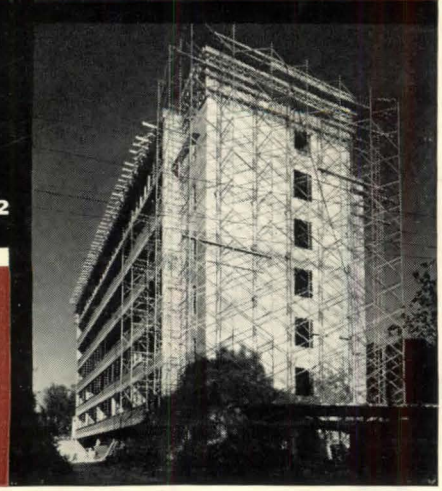
PRESSIVE ARCHITECTURE

hospitals

11

november 1952



apartment house construction

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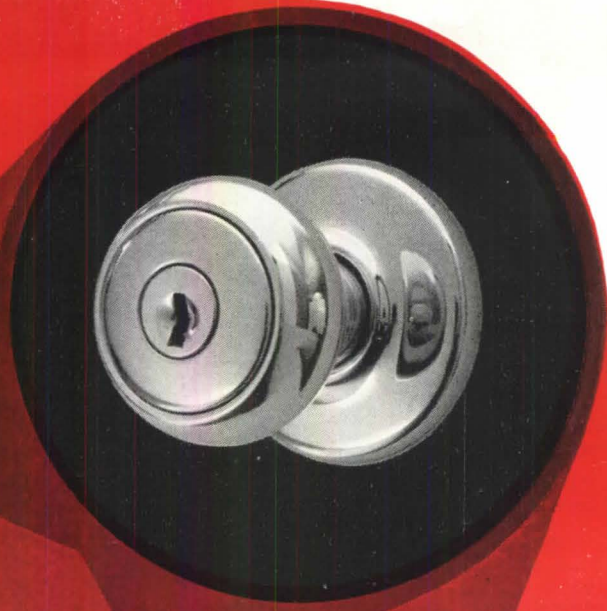
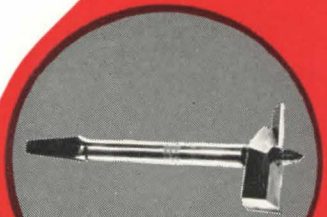
PROGRESSIVE ARCHITECTURE

pa

November 1952

the kwikset jig





the kwikset bit

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LOCKSETS

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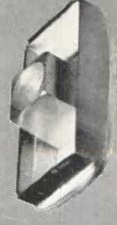

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apartment house
Philadelphia, Pennsylvania

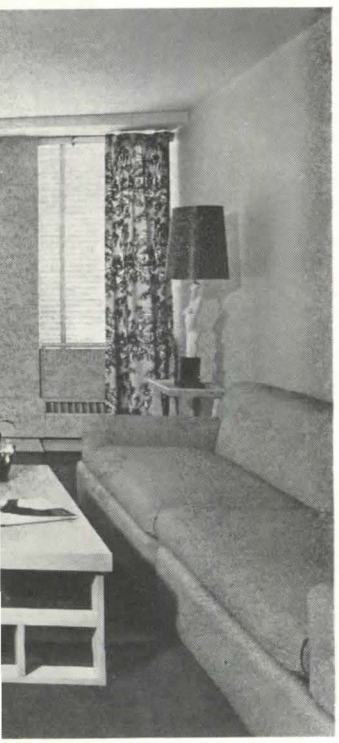
apartment house: Philadelphia, Pennsylvania

architect	John H. Graham
associated architects	Sweet & Schwartz
structural engineer	Dr. Jacob Feld
general contractor	Turner Construction Company

A remarkably pure instance of integration of plan, structure, and finished design, Flamingo Apartments, built with an FHA-insured mortgage, contains 300 rental units—46 bachelor apartments, 198 apartments with one bedroom, and 56 with two bedrooms. The 14 typical upper floors contain 21 apartments each, while on the ground floor there are 6 apartments, in addition to the main lobby, a drugstore, coffee shop, restaurant, 3 stores, and 5 suites of professional offices. The site is in a commercial area about one mile from City Hall; to the west is a near-slum area of old row houses. Tenancy in the new building is not restricted to any one r creed, or color.

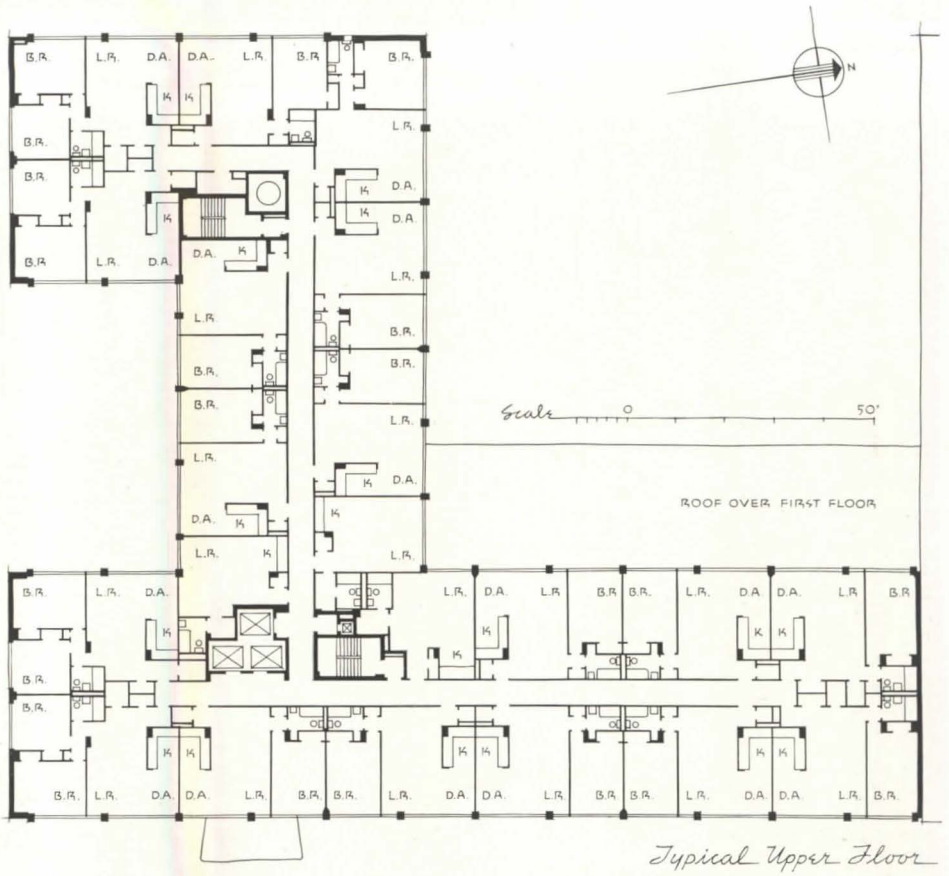
A stringent budget led to selectio the straight, flat-plate concrete const tion system (discussed in detail, p 80), wherein the concrete frame, cur filler walls, and steel casements consti the finished design expression.

Interior walls are plaster on metal l flooring is mainly wood parquetry on r tic; asphalt tile is used in service sp and carpeting in corridors. For ther insulation, there is glass fiberboard on roof and a loose fill on the suspended ing of the top floor.

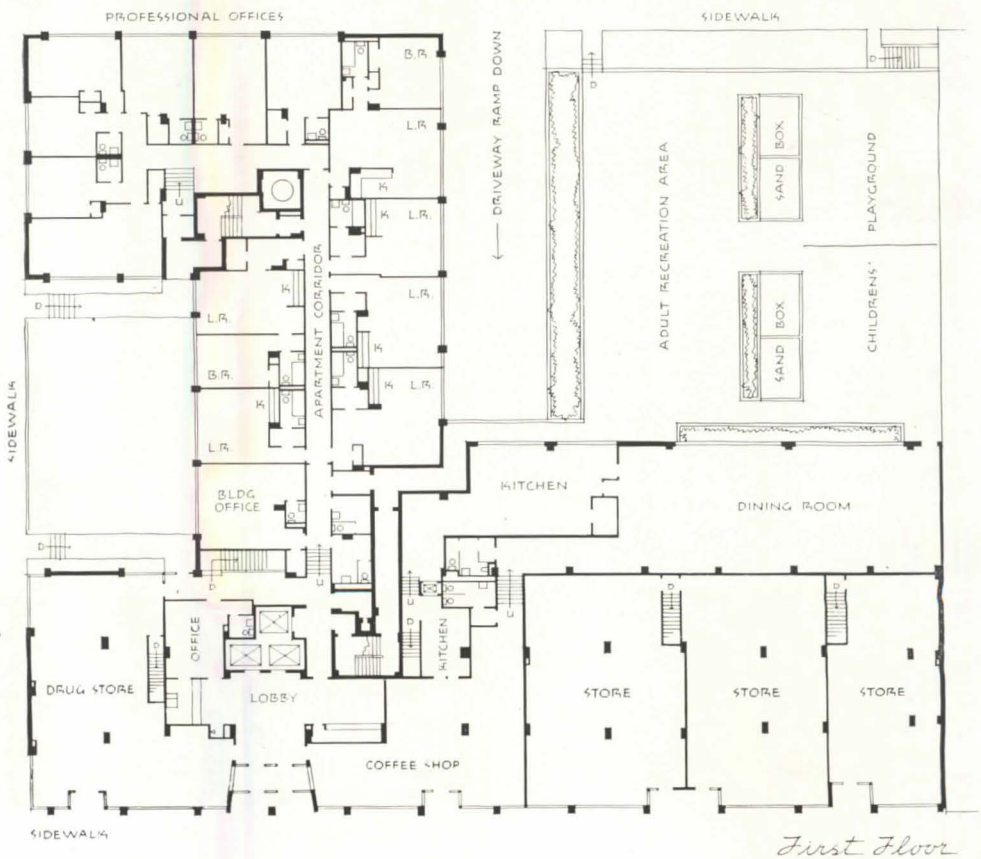


e hot-water heating system is served
n oil-fired boiler, with distribution
igh continuous convectors along ex-
r walls. This system was selected be-
e it required minimum risers and re-
, eliminating much costly furring.
l apartments were pre-painted, using
rm light gray as the base color, but
some partitions painted in one of
remaining colors—grayed rose,
ı, or blue. The warmer colors were
in north apartments, and the cooler
for apartments with southern
sure.

Photos: Cortlandt V. D. Hubbard



Typical Upper Floor

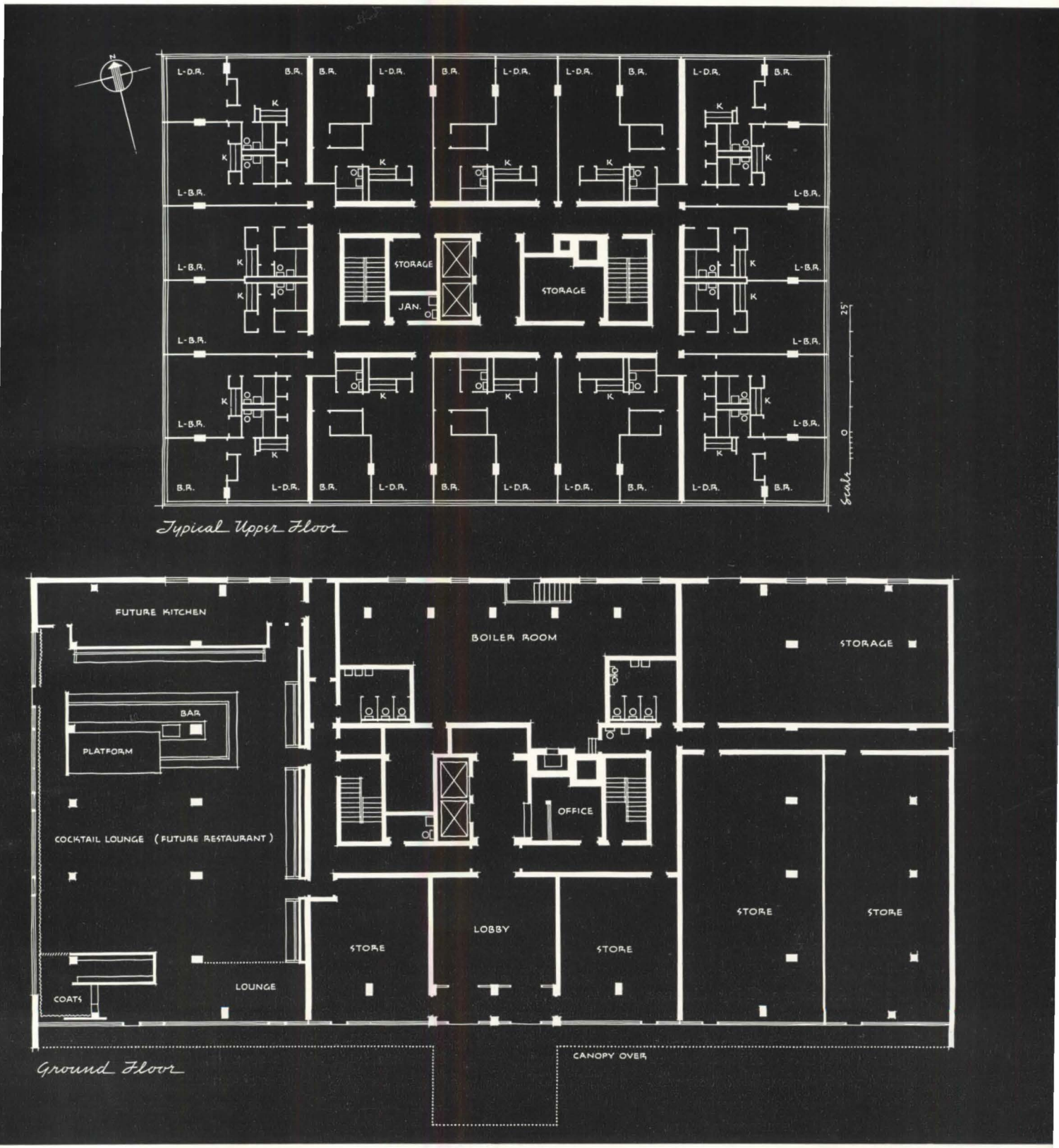


First Floor

apartment house

Savannah, Georgia

architects	Cletus W. Bergen & William P. Bergen
structural engineers	William H. Armstrong; William Edwards, Asso
mechanical engineer	Donald F. Lindstrom
electrical engineer	L. Ralph Bush



Built under FHA Section 608, this 12-story apartment building has 198 apartments—88 efficiency units and 110 apartments with a separate bedroom. On the ground level, in addition to the lobby, there are several stores and a sizable restaurant and bar. At the rear of this floor is the mechanical plant, since soil conditions made a basement impracticable.

Photos: Gabriel Benzur

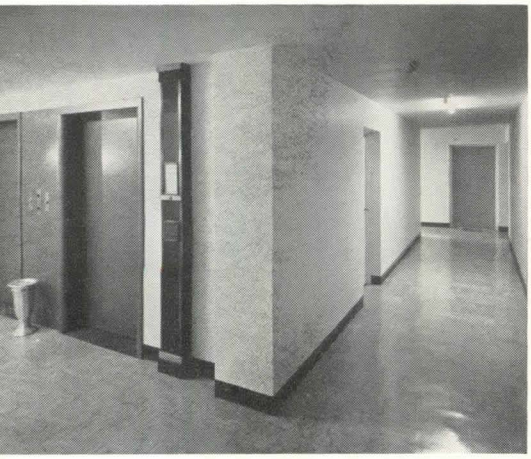
apartment house: Savannah, Georgia

At the main entrance (left) *a cant levered roof canopy extends from th entrance doors over the sidewalk. Floo ing in the lobby* (below) *is terrazzo; i apartments and corridors* (acrosspage) *asphalt tile. Elevators are self-servic*

Fronting on one of Savannah's tree-lined cross streets, the Drayton Arms Apartments are within easy walking distance of the business center. The architects give much credit to the FHA office in Atlanta for the quality of the design: "The building is an example of their willingness to further contemporary design." Not the least of its refinements is the panband concrete construction cantilevered out from a structural core, in which elevators, stairs, halls, storage rooms, incinerator closet, etc. are located. The core also provides a reassuring shelter area for each floor. This notable structural scheme is discussed on page 83 in full detail.

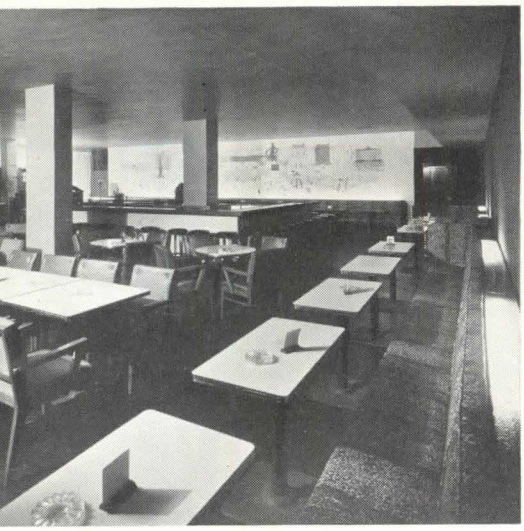
All apartments are on the building perimeter and enjoy wall-to-wall windows. Perlite plaster on metal lath is used for all partitioning; between apartments, partitions are double and contain a layer of wool felt to insure good sound control.

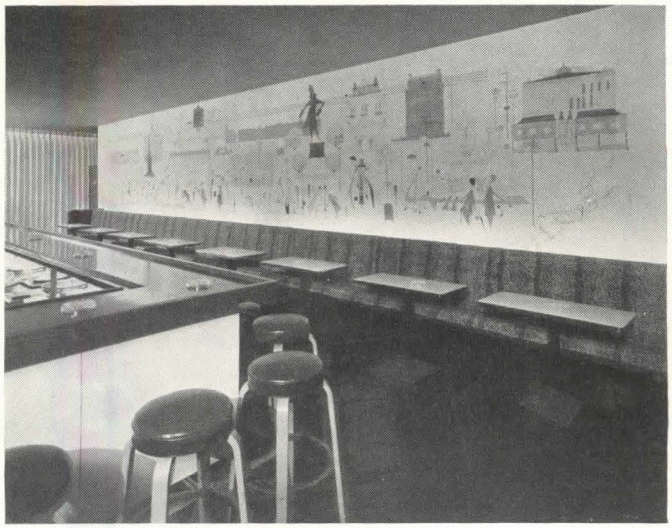
The building is year-round air conditioned and has a circulating ice-water system as well. There is independent air-conditioning control for each apartment, with remote air units consisting of fans and coils. In winter, hot water is supplied from oil-fired boilers in the central heating plant, using steam boilers and heat exchangers. These same boilers prov domestic hot water throughout the year 300-ton turbine compressor is autom cally operated and capacity controlled provide cooling water for refrigerated in summer. Chilled water is circulated the air-handling units in each apartm A separate system of exhaust-air du carries off cooking odors and other ob tionable odors from the apartments. tween each pair of bathrooms, there i 12-inch shaft that contains not o plumbing pipes, but also air ducts fr the central heating and refrigerat plant.



Although the building is air-conditioned, the bands of aluminum windows are awning type, to permit window cleaning from the inside and also to provide natural ventilation in event of mechanical failure.

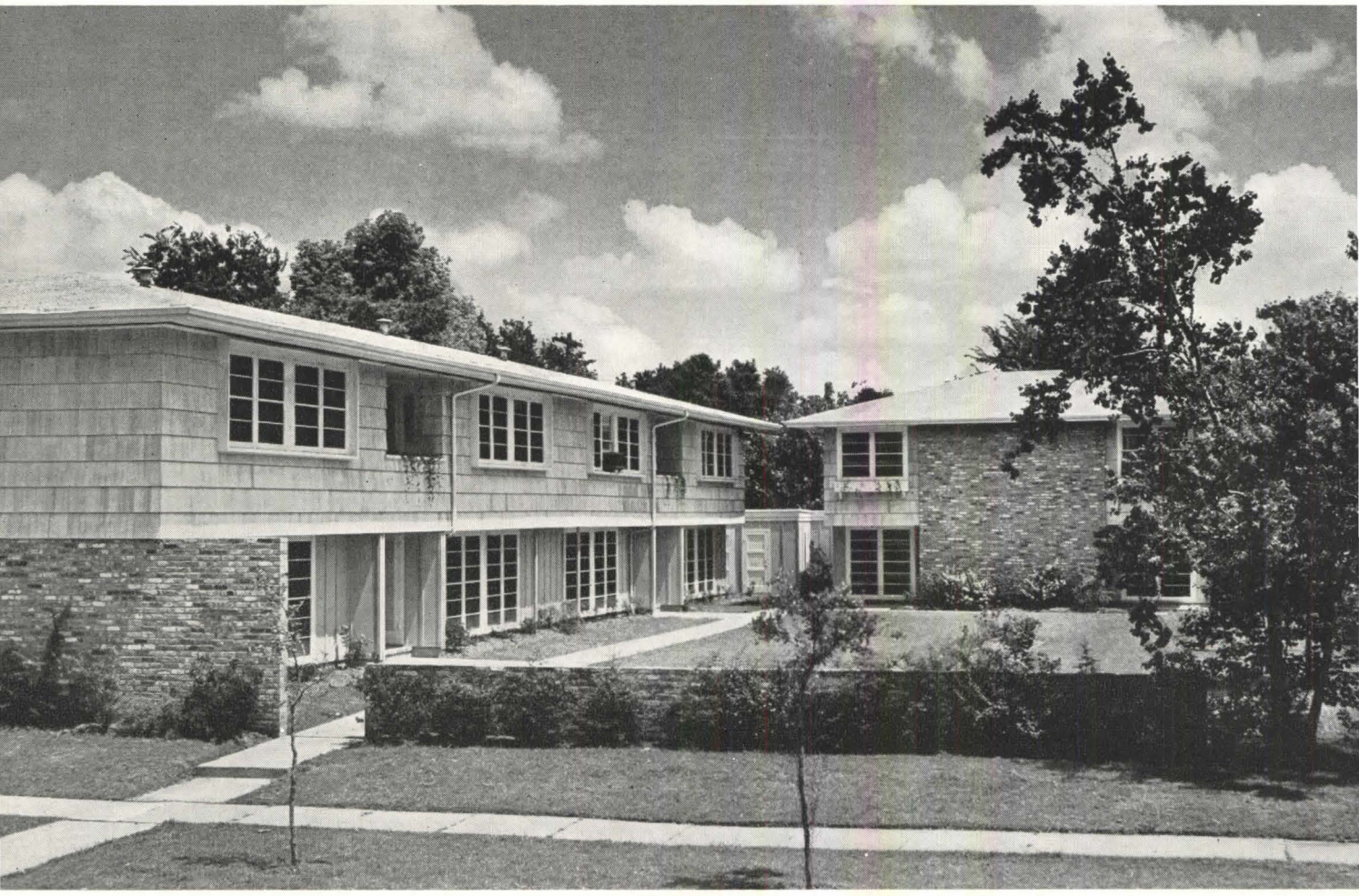
The cocktail lounge (two photos below) *occupies the west end of the ground floor. The wall mural depicting old Savannah landmarks is the work of Nancy Gibson.*





apartment house

Houston, Texas



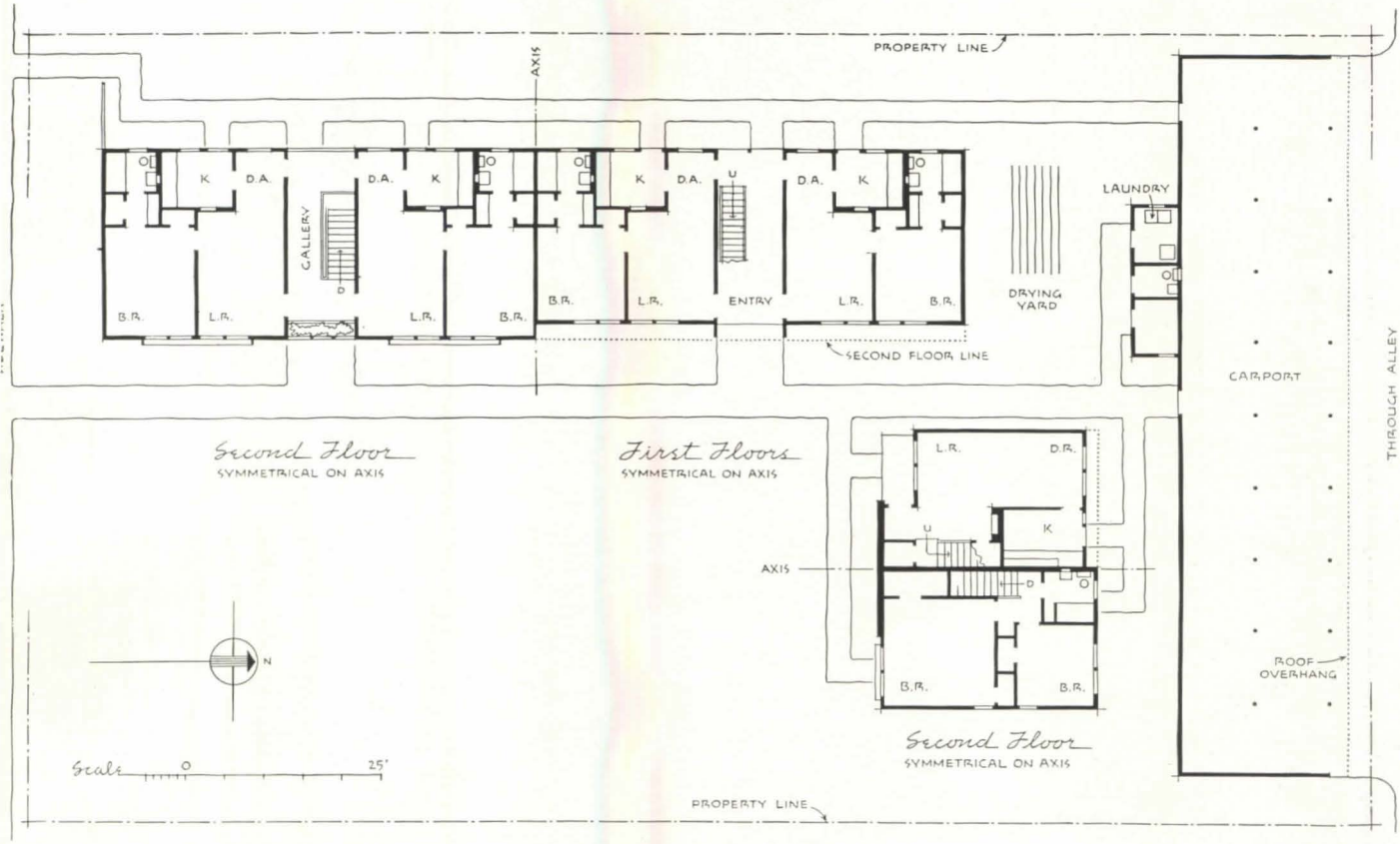
architects	Wilson, Morris & Crain
owner-contractor	Robert W. Kurtz

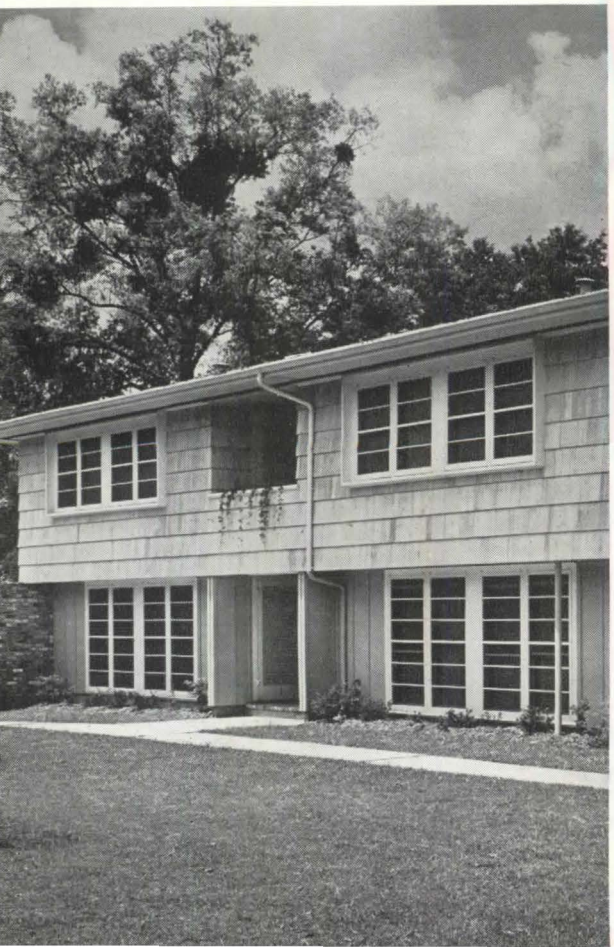
The owner of these apartments, who was also the builder, wanted a revenue-producing property and wasn't certain whether this should take the form of a one-story office building or an apartment group. Research determined that the apartment group, built with an FHA-insured loan, under Section 608, would be the more advantageous undertaking. The site is an inside lot facing one of Houston's oldest and finest streets with a landscaped esplanade down the middle. Flat and practically treeless, the plot had the advantage of an access alley on the north.

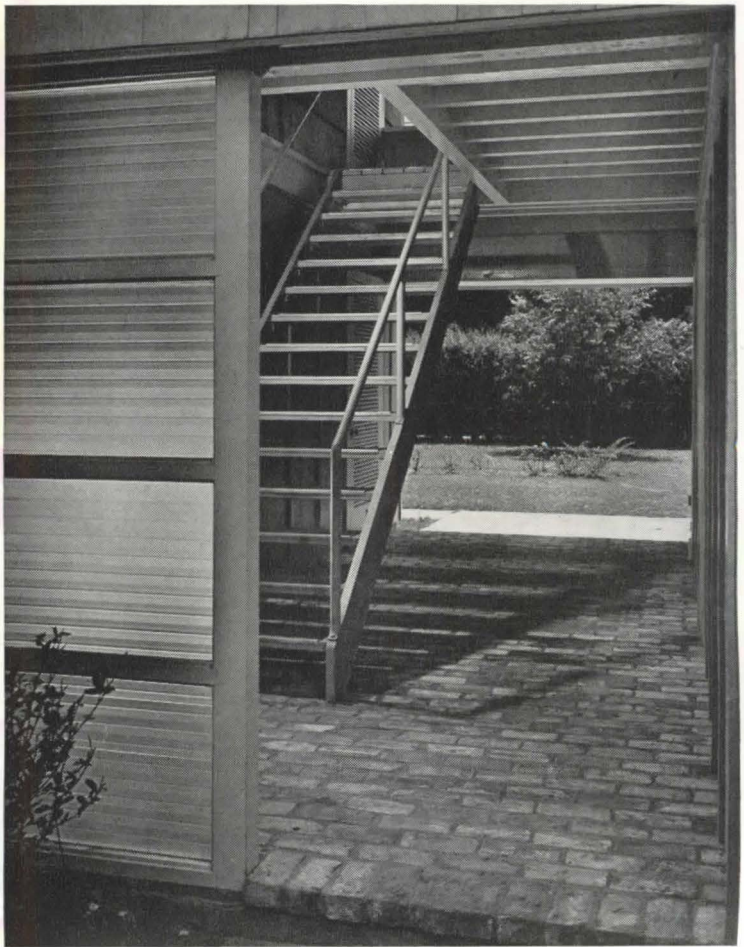
The solution consists of two separate, but related, two-story buildings. Along the west side of the property, the longer structure contains eight "3½-room" apartments, each complete on one floor. The breezeways, with open staircases that give access to second-story apartments, avoided the planning problems—and cost—of entrance halls and back stairs. At rig angles to this building, toward the re of the property, is the smaller structu in which there are two 2-bedroom dupl apartments. Off the rear alley is a carp for 10 cars, while laundry facilities a a drying yard occupy the area betwe the carport and the larger structure.

The building is of standard wood-fra construction, selected for its economy a speed of erection, built on a floating co crete slab. Double-stud construction p vides acoustical control between adjoini apartments. Exterior walls are of shak second-hand brick, or cement-asbes boards and battens. Interior walls a ceilings are surfaced with rigid wa board; the flooring is oak. Wool-type sulation occurs in the roof constructi and the apartments are heated by g fired wall heaters.

Photos: Dorsey & Pet


PROPERTY LINE
AXIS
K
D.A.
GALLERY
B.R.
L.R.
U
ENTRY
DRYING YARD
LAUNDRY
SECOND FLOOR LINE
CARPORT
THROUGH ALLEY
Second Floor
SYMMETRICAL ON AXIS
First Floors
SYMMETRICAL ON AXIS
L.R.
D.R.
AXIS
ROOF OVERHANG
Second Floor
SYMMETRICAL ON AXIS
N
Scale 0 25'
PROPERTY LINE

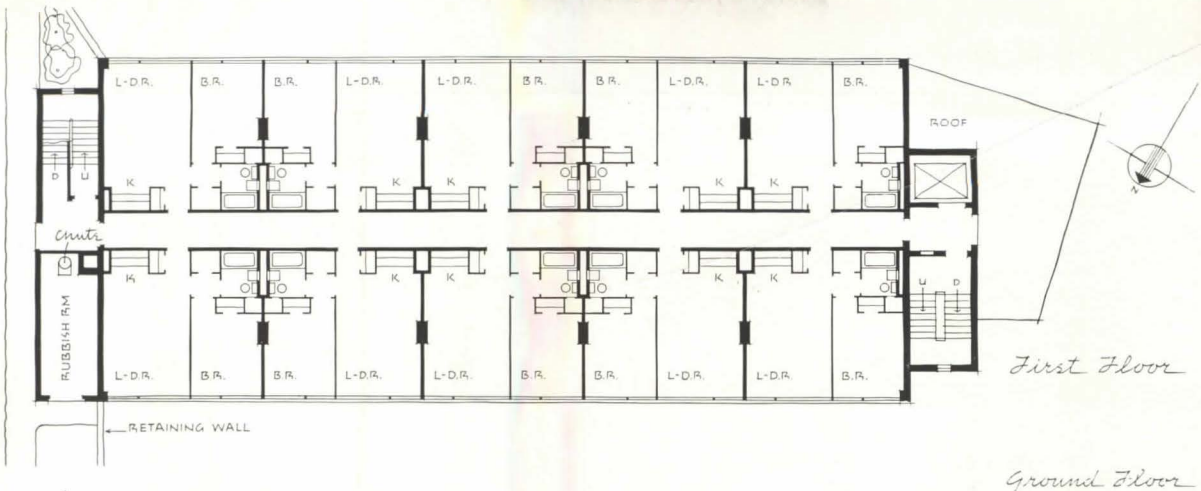


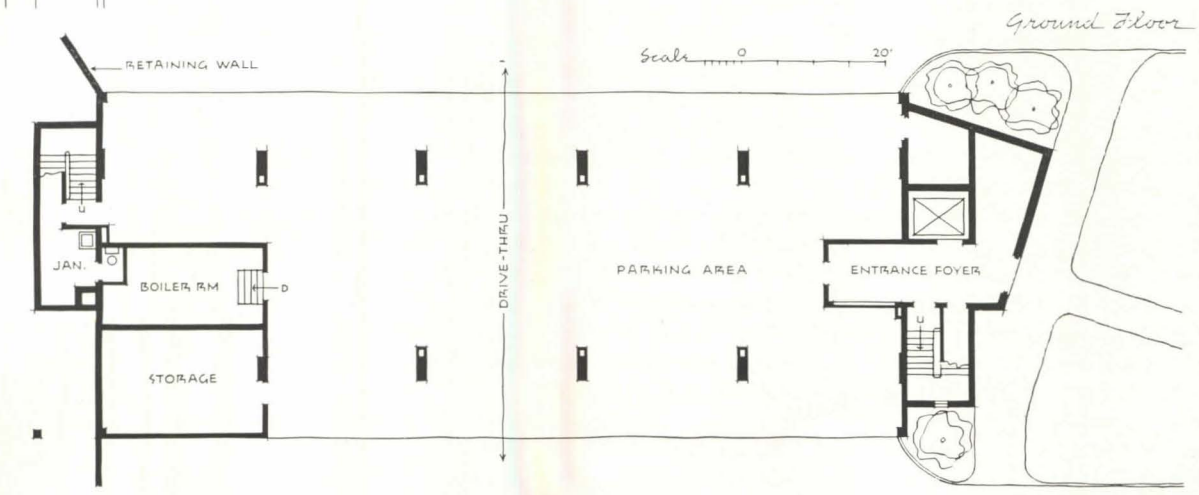


apartment house

Atlanta, Georgia

architect	John W. Cherry
associated architect	William H. Evins
structural engineer	Harry G. Hunter
mechanical engineer	E. W. Klein Co.
electrical engineer	Charles Howe





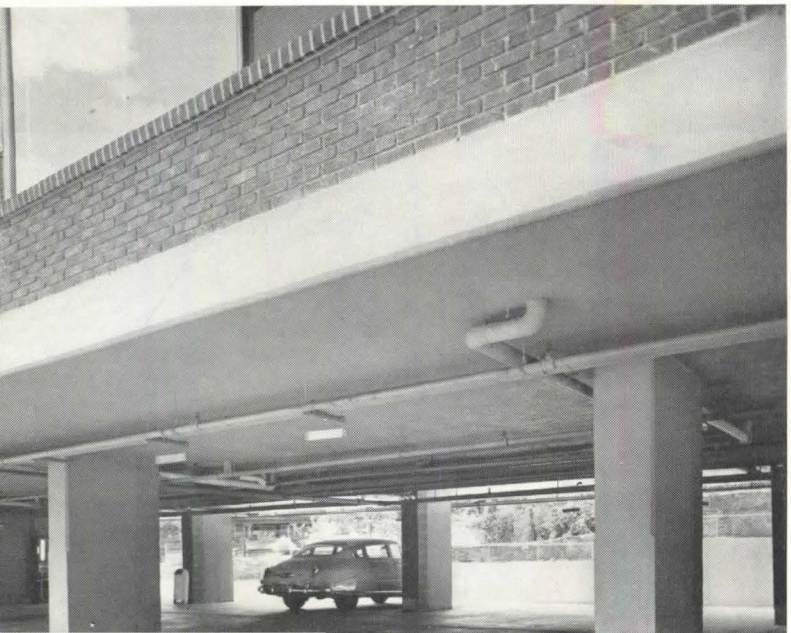
The original proposal for Barbizon Tower Apartments was to build a two-story, 14-unit building; but when it was discovered that local zoning would allow buildings up to 100 feet in height, the program was changed to a multi-story scheme with 60 units, built under FHA Section 608. Because of the narrow site, a problem was meeting the city requirement that on-site parking for tenants' cars be provided.

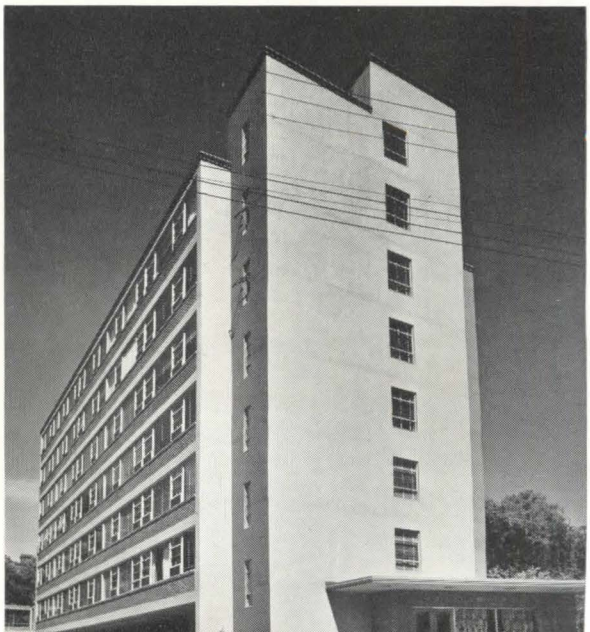
Advantages of the site were near-by transportation, stores, etc.; ideal east-west orientation; relatively high elevation providing good views. Disadvantages were limited area and the fact that higher surrounding lots made necessary costly retaining walls.

To solve the car-parking problem, the entire building enclosure (except for the main entrance, and the mechanical and storage rooms) was raised one floor off the ground, creating a protected, ground-level shelter. Cars enter a drive on one side, park in the under-building space, and drive out the other side. The 10 apartments on each of the six floors are symmetrical around a central corridor.

Detailed discussion of the structural system, using ribbed concrete slabs cantilevered out from interior column pairs, appears on page 83. Interior wall finishes are sand-finish plaster or (instair towers) concrete; floors are asphalt tile. Thermal insulation includes glass-fiberboard on the roof and vermiculite plaster under the first floor. The projected sash, glazed with 3/16″ sheet glass; entrance door and window frames, aluminum.

The heating system, served by natural-gas fired boiler, uses baseboard radiation; outside controls modulate water temperature. Each apartment has its own individually controlled air conditioner; refrigeration equipment, on the ground floor. *Photos: Frank Willard's Photocraft*





apartment house construction methods

Although erected in different areas of the country (two in Georgia and one in Pennsylvania), all of the multistory apartment houses presented on the previous pages were constructed of reinforced concrete for reasons of economy. In each instance, the architects and engineers were of the opinion that for structures of this type, a skillfully executed, reinforced concrete design offered more opportunities for economy than would have been possible through the use of structural steel.

Two of the designs not only utilized the most recent technological advances in reinforced concrete engineering, but also, by exploiting the characteristics of cantilever construction, decreased the amount of reinforcing steel that normally would have been required. This saving was accomplished by capitalizing on continuity and by allowing the combined weight of the cantilever and the exterior wall to reduce the positive bending moment in the slabs nearer the interior of the building.[1] The elimination of dropped beams and girders in all three structures simplified the installation of mechanical services, permitted a freedom of partition arrangement, and provided smooth ceilings for all individual apartment rooms.

Forcefully expressing the character of the structural design, two of the apartment buildings have exposed concrete framing. Properly controlled concrete mixes insure the durability of these surfaces. Although none of the buildings have prefab exterior walls, two firms reported that metal wall spandrels were investigated during the early design stages. At that time, cost prohibited the use of that type of spandrel; further, neither structural nor thermal properties were as advanced then as they are today.

flamingo apartments

Competitive bids received by the architects of this apartment house have demonstrated that a concrete structural system is usually more economical than steel framing for a multistory building. It has been estimated that the nearest comparable concrete framing for this structure would have been at least five percent more expensive and that steel framing with concrete floors would have been about 12 percent more. Of the several concrete designs that might have been selected, the architects and engineers considered the flat-plate method the most economical (there are no applied structural steel shapes in the entire building).

Within the experience of this firm, flat-plate construction has cost about $2.00 per sq ft of supported slab for an entire structure, including the foundations. The Flamingo is said to have been built for about $0.10 per cu ft less than comparable apartment houses erected in nearby areas.

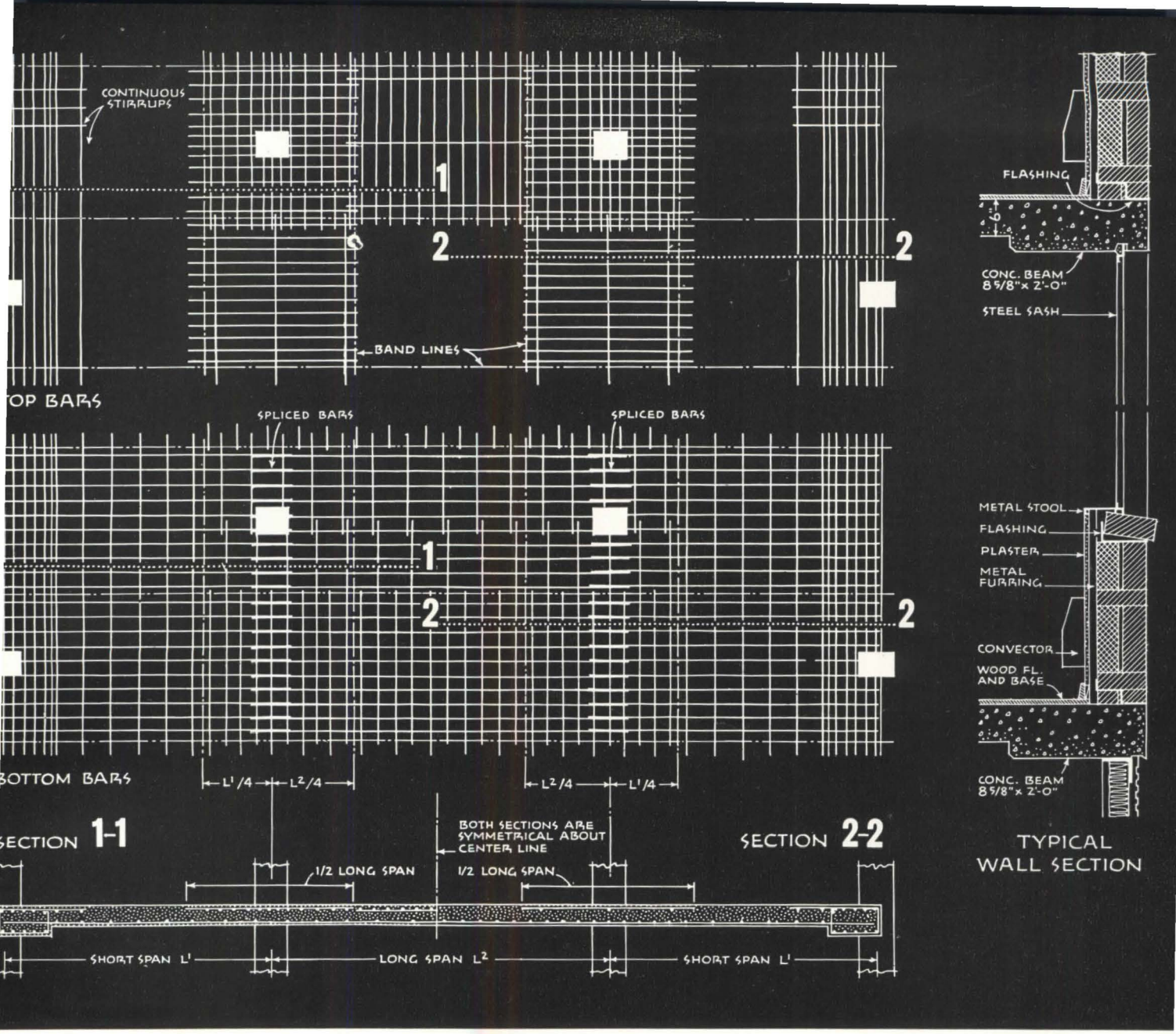
Among the principal economies permitted by the elimination of the beams and girders are the reuse of formwork and the reduction of floor-to-floor heights—requiring less masonry, paint, piping, and work performed by other trades. In deciding whether to use a flat-plate system, it was agreed that the small savings of concrete from ribbed-slab construction would be more than expended by the necessity of a hung ceiling. In the final design, the only suspended ceiling is on the top floor, where it was necessary to accommodate mechanical work and thermal insulation; all other ceilings are painted concrete.

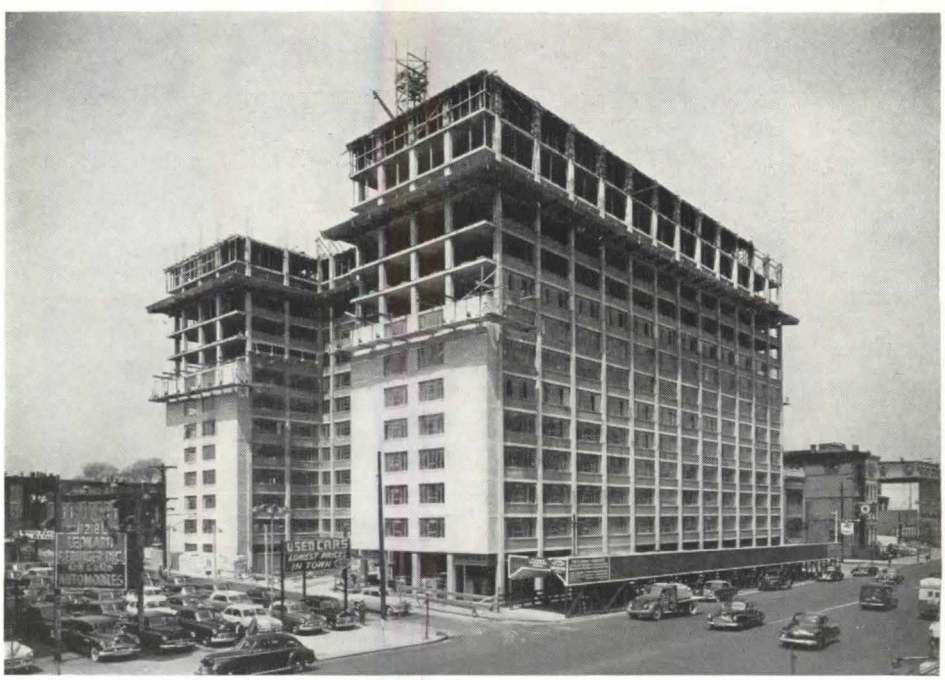
During the preliminary design stages, it was agreed to use exposed concrete as a finish material—both inside and out. It was decided that an exposed exterior frame would not only be more in keeping with the interior exposed surfaces but would also permit savings in finish material that might otherwise be required for an exterior of conventional design.

In plan, the columns are spaced 17 ft apart transversely and 15 ft on center longitudinally; the inner row is staggered about halfway between the exterior columns *(see plan acrosspage as well as plans on page 71)*. For this scheme, the transverse spans are thought to be the

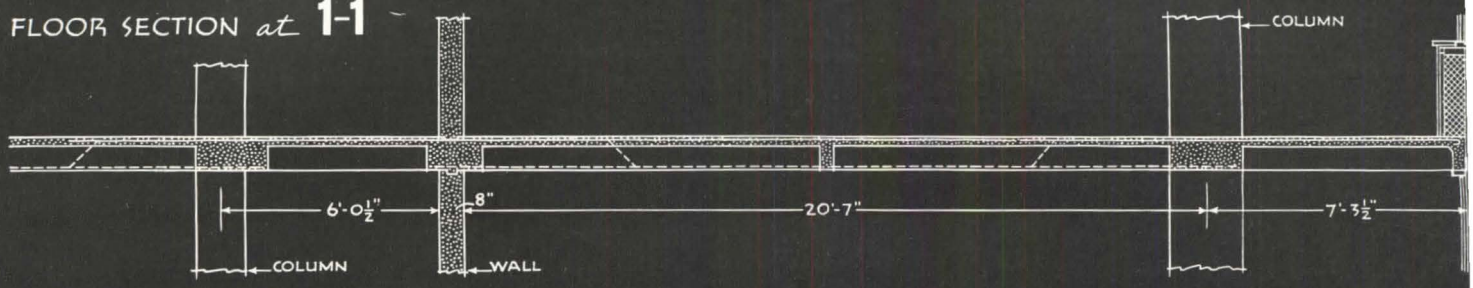
Structural drawing of the Flamingo plan (acrosspage) *shows the pattern of both top and bottom reinforcement in a typical bay. Extended top bar of stirrups* (floor section) *acts as negative reinforcement.* Photo: courtesy Turner Construction Co.

[1] *That this principle can also be used to advantage in structural steel design has been discussed in the following articles: "Construction Techniques That Conserve Steel," by Ronald Allwork, November 1951 P/A; "Steel Design Economy," by Julian Smariga, October 1952 P/A.*

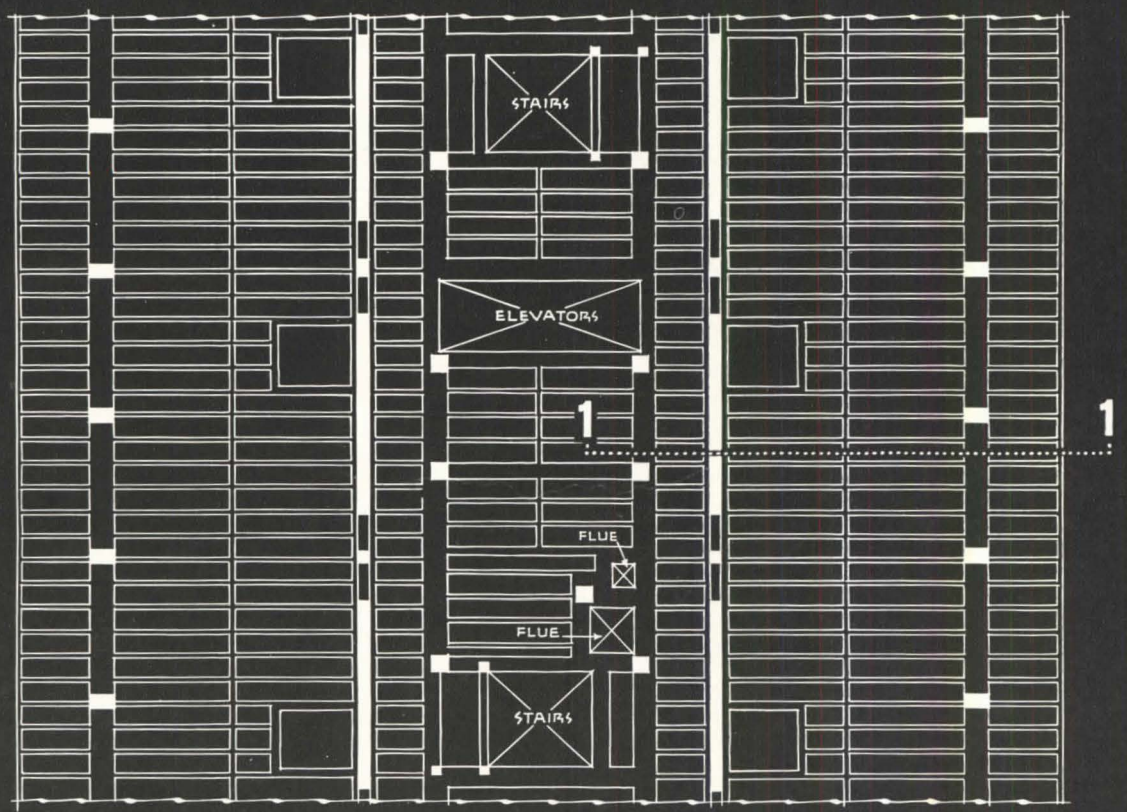

CONTINUOUS STIRRUPS
1
2
2
BAND LINES
TOP BARS
SPLICED BARS
SPLICED BARS
1
2
2
BOTTOM BARS
L¹/4
L²/4
L²/4
L¹/4
SECTION 1-1
BOTH SECTIONS ARE SYMMETRICAL ABOUT CENTER LINE
SECTION 2-2
1/2 LONG SPAN
1/2 LONG SPAN
SHORT SPAN L¹
LONG SPAN L²
SHORT SPAN L¹
FLASHING
CONC. BEAM 8 5/8" x 2'-0"
STEEL SASH
METAL STOOL
FLASHING
PLASTER
METAL FURRING
CONVECTOR
WOOD FL. AND BASE
CONC. BEAM 8 5/8" x 2'-0"
TYPICAL WALL SECTION


USED CARS
LOWEST PRICES IN TOWN
AUTOMOBILES

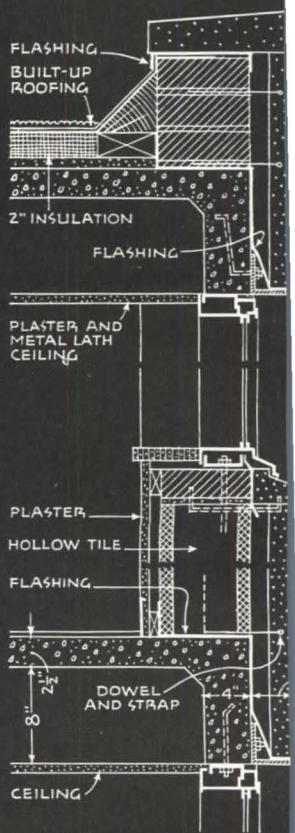
FLOOR SECTION at 1-1

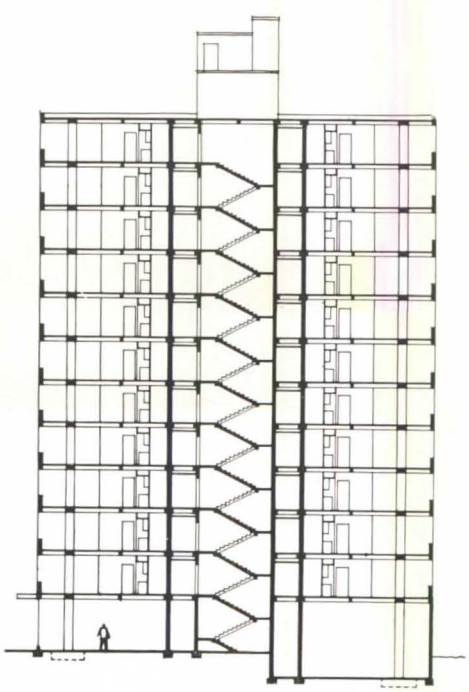


REFLECTED CEILING PLAN



WALL SECTION





.ximum economical length. Floors were signed for a live load of 40 psf with an owance of 20 psf for partition and finish *ee reinforcement pattern of slabs on eceding page);* 3000 psi concrete was ecified and although no admixture was ed, careful control of proportioning and ıcing resulted in extremely durable con- te surfaces.

Footings were placed on a soft mica ıist rock and no special problems were countered except for some minor under- ınning of adjacent structures.

drayton arms apartments

e core of this building, containing ele- tor and stair towers, halls, storage clos- , etc. *(see detail drawings acrosspage d plans on page 73)* was designed as rigid frame to resist all horizontal ind) loads as well as to support vertical ads. Wind beams and columns were minated as the slab and beam construc- n outside of the core acts as a hori- ntal cantilever laterally braced and ansmits all horizontal loads to the core. l computations for wind were based on 30 lbs per sq ft of vertical projection. ı rechecking, it was determined that by eeting local and national building codes verning minimum wall thicknesses, the present construction can actually resist a load several times greater than 30 psf.

Spans between peripheral columns presented no particular problems, as the design followed conventional pan-band design procedures. The cantilever was definitely helpful in reducing the positive bending moment in the ribbed slabs between columns and core. In addition, the cantilever was so proportioned that the negative moments at each side of the peripheral columns were equal, as well as being equal to the negative moment at the core wall. By such a balance, the moments in the exterior columns were minimized so that the columns could be kept to minimum size. Approximately 30 ft is considered the maximum economical span between columns and core walls for a building of this character and occupancy (many factors, of course, could alter this figure). Given a 30-ft span, a cantilever of about 10 ft 6 in. is required to balance the positive and negative moments described above. (The span between core and exterior columns in the Drayton Arms is actually 20 ft 7 in. and the cantilever extends 7 ft 3½ in.) For the apartment rooms, the design load included 40 psf live load and 15 psf for partitions; corridors were assigned a live load of 80 psf.

Like the designers of the Flamingo apartments, these architects and engineers investigated the possibility of using prefab metal walls; at the time, however, these had not yet been fully developed. In the final solution, lime-faced spandrels were backed with 8 in. x 12 in., hard-burned structural terra cotta tile.

barbizon tower apartments

Undoubtedly, the ground-floor garage was a prime factor in the flexible and economic plan that was developed for this building *(see plan next page and plans on page 79).* A ribbed-slab floor system *(see reflected ceiling plan)* was selected because its extra depth was needed to provide a rigid cantilever, and also because it reduced the amount of reinforcing steel that would otherwise have been required. Wide flat beams reduced the framework and produced a smooth ceiling without breaks to which contact lath could easily be applied. It was felt that these features more than outweighed the additional reinforcing normally needed for flat-beam construction. Both the flat-band, cantilevered-slab structural system and the constant floor-to-floor heights made the repeated use of forms possible. Rubbed-concrete-bearing walls at each end of the structure were designed

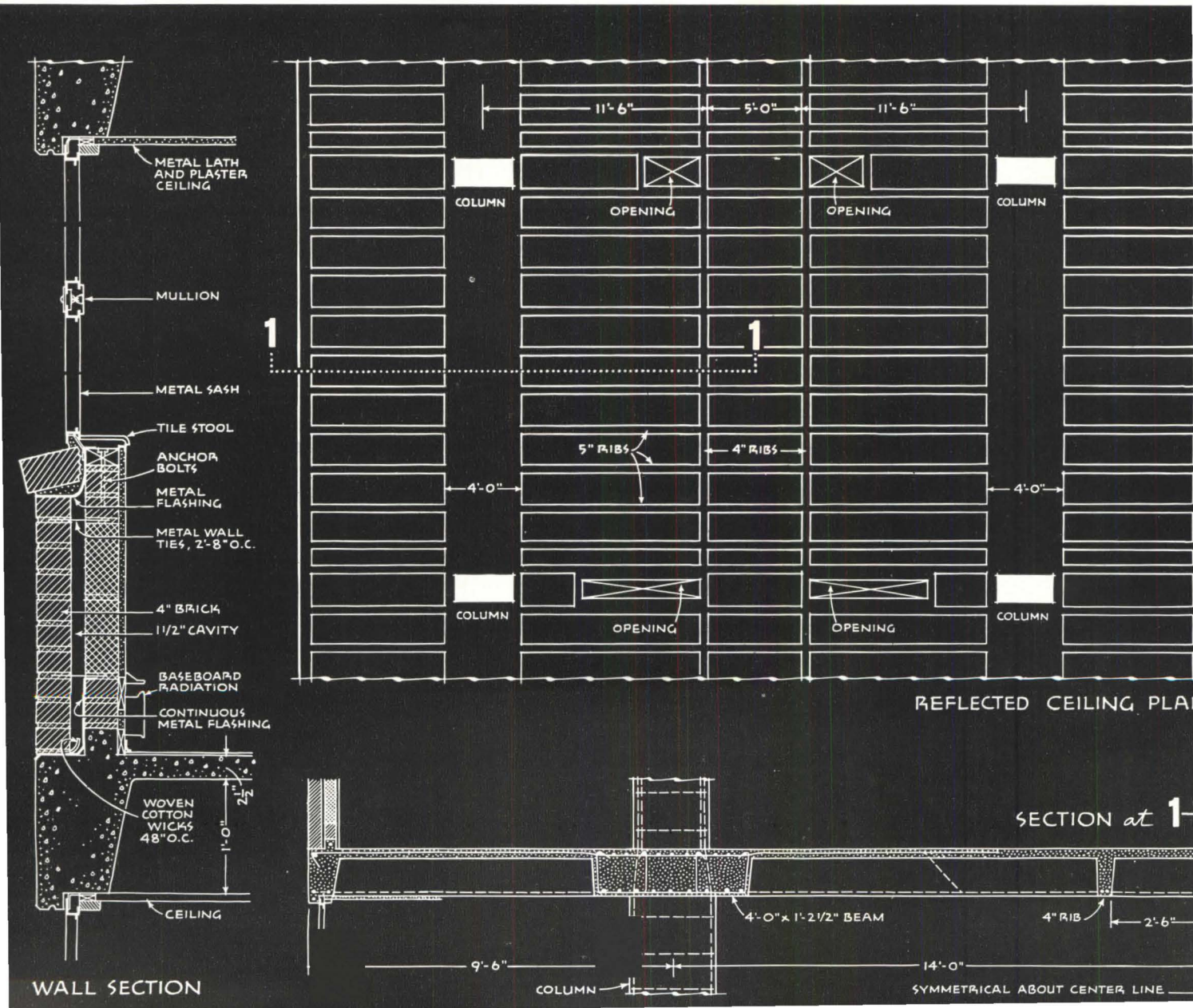
The core of the Drayton Arms, designed as a rigid frame, resists all horizontal loads and supports vertical loads. In the event of an aerial attack, the occupants would be afforded some measure of bomb-blast protection by the core. Photo: Andrew Bunn

Ribbed-slab construction in the Barbizon Towers provides the required rigidity for cantilevers extending from the wide flat beams. Only two rows of columns, at ground level, simplifies parking. Construction photo on cover: William M. Branham

not only for achitectural effect but also for the stability that they lend to the structure.

Two lines of struts were required in the 28-ft span *(see detail drawings below)* for both stiffness and even distribution of the partition loads. These struts were located so that they would frame the service shafts; only minimum reinforcement was placed. To limit deflection, spans in excess of 22 ft (in a longitudinal direction) would not have been advisable unless the depth of the beams and joists was increased. As in the Drayton Arms, a balanced rectangular section determined most economical length for the cantileve In general, a 40 psf live load was used a the total load used for the joist syst was 140 psf. An admixture in the 3000 concrete provided a smooth flow—leavi the concrete free of voids when the for were stripped.

Spread footings resting on clay w suitable for the support. As any wall sulation in this area of the country comparatively rare, uninsulated cav walls were considered adequate.



ONSTRUCTION FOR MEDICAL CARE *by E. M. Bluestone, M.D.*

spital construction should be the concrete reflection a broad functional program which takes into con-eration past experience, present community re-irements, and a reasonable anticipation of future ɛds based on trends in medical care. Since the inci-ıt of hospital construction must intersect a tem-ral period of change it can only approximate its jective. The hands of the clock continue to move. ɜt as it is true that the research of today is the ıtine of tomorrow, so true must it be that the space ɔcations of today are not likely to be the space ɔcations of tomorrow.

Architects are too frequently left to their own un-ɛd devices when they are commissioned to build ıospital for a group which has no clearer concep-ı of its desires than the general one of building a ɔspital." Where architects are compelled to pro-ɛd on such meager terms of reference they work ɛder a handicap, and not the least aspect of their ficulty is the criticism which they invite when mal-ustments result from ill-fitting spaces. Further-re, very few architects are equipped professionally survey the present and near-future medical require-nts of a community with reasonable accuracy, even they are experienced in the specialized area of spital dsign in all of its details. It is, indeed, also e that not many hospital executives are in posses-n of the required imagination and gift of prophesy ɛded for such a study, even if they are thoroughly niliar with administrative techniques and with the ation between supply and demand in hospital serv-. Planning for medical care requires the highest of *nbined professional skills.*

Just how the functional study should be under-en, and in what form it can be made most useful he architect, is a subject with which I have already lt elsewhere.* In this presentation I want to call ɛntion to certain trends in medical care which may ve two basic purposes: (1) to influence those who in authority in such matters, particularly in hos-als, and (2) to prepare the architect for impending nges in medical care which he will have to take ɔ his calculations.

Before all else, all parties to the new planning will ve to bear in mind that hospital walls are placed re only for the purpose of enclosing working spaces hether they enclose the entire hospital or any of its nponent parts) and giving privacy and physical ɔtection to the establishment. These walls are no ger erected for the purpose of containment; if the hospital is to be the best authority on medical care in any community, which it is in any case, it can no longer limit its facilities to the patients within its walls. It must make these facilities available to patients outside of its walls. It must help to prevent disease either on a co-operative or on an integrated basis and, if it fails to prevent disease, it must devote its energies to the prevention of its spread, the prevention of chronicity, the prevention of complications, sequelae, and relapses, and, what may prove to be most important, the prevention of social dependence which so often results from failure of some kind.

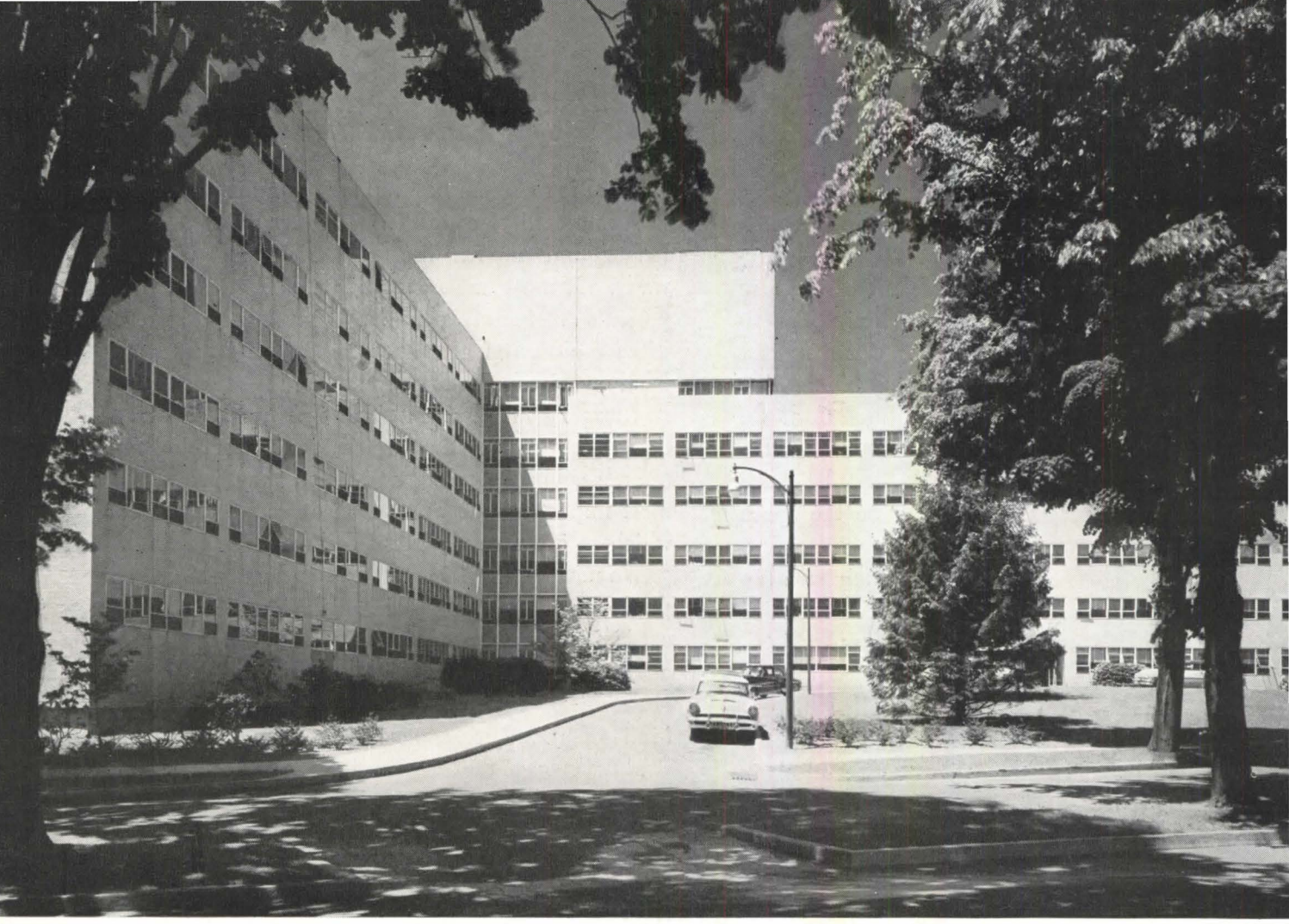
We now speak of intra-mural and extra-mural hospital services and these should be distributed in accordance with clinical urgency. If the patient needs a hospital bed, it is the best thing for him. If he does not need it, it may very well be the worst thing for him. Clearly there can be no such rigid line of restraint between the two services as a fixed hospital wall. Medical care must not only be *comprehensive* and *complete*—it must, above all, be *continuous,* and radiate its services on a mobile basis into the community if it is to serve the requirements of a science. Furthermore, medical care must be available to everyone, regardless of his location.

The hospital must take under its protective wing (1) the *near-sick* (2) the *sick* and (3) the *recently sick.* Medical, nursing, and social organization must be adjusted to the distinctive requirements of each of these groups. This belongs in the realm of function. The hospital architect will have to take such adjustments on the part of hospitals and other medical care agencies into consideration as a basis for intelligent planning. Let me illustrate by specific examples.

As I have indicated before, there is an obligation to relate the factor of distance to the factor of urgency in the provision of medical care, and this relationship is expressed in an inverse ratio—*the greater the urgency the less the distance.* The hospital can thus be represented schematically on paper as a wheel in which the hub represents the highly concentrated structural elements of diagnosis and therapy. The spokes, or segments, of the wheel represent the immediate activities which draw on the hub for sustenance. These are, for example, such activities as the health center, the diagnostic clinic, the group-practice unit, the out-patient department, the tuberculosis section, the mental section, the section for convalescent care, and the doctors' office building. The rim of the wheel represents the walls which enclose the whole. The Urgency: Distance formula continues to apply in the

(Continued on page 138)

houghts on the Technique of the Hospital Survey," *Hospital Management,* mber 1949.



HOSPITAL: GREENWICH, CONNECTICUT

The new Greenwich Hospital is a notable instance of the increasing willingness of even conservative communities to accept progressive architecture. The hospital building committee presented the architects with a thoroughgoing program; then gave them whole-hearted support as the forward-looking design was worked out.

The restricted site, on high land that slopes abruptly to the west, was difficult. After painstaking analysis, the architects found they could organize the building in a T, with patients' rooms in the crossbar facing south and commanding a fine view of Long Island Sound; the stem being devoted to administrative offices, operating rooms, and ancillary services. The slope also permitted, at the west end of the building, two above-grade levels below the main entrance floor. At the lowest (basement) level is a complete emergency department, served by a drive that leads on up to the service court. The latter adjoins the ground-floor level, where the main kitchen, housekeeping offices, locker rooms, and morgue are located.

While there are several four-bed wards on the second floor, most rooms are for one or two patients and there is even a number of rooms for private nurses—provisions that echo the type of health care that this wealthy community affords.

The structural system is reinforced concrete frame, with two-way ribbed concrete floor slabs. Expansion joints are complete structural separations, two inches wide, that divide each wing from the other two. At floor level, a sliding plate covers the joint; and at walls, a copper dam keeps out weather but permits relative motion. Double columns at the joints maintain the separation.

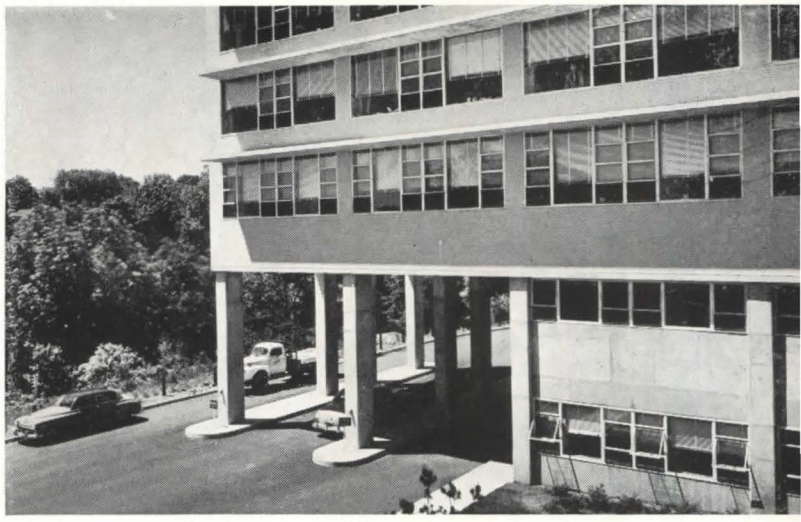
The choice of the two-ribbed floor construction was made after girders had been rejected, both because of the high cost of form work and interference with ventilating and air-conditioning ductwork. plate floors, though eliminating gir would have required undue thickness weight to span the 22′ column spac The adopted system employs pairs 8″ x 16″ precast, hollow-concrete bl (forming 16″ x 16″ square panels) wi properly reinforced concrete ribs ext ing in both directions between the pa to form a grid. In the east and west wi the 9″ floor slab is supported by a s drel beam at the walls and by a br shallow beam over the corridor. In north wing, where spans are somew smaller and ductwork more extensiv 9″ thick slab without girders is used. areas over interior columns, where stre in shear and bending are high, the low-concrete-block panels are omitted the floor is solid concrete. On the s elevation, reinforced concrete sunsh canopies are cantilevered out 3′-6″ at window-head. *Photos: Lionel Freed*

e public entrance is from the east (across-ge) ; *rear of the nursing unit, at left.*
Patients' rooms are all in the south-facing ck (below), *with windows sun-protected by 6" cantilevered, reinforced concrete eye-ws. Exterior finishes are light-gray face ck and architectural concrete; projected e steel sash are painted white.*

Photo at right: Salvatore C. Valastro

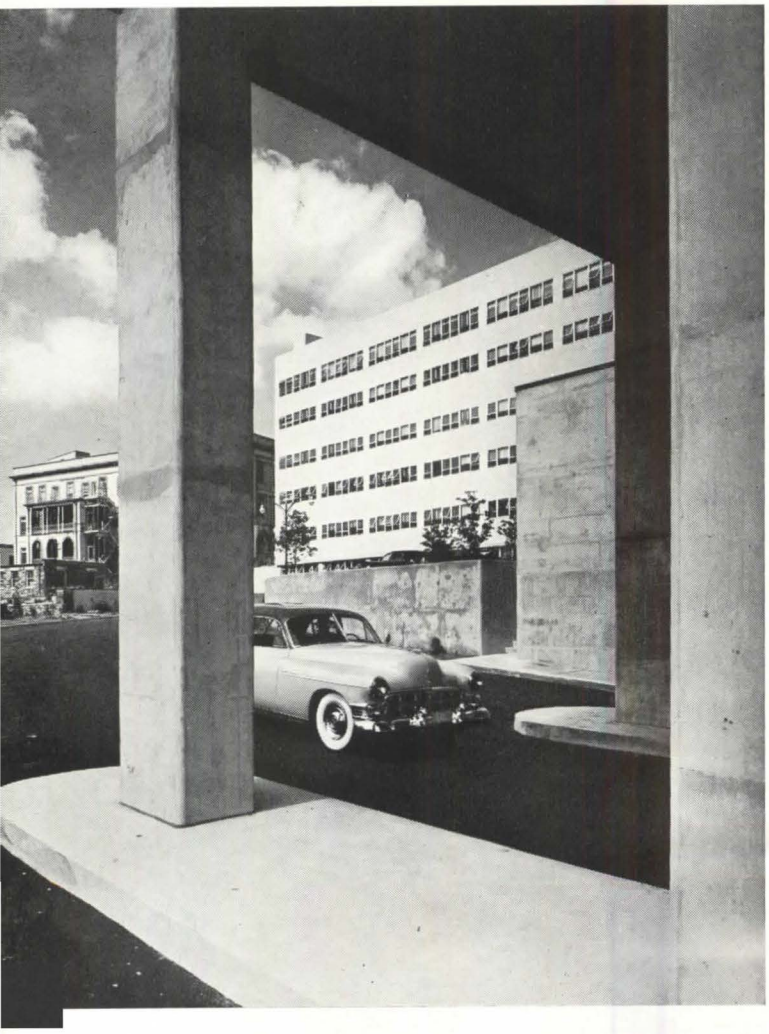
architects	Skidmore, Owings & Merrill
partner-in-charge of co-ordination	Robert W. Cutler
partner-in-charge of design	Gordon Bunshaft
structural engineers	Weiskopf & Pickworth
mechanical engineer	Guy B. Panero
landscape architect	Henry T. Marquardt
furnishings consultant	W. & J. Sloane, Contract Division
general contractor	George A. Fuller Company

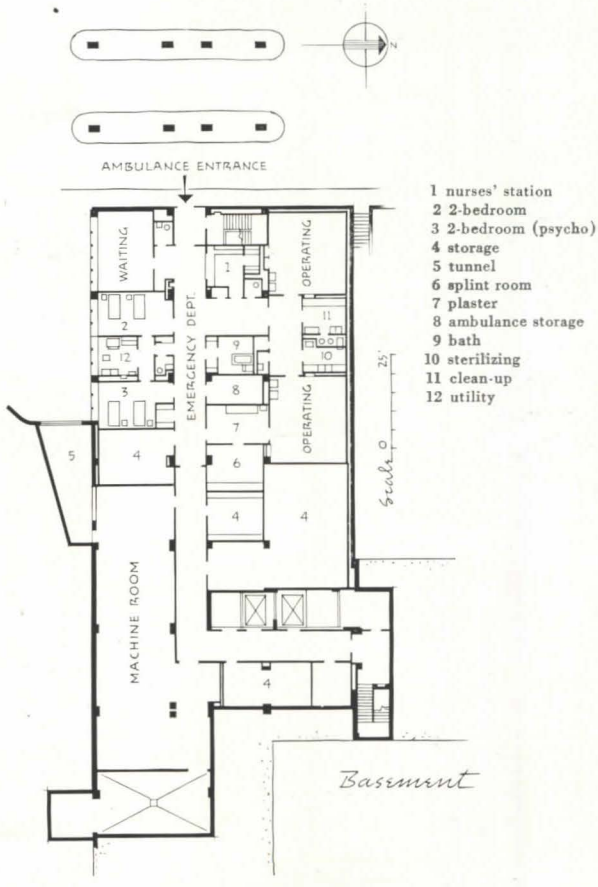
ospital: Greenwich, Connecticut



The drop in grade at the west end of the nursing wing made possible the bridged entrance to the basement emergency department (right). *The drive continues around and up to the service court at the next higher level in the rear.*

Photo acrosspage and below: Torkel Korling

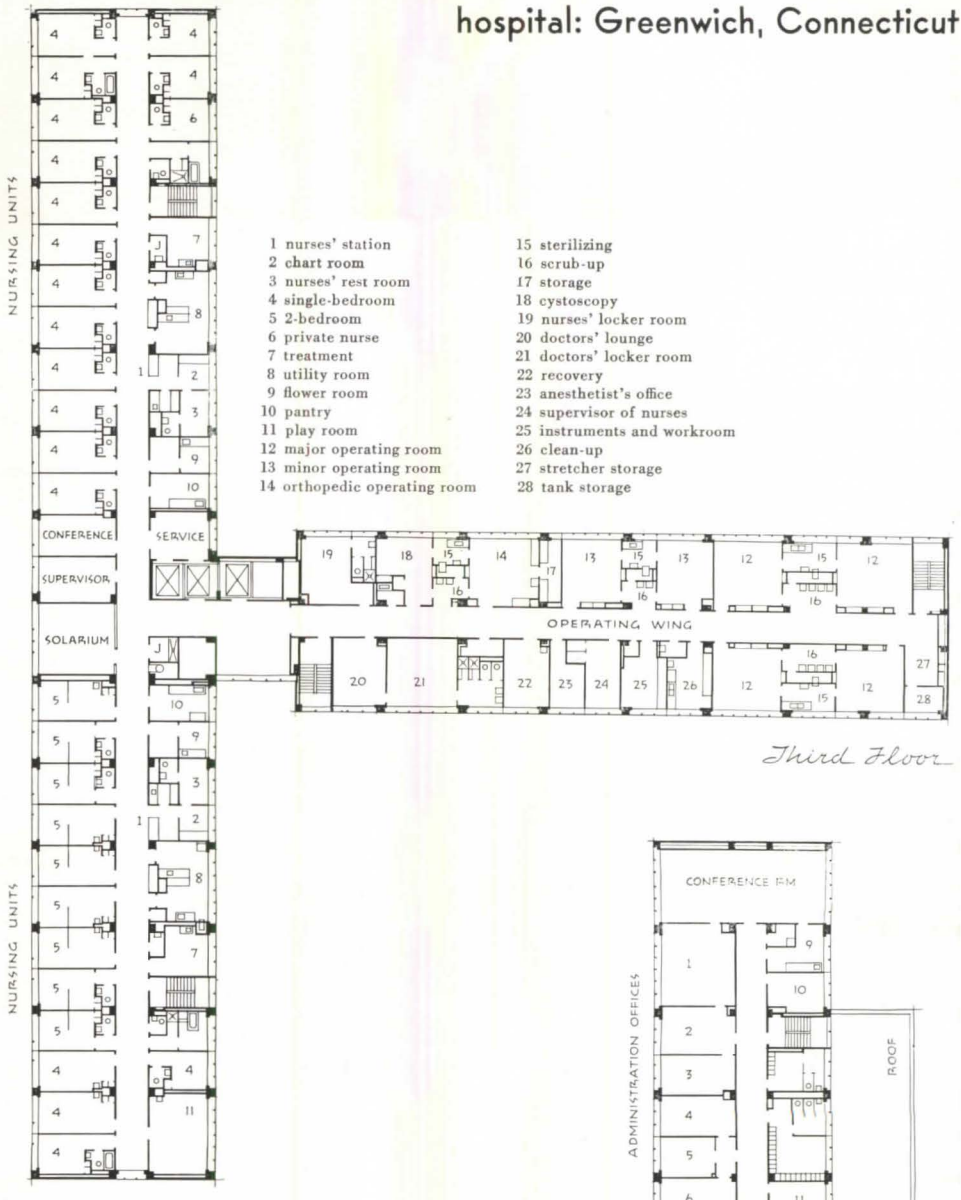




Designed to supersede an old hospital that its community had outgrown, the new 211-bed hospital (later to be expanded to 300) adjoins the old structure (left, photo above), *which has been remodeled for the outpatient department and nurses' school and residence. An enclosed passage joins the two buildings at ground- and first-floor levels.*

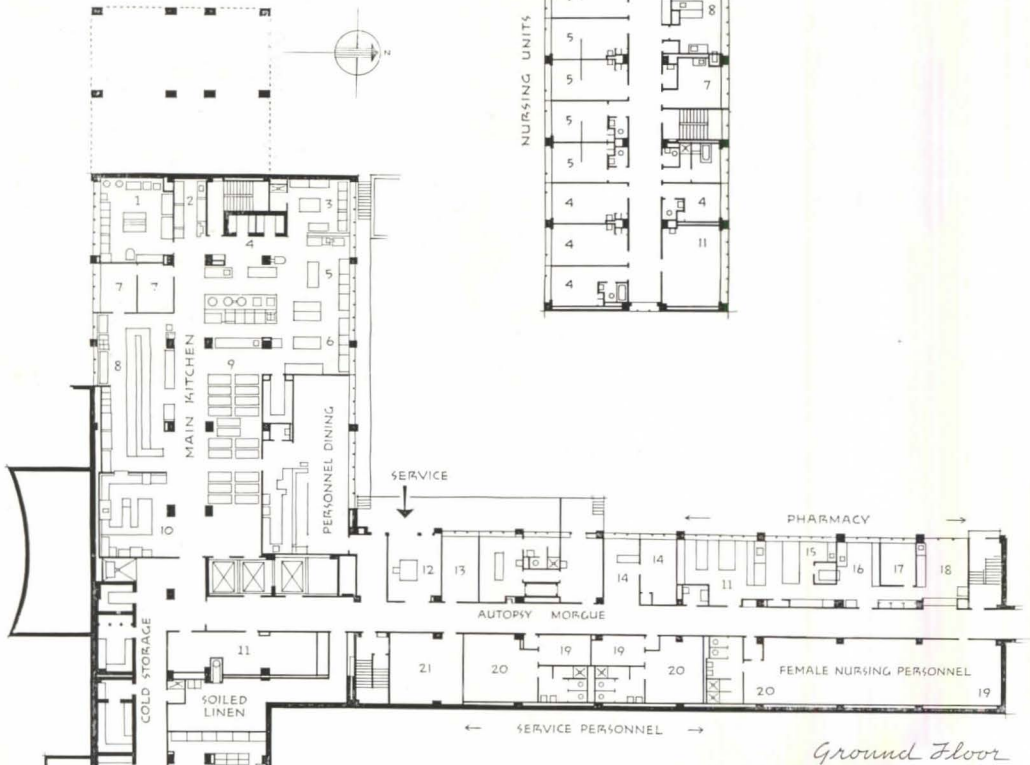
hospital: Greenwich, Connecticut

First-floor lobby

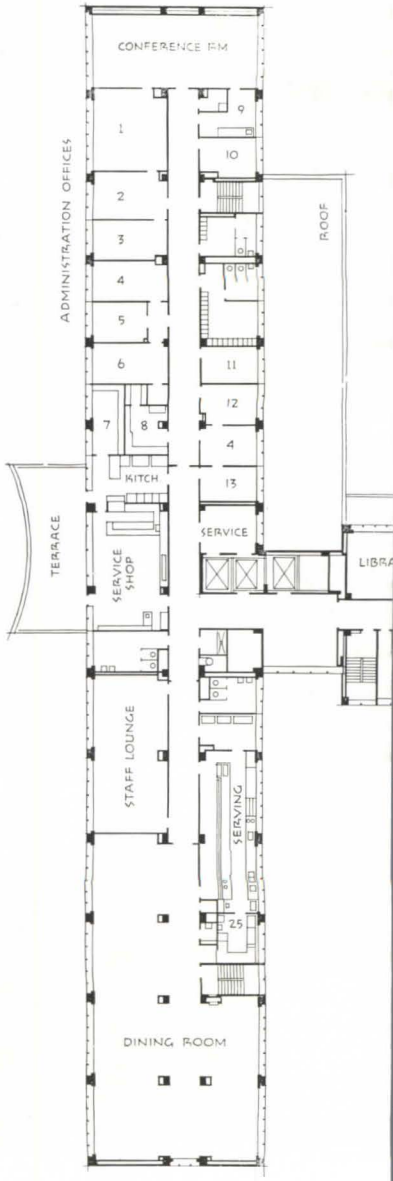


1 nurses' station
2 chart room
3 nurses' rest room
4 single-bedroom
5 2-bedroom
6 private nurse
7 treatment
8 utility room
9 flower room
10 pantry
11 play room
12 major operating room
13 minor operating room
14 orthopedic operating room
15 sterilizing
16 scrub-up
17 storage
18 cystoscopy
19 nurses' locker room
20 doctors' lounge
21 doctors' locker room
22 recovery
23 anesthetist's office
24 supervisor of nurses
25 instruments and workroom
26 clean-up
27 stretcher storage
28 tank storage

Third Floor



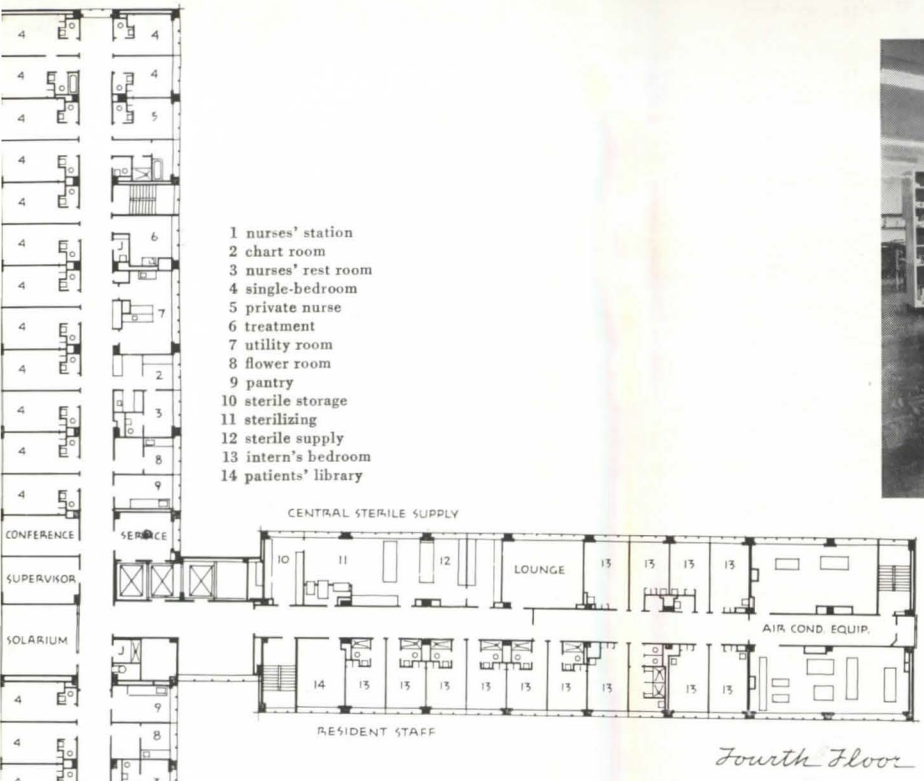
Ground Floor



1 bakery
2 butcher shop
3 pot washing
4 day refrigerators
5 vegetable preparation
6 salad preparation
7 dieticians
8 special diets
9 truck storage
10 dishwashing
11 storage
12 receiving
13 receiving office
14 housekeeper and assistant
15 manufacturing and testing
16 solution
17 office
18 dispensing
19 rest room
20 locker room
21 telephone switchboard

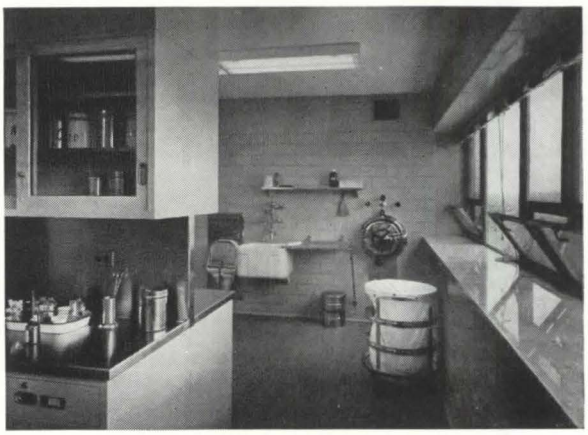
Bacteriology laboratory, second floor

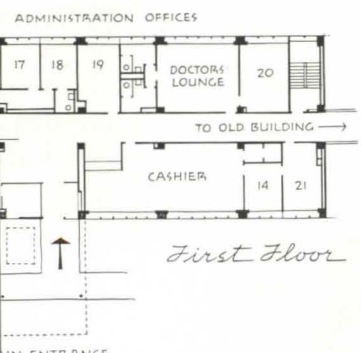
1 nurses' station
2 chart room
3 nurses' rest room
4 single-bedroom
5 private nurse
6 treatment
7 utility room
8 flower room
9 pantry
10 sterile storage
11 sterilizing
12 sterile supply
13 intern's bedroom
14 patients' library



Fourth Floor

Typical utility room





First Floor

Second Floor

dministrative office
eception
ssistant administrator
ecretary
ss't director of nursing
irector of nursing
torage
torage workshop
antry
dministrative resident
ublic relations
ersonnel

13 purchasing
14 office
15 dictating
16 transcribing
17 admitting
18 examinations
19 chief of staff
20 coat room
21 comptroller
22 consultation
23 flower room
24 telephones
25 dishwashing

1 nurses' station
2 chart room
3 nurses' rest room
4 single-bedroom
5 4-bed ward
6 men's bath
7 women's bath
8 treatment
9 utility room
10 flower room
11 pantry
12 film storage and viewing
13 secretary
14 radiologist
15 radio and fluoroscopy

16 dark room
17 chemistry
18 urine analysis
19 glass washing
20 serology
21 bacteriology
22 chief pathologist
23 histology
24 secretary
25 study
26 technicians
27 radiography
28 waiting room
29 deep therapy
30 super therapy
31 examination

hospital: Greenwich, Connecticut

Interior wall surfaces are plaster or ceramic tile. Flooring in the main lobby is terrazzo, with asphalt tile in corridors and patients' rooms. In operating rooms, conductive terrazzo is the flooring; in treatment and utility rooms, toilets, and bathrooms, ceramic tile; and in the main kitchen, quarry tile. Corridor ceilings are suspended acoustic tile; elsewhere, plaster is used. Roofing is built-up, surfaced with slag.

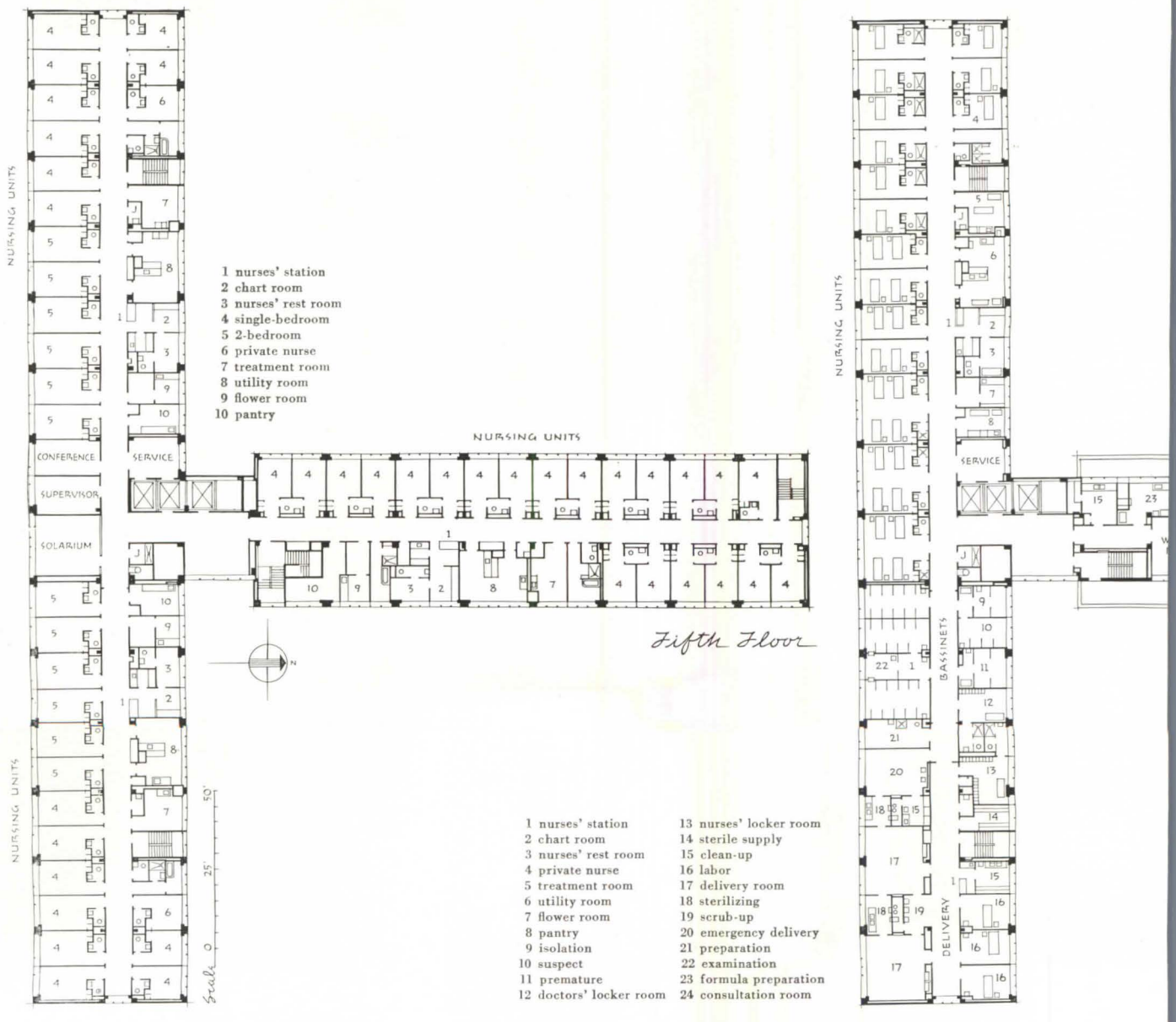
Thermal insulation is handled by two 1″ layers of cane-fiberboard under the roof. Partitions are plastered cinder block or (in toilet rooms) steel. Various types of glazing are used in the steel sash—⅛″ DSA; ¼″ polished plate; double-insulating glass. Door types include flush wood and hollow metal, manually operated rolling steel, painted flush hollow metal (elevator doors), and aluminum frames with polished plate glass (entrance doors).

To increase the efficiency and safety of the electrical installation, several signaling systems are used. One of the most recently developed detects "grounds" in operating-room wiring. If a ground occurs, a red light goes "on" in the service engineer's room and also in the electric closet; the serviceman then throws off switches in the panel until the ground is located and cleared.

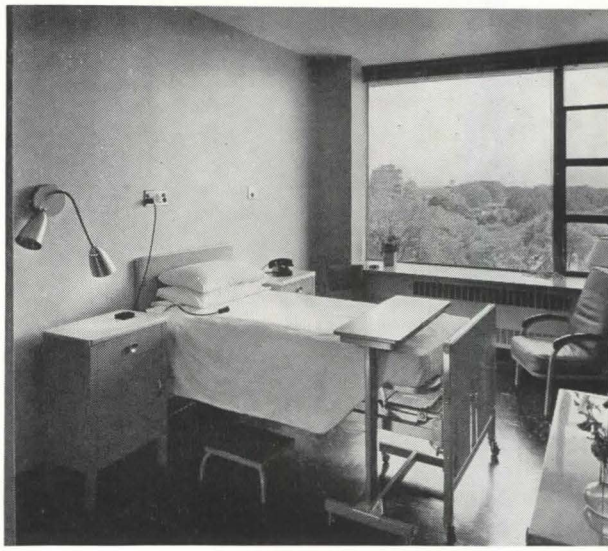
The nurses' call system includes a combination microphone-speaker for every two beds. By pushing a button, the patient flashes a light at the nurse's station and speaks directly, thereby saving one trip; if the nurse is away, a dome light over the door of the originating room informs her that a call has been made; if she is in the pantry or utility room, s receives both a light and a buzzer signa

Doctors' paging is done by a lou speaker system and "in and out" docto register. When the doctor arrives, pushes a button beside his name in cating that he is "in," reversing the p cedure as he leaves.

General illumination produces 30 to foot-candles from fluorescent fixtur while lower intensities are furnished incandescent fixtures. Air conditioning by means of a conventional all-year s tem using chilled water for cooling, stea for heating, and pan-type humidifiers maintaining proper moisture content. F the most part, the hospital is heated a two-pipe forced-circulation hot-water s tem, using convectors for heat radiati

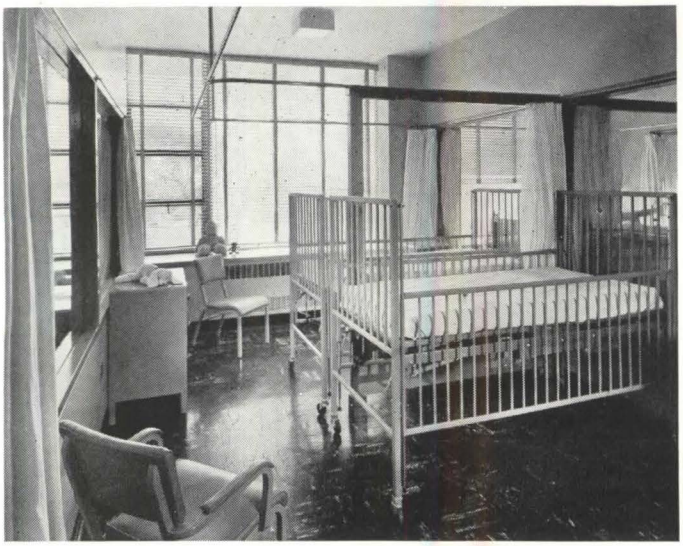


Typical nurse's station

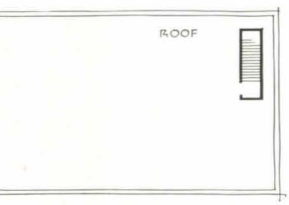


Private room

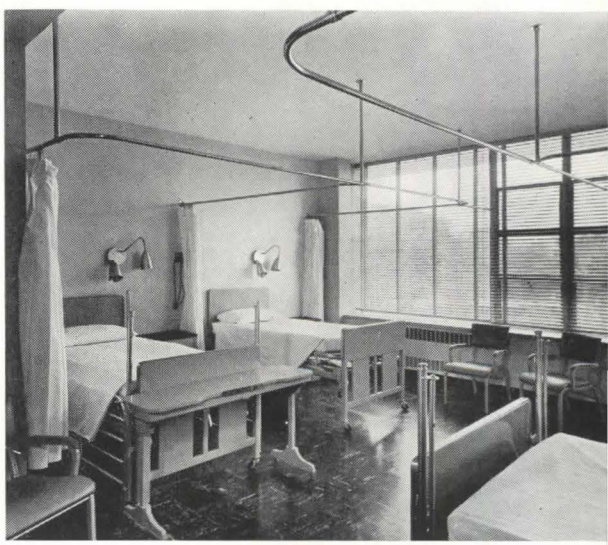
Nursery



Four-bed ward



Sixth Floor



Nursing floor lobby

HOSPITAL: WESTON, ONTARIO

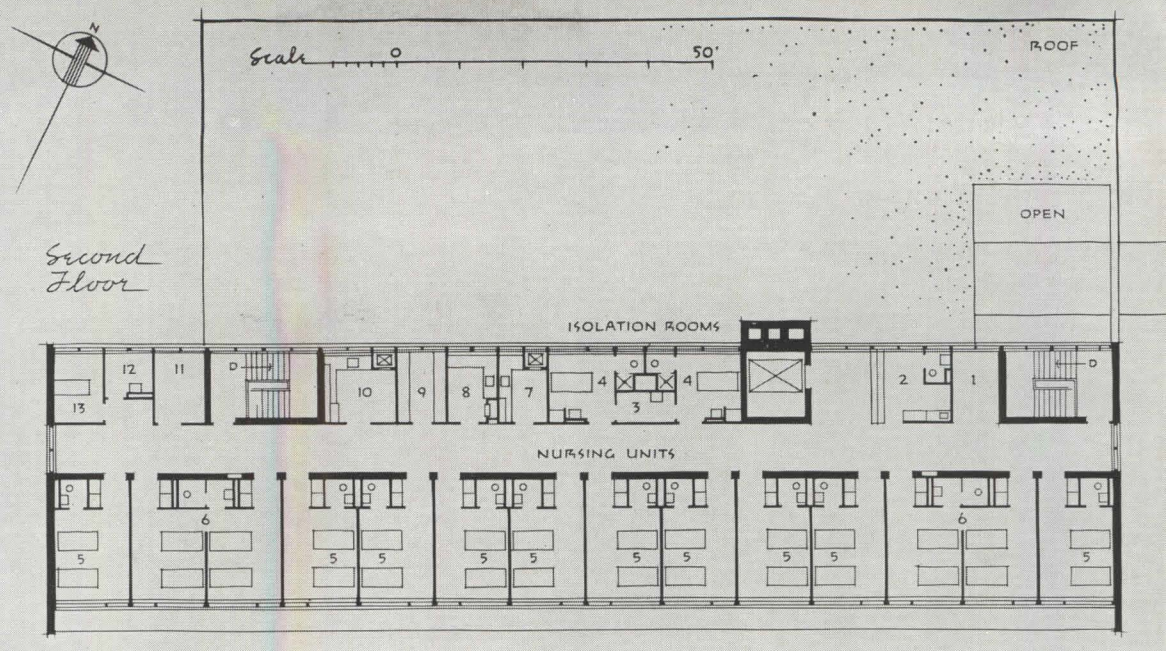
architects-engineers	John B. Parkin Associates
general contractor	Fried Construction Company, Ltd.

Awarded the Massey Foundation Medal by the Royal Architectural Institute of Canada as "the outstanding hospital designed in Canada between 1945 and 1950," the Humber Memorial Hospital is a 58-bed facility, dedicated to Canadians who lost their lives in World Wars I and II. It is the first unit of an extensive health center being planned for the level 14-acre site.

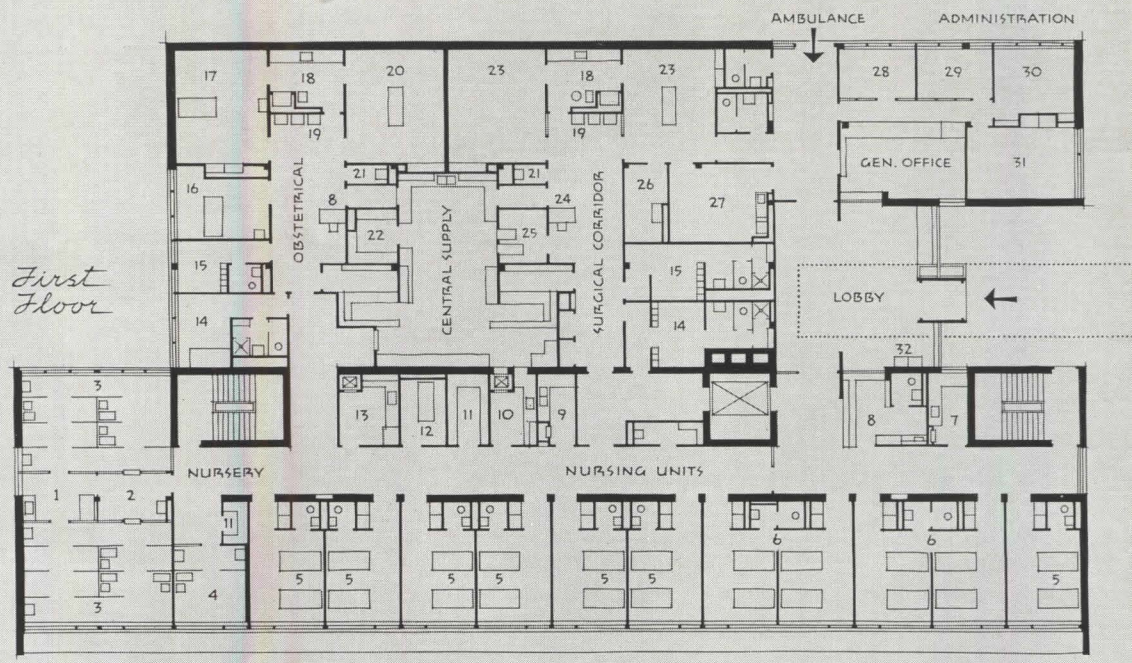
The solution is a three-story building (the nominal basement is half above grade), with all patients' rooms facing south-southeast. To minimize traffic disturbance, the main entrance is on the east side of the building. This placement also establishes plan relationships making it possible to have the records office double as an emergency-admitting office and to join the functions of night-inquiry window with the first-floor nurse's station. Perhaps most important, it results in the location of the emergency clean-up room in close relation to the operating suite so that a separate emergency operating room is not required. Regarding this controversial detail, the architects comment: "Locked doors prevent street infection developing in the operating suite, while the close relationship means that only one staff is required for both departments—a very economical advantage." Another plan innovation is the use of paired corridors, at either side of the central sterilizing room, one leading to the operating suite, the other to delivery rooms. Each suite is served from the central supply through a pass door to the particular corridor, while soiled material is returned through separate hatches.

Structurally, the building combines steel frame, brick bearing walls, and concrete floor slabs over bar joists (nursing unit wing) with reinforced concrete construction (low, rear section). Ceilings are plaster or acoustic tile. Wood sash have sheet, plate, or obscure glass.

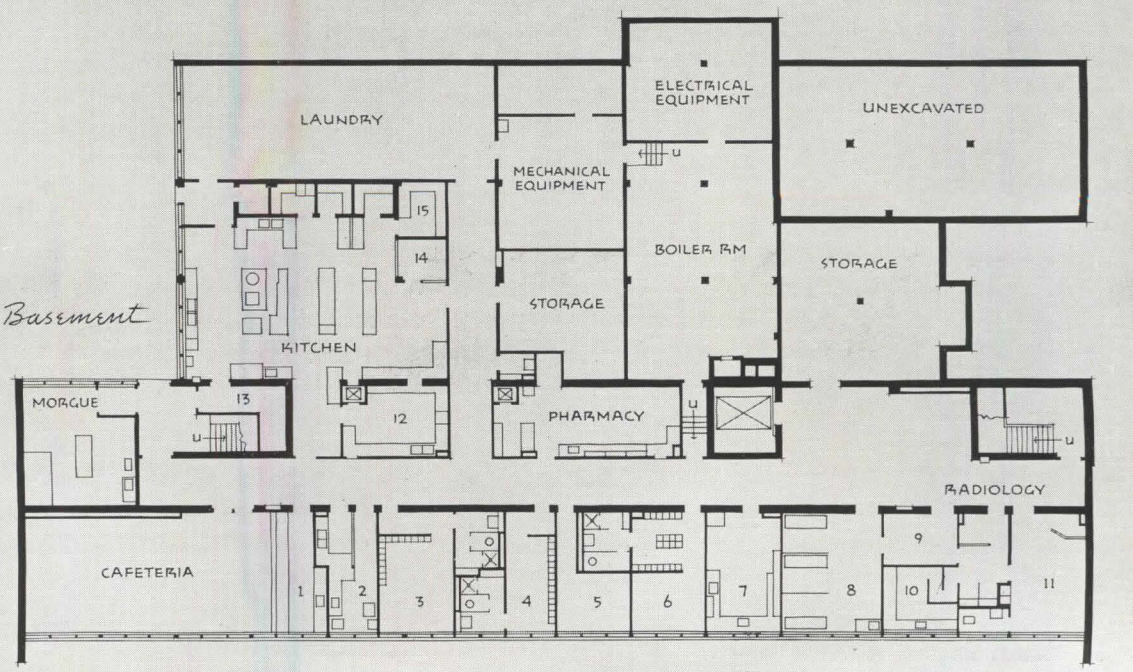
Conditioning the design of the unusual combined heating system was the desire for maximum comfort with minimum cost. For patients' rooms, a hot-water system using convectors was chosen as "the most flexible, easily controlled form of heat"; in the operating and delivery suites and other windowless rooms, where mechanical ventilation was required, warm air seemed the best answer. For the toilet rooms along inside walls of each ward, removal of 3400 cubic feet of air per minute was involved. Since it was impractical to replace all this air with fresh air through windows of patients' rooms, a separate system of supply using steam coils to temper the air was installed, with the air-handling unit in the penthouse. To service this hot-water, warm-air, and low-pressure steam combination seven small boilers are used. Three boilers, activated in series by outside thermostat, do the bulk of the heating; room thermostats and three-way valves control room temperature by zones. One low-pressure steam boiler supplies steam for the air-handling unit, and a domestic hot-water boiler supplies the hospital's hot-water needs. The two remaining boilers produce steam for sterilizing, cooking, and operating-room air conditioning.



1 WAITING ROOM
2 NURSES' STATION
3 ISOLATION UTILITY
4 1-BED ROOM
5 2-BED ROOM
6 4-BED WARD
7 CLEAN UTILITY
8 SOILED UTILITY
9 LINEN
10 PANTRY
11 STRETCHERS - WHEEL CHAIRS
12 JANITOR'S CLOSET
13 BATH ROOM



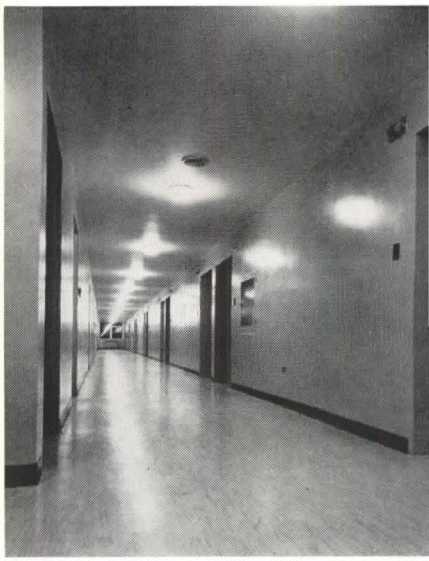
1 NURSES' WORK SPACE
2 EXAM. AND TREATMENT
3 BASSINETS
4 SUSPECT NURSERY
5 2-BED ROOM
6 4-BED WARD
7 UTILITY ROOM
8 NURSES' STATION (NIGHT INQUIRY)
9 SOILED UTILITY
10 CLEAN UTILITY
11 LINEN
12 BATH
13 PANTRY
14 DOCTORS' LOCKERS
15 NURSES' LOCKERS
16 LABOR ROOM
17 LABOR AND EMERGENCY DELIVERY
18 SUB-STERILIZING
19 SCRUB-UP
20 DELIVERY ROOM
21 JANITOR'S CLOSET
22 STORAGE
23 OPERATING ROOM
24 SUPERVISOR
25 STERILIZERS
26 PLASTER AND SPLINT ROOM
27 EMERGENCY CLEAN-UP
28 ADMITTING AND RECORDS
29 ACCOUNTING
30 DIRECTOR
31 STAFF LOUNGE AND BOARD RM
32 TELEPHONES



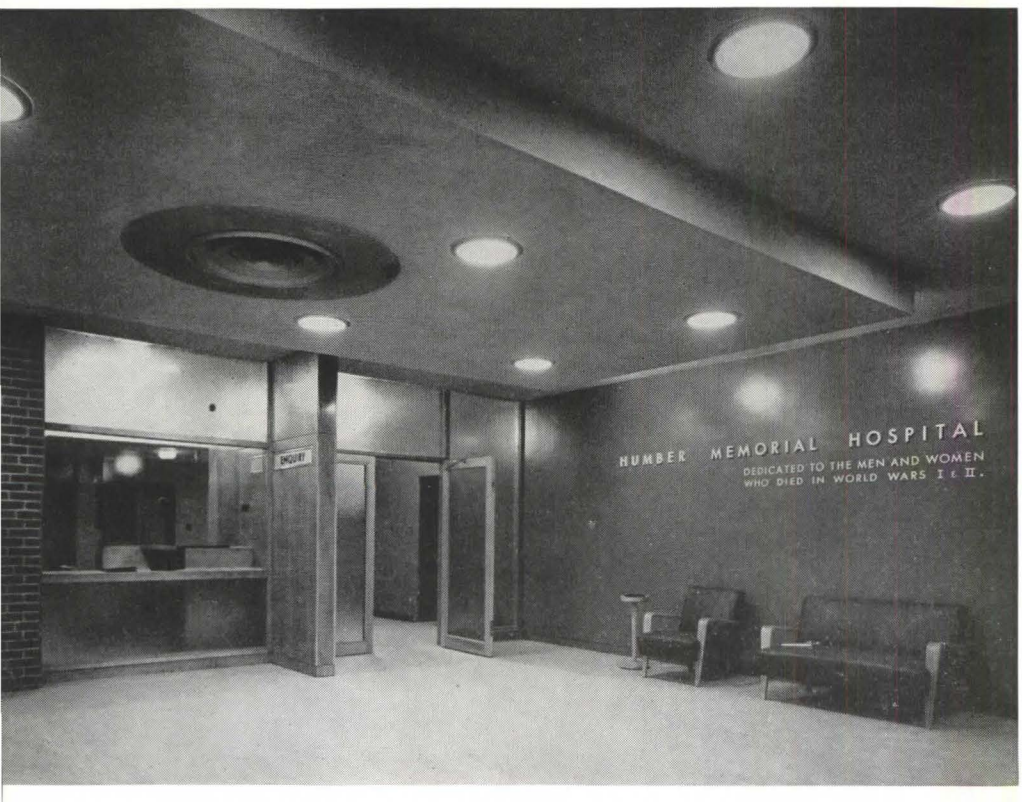
1 FOOD SERVING
2 FORMULA ROOM
3 FEMALE HELPS' LOCKERS
4 MALE HELPS' LOCKERS
5 PHARMACIST'S OFFICE
6 NURSES' LOUNGE
7 LABORATORY
8 PHYSIO-THERAPY
9 OFFICE AND VIEWING
10 DARK ROOM
11 X-RAY ROOM
12 DISH WASHING
13 CAN WASHING
14 DIETICIAN
15 DRY STORES

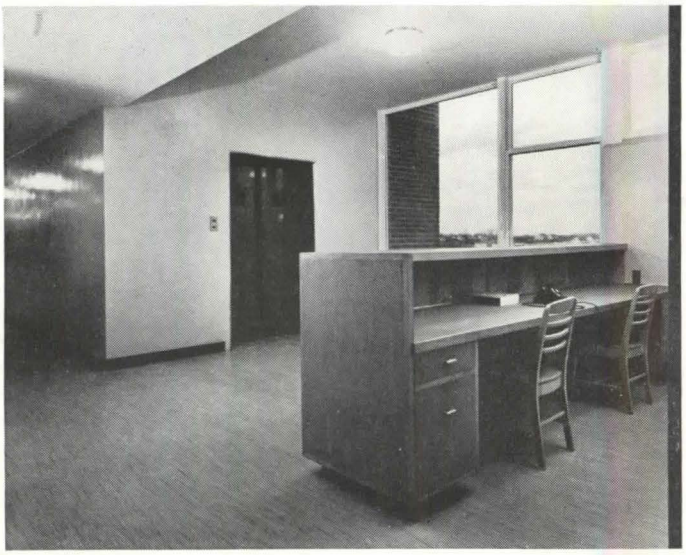
hospital: Weston, Ontario

The main entrance (left, top) *is located at the side of the hospital; a deep, overhanging canopy extends from the door out to the sidewalk line. From the memorial entrance hall* (left, bottom) *there is direct access to the business offices, the elevator, and first-floor maternity and medical nursing unit; nurse's station (and night-inquiry window) at left.* Photos: Panda



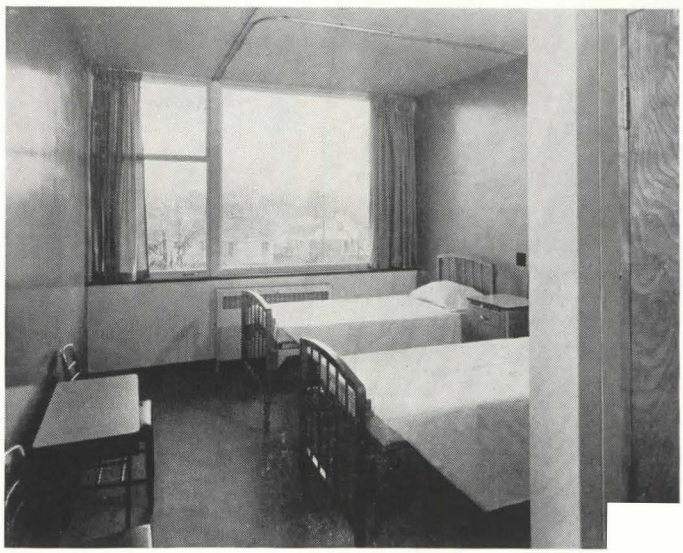
The typical nursing-unit corridor has plaster walls and ceiling, and linoleum floor. Elsewhere, both asphalt tile and terrazzo floors are used, while the basement flooring is colored concrete.

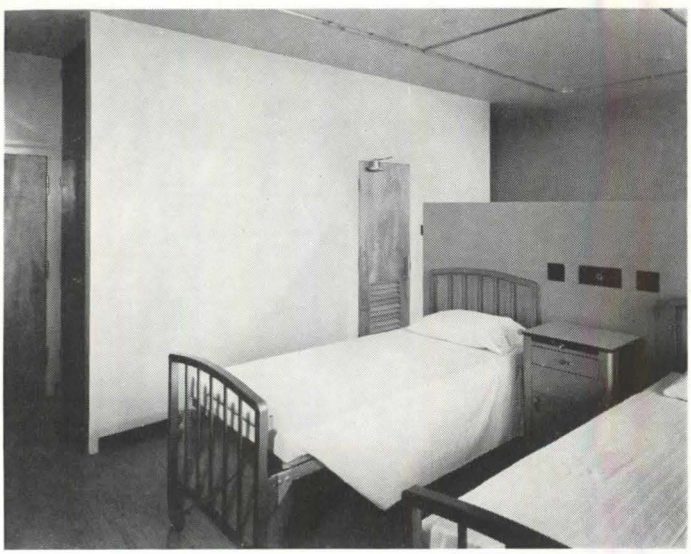




The second-floor (surgical ward) nurse's station (left) *faces the elevator; beneath the window is a built-in waiting bench for visitors.*

Each two-bed room (two photos below) *has its own private toilet. Wall-to-wall windows combine fixed and double-hung sash. Exterior structural sunshades, 3'-6" in depth, also serve as window-cleaning platforms.*

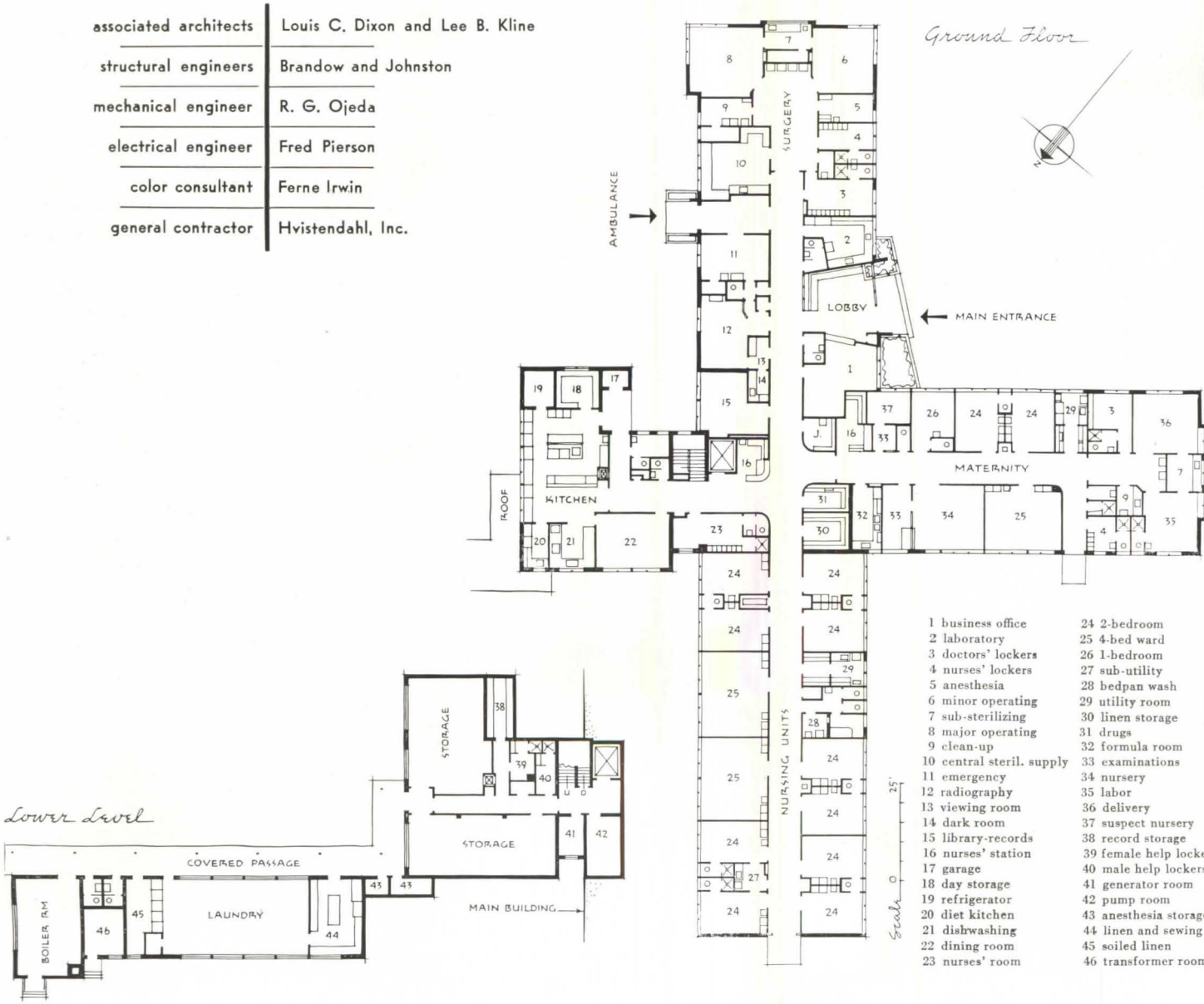




In the four-bed wards, a low partition separates pairs of beds. For the success of the design (the hospital has operated "in the black" since the third month after its opening in 1950), the architects ask that special credit be given to Gordon Hughes, Chief of the Hospital Design Division of the Federal Government, Ottawa, and to the hospital's Board of Governors, which tied no strings to the design other than it be an economical, efficient health facility.

HOSPITAL: ESCONDIDO, CALIFORNIA

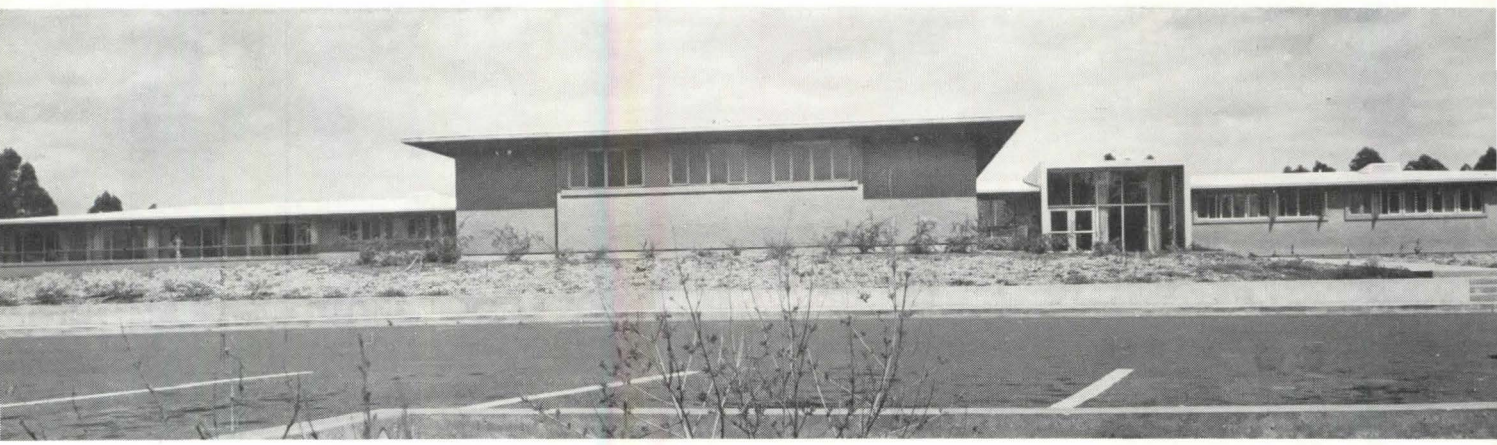
associated architects	Louis C. Dixon and Lee B. Kline
structural engineers	Brandow and Johnston
mechanical engineer	R. G. Ojeda
electrical engineer	Fred Pierson
color consultant	Ferne Irwin
general contractor	Hvistendahl, Inc.

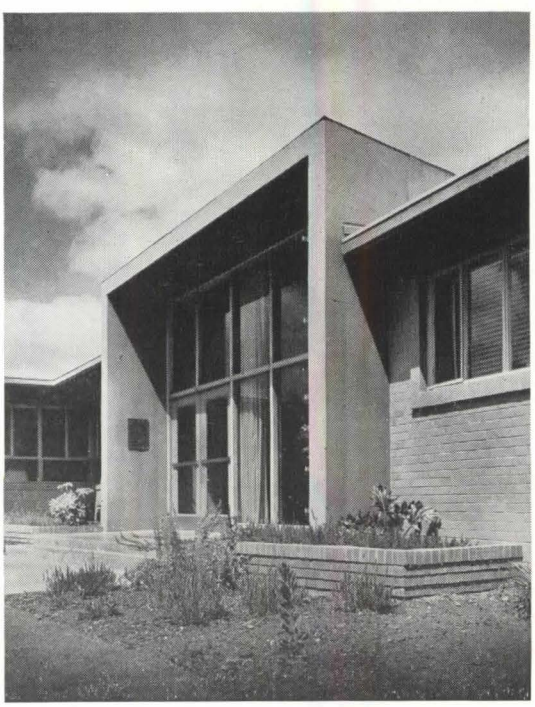


1 business office
2 laboratory
3 doctors' lockers
4 nurses' lockers
5 anesthesia
6 minor operating
7 sub-sterilizing
8 major operating
9 clean-up
10 central steril. supply
11 emergency
12 radiography
13 viewing room
14 dark room
15 library-records
16 nurses' station
17 garage
18 day storage
19 refrigerator
20 diet kitchen
21 dishwashing
22 dining room
23 nurses' room
24 2-bedroom
25 4-bed ward
26 1-bedroom
27 sub-utility
28 bedpan wash
29 utility room
30 linen storage
31 drugs
32 formula room
33 examinations
34 nursery
35 labor
36 delivery
37 suspect nursery
38 record storage
39 female help locke
40 male help locker
41 generator room
42 pump room
43 anesthesia storag
44 linen and sewing
45 soiled linen
46 transformer roon

The Palomar Memorial Hospital was erected in 1950 "in recognition of all who in time of war served our country and in sacred memory of those who made the supreme sacrifice." At present, it is a 37-bed hospital, plus nursery and outpatient facilities. Eventual plans—and the size of the surgery, kitchen, outpatient department, laundry, and boiler room—anticipate future expansion to 50 beds.

Built on top of a hillock, with agreeable views in every direction, the hospital is on a cruciform plan. The maternity suite occupies the southwest wing; the surgical and medical nursing unit is in the northwest wing; the southeast wing contains the entrance lobby, business office, outpatient department, and operating rooms; while the main kitchen and staff dining room constitute the short wing to the northeast. Beneath the kitchen area is a storage basement, which, due to the ground slope, extends at this level in an abovegrade wing housing the laundry and mechanical-equipment room. Future additions will extend in a north-westerly direction from both of the nursing-unit wings.



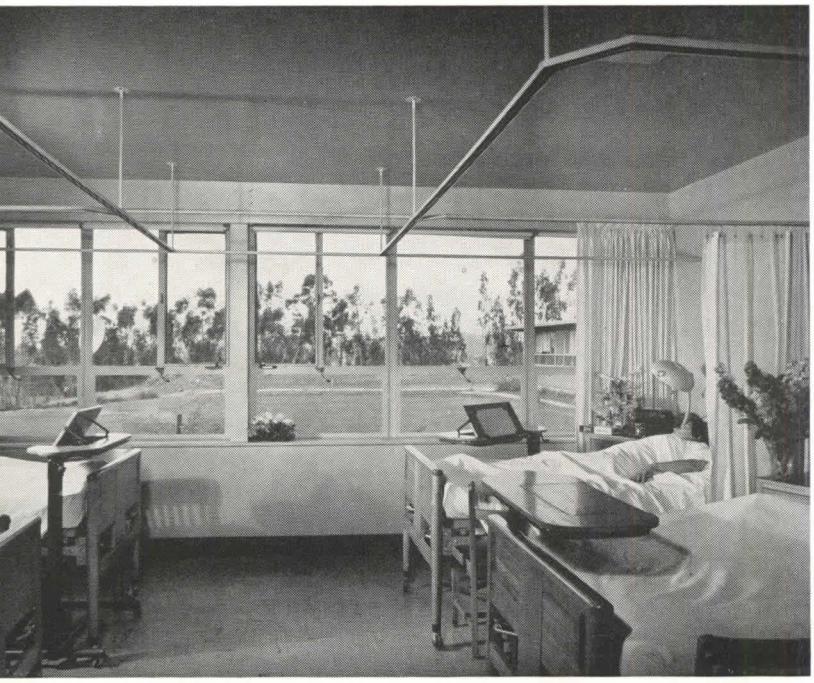


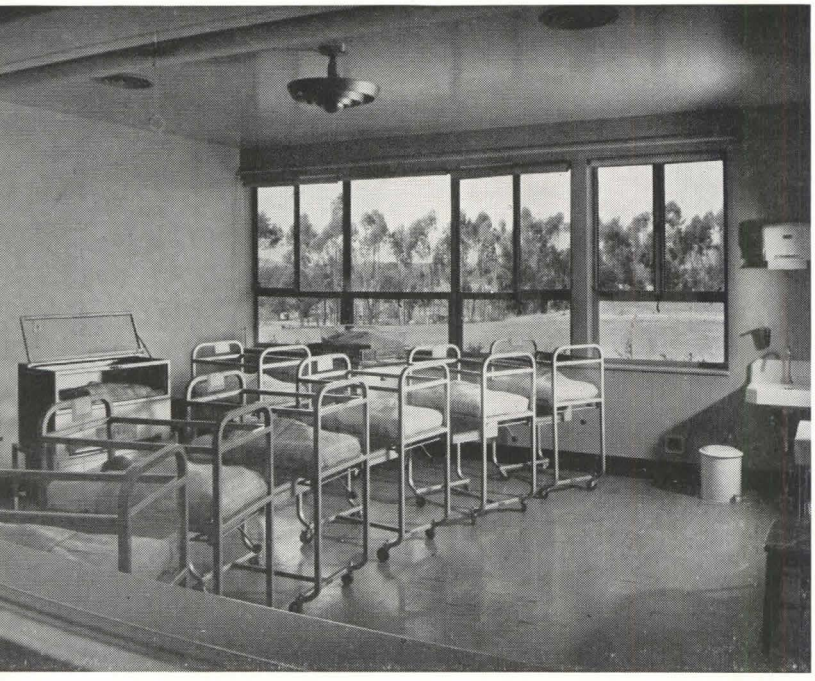
Seen from the north (top, acrosspage), *the building steps down to follow the slope in grade; laundry-boiler room wing, at left.*

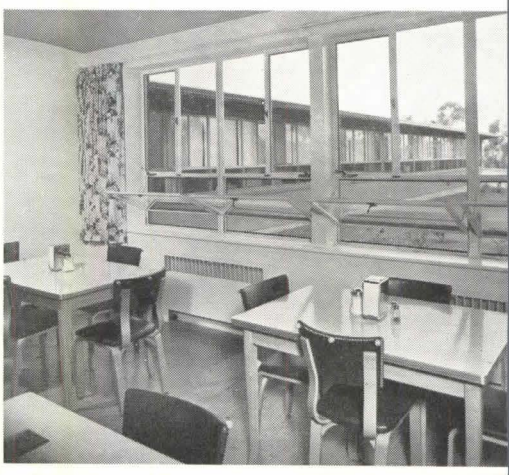
The main entrance of the hospital (above) *faces southwest and is near ample parking space.*

Photos: Julius Shulman

hospital: Escondido, California





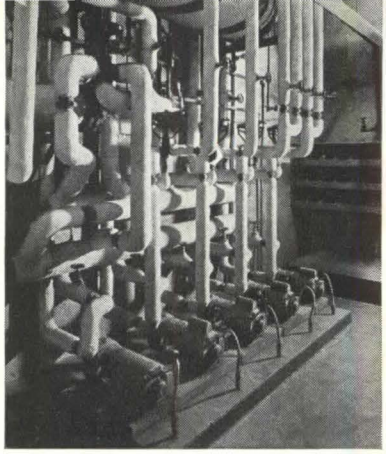


In the maternity wing, the four-bed ward and nursery (two photos at left) *overlook the northwest lawn. Floor surfaces are asphalt tile; walls are painted plaster. Adjoining the main kitchen is the staff dining room* (above). *Notice steel sash have operable ventilating panels.*

Construction consists of reinforced concrete foundations, reinforced brick walls, and wood-framed roof. The lower level of the two-story portion of the building (under the kitchen wing) is of reinforced concrete construction. Sash are of steel, and floors are either terrazzo or asphalt tile over reinforced concrete.

Acoustic tile is used on corridor ceilings; walls, other than where tile wainscots occur, are painted plaster. Thermal insulation is provided by wool-type batts, and in the reflective values derived from white marble chips used on the roof.

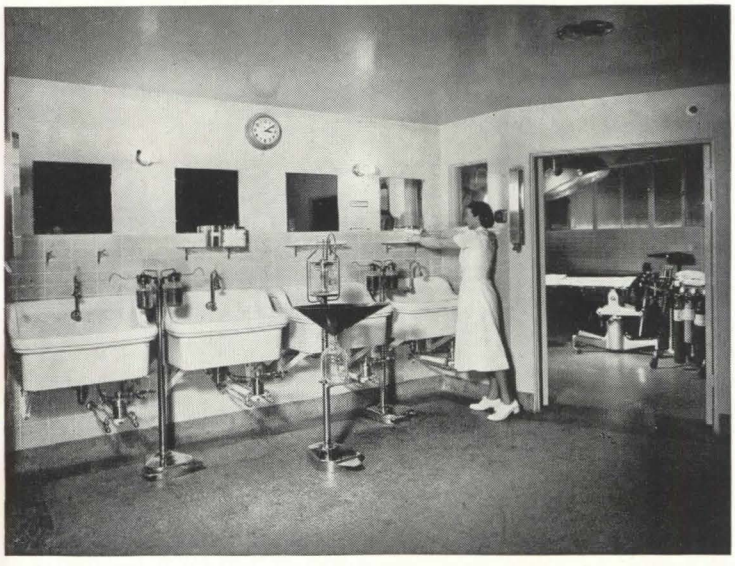
Heating is handled by two boilers furnishing steam to equipment as required. The sterilization and laundry equipment are steam heated, while all patient and living areas employ radiant floor heat, using copper tubing. Only the surgery, delivery rooms, and nursery are fully air conditioned.

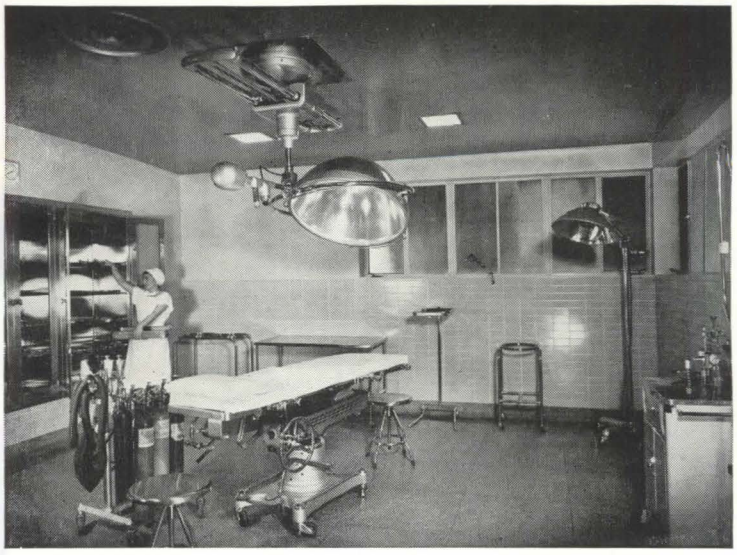


Tile wainscots are used on walls of sub-sterilizing room between operating rooms (right, top), *scrub-up area of surgery corridor* (center), *and major operating room* (bottom); *conductive terrazzo flooring.*

The main kitchen (below) *has wall-to-wall windows facing northeast.*

The radiant floor-heating system is serviced by a battery of pumps (top page).





The Architect and Public Relations:

by Asher B. Etkes and Raymond Dodd

The real value of publicity for the architect depends largely on how results are merchandised.

Of course, the constant appearance of an architect's name in national publications enhances his reputation, especially when it is linked with a specific field of architecture—schools, industrial, public buildings, or mass housing. This association, repeated often enough, raises his public status to that of a recognized authority in his field of endeavor.

It would seem obvious then that potential clients in that field would seek out the architect they've "been reading so much about." But don't bank on it; some undoubtedly will, and some won't because they've never heard of you. Remember, everyone doesn't read everything, and many people don't remember all they read.

Although nothing is older than yesterday's newspaper or last month's magazine, a good publicity story can be kept alive for as long as it serves your purpose. Keep it breathing and you'll catch those who may have missed it previously and refresh the memory of those who have read it.

There are many methods of merchandising useful publicity, each depending on personal discrimination or office tradition.

For example, a favorable publicity story —in reprint form or photostatic copy— can be used to bolster direct-mail presentations or newsletters to former and prospective clients. There are varying viewpoints among architects on the use of such mail promotions, but even the most discriminating have no objection to brochures which sing their praises. It's all a matter of opinion.

In any event, remember that reprints are usually cheaper than photostatic copies of your article. Thus, when planning a direct-mail promotion, place your reprint order in advance or immediately after the wanted story hits print. Publishers are glad to furnish these reprints but the price may go up—and justifiably—if you order too long after an issue has appeared.

Such an article in your newsletter or brochure has unusual appeal. It's an authentic report on your talents and accomplishments by an impersonal authority. It's believable because it lacks any suggestion of self-aggrandizement; someone else is handing out the plaudits.

This kind of material also is of estimable worth when you're exhibiting at local or national conventions. Photographic blowups or praiseworthy publicity are "stoppers"; people take time to read them. And the fact that some national publication devoted its space to you and your creations may be noted and remembered long after a perspective of your newest work is forgotten.

People are influenced by what they see and read, so exhibit your reprints in modest frames or try them on easels in your office.

The more important the publication, the harder the impact. Readers have real respect for prominent magazines and newspapers, and the same esteem goes out to those the editors bless. But moving publicity into big-league publications constitutes a real problem in time and effort for the architect.

Thus far, this discussion on publicity and public relations has been devoted to proving how publicity yields tangible dollar and cents results; how the architect seeking national notice can achieve such results on his own.

The first success in this field, however, will make it evident that publicity should be a continuing operation to assure full value. Granting that such an operation a useful sales tool, the busy architect ma well ask: How can I find time to do justi to such an operation?

Very often, he will require help of som kind. Perhaps that aid can be drafte from his own staff, or the architect ma employ a professional stenographic age cy. Another suggestion for a low budg operation is the enlistment of the par time help of a local newspaperman; h knows news, how to write, how to mak editorial contacts—and he might appre ate extra income.

These arrangements are suggested t meet individual publicity needs. If you projects warrant it, investigate a profe sional publicity agency. If your speciali interests only a limited audience, yo probably won't require the services of a agency. If what you design touches an appeals to the public at large, the use such an organization may return sal dividends.

A publicity agency offers the specialize talent and know-how required to turn u surprising results. You may have sto material right under your nose that cou be developed into suitable articles of a kinds for important mass-circulation pu lications—material which you lack th skill to develop—which you may not eve recognize as news.

The inclusion of articles about you an yours from such imposing publications a *The Saturday Evening Post*, *Life* or *Collie* can have terrific impact in your brochur or convention exhibits—not to mentio nationwide prestige.

Attaining such publicity outlets entai considerable creative ability, good editori contacts, and a working knowledge markets. And there are a lot of surprisi markets for architectural articles.

national publicity

If, for example, your specialty is school sign, top-ranking women's magazines—*:dies' Home Journal, Good Housekeep-g, McCall's, Parents*'—may show interest ovided the story factors fit their re-irements and the reading tastes of their diences.

Editors of many magazines other than ose in the fields of architecture and ilding will welcome a school story where e emphasis is on humanity rather than the structure.

Is there a good story in the community ruggle to raise funds to build the school? it a symbol of the growth and develop-ent of an area and its people? Has it lved any specific problem of health and lture?

Not only does this apply to schools, but any type of architecture where the hu-an interest angle is rich and exciting.

Important farm publications, religious, aternal, business, and service club maga-nes—many with amazingly large circula-ons—are among the many that may ac-pt your story if it is "slanted" to their itorial needs and readers. In other words, u may be missing a lot of bets.

If your activities warrant the services of agency, choose yours with care. Don't st crack open the classified telephone ok and dial; shop around. Remember at your needs are special ones requiring special—and dignified—operation. Vari-s agencies have varied specialties and be-use architects have neglected publicity, chitecture is rarely one of them.

A good agency currently handling in-strial accounts which frequently require me architectural writing should be able meet your specifications. Finding such agency is no hardship. Editors, who ceive and examine the output of a great mber of publicity agencies, may be will-g to make recommendations; publicity departments of materials manufacturers also may prove helpful in suggesting an agency particularly suited to your needs and budget.

Right here is the time to do your careful shopping. Don't decide on the first agency you approach—or which approaches you—without examining the presentations of several others.

It might be noted that any publicity agency worth its salt will prepare and submit a publicity program developed especially for you and your office together with a collection of sample results they have obtained for other clients.

Study these presentations carefully. The created program provides an insight into the ability of the agency, indicates whether it has grasped understanding of the unusual problems of the architect and is temperamentally equipped to handle your account.

The work samples are equally illuminating. They will show the type of accounts the agency handles, the creative ability, and the caliber of publications with which the agency has good relations. If these samples tend toward the flamboyant and heavy editorial acceptance among publications with more flash than solidity, tread easy. Such an agency may be ideal for soap, soup, or chanteuses; but slightly out of character in the role of representative for the architect.

The type of service required of the agency you select depends on the setup of your organization and its output. If you can provide a flow of newsworthy projects, there's need for a continuous publicity operation. If your creative efforts are sporadic—say only one or two major projects a year—a "spot" or "one-shot" operation is indicated. There's a vast difference between the two.

The steady publicity operation, contracted for by the year (or a portion of a year) entails the outpouring of a variety of material on both products and personnel into all available media—newspapers, magazines, even radio and television where possible. Its principal advantage is ample time to permit creative development of a good working publicity program.

The "spot" operation, one geared to a single project rather than a program, is extremely effective under proper circumstances. The type of project dictates the action.

Generally it entails the preparation of press and magazine material to be distributed at a press conference—a cocktail party, a tour, or a trip to a site. This is prefaced by intensive editorial contacts, photographic arrangements, and radio and television planning if the project warrants it. In contrast to the continuing publicity operation, it's the big intensive single push. And it can produce results.

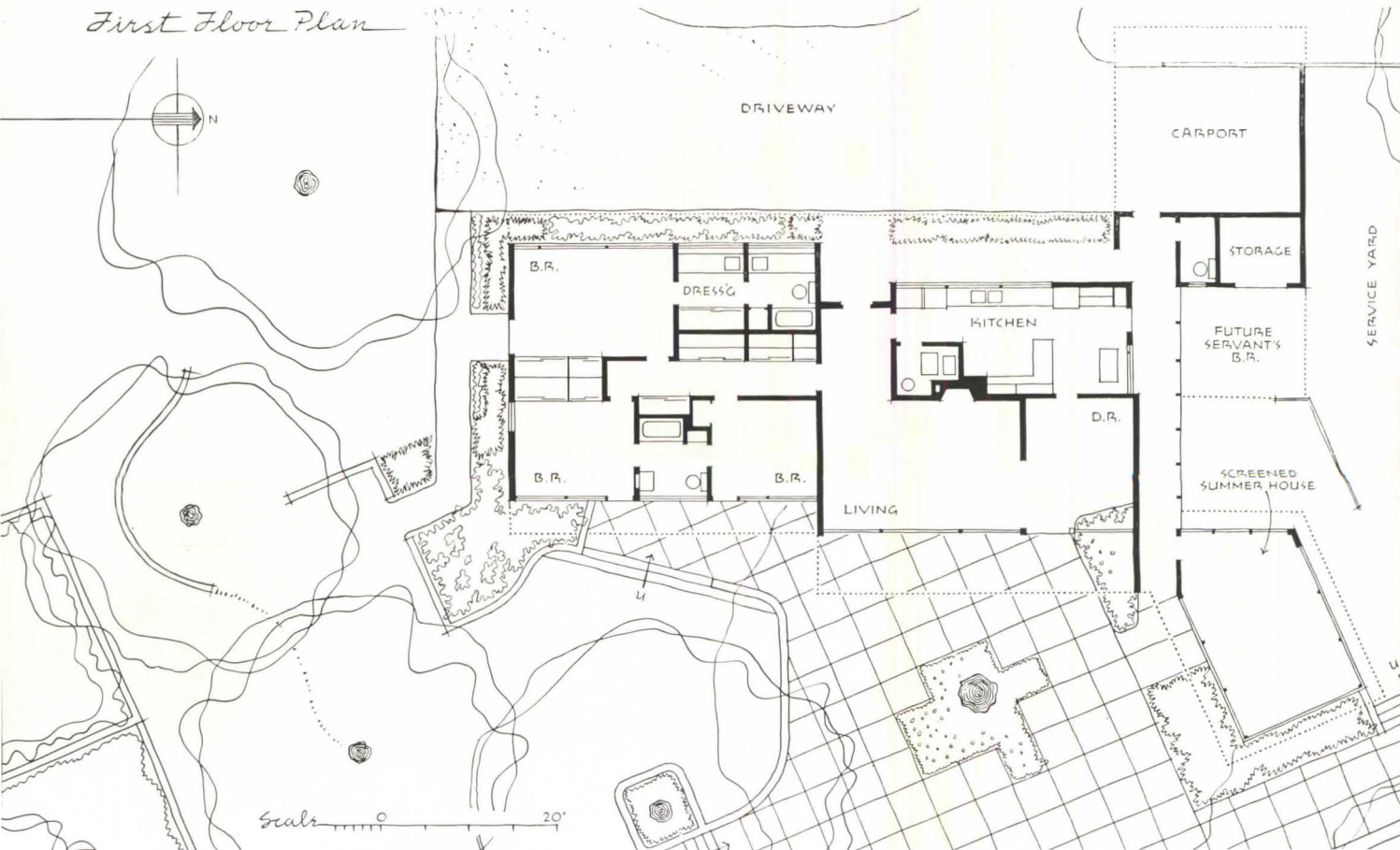
What about the costs? As previously pointed out, publicity can cost as much as you want to spend for your needs. Most architects must be content with low-budget operations, some can spend much more, but few can afford or need all-encompassing multi-thousand dollar programs.

Thus the emphasis on the small reputable agency has been fully intentional. In contrast to the larger publicity agencies, the smaller firm has a number of advantages for the architect seeking national recognition for his office.

It is as interested in developing a successful program for the low-budget account as for the client with a fatter pocketbook. It has unusual flexibility to operate at all levels, the ability to create and produce, and to gain acceptance of its work in all media.

For the architect, such an agency is not only adequate, but ideal.

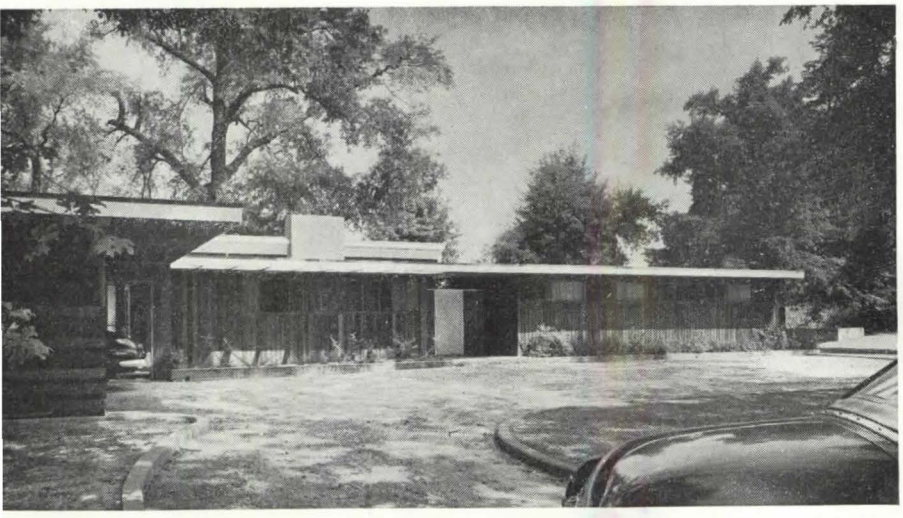
house: Memphis, Tennessee

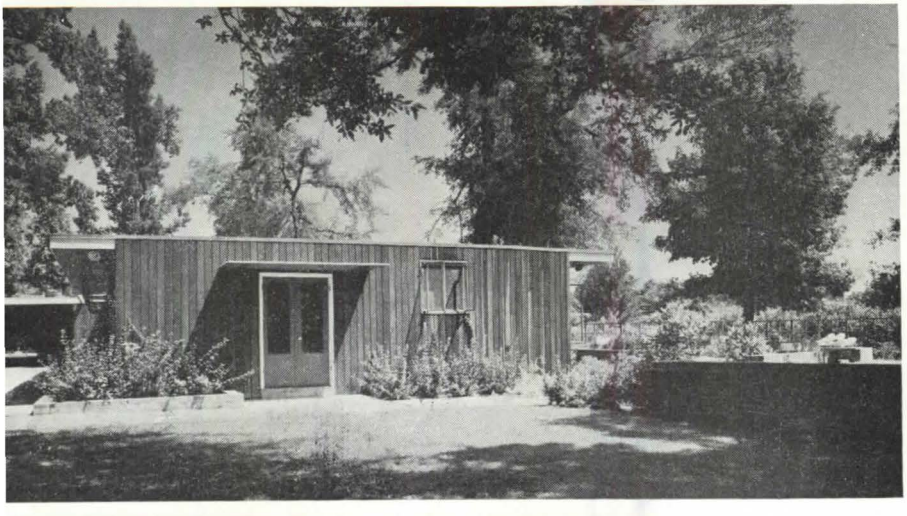


n designing this pleasant suburban house or a family consisting of parents and wo young sons, the architects sought "to reate a relaxed atmosphere." The plan f the living side of the house, they point ut, is "similar to the Cape Cod house, eing built around a big chimney." The elation between the entrance, living, and ining areas and the kitchen, utility, and reakfast-room space, was devised to make circulation possible in any direc- ion with a minimum of disturbance from ross traffic." An admirable provision is he screened summer house connected to he main house by a covered way—"an nsect-free eating and gathering place in ummer weather."

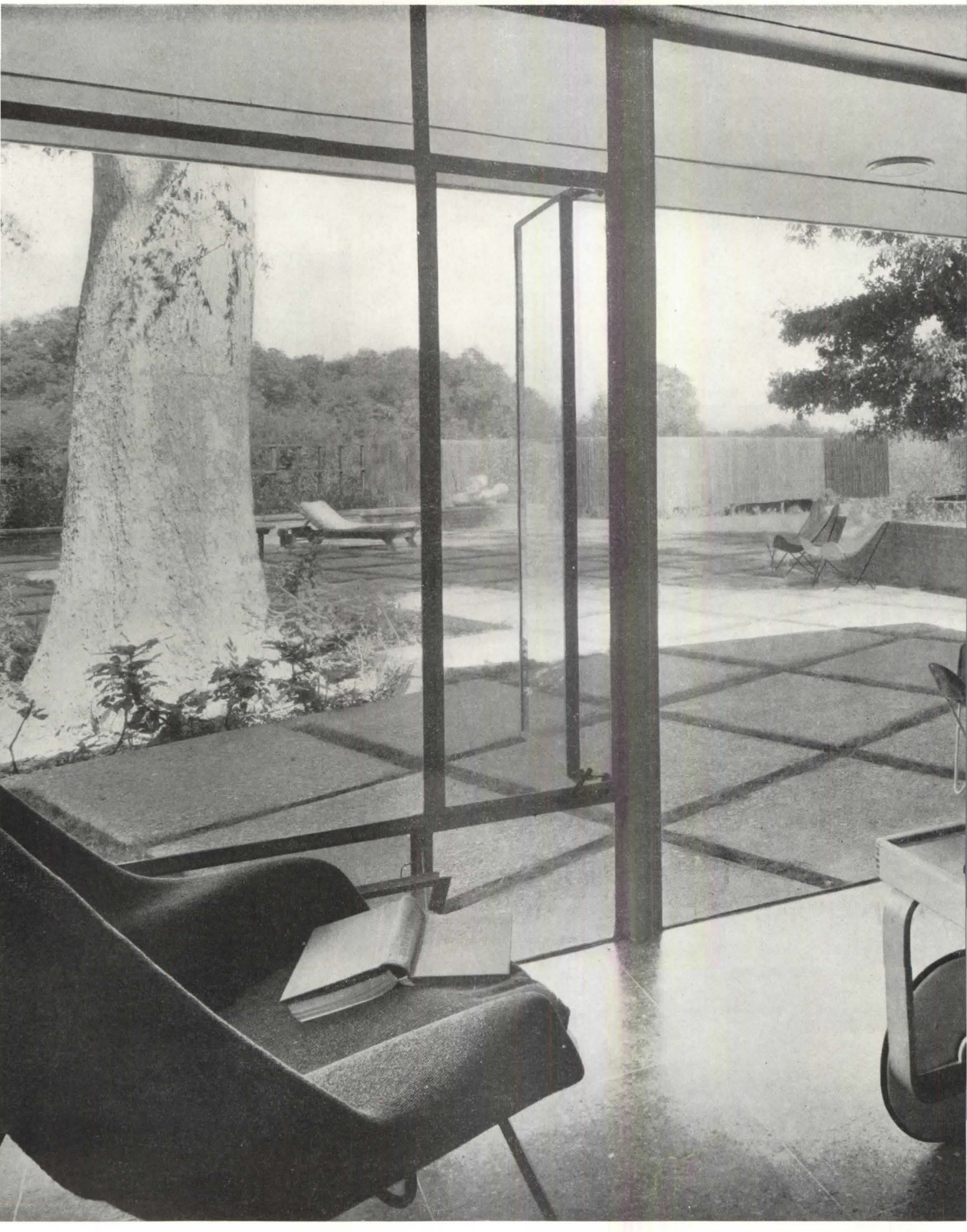
Construction is standard frame, on a concrete slab; exterior walls are t&g V-joint redwood; interior walls are oak plywood, plaster, burlap, corrugated asbestos, or ceramic tile. Terrazzo, brick, or asphalt tile are the floor surfaces. For ceilings, both acoustical plaster and gypsum-sand plaster were used. Thermal insulation consists of wool-type batts in walls and ceilings. Sash are intermediate steel casements, fixed or projected types. Incandescent light fixtures are supplemented by fluorescent cove lighting in the living-dining space. The hot-water radiant heating system — a combined floor and ceiling installation—is served by a gas-fired furnace.

architects	A. L. Aydelott & Associates
landscape architect	Wiley T. Jones

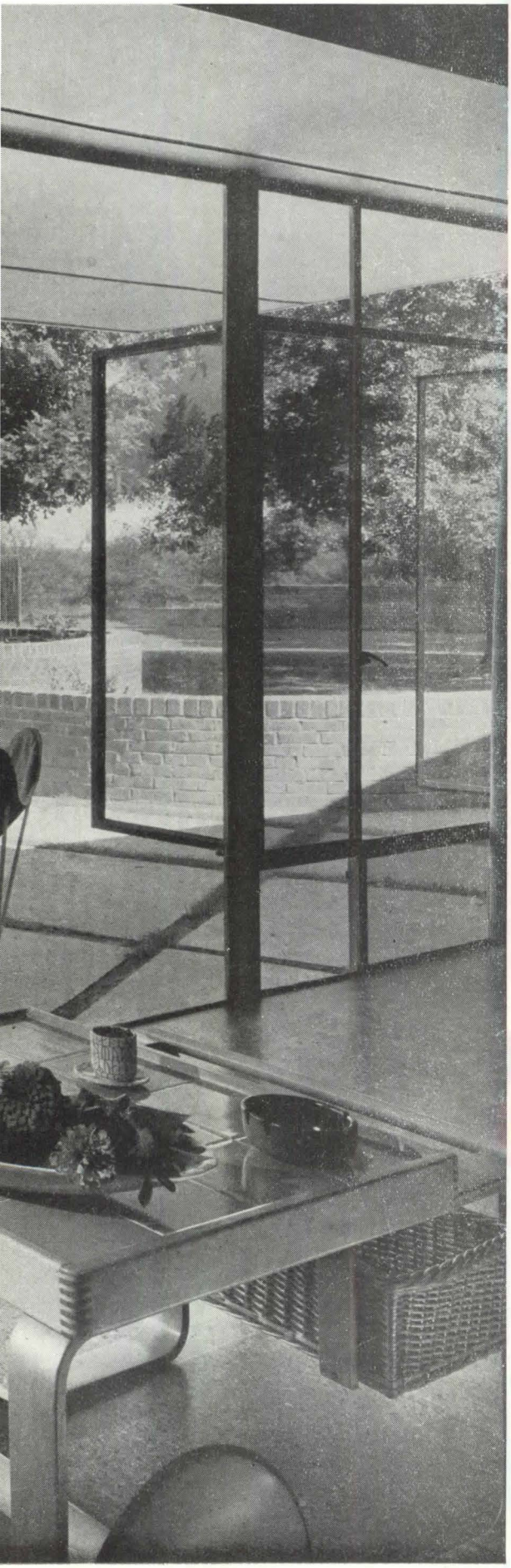


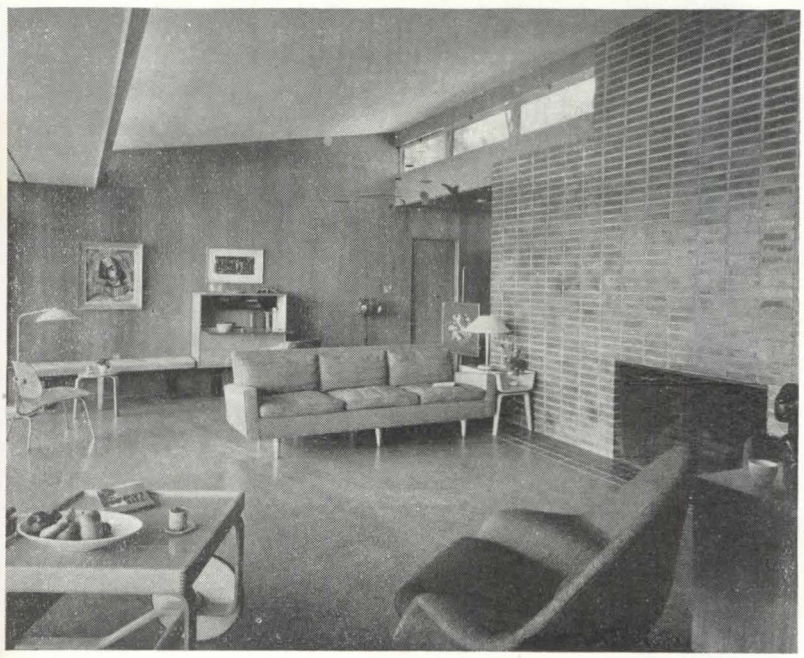


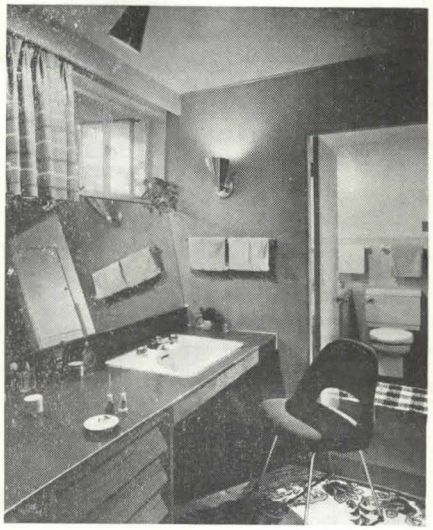
house: Memphis, Tennessee



The east-facing dining-living space (below and two photos at right) *opens up generously to the handsomely landscaped terrace and garden; flooring here is terrazzo. In the bath-dressing room* (bottom, right), *walls are oak plywood, and floorings are asphalt and ceramic tile.* Photos: Lionel Freedman







curtain walls of steel

by J. G. Terry*

New concepts of curtain-wall construction have brought the use of steel from galvanized roofing and siding for industrial buildings to the installation of porcelain-enamel spandrels for the General Motors Technical Center (near Detroit) and to the erection of the stainless-steel-concrete panels at Gateway Center (Pittsburgh). Outstanding examples, appearing with increasing frequency, illustrate that steel is one of our most versatile mediums for freedom of architectural expression in the design of contemporary structures.

The use of steel for exterior walls of buildings is not limited to those structures currently being designed; numerous modernization and remodeling programs have made extensive use of the metal façade. Even many of the humble army barracks that were built as temporary structures during World War II have been redesigned so that they can be prefabricated of steel.

For the architect considerable steel curtain walls there are many fresh approaches. Various grades of steel that can be used include corrosion-resistant architectural metal of the stainless-steel family and the multi-hued, porcelain-enamel-on-steel finishes. On industrial buildings, special zinc-coated surfaces for immediate painting have taken away the drab look from the factory.

Heretofore the stainless steels have been widely used for building trim. The low maintenance factor of stainless steel has led architects to consider it for prefab wall units to replace brick and other masonry materials. Stainless-steel "bricks" may be as large as 20 to 30 sq ft in size, yet they may be erected in a matter of minutes with decided savings.

Porcelain-enameled steel has long been used as a facing material in order to combine the economy of concrete-block construction with the characteristics of weather-tightness, corrosion resistance, and attractiveness. Although the corner service station and the supermarket have long exploited this material from a standpoint of maintenance and appearance, the designers of the General Motors Technical Center were among the first to advance the architectural use of this material and have integrated it in a monumental building of several stories. In this development, Saarinen, Saarinen & Associates produced a curtain wall with excellent thermal properties, as well as one with a limitless color range.

In the design of steel curtain walls there are several problems that must be considered before selecting the grade of metal. These may be listed as:

1. Wind and weather—selection of a suitable grade to meet wind-loading and atmospheric conditions.
2. Joints and framing—a simple, weather-tight joint and the necessary framework for attaching the panels and transmitting dead and live loads to the building frame.
3. Maintenance factor—selection of a material that will eliminate or reduce maintenance cost.
4. Existing building codes—what is permitted at the building site.
5. Insulation—wet or dry.
6. Vapor.
7. Finish.

The wind-and-weather problem requires that the curtain-wall panel must withstand the attacks of the elements; must maintain a good appearance throughout its useful life; and that it must be designed to transmit the wind loads to the structural frame. Both stainless-steel and porcelain-enameled panels should be satisfactory for the life of a building; however, it has been found that a peculiar problem exists in certain locations where curtain-wall installations are exposed to moisture-laden wind. For example, in the United Nations Secretariat it was discovered that winds driving over the East River forced moisture through normal weep holes and resulted in leakage. Corrective measures required special study and solutions, both in the window area and in the wall itself.

The joint of the steel curtain wall must be designed so that it is weather-tight. Wind-and-rain action must be prevented from driving water through any crevices that may be present in the wall. There are many methods of securing a weather-tight joint—perhaps the best method is a self-flashing joint member. With metal panels this may be readily accomplished by flanging the joint in such a manner that wind and weather will be excluded.

Provision for expansion must also be made in the joint so that the metal facing will not show the effects of thermal movement. A common method calls for the use of depressed areas in the metal panel; movement will not be noticeable in those areas after the panel is fixed. If the panel "floats" and is calk-bedded, the calking compound may be fractured by movement of the metal panel. Regular expansion joints, at such points as column covers, will have obvious advantages for either floating or fixed panels; the life of the calking compound, nevertheless, is of major concern in any joint system requiring that material.

Closely related to jointing is the way the building is framed. Although there are many different methods of applying the panels, all seem to be fairly well centered in one of three types: (1) horizontal panels between columns; (2) vertical panels, either cantilevered from the floor slab or continuous from floor beam to floor beam; or (3) the grid type, which is a combination of the first two. Selection of the framing method depends on the architect's judgment and the treatment desired for a particular structure. Most panels possess an intrinsic strength that will help to reduce the required framing.

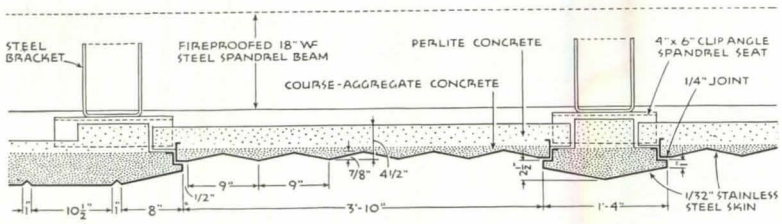
Regardless of the framing system, the

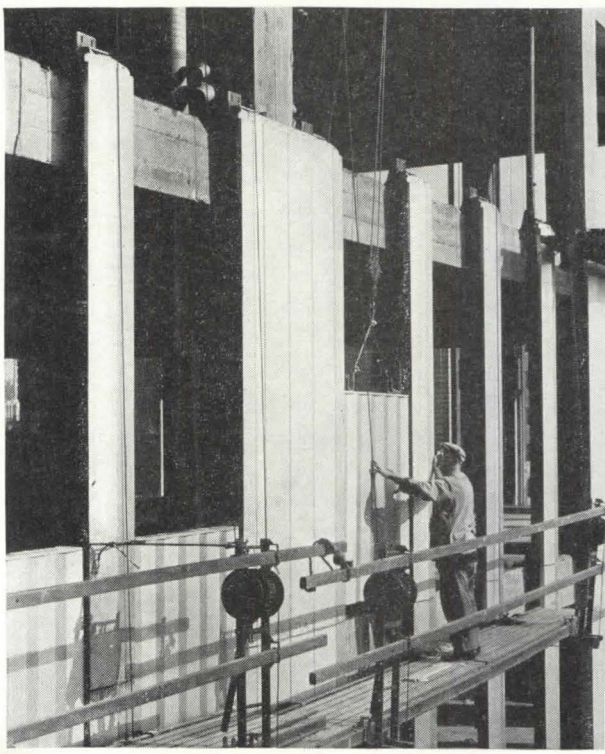
* *Development Engineer, Armco Steel Corporation, Middletown, Ohio.*

portance of the maintenance factor can- be overstressed. First, the material uld be a lifetime material; that is to , one that will last as long as the build- itself. All too often, first cost is the y consideration of the owner, and few, any, buildings are seen as other than apital expenditure and a maintenance ense. Building accessories are usually chased on a cost-per-year basis, but type of accounting is rarely applied the structure itself. It is strange, indeed, that such a large item as upkeep is not given more thought in the planning stage, and that *cost-per-year*, rather than *first cost*, is not the deciding factor.

Use of steel for curtain walls obviates many of the maintenance expenses ordinarily associated with building upkeep. For example, the stainless-steel pilasters on the Empire State Building and the porcelain-enameled spandrels on the General Motors Technical Center were both designed to require no maintenance. In the 20-odd years since the Empire State Building was erected, the stainless-steel pilasters have never had to be cleaned or maintained in any way. The General Motors spandrels are permanently colored and will retain their bright hues indefinitely. Weigh these distinct advantages against biennial painting, or the repointing of masonry about every decade.

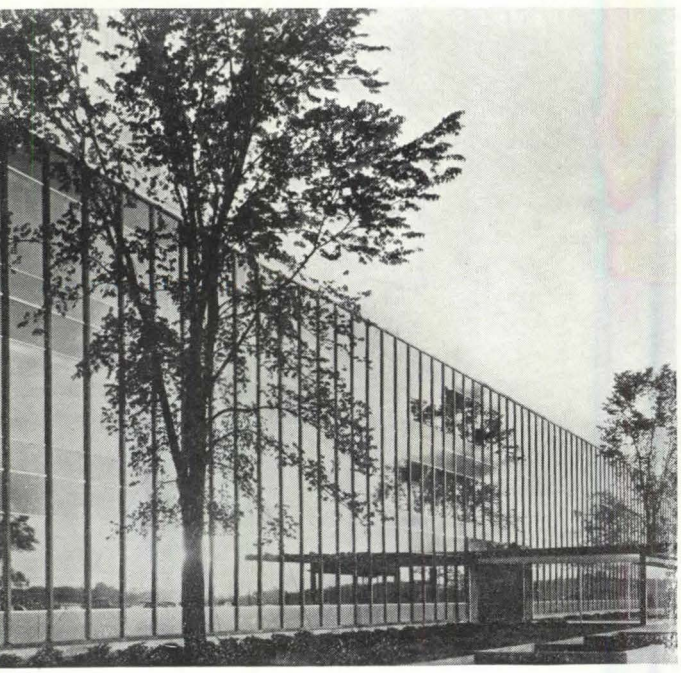
In addition, the self-flashing joints of metal wall panels usually prevent corrosive attack by eliminating leaks in the

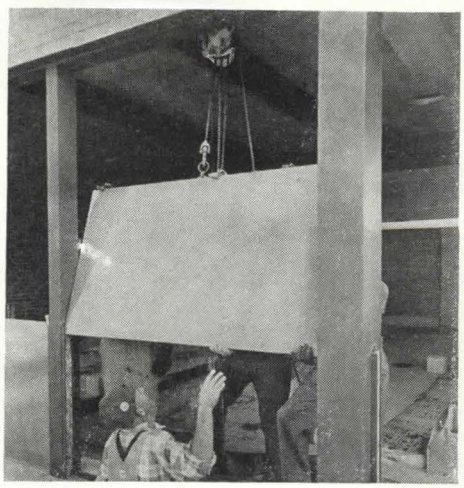




Prefab, stainless-steel-concrete spandrel at Gateway Center being set in heavily calked joints (right). *Detail* (above) *shows relationship of metal skin, coarse-aggregate concrete, and perlite concrete. Architects: Eggers & Higgins and Irwin Clavin.* Photo: Jay-Bee Studio

Porcelain-enamel-faced panels combine weather-tightness with corrosion resistance, as well as satisfy color requirements for the design of the General Motors Technical Center (below). *Individual panel being placed in supporting channels* (below right). *Architects: Saarinen, Saarinen & Associates and Smith, Hinchman & Grylls, Incorporated.*





exterior wall. In a recent survey, an eastern city found that many columns had been severely corroded and had to be replaced. Such a situation not only required huge expenditures but was a safety hazard for personnel using the building in its weakened condition. With proper design, the metal curtain wall eliminates this leakage danger and excessive maintenance cost.

Perhaps the biggest hurdle in the path of steel curtain walls is existing code regulations. Current building codes are based on combustible construction such as wood floors, stairways, and windows plus combustible drapes, floor coverings, and furniture. Requirements for a four-hour fire rating are such that the combustible load must be about 35 pounds per sq ft of floor space. Even in the most crowded filing areas this load is seldom reached; requirements for a two-hour rating are about 15 pounds of combustible material per sq ft of floor area. With today's steel desks and furniture, incombustible drapes and floor coverings, and metal partitions, very few rooms in present buildings even approach the two-hour requirement.

If this is so, are many of today's buildings truly modern? Setback requirements for a contemporary, multi-story building, of course, tend to eliminate the fire hazard from adjoining property. Fortunately, modernization of building codes is now under way in most major cities.

In the selection of insulation for a curtain-wall panel, many types have been considered. Undoubtedly the cheapest method is the use of dead air space, yet this solution increases wall thickness and decreases usable floor area. A balance must be struck between these cost variables.

The type of insulation may be either wet-wall or dry-wall construction. New techniques of pumping plaster and aggregate lower the cost of the conventional wet wall. The dry-wall technique requires assembly near the job site in order to reduce freight charges, and may in some cases create handling and scheduling problems. Dry walls prefabricated with an exterior and interior face pose another problem, namely, openings and variations in structural steel setting. As panels are often prefabricated to tolerances of a few thousandths of an inch, they are not too compatible with structural variations of ½ in. or more throughout the building. The best solution of this problem seems to be in the window surround; errors usually can be discounted in mullion, head, and sill members.

Vapor is a problem in any type of wall. Warm, moisture-bearing air will lose its moisture content on striking a cold surface—regardless of material. Conventional wall materials tend to absorb this moisture and thus seemingly dispose of the problem. However, it must be remembered that when moisture is absorbed by a wall material, the U factor increases greatly. Also, the possibility of structural damage at points where steel members pass through moisture-laden insulation creates a corrosion hazard. The new techniques using metal-foil vapor barriers and mastic coatings are extremely helpful in minimizing this problem in today's curtain wall. There are many impervious materials high in insulating value now available to the architect and contractor.

Finish, both interior and exterior, is an important consideration in the metal-panel wall. With steel, finishes may range from the dull, metallic sheen of stainless steel through the spectrum of colors offered by porcelain enamel. Interior finishes may be metallic or plaster, depending upon the panel types selected. The metallic panel may also be designed for interior location of convector or panel heating.

Let us discuss a few buildings clothed with steel curtain walls that present individual solutions for the various problems previously cited. Although the building types range from monumental to industrial structures, all demonstrate the versatility of steel as well as other valued characteristics inherent in that material.

The General Electric Turbine plant office building at Schenectady, New York (*November 1949 P/A*), illustrates the structural-steel conservation possible with steel curtain walls. The structural steel was designed and erected for a conventional construction of three floors. When a planning change required additional floor space, however, the foundations and structure could not take added loads. By the use of cellular, stainless steel curtain-wall panels, a penthouse was permitted on the existing structural members, through reduction of dead weight in the walls.

In Minot, North Dakota, an insulate ribbed-steel panel was used for the Nort ern States Power Company Building. Pr vision for future expansion was of utmo importance and the use of a demountab panel system solved the architect's pro lem. Expansion may proceed in any dire tion, and panels will be 100 percent reu able. Interesting architectural effects we obtained by reversing panels in the pila ters. A combination of flush and ribb areas adds to the vertical effect and easily achieved. Panel lengths up to ft are standard.

Co-ordinated planning and schedulir by the architects and builders of the Equ table Life office towers in Pittsburgh mac it possible to enclose each structure at th rate of one floor per day. The wall is a ready insulated when installed and r quires only bolting and welding for ere tion (*see illustrations*). Panels are sho made, filled with concrete and cured, the set with heavily calked joints. The insi finish (the face of the cast slab) is cove ed by a continuous air-conditioning e closure. Important savings were gained lighter foundation and structural membe as well as increased rentable floor spac due to only 4½-in. thickness of the wal

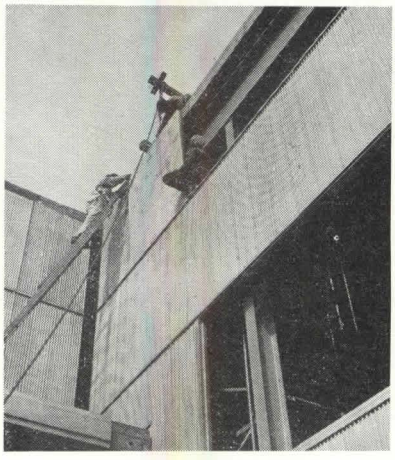
Use of stainless steel goes beyond th actual panels in curtain-wall constructio Buildings like Lever House in New Yo or the Federal Reserve Building in Detro utilize the high-strength feature of stai less steel for framing members holdir glass and marble curtain walls. The lo maintenance feature and freedom fro weakening by atmospheric corrosion fin stainless steel ideally adaptable for tho important frame members.

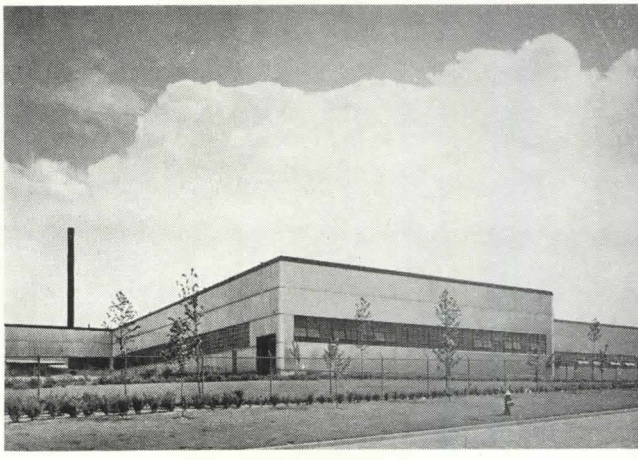
While porcelain enamel is a compar tively old architectural material, its u in curtain-wall construction is somewh new. Probably the most impressive use this wall material is in the General Moto Technical Center. The double, porcelai enamel-faced panels float on a calk b and are placed in channels as shown (s *illustrations*). Panel insulation can either calcium silicate tiles, lightweig concrete, or honeycomb paper, dependi on the use of the panel for the particul area. A cap channel serves as the sto for the window sill.

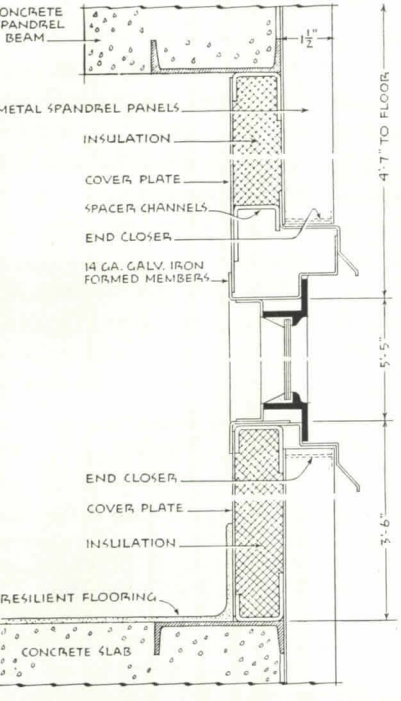
In the recent remodeling of the 12-sto Security Building in Denver, the porcela

E. F. Hauserman Company plant (near eland) was originally built with stainless panels and measured only 100′ x 250′; ddition of 250′ x 300′ was easily accom-ed through the use of demountable panels it).

Right photo: Robert E. Burke Studios





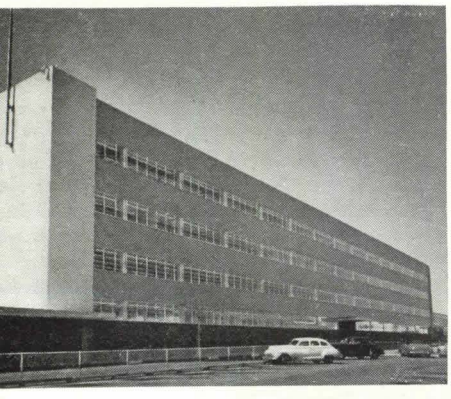


enamel facing material which replaced approximately 900 tons of brick and terra cotta weighed only 30 tons. Utilizing these panels in the renovation of old buildings offers a solution for the reduction of high construction costs. Further, the metal panels usually reduce the amount of framing needed for hanging and the job proceeds faster.

It is conservatively estimated that there are now about 40 companies in individual research on the various aspects of the curtain wall problem. Some of these systems have already emerged from the research stage, while others are still closely guarded by their developers and have not as yet been offered for any job.

The Porcelain Enamel Institute, whose members are leaders in the porcelain-enameling industry, has retained New York Architect William Lescaze for a full-scale research program to produce a marketable curtain wall. This program is proceeding under the direct supervision of three enameling plant executives who are assisting Lescaze in the important manufacturing phase of the research. Three basic structural systems are being studied, and it may be possible that a total of three solutions will result from the work of this committee.

This undertaking is not purely theoretical research which would require production modifications before manufacture, but is a constructive program based upon a combination of porcelain-enameling knowledge and architectural experience.

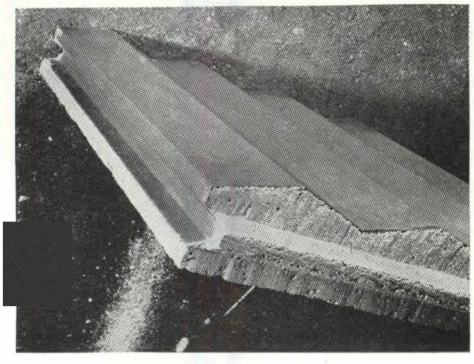


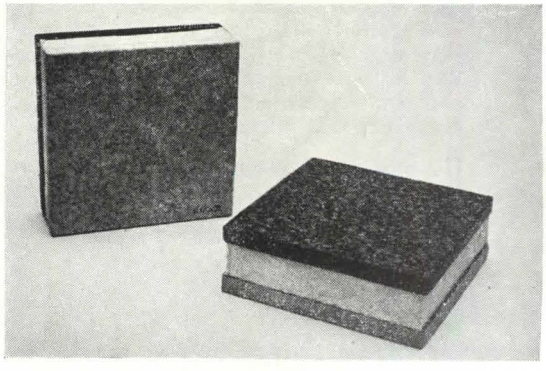
One of many companies conducting individual research on lightweight curtain-wall panels is the Washington Steel Corporation. Several panels of the type shown (below, left) *are now undergoing thorough testing at their Washington, Pa., plant. Thin, rigidized, stainless-steel skins (Type 302) .015 in. thickness, protect the perlite concrete backing.*

Another curtain-wall material just introduced to the building market by Seaporcel Metals, Incorporated, Long Island City, is a lamination of porcelain-enameled steel to thermal and acoustic insulation materials (below, right).

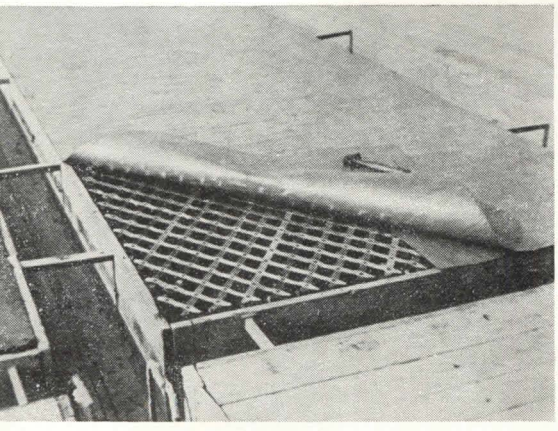
nuous crenellated-steel walls along north south elevations of Lockheed Aircraft oration's new Engineering Building ve). Compared with conventional 8" rein-d concrete walls, 800 tons of deadweight saved. Architects: Welton Becket & ciates.

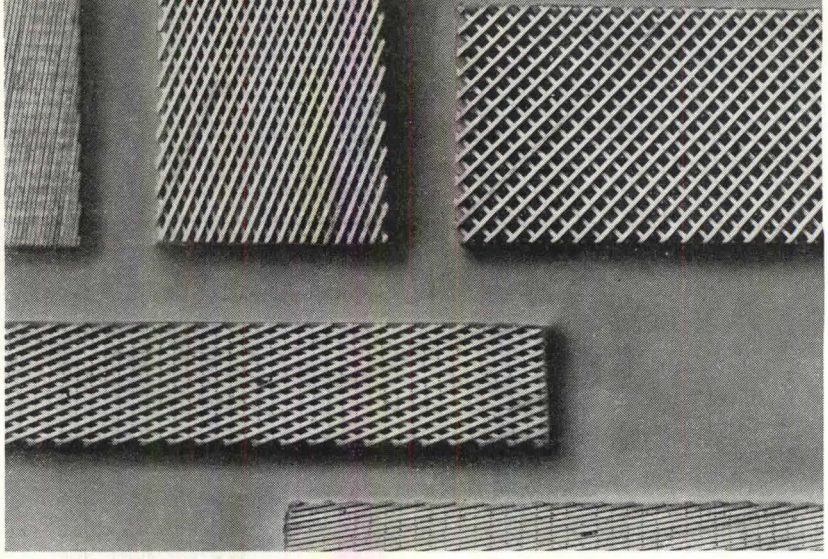
Photo: William H. Olson





pa PRODUCTS





expansible concrete forms

Expansible concrete forms that can be put to use as often as 100 times, are constructed on the extension principle of lazy tongs, permitting immediate adaptation of panel size to a wide variety of dimensions. The Rubora construction form, used extensively in Europe to cut time and costs on cast-in-place concrete jobs and now patented in this country, consists simply of latticed wood struts which are hinged at all intersection points. After the form has been adjusted to whatever panel dimension is required *(see various proportions in photo above)*, it is covered with Sisalkraft paper, for rough finished work *(left)*, or with a concrete liner of 1/8" composition board, for a smooth finish. The paper or board is easily tacked into place on the form and stripped off after the concrete has set, leaving the form clean and ready for future use.

A typical Rubora form, Type A, f example, can be expanded to cover a 3 sq ft area at an initial cost of $1 p sq ft. The same form can be adjusted any set of dimensions between 5'-8" 1'-4" and 10'-4" x 9". Weighing or 50 lbs, it is easily carried by one man a adjusted to desired size by two m Because of their flexibility, the forms m

air and temperature control

Aeropel: kitchen ventilating fan, recommended for installation near cooking range, has certified capacity rating of 400 cfm; costs only few cents per month for operation. Wall box constructed of rustproof steel; white-plastic grille offers minimum resistance to air flow, is easily wiped with damp cloth to free surface of dust. American Radiator & Standard Sanitary Corp., Bessemer Bldg., Pittsburgh, Pa.

F610 Combination Horizontal and Downflow Furnaces: packaged oil-fired units can either be fired as downflow furnaces in vertical position for perimeter heating or as horizontal units for installation in attics, crawl spaces, or suspended from ceilings. Cabinets finished in white gloss enamel for attractive appearance in kitchen or utility room. In 80,000 and 100,000 Btu models. Borg-Warner Corp., Norge Heat Div., 346 E. South St., Kalamazoo, Mich.

Thermo-Base: baseboard warm-air heating units in 3', 5' and 8' lengths, accurately rated for all static pressures and air temperatures; especially suited for small-pipe distribution systems. Equally adaptable for old or new construction. Gerwin Industries, 214 Spring St., Michigan City, Ind.

Highboy and Lowboy Furnaces: fully assembled, oil-burning, forced-warm-air units, available in output capacities of 65,000 and 85,000 Btu. Resilient mounted blowers with permanently lubricated bearings assure quiet operation; burner, controls, and wiring all enclosed within furnace casing, yet readily accessible through service door. Iron Fireman Mfg. Co., 3170 W. 106th St., Cleveland 11, Ohio.

No. 5 Thrush Air Vent: chrome-finished valve for installation on all types of hot-water radiators, baseboards, convectors, unit heaters, and high points of mains for fast, efficient venting. Packed 12 to a box with complete installation instructions. H. A. Thrush & Co., Peru, Ind.

Radiant Front Radiator: new cast-iron unit combines radiant and convected heat; low in height, only 20" high, it forms its own cabinet and requires no separate enclosure. Matching snap-on grilles provide complete concealment of piping. U.S. Radiator Corp., 300 Buhl Bldg., Detroit 26, Mich.

construction

Heatcrete: chemically stable densifier makes possible high heat-conductive concrete for radiant heating and structural applications; claimed to produce substantial economies in construction and operation; also provides quicker low-temperature panel heat production. Use of densifier reduces water in portland cement mixes up to 40%. Lee-Don, Inc., Harmarville, Pa.

Basement Sash Form: reusable steel forms for use when installing basement sash in poured concrete basements. Forms speed construction, assure perfect fit with proper clearances for operation of basement sash, and eliminate any possible leak in mor joints. Available for all three standa sizes of basement sash. Steelcraft Mfg. C 9017 Blue Ash Rd., Rossmoyne, Ohio.

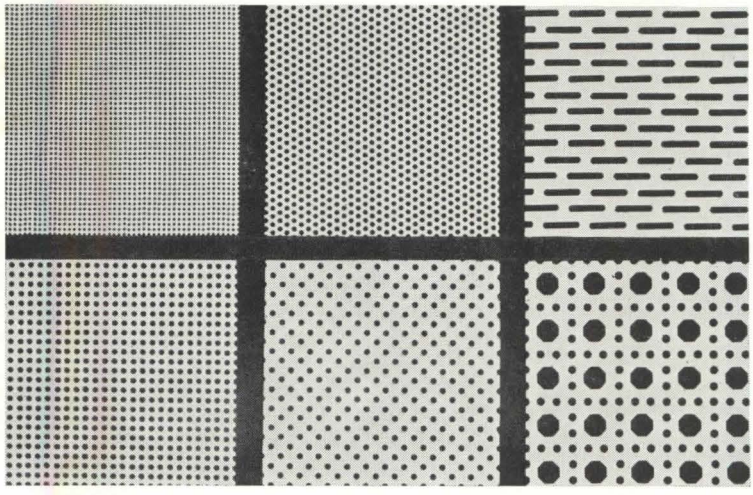
Riding Aluminum Storm Sash: frame a sash unit for casement windows "ride along with casement as it swings in out. Permanently attached to window wi weathertight sealing strip; sash is quick slipped out of frame from inside for wa ing. Inconspicuous appearance permits un to be used with almost any architectu style of residence. Alumatic Corp. of Am ica, 2081 S. 56 St., Milwaukee 14, Wis.

Vinylite Plastic Sheeting for Windo custom-cut plastic sheeting for direct ap cation to glazing; particularly useful in ducing sun glare in hospitals, factories, et washable, is easily applied, removed, a reused. Material is resistant to tearing, ab sion, moisture, oils, alcohols, and ma chemicals. Available in eight colors, fr frosted translucent to blackout black, varying degrees of glareless light transm sion. Transeal Ltd., 821 North Ave., Pla field, N. J.

Tubular Latch No. R 1952: newly signed tubular latch for screen, storm, combination door. Longer bolt throw (f 7/16") allows for greater door shrink and also gives positive latching action. steel construction withstands hardest k of use. Adjustable for door thickne from 7/8" to 1 3/8". Wright Products, Inc., Paul Park, Minn.

nonmetallic perforated sheets

Of new interest to architects is a nonmetallic perforated material, Fiberok, which compares favorably with conventional perforated sheet metals, at greatly reduced cost. Providing high acoustical properties, Fiberok has characteristics similar to those of laminated plastics or vulcanized fiber. According to the manufacturer, the material is quite strong mechanically and, unlike most metallic sheets, can be stapled, nailed, glued, screwed, cut with shears or knife. Standard sheets are manufactured in sizes ranging from 40″ x 21″ to 44″ x 60″; gages run from .010″ to .125″ in steps of .010″. A variety of perforated patterns, both on square and staggered centers, are obtainable *(below)*. Pearson Industries, 4554 N. Broadway, Chicago 40, Ill.



so be used for circular walls, thus elimiating the expense of constructing circular ood forms. Further savings result from ie crossed-beam action of the struts, hich gives additional structural support nd reduces shoring by 50 percent.

Four standard sizes of Rubora forms hould cover most requirements; special zes can also be supplied. Kurt Orban Co., nc., 205 E. 42 St., New York, N. Y.

electrical equipment, lighting

iffuser Unit: fluorescent fixture with inrect lighting to modify contrast between ightly lighted work areas and dark upper eas. All-steel construction, available in pen or closed end styles for two or three -w lamps. Reflector finished in choice high-gloss baked enamel or porcelain namel. May be used singly or in continuus rows, ceiling mounted or suspended by ariety of hangers. Leader Electric Co., 00 N. Kedzie Ave., Chicago 18, Ill.

ermaflector Downlight: series of square ownlights, fully recessed except for onelece, die-cast, hinged frame. Concealed nges and latch; "finger pull" permits quick pening when relamping or cleaning is ecessary. Completely packaged, wired, ady to install. Pittsburgh Reflector Co., 1 Oliver Bldg., Pittsburgh 22, Pa.

witchmats: line of extended-area electrial switches, in form of sheets or mats, are tuated by predetermined pressures rangg from few ounces to several tons. Typial uses are as foot switches for industrial nd commercial electrical equipment; acuators for automatic door operators; entry arms; automatic lighting of yards, sign, nd advertising displays, etc. Mats can be pplied on floors, platforms, and stair treads ithout obstructing foot or vehicle traffic. ecora Co., 7419 S. Western Ave., Chicago , Ill.

are Lamp Luminaries, Type BB: simply designed fixtures for general lighting in chain stores and supermarkets, available for use with two 40-w standard fluorescents or with two 38-w, 58-w, or 75-w slimline fluorescents. Ease of installation provided for by swiveled socket assembly and by mounting connector. Westinghouse Electric Corp., Box 2099, Pittsburgh 30, Pa.

Day-Flo Uplifter: single or double-length industrial fixtures, for use with single-pin or bi-pin fluorescent lamps. Approximately 28% light distribution is upward and 72% downward, thus providing greater seeing comfort, better brightness ratios, and higher quality illumination. Special design permits constant flow of air through fixture, thereby reducing dust accumulation. Wheeler Reflector Co., 275 Congress St., Boston, Mass.

specialized equipment

Cee-Loc: dual-purpose building maintenance product consists of self-cleaning cigarette shelf and toilet-stall door lock. As shelf, unit provides place to lay cigarette, and disposal receptacle that automatically disposes of ashes and butts. When door is locked, shelf automatiaclly springs into position for use; door is unlocked by lifting shelf, which automatically dumps ashes into receptacle, leaving clean shelf for next smoker and eliminating floor litter. As lock, it insures privacy, locking at touch of button. Electric-Aire Engineering Corp., 209 W. Jackson Blvd., Chicago 6, Ill.

Steel Kitchen Cabinets: new line of steel cabinets designed to meet trend to combination "living areas," are finished in wide range of wood grains: oak, birch, maple, cherry, and pine. Cabinet styles include custom sink, range, and refrigerator centers, and such standard units as fruit and vegetable bin, open-end base, lazy corner, storage and wall cabinets. Cabinet tops available in either Formica or inlaid linoleum. Harrison Steel Cabinet Co., 4718 W. 5 St., Chicago, Ill.

surfacing materials

Tee-N-Gee Panel: lightweight, natural wood color tongue-and-groove hardboard panel, 16″ wide x 8′ long, permits fast, easy application of wall paneling over studs, furring strips, or over old plaster by unskilled worker or professional builder. Panels may be sawn, planed, drilled, nailed, stapled, or glued in place. Forest Fiber Products Co., Forest Grove, Ore.

Sheetrock Firecode 60 and 45: two gypsum-wallboard products, incorporating specially developed gypsum core with additives to give them fire-resistant characteristics. Wallboards are ⅝″ and ½″ thick, with 60 min and 45 min fire resistance, respectively, permitting use of single layer drywall in areas where codes require extra fire-resistant construction between attached garages and homes, around stairwells, or around heating unit enclosures. U. S. Gypsum Co., 300 W. Adams St., Chicago, Ill.

pa MANUFACTURERS' LITERATURE

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

air and temperature control

1-207. June-Aire, 8-p. brochure describing winter air-conditioning systems, central plant heaters, unit heaters, and storm-proof ventilating wall louvers, for schools, churches, stores, factories, industrial buildings, residences, etc. Operational data, application methods, sizes, ratings, photos, drawings. American Foundry & Furnace Co., 1209 W St., Bloomington, Ill.

1-208. Fast Heating Action, AIA 30-C-14 (601), 24-p. catalog presenting full data on free-standing and semi-recessed, steel-enclosed convectors for use with heating systems employing steam, gravity or forced circulation hot water. New ratings, roughing-in dimensions, installation, pipe connection drawings, construction, performance, illustrations. National Radiator Co., 221 Central Ave., Johnstown, Pa.

1-209. The Finest Industrial Heaters for Your Plant, AIA 30-C-43 (NGC-10-52), 8-p. catalog describing various models of independent heating unit utilizing economical principles of direct heat transfer, operating at over-all efficiencies of 82-86%. Types, applications, full-color cutaway, and other illustrations, advantages. Prat-Daniel Corp., Thermobloc Div., 2 Meadow St., South Norwalk, Conn.

1-210. Titus Perimeter Diffuser. 4-p. folder. Illustrations of baseboard diffusers delivering heated or cooled air in complete arc over entire outside wall area; exposed surfaces made of extra-heavy gage steel to withstand floor-level abuse. Design data, typical layouts for small homes. Titus, Inc., Waterloo, Iowa.

1-211. Air-Flow Convectors (327), 16-p. catalog offering free-standing, wall-hung, and recessed types of convectors in selection of styles. Roughing-in installation data, ratings, dimensions, construction, other technical data. Illustrations. U. S. Radiator Co., 300 Buhl Bldg., Detroit 26, Mich.

Booklet and folder on residential, warm-air heating sytem, fully automatic, incorporating *salient* features of radiant, perimeter, and forced warm air heating. Design and installation data, component parts, tables, illustrations. York-Shipley, Inc., York, Pa.:

1-212. York-Heat

1-213. The Newest of Warm Air Heating Systems (RD-1256)

construction

3-170. Pacal High-Tensile Bolts (600), 12-p. bulletin pointing out advantages and economies of high tensile steel bolts over rivets for assembling of structural joints. Stock sizes, technical data tables, specifications. Paper, Calmenson & Co., County Rd. B & Walnut St., St. Paul 8, Minn.

3-171. Rigid-Tex Metal (DR-352-10), 6-p. folder outlining many uses of rigidized-metal sheet, ferrous or nonferrous, solid or perforated, available in variety of textured patterns. Advantages, patterns, finishes, applications. Rigidized Metals Corp., 658 Ohio St., Buffalo 3, N.Y.

3-172. Stressteel (1), 4-p. bulletin. Essential information on tensioning steel bars of extremely high strength, devised especially for use in prestressed concrete construction and for strengthening and repairing existing steel and concrete structures. Diagram, photo. Stressteel Corp., 211 E. 37 St., New York 16, N.Y.

★ **3-173. Armorply Building Panels,** AIA 17-A (1168-5206), 12-p. booklet describing lightweight, dimensionally stable building panels comprised of incombustible core and two metal faces, for curtain-wall construction. Types of core and faces (or skins), properties, suggested design details for application, graphs illustrating insulation values, weights, fire test performances; specifications for manufacture of architectural porcelain enamel skins. U. S. Plywood Corp., 55 W. 44 St., New York 36, N.Y.

doors and windows

Three folders illustrating many applications of steel-framed, sliding glass doors, weather-stripped for all-season protection, equipped with neoprene guide rollers for even, easy rolling and silent operation. Photos, types, sizes, details, specifications, segments of actual hospital plans. Arcadia Metal Products, 324 N. Second Ave., P.O. Box 657, Arcadia, Calif.:

4-208. Arcadia Sliding Glass Doors, AIA 16-E (SL-4)

4-209. Remodel Easily, Economically (SL-1)

4-210. Arcadia Sliding Glass Doors in the Modern Hospital (SL-16)

4-211. Foldoor, The Smartest Thing in Doors (5225), 4-p. folder describing flexibility, utility, and space-saving advantages of fabric-covered folding doors. Photos of typical installations. Holcomb & Hoke Mfg. Co., 1545 Van Buren St., Indianapolis, Ind.

★ **4-212. Daylight Walls That Don't Obscure Vision** (M-12), 24-p. booklet illustrating requirements of American Standard Practice for School Lighting, explaining "recommended practice," and showing how prominent architects build schools to meet requirements and fit residential environment. Case histories, typical cost figures, diagrams; photos of schools glazed with Thermopane insulating glass. Libbey-Owens-Ford Glass Co., Nicholas Bldg., Toledo 3, Ohio.

4-213. For Beauty and Duty, Plexolite AIA 26-A-9, 4-p. brochure on structural shatterproof, glass-fiber plastic sheet in corrugated form; transmits light freely, especially suitable for skylighting, window applications, patios, sunporches, etc. Standard types and stock sizes, strength data and static loads, uses, accessories. Plexolite Corp. of California, 4223 W. Jefferson Blvd., Los Angeles 16, Calif.

4-214. Pella Venetian Blinds (221), 8-p. booklet plus two specification sheets. Actual applications shown of Venetian blinds equipped with concealed operating mechanism and new end brackets, enabling entire blind to be taken down for cleaning and replaced without aid of tools. Photos, advantages. Rolscreen Co., Pella, Iowa.

4-215. Pomeroy Double-Hung Metal Windows, 12-p. catalog. Advantages of double-hung steel windows, operated either by sash balances or by weights and pulleys, for apartment houses, commercial buildings, hospitals, etc. Details, construction data, specifications, photos. S. H. Pomeroy Co., 25 Bruckner Blvd., New York 54, N.Y.

electrical equipment, lighting

5-140. Stabl-Lok Panelboards (PD 500) 16-p. booklet on new circuit-breaker panelboard system which makes possible on-the-spot arrangement of required panelboard assemblies without *need of waiting* for factory assemblies. Installation data, advantages, wiring diagrams, purchasing information, types of enclosures, photos. Federal Electric Products Co., 50 Paris St., Newark 5, N.J.

5-141. Fluorescent Fixtures, AIA 31-F-2 (52), 8-p. catalog offering variety of commercial and industrial fluorescent fixtures, spotlights, special purpose lights, and accessories. Selector chart, construction details, suggested methods of installation, photos. R. & W. Wiley, Inc., 129 Dearborn St., Buffalo 7, N.Y.

finishers and protectors

Two circulars, one describing portland cement grout sealer for use on cinder concrete block or very porous masonry surfaces; specifications, method of application. Other circular features new, washable, rubber latex resin wall paint, available in 20 pastel tints; uses, properties, advantages. California Stucco Products of New England, Inc., 169 Waverly St., Cambridge 39, Mass.

6-80. Porseal

6-81. Raylite

6-82. Martin-Senour Wood Stains (6) 8-p. catalog showing 40 new wood stain

lied to actual wood chips for color ac-
ıcy. Specifications for interior, close- and
n-grained woods. Martin-Senour Co.,
) S. Quarry St., Chicago 8, Ill. (Avail-
: for $1.50 to subscribers using their
erhead; send check or money order di-
ly to Martin-Senour Co.)

insulation (thermal, acoustic)

6. Industrial Insulations, 20-p. cata-
describing insulating materials—insulat-
cement, felted block, blanket, felt, and
: covering — with temperature ranges
n —150 F to 1800 F. Typical uses, sizes,
lication methods, thermal-conductivity
ohs, heat loss charts, photos, list prices.
dwin-Hill Co., 1183 Breunig Ave., Tren-
N.J.

7. Styrofoam (PL202-352), 24-p. book-
containing basic data on properties of
lating thermoplastic slabs for low tem-
ature applications only. Installation
hods, types of application, photos, illus-
ions, engineering data, standard sizes
packages. Dow Chemical Co., Midland,
h.

sanitation, water supply, plumbing

296. Watrous Flush Valves, AIA 29-
1 (449-A), 20-p. catalog offering line of
phragm- and piston-type flush valves for
ets, urinals, lavatories, and showers;
r types of valves and soap dispensers
described and illustrated. Imperial
ss Mfg. Co., 1200 W. Harrison St., Chi-
7, Ill.

**297. Uniflow Industrial Water Con-
ɔning Equipment,** 4-p. brochure on in-
rial water-softening systems built in
s of 150,000 grain gallons, and up. Photo
ıctual hospital installation, general spe-
ations, capacity table. Uniflow Mfg. Co.,
, Pa.

298. Wolverine Water Tube (K, L,
8-p. booklet describing three types of
cidized copper tubing for use in under-
ınd installations, interior and general
ınbing installations, and for stack waste
vent lines or other nonpressure appli-
ɔns. Specifications, sizes, tolerances, ap-
ation data, ordering directions. Calumet
fecla Consolidated Copper Co., Wolver-
Tube Div., 1411 Central, Detroit, Mich.

**299. Vertical Wet-Pit Centrifugal
ıps,** AIA 29cl (3-8000), 24-p. bulletin.
eral and technical data on two different
s of wet-pit pumps: heavy-duty unit
handling solids-free liquids and drain-
and screenless sewage ejector, con-
cted for solids-carrying liquids and sew-
Construction features, selection chart,
es, typical specifications, dimensions,
vings, photos. Yeomans Bros. Co., 1999
Ruby St., Melrose Park (Chicago), Ill.

specialized equipment

**300. Standard Stage Rigging Speci-
fications,** AIA 35-A-1 (800), 12-p. booklet. Stage-rigging specifications for architects, engineers, and specification writers, covering counterweight equipment for asbestos curtains, draw curtain tracks, electric curtain controls, and counterweight equipment wire guards. J. R. Clancy, Inc., 1020 W. Belden Ave., Syracuse, N.Y.

19-301. Modern Firescreens, 32-p. catalog offering custom-designed mesh-curtain firescreens of antique or standard brass, copper, satin chrome, and combined metals, to fit any type of fireplace, from period to modern. Illustrations, sizes, finishes, specifications, prices, index. Portland Willamette Co., 808 S.E. Alder St., Portland 14, Ore.

surfacing materials

19-302. Kentile as a Wall Covering (118), 8-p. booklet. Advantages of asphalt tile as wall material for hospitals, schools, institutions, theaters, and offices as well as homes. Installation data, architects' specifications, light reflectance chart, photos. Kentile, Inc., 58 Second Ave., Brooklyn 15, N.Y.

19-303. Ludowici Roofing Tiles, 8-p. booklet with full-color illustrations of clay roof tiles for both traditional and contemporary residences. Types, installation sketches; also, color photos of vitreous floor tile, available in square, rectangular, and curved shapes. Ludowici-Celadon Co., 75 E. Wacker Dr., Chicago 1, Ill.

19-304. Marble Revisits the Home, 8-p. brochure discussing use of marble on floors, walls, and corridors in the home. Photos of typical marble applications. Marble Institute of America, Inc., 108 Forster Ave., Mount Vernon, N.Y.

19-305. How to Improve Factory Methods with Masonite Presdwood (5202), 12-p. brochure. Types and uses of hardboard panels made of processed wood chips, pressed into panels of various thicknesses. Architectural applications, minimum bending radii chart, illustrations. Masonite Corp., 111 W. Washington St., Chicago 2, Ill.

19-306. Adhesive Products, AIA 23P, 20-p. booklet providing information on several types of adhesives, thinners, primers, tub-calk, and wall grout for thin-set clay tile. Advantages, specifications, installation details, instructions for setting tile by thin-set method, photos, illustrations. Miracle Adhesives Corp., 214 E. 53 St., New York 22, N.Y.

19-307. Philippine Mahogany for Residential Building, 6-p. folder showing use of mahogany in residential construction, including paneling, trim, fixtures such as mantels, bookcases, cabinets, etc., and exterior siding. Full-color plates. Philippine Mahogany Assn., Inc., 111 W. Seventh St., Los Angeles 14, Calif.

vertical traffic

20-11. Marshall Elevators, 4-p. folder on passenger and freight elevators, either oil-hydraulic or electrically operated, for commercial and industrial buildings; also, brief data on loading platforms and trucking docks. Illustrations. Marshall Elevator Co., 2015 Mary St., Pittsburgh 3, Pa.

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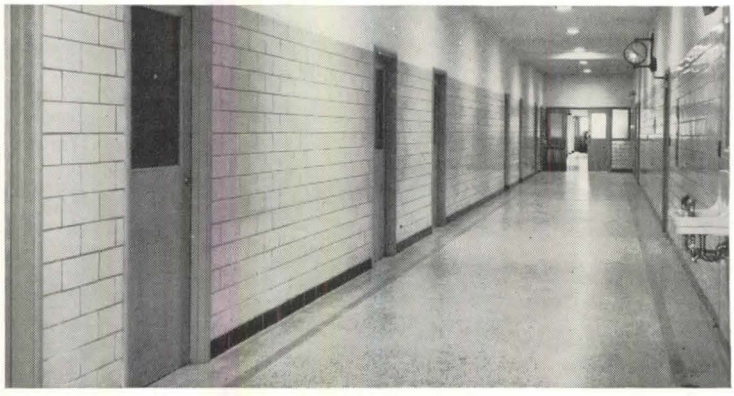

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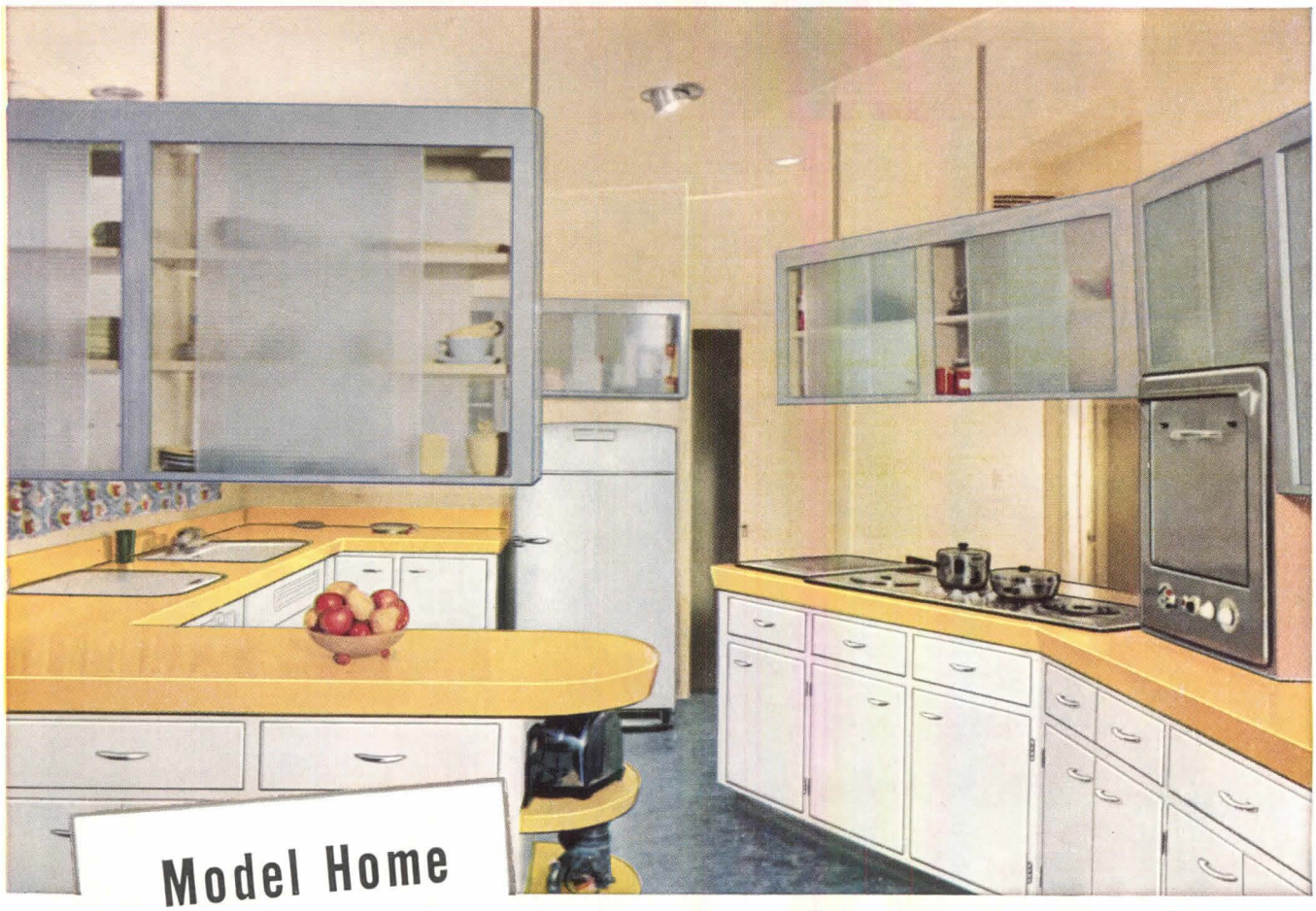

R. P. Stahl, Architect, Springfield, Mo.
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lobbies

by Page Beauchamp

No matter what the building, the lobby is one of the most important areas. As the introduction to the building, it should make the best impression. Consider the way the lobby will be used—as simply a corridor to the building itself, as a reception area, as a waiting room, as a meeting place—since any mood or effect may be created through choice of lighting, color, and scale. A lobby may be serene and restful, dramatic and exciting, or awesome and impressive. Functions of the lobby must not clash. Traffic lanes should be direct and ample, yet not infringe upon seating accommodations when those are wanted. Lighting may have to create several effects for really adequate atmosphere—and decoration must be carefully chosen.

On the following pages we show three examples: the lobbies of a hospital, a business concern, and an apartment house. Each has its own services to perform. In the Greenwich Hospital, ample provision has been made for seating arranged in several comfortable groups, to accommodate visitors who are strangers to each other. A cheerful residential atmosphere has been created through furnishings and decorations, to make waiting time seem shorter, and the hospital corridor is partitioned to conceal hospital activities. The business office lobby, on the other hand, is more dramatic though at smaller scale. This area expresses progressiveness and business success. Surfaces are plain in texture and have definitely background character, as the lobby serves as a passage to the many interesting displays created by The American Crayon Company to assist artists as well as to present its own products to best advantage. A still different conception is demonstrated by the lobby of Manhattan House, whose tenants can take pride in the first impression made on visitors. In four lobbies, opening at intervals from one long glass-walled corridor, seating groups are carefully disposed to suggest separate conversations. The decoration is a little more impersonal than that in the hospital lobby, yet the atmosphere is homelike. The result is quiet in key and taste.

Each of the lobbies is successful in atmosphere as the floor surfacing materials were well chosen for traffic, the lighting well handled for the various functions required, and the furnishings and decorations well chosen.

lobbies

acoustic tile

opaque-glass dividers

asphalt tile

location	Greenwich Hospital, Greenwich, Connecticut
architects	Skidmore, Owings & Merrill
furnishing consultants	W. & J. Sloane, Contract Division

data

Rug: mottled-gray twisted-loop wool, with bonded-rubber backing/W. & J. Sloane, Contract Division, Fifth Ave. at 47 St., New York 17, N. Y.

Wing Chairs: upholstered in modern small over-all geometric pattern in chocolate with white and red accents/W. & J. Sloane, Contract Division.

Easy Chairs: metal legs, upholstered in rough-textured gray-green, white, and chartreuse in soft check pattern/W. & J. Sloane, Contract Division.

Sofas: upholstered in dark-green and brown unpatterned fabric/W. & J. Sloane, Contract Division.

Armless Chairs: brown webbed-leather seat and back/W. & J. Sloane, Contract Division.

End Tables: gray Formica tops/W. & J. Sloane, Contract Division.

Lamps: chrome metal with white Fiberglas shades/W. & J. Sloane, Contract Division.

Lighting: 12 in. sq. recessed box fixture/special design/Court Butler Lighting, Inc., Stamford, Conn.

Terrazzo: Port-Morris Tile and Terrazzo Corp., 796 E. 140 St., Bronx, N. Y.

Ceilings: Suspended acoustical tile/"Softone"/ American Acoustics, Inc., Locust St., Keyport, N. J.

Window Glass: Thermopane / Libby-Owens-Ford Glass Co., Room 1038 T, Nicholas Bldg., Toledo, Ohio.

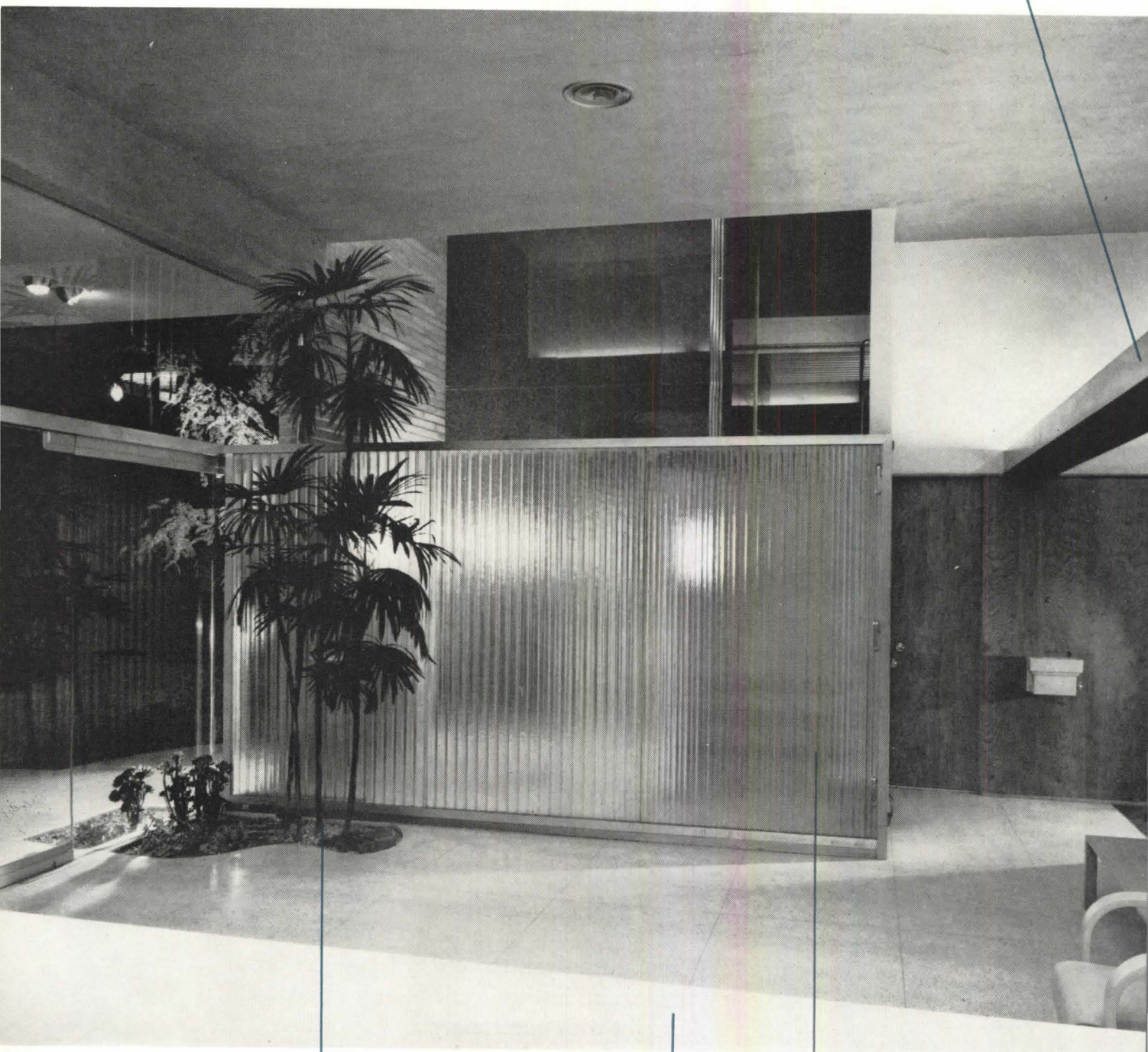
Heating Convectors: The Trane Co., La Crosse, Wis.

Paints: Devoe & Raynolds Co., Inc., 789 First Ave., New York, N. Y.

Marble Window Sills: installed by Equity Marble Co., Brooklyn, N. Y.

No one has ever said that a hospital lobby must look like the operating room. And yet, too often, lobbies in hospitals are cold, uncomfortable, and institutional. Waiting in a hospital lobby can often be fraught with uncertainty and uneasiness. How nice that this lobby doesn't look like a hospital! It has a comfortable atmosphere—its neatness and organization nicely relaxed through softening effects of an informal furniture arrangement. Another pleasant aspect is that the working part is screened from the lobby by an opaque glass wall. *Photos: Lionel Freedman*

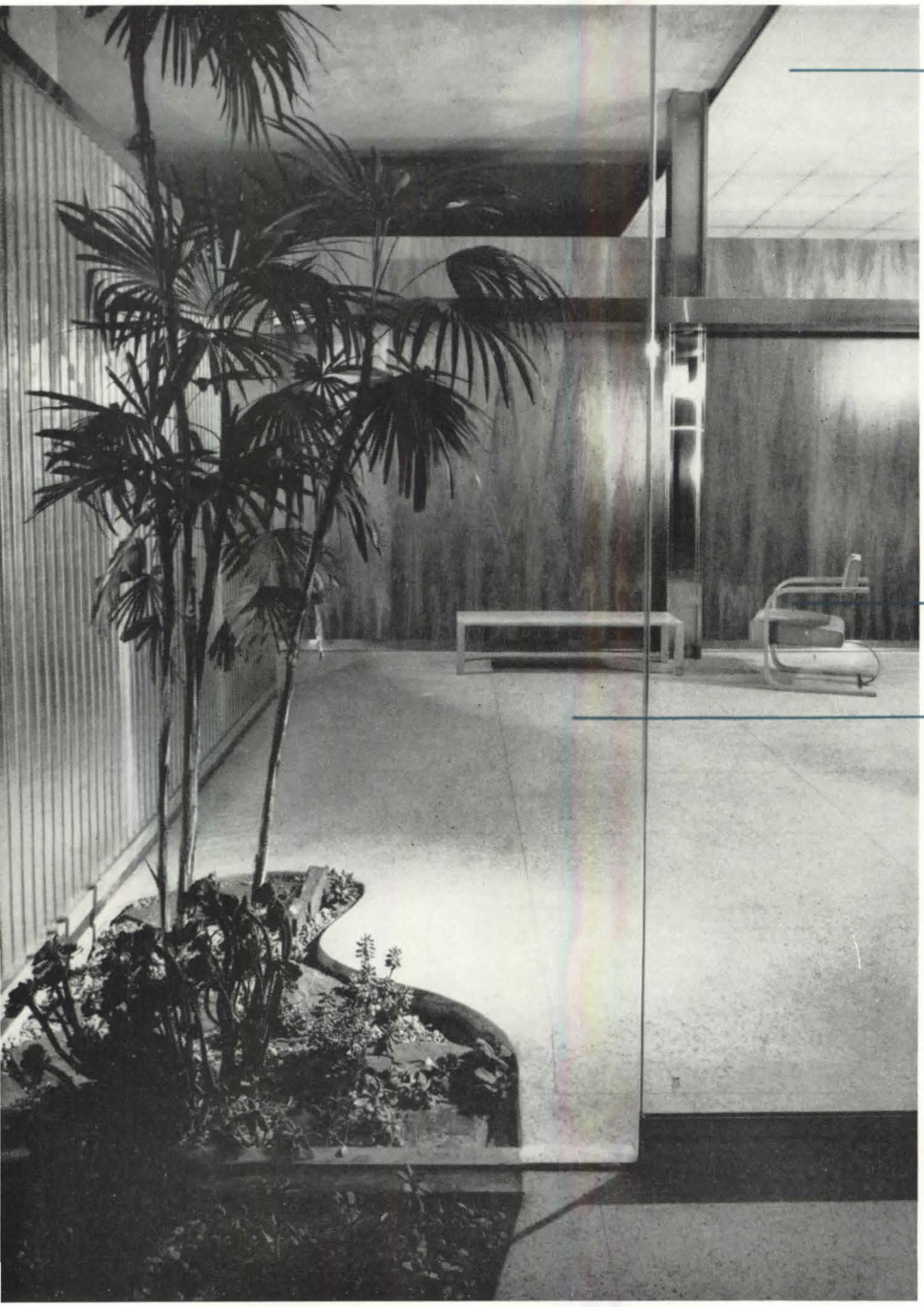
lobbies



location | The American Crayon Company, Los Angeles, Calif.

architect | Richard J. Neutra

The American Crayon Company's *Pacific Coast Studio* is located on the second floor of the Northwestern Mutual Fire Association Building. The lobby-reception room is dual-purpose. Besides serving its normal function it can become a well integrated part of the studio proper when a dividing curtain



data

Lighting: two rows of four fluorescent tubes above custom made eggcrate/ surface mounted with separate down lights/Sylvania Electric Products, Inc., Dept. T, 1744 Broadway, New York, N. Y.

Partitions: Birch and walnut veneer/ U. S. Plywood Corp., 55 W. 44 St., New York, N. Y.

Brick Walls: Rocklite Products, Ventura, Calif.

Ribbed Glass: Mississippi Glass Co., 88 Angelica St., St. Louis, Mo.

Asphalt Tile: "Matico"/ Mastic Tile Corp. of America, Newburgh, N. Y.

Glass Doors: "Tu-flex"/Libby-Owens-Ford Glass Co., Room 1038-T, Nicholas Bldg., Toledo, Ohio.

Landscaping: L. C. Harrison & Associate, Los Angeles, Calif.

wall is drawn aside. Since the studio is used for a variety of purposes—displays, lectures, discussion groups, consultation sessions, and demonstrations of art techniques—it is particularly valuable to have a flexible area in which to work. How much better to have the function designate the area, than the area limit the function.

An especially pleasant effect in the lobby is created by the combination of planes of glass, smooth wood veneers, sleek tile flooring, and the knowing use of foliage. *Photos: Julius Shulman*

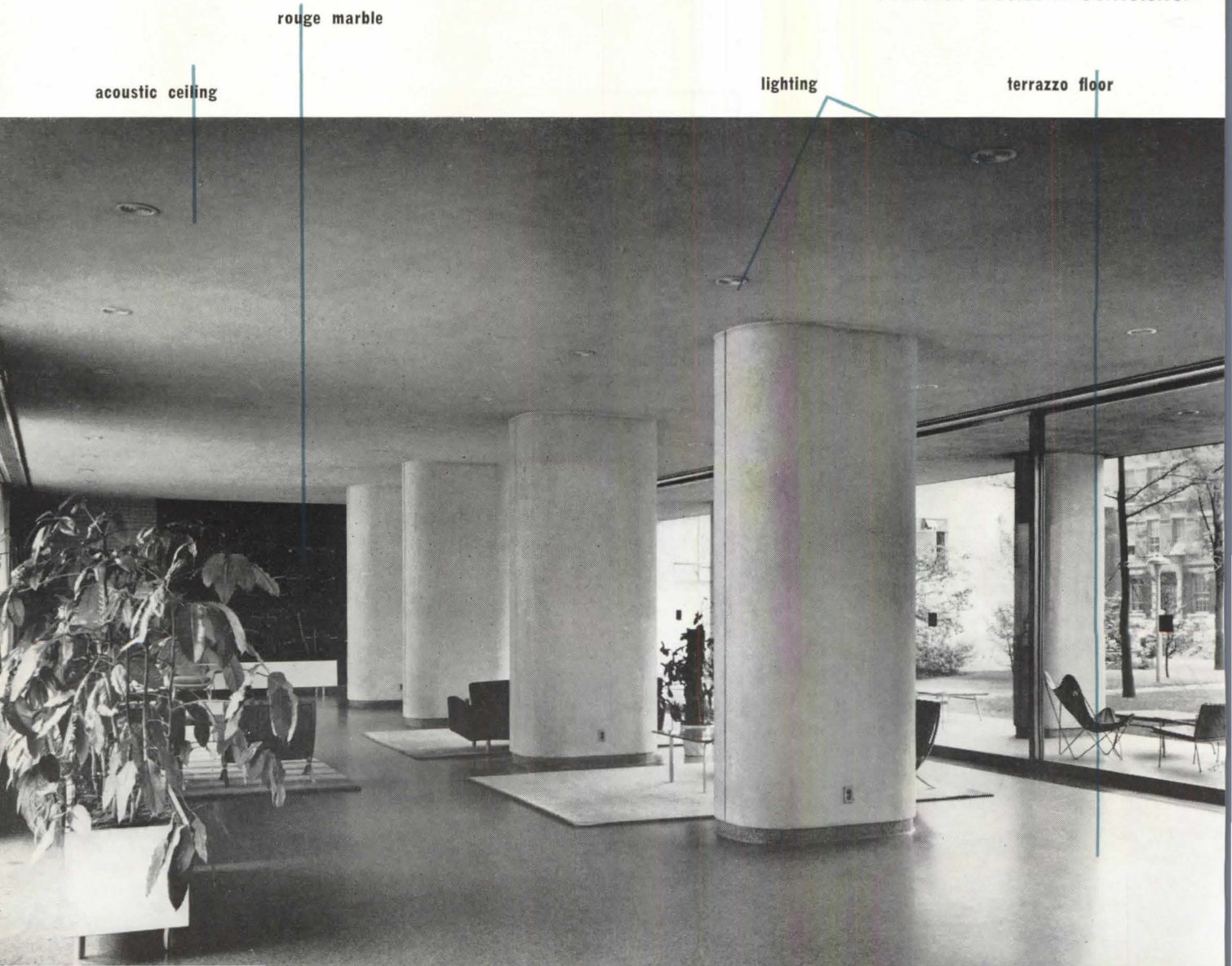
lobbies

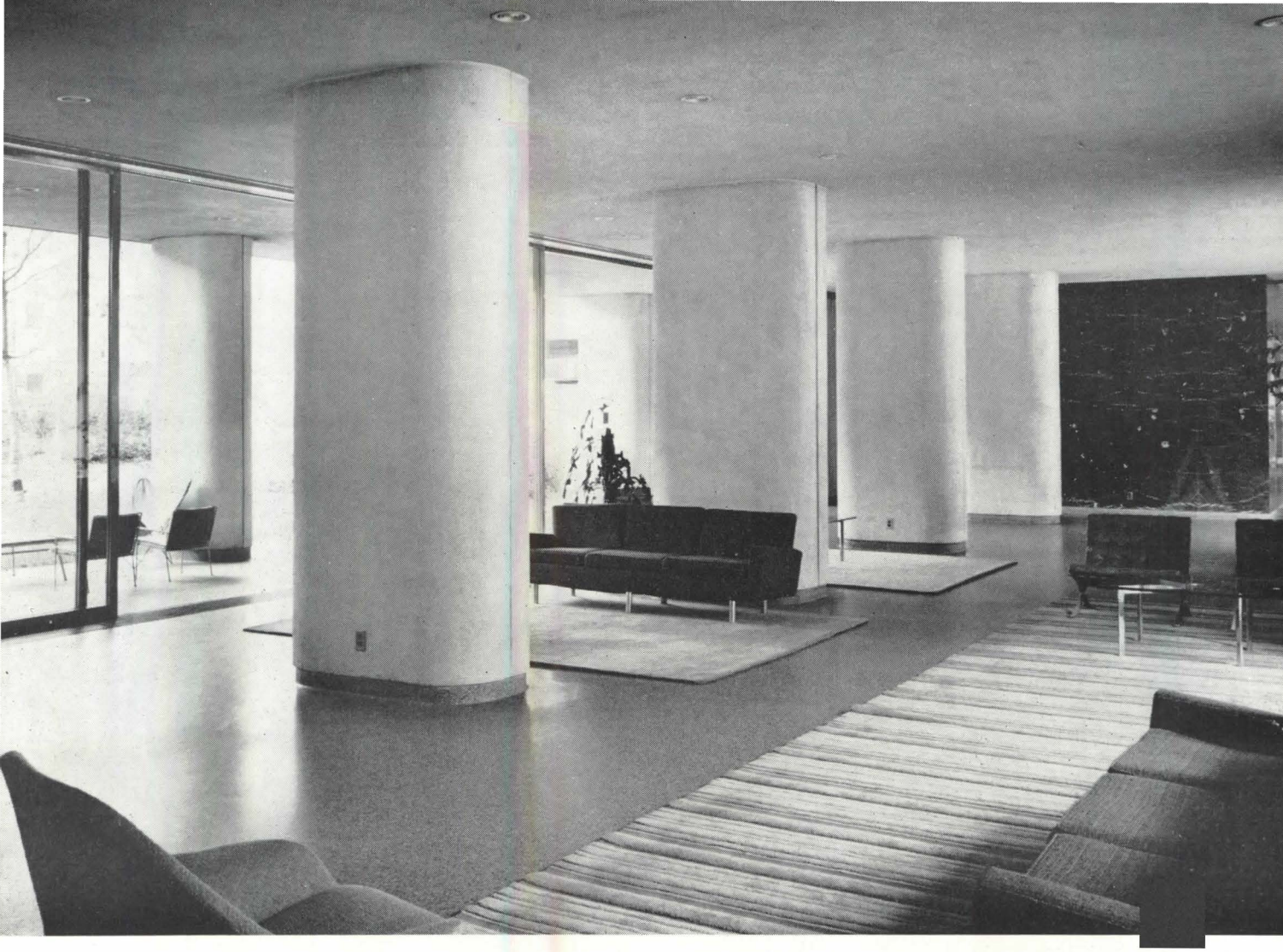
location | Manhattan House, New York, N. Y.

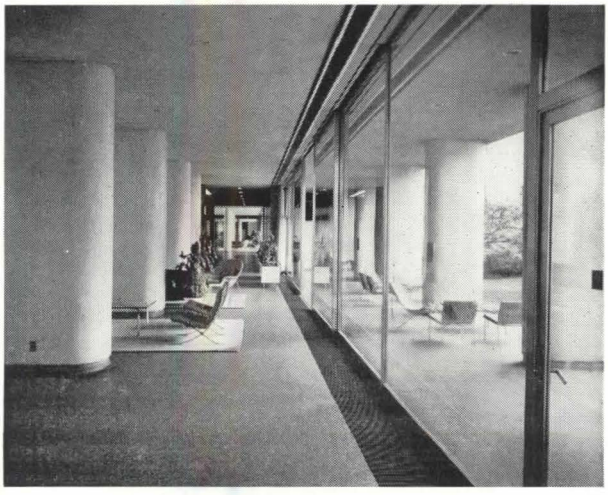
associated architects | Mayer & Whittlesey and Skidmore, Owings & Merrill

The huge area which is Manhattan House's lobby has been so well handled that one is not overwhelmed by its size. Not that largeness is a fault, but this space is used for guests of those who make their home in the building and therefore should not have the look of an office building or a railroad station. At any of the four entrances, one comes into a lobby separate and distinct from the whole, and one long hallway connects the four lobbies. Probably most outstanding features are the continuous glass walls on either side of the lobbies, and the framing of the windows by yards and yards of neatly tailored glass curtains and textured draperies. One side opens onto landscaped terraces where people may sit out-of-doors. In all, the appearance is light yet intimate. Coloring is serene—all is restful and comfortable with no attempt at foolish little decorative bits that would be completely lost. The dark greens of the foliage are repeated in much of the upholstery and carpeting—coupled with either quiet grays or beiges.

Photos: Gottscho-Schleisner







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Arm Chairs: #70/designed by Eero Saarinen/**retail:** $225 in muslin/Knoll Associates, Inc., 575 Madison Ave., New York, N. Y.

Stainless Steel Chairs: leather upholstery/#250/designed by Mies van der Rohe/**retail:** $550 in muslin/Knoll.

Sofas: #26/**retail:** $486 in muslin/Knoll.

Small Tables: designed by Skidmore, Owings & Merrill.

Flower Boxes: designed by architects/executed by New York Woodworking Corp., 133-16 35 Ave., Flushing, N. Y.

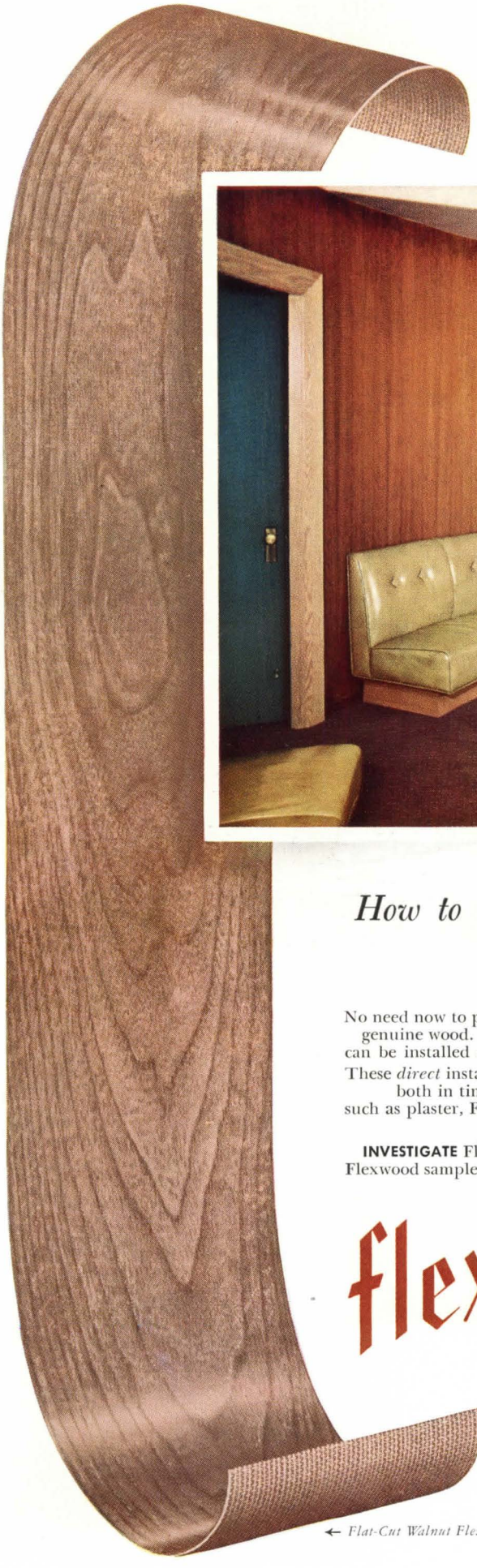
Draperies: designed by Marianne Strengell/Royle & Pilkington Co., Inc., 40 E. 34 St., New York, N. Y.

Carpets: designed by Marianne Strengell/Mohawk Carpet Mills, Inc., 295 Fifth Ave., New York, N. Y.

Lighting: flush fluorescent, recessed fixture/McPhilben Mfg. Co., Inc., 1329 Willoughby Ave., Brooklyn, N. Y.

Flooring: Terrazzo/V. Foscato, Inc., 22-02 40th Ave., Long Island City, N. Y.

Heating: hot water system/N. Y. Steam Corp., 130 E. 15 St., New York, N. Y.



← *Flat-Cut Walnut Flexwood.*

Reception Room. Miller and Burstein, Bridgeport, Conn. Architect: Victor Civkin. Figured Teak Flexwood on walls and compound curve of desk pedestal.*

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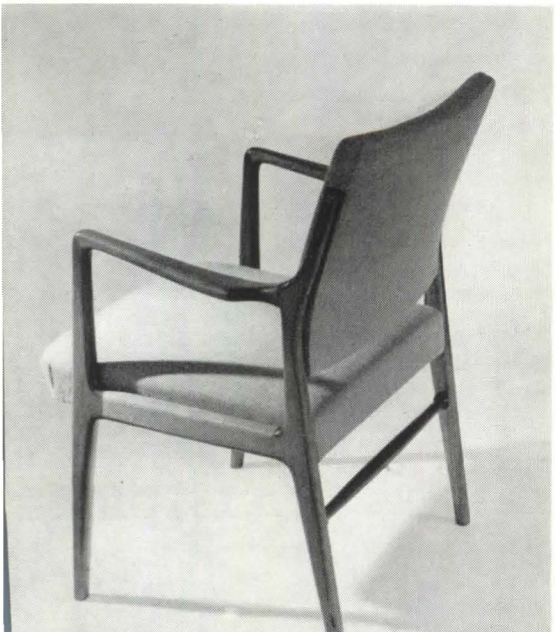
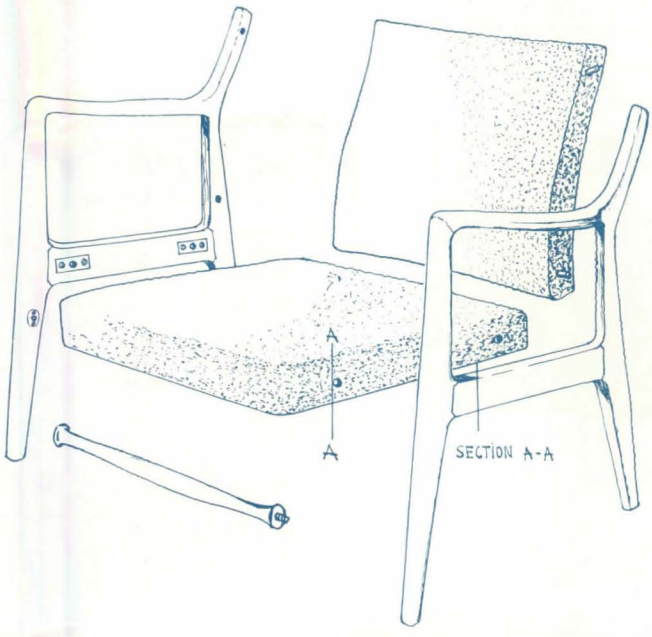
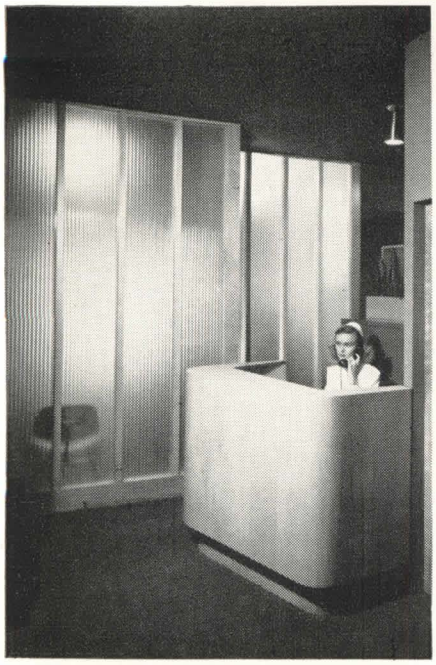
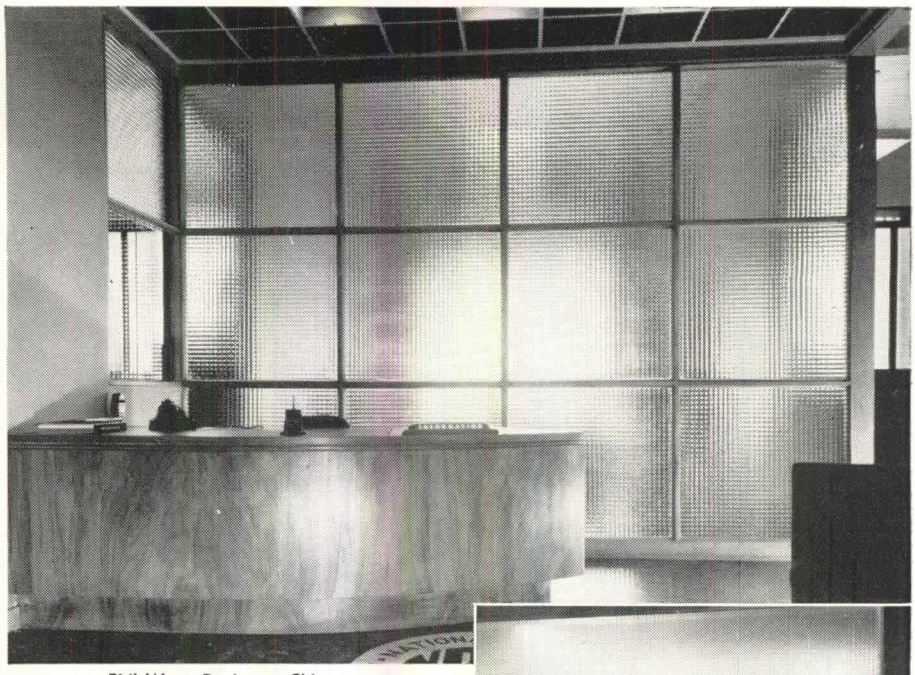


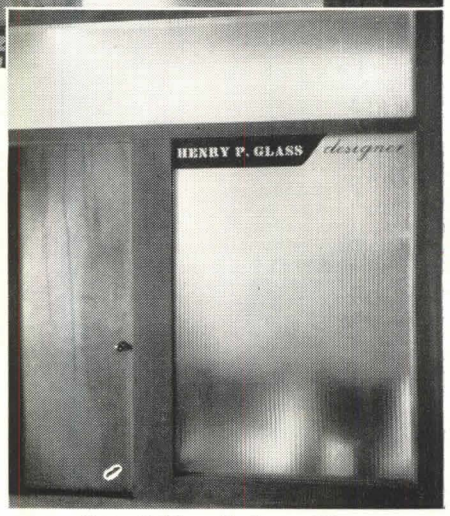




Olsen Designers, Chicago



Phil West, Designer, Chicago



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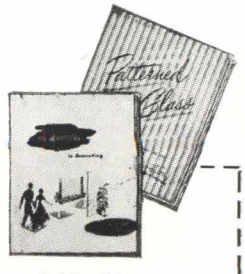

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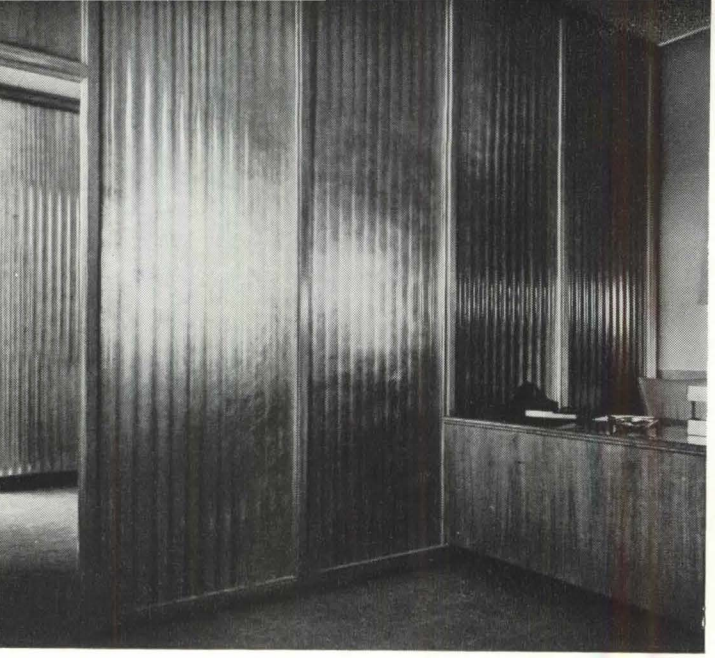

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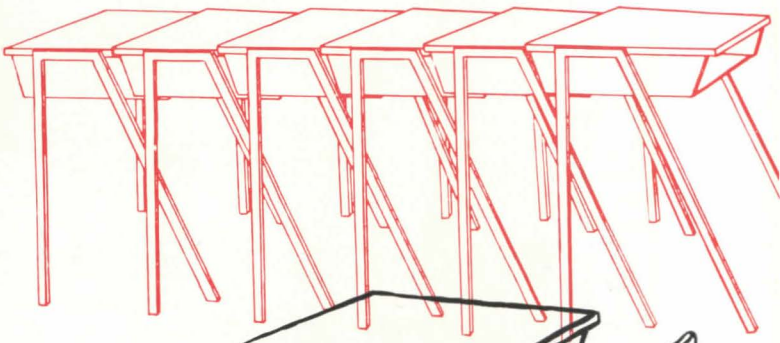

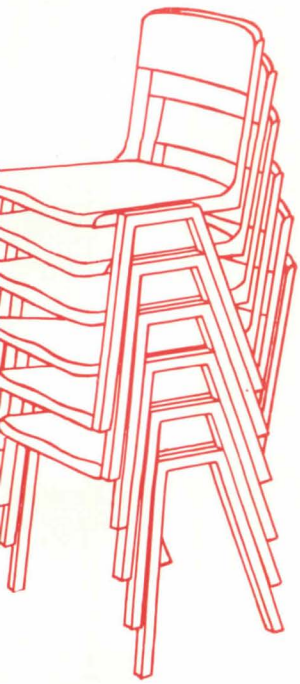

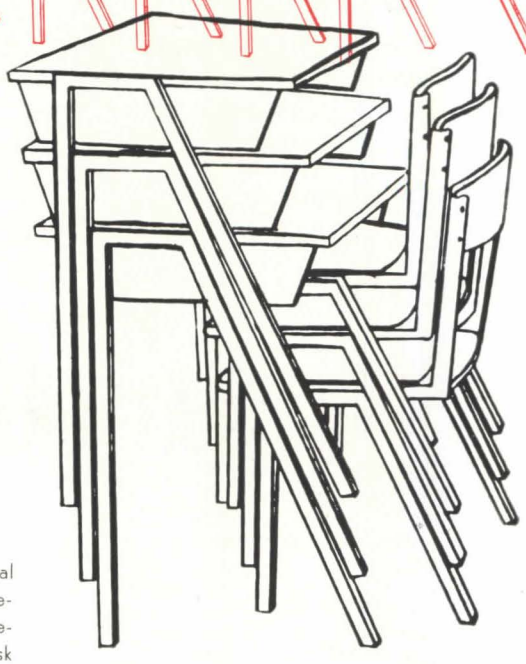

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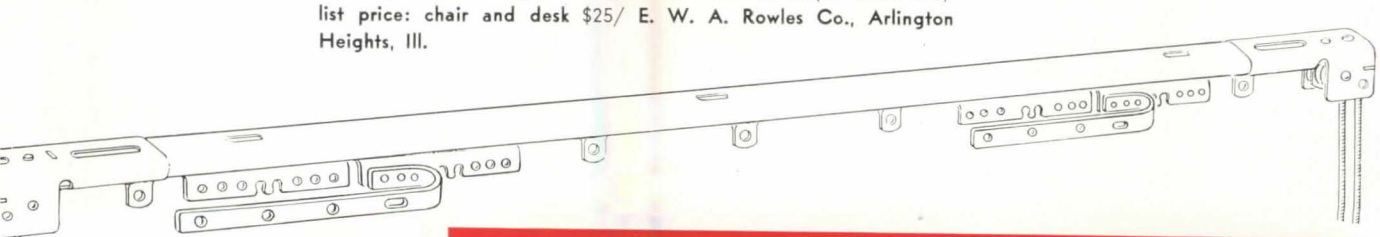

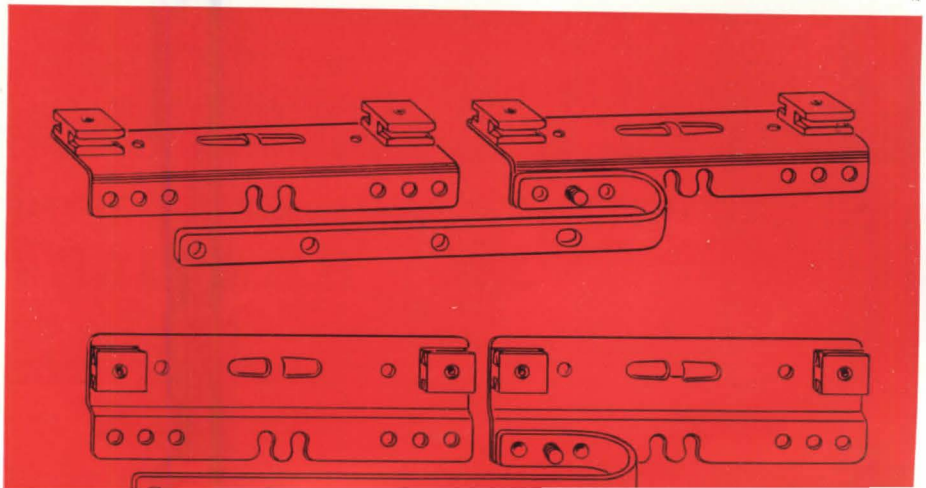

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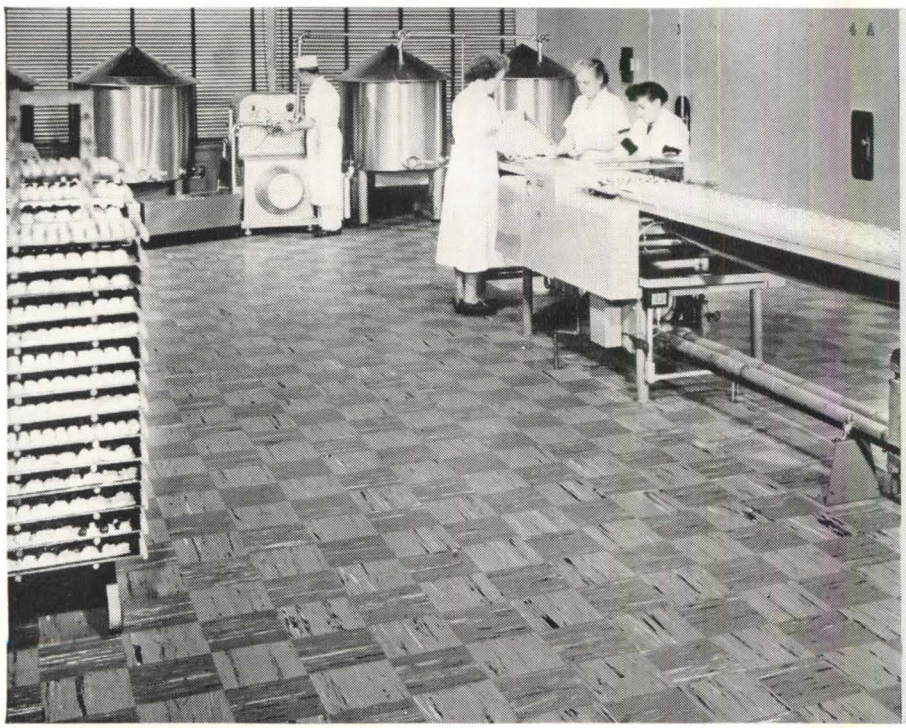

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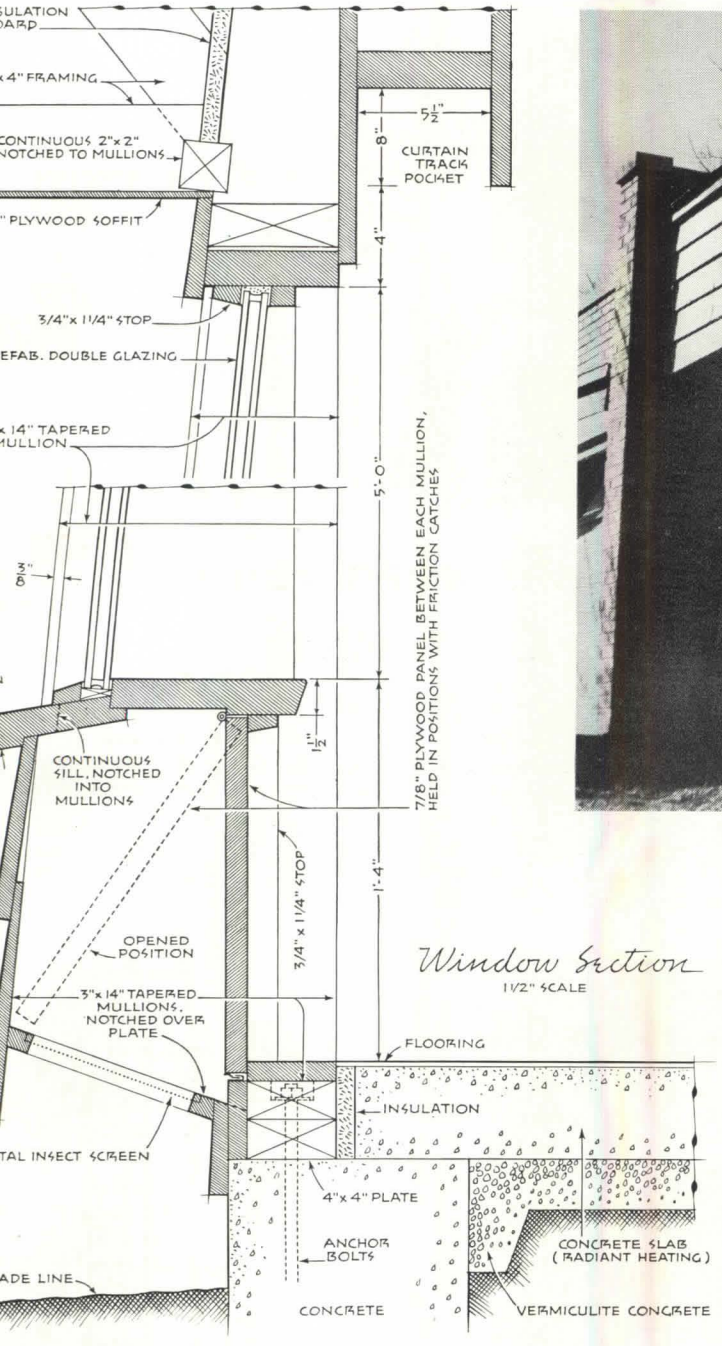
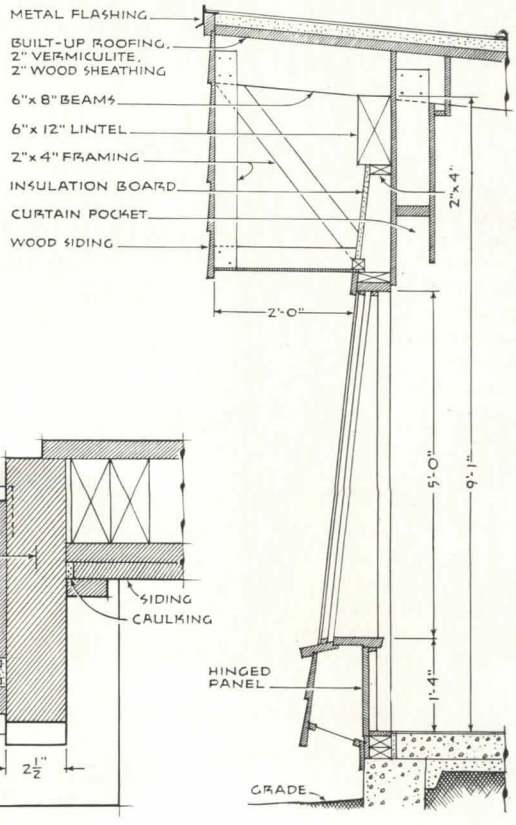
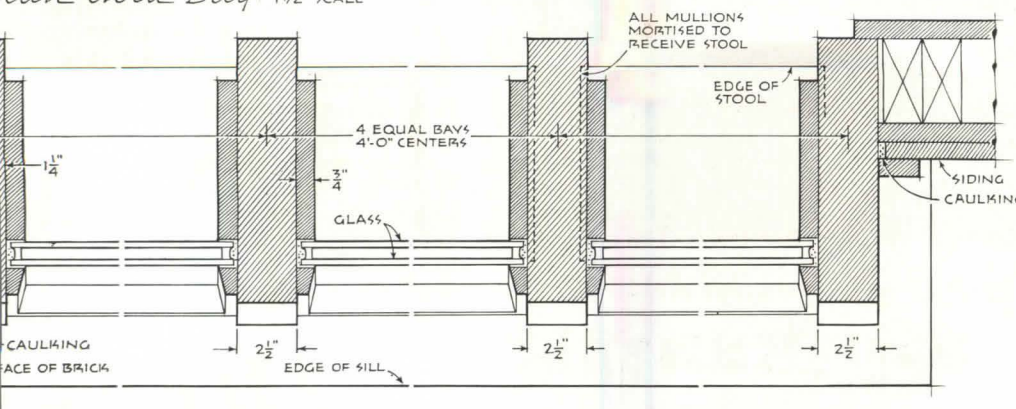


Window Section 1 1/2" SCALE

Wall Section 3/8" SCALE



lan thru Bay 1 1/2" SCALE



ONALD DAHLSTROM RESIDENCE, Deerfield, Ill.
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This Sloane Koroseal Tile Supreme *floor provides* beauty and reliability at low cost in the attractive showrooms of Herbert W. Scott, Inc., Chevrolet-Oldsmobile, Holyoke, Mass.

The Floor that Takes Traffic by the Car Load!

KOROSEAL TILE SUPREME

stays beautiful, defies the heaviest traffic and the effects of grease and oil... saves money through years of service and low-cost care.

A Koroseal Tile Supreme Floor is a sound investment in long-range economy. Its all virgin-vinyl composition provides unequalled toughness that assures service long after most resilient floors require repair or replacement. Grease, oil, acid, alkalies and strong soaps will not affect Koroseal Supreme . . . the through-and-through clear colors won't fade or stain . . . it won't crack or break and its indentation recovery is far superior to any other type of resilient floor.

You save money year after year on maintenance, too, because the nonporous Koroseal Supreme surface stays beautiful with a minimum of care . . . dirt can't cling to it . . . soap and water mopping keeps it clean and bright . . . even *occasional* waxing is optional.

Sloane Koroseal Tile Supreme comes in a range of 18 striking colors—Marbletone or Crystaltone pattern—that create attractive floors to match any décor.

For maximum wear, beauty and comfort . . . for years of money-saving service, specify Koroseal Tile Supreme . . . the ultimate *in resilient* floor coverings.

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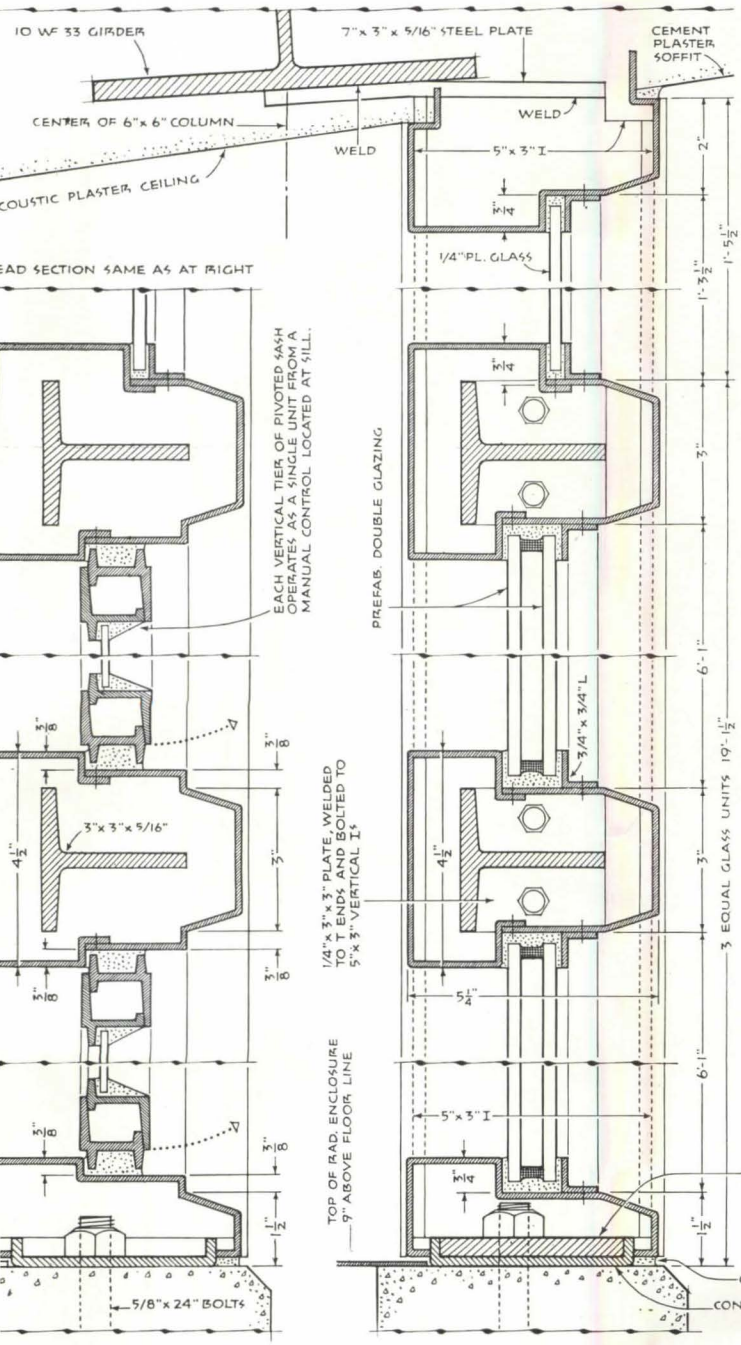
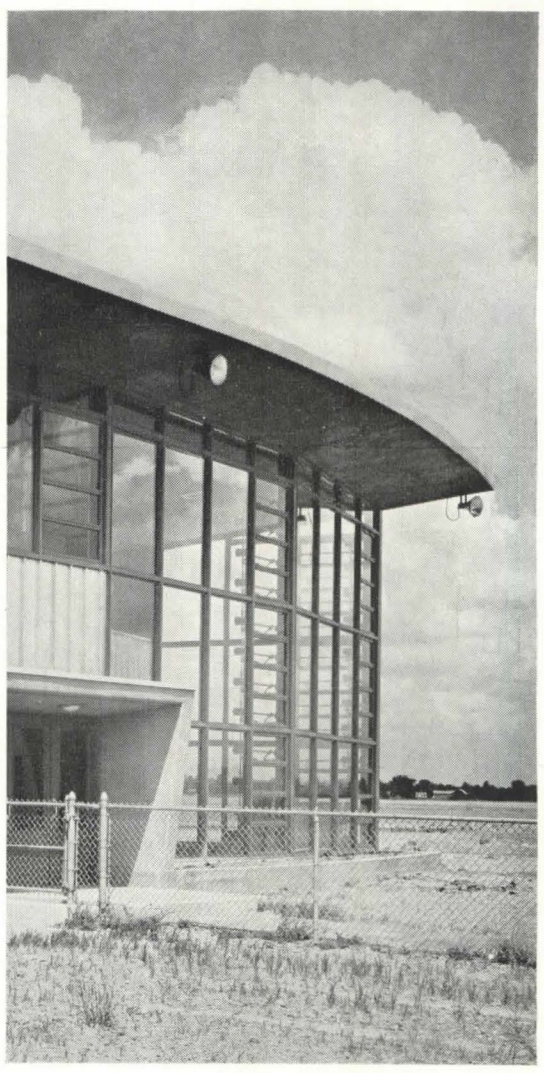
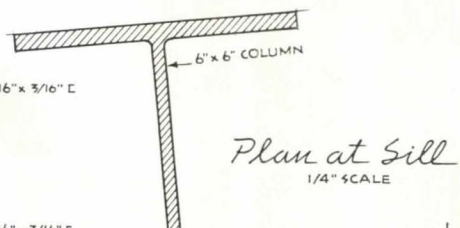


Wall Section 3" SCALE
(THROUGH PIVOT SASH)

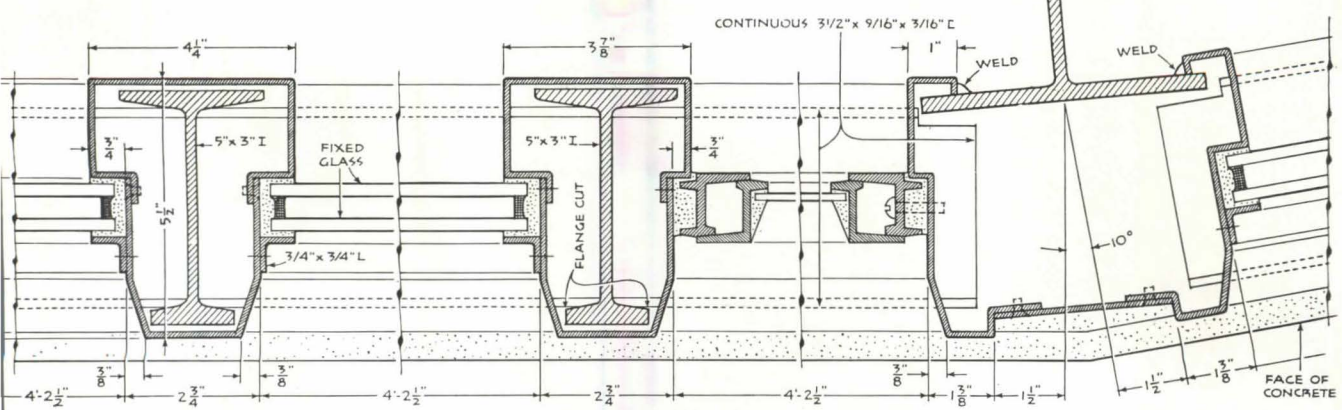
Wall Section 3" SCALE
(THROUGH FIXED GLASS)



WATERTOWN N.Y. TIMES



Plan at Sill
1/4" SCALE



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gent, Webster, Crenshaw & Folley, Architects

NOW — Famous HAR-VEY QUALITY in LOW-COST Hardware!

for interior Rolling Doors up to 70 lbs.

New CHALLENGER Series

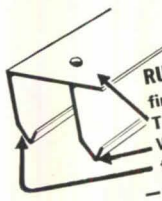
SCORES ON EVERY COUNT

Quality

Economy

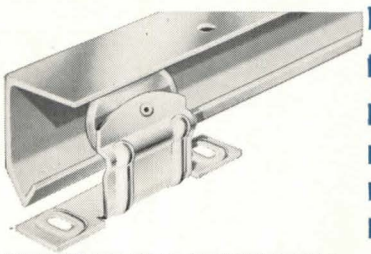
Performance

Self-lubricating Oilite bearings ... no maintenance, ever!
Durable NYLON Rollers
Sturdy ribbed-steel hangers, cadmium plated
ADJUSTABLE, for quick, accurate hanging

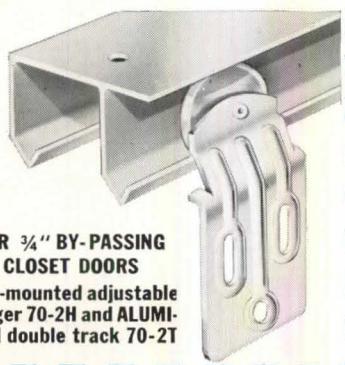


RUSTPROOF ALUMINUM TRACK
finest quality extruded ALUMINUM
Top-mounted for easy installation—no mortising!
V-groove design prevents "chattering" of roller
track serves as trim—no painting necessary!
— engineered to prevent roller jumping track
— low headroom, 1"—1¼"

3 Models meet *all* your needs, for doors up to 70 lbs.



FOR SINGLE POCKET OR BI-PARTING DOORS
¾"—1⅜"
Top-mounted hanger 70-1H and ALUMINUM single track 70-1T



FOR ¾" BY-PASSING CLOSET DOORS
Side-mounted adjustable hanger 70-2H and ALUMINUM double track 70-2T

FOR 1⅜" BY-PASSING CLOSET DOORS
Side-mounted adjustable hanger 70-3H and ALUMINUM double track 70-3T

PACKAGED for convenient handling and quick selection in the small, rectangular, easy-to-store Har-Vey Handy-Pak...contains everything for a complete installation, for 2', 2'-6" & 3' doors.

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New HAR-VEY HEAVYWEIGHT available for Doors up to 200 Lbs. — Get the facts today!

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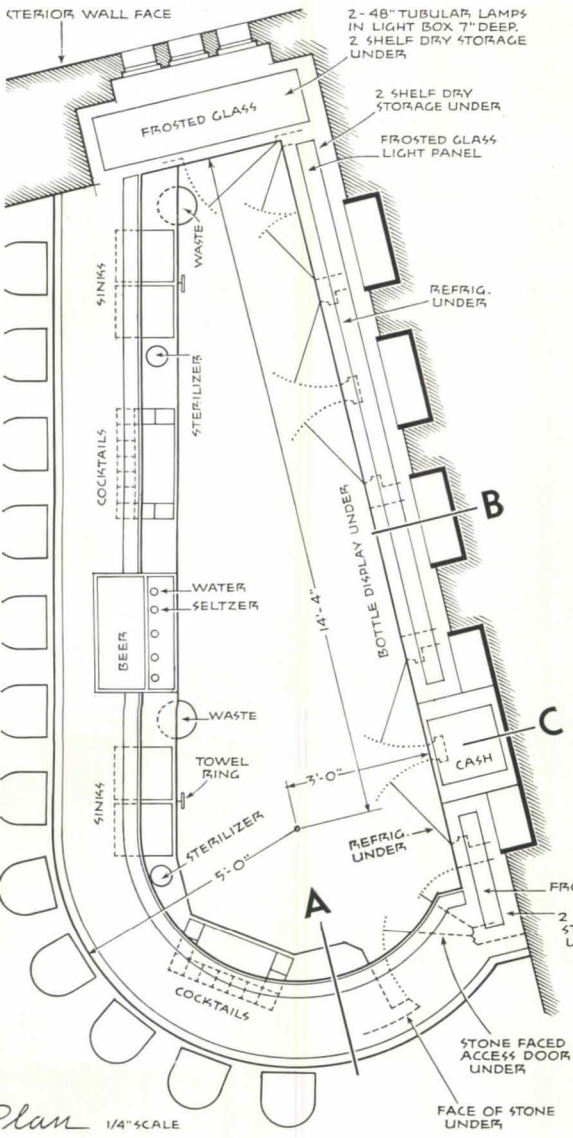

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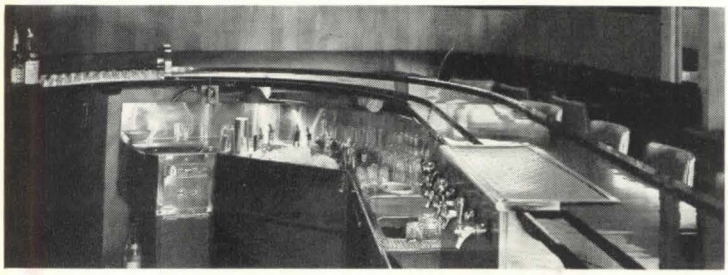
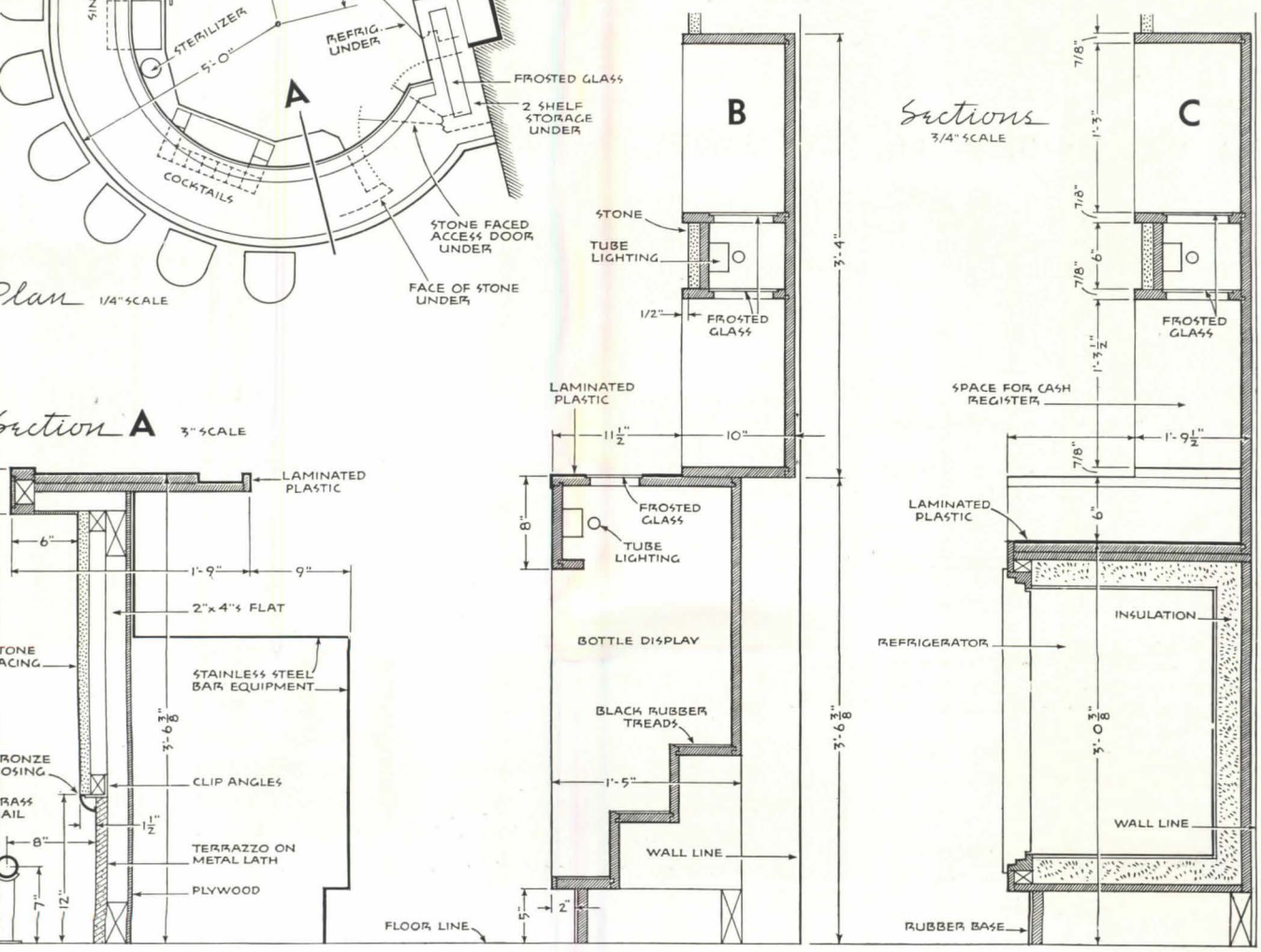


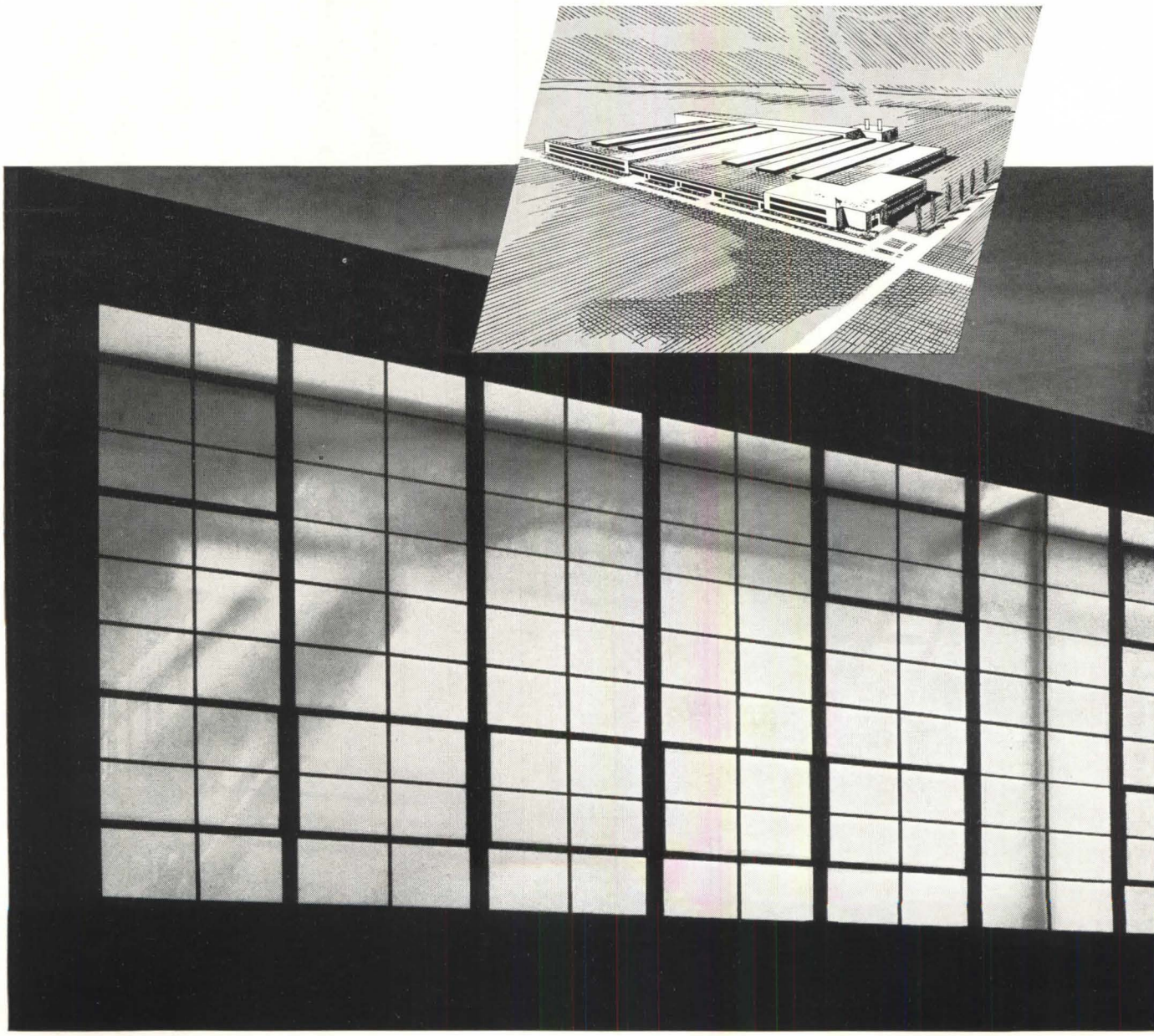


OLLENDEN HOTEL, Cleveland, Ohio

c Lessman Interiors, Designer

CECO 1-source service

helps America's presses roll...



There's nothing deader than yesterday's newspaper. Publishing is a business of timeliness . . . of speed . . . of deadlines. When the nation's newspapers need new presses, there's need for speed in getting them there.

That's a continuous problem of the Goss Printing Press Company, one of America's leading printing press manufacturers. So, when rapid growth in their business called for expansion, the Goss Company, its architects Olsen & Urbain and contractors Sherman Olson, Inc., needed quick deliveries of building supplies to meet "on time" building schedules. That requirement pointed to Ceco, for we meet such emergencies day-after-day . . . year in—year out. Ceco went to work . . . steel bars and welded wire fabric soon gave reinforcement to a mounting structure . . . steel windows were placed to assure more light and controlled ventilation . . . in record time another building was added to Chicago's industrial skyline.

Once again Ceco's one-source service came through, and expanded facilities at Goss Printing Press Company met delivery deadlines to the nation's press. Ceco one-source service embraces precision engineered steel products, delivered and invoiced from one source, all adding up to faster, more efficient service at savings in money too.

More and more architects, engineers and contractors depend more and more on Ceco for help on building problems.

CECO

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construction for medical care

(Continued from page 85)

concentric circles which surround the rim of thi wheel, as an extra-mural activity reaching out int the patient's home.

All of this is logical and, in fact, compulsory, i view of the latest developments in medicine and sur gery as well as in the social sciences. Changes i structure and in space allocations will be the in evitable result. The criteria for admission to hospital will depend entirely on clinical rather tha on social need, the home being available in adequat housing programs. Only those patients will qualif for admission to a hospital who require technica procedures of one kind or another which cannot b applied in the home. Whereas the proportion of bed allocated to medicine and to surgery in the voluntar general hospitals of this country have been abou equal until recently, it is reasonable to expect tha an extra-mural home-care program will draw awa from the hospital far more medical than surgica patients. *Home care will reduce the demand on bed within the hospital* and, as a result, it will force a expansion of diagnostic and therapeutic hospita facilities for home use. Provisions for sufficien intra-mural facilities to serve extra-mural areas wil therefore have to be made. Also, there will be fa greater co-operation with the practicing medical pro fession in this regard, with a consequent increase call on these intra-mural facilities. The result of al this will be a preponderance of surgical over medica beds within the hospital, a greater emphasis on oper ating room facilities, expanded laboratories, and ex panded out-patient departments of all kinds.

Medical education is already beginning to shif some of its emphasis from the in-patient departmen to the out-patient department of the hospital, wher the student finds a greater wealth of pedagogicall useful clinical material, and this tendency too mus be taken into account. Moreover, research labora tories will have expanding opportunities in the con tinuity of intra-mural and extra-mural care. Thes will enable the physician to cling tenaciously to th stubborn cases of prolonged illness, and give him much stronger scientific foundation for his work tha we have thus far seen in the limited time, space, an energy at our disposal within hospitals. The sam goes for X-ray departments, diagnostic and therapeu tic, departments of basal metabolism, cardiography encephalography, hematology and the like. The rati of cubic feet of service space within the hospital wi have to be increased, apart from the rapid advance in medical science, because this cubic footage wi

be required to serve beds outside as well as inside.

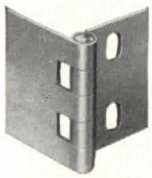
In such an integrated setup, the nursing office will preside over a wider area of nursing service, and the same can be said of the social service department. The dietetic department similarly will expand its area of usefulness.

I would, in fact, urge that all future hospitals be geared to the care of the difficult, complicated, and tenacious, cases of prolonged illness. Only then will we be sure that such patients will receive the right kind of care, while acutely sick patients will be easily dealt with as part of the day's work, since all facilities for their care will be available. As matters now stand, the care of the patient suffering from prolonged illness, such as it is, is an outgrowth of the work of the so-called acute general hospital. We have reached a point in the history of medical science where we can start from the other end and gear the hospital to the care of the most difficult scientific problems. It goes without saying that the easier problems of acute medicine and surgery are more successfully assimilated in the environment of such a hospital. The criteria for admission to this kind of hospital, which would make no distinctions between "acute," and "chronic," will be *based solely on the need for the hospital and not on the duration of the illness*. Distinctions, from the standpoint of service, between "curable" and "incurable" patients will more readily disappear in such a hospital than in any other type of institution, if we will only remember that *hospitals are not established for curable patients only*. We can relate acuteness to urgency, but it is not generally appreciated that lessened urgency can be chronic, and to some extent compelling, for varying periods of time. In our planning for medical care, we should never lose sight of the fact that *most people take a long time to die.* This problem in medical care is still largely neglected.

These are trends for the architect as well as trustee to ponder because he will be called upon to interpret them on his drawing boards. It is to his interest that the product of his skill be good for as long a time as possible. He will be far more valuable to his employers if he is handed a sound functional basis for his designs, and this is something too for his employer to ponder. *The need for co-operative structural planning based on a solid functional program is greater today as we emerge from the pre-scientific era.* The social worker and the physician are joining hands in the beneficent practice of *social medicine* which has all of these lessons, and more, to teach us. We must be more alert than ever to adjust our sketches to the increased tempo of medical and surgical invention and discovery.

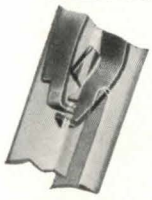
Compare Them for DURABILITY SECURITY TOP VALUE

SAG-PROOF HINGES



Rugged 5-knuckle hinges, with 3/16" semi-recessed pins, are made of 14-gauge steel, both welded and bolted into place.

GREATER SECURITY



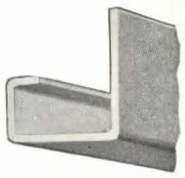
Only Medart Lockers have this patented pick-proof "dual latch" mechanism concealed in the lock rod channel. It's pre-locking, positive in action whether door is slammed or gently closed.

STURDY BOTTOMS

Built to take brutal punishment — won't break or sag. Full ¼" flange of bottom is tied solidly to steel frame. Compare this feature with ordinary lockers!

STRONGER

Entire frame — top, bottom and sides — is channel-shaped steel electrically welded into a single solid, rigid unit that stays square and true.



ADJUSTABLE LEGS

Heavy malleable iron. Front legs are adjustable up or down to compensate for unevenness of floor.

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MEDART LOCKERS are built in all standard types and sizes, both recessed and free-standing.

BASKET SHELVING sturdy and very rugged, both permanent and portable, in many sizes is built by Medart.

A better constructed, stronger, more serviceable locker can't be bought! More than that, because Medart originated virtually every practical feature used in modern steel lockers, Medart builds the locker that includes them *all* — not just those above, but many more!

By actual comparison you'll find the skillful engineering, best quality metals and precision manufacture in Medart Lockers are a better paying long-term investment in extra years of service, far less maintenance, appearance that stays new indefinitely, and thoroughly dependable tamper-proof protection.

Medart offers 80 years of engineering experience to help analyze and solve the most complicated locker problem. No matter how modest your budget, Medart Lockers give you more for the money!

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Medart ST. LOUIS MISSOURI

the effective art

Posters. *W. H. Allner. Reinhold Publishing Corp., 330 W. 42 St., New York, N. Y., 1952. 120 pp., illus., $8.50*

Poster art is at once the oldest and the newest form of mass communication. The oldest, because the drawings of bisons made by Neolithic cave men may be assumed to have been propaganda, either for the prowess of the hunter or for the location of a good hunting ground. The newest, because the ingenuity of the contemporary artist seems to express itself more freely in posters than in other forms of advertising. Consequently, poster art of the present day shows more variety, more ingenuity, more scope, more direct impact than other forms of advertising. That this should be the case is no accident, since the poster is—more than any other form of advertising—almost entirely the creation of the artist, and depends for its effectiveness primarily on what the artist does with it.

Public reaction to posters indicates that people are ready and willing to follow the artist in his flights of imagination wherever he wants to take them—provided that his point of departure is sound artistically and psychologically. Thus, we have already been conditioned to accept shapes or forms, color and line, as symbols, sufficient within themselves to convey a selling message. Shapes have become more interesting and more provocative than merchandise and services; an exaggerated, posterized worm's-eye view of a liner's prow suggests the whole ship, foreign countries, the sea air and everything else that goes with an ocean voyage. The Beggerstaff Bros. and Toulouse-Lautrec, etc., supplanted the cluttered, over-elaborated posters of the late 19th Century even before today's streamlined automobiles displaced the horse and buggy. The posters of today tend more and more toward simplicity. And insofar as they achieve it, they gain in directness, in effectiveness, in artistic, and psychological integrity.

This is beautifully illustrated in W. H. Allner's new book, *Posters*. It is a representative collection of contemporary poster art—not a complete collection, but a good cross-section of what is being currently done.

With this important reservation in mind, the reader will find that some of the posters reproduced in this book are not posters at all. They

(Continued on page 142)

books received

Frank Lloyd Wright, Sixty Years of Living Architecture. Distributed by Museum Books Inc., 48 E. 43 St., New York 17, N.Y., 1952. 100 pp., illus., $4.50

Roots of Contemporary American Architecture. Lewis Mumford. Reinhold Publishing Corp., 330 W. 42 St., New York 36, N.Y., 1952. 454 pp., $7

Jordans Dictionary of Civil Defense. Edited by Carlton Wallace. Philosophical Library, Inc., 15 E. 40 St., New York 16, N.Y., 1952. 160 pp., illus., $2.75

Robert Moses: Builder for Democracy. Cleveland Rodgers. Henry Holt & Co., 383 Madison Ave., New York 17, N.Y., 1952. 356 pp., illus., $6

REVIEWS

(Continued from page 141)

may be excellent design or tasteful layout or both, but they are not posters in the true sense of the word. Saul Steinberg's poster of "Rigoletto," for example, has simplicity, directness, and good design—but by no stretch of the imagination can it be called a poster. Similarly, Ladislav Sutnar's contribution has good design, telling color, excellent layout—but as a poster it defeats what it is trying to say. Here the message, "*It's Safe . . .*," is confused by the way type is used—and that element alone is enough to destroy its poster quality.

The exact opposite is true of Leo Lionni's poster, "*Listen to . . .*" Here design, lettering, and all other elements combine to create a perfect poster. Other splendid posters in the book include A. F. Arnold's poster for LEE Work Clothes, and Allner's own superb poster for *Life* magazine.

In fact, most of the selections are excellent, and should serve as comprehensive copy for the student and inspiration for the professional. A good book on poster design has been long overdue, and Allner's is the best and freshest book on the subject published in at least a decade. Eight dollars and fifty cents seems a modest price to pay for so many fine posters—11 of them in color and the rest in black and white—when we consider that each one of the fifty artists represented here is exemplified by an outstanding example of his best work.

ERVINE METZEL

student expression

Perspecta. *The Yale Architectural Journal. Schools of Architecture & Design, Yale University, 2121 Yale Station, New Haven, Conn., 1952. 56 pp., illus., single issue $1.50*

The first issue of this new and ambitious student undertaking (Summer, 1952) is a handsome and intelligently edited publication. Well printed on heavy stock, with a 10" by 12" format, its avowed purpose is "to create a medium of expression . . . through which the potentialities of contemporary expression might be explored without programmatic implications." At least that is the way George Howe, Chairman of the Department of Architecture at Yale, expresses it in his introduction to the first issue. What the student editors have done with the issue is to establish a

(Continued on page 144)

IMPORTANT CLAY TILE NEWS!

Tile Council of America announces the publication of Thin Setting Bed Methods and Materials, K-400

The THIN SETTING method of installing clay tile has been widely used throughout the United States. To provide an impartial summary of the experience of representative and responsible members of the building industry, the Tile Council of America engaged Don Graf to make a national survey. His study covered hundreds of building professionals in 49 cities in every section of the U.S.

As a result, the Tile Council announces publication of K-400 compiled by Don Graf. This summarizes the present status of the thin setting bed technique, and provides specifications for three basic types of thin-setting installations. (This complements the "Tile Handbook" which gives specifications for conventional mortar installations.)

WHAT "THIN-SETTING" OFFERS YOU:

- Important savings in time, weight and materials, under favorable conditions.
- Opportunities for wider, more flexible use of clay tile. Greater scope for Tilework on more varied surfaces and in additional areas.

We wish to call attention to the fact that the U.S. Department of Commerce has just announced minimum performance requirements for water resistant organic adhesives for clay tile installation. (Commercial Standard CS-181-52).

Distribution of "K-400" is being
e to the architectural profession. For additional copies,
lease send requests on your company letterhead to:
10 East 40th Street, New York 16, N.Y.

TILE COUNCIL OF AMERICA

10 EAST 40th STREET, NEW YORK 16, N.Y.
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THE MODERN STYLE IS CLAY TILE

REVIEWS

(Continued from page 142)

theme of architectural development in relation to architectural education, beginning with an article by Howe on "Training for the Practice of Architecture," following with an interesting piece by Henry-Russell Hitchcock on the formative years of Wright, Mies, and Le Corbusier, continuing with studies of the development of Paul Rudolph, Philip Johnson, and Buckminster Fuller, and ending with a useful discussion of Michelangelo's development of the "reflex diagonal" as indicated in his drawings for the fortifications of Florence. Two additional pieces which follow (a transcript of a broadcast by Fello Atkinson and a transcript of a speech by Henry H. Reed, Jr.) are perhaps out of place in this issue, unrelated as they are to the established theme.

The issue seems to this reviewer to indicate the possibilities and the dangers of a student publication. If student authors truly find an original approach to editorial matter—as they did in the main subject of *Perspecta I*—they can do a job which deserves doing and is not being done elsewhere. If they yield to the temptation to publish articles which could find another outlet if they were good enough, they will inevitably produce a pale copy of the established professional journals.

There are now several serious attempts at student journalism in architecture. It will be interesting to see which ones remain and improve; it seems certain that only the original and creative ones will find a continuing audience.

T. H. C.

language of materials

The Art of Ancient Peru. *Heinrich Doering. Frederick Praeger, Inc., 105 W. 40 St., New York, N. Y., 1952. 260 pp., illus., $12.50*

In the growing flood of books on Aboriginal Art, this publication is an exception of outstanding merit. Its format is large enough to allow photographs of impressive size and precision, and the text is concise and informative. But the strongest feature of this rare work is the range of its subject matter. Like a gigantic scroll there unfolds before our eyes one of the most visual civilizations created by man. Through a succession of form revolutions, the beholder is carried back in time from intricately engineered palace walls like those behind which Atahualpa, the last Inca ruler, was

(Continued on page 146)

REVIEWS

(Continued from page 144)

murdered by Pizzaro in 1533, to stone slabs, with magic incisions, from a Chavin temple of the first century A.D. Every form concept Western man has reached in slow and arduous steps is represented here. There are portrait heads of the Mochica culture (between 400 and 600 A.D.) that have the stylized naturalism of Renaissance busts, but on a page later a head from the same era has the abstracted spirituality of an early Gothic Saint, down to elongation and headdress. The fierce magic of an African mask alternates with an Inca gold statue that seems purest German Expressionism, and pottery pictures of Hellenic composition were created side by side with carved posts that seem to come directly from the South Pacific.

The strongest proof of universality is furnished, however, by the examples of Peruvian architecture. The examples, reproduced in magnificently clear and detailed photographs, reach from Cyclopean walls of primitive force, to the faultless horizontal courses of ashlar masonry that could be part of any Renaissance palace. Unlike other peoples, the ancient Peruvians combined with equal perfection the rock-cut architectural form and the intricate assembled structure. Walls of jointed stones that follow the curve as well as the incline of the ground and still stand today, merge almost imperceptibly with horizontal planes cut from the living rock. This gives unique emphasis on organic growth, in a landscape of gigantic mountains. The trapezoidal doors of Egyptian Pylons are anticipated here—so is the Late Roman ruse of facing rubble walls with finished stone slabs. The ruins of Greece and Rome become fragmentary indeed, when compared to these remnants of a creative civilization that had been spared the deadening influence of verbalization. Stone, fiber, and clay were their only language. All the vapid talk about an integration of the arts and of the "mysteries" of building site and structure becomes reality, in this proud testimony of the truly American civilization of ancient Peru.

SIBYL MOHOLY-NAGY

citizens of tomorrow

Children and The City. *Olga Adams. Michael Reese Hospital Planning Staff, 29 & Ellis Ave., Chicago 16, Ill., 1952. 29 pp., illus. $1*

This is a very elementary book on city planning, designed for teaching five- and six-year old children. It is not in any sense a text book for the child to use, but rather a description of a teaching technique for creating an awareness of city responsibility in children of early school years. It is illustrated with drawings made by children who have attempted to visualize the city as they would like to see it, and photographs of the teaching technique as it has been used. The booklet is published by Reginald Isaacs on a non-profit basis and is sponsored by six Chicago planning groups.

Walter H. Blucher says in his introduction that "the place to begin training people about

(Continued on page 148)

REVIEWS

(Continued from page 146)

their civic responsibilities is in the kindergarten." Certainly no architect or planner would argue with this fact and it is important to know that a teaching manual for this purpose is now available. T. H. C.

collaborative research

Design For Therapy. *American Psychiatric Association. 1785 Massachusetts Ave., N.W., Washington 6, D.C. 80 pp., illus. $1.25*

This is a report of a conference held at the Mayflower Hotel in Washington, D.C. on April 6th and 7th, 1952, under the auspices of the American Psychiatric Association. The two-day meeting was attended by a large group of psychiatrists and architects who were invited to meet together to discuss the possibilities of collaboration in developing basic information for the design of mental hospitals.

The booklet contains a number of prepared papers and transcripts of some of the informal discussions which followed the reading of these papers. The final chapter develops the proposal which came out of the meeting; that the American Psychiatric Association establish facilities for research and analysis of the information which becomes available on the design, construction, and equipment for mental hospitals.

The idea is that the American Psychiatric Association will co-operate with the American Institute of Architects on a two-year program which, it is estimated, would cost $180,000. At the end of that time it is assumed that the research group will be sufficiently established so that a part-time director and consultant architects and engineers can continue its operation on a yearly budget of $25,000, which the American Psychiatric Association hopes would be returned for services paid for. T. H. C.

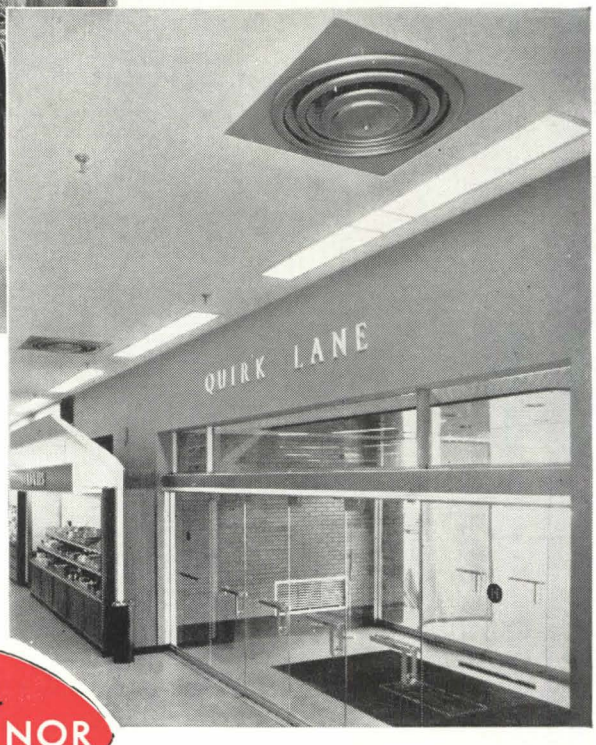
NOTICES

new practices, partnerships

DAVID B. LIBERMAN, Architect, announces the opening of his office at 605 Walnut St., Knoxville, Tenn.

(Continued on page 150)

Design Engineers: Abbott, Merkt and Company, Inc.
Design Architects: Kahn and Jacobs
Consulting Engineers: Edward E. Ashley



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

NOTICES

(Continued from page 148)

JOHN B. PARKIN ASSOCIATES, Architects and Engineers, Toronto, Canada, announce the following associates of the firm; R. V. B. BURGOYNE, B. Arch., M.R.A.I.C., Director of Sault Ste. Marie, Ont., office; J. E. MEWS, B.A.Sc., P. Eng., Mechanical Engineer, Director of Mechanical Engineering Dept.; P. T. MIKLUCHIN, D. Eng., P. Eng., Structural Engineer, Director of Structural Engineering Dept.; E. WILBEE, B.A.Sc., P. Eng., Mechanical Engineer, Director of Process Engineering Dept.; The partners of this firm are JOHN B. PARKIN, JOHN C. PARKIN, and EDMUND PARKIN, 717 Church St., Toronto 5, Ontario.

The office of DONALD L. HARDISON has announced the formation of an associateship in the practice of architecture, as follows: DONALD L. HARDISON, Architect, and HARRY B. CLAUSEN and S. RICHARD KOMATSU, Associate Architects, at 225 Broadway, Richmond, Va.

HENRY J. EULER, JR., A.I.A., announces the opening of an office for the practice of architecture at 17 Street and Pacific Avenue, Virginia Beach, Va.

HAROLD S. PAWLAN, A.I.A., has established offices for the practice of architecture at 111 W. Washington St., Chicago, Ill.

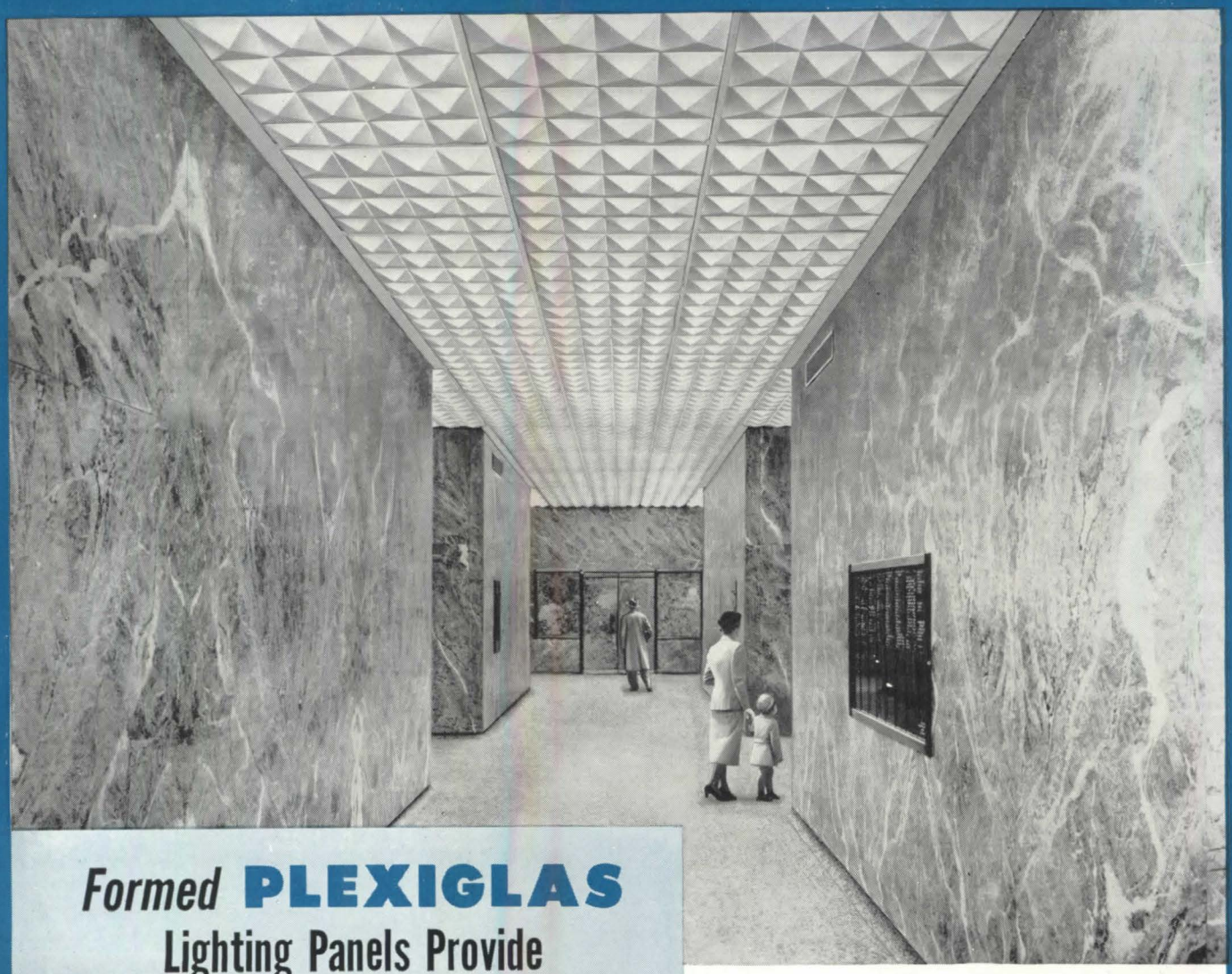
The Architectural-Engineering firm of KISTNER, CURTIS & WRIGHT which has had main office activities in Los Angeles, Calif., for many years, with branch offices in San Diego, Calif., and Los Alamos, N. M., has been reorganized as two separate firms. The new firms are now KISTNER, WRIGHT & WRIGHT in Los Angeles, with project offices in San Diego and Los Alamos; and KISTNER, CURTIS & FOSTER in San Diego.

PHILIP WADSWORTH, A.I.A., and ROYAL BOSTON, A.I.A., announce the resignation of WILLIAM D. TUTTLE from the firm of WADSWORTH, BOSTON & TUTTLE. WADSWORTH & BOSTON, Architects, will continue practice at 57 Exchange St., Portland 3, Maine.

SARKIS M. ARKELL, A.I.A., announces his association with the firm of SARGENT, WEBSTER, CRENSHAW & FOLLEY, Architects, Syracuse and Watertown, New York. This firm recently opened a branch office at 311 State St., Schenectady, N. Y., which will be under the management of ARKELL.

GEORGE F. DENNISTON has joined the firm of KELLY & GRUZEN, Architects and Engineers, as Executive Manager of the firm. DENNISTON is an Associate member of the A.I.A. and is on the Board of Governors of the New York Building Congress. He had been associated with the firm of Eggers & Higgins, Architects, New York, since 1939.

(Continued on page 152)



Formed PLEXIGLAS Lighting Panels Provide Decorative Appeal at Gateway Center

All lobby corridors of the Gateway Center buildings in Pittsburgh are lighted as shown above, by custom-formed panels of PLEXIGLAS acrylic plastic suspended beneath cold cathode tubes.

The architects wanted a faceted ceiling design that would give sparkling texture to the lighting. The designer achieved this by having multiple pyramids formed into each acrylic plastic panel; mounted wall to wall along the corridors, the panels contribute marked decorative appeal to the lighting installation.

Thermoplastic PLEXIGLAS panels can be formed easily to almost any shape or design. This makes it possible to combine lighting with decorative treatments of ceilings—frequently at substantial cost savings. In addition there are the advantages of diffused illumination, low brightness ratios, and fixture-free appearance.

We will be glad to send you design details of the luminous ceiling shown above.

Gateway Center, Pittsburgh, Pa.—a trio of steel-clad office towers erected by the Equitable Life Assurance Society as part of the city's famed redevelopment program. Approximately 11,000 square feet of PLEXIGLAS diffusing panels are used for luminous ceilings in lobby corridors.

Architects:
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Builder:
Starret Bros. and Eken, New York

Lighting Design:
Lighting by Feder, New York

PLEXIGLAS Fabrication:
Dura Plastics, Inc., New York

NOTICES

(Continued from page 150)

PETER K. OGDEN announces opening of offices for the practice of architecture at 92 Orchard St., Greenwich, Conn.

DAN KILEY, Architect, announces opening of his office at Wings Point, Charlotte, Vt.

CHARLES GORDON LEE, Architect, announces reopening of his office at 515 Mercantile Bldg., Denver 2, Col.

DONALD R. HOLLINGBERRY announces opening of his office for the practice of architecture at Moses Lake, Wash.

RICHARD M. WILKES, Public Relations and Editorial Representative, announces opening of his office at 1350 N. Highland Ave., Los Angeles 28, Calif.

CARROLL S. RANKIN, Architect, and WILLIAM A. GRAY, Architect and Engineer, announce formation of a partnership for the practice of Architecture and Civil Engineering at 314½ S. Ashland Ave., Lexington, Ky.

DONALD J. STEWART and K. E. RICHARDSON, Architects, announce formation of a partnership, STEWART & RICHARDSON, with offices in Vancouver, Wash., and Portland, Ore.

EARL C. HAYES, JR., Architect, announces opening of his office at 718 Sixth St., Portsmouth, Ohio.

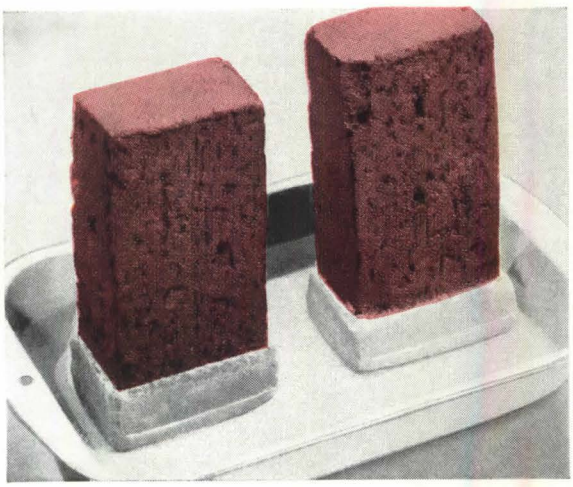
ST. JOHN & PLATT, Consulting Engineers, announce admission to partnership of RAYMOND C. CARLSON, Professional Engineer. The firm will practice under the name of ST. JOHN, PLATT & CARLSON, 212 Kresge Bldg., Binghamton, N. Y. and 627 Genesee Bldg., Buffalo 2, N. Y.

GEORGE FARKAS announces dissolution of his partnership with WALTER BAERMANN. The Farkas organization is operating under the name of GEORGE FARKAS, INC., established in 1942 for Industrial Design, Interior Planning, and Consultant for Land Development.

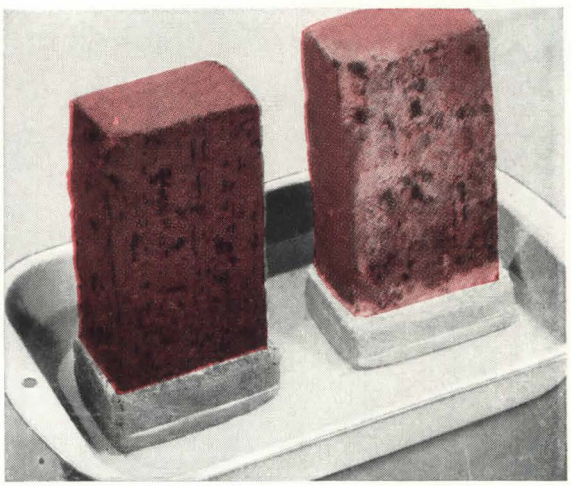
CARL B. STOYE, Architect, 22 Main St., Sayville, N. Y., will continue the practice of the firm EDWARDS & STOYE. His partner, ROBERT H. EDWARDS, died in August 1952.

BRIXMENT MORTAR

Helps Prevent Efflorescence



To test two mortars for resistance to efflorescence, "cap" two brick heavily with the mortars — let harden, and



keep both brick for a few weeks in a shallow pan of water, as shown. Try this with Brixment mortar!

HERE'S WHAT CAUSES EFFLORESCENCE—AND WHY BRIXMENT MORTAR HELPS CONTROL IT

Efflorescence is an outcropping of minute white crystals on brickwork. When these crystals occur on colored mortar joints, the condition is sometimes mistaken for *fading.*

Efflorescence is caused by the presence of soluble salts in masonry materials. When reached by water, these salts dissolve, and are drawn by evaporation to the surface of the wall. Brixment itself *does not cause efflorescence* because it is practically free from soluble salts. Even when such salts are present in the sand or brick, the air-entraining and waterproofing agent in Brixment usually *prevents them from coming to the surface.*

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out of school

by Carl Feiss

"We might say further, then, to differentiate between art and technics, that art is that part of technics which bears the fullest imprint of the human personality; technics is that manifestation of art from which a large part of the human personality has been excluded, in order to further the mechanical process. No matter how abstract art is—and even in the most realistic convention every work of art is an abstraction—it can never be entirely impersonal or entirely meaningless. When art seems to be empty of meaning, as no doubt some of the abstract painting of our own day actually does seem, what the painting says, indeed what the artist is shrieking at the top of his voice, is that life has become empty of all rational content or coherence. And that, in times like these, is far from a meaningless statement."

Art And Technics—LEWIS MUMFORD

During the past year we have been subjected to a phenomenon on which none of us has commented. Architectural periodicals—led by P/A—have been discussing art. It is as though, after years of wandering in a desert of abstract, smooth monotones of plaster, plywood, and glass, the architect has fallen by accident into an oasis of warm, friendly, humorous, and human design. The discussion has become quite frenetic. Mitzi Solomon, Walter Gropius, Richard Bennett, Sibyl Moholy-Nagy, and others: they've been good, each in his or her own fashion.

It is not as though architects had ever really forsaken the muse. Quite the contrary! Isamu Noguchi, Alexander Calder, Picasso, and Henry Moore, I am happy to say, have retained a continued popularity through the arid years. I will admit to a slight malaise every time I see that famous Museum of Modern Art reproduction of Picasso's bland and classic seated lady, in published photos of every contemporary interior. I grant that she is quite harmless as a "modern" and goes well with blond woodwork. There has also been the introduction of that much overworked and badly shaped, abstract free-form which, being standardized into a mildly diseased kidney, sets the pattern for crud boxes and even swimming pools. This shape is in profile horridly reminiscent of those hydrocephalous and pimpled weirds by Aubrey Beardsley—later by Salvatore Dali. I don't like them and never did.

All things considered, I am greatly relieved that there seems to be some relaxation of esthetic tensions and some hope that such clichés as mentioned above may be superseded by less self-conscious and more relaxed acceptance of other art forms. I sincerely hope that the indications we have been seeing recently of a greater interest in brilliant color and warm textures, of a slight playfulness in lighting fixtures, and the occasional suggestion of ornament may indicate that the cycle is revolving again, after a period of quiescence. We may be returning to that most natural of all instincts, that of adornment. Despite Mies van der Rohe and his school of "purists" (and I consider even their choices a form of decoration), it is a healthy and happy trend. May it flourish!

●

This will in time, bring us, logically to the responsibility of the schools to foster and co-

(Contitnued on page 156)

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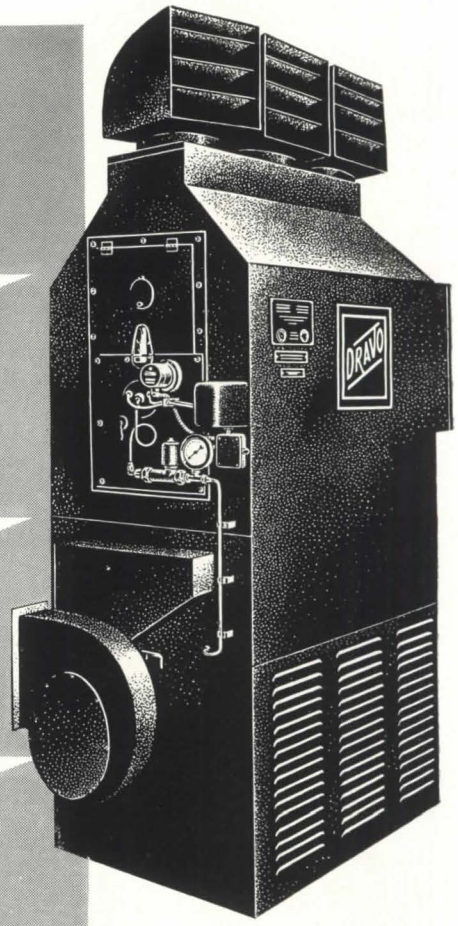

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out of school

(Continued from page 154)

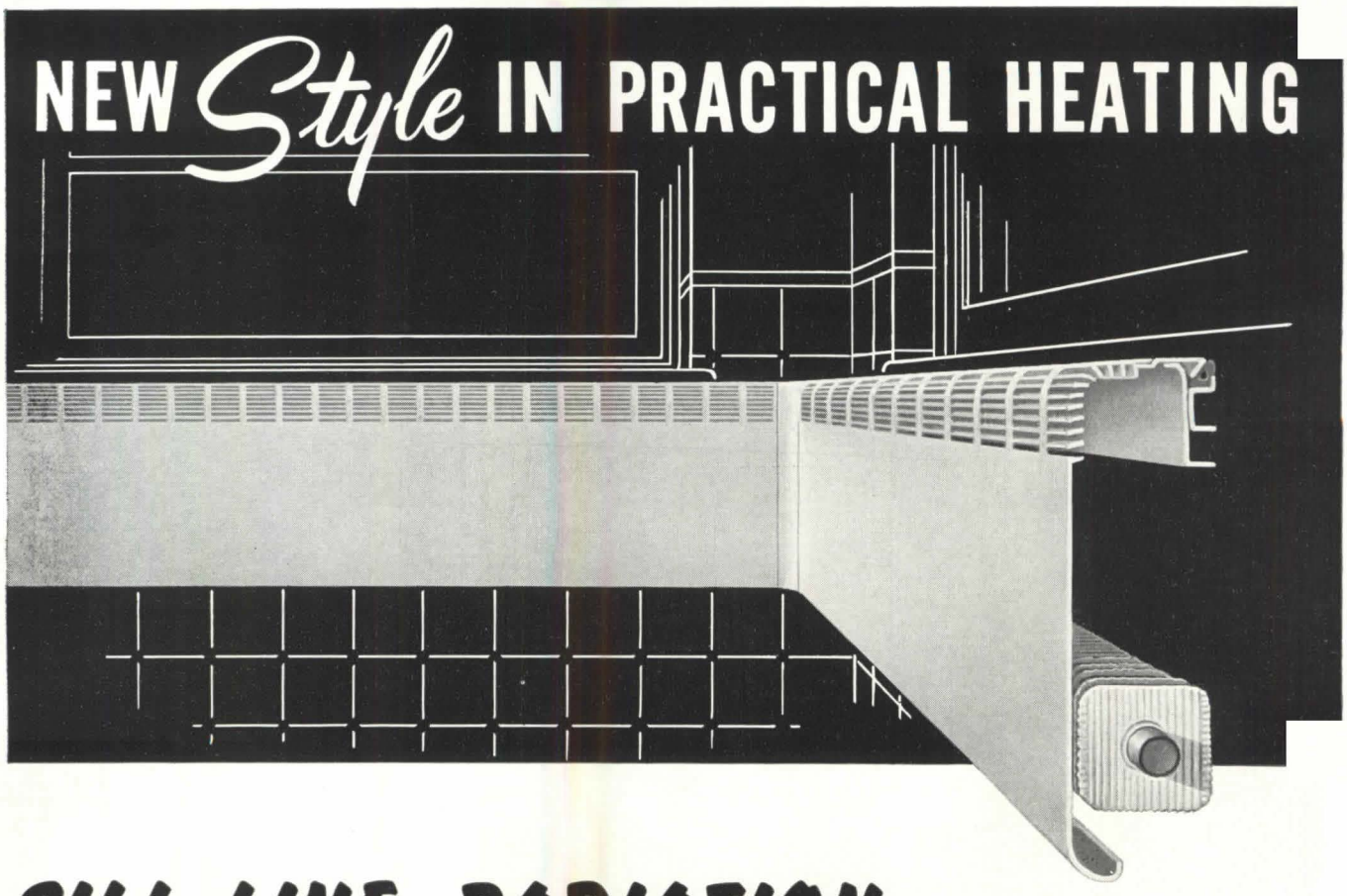
ordinate the arts. But first, besides architecture, what are these socially acceptable media? Drawing, painting, sculpture, music, the drama, landscape design, interior decoration, clothing, and light. Some of these overlap into the physiological, psychological, and sexual pleasures, and are difficult to separate out. There is nothing like combining them, for instance, in a well ordered ensemble. A Cordon Bleu dinner with champagne, a seductive and appropriately draped blonde, muted lights, soft music, comfortable furniture in a pleasant room with perhaps a Tanguy escape, and a glimpse into a garden with a sculptured fountain in moonlight! The drama ensues in due course, and all of the arts meld pleasantly. I am not quite sure how this is taught in school, but it might be tried.

Setting aside temporarily these sybaritic impulses with which some of us would like to while away our time from here *on out till the* last bomb falls, let us pursue this question of architectural education and the allied arts. Matisse's little chapel in the south of France proved a different kind of bombshell. A silly situation, when a tiny building decorated with some bright-stained glass and black-and-white tiles takes the architectural world by storm! We seem to have forgotten completely the lesson of that warm, glowing interior of St. Mark's in Venice, and all of the other equally great combinations of art and architecture with which our history books and history classes are filled. I'm not belittling Matisse. I own an "Odalisque" of his, and have always admired him as the one real easel painter who feels color as part of his paint and not as an application. But that is neither here nor there. What I am wondering is, where in the devil we've been these last twenty-five years? It now takes an old man with a sincere religious impulse coming in his last years, to awaken all of us to the foolish fadism that has made us deny our own heritage of art and design. We have been relegating the visual arts to the false peacock colors of the Juke Box and the emasculated pastels of both the German and French contemporary architects. Even F. L. W., who has never quite gotten away from the Art Nouveau in his detail, has felt the need for a more lively décor—mostly in spots and squares of color and hardly any of it integral with the structure.

We experienced an iconoclasm from the Bauhaus some twenty-five years ago, with an attendant disruption of standard art relation-

(Continued on page 158)

NEW *Style* IN PRACTICAL HEATING



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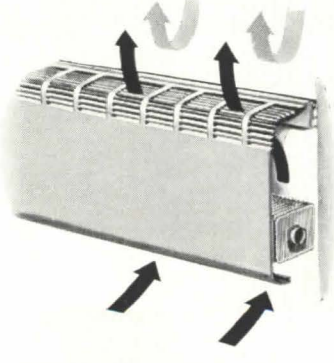

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out of school

(Continued from page 156)

ships and accepted art forms. There was, it is true, the (fortunately) brief influence of the 1925 Exposition des Arts Decoratifs in Paris, sumptuous in Lalique glass and other embellishments. There were also, of course, the two great but short-lived periods, so far apart in character and geography, but great phenomena of our period—the Scandinavian High Renaissance of craftsmanship, from 1920 to 1945, and the Mexican Mural Era, of about the same dates. Neither of these two isolated and exciting movements could be said to have been stimulated by or controlled by the Bauhaus iconoclasts or by the Left Bank artists of Paris, although individual artists may have studied in Germany or Paris from time to time. However, in the United States the ax fell, the classic casts were smashed in the cloistered halls, under the stimualting influence of Moholy-Nagy, Gropius, Josef Albers, Mies, and Herbert Bayer. All kinds of changes in the architectural schools took place—a movement to stark realism in the use of materials and to the cool or cold abstractions applying realism to Mondrian or Mondrian to realism, depending on who came first. I am oversimplifying what actually happened, as this is no place for a complete historical analysis. It has been a period of exciting change, but one not too productive of highly developed art forms. Certainly the classic allied arts did not profit materially—with the possible exception of some phases of furniture design and textiles—from this whole movement.

●

Eleanor Bittermann, in *Art in Modern America,** does a clever and valuable reporting job in an attempt to identify key mural and sculpture work allied to contemporary American architecture by nearly all accepted or general media. The author does not cover furniture, light, or textiles. I can recommend Marshall Fredericks' statement on pages 85-87. This book, however, does not actually analyze the causes or effects —it just reports. In a sense it can serve as the badly needed illustrations for Mumford's latest *Art and Technics,*** which should be a "must" in all architectural schools, if not in all art schools: preferably both. I quote from it at the beginning of this article. There is a third and not very revealing book on the subject by Bruce Allsopp, *Art and The Nature of Architecture,*‡ also part of this revival of interest, which has become so noticeable and which should become important.

* *Reinhold Publishing Corporation. 1952. $10.00*
** *Columbia University Press. 1952. $2.50*
‡ *Isaac Pitman. 1952. 16s.*

(Continued on page 161)

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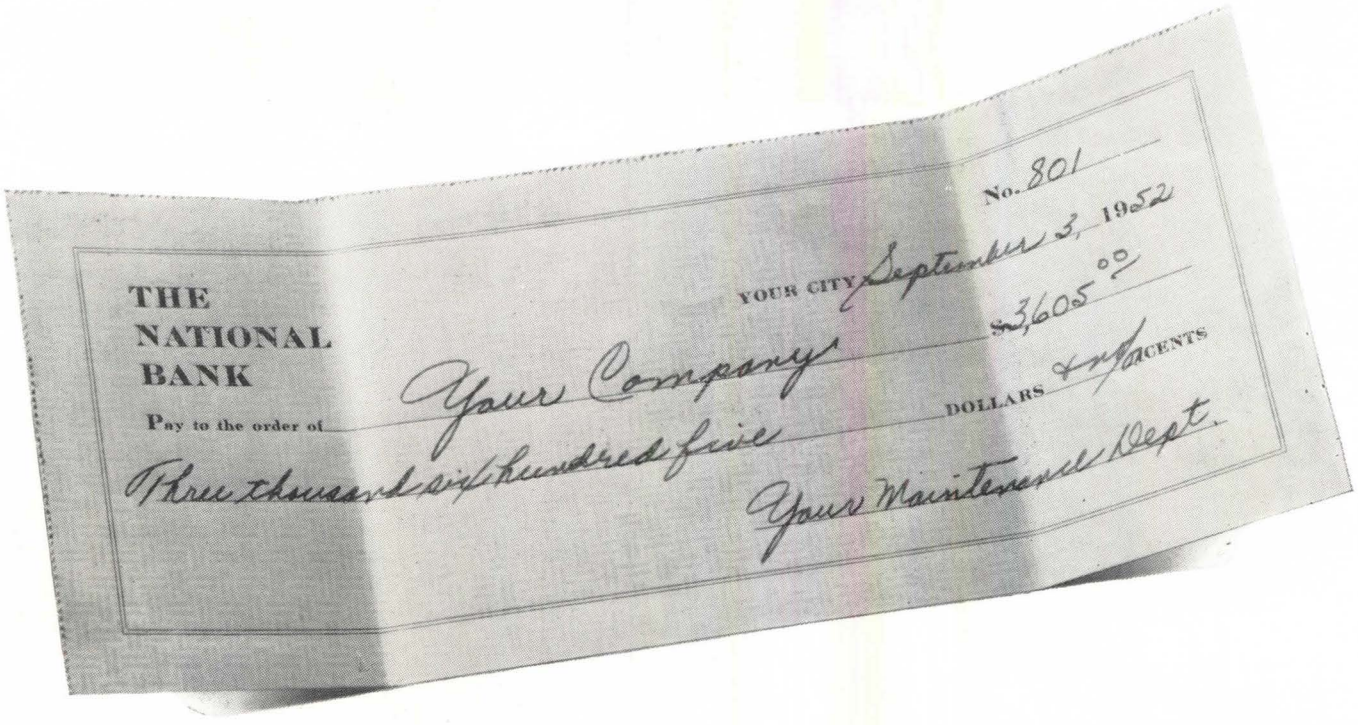

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out of school

(Continued from page 158)

While architects have been cleaning ornament ff of their forms to find what the structure be- eath the decoration meant, and while they ought out of pure form the meaning of, or the ssence of, beauty in pure form, the rest of the rt world on the whole has been enjoying a uiet cultural lag of its own. I am not implying hat the movement towards architectural hy- ienics of the past twenty-five years has been cultural lag. Quite the contrary! The Corbu- ier-Bauhaus sanitary systems have been intel- ectually stimulating and in most instances as alutary as Lysol to a badly infected kitchen ink. In the hideous residue of art heritages vith which we have been infested—and in par- icular, our architecture—it has been a great sthetic relief to see gleaming and simple sur- aces and clearcut structure revealed. And now Mrs. Bittermann has well documented the facts), ve begin to see a hesitant movement to amal- gamate what might be called residual arts with he newly cleaned structural forms. While Mumford pleads eloquently and in philosophical error for the humanizing expression of art to ounteract the absorption of man into the Fran- enstein machines of his own making, the artist ticks to his old easel and hopes to hang in the Nirvana of a museum. It is this which remains he artist's prime cultural lag.

The average art school today has little to offer n architectural school. They seem to be many niles farther apart than in the old days of ommon classicism. We seem farther than ever rom those great integrations which created Chartres—or even Boston Public Library. (I ever particularly cared for the latter, but *will* dmit that it did integrate the arts.) And the verage artist has little to offer an architect. ramed paintings for the walls? A dime-a- lozen genuine erls at any department store! Sculpture? Sure—a nude figure for the garden r an animal in ceramics for the coffee table. Trivia for the most part. Maybe a few new ares and Penates, to be moved with the Bendix vhen the time to change houses comes. Perhaps ve do a little better on public buildings: a plaque or an applique relief panel over a door, good crucifix in a church, a carved post, a igh relief casting long shadows on a simple urface. These may be good! Or an over-bar r wall in a theatre lobby may have offered oom for fantasy and scale, or even just a little xperiment with light and materials. They may e good too. But on the whole not very much as really happened since "Guernica" and the

(Continued on page 162)

out of school

(Continued from page 161)

WPA Artists Project. Both were genuine and something to remember! Neither, however, generated the dynamics of the recent Scandinavian or Mexican art eruptions, which like Paracutin may have been short-lived but certainly were volcanic in origin and in grandeur.

Part of the reasons for our problem was hinted at above. The usual art course emphasizes easel painting. All painting students of a conservative bent want to be hung in the Metropolitan Museum of Art, those more liberal in the Museum of Modern Art. They hope to find their futures through local galleries and museums, and objectives are largely directed towards "shows." It is the rare school that develops other ambitions in the budding artist these days. Sculpture and ceramic classes seem equally limited in purpose, although there may be some little more emphasis occasionally on the broader, architectural uses of sculpture. It is all part of that strange, egotistical, and semi-psychotic situation that has made it more fashionable in some of the arts to attempt to publicly express the artist's personality, no matter how unimportant or unpleasant that personality may be, than it is to express or interpret anything else. The worlds of the human, the spiritual, and the physical, all suffer accordingly through a lack of genuine interest in them. The world of art suffers from the inconsequential.

Perhaps it is just as well that artists do not read these articles. In re-reading what I have just written I find that I sound almost bitter. Perhaps I am influenced in part by Mumford's stinging blows. Actually I am motivated by disappointment that in recent years my own experience has not revealed any improvement in the alliance between the arts and the art of architecture.

●

In the schools and universities, where real leadership should occur, I find schism and indifference. For a period, you may remember, there were some interesting and exciting experiments —under the elder Saarinen, at Cranbrook, under Josef Albers, at Black Mountain, under Gropius, at the Bauhaus, among others. These three, in particular, were laboratories of invention in education, each in its own way, to try to form new alliances among the arts and architecture, and at the same time to explore new fields of artistic expression. There have been all too few of these laboratories, and they have all been too short-lived. American universities have not yet succeeded in providing the freedom of work-

(Continued on page 164)

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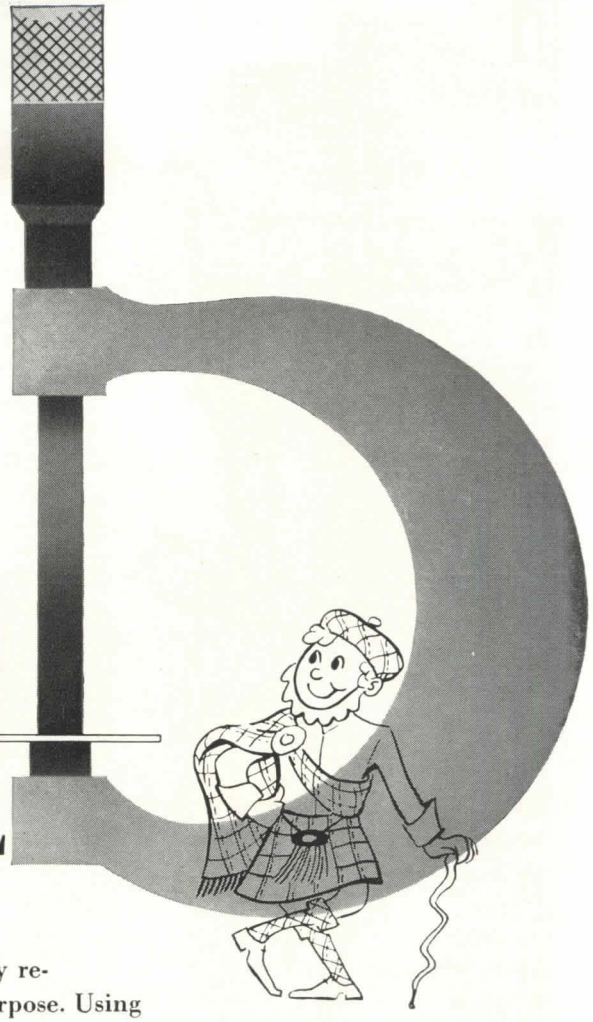

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out of school

(Continued from page 162)

shop experiment and the free interplay of personalities and experience which these special schools have afforded. The bondage of the degree with its attendant strictures on freedoms—a bondage many times discussed on these pages—again interfere with the co-ordination and mutual stimulation so badly needed in the visual arts.

Architecture and architectural education will always pose particular problems in the development of the desired correlations of the arts. Except in those rare instances when its function is that of pure symbolism (see Mumford), it must ally esthetic design with the general welfare. No *other* visual art is at present regulated by the police power—health, safety, and the general welfare. If the pursuit of happiness were a responsibility of the police power, then other arts had better look to their latest monstrosities (including such objects as are to be found back of the Lincoln Memorial, in Washington, D. C.). On the other hand, beauty is obviously not the only function of the visual arts. Neither Signorelli's frescoes at Orvieto, Goya's bullfights, Aztec sculpture, nor the "Guernica" of Picasso are art—if pleasure is the only emotion to be derived from art. But we do expect and hope for evidences of the human spirit from all art forms, irrespective of media or place. Even in advertising art we should hope for something of this!

●

If we are to hope for a further development of art and architectural relationships, the schools will need to become the incubators of the movement. This does not mean subserviency of any one medium to another—it means an interdependence so closely welded that it is impossible to discern the separate arts and crafts. It means, in a sense, the elimination of the picture frames and the niches for objects of art. It means that buildings on the site and in combination with each other in a community be designed as a sculptural aggregate. It means also that the best in humanity's traditions be one with the best of humanity's objectives.

I suppose that this Utopian dream is silly to consider, what with the utter debasement of human taste with which we are so constantly surrounded. I suppose it is too much to hope that our miles and miles of hideous street fronts with their cheap and ugly colors, forms, and souls can be converted by popular will to things of beauty. I suppose that the Juke Box is the popular art form. It is certainly to be found in its many manifestations in the ten cent store, the home furnishings department in any department store, and in the vertical acres of advertise-

(Continued on page 166)

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out of school

(Continued from page 164)

ments which line our highways, in town and out.

The scale of the undertaking facing us is overwhelming when we conceive of the idea that the arts in time must become one of the great manifestations of our democracy. However, I do not see how, in light of what we see around us, that we can shirk this task of cleaning up the visual or esthetic slums within which we are mired. And if those of us who are sentitive to our environment and feel some responsibility for its existence as such, cannot, in our little way, begin the training programs which are requisite to the manning of the attack, then we are failing the society in which we live and which can look to no other source for help.

NOTICES

awards

The winners of five $500 annual scholarships, awarded in New York by the BROOKLYN ARCHITECTS SCHOLARSHIP FOUNDATION, are announced by the president, Martyn N. Weston, as: LAURIE MUTCHNIK, of Samuel J. Tilden H. S.; SIDNEY PAUL, of Cooper Union; and FRANK ELISEO, ALAN L. AARON and IRVING B. ELMAN, all of Brooklyn Technical H. S.

All of the recipients are recent graduates of the institutions named and will use these scholarships to enter accredited colleges of their own choice.

THE HASTINGS GRADUATE FELLOWSHIP in Architecture at the University of Illinois for 1952-53 has been awarded to CLAES JOHAN ANDERS MELLIN, Stockholm, Sweden. First Alternate is FRANCISCO JOSE MORALES DE LOS RIOS DE CASTRO, Lisbon, Portugal. Second Alternate is MAN-BALL LEUNG, Hong Kong, China.

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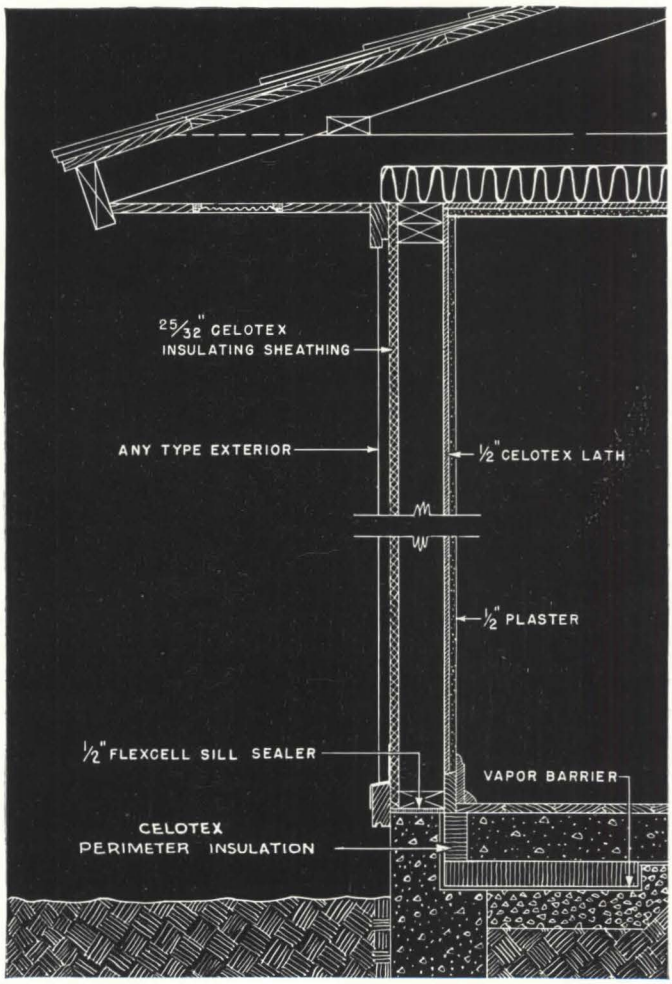

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it's the law

by Bernard Tomson

This month's column and IT'S THE LAW *for December, related to the question of bonds, supplement Tomson's* Architectural and Engineering Law *(Reinhold 1951).*

BONDS AND INSURANCE

Architects and others concerned with the problem should realize that all bonds are not the same in scope or coverage. A bond is a contract made with an insurance company or similar organization, and is enforceable only according to its terms. It is therefore important to look at the terms to determine whether the owner is properly covered. Sometimes matters outside of the apparent expressed language of the bond determine the coverage of the bond. Of paramount importance in considering a performance bond is the construction contract itself. If the performance bond guarantees performance in accordance with the terms of the construction contract, it is obvious that an inadequate construction contract will make inadequate the performance bond.

Bonds and insurance have been and remain essential provisions in construction contracts to protect the owner against liability. In public construction, legislative bodies have enacted laws making it mandatory for most governmental bodies to require construction bonds when entering into any building contract.[1] Some jurisdictions have gone so far as to require private construction to be covered by such construction bonds.[2] **(Continued on page 170)**

[1] *A typical statute to this effect is:*

"Any person, or persons, entering into a formal contract with the State of Florida, any county of said State, or any city in said State, or any political subdivision thereof, or other public authority, for the construction of any public building, or the prosecution and completion of any public work or for repairs upon any public building, or public work, shall be required, before commencing such work to execute the usual penal bond, with good and sufficient sureties, with the additional obligations that such contractor, or contractors shall promptly make payments to all persons supplying him, or them, labor, materials and supplies, used directly or indirectly by the said contractor, contractors, sub-contractor or sub-contractors in the prosecution of the work provided for in said contract; and any person, or persons, making application therefor, and furnishing affidavit to the Treasurer of the said State of Florida, or any city, or county, or political subdivision, or other public authority, having charge of said work, that labor, material or supplies for the prosecution of such work has been supplied by him or them, and payment for which has not been made, shall be furnished with certified copy of said contract and bond, upon which, said person, or persons, supplying such labor, material or supplies shall have a right of action, and shall be authorized to bring suit in the name of the State of Florida, or the city, county, or political subdivision, prosecuting said work for his, or their use and benefit, against said contractor, and sureties, and to prosecute the same to final judgment and execution: Provided, that such action, and its prosecution, shall not involve the State of Florida, any county, city or other political subdivision, in any expense. (Ch. 6867, Acts 1915, §1; Ch. 10035, Acts 1925, §1.)" (Comp. Gen. Laws of Fla., 1927 Ann., Sec. 5397).

[2] *"The owner of such work shall require of such undertaker, contractor, master-mechanic, or engineer, a bond with good and solvent surety as follows: For all contracts not exceeding ten thousand dollars ($10,000) the amount of the bond shall be the amount of the contract. If the contract is over ten thousand dollars ($10,000), but does not exceed one hundred thousand dollars ($100,000), the bond shall be not less than fifty per cent of the amount of the contract but not less than ten thousand dollars ($10,000) in any event, if the contract is over one hundred thousand dollars ($100,000) but does not exceed one million dollars, the bond shall be not less than thirty-three and one-third per cent of the amount of the contract; and if the contract exceeds one million dollars, the bond shall be not less than twenty-five percent of the amount of the contract. The bond shall be attached to and recorded with the contract in the office of the clerk of court or recorder of mortgages, as above set forth, and the condition of the bond shall be the true and faithful performance of the contract and the payment of all subcontractors, journeymen, cartmen, workmen, laborers, mechanics, and furnishers of material, machinery, or fixtures jointly as their interest may rise." (Louisiana Gen. Stats. 2, Sec. 5107.)*

Why Burn Down Your House for Roast Pig?

IN ancient China, men ate meat raw. But one day, while Ho-ti the swineherd gathered mast for his hogs, his stupid son Bo-bo, playing with fire, burned down their straw hut. Bo-bo sniffed the odor of burnt pig. He touched one to see if it was still alive, scorched his fingers, put them in his mouth and was amazed at the delicious taste. Father came home and caught his son devouring a pig. Ho-ti tried one, too, found it intoxicatingly sweet and satisfying.

Thereafter, neighbors observed feverish building of new straw huts at Ho-ti's, followed always by conflagrations. The secret leaked and fires became widespread. In a few weeks even his Lordship's town house was on fire. Finally, straw for hut building disappeared from the market and young pigs could not be had for love or money. At last, after many generations, a wise man arose who said that a pig could be roasted without burning down an entire house.

Thousands of years later, we Americans feast deliriously on "roast pig." Accompanying our delights are fires of inflation, which can destroy our values just as certainly as the roasting of Ho-ti's pigs consumed his earthly possessions. But surely we need not await the coming of a sage to tell us not to burn down our houses to enjoy the delights of roast pig!

Let us unite to stop the ruinous flames of inflation. Curb wasteful and unnecessary government spending. Balance our Federal budget. Control our national debt and reduce taxes. Only in this sane way can we produce more straw and enjoy our houses, raise more pigs and eat them, too.

it's the law

(Continued from page 168)

The law with regard to the construction and application of construction bonds generally, is governed by the law of suretyship. This series of articles on construction bonds and liability insurance will confine itself to a discussion of problems faced by architects, engineers, contractors, and owners.

A. Performance Bonds

The problem which usually arises in connection with such construction bonds is an inspection and interpretation of the bond, so as to determine whether or not a given claim may be recovered against the surety. It is fundamental law that a surety cannot be held for any claim beyond his obligation, as set forth in the written agreement of suretyship. Thus, the courts of the various states have been frequently called upon to determine the extent of the surety's liability upon a given bond.

At the outset, it should be stated, that it is to the best interests of the architect, owner, contractor and the parties dealing with them, to have the terms of the bond (coverage) as broad as possible. This, however, is not possible if the construction contract be ineffectually drawn. It is the provisions of the construction contract which determine the degree of protection afforded an owner (and the parties dealing with him) under a Performance Bond. That which is omitted from the construction contract is automatically omitted from the coverage of a Performance Bond. It is therefore of paramount importance that construction contracts be completely and carefully prepared so as to express all of the contractual obligations of the owner and contractor. Even a casual inspection of various parts of a Performance Bond form shows the incorporation of the construction contract into the terms of the bond, and the limits beyond which a surety may not be held liable.

"WHEREAS, Contractor has by written agreement date . . . entered into a contract with Owner for . . . in accordance with drawings and specifications prepared by . . . which contract is by reference made a part hereof, and is hereinafter referred to as the CONTRACT.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if Contractor shall promptly and faithfully perform said CONTRACT, then this obligation shall be null and void; otherwise it shall remain in full force and effect.

Whenever Contractor shall be, and declared by Owner to be in default under the CONTRACT, the Owner having performed Owner's obligations thereunder, the Surety may promptly remedy the default, or shall promptly:

(1) Complete the CONTRACT in accordance with its terms and conditions, or

(2) Obtain a bid or bids for submission to Owner for completing the CONTRACT in accordance with its terms and conditions, and upon determination by Owner and Surety of the lowest responsible bidder, arrange for a contract between such bidder and Owner and make available as work progresses (even though there should be a default or a succession of defaults under the contract or contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the balance of the contract price; but not exceeding, including other costs and damages for which the Surety may be liable hereunder, the amount set forth in the first paragraph hereof. The term 'balance of the contract price,' as used in this paragraph, shall mean the total amount payable by Owner to Contractor under the CONTRACT and any amendments thereto, less the amount properly paid by Owner to Contractor."

B. Labor and Materials

The problems presented under a Labor and Materials Payment Bond are somewhat similar to those of a Performance Bond. Here, however, the *type* of bond purchased (some types of bonds afford greater coverage and protection) is an important factor. In performance bonds, the surety merely insures performance of the construction contract by the contractor, whereas under a Labor and Materials bond, the surety may guarantee payment of all claims or of enumerated claims arising from and dealing with the particular construction job. The coverage provisions of a desirable Labor and Materials Payment bond are, as follows:

"Whereas, Principal has by written agreement dated . . . entered into a contract with Owner for . . . in accordance with drawings and specifications prepared by . . . which contract is by reference made a part hereof, and is hereafter referred to as the CONTRACT.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if the Principal shall promptly make payment to all claimants as hereinafter defined, for all labor and material used or reasonably required for use in the performance of the Contract, then this obligation shall be void; otherwise it shall remain in full force and effect, subject, however, to the following conditions:

1. A claimant is defined as one having a direct contract with the Principal or with a sub-contractor of the Principal for labor, material, or both, used or reasonably required for use in the performance of the contract, labor, and material being construed to include

(Continued on page 173)

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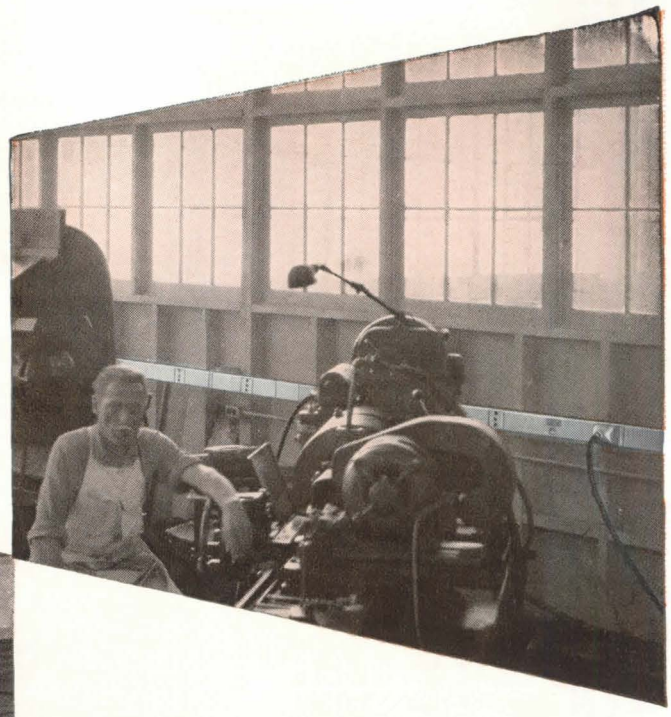

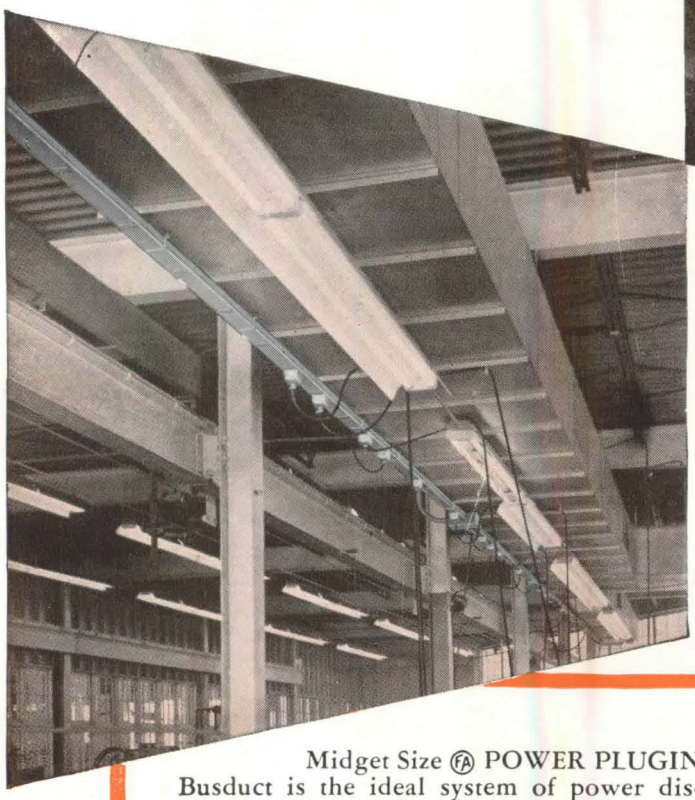

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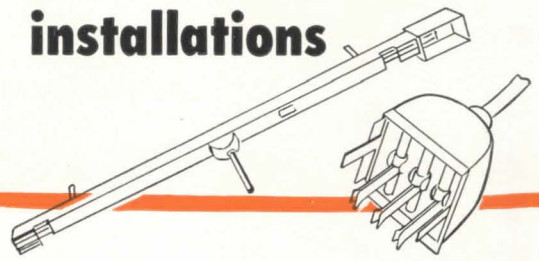

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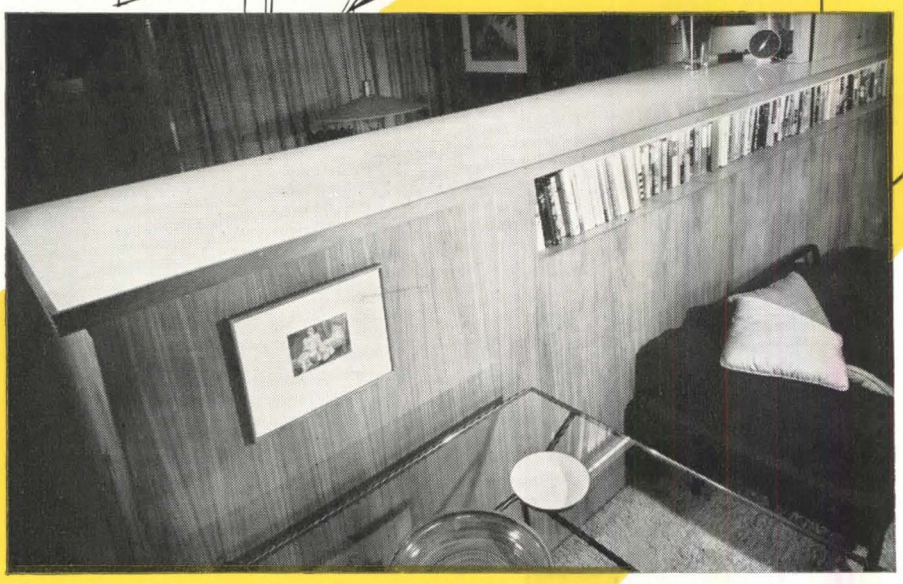

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(Continued from page 170)

that part of water, gas, power, light, heat, oil, gasoline, telephone service, or rental of equipment *directly* applicable to the contract.

2. The above named Principal, and Surety hereby jointly and severally agree with the Owner that every claimant as herein defined, who has not been paid in full before the expiration of a period of ninety (90) days after the date on which the last of such claimant's work or labor was done or performed, or materials were furnished by such claimant may sue on this bond for the use of such claimant in the name of the Owner, prosecute the suit to final judgment for such sum or sums as may be justly due claimant, and have execution thereon, povided, however, that the Owner shall not be liable for the payment of any costs or expenses of any such suit."

As a general rule the terms "labor" and "materials" have been held to mean that labor and materials necessary for the construction under the terms of the construction contract. Where just the above quoted items of "labor and materials" are used in the coverage of the bond, some courts have refused to extend the liability of the surety to those claims arising from the rental of machines and equipment by the contractor. In *Southern Surety Co. v. Municipal Excavator Co.*, 160 Pac. 617, the court refused to hold the surety liable for the rental of trenching machines used in the construction of a public sewer project. The court stated:

"It cannot be said that the excavator company furnished either labor or material for the public works, or that it sustained any contract relation to such public works. It merely furnished two machines to the contractor that he employed in the construction of this public work. It is true that the excavator company furnished the skilled operator and retained the right in its contract to furnish an engineer and fireman, but it expressly stipulated that such employes should be the employes of the contractor, and should be paid for by him. It therefore performed no labor in connection with the operation of the machine. Its claim is only for a stipulated rental for the use of the machine. Such a claim was not within the letter or spirit of the bond and was not protected thereby."

The Oregon Supreme Court, in *School Dist. No. 6 of Wallowa County v. B. E. Smith*, et al, 127 Pac. 797, held that material furnished to a partner of the contractor, and which material was used in the construction job, was not covered by the bond, which was given to the contractor in his name alone. The Court, in its opinion, stated:

"The conditions of the bond are for the individual liability of Smith, and not for the liability of a firm of which Smith was a member. The bond, being statutory, should be strictly construed, and sureties thereon have a right to demand that plaintiff shall bring itself fairly within its terms."

Other jurisdictions, in dealing with the same problems, have held to the contrary. It cannot be overemphasized that the determining feature in all coverage litigation is the specific language of the bond.

In *United States Fidelity & Guaranty Co. v. R. S. Armstrong & Bro.*, 142 So. 576, the Supreme Court of Alabama, in discussing whether or not the rentals of equipment were included in the coverage of a construction bond, made this curt statement:

"Claims for rentals of machinery and equipment are within the coverage of such bonds."

(Continued on page 174)

it's the law

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In a later case the same court stated in *John E. Ballenger Construction Co. v. Joe F. Walters Construction Co.*, 184 So. 277, reaffirmed this position, as follows:

"No one now contends that the rental of such appliances is not within the obligation of such a bond."

These and other cases seem clearly contrary to the *Southern Surety* case, *supra*.

With regard to the liability of a surety, where the legal organization of the principal has been altered, and where the surety then claimed he was no longer liable, the United States Supreme Court stated:

"The purpose of the act was to provide security for the payment of all persons who provide labor or material on public work. This was done by giving a claim under the bond in lieu of the lien upon land and buildings customary where property is owned by private persons. Decisions of this court have made it clear that the statute and bonds given under it must be construed liberally, in order to effectuate the purpose of Congress as declared in the act. In every case which has come before this court, where labor and materials were actually furnished for and used in part performance of the work contemplated in the bond, recovery was allowed, if the suit was brought within the period prescribed by the act. Technical rules otherwise protecting sureties from liability have never been applied in proceedings under this statute. As the basis of recovery is supplying labor and material for the work, he who has supplied them to a subcontractor may claim under the bond, even if the subcontractor has been fully paid."

Therefore, while some courts have now adopted a more liberal view with regard to the determination of the scope of coverage of a construction bond, the best insurance obtainable against possible liability is a *bond which contains broad coverage terms.*

Performance Bonds

(a) Be certain that the terms of the written construction contract are complete since a performance bond is limited to the terms and conditions expressed in the construction contract.

Labor and Materials Bond

(a) Make certain that the labor and materials bond cover the following possible debts:

(1) Debts of contractor or his firm in connection with your construction.

(2) Debts of subcontractors in connection with your construction.

(3) Debts for rental or hiring of machines and equipment.

(4) Possible debts for water, gas, power, light, heat, oil, gasoline and telephone.

(To be Continued.)