JANUARY 1953

ARCHITECTURAL RECORD

Istanbul Hilton Hotel

ARCHITECTS' OFFICES—BUILDING TYPES STUDY NUMBER 194

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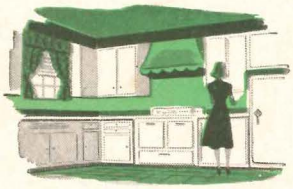

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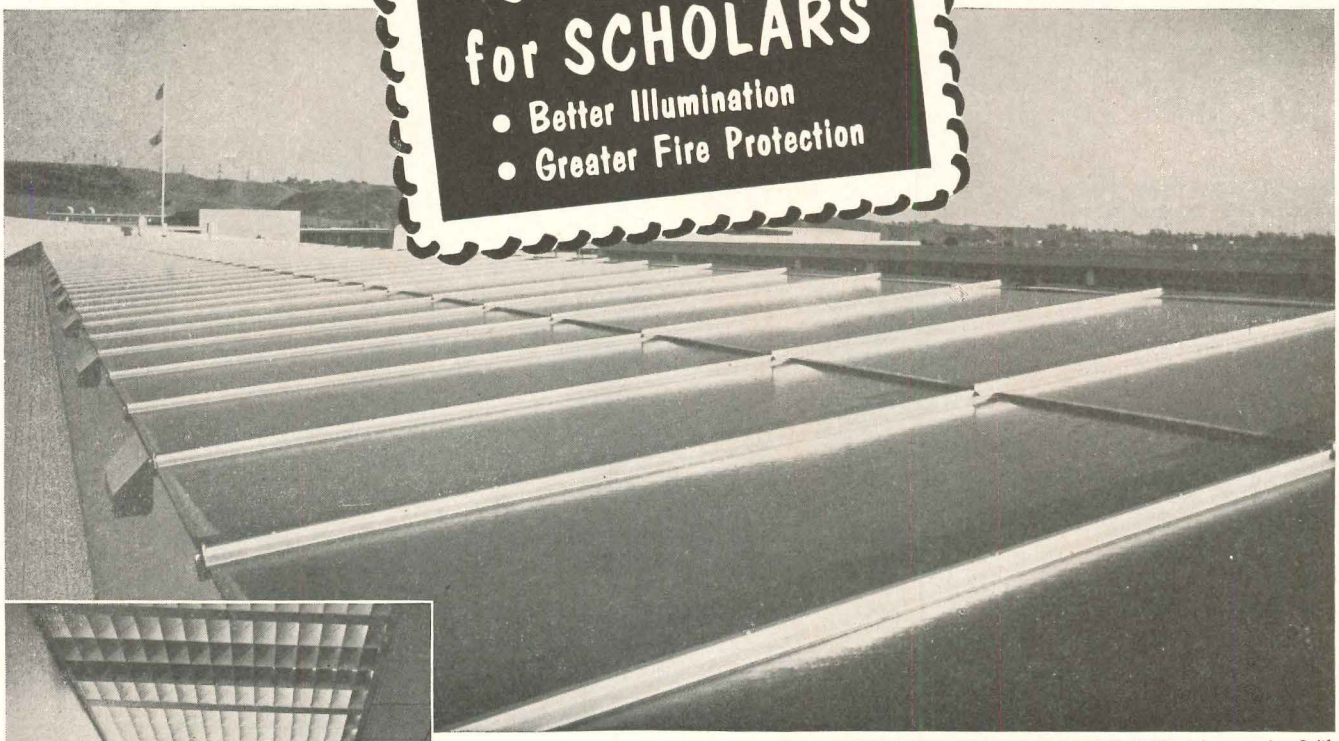
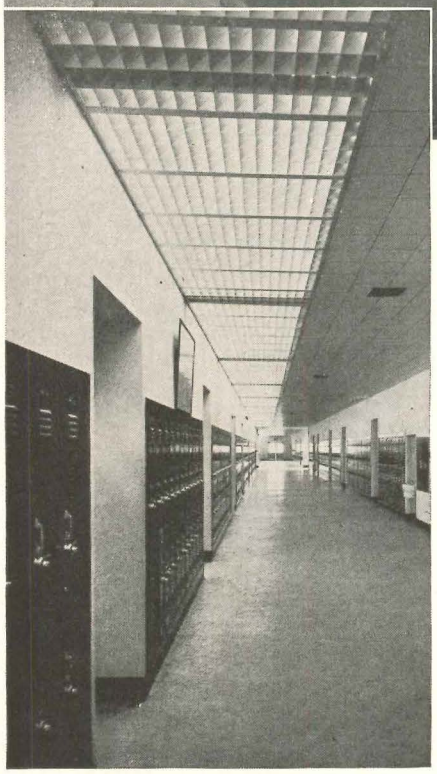


Daniel, Mann, Johnson & Mendenhall, Architect, Los Angeles, Calif.



Skylights of new Culver City High School provide daylight illumination in large building.

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Eye fatigue is an enemy of education. School children must be provided with high levels of quality illumination. In the modern Culver City High School, approximately 30,000 square feet of Hammered Coolite Wire Glass by Mississippi was installed in skylights which flood the entire interior with glare-free, controlled daylight for easier seeing. The texture and delicate blue-green tint of Coolite transmute raw sunlight into softly diffused and conditioned illumination. The innate strength of this famous wire glass by Mississippi adds structural endurance, reduces danger from breakage. Hammered Coolite Wire Glass helps retard effects of dangerous fires, provides increased safety for occupants. It tends to "bottle up" and smother small conflagrations before they can spread to tragic proportions.*

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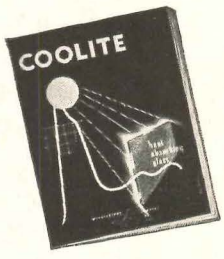

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PERSPECTIVES

WHITHER ARCHITECTS? Dean Joseph Hudnut of Harvard, on the West Coast for a series of lectures on the University of California's Berkeley campus, told reporters that in the city of the future the architect will have disappeared, to be replaced by the industrial engineer. Architects? They will find their work in the future confined to suburbs and rural areas or to cities that are not industrialized. *The Daily Pacific Builder*, F. W. Dodge Corporation newspaper in San Francisco, reported Dean Hudnut's assertion that 50 per cent of the nation's architects now are industrial engineers, creating designs that stress utility and economy rather than art.

FRANK LLOYD WRIGHT on records: a letter from Taliesin announces that the Frank Lloyd Wright Foundation is about to release a series of long-playing records containing the talks of the master to and with the Taliesin Fellowship and other talks made from time to time throughout the country. The records (one of them already on its way here, we hope) are "ready for release by popular subscriptions."

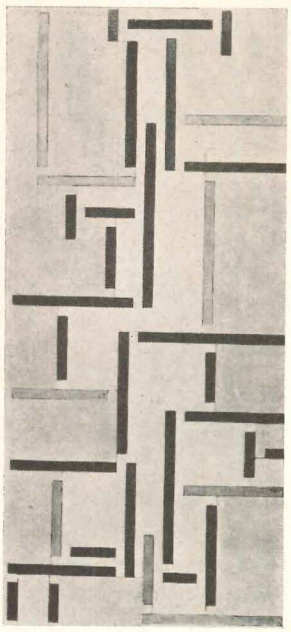
"BROTHER, THIS IS SOMETHING": as the first architectural commentary from the President-elect, Ike's spontaneous tribute to the United Nations Headquarters in New York is worth noting. In his first tour of the most controversial architectural project of a generation, General Eisenhower displayed his customary inquisitive, energetic and direct reaction to a new experience. He asked a great many questions — he appeared fascinated by such details as the "holes" in the ceilings for light and air ducts and the earphones that bring every speech to the wearer in his choice of six languages. As to his position on the more delicate issues of the esthetic realm, proponents of the most untrammeled "expression" will be forced to agree with Ike's comment that "to be modern you don't have to be nuts," while traditionalists can take comfort from the reports that puzzlement was the General's major reaction to Fernand Leger's large abstract murals for the Assembly hall.

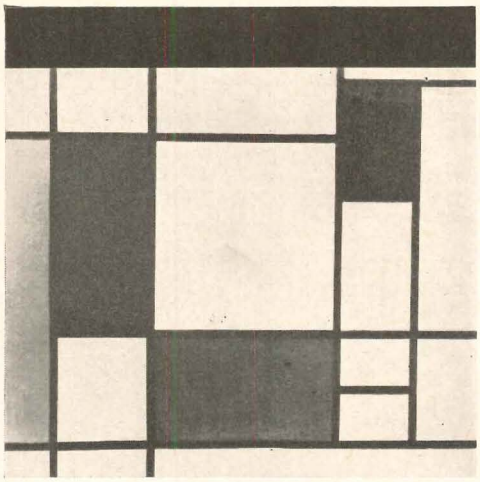
UNESCO likes the "giant radiator": at a turbulent general conference in Paris, beset by major crises over budget and the resignation of the UNESCO director and the executive chairman, it was voted to accept the Breuer-Nervi-Zehrfuss scheme for UNESCO's Paris headquarters and to ask the French government for a new site. The French promptly re-offered the Place de Fontenoy site which they and UNESCO had agreed was "unsuitable" after seeing the first building plans prepared by Eugene Beaudoin, French architect, last spring. The present plans (ARCHITECTURAL RECORD, Dec. 1952, pages 11–14) were designed for a site on the Bois de Boulogne and were rejected by the French a few weeks before the UNESCO meeting because officials felt the 16-story building would interfere with the view of the Arc de Triomphe. At the time, the French appeared to take a less than admiring view of the design itself, which they said looked like a "giant radiator" and would clash with the traditional architecture of Paris.

ON THE HORIZON: the shape of the future, forever tantalizing, becomes an irresistible subject for speculation with the advent of every new year. An "educated guess" on "the ten greatest fields of opportunity for America after the defense program has passed its peak" is made by *York Report*, a newsletter circulated among top corporation executives by the York Engineering & Construction Company and the York-Gillespie Manufacturing Company of Pittsburgh. The ten fields: 1. fuel from atomic energy; 2. electronic brains; 3. push-button factories; 4. the engineered home; 5. television advances; 6. the small car; 7. new metal processes; 8. advances in rare earths; 9. antibiotics and farm chemicals; 10. better plastics.

CHERCHEZ LE CHARACTÈRE: Architect Edgar Williams was the main speaker at the dinner opening the first of three national Gold Medal exhibitions planned this year at the Architectural League of New York. Mr. Williams, while he called craftsmanship "the essence of the artist's equipment," suggested advice of one of his professors of many years ago — cherchez le charactère! — was still the criterion for judging any work of art. Mural decoration, sculpture and design and crafts in native industrial arts were represented in the exhibition, which was surprisingly small. No awards were announced at the dinner; all the Gold Medal awards this year will be made known at the final dinner in June.

REQUIRED READING: *The New Yorker's* profile series called "The Palm Beach Architect" on the fabulous Addison Mizner ("Construction first, blueprints later"). Four articles written by the late Alva Johnston before his death in 1950 were published in the November 22 and 29 and the December 6 and 13 issues. Anybody here remember the Florida boom?





Left: Van Doesburg's "Rhythm of a Russian Dance," 1918.
Above: "*Composition,*" 1920 painting by Piet Mondrian

DE STIJL: A RETROSPECTIVE EXHIBITION

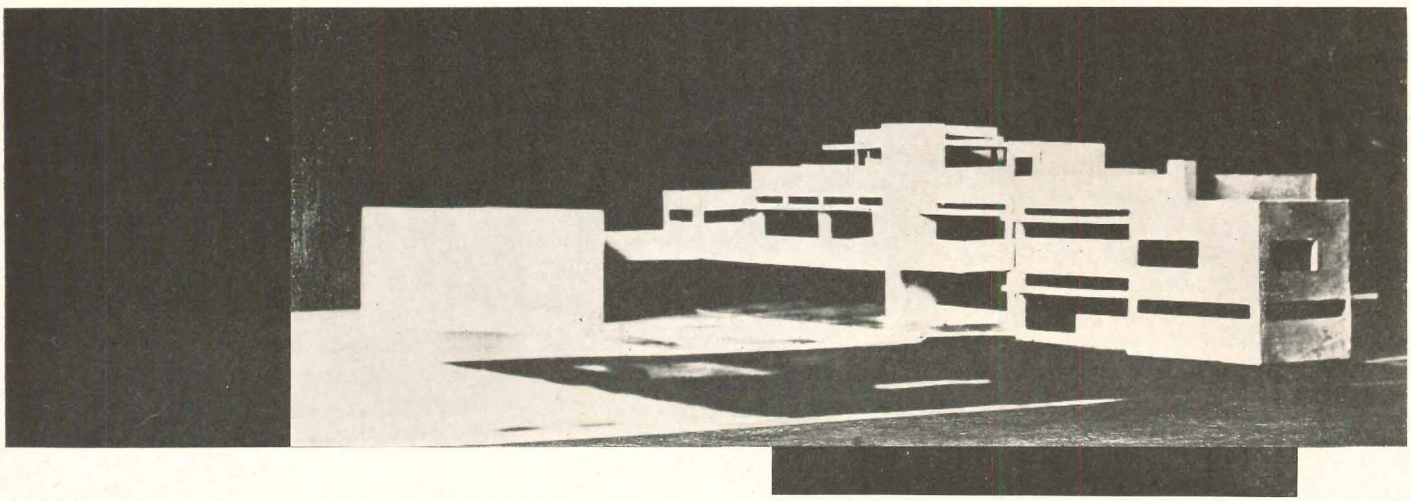
NEW YORK'S MUSEUM OF MODERN ART HOLDS

SHOWING OF ITS ART, ARCHITECTURE, DESIGN

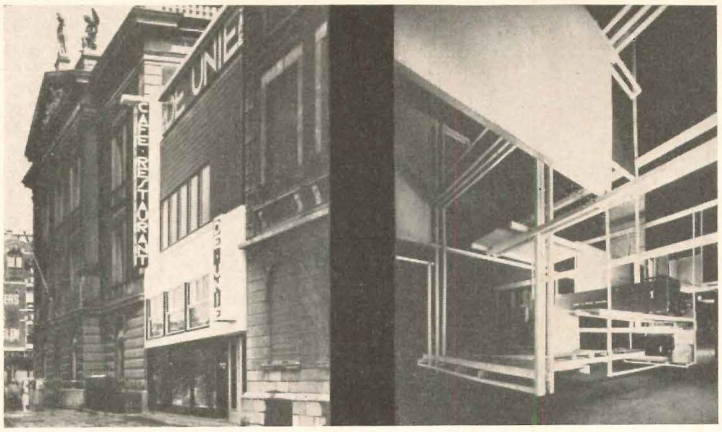
On view at the Museum of Modern Art until February 15 is a comprehensive exhibition of the work of the *de Stijl* group, the primarily Dutch group of artists and architects who together played an important formative part in the evolution of that phase of modern architecture known as the International Style.

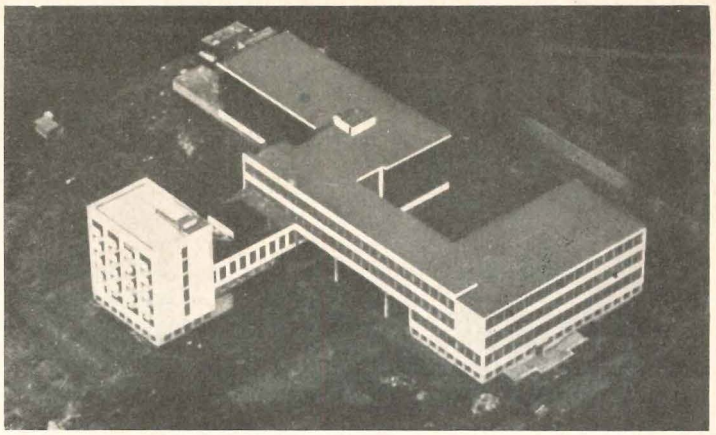
The show is the first historical retrospective exhibit given the group in this country. It includes examples of its paintings, sculptures, architecture, typography and furniture, by such well-known members of the group as Van Doesburg, Mondrian, Oud, Rietveld and Vantongerloo, and by lesser-known figures. Work by contemporary artists and designers which reflects the movement is included to exemplify its continuing influence.

The exhibition was designed by Rietveld, who brought it to New York from Amsterdam and Venice, where it had already been shown. It is being displayed here under the sponsorship of the Dutch government.

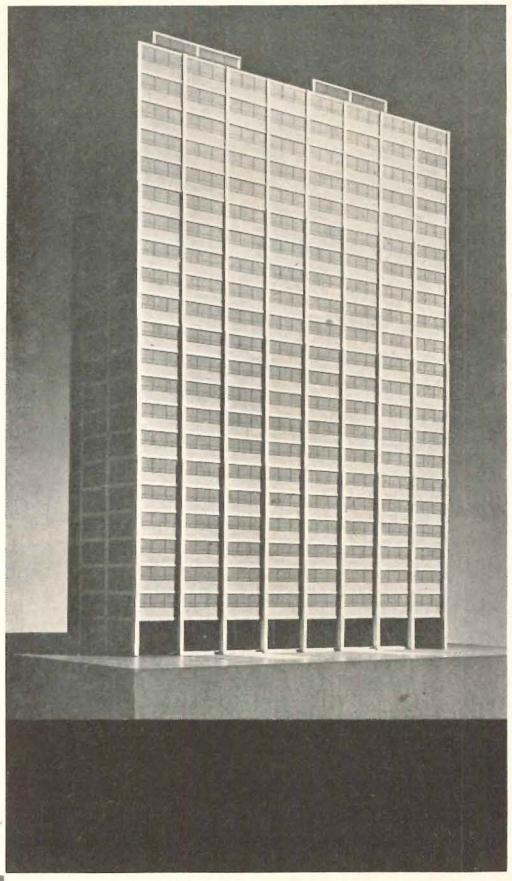


Above: painting into architecture. Model of Rosenberg House, designed 1923 by Van Doesburg and Van Eesteren

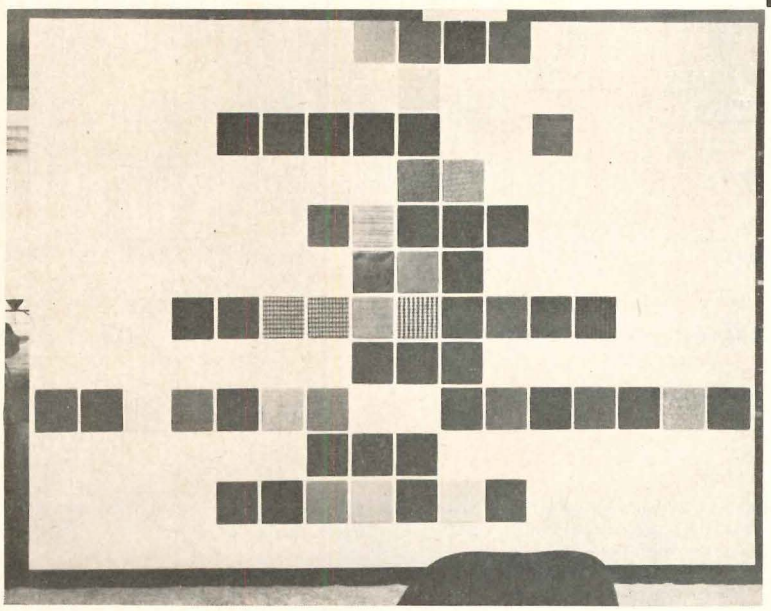




Above left: the composed façade. J. J. P. Oud's CAFÉ DE UNIE, Rotterdam, 1925. Above right: DE STIJL abroad. Kiesler's CITY IN SPACE 1925. Right, top: DE STIJL in the plan. Gropius' BAUHAUS, Dessau, 1925–26. Right: the continuing influence. Chicago apartment building by Mies van der Rohe, 1949



Above: DE STIJL principle of separation of elements continued. Harvard Graduate Dormitory, Gropius with Architects' Collaborative, 1949. Below: DE STIJL in display. Fabric display at Knoll Associates, New York, is directly in the tradition



JOINT PLANNING STANDARDS DEVELOPED FOR BUILDING PROGRAMS OF ALL ARMED FORCES

By Ernest Mickel

FRANK R. CREEDON, the country's new director of all defense installations, is moving rapidly toward a coordination of the military public works programs both here in the United States and abroad.

His first project as a construction coordinator in the Department of Defense has been to select those types of military structures which were most repetitive in the programs of the three services and begin work on planning standards to assist architects in calling for bids. Mr. Creedon, himself an engineer, is known to favor employment of architects to the fullest extent in carrying out the multi-billion dollar building programs of Army, Navy and Air Force.

Barracks Standards First

Three-story permanent barracks were put down as first order of business as far as planning standards were concerned, and the guides for this type of building now are complete. Standards for bachelor officers' quarters, mess halls and warehouses are being worked on. With approval of the Secretary of Defense, already assured, all these will be made mandatory for all the services. Guides for one- and two-story permanent housing for enlisted men were worked out immediately following completion of the three-story category to get the standards on residential work out of the way ahead of the BOQ, mess halls and warehouses.

The installations office does not mean for these standards to hamstring architects. They will serve to aid in his preparation of plans and the handling of bids, but Mr. Creedon believes the architect should be encouraged to use his ingenuity in adapting any project to site, climate and other local conditions.

Since Congress established the new post in the military public works authorization act signed last July 14 with the idea of putting some control on spending for these huge programs, the director has approached his task with this in mind. That is why he chose repetitive structures and those involving largest expenditures to work on first. Preference was given in the order in which their repetition and use of taxpayers' dollars occur. Like many members of Congress, Mr. Creedon is convinced that more money must be saved in the military installations programs and he is determined that it will be. His general approach to the problem received quick approval from the Budget Bureau and the Secretary's office.

Engineering Studies Planned

The planning standards form only the more immediate schedule in the new office. While these are being drafted, Mr. Creedon and his staff are at work on long-range objectives which will include preparation of complete engineering studies of each station where new construction is sought in the firm programs to be laid before Congress. This again looks toward savings in total outlay; Mr. Creedon hopes to remove a lot of the confusion surrounding justification of projects to Congress and to put some brakes on the pyramiding of military public works spending toward the end of fiscal periods.

Creedon Given Broad Scope

He will perform many other duties in his capacity as adviser to the Secretary. A directive from Secretary Lovett has outlined his functions as follows:

1. Maintain direct surveillance over planning and construction.
2. Report to the Secretary as necessary regarding the status and progress of such projects.
3. Develop the department's policies and coordinate activities of the military departments in recording inventories, utilization and condition of facilities in existence, under construction, and authorized and funded.
4. Develop policies for computation of program requirements, issue instructions and guidance to the military departments for preparation of programs, recommend to the Secretary those to be approved and presented to Congress, and assist in preparing and presenting to Congress proper appropriation and authorization requests.
5. Develop uniform design criteria and construction standards with emphasis on cost reduction.
6. Resolve conflicts between military departments regarding single or adjacent installations.

Will the Services Help?

The installations office program is so vast, with its planning, programming, expediting, project scheduling and refereeing service that it will take time to get the course completely charted. The important thing to Mr. Creedon at this stage is cooperation from the three services. He reports he is getting this.

MILITARY PUBLIC WORKS—FISCAL 1953

Service	New Obligational Authority	Appropriations	Obligated July–Oct.
Army	$ 585,510,000	$ 585,510,000	$118,745,000
Navy	363,285,000	363,285,000	185,974,000
Air Force	1,200,000,000	1,245,335,000*	462,544,000
Totals	$2,148,795,000	$2,194,130,000	$767,263,000

** The Air Force appropriation included $45,335,000 cash for the liquidation of prior contract authority, bringing the balance seen in the figures for the other two services to the Air Force as well by the end of the fiscal term.*

HHFA SURVEY: GENERAL CHARACTERISTICS OF HOUSES

Characteristic	1940 U.S. Average	First Half of 1950 U.S. Average	Region 1	2	3	4	5
1-story	67	86	66	98	84	99	98
1½- and 2-story	33	14	34	2	16	1	2
Full basement	55	36	58	2	67	*	13
Partial basement	14	3	4	2	2	*	4
Utility room—no basement	31	20	23	15	27	14	20
Neither basement nor utility room		41	15	81	4	85	63
Calculated average area in sq ft:							
All houses	1177	983	1012	975	980	960	970
1-story	1009	941	888	969	920	961	967
1½- and 2-story	1523	1252	1254	1201	1266	914	1074
Number of bedrooms							
1 bedroom	na	1	1	*	1	1	*
2 bedrooms	na	65	57	70	75	65	53
3 bedrooms	na	33	41	29	23	33	46
More than 3 bedrooms	na	1	1	*	1	1	*

** Region 1 comprises Northeastern states; 2 the Southeastern states; 3 the Midwest; 4 the Southwest; and 5 the Far West. Figures are percentages, except as noted. An asterisk indicates the percentage is less than 0.5; n.a., that the data is not available.*

WHAT KIND OF HOUSES DOES FHA INSURE? NEW SURVEY PROVIDES SOME ANSWERS

DETAILED REGIONAL DATA on materials use patterns in house construction in the United States was compiled in the study just completed by the Housing and Home Finance Agency and published as a monograph: "The Materials Use Survey, a study of the national and regional characteristics of one-family dwellings built in the United States in the first half of 1950." The monograph also presents for the first time material quantities used in the production of 1000 single-family detached houses built in the first half of 1950.

The source selected naturally produced a sample consisting largely of the builder-type house — the average floor area of the 1000 houses, for example, was 983 sq ft (see table) — and the study cannot be taken to reflect very much about the character of the architect-designed house of today, except as builder houses may be influenced by it and as builders who employ architects are influenced by them. The data will be most helpful to builders, materials producers and suppliers.

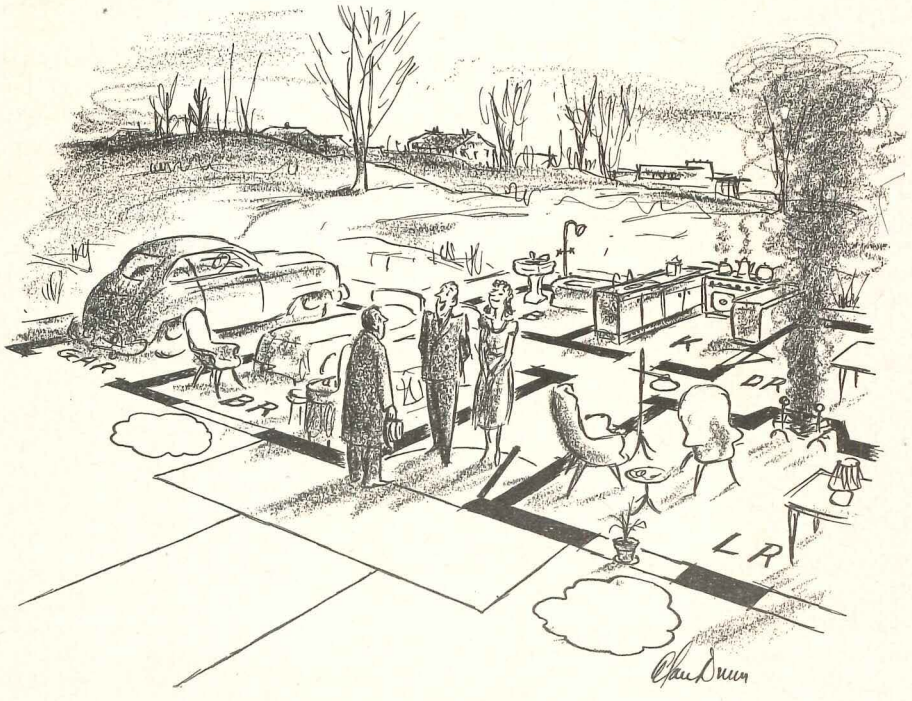
The houses studied were selected at random from the files of a total of 50 Federal Housing Administration offices throughout the country. The sample included only new single-family detached houses processed for mortgage insurance by FHA under Title II, Section 203, on which construction was started in the first six months of 1950. The period was selected as the most recent one from which a use pattern unaffected by materials shortages and credit controls arising from Korea could be derived.

Broader interest, however, attaches to the details of the wide regional differences which persist in spite of mass production of so many of the basic components of a house. Basements and porches, for example: in the Middle Atlantic states, most houses had basements, in the Southwest few had them; in the East few houses had porches, in the Southwest most had them.

NEW YEAR FOR BUILDING: NPA EASES METAL CURBS

RECREATIONAL BUILDINGS, schools and hospitals, commercial building and housing all get a lift from the National Production Authority's announcement last month that relaxations of controls on steel and copper previously scheduled for May 1 would instead be effective January 1. Because drought conditions in the Pacific Northwest and the Tennessee Valley have caused power shortages and cut aluminum production, aluminum controls will not be relaxed before May 1.

Under the new revision of CMP regulation 6, the ban on recreation building in effect since Oct. 26, 1950 was lifted and per-quarter self-authorization up to five tons of steel and 500 lb of copper was provided; commercial buildings, schools and hospitals and radio and TV stations were classified with industrial buildings and thus allowed to self-authorize up to 25 tons of steel, 5000 lb of copper and 2000 lb of aluminum per quarter; home builders for the first time since CMP were authorized to use structural steel, up to 1500 lb per unit; and apartment house builders were allowed to self-authorize steel, up to three tons, and copper, up to 225 lb, per building.

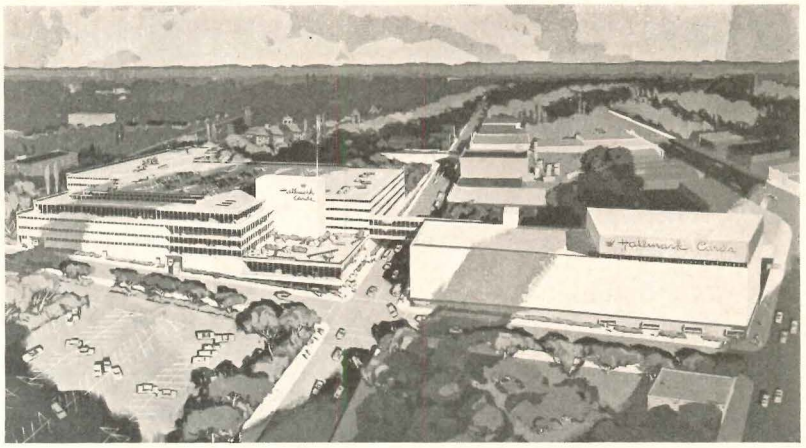


—Drawn for the RECORD by Alan Dunn

"My dear fellow, don't you know? — Nowadays it's the 'plan,' not the 'elevation'—"

NEW PROJECTS FOR INDUSTRY, RESEARCH, TV

Building on a mountain: Welton Becket has capitalized on a problem site in designing this seven-story plant for the Hallmark Greeting Card Company on the edge of Kansas City's business district — street-level docks on every floor and street-level parking for 500 cars on the roof. Top floor (188,950 sq ft) will overlay entire mound; floor area decreases at each level so ground floor is only 17,750 sq ft. Over-street bridge will connect old plant, to be remodeled, and new structure



Trane Company's new research and testing laboratory in La Crosse, Wis., will include facilities for duplicating temperature, humidity, pressure and air movement conditions anywhere in the world. Among its features will be model rooms to study heating, cooling, ventilation and humidity control for schools, hospitals, hotels, offices and home; a 40-ft-high bay at the south end will house large test setups. Magney, Tusler & Setter are architects

"A new conception in metal and glass," according to the sponsors, is to be embodied in a $10 million amusement and commercial development for the New York City block bounded by Broadway and Seventh Avenue, 51st and 52nd streets. Emery Roth & Sons, Architects, have designed the proposed 25-story building containing offices, studios for television broadcasting, and a parking garage on two basement levels and part of two levels above ground. Office "wings" will be set back after eight to ten floors of store, garage and studio space

Adolph Studly

Plans for a Better World

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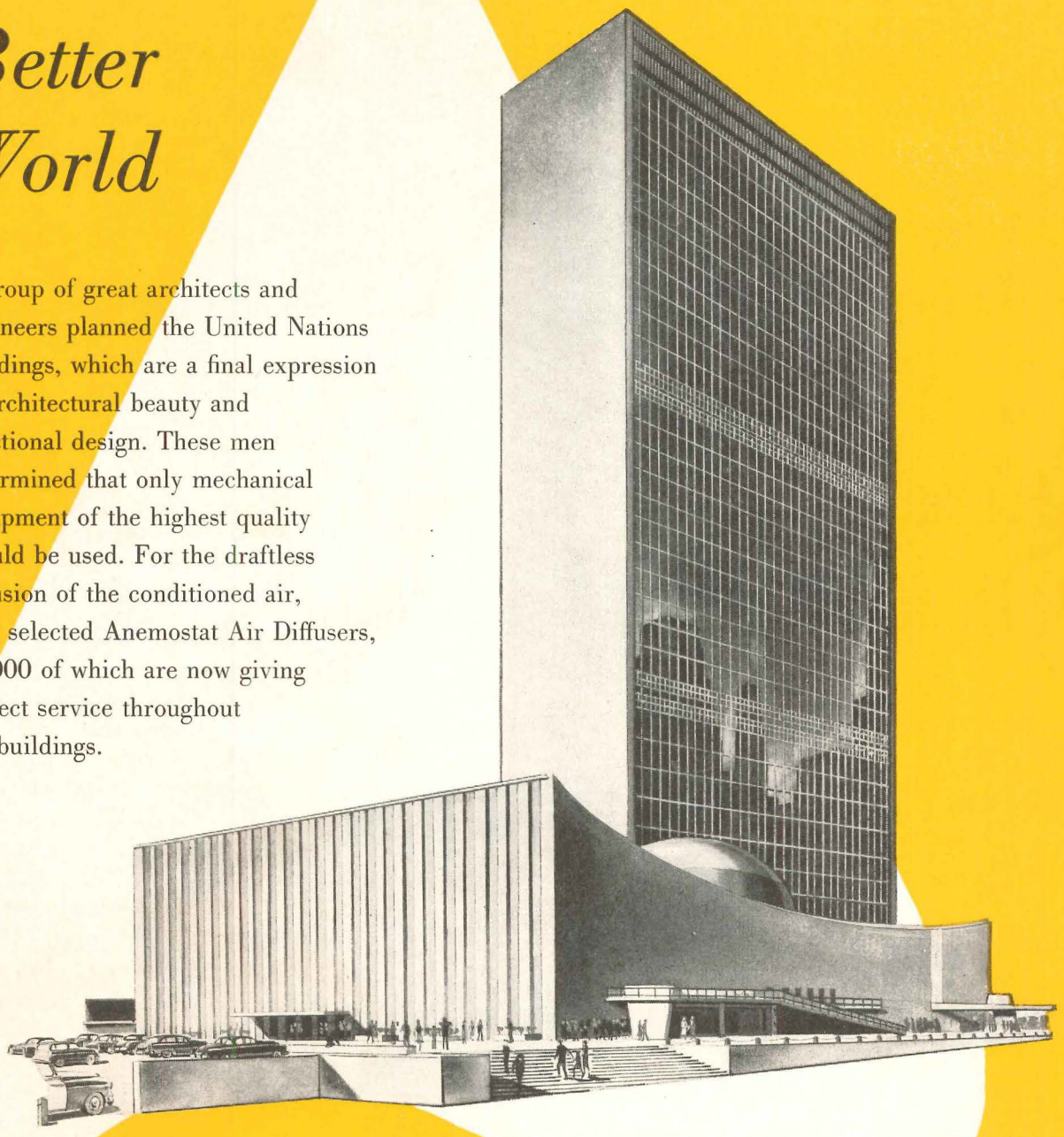

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You slash the cost of your foundation and your structural steel. Because this floor is formed by long-span steel, cellular panels coupling great strength with light weight . . . engineered to carry your physical load at the lowest possible cost.

Your building rises fast from its foundation, because your floors go in as your structural steel frame goes up, forming a working platform for other trades.

Your finished building will never be electrically obsolete, for the cells of this cellular steel subfloor act as raceways for wires fed in from the header ducts on the surface of the subfloor.

Your client can have electrical outlets in any square foot of floor . . . any time . . . for the life of the building. He can change them as his electrical needs change . . . quickly, inexpensively . . . without disrupting his business. He can move partitions . . . change his whole office layout without costly electrical alterations.

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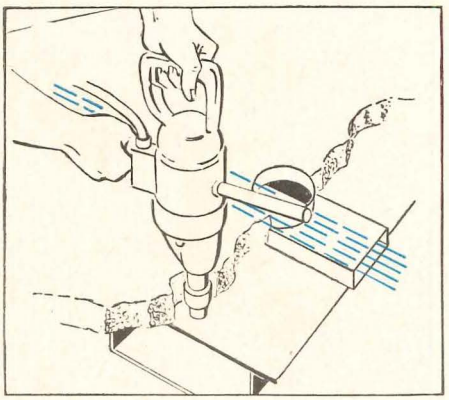
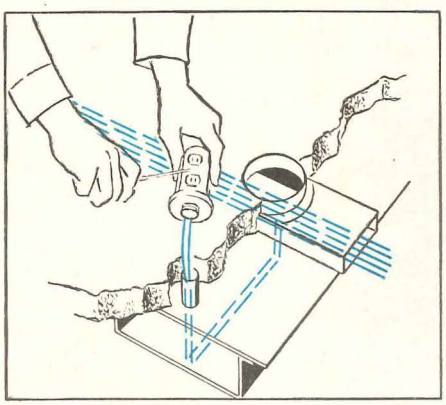
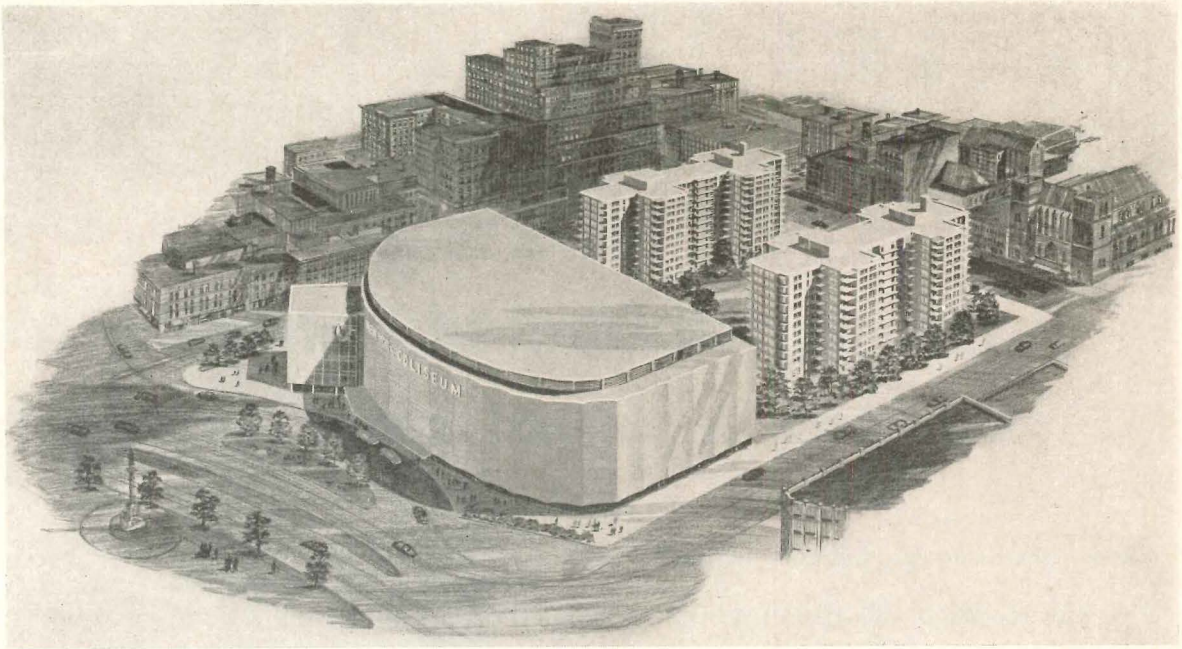


← A hole is simply drilled down through the finished floor into the cellular subfloor. Floor outlet tubing is installed. Cover is removed from handhole of crossover duct and wires fed down and wires fed through raceway to the drilled hole.

Wires are pulled up through drilled hole and outlet installed. Floor is never torn up, business goes on as usual. You have electrical availability in any square foot of floor . . . any time. As many as 15 outlets in the area occupied by a single desk. →



Fenestra Nepco ELECTRIFLOORS



New York Coliseum would be part of the $40 million redevelopment project to include two 12-story apartment houses on a super block bounded by Columbus Circle (at left in photo), Columbus Avenue (opposite), 58th and 60th Streets

SLUM CLEARANCE MAY BRING CONVENTIONS TO NEW YORK

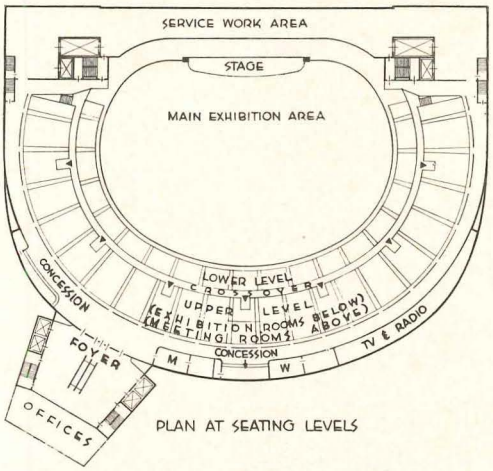
NEW YORK CITY'S long-proposed convention center may get under way this year with the aid of Federal funds under Title I of the Housing Act of 1949.

The $40 million project involves clearance of old buildings in the Columbus Circle area and redevelopment in two sections: "middle-income" housing for 528 families to be built by "reliable private interests" and the New York Coliseum financed and constructed by the Triborough Bridge and Tunnel Authority, of which Robert Moses is chairman.

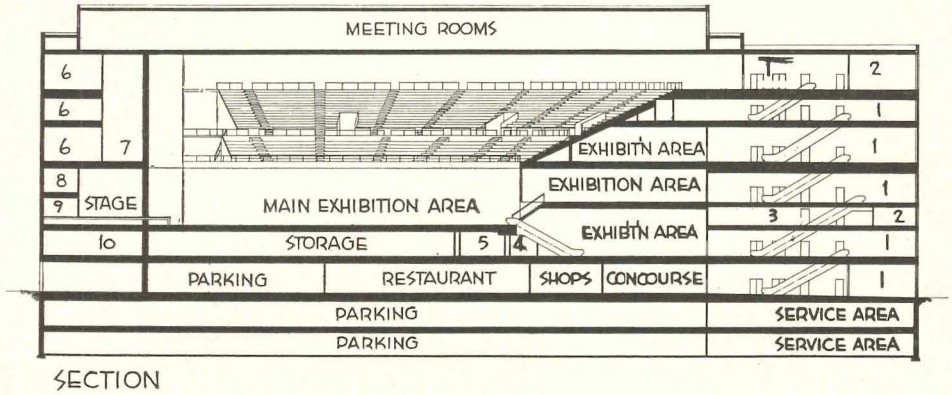
The ubiquitous Mr. Moses is also chairman of the Committee on Slum Clearance Plans; Leon and Lionel Levy are architects; Skidmore, Owings & Merrill, co-ordinating architects.

The preliminary plans shown here were approved by the City Planning Commission last month after a public hearing which produced some dissenting views on the design of the Coliseum. A representative of the West of Central Park Association called the proposed Coliseum "an oversized salt box" and "inadequate to serve the city's needs for convention and exhibition facilities."

The New York Times wished editorially that the Coliseum could be larger, noting that Atlantic City's Convention Hall seats 35,000, but remarked philosophically that "there is a limit to money available, geared to earnings foreseen. . . . We can be happy — and certainly are — to get this fine hall, a tremendous improvement."



PLAN AT SEATING LEVELS



SECTION

Design target was 225,000 sq ft of free area for exhibition, display and show purposes. Concourses are designed so a number of smaller shows can be set up and operated at one time, all served by the same vertical transportation in tower (lower left in sketch above). Balconies have 6000 fixed seats; 12,000 temporary seats can be put in main auditorium (exhibition area) and 7500 more in various meeting rooms. Left: public garage for 800 cars occupies two floors below grade

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5. PAINTING AND REPAIRING "STORMS"
6. STORING "STORMS"

Write:
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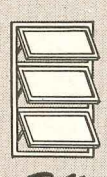
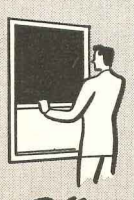
Dept. E-3,
Pella, Iowa.

PLAN WITH *Pella* PRODUCTS MADE BY ROLSCREEN COMPANY, PELLA, IOWA



Pella MULTI-PURPOSE WINDOWS

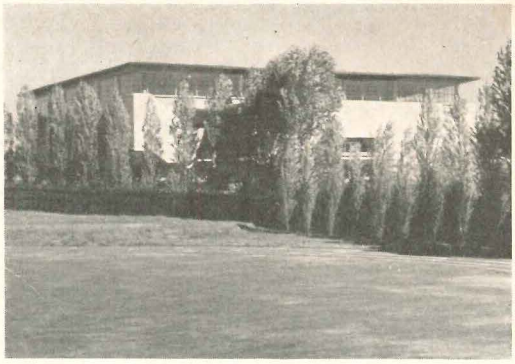
Pella ROLSCREENS



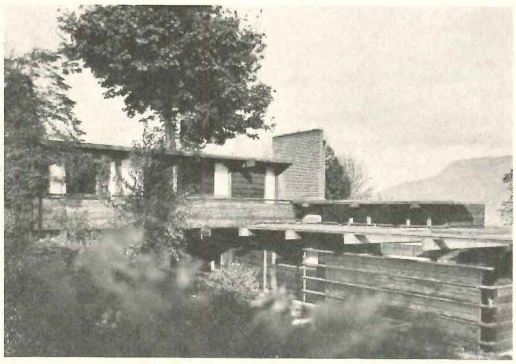
Pella LITE-PROOF SHADES

Pella WOOD FOLDING DOORS

Pella VENETIAN BLINDS



Above: Silver Medal, recreational buildings—War Memorial Gymnasium, U. of British Columbia, Vancouver; architects, Sharp & Thompson, Berwick, Pratt, with Fred Lasserre, consultant. Below: same firm won Silver Medal for residences under $15,000 for residence of Dr. Copp, Vancouver



THE RECORD REPORTS

(*Continued from page 24*)

Ltd.), and recreational buildings (War Memorial Gymnasium, University of British Columbia). Fred Lasserre served as consultant for the latter building.

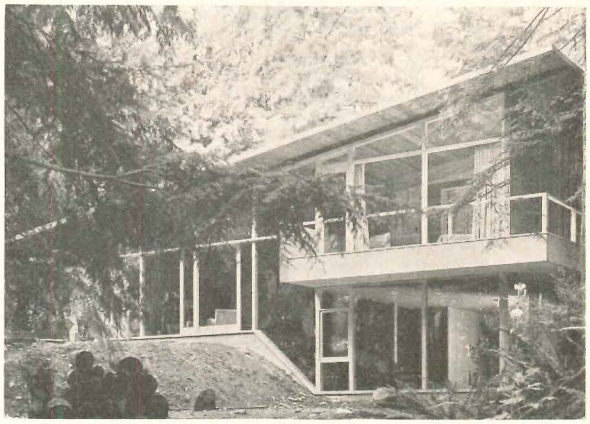
Still another award was won by a Vancouver firm, a silver medal for residences costing more than $15,000. This went to Davidson & Porter for a residence for John C. H. Porter, West Vancouver, B. C.

Other silver medal awards were made in these categories: *apartment houses*, Gordon S. Adamson, Toronto, Ont., for an apartment building at 130 Old Forest Hill Road, Forest Hill Village, Ont.; *ecclesiastical buildings*, Philip Carter Johnson, London, Ont., for the Knox Presbyterian Church, Goderich, Ont.; *educational buildings*, Craig & Madill, Toronto, Ont., for a high school in Marmora, Ont.; and *municipal buildings*, Shore & Moffat, Toronto, Ont., for the municipal offices, York Township, Ont.

Awards were presented at the opening of an exhibition of competition entries at the National Gallery in Ottawa. The presentations were made by the Gov-

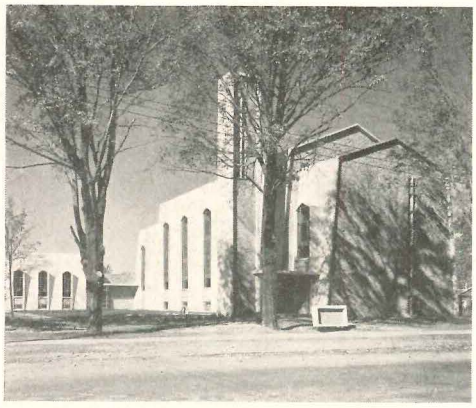
(*Continued on page 30*)

Right: Silver Medal winner, commercial buildings—Tilden Drive Yourself, Ltd., Vancouver, B. C.; architects, Sharp & Thompson, Berwick, Pratt, Vancouver. Far right: Silver Medal, residences over $15,000—John C. H. Porter residence, West Vancouver, B. C.; architects, Davison & Porter, Vancouver

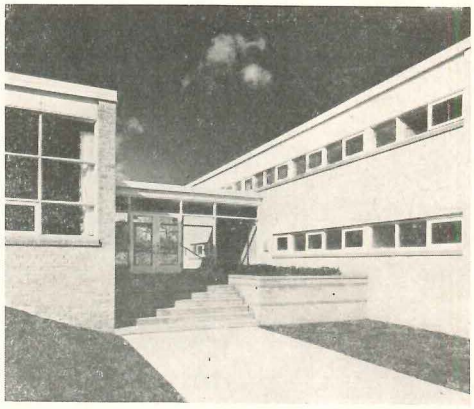


Tony Archer

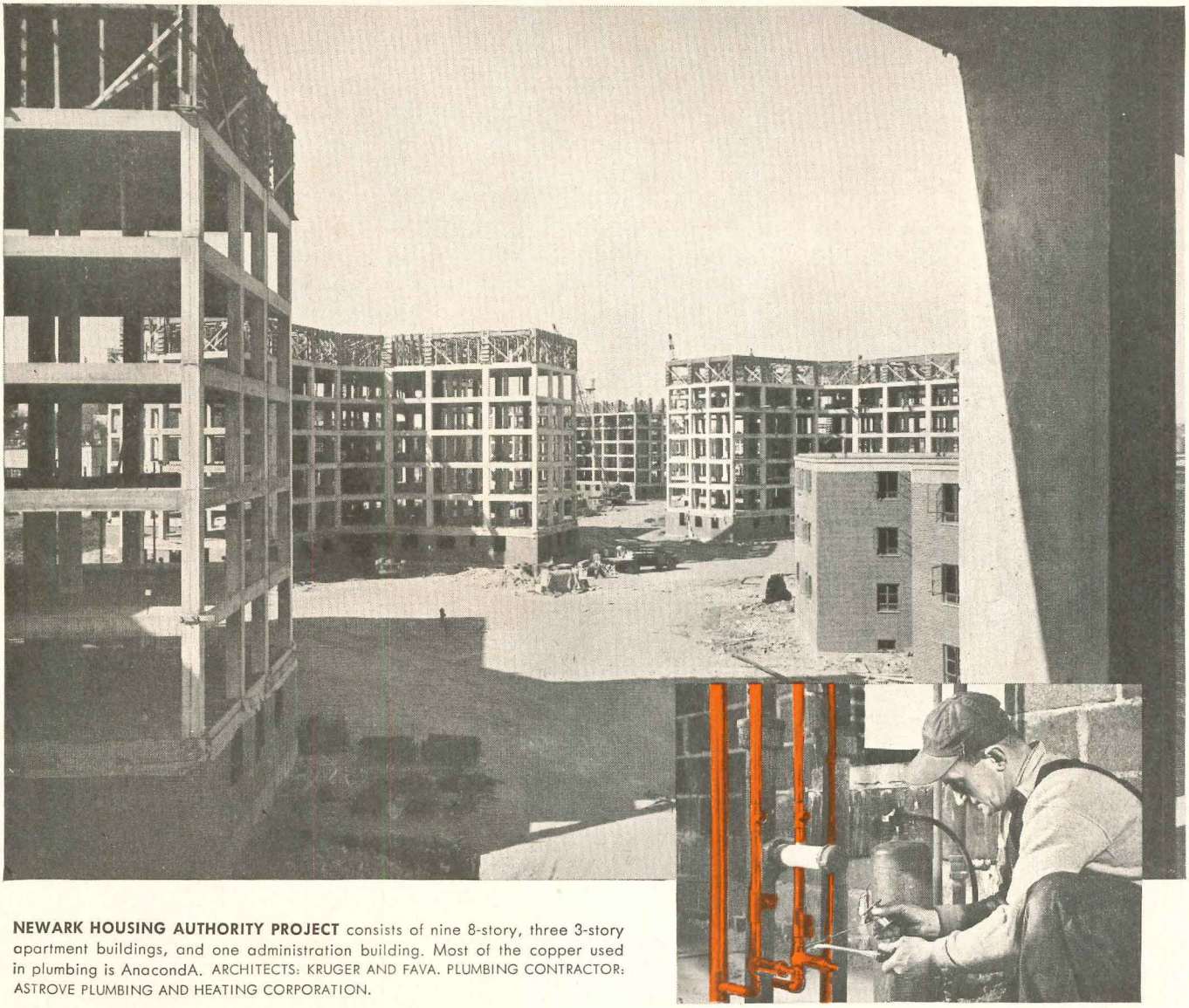
Ron Nelson



Panda



Far left: Knox Presbyterian Church, Goderich, Ont., won Silver Medal for religious structures; architect, Philip Carter Johnson, London, Ont. Silver Medal for educational buildings went to Marmora, Ont., High School (left); architects, Craig & Medill of Toronto, Ont.



NEWARK HOUSING AUTHORITY PROJECT consists of nine 8-story, three 3-story apartment buildings, and one administration building. Most of the copper used in plumbing is AnacondA. ARCHITECTS: KRUGER AND FAVA. PLUMBING CONTRACTOR: ASTROVE PLUMBING AND HEATING CORPORATION.

How little savings can become BIG

"Here at the Newark Housing Authority Project, copper tube economy pays off in a big way."

When Wesley Fredericks says this, he knows what he's talking about. He's the plumbing foreman on this project of 630 apartments on 12 acres of land near the Passaic River. "Wes" really put his finger on one of the big advantages of copper tubing.

Easy bending on the job is just another reason why copper is so popular for so many uses in building construction. Copper is ideal for both heating and plumbing lines. At the Newark project 46,811 feet, or over 14 tons, of ⅜" to 3" ANACONDA Copper Tubing were used in the plumbing system. Type L (hard) was specified for all interior plumbing lines; Type K for the service lines from the main through the foundations in each building.

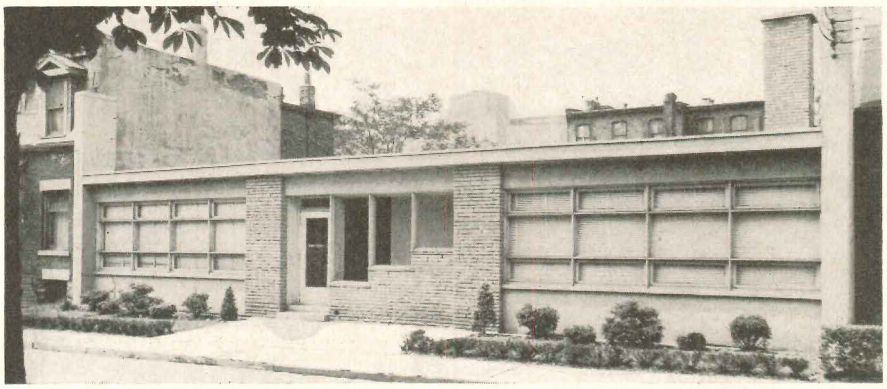
Copper tubing—preferred by owner, architect and builder for permanence and quality — saves maintenance through the years. It also offers immediate savings in installation. Solder-type joints, lighter weight, easier handling save time and labor. It's always a good policy to investigate the use of copper first—for quality, cost and availability. See your regular supplier for all ANACONDA Products. The American Brass Company, Waterbury 20, Connecticut. In Canada: Anaconda American Brass Limited, New Toronto, Ontario. 5213

modern plumbing calls for **ANACONDA®** copper tubes

CANADA

(*Continued from page 30*)

August, this year, the number of dwellings approved for loans was two and a half times the total for August 1951. The value of loans approved under the act during the first eight months of 1952 amounted to $173 million, compared with total loans valued at $125 million during the corresponding period of 1951.



Murray Sklar of Toronto was the architect for this plant and office building for Uniforms Registered, Toronto. The plant has been built with provision for adding a complete second floor. It is masonry-bearing construction with steel beams and wood joists. Radiant heating is used for the entire building

Investment at Peak

During the first six months of 1952, capital investment in the form of new construction rose to a new peak level for the period. In terms of 1951 dollars, the value of new construction work totalled $1.21 billion, an increase of three per cent over the previous high for the period, the $1.18 billion expended in the first half of 1951. The record volume of overall construction activity in the first half of 1952 took place without a corresponding rise in building costs. By the end of July 1952, the combined index of wholesale prices of residential building materials and hourly wage rates of construction workers continued to increase, but the effect of this was partly offset by a decline in the price of some building materials.

Immigration of skilled construction workers was higher during the first six months of 1952 than for any corresponding period in the postwar years, numbering 4300 tradesmen, 35 per cent more than entered Canada in the comparable period of 1951, which saw the previous postwar peak. Carpenters, bricklayers and electricians continued to make up the largest of the trade groups, representing, respectively, 37, 22 and 17 per cent of the total of skilled construction workers.

(*More news on page 36*)

Everything YOU COULD ASK FOR IN AN AUTOMATIC DOOR CONTROL

DOR-O-MATIC

INVISIBLE DOR-MAN

Completely Automatic

The very instant a person steps on the specially designed carpet which leads through the doorway, the Invisible Dor-Man goes into action . . . opens the door quietly, quickly, automatically.

Completely Concealed

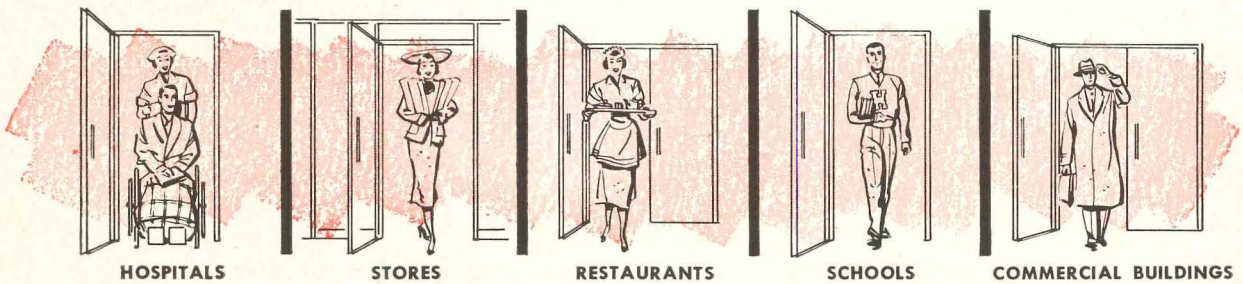
The Invisible Dor-Man can be applied to any standard stock door (glass, wood, or metal). No alterations are required—no devices in the head jamb. The operating units remain entirely "invisible."

Completely Noiseless

The Invisible Dor-Man can be installed for perfectly silent service. Not a whisper is heard as the door glides open and closed . . . mute testimony to quality design and construction.

all this—and **OUTSTANDING ECONOMY** too

THE IDEAL DOOR CONTROL FOR EVERY TYPE OF DOOR—EVERY TYPE OF BUILDING



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By Ernest Mickel

NEW IDEAS, NEW FACES: CHANGE IS IN THE AIR

Advice Instead of Direction, With Economy the Keynote — Military Building to Rise

As a nation agog with the excitement of its first change in Federal Administration in 20 years awaited the official Republican kickoff on January 20, Washington was a city of rumors and resignations. The Commodore Hotel in New York, Eisenhower headquarters till Inauguration, was the new focus of national plans and appointments.

What about government and government-aided construction programs under the new régime? Economy was sure to be the watchword in Congressional scrutiny of appropriations requests in these as other areas; defense spending would continue to climb till late this year; and the housing agencies were in for reorganization.

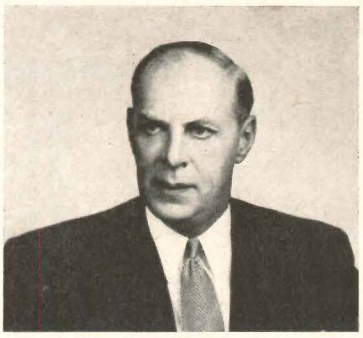
Military: 18% More Building

Military construction was about the only field in which solid predictions were possible (and it remained to be seen what effect the Creedon effort would produce there — see page 12). Current commitments, made on the basis of contract authority already given by Congress, will carry the military planning and spending programs on into fiscal 1954 and 1955 and even beyond. Of the $10,854 million authorized for military construction from July 1950 through August 1952, $8726 million has been appropriated by Congress and only $4895 million obligated by the services. The Departments of Commerce and Labor, in their annual forecast of construction prospects, estimated military and naval new construction activity would climb from $1355 million in 1952 to $1600 million in 1953 (calendar years), an increase of 18 per cent.

Housing: Federal "Cooperation"

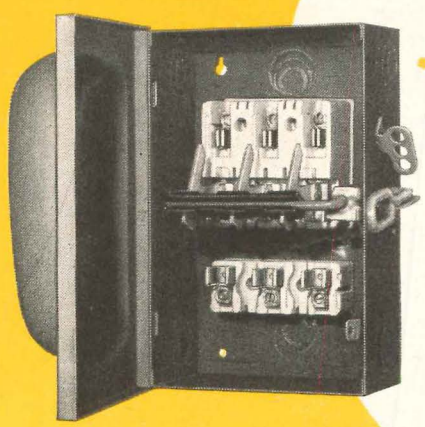
A new era in housing was charted in recent remarks of Rep. Jesse P. Wolcott (R-Mich.), who will be chairman of the important House Banking and Cur-

(*Continued on page 244*)



Frank W. Cortright, executive vice president of the National Association of Home Builders since the organization was formed in 1942, has resigned because of ill health. He will become a lifetime voting member of the N.A.H.B. Executive Committee, policy-making group from whose membership the association president is chosen, and, on a three-year contract, special consultant to N.A.H.B.

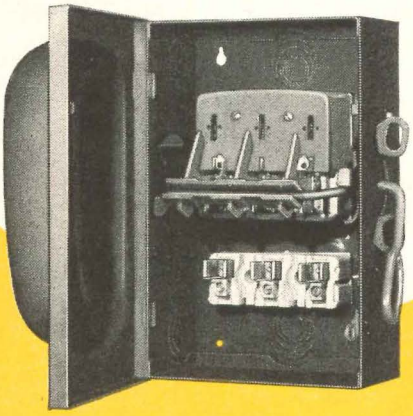
3 LINES OF SAFETY SWITCHES *for* 3 DIFFERENT MARKETS



...one line can't do two or three jobs without compromising price and performance!

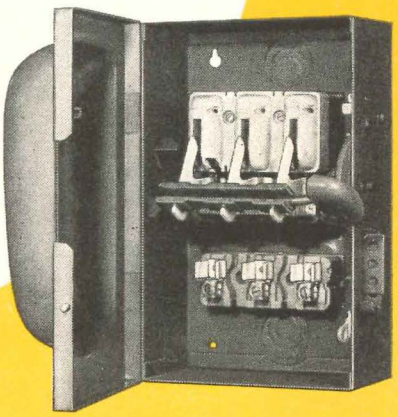
GENERAL PURPOSE

- **90,000 line** designed for residential, commercial and other applications where price is limiting and the service factor is not great.



INDUSTRIAL

- **40,000 line** designed for general industrial or institutional and commercial applications where the service factor is greater and price is an important consideration. MEETS BOTH GOVERNMENT AND NEMA SPECIFICATIONS FOR TYPE A SWITCHES.



HEAVY-DUTY INDUSTRIAL

- **80,000 and 50,000 line** designed for mass production industries where price is secondary to continued performance under conditions of severe service and maximum safety. The 50,000 line is used where space is limited. BOTH ARE TYPE A but go far beyond those requirements.

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SQUARE D COMPANY

You can put full confidence in them!

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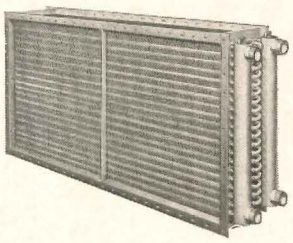
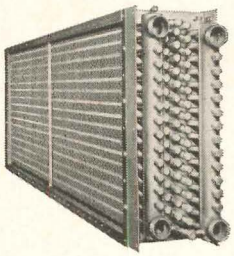
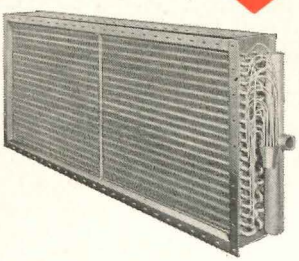
THIS COMPLETE LINE OF FAMOUS McQuay PRODUCTS



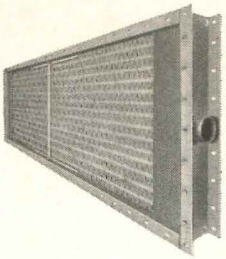
WATER COIL



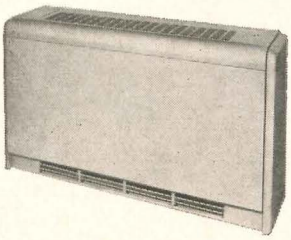
CLEANABLE TUBE WATER COIL



DIRECT EXPANSION COIL

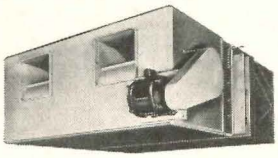


"BLAST" HEATING STEAM COIL

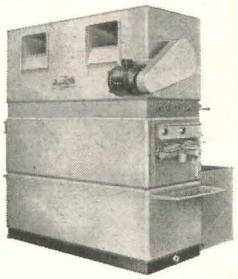


SEASONMAKER (FLOOR)

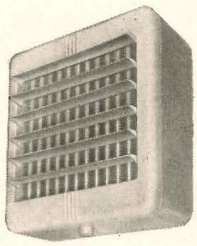
"RH" AIR CONDITIONER



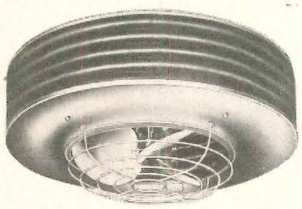
AIR CONDITIONER
(Suspended Model)



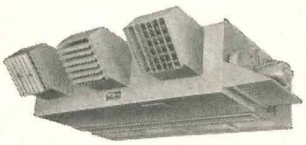
AIR CONDITIONER
(Floor Model)



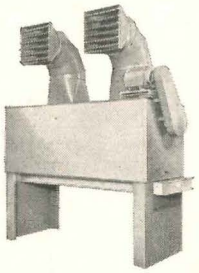
HORIZONTAL UNIT HEATER



DOWN FLOW UNIT HEATER

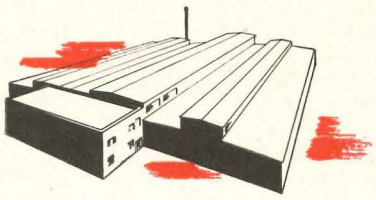


BLOWER TYPE UNIT HEATER
(Suspended Model)

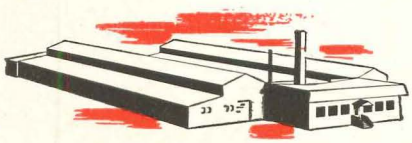


BLOWER TYPE UNIT HEATER
(Floor Model)

McQuay representatives, in all principal cities throughout the United States, are qualified by long experience and training to help you satisfy all of your air conditioning and heating requirements. For cooperation in making the sale, technical advice, or getting the job done on time, consult the McQuay representative in your territory. Available to you through him is the complete line of McQuay products, featuring famous Ripple-Fin construction—a McQuay exclusive, assuring maximum heat transfer efficiency and dependable performance.



PLANT 1—1600 Broadway N. E.
MINNEAPOLIS 13, MINN.



PLANT 2—1729 Broadway N. E.
MINNEAPOLIS 13, MINN.

PLANT 3—4th and Park Ave.
FARIBAULT, MINN.

CONSTRUCTION COST INDEXES

Labor and Materials

United States average 1926–1929 = 100

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

NEW YORK

Period	Residential Brick	Residential Frame	Apts., Hotels Office Bldgs. Brick and Concr.	Commercial and Factory Bldgs. Brick and Concr.	Commercial and Factory Bldgs. Brick and Steel
1925	121.5	122.8	111.4	113.3	110.3
1930	127.0	126.7	124.1	128.0	123.6
1935	93.8	91.3	104.7	108.5	105.5
1939	123.5	122.4	130.7	133.4	130.1
1940	126.3	125.1	132.2	135.1	131.4
1946	181.8	182.4	177.2	179.0	174.8
1947	219.3	222.0	207.6	207.5	203.8
1948	250.1	251.6	239.4	242.2	235.6
1949	243.7	240.8	242.8	246.4	240.0
1950	256.2	254.5	249.5	251.5	248.0
1951	273.2	271.3	263.7	265.2	262.2
Aug. 1952	279.7	276.6	274.4	276.5	274.3
Sept. 1952	279.7	276.6	274.4	276.5	274.3
Oct. 1952	279.0	275.7	274.3	276.4	274.1
	% increase over 1939				
Oct. 1952	**125.9**	**125.2**	**109.9**	**107.2**	**110.7**

ATLANTA

Period	Residential Brick	Residential Frame	Apts., Hotels Office Bldgs. Brick and Concr.	Commercial and Factory Bldgs. Brick and Concr.	Commercial and Factory Bldgs. Brick and Steel
1925	86.4	85.0	88.6	92.5	83.4
1930	82.1	80.9	84.5	86.1	83.6
1935	72.3	67.9	84.0	87.1	85.1
1939	86.3	83.1	95.1	97.4	94.7
1940	91.0	89.0	96.9	98.5	97.5
1946	148.1	149.2	136.8	136.4	135.1
1947	180.4	184.0	158.1	157.1	158.0
1948	199.2	202.5	178.8	178.8	178.8
1949	189.3	189.9	180.6	180.8	177.5
1950	194.3	196.2	185.4	183.7	185.0
1951	212.8	214.6	204.2	202.8	205.0
Aug. 1952	219.1	220.7	214.2	211.9	216.8
Sept. 1952	219.1	220.7	214.2	211.9	216.8
Oct. 1952	221.1	223.7	216.2	212.7	218.0
	% increase over 1939				
Oct. 1952	**156.2**	**169.2**	**127.2**	**118.4**	**130.2**

ST. LOUIS

1925	118.6	118.4	116.3	118.1	114.4
1930	108.9	108.3	112.4	115.3	111.3
1935	95.1	90.1	104.1	108.3	105.4
1939	110.2	107.0	118.7	119.8	119.0
1940	112.6	110.1	119.3	120.3	119.4
1946	167.1	167.4	159.1	161.1	158.1
1947	202.4	203.8	183.9	184.2	184.0
1948	227.9	231.2	207.7	210.0	208.1
1949	221.4	220.7	212.8	215.7	213.6
1950	232.8	230.7	221.9	225.3	222.8
1951	252.0	248.3	238.5	240.9	239.0
Aug. 1952	260.7	254.0	253.0	259.1	253.7
Sept. 1952	260.9	254.1	253.5	259.7	254.0
Oct. 1952	260.2	253.2	253.4	259.6	253.8
	% increase over 1939				
Oct. 1952	**136.1**	**136.6**	**114.7**	**116.7**	**113.3**

SAN FRANCISCO

1925	91.0	86.5	99.5	102.1	98.0
1930	90.8	86.8	100.4	104.9	100.4
1935	89.5	84.5	96.4	103.7	99.7
1939	105.6	99.3	117.4	121.9	116.5
1940	106.4	101.2	116.3	120.1	115.5
1946	159.7	157.5	157.9	159.3	160.0
1947	193.1	191.6	183.7	186.8	186.9
1948	218.9	216.6	208.3	214.7	211.1
1949	213.0	207.1	214.0	219.8	216.1
1950	227.0	223.1	222.4	224.5	222.6
1951	245.2	240.4	239.6	243.1	243.1
Aug. 1952	253.1	248.0	248.2	251.6	253.1
Sept. 1952	252.6	247.8	248.5	251.6	253.2
Oct. 1952	251.3	246.2	248.3	251.4	252.8
	% increase over 1939				
Oct. 1952	**138.0**	**147.9**	**111.5**	**106.2**	**117.0**

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

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

index for city A = 110
index for city B = 95

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

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

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

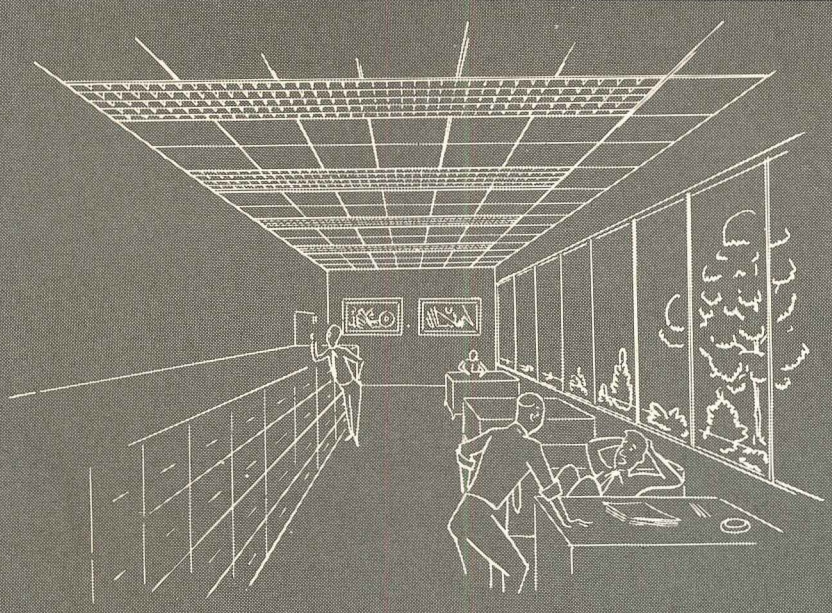
Conversely: costs in B are approximately 14 per cent lower than in A.

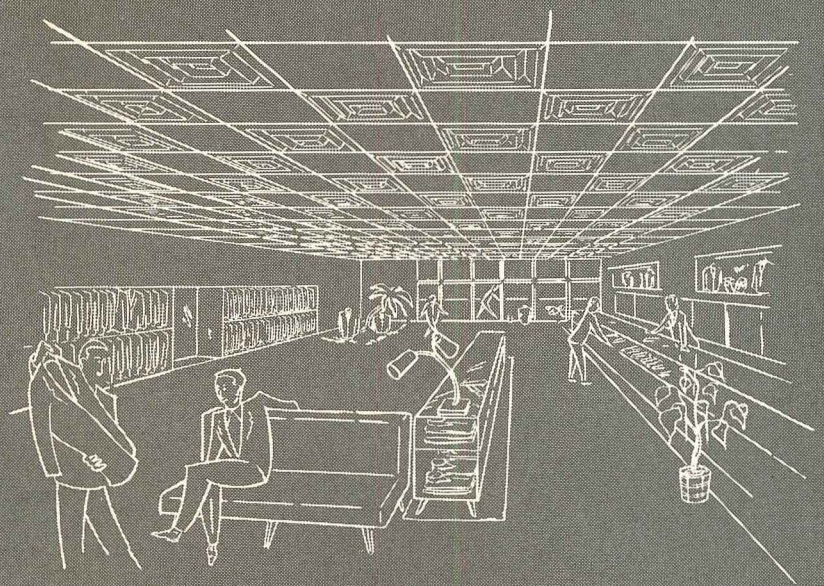
$$\frac{110-95}{110} = 0.136$$

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

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

These index numbers will appear regularly on this page.





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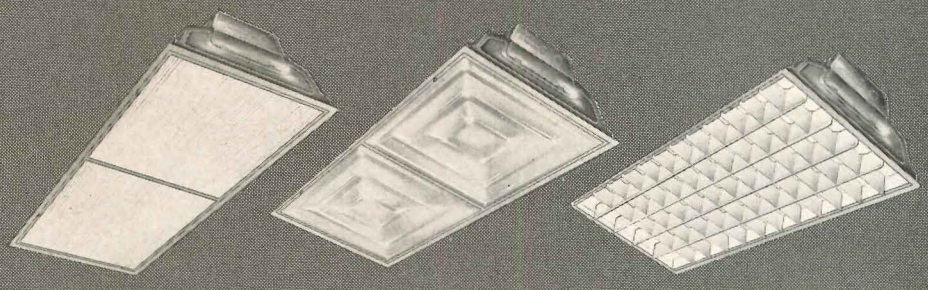

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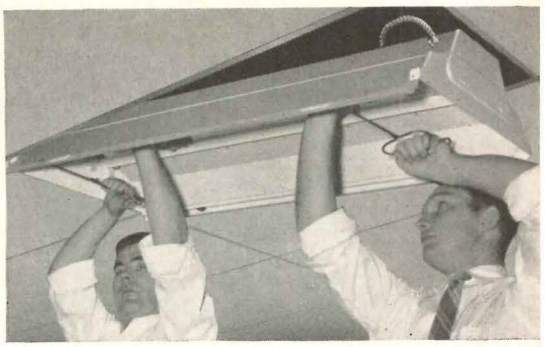
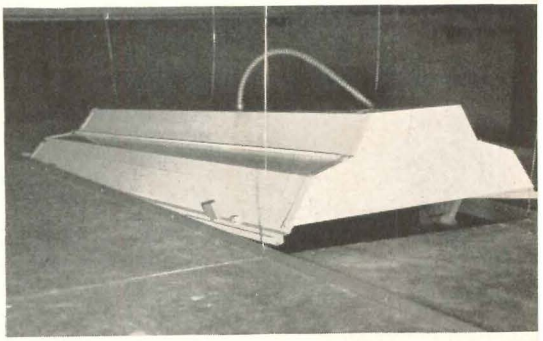
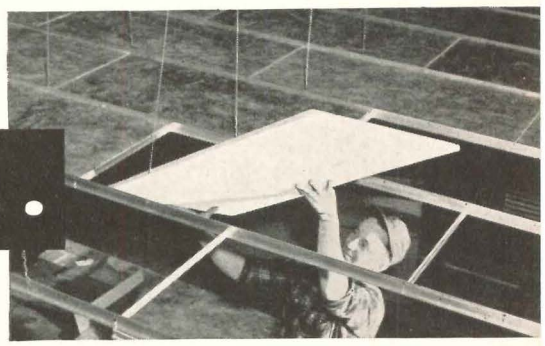


Mobilex is easy to install. Simply compress the sides of the fixture with "Mobilhooks" and insert it into the grid opening.



The fixture rests on the grid rails. End baffles lock the compression feature into place. No hangers or suspension straps.



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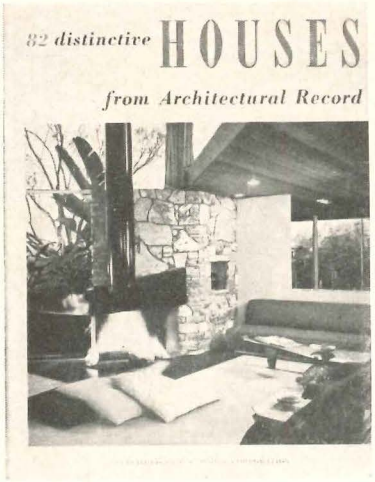


82 DISTINCTIVE HOUSES FROM ARCHITECTURAL RECORD

82 Distinctive Houses from Architectural Record. F. W. Dodge Corporation (119 West 40th Street, New York, N. Y.) 1952. 8¾ by 11⅝ in. 448 pp., illus. Introductory price: $6.50. After February 1 $8.00.

REVIEWED BY
HAROLD R. SLEEPER, F.A.I.A.

Here, under one cover, is ARCHITECTURAL RECORD's selection of American contemporary houses for the past five years. If you design houses, if you work on house designs, or even if you are only interested in houses, it will be a pleasure as well as worth your while to browse through this volume. With this collection of well-selected contemporary houses to review, you may analyze just what we have been doing, and perhaps hazard a guess as to where we are going. You will be stimulated by the variety and ingenuity of the solutions.

Almost all of us have seen these illustrations before. So they are not new in this respect. However, to see a house in a monthly magazine gives a different impact than to see it with 81 other houses. I had followed the past issues of the RECORD, but a surprisingly great number of the houses shown still seem fresh and new. In looking through the magazines monthly I tend to look at what interests me at the time, saying to myself, "I like that," or "Very good, I wonder why he did that," but without any very critical analysis. This book is definitely a barometer of the trend of architect-designed houses, and doubting my primary reactions, I set out to get a few statistics.

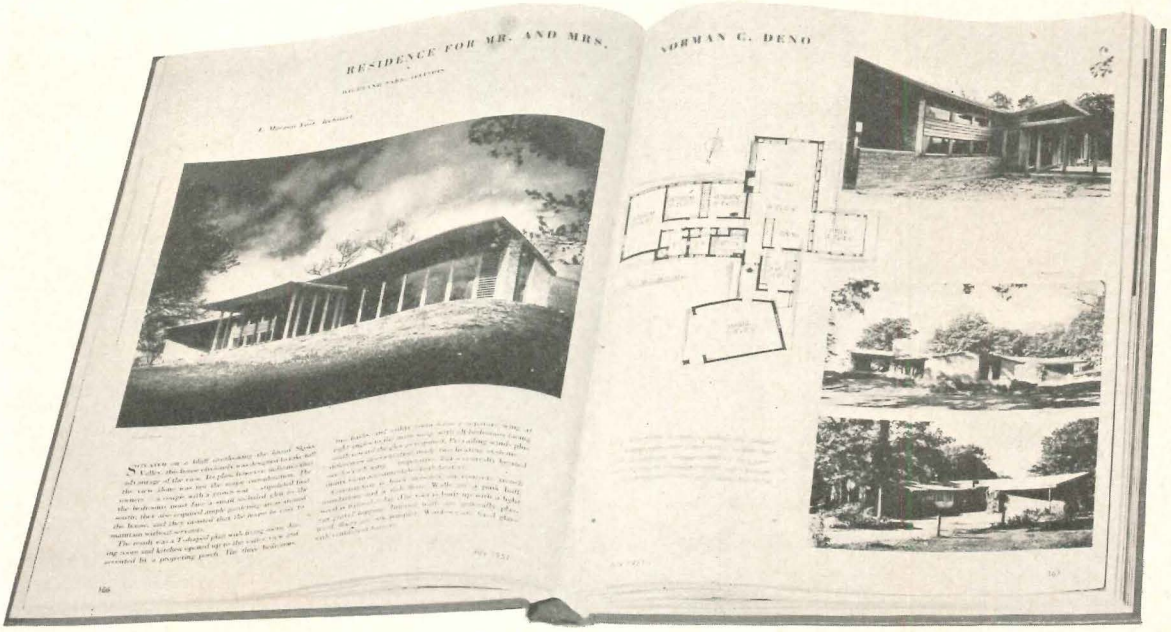
These proved to me that we have become stylized, assuming that the selections made by the RECORD were not made because of the style. In days to come the years 1947 through 1951 may well be termed the "Board Age" or more specifically the "Vertical Board Age." This material is used outside — and inside — on walls, ceilings, soffits. As a relief from "boards", stone wall or oversized stone chimney was used for the needed relief. Brick or block is seldom used, and plaster is rare.

Glass seems to have been skillfully employed for a purpose. It is used for semi-tropical regions, for Maine, Vermont or the Middlewest. This group of houses defies any regional identification. Glass areas are not diminished because of hard winters. Of course, better insulation, storm sash or double glazing and more fuel is the answer. So we are not likely to see any great rebirth of regional architecture.

It is most interesting to note that the fireplace is evidently ensconced to stay. Its flexibility has been increased whereby one fireplace may serve two or three spaces, and its masonry mass accentuated far beyond its practical need for the design effect.

The paucity of materials used in the designs would be relieved, I am sure, if these illustrations were in color, as evidenced by the boldly-colored jacket. Still we can hope for a wider use of other materials both inside and outside in the future. Is the lack of variety in basic materials used because contemporary designers are struggling to avoid being like the "usual" so they automatically shun the use of the materials common to

(*Continued on page 48*)



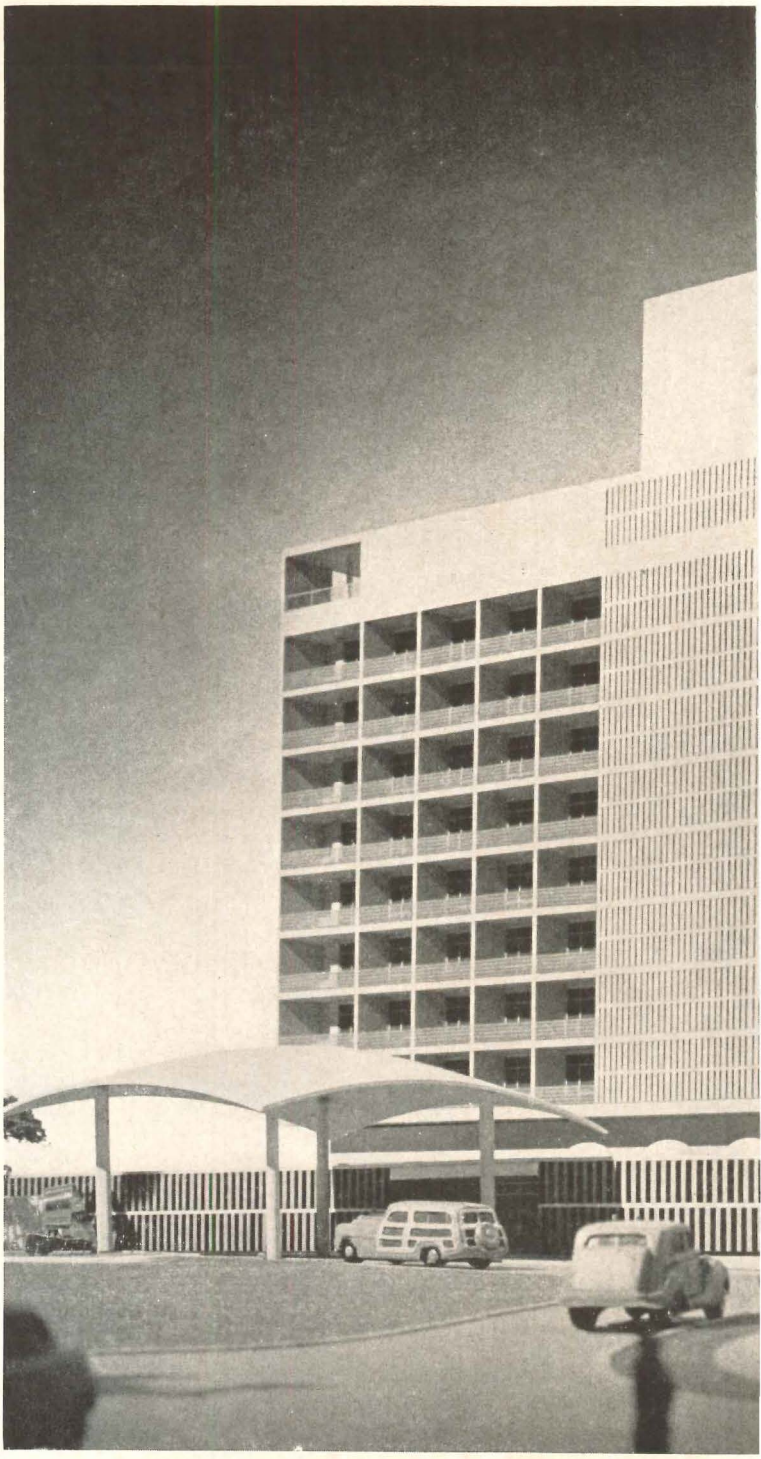
TOURIST HOTEL FOR ISTANBUL, TURKEY

MOSQUES AND MINARETS, earlier native architecture of Istanbul, will one day soon be scenic contrast to the latest American-aided project in the East, the Istanbul Hilton Hotel, done by Skidmore, Owings & Merrill and their Turkish associate, Sedad H. Eldem.

In architectural terms, the mosques and the minarets have little more significance than ancient and revered landmarks in this or any other country. For something like twenty-five years the Turks have wanted, in fact made a point of rather demanding, international styles of architecture. Virtually all of the large buildings of recent years have been modern in concept and styling, something that could be said of perhaps no other country.

The new hotel will nevertheless represent a new high, literally as well as figuratively. It will be the highest building to date, and the most important, for it will become the focus of business and diplomatic (and tourist) functions and activities. Designwise, it will no doubt stand out for a quality of assertiveness, partly because this is one of the

ISTANBUL HILTON HOTEL



Ezra Stoller

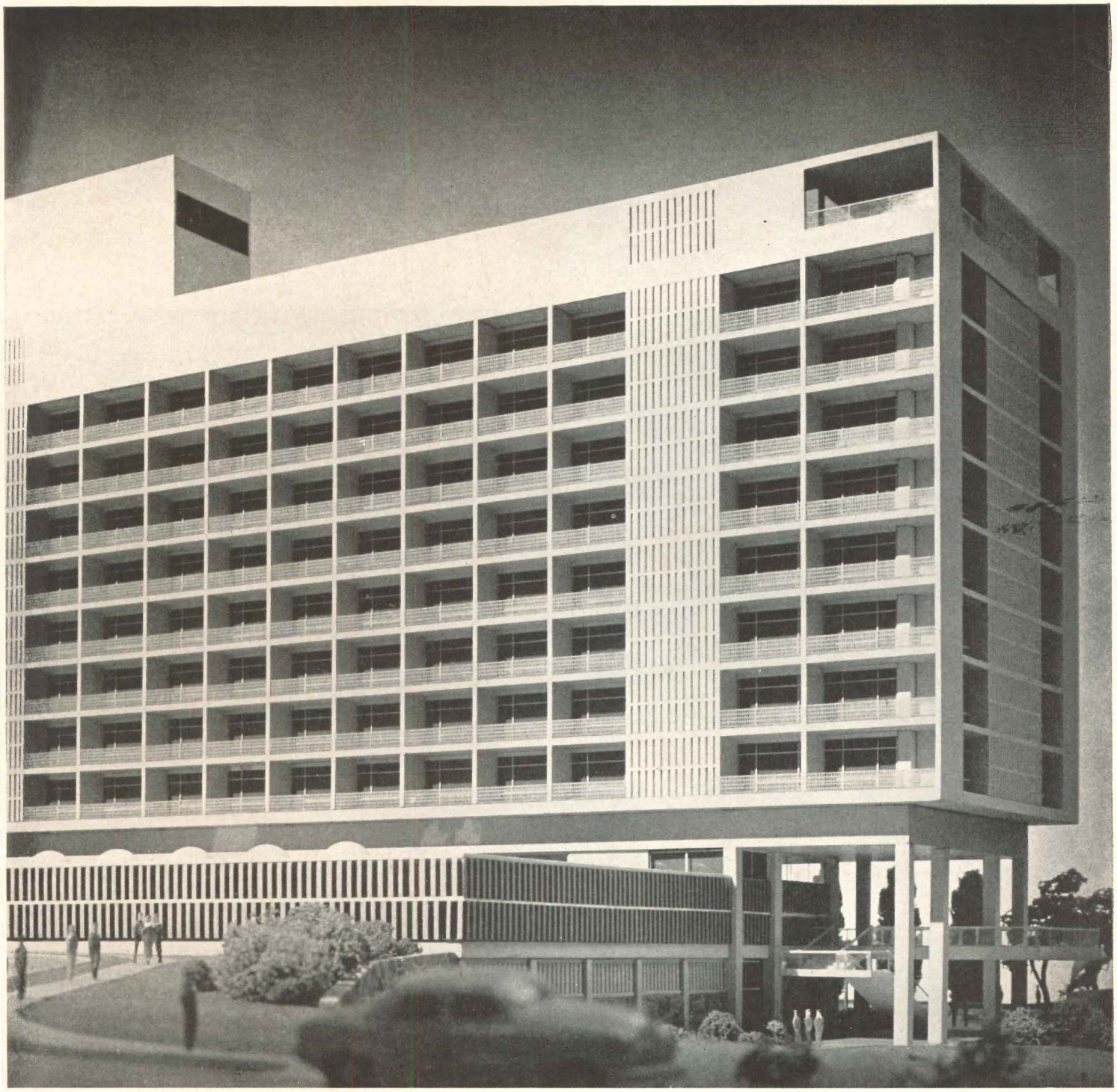
natural products of the American portion of the design association, partly because that quality is inherent in any of the new hotels beginning to dot the travel maps and posters.

In this instance, however, the scheme of the hotel departs from the strictly tourist concept, for it is to fill a larger need in Istanbul. This is essentially a project of the Turkish government, as are most of the later buildings there, and one of its purposes was to provide facilities for official functions. It is really a combination of the great tourist hotel and the hotel version of a palace.

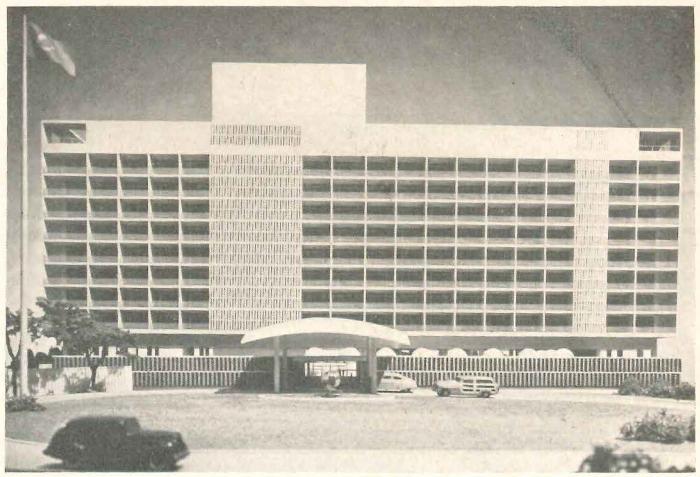
This thinking is readily visible in the model photographs. The main shaft of the building contains the sleeping rooms, and follows the logical form of many strictly tourist hotels. The lower portion, however, is greatly extended, including all of the lounges, bars, restaurants and shops, flowing outward to pools and gardens and sports facilities of a vacation resort, but also having the banquet and conference rooms of a hotel catering to business and government activities.

These purposes found their way into the architectural expression, though the interpretation is much more natural than the listing of the purposes might imply. The slick efficiency of the hotel-room shaft is manifest, and the extension of the two public floors offers no denial of this note. There is perhaps a gayer or more gracious note in the gradual movement outward of the lower floors, and there are motifs of definitely Turkish origin, these being suitable for tourist or diplomat alike. The picturesque quality of Turkish artistry will find its place in the interiors, even though the tourists have to take cabs to see the minarets.

From its beginning the hotel project seemed to accumulate a great deal of official attention, and was finally blessed with high-level approbation. Istanbul (Turkish government) had long sought to interest



Owner: Turkish Republic Pension Fund
Advisor-Operator: Hilton Hotels International
Associated Architects: Skidmore, Owings & Merrill
Sedad H. Eldem
Partners in Charge: William S. Brown, Coordination
Gordon Bunshaft, Design



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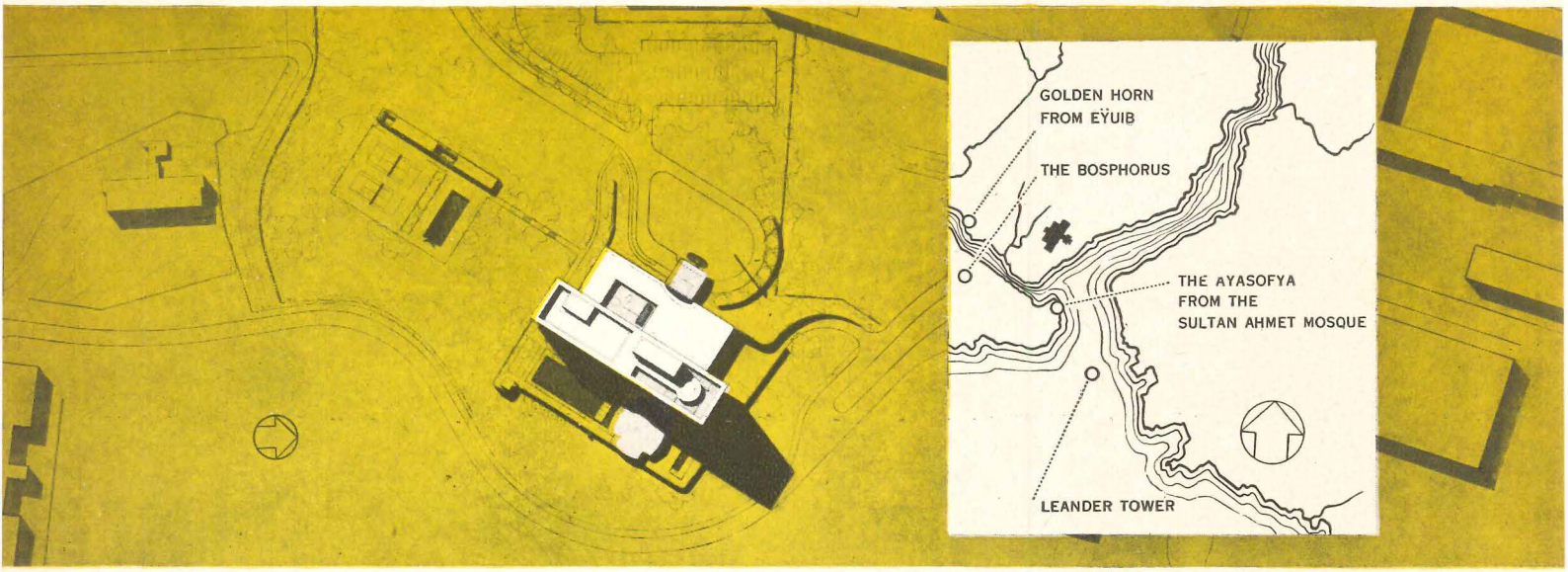
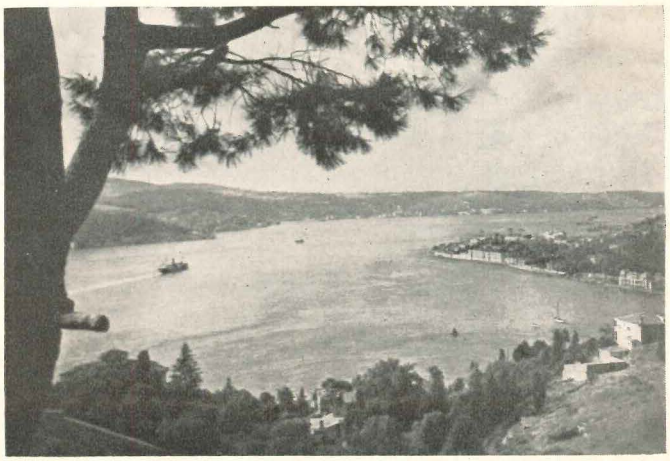
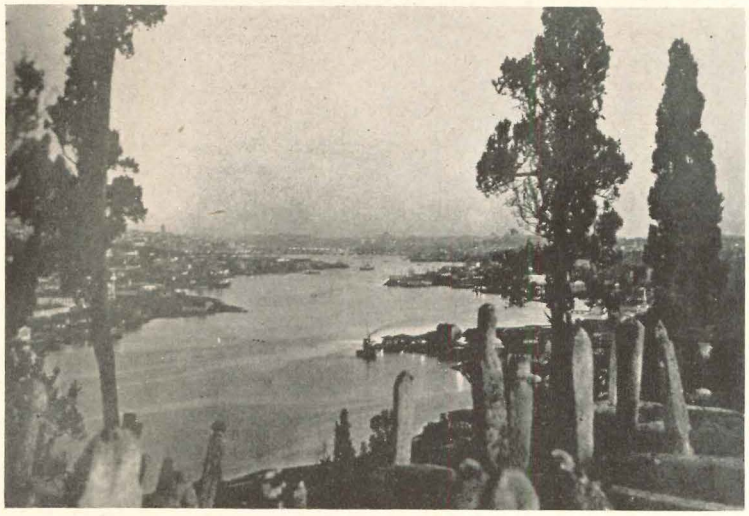
ISTANBUL HILTON HOTEL





For all of the European influences that have been felt in Turkey in its recent history, the country is still visited for historic scenic attractions. The hotel will have for its site a high hill overlooking the famous Bosporus (left, below). Within range of this hill (telescopic range, perhaps) are such views as the Leander Tower (left, above), the Golden Horn (opposite page) and the mosque d'Ayasofya (page 103)



American capital in such a venture. ECA (now MSA) took an interest in this and other similar moves toward extension of commercial and tourist trade. An official tour was organized, with Conrad Hilton and John Houser of Hilton Hotels International, and Louis Skidmore and William Brown of the architectural firm, who visited London, Rome, Istanbul, Athens. Istanbul was the first city selected; there may be others. The enthusiastic cooperation of the Turkish government was a factor; funds and collaboration were made available. Also the choicest possible site; indeed the site is part of an ambitious park development for Istanbul, and but for official enthusiasm could not have been made available for any hotel, with or without international backing.

A contract with the Turkish government was signed by the Turkish minister of Foreign Affairs and Hilton Hotels International, and was subsequently assigned to the Turkish Republic Pension Fund for administration and for carrying out the provisions. The hotel will be operated under 20-year lease by Hilton Hotels International.

As a design assignment, the hotel had an unusual tie for Skidmore, Owings & Merrill, for the firm had previously been retained by the Turkish government to survey town planning, housing and building. Gordon Bunshaft, partner and design chief, had led a field group in a two-month trip through Turkey, culminating in a major set of recommendations to the Ministry of Public Works. The findings of the survey do not have too much bearing on this project, but the fact of the study did do much to smooth the planning procedures. Turkey does have much of modern technology, but like all Eastern cities is lacking in basic things like steel and cranes and tools and techniques.

Perhaps this hotel project will advance in some degree the firm's own recommendations about developing local industries. It is true that most of the materials will have to be brought in, but the project will have an unusual amount of participation by Turkish interests. Sedad Eldem, an award-winning contemporary architect, was an active participant in the early planning, spending many months in New York. Basic design was done in New York, also engineering. But working drawings were done in Istanbul by Eldem's office, with two S. O. & M. men working there for interpretations.

In design terms this is a normal project, affected by local shortages principally in steel-saving devices. The structural design, in reinforced concrete, was developed to use steel rods with exceptional economy. The structure will stand on continuous footing beams, with reinforcing rods carefully placed to match tension stresses, but designed without too much reliance on bonds. Beams throughout the building get over-sized, not only because of the steel saving, but also for an earthquake condition of second-degree magnitude.

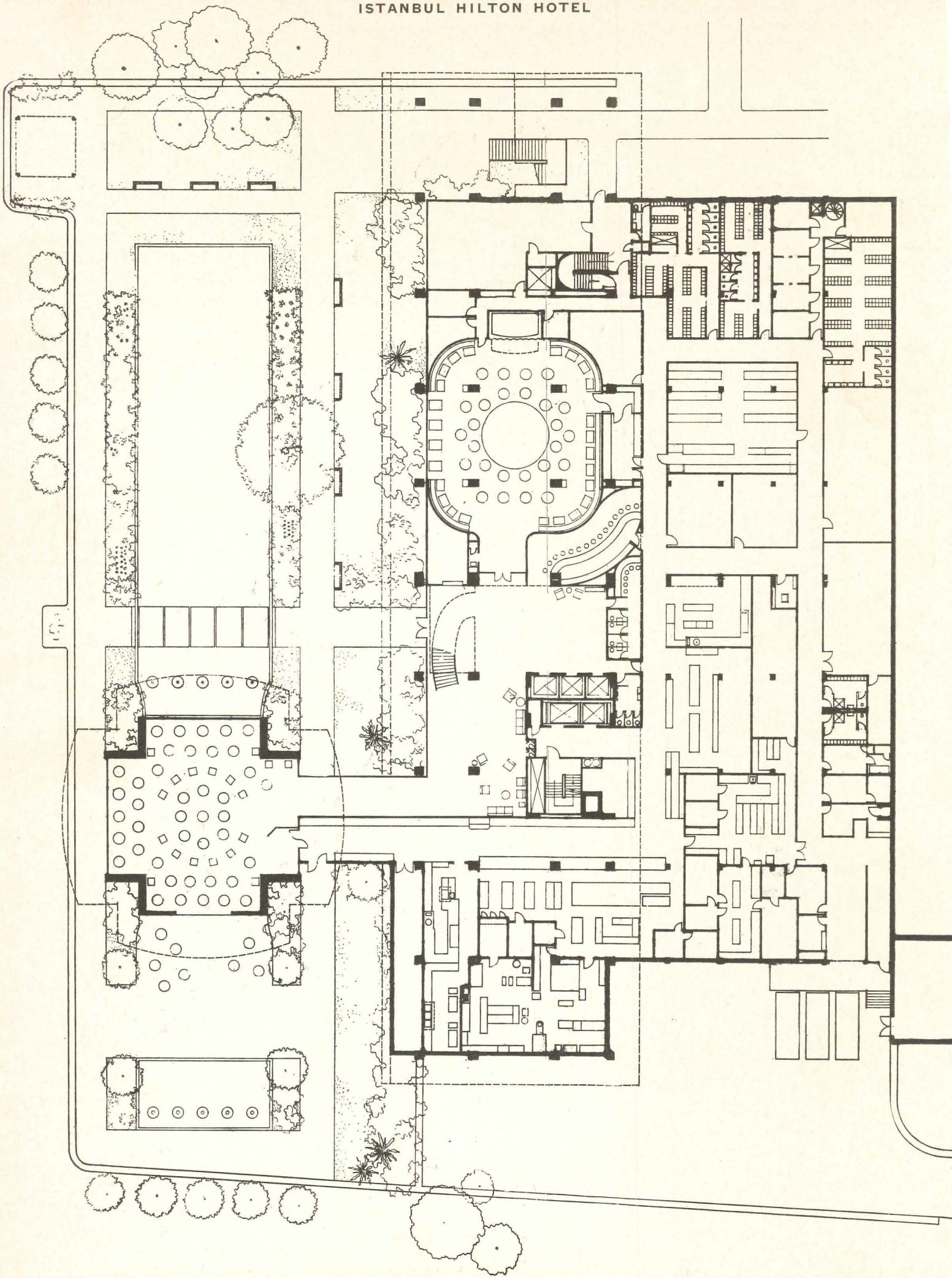
The overall design takes full advantage of a site difficult to match in any of the tourist centers of the world. Bellevue Park, on the top portion of which the hotel will stand, is a high promontory overlooking the strategic Bosporus, with views and breezes to give the steamship and air lines much copy for their tourist folders.

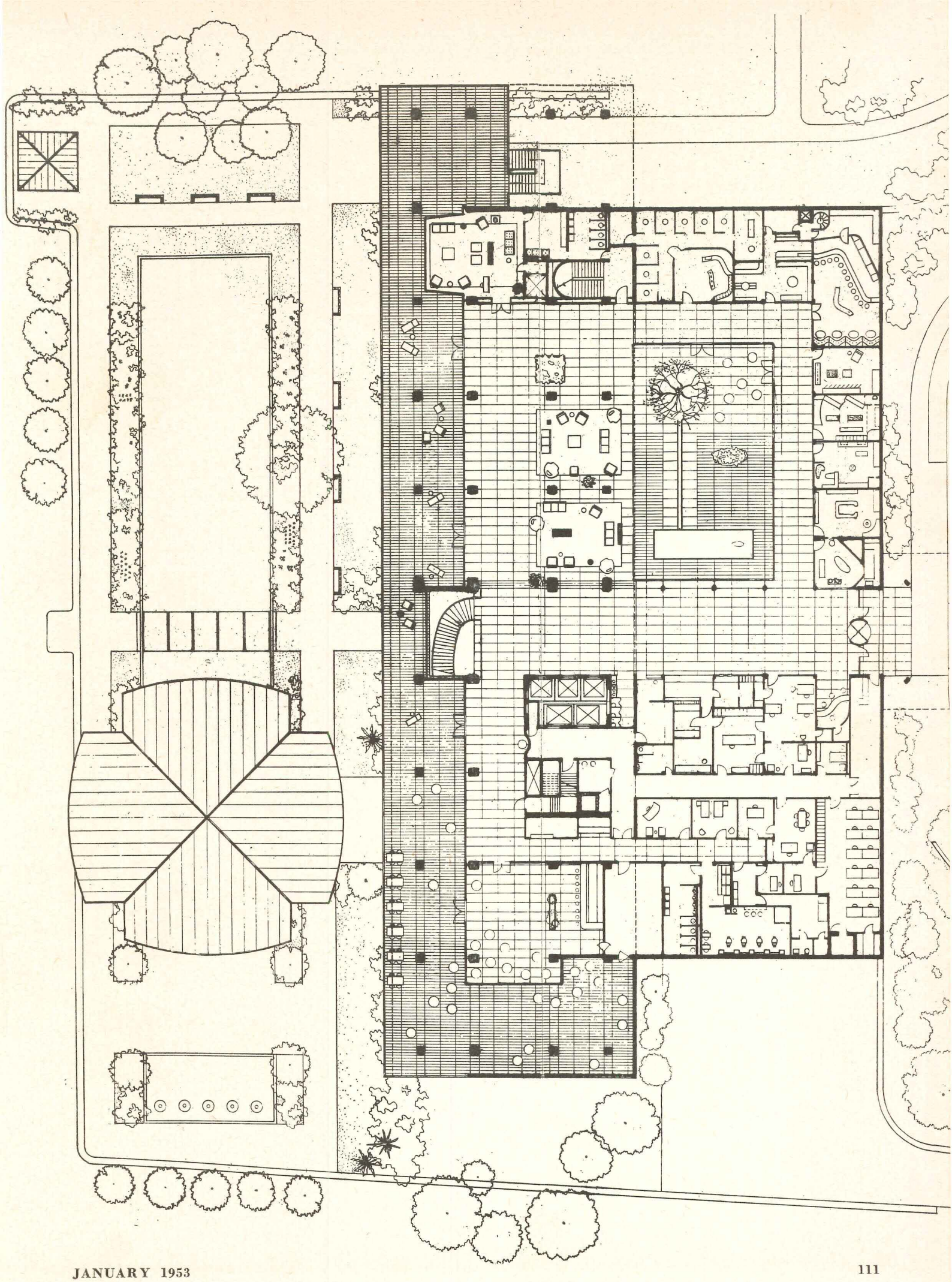
Integration of indoors and outdoors, stressed so heavily in modern tourist hotels, is extensively but very naturally done. The upper (entrance) floor has an open patio in the center, surrounded by a group of shops on one side, main lobby on the other. Lobby opens on the other side to a very long cocktail terrace overlooking the garden, a modern version of the old front porch. Below, on the garden side the near visual focus is a reflecting pool, to be used also for skating. The hillside falls away rapidly toward a huge free-form swimming pool, with tennis courts and cabanas; farther still, to one side, is an amphitheater. And in the distance, those terrific views.

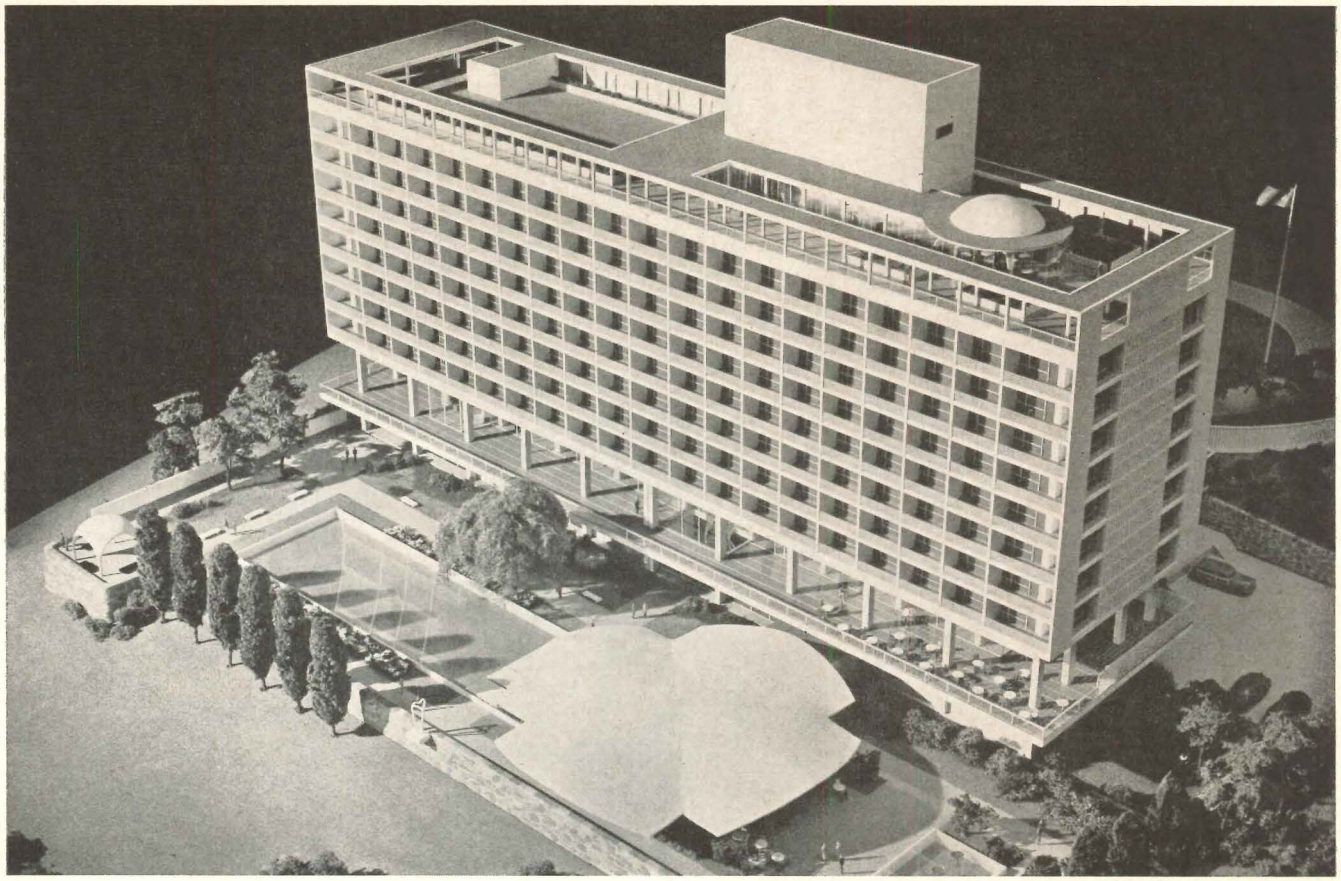
ISTANBUL HILTON HOTEL

Ezra Stoller

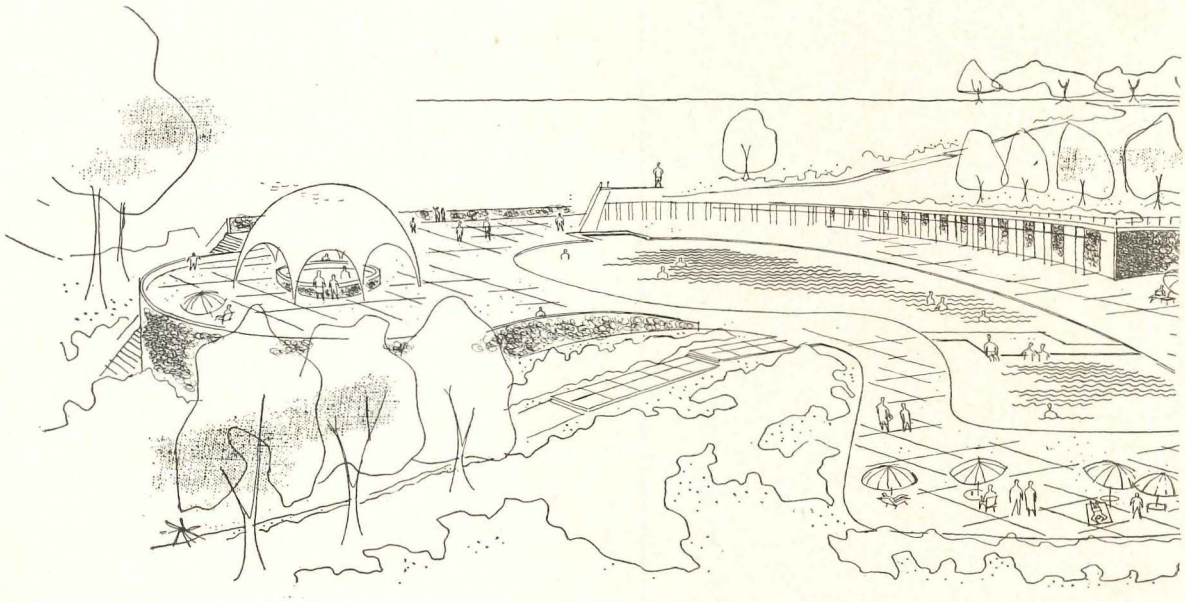
The multiple purposes of the hotel show more plainly from the front entrance side; the great extension of the lower floor contains shops, offices, lounges, encircling an enclosed patio, with vast terrace hanging outward toward reflecting pool and gardens







Viewed from this side the model gives a better idea of the social and recreational aspects of the hotel. Resort hotels have gone through many changes, but the far-away tourist hotel utilizes to the full the "watering-place" development outdoors



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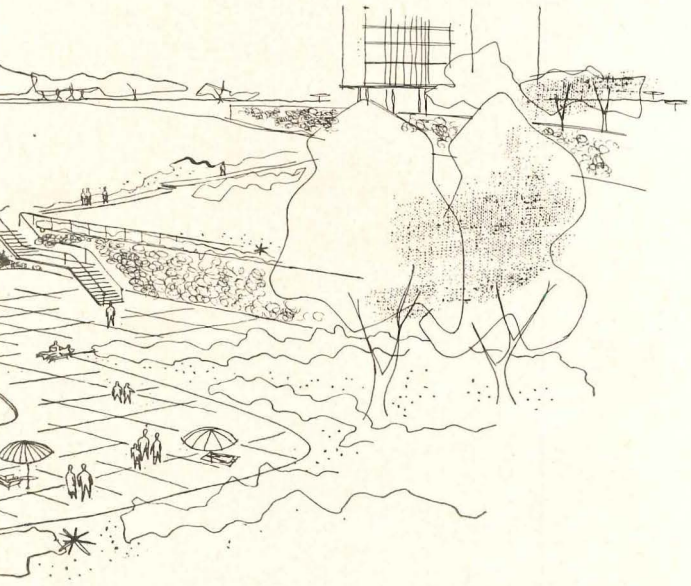
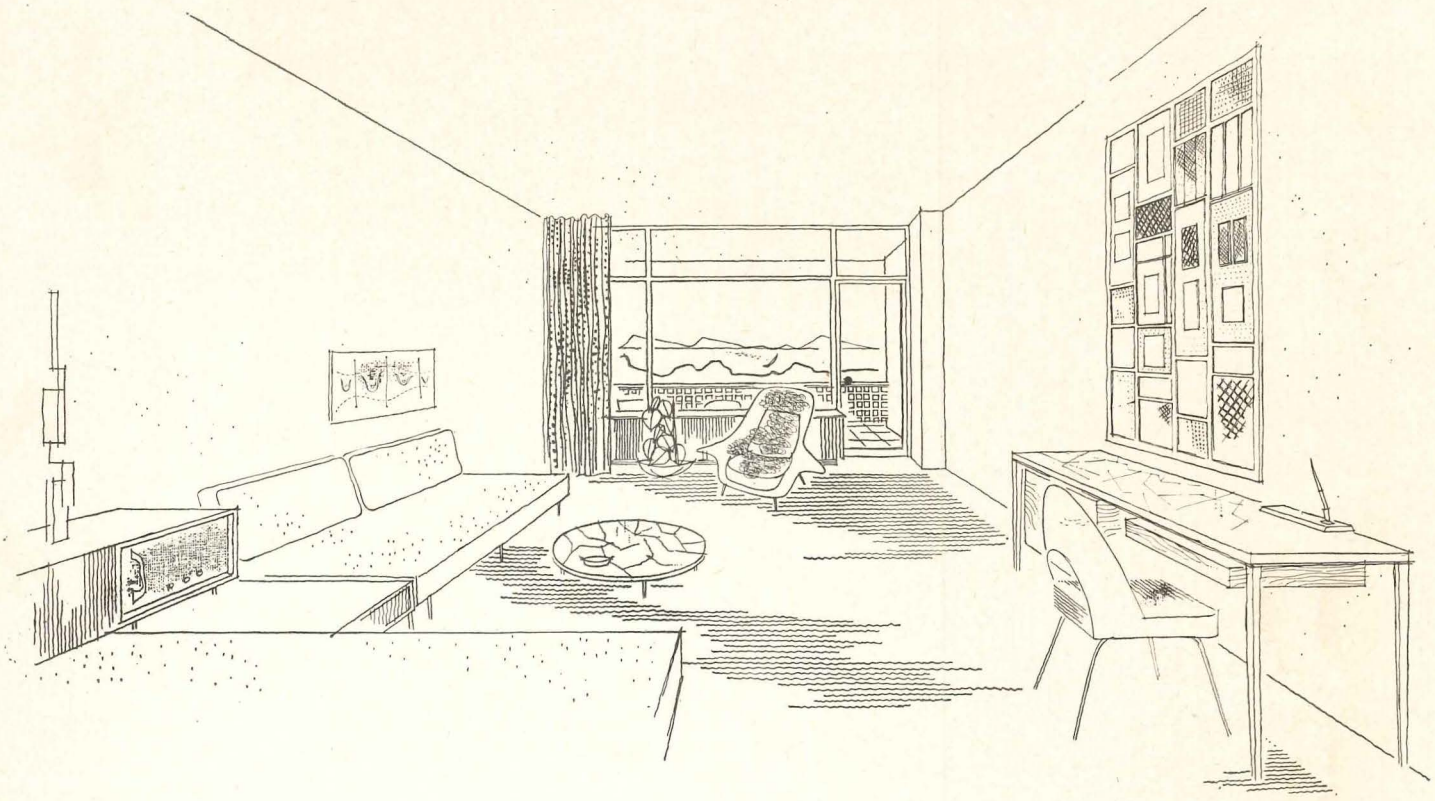
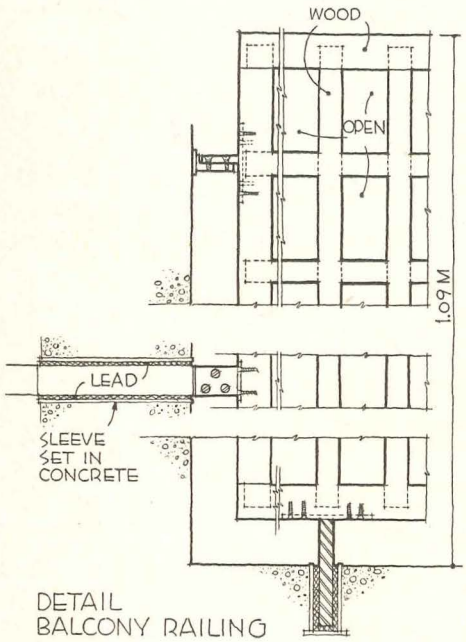
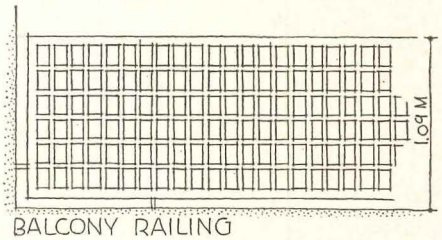






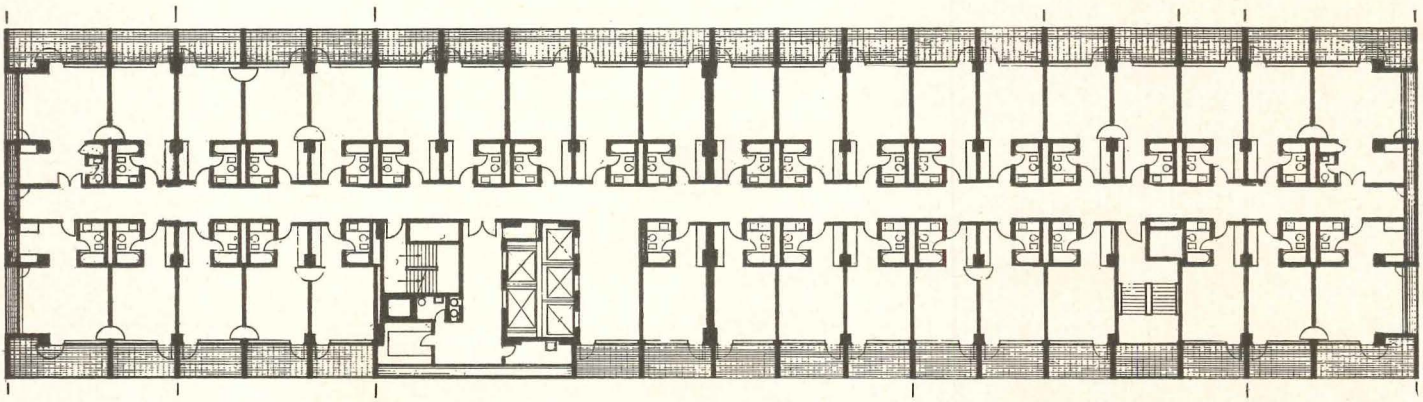
DETAIL
BALCONY RAILING

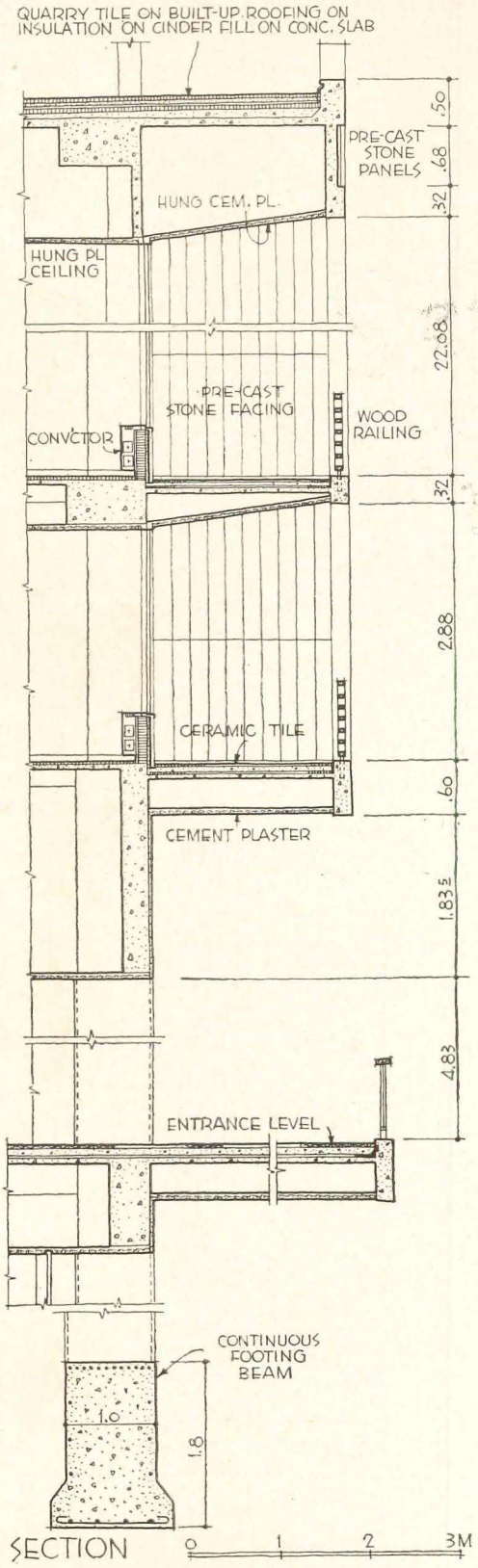
Each sleeping-room floor is identical, with all rooms alike except at the corners. A penthouse floor will have a few larger suites

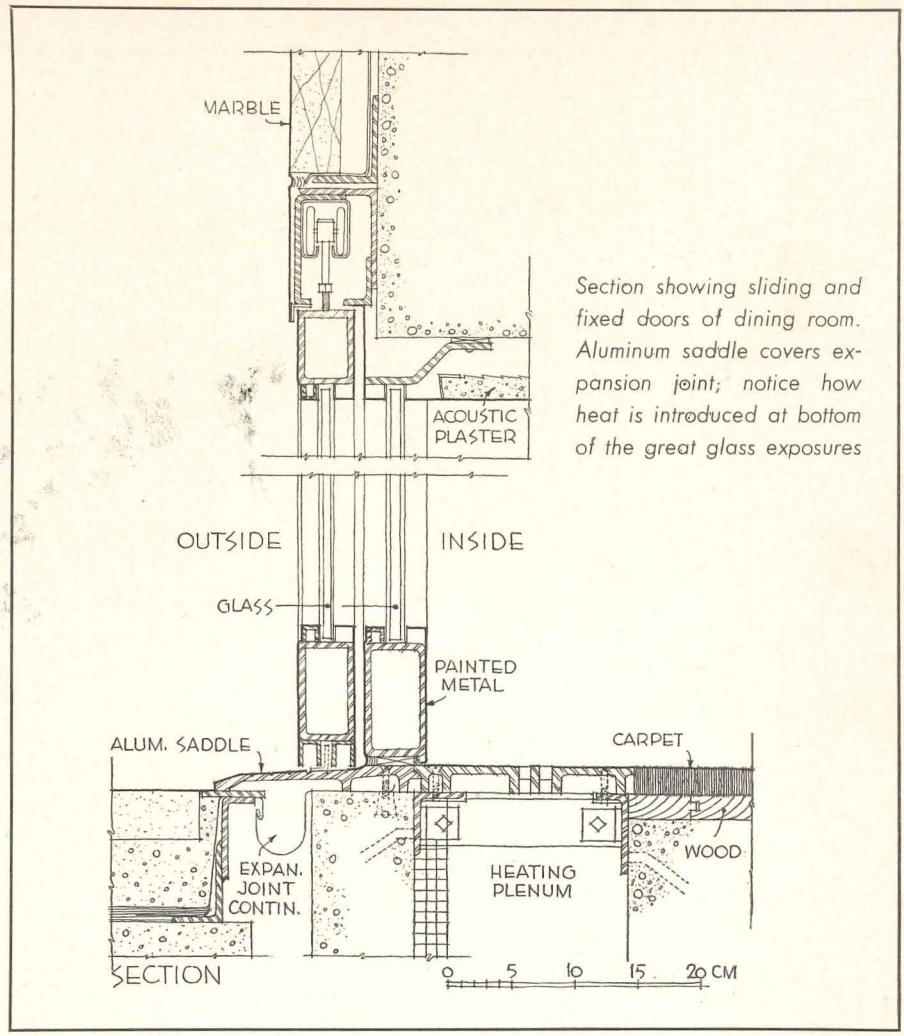


BALCONY RAILING

TYPICAL FLOOR PLAN

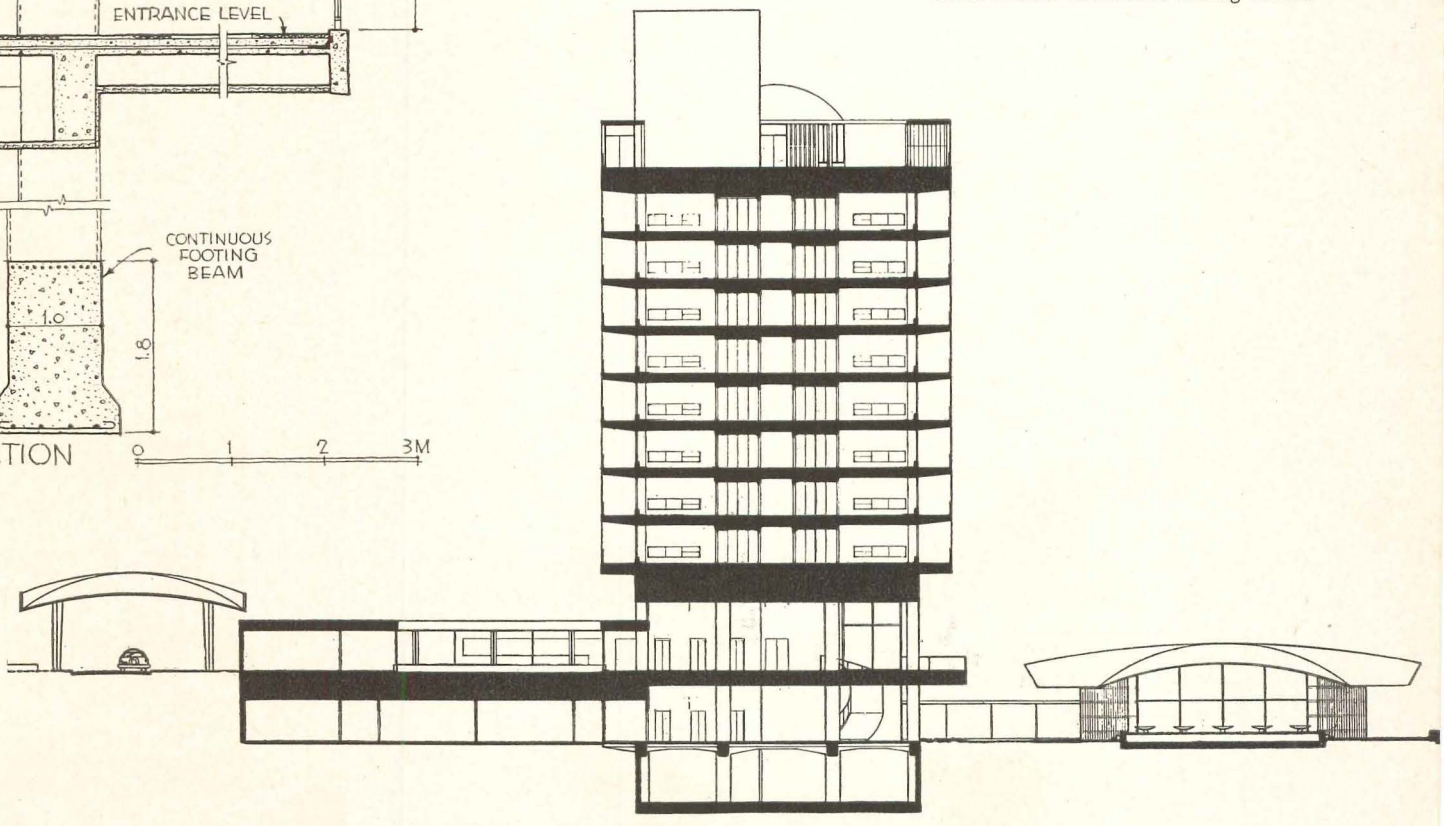






Section showing sliding and fixed doors of dining room. Aluminum saddle covers expansion joint; notice how heat is introduced at bottom of the great glass exposures

Typical wall section shows great size of concrete beams, to save reinforcing steel. Notice continuous footing beams



ISTANBUL HILTON HOTEL

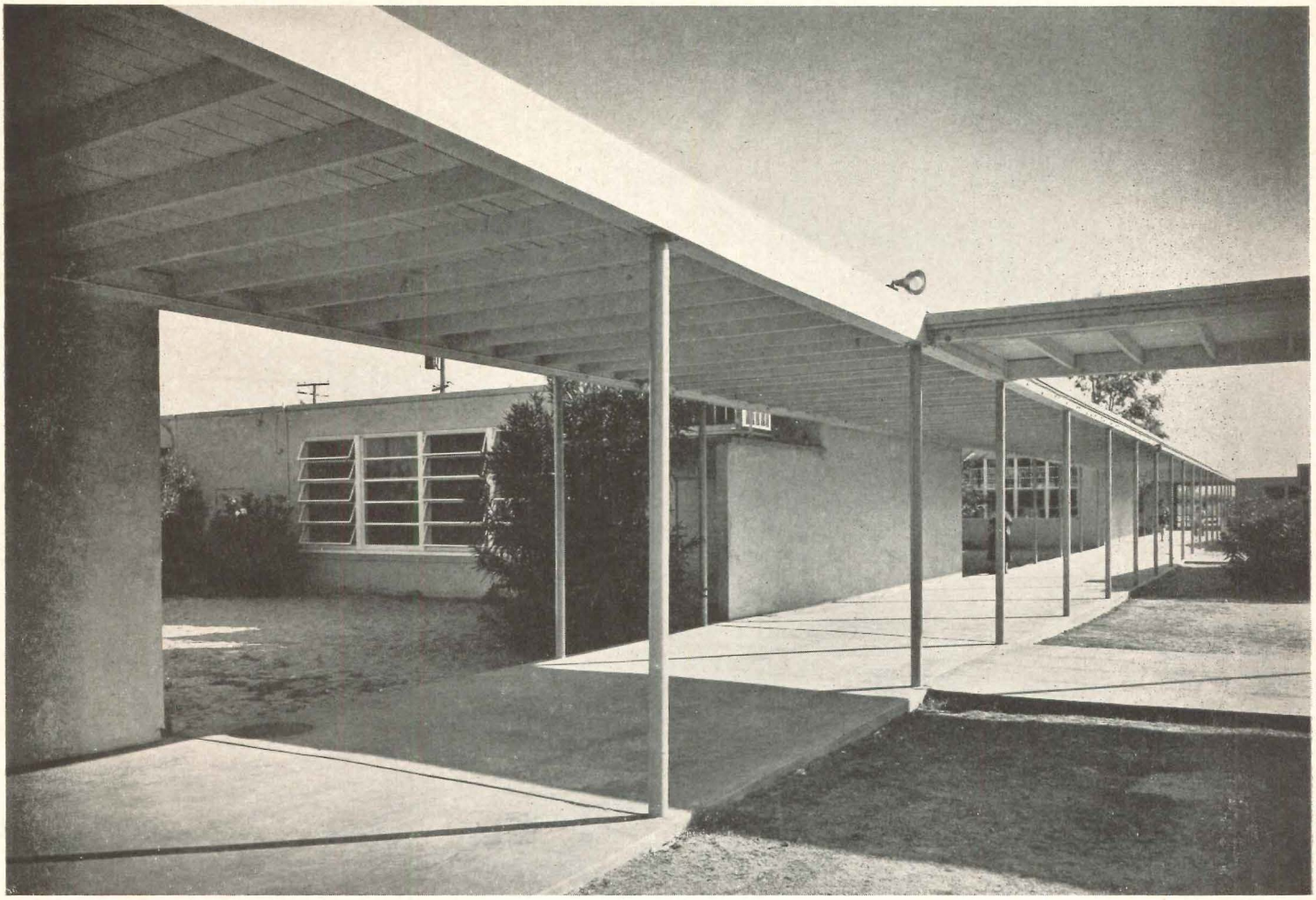
Exra Stoller

DESIGNED FOR MULTI-STAGE CONSTRUCTION

School mirrors its community in character and planning

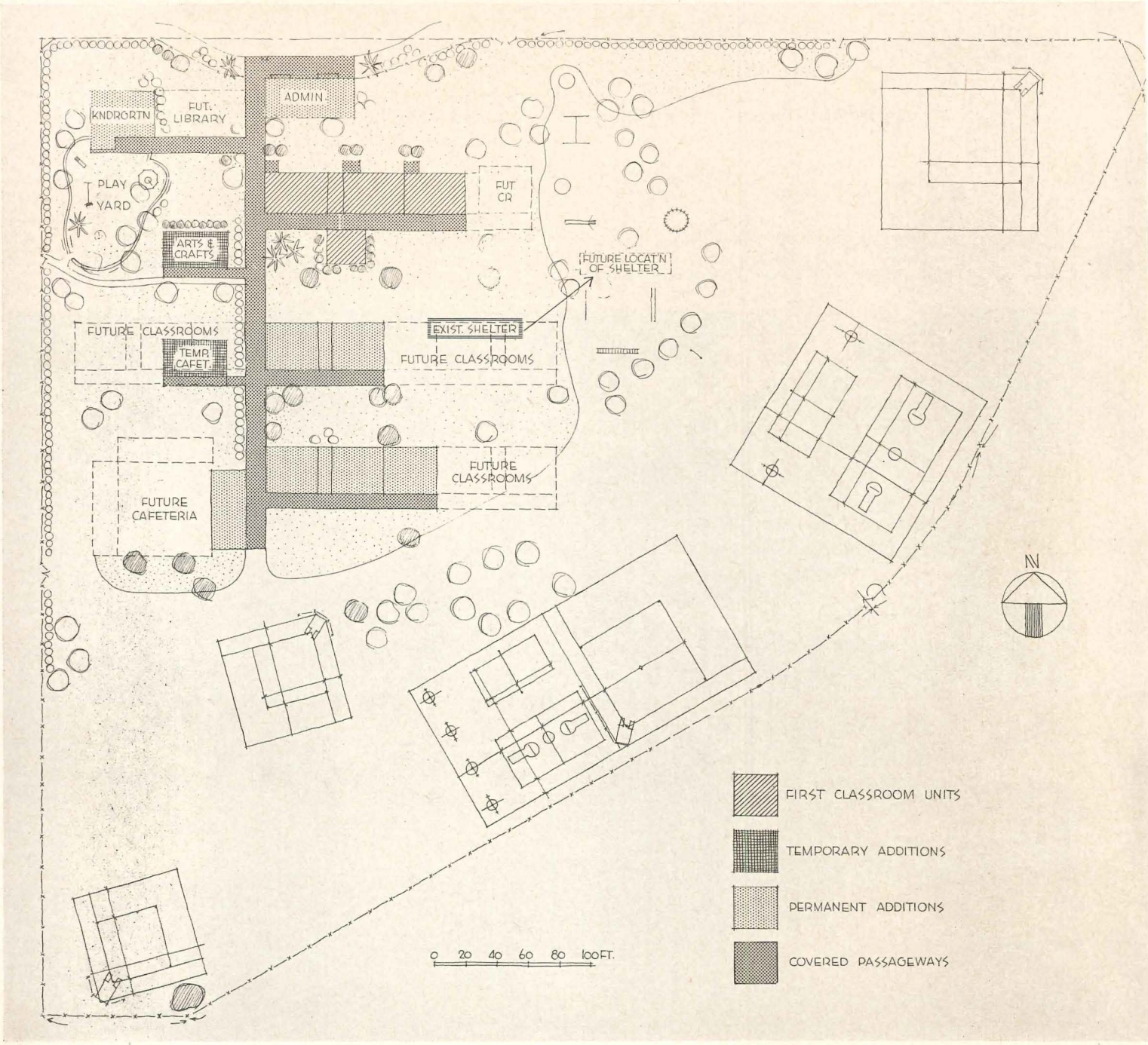
Cahuilla Elementary School
Palm Springs, California, Unified School District

Clark and Frey, Architects



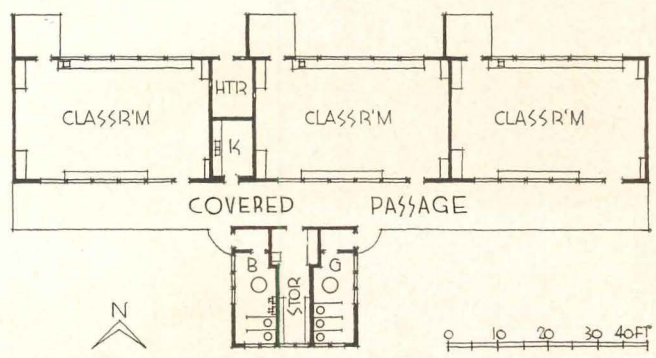
Julius Shulman

IN DESIGNING this sprawling, finger-plan school the architects were able to take advantage of a comparatively mild desert climate and a flat, uncomplicated site. The result was a flexible, open plant which could be built in stages with a minimum of complications. The school began operations in a single original unit of three classrooms with adjunct toilet facilities and has expanded to the interrelated group of buildings shown here. A glance at the plot plan on the following page will show still further expansion planned for the future. If necessary, the scheme could be enlarged even further, to keep pace with community growth. Throughout its successive stages, the school has maintained a character and scale geared to the requirements of the children whom it serves.



CONSTRUCTION COSTS	Totals	Sq Ft
First unit (5000 sq ft)	$28,000	$5.60
Temp. add. (2200 sq ft)	$12,100	$5.50
Perm. add. (12,000 sq ft)	$102,000	$8.50
Total to date (19,200 sq ft)	$142,000	Approx. average $7.80

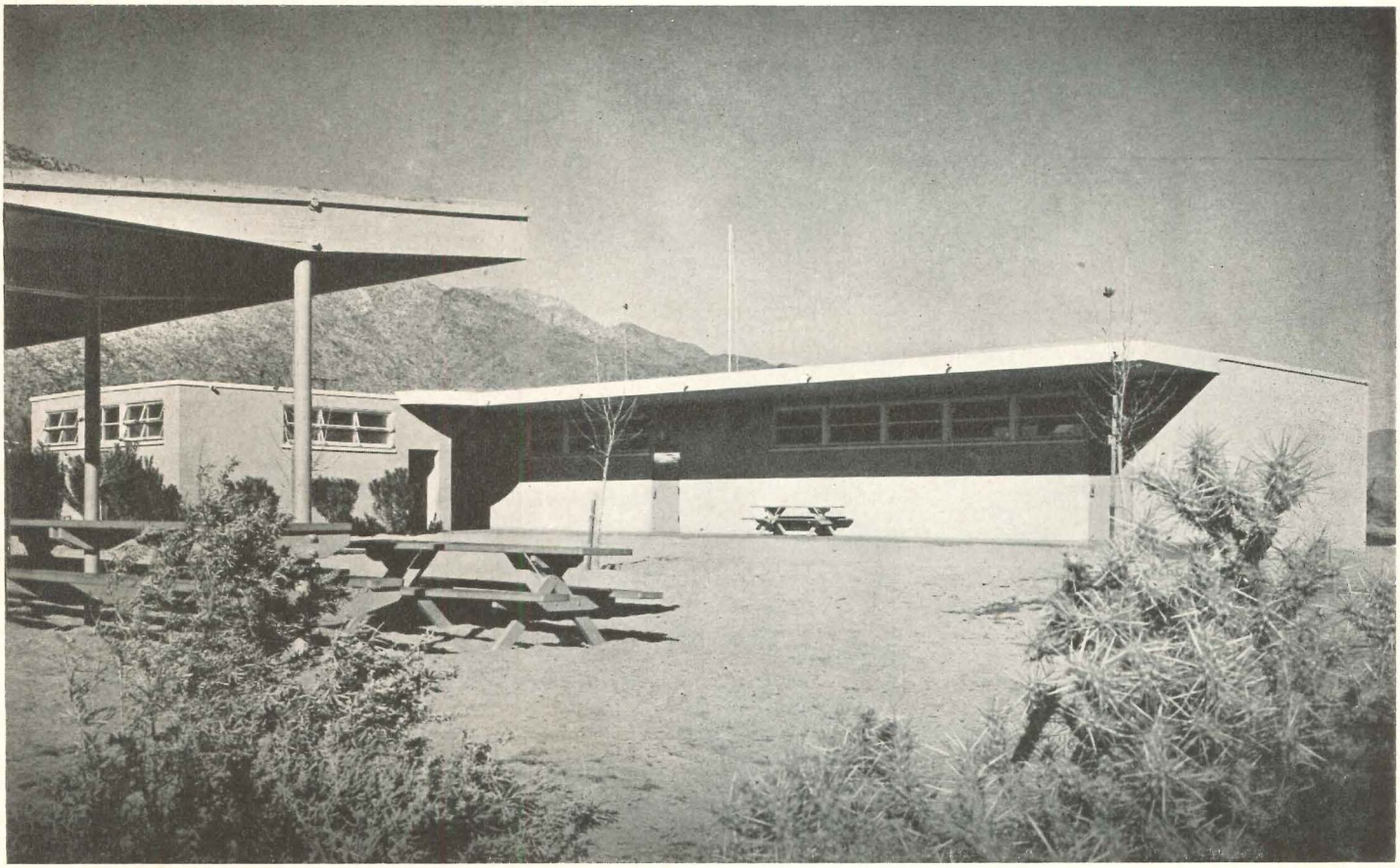
Above: plot plan shows initial, present and projected future stages of school. Below: plan of original classroom building, also shown in photograph opposite page. Separate toilet block is connected by covered passageway



At present, the group includes eight classroom units distributed in three pavilions, a kindergarten, an administration building, two toilet blocks, an outdoor shelter, and temporary cafeteria and arts and crafts buildings. Present plans call for the addition of nine classrooms, a library and a larger permanent cafeteria. The buildings are connected by open, covered passageways which also provide shade and shelter and help shield classrooms from direct rays of the hot desert sun. Generous recreational facilities include outdoor basketball courts, baseball diamonds and space for other activities.

The sprawling plan of Cahuilla School mirrors the community of Palm Springs itself, which spreads its 7700 population over a relatively large area. Minimum size of residential lots is 100 ft square and most houses are one-story. This factor made it necessary to provide three separate dispersed facilities for elementary education and will help determine the ultimate practical limits of expansibility for each. Cahuilla School serves the southern portion of the community.

Construction is of concrete foundation, wood frame and integrally colored cement slabs, poured on grade. Exterior walls are of cement plaster and are painted. Interior walls are plaster, finished with colored stucco. Windows are mostly louver-type and have crank-operated steel sash which permits maximum circulation of air in hot weather. During cold days the buildings are heated by individual gas-fired forced-air furnaces through outlets in concealed ceiling ducts. This system has helped in making the expansion of the school plant simpler and easier.

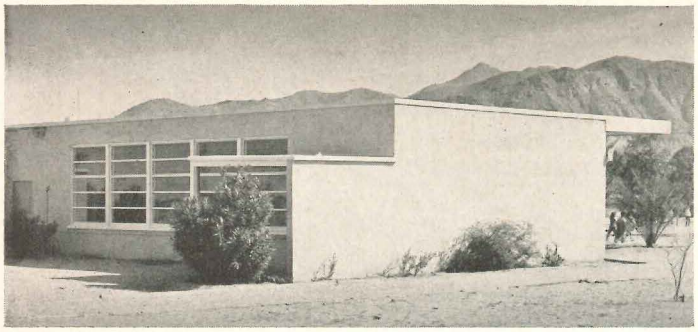


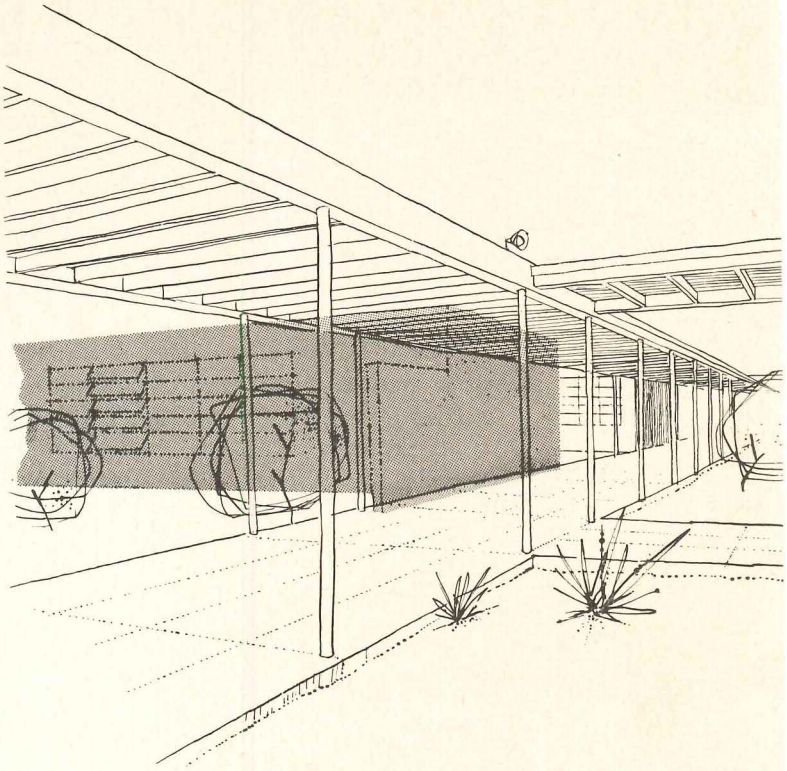
Julius Shulman

First completed classroom building shown in view from south. Cantilevered roof of passage shields classrooms from excess sun

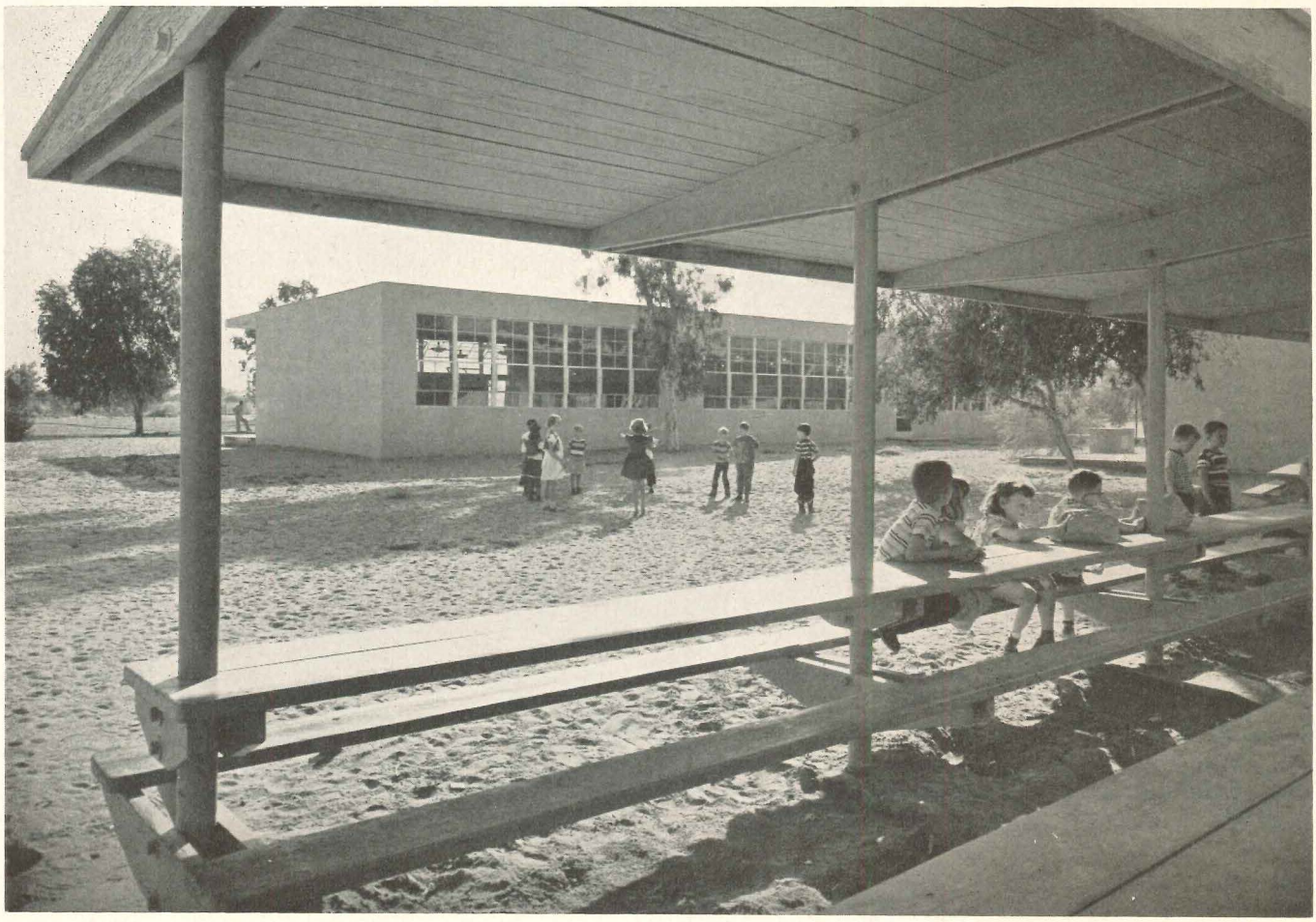
CAHUILLA ELEMENTARY SCHOOL

PERMANENT ADDITIONS

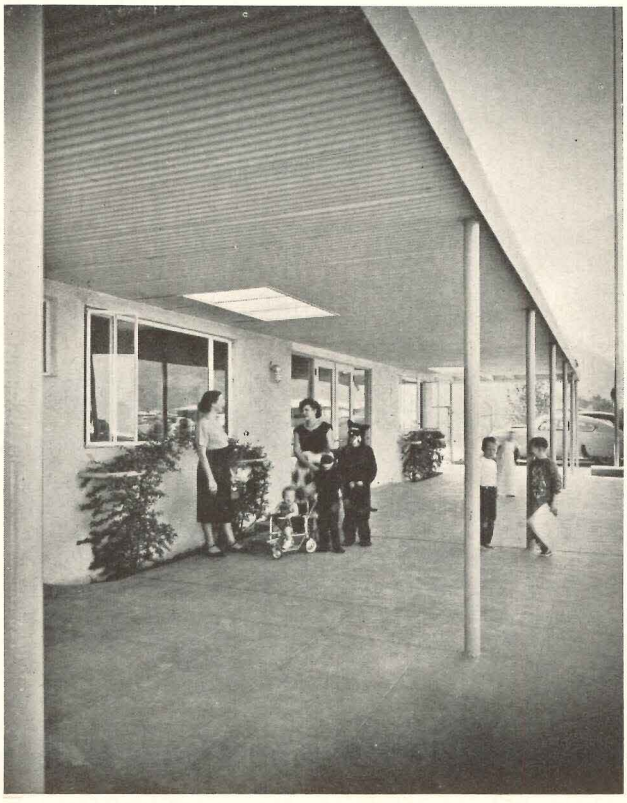




First classroom unit is shown here before and after expansion of school. Above: building as it originally appeared, view from northwest The sketch at right shows the building, shaded area, as it appears today (see also photograph p. 117). Below: outdoor shelter is used during lunch and rest periods

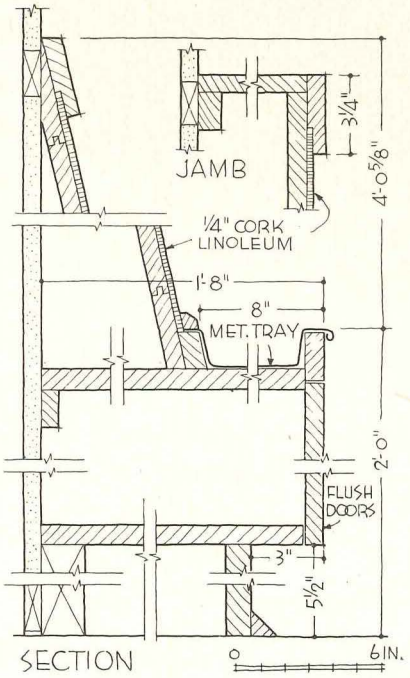


Julius Shulman

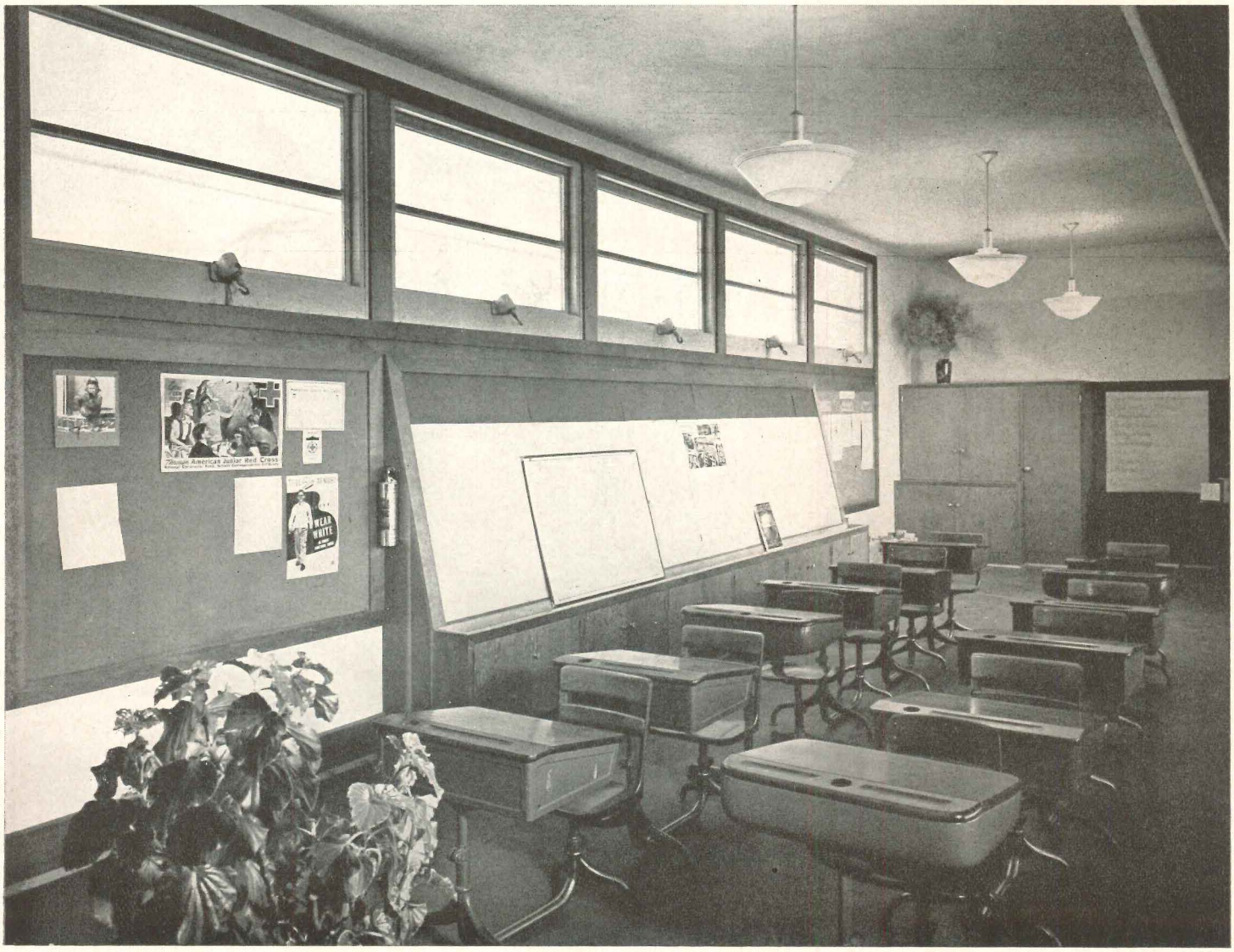


Above: view of kindergarten building, looking west. Low free-form fence at left encloses separate playground. Library building will occupy space at right of photo. Right: entrance to administration building. Note built-in railings to support planting

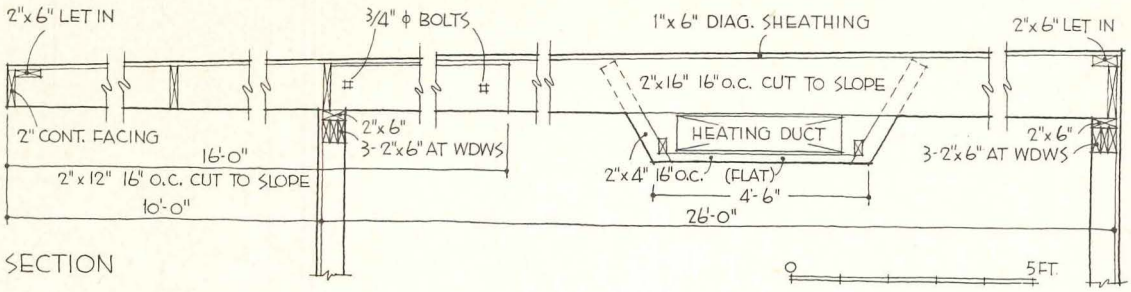
CLASSROOM DETAILS



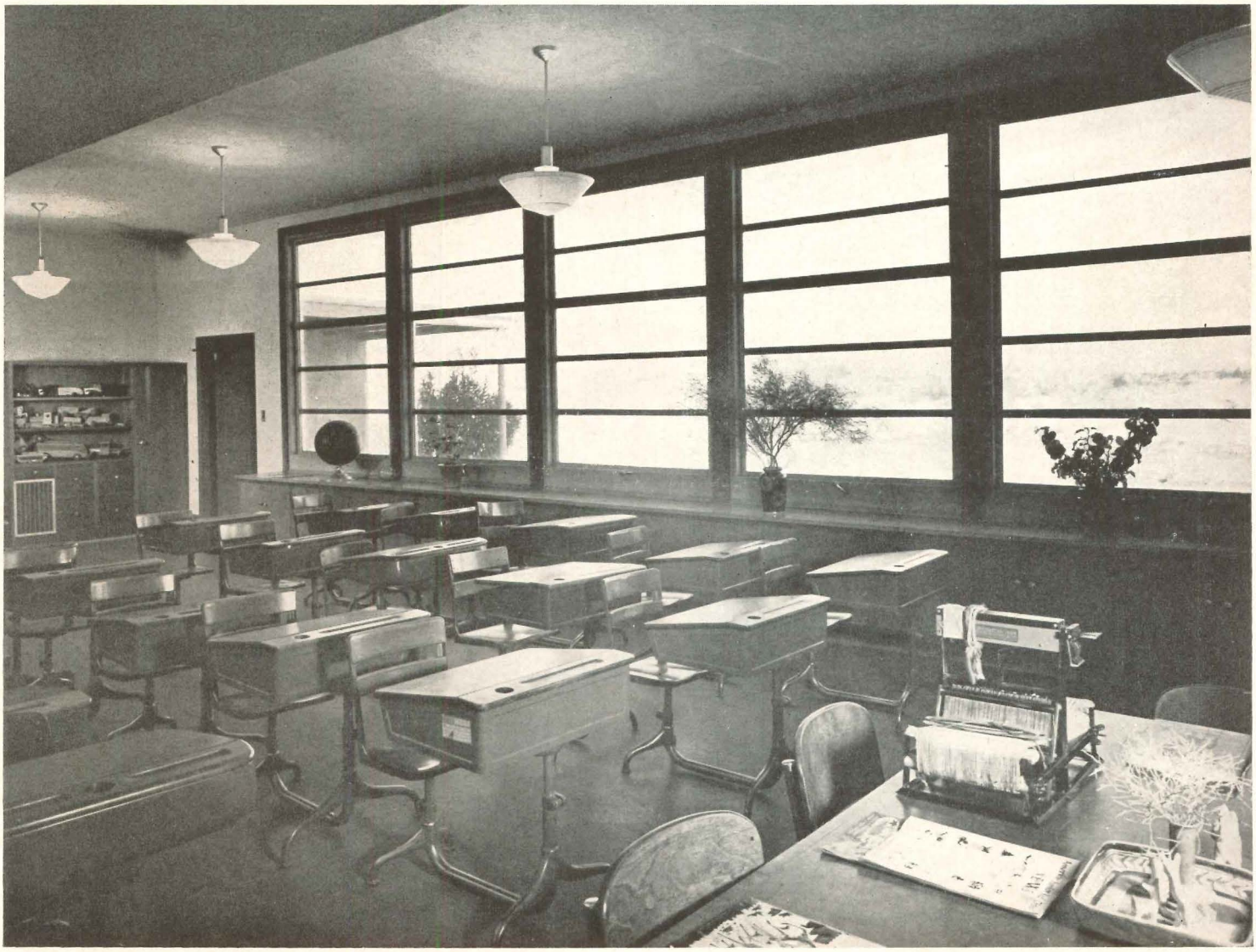
Below: interior of typical classroom. High windows are oriented to south and shielded by exterior passageways. They help control excess sun in summer, but permit low rays to enter in winter. The built-in easel board was especially designed (see detail at left) and has storage space for art work. Classrooms also have porches with sinks and counter cabinets for outdoor activities



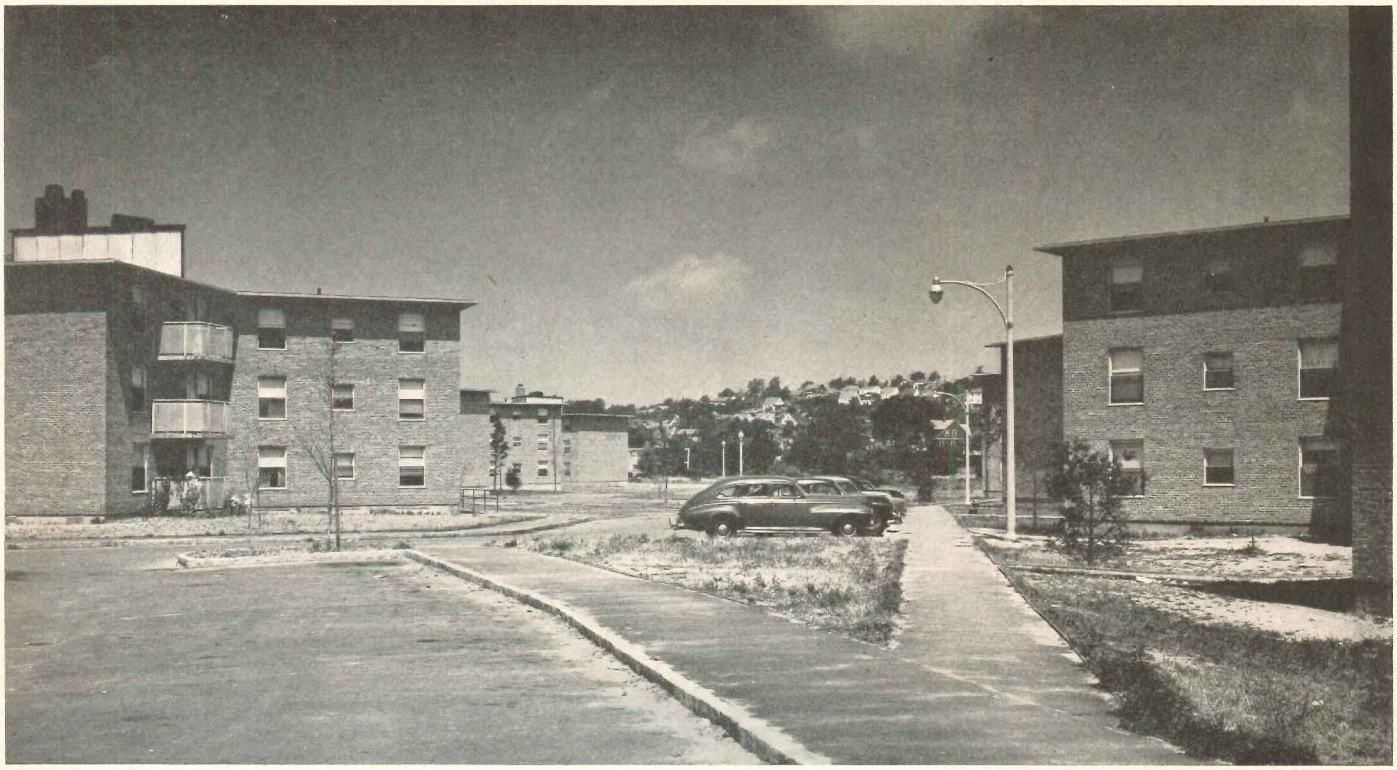
Below: detail shows ceiling construction for accommodation of concealed heating duct (see photographs opposite page and below). Nailing instructions for 1 by 6 in. diagonal sheathing are specified exactly to insure maximum strength. Photo at bottom of page shows large classroom windows in north façade. Door at left leads to individual porch



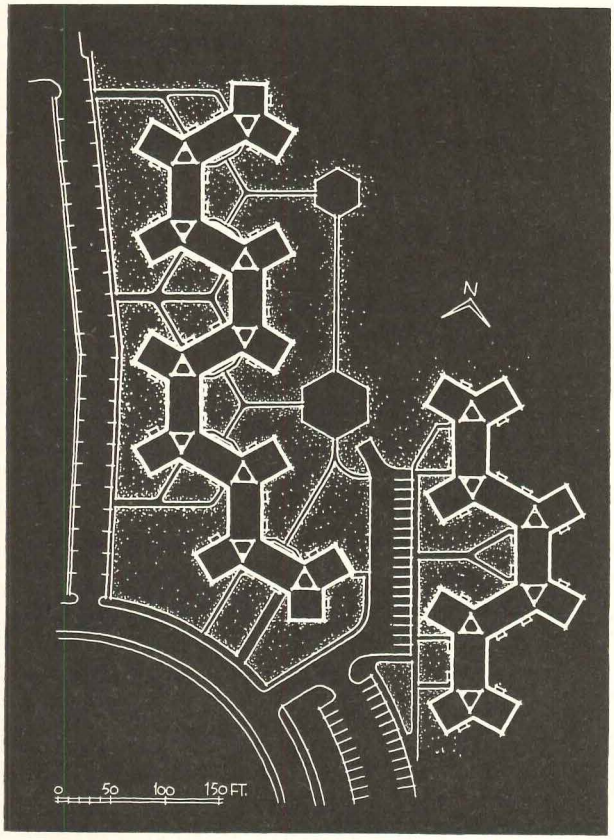
Julius Shulman



HOUSING PROJECT AVOIDS FREIGHT-YARD LOOK



Joseph W. Molitor

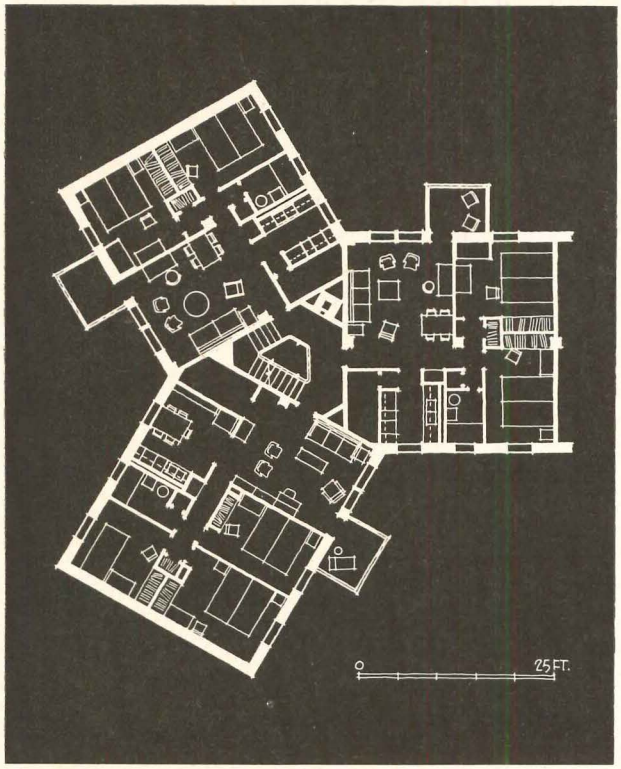


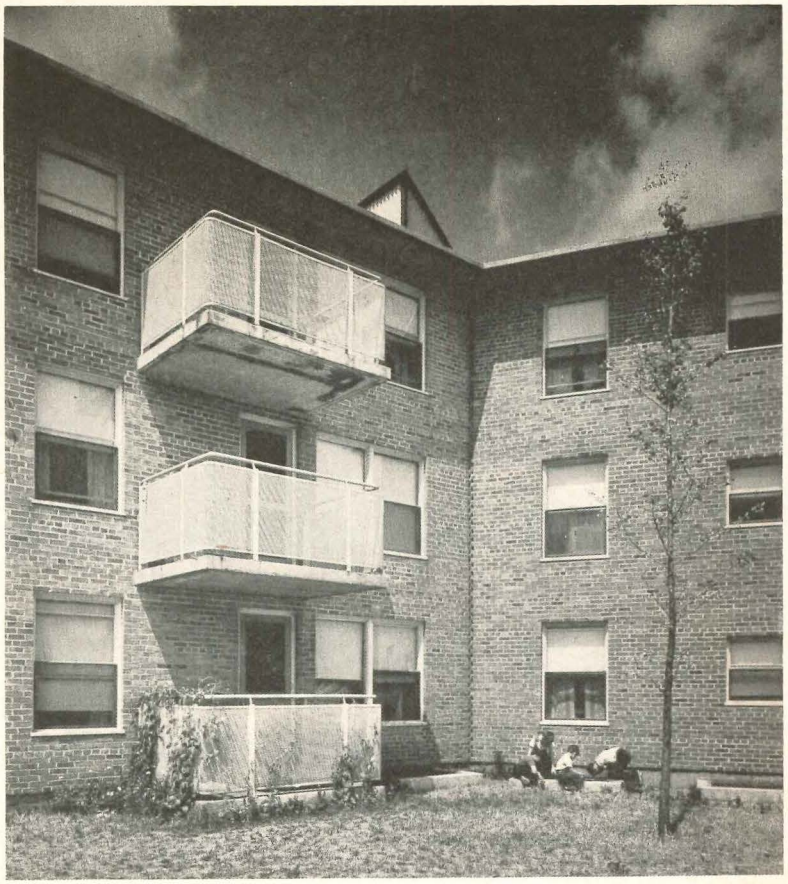
WANTING especially in this instance to avoid the usual slummy associations of a public housing project, the architect worked to develop something better than the customary freight-yard disposition of buildings. The scheme of radiating elements on a 120-degree arc lends interest and variety, also conserves on the number of stairs required for exits. The device also prevents apartments from looking directly at others, gives a wider angle of view, and creates courts of different shapes and sizes.

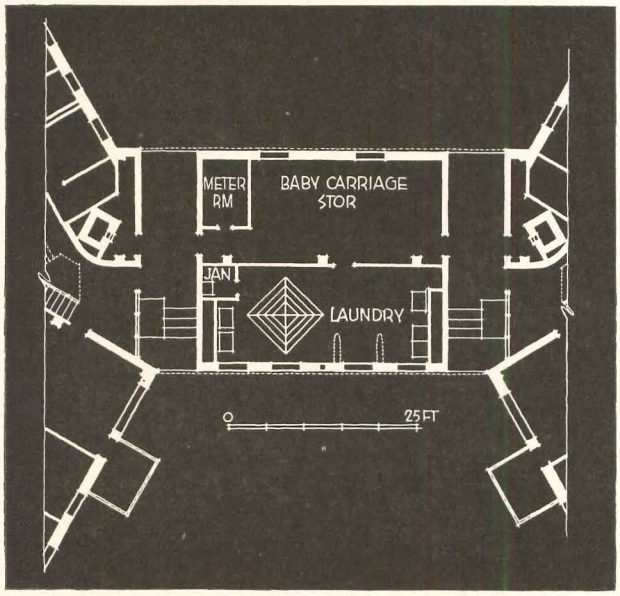
Basements had to be eliminated because of water conditions; hence, at alternating entrances, utility rooms and laundries are placed on the ground floor. Passages through the building give access to play spaces in the center of the project without the necessity of crossing any streets. Each apartment has direct access to laundry and incinerator in stair hall; each also has its own storage room within the apartment.

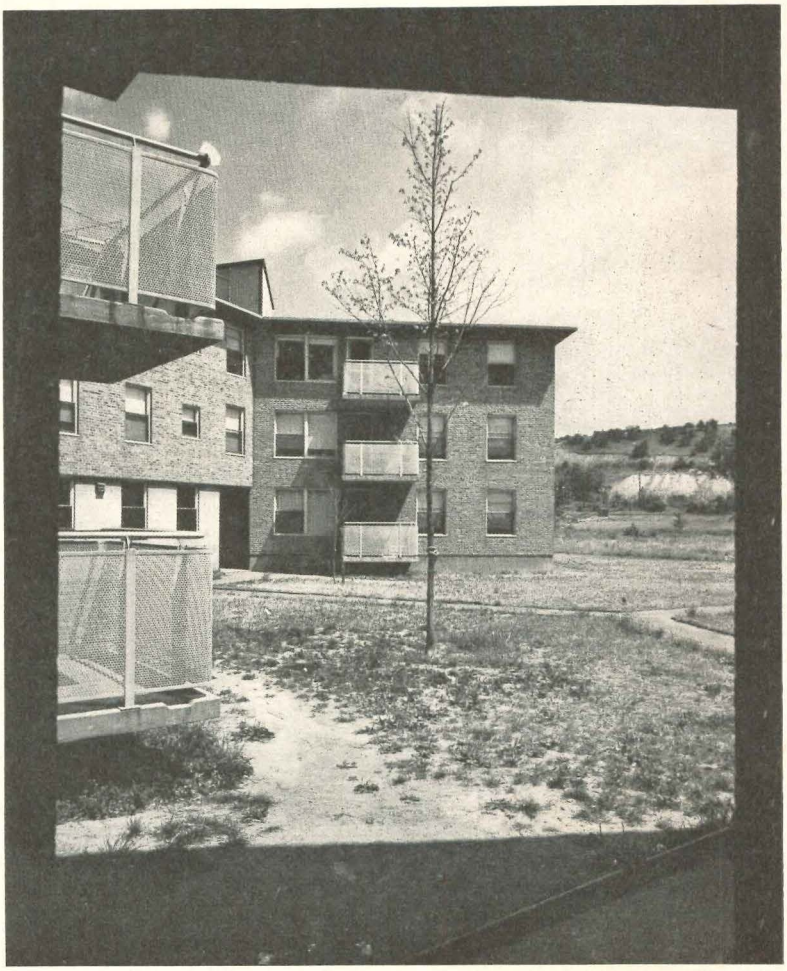
Buildings are fire-resistant, with masonry walls and center columns and concrete floors; heating from a central plant.

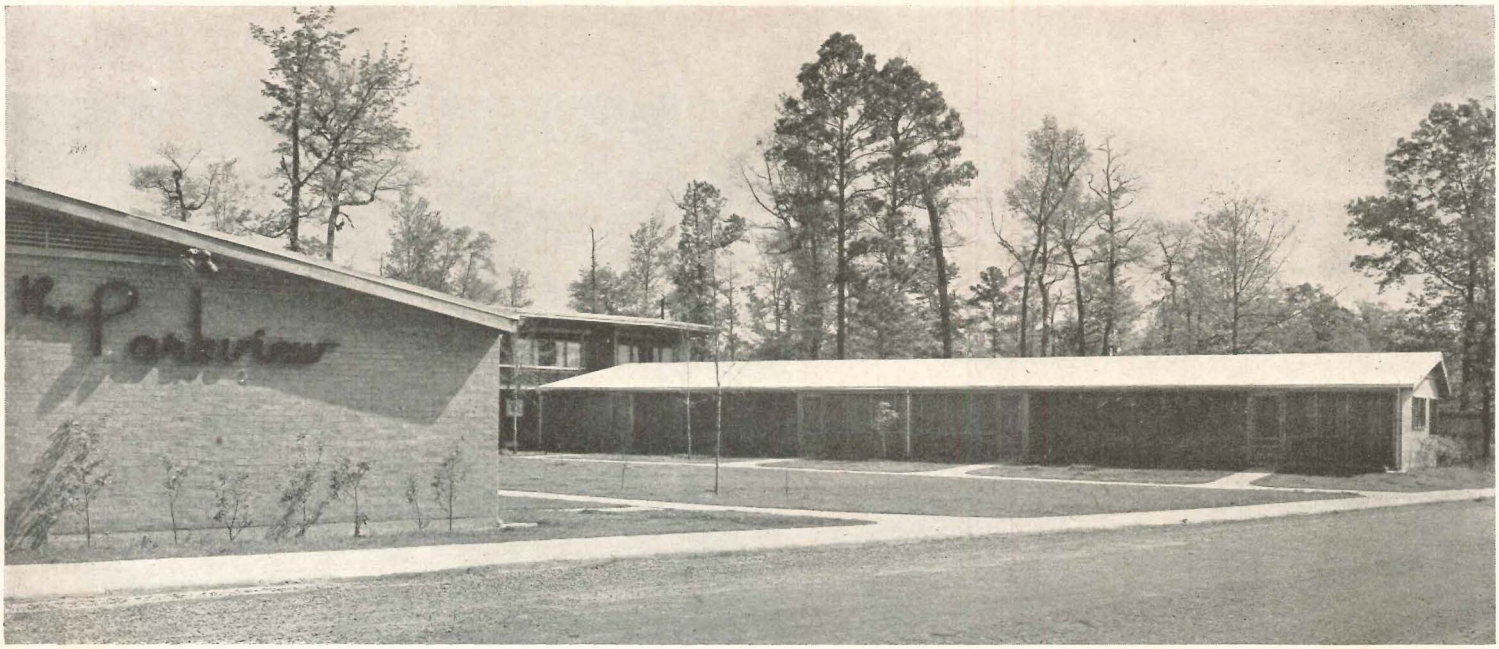
State Aided Veterans' Housing, Chelsea, Mass.
Hugh Stubbins, Jr., Architect
Thos. Worcester, Inc., Engineers
Chambers & Morice,
Landscape Architects and Site Planners









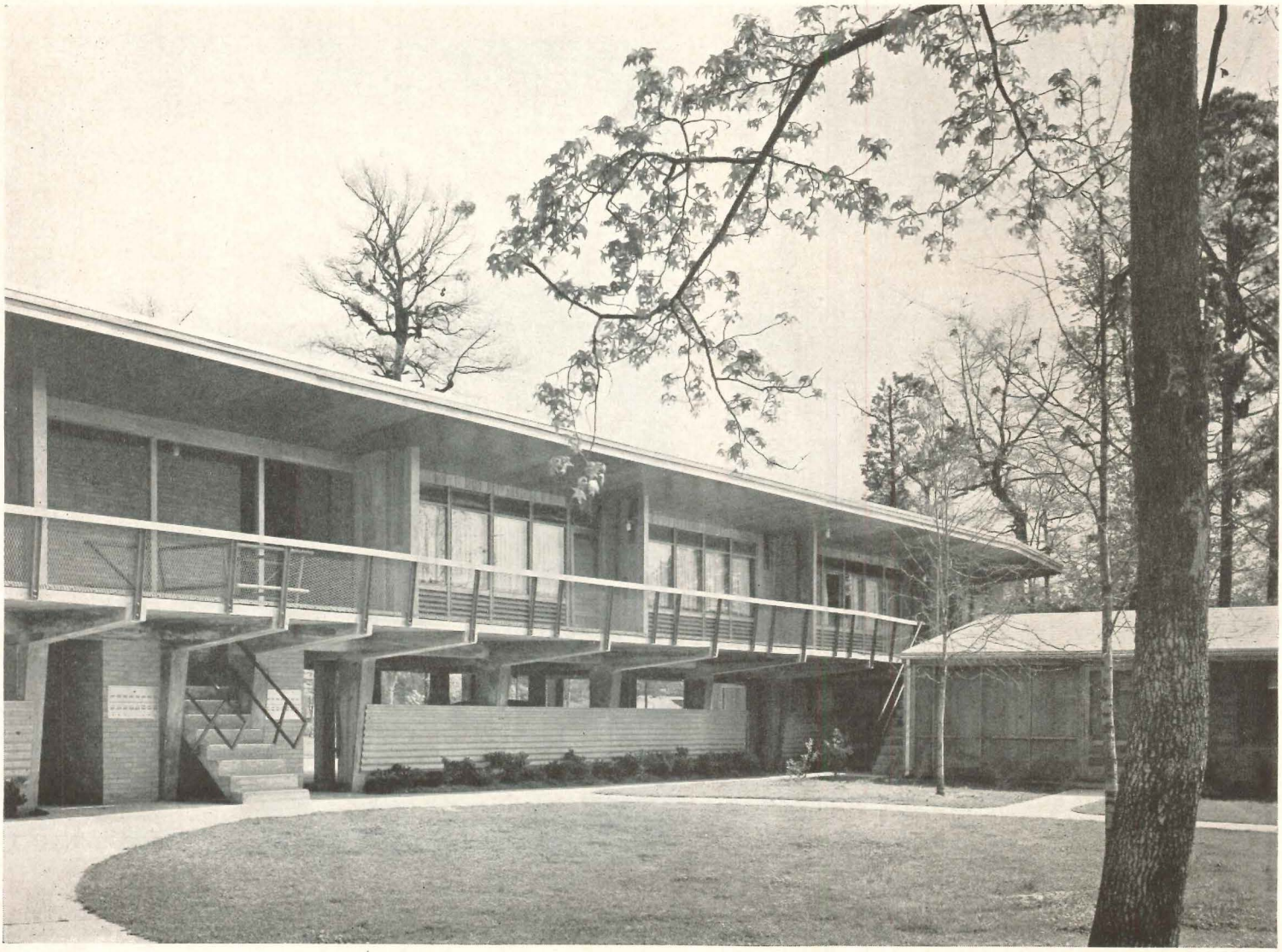


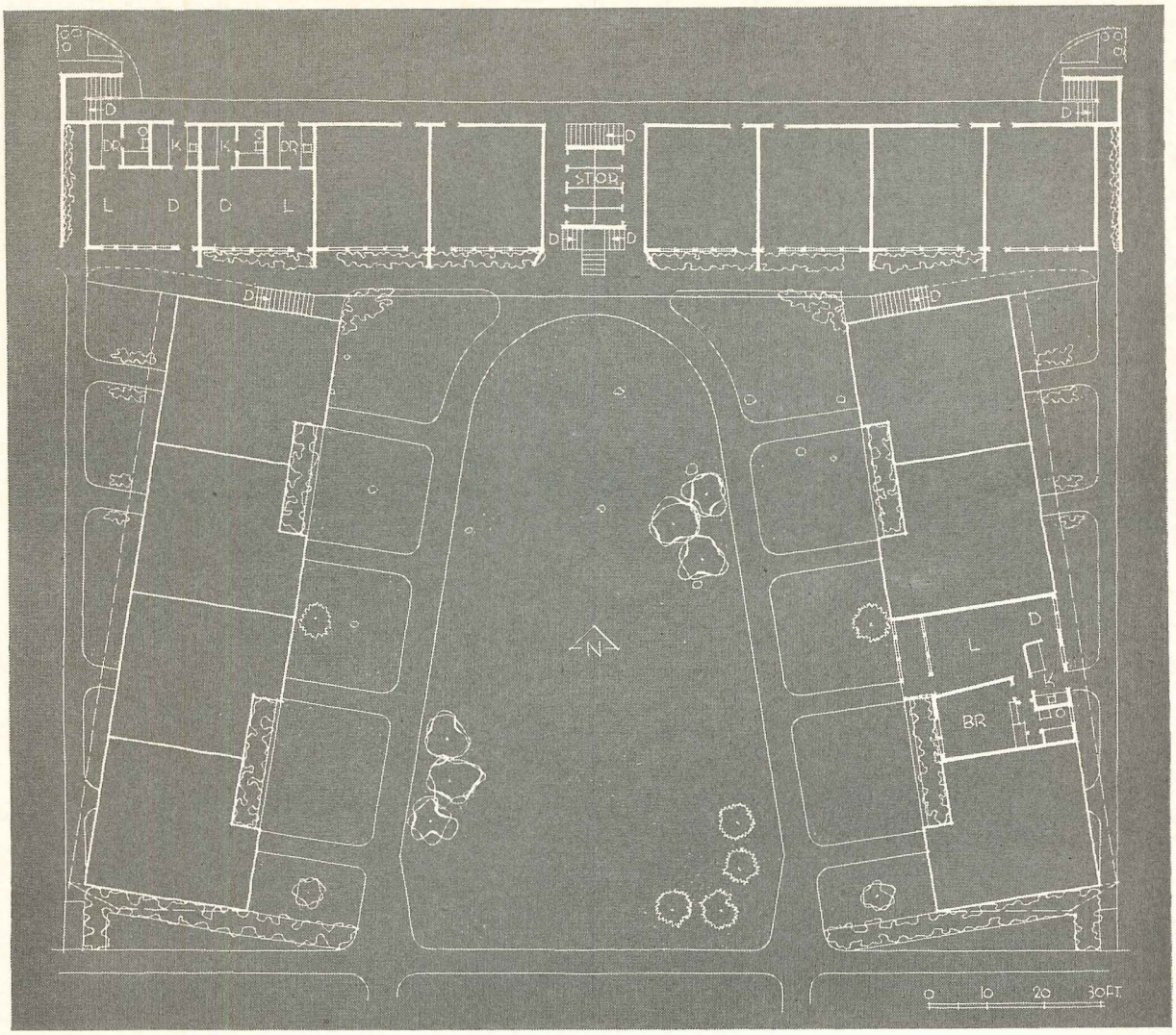
MODERN APARTMENT INTRODUCED IN MILL TOWN

The Parkview Apartments, Springhill, La.

Lester C. Haas, Architect

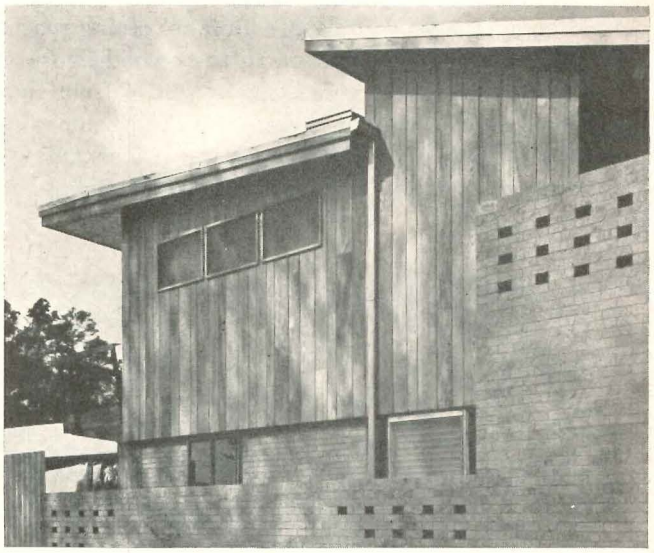
Joseph W. Molitor

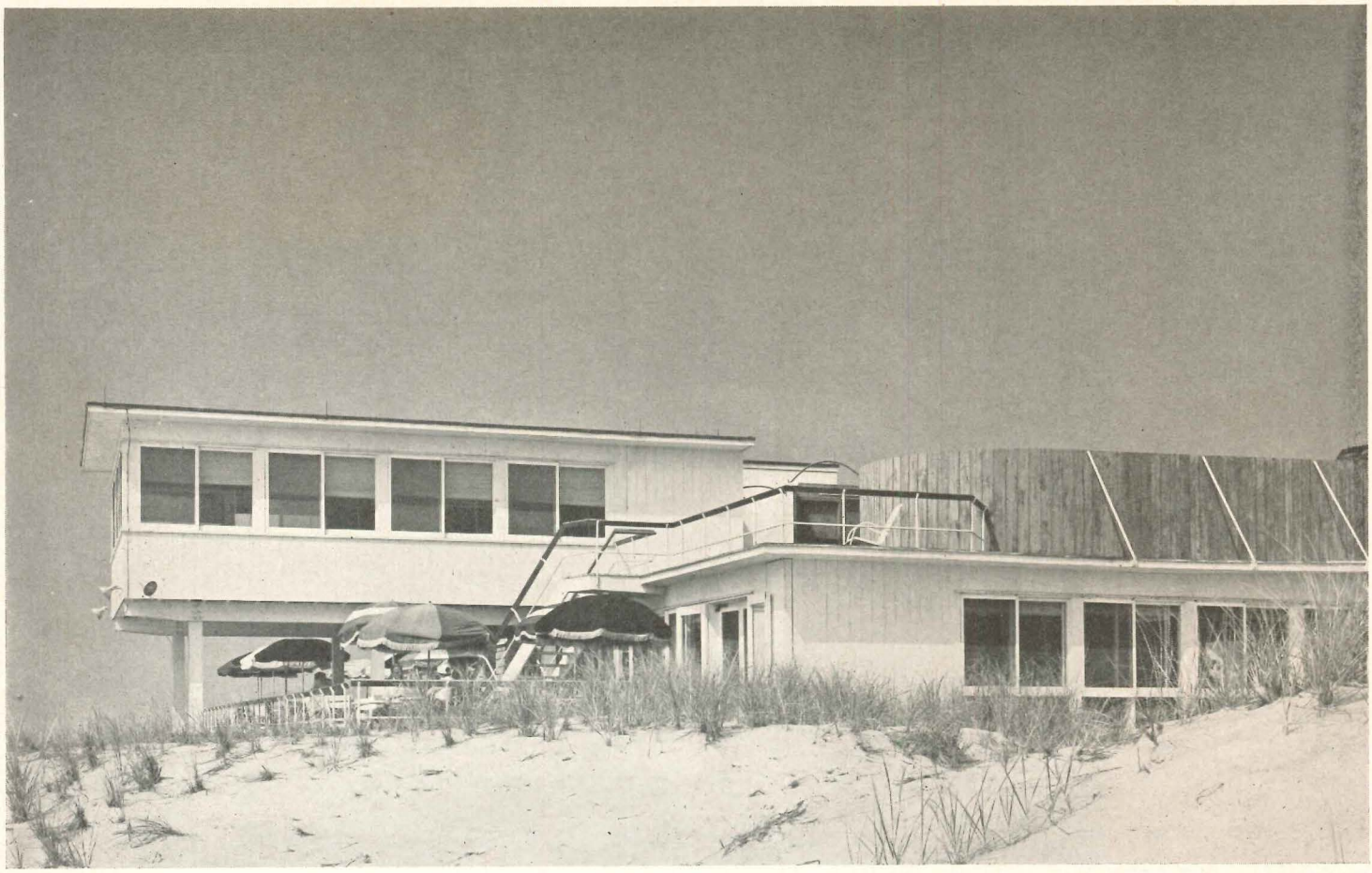




Hinged sliding doors between living room and porch afford "outdoor" living during most of the year. Efficiency units have ventilating wood louvers below and glass transom sash above fixed glass on south wall. Clerestories provide light and ventilation in kitchens and baths. Kitchen work counters in all apartments have sliding table tops that protrude through walls to form end tables for telephones, etc., and extend their full length to serve for dining or study

THE OPEN "U" SHAPE of this apartment provides many attractive features not usually found in the conventional apartment building. Each of the eight one-bedroom units on the ground level has its own screened porch, which serves as a private entrance to the living quarters inside. The eight efficiency apartments at the back of the "U" are elevated, assuring privacy and permitting better ventilation and view than would be possible on ground level at that particular end of the building. This also allows for on-site, sheltered parking, service facilities and a central heating plant beneath the units. Heating of each unit is by ceiling radiant panels. Bearing walls and unit separations on ground floor are brick — exposed on the inside to minimize maintenance and decoration costs. Roof is lightweight insulating concrete — covered by reflective aluminum roofing.





SEASIDE HOTEL IS REMODELED

Dune Deck Hotel, Westhampton, Long Island — *William Lescaze, Architect*

EXTENSIVE REMODELING, which included an addition to the existing structure, has turned a formerly drab looking hotel into an attractive summer resort. Located on a broad sandspit separating the Atlantic Ocean from Moriches Bay on Long Island's south shore, the hotel needed an enlarged boardwalk, additional dining space and the transfer of the kitchen to the second floor — adjacent to the dining rooms. The entrance from the parking area was freshly treated — blending the old and the new in such a way as to create a harmonious balance (lower left photo, opposite page). Douglas fir has been used for framing; interior walls are plywood; floors in lobby and cocktail lounge are cork. Horizontal sliding windows in three walls of the dining room provide excellent ventilation and light and give a view from all parts of the room. An outdoor dining terrace on a section of the boardwalk is partially protected by the overhanging new addition to the building. Interior furnishings are contemporary Swedish designs made in this country.

Future plans call for remodeling of sleeping quarters, located in another wing of the building.

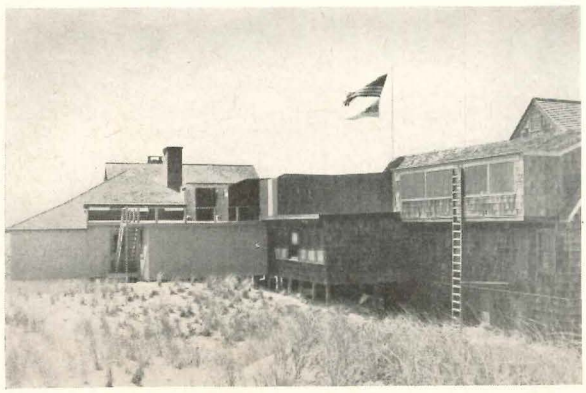
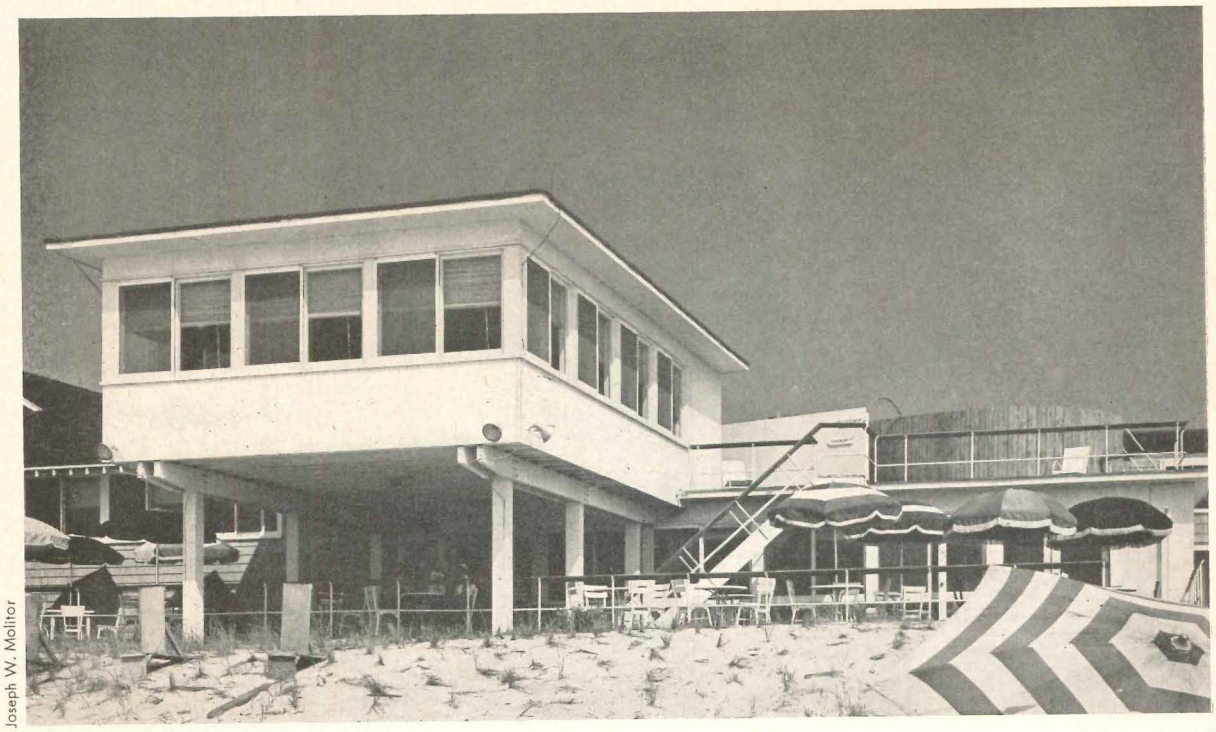
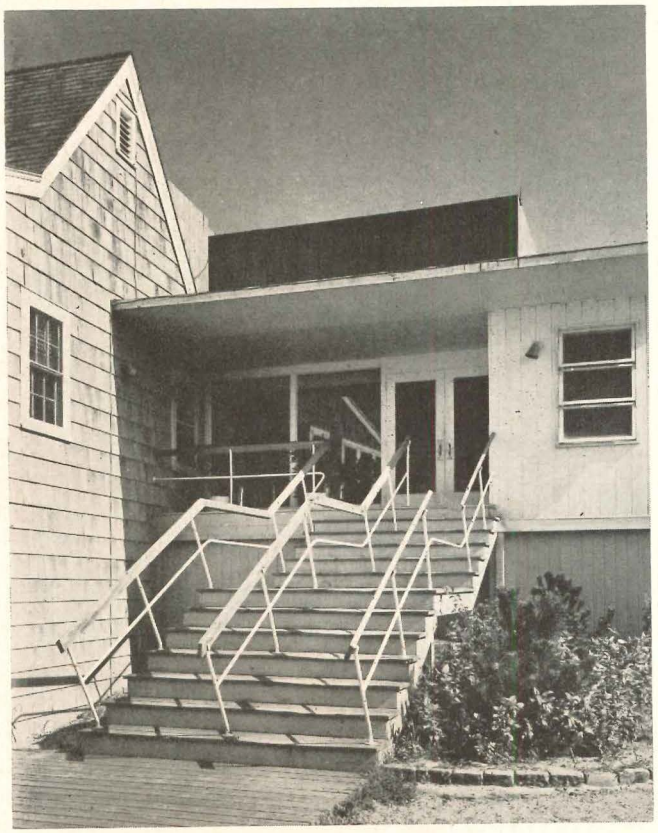
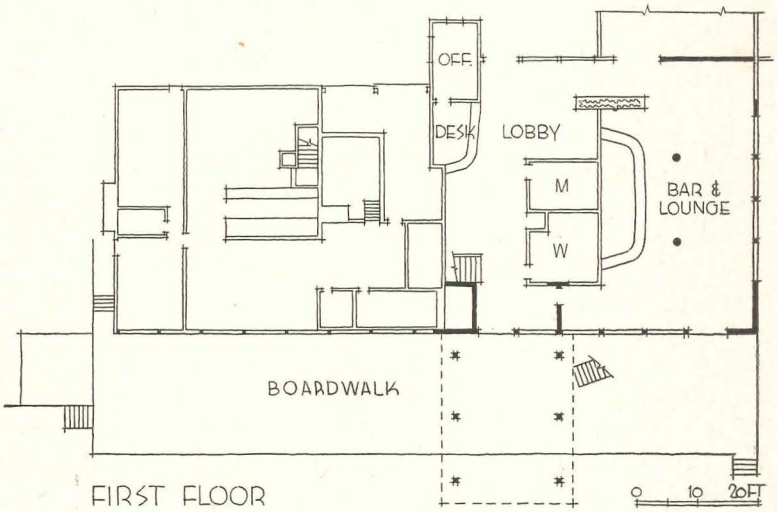


Illustration at left shows the hotel as it looked before remodeling—a bleak and cold structure, as compared with the new and improved façade that it now boasts. Entrance from parking area (opposite) unites the old and the new with a simply balanced grace

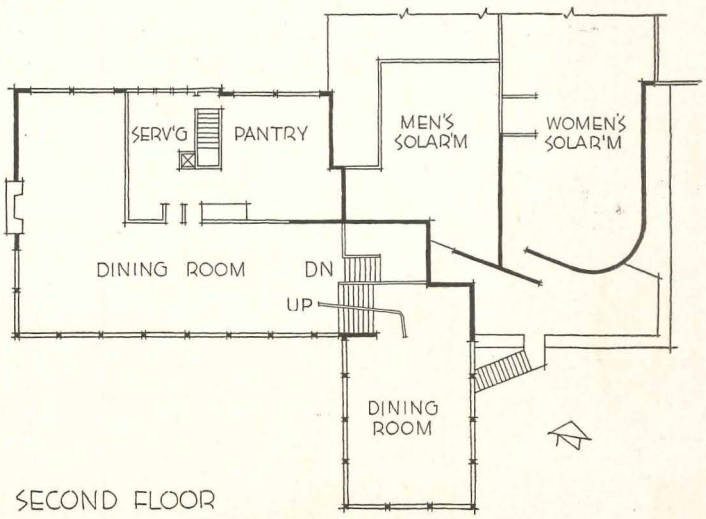


Joseph W. Molitor

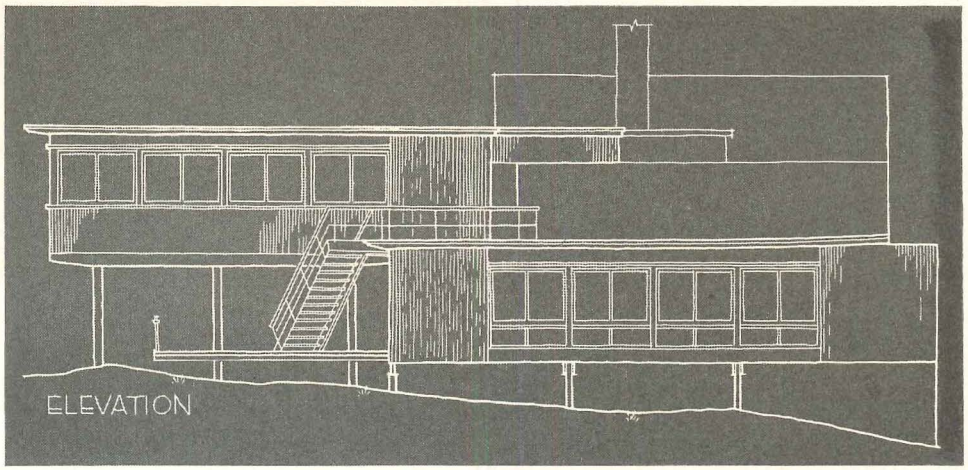




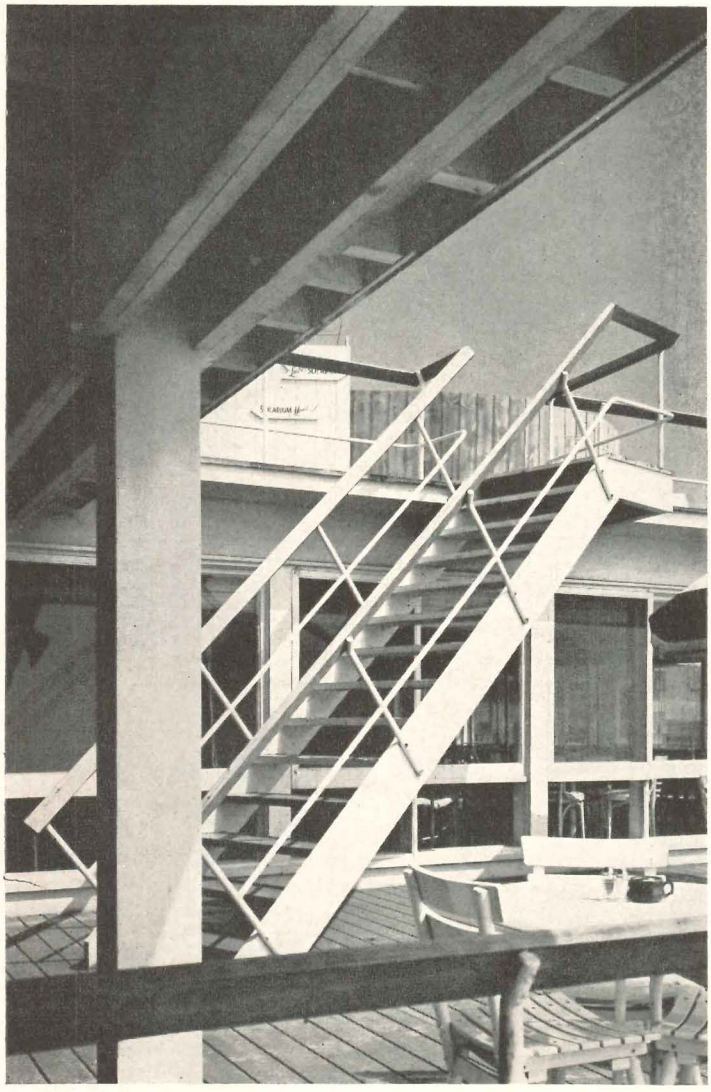
FIRST FLOOR



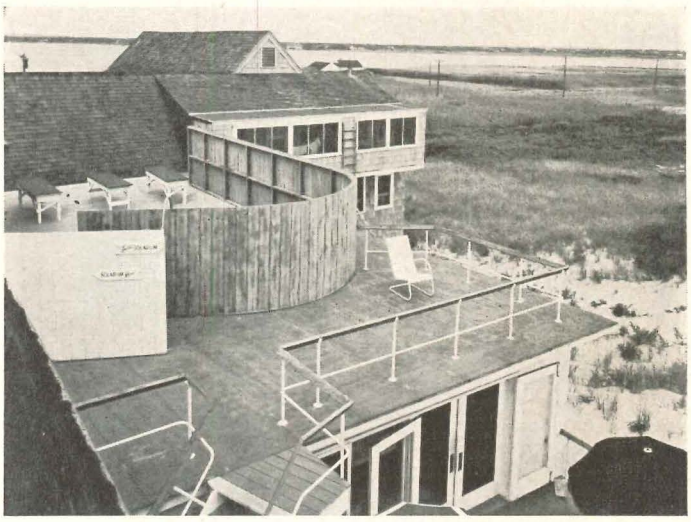
SECOND FLOOR



Elevation above shows details of suspended dining room addition over boardwalk. Sliding glass windows in cocktail lounge and new dining room enhance view and provide excellent ventilation

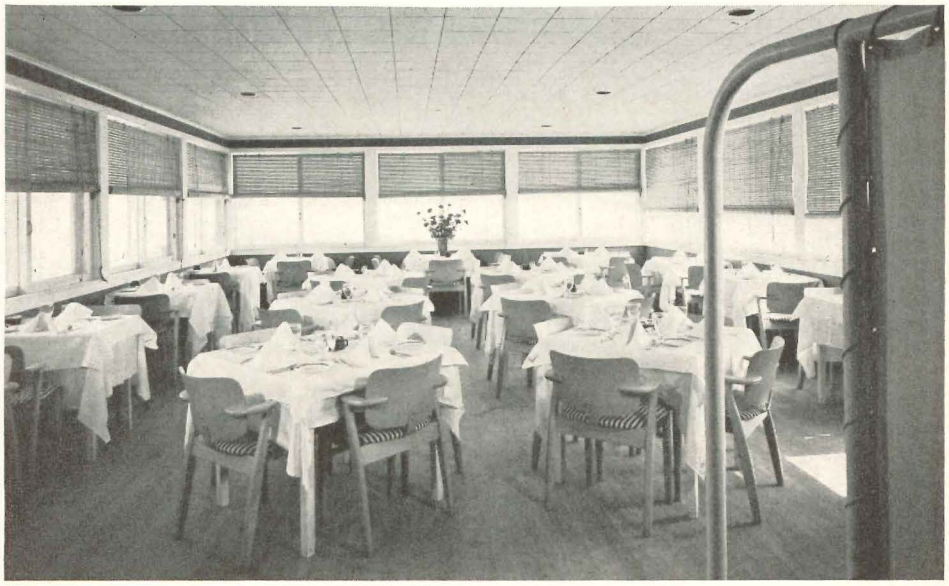


Joseph W. Molitor



Left: steps leading from dining terrace on boardwalk to sun-bathing areas on upper deck. Entrance to lobby and cocktail lounge is through glass doors

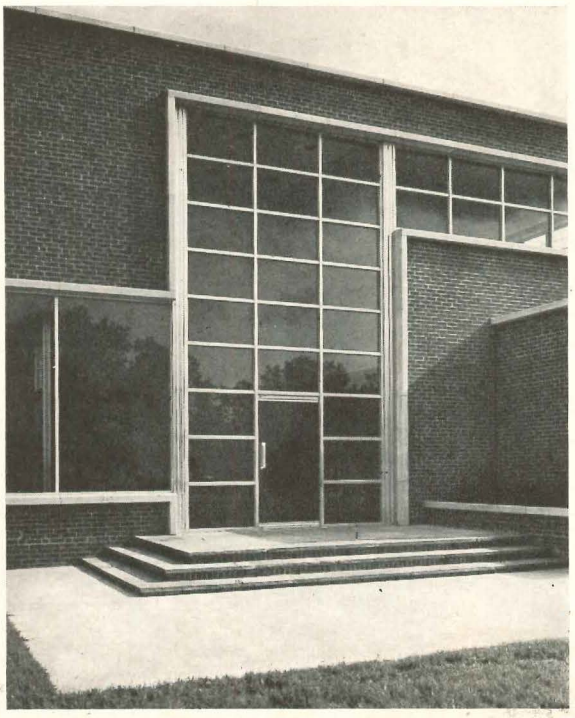
Lobby, above, facing entrance from parking area. Entry to both dining rooms is by stairway at left. Cocktail lounge is to right of lobby



New dining room, above, overlooks ocean; has sliding glass windows on three walls. Bar, below, is accessible to outdoor dining terrace

SUBURBAN SITE FOR COCA-COLA BOTTLING PLANT

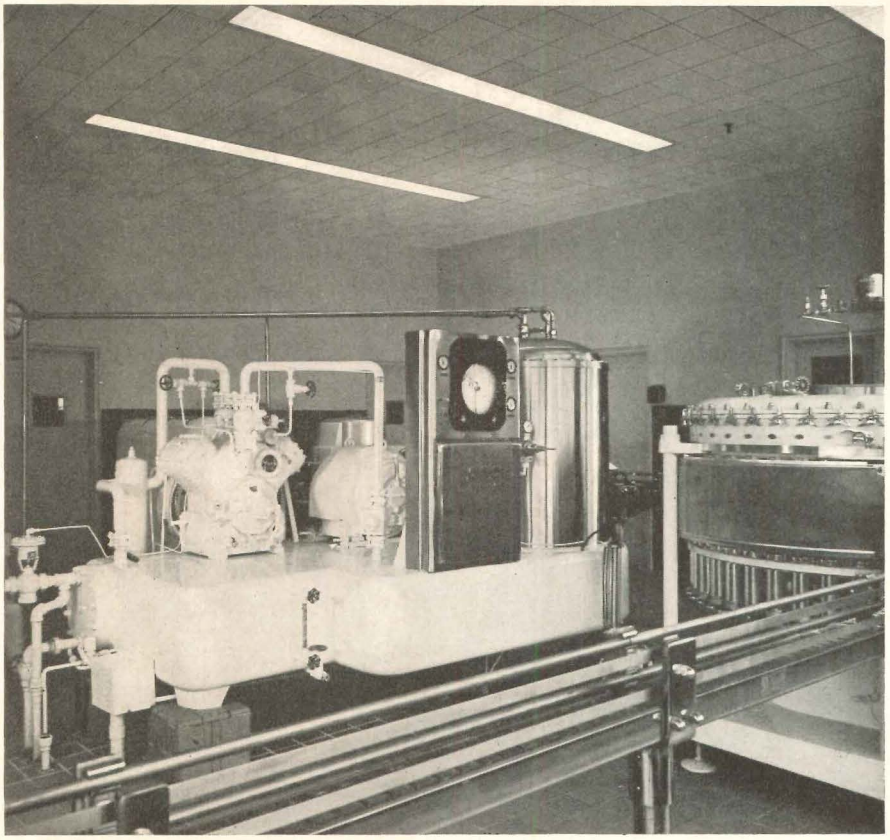
Kinston, North Carolina *John J. Rowland, Architect*

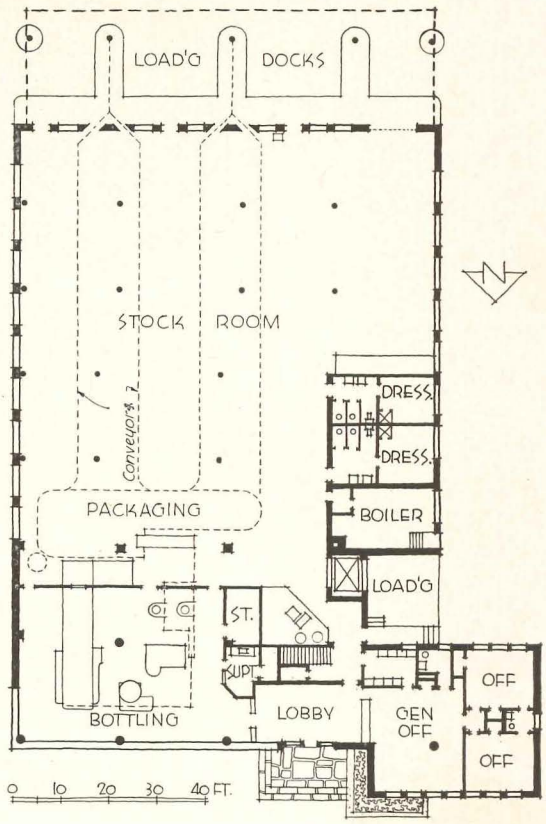


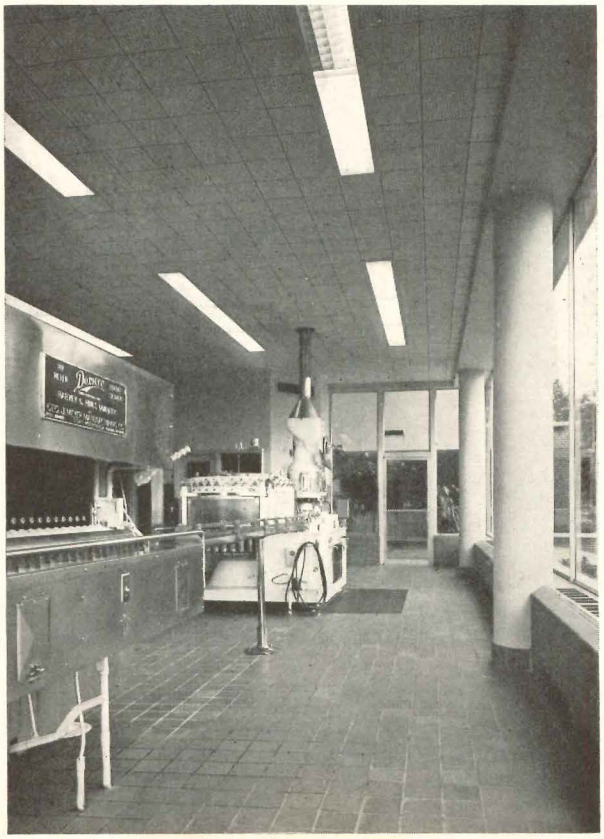
THE SITE for this Kinston, N. C., Coca-Cola bottling plant, on the outskirts of the city, was selected to avoid down-town traffic congestion and provide adequate facilities for off-street loading and unloading.

Following the plan of most Coca-Cola bottling plants — in which the bottling process is displayed to the public — the rear warehouse section is fronted by a large, window-walled bottling room. Bottles travel by a conveyor system from one to the other, affording a capacity of 12,000 bottles per hour. On the second floor, above bottling room and lobby, are caustic, syrup and file rooms, as well as storage space, lobby and conference room.

Completed in 1949, the plant was planned for the addition of another unit to the east. Planning consultant was the engineering department of the Coca-Cola Company of Atlanta of which Mr. Lynn LaGarde is chief engineer.

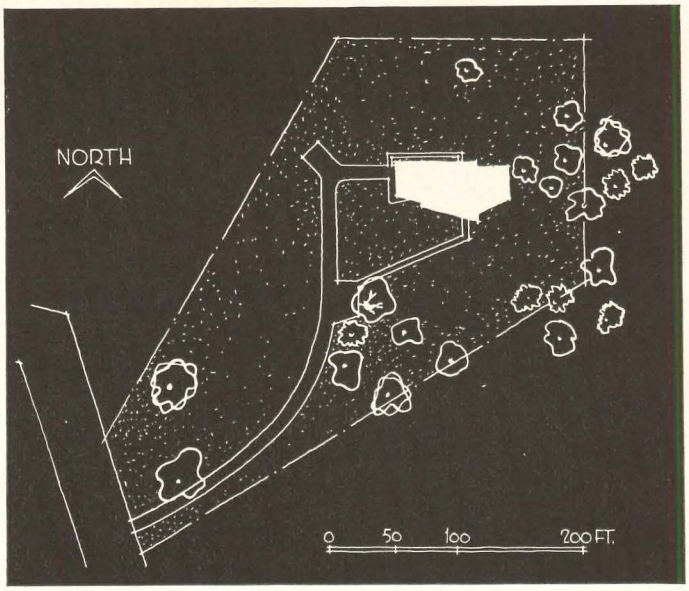






Joseph W. Molitor

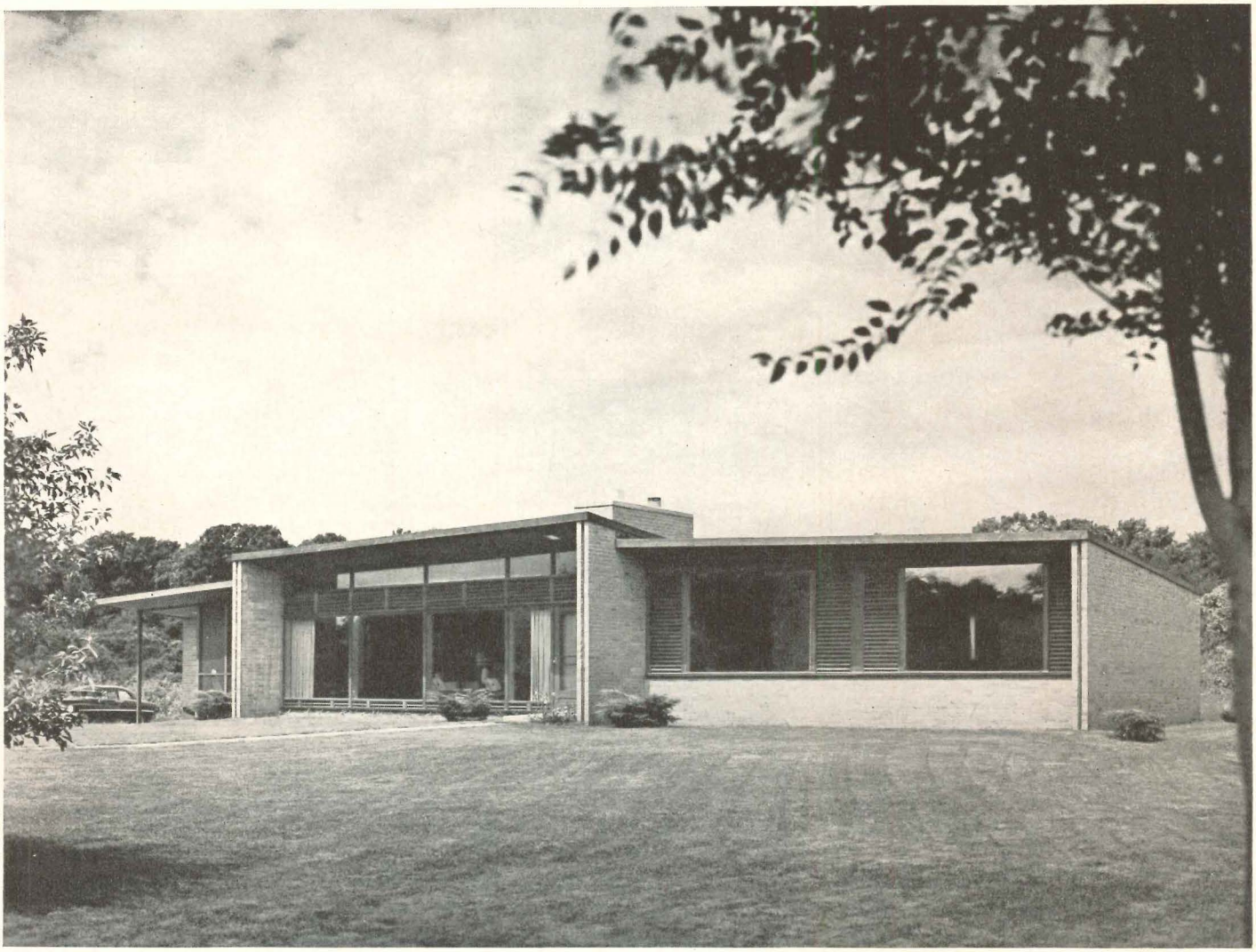
The bottling room, above and right, has quarry tile floor and wainscot and acoustic ceiling. Fan blows across front window-wall to prevent condensation. The offices and lobby have rubber tile floors and acoustic ceiling and are equipped with year-round air conditioning



DESIGNED FOR

House for William E. Neumann

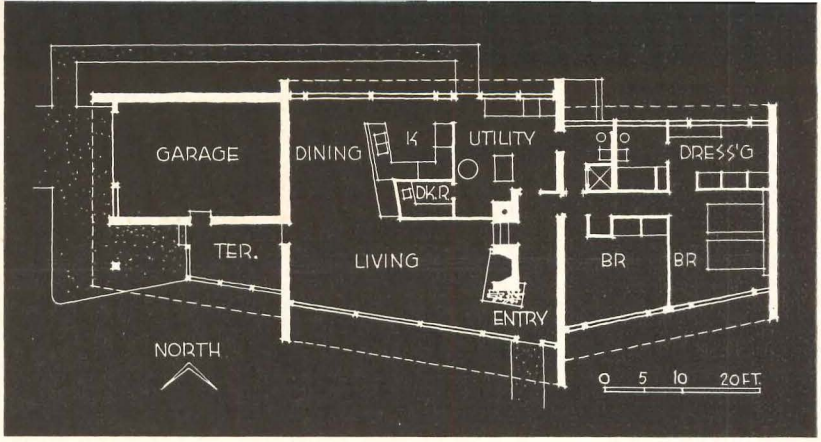
Du Page County, Illinois



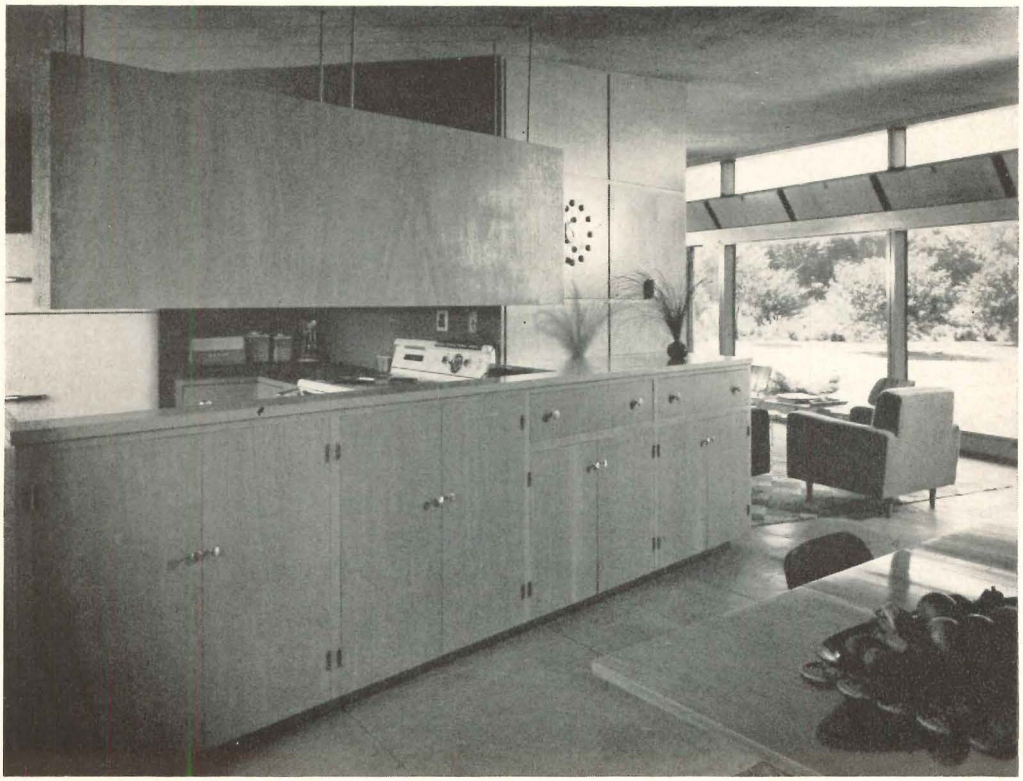
Extending brick cavity walls beyond glass plane expresses the three-part plan and supports overhangs. Precise orientation for maximum solar effect. Top and bottom ventilation through screened louvers

INFORMAL LIVING

George Fred Keck–William Keck, Architects



The open living-dining-kitchen area gives the guest at table a pleasant sense of "being near the kitchen" while still enjoying the view



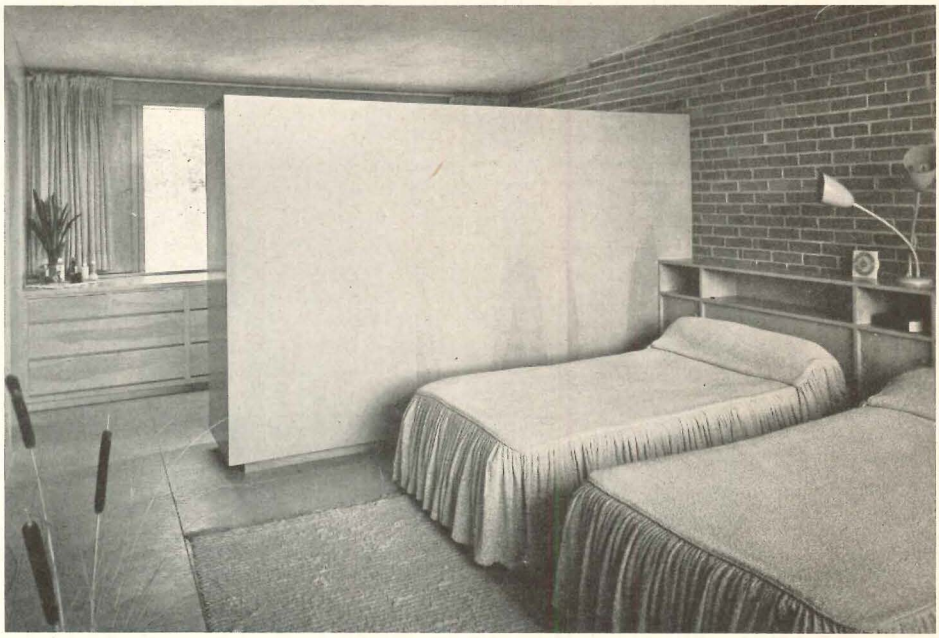
Hedrich-Blessing

THE OWNERS REPORT, "we are experiencing a most comfortable and relaxed life in our . . . house. Satisfying esthetically and for ease of maintenance."

A sense of openness is achieved by sloping the roof up to the south over large glass areas and by a single space for living-dining-kitchen. This almost U-shaped area is wrapped around the owner's darkroom and abuts the utility room. In a maidless household, such an arrangement allows host and hostess to chat with their guests while preparing drinks and dinner.

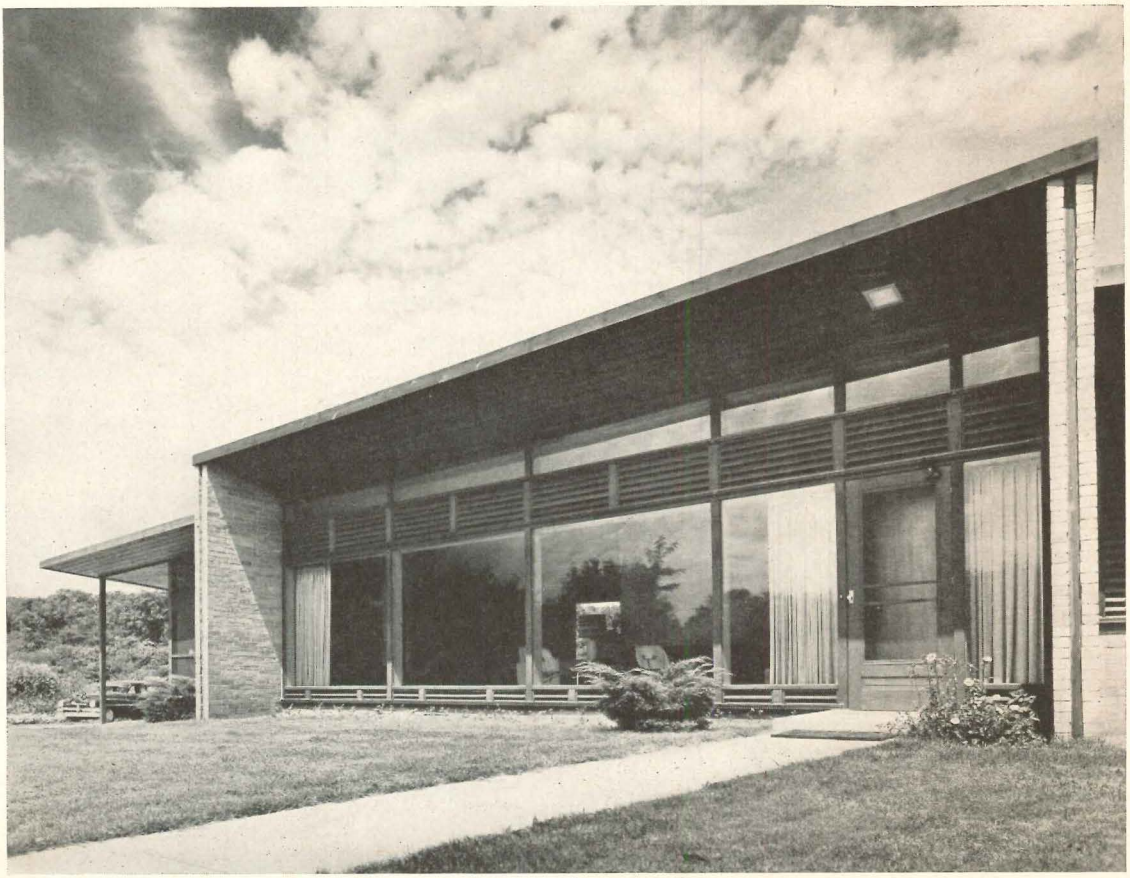
The wood frame is supported by brick cavity walls; ceilings are acoustical plaster; interior walls brick, plaster or birch plywood; floor is cement finish over circulating hot water radiant heating coils.

NEUMANN HOUSE



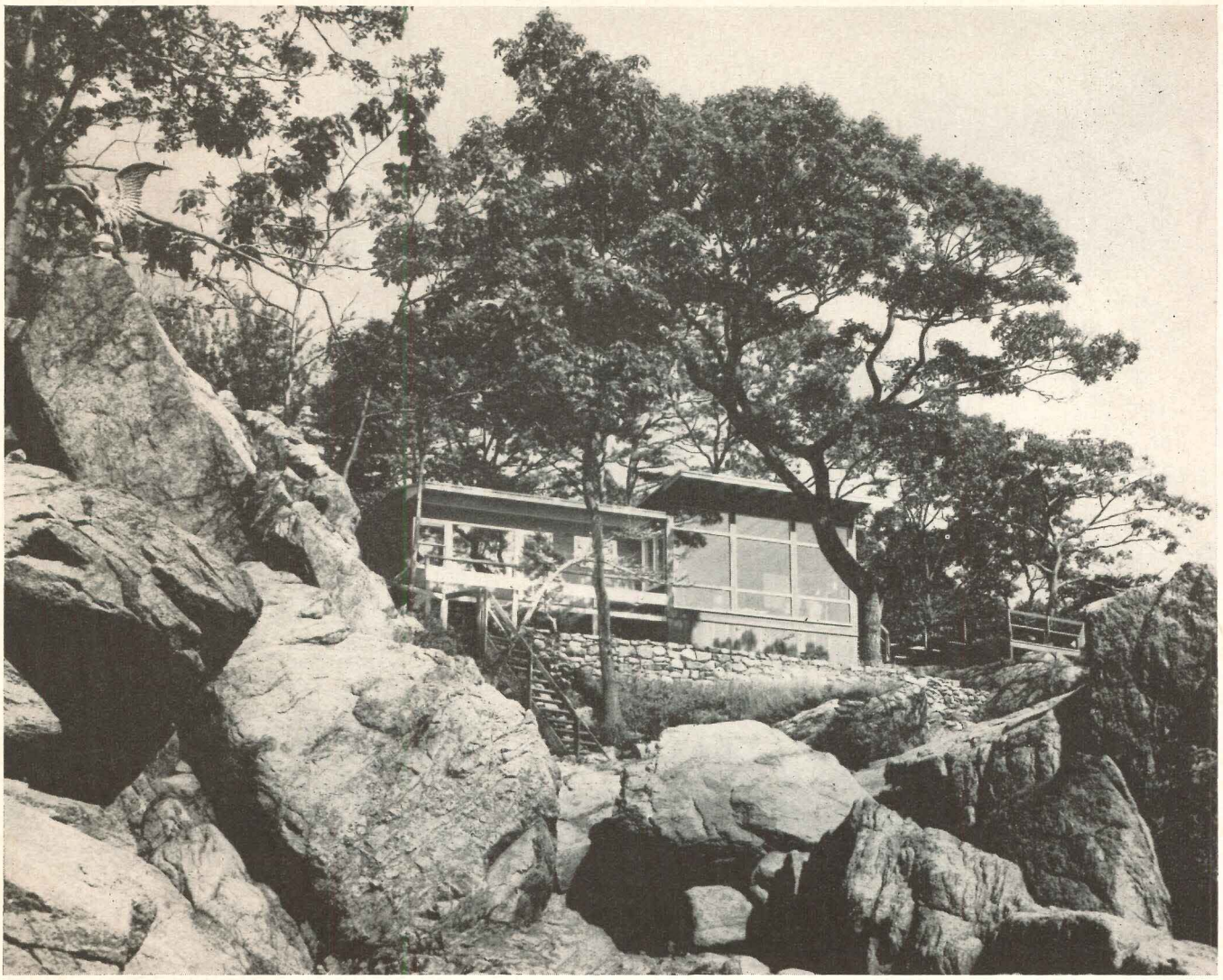
In master bedroom, built-in birch wardrobe divides sleeping and dressing areas. Fluorescent tubes at top of cabinet provide indirect room lighting and also illuminate contents through glass

Hedrich-Blessing



WEEKEND RESIDENCE OF RALPH L. POPE

Smith's Point, Manchester-by-the Sea, Massachusetts



Fred Stone

Eleanor Raymond, Architect

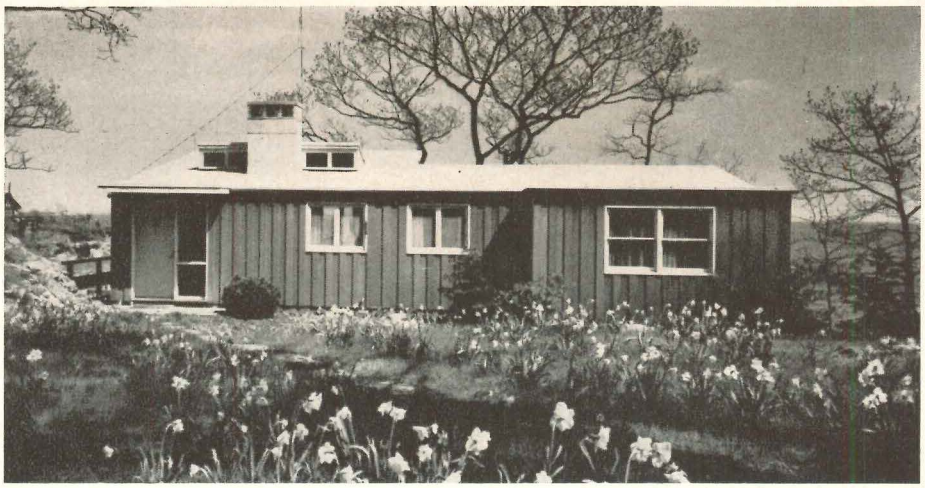
A DRAMATIC SITE on the rocky Massachusetts coast a few miles north of Boston was an important factor in the design of this year-round weekend house. Planwise, however, the emphasis was on ease of operation since the owner maintains bachelor quarters.

The house was placed as close as possible to the edge of the high cliffs to obtain the widest view and to overlook the low-tide pools and seaweed. Both living room and master bedroom face the ocean, with walls on that side almost wholly of glass. A balcony outside the master bedroom, a deck angled out from the living room, and a lower-level barbecue terrace provide for outdoor enjoyment of the view.

In plan the house is simple and compact. The rectangular living room is connected with the kitchen by a bar-counter with doors which can be closed when desired. Guest room and bath are so located that they can be shut off from rest of house when not in use.

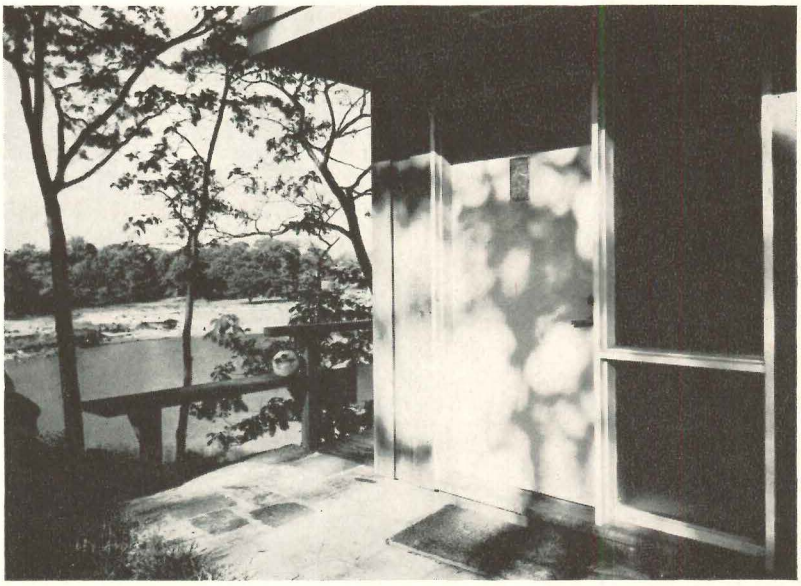
Labor-saving devices are everywhere apparent. The kitchen is minimum-sized, equipped with incinerator, dishwasher and can-dump (trap to barrel under floor). Both bedrooms have specially designed blanket boxes and round bedside tables mounted on large rubber wheels.

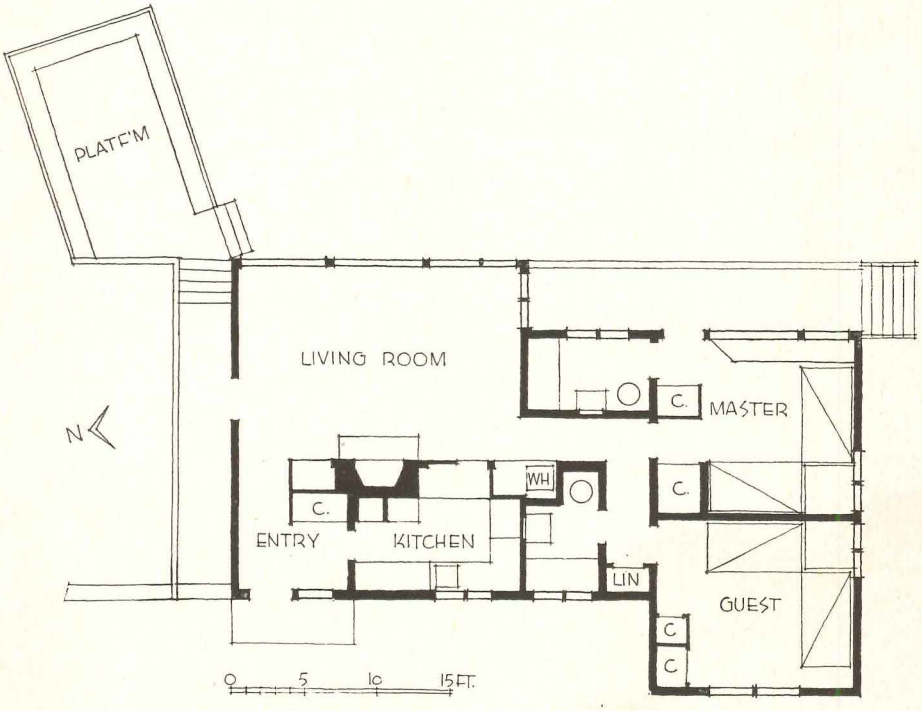
Exterior walls are redwood, roof is white pebbles. Living room walls are natural redwood; bedroom walls, plywood. Ceiling in living room, between exposed rafters, is covered with woven banana-leaf material in natural color. Heating is forced warm-air spraying inside surfaces of large glass areas — a system well adapted to the frequent opening and closing of a house used mainly on weekends.



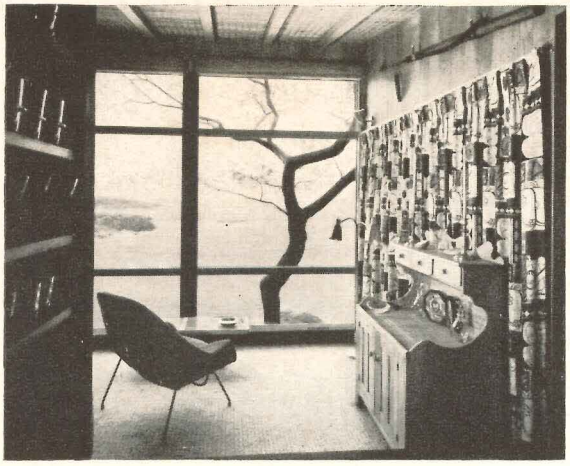
Front of house (left) gives no hint of view on other side. Walk leads from front door (below, left) to platform on rocky promontory

WEEKEND HOUSE





House is planned throughout for servantless living and masculine ease. Front door doubles as service entry since it adjoins kitchen



Left: view of ocean is opened to kitchen by bar-counter which can be closed when desired. Below, left: living room has built-in television cabinet on fireplace wall, "trolley-car" settee with back hinged to face either ocean or fireplace, depending on weather. Below, right: balcony outside master bedroom has steps leading directly to tan-bark barbecue terrace on lower level

Fred Stone

ARCHITECTURAL RECORD'S

BUILDING TYPES

®

***STUDY NUMBER* 194**

ARCHITECTS' OFFICES

1. *Entrances*
2. *Reception Rooms*
3. *Conference Rooms*
4. *Private Offices*
5. *Drafting Rooms*
6. *Storage*
7. *Plans and Exteriors*

Although architects' own offices are hardly new as a building type, the current trend toward decentralization paralleling that of other building categories has made a more extensive study seem in order. This is ARCHITECTURAL RECORD'S first Building Types Study on the subject, but the following individual offices have been published in the magazine since 1947:

Britton, James A., Greenfield, Mass. March 1951, pp. 112–115.
Jessen, Jessen, Millhouse & Greeven, Austin, Tex. March 1951, pp. 116–119.
Thomas-McFarland-Bonsall, Los Angeles, Calif. Aug. 1950, pp. 32–2, 32–3.
Page, Southerland & Page, Austin, Tex. May 1950, pp. 114–115.
Parkin, John B., Associates, Toronto, Ont. July 1949, p. 156.
Lankton, J. Fletcher, John N. Ziegele and Associates, Peoria, Ill. March 1949, pp. 97–99.
Abrahams, David J., & Associates, Boston, Mass. July 1948, pp. 100–101.
Felciano, Clarence, Santa Rosa, Calif. July 1948, pp. 97–99.
Polevitzky, Igor B., Miami, Fla. July 1948, pp. 94–96.

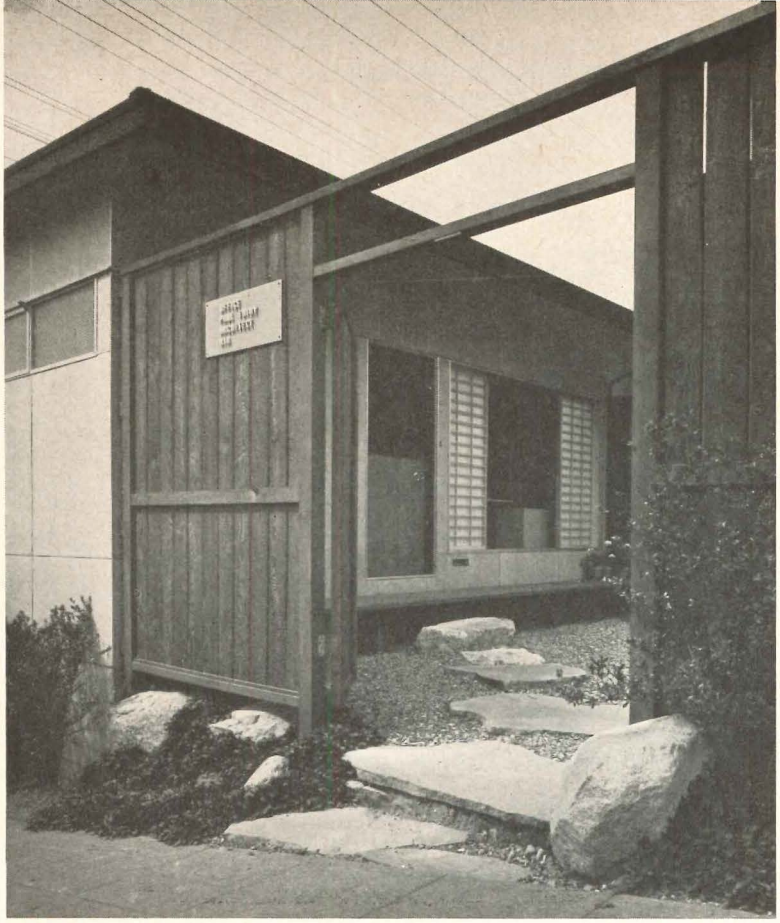
At the beginning of this new year, perhaps it is timely to note that during 1953, the RECORD will present the 200th Building Types Study in its continuing program to cover significant developments keyed to changing conditions.

A NEW FLEDGLING seems to be quietly taking its place among the variety of specialized building types we have today. Between periods of cajoling clients into building offices with efficient and pleasant working conditions, and with good public relations qualities, more and more architects are stealing time to apply their theories and logic to the housing of their own firms.

Perhaps the greatest impetus to the development has come from a change of heart in the people an architect deals with. A drab, hyper-conservative office is not usually necessary these days to convince them of an architect's basic soundness. Instead, they generally seem more impressed with a good example of the type of work that can be expected of him. Most clients want buildings that both make and save them money, and that have a certain amount of prestige: an architect's office with these qualities can be one of the best forms of publicity.

Another factor is the discovery that many types of clients will go to outlying areas to consult an architect, some by preference because they live nearby. Such locations offer lower rents or taxes, easier parking, more pleasant surroundings. To help finance their own buildings in these areas, many architects are including extra rental offices in the plans. Some have found that such rentals also take care of a good portion of their overhead costs. The extra offices also serve as expansion room if the firm should outgrow the original space allotted to it.

Nineteen offices of various types, sizes and locations have been selected for this study to illustrate the various trends current throughout the country. To afford a closer comparison, the basic elements which are common to most offices, regardless of size, have been grouped together in the outline listed at the top of the page. The larger offices have varying multiples of these elements. Major attention has been focused on interiors, where the architect-client most often expresses his individuality.

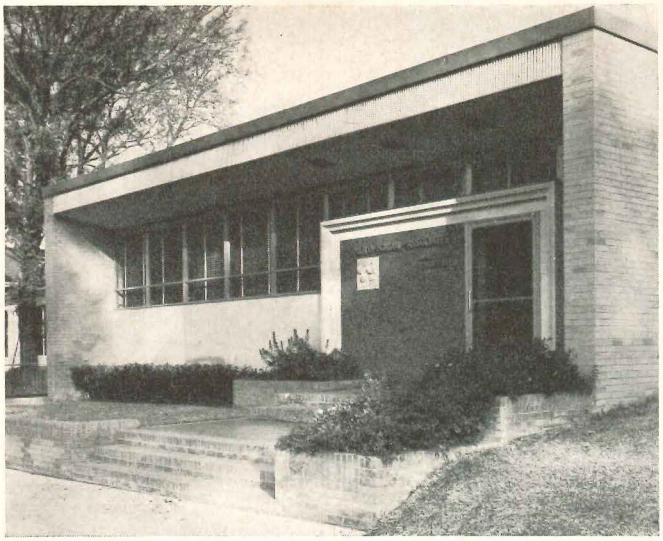


Charles R. Pearson

I. B. Lindenthal

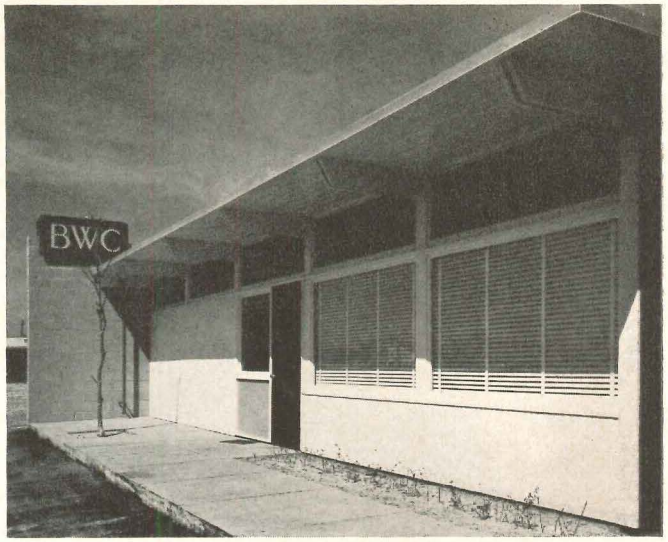
Pleasant off-street entrances add privacy and quiet to the offices of Paul Thiry, Seattle (top) and Staub, Rather and Howze, Houston (bottom). Thiry's office (plan p. 159) has asbestos board exterior, aluminum trim. Staub, Rather and Howze (plan p. 166) use lightweight concrete canopy and screen, pink brick walls

H. O. Wiseman



A wide overhang shelters entrance and front windows in office of Neild-Somdal-Associates, Shreveport, La. (above). Side walls are light pink brick. Light colored stone is used below windows and around door. Granite panel by door displays firm name and sculptured panel. Plan on p. 165

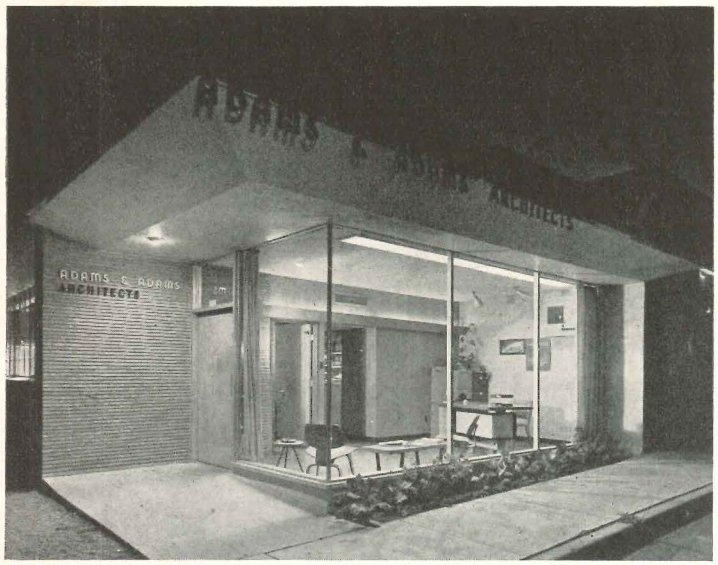
Joseph W. Molitor



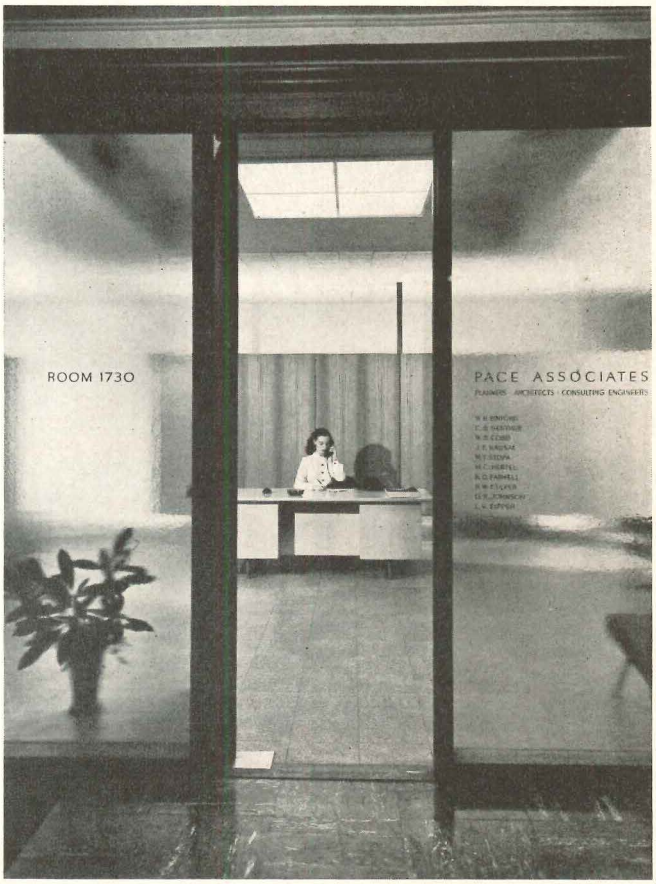
Biggs, Weir and Chandler, Jackson, Miss. (above), use scheme similar to one above left. Interior blinds give privacy, closed front appearance. Siding is white, with red panel by black door. Plywood sign is black with yellow-orange letters. Plan on p. 164

Pace Associates, Chicago, provide a pleasant variation from the typical office floor entrance. A clear glass door, flanked by translucent glass panels gives an attractive vista from the elevator lobby into the reception room (see opposite page). Plan on p. 162

Dewey G. Mears

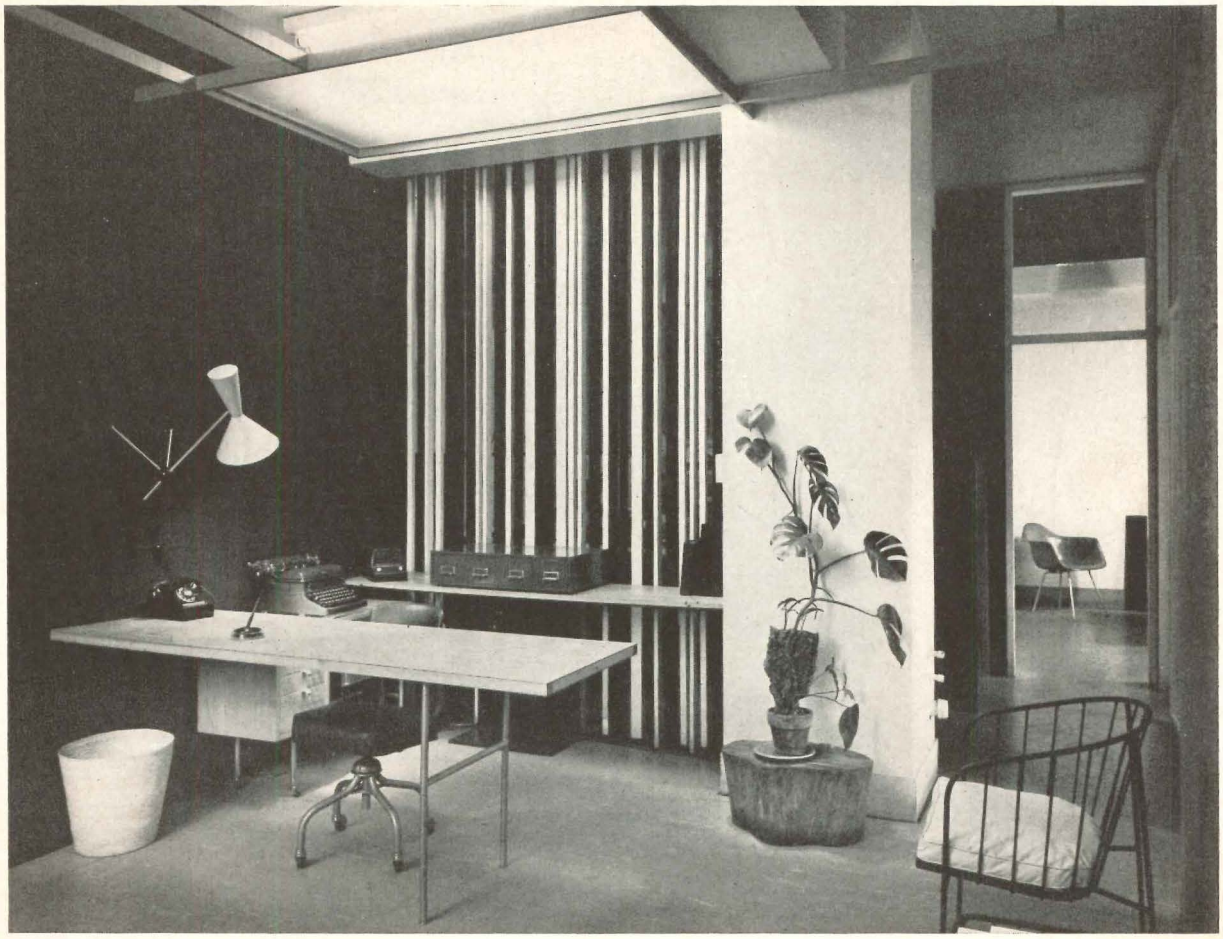


An open, shop-front scheme is used to dramatize reception area by Adams & Adams, Dallas, Tex. (above). Firm name is boldly displayed on tapered overhang and on brick wing wall. Plan on p. 164



Bill Hedrich, Hedrich-Blessing

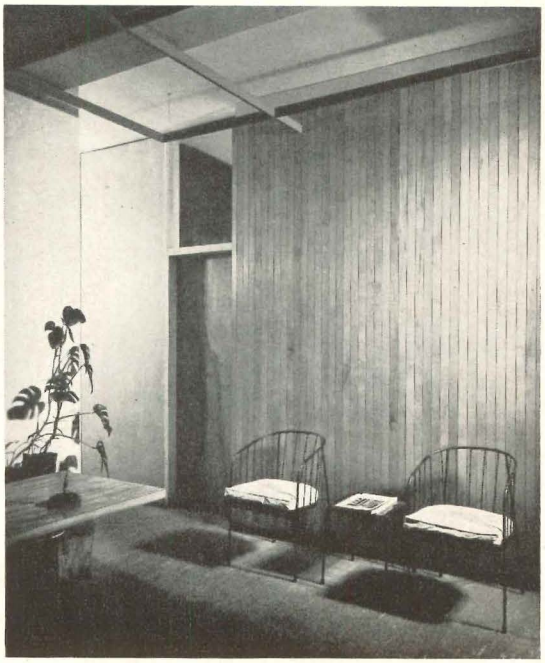
Richard Shirk



Leinweber, Yamasaki & Hellmuth's Detroit offices (above, below right) are mainly black and white. Accents of red-orange and blue are carried out in vertical slats hiding shelves behind desk, and on frame of dropped ceiling. Left wall is blue; others, white plaster or birch. Floor is gray and white mottled asphalt tile. Ceilings are white except in conference room, which is black. Plan p. 162

Bill Hedrich, Hedrich-Blessing

Pace Associates (above) use black and white to accent natural finish teak walls, natural color cork tile floors. Knoll furniture includes white plastic laminated tables on black metal legs



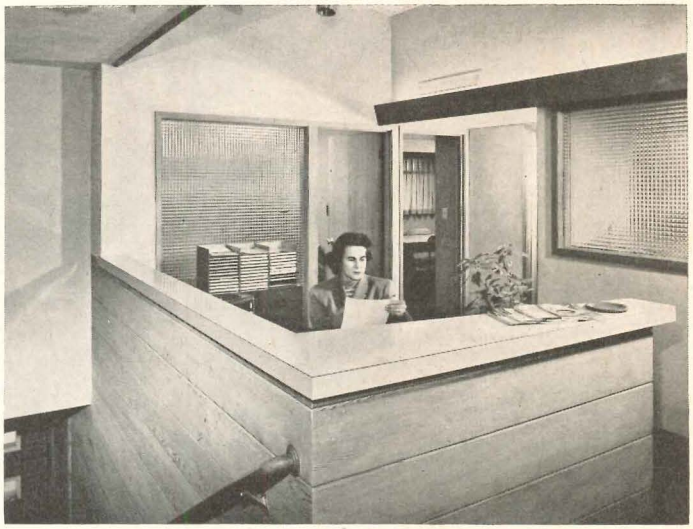
Richard Shirk

Joseph W. Molitor

The Jackson, Miss., office of Biggs, Weir and Chandler has red and white walls, blue door by receptionist's desk. Perforated wallboard in blue, yellow, green and gray used as partitions. All floors are black asphalt tile. Plan on p. 164

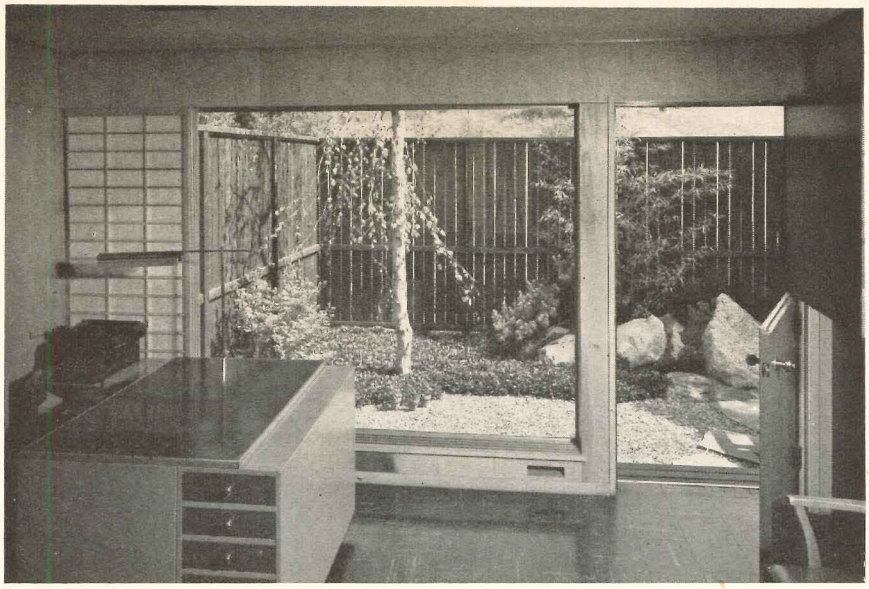
Gabriel Benzur

The office of Aeck Associates in Atlanta has a built-in desk and shelf unit in striated plywood with natural cork top. Floors are red and white on mocha asphalt tile; walls, gray striated plywood and cocoa brown plaster. Recessed fluorescent and incandescent lighting placed in acoustic tile ceiling. Furniture includes molded plywood chairs in natural birch. Plan on p. 162



Julius Shulman

Redwood and sand colored plaster are background for green and yellow accents in Walter Wagner's Fresno, Calif., office. Counter and rail control stair, and are yellow and green laminated plastic (green repeated in office draperies). Obscured glass separates secretary from front office. Main floor is quarry tile; asphalt tile used upstairs. Plan on p. 160



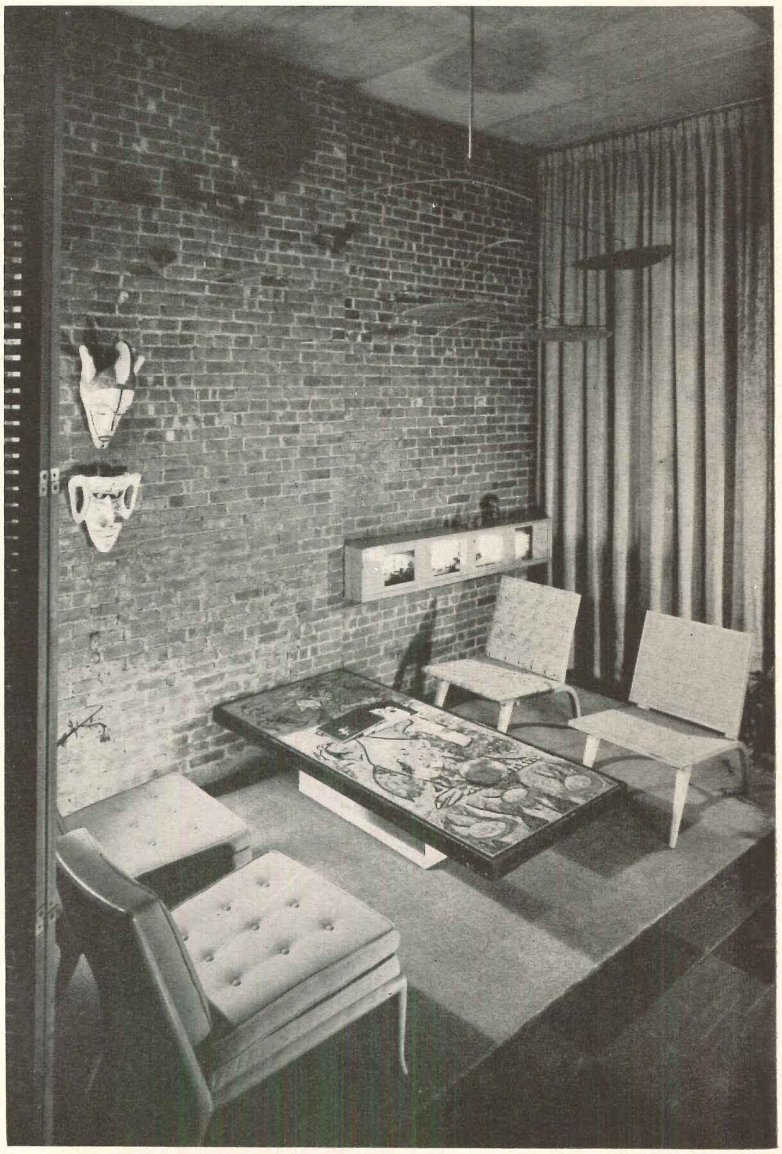
Charles R. Pearson

A garden entry with a large picture window leads into the office of Paul Thiry. Walls are plaster and plywood in natural finish; floors are brown-red asphalt tile; doors are olive green. Much of the furniture in the office designed by the staff. See plan, p. 159

Edward D. Stone has offices in a remodeled brownstone house in New York City. The main floor houses reception, office and drafting areas. Most furniture is architect's own design. Photos below show reception area

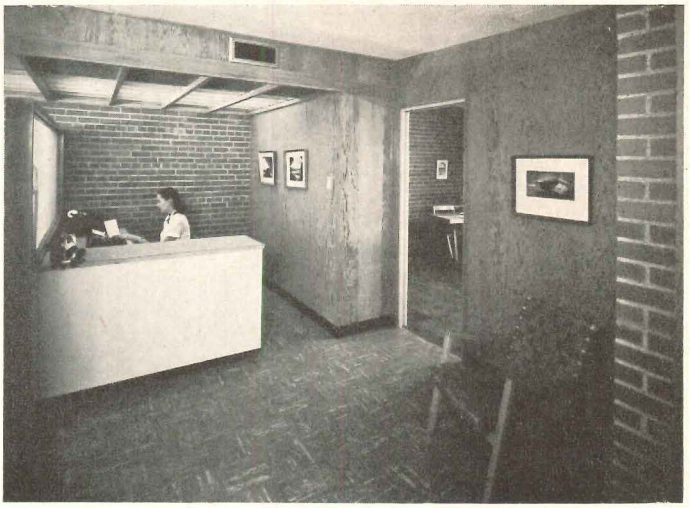
Floor is brown and terra cotta asphalt tile in large squares with carpet of cafe au lait. Lime colored burlap covers window wall opposite natural wood screen. Ceiling is finished in natural birch plywood squares

Ezra Stoller



Ezra Stoller

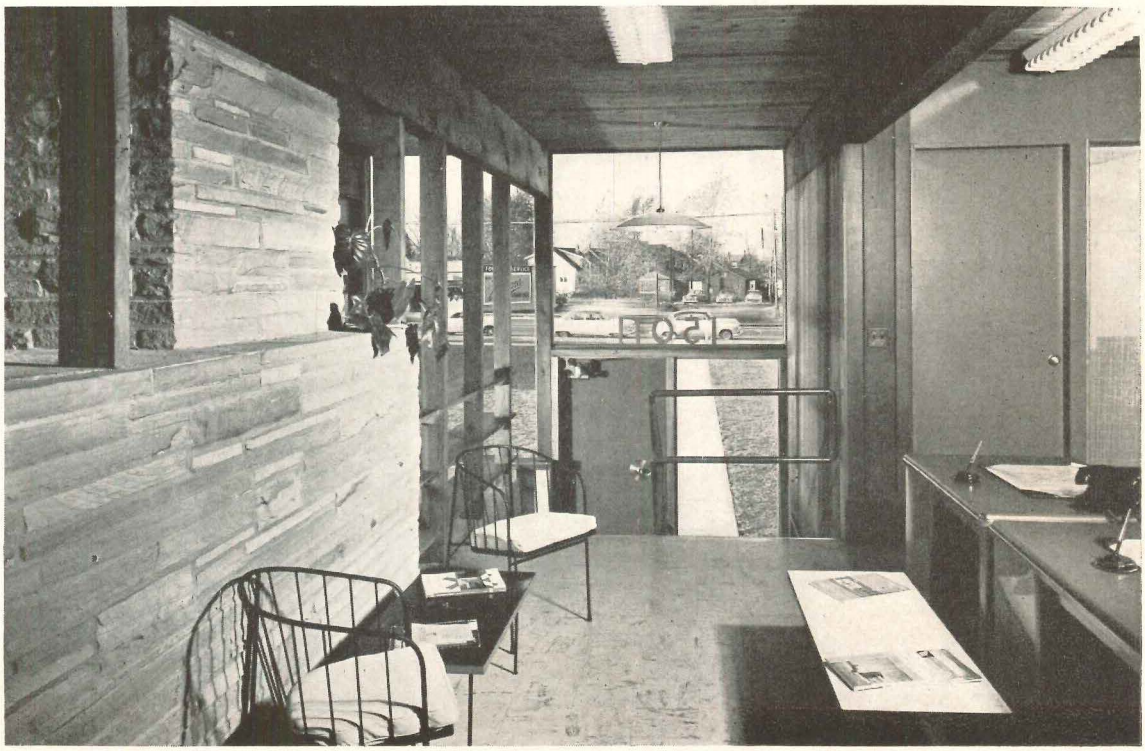
H. O. Wiseman



Stuart A. Weiner

Left: Neild-Somdal-Associates use deep browns and off-pinks as background colors for green lounge furniture. Walls are pink brick and burlap, with a marble panel by door and display panel for current work. Floors are brown and pink rubber tile. Plan p. 165. Right: Harold Ekman's office in Phoenix has warm tones with walls of natural red brick, natural redwood. Floor is gray asphalt tile; cabinet work, light gray with yellow vinyl tops. Chairs designed by Hans Knoll; Danish tables. Plan p. 160

Jahr-Anderson Associates, Inc., Dearborn, Mich., use brick, stone, glass, Douglas fir and red cedar on walls. Ceiling is natural wood, acoustical tile, dramatized by concentric ring lighting. Wood supports create separation of rooms and open feeling. Floor, asphalt tile throughout. See opposite page



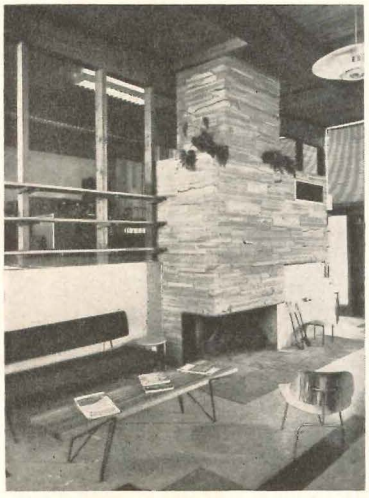
Richard Shirk

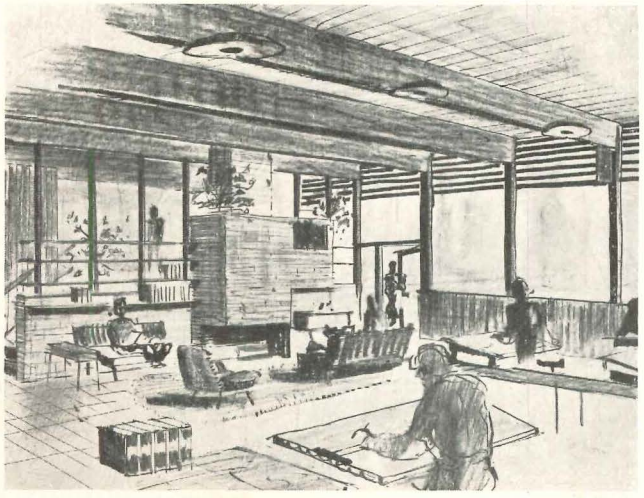
Ezra Stoller

Ed Stone has used bamboo slats strapped to walls, complemented by natural hemp squares on floor. Haitian primitives adorn the walls; lime colored draperies and accents in the primary colors on a suspended mobile add to decor of room. Design area is shown in background of photo

Below: Jahr-Anderson fireplace wall of Tennessee ledge rock is center of lounge-conference area of drafting room. Floor is bright yellow with a play of red, black and green in abstract pattern, separating it from light green flooring used in main drafting area. Plan, p. 165

Richard Shirk

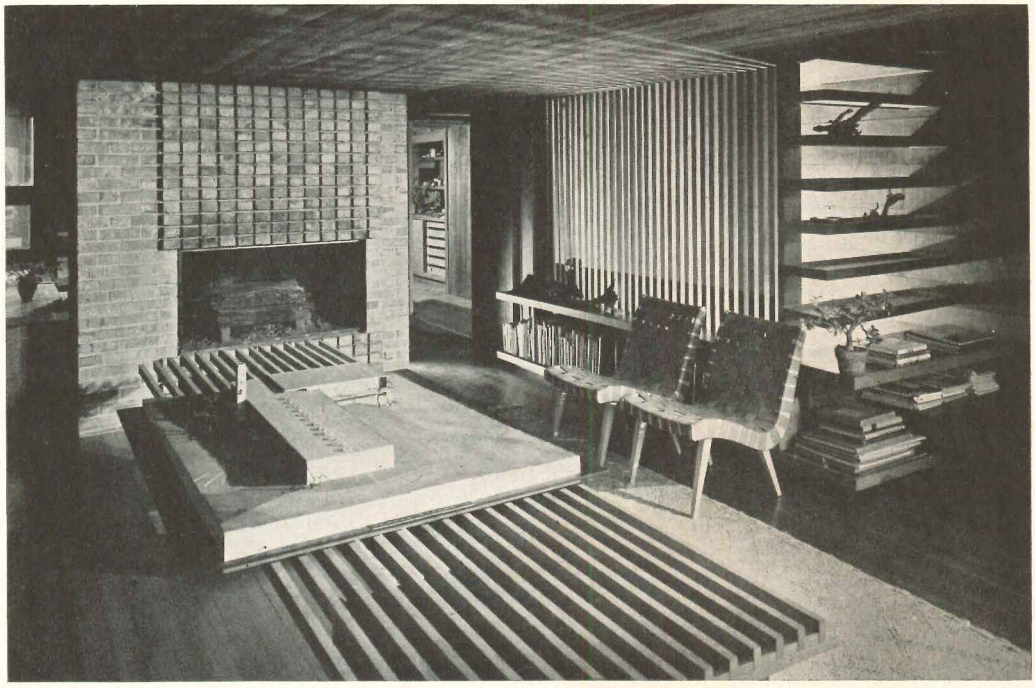




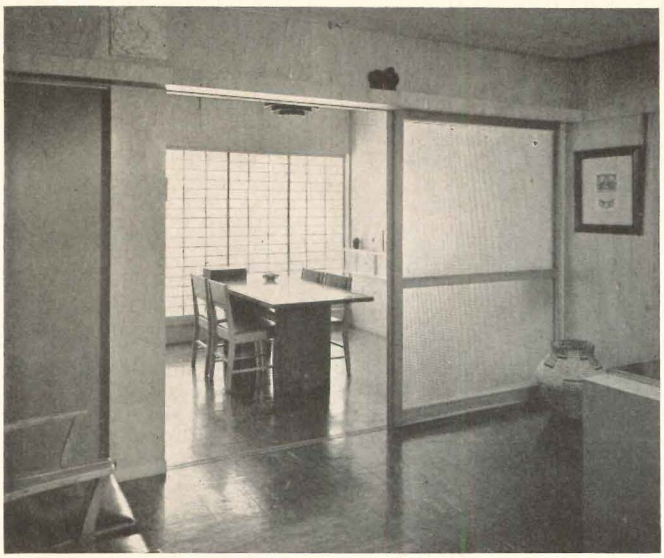
I.B. Lindenthal

Staub, Rather and Howze's conference area overlooks garden. Concrete sun shades prevent glare in room. Walls are covered with natural textured cotton, also used as drapery fabric, creating a restful atmosphere as compared with the apricot and Chinese blue of reception area. Floor, cork; table, birch lacquered gray. Plan p. 166

Rough sawn redwood walls, floor of edge grain fir in a natural finish form the background for Schweikher and Elting, Roselle, Ill. Chairs designed by Hans Knoll, upholstered in green fabric, are grouped by fireplace for view of model displays (opp. page). Shelving and benches are polished redwood; ceiling rough sawn redwood boards



Bill Hedrich, Hedrich-Blessing



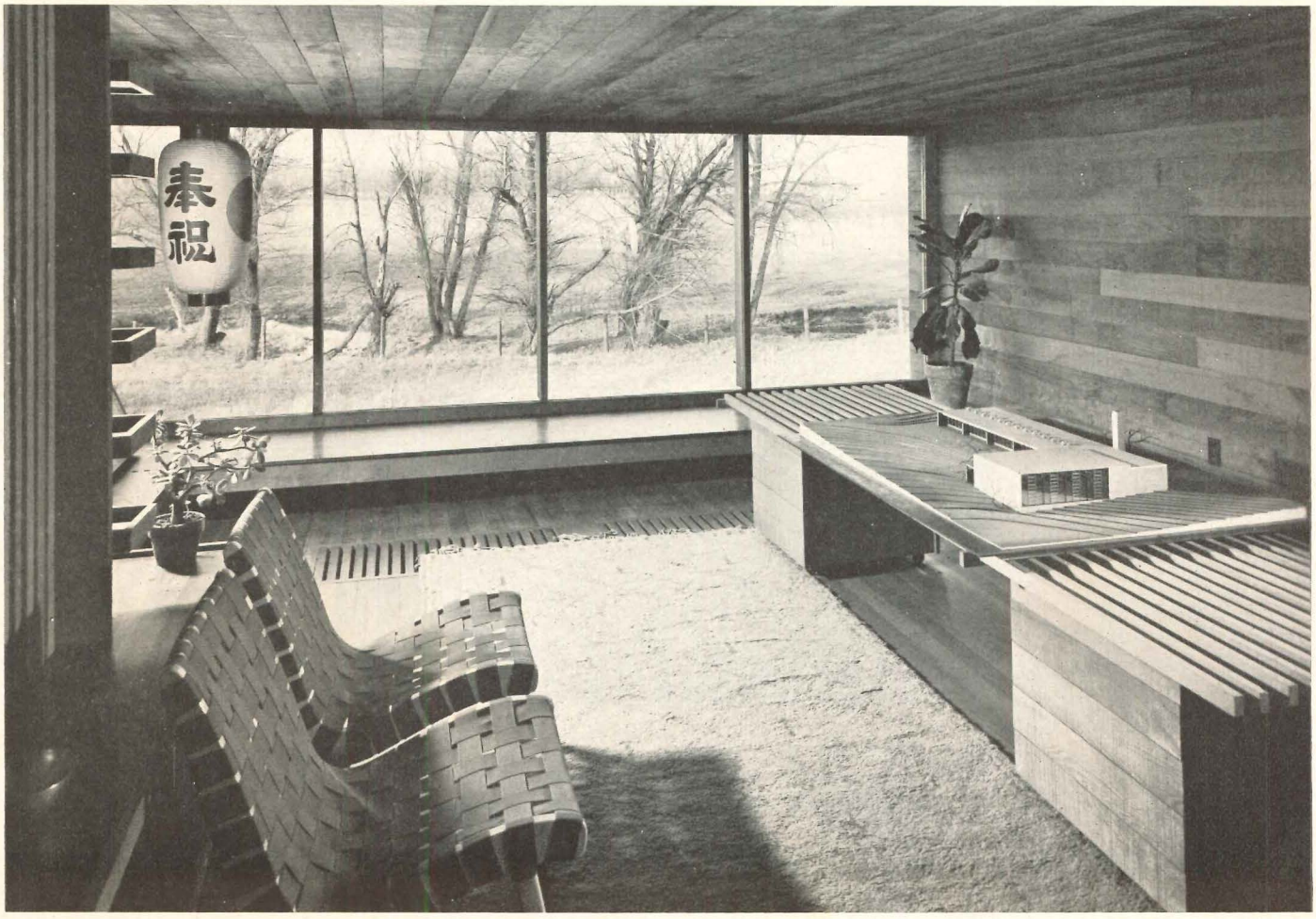
Charles R. Pearson

I. B. Lindenthal

Paul Thiry's conference room (left) is well lighted by window screens covered with glass fiber cloth. Interior walls are plaster and plywood, natural finish. Wilson, Morris and Crain's office in Houston (right) has wall of copper foil mounted on asphalt backing. Ceilings are warm gray with acoustical asbestos blown on; floors, scrap marble. Vertical cloth blind in chartreuse and furniture covered in greens, grays and blacks complete room. Plan p. 164

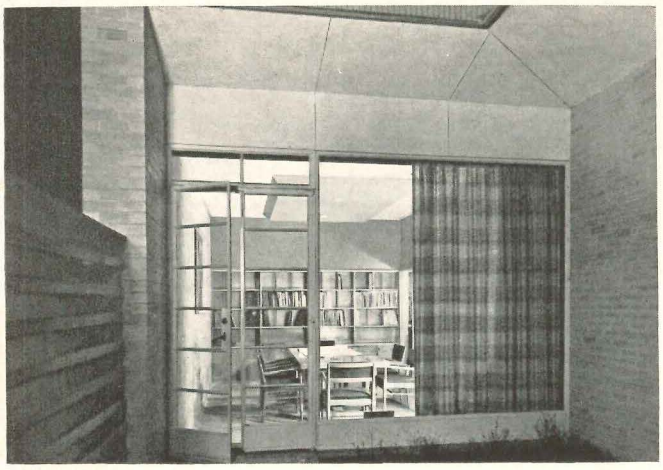
Glass window wall in conference area for Schweikher and Elting overlooks countryside, provides good lighting for displays. Plan on p. 163

Bill Hedrich, Hedrich-Blessing



ARCHITECTURAL INTERIORS

Design | Details | Materials | Equipment

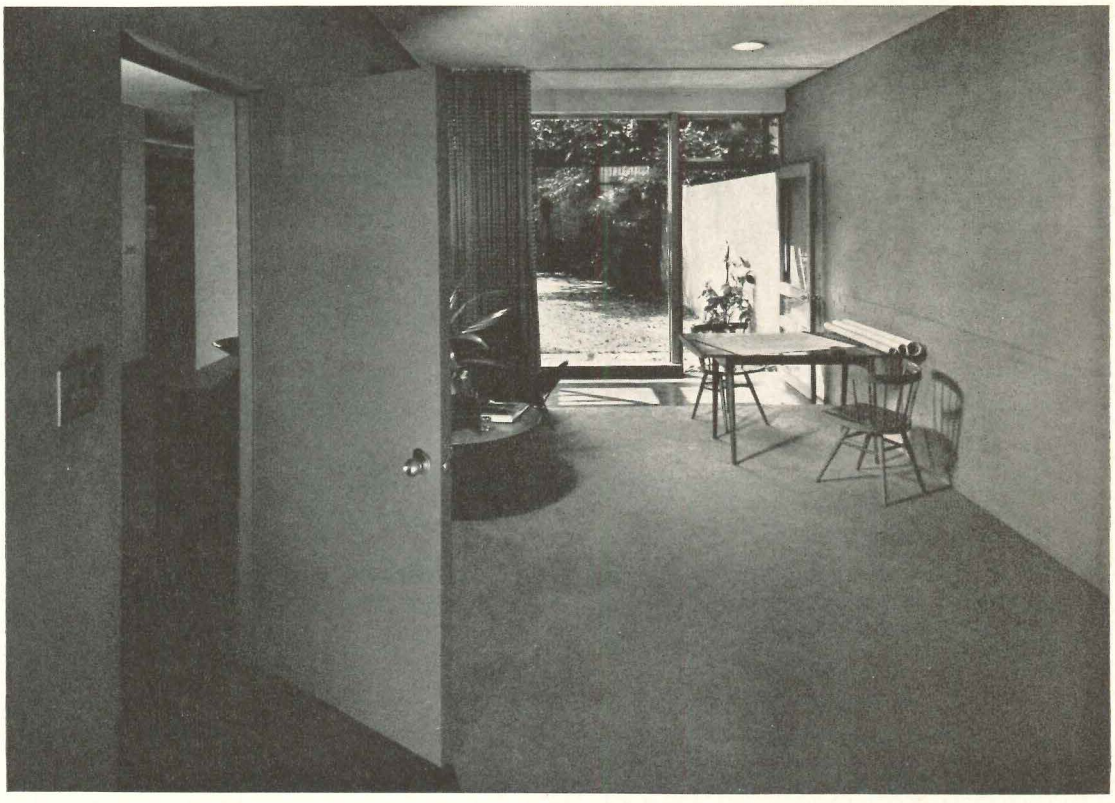


H. O. Wiseman

Neild-Somdal's conference area opens on court, has pink-tan carpet and draperies, book-case wall. Other walls are cork, brick. Ceiling is acoustical tile around center-dropped cove lighting. Furniture upholstered in brown. Plan p. 165

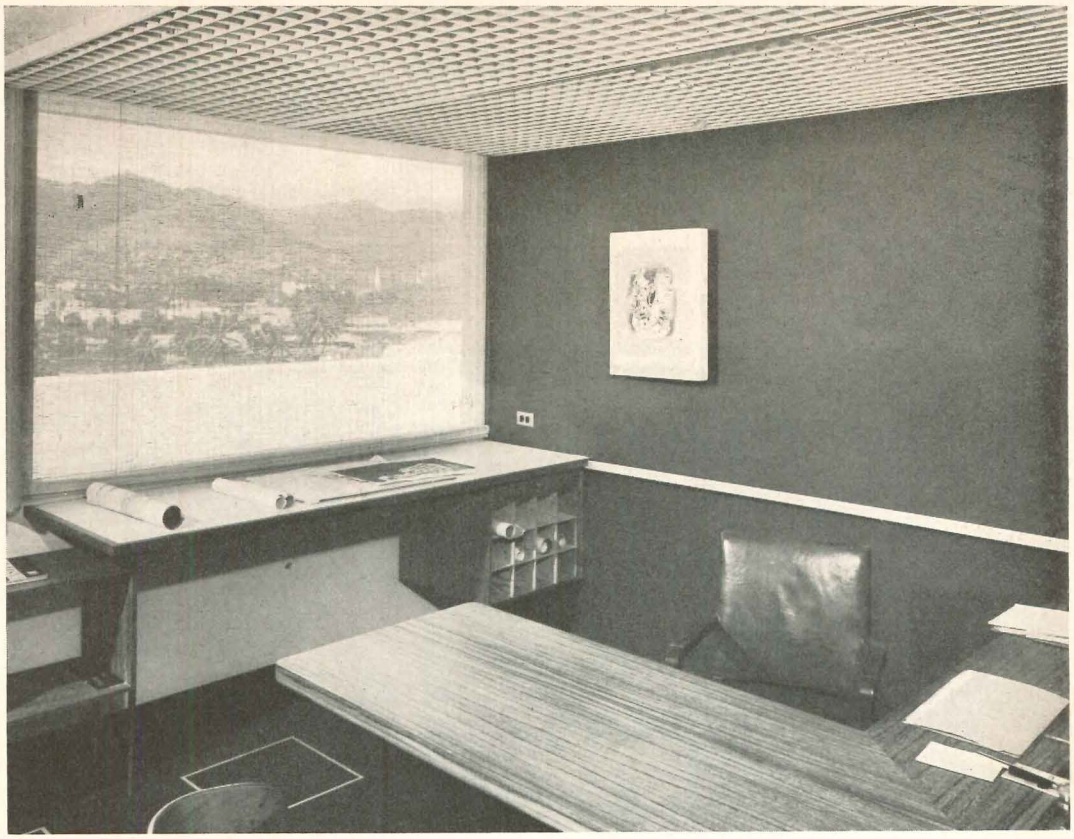
Bill Hedrich, Hedrich-Blessing

Conference room for Pace Associates has corrugated translucent vinyl plastic ceiling illuminated above with fluorescent lighting. Saarinen chairs in black and brown cloth surround light oak table, designed by firm. Plan p. 162

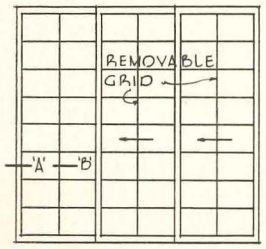


Gabriel Benzur

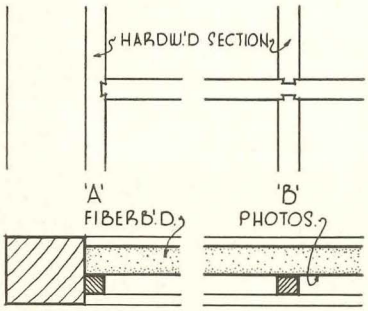
League, Warren and Riley in Macon, Ga., combine conference area with private office. Use of much glass, and carpet and wall of same gray-green color gives open feeling. White nylon draperies cover one window; a corded fabric covers opposite end of room. Ceiling is acoustical plaster, white throughout. Furniture by Hans Knoll, in browns and oranges. Plan on p. 161



R. Wenkam



·SHOJI - DOORS·



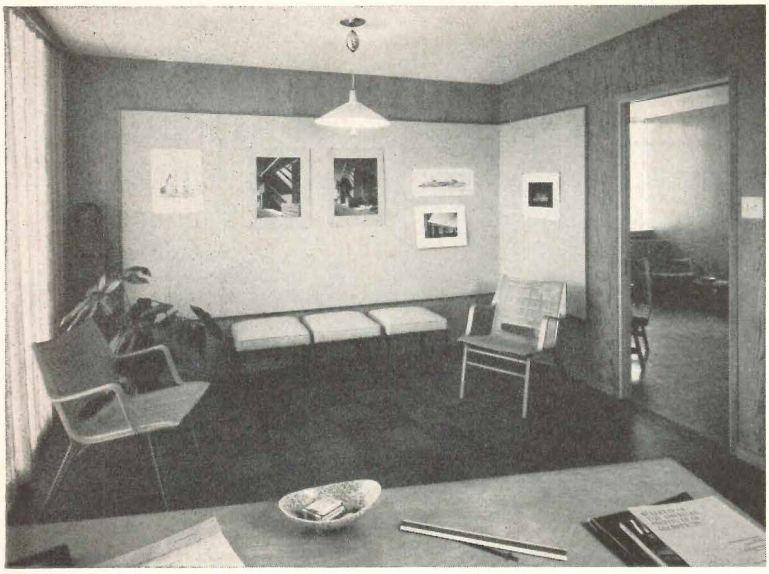
Vladimir Ossipoff's Honolulu office is done in tones of dark egg plant and white—used on plaster walls. One window wall covered in vertical and horizontal split bamboo draperies; remaining wall has sliding panels of superimposed wood grid for insertion of photos (left detail and below). Sliding wall opens to enlarge conference area. Ceiling is egg crate louvers with concealed lighting. Plan p. 162

R. Wenkam

ARCHITECTURAL INTERIORS

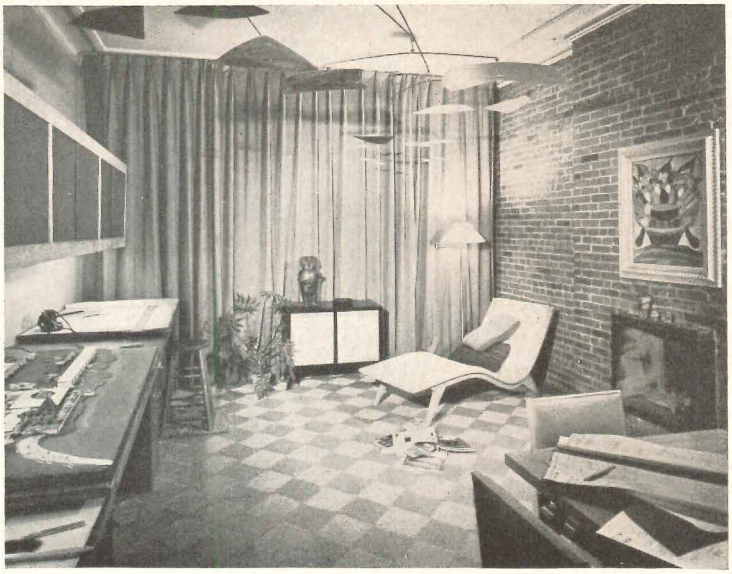
Design | Details | Materials | Equipment

Stuart A. Weiner



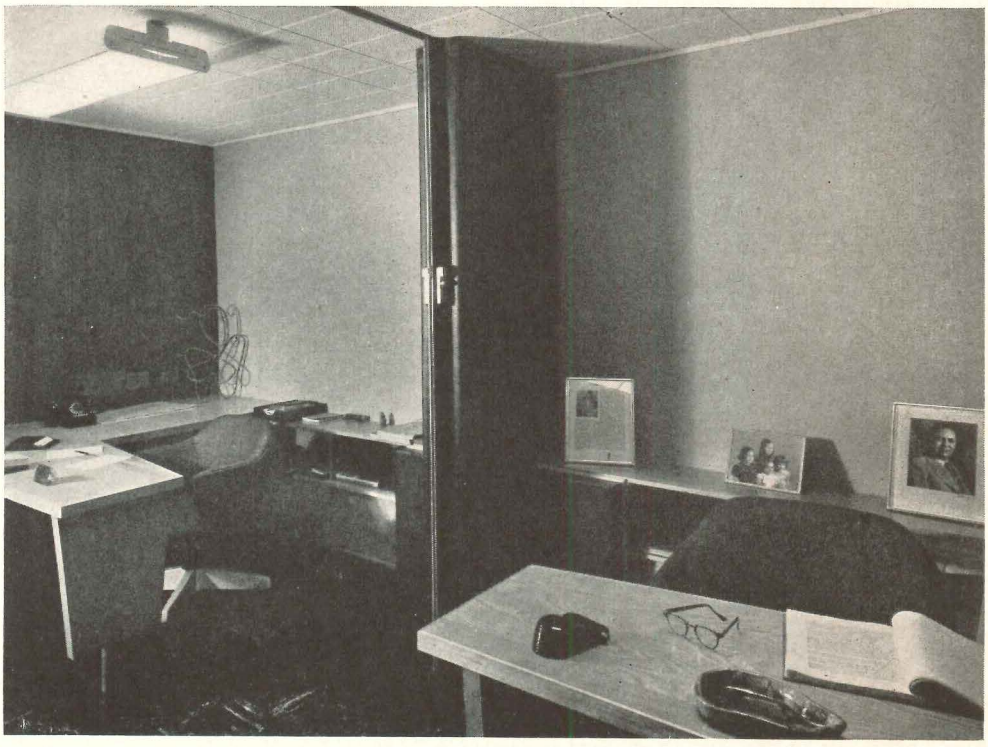
Harold Ekman's private office has medium brown cork floors. Natural monkscloth stretched over boards used for tacking purposes, adding color and texture contrast to redwood walls. Center light, adjustable suspension; ceiling, acoustical tile; furniture, Danish manufactured with Knoll chairs. Plan p. 160

Ezra Stoller



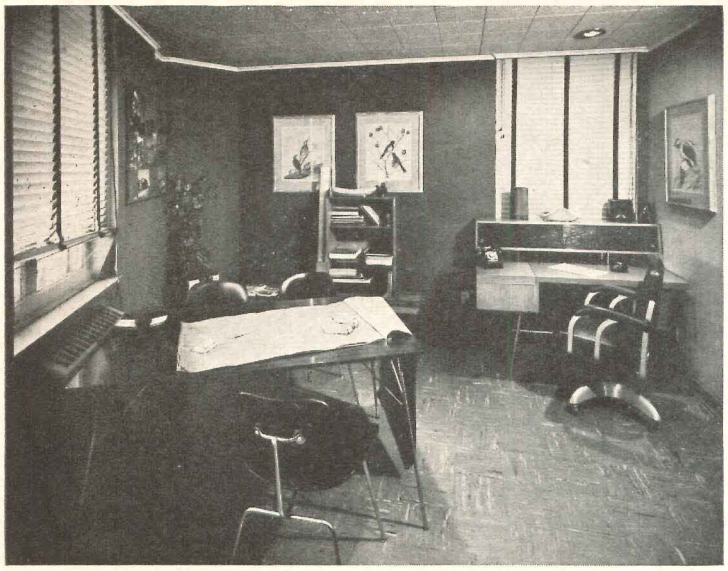
Edward Stone has designated above office as his design area. Walls are natural brick; natural colored hemp squares are used on floor. A Calder mobile in black and primary colors is suspended from ceiling; Haitian primitives adorn walls and carry out color accents. Furniture, Stone's designs

A green folding partition separates offices for Associated Architects (Wirtz, Calhoun and Tungate) in Houston. Three walls are waxed redwood plywood; remaining wall, yellow sheet rock. Floor, brown marbleized asphalt tile. Desk chairs covered in brown; other office chairs are gray plastic. Birch desks designed by architects. Plan p. 163



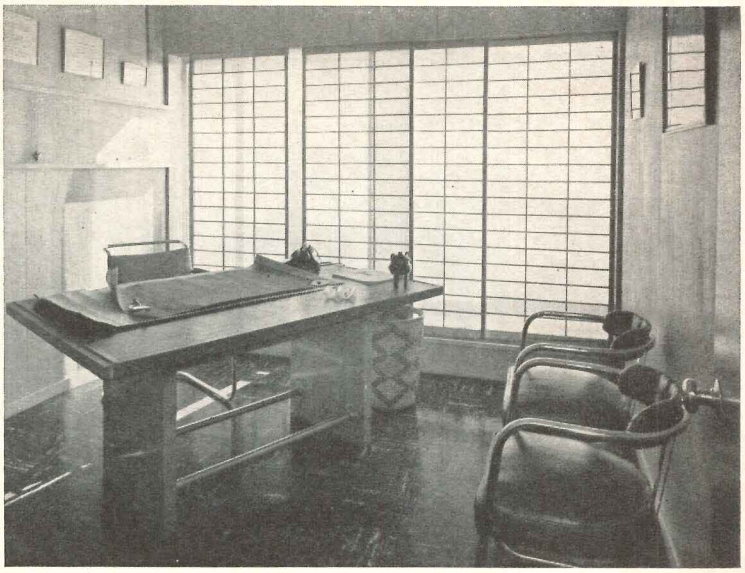
I. B. Lindenthal

Gabriel Benzur



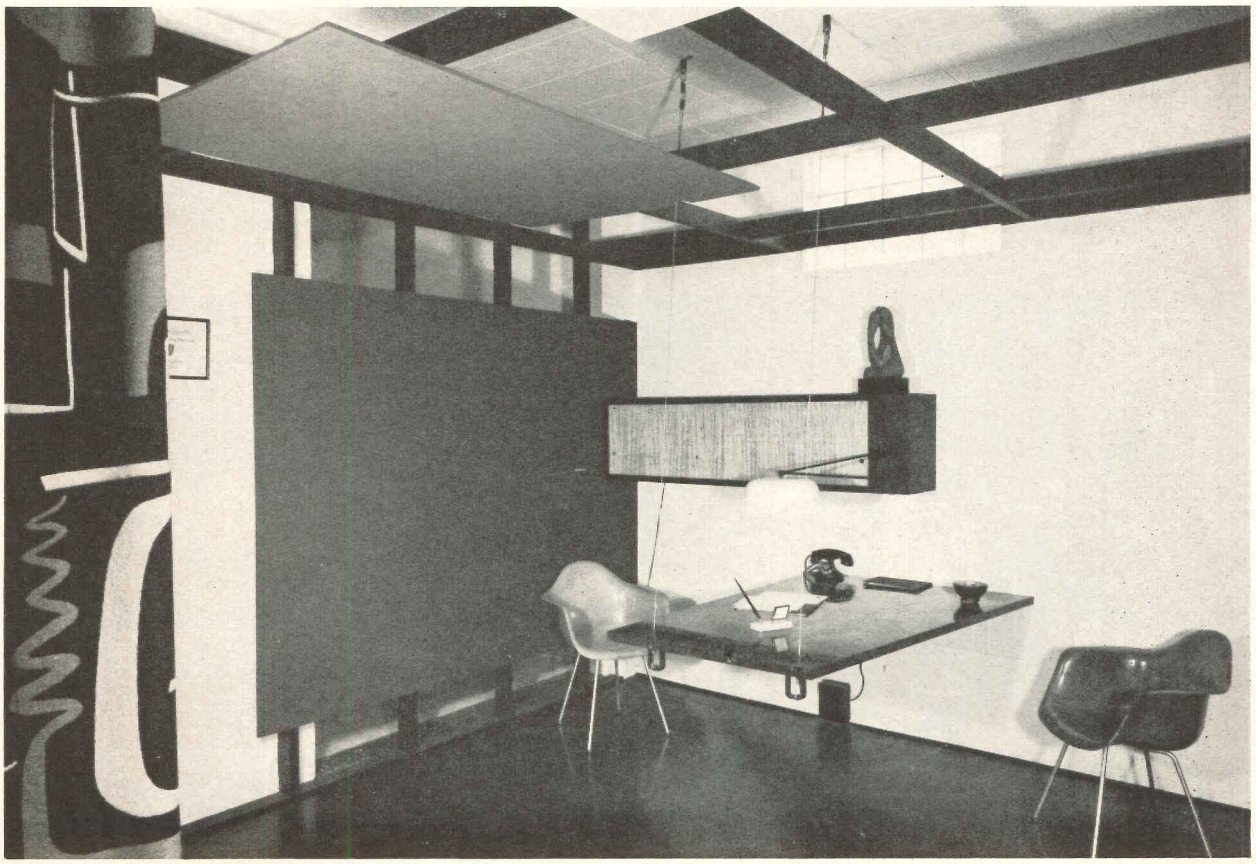
Private office for Aeck Associates has gray striated plywood and rust painted plaster walls; floor is asphalt tile in red and white on mocha. Venetian blinds are eggshell with chocolate brown tapes. Furniture consists of black molded plywood chairs, natural birch desks, walnut tables

Charles R. Pearson



Paul Thiry's office has plaster and plywood walls in natural finish. Floor is brown-red asphalt tile. Maximum light is admitted through Shoji window screens covered with glass fiber cloth. This window also reduces glare, contributes Oriental influence. Office is clean cut, uncluttered

Bernard M. Goodman's office in Miami has black asphalt tile flooring, white plaster walls. Panel behind desk is green; 2 by 4 supports, black. Wall cabinet black with prima-vera doors; shell chair red, chrome legs. Desk is slab of black marble, supported by steel brackets at wall, steel tiller ropes at free end. Ceiling panel over desk, red. Drapery (left) black pebble cloth with red and white abstract print



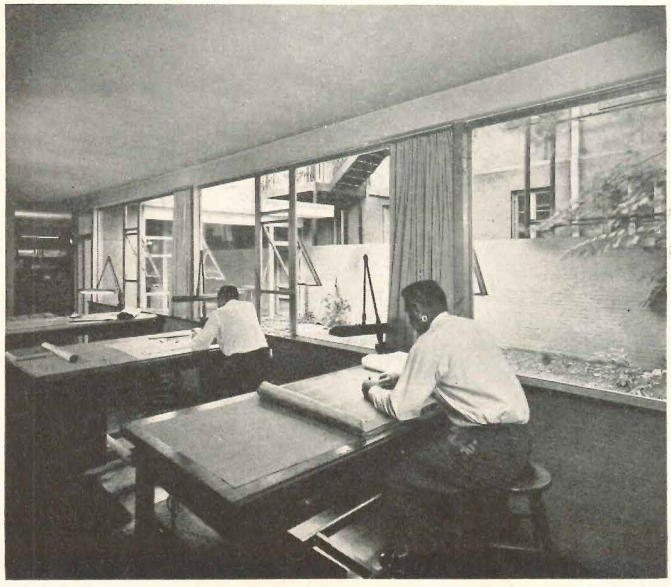
Rada

ARCHITECTS' OFFICES: 5—DRAFTING ROOMS

I. B. Lindenthal

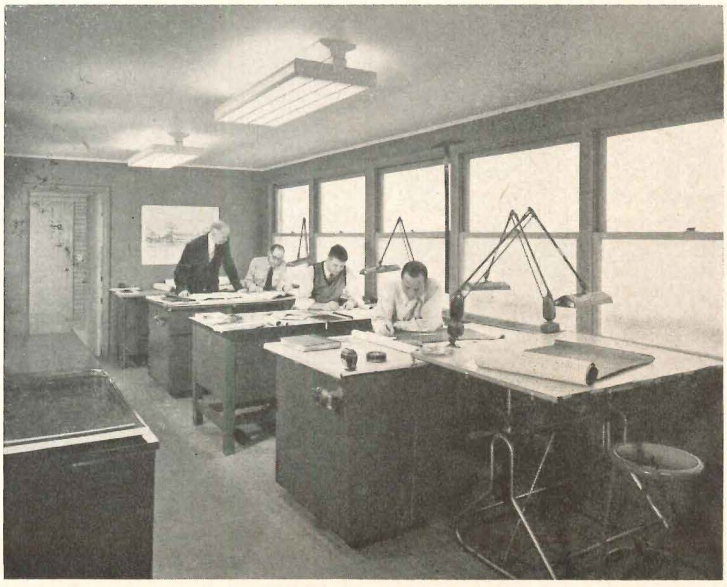
Wirtz, Calhoun and Tungate's drafting area has yellow cabinets and waxed redwood up to window sills. Tables are 3 by 7 birch slab doors on pipe legs. Bookcases are conveniently located in the center of the long room, which extends the entire length of the building

Cabinet wall in the drafting room of League, Warren and Riley is deep aqua; other walls are beige. Cabinets at rear of room are painted terra cotta. Light gray percale drapes at windows give softened effect. Room has counter with sink, housing cabinets and refrigerator beneath



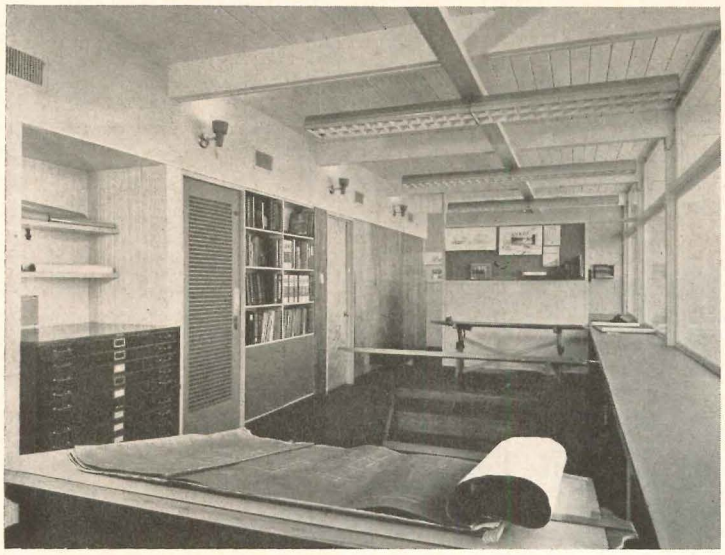
Gabriel Benzur

The drafting room of Philip Duke West in Hinsdale, Ill., has painted plasterboard and waxed birch plywood walls. Ceilings are plaster board finished with heavy muslin and flat paint; floors are tan asphalt tile. Illumination is by fluorescent lighting. Tables, storage type. Because of proximity to neighboring building, windows have translucent glass. Plan p. 161



Bill Hedrich, Hedrich-Blessing

Joseph W. Molitor



Biggs, Weir and Chandler have used vertical carsiding on some of the walls in drafting room, with ceiling of exposed beams and deck, painted white. Fluorescent lighting and window wall provide excellent light. Wide blue counter at window permits extra work space by tables. Colored panels may be set up to separate drafting areas. Door, pine louvered

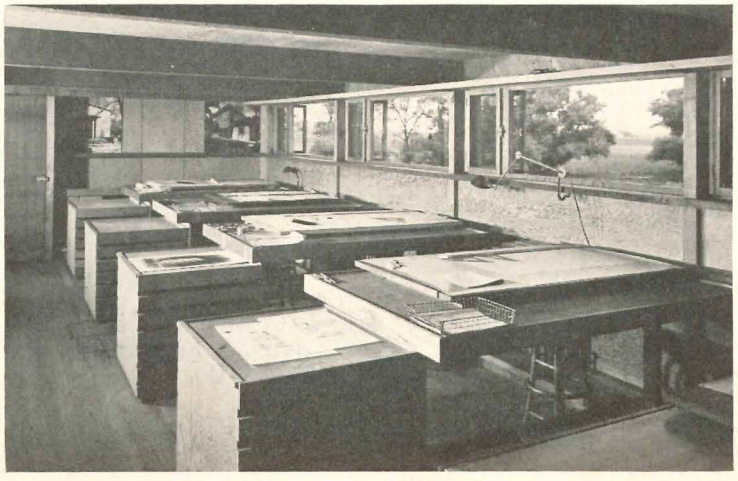
Richard Shirk

Drafting area of Jahr-Anderson has a 13-ft 6-in. ceiling with underside of roof deck exposed and finished natural. Rear wall is soft green with yellow flecks in vitreous cement over cinder block. Floor is light green asphalt tile. Lighting fixtures are concentric ring louver around silver bowl lamp with white translucent plastic domes, dramatizing natural wood ceiling

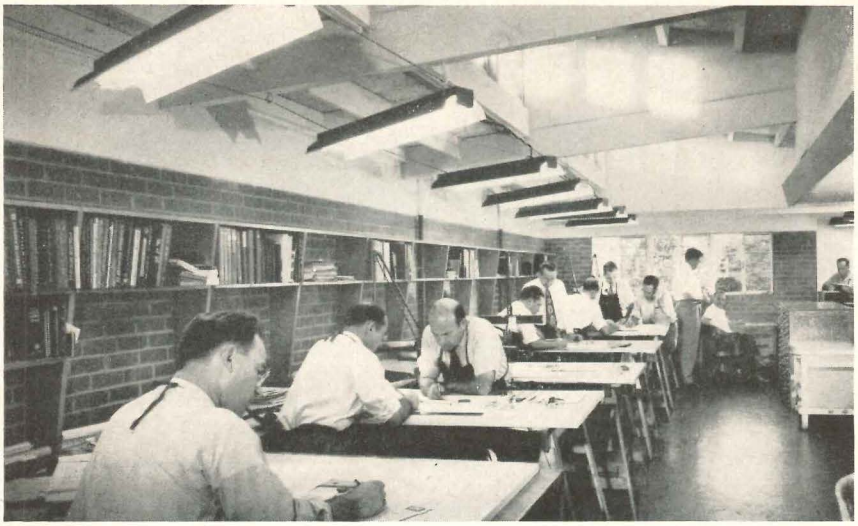
Stuart A. Weiner

Light natural colored redwood provides a pleasant background for the drafting area of Harold Ekman's office. Floor is gray asphalt tile; ceiling, acoustical tile with recessed lighting. Natural daylighting is admitted through whole window wall

Exposed walls in Schweikher and Elting's drafting room are rough-sawn redwood and fir plywood. Ceiling has exposed fir beams with fir plywood between beams; floor is edge grain fir. Drafting tables, shelves, drawers designed by architects

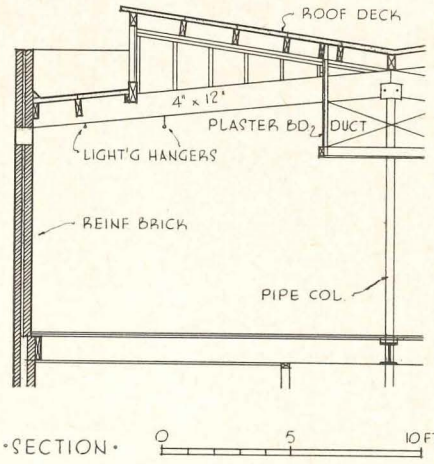


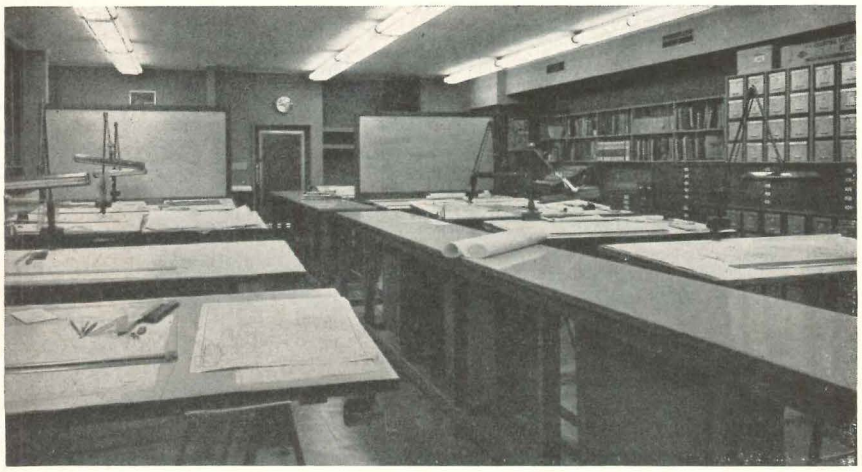
Bill Hedrich, Hedrich-Blessing



Julius Shulman

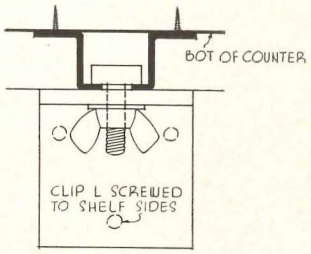
Clerestories (detail at right) provide additional light in the drafting room of Walter Wagner. Walls are brick and yellow plaster; ceiling is light yellow plaster board. The light colors in the room reflect light from the clerestories to compensate for the lack of windows by drafting tables

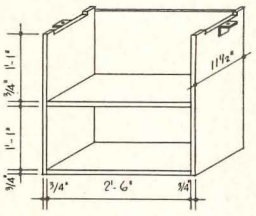




H. O. Wiseman

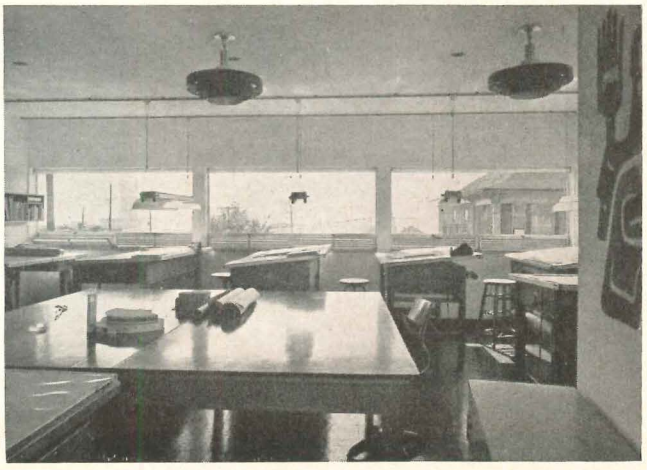
The drafting room for Neild-Somdal has gray asphalt tile floors; acoustic ceiling. Walls are mostly green plaster, with some glazed structural tile under windows and pink brick behind storage cabinets and counter. Counter in center of room serves as extra work space with storage beneath (detail, right)





DETAILS OF BOOKSHELVES

Charles R. Pearson

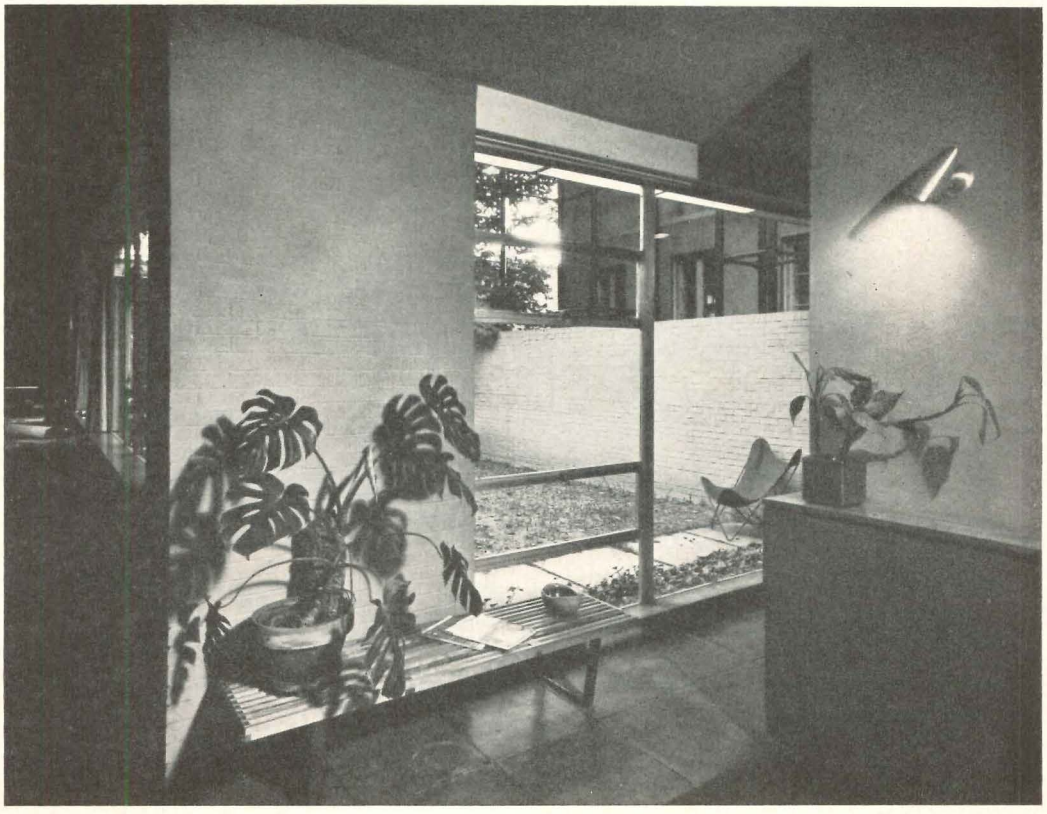


Paul Thiry's drafting room has plaster and plywood walls. Room is well lighted by large glass areas and lighting fixtures which raise and lower on a track. Floors, brown red; doors, olive green

Joseph W. Molitor

Storage space has been adequately provided for in the office of Biggs, Weir and Chandler. In the conference area, or library, cabinets line two walls—some as open bookshelves; others which have doors make it possible to tuck material out of sight. The floor is black asphalt tile; ceiling is acoustical tile and exposed beam and deck, painted white. End wall is a perforated wallboard, painted blue. Remaining wall is birch plywood and exposed masonry

The office of League, Warren and Riley has storage facilities located in the plan room, which also serves as a passage way. Cabinet wall in this room is deep aqua, a pleasant contrast to the beige colored adobe on masonry walls. Terra cotta cabinets in rear of drafting room provide adequate storage space, and introduce an additional color accent

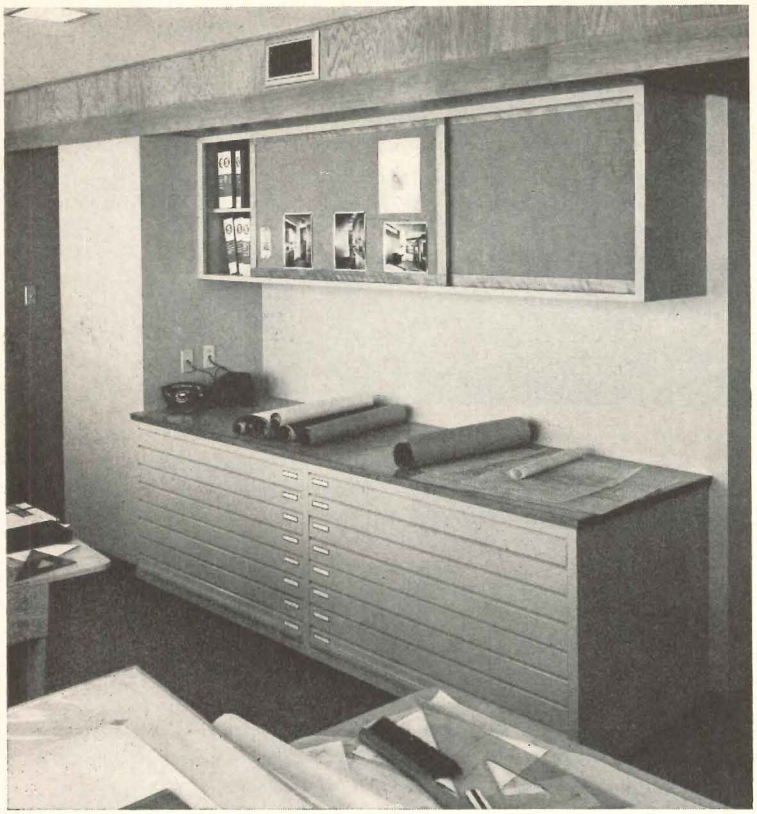


Gabriel Benzur

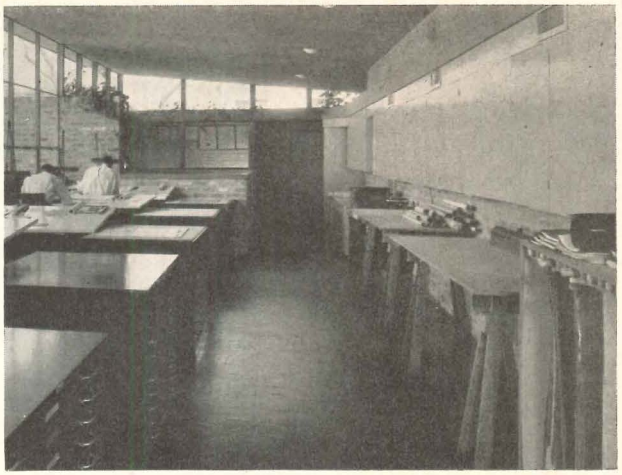
ARCHITECTURAL INTERIORS

Design | Details | Materials | Equipment

Stuart A. Weiner



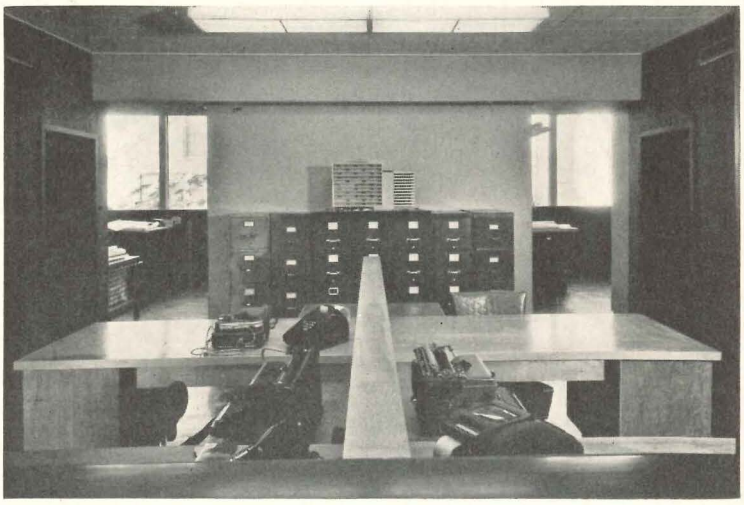
I. B. Lindentha



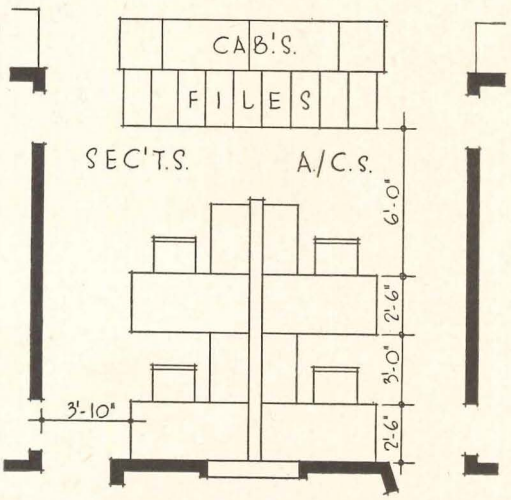
Storage facilities for Wilson, Morris and Crain (above) in the drafting room of the offices: large files containing many shallow drawers are placed in the center of the room, and a vertical file for blueprints is set against the wall

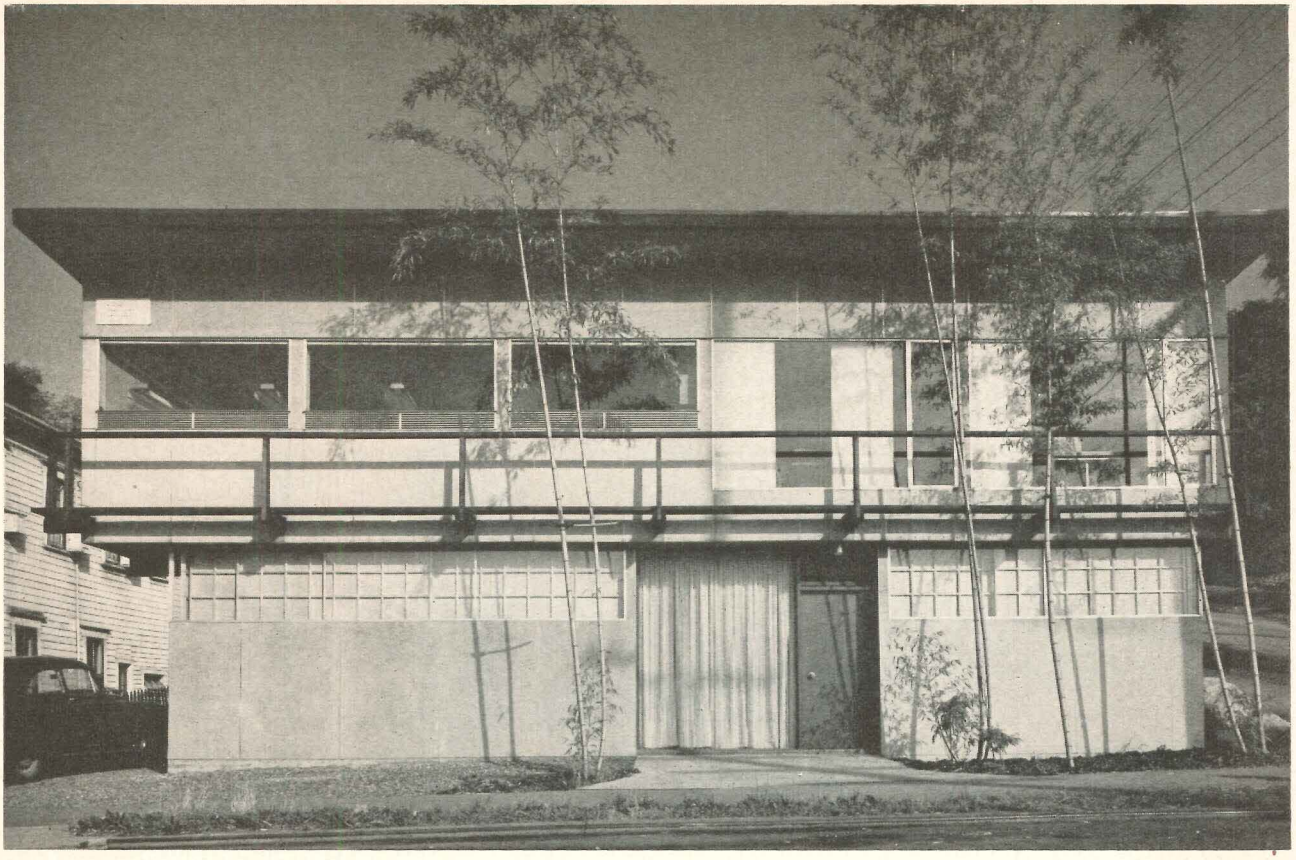
Left: Harold Eckman's office also organizes storage space in its drafting room. File cabinets are placed in wall recess beneath wall-mounted bookshelves. Cabinet work is light gray with soft yellow vinyl tops to blend with gray asphalt floors

I. B. Lindenthal



Wirtz, Calhoun and Tungate have used a section of the secretarial and accounting room to store material. Files are placed against rear wall which opens into drafting room. Larger storage cabinets are on the reverse side of the wall, as shown in detail adjoining photo. Desks in illustration were designed by the architects

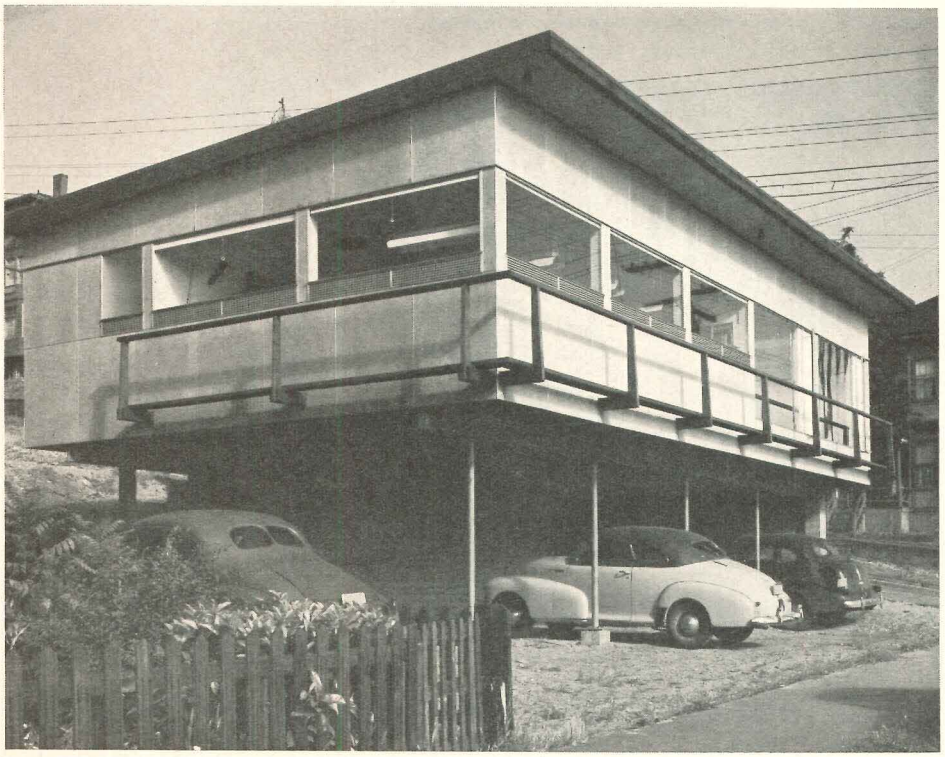




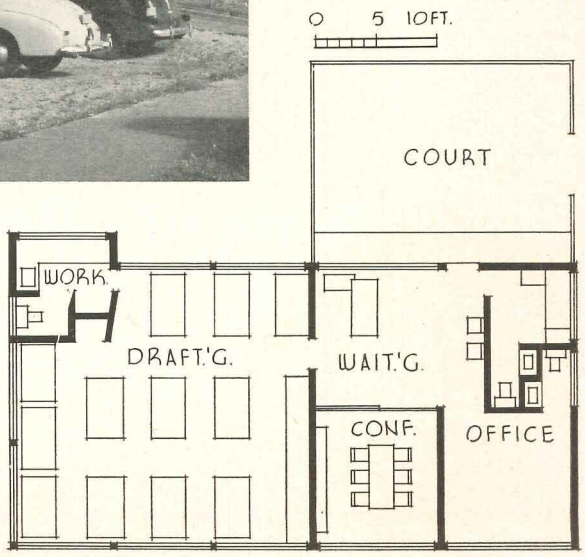
Charles R. Pearson

Paul Thiry's office in Seattle has a central location, close to town and principal highways. Lower floor was planned for rental; upper floor for architect's use is shown in plan below. Photo below shows early stage.

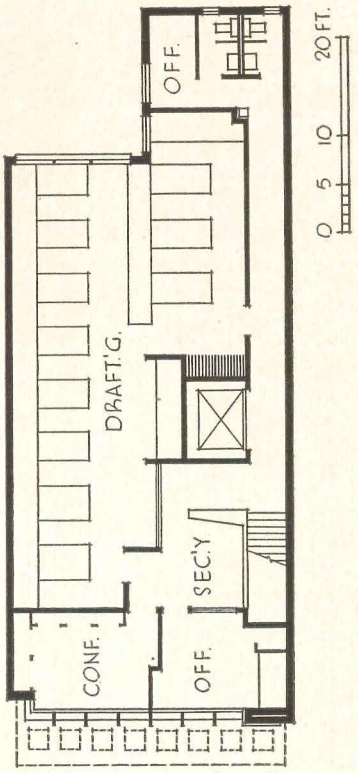
The sloping site gives ground level entries to both sections of building, parking for six cars. Construction is frame with asbestos board exterior, aluminum trim, asbestos roof



Charles R. Pearson

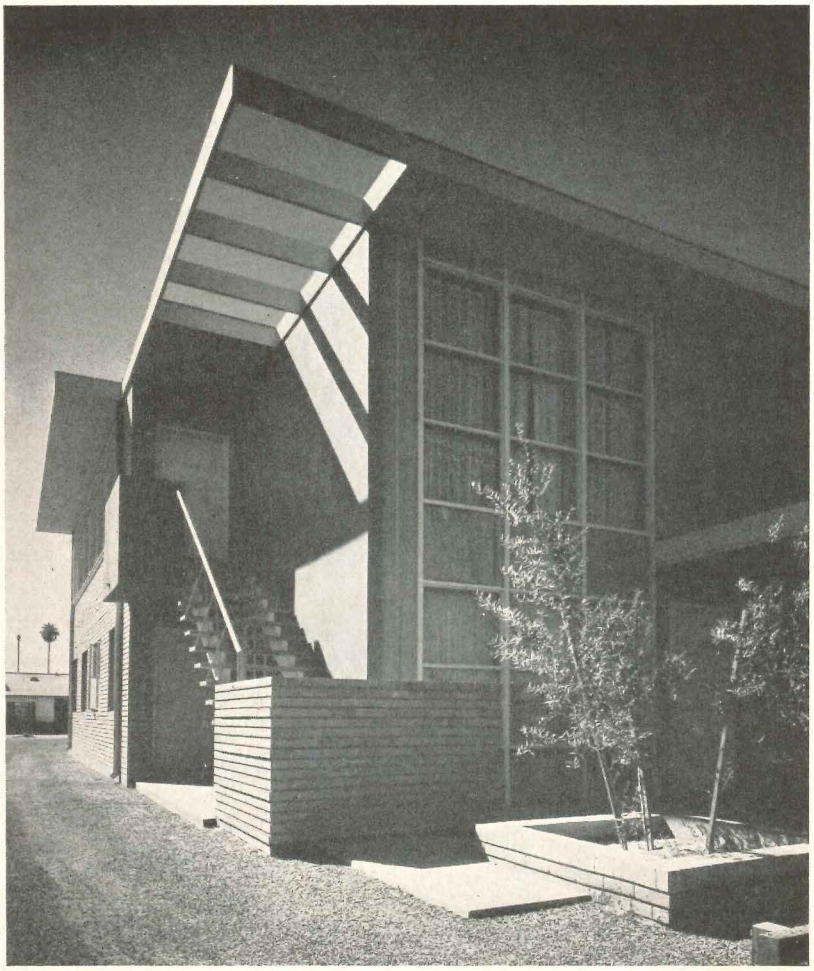


Julius Shulman

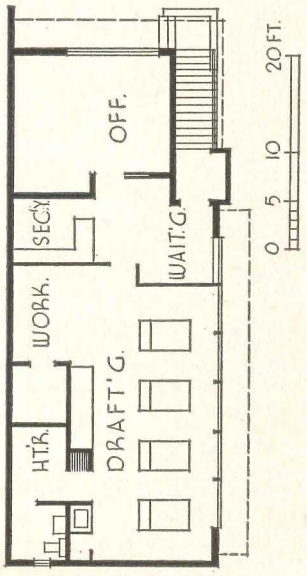


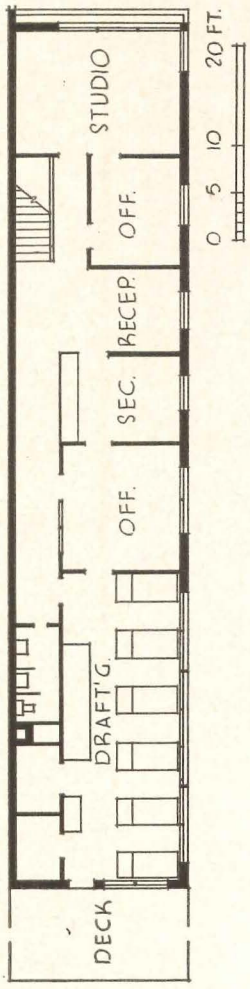
Walter Wagner's brick office building in Fresno, Calif. (above), has two rental offices on lower floor, upper floor for his own offices (plan at right). Each office has separate entrance. Wagner has placed secretary's desk to control all second-floor circulation

Harold Ekman, Phoenix, Ariz., has developed a three-office plan (below) somewhat similar to above, but second-floor entry has outside front stairs. Exterior is blue painted brick, redwood, white trim; doors are birch. Larger lot permits off-street parking, side windows



Stuart A. Weiner

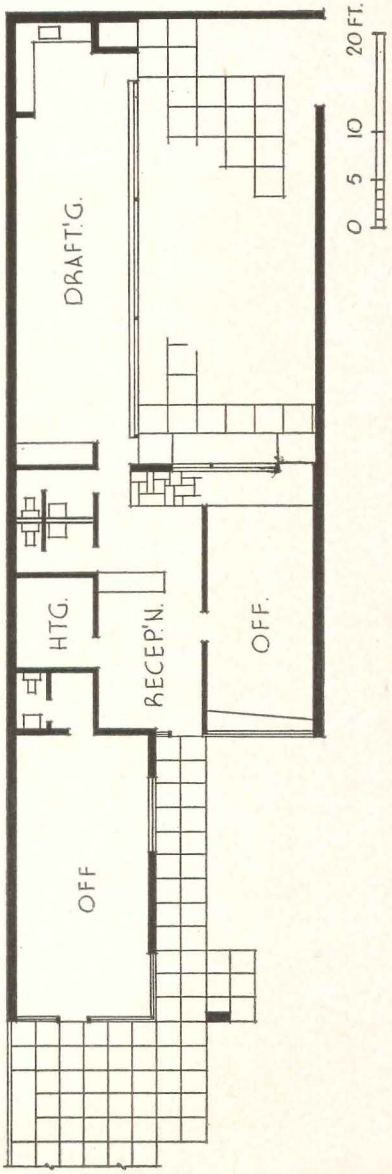




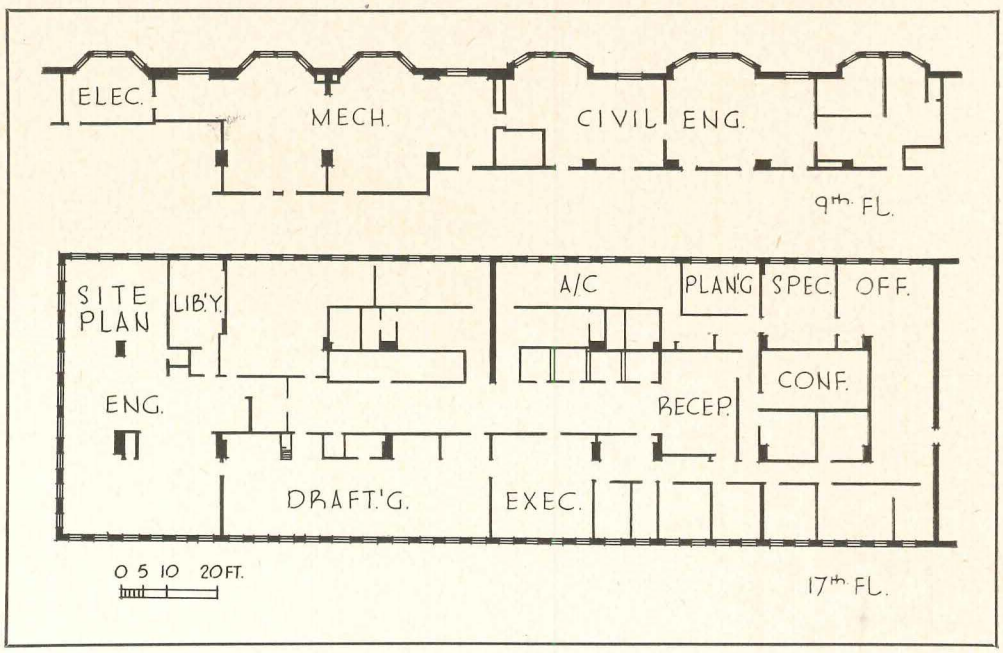
Bill Hedrich, Hedrich-Blessing

Philip Duke West's office occupies a very narrow lot in the business section of Hinsdale, Ill., a Chicago suburb. Lower floor is rented to a store; upper is shared by offices of West and those of Mrs. West, a decorator. Studio at front serves as conference room for both (plan at left)

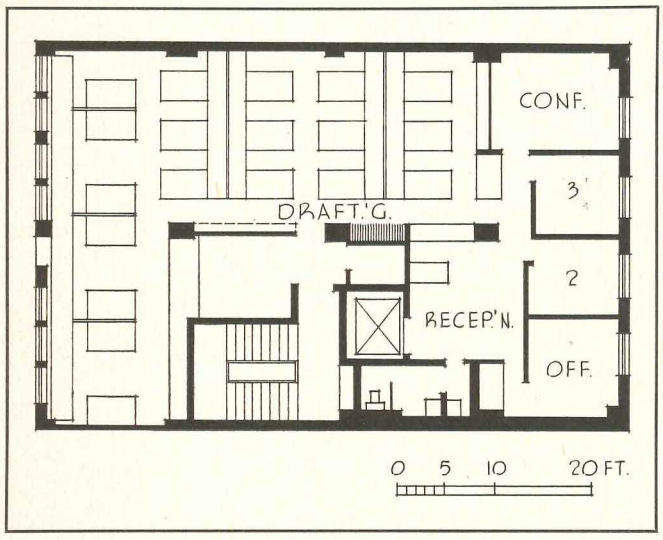
Gabriel Benzur



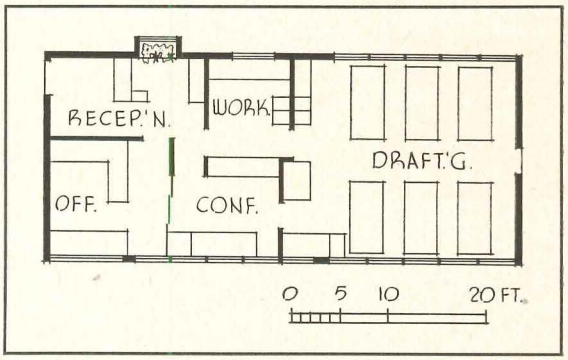
League, Warren & Riley, Macon, Ga., have developed a one-story plan with a rental office near the street, and their own offices to the rear, giving privacy to each. All major rooms in the architects' office open on a pleasant court. Central hall also serves as plan and storage room, office doubles for conferences



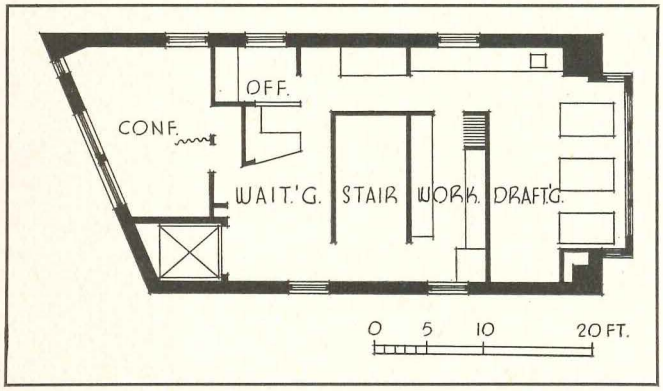
Pace Associates (above) are in an office building in downtown Chicago, have expanded through the years from a few small offices to large suites on ninth and 17th floors, and also have space for duplicating machines on 18th floor. Office layout is sub-divided into various architectural and engineering activities



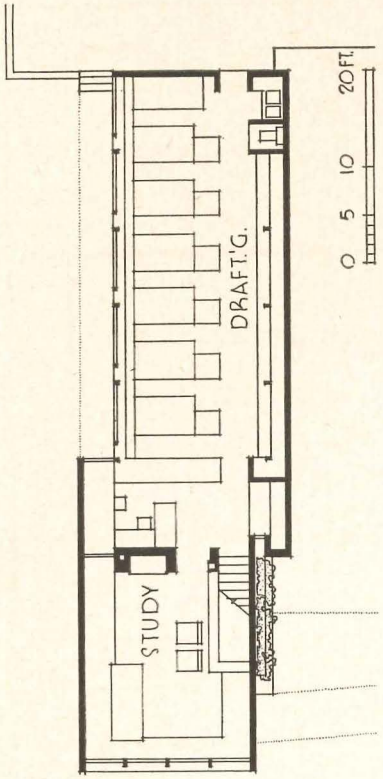
Leinweber, Yamasaki & Hellmuth (above) occupy the third floor of an office building in Detroit, Mich. The entire floor was cleared and partitions of wall board and plywood, stained black or yellow, were placed as desired. Drafting tables have plan counters at side, tack boards between

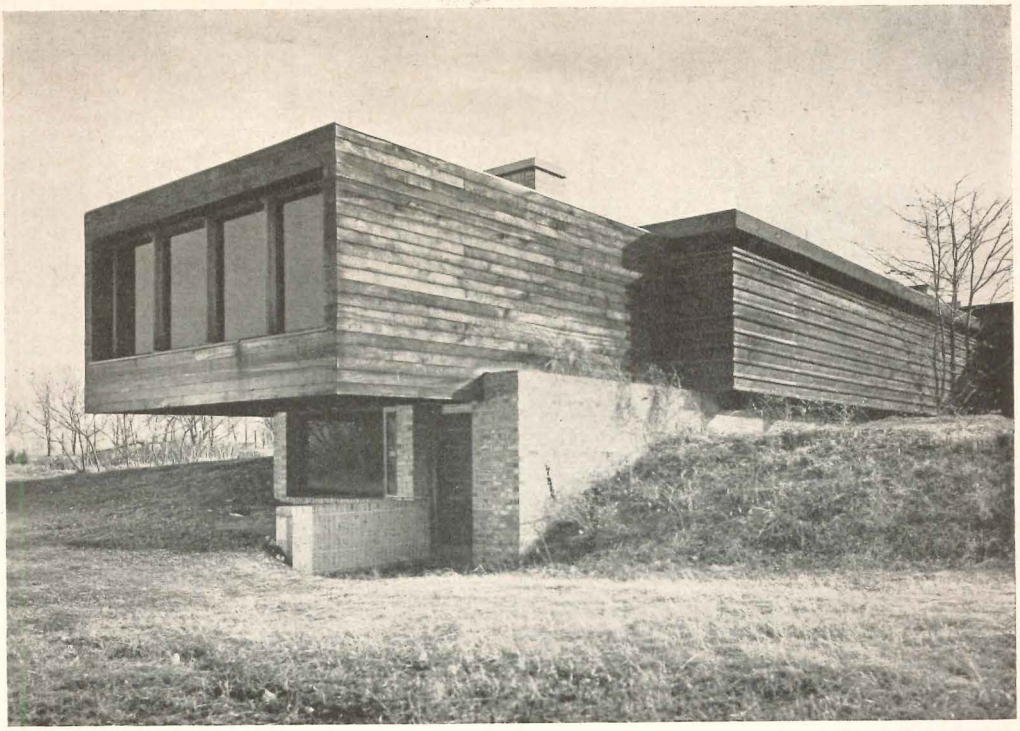


Vladimir Ossipoff has his offices (above) in a penthouse atop an office building in Honolulu, Hawaii. Conference and work rooms are placed to give privacy to drafting rooms. Sliding doors between office and conference room permit joining of the two areas for large meetings and discussions



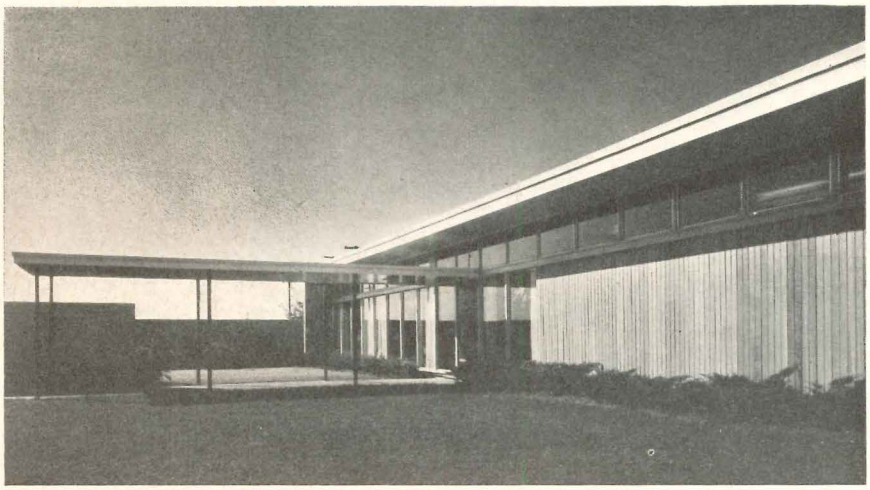
Aeck Associates (above) have offices on the seventh floor of an office building in downtown Atlanta, Ga. Compact arrangement accommodates medium size staff. Conference room can be divided into two offices as needed





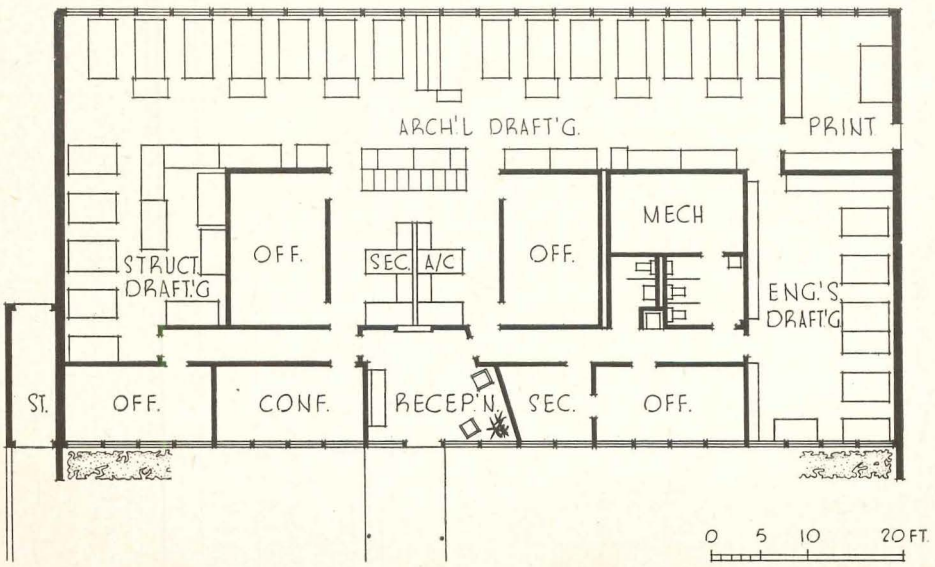
Bill Hedrich, Hedrich-Blessing

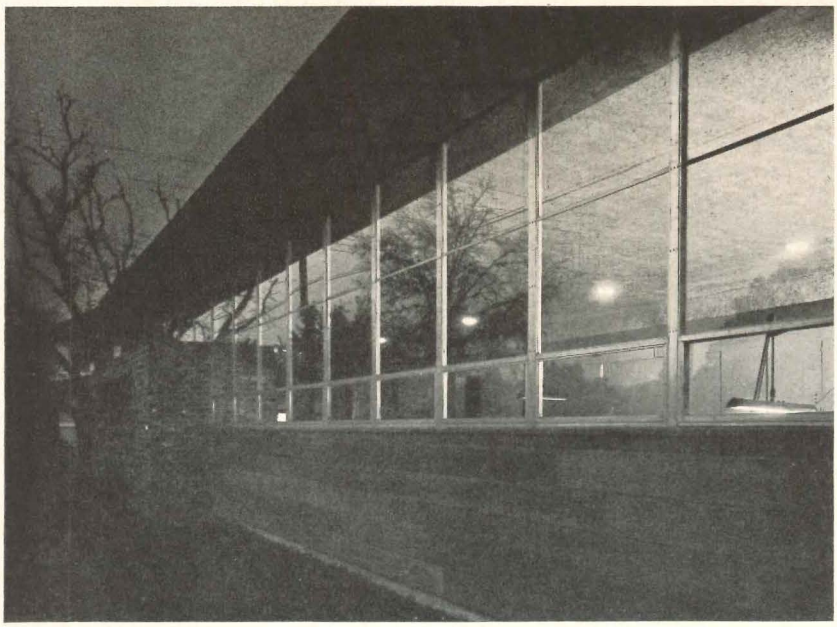
The offices of Schweikher and Elting are located in a wing of Paul Schweikher's country home in Roselle, Ill. Exterior is redwood. Lower floor houses entrance and quarters for an office caretaker



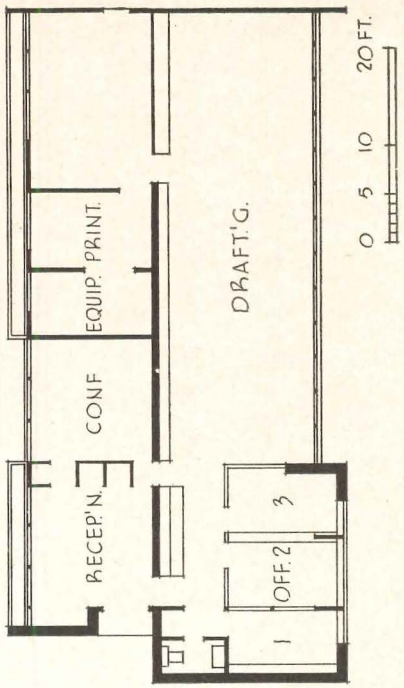
I. B. Lindenthal

Associated Architects (Wirtz, Calhoun and Tungate) have own building in Houston, Tex. Building has wood frame, exterior of redwood, brick, asbestos siding; roof is built-up, gravel surfaced. Off-street parking is at rear

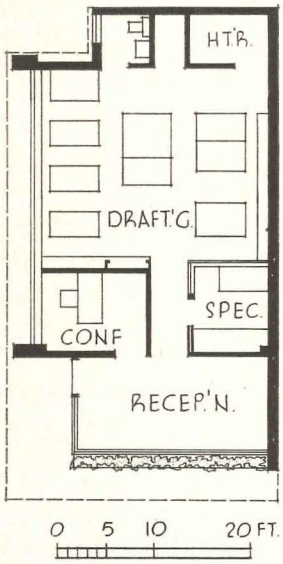


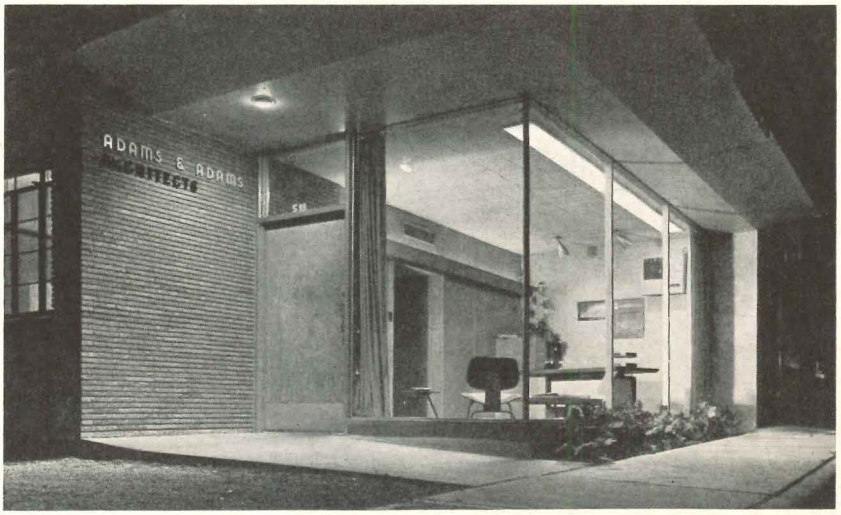


I. B. Lindenthal



The office building of Wilson, Morris & Crane in Houston, Tex. (above), has a solid brick front on the street side for privacy, windows along sides. Shed roof slopes up over drafting room for added light. Entrance door is clear glass

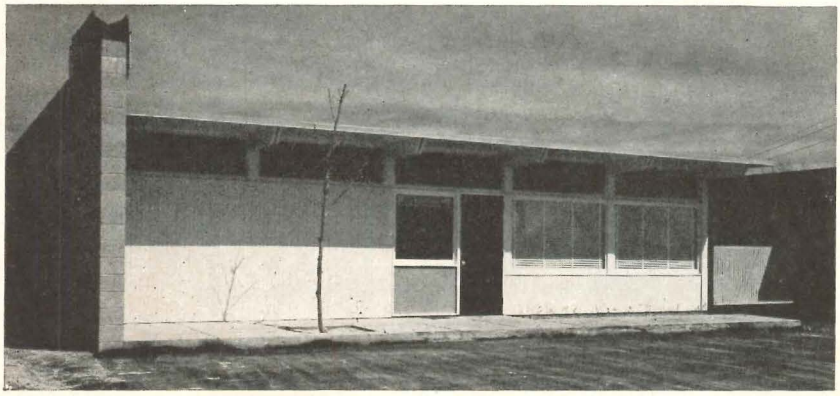




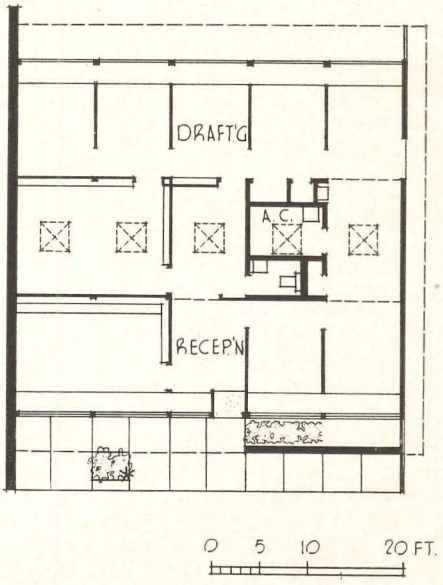
Dewey G. Mears

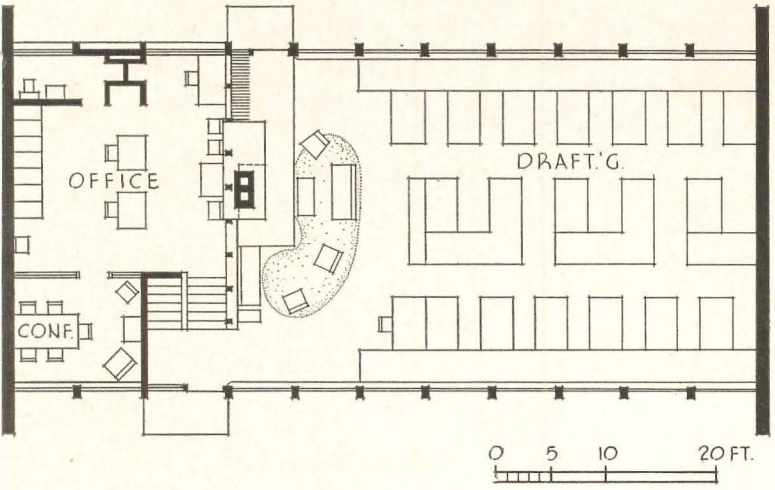
Adams & Adams, in Dallas, Tex., have a small compact building (above). Curtains draw across glass front for privacy; brick fin wall shields conference and drafting rooms from street

Biggs, Weir & Chandler's building in Jackson, Miss. (below), has white painted siding, bright color accents. Plastic skylights are over central rooms. Drafting tables are separated by tack-board screens in bright primary colors

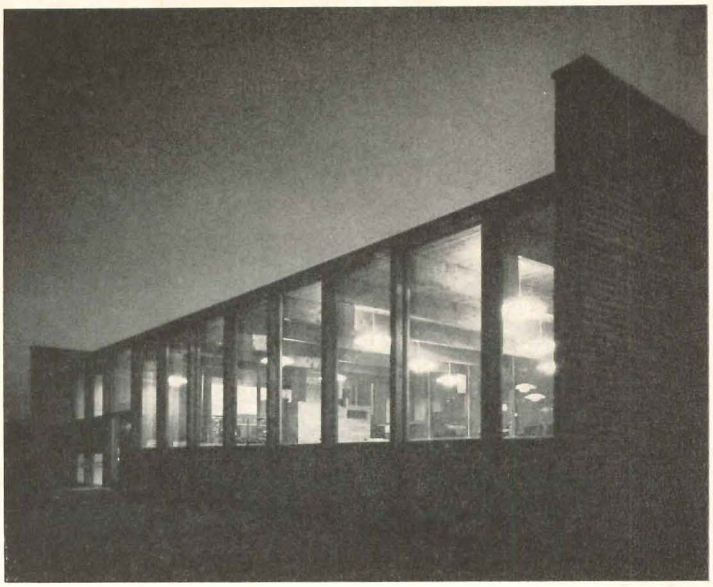


Joseph W. Molitor



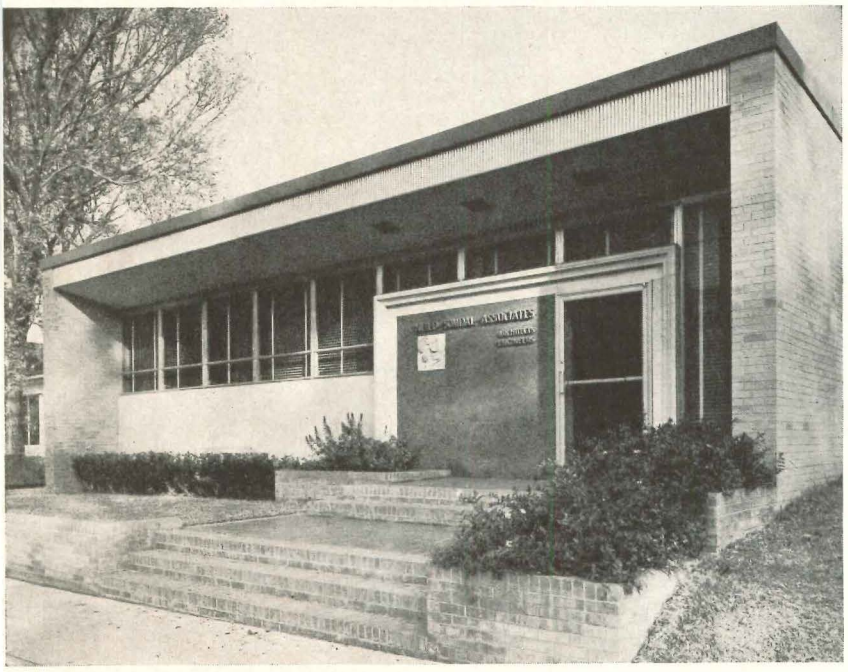


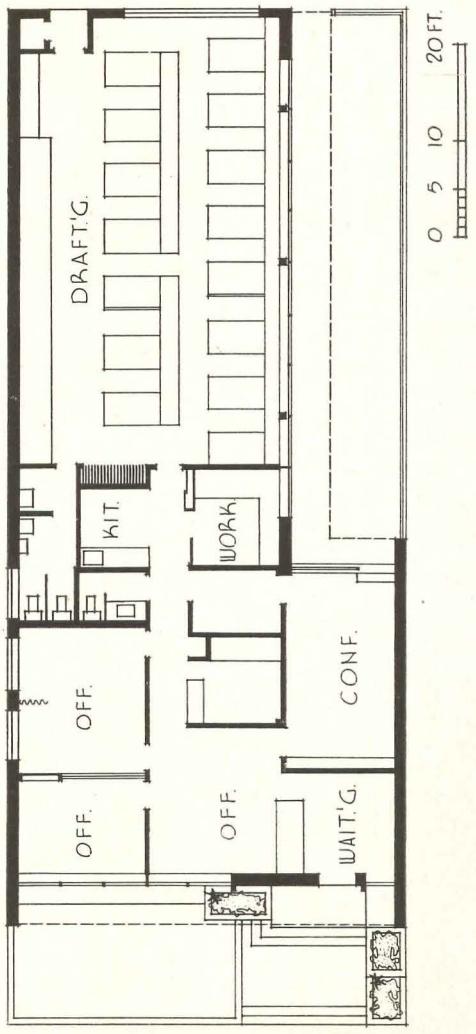
Richard Shirk



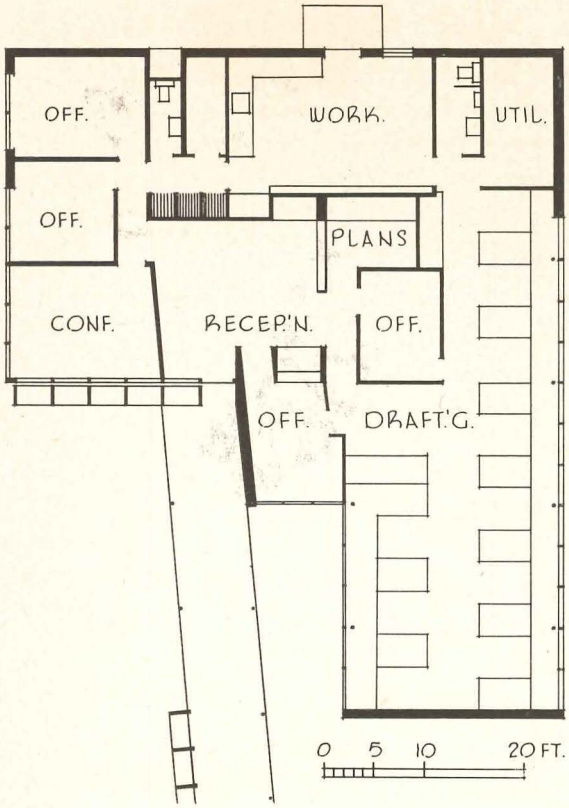
Jahr-Anderson Associates, Inc., have developed a three-level timber structure for their Dearborn, Mich., offices to segregate the various areas, and to permit a high drafting room ceiling. Level below office houses printing machine, storage and private work and design areas. Drafting room has a lounge area for coffee and informal group meetings, opens directly off entrance

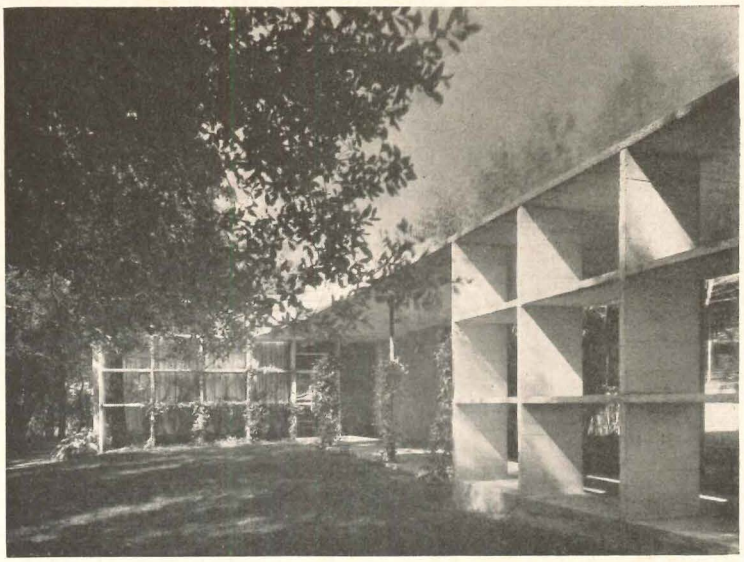
H. O. Wiseman





Neild-Somdal-Associates' building is located in a semi-suburban area of Shreveport, La. It was planned around light court in case adjoining lots are built-up. Drafting room can be expanded on land to rear; the structure is also designed for future addition of second floor. Bearing side walls are brick with 2-in. cavity; columns are steel, roof is concrete slab over steel bar joists

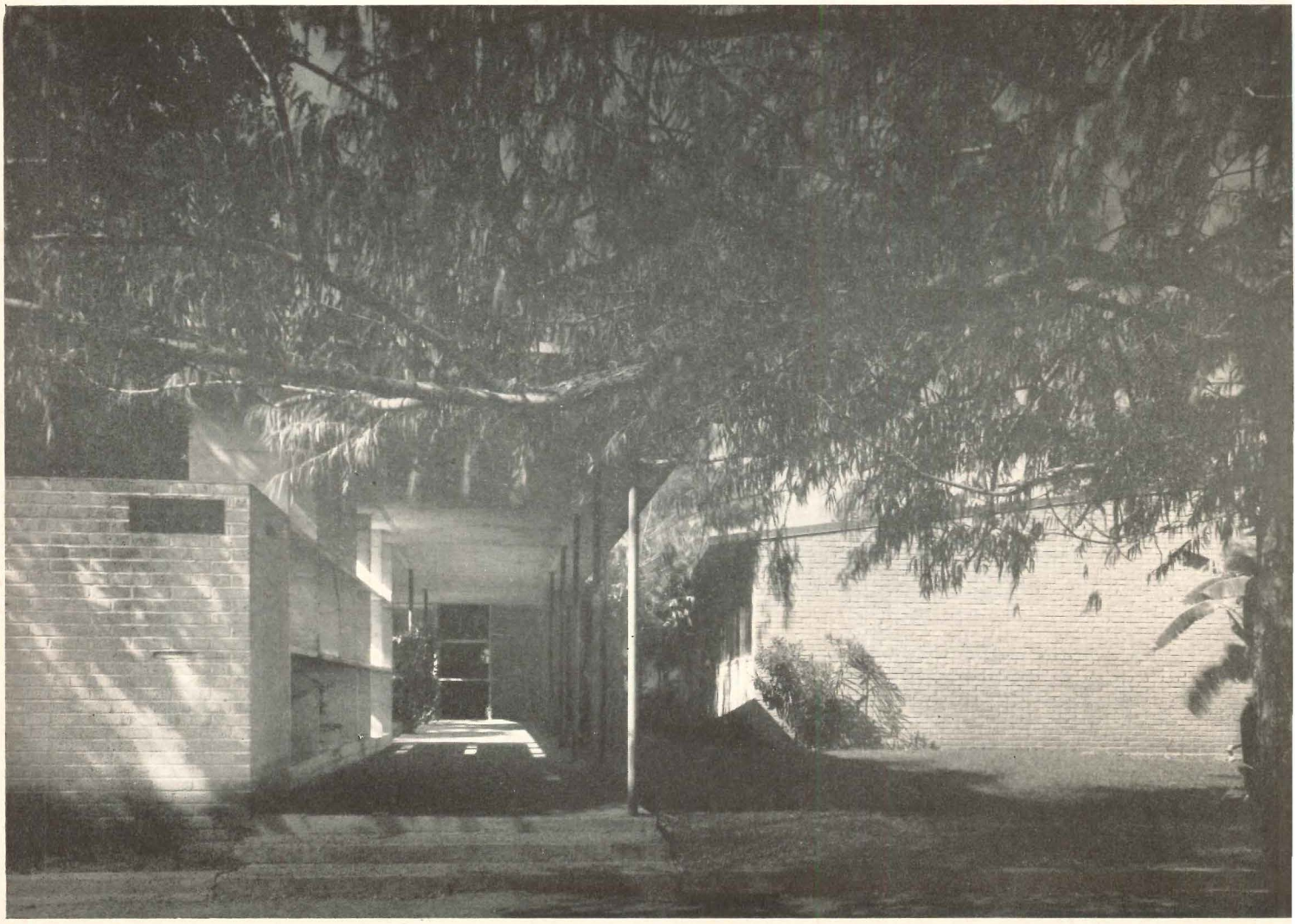




I. B. Lindenthal

Staub, Rather and Howze have developed a building with a strong residential character for their offices in Houston, Tex. Exterior is soft pink brick. Concrete screens and planting help reduce glare from sun, give privacy to offices, drafting room

I. B. Lindenthal



TRENDS IN HEATING AND AIR CONDITIONING

*By S. Konzo**

Professor of Mechanical Engineering

University of Illinois

Equipment will be more compact; automatic controls will make operation more flexible and efficient; ducts will be integral with the structure — these are a few of the developments contained in this forecast

THE CONTINUING ACCELERATED developments in heating, ventilating and air conditioning can be attributed to the following five sources:

1. A demand for compactness of equipment.
2. A demand for push-button and automatic control of mechanical equipment.
3. The advent of new materials of building construction.
4. The introduction of new construction techniques.
5. The demand for higher standards of acceptance.

The source of these developments can be traced to architects, builders, building owners and equipment manufacturers. Regardless of the source, however, the fact remains that architects and mechanical engineers must keep pace with the trends. Some of the broader aspects will be discussed here.

1. Trend Towards Compactness of Equipment

Numerous examples can be cited in a wide variety of heating and cooling applications showing the trend towards compactness of equipment:

a. Extended surfaces, or fins, are used to promote greater heat transfer; higher velocities of the circulating medium are becoming more common; and higher speeds of equipment are being utilized.

b. In aircraft heaters, the heat release per cu ft of furnace volume is many times greater than that in use for industrial furnaces.

c. High velocity air flow at moderately high pressures have been developed for commercial buildings. Velocities as high as 4000 fpm have been used for air conditioning service.

d. High-speed axial flow fans, as well as high-speed centrifugal fans, are on the market.

e. Smaller boilers with high circulation rates are being developed.

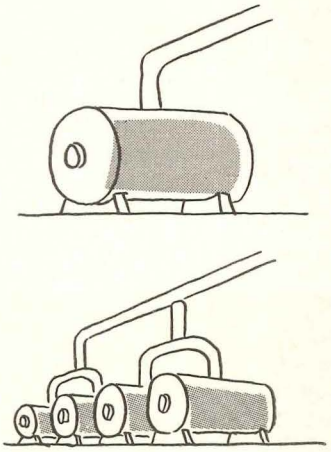
f. High temperature hot-water systems, with temperatures in excess of 230F, are being tried.

The trend towards compact equipment will undoubtedly be accentuated as a result of engineering research, competition and space demands. One does not have to speculate too far ahead to imagine the potentialities of high-velocity, high-pressure ducts; of high-speed refrigeration compressors; of high-intensity combustion processes; and low-temperature cooling air for commercial, industrial and residential applications.

2. Trend Towards Push-Button and Automatic Controls

The single largest contribution during the past two decades has been the practically universal adoption of automatic control equipment. These controls serve not only to regulate temperatures, pressures, drafts, flow rates and dew-point temperatures, but also serve the more important function of providing safety limits for operation. We can expect not only refinements in the equipment, but also the more extensive use of the following items:

a. Zone control of large blocks of rooms and spaces where a single large unit is used for the entire building.



A number of small-sized heating or cooling units (boilers, refrigeration compressors, etc.) tied together and turned on or off automatically as the load varies may be more efficient in some cases than one large unit

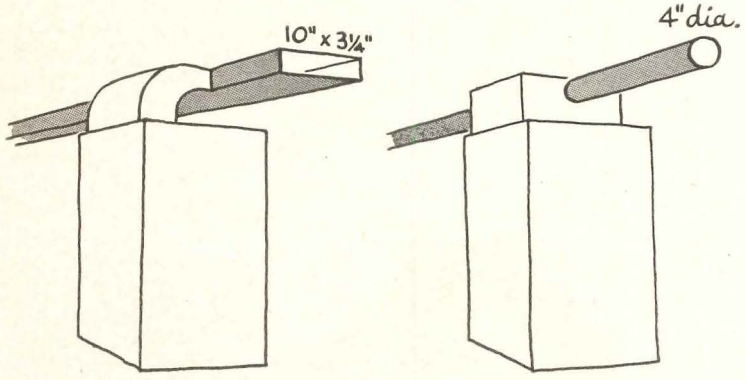
b. Simultaneously, we can expect the use of individual units, each serving a small zone.

c. Also we can expect the ultimate refinement to consist of individual room temperature control for both heating and cooling.

d. Factory installed control equipment with control settings fixed at the factory, and with a minimum of electrical connections to be made at the site of installation.

e. Step control of multiple units to handle varying weather and load demands, such as the use of two or three refrigeration compressors for a given building.

f. Modulating control of a large capacity unit to handle the demands



High-velocity, high-temperature forced warm air systems for residences and small buildings distribute the heat through 4-in. circular ducts, taking up less space than conventional forced warm air ducts and demonstrating the use of higher velocities to make equipment more compact

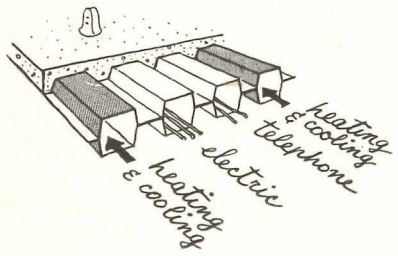
* *Based on a paper given at the U. of Illinois Short Course, "Planning for Heating and Air Conditioning of Small Buildings," Oct. 1952.*

of fractional loading. In this connection much remains to be done in obtaining a close control of air-fuel ratios for burners when the fuel input is varied over a wide range.

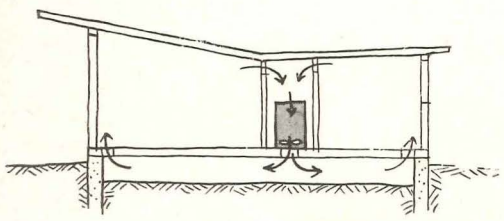
3. Advent of New Materials for Building Construction

A seemingly simple change such as the replacement of metal pipes by a new type of plastic tubing has ramifications that tax the ingenuity of the mechanical engineer. Even a casual inspection of trade literature reveals that resourcefulness and imagination will be needed to handle such items as:

a. The proper insulation and vapor treatment of solid and hollow masonry walls.
b. The proper insulation of metal walls composed of two skins of metal and with metal ties connecting the two skins.
c. The proper sealing of the joints between large sections of wall panels, which have been prefabricated.
d. The possible use of building materials to serve a dual purpose, such as hollow tile and steel channel spaces for air ducts.
e. The proper application of double-glazed, fixed windows, ventilating louvers for use with fixed glass areas, roof overhangs for solar orientation and movable sun shades for window openings.



Parts of structures, themselves, are being designed to double as heating and air conditioning ducts. Above: cellular floor carries wiring as well as air for heating and cooling. Below: floors are kept warm in houses built over crawl spaces by dumping heated air into them



f. The proper installation of L-P gas tanks.
g. The electrical wiring for installations using electrical energy as the heating source.

4. Impact of New Construction Techniques

When an architect develops a new building form, or a builder tries a new construction technique, the mechanical engineer will be vitally interested. Consider the impact of some of the following construction practices:

a. If movable partitions are to be used in order to provide flexibility in internal arrangement, the type of heating unit and the location of the heat source must be carefully considered.
b. If prefabricated panels of wall, floor and ceiling are to be used, conventional locations of piping, ductwork and wiring may offer difficulties.
c. Slab floors placed on the ground introduced a problem of cold floor surfaces near the exposed perimeter.
d. The use of tightly enclosed crawl spaces introduced problems of cold floor surfaces as well as high moisture release from the damp soil.
e. Unventilated flat deck roofs offer a serious problem of panel heating effect in the summer.
f. The use of large glass exposures, some of it unwisely, has brought about problems of solar loads.
g. Conversely, in the windowless structure, the ventilation problem is paramount.
h. Group housing or large-scale planned communities may make feasible the use of a single central station for heating and the use of heat distribution lines to individual buildings.
i. Conversely, the use of a large number of standard, small units strategically located throughout a building may reduce the amount of piping, wiring and ductwork.

5. Acceptance of Higher Performance Standards

In the minds of the research engineer the standards of acceptance of heating equipment have been raised during the past two decades. Nevertheless, as far as most building specifications are concerned, the standard is loosely stated that the "system shall be capable of maintaining a temperature of 70F." The question arises as to where this temperature is to be measured; when this temperature is to be measured; how much tolerance is to be permitted; how much variation is to be permitted from one part of the building to the next; and whether some of the other factors affecting comfort are to be ignored.

Higher standards bring about changes in equipment and design and raise some problems, as illustrated by the following partial list:

a. The demand for attractive appearance has resulted in the disappearance of the bulky column-type radiators, convectors, baseboard radiators and panel systems.
b. The demand for quiet operation imposes a problem to manufacturers of fans, oil burners, stokers, steam piping and control equipment.
c. The demand for adequate ventilation has been accentuated by more tightly constructed buildings. Adequate ventilation requires a larger fuel consumption. Alternative means are being developed, such as the use of odor-absorbing chemicals, air washing, odor-masking chemicals and electrostatic precipitation.
d. The demand for cleaner outdoor air has resulted in numerous attempts to control atmospheric pollution. The small building has not been blameless as a source of smoke and fumes.
e. The demand for higher safety standards has come about to a large extent from industry itself. The American Gas Association and the National Board of Fire Underwriters Laboratory are two examples of industry-controlled testing and approval agencies.
f. The demand for summer cooling has increased as less costly and more compact equipment has been made available. But at present the standards of acceptance of summer air conditioning systems are relatively low. It can be expected that as summer air conditioning becomes more common that demands will arise for closer control of humidity, elimination of odors, elimination of drafts and reduction in initial and operating costs.

The conclusion is inescapable that specialization will continue and that progress will be accentuated. The working team of the future, therefore, must include the architect as the overall planner and coordinator of the building, and the mechanical engineer as one of the specialists dealing with the functional aspects of the building.

TILT-UP WALLS HAVE OWN COLUMNS, BEAMS

Concrete framing is cast integral with wall panels

St. Louis Produce Market, St. Louis, Missouri

L. Roy Bowen & Associates, Architects and Engineers
William O'Neil, Structural Engineer for Wall Panels
Robinson Construction Co., Contractor

EACH of the two 114 by 1225 ft buildings comprising the new St. Louis Produce Market contains 49 individual units, 25 ft wide, built repetitively of tilt-up concrete panels. After the panels are in place they are bridged by precast concrete roof joists. The necessity for maximum sanitation in the handling of produce was one of the primary factors in the selection of concrete, and economy was the major factor in the choice of tilt-up construction.

Practically all of the perishable fruits and vegetables coming into the St. Louis area will be received and serviced by this market starting early this month.

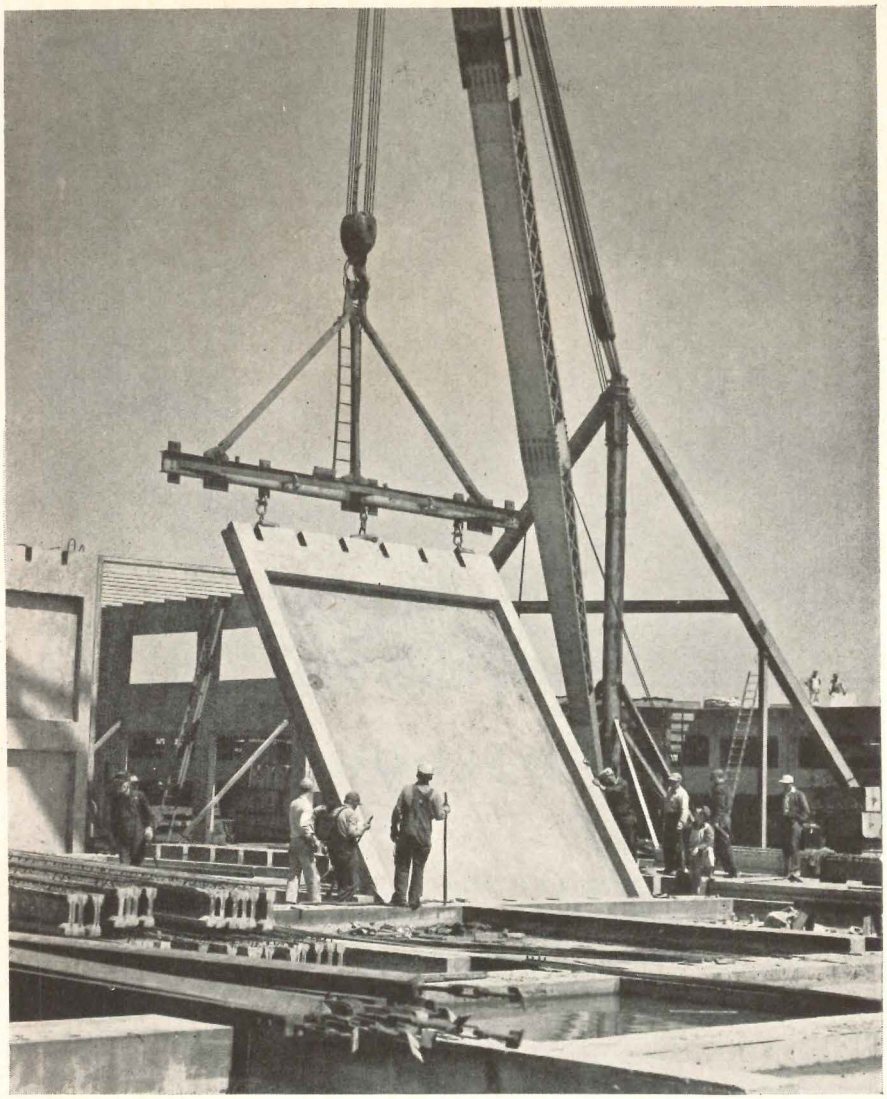
Two surveys were made in the last decade to determine the need for such a market. Most recent was one by the Department of Agriculture in 1949, which was used as a basis for planning the two structures. The facilities were financed by a corporation formed from a group of 59 produce distributors. Of the 98 units, 93 have been taken by these distributors, so that some of them will occupy more than one unit. Of the remaining five units, three will be used for restaurants, and the remaining two as office space for produce brokers.

The buildings will be served directly by the tracks of the Wabash Railroad which were relocated for this purpose.

The units were made 25 ft wide so that three vehicles could be parked in front of each unit. This is where business is done at a produce market, and is the reason for the concourse running the length of the building in front of the units. Because produce people have always done business at curb height, they insisted that the doors opening from the concourse onto the trucking area be of curb rather than truck height. Doors are at railroad car height at the rear of buildings.

A mezzanine floor for office space runs the entire length of the rear 20 ft of both buildings. Each unit has its own toilet facilities both up and down in this section. The building was designed so that a second floor can be added wherever desired by resting joists on the beams cast at mid-height on the interior panels.

Two 1225-ft buildings provide a total of 98 individual units for some 50 tenants. Long side of building in foreground is for railroad service



One of the interior panels with integral beam and columns being raised to position by a 35-ton derrick. The frame is 11½ in. thick and the center of the panel is 4 in.

Wall Panels

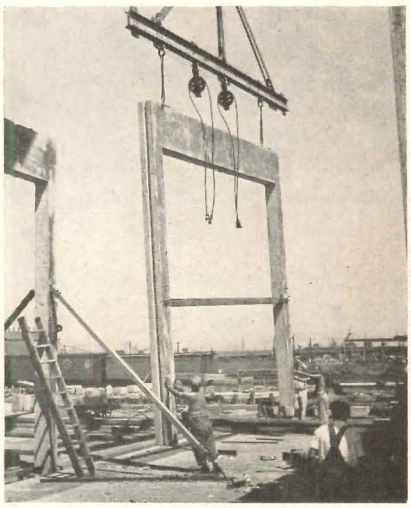
The tilt-up walls are actually a part of the structural frame — columns and beams are cast integral with the panels — in contrast to the use of tilt-up panels merely as enclosure which requires separate framing. Panels for the market buildings are secured to each other at their juncture by welding steel bars to steel anchors cast in the panels at each end of the top edges. Precast concrete roof joists connect one panel to another; steel bars in the tops of the joists are welded to anchors in the top edges of the panels.

Both exterior walls and interior partitions were cast on the floor and tilted up into position. The small casting floor necessitated casting the panels in layers, so a bond-breaking agent was used to keep them from sticking together and to the floor.

The size and thickness of wall panels vary both on interior and exterior. Panel heights are generally 22 ft 6 in., widths from 20 to 25 ft.

An individual unit of the two buildings consists of a front exterior panel, a panel between the concourse and store space, a rear exterior panel and three interior panels on each side. Some of these interior panels have beams at mid-height, some have cantilevers, some have neither, some both.

Typical wall panels are shown in the



Left: concrete floor makes a casting bed for panels, poured atop one another. Above: structural frame is braced while transported

sketches directly at right. No. 1 is a rear exterior wall panel opening to the railroad tracks from which produce can be moved directly into the unit.

No. 2 is an interior panel which intersects the exterior rear panels and contains a cantilever which supports the roof protecting the railway unloading area. It has integrally cast beams at mid-height on which the mezzanine structure rests.

No. 3 is a typical interior panel constructed similarly to No. 3 for mezzanine floor installation.

No. 4 flanks the inside of the concourse which is open through the entire length of the building. These panels separate the concourse from the interior of the unit itself.

No. 5 is a front exterior wall panel facing the trucking area and containing two 10 by 10 ft doors for servicing trucks picking up produce. The heaviest wall panel weighs about 34 tons.

The Construction Process

Briefly, the steps in construction were as follows:

a. Fill and plumbing
b. Cast-in-place concrete piles to rock
c. Cast-in-place foundations
d. Construction of 5-in. concrete floors
e. Preparation of forms for panels and placement of steel and casements in forms
f. Placing of concrete for panels and curing of panels (usually 14 days)
g. Erection of panels and construction of roof

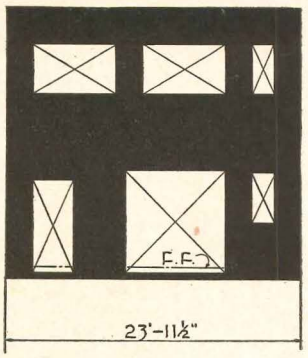
Because winter weather, track relocation and other problems delayed construction on the first building, statistics on the second building are more significant.

On this *second* building there were 349 wall panels. Concrete was placed for the first panels on Feb. 28, 1952, and the final panel was placed on June 2, 1952. The first panel was erected April 16 and the final one on July 25. There were 13 panels erected on July 15, the record high for this job. Average was about six per day. There were no panels dropped, only four suffered minor cracks which were repaired, and none were lost. The 349 panels in the second building were cast in 60 working days.

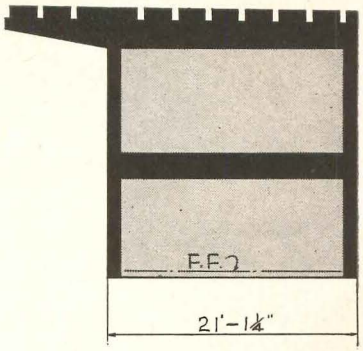
Foundation

The entire building rests on cast-in-place concrete caissons which were carried to rock. Wall panels were set on 3-ft diameter caps which were merely the widened tops of the 18-in. caissons. The retaining wall at the "trucking side" of the building was cast-in-place concrete.

The 5-in. concrete floors were placed in alternate lanes across the building,

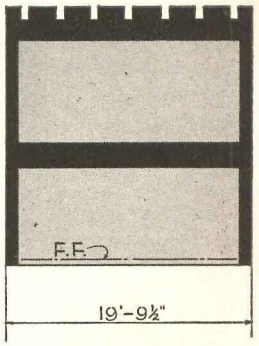


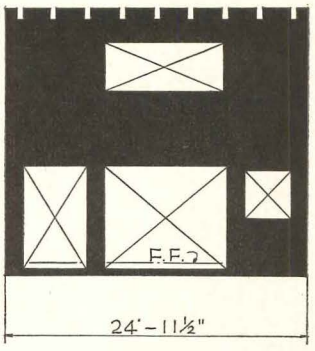
No. 1. Rear wall, facing railroad, 10 in. thick. Produce unloaded here



No. 2. Interior wall, railroad side, frame 11½ in. thick, wall 4 in. Cantilever for roof at unloading dock. Beam at mid-height for mezzanine floor joists. Set perpendicular to panel No. 1

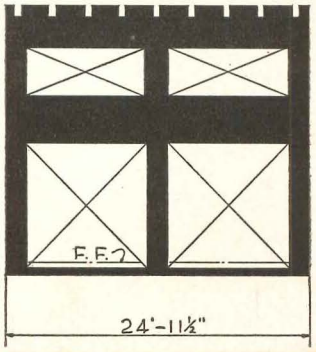
No. 3. Interior wall, frame 11½ in. thick, wall 4 in. Beam at mid-height for future second-floor construction

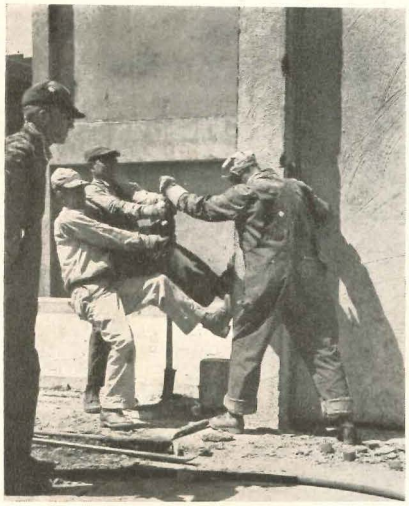




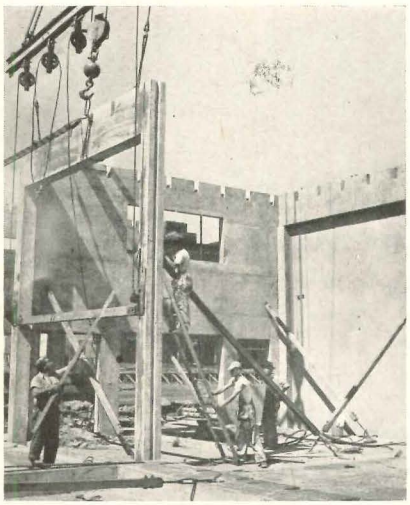
No. 4. Concourse wall, truck side, 10 in. thick

No. 5. Front wall, truck side, 10 in. thick. Separates concourse from the outside. 10-ft doors for loading produce

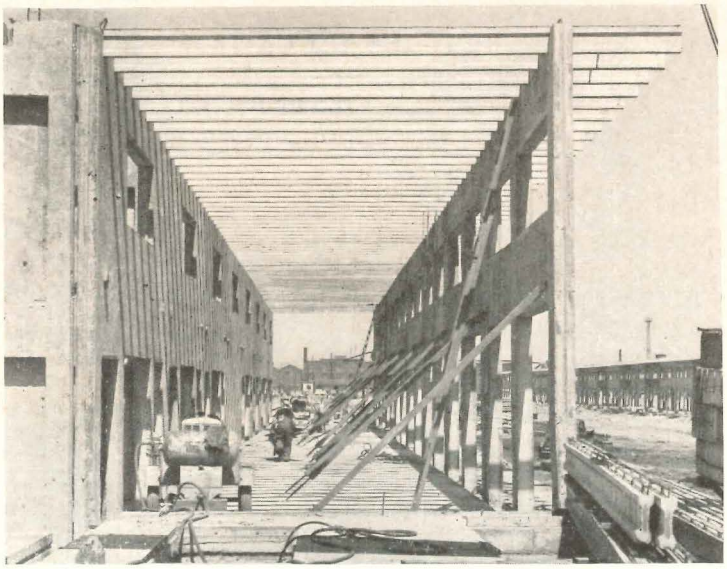




Interior panel being jacked into place. Note beam at mid-height in background panel to hold joists for a second floor



Temporary bracing steadies panels during construction. When all panels are up, concrete joists will be set in notches



Looking down through the concourse area on the truck side. Panels are connected by precast joists

the lane width being the c-c distance between cross panels (generally 25 ft 0 in.). Reinforcing was of wire mesh only.

There were two primary reasons for building the floor in this manner. First of all, it saved on formwork, as the adjacent edges of the completed floor sections could be used as forms for the section placed in between them. Secondly, by using this type of construction it was not necessary to wait until forms could be stripped from a completed lane before starting work on another one. Thus construction was speeded up. The 25-ft width coincided with the width of the units, and the interior panels are in place immediately above the floor joints.

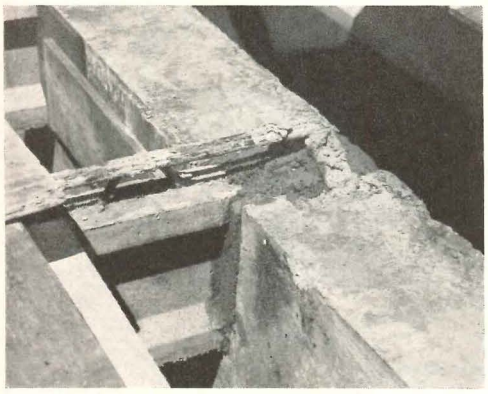
Forms

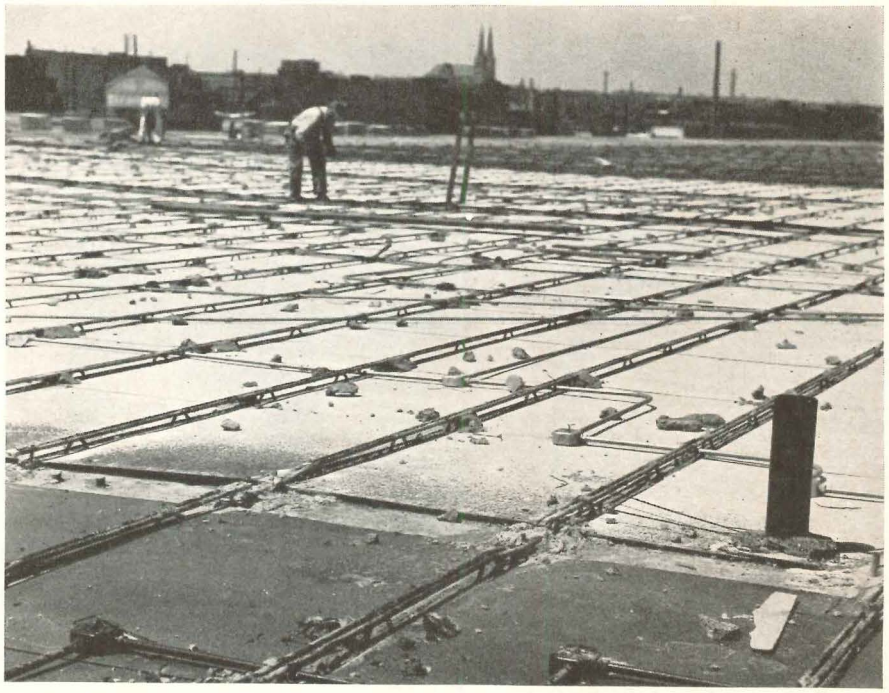
In most cases, edge forms for panels were of 2-in. lumber. Where sides of panels were cast adjacent to each other, a ½-in. plywood division strip was used as an edge form. Any yielding of this thin edge form caused no difficulty, as panels cast adjacent were erected the same way.

Roof Construction

The roof construction consists of precast concrete joists at 34 in. c-c, supporting cement asbestos board on which is placed a 3-in. fill of vermiculite concrete. The notch in which the joist rests is grouted later to completely fill the void between joist and panel. More than 23 miles of precast concrete joists were used in the roofs and mezzanine floors of the two buildings.

The top side of the asbestos-cement boards is sprayed with a bituminous waterproofing. It was thought that by waterproofing the asbestos-cement, deflections of the board would be less than if not waterproofed. Electrical conduit and conduit boxes were placed on the asbestos-cement board before placing roof fill. Asbestos-cement boards were secured in position by using a small amount of mortar between the boards and the top exposed bars of the concrete joists.





Above: exposed steel bars of concrete joists are welded to plates in wall panels. These bars, also welded to joist stirrups, project up into concrete roof slab to tie slab to frame. Right: asbestos cement sheets act as forms for vermiculite concrete roof fill. All conduit is in roof slab

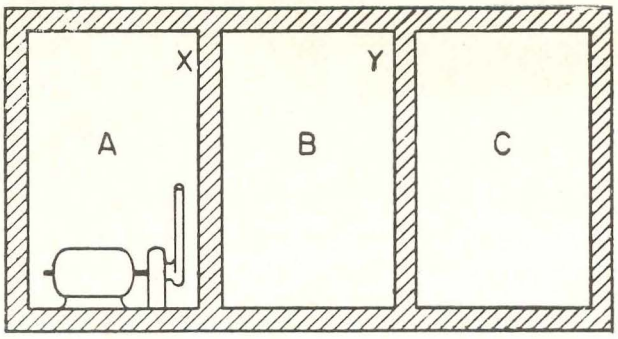
REDUCING THE NOISE OF INDUSTRIAL MACHINES

*By Paul H. Geiger and Richard N. Hamme**

A discussion of how to cut noise with: (1) resilient machine mountings, (2) vibration dampening materials, (3) acoustical housings and barriers, (4) sound absorbing materials

ANY INDUSTRIAL MACHINE is always a source of mechanical vibrations, and the vibrations usually result in undesired noise.

There are three basic ways of attacking this annoyance problem aside from just getting used to the noise or plugging your ears: (1) You can try to reduce the amplitude of the vibration itself at some stage in its travels, either by minimizing the forces in the machine or by dissipating its energy harmlessly when it tries to get away. (2) Better yet, you can try to isolate the disturbance by putting obstacles in its path from the machine to the ear. (3) Or, the character of the disturbance can be modified so it will be less objectionable.



In the text, three hypothetical rooms demonstrate some principles of noise reduction. Room A contains an unusually noisy machine and room C is needed for office space. Text and figure will show how cavity walls improve noise reduction

Noise Reduction at the Source

The logical place to attack the noise seems to be at the place where it originates, at the source, in the machine itself. This may not be the most fruitful approach in the long run, but a long hard look at the machine in the hope of discovering the actual mechanical causes of the noise is usually justified, just for familiarity with the problem if for no other reason. The ideal approach is a complete noise analysis because the noise of any practical machine is bound to be complex, a non-musical combination of many individual tones sometimes well confused with unpitched noise. Little is accomplished by way of overall loudness reduction until the loudest single component is reduced.

Resilient Mountings

Inasmuch as any machine seems bound to produce some mechanical vibration, ways have to be found of keeping this vibrational energy from being radiated into the air as noise. The mechanism of sound radiation already suggests the solution. In order that a vibrating object be an efficient radiator of sound, its dimensions must be of the same order of magnitude or greater than the wave length of that sound in air. For example, an object vibrating at 100 cycles per second will not radiate efficiently unless it has an area of several sq ft. Hence, in order to prevent the radiation of a 100-cps vibration, it is only necessary to prevent the vibration from reaching any surface of large area. This kind of vibration isolation can be accomplished by the use of suitably designed resilient mountings. Considerable noise reductions can be obtained both by using resilient mounts inside the machine to isolate vibrations from large housing and coverplates and by using them under the entire machine to isolate it from the floor and walls.

The design of resilient mounts is very simple in most installations. Using either steel springs or any resilient rubberlike material, the only design criterion is the stiffness of the mount, or, what amounts to the same thing, the natural frequency of the machine on its mounts. The natural frequency can be determined easily by computing or determining experimentally how far the spring or rubber mount is deflected by the weight of the machine, the so-called static deflection. The mounts must be soft enough so that their natural frequency will lie well below the lowest-frequency vibration which is generated by the machine, otherwise the vibration may actually be amplified. In mounting rotating machinery, this means that the natural frequency of the mounts must be well below the speed of rotation.

Certain simple precautions must be taken in the installation of resilient mountings. You must not allow them to be "short circuited" by rigid connections to the machine. The isolation is only obtained by virtue of the free movement of the machine on its mounts, so rigid fuel pipes, exhaust lines or electrical conduits will defeat the purpose. Furthermore, you must have either a rigid or highly damped foundation structure to support the mounted machine, otherwise foundation resonances will be excited by the little vibrational energy that does leak through the mounts.

Vibration Damping Materials

Any mechanical system has an inherent tendency to vibrate more easily at some frequencies than it does at others. These frequencies are called the natural frequencies of the system. Such little energy is required to excite and maintain resonant vibrations that the vibrational forces which leak through well-designed resilient mounts are quite capable of inducing foundation resonances of large amplitude.

Whenever a machine's speed is not constant or when parts are subjected to impact, vibration at the natural frequencies should be damped out by the proper use of vibration damping materials. These materials are only effective in suppressing vibration at or near the natural frequencies where they are capable of draining off energy at a greater rate than it is being supplied. The vibration damping materials function by being flexed and deformed by

* *Research Physicists, Engineering Research Institute, U. of Michigan. Based on a paper given at the third annual National Noise Abatement Symposium at Technology Center, Chicago, Oct. 10, 1952*

the vibrating surface to which they are attached, so that mechanical energy is dissipated by internal and/or rubbing friction during flexure.

Damping materials are available in several forms. The so-called mastic "deadeners," which are applied with a spray gun, have been developed primarily for the automobile industry. The mastic deadeners are all very similar in appearance but their effectiveness varies over a great range from one product to another.

Various types of asphalted indented felt are available for vibration damping use either just laid in sheets on the vibrating surface or cemented to it. Their effectiveness is very much improved if the indented felt is backed with a sheet of metal. The inertia of this sheet constrains one surface of the treatment and ensures maximum fiber flexure when the opposite side moves in contact with the vibrating surface. Fibrous blanket materials, which are relatively poor in themselves as vibration damping materials despite their effectiveness as airborne sound absorbers, can also be rendered quite effective in vibration damping service by backing the blanket with cardboard or heavy paper.

Acoustical Housings

It may still be that further noise reduction is desirable. The possibility still remains of fencing off the airborne sound radiated by the machine, confining the noise to an area where it will not disburb anyone. Whether this airborne sound barrier is a small sheet-metal housing or an entirely separate room, the acoustical principles are the same.

Care must be taken that the partition or housing is properly isolated from the machine by resilient mounts so that the partition acts like a barrier rather than a radiator. Furthermore, if the housing is made of sheet metal, it may be necessary to use a vibration damping treatment to prevent exciting the housing resonances.

If very high attenuations are required as in the case of very noisy machinery with office space nearby, the problem might seem very difficult since the attenuation of a single homogeneous wall depends only on its weight per unit area. For example, weight law requires the use of a single partition weighing more than 400 lb per sq ft to obtain 60 db attenuation. But luckily, an improvement upon the single-wall construction is available when needed.

Consider the three rooms A, B and C in the sketch. Assume that room A contains an unusually noisy machine and room C is needed for office space. If partition X and partition Y are both homogeneous single walls weighing 3.5 lb per sq ft, the sound level in room B will be 30 db down from that in room A according to weight law, and the sound level in room C will be 30 db down from that in room B. This is true provided, of course, there are no sources of noise other than the machine in room A and provided there are no possible noise paths between rooms A and C other than through both partitions.

It appears then that 60 db attenuation has been obtained between rooms A and C with the use of only 7 lb per sq ft of material in contrast to the 400 lb per sq ft that would be required in a single-wall structure. Now, if the size of room B is decreased by moving the two partitions together, it would seem that the 60 db attenuation would be maintained until the two walls came into contact.

Actually, the picture is greatly oversimplified, but it is not too far from the truth provided there are no leakage paths around the double partition, and provided the air space between the partitions is wide enough to prevent close coupling by the enclosed air. But to obtain maximum benefit from the double-wall structure, the two walls have to be mechanically isolated from one another as much as possible. Each connection between them reduces the attenuation, even if the connection is only through a high-quality sound-absorbing material. Lining the air space between the walls with sound-absorbing material will improve the attenuation somewhat, but filling the air space entirely, even with a very soft material, will reduce the attenuation more than the added absorption increases it.

Sound-Absorbing Materials

The soft and porous sound-absorbing materials do, however, perform an important function in obtaining the attenuations predicted by weight law for the single-wall structures. Referring again to the sketch, suppose there were absolutely no sound absorption in room A. Now, since it has been assumed that there is no path of escape for sound energy except through partition X and since no sound energy is being absorbed in room A, the sound level in room A will build up; it will build up until the energy escaping through the partition is just equal to that being produced by the machine. In other words, the noise arriving in room B is the same as that which would arrive there if partition X were not present at all. Of course, this is a wildly hypothetical example with respect to architectural acoustics because of the sound absorption that is always present, but this situation is closely approached in the case of a machine operating in a sheet-metal housing where absorption is at a minimum. In this case, you have to line the housing with sound-absorbing material in order to get the required noise reduction.

Sound-absorbing materials also offer a solution to the problem of furnishing a machine with the necessary air for cooling and combustion when it is completely enclosed in a noise-attenuating housing. Of course, holes through the housing will ruin its effectiveness, but ducts can be fitted through the walls which can furnish the necessary air flow without causing a serious sound leak provided the ducts are lined with sound-absorbing materials. Long ducts with bends or baffles are by far the best, because in this way the noise can be repeatedly directed toward the sound-absorbing material without slowing down air flow too much.

Acoustical Materials

We have now considered several distinct uses of the three basic acoustical materials: resilient mounting materials, vibration damping materials and sound-absorbing materials. In general, a material which is good for one purpose is rather poor for the other two. For example, the various types of rubber are excellent for resilient mounting purposes, but rubber is a relatively poor material for vibration damping and for airborne sound absorption. In the same way, sound-absorbing materials are of very little use in preventing sound transmission, and they require special treatment to be useful for vibration damping.

Sometimes you can fabricate a composite structure which will serve two acoustical purposes well enough. Generally, however, the functions of the various acoustical materials must be regarded as distinct, and our moral here is simply that the function of the material has to be borne in mind when it is being selected, and then it has to be used in the right place.

PRODUCTS for Better Building

Mechanical Parking System For Installation in Buildings

Alkro Integral Parking is a new automatic parking system designed to be incorporated as an integral part of office buildings and other structures in the same way that passenger elevators have become an integral part of such buildings. An installation of this sort is economically practicable, according to the manufacturer, since the cost of construction of the system is less than half the cost for construction of office space of the same cubic content.

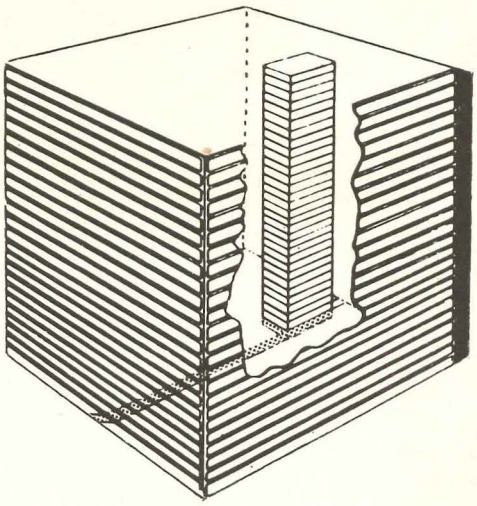
The system consists basically of a standard automatic elevator, a conveyor mounted on the elevator platform and automobile stalls in the form of shelves on each side of the elevator shaft. The conveyor and the shelves have horizontal transverse members which intermesh without contact and permit cars to be transferred as shown in the illustrations at right.

An elevator and conveyor can serve two vertical rows of shelves, one on each side of the shaft. The floors are spaced 8 ft, 6 in. apart and as many as 50 floors can be included in an installation, serving a total of 100 automobiles. The total ground area occupied by the elevator shaft and stalls on either side is 24 by 25 ft, or 600 sq ft. If this is divided by the number of cars accommodated in an installation, the proportional amount of ground space required for each automobile may be found, and an index to proportional land costs and income can be deduced accordingly. This amount of ground area is only 6 sq ft in a 100 car installation. As many of these 100-car units as desired may be installed in a building, and may be grouped in a variety of arrangements either end-to-end or side-by-side.

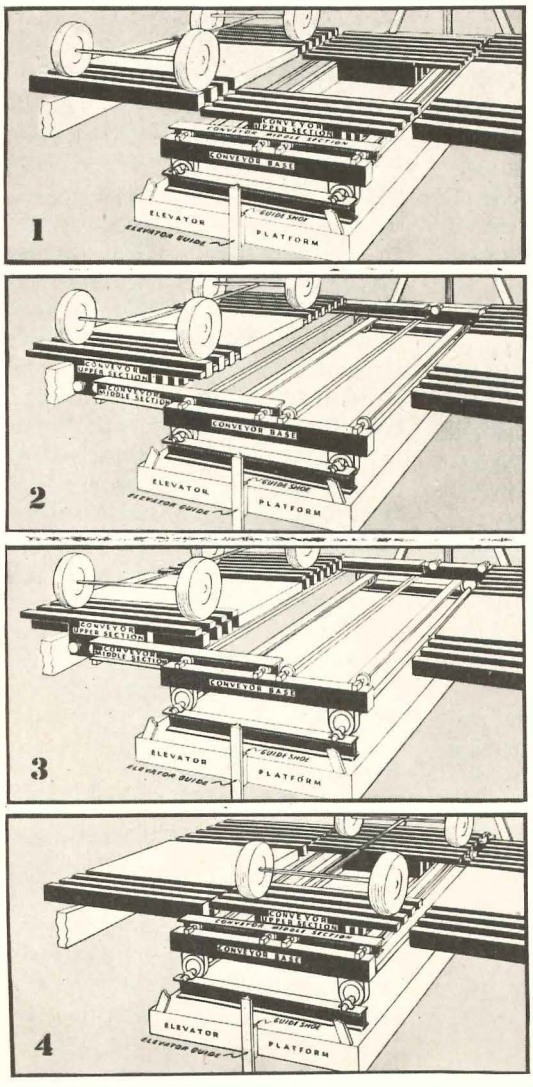
Operation of the system is described as very fast. In a single round trip one automobile can be parked and another withdrawn automatically. The system is also said to eliminate damage, since no attendant need ever enter an automobile. A 600-stall garage reportedly can be operated efficiently with two attendants and one cashier, and at slack hours one person could operate the entire garage.

In a full scale test installation built in Houston, over 220,000 automobiles reportedly have been handled without mishap or noticeable wear to either automobiles or the conveyor. Cornelius Kroll & Co., San Jacinto Bldg., Houston, Tex.

(*Continued on page 188*)



Right: sketch indicates how parking system can be installed within a typical office block. Note access passage. As many units as desired can be placed within a building



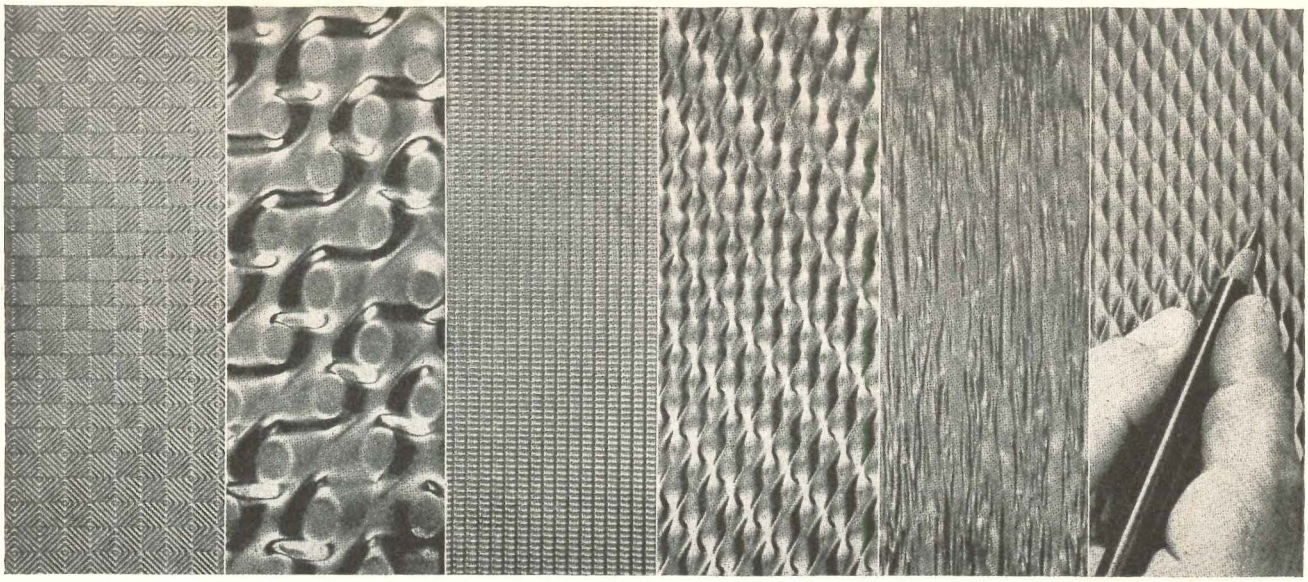
These are steps in withdrawing a car from its parking shelf: 1. Elevator on which conveyor is mounted is stopped beside shelf . . .

2. Conveyor moves out so that transverse members of upper section intermesh with shelf beams . . .

3. Upper section of conveyor is raised above shelf level. Car rests on horizontal conveyor members and is lifted free from shelf . . .

4. Conveyor retracts onto elevator, carrying car with it, lowers in place. Elevator transports car to main level

LITERATURE FOR THE OFFICE



Above: these are a few of numerous textured finishes available in stainless steels. Hand indicates scale of pattern for each

Stainless Steels

Architectural Uses of the Stainless Steels. Booklet describes and illustrates a wide variety of architectural applications for stainless steels. Features and advantages are cited and photographs of actual installations point up the text. A section showing stock parts is included, and another section deals with architectural treatments of interiors, fronts and entrances, exterior walls, and flashing, roofing and drainage. The booklet is rounded out with a section of technical data which includes a table of stainless steel types. Detail drawings of typical solutions to various problems are included. 31 pp., illus. Committee of Stainless Steel Producers, American Iron and Steel Institute, 350 Fifth Ave., New York 1, N. Y.

Refrigeration Equipment

Thesco Equipment. Spiral bound collection of separate bulletins describing and illustrating the manufacturer's line of diversified refrigeration equipment. Included are storage refrigerators, service refrigerators, "Two-Temp" refrigerators, ice chests, freezers and mortuary refrigerators. 52 pp., illus. The G. Schmidt Co., John and Livingston Sts., Cincinnati 14, Ohio.

Welding of Metals

Weldability of Metals. This book is a direct reprint of chapter 2 of the manufacturer's "Procedure Handbook of Arc Welding Design and Practice," ninth edition. It describes various types of carbon and alloy steels and gives chemical analyses and descriptions of properties, uses and characteristics for each type. Best welding procedure for each is detailed, and American Welding Society specifications for electrodes used to weld are included. Similar information is given for copper, aluminum, nickel and their various alloys, as well as for cast iron, forgings, cast steel, wrought iron, ingot iron, galvanized steel, terne plate and enameling stock. An analysis of principles and practices of hardsurfacing is included. The text is supplemented with tabular data, drawings and photographs. 141 pp., illus. Price 50 cents. Lincoln Electric Co., 22801 St. Clair Ave., Cleveland 17, Ohio.

Drawing Equipment

Gifts by Anco, Special Bulletin No. 29. Folder illustrates the manufacturer's wood specialties for professional and student draftsmen and artists. Included are drawing tables, drawing boards, sketching easels, pantographs, illuminators, sketch boxes and accessories. 2 pp., gatefold. Anco Wood Specialties, Inc., 71–08 80th St., Glendale 27, Long Island, N. Y.

Stage Rigging Specifications

Standard Stage Rigging Specifications, Architectural. Designed to aid the architect in specifying equipment for stages in theaters, schools and auditoriums, this booklet includes specifications for the following: asbestos curtains, counterweight equipment for asbestos curtain, counterweight equipment upright wire guide, counterweight equipment upright T bar guide, counterweight equipment underhung wire guide, draw curtain tracks and electric curtain controls. 11 pp., illus. J. R. Clancy, Inc., Syracuse, N. Y.

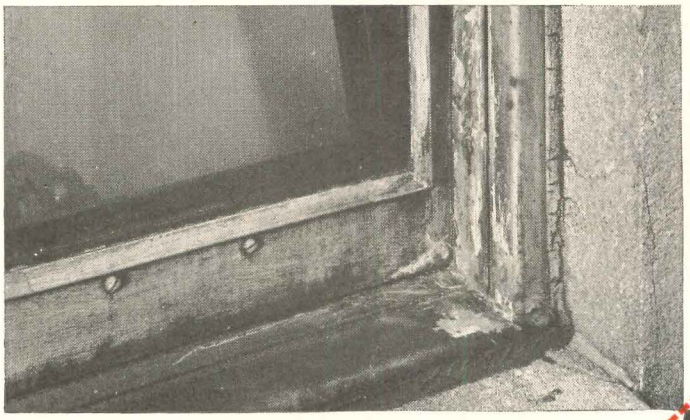
Planks and Channel Slabs

(1) Porete Plank: Circular No. 69-B; (2) Porete Lightweight Channel Slabs: Circular No. 59-B. Brochure describes the tongue and groove and square edge plank made of lightweight nailable concrete. Details, specifications and other data are included.

Lightweight channel slabs for roofs and floors are described in second circular. The advantages of their use are cited, and sections are devoted to specifications and details. General recommendations to engineers and architects complete the contents of the brochure. 4 pp., illus; 8 pp., illus. Porete Mfg. Co., Porete Ave., North Arlington, N. J.*

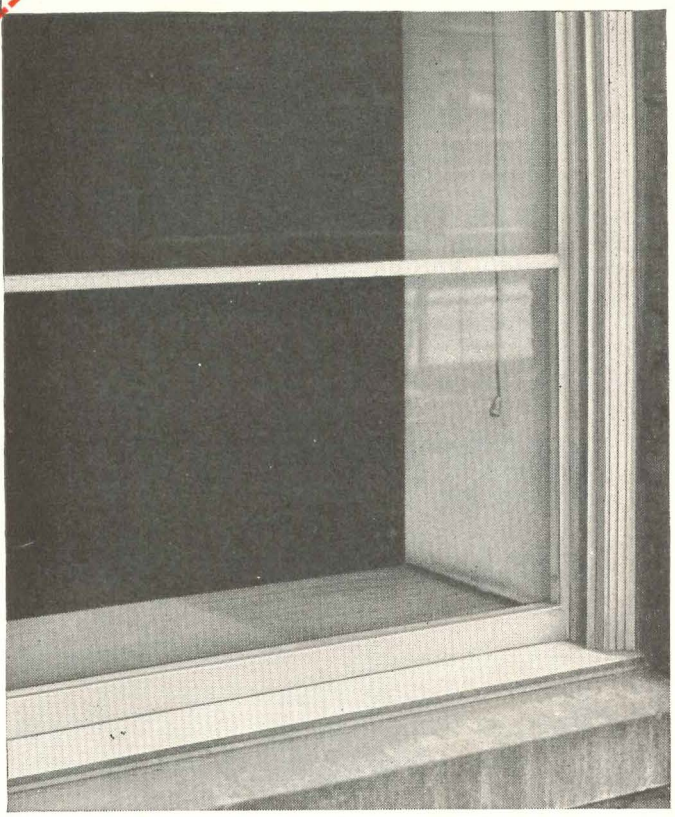
(*Continued on page 230*)

* *Other product information in Sweet's File, 1952.*



Continual maintenance...

or no maintenance at all?



This typical ADLAKE Window has been in service for 11 years, with no maintenance whatever!

Which would you choose for your windows?

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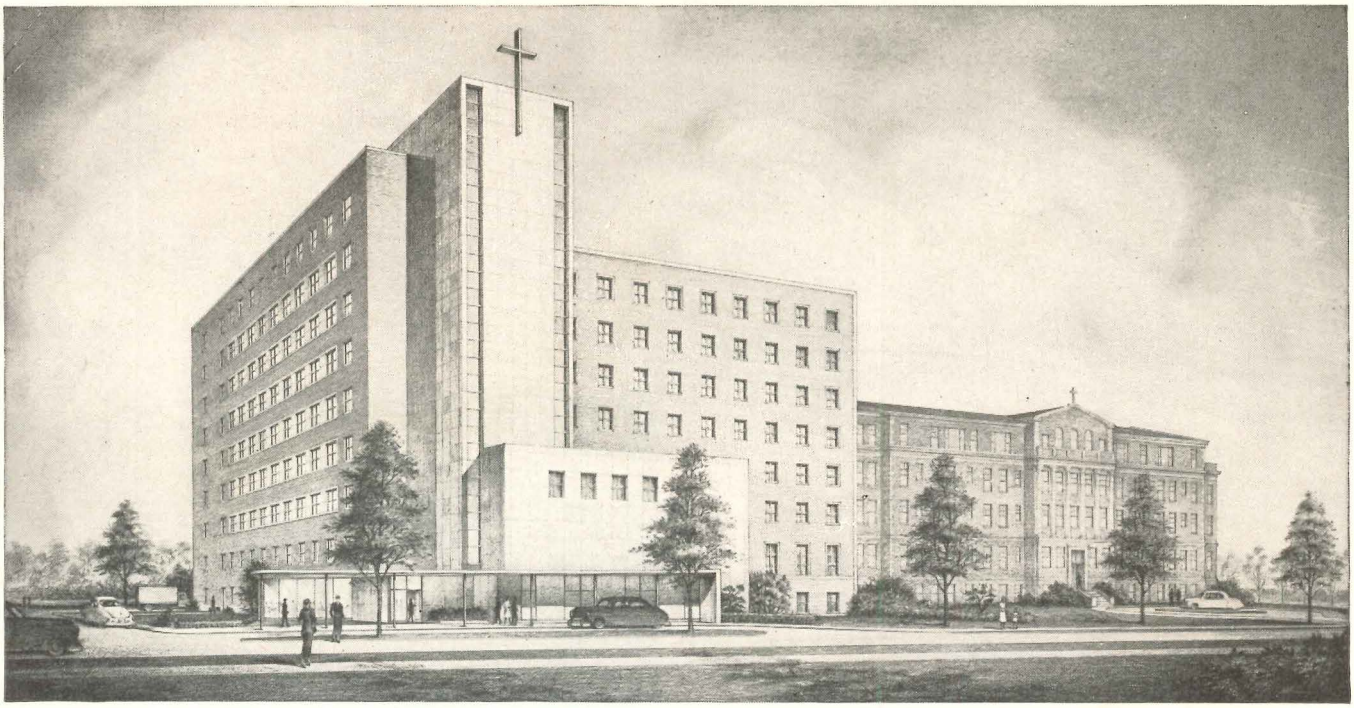

St. Francis Hospital, Trenton, N. J. The new $3,000,000 8-story addition, shown at left, is now under construction. Architects and Engineers: Schmidt, Garden & Erikson, Chicago. Heating Contractor: Wm F. Hindley Co., Trenton. Operation of St. Francis Hospital is under the direction of the Sisters of the Third Order of St. Francis.

MEET HOSPITAL REQUIREMENTS

with Modern Controlled Steam Heating

Balanced Heating . . . Outdoor Thermostat Control . . . Continuous Steam Flow . . . First applied to modernize older buildings . . . Now being installed in new addition.

Schmidt, Garden & Erikson, Chicago Architects and Engineers noted for their hospital work, are the creators of the completely modern addition now being erected alongside the older buildings of famed St. Francis Hospital, Trenton, New Jersey. This new addition will have modern controlled steam heating incorporating the proven principles adopted in modernizing the original vacuum heating installation in the existing buildings.

The three original buildings, the most recent completed in 1927, were overheated, indicating fuel waste and involving considerable maintenance. In 1949 the original system was changed to a Webster Electronic Moderator System by John G. Carr Co., Inc., Trenton heating contractor.

Reporting results, Chief Engineer A. P. Scharer said that the modernization was paid for out of fuel oil savings in less than two years. Further, these older buildings are comfortably heated, with a noticeable absence of overheating in mild weather.

Is your hospital in need of modernization? It will cost you nothing to investigate. There are Webster representatives in 65 cities experienced in working with owners, architects, engineers and heating contractors in the solution of specific heating problems. Ask to see your Webster Representative.

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OF STEAM HEATING

"Controlled by the weather"

STAINLESS STEEL—3

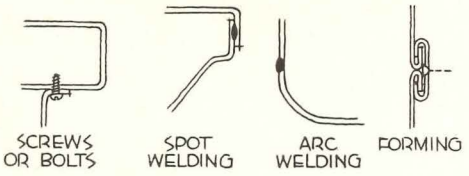
Presented through the Courtesy of the Committee of Stainless Steel Producers, American Iron and Steel Institute

Stainless Steel Ceilings

Flat stainless sheets are used occasionally as ceilings for high rooms, such as lobbies. Perforated stainless ceilings are employed for acoustical reasons. Sometimes the space above such ceilings is a ventilating plenum chamber. Also, sanitary considerations dictate stainless steel walls and ceilings in many kitchens and food handling areas.

In all these, the important design feature is the expansion joint. Any large metal area must have freedom to expand and contract with thermal changes. Otherwise, it buckles or wrinkles. It becomes almost impossible to stiffen such areas adequately for good appearance. Any frame or angle rigidly attached to stainless sheets should also be stainless steel. Differential expansion of two metals causes warping.

JOIN STAINLESS PIECES WITH:



It should be noted that most joints do two other things in addition to their expansion function. They add stiffness at the edges. Also, they frequently embody schemes for concealing screw heads, bolts, etc. Choose an arrangement that satisfies design requirements without overstepping the economical work-range of the metal fabricator.

Fastening Methods

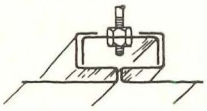
There are four principle ways of putting stainless pieces together: screws, spot welding, arc welding and seamed or clipped joints.

Use screws when the components must be taken apart occasionally. It may sometimes be wise to specify screwed fastenings in case the fabricators and installers should be inexperienced or unequipped to handle other techniques. Occasionally sheet metal screws reduce fabrication and assembly costs to the point where economy dictates their use. However, jobs involving large numbers of similar parts usually warrant extra tooling, more shop-made joints and fewer screwdriver operations on the site.

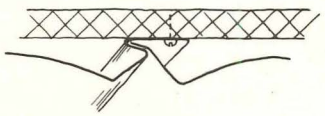
Screws and nuts should be stainless. If dissimilar metals are joined, insulate faying surfaces with a coat of sealer of some kind to prevent

CONCEALED FASTENINGS & EXPANSION JOINTS

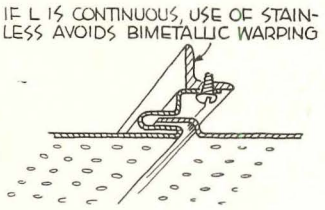
Wall or ceiling treatment for light-gage metal and modest expense



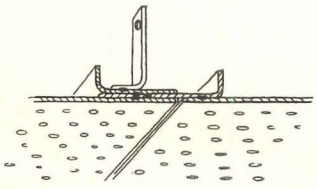
Simply-made hanger and expansion joint for light-gage stainless ceiling



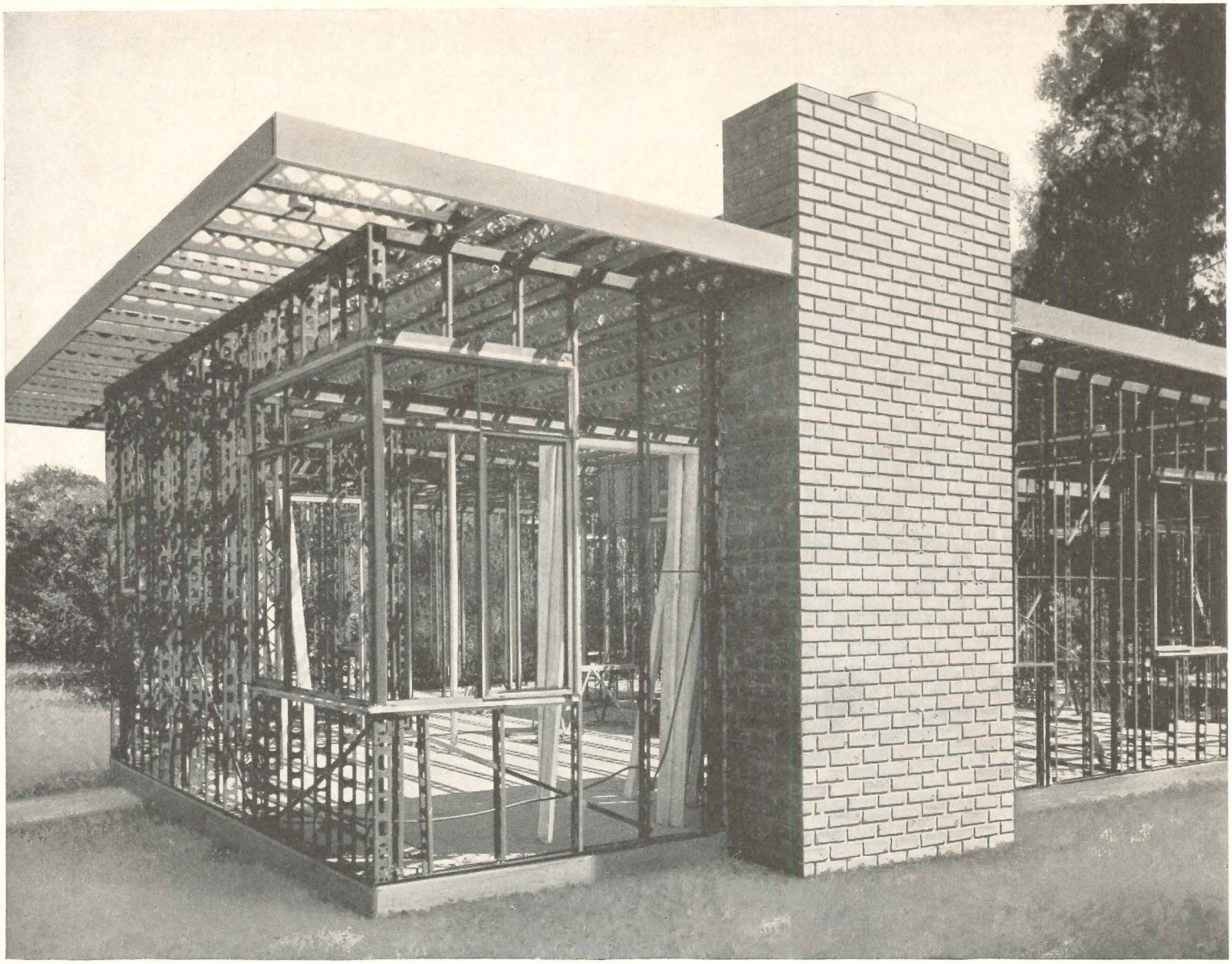
Many stock, roll-formed sections are available with joints of this type. They can be used for interiors and exteriors



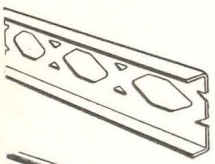
This type of expansion joint in a high-quality perforated stainless steel ceiling would require tooling for the elaborate bends. Thus, it would be undesirable on a small, shop-built job



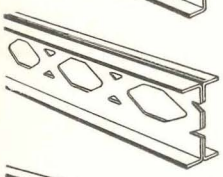
Built-up, spot-welded expansion joint would be most economical for most stainless steel fabricators. Note bent angles for stiffness



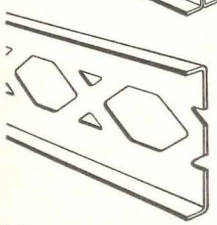
PENMETAL ANNOUNCES BRAND NEW Lightsteel STRUCTURAL SECTIONS



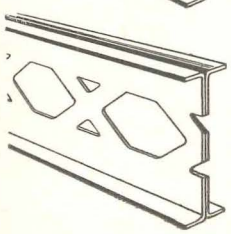
STUD
3¼″ and 4″
16 and 14
gauge



DOUBLE STUD
3¼″ and 4″
16 and 14
gauge



JOIST
6″ and 8″
16 and 14
gauge



DOUBLE JOIST
6″ and 8″
16 and 14
gauge

ASK THE typical building owner—whether commercial, industrial, institutional or residential—how he'd like to have a house with a steel frame. You'll get a quick "yes" for an answer.

The good news is that he can have it! He can forget about rot and termites. Penn Metal Company, Inc. has devised a system of Lightsteel structural sections that brings the strength and permanence of steel to light construction for an economical figure.

PENMETAL Lightsteel Structural Sections have already been widely tested and well received on the West coast. When used with pumice concrete and gypsum, architects and builders are finding that they provide a long life, low maintenance structure. They're particularly well suited to the requirements of modern design.

How about cost? Cost is the best part of the PENMETAL story. The cold-rolled sections are available at a total cost less than most competitive materials.

The *extra* benefits of PENMETAL Sections are substantial. Pre-cut lengths in a variety of stock, plus a complete line of accessories, speed the job. Openings in studs and joists make for rapid installation of conduit and piping. A high strength/weight ratio means easy, quick handling, fewer man hours.

Fire resistance is excellent. A 2½″ concrete slab on PENMETAL Lightsteel Structural Sections with 1″ of light-weight plaster on ceilings or walls wins a 4 hour rating, far above average. Insurance costs are reduced.

METAL MARK Penmetal 1869 OF QUALITY

PENMETAL Sections are the ideal solution for the building owner who wants the satisfaction and comforting feeling that his structure is framed with *steel*.

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STAINLESS STEEL—4

Presented through the Courtesy of the Committee of Stainless Steel Producers, American Iron and Steel Institute

electrolytic action. On exterior work, use stainless steel fasteners even in concealed locations as a precaution against unsightly rust streaks.

Spot welding offers a very inexpensive way to "stitch" thin metal sheets together. It is normally a shop operation. It has all the advantages and disadvantages of being a permanent joint.

There has to be enough room on both sides of a spot welded joint so that the electrodes can be brought to bear during welding. It is not economical to make specially-shaped electrodes except for a high-production job.

Marks left at the welds can be polished off if necessary. It is possible to make this job easier by using a flatter, larger electrode on the side of the joint that must look good.

Arc welding with butt joints is a standard method of fabricating sanitary food handling equipment of stainless steel. The weld head can be ground down and polished until it blends with adjacent metal.

Architects can use this technique to obtain longer or larger pieces than stock sheets or fabricator's equipment can normally supply. Several sections may be welded together into a continuous unit. Welding and polishing can be performed on the site, but a better, easier job is possible using shop equipment.

Possibilities of seamed, clipped, cleated and snap-into-place joints are almost infinite. They are used in stainless steel in the same places and for the same reasons that sheet-metal workers have always employed them on other materials. Many special proprietary fasteners are made of stainless.

Lap-seam joints used in stainless roofing and flashing are often soldered for a watertight seal. This practice has long proved satisfactory and economical. However, solder by itself does not have enough strength to serve as a joint between stainless members. Some mechanical lock in addition is required.

Wall Ties and Masonry Anchors of Stainless Steel

Masonry anchors are nominally protected from the weather. Yet seepage and frost-broken mortar can expose them to corrosive conditions. Failures have been recorded. In many older buildings, masonry has had to be removed because rusted tie bars created hazards from falling stone, brick or terra cotta.

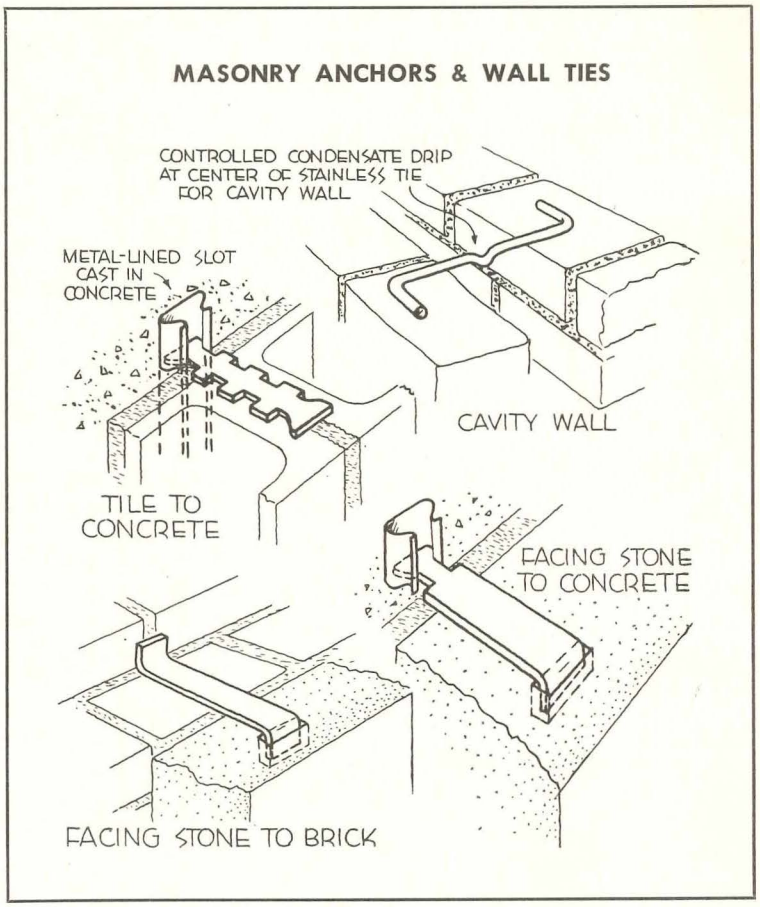
To specify a corrosion resisting material like 17 per cent chromium, Type 430 stainless steel for masonry ties and anchors may often be a soundly justified precaution.

Roofing, Drainage, Flashing

For roofing, gutters, leaders and all kinds of flashing, the same designs are used with stainless as with any other metal. Lighter weight sections are permitted by stainless steel's greater strength. For this reason it is often practicable to work with larger pieces and longer lengths.

Stainless Mesh and Grids Need No Paint

Bars, rods, wire mesh, expanded metal and formed plates serve the designer by imparting a feeling of light, airy tracery to his work. These elements, in stainless, need be no heavier nor thicker than design requirements indicate, and allowances for rusting are unnecessary. Since corrosion resistant stainless steel needs no protective coating of any kind, maintenance costs on such hard-to-paint surfaces are cut considerably.



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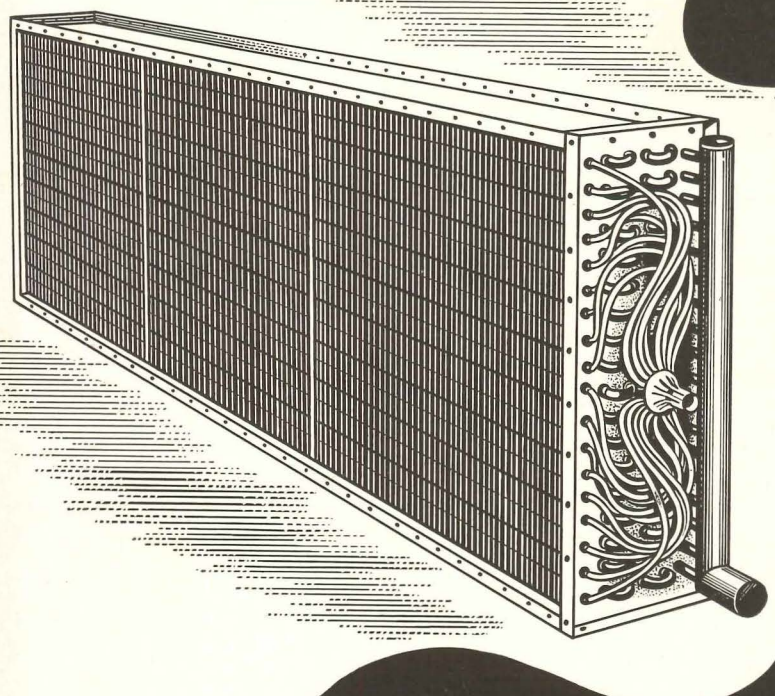

But BUSH finned coils aren't just BUILT, they'r ENGINEERED . . . constructed to rigid specificatior . . . accurately rated . . . by HEAT TRANSFE ENGINEERS.

Consider these advantages of BUSH finned coil

- Tube sheets and top and bottom plates constructe of heavy gauge zinc coated steel. Flange and ho spacing arrangement simplifies duct connection.
- Tube sheets and headers have die-formed lippe holes—providing greater bearing area betwee tubes and header. End caps dished for adde strength and rigidity.
- Tight fin-to-tube bond insured by expanding tub mechanically during construction.
- All direct expansion coils are rated with allowanc made for pressure drop on the refrigerant sid User pays no penalty in performance. BUSH coi deliver as rated.
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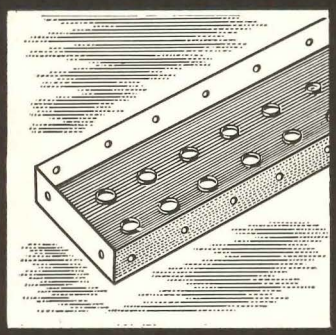
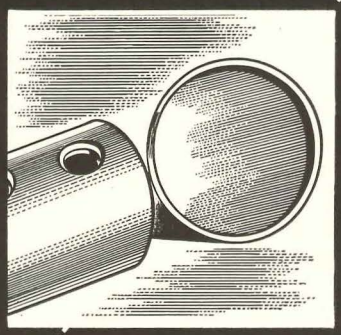
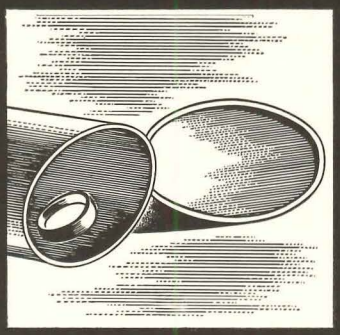
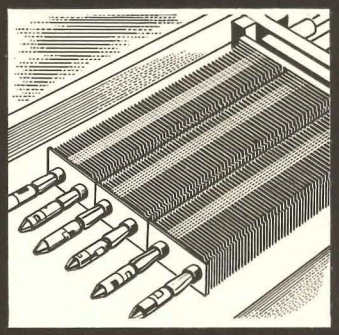
New catalog — free on request — describes an gives specifications on all types of Bush coil

Your nearest Bush sales engineer will be gla to offer help or advice on coil selection.









BUSH MANUFACTURING COMPANY

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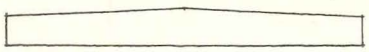
STRUCTURAL FORMS—13: Plywood Girders and Glued Laminated Beams

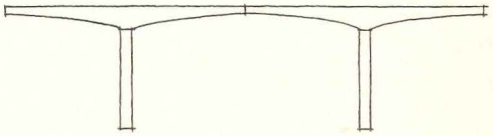
By Seymour Howard, Architect, Instructor at Pratt Institute

GLUED LAMINATED BEAMS & GIRDERS

Arch and rigid frame shapes in wood may not be the most practical to use for long spans in wood. Glued laminated beams or plywood girders have their place particularly for one-story buildings extending many bays in two directions, for heavy loadings such as gantry cranes and for multi-story buildings:



Top edge tapered for roof drainage



Double cantilever sections

Besides beams (and columns) of uniform section, tapered and cambered members are easily made. For calculating sections, use "allowable unit stresses for structural glued laminated lumber" in National Lumber Manufacturers Association's "National Design Specification"—Most used values: (Southern Yellow Pine & Coast Region Douglas Fir)

	For Dry Conditions of Use	For Wet Conditions of Use
"E"	1,800,000 lbs/in.²	1,600,000 lbs/in.²
Extreme Fiber (bending)	2200 lbs/in.²	1800 lbs/in.²
Horizontal Shear	165 lbs/in.² (D.F.)	145 lbs/in.² (D.F.)
	200 lbs/in.² (Y.P.)	175 lbs/in.² (Y.P.)

PLYWOOD GIRDERS

Tapered and cambered shapes can easily be made in plywood girders. Stock plywood dimensions should be used if possible.

Maximum span about 100 ft. Usual depth about ⅛ to 1/12 span (some have been used 1/22 span)

For approximate calculations, assume flanges take all the moment, web takes all shear

$$\text{Area (of one flange)} = \frac{M}{\text{total depth} \times \text{allowable unit stress, compression 11 to grain}}$$

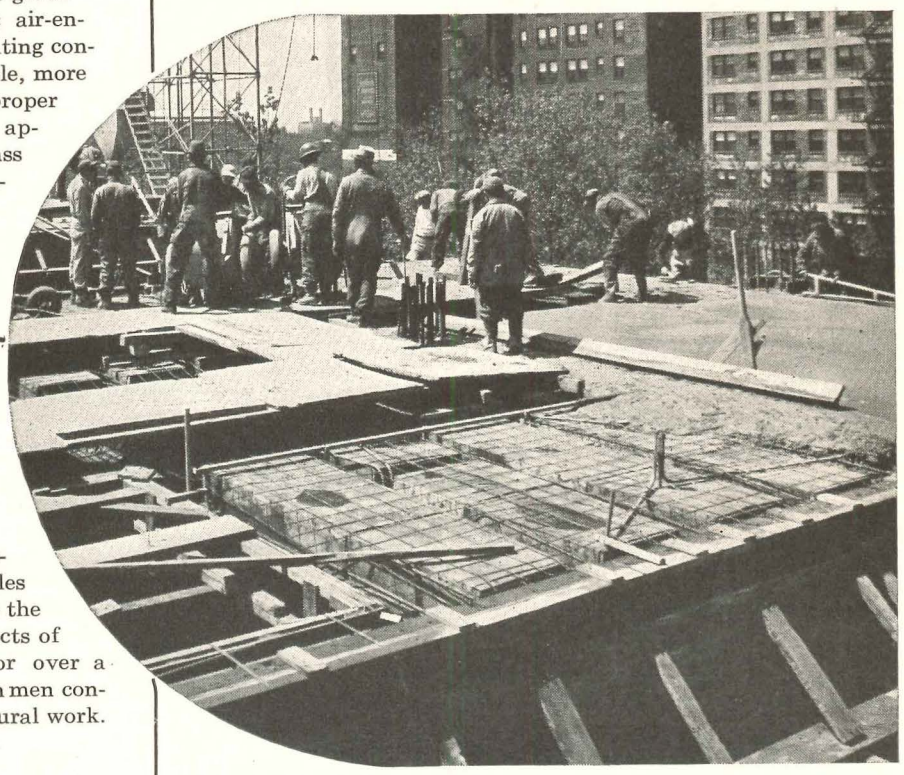
$$t'' \text{ (or } \Sigma t'') = \frac{5}{4} \times \frac{V}{\text{total depth} \times \text{allowable shear stress for grade of plywood}}$$

For nailing, spacing (each side) "P". For nail-gluing, provide one nail per 8 to 10 sq in. of glue joint (P should not exceed 6 in., even in region of minimum shear.)

$$P = \frac{2xh_1}{V} \times \text{allowable lateral nail bearing lbs/nail}$$

Better for structural work

Less mixing water is required for a given slump when you use Duraplastic air-entraining portland cement. The resulting concrete is more plastic, more workable, more cohesive and uniform. This aids proper placement and improves surface appearance of both structural and mass concrete jobs. This is especially important when columns are heavily reinforced as shown in photograph.



Makes more durable concrete

When Duraplastic is used for structural concrete, billions of tiny entrained air bubbles minimize water gain and segregation. Thus the finished concrete is fortified against the effects of freezing-thawing weather. That's why, for over a decade, an increasing number of construction men continue to specify Duraplastic for their structural work.

YET DURAPLASTIC* COSTS NO MORE

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

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

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

AR-D-123 R

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AIR-ENTRAINING PORTLAND CEMENT

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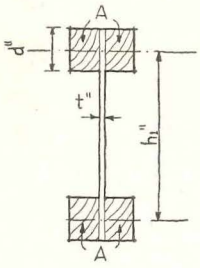
STRUCTURAL FORMS—14: Plywood Girders and Glued Laminated Beams

By Seymour Howard, Instructor at Pratt Institute



***I* Section**

Limited by available plywood thickness to shorter spans

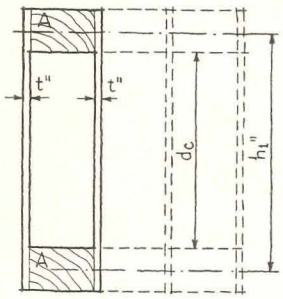
Typical Values

Allowable shear stress in plywood		Allowable nail loading	
Exterior DFPA–A–A	210 lbs/in.²	8d	78 lbs/nail
" " A–B; A–C	192 lbs/in.²	10d; 12d	94 lbs/nail
" " B–C; C–C		16d	107 lbs/nail
" B–B	180 lbs/in.²	20d	139 lbs/nail
Interior A–A; B–B; C–D	178 lbs/in.²	(Based on Nat'l. Lumber Mfrs. Association "National Design Specifications")	
" A–B; A–D	163 lbs/in.²		
" B–D	153 lbs/in.²		

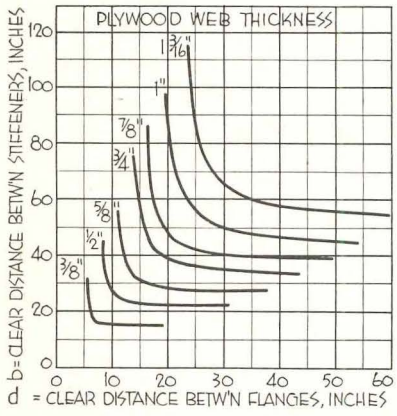
Flanges may be solid or laminated wood. They may be nailed, nail-glued or glued to plywood web (see sections at left)

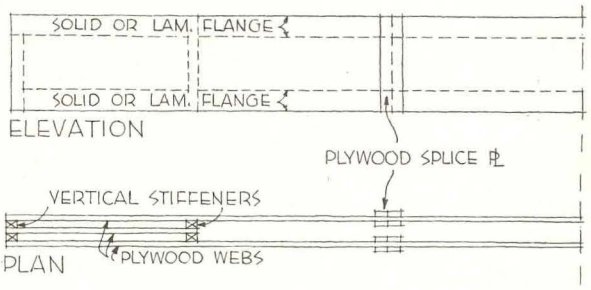
Depth of flange d should be minimum 4t" for glued assembly, more for nailed, depending on amount of nailing required

For glues, see T.S.S. Sheet #6 on Structural Forms



***Box* Section**





Detail of Typical Girder

Notes: Upper flanges must be braced laterally; Joists can be used for this; Plywood splice plates are used at each joint in the web

Spacing of Stiffeners

This spacing b" will prevent web buckling and develop full plywood shear strength. Spacing may be increased to 3b as shear stress decreases to ½ allowable

Stiffeners are required under point loads in addition and at supports

References: Lab Report No. 58, "Plywood Beam Design Factors," by David Countryman & Vernon D. Haskell (Oct. 1952); "Technical Data on Plywood," published by Douglas Fir Plywood Association, Tacoma 2, Wash.

MATICO PRESENTS

Confetti

- 10 FESTIVE COLORS
- ECONOMICAL ASPHALT TILE
- IDEAL FOR EVERY ROOM
- TOUGH AND LONG WEARING
- FORTIFIED WITH POLYSTYRENE PLASTIC
- FOR USE ON, ABOVE OR BELOW GRADE

QUALITY CONTROLLED

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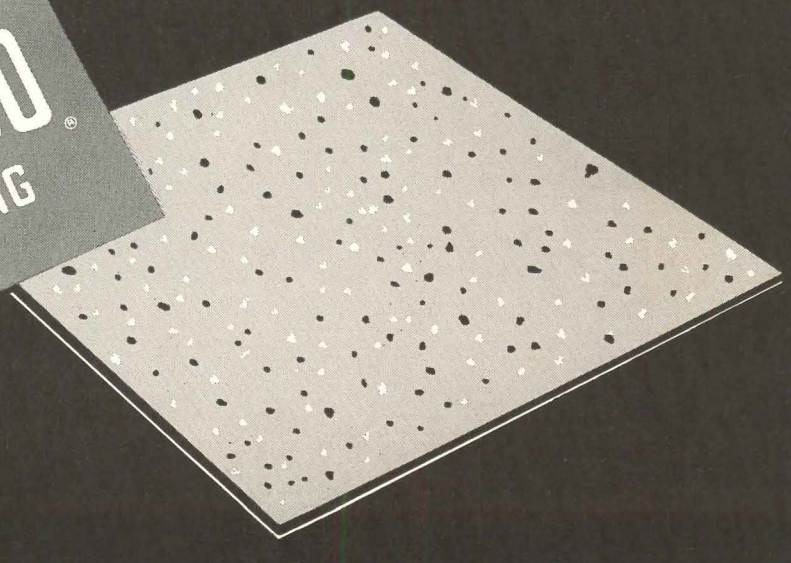
TILE FLOORING



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Please send me specification data and free Confetti sample kit.

Name .....

Address .....

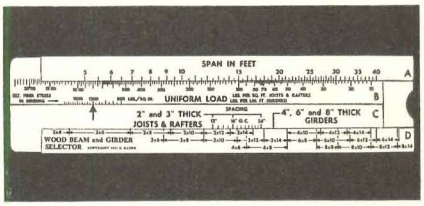
City..... Zone.... State.....

PRODUCTS

(*Continued from page 175*)

Slide Rule Selector for Wood Beams and Girders

Simplification of procedure in designing wood beams, rafters and joists is reportedly made possible by a new folded plastic slide rule. The device consists of a rule with two reversible slides which move separately. On the front of the slides are printed two scales for members in bending where deflection is not a factor. On the reverse of the slides are scales for members where deflection



Slide rule device simplifies selection of wood beams, girders, joists

must not be excessive. When the scales are set for proper load, span length and fiber stress, the proper size member for the desired spacing can be read directly at the bottom of the rule. When the rule is once set, the most economical wood member for any spacing can be selected without further figuring. Suggested stresses for commonly used lumber species are tabulated on the back of the rule, and a case and instruction manual are included with it. Everett Rader Co., P.O. Box 122, Bowling Green Station, New York 4, N. Y.

Birch-Finished Metal Doors

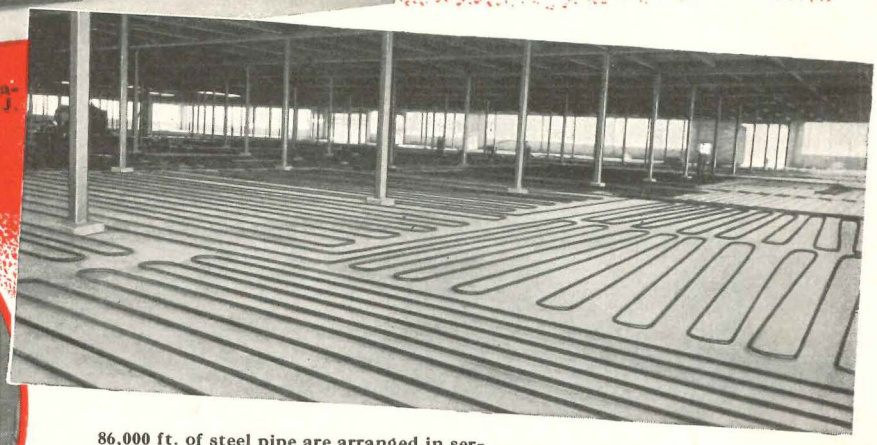
Amweld knocked-down sliding closet doors are now available in a birch finish to harmonize with flush birch swing doors. The door units come as a complete package — containing all necessary hardware, jambs, header, track, door panels and installation print. The panels are available for 3, 4, 5 and 6-ft openings, with two by-passing panels for each size. Hardware for the panels includes non-tarnishing plastic door pulls which harmonize with the birch

(*Continued on page 192*)

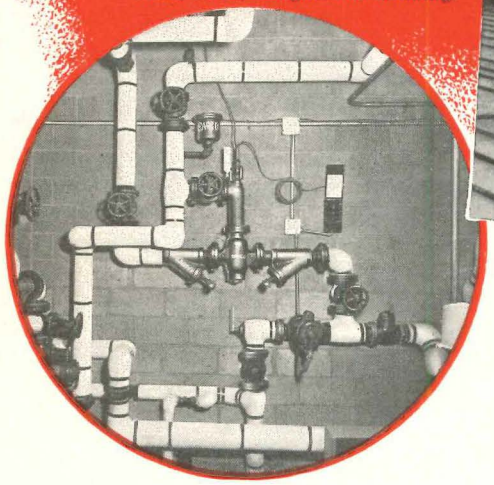
Sarcotherm Heat Control System chosen for POTDEVIN MACHINE COMPANY'S LARGE PLANT at Teterboro, N. J.

New plant of Potdevin Machine Co. at Teterboro, N. J.

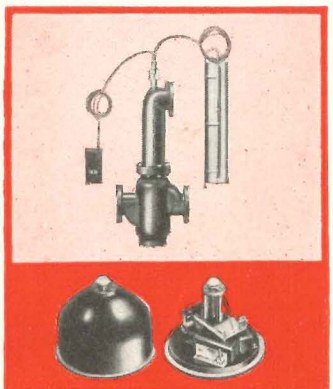
Boswell Engineering Co., Ridgefield Park, N. J., designers of building.



86,000 ft. of steel pipe are arranged in serpentine coils for the radiant heating system. Heating Contractor, Frank Lawton, Paterson, N. J.



One of the 5 Sarcotherm Control valves, protected by strainers. A Sarcotherm Air Eliminator will be noted at the right.



The heart of the Sarcotherm control system is this unique control valve. It is actuated by liquid expansion thermostats, one located outside the building and one in the valve itself. Between them they anticipate changes in heat loss ratio, thus maintaining comfort temperatures under all conditions.

The Sarcotherm Comfort Control "Thermoray" is an extremely sensitive thermostat affected by both radiation and convection.

This latest addition to the industrial plants at Teterboro terminal covers an area of 102 thousand square feet.

The single story building is radiant heated by floor coils requiring 86,000 feet of pipe.

The system is divided into five zones, each controlled by a 3″ Sarcotherm Control Valve, type STA-1D, with Thermoray heat-loss thermostat for each zone.

Sarcotherm also furnished Sarcoflow balancing fittings, access boxes, strainers and other accessories.

This is the largest single story industrial building in the East, radiant heated by floor coils.

We are proud that

Sarcotherm Control

was selected for this outstanding job. Individually engineered Sarcotherm Control systems are available also for conventional forced Hot Water or Steam Heating Systems. Our Engineering Department will be glad to assist on your next job.

24

Sarcotherm CONTROLS, INC.

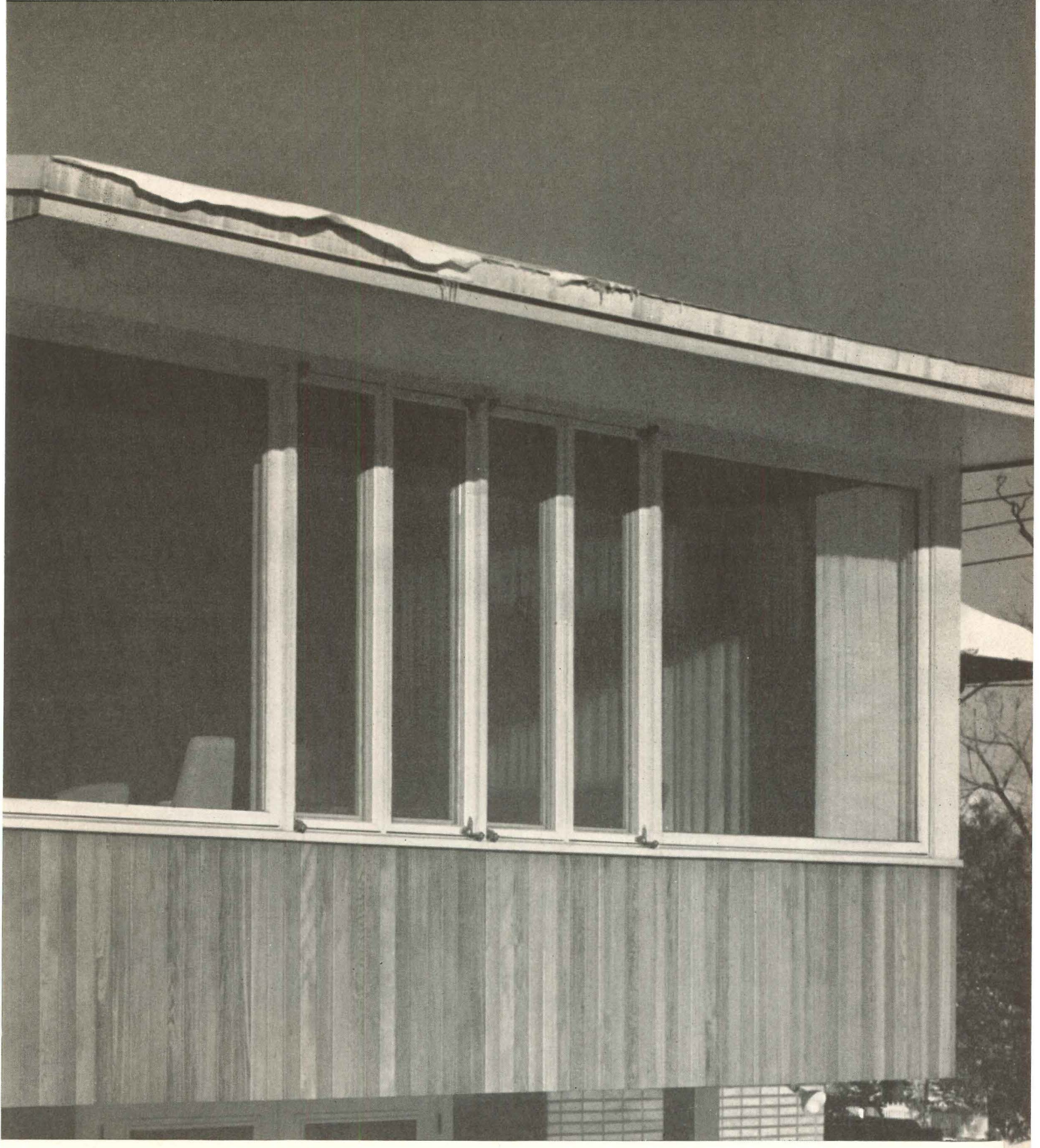
EMPIRE STATE BUILDING · NEW YORK 1, N. Y.

A SARCO PRODUCT

Thorshov & Cerny, Inc., Architects

TAKE THE STING
OUT OF WINTER with

ANDERSEN *Windowalls* *



SUNSHINE FLOODS into this livingroom with a warmth that belies the zero temperature outside. Highly weathertight WINDOWALLS of Andersen Casement Window Units protect the owner's perfect comfort. These same WINDOWALLS frame a scene of wintry beauty, and in warmer days, admit every cooling breeze. These are Andersen WINDOWALLS, famed for their beauty, efficient both as windows and as walls.

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WINDOW SPECIALISTS FOR 50 YEARS

Write for Detail Catalog or Tracing Detail File; or see Sweet's files for specification data. WINDOWALLS *sold by millwork dealers.*

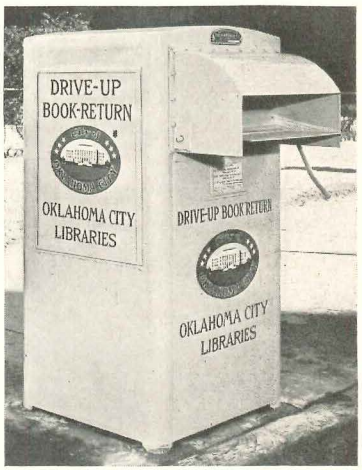
PRODUCTS

(*Continued from page 188*)

finish; two self-adjusting, spring-held nylon guide keepers, bound in felt to prevent sway and derailing; and nylon rollers which add to the quiet operation of each sliding panel. The American Welding & Mfg. Co., 500 Dietz Rd., Warren, Ohio.

Drive-Up Book Return For Libraries

The *Auto-Page* is a new drive-up book return box designed to make returning of volumes to libraries more convenient for the borrower. The box looks somewhat like a mail storage box and can be installed at curb edge where it can be conveniently reached from an automobile. The borrower drives up to the box, pulls a lever which lowers a shelf, places his books on the shelf and lifts the lever

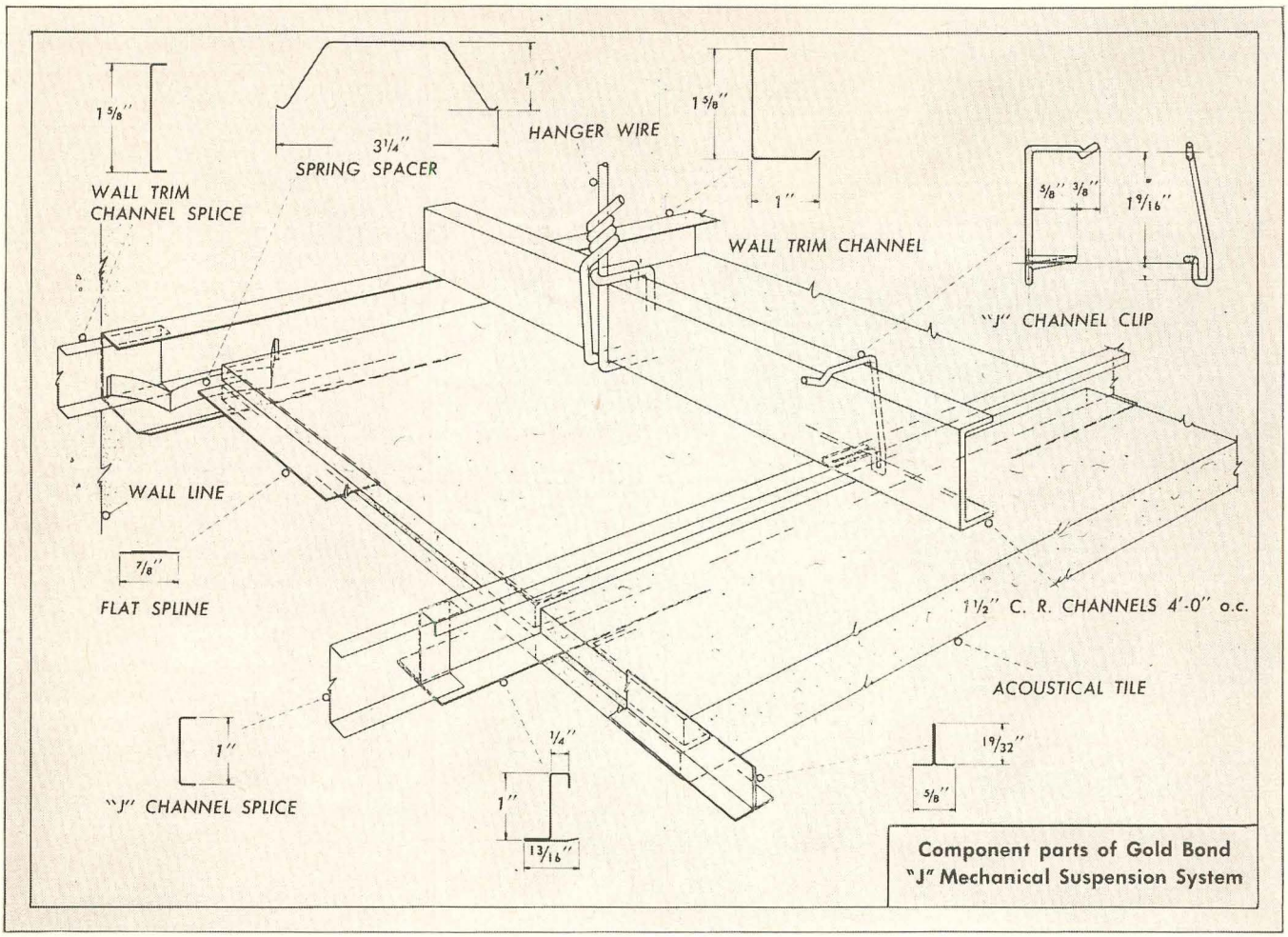


Drive-up book return box makes returning of library volumes more convenient

again. The books are deposited inside the box to be collected later. The box is constructed on 14-gage steel with an inner construction controlled by springs to prevent unnecessary abuse of books. No book is dropped more than 12 in. The box is reportedly weatherproof and theft-proof and has a front hood which is removable for repair in case of accident. Outside dimensions are 2½ ft sq by 5 ft high. The Boardman Co., Box 1152, Oklahoma City, Okla.

(*Continued on page 196*)

Announcing THE NEW GOLD BOND "J" MECHANICAL SUSPENSION SYSTEM



Component parts of Gold Bond "J" Mechanical Suspension System

Gold Bond's new system for mechanically suspending acoustical ceilings makes jobs easier and faster; it accommodates any acoustical tile under most circumstances; and it permits economical maintenance.

Gold Bond's "J" System gives you these money-saving advantages:

1. Only three basic parts make up the system.
2. Builds complete ceilings.
3. Gives lowest per square foot cost.
4. Recessed light troffers can be installed.
5. Gypsum Wallboard and asbestos-cement board bases may be used.
6. Permits stepped ceiling assemblies.
7. Allows quick replacement of damaged tile.

Besides construction advantages, you and your client receive additional benefits from the "J" System. It is covered by National Gypsum Company's policy of undivided responsibility...Gold Bond supplies the system, gypsum wallboard and acoustical materials, and qualified Gold Bond Acoustical Applicators install the complete ceiling.

Before you specify any mechanical suspension system, write our Architectural Department for complete information and a set of drawings which show details of Gold Bond's new "J" Mechanical Suspension System.

NATIONAL GYPSUM COMPANY • BUFFALO 2, N. Y.

Lath, Plaster, Lime, Sheathing, Gypsum Roof Decks, Wall Paint, Textures, Rock Wool Insulation, Metal Lath, Sound Control Products, Fireproof Wallboards, and Decorative Insulation Boards.

You'll build or remodel better with Gold Bond

WASHINGTON

(*Continued from page 38*)

rency Committee in the new Congress, to a group of midwest homebuilders: "You will find, I am sure, a new spirit of cooperation on the part of the federal government, supplementing but never supplanting your responsibility to do the job. . . . We will remove the fear of socialism and give a positive guarantee that this cooperation on the part of government will never be interpreted as carrying with it the authority to put government in business, or in competition with private enterprise."

Beyond assurances of a new "climate" there were mostly questions. Some Republicans were talking about a complete overhaul of the government housing agency setup; others, including Mr. Wolcott, favored revamping the Federal Housing Administration and the Federal National Mortgage Association but keeping them intact.

Will HHFA Be Curtailed?

As for the Housing and Home Finance Agency, Administrator Raymond Foley planned to stay around long enough to initiate his successor (Charles Taft, Senator Taft's brother, and Allen E. Brockbank, president of the National Association of Home Builders, were among the armchair favorites for the post) but nobody knew just what kind of agency that successor might be heading. Home-builders have long chafed at the strong control over such subsidiary agencies as FHA, the Home Loan Bank Board and the Public Housing Administration exercised by HHFA as the independent agency set up by the Housing Act of 1949 to correlate government activities in the housing field.

No Cheer for Public Housers

Public housing prospects were not bright. The program set up in the 1949 Housing Act — 135,000 units per year for an 810,000-unit total in six years — has never been matched with the requisite funds by Congress in any single year since. The ceiling for the current fiscal year was set at 35,000 units; and PHA officials did not expect the Republican-controlled 83rd Congress to be more ambitious. N.A.H.B. is preparing a major campaign to prove that private builders can do a better job for the public.

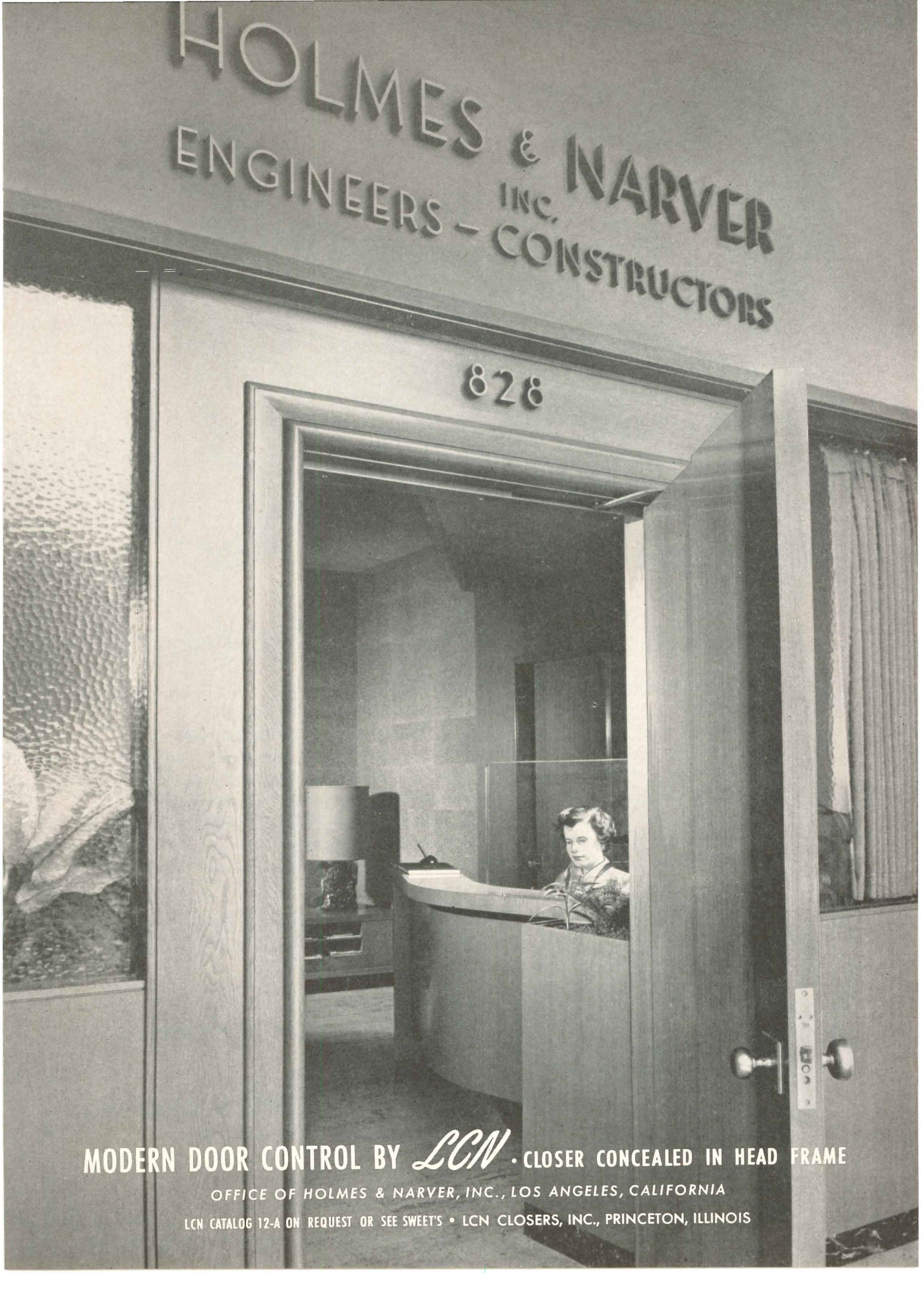
Staff Architects, Engineers Sought for VA Hospital Work

Veterans Administration again has sounded an urgent call for all types of architects and engineers to work on its big hospital construction, conversion and modernization program.

Most immediate of VA needs was for architects and engineers for journeyman grades. Yearly entrance salaries: color designer (grade 7), $4205; architects and engineers (grade 9), $5060; architects, engineers, construction superintendents and project managers (grade 11), $5940; and estimators and engineers (grade 12), $7040.

Vacancies were listed for architects, estimators, structural engineers, mechanical engineers, electrical engineers, civil engineers (sanitary), architectural engineers (specifications), landscape design architects, color designers, construction superintendents, project managers and boiler and mechanical inspectors.

(*Continued on page 248*)



MODERN DOOR CONTROL BY *LCN* · CLOSER CONCEALED IN HEAD FRAME

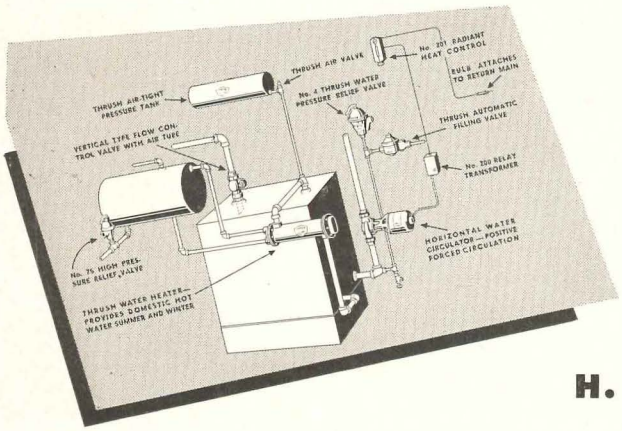
OFFICE OF HOLMES & NARVER, INC., LOS ANGELES, CALIFORNIA

LCN CATALOG 12-A ON REQUEST OR SEE SWEET'S • LCN CLOSERS, INC., PRINCETON, ILLINOIS

No. 201
RADIANT HEAT
CONTROL

please home owners with Thrush *Radiant Hot Water Heat*

AUTOMATIC HEATING COMFORT in any weather . . . a constant flow of radiant heat . . . with one inexpensive, simple, dependable control. That's what you provide home owners when you specify the No. 201 Thrush Radiant Heat Control for Hot Water Heating Systems. It completely ends the ups and downs of heating. The temperature remains constant at the desired setting, no matter how the outdoor weather varies. It compensates automatically for even the widest outdoor temperature changes. When combined with the complete forced circulating Thrush Flow Control System, the Radiant Heat Control assures the finest home heating at lowest cost.



THE COMPLETE THRUSH SYSTEM of Hot Water Heat shown here assures automatic control of temperature from beginning to end of the heating season.

Radiant coils, Baseboards, Convectors or Radiators--Thrush Radiant Heat Control ends overheating and underheating . . . no matter what type of radiation may be used. Find out more about it now.

See our catalog in Sweet's or write Dept. J-1.

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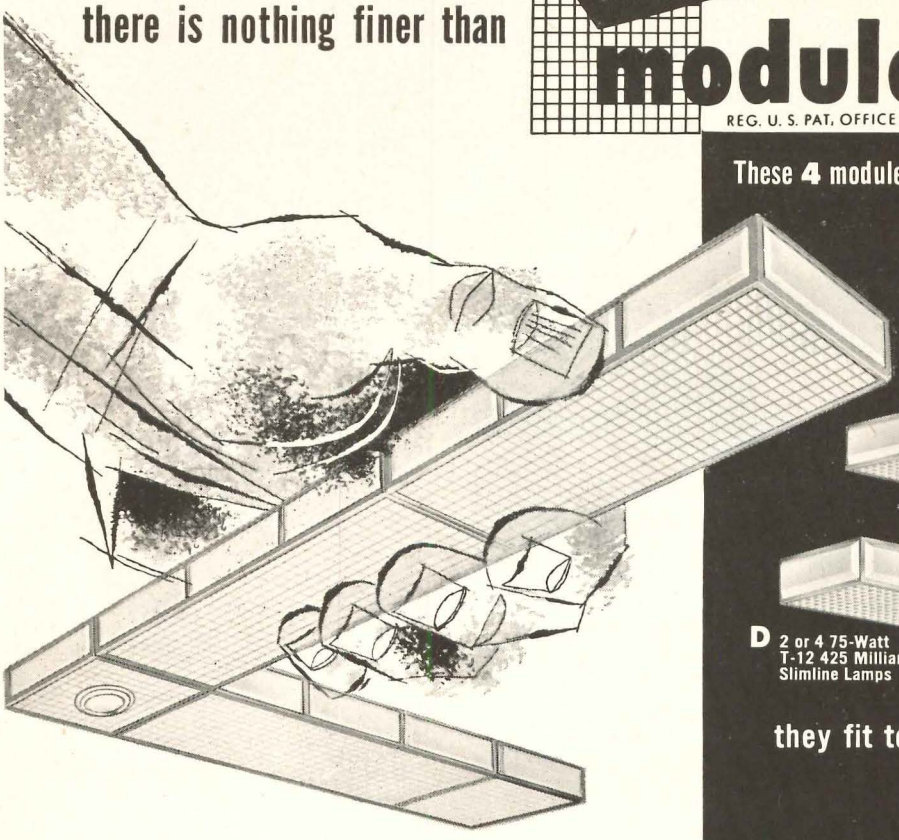
Where the installation calls for exceptional commercial lighting

there is nothing finer than **MITCHELL module**
REG. U. S. PAT. OFFICE



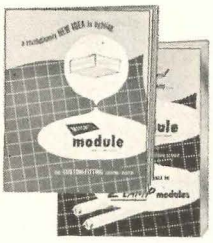
custom-fits *any commercial interior—at no more than the cost of ordinary fixtures*

50,000 DIFFERENT PATTERNS POSSIBLE
20% MORE LIGHT

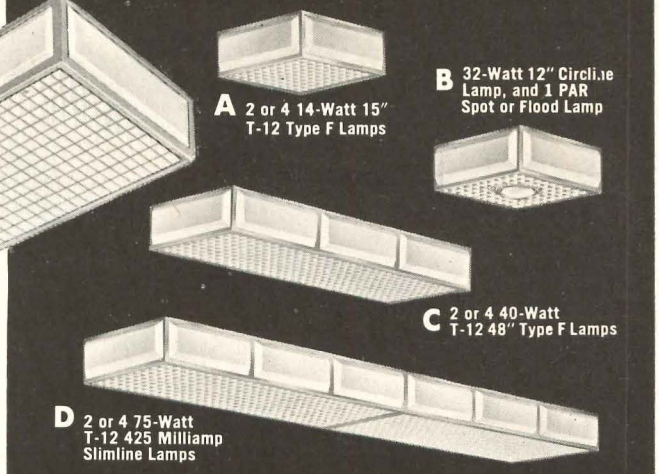
When you specify MITCHELL MODULE, you specify *the best* in ultra-modern commercial lighting. It's a revelation: with just 4 simple, low-cost "building blocks of light", MITCHELL MODULE offers *unlimited* lighting patterns to custom-fit any commercial interior. MODULE'S exclusive plastic louver passes 20% MORE LIGHT. Units fit together simply (mechanically and electrically) for quick, low-cost installation, and for easy rearrangement of patterns to suit changing needs. MODULE mixes all light sources smoothly in one harmonious, beautiful system—puts the light exactly where it's needed. No ordinary fixtures can match MODULE—the *only* lighting that *custom-fits* with standard *low-cost* units.

Only MITCHELL makes MODULE

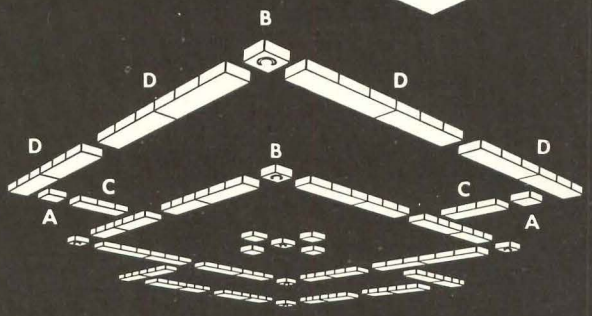
There's nothing in lighting easier to specify, easier to sell than MODULE. It custom-fits and "grows" with every lighting need; it delivers MORE LIGHT; it stays beautiful, new; it costs no more than ordinary fixtures. It's America's No. 1 Commercial Lighting with exclusive advantages for architects, wholesalers, contractors, utility consultants and users. You'll want the facts about MODULE—write today for full descriptive catalogs.



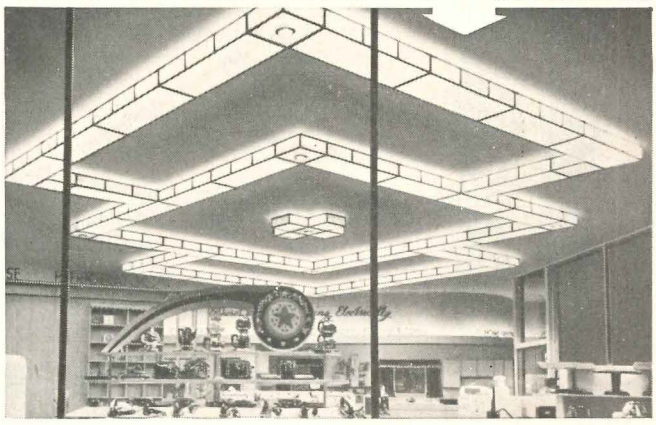
These **4** modules are the "BUILDING BLOCKS" of light



they fit together like this



for lighting magic like this



MITCHELL MANUFACTURING COMPANY, Dept. 4-A
2525 North Clybourn Avenue, Chicago 14, Illinois
In Canada: Mitchell Mfg. Co., Ltd., 19 Waterman Ave., Toronto

WASHINGTON

(*Continued from page 244*)

Building Shortage Worse at Secondary Level, N.E.A. Says

Growing difficulties at the secondary school level and few signs of improvement at the elementary level are reported by the National Education Association in its 11th annual estimate of school conditions throughout the nation.

Current shortages are compared with those indicated in the 1951 survey in the following table:

NUMBER OF STATES IN WHICH BUILDING SHORTAGE IS

Type of School	Very small		Considerable		Very large	
	1951	1952	1951	1952	1951	1952
Rural						
Elementary	18	16	24	24	6	6
Secondary	18	18	27	25	3	5
Urban						
Elementary	1	2	27	25	20	21
Secondary	12	20	33	21	3	7

Although population experts have estimated elementary enrollments should reach their peak in 1956–57 and secondary enrollments in 1959–60, N.E.A. suggests that these estimates of several years ago may have been too low and suggests that peak enrollments may not be reached till well into the 1960s.

"The total number of children, combined with population mobility, has produced especially acute school housing problems in new communities, suburban areas near metropolitan centers, and in states on the rim of continental United States," the report points out.

Total school enrollments have increased 3,773,183 between the 1946–47 and 1952–53 school years. Elementary school enrollments have gone from 17,299,565 to 20,220,217; secondary, from 7,212,147 to 7,312,837.

Air Force Asks Civilian Aid In Bid for Building Economy

The Air Force has decided to investigate itself.

Hard on the heels of Congressional probes of air base construction in North Africa and France comes the announcement of two Air Force projects:

1) A joint civilian and military facilities review committee known as the Projects Installations Committee to conduct an over-all study of Air Force installations here and abroad.

2) A joint-venture contract for detailed research and review work on Air Force installations in the U. S. with the architect-engineer firms of De Leuw, Cather and Company, Chicago, and the J. E. Griner Company, Baltimore.

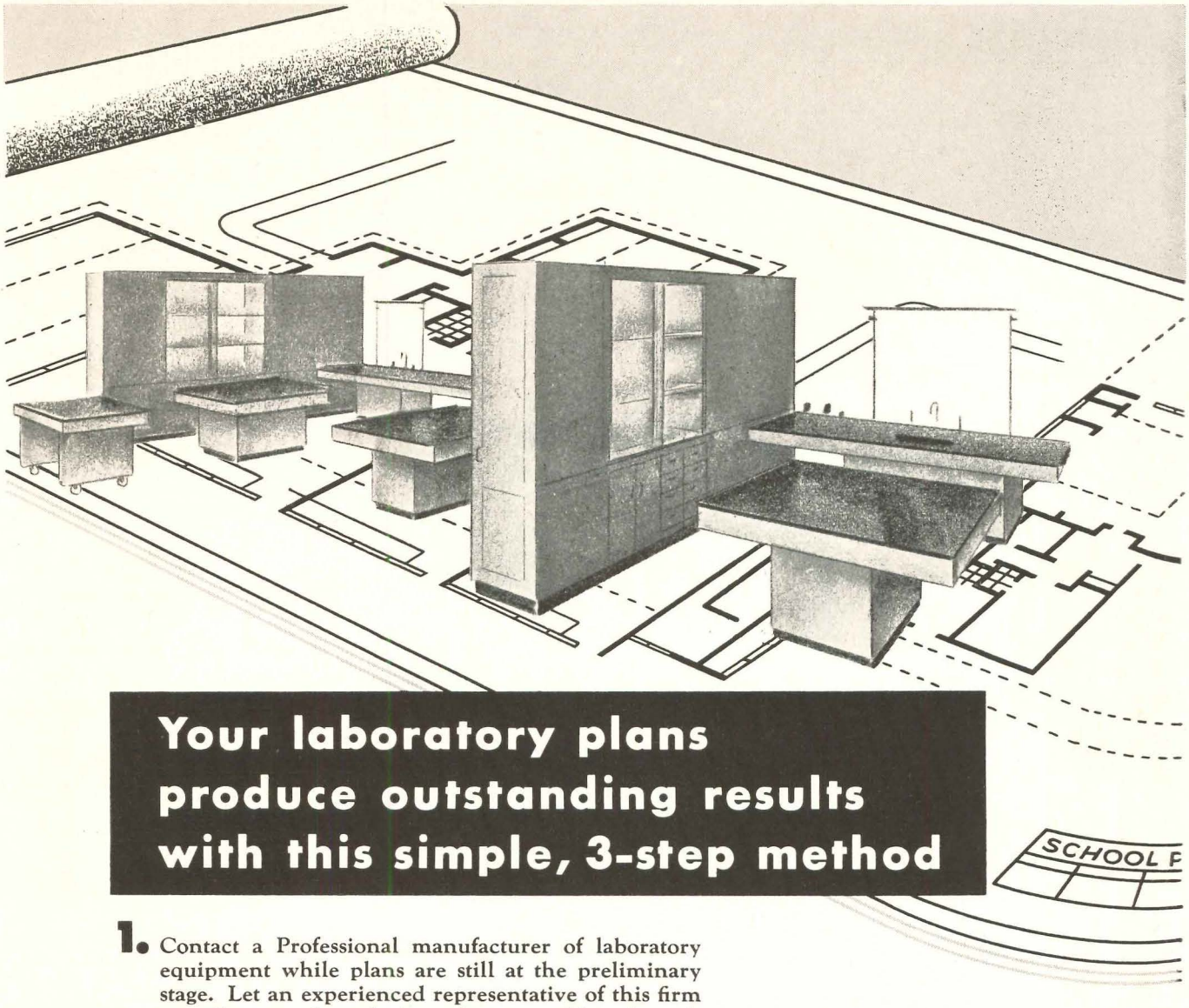
Wide Criticisms Invited

The joint-venture group will report and make recommendations to the joint committee, which will in turn recommend to the Secretary of the Air Force measures aimed at maximum efficiency and economy in air base construction. The committee has been invited to challenge all criteria, plans, specifications, program and procedures connected with the Air Force construction program.

Architects on Committee

Members of the committee include Max Abramovitz of Harrison & Abramovitz, Architects, New York; George H. Miehls, president of Albert Kahn Associates, Architects and Engineers, Detroit; and Albert L. Baum Sr. of Janos, Baum and Bolles, Consulting Mechanical Engineers, New York.

(*Continued on page 252*)



Your laboratory plans produce outstanding results with this simple, 3-step method

1. Contact a Professional manufacturer of laboratory equipment while plans are still at the preliminary stage. Let an experienced representative of this firm contribute to the solution of your problem knowledge gained through years of laboratory planning.

This entire question of laboratory planning and purchasing has been explored in Better Laboratory Planning, an attractive new booklet published by Scientific Apparatus Makers Association. Thoroughly readable, and illustrated with numerous photographs of outstanding laboratory installations, Better Laboratory Planning belongs in every architect's reference library.

If you have not received your copy it can be secured by writing to—

2. Prepare separate specifications covering laboratory equipment, or have these made a separate section of the general construction specifications. This permits Professional manufacturers to consider those portions of the job they are especially equipped to produce.

3. Secure direct bids from Professional manufacturers to the owners, or, when indicated, to the general contractor. In this way you receive the full benefits of specialized manufacturing facilities, volume production of standard components and thoroughly trained installation personnel. 1, 2, 3—that's all there is to it!

LABORATORY EQUIPMENT SECTION

Scientific Apparatus Makers Association

20 North Wacker Drive • Chicago 6, Illinois

THE RECORD REPORTS

WASHINGTON
(*Continued from page 248*)

Other civilian members are: Assistant Secretary of the Air Force E. V. Huggins (*ex officio*), chairman; John P. H. Perry, deputy for installations at USAF headquarters, vice chairman; Fred J. Driscoll, president of the George F. Driscoll Company of New York City; G. Dewey Hines, construction vice president of the Equitable Life Assurance Society of the U. S.; D. W. Winkleman, president of the D. W. Winkleman Company, Inc., Syracuse, N. Y.

Military members are: Maj.-Gen. John M. Weikert, assistant deputy chief of staff, Operations, USAF Headquarters; Maj.-Gen. M. J. Asensio, director of the budget, USAF; and Brig.-Gen. John R. Hardin, assistant chief of engineers for military construction, U. S. Army.

Planned Industrial Districts: Developer's Role Discussed

The latest technical bulletin (No. 19) of the Urban Land Institute contains a comprehensive summary of the role of the developer in establishing a planned industrial district.

Ten selected industrial districts are discussed in detail, from features of the physical location and layout to management and marketing policies of the sponsors. The case studies include examples of a variety of planning and sponsorship practices.

The 56-page copyrighted publication discusses basic principles of location, land planning, building design and landscaping and gives some very specific details on matters of building types, setback lines, street dimensions, etc. There are numerous illustrations.

Technical Bulletin No. 19 is available at five dollars per copy from the Urban Land Institute, Washington 6, D. C.

ON THE CALENDAR

Jan. 8 throughout the year: Good Design 1953, sponsored by the Museum of Modern Art and the Merchandise Mart; a selection of home furnishings that have come on the market since July 1, 1952 — The Merchandise Mart, Chicago.

Jan. 13–15: Annual Meeting, National Constructors Association — Hotel Commodore, New York City.

Jan. 18–22: 1953 convention and exposition, National Association of Home Builders — Conrad Hilton Hotel, Chicago.

Jan. 19–22: Plant Maintenance Show and Conference — Public Auditorium, Cleveland.

Jan. 19–23: Winter General Meeting, American Institute of Electrical Engineers — Hotel Statler, New York City.

Jan. 21–Mar. 15; Built in U.S.A.: a survey of American architecture, both industrial and residential, since the Museum's 1944 exhibit — Museum of Modern Art, 11 West 53rd St., New York City.

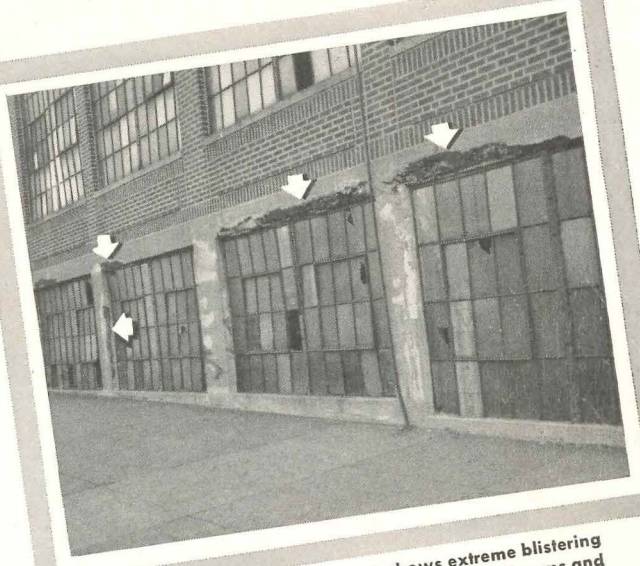
Jan. 26–27: Annual Meeting, American Society of Landscape Architects — Ansley Hotel, Atlanta, Ga.

Jan. 26–29: 59th Annual Meeting, American Society of Heating and Ventilating Engineers — Conrad Hilton Hotel, Chicago.

(*Continued on page 256*)

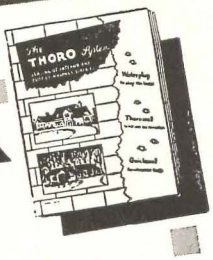
A NEW SURFACE!
A BEAUTIFUL THOROSEAL SURFACE!

PILGRIM BADGE BUILDING
BOSTON, MASS.



Above photograph shows extreme blistering and spalling of concrete spandrel beams and columns of Pilgrim Badge Building, Boston, Massachusetts which is now entirely protected and further deterioration arrested.

Restoration of concrete spandrel beams and other structural concrete work done by contractor Henry Gironi, Allston, Massachusetts. THORITE Patching Mortar used to seal rods and patch blistered concrete and THOROSEAL to protect surface and patched areas.



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NEW EAGLE — PENNSYLVANIA
40th YEAR

THE RECORD REPORTS

(*Continued from page 252*)

Jan. 26–30: 11th International Heating and Ventilating Exposition — International Amphitheater, Chicago.

Jan. 28–29: Eighth Annual Short Course in Residential Construction, sponsored by the Small Homes Council — University of Illinois, Urbana-Champaign, Ill.

Jan. 28–31: Annual meeting, Society of Architectural Historians — Cleveland.

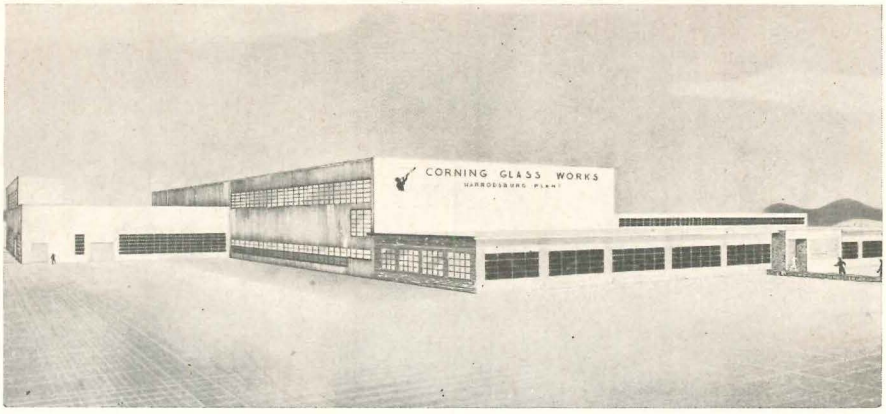
Feb. 14–19: National Convention and Architectural Exhibit of School Buildings, American Association of School Administrators — Atlantic City.

Feb. 18–20: Eighth annual Conference of the Reinforced Plastics Division, Society of the Plastics Industry, Inc. — The Shoreham Hotel, Washington, D. C.

Feb. 21–Mar. 1: 1953 Exposition, Home Show of St. Louis, Inc. — Kiel Auditorium, St. Louis.

Mar. 16–20: National Association of Corrosion Engineers Conference — Chicago.

Mar. 23–April 4: York course on protection and repair of ancient buildings. Details from Secretary, York Civic Trust, St. Anthony's Hall, Peaseholme Green, York, England.



Corning Glass Works has under construction at Harrodsburg, Pa., a new optical glass plant. The new facility was designed by Ward & Moore of Corning with the engineering dept., Corning Glass Works

OFFICE NOTES

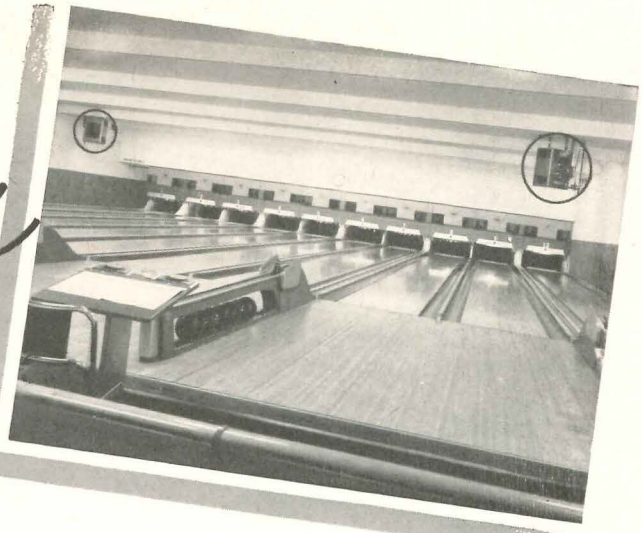
Offices Opened

• G. W. Brandhorst and J. M. Leadholm have opened architectural offices in the St. Louis Park Theater Building at 4829 Minnetonka Boulevard, Minneapolis 16, Minn. The firm will be known as Brandhorst & Leadholm.

• Louis Gardner and Emanuel N. Turano have announced the opening of offices, with the name of Turano-Gardner Associates, at 35 West 53rd Street, New York 19, N. Y.

(*Continued on page 260*)

At Recreation



Bowlers and spectators enjoy clean comfort and even temperature in remodeled recreation center heated with Janitrol Unit Heaters.

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Second: operation is automatic, requiring no attention and only a minimum of maintenance.

Third: heat is directed where it is most needed and only used when required, response is fast, operation economical.

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BOILERS • UNIT HEATERS • CONVERSION BURNERS

THE RECORD REPORTS

(*Continued from page 256*)

• Charles L. Potter Jr., A.I.A., has opened an office for the practice of architecture at 11 Wade Hampton Boulevard, Greenville, S. C.

• Arthur O. Reddemann, A.I.A., has announced the opening of an office at 3420 West Center Street, Milwaukee 10, Wis.

New Firms, Firm Changes

• Baumann and Baumann, Architects, of Market Street, Knoxville, Tenn., have announced the formation of a corporation to carry out all uncompleted contracts and for continued general practice, to be known as Baumann and Baumann, Inc., Architects-Engineers. Will W. Griffin, A.I.A., is president.

• Preston Bolton, A.I.A., and Howard Barnstone, A.I.A., have formed a partnership for the practice of architecture, with offices at 3106 Brazos, Houston 6, Tex.

• Carl H. Gausewitz has announced partnership with Robert C. Cashin, the firm to be known as Gausewitz & Cashin, Architects and Engineers, 201 Tenny Building, 110 East Main Street, Madison, Wis.

• Ernest Ross and Bertram S. Koslen announce the formation of a partnership to be known as Koslen & Ross, Architects, with offices at 2163 Lee Road, Cedar-Lee Building, Cleveland Heights 18, Ohio.

• Arthur H. Kuljian, chief mechanical engineer for the Kuljian Corporation, engineers and constructors of Philadelphia, has been elected vice-president in charge of engineering of the firm.

• Ramey & Himes, Architects, have appointed Henry W. Schirmer, Jr., and Robert J. Schaefer as associates in the firm.

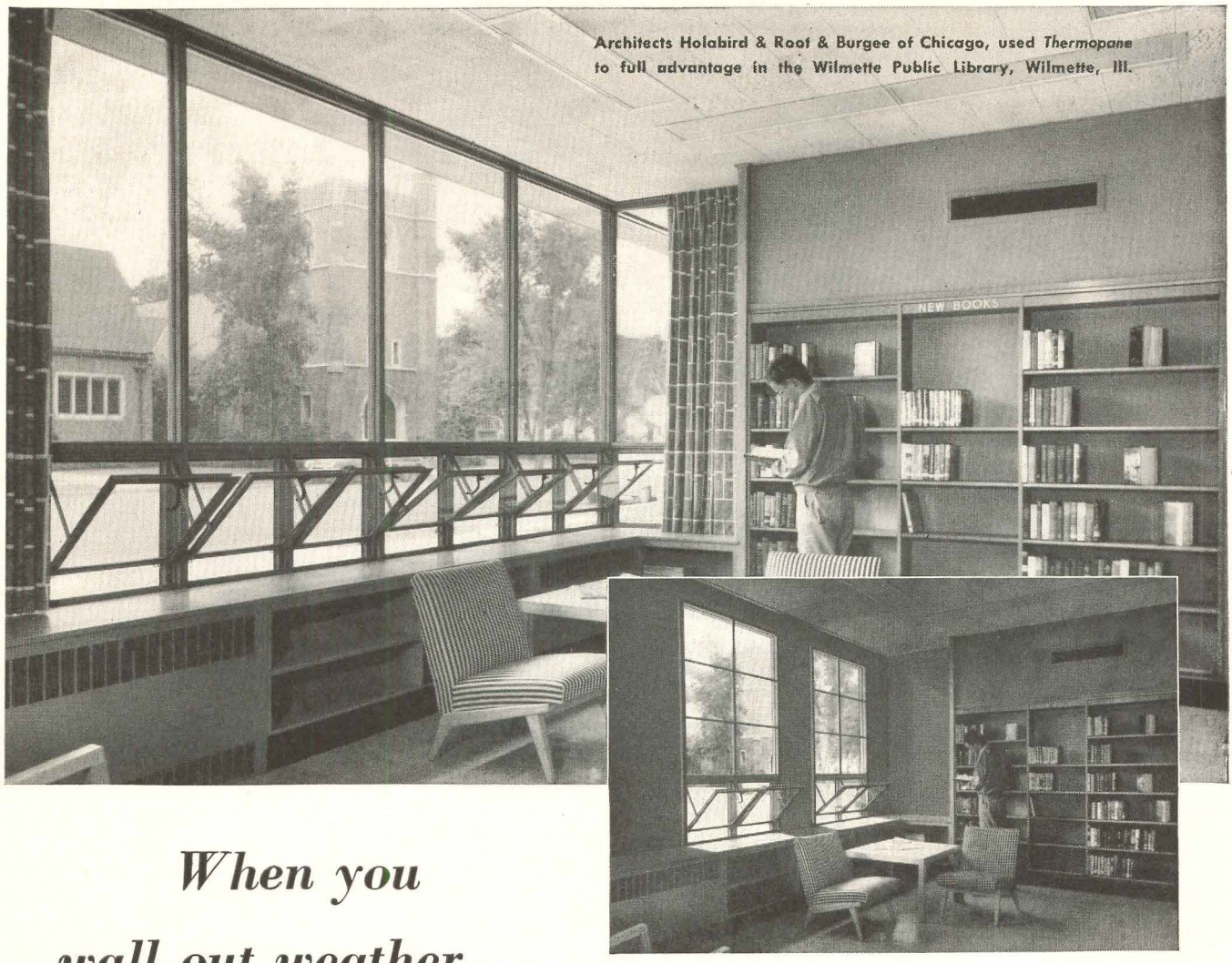
New Addresses:

The following new addresses have been announced:

Mayo & Mayo, Architects, Suite 2630, 35 East Wacker Drive, Chicago 1, Ill.

Joseph Stein, Architect, 168 Grand Street, Waterbury, Conn.

(*Continued on page 264*)

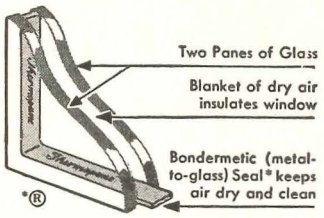


Architects Holabird & Root & Burgee of Chicago, used *Thermopane* to full advantage in the Wilmette Public Library, Wilmette, Ill.

When you wall out weather . . .

WHY WALL OUT LIGHT, VIEW AND SUNSHINE?

The smaller retouched photograph of the Wilmette Library shows how the architects' design would have suffered had they used conventional windows. A wall is designed to shut out the weather, to keep heat in during winter, out during summer. You can do all this with *Thermopane** insulating glass and still give your client the priceless pleasures of sunshine and view with lots of natural, eye-comforting *free* daylight. For every building you design, compare the cost of a *Thermopane* Daylight Wall —*Thermopane* wall to wall and sill to ceiling—with one of opaque materials that must be finished and decorated on the inside. Then consider the special benefits you can give your clients when the insulated wall is also transparent. *Thermopane* is a bargain!



QUICK FACTS

Thermopane insulating glass is widely and successfully used in all kinds of buildings. *Thermopane* with ½'' of dry air hermetically sealed between two panes has twice the insulating value of single glass. This minimizes chilliness, drafts and heat loss at windows in winter. *Thermopane* cuts air-conditioning costs by reducing the amount of heat entering during summer. Cuts out 44% more noise than a single pane. Write for *Thermopane* literature.

For the latest Thermopane information consult the 1953 Sweets File, or write Libbey·Owens·Ford Glass Co.
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THE RECORD REPORTS

(*Continued from page 260*)

AT THE COLLEGES

Conference Hears Report On Trussed Rafter Study

A conference on trussed rafters held at the Wood Research Laboratory of Virginia Polytechnic Institute heard the findings of a two-year study performed by Dr. E. George Stern of the Virginia Engineering Experiment Station and P. W. Stoneburner of the Virginia Agricultural Experiment Station.

Participants in the conference included representatives of the Housing and Home Finance Agency, the Engineering Research and Development Laboratories of the Corps of Engineers, the Small Homes Council of the University of Illinois, New York University College of Engineering and the Timber Engineering Co. of Washington, D. C., in addition to a number of architects and manufacturers actively engaged in research on trussed rafters. Besides hearing the reports, the group also examined the facilities of the Laboratories.

Research Findings Reported

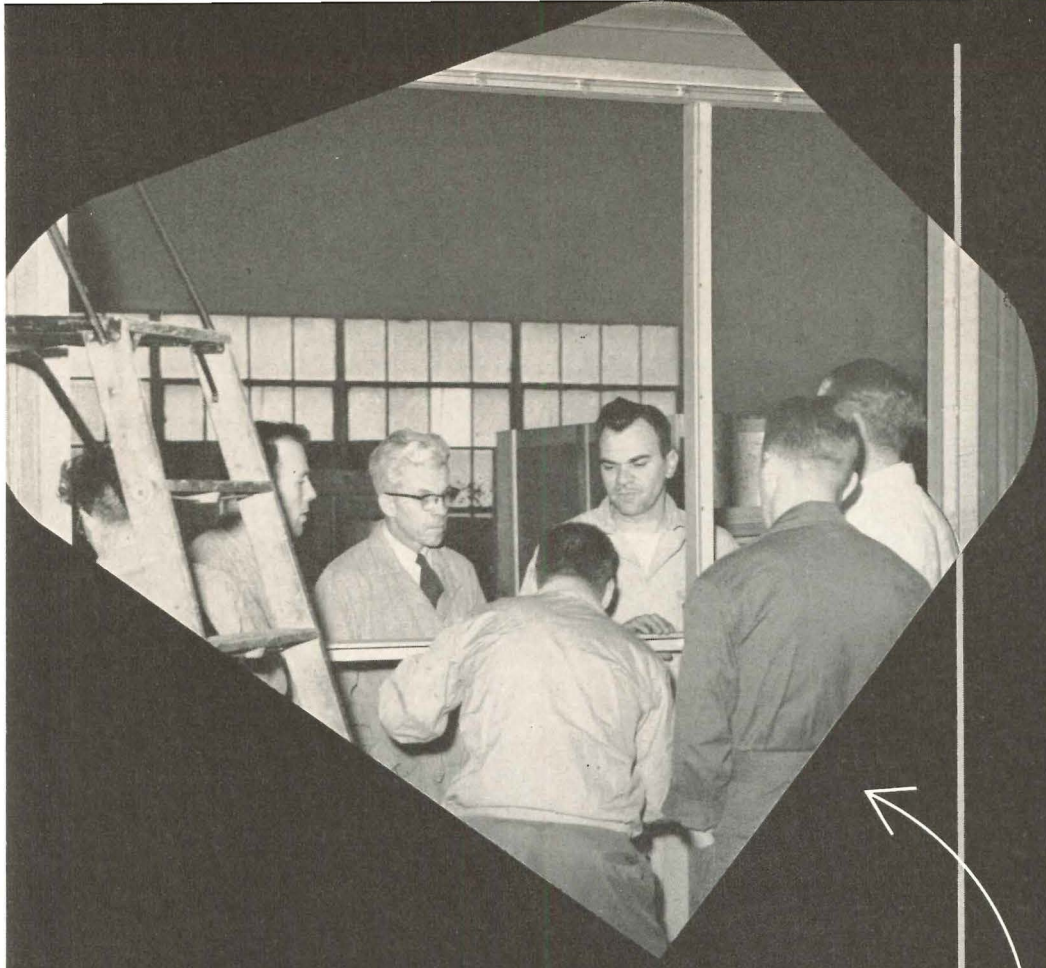
In the tests reported, as many as 44 nailed, Burrlocked-assembled, bolted and slit-ring connectored trussed rafters of 26-ft span were tested to destruction. It was found that the type of nailed trussed rafter suggested by V.P.I., with nails in double shear, performs very satisfactorily, saves a considerable amount of lumber and can be easily fabricated without special tools and equipment.

The newly developed trussed rafters are already being used in the erection of demonstration homes in New York State, designed by the Research Division of New York University under the sponsorship of HHFA. A color film showing the fabrication and erection of the nailed trussed rafters was shown to the conference by Hyman Steinberg of New York University.

The conference also discussed performance characteristics of nailed-and-glued trussed rafters, split-ring connectored trussed rafters and the "W" truss suggested by the Small Homes Council. These were compared with performance characteristics of the V.P.I. designs, which are suitable for both prefabrication and site-fabrication.

Complete results of the V.P.I. investigation are published in the Vir-

(*Continued on page 268*)

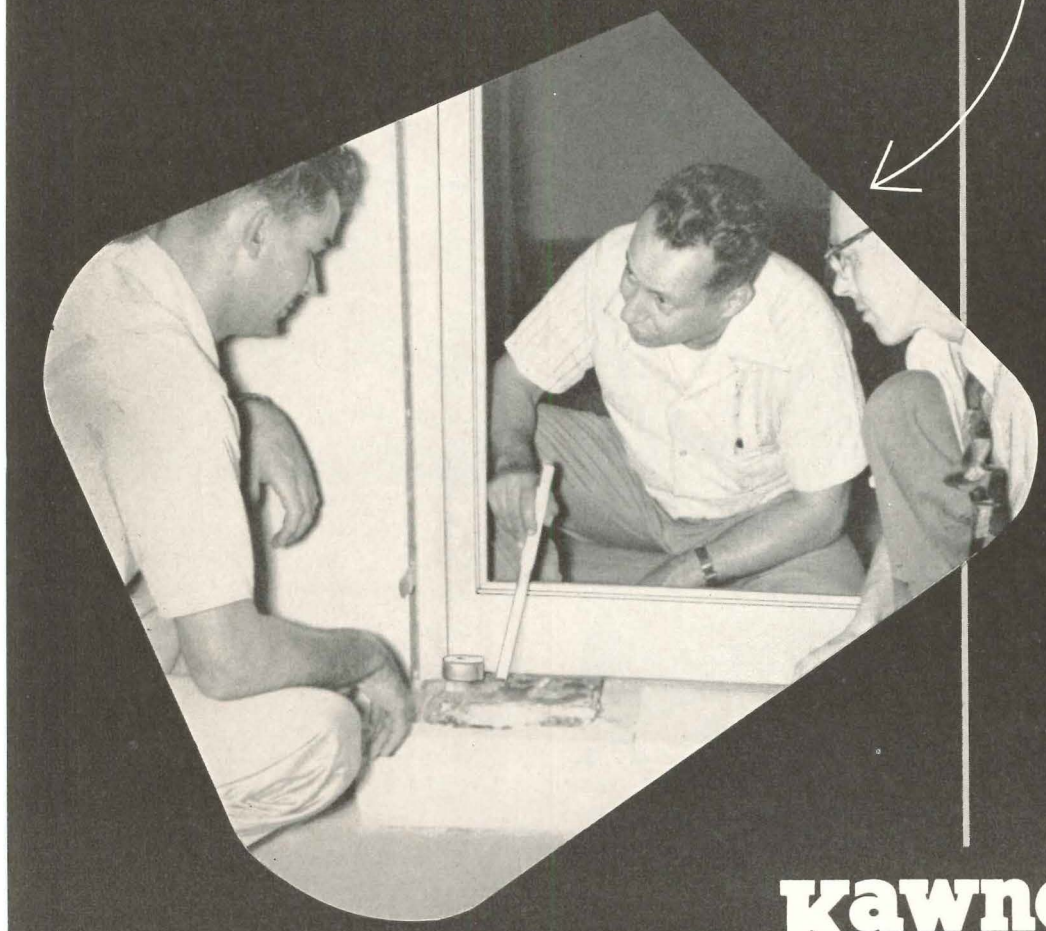


KAWNEER specialized services to *very busy* architects take many forms, such as the special KAWNEER Dealer Personnel training school at Niles, Michigan.

Becoming students for two action-filled weeks, Dealer Personnel receive intensified training in KAWNEER products—from manufacture through installation—before drawing boards, and at practical work installation problems. The KAWNEER curriculum is complete—from estimating through installation.

Graduates add their skill to the long list of KAWNEER services which you, the architect, have at your disposal.

helpers for assiduous architects



KAWNEER services to architects include modern plants and production methods, skilled craftsmen, products architect-designed—for architects. KAWNEER literature provides complete information and details. KAWNEER-trained applicators make installation easy... insure client satisfaction. And the experience of KAWNEER-trained Dealer Personnel and Field Representatives is available, on request, to architects everywhere.

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THE RECORD REPORTS

(*Continued from page 264*)

ginia Engineering Experiment Station Bulletin No. 81, September 1952. Copies may be procured from Dr. E. George Stern, Virginia Polytechnic Institute, Blacksburg, Va.

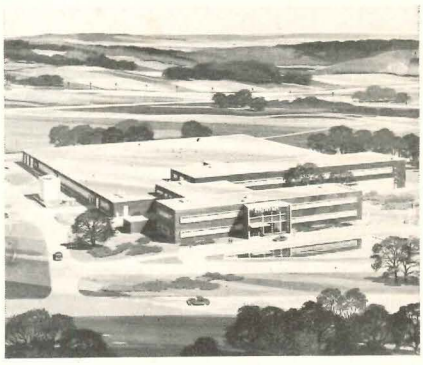
"Tides of Taste" Subject Of Chicago Lecture Series

Twelve University of Chicago University College lectures on "Tides of Taste" will discuss the hundred years of change in architecture and decoration from the Regency Style to "Modernismus." David S. Watson, University College lecturer, will conduct the series.

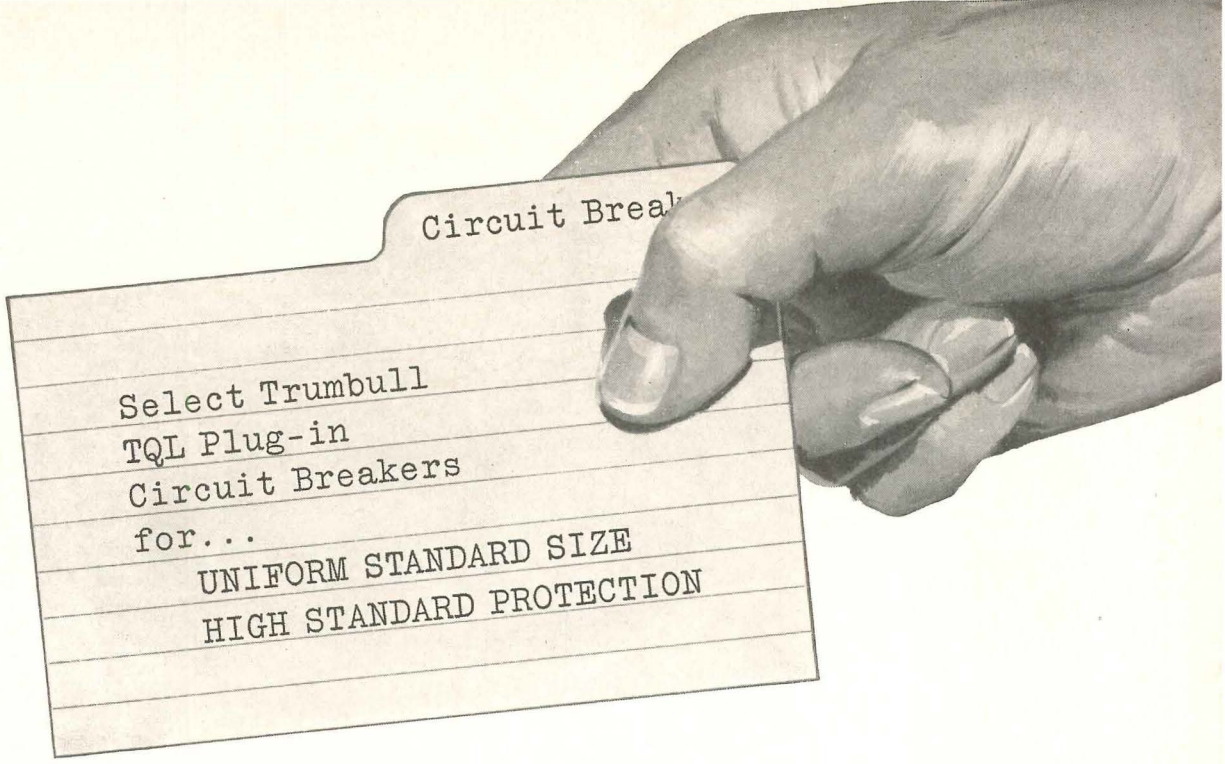
The lectures will cover such varied topics as esthetics and academics; the theorists of the great revivals (Cockerell, Pugin, Ruskin, Viollet-le-Duc); architects, architecture and the battle of the styles; the Turkey carpet and the keepsake face of the mid-Victorian era; and state capitols and palace hotels.

Other lectures include "Engineering and Elegance," "The Revival of Craftsmanship," "The Search for a New Tradition," "The Skyscraper" and "Modernismus, the Bauhaus, Wright, Neutra, Le Corbusier and the Influence of the Paris Exposition."

(*Continued on page 272*)



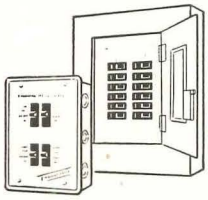
Mennen Company, manufacturers of men's toiletries and baby products, will move early next year from Newark to a new building on a 100-acre site near Morristown, N. J. The office, warehousing and manufacturing facilities will be consolidated for the first time in the new structure, which provides more than 264,000 sq ft of floor space. The actual building site is 20 acres; the remainder is being held by the company for possible sale to "other suitable industries." A. M. Kinney, Inc., was the designer



Trumbull TQL Plug-in Breakers from 10 through 50 amp. ratings are all made to the same standard dimensions — physically interchangeable not only in Trumbull Load Centers and Panelboards but also dimensions of these breakers have been adopted by leading manufacturers. This means convenience, economy and time saving for the contractor or plant electrician.

Trumbull also sets the quality and safety standard with a thermal-magnetic trip for positive protection against both shorts and sustained overloads. Compact and economical to buy and install. They pay for themselves because they are built to last a lifetime. They pay big dividends in letting you restore service quickly after short or overload is corrected. They may well save a capital investment by prevention of overheated circuits.

Quick Facts



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- Trip indicating, trip free handle, with stamped rating
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- Underwriters' Laboratories Approved for feeding through line or load terminal
- Ratings: 10, 15, 20, 30, 40 and 50 amp., 120 volt A.C., single pole
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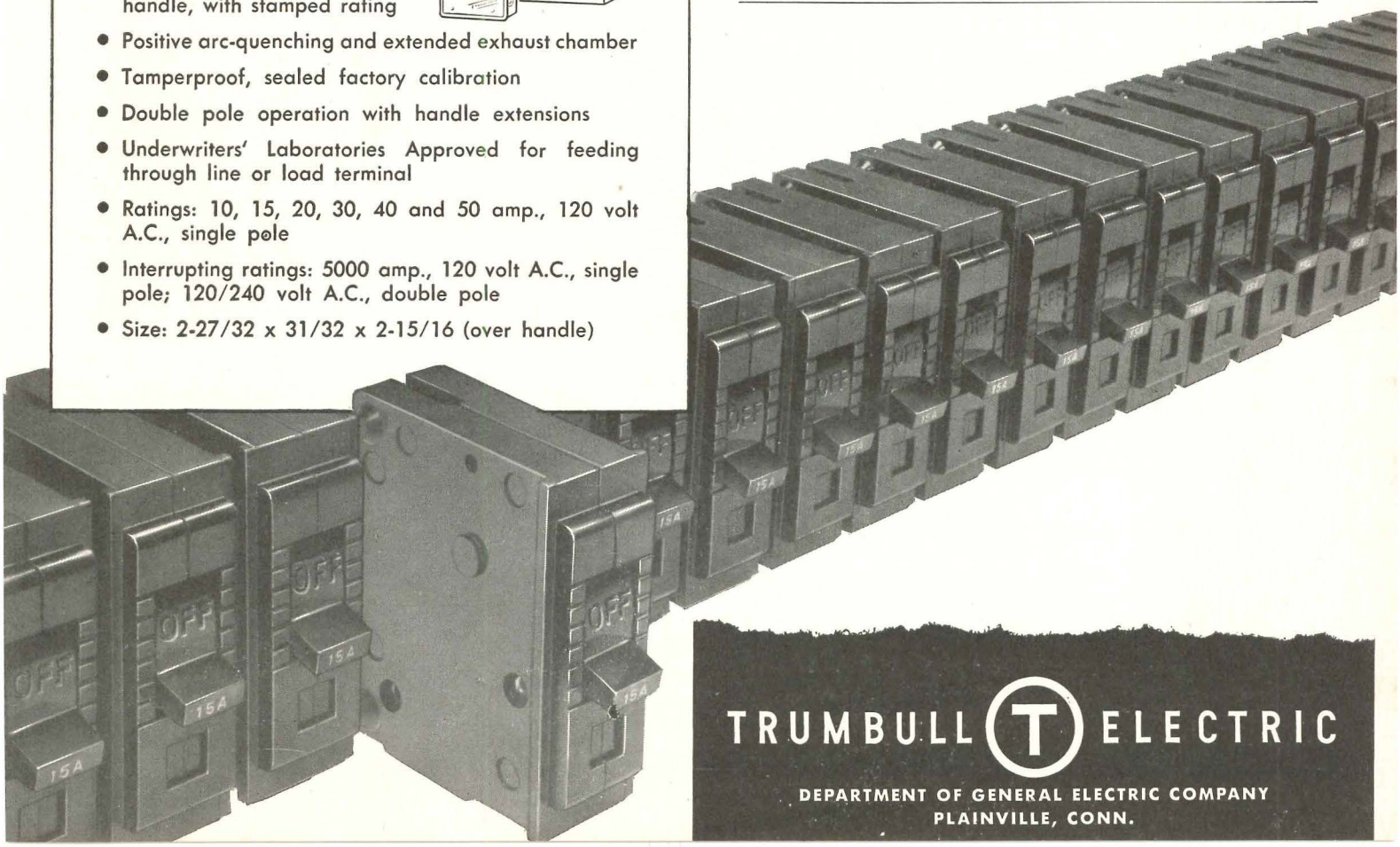


TRUMBULL (T) ELECTRIC

DEPARTMENT OF GENERAL ELECTRIC COMPANY
PLAINVILLE, CONN.

THE RECORD REPORTS

(*Continued from page 268*)

Harvard Offers Scholarship For Landscape Architecture

The Department of Landscape Architecture, Graduate School of Design, Harvard University, has announced the availability of two scholarships for academic year 1953–1954. One scholarship carries a stipend of $600, the equivalent of the tuition for one year. Inquiries may be addressed to the chairman, Department of Landscape Architecture, Robinson Hall, Harvard University, Cambridge 38, Mass.

Another scholarship for graduate study in landscape architecture is being offered for the coming academic year by the Department of Landscape Architecture. The scholarship provides an income of $1000, of which $600 is for tuition and $400 for help with expenses. Candidates must be citizens of the United States and have received their bachelor's degree or equivalent within the past four years. Students who are candidates for the degree in June 1953 are also eligible. Closing date for applications is February 1. Inquiries may be addressed to the chairman of the Department of Landscape Architecture, Robinson Hall, Harvard University, Cambridge 38, Mass.

New Courses

• A course in "Architectural Interiors" will be offered by the Columbia University School of General Studies in cooperation with the School of Architecture. The course is described as "a survey of architectural history with special emphasis on the study of interiors and furniture." Instructor will be Michael Harris, architect, who is associate director of planning for United Nations Headquarters. The course is open to non-matriculated or special students.

• Columbia's School of General Studies has also established a new major program in construction management. This program is designed to enable men and women either engaged in the building industry or preparing to enter it in administrative or supervisory capacities to earn college degrees while mastering the principles of building construction. The program includes both specialized professional courses and general cultural and academic courses. Normally, the program can be completed in four years of full-time study, but most courses will be offered in late afternoon and evening, so that students can earn degrees over a longer period of part-time study, without interference with their regular employment.

Faculty Appointments

• Prof. S. M. Marco has been named chairman of the Department of Mechanical Engineering at Ohio State University. He succeeds Prof. Aubrey I. Brown, chairman of the department since 1946, who asked to be relieved of the duties of the chairmanship, so that he could devote full time to teaching.

• A. James Speyer, assistant professor of architecture at Illinois Institute of Technology, has been appointed to the rank of associate professor.

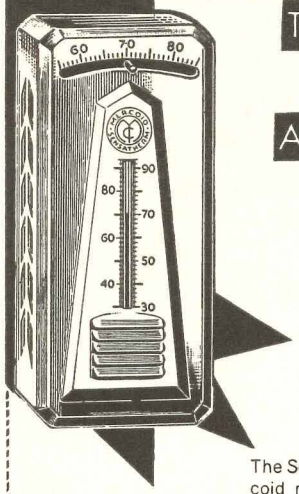
• Clyde A. Patterson Jr. has been appointed critic in design in the Dept. of Architecture, Western Reserve Univ.

AWARDS

• Thirteen buildings won honors in the 1952 architectural competition sponsored by the Queens, N. Y., Chamber of

(*Continued on page 276*)

FEATURED in HOUSE & GARDEN'S 1953 **House of Ideas**



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Applies quickly, speeds up the job. Sets firmly, but pliable enough to withstand vibrations. Will not crack, chip or powder! Will not sag, creep or pull away! Never needs painting. *O. K. for primed wood sash, too!

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. . . See Sweet's Architectural File — Section 7C/D1 for full information.

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THE DICKS PONTIUS COMPANY
DAYTON, OHIO
Alexandria, Va. Decatur, Ga.

THE RECORD REPORTS

(*Continued from page 272*)

Commerce for buildings erected in the borough during the past year. Cited for "excellence in design and construction," the prizewinners included the following structures:

St. Teresa's Roman Catholic Church, Woodside, William J. Boegel, architect; Metropolitan Industrial Bank, Forest Hills, Philip Birnbaum, architect; Bestform Foundations Building, Long Island City, Rahman & Astor and Irene von Horvath, architects; Gertz-Flushing Department Store, Abbott, Merkt & Co., engineers; Queens Village Public Library, Raymond Irrera, architect; Leo F. Kearns Funeral Home, Richmond Hill, A. F. Meissner, architect; Park Briar Apartment Building, Forest Hills, Lawrence N. Rothman, architect; Queensview Cooperative Apartments, Long Island City, Brown & Guenther, architects; Schaefer Warehouse, Long Island City, Louis H. Pfohl, architect; Long Island City Savings & Loan Association, Raymond Irrera and Vincent D. Luongo, architects; Long Island City Savings Bank, Rego Park, Halsy, McCormick and Helmer, architects; Douglaston substation of Consolidated Edison Co., designed by the company's own structural engineering bureau; and Plaxall Building, Long Island City, Louis H. Pfohl, architect.

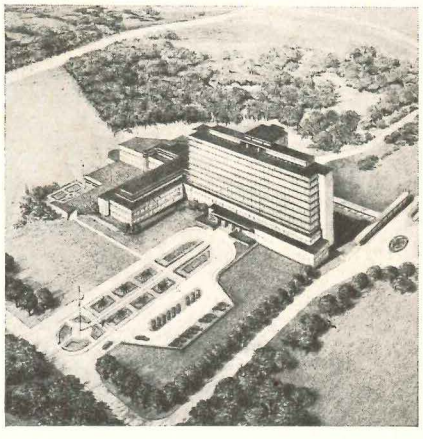
PRODUCERS PLAN TO GIVE FACTS ON NEW MATERIALS

Dissemination of factual information concerning proper uses of new and improved building materials is slated as a major goal this year by the Producers' Council.

Elliott C. Spratt, Council president, has described the aim of the program as designed "to help reduce the cost and improve the quality of construction by showing architects, builders, contractors and distributors how to utilize most efficiently the host of varied products now on the market."

Informational meetings, products displays, films and technical literature supplied by company and association members of the Council are all to be included in the program. Details are to be developed by the Council's joint committees with the American Institute of Architects, the National Association of Home Builders, the Associated General Contractors of America and the National Retail Lumber Dealers Association.

(*More news on page 280*)



Holabird and Root and Burgee of Chicago are architects, Frederick Dunn of St. Louis, associate architect, for the Monsanto Chemical Company's new headquarters office building in St. Louis County. The initial building, to be eight stories high and contain about 350,000 sq ft, is part of an overall plan to accommodate long-range needs

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KELLY & GRUZEN DESIGN GYM FOR POWER ACADEMY

New meets old quite straightforwardly in the Power Gymnasium Building which has been designed by Kelly & Gruzen, Architects-Engineers, as an addition to the Power Memorial Academy in New York City.

Power Gymnasium Building, designed as addition to Power Memorial Academy in New York City by Kelly & Gruzen, Architects

The two-story gymnasium will be of contemporary design, two stories high, of fireproof construction. There will be seating accommodations for 1400 spectators and gymnasium facilities and equipment to include a regulation basketball court and two practice courts with folding partition, a removable stage, folding gym seats, a mezzanine storage area, locker and shower rooms and an instructor's office.

A granite stairway rising from the street level will lead to a connecting lobby which will be the main entrance for both the school and the gymnasium. Cost of the building is estimated at $450,000. Construction is under way and is expected to be completed by the middle of next year.

CHICAGO TO REDEVELOP SQUARE MILE SLUM AREA

The Chicago Land Clearance Commission, which recently celebrated its fifth birthday, has set as its target for the next five years the redevelopment of one square mile of slum and blighted areas.

According to John McKinlay, Commission chairman, two deteriorated neighborhoods, each of 120 acres, are under study and redemption of about 100 acres of blighted vacant land or "dead" subdivisions is planned for 1957, along with other redevelopment operations which will include another 100 acres. Four projects covering 227 acres have been started and the program for the next five years will approximate 667 acres.

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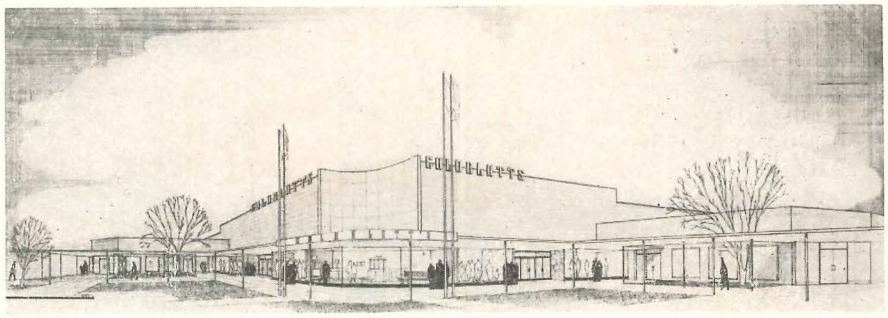
PARK FOREST CENTER GETS NEW DEPARTMENT STORE

One of the largest one-floor department stores in the Middle West will be built for Goldblatt Bros., Inc., as part of the new $125,000,000 planned community and shopping center of Park Forest, Ill.

The Goldblatt store, with about 60,000 sq ft of floor space, will be the firm's 16th in the Chicago area. Loebl, Schlossman & Bennett are the architects.



Goldblatt Bros. of Chicago will have a $2 million department store in the shopping center of the planned community of Park Forest, near Chicago. It will be the 16th in the firm's chain of stores; is planned to duplicate the facilities and merchandise of downtown stores. The store will have 60,000 sq ft of floor space on one floor

The new store will carry the same lines as the other stores of the chain. It will have an outside selling area designed for seasonal selling of shrubbery, garden furniture and supplies and related items.

The existing parking lot at the Park Forest center will be expanded from its present 1500-car capacity to 3000 cars to accommodate the new store.

The store is planned to serve not only the community at Park Forest but the 60,000 persons in the growing nearby communities of Chicago Heights, Homewood, Flossmoor, Steger, Crete, Matteson and Olympia Fields. An additional 100,000 persons live within easy distance of the center.

The Park Forest center now has 40 shops and stores, and another 40 are to be added. The entire center is canopied for all-weather shopping. There is no vehicular traffic through the area; provision has been made for automobile traffic in large parking lots flanking the center. All stores are air conditioned.

Park Forest, which now houses some 17,000 persons in 4500 privately-owned and rental houses, is expected to grow to 32,000 by early 1954. The town was developed by American Community Builders Inc., headed by Philip M. Klutznick, president, and Nathan Manilow, vice president and treasurer. Loebl, Schlossman & Bennett are the architects for the planned community.

(*More news on page 290*)

THE RECORD REPORTS

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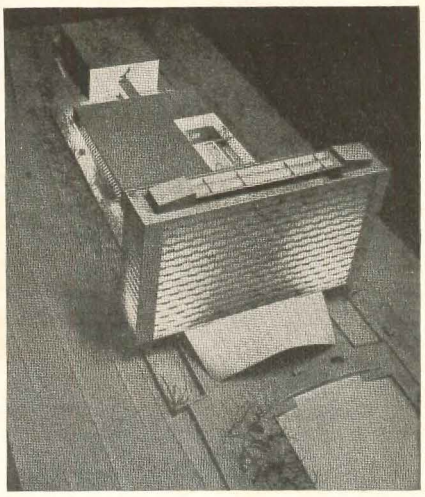
PERIODICAL REPORT

The Architects' Journal

November 6, 1952

UNESCO or Fiasco? Under this heading, *Astragal*, the Journal's witty, anonymous commentator on the architectural passing show, delivers some observations on the project for a new UNESCO headquarters in Paris and on the controversy which has centered about it. He reports his early reactions as follows:

"First: headquarters delight that a modern building of such distinction is being sponsored by an official body. (Nobody indeed seems even to have considered any other sort of approach. How far away may seem the battles of the 'twenties and 'thirties.) Second: delight in the clarity and simplicity of form displayed in plan, section and elevation. Third: delight in the fact that



although the office block follows the contemporary stock formula — inevitably, I suppose, since it is the most efficient solution to a stock problem — the human scale has been kept, the effect is not bossy, and the windows (Mumford, please note) actually open. Any reservations? Well, perhaps a few . . . a suspicion that those acres of flat roof will be difficult to handle . . . a personal prejudice against rubble masonry walls and 'racked staircases' . . . and no delight whatsoever in the tensely sprung parabolic arch over the lobby. This is 'Look-no-hands' stuff, inappropriate in a building which the architects describe as 'the embodiment of a great idea.' Certainly UNESCO is a Great Idea. Certainly, too, this will — or could — be a Great Building."

The Architectural Review

October 1952

This month's issue devotes considerable space to an article on wallpapers by Donald Dewar Mills. As a result of reawakened interest in Regency wallpapers following the war, a 25-year "functionalist" revolt seems to have ended, and wallpaper is beginning to be used again for modern interiors in England. Mr. Mills discusses and shows examples in color of a number of good modern papers which have broken from the conventional mode of stereotyped repetition. A small number of manufacturers in England have prevented the field of wallpaper design from completely stagnating, he says, but despite their efforts plus the emergence of new designers plus increasing interest on the part of architects, the general level of design has remained poor. This condi-

(*Continued on page 292*)