls, KIMSUL can be quickly installed by unskilled labor. KIMSUL saves 80% on space and handling costs, too, with each roll compressed to 1/5 installed length. And the exceptional flexibility of the KIMSUL blanket lends itself well to caulking and fitting behind pipes, wiring and other "tight spots".

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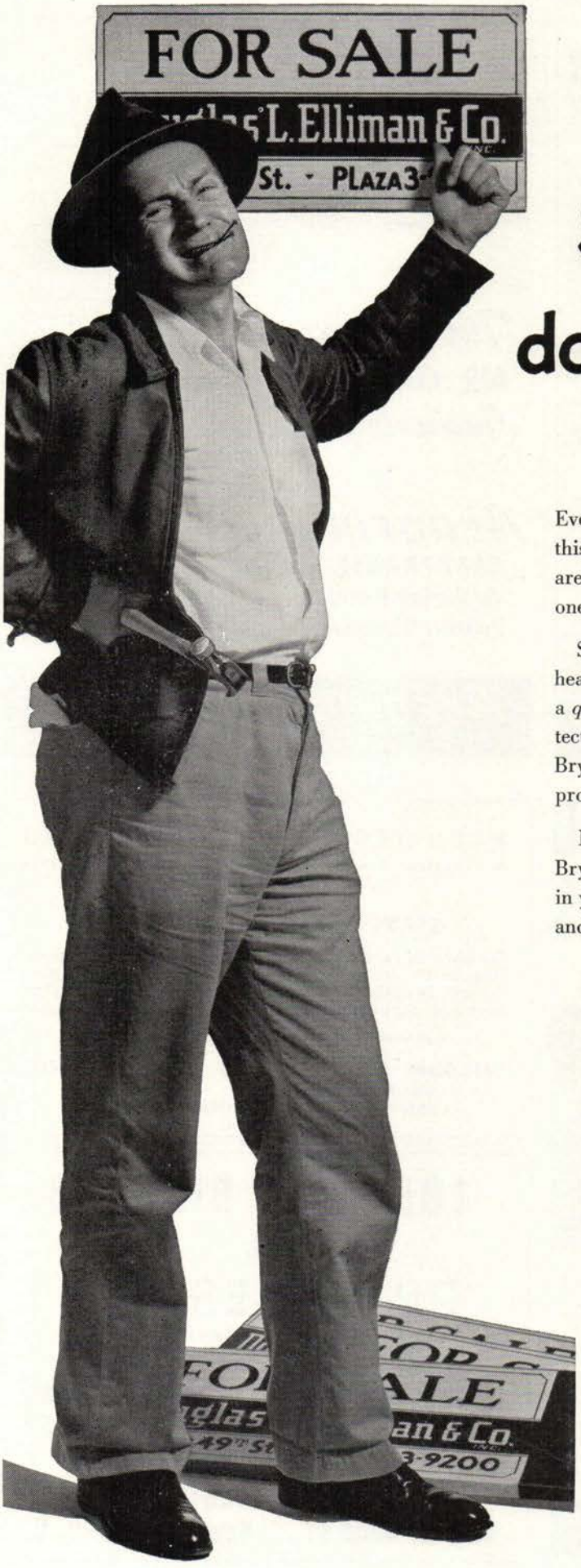

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Florida Beautifies its State Capital with Architectural Concrete

These three architectural concrete buildings, Florida Supreme Court (top), Industrial Commission (above) and State Road Department (below) are located in Capitol Center, Tallahassee. Architects and engineers: Yonge and Hart and James Gamble Rogers II, associated architects. Respective contractors, top to bottom: J. A. Jones Construction Company, Henry C. Beck Company, Southern Builders, Inc.

THESE THREE distinctive state government buildings in the new Capitol Center at Tallahassee demonstrate the versatility of architectural concrete. They combine impressive beauty with rugged strength, economy and durability.

Architectural concrete is equally adaptable to schools, hospitals, theaters, apartments, stores, factories and office buildings. It fulfills every construction requirement—firesafety, fine appearance, low upkeep expense, long life. It delivers dependable, ***low-annual-cost*** service year after year.

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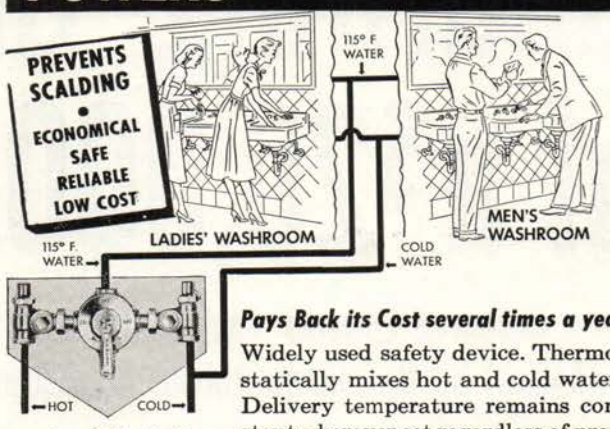

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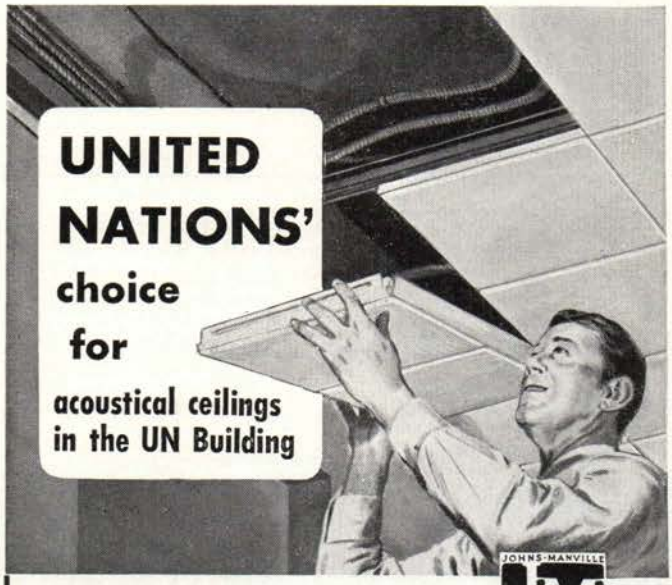

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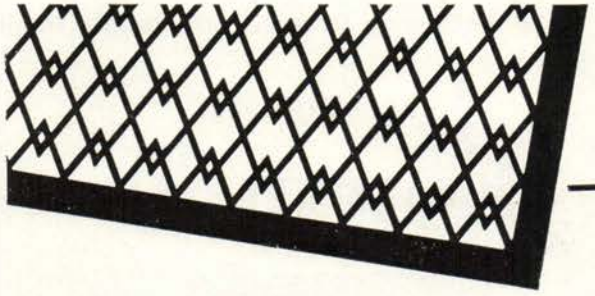

To harmonize with any decorative motif

There's a choice of over a hundred standard Hendrick Grilles in distinctive designs, available in a wide range of over-all dimensions, bar sizes, and number and size of perforations. Ample open areas assure good air flow. They are made with clean-cut perforations in heavy-gauge aluminum, bronze, copper, Monel, steel and stainless steel. Illustrated is design M No. 9, with 67% open area. Write for detailed information.

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Guarding the "Lifelines" of a $20,000,000 Hospital

Choice of Edwards' Equipment Insures Against Costly Communications Breakdown!

• The larger the hospital, the greater the need for *absolutely,* dependable signal, communication and protection systems. How these vital "nerve centers" perform is literally a matter of life and death.

You can be sure no effort was spared insuring Buffalo's gigantic new $20,000,000 Veterans' Administration Hospital against breakdowns in these crucial services. You can be sure—because the contract went to EDWARDS!

Nurses' call systems . . . night lights . . . doctors' paging systems . . . clocks . . . operating-room timers . . . fire alarm stations . . . all awarded to EDWARDS!

Thus another Edwards equipped hospital is added to the ever-lengthening list . . . another record of unmatched, trouble-free service in the making!

Write for illustrated bulletin on Edwards' Hospital Signal Systems.

BUILT ON A 16½ ACRE TRACT, donated by the city, Buffalo's new V.A. Hospital is an outstanding example of modern, functional design. The structure is 14 stories high, contains 2,328 rooms, has a capacity of 1,000 beds.

KEYBOARD SELECTOR
of the Edwards' Doctors Paging System is so compact that it actually takes up little more room than telephone directory! 120 doctors can be called on this unit and 3 doctors paged at the same time!

EDWARDS

HOSPITAL

Signal Systems

Edwards Company, Inc., Norwalk, Conn.

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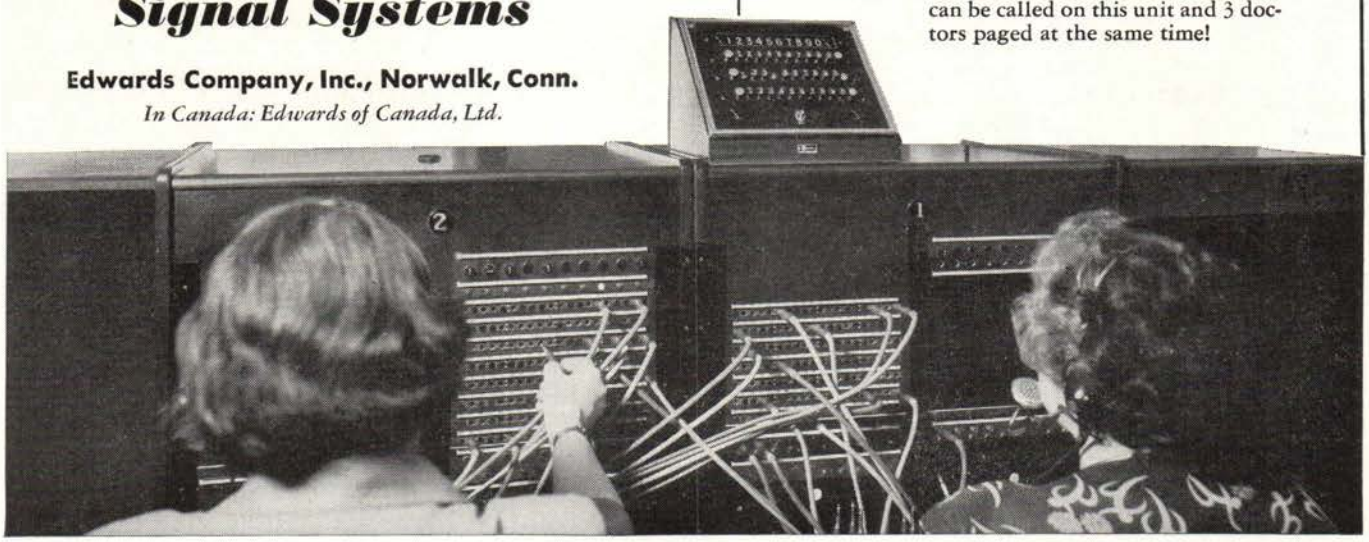

SELECTED PRODUCERS' BULLETINS

● Economy, speed of installation, and improved sanitary features are claimed for a pitless adapter made by the Williams Products Co., Joliet, Ill., for use with jet and shallow-well pumps. The adapter eliminates the conventional pump pit, so frequently a source of contamination of the small water supply during periods of heavy rainfall when backflow may occur. Since no excavation or concrete is required, a substantial saving in water system costs is effected.

The typical water system, equipped with the adapter, is usually located at some distance from the house, below ground for protection against freezing. Both pump and tank can be placed in a utility room, garage, or similar space.

The adapter provides a convenient means for removal and replacement of piping and parts in the well. A junction is formed between machined surfaces on the "connector" and the "housing" exterior, thus joining the horizontal runs of pipe buried below frost depth with the drop pipes in the well. The connecting parts are held together by the weight of the attached drop-pipes and a simple clamping device at the top of the unit above grade. A long-lived neoprene gasket is cemented to the connector casting to complete the seal. If a new gasket is ever required, it can be easily applied in the field. Adapters are constructed with interchangeable base flanges for installation on wells 4 in. to 6 in. in diameter, and with depth of cover over the pipes ranging from 3½ ft. to 6 ft. to meet local requirements for frost protection.

● General Electric's Apparatus Department recently fitted out its "More Power to America Special," a quarter-mile long, streamlined train said to contain the biggest electrical display ever built. More than 2000 different electrical products, processes, and techniques are displayed throughout eight of the ten stainless steel cars that comprise the train. Individual exhibits cover such equipment as turbines, substations, motors of all sizes and ratings, industrial and street lighting fixtures, welding and heating equipment, diesel-electric switches, controls, urban transit and railroad equipment. Still others relate to atomic power, weather research, fire control systems, and "snow-making" techniques.

The train will visit approximately 150 key industrial centers in the United States during 1950 and 1951 for the purpose of enlarging the market for electrical equipment, and to disseminate engineering advice to American industry. At each stop the train will be inspected by invited representatives of electrical utilities, manufacturing and transportation industries, the armed services, the federal government, and municipalities; however, it will not be open to the public during its tour.

The train itself is, in many ways, an exhibit of G-E equipment. The locomotive, for example, is a 4500-hp two-unit diesel electric built by Alco-G-E. Other G-E equipment includes the diesel-driven under-car power plants, fluorescent and incandescent lighting, numerous motors and controls, Textolite window sills, and Flamenol cable.

● Adoption of 17 paneling patterns as standard for the Western Pine industry was recently announced by the Western Pine Association. The new standard designs will be known as the WP series, and they represent a consolidation of 35 patterns heretofore known as the KP and IE series. A ⅜" t & g and ½" lap have been standardized for the new series; wherever possible, the V has been standardized at 3/16" depth and ½" width. Single copies of a 4-page folder showing full-size details of the new series are available without charge. Write Western Pine Association, 510 Yeon Bldg., Portland 2, Ore.

● Construction of an experimental classroom building for the testing of glass block fenestration performance and the general development of the coordinated classroom has been completed at Port Allegany, Pa., by the Pittsburgh Corning Corp. The research engineering staff have full freedom to experiment in this classroom in which walls, ceiling, floor, desk tops, and other surfaces have been painted in light color for high reflective qualities. At present the staff is studying various inexpensive ways of providing brightness control at the vision strip. They soon expect to investigate the relationship between classroom illumination and visual aids projection.

p/a

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Panel size: 48" by 15 7/8".

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And look at the structural advantages.

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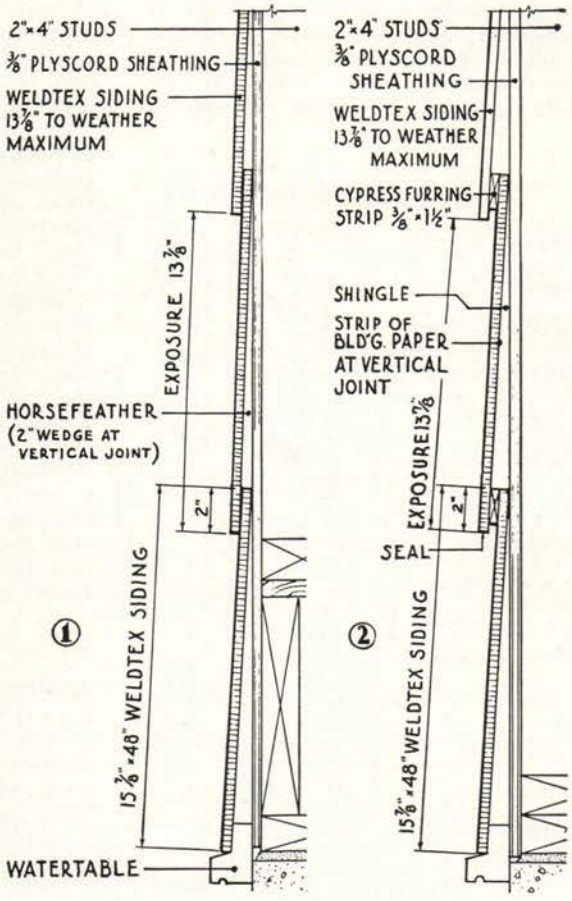
Weldtex Siding is approved by F.H.A. on Federal Housing jobs.

Get complete information on this new siding material. It speeds, simplifies and improves construction... and adds beauty to any home. Write us today. We'll rush you full details.

*U.S. PAT. NOS. 2286068, 2363927, 2363492. TRADE MARK REG.



Detail 1 shows normal installation of Weldtex Siding. Detail 2 shows how simply and easily you can fair out the butt of the board to create a deeper shadow line, when desired.

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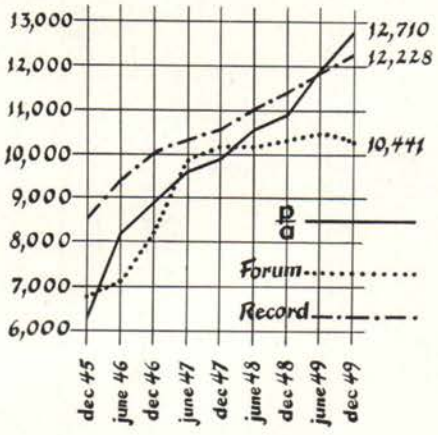
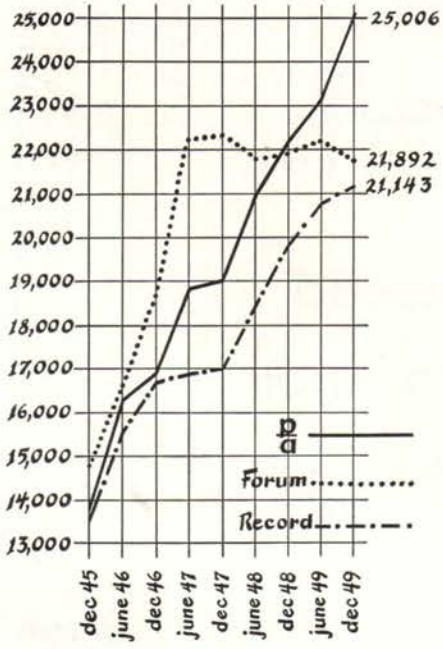
P.S.

I'M SURE THAT YOU HAVE ALL NOTICED by now the proud claim blazoned on our cover: *Largest Architectural Circulation in the World.* Perhaps it deserves some graphic explanation. Certainly the design professionals who have made it possible for us to make the statement deserve our thanks. Personally I am very gratified at what has happened circulation-wise in the last four years, and the whole P/A staff is feeling very pleased at this "preferential vote"—the most substantial one possible—given us by the subscription figures. So that you may see what is happening in the national architectural magazine field, I am reproducing here several charts, based on Audit Bureau of Circulation audited figures, which have just been handed me by Jack Carlin, our justifiably proud circulation manager.

ARCHITECT CIRCULATION



TOTAL PROFESSIONAL CIRCULATION



THE PANAMERICAN ARCHITECTURAL CONFERENCE in Havana, reported more formally on page 00, was an opportunity to see again, under unusual conditions, many old friends; and to make many new ones. There was a tendency to keep the national delegations together, which was too bad in a way, but I did have a chance to talk with many from out of the United States (it was particularly good to see Carlos Contreras of Mexico) and the Havana architects were most gracious in giving of their time to show us around. I remember particularly a delightful dinner party at the home of the Alberto Prietos, pleasant contact with Sylvia O'Bourke and her brother, and many good hours spent with Nicolas Arroyo and his charming wife and partner, Gabrielle Menendez.

The U.S. delegation was a good one as far as personalities go (not speaking here of the amount of *work* done, under which definition our group, with a few exceptions such as Julian Levi, Chloethiel Smith, Dave Runnells, and Al Parker, could not be called a good one).

Despite such incidents as Bob Little almost getting sheared off the back seat of Arroyo's car by a passing truck, Katherine Ford getting lost in a taxi that had bells instead of a horn, Henry Kamphoeffner losing two hours in the middle of one afternoon, and a few other misadventures, the group enjoyed to the full the delightful weather, the enticing places that were available to visit, the music, and inevitably, the shop talk that follows such a group anywhere, even out of the country.

●

ARCHITECTURE IN HAVANA, except for the really old, historically reasonable, mellow and sometimes very beautiful Spanish buildings, and except for a few good contemporary buildings, is very hard for a visitor to take. Generally speaking, there is a choice between pink pseudo-Renaissance and pale blue modernistic. Scattered around the city is some excellent work by a few sensitive designers. In other words, the situation is much as it is in the United States, except for the general use of stucco on brick, which, we were told, is a very reasonable construction system considering the climate and the availability (or unavailability) of materials.

It seemed to me that the largest contribution the contemporary designers had made was a careful study of climate—ways to combat the heat that is intense at certain hours, and ways to utilize fully the winds that continually work to make the weather pleasant. Orientation, size and placement of openings, various sun-control devices, all are important and in many cases have been newly and thoroughly considered. Most obvious is the intelligent use here, as in southern Florida, of jalousies of all kinds, all sizes.

The fact remains that most of the good residential work (the ordinary work, in nasty suburban subdivisions, is no better and no worse than what we are used to) is cold and hard to North American eyes, I doubt whether stucco could ever be made a friendly and sympathetic material. It is only in the interiors, especially where some of the Cuban woods are used (the native mahogany is one of the most beautiful grayed brown tones I have ever seen) that one begins to feel at home. In non-residential categories, it seemed to me, there is greater advance and much to be admired.

●

THE PROFESSIONAL ORGANIZATION of the Cuban architects is a most interesting one. The Colegio de Arquitectos, the professional society, actually controls the practice of all architects, for their mutual benefit. Contracts are signed and fees regulated through the Colegio. A percentage of all fees goes to its treasury, and the resultant sizable funds have been used to erect its own building and to make other investments, the income from which is used as a retirement and social benefit fund for its members. There is even an attempt to limit the size of practices and to spread work, by a regulation which forbids any architect to have more than six simultaneous commissions in his own name. All of the local architects I talked to were enthusiastic about the system, and very proud of the strength of their organization. Incidentally, the very first impression of Havana that I got was the *architect's* name prominently displayed on all new construction—no mention of the builder.

●

I HAD WANTED TO SAY something in this column about Miami, where I spent part of a week, but I seem to be running out of space. Perhaps another month. I hope I do have room for this comment, though—since my last visit there I sensed a maturing of the attitude and of the product of the southern Florida architects. Really good, sound things are beginning to appear. Nowhere have I talked to a group of architects so intensely *concerned* with the need to provide a reasonable and a successful environment. Nor visited a more hospitable bunch.

Thomas H. Creighton