RESSIVE ARCHITECTURE

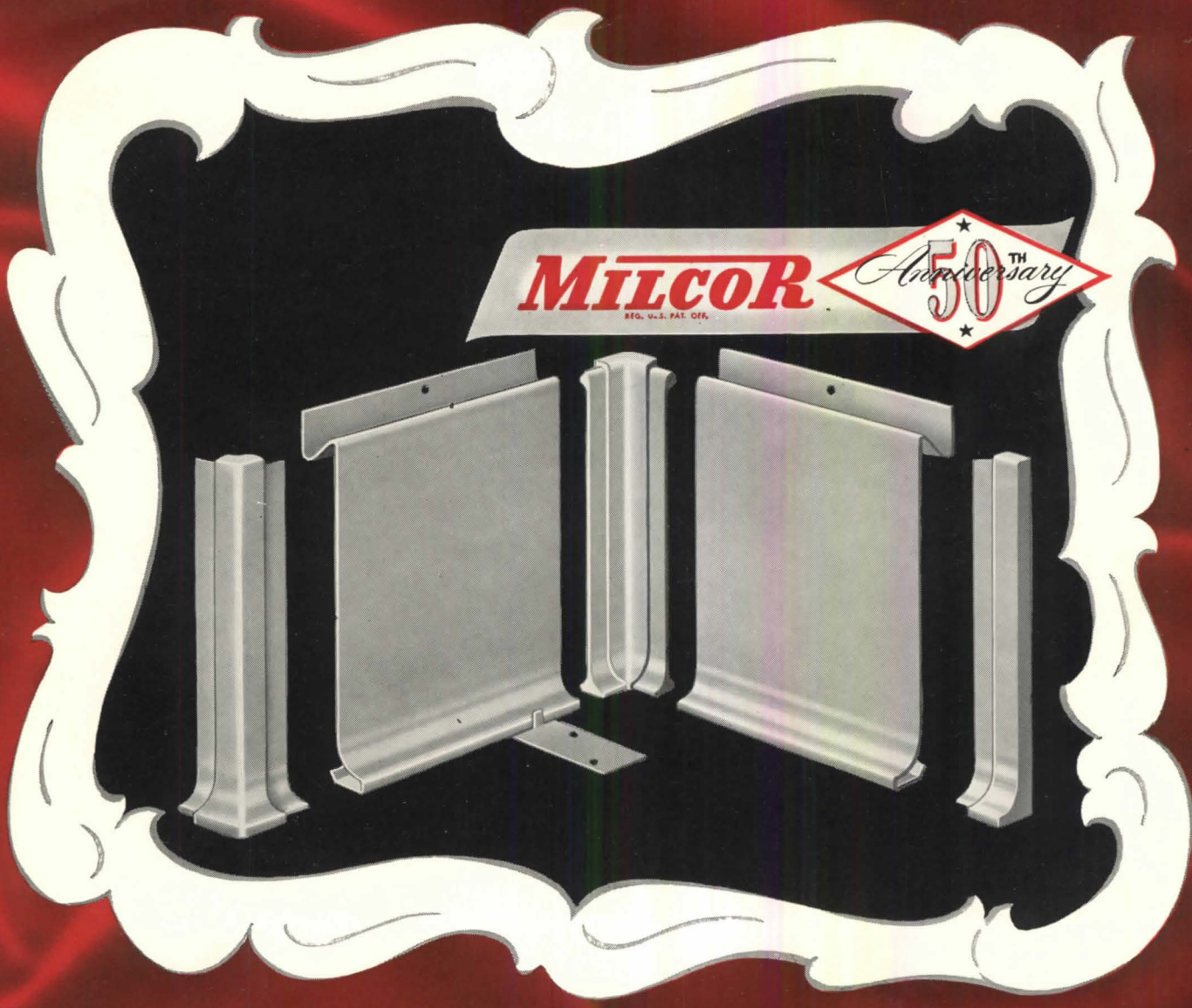
veterans hospital

7

july 1952

interior design data

largest architectural circulation in the world



MILCOR* No. 605 Plastered-in Metal Base

with friction-fit fittings for faster installation

Flush-type plastered-in design — Base (4" and 6" heights, standard 10' lengths) is punched for nailing to wall. Has slotted plaster flange for easy grouting. Sections of base joined by flat aligning plate, requiring no punching, no screws.

Fittings require no punching, no screws — Cast outside and inside corner fittings (square or ¾" radius) and left-and right-hand end-stops are friction-fit.

Sanitary, fire-safe, durable — Ideal for hospitals, schools, hotels, apartments, office and industrial buildings, etc. — with linoleum or any other type floors.

Write for complete information.

*Reg. U. S. Pat. Off.

INLAND STEEL PRODUCTS COMPANY

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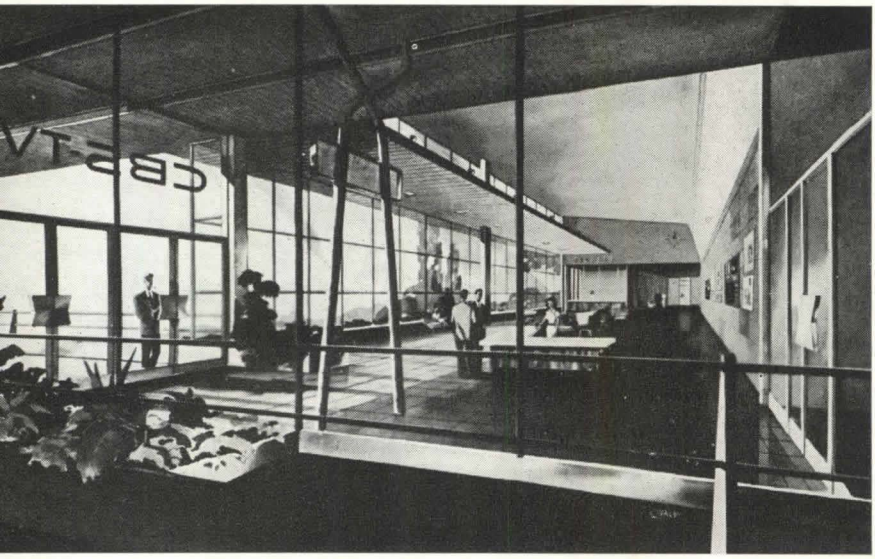
PROGRESSIVE ARCHITECTURE

July 1952


built to greet a million hands
kwikset
LOCKSETS
Kwikset locks are
precision manufactured,
beautifully finished,
designed to last.
kwikset sales and service company
anaheim, california

ntinued from page 15)

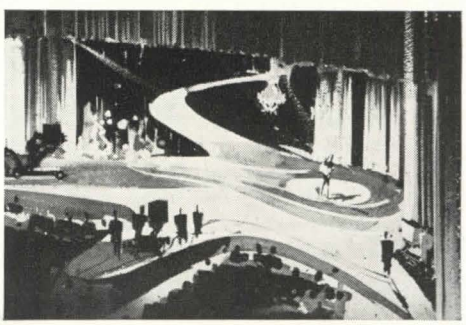


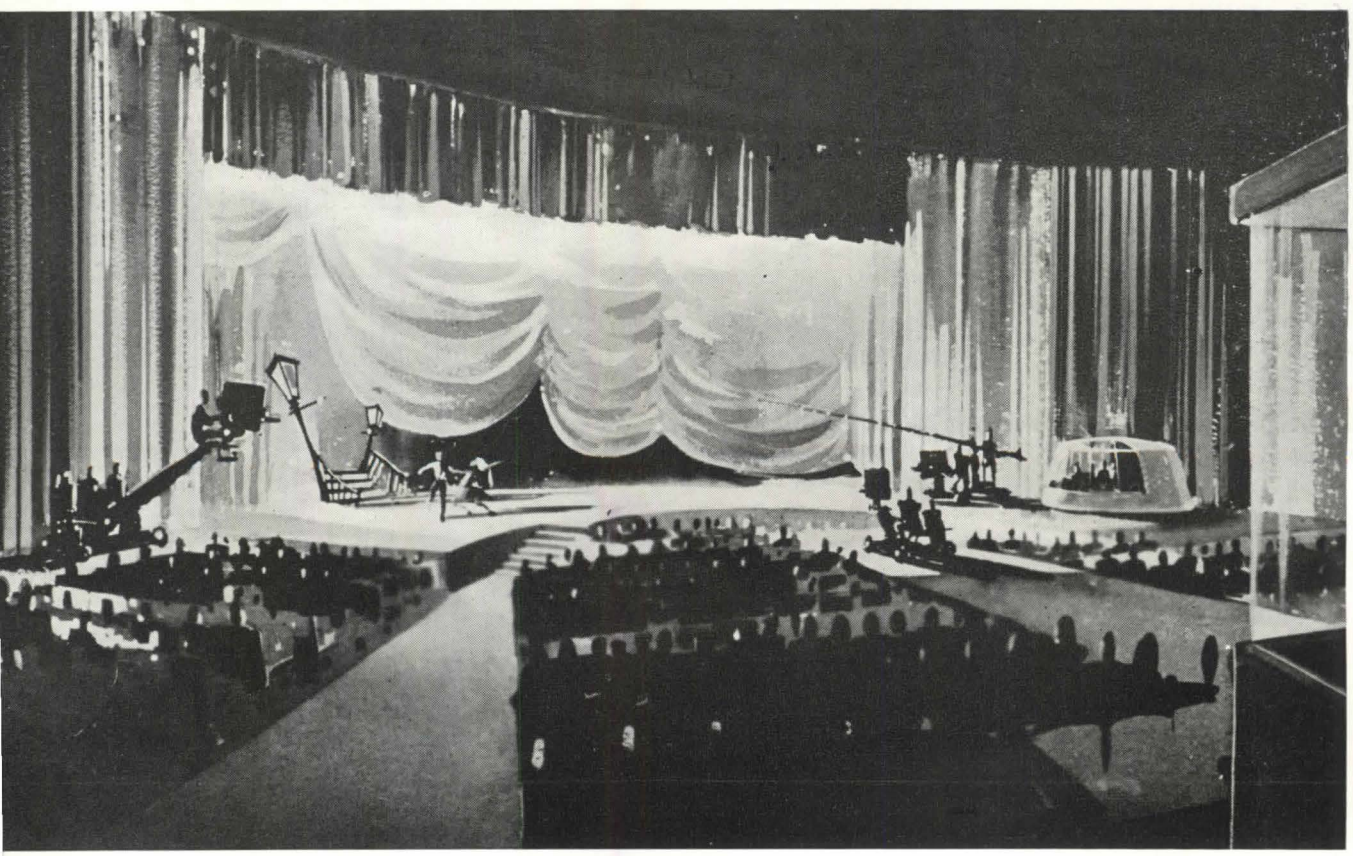
second-story level by huge elevators or hauled to designated stages via a ramp running around the second floor. Set-storage rooms, property storage, paint shops, and carpenter shops, are located to form a "production line" to speed technical steps that must precede the TV broadcast. The initial unit will have a production capacity of 28 hours a week.

For the present, administrative offices, space for writers, directors, producers, and clerical offices will be accommodated in a four-story structure. Near the TV studios are located dressing rooms for the actors and entertainers, three large rehearsal halls, and other related facilities. Pereira explains:

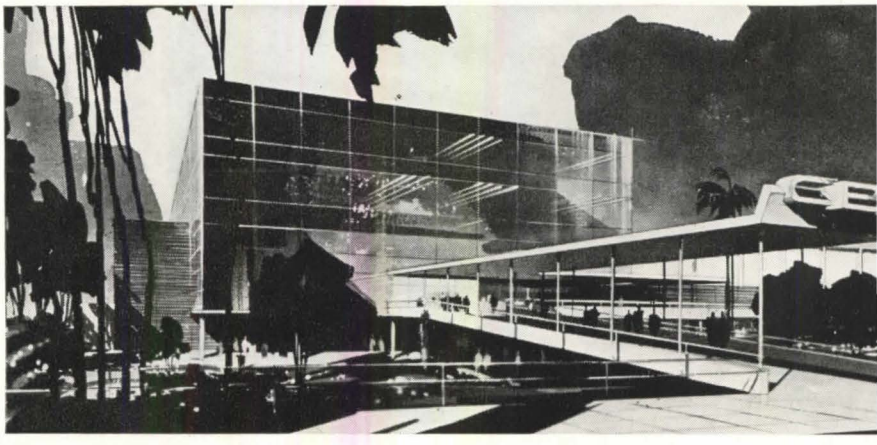
"The entire facility of the initial unit is really an experimental workshop and we intend, in the future, as the plant expands,

(Continued on page 18)

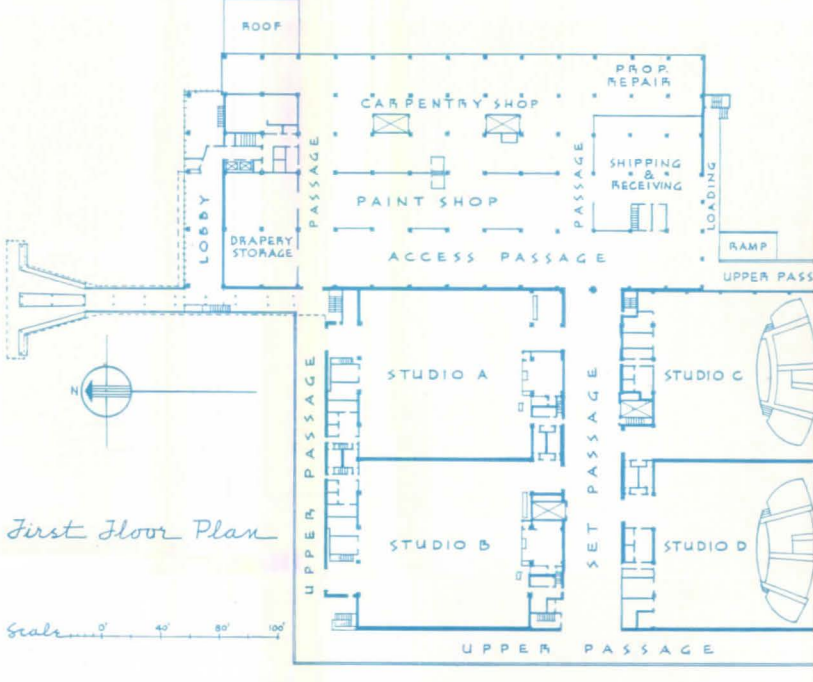




west coast television center



Initial unit of the C.B.S.—TV Center in Hollywood, California, designed by Pereira & Luckman, Los Angeles architects and engineers, is scheduled to open in October. The architects "tried octagons, pentagons, and round structures" to express TV needs, then chose the simple rectangular buildings shown here, which afford maximum plan flexibility.

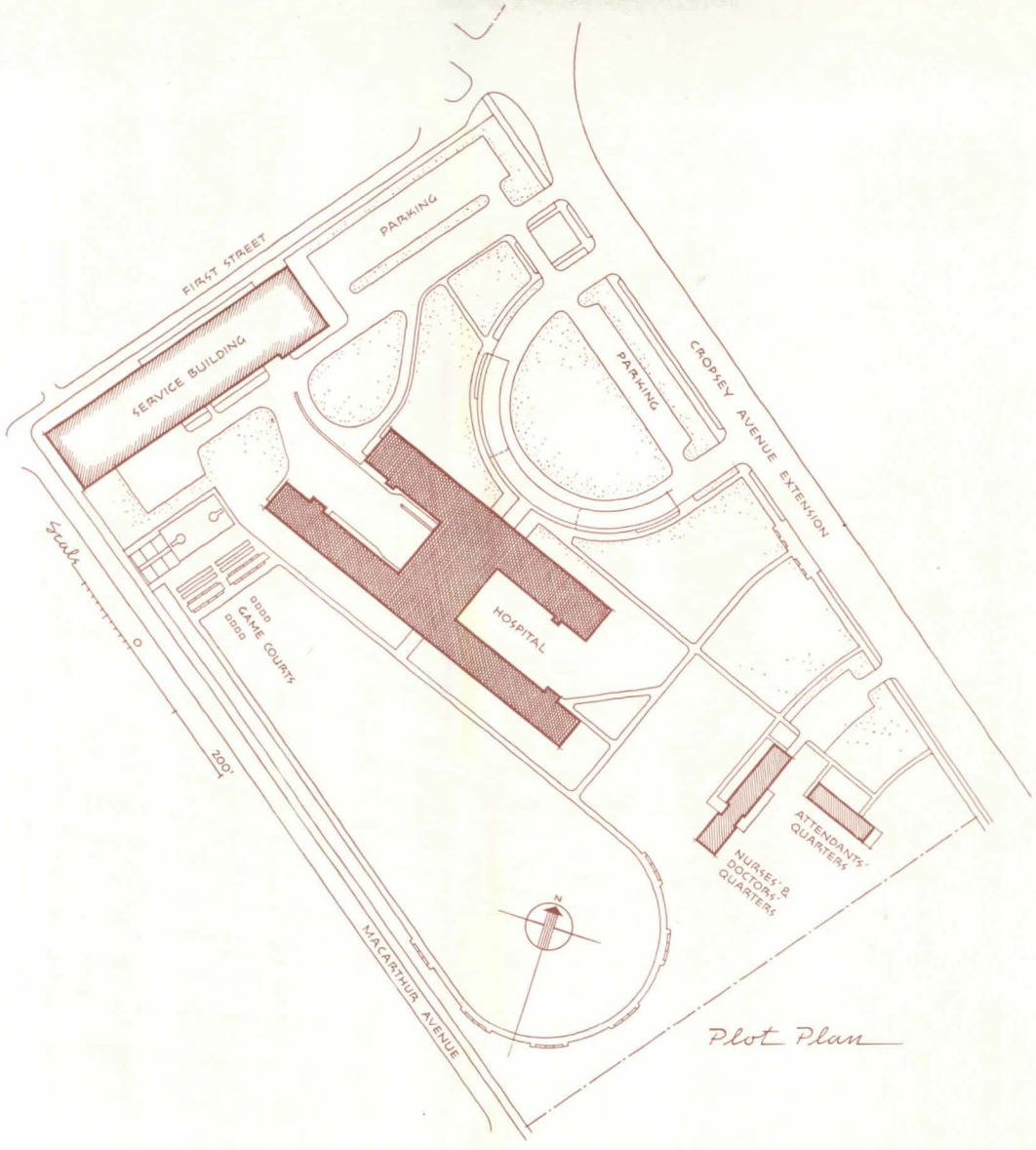


The first building group designed exclusively for TV begins coast-to-coast broadcasting this fall from an initial 13-acre unit of structures in Hollywood, California, designed by Pereira & Luckman, Los Angeles architects and engineers. Ultimately, the Television Center now under construction for C.B.S.—TV will cover 25 acres and include expanded TV facilities grouped around a 13-story administration building. The first unit is built arc core of four spacious studios (eac taining 12,100 sq ft) and will cost $12 millions. It includes facilities sign of sets (which will be lifted

VA HOSPITAL

location	Fort Hamilton, Brooklyn, New York
architects-engineers	Skidmore, Owings & Merrill
partner in charge of co-ordination	John O. Merrill
partner in charge of design	Gordon Bunshaft
structural engineers	Weiskopf & Pickworth
mechanical engineers	Jaros, Baum & Bolles
general contractor	Cauldwell-Wingate Company

Built and supervised for Veterans Administration by the Corps of Engineers, Department of the Army



VA Hospital: Brooklyn, New York

ıe first phase of the urgent postwar ram of design and construction of ans' hospitals, several commissions nately went to top-ranking private itects. During this period, distinct ibutions were made not alone to the sion of proper health-care facilities eterans, but to the field of hospital n in general.

ıe of the first—and, in our opinion, of the best—of these units built by Corps of Engineers for the Veterans inistration is this giant, 1000-bed ral hospital adjoining Fort Hamilton, ooklyn, New York. In addition to all standard medical facilities, the hos- includes fully equipped physical and ational therapy departments, arts crafts rooms, and various recrea- l-cultural areas such as a canteen, nts' library, a P-X, game rooms, etc. wo top floors of the 17-story nursing wing are given over to patients requiring psychiatric care and treatment; neurological units occupy the two floors below.

The architects took bold advantage of the magnificent, 17-acre site that, toward the south, overlooks The Narrows, the lower entrance to New York Harbor through which the great transoceanic liners pass. An early decision was to align the tall, 490-foot-long block of nursing units so that as many bedrooms and wards as possible would have southern windows and look out over the widespread view of the water and its ocean traffic.

As the plot plan shows, this nursing-unit wing forms the longer leg of an H-shape plan, the shorter and lower (6 stories) leg on the north containing the outpatient department, public entrances, therapy departments, laboratories, and operating suites. The connecting link (which extends the full height) constitutes the mechanical core of elevators and stairways, around which are organized the lobbies, records rooms, and various specialized offices. Among the adjunct structures are a laundry-powerhouse (to the west) and a nurses' residence, attendants' building, and some staff housing, at the northeast corner of the extensive site.

The original design, which had to be curtailed somewhat to meet budgetary requirements, included a low structure connecting toward the south, in which an auditorium, cafeteria, and chapel were planned. These facilities were later incorporated within the main building.

Structurally, the building consists of a rationalized steel frame, in which the layout is entirely symmetrical and there are no offset columns, with floors and roof of concrete-arch construction. The exterior walls are of light gray brick, with cinder-block backup.

Soil investigation at the site revealed a layer of silt and fine sand with little supporting power for a depth of roughly 20 feet. Below this, the sand was firmer and coarser and capable of sustaining load. Ground water occurred about 15 feet below grade. Driven piles proved to be the most economical method of transferring the load to the bearing stratum. Several types of cast-in-place concrete piles, capable of supporting 30 tons, were specified.

The size and shape of the main block —490 feet long, 46 feet wide and 17 stories in height—required exceptional analysis on the part of the structural engineers. "It was important," they point out, "to select an economical type of floor, and economy involved not only the cost of the floor itself but also the depth occupied between the ceiling and finished floor above."

Too great a depth would obviously have increased the height of the building, involving greater cubage and the additional costs of walls, partitions, and all vertical elements, such as elevators, piping, duct work, etc. Another important structural-design factor that had to be considered for such a narrow building was the horizontal force from wind. After a number of structural systems were studied, a system employing a two-way ribbed-concrete floor panel was selected.

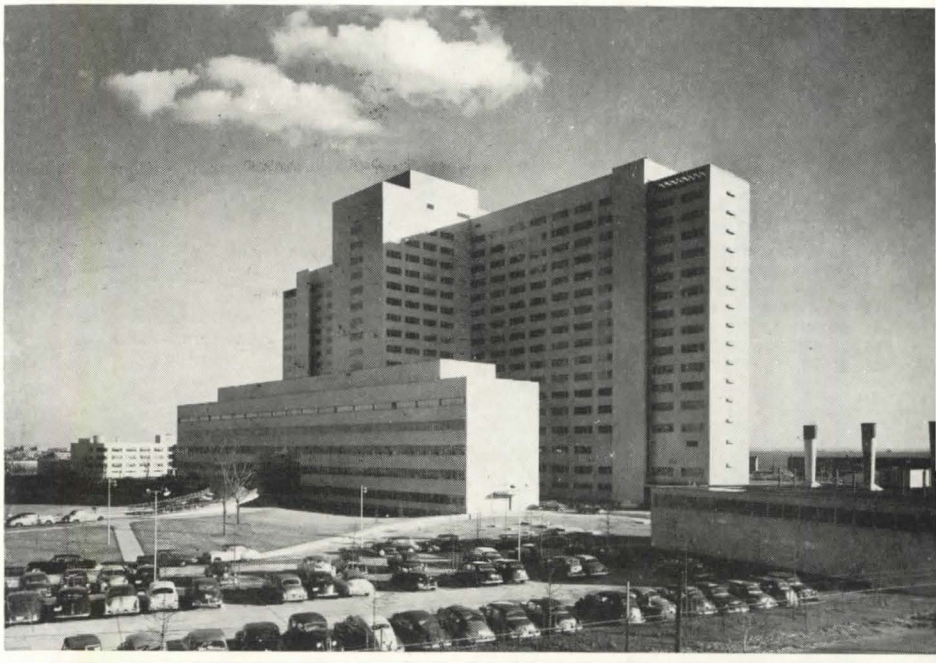
"The ribs were formed by precast slag-blocks" the engineers report, "and thus the load was carried to girders on f sides of each panel. The load was t shared by the girders extending along corridor and the spandrel girders (e and west) with the transverse gird (north and south). This proved a hap solution in reducing girder depths." girders along the corridors could not very *deep* because of ducts over the ridor ceilings which turned under th into the rooms at either side. The tra verse girders had to be shallow, si they determined the elevation of the ings. "Distribution of the load to b systems of girders enabled all to be shallow as possible," the engineers c cluded.

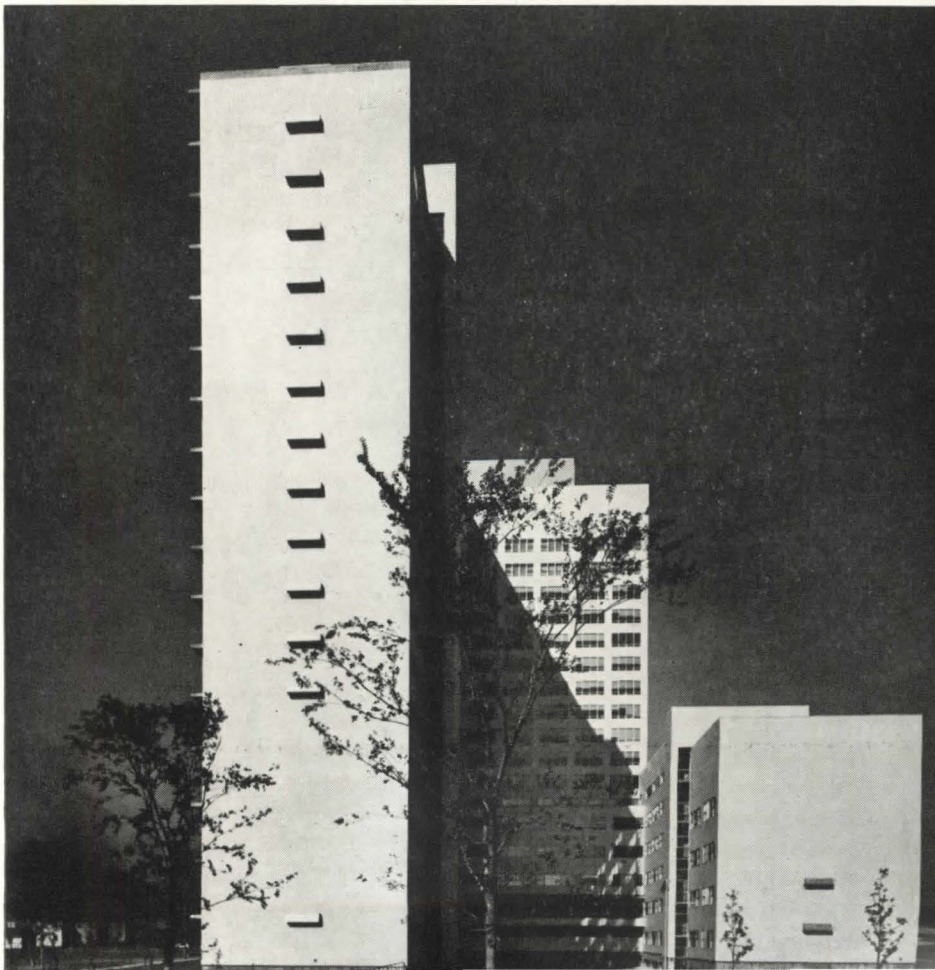
In the typical floor, the girders al

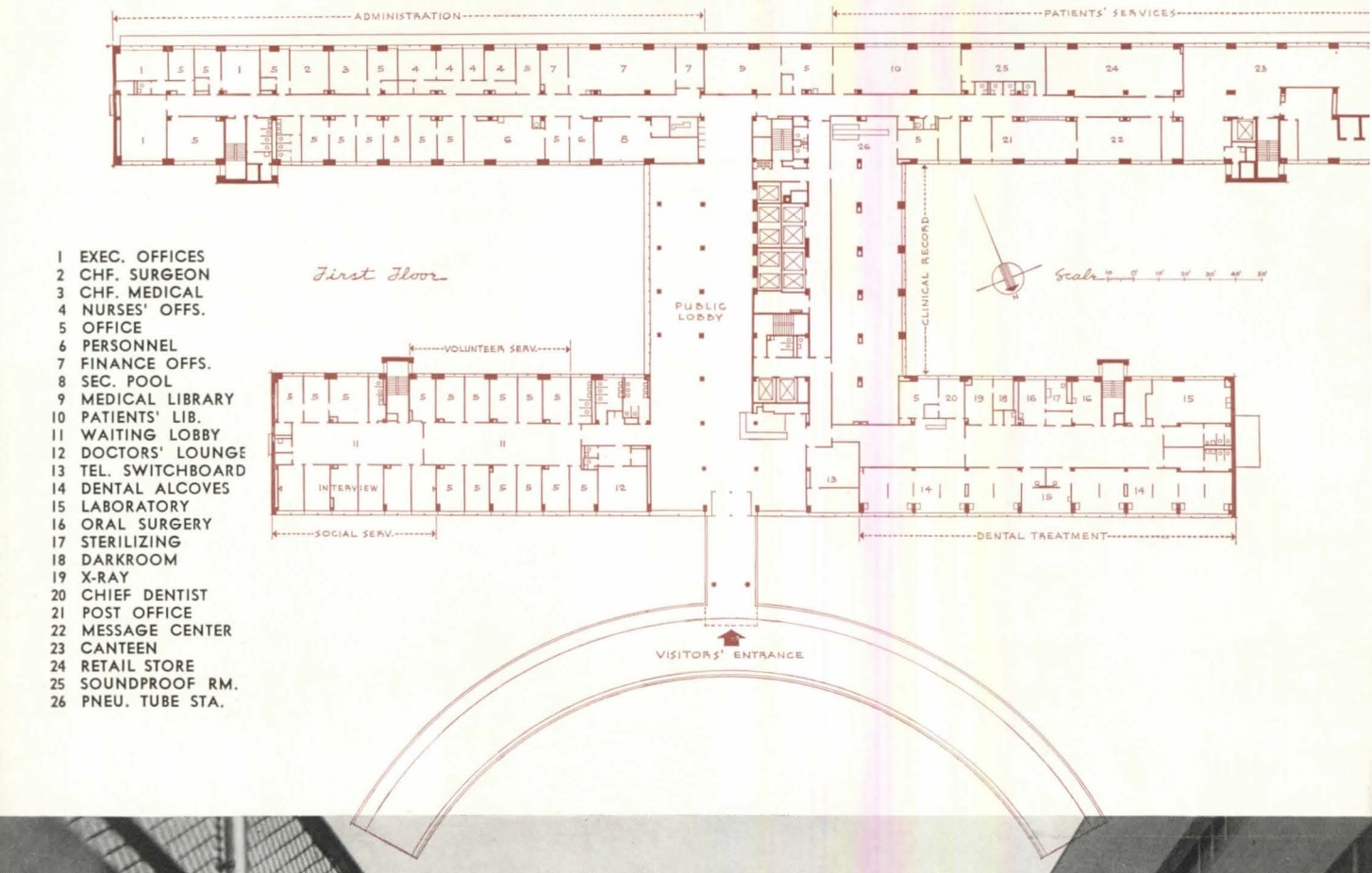
corridors were generally 12″ WF
ıs. The transverse girders were made
ouble channels all the way across the
ling. The double channels straddled
columns and were fastened to them
ubstantial wind connections. These
nels were 12″ deep in upper floors,
in the eighth and seventh floors,
15″ in the sixth floor and below.
ıe sunshade eyebrows above the bands
outhern windows in the main hospital
ς are of reinforced concrete. Double-
, casement, and projected sash are all
, and glazing includes plate, window,
obscure glass as well as double-in-
ing glazing (the latter, mainly on the
ı elevation of the north wing, as fixed
ng for the operating rooms).

VA Hospital: Brooklyn, New York

The entire complex (immediately below) *includes nurses' and staff residences* (extreme left), *the main hospital block, with a six-story wing on the north (a two-level ramped entrance keeps patients' and visitor traffic separate); and* (right) *the laundry-powerhouse building. Nursing units occupy the tall southern block* (acrosspage). *Seen from the east* (bottom page), *the three main functional divisions are clearly defined.* Photos: Martin Helfer







1 EXEC. OFFICES
2 CHF. SURGEON
3 CHF. MEDICAL
4 NURSES' OFFS.
5 OFFICE
6 PERSONNEL
7 FINANCE OFFS.
8 SEC. POOL
9 MEDICAL LIBRARY
10 PATIENTS' LIB.
11 WAITING LOBBY
12 DOCTORS' LOUNGE
13 TEL. SWITCHBOARD
14 DENTAL ALCOVES
15 LABORATORY
16 ORAL SURGERY
17 STERILIZING
18 DARKROOM
19 X-RAY
20 CHIEF DENTIST
21 POST OFFICE
22 MESSAGE CENTER
23 CANTEEN
24 RETAIL STORE
25 SOUNDPROOF RM.
26 PNEU. TUBE STA.

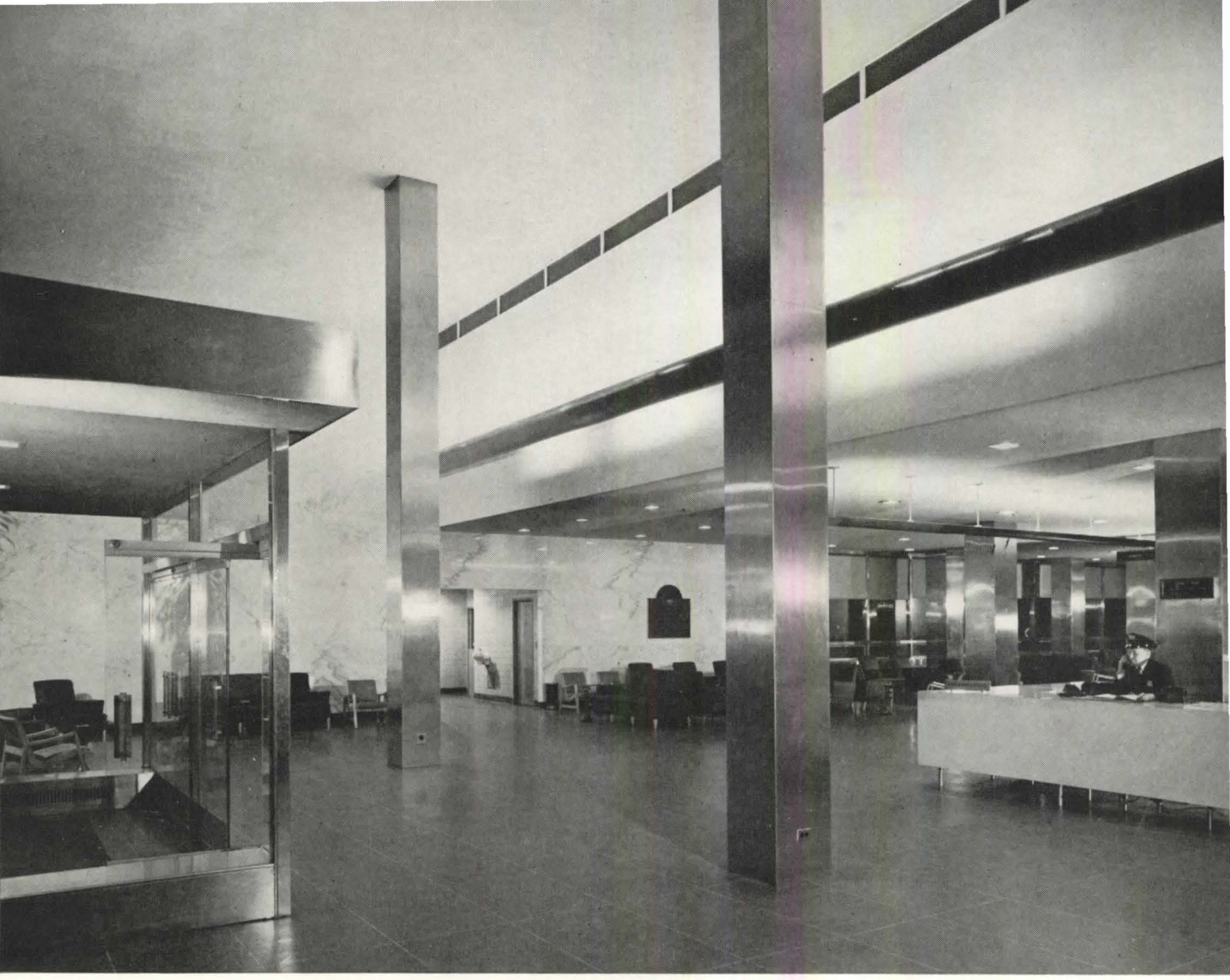
The two-level entrance—one for patients, the other for visitors—is made possible by the dramatic curved ramp at the front of the hospital that carries both automobile and foot traffic (photos above and acrosspage). *The visitors' lobby* (right) *has a terrazzo floor, columns sheathed in stainless steel, and end walls surfaced with marble.*

Photos: Torkel Korling; Martin Helfer

Hospital: Brooklyn, New York

oad curved ramp, supported on a e, central arc of columns, provides evels of access to the hospital on the , entrance front. The lower level en- e is for patients, whether hospital- or outpatients; the upper level is for rs chiefly. Further separation derives the fact that all outpatient facilities ocated in the six-story block of the tal, and separate elevators are pro- for outpatients' use. At basement (*plan not shown*) is the central supply and storage space, mechanical equipment, orthopedic brace rooms, and morgue.

The adjacent power plant supplies steam for heating, water heating, sterilizing, etc. The basic heating system consists of radiators or convectors, controlled by outside zone thermostats. Some areas —notably the psychiatric floors—utilize a radiant panel heating system. Electrostatic air filters serve both the ventilating system (tempered outside air distributed to rooms from corridor-ceiling ducts and exhausted by fans) and areas that are fully air-conditioned—operating rooms, recovery areas, allergy rooms, and the like. In the isolation nursing unit and in certain other areas, the air is further treated by germicidal devices that destroy all but a fragment of air-borne bacteria. Incandescent fixtures are the rule for artificial lighting, although fluorescent units are also employed, in lobbies, corridors, and various specialized areas.



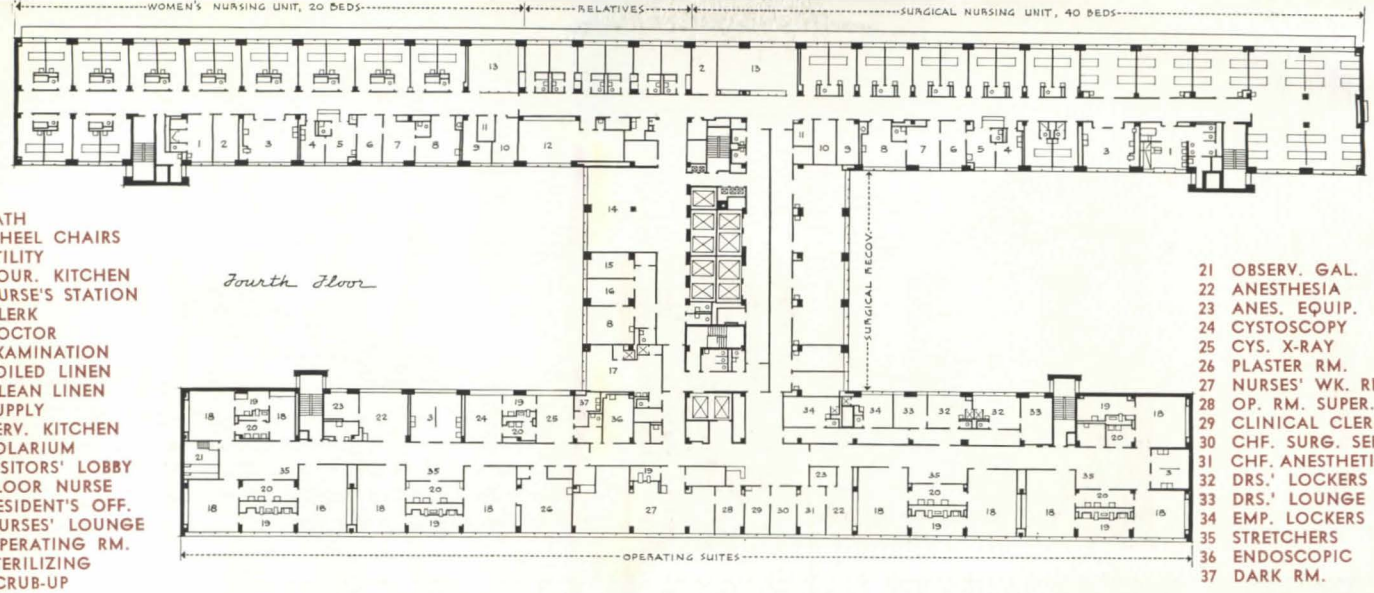
Looking from the west end of the first-floor public lobby (above) *one sees through to the corridor leading to the social service and volunteer service offices. The elevator core of this lobby* (left) *is paneled with rough-surfaced porcelain enameled steel that symbolizes the mechanical nature of the area it encloses.* Photos: Martin Helfer; Torkel Korling

VA Hospital: Brooklyn, New Y

The first floor includes the main public entrance, social-service offices, and dental unit; recreation facilities and administrative offices. The second floor is chiefly given over (in the forward block) to therapy departments and (in the rear) to food service. On the fourth floor are the operating suites, recovery unit, surgical nursing wing, and women's nursing unit, with a few rooms for use of relatives.

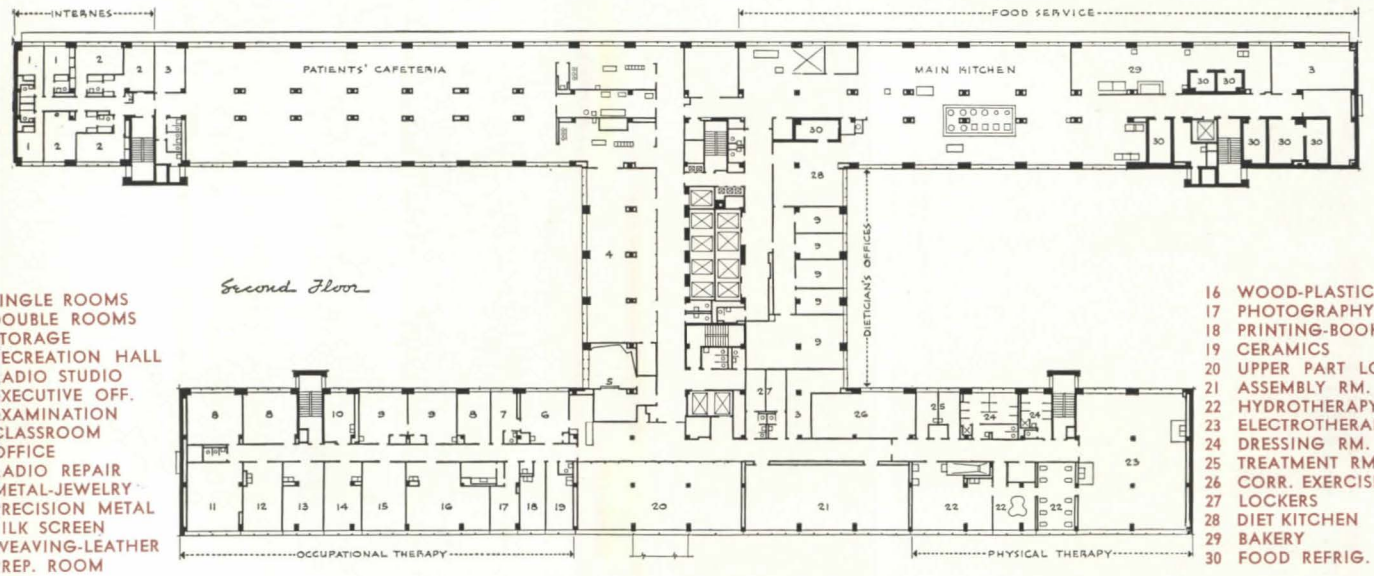
The third floor (*not shown*) also occupies the entire floor area. Here, the south wing is divided between an isolation nursing unit and quarters for residents. The connecting link, in addition to the mechanical core, has five double rooms, and (on the west side) experimental animal cages. The forward unit houses X-ray therapy; X-ray radiography, and hospital laboratories.

Typical upper-floor finishes are asp
tile flooring; acoustic-plaster ceiling
lobbies and corridors, with furred-pl
ceilings elsewhere; plaster walls, e
for glazed structural tile in the lo
and corridors and ceramic tile in to
utility rooms, operating rooms, etc. O
lower lobby floors, the walls aroun
elevator core are surfaced with a r
finish porcelain-enameled steel sheet



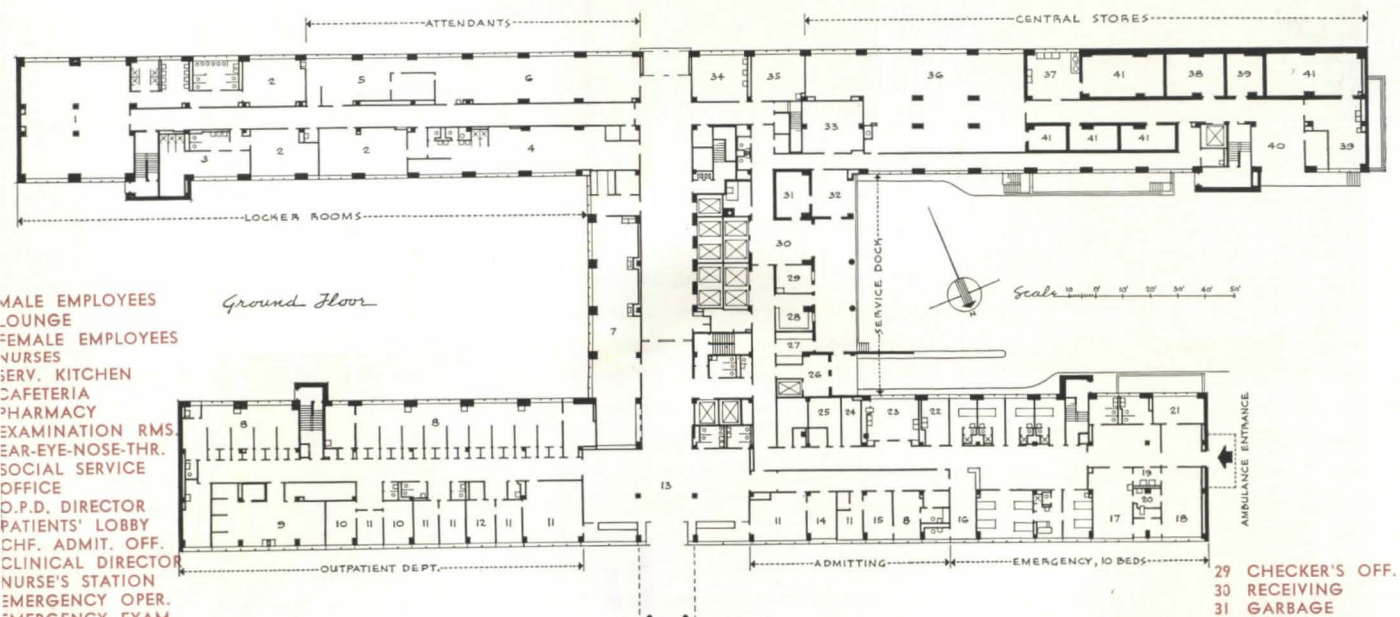
ATH
HEEL CHAIRS
ILITY
OUR. KITCHEN
URSE'S STATION
LERK
OCTOR
XAMINATION
OILED LINEN
LEAN LINEN
UPPLY
ERV. KITCHEN
OLARIUM
ISITORS' LOBBY
LOOR NURSE
ESIDENT'S OFF.
URSES' LOUNGE
PERATING RM.
TERILIZING
CRUB-UP

21 OBSERV. GAL.
22 ANESTHESIA
23 ANES. EQUIP.
24 CYSTOSCOPY
25 CYS. X-RAY
26 PLASTER RM.
27 NURSES' WK. RM.
28 OP. RM. SUPER.
29 CLINICAL CLERK
30 CHF. SURG. SERV.
31 CHF. ANESTHETIST
32 DRS.' LOCKERS
33 DRS.' LOUNGE
34 EMP. LOCKERS
35 STRETCHERS
36 ENDOSCOPIC
37 DARK RM.



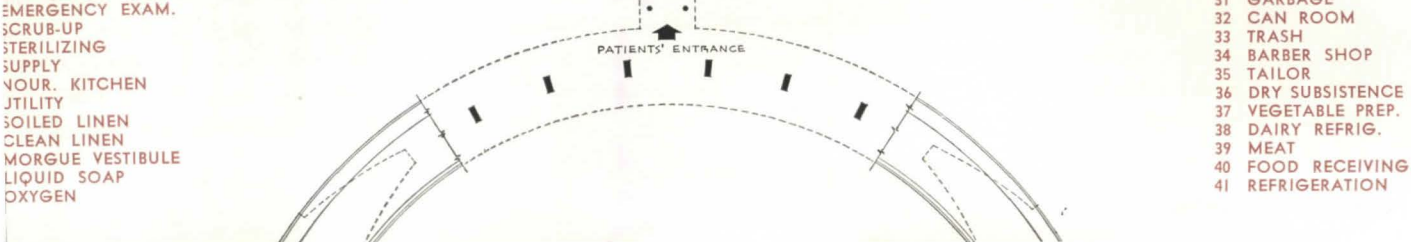
INGLE ROOMS
OUBLE ROOMS
TORAGE
ECREATION HALL
ADIO STUDIO
XECUTIVE OFF.
XAMINATION
CLASSROOM
OFFICE
ADIO REPAIR
METAL-JEWELRY
RECISION METAL
ILK SCREEN
VEAVING-LEATHER
REP. ROOM

16 WOOD-PLASTICS
17 PHOTOGRAPHY
18 PRINTING-BOOKS
19 CERAMICS
20 UPPER PART LOBBY
21 ASSEMBLY RM.
22 HYDROTHERAPY
23 ELECTROTHERAPY
24 DRESSING RM.
25 TREATMENT RMS.
26 CORR. EXERCISE
27 LOCKERS
28 DIET KITCHEN
29 BAKERY
30 FOOD REFRIG.



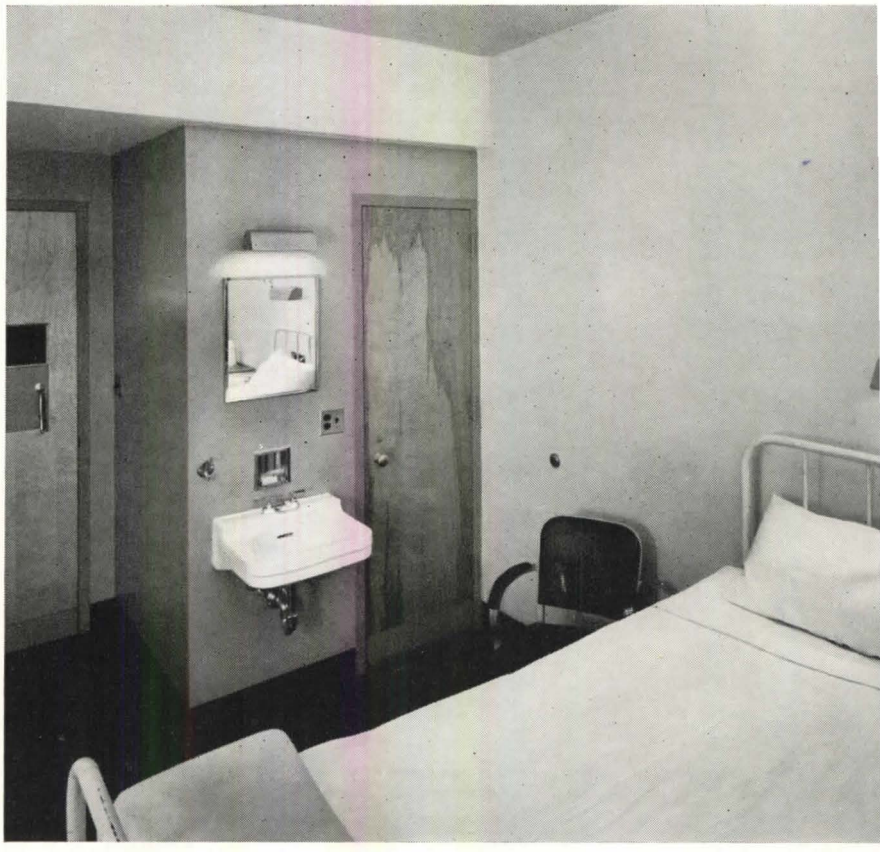
MALE EMPLOYEES
LOUNGE
FEMALE EMPLOYEES
NURSES
SERV. KITCHEN
CAFETERIA
PHARMACY
EXAMINATION RMS.
EAR-EYE-NOSE-THR.
SOCIAL SERVICE
OFFICE
O.P.D. DIRECTOR
PATIENTS' LOBBY
CHF. ADMIT. OFF.
CLINICAL DIRECTOR
NURSE'S STATION
EMERGENCY OPER.
EMERGENCY EXAM.
SCRUB-UP
STERILIZING
SUPPLY
NOUR. KITCHEN
UTILITY
SOILED LINEN
CLEAN LINEN
MORGUE VESTIBULE
LIQUID SOAP
OXYGEN

29 CHECKER'S OFF.
30 RECEIVING
31 GARBAGE
32 CAN ROOM
33 TRASH
34 BARBER SHOP
35 TAILOR
36 DRY SUBSISTENCE
37 VEGETABLE PREP.
38 DAIRY REFRIG.
39 MEAT
40 FOOD RECEIVING
41 REFRIGERATION



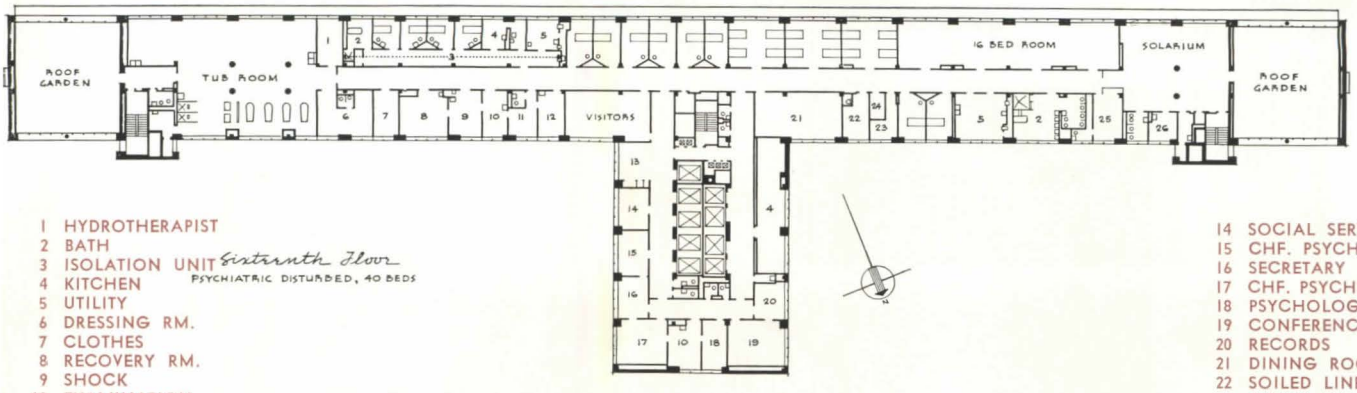
VA Hospital: Brooklyn, New

The typical upper-floor elevator lobby (left) *has walls of glazed structural block, asphalt-tile floor, and acoustic-plaster ceiling. A nurses' station* (below, left) *occurs at the center of each of the paired nursing units on the typical floor. Clean simplicity marks the typical patient's room* (below, right).



The lower plan on the facing page is the typical nursing-unit floor, with 40 beds in each of the nursing units that are almost symmetrically arranged on either side of the central solariums, along the southern wall. The thirteenth and fourteenth floors (not shown), are used by neurological patients, and are practically identical, except that two 8-bedroom wards occur at the ends in place of the 16-bed wards of the typical floor. The fifteenth floor, also not shown, is for quiet psychiatric patients.

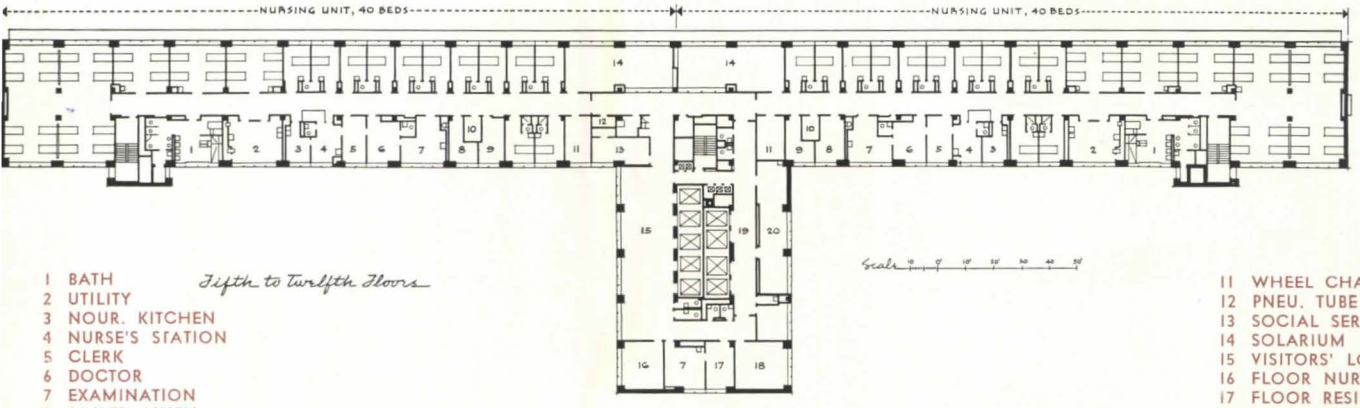
An audio-visual system is used for paging doctors; a light and buzzer equipment constitutes the nurses' call system. Fro the medical-records room on the first floo a 4-inch pneumatic tube system provide direct, speedy communication with a nursing floors, treatment areas, and som offices; a bank of dumbwaiters serves a floor kitchens, which are located on th west wall of the central block. Other sp cial equipments include a central chille drinking-water system; radio outlets b side every bed; telephone booths for an bulant or wheel-chair patients, and a por able plug-in phone unit that may b wheeled to the patient's bedside.



Sixteenth Floor
PSYCHIATRIC DISTURBED, 40 BEDS

1 HYDROTHERAPIST
2 BATH
3 ISOLATION UNIT
4 KITCHEN
5 UTILITY
6 DRESSING RM.
7 CLOTHES
8 RECOVERY RM.
9 SHOCK
10 EXAMINATION
11 DOCTOR
12 CLINICAL CLERK
13 WAITING

14 SOCIAL SERVICE
15 CHF. PSYCH. NURSE
16 SECRETARY
17 CHF. PSYCHIATRIST
18 PSYCHOLOGY
19 CONFERENCE
20 RECORDS
21 DINING ROOM
22 SOILED LINEN
23 CLEAN LINEN
24 SUPPLY
25 NURSE'S STATION
26 BARBER SHOP

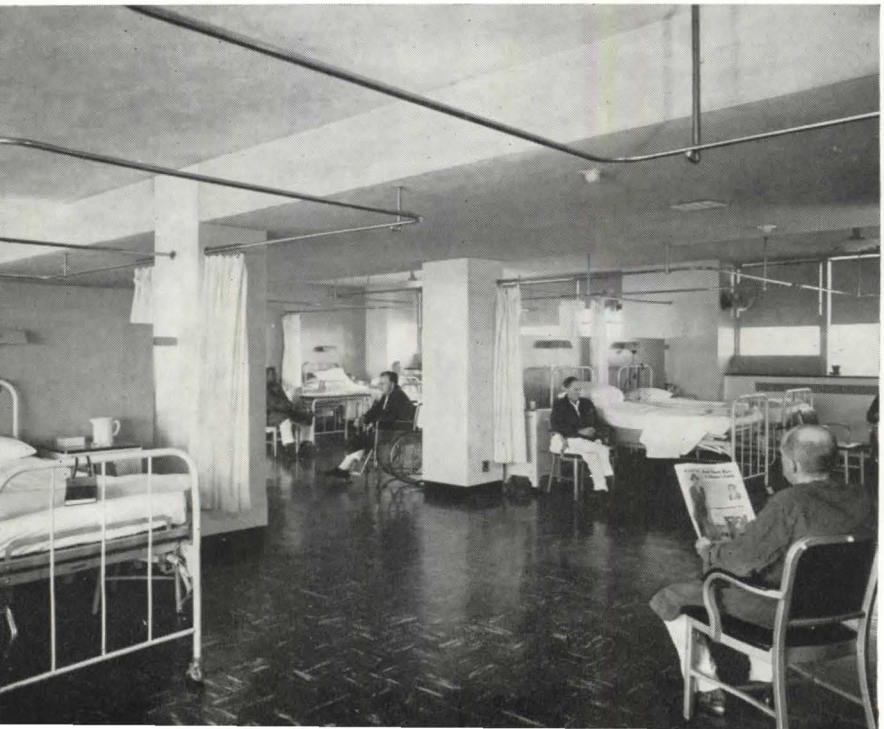


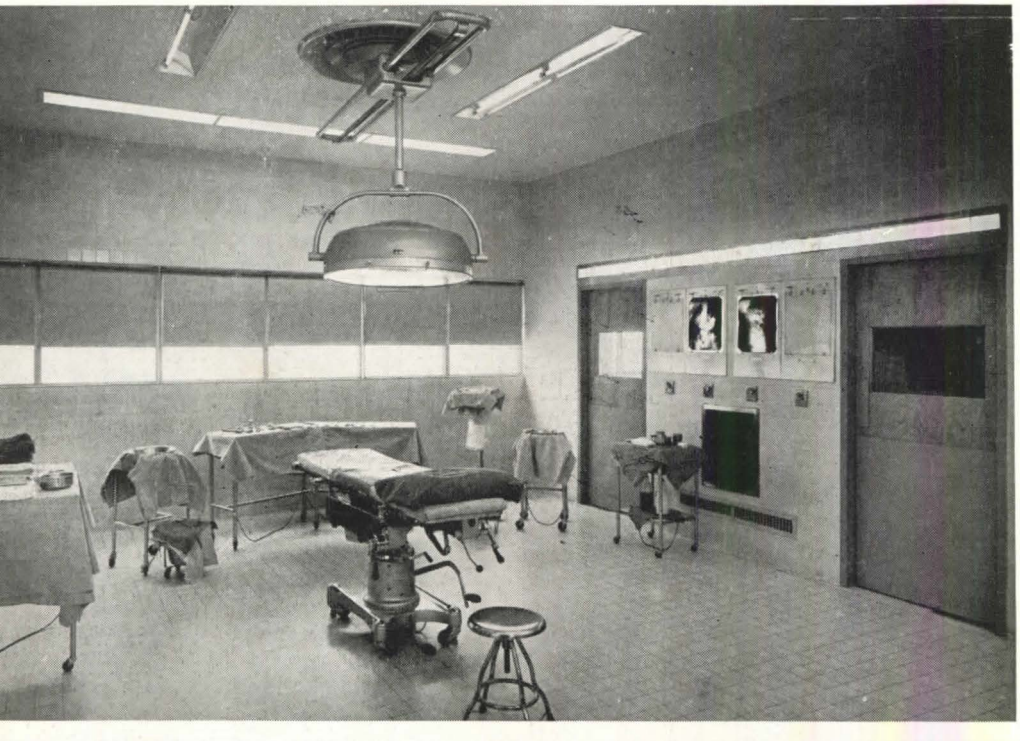
Fifth to Twelfth Floors

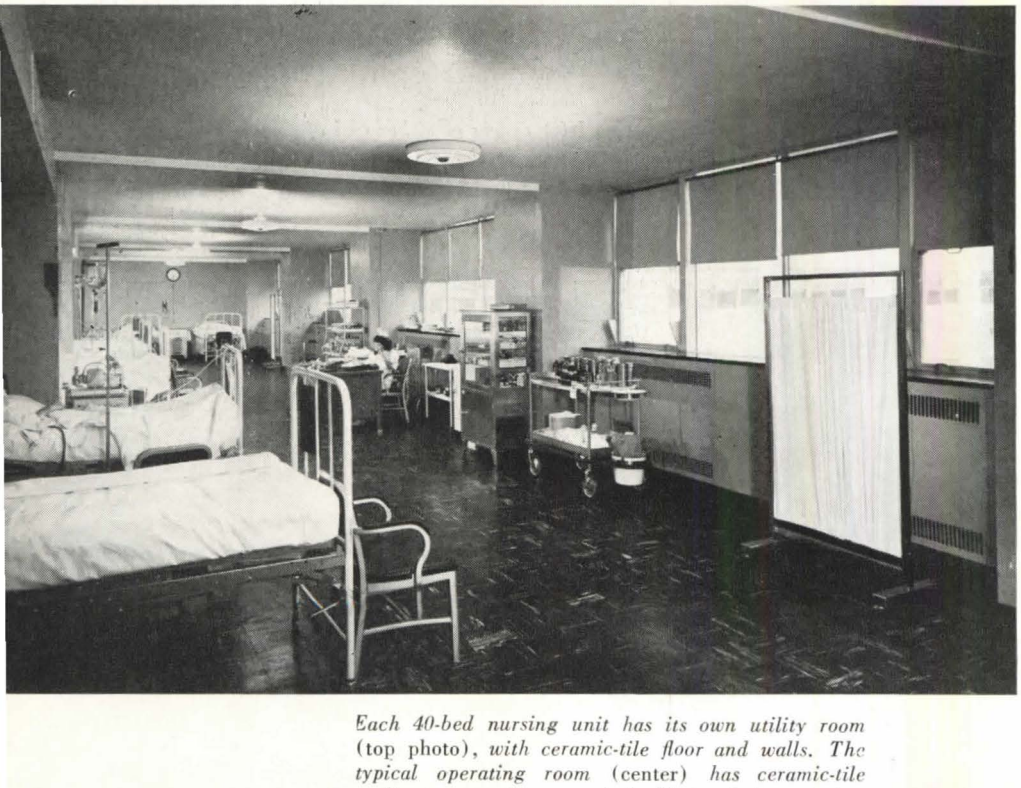
1 BATH
2 UTILITY
3 NOUR. KITCHEN
4 NURSE'S STATION
5 CLERK
6 DOCTOR
7 EXAMINATION
8 SOILED LINEN
9 CLEAN LINEN
10 SUPPLY

11 WHEEL CHAIRS
12 PNEU. TUBE STA.
13 SOCIAL SERVICE
14 SOLARIUM
15 VISITORS' LOBBY
16 FLOOR NURSE
17 FLOOR RESIDENT
18 CONFERENCE
19 SERVICE LOBBY
20 KITCHEN

A 16-bed ward (below, left) *occurs at either end of a typical nursing-unit floor. At the center of the floors are the solariums* (below, right) *with their south-facing windows.* Photos: Martin Helfer







Each 40-bed nursing unit has its own utility room (top photo), *with ceramic-tile floor and walls. The typical operating room* (center) *has ceramic-tile walls, terrazzo floor, and double-insulating glazing. Mounted flush on side walls are bands of germicidal lamps. Also on the fourth floor is the surgical recovery unit* (bottom). Photos: Martin Helfer

VA Hospital: Brooklyn, New Y

Foundation: concrete piles—Raymond Co Pile Company. **Frame:** structural steel—hem Steel Company. **Floors, roof:** concret system—Republic Fireproofing Compan high Portland Cement Company, Un Atlas Cement Company, Hercules C Corporation. **Wall surfacing:** exterior: bri cinder-block back-up; interior: plaster rooms, toilets, ceramic tile—Mosaic Tile pany. **Floor surfacing:** asphalt tile—Mast Corporation of America. **Ceiling surf** plaster and acoustical plaster—U.S. G Company. **Roof surfacing:** 5-ply built-up ing, waterproofing—Ruberoid Company. **tions:** cinder block—National Brick Co tion; structural facing units—Arketex C Corporation. **Windows:** sash: double-h S. H. Pomeroy Company, Incorporated; ment and projected—Truscon Steel Cor glass: plate—Franklin Glass Corporation dow—American Window Glass Cor double-glazing and obscure — Libbey-O Ford Glass Company. **Doors:** wood int Hardwood Products Corporation; hollow overhead and elevator—Overhead Door pany, Aetna Steel Products Corporation pered-glass entrance—Pittsburgh Plate Company. **Hardware:** surface-type door c deadlocks and cylinder locksets—Norwal Company; concealed overhead and floo door closers—Shelby Metal Products Cor hospital-type hinges and regular butts Kinney Manufacturing Company. **Paint:** Merkin Paint Company.

equipment

Elevators: high- and low-speed passe Westinghouse Electric Corporation; high low-speed service—Westinghouse Electri poration, John W. Kiesling & Son, In rated; cabs — Globe-Van Doorn Corpo **Lighting fixtures:** Simes Company, Con Corporation, Leader Electric Company Philbin Manufacturing Company, Westin Electric Corporation, Swivelier Company brandt Lamp Corporation. **Electrical di tion:** service-entrance switch, panelbo Standard Switchboard Company; cor Youngstown Sheet & Tube Company, S Chalfant Division; the wiring devices pleton Electric Company, Russell & Company, Bryant Electric Company, H Hubbell, Incorporated. **Plumbing and tion:** water closets, tubs, lavatories— Company; toilet seats—C. F. Church facturing Company; water storage he Patterson-Kelley Company; flush valves— Valve Company; incinerator — Washb Granger, Incorporated; copper, wrough and steel pipe—Bridgeport Brass Cor A. M. Byers Company, Bethlehem Steel pany; sprinklers—H. G. Vogel Cor shower controls — Leonard Valve Cor medicine cabinets—Parker Steel Product **Heating:** steam and radiant type; bo *Titusville Tank* & Construction Company; tors—National Radiator Company; stee wrought iron pipe—Bethlehem Steel Co A. M. Byers Company; unit heaters—U Conditioning Corporation; controls—Mi olis-Honeywell Regulator Company. **Air tioning:** Carrier Corporation; diffuser grilles—Air Devices, Incorporated, Ane Corporation of America, Tuttle & Bailey porated, J. W. McGuire Company; blo U.S. Air Conditioning Corporation; f American Air Filter Company.

patient–nurse two-way communication

by L. T. Chandler*

ıe past, nearly all hospitals have em-
ed a lamp-signaling system from pa-
to nurse which, briefly, consists of a
ng button with cord at the patient's
ide, a corridor lamp over each room
ance, a pilot lamp in the duty rooms,
a lamp annunciator in the nurses' sta-
When the patient presses his calling
on, the lamps in the corridor, in the
ty, and in the nurses' station (indicat-
the room calling) are lit and remain
ntil the bedside calling button is reset.
t systems have a buzzer associated with
tility station and an annunciator which
ds momentarily when the button is
sed, so that the nurse will know that
om is calling even though she may not
acing the lamps at that moment. This
m necessitates the nurse going to the
ide of the patient who is calling to
rmine his needs. Many times the na-
of the need is such that the nurse must
go to the duty room or diet kitchen for
tional equipment. It has been recog-
l recently that a communicating system
l be made that would permit a two-
conversation between patient and
e, not only saving the nursing staff
y steps, but also giving the patient
ker service and assurance, through the
t conversation with the nurse, that the
will be attended.

e continued shortage of nurses jus-
the use of any system which will help
urse in caring for more patients with-
educing nursing standards. A patient-
ıurse two-way communication system
contribute greatly to the efficiency of
nt care; however, the following should
arefully considered by those respon-
for specifying such a system.

rvisor, Sales Engineering, Edwards Company, Inc.,
k, Conn.

requirements of system

Certain desirable features of the straight visual system as used in the past should be retained. These are:

(a) The use of corridor dome lights over room entrances, since there will be cases—especially in the smaller hospitals—where the nurse leaves the nurses' station to answer a patient's call and in the interim misses another call. The corridor lamp will then warn the nurse to go to the second room before returning to her station.

(b) Easy removal of any patient's calling-button cord set from the system, so that the button and cord may be cleaned periodically or, if necessary, repaired or replaced after long usage. During removal, a means should be provided to cancel the automatic disconnect feature (described below) so that, when the new or cleaned cord set is installed, the automatic disconnect feature is immediately and automatically restored.

(c) The use of the automatic disconnect feature in the patient's calling button and cord: In the event the patient accidently pulls his calling-button cord from the wall or if the cord plug is not properly engaged in its receptacle, all lamps in the system associated with that room will be lit and the buzzers in the utility room and nurses' station will sound continuously, thereby signifying to the nurse which button is inoperative.

(d) The use of a pilot lamp and buzzer in each duty station and diet kitchen, or at any point where it is desirable to notify a nurse that there is a call registered at the master station. This is especially desirable for night duty where the nursing staff is reduced to a minimum and it is impossible to have a nurse continuously at the nurses' station (where the master station is located).

(e) Emergency calls from rooms where no microphone speaker is desired (toilets, bathrooms, and operating rooms) should register on a small lamp annunciator having a continuous sounding buzzer or bell in the nurses' station. It is usually not practical or economical to have these calls come in on the nurses' master station which handles all calls from the rooms equipped with microphone speakers.

All equipment should be designed to have a pleasing appearance, with minimum space requirements. This is especially true of the equipment used in the patient's rooms, since the combination speaker-microphone and calling cord receptacle must be mounted in a prominent place on the wall over the bed. The use of a single stainless-steel or sprayed satin-aluminum plate for this equipment is desirable from appearance and utility considerations, as it will match other electrical devices in the room, such as switch and duplex receptacle plates, etc. The patient's room station illustrated (*Figure 1*) is the same size as a standard 3-gang electrical face plate; measures only 6¼″ wide and 4½″ high; and requires a standard 3-gang outlet box 2¼″ deep.

Since the equipment of the system requires 24-hour use because of its important function, all parts should be made of the highest quality material and extremely rugged. For example, the switches on the master station (*Figure* 2) receive hard usage and should be of a telephone-cam-key construction with silver contacts. These should be mounted in a vertical position so that dirt and dust cannot easily lodge there and cause faulty operation. The calling button should be shock resistant; its electrical cord should have quality insulation with an outside covering of neoprene to assure long life and to remove the danger of electrical shock to the patient.

The system should be designed for minimum servicing and where replacements will eventually be needed, such as in the tubes of the amplifier, accessibility to those parts must be of prime consideration, to keep maintenance costs as low as possible. To insure continuous operation, the amplifier which is the heart of the system should be designed so that it can be completely removed and a new one installed in a few minutes time.

The electrical circuit and its components should be as simple as possible and designed so that the average hospital maintenance personnel may make repairs and replacements, thereby keeping maintenance costs comparable with those of the lamp-signal systems used in the past. For example, the complicated locking or sequence-type relays and other devices, which are difficult to adjust and maintain, should not be used. As is true for other hospital electrical equipment, the system should be manufactured by a company that is reliable and has a record of experience in signaling, backed up by a nationwide service organization with readily available parts and personnel for assistance when needed.

The equipment should be so designed that it can be easily and economically installed, as the cost to the hospital is the installation plus the maintenance expense. Use of electrical back boxes, where possible, is desirable for this reason.

The system should be able to transmit clearly the faintest voice from the patient and also transmit the voice of the nurse to the patient so that it may be clearly understood. The volume of the conversation should be such that it is not carried into the corridors or, where speakers are used in wards, be annoying to the other patients. It is desirable to have a 3-level volume key on the master station which a nurse may immediately adjust to take care of very weak or very loud voices and thereby assure a proper volume at all times.

Privacy of conversation between patient and visitors, without eavesdropping by the nurse at the master station, is a question of debate by hospital authorities. Some contend that the nurse has neither the inclination nor the time to eavesdrop. However, the system which will be described later is so arranged that the patient must first operate his calling button in order that the nurse may hear his (or the visitor's) voice —unless a monitoring feature is desired.

Most hospitals agree that monitoring of the patient's speaker by the nurse has doubtful value. The monitoring feature would mean that the nurse could call or listen into any room from the master station without the patient pressing the button. Although claims have been made of the nurse being able to listen in for patients' abnormal breathing, this is debatable. Also, this feature may create a tendency to neglect established routine visits to the patient by the nurse. If monitoring is possible, it would void the privacy advantage unless a cutoff switch is placed at the room speaker. This would increase the costs and permit the possibility of the patient's neglecting to throw the switch back to its normal operating position.

Since the spaces assigned as nurses' stations are usually open to the corridor and not behind closed doors, the master station should be equipped with a handset so that the patient's needs are confidential to the nurse. This gives the patient more confidence in the use of this type system and is an advantage over the loud-speaker type of master station. Furthermore, a lower volume booster is required of the handset type, keeping distortion to a minimum and permitting greater sensitivity in picking up the patient's voice. The handset also permits the nurse to use a normal speaking voice and prevents background noises and conversations in the nurses' station from being broadcast into the patient's room.

It is very important that the system assures that all calls are indicated at the master station and that it is not possible for a call to be intentionally or accidentally canceled by the nurse at the master station. Resetting should therefore be done only at the patient's bedside. This is complished by having the calling butto the locking type, with a reset means in button. The reset device in the bu should not only be designed so that a tient can easily reset the button when quested to do so by the nurse, but also be accidentally reset at any time.

In order to keep the system an effic and easy-to-operate device, it must perf only the service for which it is inten Trying to use or design the system for s functions as public address, inter throughout the building, piping music, ing doctors, fire alarm, etc., destroys efficiency of performing its prime pur with generally disappointing results.

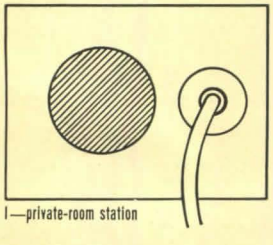
how the system operates

When a patient wants assistance, presses his calling button *(Figure 1)* w causes a lamp to be lit and remain li the dome light over the room entranc the pilot light in duty, work room, or kitchen, and the associated pilot ligh the nurses' master station. The buzze the utility station and in the nurses' sta sounds momentarily. The nurse at the ter station picks up the handset, *(Figur* throws the cam key opposite the lit lamp and, using the talk-listen key, verses with the patient. At the end o conversation, the nurse requests the pa to reset his button, which extinguishe associated lamps. The nurse flips that station back to normal and is now r to answer the next call. The system designed that in the event the patient not receive immediate attention, he repeatedly press his calling button w momentarily operates the buzzers in system and flashes all associated l mentioned above.

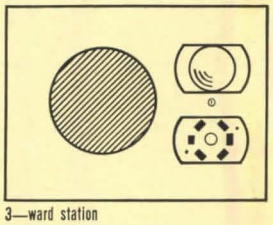
proper placing of equipment

The microphone-speaker and calling ton receptacle combination should b stalled on the wall at the head of th tient's bed. The system is designed so the patient need not face the microp

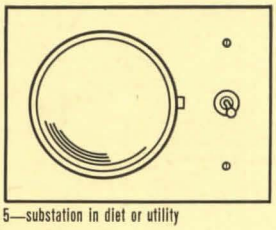
Figure 1—patient initiates conversation by pressing call button (below, left). *Figure 2—master station combines built-in amplifier and double-throw cam keys to increase room station capacity and reduce size of cabinet* (below, right). *Figures 3 and 4* (center and bottom) *illustrate the eight stations of the system and a conventional conduit lay-out.*



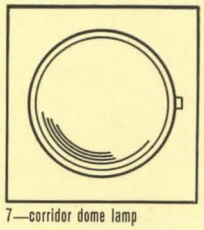
1—private-room station



3—ward station

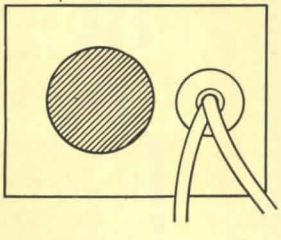


5—substation in diet or utility

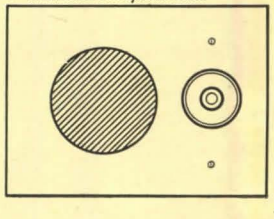


7—corridor dome lamp

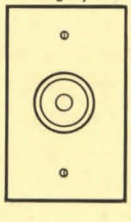
2—semi-private station



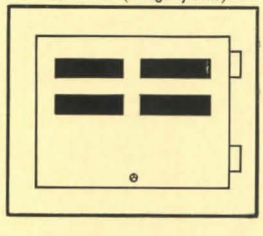
4—examination or dayroom station

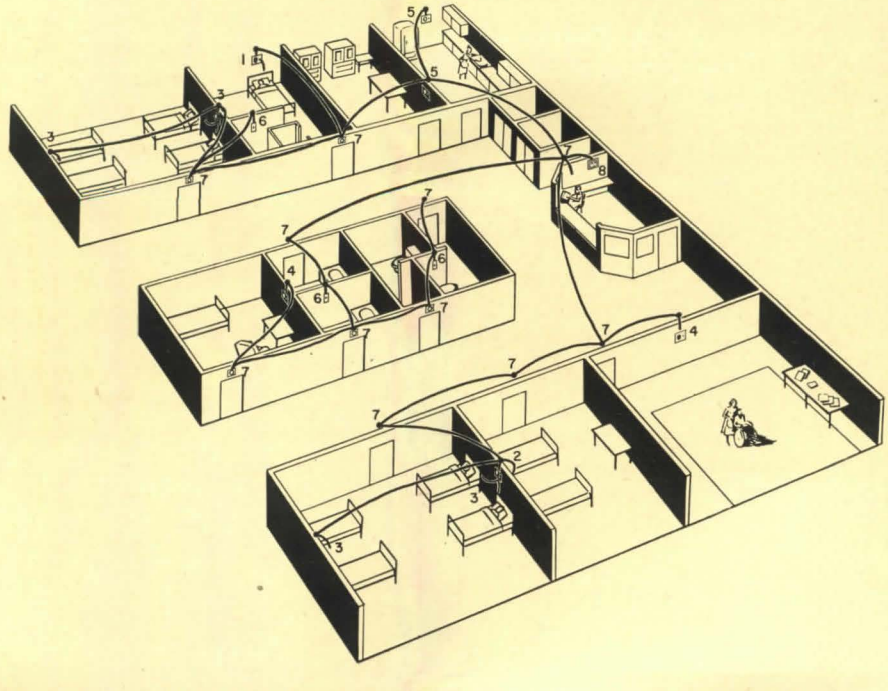


6—emergency station (bath or utility)



8—nurses' station (emergency calls)





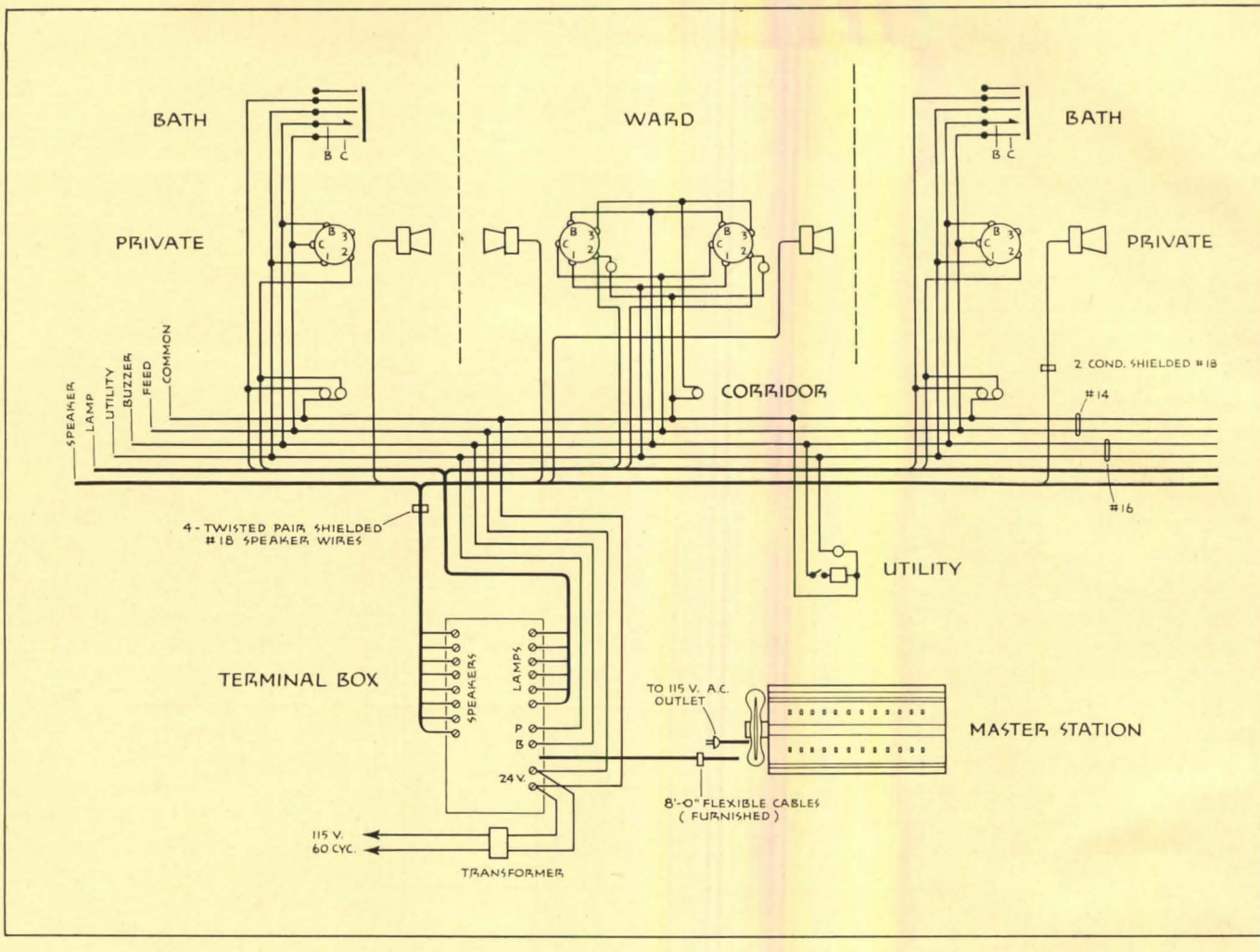


Figure 5—typical wiring diagram indicates number of wires and sizes required. Speaker and signal wires can be run in same conduit.

speaker during conversation. The calling cord which plugs into its receptacle (which is in the same face plate as the microphone-speaker) is 6′ in length. In semi-private rooms and wards, it is often most economical to use only one speaker between each pair of beds and a double calling cord which has only one plug and receptacle.

The master station can be installed on any convenient desk space in the nurses' station. Although the unit is portable, it is equipped with cables approximately 9′ long. These cables end in a terminal box, usually mounted in one of the walls. Sometimes certain locations for the terminal box are more advantageous from the electrical contractor's viewpoint and this, therefore, often determines the location of the master station and the desk on which it is to be mounted.

wiring requirements and power supply

Most systems permit the lamp, audible signal, and speaker wires to be run in the same conduit. However, this should always be checked with the manufacturers whose equipment is to be specified. Installation costs are naturally higher for those systems that are not designed to permit the one-conduit layout. The speaker wires should be shielded, twisted, pair No. 18 or larger. The signal wires shoul No. 16 and the common feed wires run from the transformer secondary shoul No. 14.

The eight stations of the system a conventional conduit layout are sh (*Figures 3 and 4*). Conduit layou course, will be dependent on the typ construction used for the particular pital. The wire sizes and number req are shown in the wiring diagram (*Fi 5*).

The system operates from the 2 secondary of a N.E.M.A. Standard h duty signaling type of suitable capaci light at least one quarter of the lamp the system simultaneously.

hospital lighting

by Howard Haynes*

ing requirements should be con- y considered during the designing of pital. A neat clean appearance and of maintenance are factors more im- nt in hospital lighting than in the ng of other interiors. Hospitals em- ze cleanliness—and a lighting system mple, neat design can add much in ng this impression. Lighting fixtures be washed and cleaned, not only to ain lighting efficiency but also, more tant in hospitals, as part of the regu- outine of keeping all surfaces clean. ost of cleaning fixtures can vary con- ably, depending on the types used. A xtra dollars spent to obtain easy-to- lighting units may save many times mount during the life of the fixture. meet these requirements, a variety uorescent and filament fixtures are able. For general lighting, the trend s to be toward recessed ceiling fix- covered with diffusing plastic or flush with the ceiling; either fluo- nt or filament lamps can be used.

comfortable lighting

hieve comfortable lighting sharp dif- ces in brightnesses within the field of must be avoided. Lighting units must e too bright and bare lamps must, urse, be shielded. Often overlooked e bare lamp brightness as reflected specular metal or glossy paint; mat, r than glossy, paints should be used. s should be relatively light in color; should have pleasing colors and re- about 50 percent of the light; ceilings d reflect even more but need not sarily be white. Good lighting fix- alone do not assure comfortable ng—the whole interior of the hospi- ust be taken into consideration in ning the lighting.

amount of light

atter how clean and sanitary a hospi- ay be, dim lighting can create the site impression. But even more im- nt than appearances, it has been n that for quick, accurate, easy see- ing, certain levels of illumination are required. These values vary, of course, with the difficulty of the seeing task. The footcandle recommendations for the various elements in a hospital plan are listed in the table accompanying this article.

Hospital lighting must satisfy the needs of at least three groups of people—the patients, the hospital staff, and the visitors. The patients, unless they are well enough to read, want low-level, comfortable lighting. The staff, on the other hand, requires higher levels of illumination to permit quick, accurate seeing. The visitors would like to find the hospital a warm cheerful place, and lighting can do much to give this feeling.

fluorescent or filament lighting?

Either fluorescent or filament lamps can be used in most locations. For simplicity, lowest initial cost, and low maintenance cost, filament lamps can be recommended. Fluorescent lamps are more efficient: less heat is generated and the surface brightness is relatively low. As for over-all cost, when lamps are operated many hours per day and/or the electric rate is relatively high, fluorescent lamps are generally preferable. In the past, the principal objection to the use of fluorescent lamps in hospitals was the color they produced. The lamps were deficient in red and people under them looked less healthy than they really were—psychologically bad in hospitals. However, recently developed fluorescent lamps that radiate red light give complexions a more natural appearance. As this is accomplished at some sacrifice in efficiency, their use is recommended only for patients' rooms, operating and examining rooms, and in the cafeteria and dining room. Eventually they may be used more generally.

emergency electric power

Failure of the electric supply in a hospital can well be a matter of life and death; an emergency supply is imperative. Unless the emergency source has sufficient capacity to take on the requirements of the entire hospital, certain lights throughout the hospital should be put on a special circuit that is controlled by the auxiliary power supply.

operating rooms

Good lighting is essential in surgery where a life may depend upon the ability of the surgeon to see clearly. Because the surgeon may be looking deep into a cavity of low-reflection factor, he should have a lighting intensity of 1800 footcandles or more. This light must come from several wide-angle directions to decrease the shadows from the surgeon's head, his hands, and the surgical tools. Heat-absorbing glass filters are used to reduce the radiant heat and provide color correction. A system of concentrating lens plates mounted in the ceiling is also available. The choice of which of the several available operating lights to use can best be left to the surgeons.

The operating light should be supplied by a branch circuit independent of all other lights, and this circuit should be connected to the emergency bus. An automatic throw-over switch should be provided to connect the operating light directly to the emergency supply in case of failure of the main power supply.

General lighting in operating rooms has sometimes been neglected. Occasionally a surgeon will insist that he can see better without the general lighting, but when he says this it can be assumed that his general lighting system undoubtedly gives light of poor quality and low quantity. A good general lighting system providing 50 footcandles of light will increase the surgeon's comfort, since it will reduce the contrast between the operating area and the surrounding area. The operating staff will have good light to see quickly and easily in carrying out the instructions of the surgeon. Fixtures built into the ceiling—covered with glass or plastic and flush with the ceiling—are being widely used in modern construction. Either filament or fluorescent lamps may be used. Cool, white fluorescent lamps give a pleasant color that approximately matches the hue of the color-corrected operating light; they also give the anesthetists an excellent idea of the true coloring of the patient's face and lips.

Outlets should be provided for portable operating lights which may be used by the surgeon. All lighting fixtures and electrical

Division, General Electric Company, Nela Park, nd, Ohio

Figure 1—the concentric-ring fixture with silvered-bowl lamp blends well with the ceiling. Fort Hamilton VA Hospital, Brooklyn, N. Y.

Fort Hamilton photos: Martin Helfer

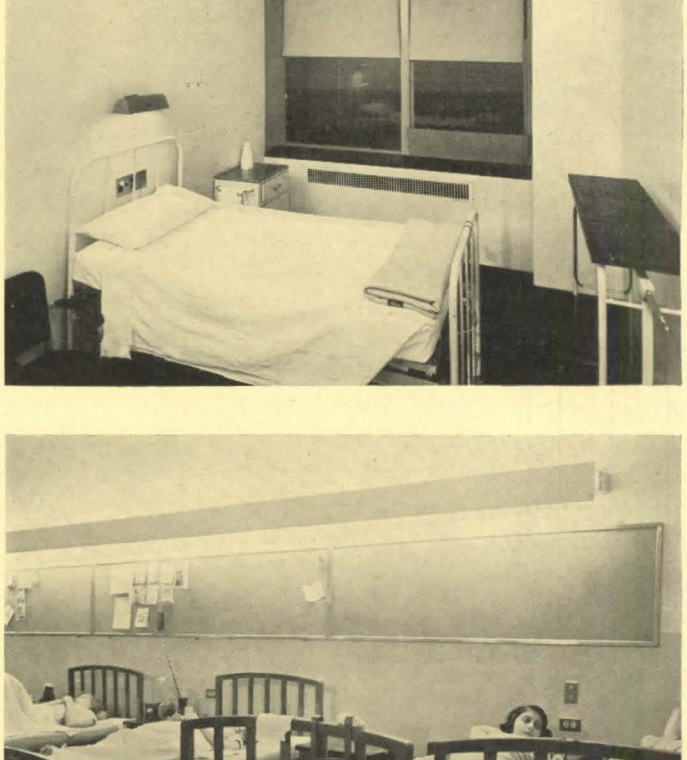


Figure 2—this premature nursery is comfortably lighted to a level of five footcandles by coves containing continuous rows of fluorescent lamps. George Washington University Hospital, Washington, D. C.

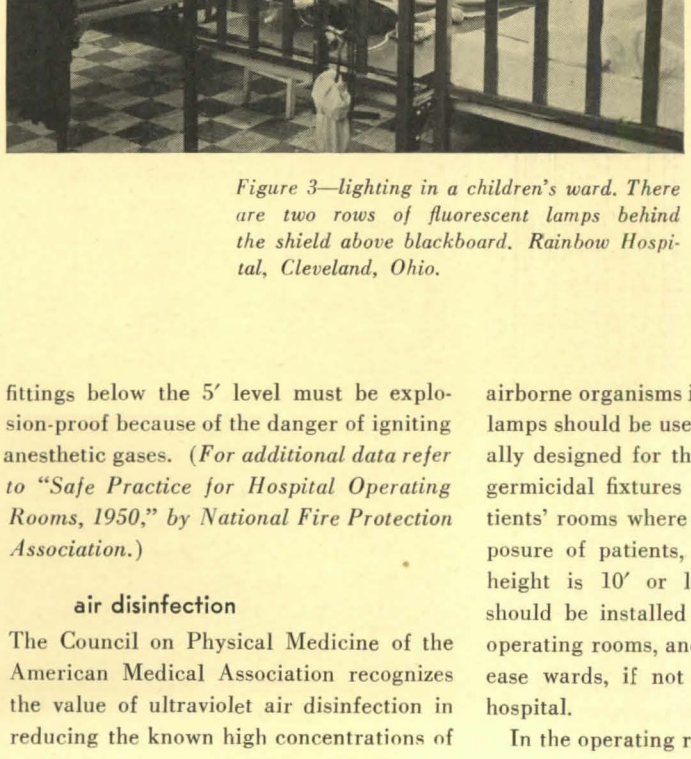


Figure 3—lighting in a children's ward. There are two rows of fluorescent lamps behind the shield above blackboard. Rainbow Hospital, Cleveland, Ohio.

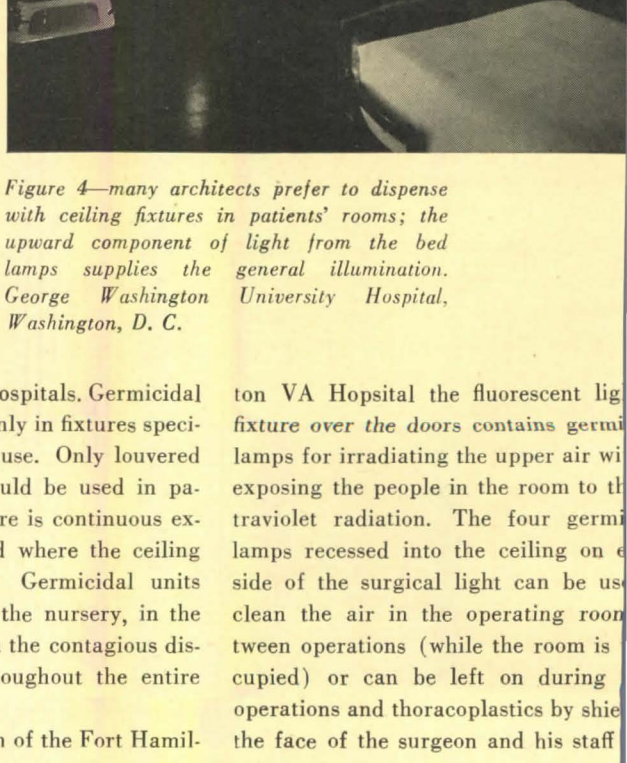


Figure 4—many architects prefer to dispense with ceiling fixtures in patients' rooms; the upward component of light from the bed lamps supplies the general illumination. George Washington University Hospital, Washington, D. C.

fittings below the 5′ level must be explosion-proof because of the danger of igniting anesthetic gases. (*For additional data refer to "Safe Practice for Hospital Operating Rooms, 1950," by National Fire Protection Association.*)

air disinfection

The Council on Physical Medicine of the American Medical Association recognizes the value of ultraviolet air disinfection in reducing the known high concentrations of airborne organisms in hospitals. Germicidal lamps should be used only in fixtures specially designed for their use. Only louvered germicidal fixtures should be used in patients' rooms where there is continuous exposure of patients, and where the ceiling height is 10′ or less. Germicidal units should be installed in the nursery, in the operating rooms, and in the contagious disease wards, if not throughout the entire hospital.

In the operating room of the Fort Hamilton VA Hopsital the fluorescent lig
fixture over the doors contains germi
lamps for irradiating the upper air wi
exposing the people in the room to th
traviolet radiation. The four germi
lamps recessed into the ceiling on e
side of the surgical light can be us
clean the air in the operating roon
tween operations (while the room is
cupied) or can be left on during
operations and thoracoplastics by shie
the face of the surgeon and his staff

Figure 5—isolation-ward corridor looking into solarium. Two 60-watt tungsten filament lamps in each recessed louvered fixture provide an average of approximately 10 footcandles. A 15-watt filament lamp in each unit is for night lighting. Fort Hamilton VA Hospital.

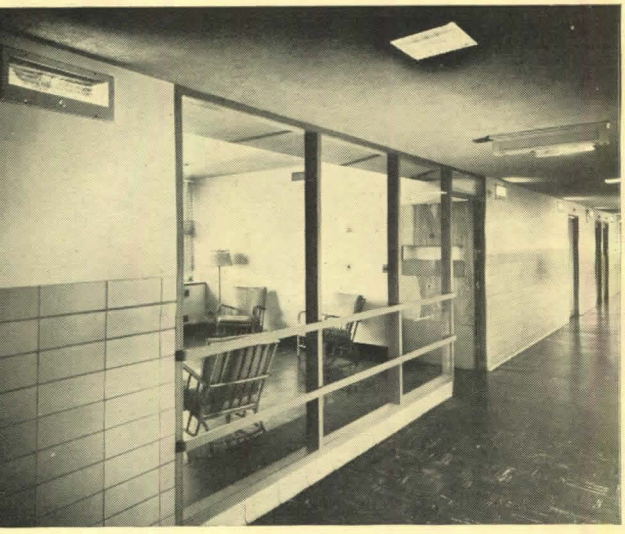


Figure 6—the corridor and reception room in the dental section are comfortably and adequately lighted to a level of 10 footcandles with two continuous rows of fluorescent lamps in an indirect fixture. Fort Hamilton VA Hospital.

Figure 7—this surgery corridor is exceptionally well lighted, an average of 40 footcandles, with recessed fixtures containing two 40-watt fluorescent lamps. Fort Hamilton VA Hospital.

Figure 8—this chemistry laboratory is well lighted to a level of 50 footcandles. Two rows of 8′ cool-white slimline-fluorescent lamps are used in each fixture. Glass coverplates diffuse the light. St. Francis Hospital, Hartford, Conn.

ays of the lamps. (*For photo of operroom in Fort Hamilton VA Hos-* *see page 74.*)

patient's room

lighting requirements should be consiin the patient's room; they are: genighting (5 footcandles); a light for l reading (20 footcandles); an exng light for the doctor (100 footes); and a night light giving a fracf a footcandle. Sometimes four different fixtures are used to meet the needs and at other times two or more of these lighting requirements may be built into one fixture.

In considering the general lighting, it is well to remember that, to the patient, the wall at his head is the "ceiling" and the ceiling is a "wall" which he is facing. To provide him with the most comfortable general lighting possible when using a ceiling-hung unit, it is necessary that the fixture brightness, as seen by the patient, be nearly the same as the brightness of the ceiling surrounding the fixture. This rules out enclosing globes and recessed fixtures, as being too bright, and totally indirect fixtures, as being too dark against a bright ceiling. Fixtures of plastic or glass are available that meet the requirements. Perhaps the simplest fixture that approaches the requirements is a silvered bowl lamp with concentric-ring louvers (*Figure* 1).

Cove lighting can be designed so that it will give very uniform and pleasant general

lighting (*Figure 2*)—particularly when instant-start, warm-white fluorescent lamps are installed in such coves. However, cost generally rules out cove lighting. A simplification of cove lighting would be a modified form of the fixture used at Rainbow Hospital in Cleveland (*Figure 3*).

Many hospitals prefer to provide the general lighting by units on the wall behind the patient. In such cases, a reading light is generally incorporated into the fixture, thus making one fixture serve two purposes. Such a solution, however, fixes the position of the beds—which is considered objectionable in some hospitals.

For casual reading, 20 footcandles of light is adequate. In the few hospitals where the patient does prolonged reading before being discharged, a level of 30 footcandles is required.

Where there is more than one patient in a room the light from the reading unit should be well controlled—confining the light, as well as possible, to the patient's bed (*Figure 4*).

Many reading lights are attachable to the head of the bed. These units are simple and generally adequate, but the maintenance cost of repairing frayed lamp cords and broken lamps can be high.

Floor stands give a homelike atmosphere, but as such a light might annoy other patients in the same room it should be considered for private rooms only. Maintenance cost of floor stands is usually high.

Sometimes the patient's reading light can be moved or taken apart to give the doctor a small examining light. In other cases a special examining light can be kept in a nearby closet.

A 25-watt filament lamp in a wall-recessed unit, mounted 18 inches above the floor and provided with a lens or louver to direct the light downward, is generally used for the night light. Another method of providing night lighting, is to have an additional low-wattage lamp in the general lighting fixture. The night light should be shielded from the patient's eyes and it should be located to avoid distracting shadows.

Mercury switches are suggested for use in the patient's room to reduce noise. An automatic door switch on closets is a worthwhile refinement.

As the ceiling is a "wall" to the patient, it would be logical to paint the ceiling a pale color—as long as its reflection factor is kept above 50 percent.

corridors

The intensity of light in the corridors outside the paitents' rooms should be approximately five footcandles, to blend with the general lighting in the patients' rooms. Care must be taken that no corridor lighting fixtures are visible to patients in their beds. Corridors are frequently lighted with units recessed into the ceiling and containing one or more filament lamps. Very pleasant corridor lighting is obtained with a continuous row of slimline fluorescent lamps operating at 200 milliamperes. Crosswise louvering is used. While this system gives a higher lighting level than suggested above, it is a very comfortable system and worthy of consideration. (*Figures 5 and 6 illustrate corridor lighting at Fort Hamilton VA Hospital.*)

Night lights should be provided in the hall. With recessed fixtures in the ceiling it is a simple matter to have an additional low-wattage lamp in each unit to serve as a night light. If fluorescent lamps are used for the regular hall lighting, a separate tem of night-lighting units may be requ

Corridors in other locations in the pital can take higher levels of illun tion (*Figure 7*).

nurses' stations

For reading charts, writing, and perf ing miscellaneous duties, the nu should be provided with a general ill nation of 30 footcandles. (*Excellent l ing of a nurses' station is illustrated page 72.*)

laboratories

Here the work is of a precise nature the laboratory workers must be abl see easily and efficiently to achieve a rate results. Thirty footcandles of ligh should be the minimum. There shoul 50 footcandles on the table (*Figure* and special provisions for 100 footcan for such difficult seeing tasks as the r ing of pipettes, burettes, etc. Day color or quality of light is desirable colorimetric measurements.

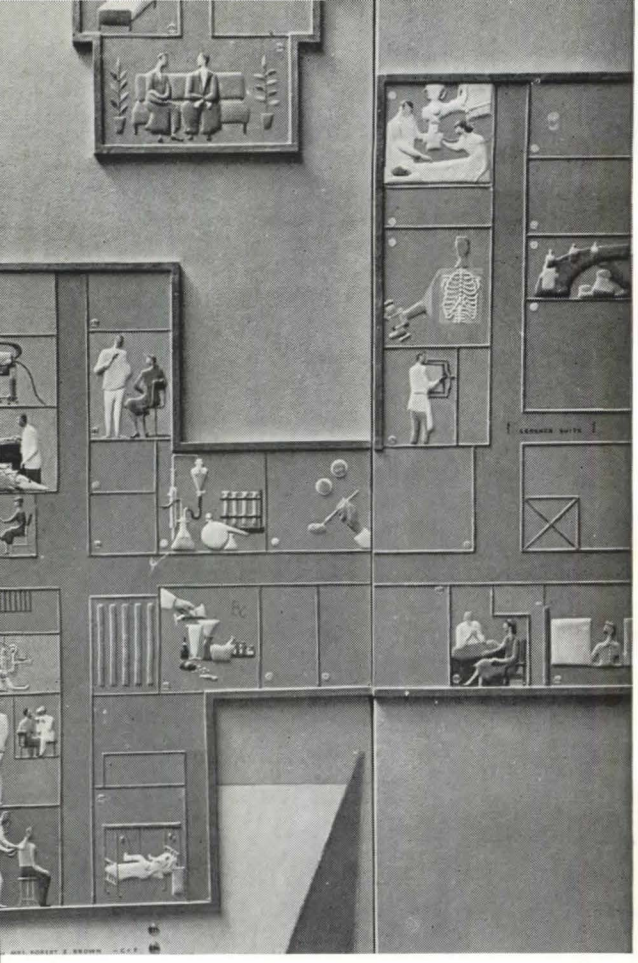
offices, laundries, kitchens, etc

These areas should be lighted to a r mum of 30 footcandles, with good o or industrial-type lighting units an accord with the practice for office factory lighting. In selecting fixture should be recalled that the psycholog sanitation carried out elsewhere in hospital has some influence in t areas.

In offices where difficult seeing t exist (auditing and accounting, busi machine operation, transcribing and t lation, bookkeeping, drafting, designi a lighting installation providing 50 candles is advisable.

RECOMMENDED FOOTCANDLES (maintained in service)

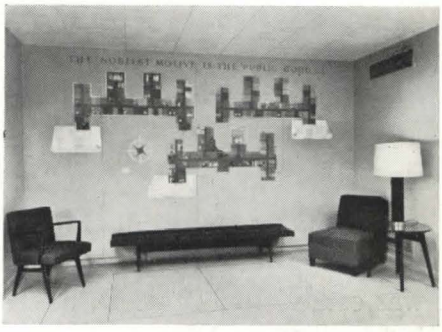
Autopsy room:	General lighting	30
	Autopsy table	200
Consultation rooms:		30
Delivery rooms:	General lighting	50
	Delivery table (normal deliveries)	200
Emergency rooms:	General lighting	50
	Supplementary	200
Examination rooms:	General lighting	50
	Supplementary	100
	X-ray and Fluoroscopy	10
Kitchen:		30
Laboratories:	General lighting	30
	Supplementary on work tables	50
	Close work	100
Library:		30
Nurses' stations:		30
Offices:		30
Patients' rooms:	General lighting	5
	Supplementary for casual reading	20
	Supplementary for examination	100
	Corridors	5
Pharmacy:		30
Solaria:		30
Sterilization rooms:		30
Surgery:	General lighting	50
	Operating table	1800
Therapy:		30
Toilets:		10
Utility rooms:		30
Waiting rooms:		20

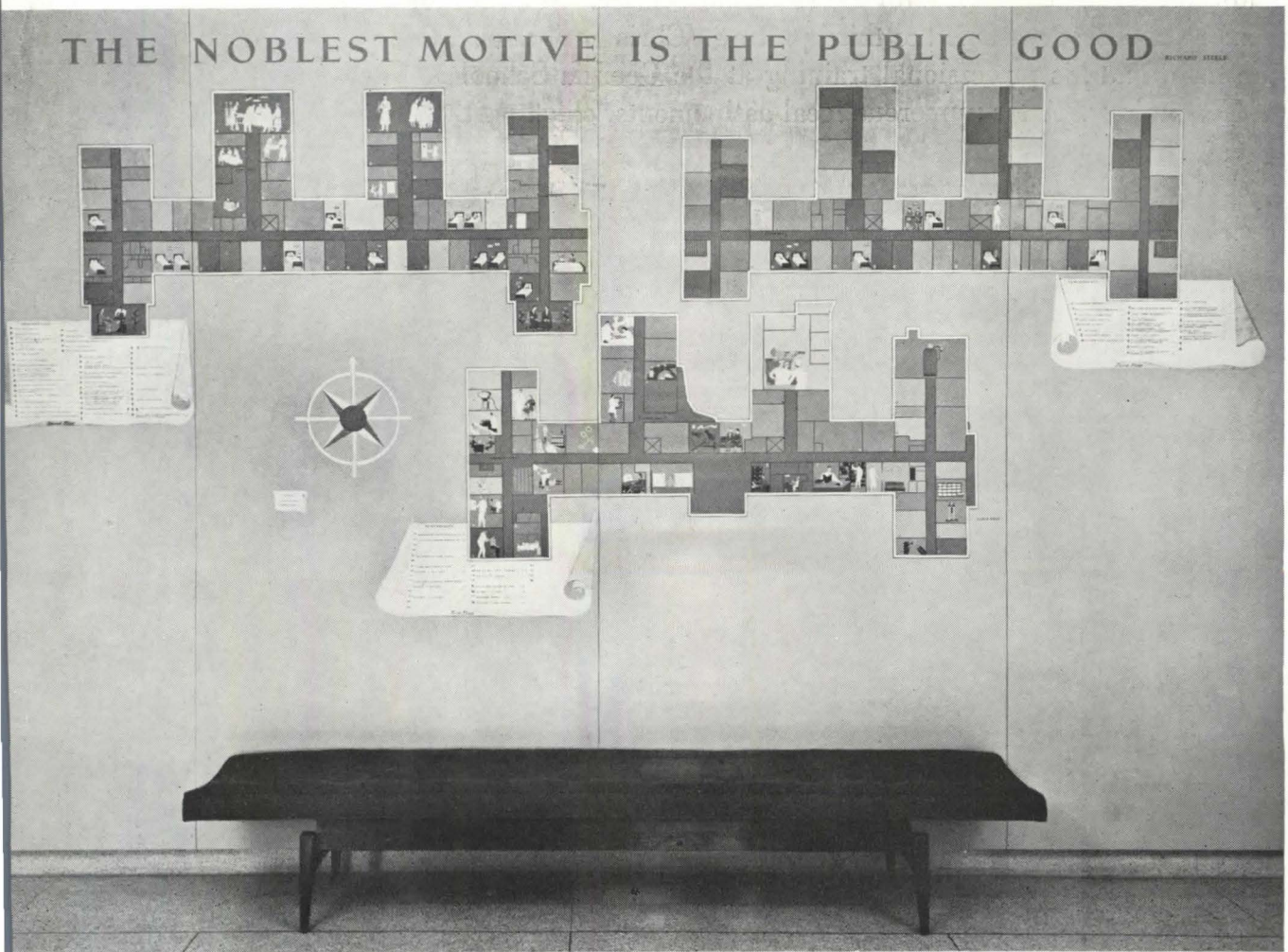


hospital mural

Conspicuous record of names of donors whose gifts built Valley Hospital, Ridgewood, New Jersey, was a requirement given special attention by Eleanor Pepper, Interior Consultant, New York. In selecting colors and furnishings for the new hospital, Miss Pepper had attempted to stress a homelike atmosphere and she wished to avoid placing a funereal plaque or solemn "memorial book" in the prominent memorial alcove at the right of the main lobby (*photos below*). She turned to Louis Ross, New York painter whose colorful gesso decorations are well known, for a lively translation of the hospital plan that graphically reveals the functions of the various rooms and at the same time lists the donors on scrolls painted below (*detail at left*). Fine & Miltonberger, New York and Ridgewood, were the architects-engineers.

Photos: Ernst Weitz





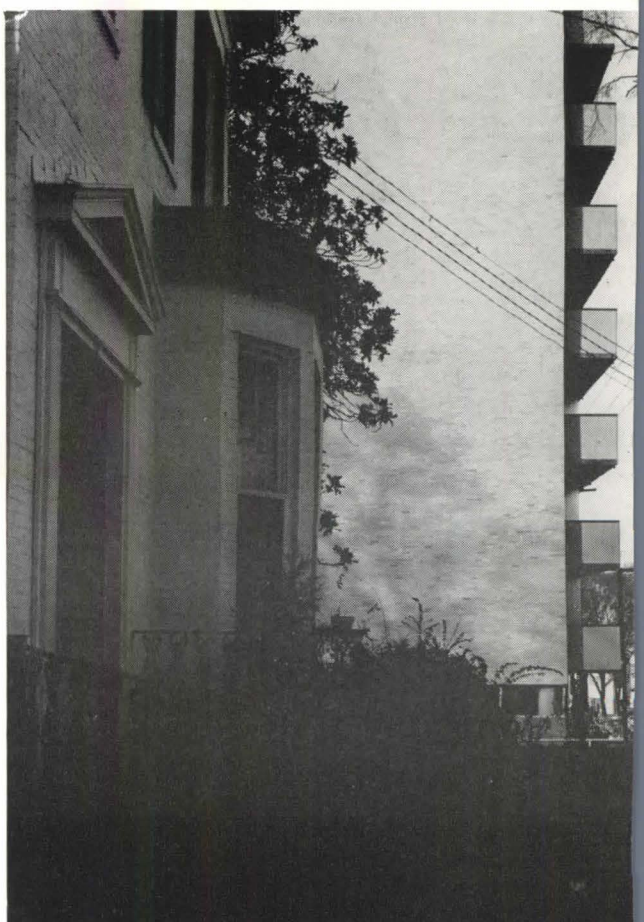
the architect and his community

Sherlock, Smith & Adams: Montgomery, Alabama

Like most tradition-rooted communities, Montgomery, Alabama, has long clung to its a chitectural heritage and taken a dim view of more recent trends in architecture. It is, therefor extraordinary that a firm such as Sherlock, Smith & Adams, Architects and Engineers, has bee able not only to do reputable contemporary work throughout the area but also to apply it to build ings in almost every category. This renaissance of good architecture in the area cannot, of cours be attributed to this one firm, or even to the increasing group of forward-looking younger firms i the southeast, nor to any single factor. Rather, a happy coincidence of the mood of the times, th performance of these knowing architectural offices that have worked so conscientiously toward contemporary expression, and increased understanding of the dynamic quality of progressiv architecture has brought about its local acceptance. Thus, as the illustration below emphasizes, th old and the new often stand in startling contrast; in the foreground, an agreeable instance of th inherited architecture; in the background, the uncompromising mass of the Walter Bragg Smit Apartments in Montgomery, designed by Sherlock, Smith & Adams.

The firm was established in 1945 as Sherlock and Smith, when Sherlock, the enginee and Smith, the architect, returned from war service. In the following year, Adams, a young Mon gomery architect, became the third partner. Chris J. Sherlock, the head engineer and president the firm, had his professional training at the Georgia School of Engineering and Georgia Scho of Technology. After numerous local assignments, chiefly with the Alabama Highway Departmen

The Walter Bragg Smith Apartments (across-page and in background, photo at right) *is two blocks from the center of Montgomery and consists of 122 small apartments, with three retail shops on the lobby (ground) floor and a penthouse cocktail lounge. Framed in steel, the structure has cavity, brick, end walls and spandrel areas of glazed tile on hollow tile. The building was 100 percent occupied ten days after opening. Cost: $10.50 per square foot.*
Photos: Betty Baldwin



e joined Smith to launch the firm. Sherlock devotes his main efforts to the solicitation of the big-
er commissions; hence, spends much time traveling and conferring with prospective clients. Offi-
ially in charge of the engineering work of the firm, he now leaves more and more of this in the
ands of his capable staff. Moreland Griffith Smith is a graduate of both the Alabama Polytechnic
nstitute (B.A. Arch.) and *l'Ecole des Beaux Arts* in Paris, and he received his Master of Architec-
ure degree from M.I.T. After working in offices in Detroit, Nashville, and Montgomery (includ-
ng his own practice in the last city), he founded the firm with Sherlock at the war's end and now
erves as the office treasurer. Although the financial responsibilities have deprived him of the privi-
ege of overseeing design details, he concerns himself with the general tack of each major project,
nd is insistent on even obscure esthetic points. This dual activity, and his ability to divorce the
ole of financier from that of esthete, has occasionally been the despair of the treasury, and the de-
ght of his starry-eyed, fresh-out-of-college draftsmen. Richard J. Adams, also an architect, received
is B.S. Arch. from the Alabama Polytechnic Institute and worked with various Montgomery firms
efore becoming a partner in 1946. His chief official functions are with the design and drafting
ooms. As one of the staff describes his activity, "he is a tireless and nerveless man who works
ith no apparent order or system. When his desk or drafting board becomes completely smothered
n sketches, overlays, salesmen's samples, and work sheets, he merely appropriates another desk
nd moves on. But from under these great piles of disorder comes an amazing amount of work, all
f which is thorough, correct, and definite."

the architect and his community: *Sherlock, Smith & Adams*

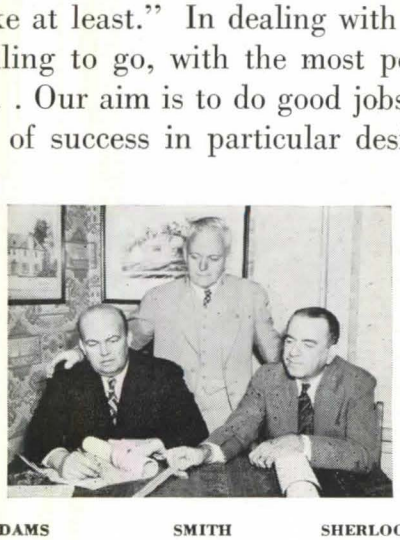
Montgomery is a growing city—75,000 in 1934; 125,000 in 1951—but still sma enough to please the partners, all of whom prefer to live and raise their families in a friendl smaller community. While Montgomery is their base of operations, however, the practice exten over practically the whole state, excluding only Mobile and Birmingham proper. As a result, "w keep three jeep station wagons covering the state at all times on survey and inspection work."

The only disadvantage they cite about working in a community of this size is that the find they constantly have to combat the idea that the big-city architect must be a better architec or he couldn't survive in the big town; but add, "we seem to get around this fairly well by hittin the client 'fustest with the mostest.' " Emphasizing that a firm devoted to contemporary work n only can survive but prosper in such an environment—by enlarging the sphere of activity well b yond the immediate community's bounds—they report that they now have a $6,200,000 war house project for the Corps of Engineers; a $3,500,000 warehouse and refrigeration storage job f the Navy; a $1,500,000 hospital offshore for the Corps of Engineers, and a very large oversea project for the Department of Defense. The partners feel that one of the most important ingred ents in the firm's success is the fact that they maintain a complete engineering department. Whil they question whether this is expedient financially, "it has made possible a more eloquent expre sion of structure as a basis for design," and they would not operate on any other basis. Indeed they say, "no firm can afford to be without this so-called luxury."

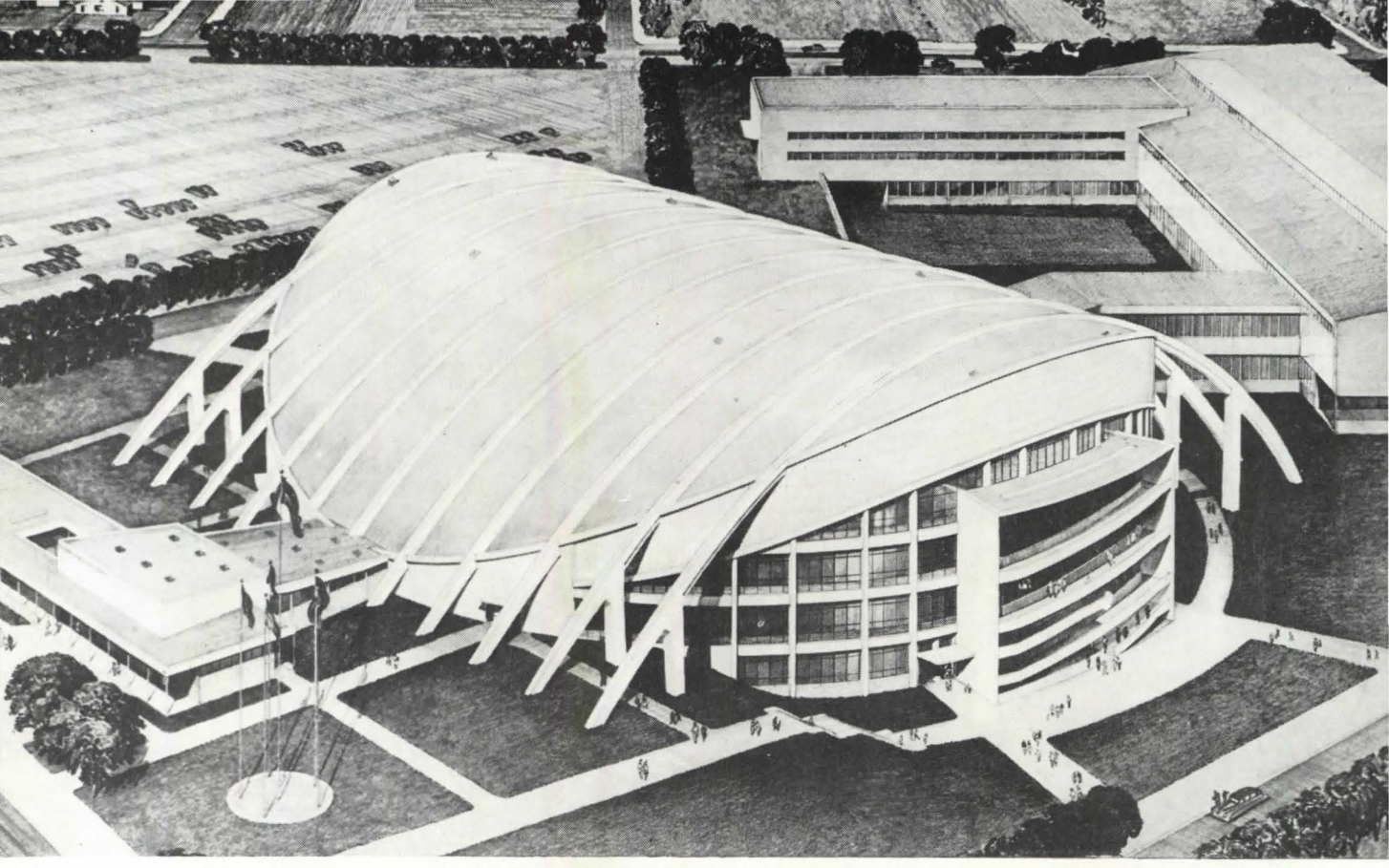
It is noteworthy that both of the architects in the firm—Smith and Adams—had trad tional schooling. No small factor in bringing them into the contemporary realm, as well as facil tating local acceptance of the progressive approach, is the close physical and cultural proximity Auburn, where Alabama Polytechnic Institute is located. Of the firm's 35 employees, the grea majority are young Auburn graduates. And out of the ranks of these come the junior designe and junior engineers who serve as job captains in their respective departments.

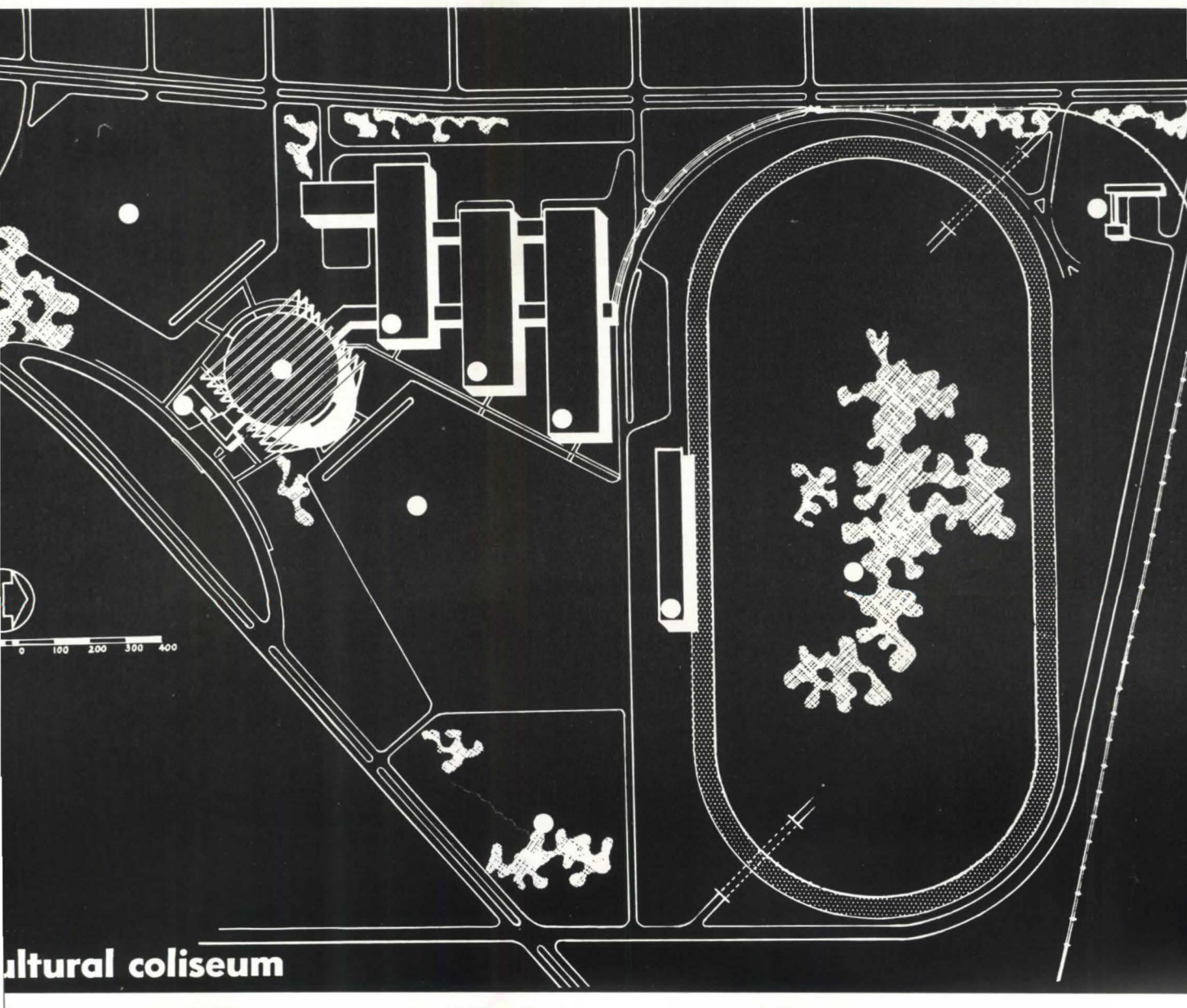
When a job comes to the office, a *parti* is developed by one of the architect principal Then, it is handed over to a job captain for development and follow-through, the amount of au thority delegated being dependent on the size and nature of the project and the job captain's abi ity. Daily *critiques* are held by the principals. This policy has justified itself repeatedly by produ ing fresh—"and often practicable"—ideas. But, the firm points out, while this is the habit, it by no means the rule, "for in this office, there is no definite rule . . . The partners know that cre tive work must not be mortgaged to a mechanical schedule."

In working to produce progressive work in this tradition-imbued area, the partners sub scribe to the doctrine that half a cake is better than none at all, although they feel that sometime "we should have been more bold and tried for ¾ of the cake at least." In dealing with a clien "we take him along the road as far as he is ready and willing to go, with the most persuasiv means at our command. But we do not claim to be purists . . . Our aim is to do good jobs, so tha they will lead to better jobs. And, regardless of the degree of success in particular designs, th sum total, we believe, will add up to a better commu nity."



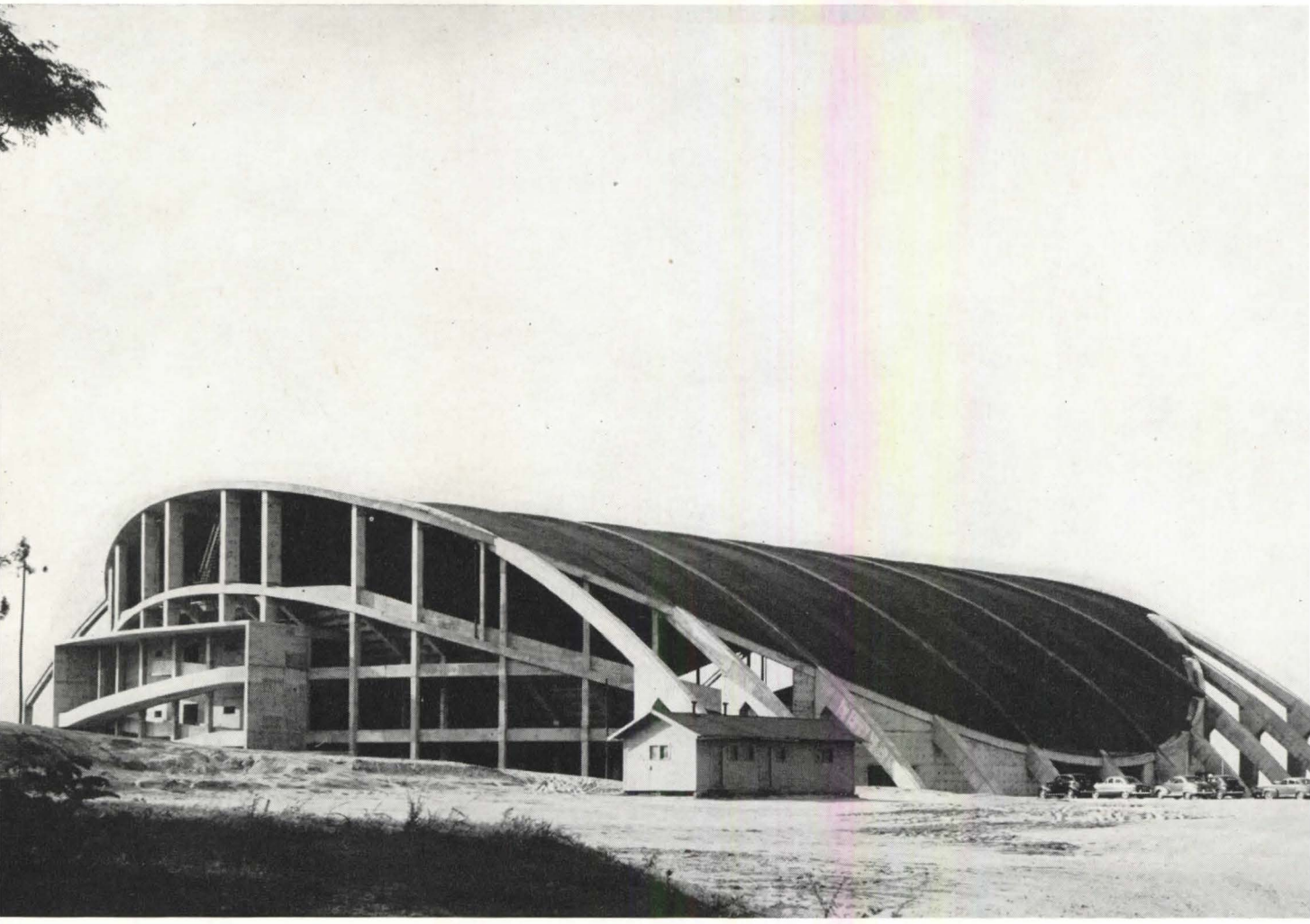
ADAMS SMITH SHERLOCK





ltural coliseum

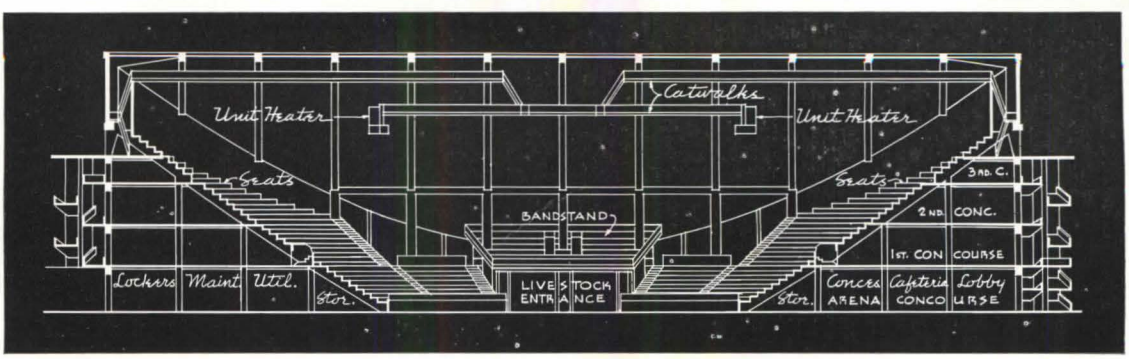
the architect and his community: *Sherlock, Smith & Adams*

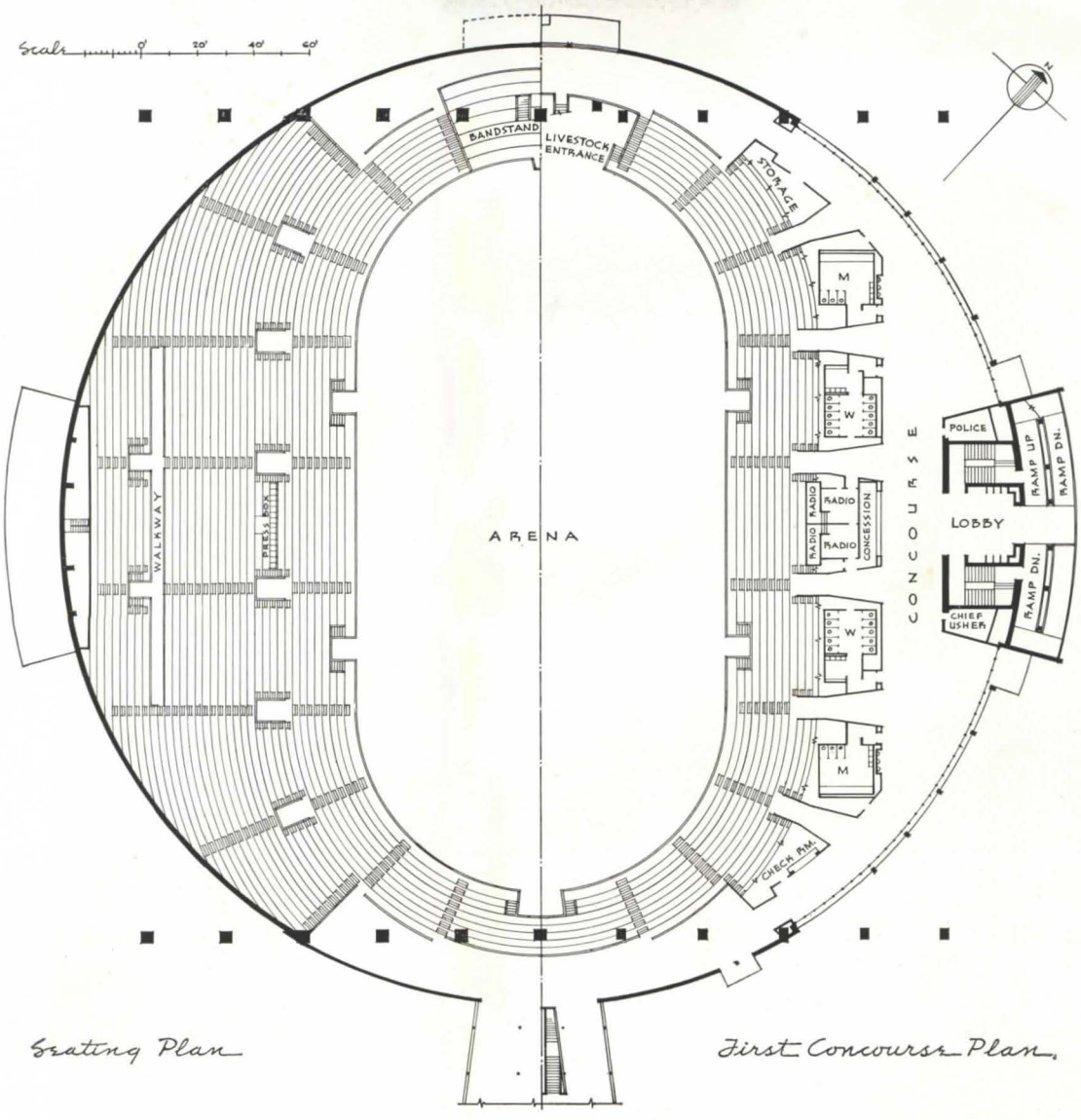


First unit of a vast Agricultural Center that is being built for the State of Alabama on a 70-acre tract near Montgomery's city limits, this dramatic coliseum has permanent seating for 9060. To be used primarily for fairs, livestock shows, and large statewide meetings, it will also be available for rodeos, concerts, etc.

The eventual center will include an administration building and various auxiliary structures *(plot plan, preceding page)*. Without question, the most remarkable things about this concrete structure are the round plan, roofed by a barrel arch of thin-shell (3-inch) concrete, the axis of which runs at right angles to the axis of the arena, and the fact that the frame and the seating are independent structures. Thus, the greatest height—and consequently, most seating—occurs at the ideal, 50-yard-line zone. The firm of Ammann & Whitney were consultants for the thin-shell roof.

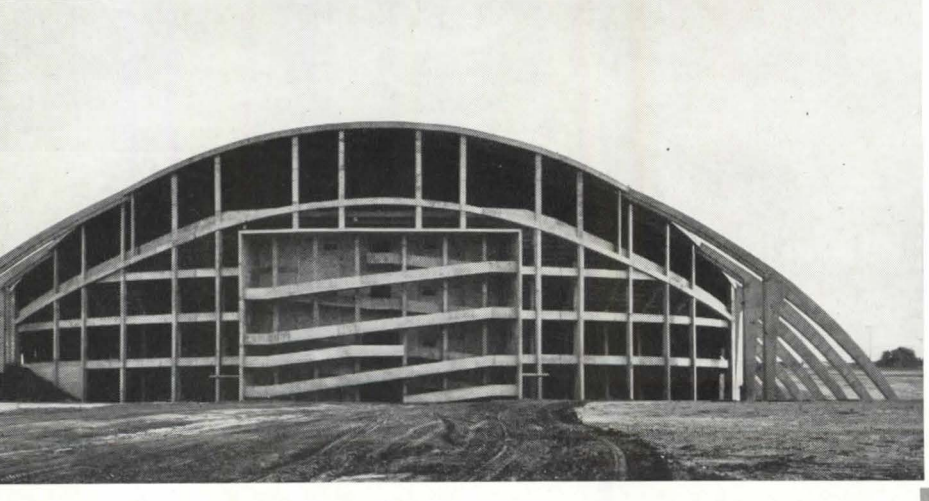
Photos: Jack Holmes;
Construction Details: Cleveland Lane



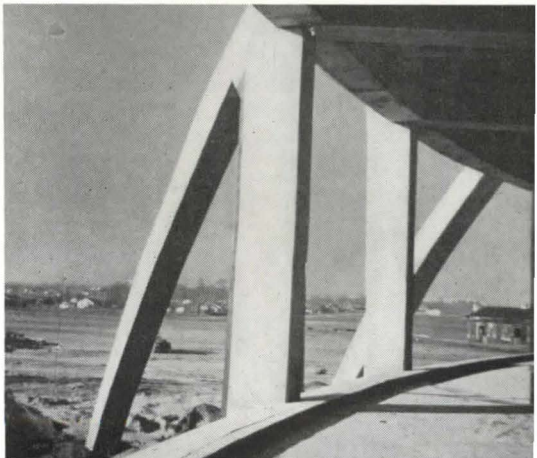


Seating Plan

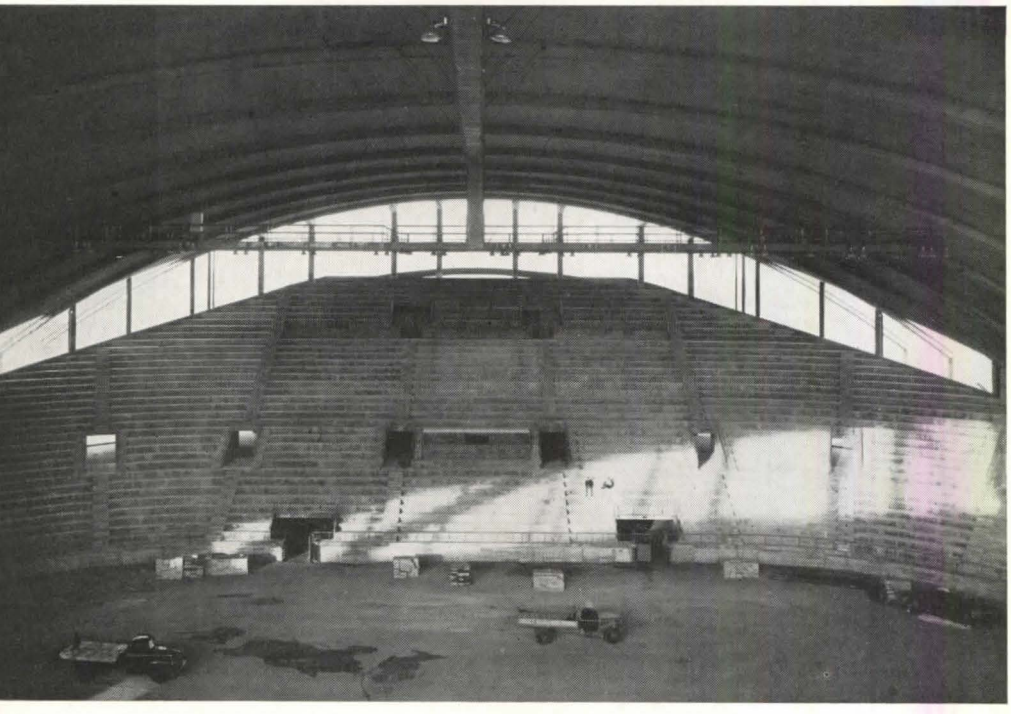
First Concourse Plan

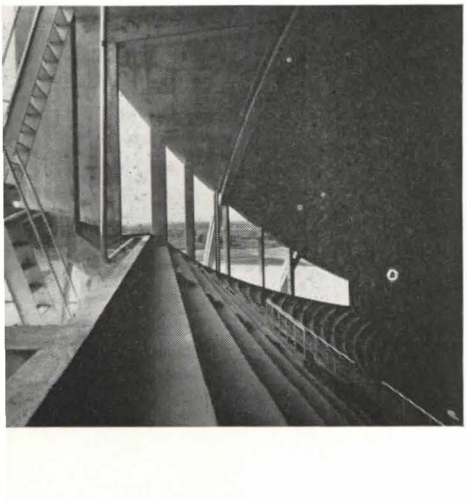


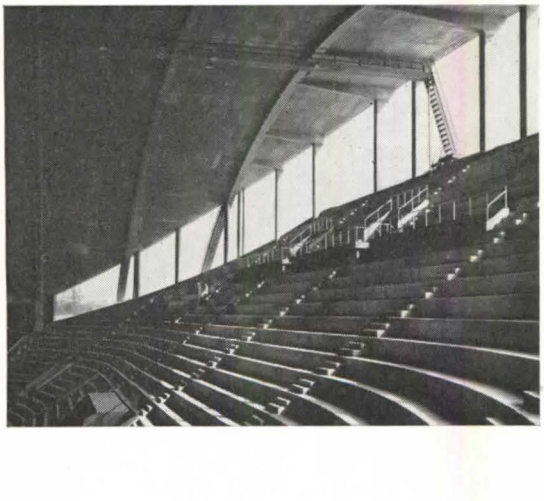
For such events as boxing matches, political conventions, etc., removable seating is placed in the arena, increasing the capacity to 15,000. Height of the coliseum at the center of the arches is 100 feet.



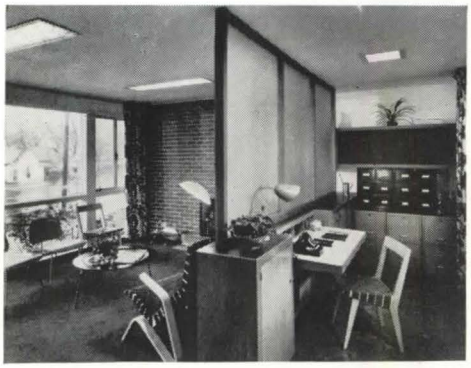
the architect and his community: *Sherlock, Smith & Adams*

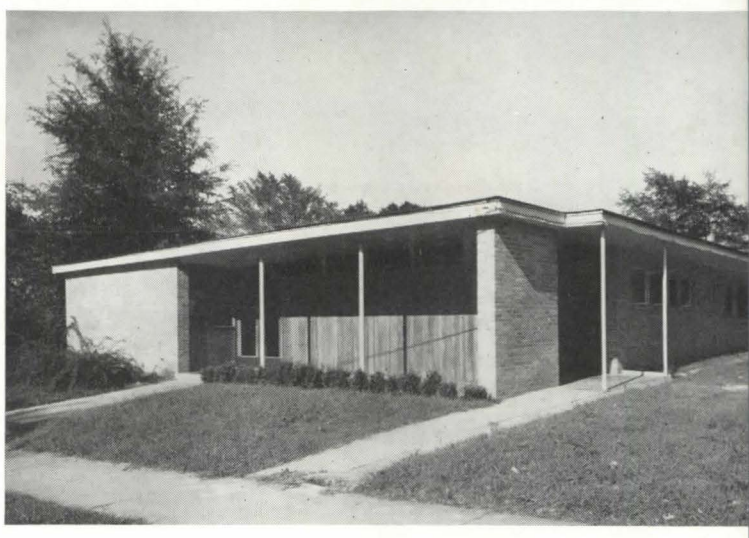






The 286-foot clear span encloses a 260 arena. Below the seating are two leve concourses for exhibits and livestock s Since the roof structure and seat fra were kept separate, the formwork for roof could be reused on each pair of On completion of the roof, constructio the stadium proceeded independently. Fu work will include an outer shell of blue-g heat-resistant glass, gray porcelain ena and gray-and-terra cotta glazed brick. Jones Construction Company built the $1 000 initial structure in fourteen months

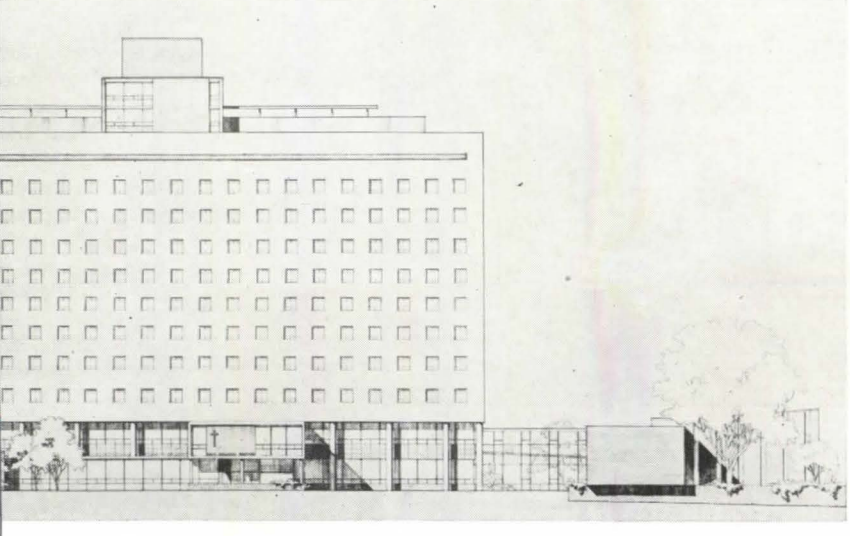




An office building for Dr. E. Kocour (two photos at top), *this small frame structure has a waiting room, office, X-ray room, three treatment rooms, and a small lab and dark room. One of the earliest completed health-care facilities designed by the firm is the McLennon Clinic at Opp, Alabama* (photos immediately above and at right).

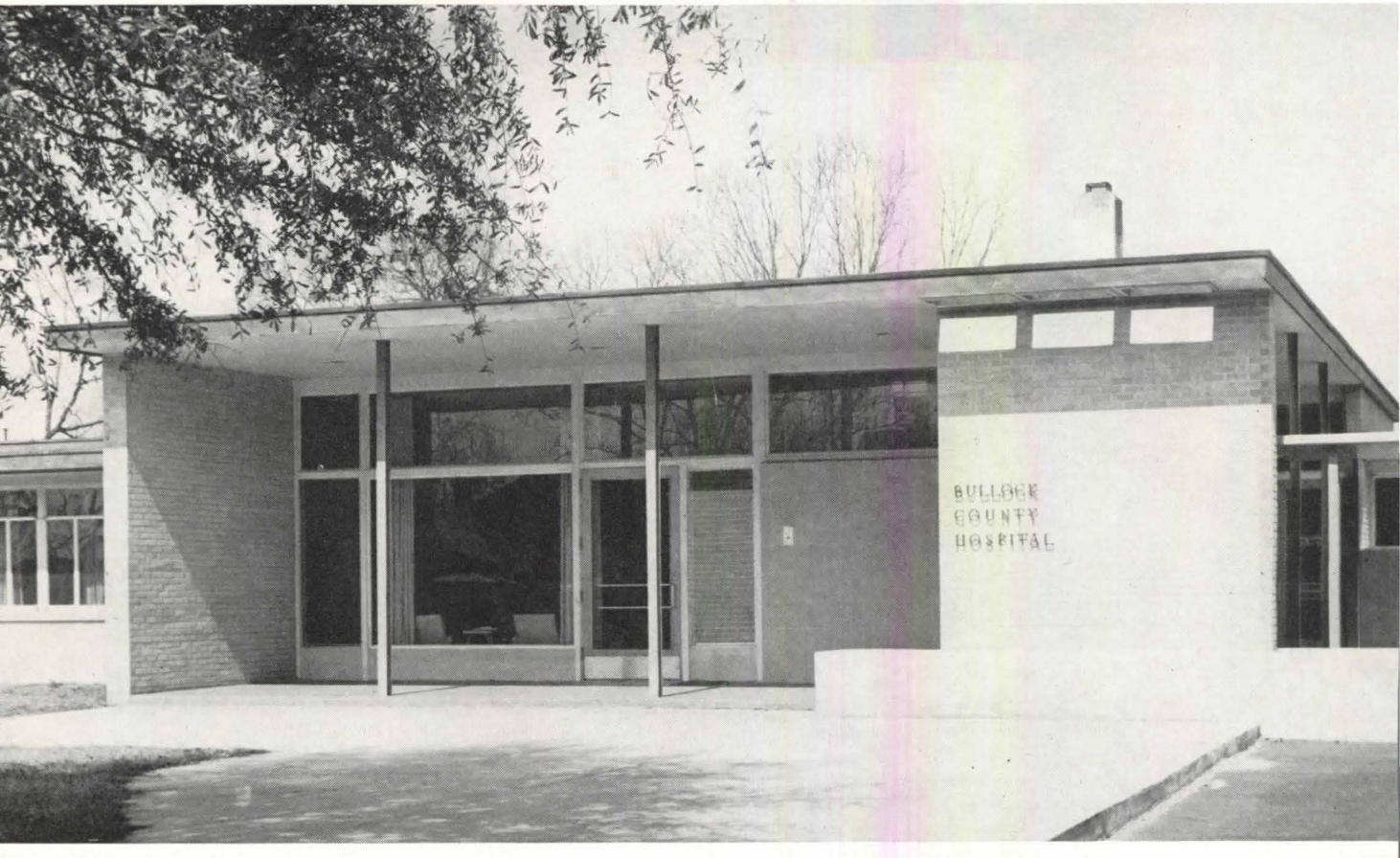
Photos: F. S. Lincoln and Jack Holmes

Rendering of St. Margaret's Hospital, a 272-bed project for Montgomery. Among the plan refinements are oxygen outlets at each bed, complete air conditioning, and an electronic device that allows the nurse on duty to check each patient's respiration without leaving her station.



health facilities

the architect and his community: *Sherlock, Smith & Adams*

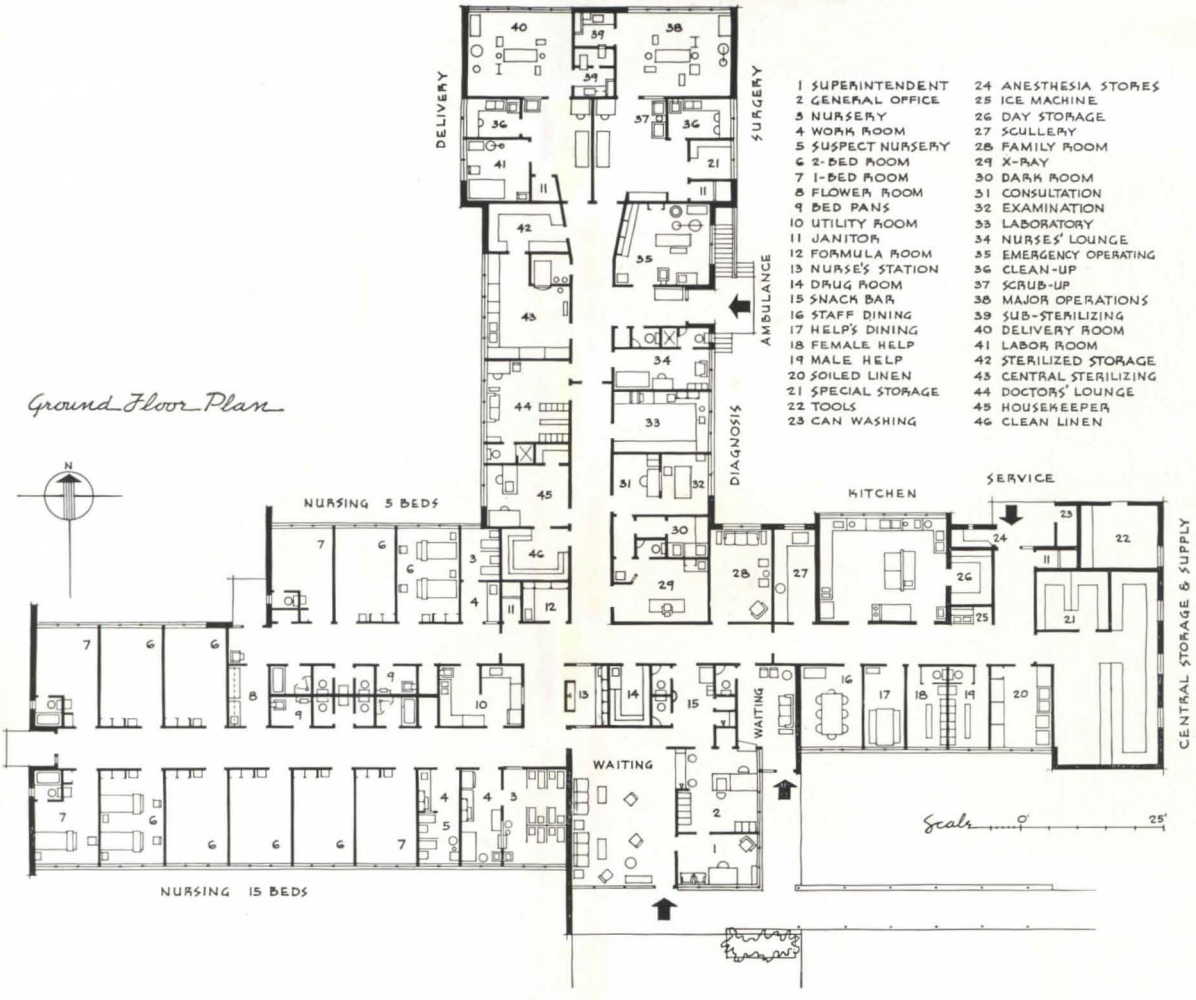


When the hospital was built in
there was only one doctor in the co
Three doctors, including a surgeon,
since located in the community an
hospital is operating within its bu
Cost, including lot, building, equipr
and architects' fee, was $286,000, ($
per bed).

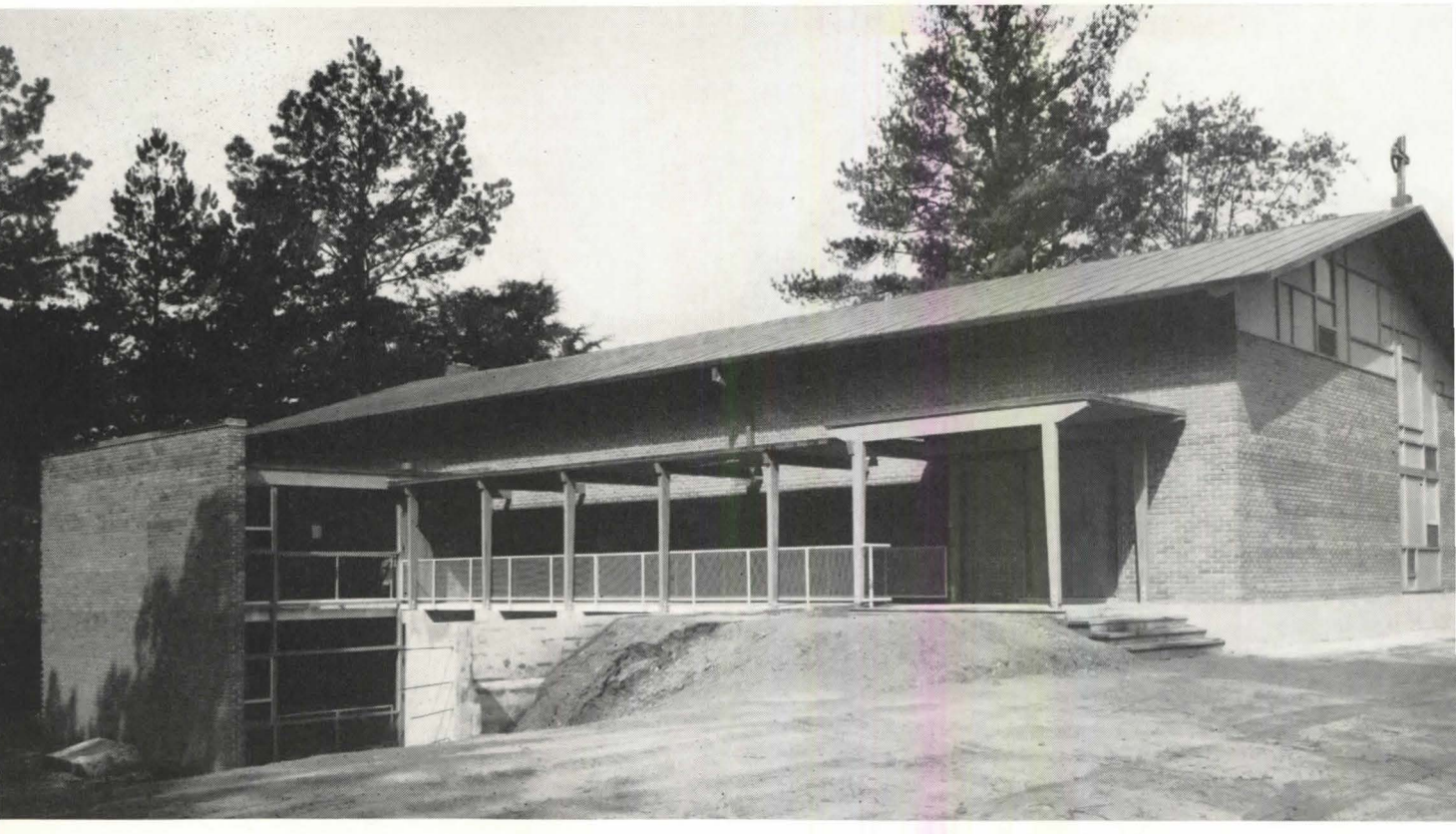
Photos: Jack Holmes; Betty Bal

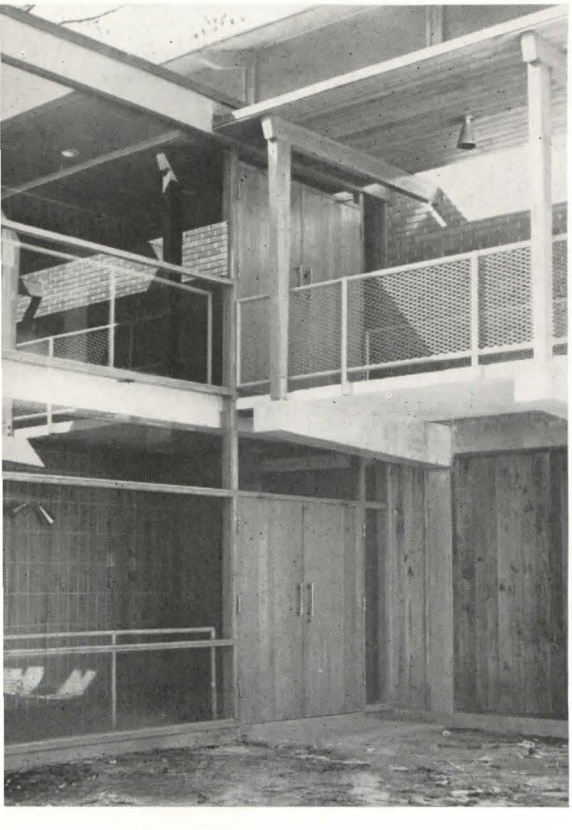
hospital

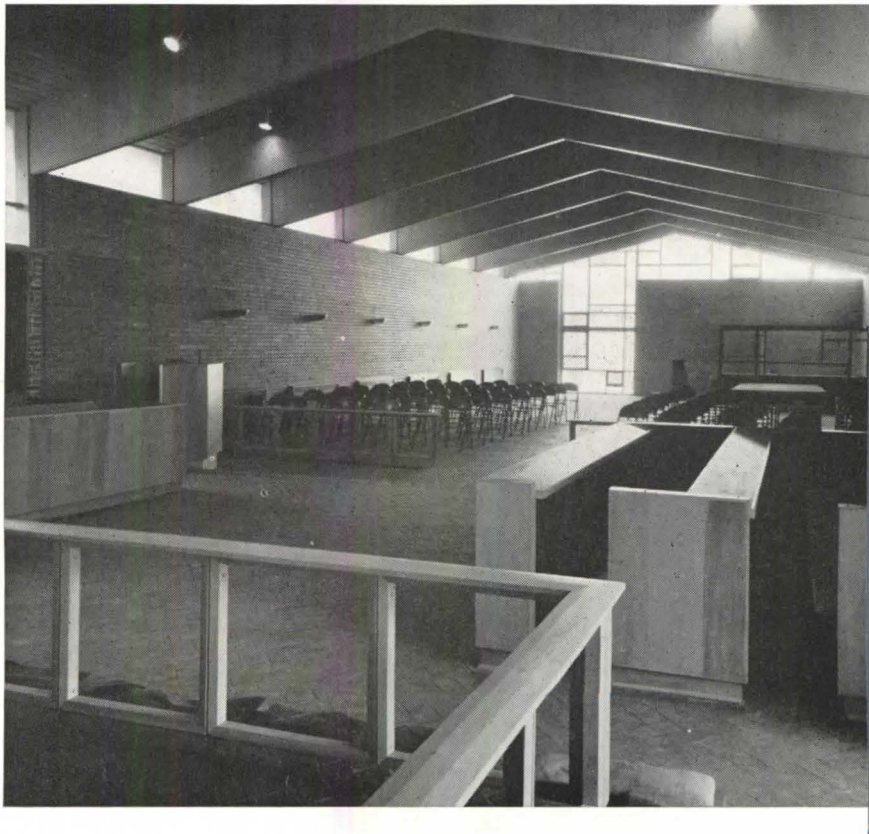
Bullock County Hospital, built under the Hill-Burton Hospital Act in Union Springs, Alabama, is a 30-bed general hospital designed to meet the needs of a rural, agricultural County. Patients' rooms face north or south. To provide efficient operation with a minimum staff, the nurse's station is centrally placed and controls all corridors. A service core in the center of a *double-corridor scheme* in the nursing wing is lighted and ventilated by motor-operated clerestory windows. Structurally, the hospital is steel framed, with brick cavity walls and structural glazed facing on spandrel walls. The roof deck is vermiculite concrete. Operating rooms and delivery suites are air conditioned. A nurse-to-patient call system allows direct communication between patients and the nurse's station.


Ground Floor Plan
N
DELIVERY
SURGERY
AMBULANCE
DIAGNOSIS
NURSING 5 BEDS
NURSING 15 BEDS
KITCHEN
SERVICE
WAITING
WAITING
CENTRAL STORAGE & SUPPLY
Scale 0' 25'
1 SUPERINTENDENT
2 GENERAL OFFICE
3 NURSERY
4 WORK ROOM
5 SUSPECT NURSERY
6 2-BED ROOM
7 1-BED ROOM
8 FLOWER ROOM
9 BED PANS
10 UTILITY ROOM
11 JANITOR
12 FORMULA ROOM
13 NURSE'S STATION
14 DRUG ROOM
15 SNACK BAR
16 STAFF DINING
17 HELP'S DINING
18 FEMALE HELP
19 MALE HELP
20 SOILED LINEN
21 SPECIAL STORAGE
22 TOOLS
23 CAN WASHING
24 ANESTHESIA STORES
25 ICE MACHINE
26 DAY STORAGE
27 SCULLERY
28 FAMILY ROOM
29 X-RAY
30 DARK ROOM
31 CONSULTATION
32 EXAMINATION
33 LABORATORY
34 NURSES' LOUNGE
35 EMERGENCY OPERATING
36 CLEAN-UP
37 SCRUB-UP
38 MAJOR OPERATIONS
39 SUB-STERILIZING
40 DELIVERY ROOM
41 LABOR ROOM
42 STERILIZED STORAGE
43 CENTRAL STERILIZING
44 DOCTORS' LOUNGE
45 HOUSEKEEPER
46 CLEAN LINEN

the architect and his community: *Sherlock, Smith & Adams*



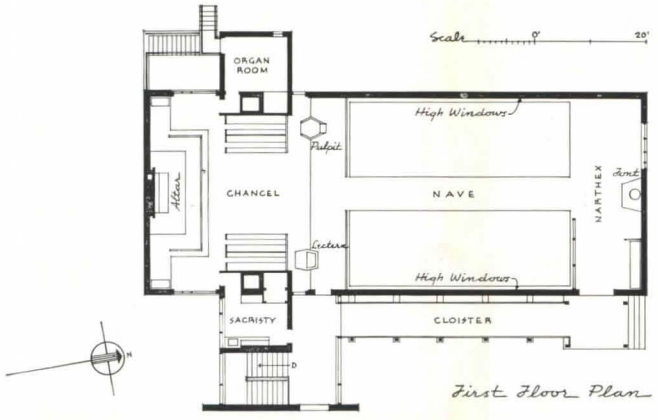


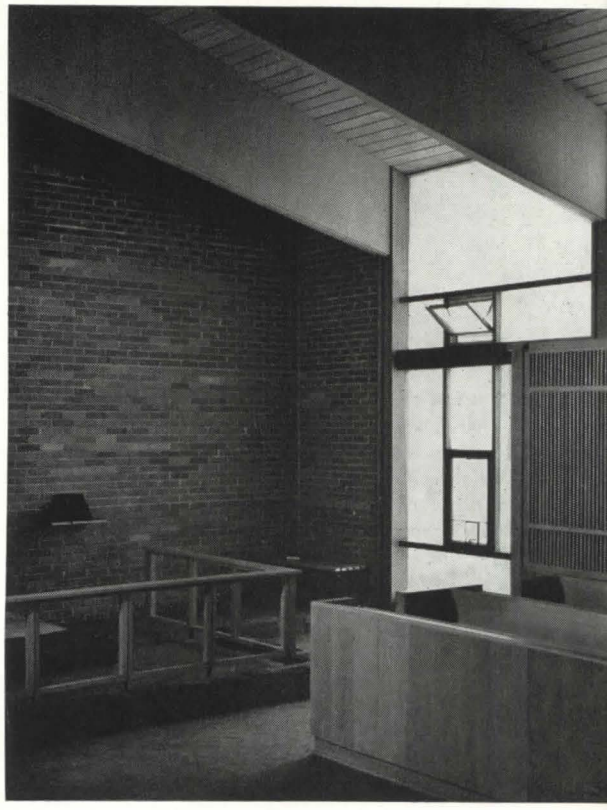


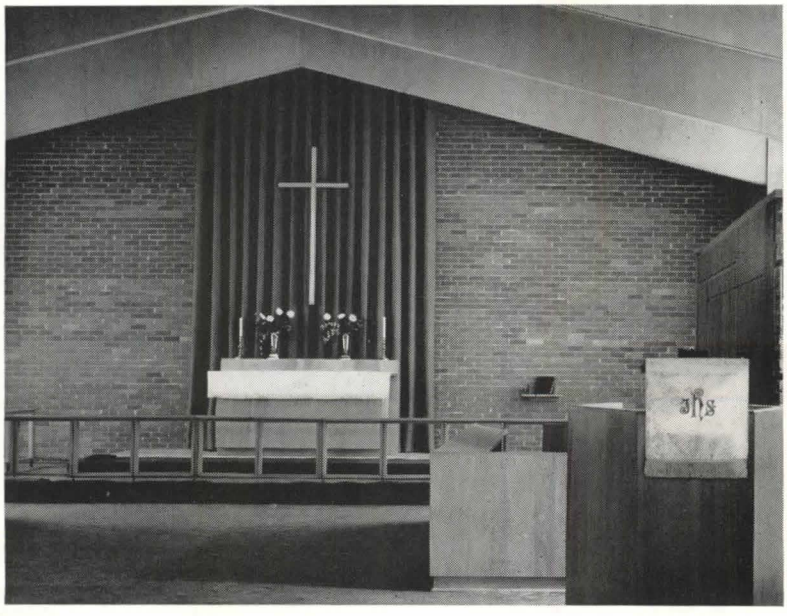
St. Andrew's Episcopal Church, Tuskegee, Alabama, serves an active faculty and student group at Tuskegee Institute. The completed unit is but a portion of the eventual scheme that will include a bell tower, cloistered courtyard, parish house, and church school. It was the Bishop's specific request that the church be "very simple and modern." The site slope allowed a two-level scheme that appears to be a one-story structure from the street. Below the church is an assembly room, opening on its east side to the court. The principal ing material is brick, exposed insid out—12-inch cavity walls, 12 feet Spanning from piers built into the walls, wood trusses encased in ¾″ pl support 3″ cypress roof decking.

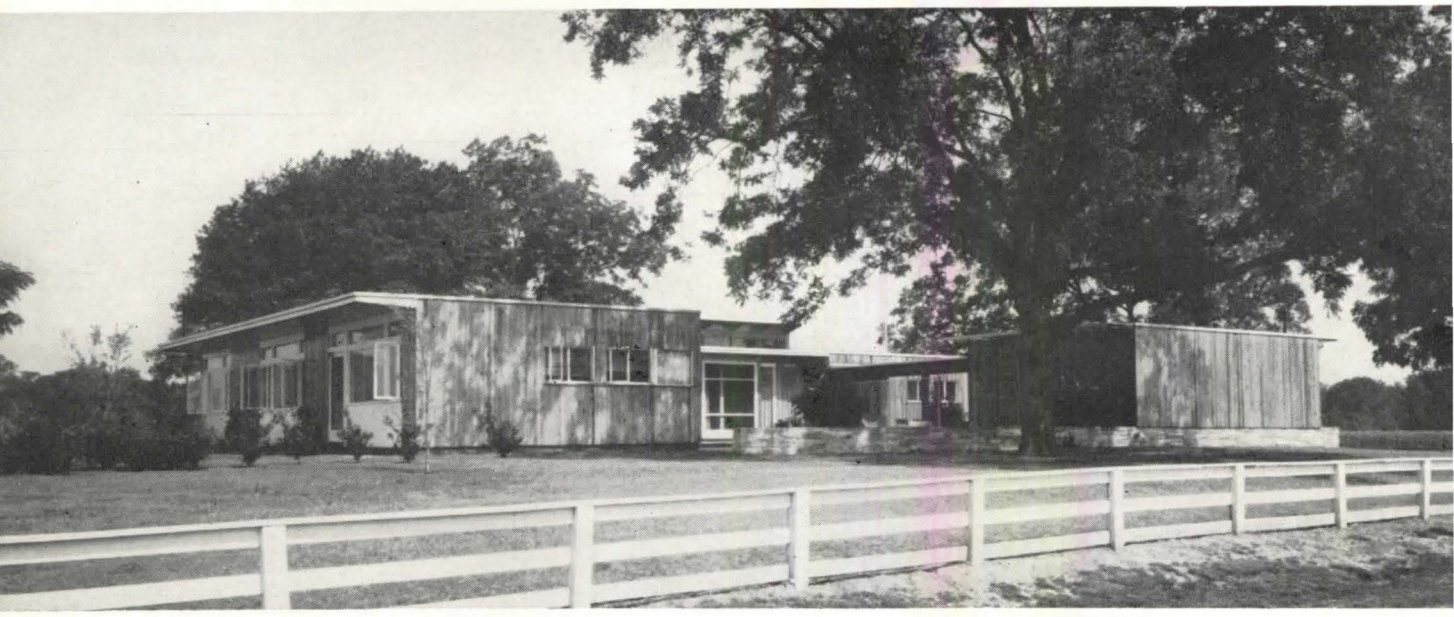
church

The top chords of the roof trusses extend as outlookers to support the roof overhangs, which shield the **high windows** *between trusses. All exposed wood is natural cypress; the copper-surfaced roof will be allowed to acquire a natural patina. The glazed stair well* (left) *will connect the future parish house (containing classrooms, offices, and library) to the church.* Photos: Jack Holmes, Betty Baldwin



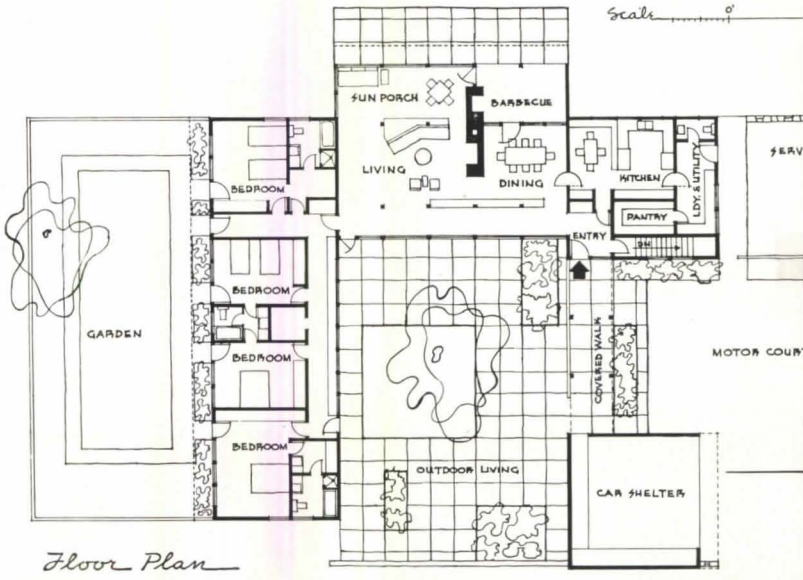




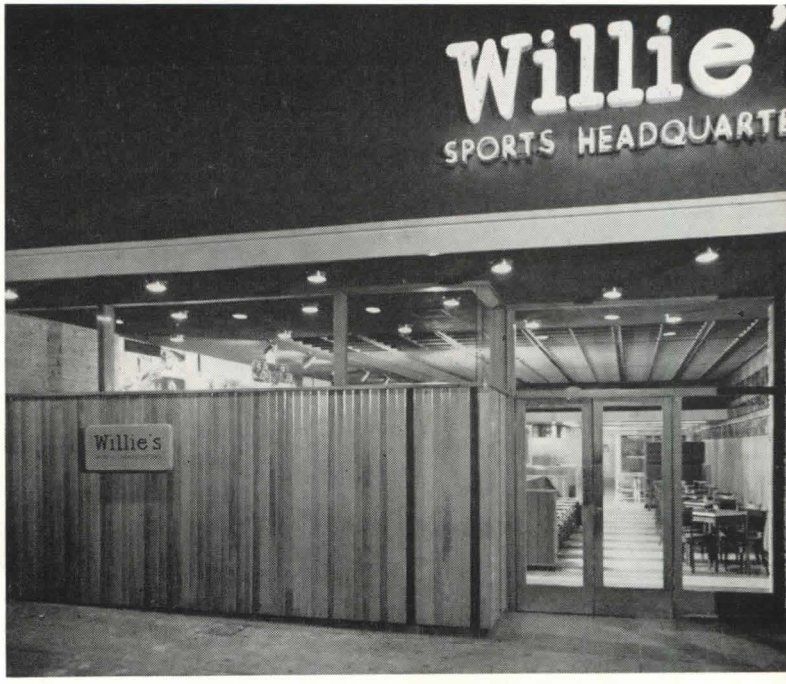


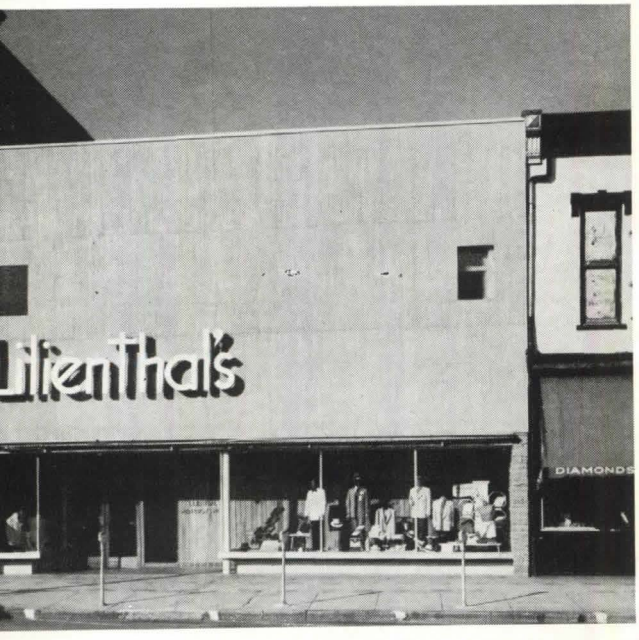
house

Built around a central courtyard on top of a wooded knoll near Hurtsboro, Alabama, this is the country retreat of a prominent local lumberman. A requirement of the program was to utilize the various woods that are his stock-in-trade. Hence, exterior walls are varnished poplar; different rooms feature such native woods as pine, magnolia, pecan, red gum, and hemlock. Floors throughout are oak. To offset the extensive areas of light-golden-brown natural wood, gravel guards and louvered screens were painted light blue; window frames, white. Photos: Jack Holmes



Floor Plan





stores

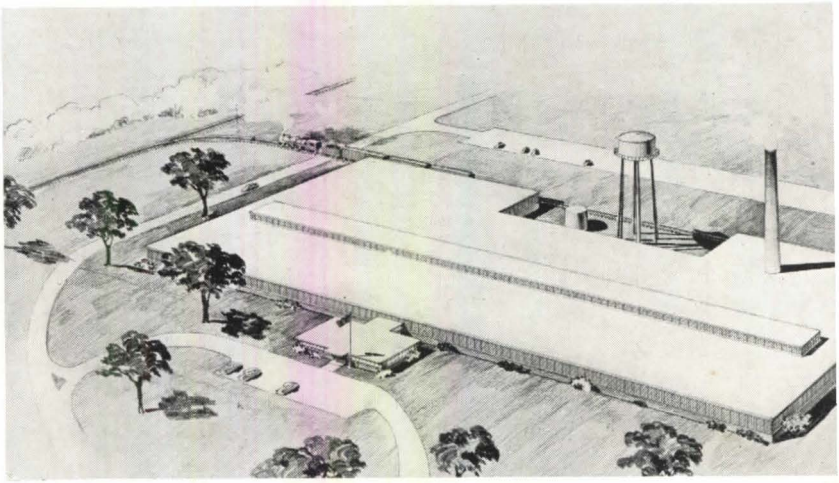
One of the important contributions the architects have made to the community is the face-lifting of numerous commercial structures. In each design, a careful attempt has been made to establish a character that is appropriate for the type of store involved: Willie's (two top photos) *is an elegant version of the typical sports center and pool hall with wide use of natural wood, stone, and leather; Lilienthal's* (left) *is a men's clothing store, with a front of natural cypress, stone and glass, upper "billboard" of marine-striated plywood stained gray-green; and Bronson's* (two bottom photos) *is a children's shop with a billboard front, the upper panel of which is natural corrugated asbestos while the lower walls are structural glass and travertine.*

Photos: Rodney McCay Morgan; Jack Holmes

the architect and his community: *Sherlock, Smith & Adams*

1

2



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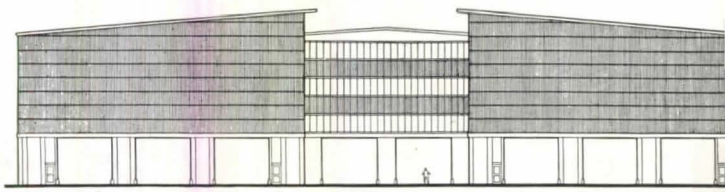


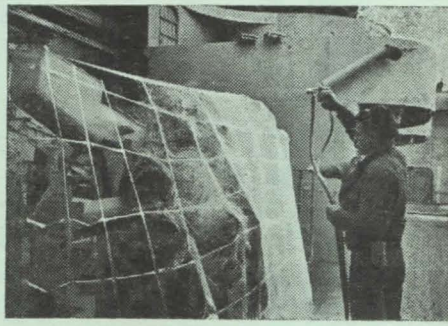
On this page, we show the merest sampling of work in other categories that Sherlock, Smith & Adams are doing in their area: the Booker T. Washington School, in Montgomery (two photos above) *is a fireproof structure built to a minimum budget; a projected plant for a woolen company* (top, right); *rendering of the huge Anniston Ordnance Depot, near Anniston, Alabama* (center, right) *done by the architects for the Corps of Engineers, U. S. Army; and* (below, right), *a court room in the DeKalb County Court House, Fort Payne, Alabama. The firm has also done several of the big buildings in the State Capital group in Montgomery and has developed a "grand scheme" incorporating all existing buildings with several proposed new units into an integrated civic center.*

Photos: Jack Holmes; F. S. Lincoln

4

sprayed-on vinyl-plastic sheeting

by Guy G. Rothenstein*



Operation Mothball: early use of plastic spray

ed-on vinyl-plastic sheetings are ob- by spraying a liquid vinyl chloride- e copolymer (for simplification, here- :alled plastic spray), using standard equipment capable of producing s. of air pressure and 25 cfm air cement.

characteristics

:h a material is applied by six to passes of the spray gun over any ed surface (without adhesive), it e stripped off after a few hours of :. A flexible plastic sheeting is d, having the general properties bed *(Table of Characteristics)*.

additional characteristic of this ma- is that it can web over open spaces 2" wide, and if mixed with a web- solution the distance it spans can :reased, up to 24". Mention of this ing" recalls one of the original ap- ions of plastic spray, namely, the er protecting of the U. S. Govern- equipment, often referred to as tion Mothball. From as early as guns, airplanes, and large parts of s have been "wrapped in cocoon" hen remained outdoors for years it being harmed in any way by the nts.

s amazing that the government spent imated $40 millions on vinyl-plastic- materials and applications, before uilding industry became interested. y be questioned whether this was a poor public relations policy on art of the manufacturers, or to a f imagination by those members of uilding trade acquainted with this ct in its early stage. This material, ating as a chemical development out- of the building industry, was con- d by its formulators for several mainly a maintenance product. ing more or less the government applications, it was first used for packaging industrial equipment for outdoor storage or overseas shipment; then for repair and rehabilitation work on existing structures. Roofs and stucco, brick, and concrete walls were successfully covered with plastic spray. A good number of these applications were made in Florida and in the Midwest. After some time, the material was also applied to some new structures as a weatherproofing material as well as an interior wall covering. An important early use, developed in 1948 by the Department of Agriculture was for sealing tobacco warehouses during the fumigation process. Through all these various applications, members of the architectural profession became, little by little, acquainted with plastic-spray materials and aware of the tremendous potentialities for new construction.

The revolutionary aspect is that here is a durable material which can be applied by simple means on surfaces of any kind, size, and shape, to form a flexible, continuous, jointless "skin," not affected by movements of the structure. Furthermore, this "skin," of leatherlike texture, has an attractive appearance and comes in a large range of colors.

One of the main struggles throughout the history of building construction has been man's effort to master the technique of joining materials. Sprayed-on-plastic sheeting is one of the greatest factors for progress in the struggle, to date. Actually, the construction of the joint between structural materials becomes in many respects secondary, because the sheeting covering the joint will now perform vital functions which previously had to be engineered, often at great expense, within the materials.

Other unique features of sprayed-on-vinyl sheeting are that it is adaptable to three dimensional shapes and that there are no limitations as to size. A convex dome, several hundred feet in diameter, can be as easily covered as a concave bowl a few inches in diameter.

longevity

For all building materials, the question of length of life is very important. Resins used to formulate these materials are completely polymerized and the sheeting is formed only by the evaporation of solvent; no embrittlement or shrinkage is experienced with the aging of the material. Unpigmented vinyl, however, should not be exposed to the rays of the sun. The materials should always be pigmented with aluminum, vinyl-plastic dispersions in colors, or both. If used for weather protection, it is important to specify the material in sufficient thickness. Generally, horizontal exterior surfaces are more exposed than vertical ones; therefore, the recommended thickness for a horizontal exterior surface is at least 30 mils.

The writer has examined sheetings that had been exposed for eight years: they did not show any sign of wear or deterioration. Accelerated weather tests indicate actually a much longer life span for these materials. It may therefore be considered a conservative conclusion that plastic spray will still be in good condition after 8 to 10 years of outdoor exposure and 12 to 15 years of indoor use.

After such periods of time, it is advisable to spray an additional 10 to 15 mils on the original sheeting. The plasticizer contained in this material will partially penetrate the old material and has the tendency to reactivate it. This rejuvenation process may be repeated during the normal life span of a building. (Contrary to paint, the strength of vinyl-plastic sheeting increases as its thickness is built up.)

Another suggested means to co-ordinate the life span of sprayed-on vinyl-plastic sheeting with the life span of structures is to apply mastics or vinyl-based paints

er, New York, N. Y.

as top coatings, then to replace this top coat when required.

new concepts

If the concept of a "continuous skin" over structures is fully analyzed, it has the greatest repercussions on the selection of the other materials going into the structure, and their methods of erection.

Facts: Materials classified for "interior use only" may now be used for exterior wall construction as well. Precast elements, building panels, or boards may be erected with butt joints. Such units may be held in place by means of countersunk nails, screws, or bolts which will not be visible through the surface of sprayed-on vinyl-plastic sheeting.

Examples: In frame construction, the materials used on the outside of the wall may be simply plaster, ordinary plywood, or boards of gypsum, fiber, or cement asbestos.

In fireproof construction, columns, spandrels, or concrete masonry no longer require the application of heavy and expensive brick, stone, or metal facings.

In load-bearing wall construction, walls built of cinder or concrete block faced with plastic spray are attractive and absolutely waterproof.

Canopies, balconies, and other projections of buildings, as well as fascias and soffits, can now be covered with the same "continuous skin" as the vertical surfaces.

Roofs (except for load requirements) may be built in the same manner as walls. Projections such as upset beams, skylights, etc., do not pose any flashing or waterproofing problems.

exterior surfaces

From an economic viewpoint, the greatest interest lies in the use of sprayed-on vinyl-plastic sheeting as a facing material for the outer face of exterior walls of multistory structures of fireproof construction.

In general, the most common method for this type of construction consists of a skeleton of fireproofed steel or reinforced concrete, filled in with back-up masonry and windows; columns, spandrels, and masonry are then faced with a more expensive type of brick or other masonry materials. This "masonry curtain," supported by shelf angles, is expensive and its weight adds further cost to the skeleton and its foundations. The windows set in the openings are calked for weatherproofing. Even though this type of construction is referred to as "permanent," experience shows that repairs and maintenance are needed over the years; the windows have to be recalked, joints repointed, and the entire façade steam-cleaned.

If the realities of maintenance for any type of wall are recognized, tremendous savings in construction cost result when the "curtain" of masonry materials is omitted and replaced by vinyl-plastic sheeting sprayed on columns, spandrels, and back-up masonry. This original covering will stand up for at least 8 to 10 years; after that time it will have to be sprayed again as part of the regular building maintenance. In evaluating the savings, it should be considered that the cost of concrete and back-up masonry for a plastic-sprayed wall will be slightly higher because of desirable higher standards of workmanship. Besides the omission of the masonry curtain, however, savings will result through the absence of calking and additional materials for sills (the plastic spray seals the joint between window structure).

Buildings faced with sprayed-on pl sheeting are of monolithic texture are washable. They can be practically color and can do wonders to break u monotonous appearance of our cities. (point should be of special interes housing authorities and builders of l developments.)

The same principle of exterior "pl skin" can be applied to nonfireproof struction by substituting more econon materials and methods of assemb "under the skin."

Sprayed-on plastic sheeting also f excellent roofs; however, for a roo conventional design, there seems to b particular saving unless special probl such as unusual movements of the s ture or upset beams, skylights or open requiring flashings and counterflashi are present which would increase the of conventional roofing or make its impractical.

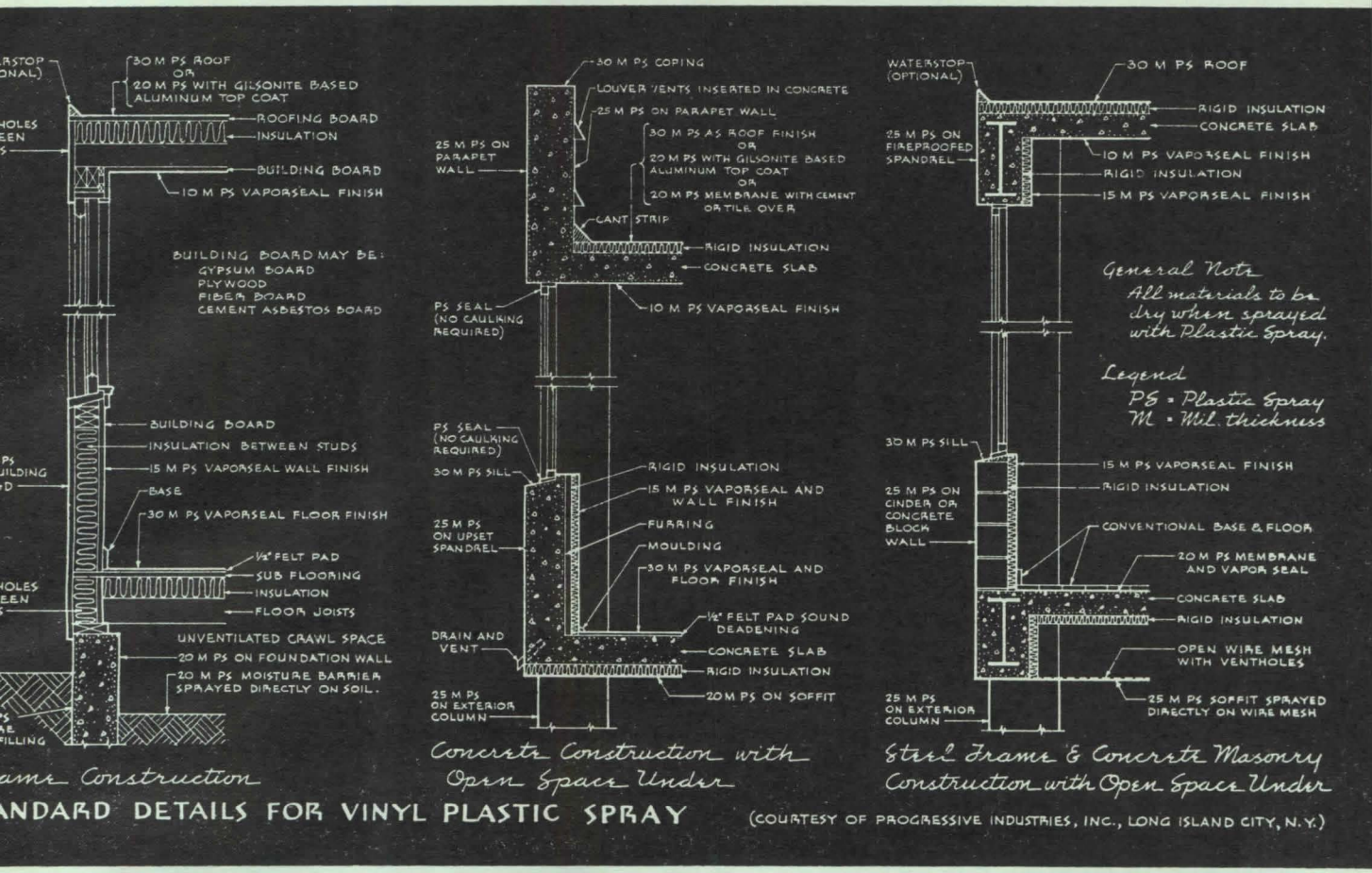
interior wall surfaces

Of equal importance to the new me of construction of walls and roofs the interior uses of sprayed-on vinyl- tic sheeting which bring about a comple new concept of finishes.

In geographical areas where wi heating is required, walls covered on outside with a plastic spray "contin skin" should also receive an interior v seal. This is necessary to prevent vapors captured inside the structure attacking the insulation and wall m rials. The conventional vapor seals usu placed inside the wall have the di vantage of leaving the wall finish exp to attacks by vapors. If, instead, pl

CHARACTERISTICS OF SPRAYED-ON VINYL-PLASTIC SHEETING

Thickness (6 to 8 passes):	.035"
Weight:	2 oz. per sq. ft.
Adhesion:	On glass: up to 25 psi On porous materials: nonstrippable
Tensile strength:	1200 to 1400 psi
Elongation:	200 to 225 percent
Flexibility:	+ 60F to + 100F: 500,000 flexes —32F: can be bent 180° over a 3/8" mandrel
Color:	Natural: ivory, gray, opaque. Pigmented with aluminum: metallic gray. Pigmented with dispersions: all colors
Texture:	Smooth with leatherlike grain
Abrasion:	Loss of 75 mgm after 5000 revolutions of Taber abraser
Wear:	Loss of .001" after 1000 revolutions of Taber abraser
Longevity (pigmented):	Exterior: 8 to 10 yrs Interior: 12 to 15 yrs
Temperature range:	— 40F to + 180F
Fire resistance:	Self extinguishing, does not support bustion
Corrosiveness:	*Causes no corrosion* on plain low-ca steel when exposed to an atmosphe 95% humidity at 95F (± 3F) for 24
Vapor transmission rate:	Not more than 0.5 gram per 100 s per 24 hrs
Chemical resistance:	Not affected by acids, petroleum sol aromatic gasolines, alkalis, aliphatic carbons, oils, fats, grease, and salt
Bacteriostatic and fungistatic resistance:	Not affected by major mildew and groups
Radioactive resistance:	Reduces the penetration of radio radiation into the surface to which applied



ANDARD DETAILS FOR VINYL PLASTIC SPRAY (COURTESY OF PROGRESSIVE INDUSTRIES, INC., LONG ISLAND CITY, N.Y.)

is applied to the interior surface wall, it forms a vapor seal at the location and becomes at the same a decorative finish, not vulnerable ors.

structures that are air cooled during mmer, the "continuous skin" vapor n both surfaces of the exterior wall highly desirable.

des the usefulness of plastic spray vapor seal, this material makes a desirable interior wall finish, the which should not be restricted to side of exterior walls. It may be wherever it is desirable to have a of better wearing qualities than or wallpaper. Pigmented with color- inyl-plastic dispersions and sprayed thicknesses varying from 10 to 30 plastic spray forms a jointless sheet- attractive appearance, in perform- very similar to the well known and used calendered vinyl-plastic sheet- which are cemented to walls. The obvious advantage of the sprayed-on lastic wall covering is the complete e of joints and a better bond to the e. Another advantage is that three-dimensional shapes can be covered without difficulty.

Mostly because of the simplified installation process, the plastic-spray wall coverings are considerably lower in cost than comparable cemented-on types.

In instances where the maintenance budget of a building is considered while selecting wall finishes, this new material will, over a period of years, actually produce considerable savings over paint. This fact is little by little being recognized by building owners. For instance, the New York Waldorf-Astoria Hotel has used plastic spray for a number of bathroom walls and ceilings, and one of the Henry Hudson hotels has made an even more extensive use of this material. Other significant applications are in the elevator lobbies of the new Lever House and the Knoll Associates New York showroom, as well as in various public areas of the new Trade Bank and Trust Company, also in New York.

The plastic spray is a logical sanitary finish for areas subjected to hard wear and undoubtedly it will be used widely in schools, hospitals, hotels, ships, public areas of apartment houses, and, to some extent, in homes. Considerable interest has been shown by architects already acquainted with this material, in its application on cinder or concrete block and on lightweight masonry materials such as precast wood-fiber cement panels, etc., in order to save plastering and painting and yet obtain smooth, washable surfaces. With some care to the treatment of the joints, practical and handsome surfaces may be obtained in this manner. When applied on plaster, the finish coat of plaster can be omitted, which results in further savings.

new architectural details

Besides the use of these new materials to cover entire exterior and interior building surfaces, there are numerous smaller applications where the combined characteristics of vinyl-plastic sheeting and its spray application permit the development of simplified architectural details. This technique stays entirely within the concept of conventional construction.

Membrane waterproofings, flashings, copings, and corrosion-protection of metals can be done advantageously by the plastic-

spray method. The plastic-spray gun will become a commonly used tool on construction jobs, and will eliminate the need for many expensive and elaborate details, saving considerable drafting and specification time for the architect.

prefabrication

Poor solutions of joint engineering have caused many systems of prefabrication to fail. The entirely new concept of waterproofing and vaporproofing joints on the surface, brought about by plastic spray, has most interesting possibilities for prefabricated civilian and military structures.

One system designed by the writer consists of shop-finishing panels with plastic spray, then coating the specially designed joint in the field by a simple vinyl-plastic application—it can even be applied by brush. Shop and field coats will fuse together to form a flexible "continuous skin."

industrial construction, mechanical work

In view of the excellent protection which vinyl-plastic provides against corrosion of any sort, the spray application of this material is of greatest interest to industries with either high humidity conditions (bakeries, dairies, laundries, etc.) or problems of acids, alkalis, salt spray, etc. Interiors, exteriors, ducts, hoods, tanks, and miscellaneous equipment may be lined with plastic spray. In New York's new Lever House, an air shaft built of cinder blocks is faced with this material.

Of special interest is the use of this material where radioactive radiation occurs. As a strippable film, this material is used extensively by the Atomic Energy Commission. Used as a permanent finish, it will greatly reduce the penetration of radiation into surfaces to which it is applied, and it may be cleaned with a solution of nitric acid and live steam after exposure. A recent development of pigmenting sprayable vinyl plastic with lead powder, permits the spraying of lead linings in areas to be protected (X-ray rooms, laboratories, etc., and also for civil defense purposes).

flooring

Plastic spray applied to heavy felt or foam rubber pads forms a highly resilient and sanitary wall-to-wall carpeting. Joints between the pads (these come in rolls up to 12′ widths) and the baseboard may be sprayed over so that the entire area, regardless of size, will form a waterproof and washable surface.

This flooring has approximately the same wearing qualities as linoleum and it is excellent for stores, hospital rooms, nurseries, halls, corridors, stairs, bathrooms, kitchens, etc.

fabrics

Vinyl plastics of the strippable types, sprayed on engraved, embossed, or textured surfaces, form very attractive three-dimensional sheetings when stripped off. Various structural-glass and embossed-metal designs are readily available for this purpose.

furniture

One of the most exciting applications of plastic spray is for upholstered furniture. Sprayed directly on foam rubber, it will mold its contours and form a seamless, washable, leatherlike cover, expressing the intended design shape in its purest form. Plastic spray is also an excellent finish for wood, metal, or fiber furniture as imperfections of surface or joint will not show in the finished piece. Color and washability suggest its use for children's furniture, store fixtures, etc.

sculptures

The quality of webbing of plastic spray which permits the spanning of open spaces up to 24″ has very interesting possibilities for sculptural applications, where the tension of materials defines pure geometric forms.

miscellaneous applications

Weatherfast outdoor movie screens can be obtained by spraying aluminum- and white-pigmented vinyl on stucco or concrete surfaces. The same material may be applied to interior walls which then become decorative washable surfaces, also fulfilling the function of projection screens.

Swimming pools of any type of construction may be lined with sprayed-on vinyl-plastic sheeting.

One manufacturer of insulating materials is considering a plan to enclose glass-fiber insulation with sprayed-on vinyl plastic in order to provide a vapor seal and to facilitate the handling of the material.

application

Despite similarities in the type of e ment used, the spraying of vinyl p requires a completely different techn than the spraying of paint, and technique of plastic spraying may be sidered as a new craft. In view of fact, and because of the important fun which plastic spray is to fulfill in construction, this work should be formed only by highly trained crafts available through contractors specia in architectural applications of this terial, such as 20th Century Builde Tampa, Florida, or Progressive Indus Inc., of New York. As to specifica it is recommended that this work be fied in a separate section under the ing: Sprayed-on Vinyl-Plastic Shee

The spraying is a very clean oper because the liquid plastic, even atomized, does not form a mist. Ther operators do not have to wear face m and only a few inches immediatel jacent to the sprayed area need covered or masked. The odor of th vent, somewhat unpleasant during spraying operation, dissipates comp within a few hours. The cured ma has no odor or taste whatsoever a absolutely non-toxic.

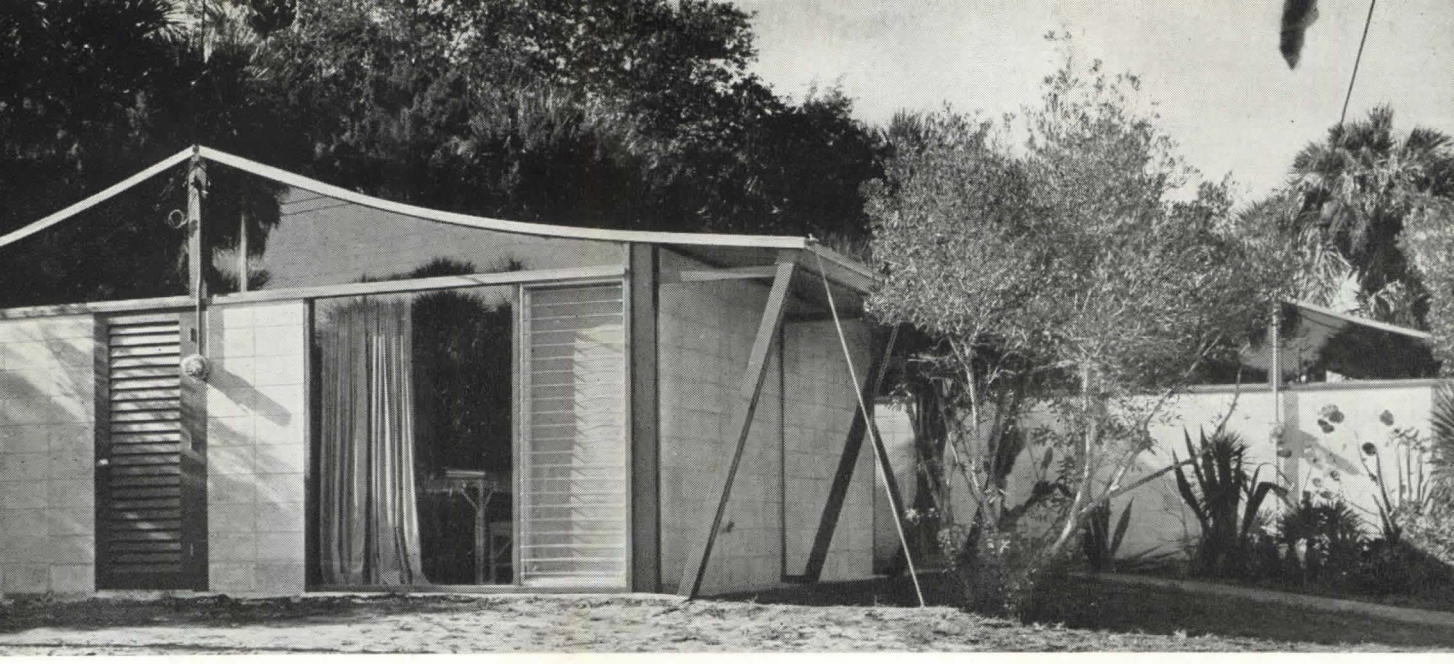
outlook for the future

Already, original design solutions on this new material have come fro drafting boards of professionals. Twi and Rudolph's guest cottages at Sar Florida, with their plastic-sprayed curved under tension, are presented following P/A feature. Engineer Fr Severud, besides proposing this ma for atomic blast blowout panels and titions *(page 70, September 1951* is considering roofing an arena of span by stressing wire mesh over a steel structure and spraying a vinyl-p roof directly on this mesh.

The often attempted perfect geo form for "floating structures" on stil *now be materialized with unbroken* lithic surfaces of even texture and trolled color on all planes of the stru

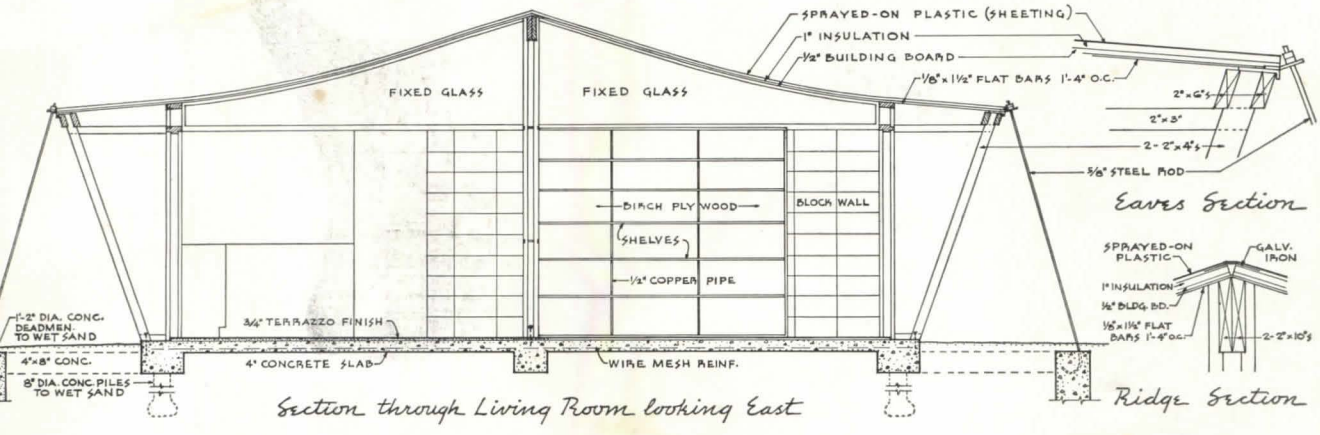
Undoubtedly, plastic spray in the of designers with imagination, ful ploring the possibilities of this skin," will bring about great chan the design, detailing, and construct buildings.

** In New York City this work is generally p by the cement finishers.*



guest houses with plastic roofs

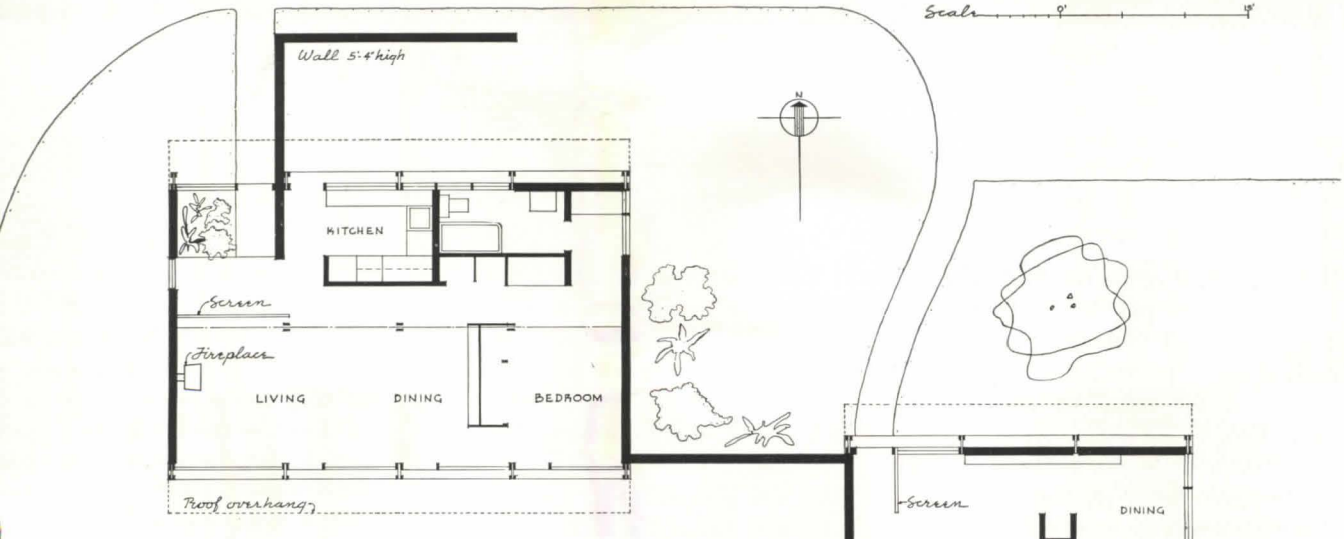
location	Sarasota, Florida
architects	Twitchell & Rudolph



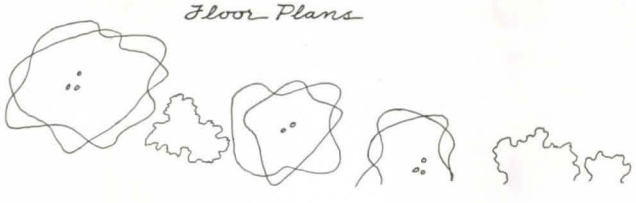
Section through Living Room looking East

Eaves Section

Ridge Section



Floor Plans



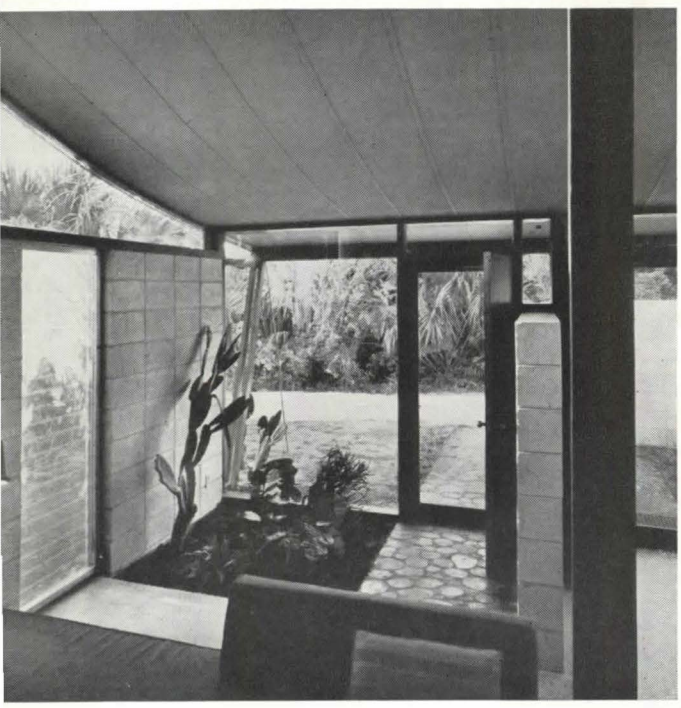
One of the most recent architectural applications of sprayed-on plastic sheeting (pages 99-102) is in the construction of the roofs of these two small guest cottages that were built for rental on an estate on Siesta Key.

As indicated in the sectional drawing on the preceding page, the tent-like tension roofs are made up of catenary curves formed by flat ⅛″ x 1½″ mild steel bars, spaced 1′-4″ on center, to which are clipped large sheets of ½″ insulating building board, over which there is a 1″ layer of glass-fiber insulation which, in turn, is surfaced with the sprayed-on vinyl plastic, 1/16″ thick. Tension and compression members along the north and south walls of the structures are designed to compensate for the inward thrust of the roof. Soffits of the portions of roof that project beyond the building line are surfaced with plywood.

Opening out to the south to overlook a grove of beautiful oak trees, the cottages are so located that they cannot be seen from any other structures of the property —the main house, a studio, a swimming pool, and another guest house. Living privacy for each cottage derives fr staggered placement of the units.

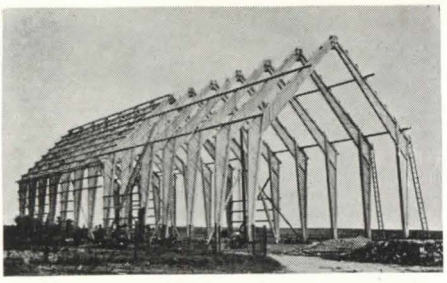
The framing of the houses, whi built on reinforced-concrete grade on piles to wet sand stratum is o and-lintel construction down the and along the north and south wal terior masonry walls are of lime flooring is terrazzo, and partitions a wood on standard stud frame. To air movement, certain window area operable glass jalousies in place of windows. Electric unit heaters and p fireplaces supply the heat needed.

The two cottages are blended together by use of the same structural systems, general pattern of fenestration, and same materials. In the living room of the larger house (across-page and immediately below) *the entrance is around a small interior garden, and the exterior walkway pattern extends inside the house.* Photos: Jack Holmes



The west wall of the smaller cottage (two photos above), *windowless except for the glazed gable end, and the offset placement, provide privacy for both units. The detail* (below) *shows the pattern of the curved plastic roof, insloping paired posts, and 5/8" steel tension rods that keep the whole structure in equilibrium.*

HB-arches use standard timber secti



Examples of HB-construction in Sweden: Framework for a barn erected at Svalöf; span 40', height 43' (above). *Decking for bridge over Viskan River at Rydal is carried on four HB-beams, continuous over piled supports; spans are 49', 66', and 49' respectively* (below).

An unusual form of wood-beam construction that will carry heavy loads and span long distances economically was used recently in a recreation hall-theater at Naples, Maine. It is believed to be the first wood-truss framework of its kind to be erected in this country.

Known as the HB-beam system, this type of laminated wood trussing (formed of standard timber sections) is named after its inventor, Prof. Hilding Brosenius of the Royal Institute of Technology, Stockholm, who holds the patent in Sweden and in several other foreign countries. Since its inception in 1939, the system has been employed in the construction of over 2000 factories, schools, warehouses, aircraft hangars, theaters, bridges, and other diverse structures in many parts of the world. In their simplest form, the beams consist of laminated webbing (two layers of 1" boards nailed at right angles) flanked at top and bottom with a laminated flange. Dimensions are computed on the assumption tha flanges take the entire bending mome the beam, and the web resists all o shearing force. The carefully calcu methods of nailing are reported to ac tangible savings in materials and and, as well, eliminate the many tie and braces found in bolted struc without loss of structural strength. beams show considerable reductio over-all dimensions and dead weigh compared with timber-framed girde equivalent strength. These factors tribute to easier handling and qu erection; furthermore, the beams ca fabricated with ordinary woodwo tools.

The basic system of the HB-bea extremely flexible; it may be appli straight, flat-topped, and continuous s and to two- and three-hinged, rigid- arches. These arches can be fabrica any roof pitch, any height, and fo loading that the building requires.

air and temperature control

Low-Cost Gravity Furnace: oil- or gas-fired warm-air furnace, with bonnet output of 75,000 Btu, designed primarily for low-cost housing. Casing measures 52" high, 22¼" wide, 28¼" deep; unit is factory assembled with full-sized bottom plate to prevent air leaks when installed on uneven floor. Delta Heating Corp., Trenton 8, N.J.

Horizontal Winter Air Conditioner, Type 253: oil-fired unit, available at present in one size only, 110,000 Btu; may be suspended as unit heater in all types of residential installations, also in garages, shops, schools, and other commercial buildings. Unit is completely up-draft in design; casing is lined with asbestos insulation laminated with aluminum foil, serving to reflect heat back into heat exchanger and also reduce noise. L. J. Mueller Furnace Co., 2005 W. Oklahoma Ave., Milwaukee, Wis.

Vertical Discharge Fan: "flat-as-a-flounder" design allows residential installation in lowest pitched roofs. Unit is framed of 1" seamless tubing, housed in heavy-gage steel, is installed unattached, riding vibration- and noise-free in foam rubber. Available in five sizes with either 1/3 or ½ hp motor. Murray Co. of Texas, 3200 Canton, Dallas 1, Tex.

Circle Air Electric Convection Heater: electric convector draws in cold air through lower vents of metal cabinet enclosure; air then passes around fins which warm it to desired temperature; upper vents of cabinet distribute warm air into room area. Unit can be recessed or set against wall. Suitable for heating entire house or sections only; may also be installed in stores, plants, new construction, etc. Paley Mfg. Corp., 244 Herkimer St., Brooklyn 16, N.Y.

Home Air Conditioner: compact summer air conditioner converts any forced warm-air heating system into all-year conditioning system; can be installed in either new or existing homes. Built in 2, 3, and 5 hp models; heavy glass-fiber insulation used throughout for thermal and sound insulation. U. S. Air Conditioning Corp., 3300 Como Ave., S.E., Minneapolis, Minn.

doors and windows

Insulux Panel-Vent: glass block ventilator, for installation in glass-block paneling; consists of actual half-block in pattern matching surrounding panel blocks, and hinge which swings outward whenever ventilation is desired. Aluminum screen on inside keeps out insects. Can also be used alone with concrete, brick, or other materials to provide ventilation for hallway, garage, closet, bathroom, etc. No special tools or equipment needed to install. American Structural Products Co., Nicholas Bldg., Toledo 1, Ohio.

Ra-Tox Shades: made of strong, resilient, basswood slats woven together with heavy-duty seine twine into rugged, durable fabric, said to outwear shades made of cloth or similar materials; resists rain, sunlight, grease, fumes, dirt, and abuse. Originally designed for industrial use, now available for school applications. Wide range of colors, including natural finish. Hough Shade Corp., Janesville, Wis.

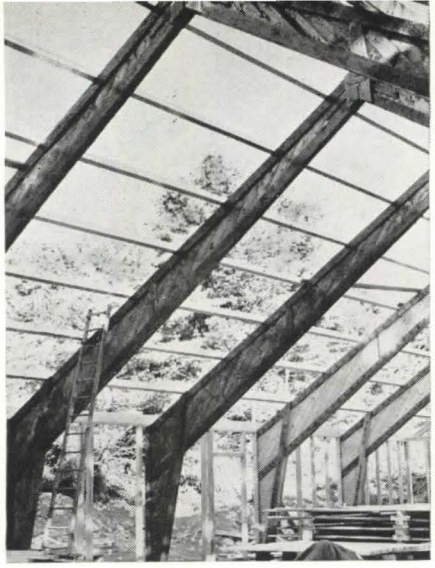
Pella Wood Folding Door: fully asse "accordion" door that folds against jamb, consists of wood panels, 3⅝" w ⅜" thick, joined together by series o cealed hinges acting as springs; door i ported at top by metal track. Availal sizes up to 12' in height and 20' in Rolscreen Co., Pella, Iowa.

electrical equipment, lighting

PB Electri-Center: general purpose breaker, for use in commercial and indu buildings for control of lighting and ance circuits. Basic unit contains bo terior, two 15 amp. and two 20 amp. bre additional breakers, filler plates, and (flush and surface) are supplied at ti purchase to suit specific needs. Availa 14 or 20 circuits. BullDog Electric Pr Co., 7610 Joseph Campau St., Detro Mich.

"Chieftain" Commercial Fixtures: open-type fluorescent fixtures, finishe two coats of baked enamel and indivi phosphatized to provide maximum resi to oxidation in installations where e humidity prevails. Adaptable to all ty mounting. Gibson Mfg. Co., Atlanta,

Hinged Drum Fixture, Series 110 candescent fixture, enclosed in glass " bowl, utilizes ventilating and insulati vice that insures cool operation and pr ceiling discoloration and breakdown sulation; particularly suitable for areas continuous lighting operation is nec Especially designed hinges simplify replacements, eliminating necessity



Progress photos of recreation hall-theater at Naples, Maine. Design data for beams: 3-hinge type, 11'-6" on center; 48' span with 12' cantilever for porch-roof and 24' height from floor to crown. Flanges are 2" x 6" Douglas fir while webs consist of two layers of 1" x 6" local spruce. Portable saw and hammers were only equipment used to make the trusses. Photos: Roger Flint

of HB-structures is achieved with ole cranes, derricks, or winches. ely any staging is necessary.

beams may also be used for portal rch frames; transportation difficul- however, preclude complete fabrica- before delivery. To overcome this, a l angle construction has been de- ed which allows the frame to be d on site from prefab straight sec- The beams are delivered in lengths proximately 80′ and joined at the job, usually only by a simple nailing process. The design of a satisfactory large splice joint makes the construction of beams exceeding a 300′ free span a relatively simple matter.

The roof trusses in the Naples theater (*above*) were constructed by a Maine builder from plans sent by the HSB Building Association of Sweden, especially for that building. John M. Dennerlein, New York architectural designer of the theater, is the exclusive agent in this country for the HSB Building Association; his address: 209-45 112 Ave., Queens Village, N.Y.

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ng glass bowl. Gruber Brothers, Inc., . First St., Brooklyn 11, N.Y.

nuous "T" Lights: weatherproof, con- us, horizontal fluorescent fixtures, com- y wired for immediate installation, for or use. Units are 30″ wide, in 4′ and ngths, can be fitted to existing poles, me already equipped with manufac- s 9′ or 12′ standards. Guardian Light 01 Lake St., Oak Park, Ill.

W Big Beam Emergency Light: 2- unit provides instant automatic flood- ng for minimum of 4 hours in event of ar power failure; charged to capacity times by means of enclosed, automatic e charger; equipped with fast charger recharges battery after emergency use. Lite Mfg. Co., 1050 W. Hubbard St., go, Ill.

finishers and protectors

izer Brick and Stucco Finish: one- paint for use on masonry surfaces co, brick, concrete, cinder block, etc.), be applied directly without need for al priming or sealing coat. Paint permits nission of moisture through paint film ut breaking down film itself, so that ampness penetrating through paint can e. Can be applied by brush, roller, or gun. Colorizer Associates, Inc., 345 Western Ave., Chicago, Ill.

less Paints: full line of odorless, in- oil-based paints, available in gloss, gloss, flat, enamel, floor paint, and varnish, in large selection of colors. Keystone Paint & Varnish Corp., 71 Otsego St., Brooklyn, N.Y.

Concrete Floor Hardener No. 860: clear, colorless liquid forms dense, nonporous, flint-like surface on concrete floors to withstand extra heavy traffic; easily applied by brush or mop. Recommended for use in warehouses, garages, schools, institutions, and factories. Monroe Co., Inc., 10703 Quebec Ave., Cleveland 6, Ohio.

Apex Anti-Rust Paint: aluminum paint for application over rusted surfaces (no wire brushing or scraping necessary) to prevent further rust action. Recommended for protection and preservation of new metal against future rust attacks. One-coat coverage sufficient, even over black surfaces. Paramount Industrial Products Co., University Center Station, Cleveland 6, Ohio.

Hydrocide S.X Colorless: invisible penetrating water-repellent silicone compound for all types of above-grade, porous masonry; sheds dirt, controls efflorescence, will not discolor or wear away. L. Sonneborn Sons, Inc., Building Products Div., 80 8th Ave., New York 11, N.Y.

sanitation, water supply, drainage

Electro-Matic Water Softener: automatic, home water softener, electrically operated, enables homemaker to reduce soap consumption by as much as 80%, depending on hardness of water supply. Unit contains special water-softening resin element, "Permutit Q," and simplified valve assembly which reduces number of moving parts, thus simplifying service problems. Manufactured in two sizes. Permutit Co., 330 W. 42 St., New York 36, N.Y.

Model "B" 4″ Electric Submersible Pump: packaged, ¾ hp unit developed especially for domestic water supply system. Operation is noiseless since pump and motor operate completely under water. Compact size permits its use in wells as small as 4″ in diameter; capacities range from 520 gph at 150 ft. to 100 gph at 320 ft. Sumo Pumps, Inc., 375 Fairfield Ave., Stamford, Conn.

specialized equipment

"N" Line of Surveying Instruments: new, moderately-priced line consists of four instruments: convertible transit-level, heavy-duty 12″ Dumpy level, service transit-level (farm level), and hand level. Constructed of brass and bronze; simpified design combines rugged construction plus precision required by builders' and contractors' applications. C. L. Berger & Sons, Inc., 37 Williams St., Boston 19, Mass.

Upright Freeze Pantry: 19 cu. ft. home freezer stores 665 lbs. of food, yet occupies less than 1 sq. yd. of floor space. Among other desirable features, are electronic warning alarm and signal light that guard against food spoilage should temperature rise for any reason. No special installation required; plug fits into any 110v a-c outlet. Ryan Industries, Refrigerator Div., 1025 Excelsior Ave. E, Hopkins, Minn.

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

★ **1-178. Remotaire Room Conditioner,** AIA 30-F-1 (257), 24-p. engineering manual on room conditioner, providing summer cooling and winter heating, for multiple installation on unit system. Technical data, selection, specifications, cooling selection charts, piping diagram, nominal ratings, index. American Radiator & Standard Sanitary Corp., Bessemer Bldg., Pittsburgh 30, Pa.

1-179. Commercial Refrigeration (350), 40-p. catalog. Illustrations of various types of coolers (walk-in, reach-in, wall-mounted, etc.), defrosting units, ice-makers, fin and tube coils, and other commercial refrigeration products. Recommendations, dimensions, specifications, connection sizes, photos, drawings, engineering data. Bush Mfg. Co., West Hartford, Conn.

1-180. Ess Air-Conditioning Smoke Indicators (521), 4-p. bulletin describing three types of smoke-control alarm systems that automatically stop air circulation within air-conditioning ducts and give visual or audible signals at first sign of smoke; acts as guard against panic hazards, fire and smoke damage. Features, mounting diagrams, photos. Ess Instrument Co., 96 S. Washington Ave., Bergenfield, N. J.

1-181. National Fintube Convectors, AIA 30-C-4 (587), 4-p. brochure. Information on convectors, using heating elements of steel fins on steel pipe, for installation in hospitals, schools, factories, or business offices. Design, steam and hot water ratings, roughing-in dimensions. National Radiator Co., Johnstown, Pa.

1-182. Preferred Unit Steam Generator (2000), 26-p. bulletin giving detailed description of heavy-duty, self-contained, portable steam plant fired by light or heavy oil, natural or manufactured gas; combination gas and oil units available. Components, advantages, data and dimension chart, views. Preferred Utilities Mfg. Corp., 1860 Broadway, New York 23, N.Y.

★ **1-183. Air Handling, Air Cleaning, Air Conditioning** (600), 60 p. catalog offering complete line of equipment for air-conditioning and air-handling systems. Industrial uses, application charts, capacity and dimension tables, engineering data, photos, drawings, cross-reference index. Westinghouse Electric Corp., Sturtevant Div., 200 Readville St., Hyde Park, Boston 36, Mass.

construction

3-151. Precast Prestressed Concrete Slabs, AIA 4-K, 8-p. bulletin on hollow-core building slabs, capable of clearing spans up to 26′, for roofs and floors. Diagrams illustrating uses with all types of construction; load chart, advantages, specifications, new ways of installing heating systems, including two hot-water radiant methods and a warm-air split system that combines circulating air with radiant floor. Flexicore Co., Inc., 1932 E. Monument Ave., Dayton 1, Ohio.

3-152. Concrete Masonry Handbook, AIA 10-C (P27), 64-p. manual designed to assist architects, engineers, and builders in designing or constructing masonry buildings that meet modern requirements, varying with purpose of building. Latest recommended practices in concrete masonry construction, suggested details, technical information based in field and research laboratory, photos, drawings, bibliography. Portland Cement Assn., 33 W. Grand Ave., Chicago 10, Ill.

3-153. Rilco Glued Laminated Wood, AIA 19-B-3, 16-p. booklet. Types and applications of glued, laminated wood (Douglas fir or Southern yellow pine) arches, beams, and trusses. Sectional dimension table, typical details and other drawings, specifications, photos. Rilco Laminated Products, Inc., 1st National Bank Bldg., St. Paul 1, Minn.

doors and windows

4-182. Aluminum Windows, 24-p. booklet containing latest specifications for double-hung, casement, projected, and awning type aluminum windows in residential and commercial applications; includes specifications covering both standard and modular sizes. Photos of actual installations. Aluminum Window Manufacturers Assn., 74 Trinity Pl., New York 6, N.Y.

4-183. Use Marble Window Stools, 4-p. folder illustrating step-by-step method of setting marble window stools which can be used with any type of sash—wood, steel, or aluminum. Details of window installations in various types of wall construction. Carthage Marble Corp., Carthage, Mo.

4-184. For New Design Flexibility (G2287), 4-p. folder showing in detail the daylighting function of new 12″ light-directing and light-diffusing glass block, also of 8″ glass block. Recommended elevations, advantages. Pittsburgh Corning Corp., 307 Fourth Ave., Pittsburgh 22, Pa.

4-185. Doorways to Happier Living (H 41), 16-p. brochure. Pictorial guide to proper selection of door, window, and cabinet hardware. Styles, photos. The Stanley Works, New Britain, Conn.

4-186. Steel Windows and Doors, AIA 16E (1952), 111-p. catalog. Specifications and installation details given on complete lin residential, commercial, industrial, and tutional steel windows and doors. Cons tion data, types and sizes, photos, thum dex. Truscon Steel Co., 1300 Albert Youngstown 1, Ohio.

4-187. SLI-D-O-O-R (1137), 4-p. f describing prefab, ready-to-install sli doors made of laminated wood-flake p guaranteed not to warp; equipped wit necessary hardware. Dimensions of two- three-door units, advantages, application stallation data. U.S. Plywood Corp., 5 44 St., New York, N. Y.

4-188. 62% More Overhead Daylight booklet on dome skylight units availab clear or light-diffusing Plexiglas, for roo stallations. Sizes and shapes, applicat details, specifications, dimensions. W Flashing Co., 87 Fawcett St., Cambr Mass.

electrical equipment, lighting

5-121. Electric Availability Importa Architectural Design, 16-p. booklet. Re mended layout plans for wiring devic residential living areas, for convenient ging of electrical appliances. Types o vices, uses, illustrations. Arrow-Hart & man Electric Co., Hartford Co., Hartfo Conn.

5-122. Exit Lighting, AIA 31-F-2 (8-p. catalog supplement containing 31 tinct types of electric, directional sign hospitals, schools, hotels, churches, the etc. Data regarding letter height, ov length, height, and fixture width. G Brothers, Inc., 125 S. First St., Brookly N.Y.

5-123. Auxiliary Electric Power for lic Utilities (A-292), 8-p. folder. Type sizes of electric plants suitable for public utility need. Specifications give units from 400w to 5000w size in bot and d-c models; also brief descriptio housed standby plants and automatic trols; photos. D. W. Onan & Sons, Inc., University Ave., S.E., Minneapolis 5, M

5-124. Engineered Lighting, AIA (3-52), 32-p. catalog. Technical data on full line of commercial and indu fluorescent light fixtures and access Construction, features, finish, mountin formation, drawings. Wm. Penn Fluore Light Mfrs., 1429 S. 23 St., Philadelph Pa.

5-125. Flex-A-Power (TEB-2), 50-p. log. Detailed information on various of trolley busways, each of which serve cific distribution system requirements sign characteristics, features, applicatio

ıges, dimensional data, typical specifica-, photos. Trumbull Electric Mfg. Co., Woodford Ave., Plainville, Conn.

5-126. Street Lighting (B-5460), 84-p. engineering guide to design of street lighting systems. Analyses of de- procedures, roadway illumination com- tions, and electrical distribution sys- ; sample problems and solutions, main- ıce and its cost, charts, diagrams, photo- hs, glossary of street lighting terms. inghouse Electric Corp., Box 2099, Pitts- h 30, Pa.

finishers and protectors

. ACP Phosphate Coating Chemicals Processes (915), 12-p. bulletin explain- types and uses of chemical coatings for t bonding, rust proofing, and for protec- of surfaces subject to friction. Methods application, photos, index. American nical Paint Co., Ambler, Pa.

. Redwood Staining, AIA 25-B-12, 4-p. er giving specifications for staining and ng of redwood interiors and exteriors. of simplified stain wax formulations, r chart. Samuel Cabot, Inc., 141 Milk Boston 9, Mass.

. Waterproofing — Exterior, Above de, AIA 3-B-1 (BP 3051), 4-p. folder. nical data guide for protective treat- t of exterior concrete and masonry walls application of Hydrocide SX (invisible r repellent silicone product). Advan- s, summary of performance test. L. Son- rn Sons, Inc., 300 Fourth Ave., New k, N.Y.

insulation (thermal, acoustic)

. Cellufoam, 4-p. booklet. General in- ation on lightweight, semi-rigid board, ed of wood-fiber insulating and acous- material, with low "k" factor of 0.26; old- and fungus-proofed. Types of ap- tions, standard sizes, heat conductivity t, photos. Masonite Corp., Cellufoam ducts Div., 111 W. Washington St., ago 2, Ill.

. Textured and Perforated Acous- Tile, AIA 39-B, 8-p. bulletin covering ety of glass fiber acoustical materials, in- ing textured, perforated, and plastic- d tiles, rigid boards, and batting. Ap- tion data, sound absorption coefficients, ifications. Owens-Corning Fiberglas ., Nicholas Bldg., Toledo, Ohio.

. Roof Decks and Roof Insulation, 4-E-13; 37-B-2 (CA-2), 12-p. booklet. of insulating vermiculite concrete in deck construction. Advantages, prop- s, specifications, sectional drawings, os. Zonolite Co., 135 S. La Salle St., ago, Ill.

sanitation, water supply, drainage

52. Emergency Showers and Decon- ination Showers, AIA 29-H-3 (30), 6-p. folder. Three models of emergency showers using especial methods of spraying water rapidly to quench fire, dilute and remove contaminating chemicals from clothing or human body. Construction, operation, photos. Logan Emergency Showers, Inc., Glendale, Calif.

19-253. Boiler Water Level Controls and Safety Devices (SC-2), 24-p catalog offering wide selection and application of safety devices—low-water fuel cut-offs, float-operated switches, temperature and pressure relief valves, etc.—for steam and hot water boilers. Capacity curves, dimension drawings, engineering data. McDonnell & Miller, Inc., 3500 N. Spaulding Ave., Chicago 18, Ill.

specialized equipment

19-254. Brutex (A-2029), 4-p. folder describing new tracing cloth, resurfaced to a velvet matte finish that will receive graphite from hardest pencil grades; will not smudge under ordinary use, yet is easily erased without "ghosting." Advantages. Charles Bruning Co., Teterboro, N.J.

Two booklets, one on hospital equipment layout, illustrated with photos; the other describes basic equipment for physician's treatment room—patient's tables, instrument and sterilizer cabinets, waste receptacles, operator's stools, etc. Color plates, prices. A. S. Aloe Co., 1831 Olive St., St. Louis 3, Mo.:

19-255. Hospital Equipment Layout and Planning Service

19-256. Design Achievement in Treatment Room Furniture

19-257. Thermatic System (T), 8-p. bulletin describing automatic process control system for surgical sterilizers, which insures safe standardization of time-temperature performance, mechanical accuracy, and safety for patients; readily adaptable to both old and new sterilizer installations, geared to accommodate all types of loads. Safety and other features, operational data, photos. Wilmot Castle Co., 1255 University Ave., Rochester 7, N.Y.

19-258. Institutional Cabinets and Casework, 4-p. folder showing typical applications of wood cabinetry and casework in institutional areas. Specifications, photos. Wood-Metal Industries, Inc., 101 Park Ave., New York 17, N.Y.

surfacing materials

19-259. Alberene Stone Laboratory Equipment, 12-p. brochure illustrating use of chemical-resistant Alberene stone as material for laboratory table tops, shelving, sinks, splash backs, drainboards, and related equipment. Properties, design consideration, construction details, specifications, typical sections, installation photos. Alberene Stone Corp. of Virginia, 419 Fourth Ave., New York, N.Y.

19-260. Tiles and Faience, AIA 23A, 16-p. catalog presenting groups of imported and domestic faience and decorative, hand-made tiles, all designed by international ceramic artists. Illustrations, sizes. Vanderlaan Tile Co., 103 Park Ave., New York, N. Y.

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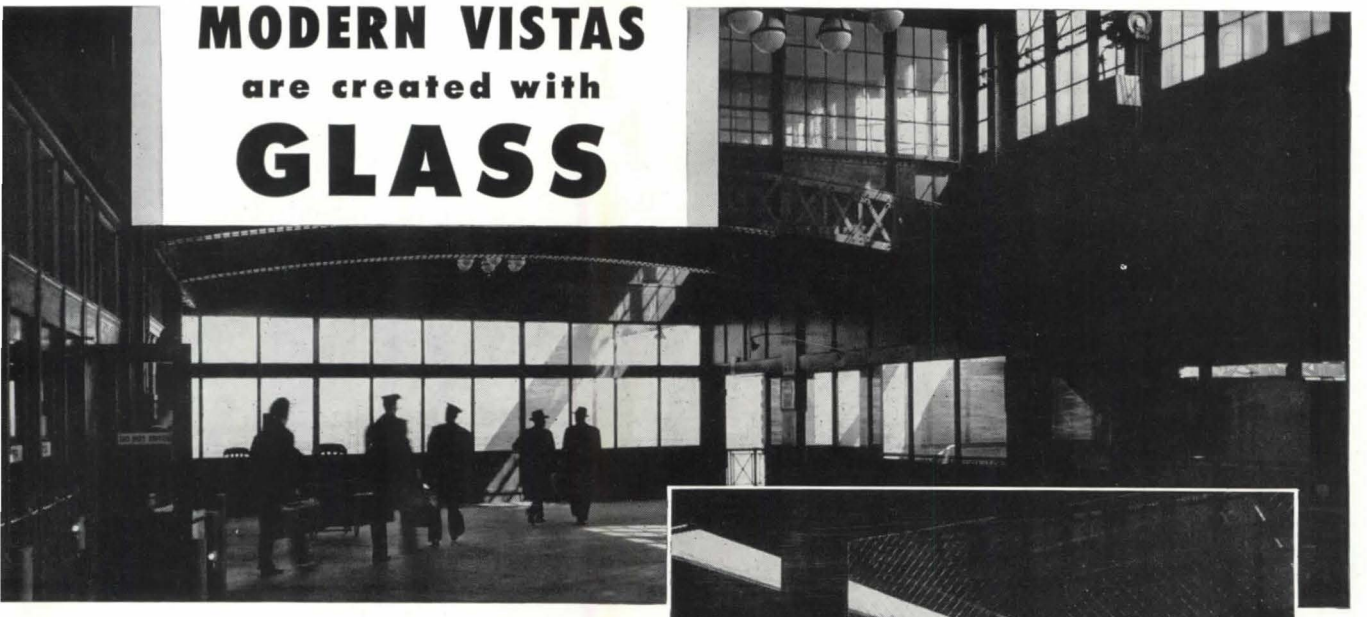

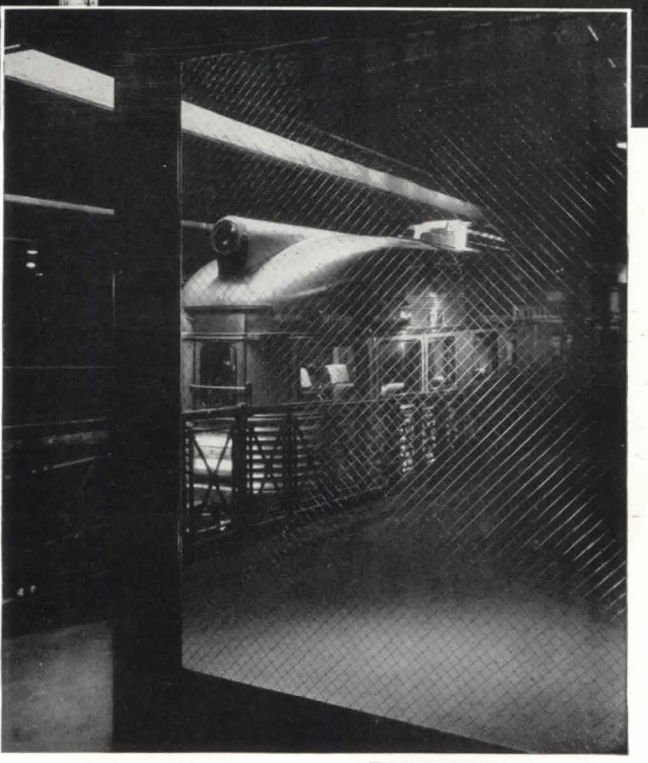

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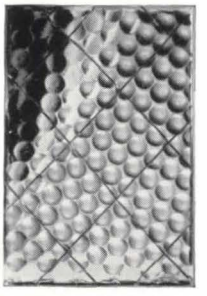

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patients' rooms

by Eugene D. Rosenfeld, M.D.*

hospital administrators would be to have the interior design of hos- handled by professionals. The tion and equipment of patients' in particular, have long been the ve province of well meaning volun- often the Ladies' Auxiliary. Pro- al advice is badly needed in color ent, furnishing, lighting, accessories, aterials used in the patient areas of ils. The patient's room is no longer way-station to the operating room, her a patient's temporary home on id to recovery. As such, it deserves t the same attention as that given to erior design of a home, or even an or public building.

n the administrator's point of view, tient's room should be of such sim- of design as to require a minimum intenance and housekeeping, while g the patient an optimum of care and t.

fixtures should be flush-mounted; v and door frames and bucks should flush with the wall as possible; ex- radiation and interior sills should be ated; all oxygen outlets, suction , electrical receptacles, intercom- ation equipment should be flush- ed with stainless steel plates (or some easily maintained material); all -wall and wall-to-ceiling joints be smooth and without moldings.

ngs are best treated with some maintained, soundproofed surface, ainted a subdued eggshell (or off- . Ceilings, walls, and floors should be treated with a material that can shed easily and will not streak. in particular, require a material, s some of the new plastics, which ot stain, crack, chip or mar when r other items of equipment are thrust t them. Painted walls must be refur- every two or three years; investment able and appropriate wall covering is nical in the long run and an esthet- important step.

ring is always a difficult problem— at has yet to be satisfactorily solved. sfactory hospital floor should com- asy maintenance, sound deadening, ncy, longevity, and attractiveness. A hat mars or shows footprints, that s dust and dirt, that needs frequent polishing is to be avoided. Slick, highly polished floors are dangerous, particularly in patients' rooms. Probably the best material available, but one of the most expensive as well, is cork. The floor coverings most widely used in hospitals today are asphalt or rubber tiles, or linoleums with flush-cove bases. Such floors are satisfactory and certainly preferable to wood, carpeting, or most other types.

Lighting of patients' rooms is seldom given enough thought. It would be of great interest (and therapeutically valuable, perhaps) if experimentation in hospital lighting were encouraged to determine the effect of various intensities, hues, and tints upon hospitalized patients, their rates of recovery, their response to therapy, etc. Perhaps, a rheostatically controlled system regulating hue, intensity, and color will some day be standard equipment in hospitals and available as a therapeutic device. Present-day patients' rooms all too frequently contain overhead fixtures and exposed lamps which are disturbing to bedridden people. Indirect lighting is always desirable. Floor lamps, found so often in hospital rooms, are hazardous; cords get in the way or become frayed and eventually become fire hazards. If proper sources of light are provided for reading, safety, and examination purposes, general illumination may be kept at a minimum. For these purposes, wall-mounted *lamps*, with direct and indirect beams, using fluorescent bulbs of the new daylight variety, so designed as to yield general and specific illumination, best meet the requirements. They have the additional advantage of not producing heat and, of course, use less electricity. Lighting should be controllable both by the patient and the nurse, and adequate night and safety lights are needed in a patient's room.

In designing the furniture and accessories for patients' rooms, thought should be given to the scale of the furnishings in relation to the room. The present trend is toward lighter, smaller pieces and in-the-wall storage units. It is vital that all materials used in hospital furniture be fireproof, stainproof, chip-proof and devoid of unnecessary frills, carvings, surfaces, and joints. A minimum number of pieces, consistent with actual needs and esthetic sensibilities, should be used. Overcrowded rooms are a danger to patient and staff, require more upkeep, and are generally unattractive. The average patient requires only a catch-spring-equipped bed, a bedside table in which most of the utensils for patients' care can be stored, an overbed table-vanity combination, a rubber mat covered stool, and several chairs for visitors.

Fabrics for draperies, curtains, and upholstery should be carefully chosen for durability and beauty. Those which are flammable, dust-catching or difficult to keep clean should be avoided. We should not be afraid to use color in hospital rooms, to harmonize color schemes, to attempt to achieve esthetically attractive effects. Paintings, sculpture, and ceramics, intelligently used, would help reduce the atmosphere of cold sterility of the hospital room of the past.

The ideal patient's room—the administrator's dream room—would be a single-bed room which could be converted to a two-, three-, or four-bed room in a few seconds when it is desirable for a patient to have company. It would be inexpensive to build, equip, maintain, and service. It would satisfy the esthetic needs of the patient, the staff, and visitor alike. It would seldom have to be re-equipped, refurnished or re-decorated; yet it would always look new, clean, fresh, and attractive. It would have a pleasant view, be soundproofed, air conditioned, and so designed that color harmony and lighting could be modified at will. All the necessary equipment for complete nursing service of the patient would be immediately at hand, in properly designed storage units, but the room would look like a well designed combination sitting and bedroom, rather than a traditional hospital room. The equipment and furnishings would be so designed as to encourage a maximum of self-service by the patient, and at the same time allow maximum servicing of the patient by nursing and medical staffs, without unnecessary energy expenditure. The room would be equipped with safety devices, modern audio-visual communication equipment and passive as well as active signal systems, so that self-endangering movements by the patient would immediately summon the nurse. It would be isolated from the hospital hubbub and situated off quiet corridors, but could open up, through windows and flexible walls, to project the patient into a wider environment. This room is worth striving for, even if it can never be attained.

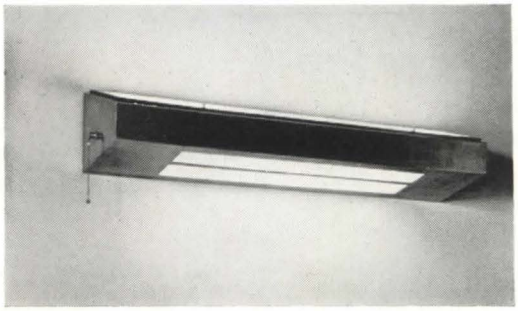
* *e Director, The Long Island Jewish Hospital*

patients' rooms

	model room—typical double bedroom
location	Mt. Zion Hospital—San Francisco, Calif.
architects	Milton T. Pflueger and Skidmore, Owings & M
contractor	Engineers Limited

This is one of those rare instances where the hospital architects were given complete control in the design of the patient's room. The strikingly pleasant environment speaks well for this approach. Although we know that the choice of one night table or another is not the most crucial aspect in the design of a hospital room, it is a fact that the architect can create that harmony which results from approaching the interior as a whole. On looking at this room, one is immediately impressed by its taste and design integration. Certainly the bed would work as well with less handsome end panels and certainly there are other chairs as comfortable: but these are discri ing choices—not only for comfort an of maintenance but also for compati good looks, and the serenity that is for a patient's room.

An adequate-sized room is made to larger by the generous windows an overhang, which is painted the



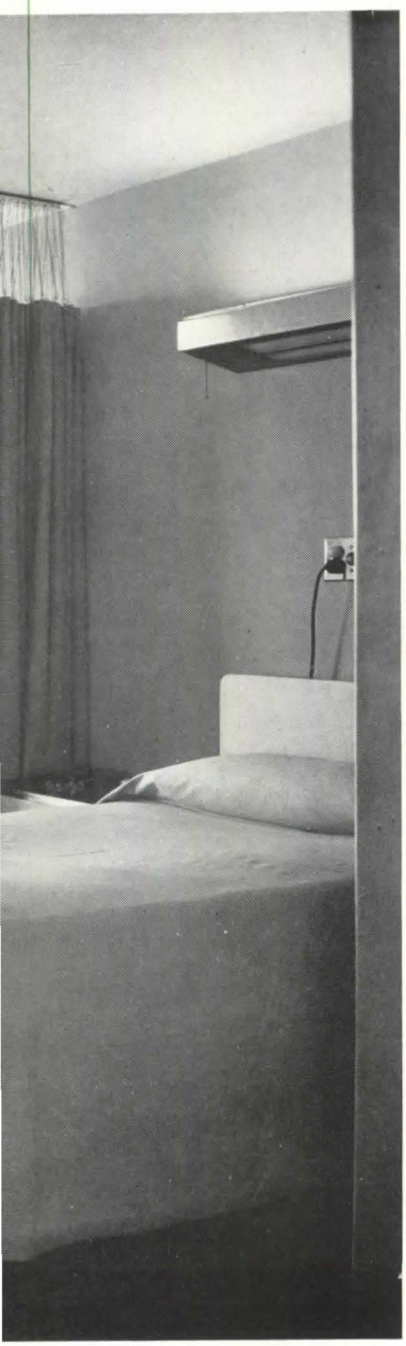
bed lamp

bed can be patient-operated

bedside cabinet

overbed table has lift-lid mirror and compartment

bed curtain, stainless steel rods



. The double-hung window is out of with the patients and accessible to the , even when the cubicle is enclosed. lighting is from the fluorescent bed s which direct light above for general ination and below for reading. On the opposite, there is a night light, op- l by a switch at the door. The ward-robe at entry has two identical closets, each containing hanging space, drawers for folding wear, shelves for blankets, and a compartment above for suitcases. Heating is by tempered air through the grille over the entry and by convector type radiator under the windows.

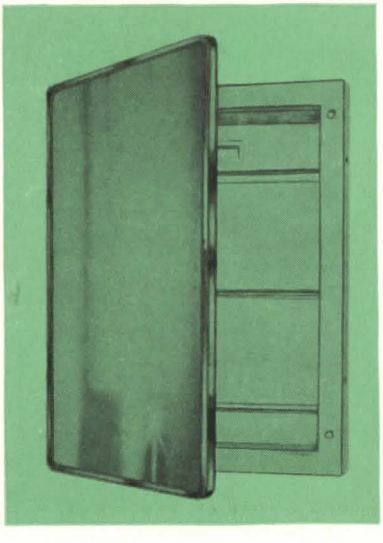
All walls are painted gray-green. One washable fabric which matches the wall color is used for curtains and bedspreads. Ceiling is white, floor is black asphalt tile, and wood is birch. The floor in the bathroom is green mat-finished ceramic tile. Window shades are linen. All metal is brushed chrome, aluminum, or stainless steel. *Room Photos: Roger Sturtevant*

patients' rooms

Mt. Zion Hospital—San Francisco, Calif

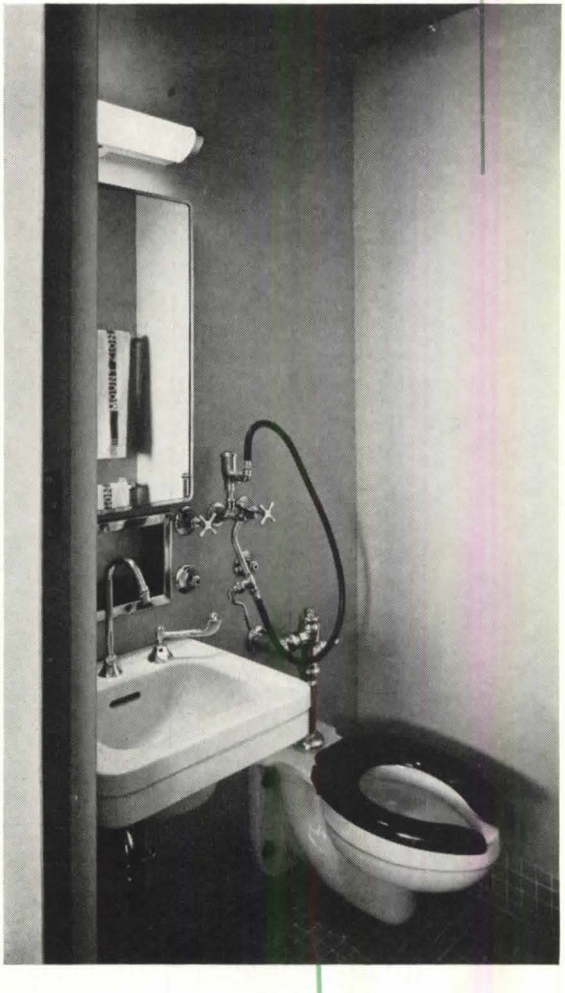
continued

bathroom lighting fixture



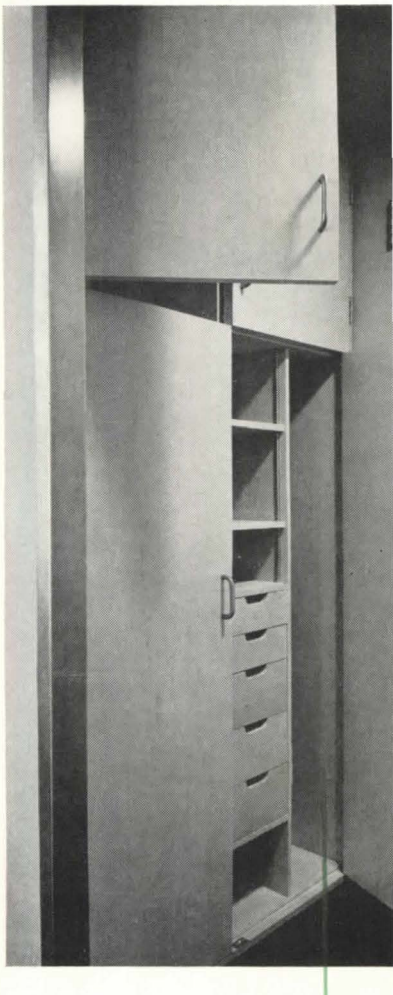
medicine cabinet

Keene's cement



mat-finish ceramic tile

offset



double wardrobe recessed at ent

The model room was a laboratory for the architects and hospital staff. After being submitted to rigorous tests, the following revisions were made:

Wardrobe was relocated to provide more clearance. In its original position opposite bathroom door, it was found to be in the way when beds and wheeled stretchers were moved in and out of the room. Room side of wardrobe was also found to be vulnerable when furniture was moved.

Offset hinges were put on corridor door for complete clearance when opened and bathroom wall was brought forward to form a recess for the door at wardrobe.

Bathroom door was placed on room side with three ordinary hinges. In original arrangement, door swung into bathroom because of the restricted space in entry. It was necessary to design a special door stop, installed in the jamb, in case patient was trapped in bath or fainted against door. Special door stop and double acting hinges were considered complicated and expensive.

Bathroom was reduced and enclosed with partitions only 3″ instead of 6″. This made possible a wider entry and more space between bed and bathroom when oxygen cabinet was used.

End of projecting wall was protecte
stainless-steel edge casing.

A cabinet for patients' personal
cines was substituted for the mirror.

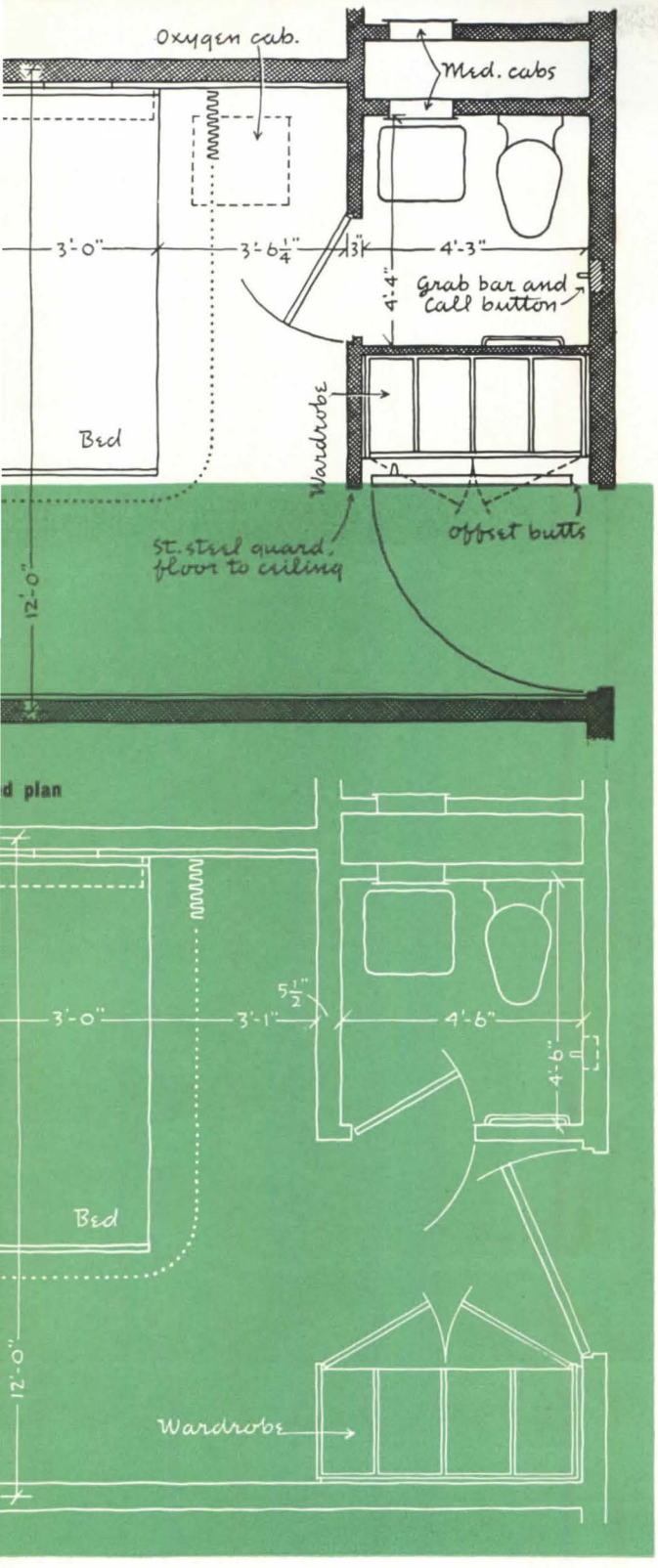
The water closet was raised 2″ h
than conventional height.

Towel rod was increased from 1
24″, so that towel and wet wash cloth
not be placed over each other.

A projecting member was added t
base along bed wall, to protect p
from beds and bedside tables.

A valance was considered desirab
cover window shade rollers.

An outlet for a wall receptacle



first plan

to wall opposite bed, because fluores-
ed lamps cast an unflattering pallor
used alone.
clear traction bars, bed lamps and
call plates were raised.
entral oxygen outlet was added to
r-bed plates.
n was painted a lighter green.
deck outside window was painted
green to minimize reflected glare.
give a sense of protection and to
t safer for window washing, flower
were added to the outer edge of
Drain for overhang could be com-
with drainage for flower boxes.

data

Bathroom Fixtures: Crane Co., 836 S. Michigan Ave., Chicago 5, Ill./ 301 Brannan St., San Francisco, Calif.

Bed: H-817-1-L-190/ patient-operated "All Purpose Bed"/ 35½" x 86"/ price range about $104.00 to $140.00 dependent on quantity and zone/ Simmons Co., 1 Park Ave., New York 16, N. Y./ Merchandise Mart Plaza, Chicago 54, Ill./ 353 Jones Ave., N. W., Atlanta 1, Ga./ 295 Bay St., San Francisco 11, Calif.

Bedspread: #902540/ "Sea Green"/ cotton, mohair, and rayon mixture/ 76" wide/ list: $5.80 per yd./ Goodall Fabrics Inc., 1355 Market St., San Francisco, Calif./ 525 Madison Ave., New York 22, N. Y.

Cabinet: (bathroom) #2050/ "Master Junior Model"/ 20¼" x 28¼"/ white enameled steel and stainless frame/ list: $35.80/ Miami Cabinet Division, The Philip Carey Mfg. Co., Middletown, Ohio.

Cabinet: (between beds) discontinued.

Cabinet: (built-in wardrobe) architect-designed/ birch doors, drawers, and adjustable shelves/ The Fink & Shindler Co., 552 Brannan St., San Francisco, Calif.

Cabinet Hardware: (built-in wardrobe) architect-designed/ E. M. Hundley Hardware Co., 662 Mission St., San Francisco, Calif.

Ceiling: plaster painted white.

Chair: #51C/ Alvar Aalto design/ birch frame with curly birch laminated seat and back/ list: $51.00/ Finsven, 870 Madison Ave., New York, N. Y.

Curtains: same fabric as bedspread.

Curtain Track and Hardware: Grant Pulley and Hardware Co., 31-85 Whitestone Pkwy., Flushing, N. Y.

Doors: flush/ birch plywood.

Door Hardware: (bathroom) "Mercury"/ dull chrome 5" backset design/ The Schlage Lock Co., 2201 Bayshore Blvd., San Francisco, Calif./ 350 Fifth Ave., New York, N. Y.

Door Hardware: (entrance-door hinge) LA-475/ special extra heavy 5" throw-back hinge/ Stanley Works, New Britain, Conn.

Door Hardware: (entrance-door pull) Glenn Johnson, Laporte, Ind.

Floor: (bathroom) ceramic tile/ pastel green/ mat-finish/ Olean Tile Co., Olean, N. Y.

Floor Covering: B 204/ "Grand Antique"/ "Kentile"/ black/ David E. Kennedy, 58 Second Ave., Brooklyn, N. Y.

Lighting Fixture: (bathroom) #7271/ 18½" long x 3" wide/ extension 4½"/ "Color Corrected" fluorescent/ 2 light-15W lamps/ "Alachrome" and white/ keyless/ list: $15.90/ Lightolier, 11 E. 36 St., New York, N. Y.

Lighting Fixture: (overbed lamp) architect-designed/ stainless-steel with 2-lamp fluorescent/ 4-way switch activated by pull chain/ for direct and indirect light/ California Electric Supply Co., 1585 Folsom St., San Francisco, Calif.

Lighting Fixture: (recessed) dull chrome/ exposed ring/ Sunbeam Inc., 777 E. 14 Pl., Los Angeles, Calif.

Paints and Finishers: W. P. Fuller & Co., 135 N. Los Angeles St., Los Angeles 53, Calif.

Shelf: birch/ Morris Cabinet & Fixture Co., San Francisco, Calif.

Table: (overbed) #614/ single pedestal/ 34" x 14"/ adjustable height from 28" to 43"/ laminated plastic top/ lift-lid mirror with vanity compartment under/ Hill-Rom Co., Inc., Batesville, Ind.

Walls: plaster painted gray-green (bathroom) Keene's cement painted gray-green.

Windows: (sash) Brannan St. Planing Mill, San Francisco, Calif.

Windows: (glass) W. P. Fuller & Co.

Window Screen: "KoolShade Sunscreen"/ bronze louvers set at 17° angle/ aluminum, wood, or "Quik-on" frame/ Ingersoll Products Div., Borg-Warner Corp., 321 Plymouth Ct., Chicago 4, Ill.

p/a interior design data

patients' rooms

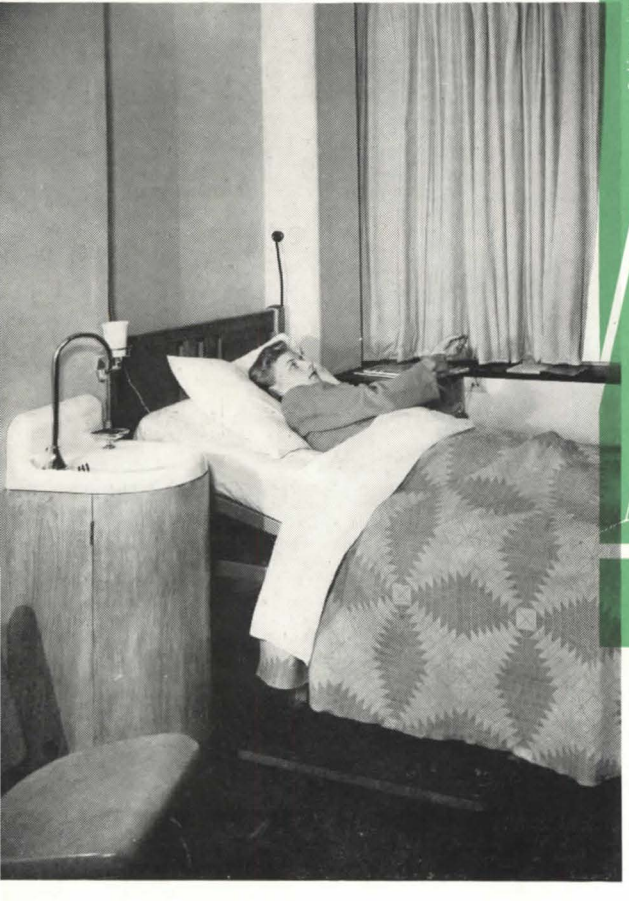
data

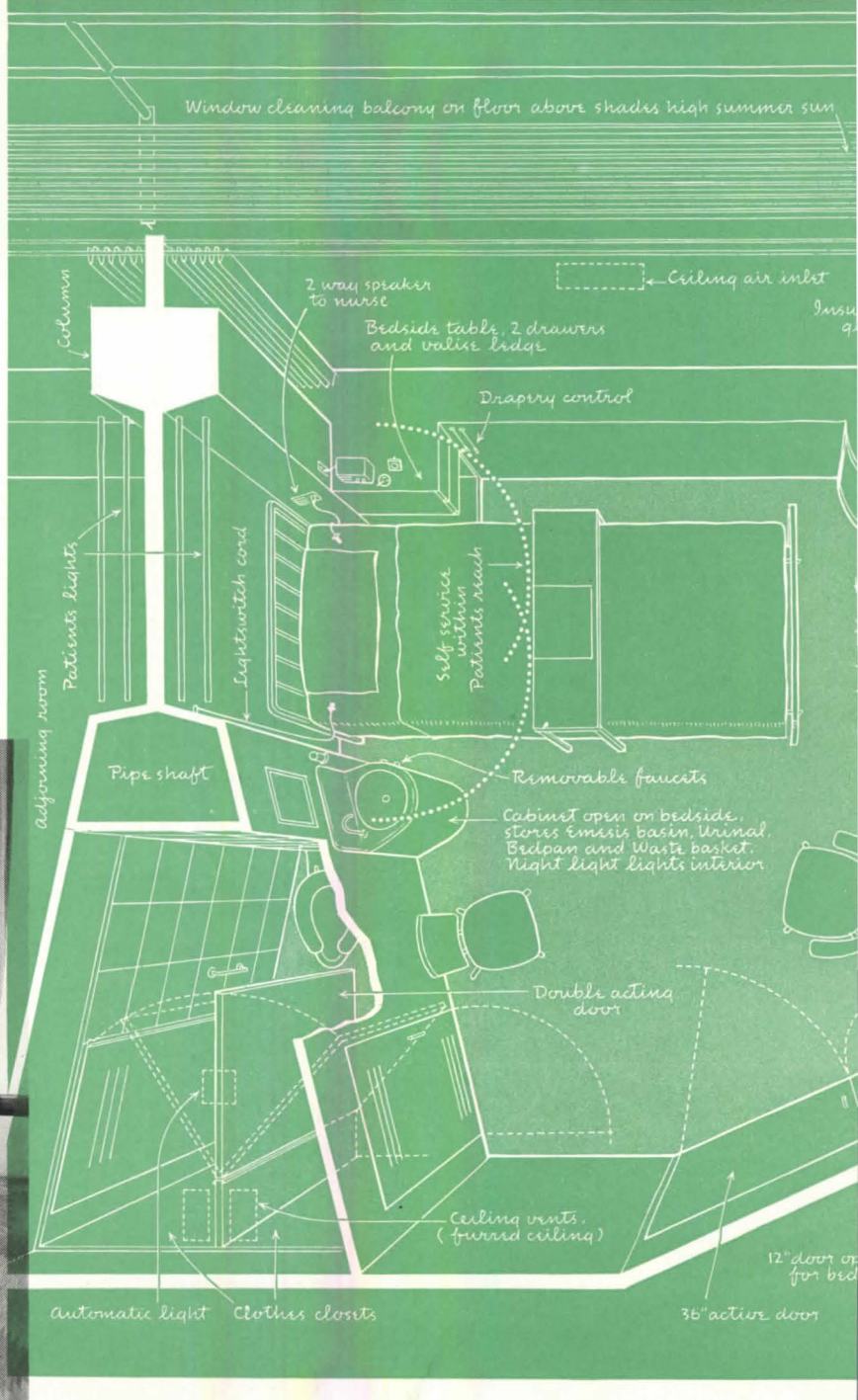
Cabinets: built-in/ architect-designed/ birch with slate top/ Boston Milling Co., Harrison Ave., Boston, Mass.

Floor Covering: asphalt tile/ C-752/ terra cotta/ Hood Rubber Co., Watertown 72, Mass.

Wall Covering: "Hawthorne"/ #6524/ 24" wide/ 100 sq. ft. per roll 12½ cents per sq. ft./ United Wallpaper Inc., Merchandise Mart, Chicago 54, Ill.

Windows: "Twindow"/ Pittsburgh Plate Glass Co., 632 Duquesne Way, Pittsburgh, Pa.





	model room—single bedroom
location	Peter Bent Brigham Hospital—Boston, Mass.
architects	Markus & Nocka
contractor	Chandler Construction Company

A pressing need for low-cost private and semi-private accommodations was the spur behind the development of this prototype for Peter Bent Brigham. The answer was to design the most minimal room with maximum self-help facilities. Concern is not so much with perfect colors, finishes, and furniture as with economy without sacrifice to comfort or a pleasant environment.

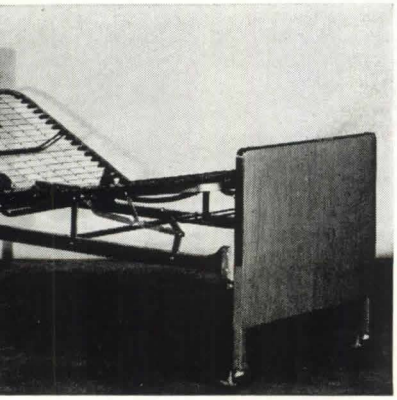
Walls are angled, corners utilized, and door swings carefully manipulated to achieve a room that totals only 112 square feet. The result compares favorably with the conventional standard which is 30% larger. To create a sense of spaciousness, the outside wall from bed level to ceiling and from wall to wall is a single sheet of insulating glass. A continuous catwalk of rectangular bars at each floor level shades the room from summer sun and simplifies window cleaning. The room is mechanically ventilated and all piping (electric, telephone, plumbing, oxygen, etc.) is housed in a single service core. Since walls are free of piping, these need be only 2½" thick—a further space saver. For a double room, a curtain takes the place of the non-structural partition.

Adjacent to the patient are lav drawers for personal belongings, and curtain controls, and a tw speaker to the nurse. Thus, self-h encouraged for ordinary routine and are freed for more crucial tasks. wide sill is slate, the floor is asphal and the wall opposite the bed is c with a washable patterned paper in g brown, and yellow. Other walls are p to match the gray-green background paper, floor is terra cotta, and curtai yellow. All furniture is hospital sel

Photos: Creative Photographer

	typical single bedroom
location	Crossett Hospital—Crossett, Ark.
architect	William Lescaze
consultants	Neergaard, Agnew & Craig
contractor	Peterson, Garbi & Joseph Inc.

room is typical of the 50-bed hospital is part of a rural health center. gh economically built, the rooms are appointed with comfortable beds of e variety, generous wardrobe space, verbed tables that boast multi uses. s are green and gray for south rooms, nd gray for north. Plans, exterior, public spaces were shown in July P/A. *Photo: R. Neil Rhodes*



data

Bed: H-817-1-L-190/ self-adjusting/ 35½" x 86"/ price range: about $104.00 to $140.00 dependent on quantity and zone/ Simmons Co., 1 Park Ave., New York 16, N. Y./ Merchandise Mart Plaza, Chicago 54, Ill./ 353 Jones Ave., N. W., Atlanta 1, Ga./ 295 Bay St., San Francisco 11, Calif.

Cabinet: (built-in wardrobe) architect-designed/ birch plywood natural finish/ Alto Mills Texarkana, Arkansas, Tex.

Chair: Simmons Co.

Floor Covering: "Kentile"/ David E. Kennedy, 58 Second Ave., Brooklyn, N. Y.

Lighting Fixture: (floor lamp) Faries Mfg. Co., 1037 E. Grand Ave., Decatur, Ill.

Lighting Fixture: (wall bracket) #964/ Peters Jr. Model R/ Luminous Equipment Co., 900 W. Van Buren St., Chicago 7, Ill.

Paints: "Wallhide"/ Pittsburgh Plate Glass Co., 632 Duquesne Way, Pittsburgh 22, Pa.

Table: (overbed) F-881-F/ "Formica" top/ 14½" x 48¼"/ adjustable height from 34⅝" to 52½"/ double acting center with mirror on underside/ list: $70.00 to $84.00 dependent on quantity and zone/ Simmons Co.

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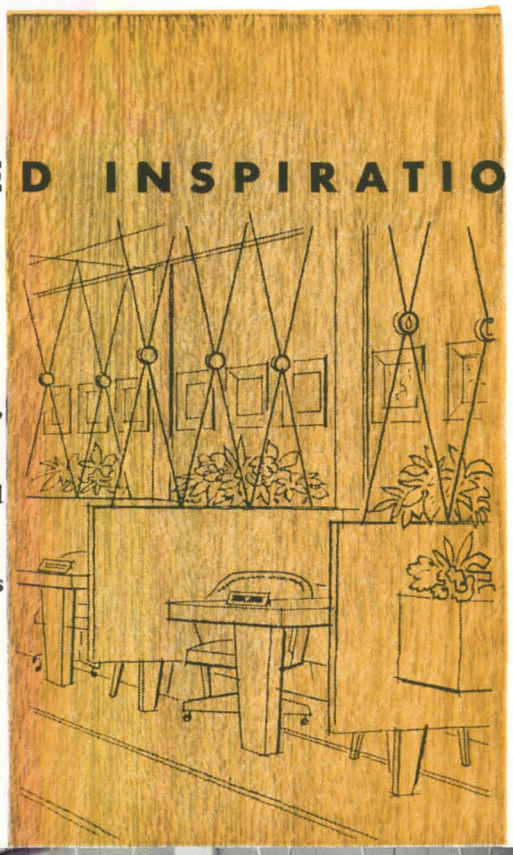

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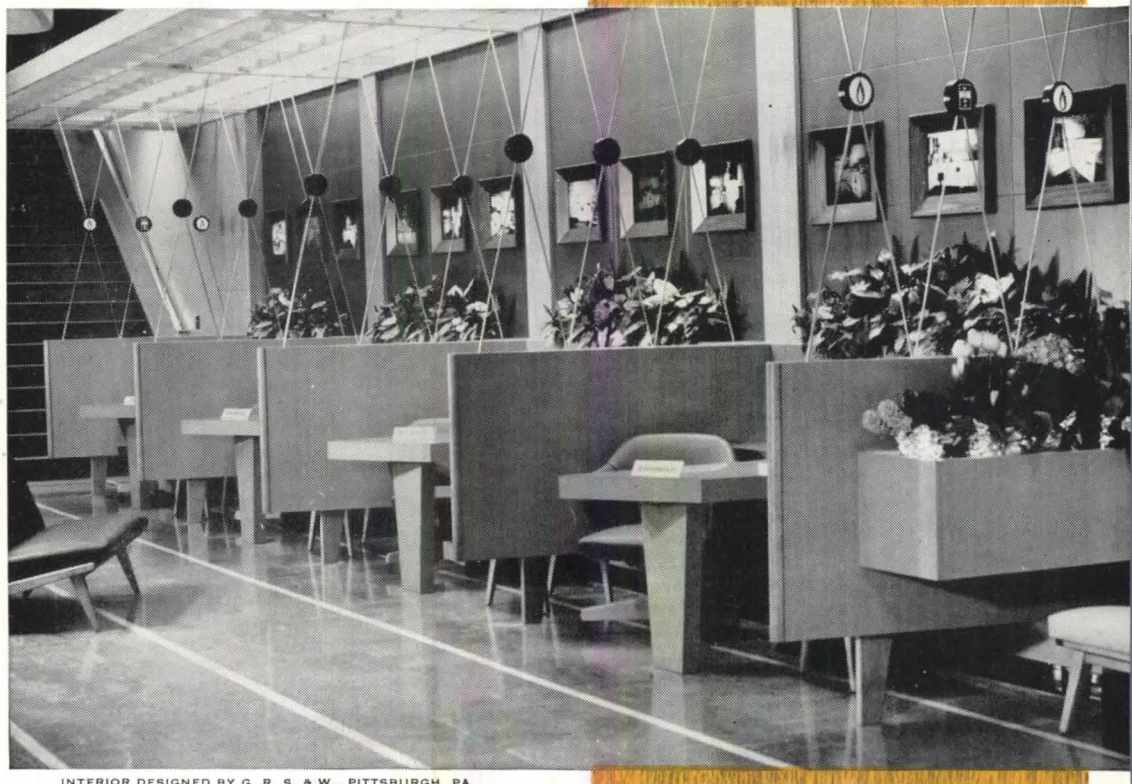

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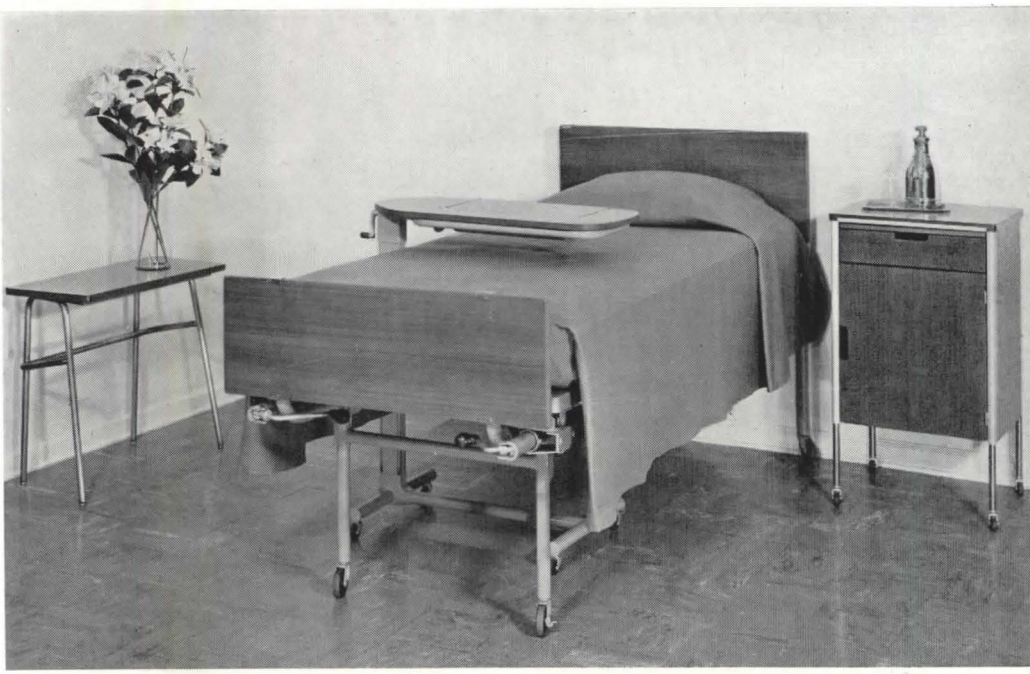
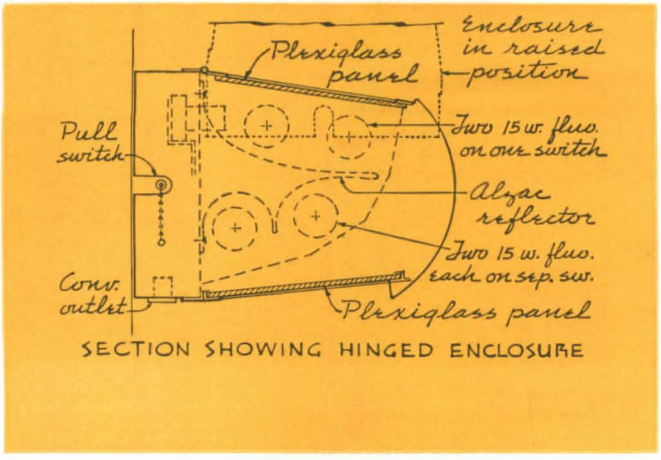
e Cabinet #20 NA has multi-purpose es and careful detailing typical of Rom Modern." Unit usable from front ack/ formed aluminum two-way drawer ift oak front/ swinging arm for use as ed table/ aluminum back panel and d towel rod/ front (not shown) has ak door to compartment with shelf and ded metal bottom/ legs aluminum/ and swing arm laminated plastic on **size:** 20" wide x 17" deep x 36" high/ **x. $53.00/ The Hill-Rom Co., Bates-Ind.**

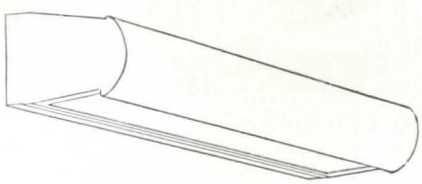


"Hill-Rom Modern" is a new and handsome answer to hospital furniture needs. The extensive line was designed by Harry Weese, architect and Fran J. Burst, head of Hill-Rom's design department. Included are a large variety of storage units, beds, tables, and chairs thoughtfully detailed to suit the function, maintenance, and visual requirements of hospital rooms. Furniture is a combination of anodized aluminum and "pencil stripe" American walnut or rift oak/ exposed edges banded with matching solid wood/ all tops laminated with cigarette-proof plastic/ **Shown: Bed:** #10/ 3' x 7'/ ball bearing casters/ **approx.: 85.00/ Bedside Cabinet:** #10 NA/ 20" wide x 17" deep x 36" high/ formed aluminum drawer/ slide-out shelf under/ cabinet with shelf, basin ring, and expanded metal bottom/ reversible door/ aluminum back panel with hinged towel rod/ **approx.: $62.00/ Flower Table:** #10/ also for use as writing table/ 14" x 30" x 27" high/ **approx.: $26.00/ Overbed Table:** #614/ 34" x 14" with adjustable height from 28" to 43"/ lift-lid center section with mirror on underside and compartment below/ **approx.: $47.00/ The Hill-Rom Co., Inc., Batesville, Ind. Prices for Hill-Rom hospital furniture are approximate retail for the Eastern district. These are subject to variation according to locality and quantity. Inquiries for exact prices are recommended.**

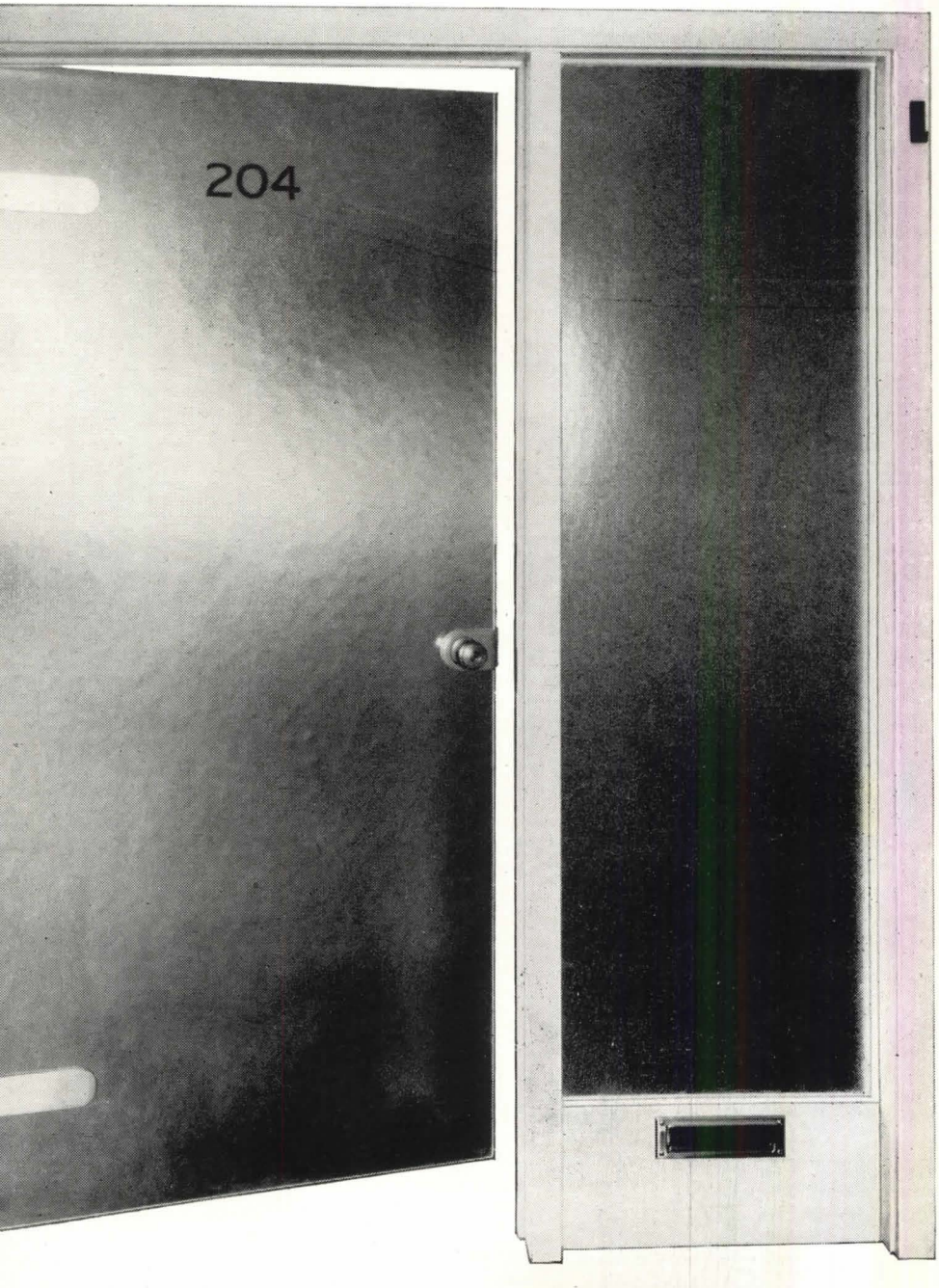


SECTION SHOWING HINGED ENCLOSURE

New Hospital Lighting Fixture #B27-786 specified for patients' rooms at Montefiore and L. I. Jewish Hospitals/ designed by H. M. Van Duzer and J. George Blumenthal, lighting engineers/ 5" x 19"/ 4—15w. fluorescent lamps/ "Alzac" reflector/ polymerized white metal with "Plexiglas" top and bottom panels hinged for access/ individual controls for direct and indirect light/ **net:** $30.00/ **Lightolier, 11 E. 36 St., New York, N. Y.**



Dramatically BEAUTIFUL DOORS



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for up-to-da interiors

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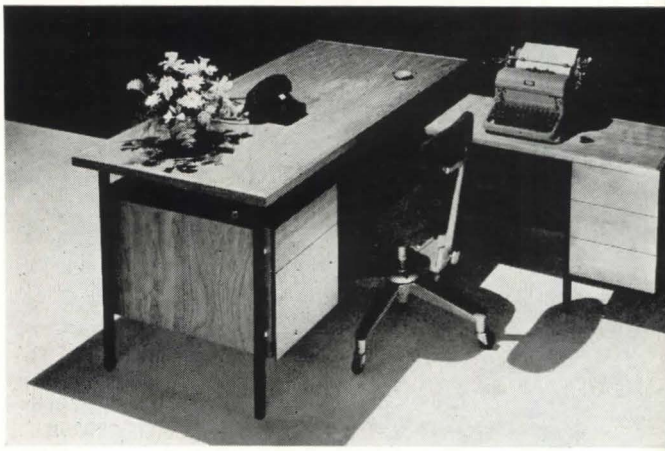
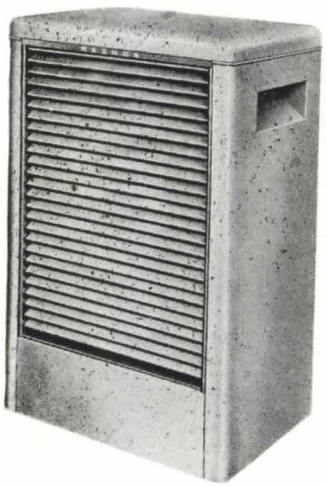
p/a interior design products

Executive Secretarial Desk: #501BM/ natural-finish birch with plastic laminated-birch top and satin-black metal frame/ **main top:** 60" x 28" x 29" high/ **typewriter top:** 36" x 17" x 24½" high/ **two-drawer pedestal:** top drawer with lock, one permanent partition and stationery dividers; lower drawer with "pendaflex" file/ **three-drawer pedestal:** top drawer with sliding pencil tray, center drawer with two removable partitions/ **list:** $585.00/ #501PM has gray linen plastic top and lists for $570.00/ a smaller secretarial desk lists for $488.50/ all models also available with walnut base/ **Posture Chair:** designed by Saarinen/ adjustable back and seat/ tilt control for forward or back position/ cast aluminum-swivel base/ **Knoll Associates.**



"Office Planned Furniture" is a new line designed by Knoll Planning Unit for executive, secretarial, and conference use. Included are a large and small executive desk, L-shaped secretarial desks, storage cabinets, a conference table, executive and swivel desk chairs. For flexibility, desks are left-or right-hand models, fitted with a choice of drawer and pedestal units, and are combinable with the storage cabinets in a number of ways. Wood is walnut or birch and tops are laminated with burn and stain-proof plastic. Frames are satin-black oxidized metal. On special order, desks are also available with solid-teakwood top, drawers in ebonized finish, and frame in chromium or stainless steel. **Shown: Conference Table:** #580B/ natural finish birch with metal frame/ 9' x 43" at center x 32" at ends x 29" high/ **list:** $720.00/ #580W has walnut top and is $780.00/ **Cabinet:** #541W/ walnut plywood and "Realwood" top/ 6' x 18" x 27½" high/ four sliding doors/ eight adjustable shelves/ leather pulls/ metal base/ **list:** $402.00/ also available in three- and four-foot lengths, in birch, and without frame for wall mounting at lower prices/ **Chair:** #71USB by Saarinen/ **Knoll Asociates, 575 Madison Ave., New York 22, N. Y.**



Sash Light: shatterproof "Resolite"/ translucent flat-plastic sheets in standard and special sizes/ 70% polyester resins reinforced with 30% glass fibers. (Owens-Corning Fiberglas mat) said to resist severe vibration, concussion, radiant heat, and other causes of glass pane breakage/ also unaffected by extreme weather, fumes, acids, or alkalies/ for glazing partitions sizes up to 42" x 96"/ sheets or lights cut to specified size at factory/ 8 standard colors/ installed as glass/ **Resolite Corp., Zelineople, Pa.**

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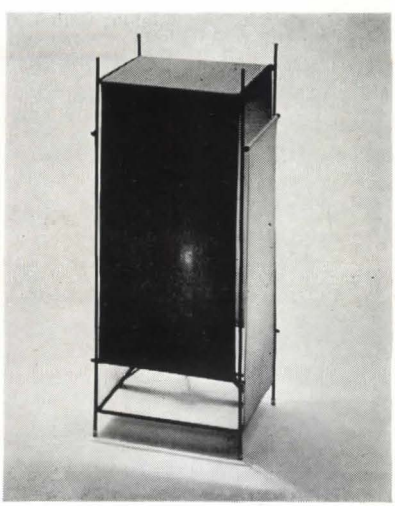
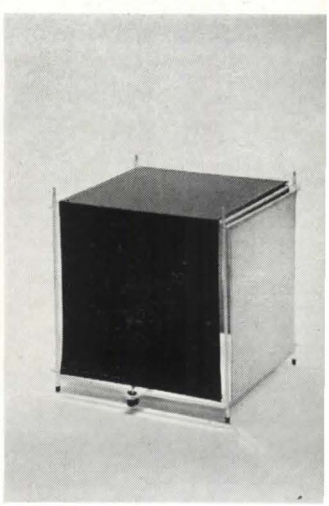
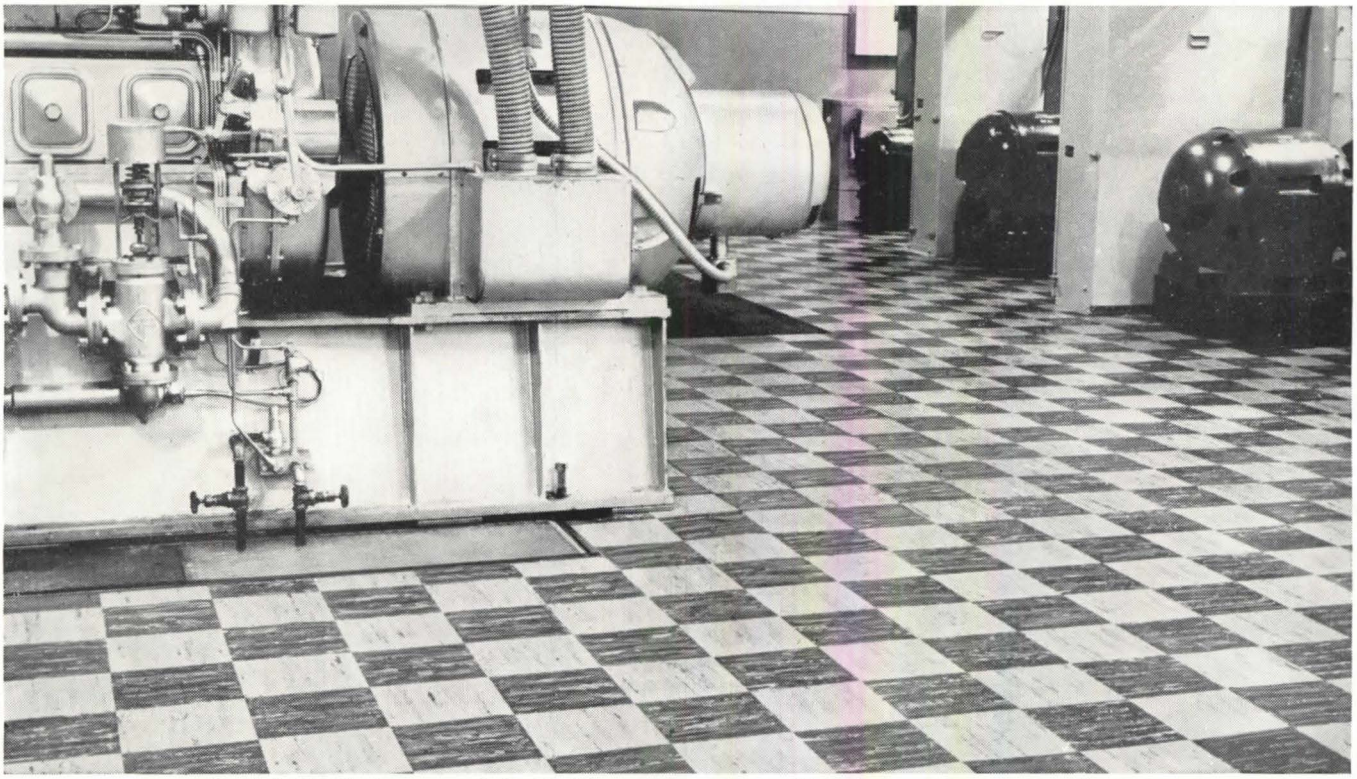
ps from a new group of six de-
ed by George Nelson for the
vard Miller Company, Zeeland,
h. Lastex stretched over a wire
ne is removable for washing.
nes are welded and rubber-
ed. **Shown: #H953** (hexagon)
wide x 19½" long x 14" high
-all/ black frame with white-and-
lastex shades or white frame
white-and-green/ **approx. re-**
$21.95/ **#H955** (rectangle)
" x 8½" x 22" high/ black
ne with blue-and-white lastex
els or white frame with red-
-white/ can also be horizontally
g/ **approx. retail:** $19.95/ **#H-**
/12½" cube/ black frame with
white shade or white frame with
-and-white/ can be wall hung/
rox. retail: $19.95/ **National**
ributor: Richards Morgenthau,
Fifth Ave., New York, N. Y.







Special Kentile (greaseproof) is ideal for power rooms, machine shops, restaurants . . . wherever greases, oils, alcohol, alkalis, most acid solutions, or extra heavy traffic present a maintenance problem.

The practical and time-saving solution to any flooring problem is a call to the local Kentile Flooring Contractor

THE OBVIOUS advantages of a certain kind of flooring in a certain installation are often outweighed by disadvantages that can be foreseen only by the expert. To keep posted on the great number of products and materials available today would be so time-consuming that busy specifiers everywhere are learning to count on specialists for accurate and up-to-date information. Such a man is the Kentile Flooring Contractor. Call on him as often as you wish... you'll find his extensive background makes him a valuable addition to your "staff."

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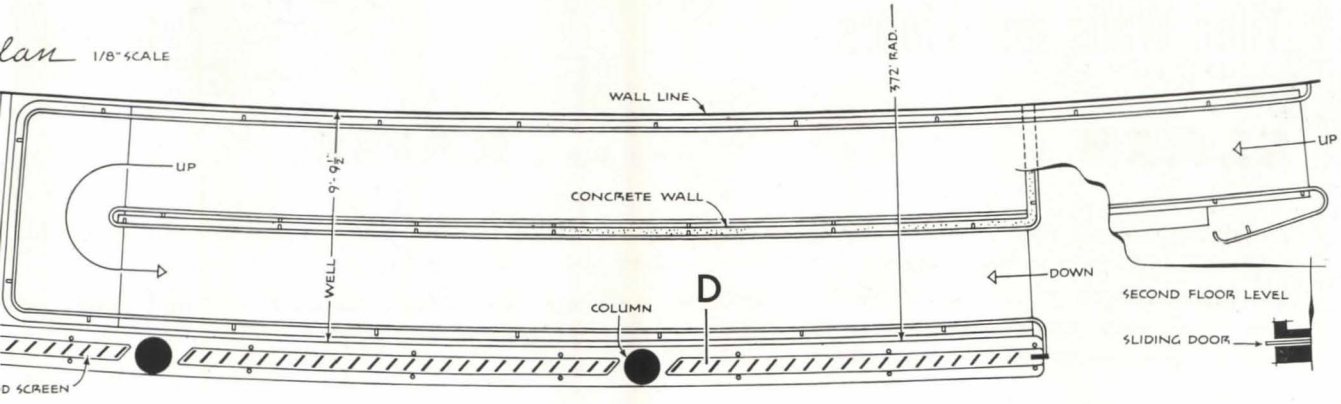
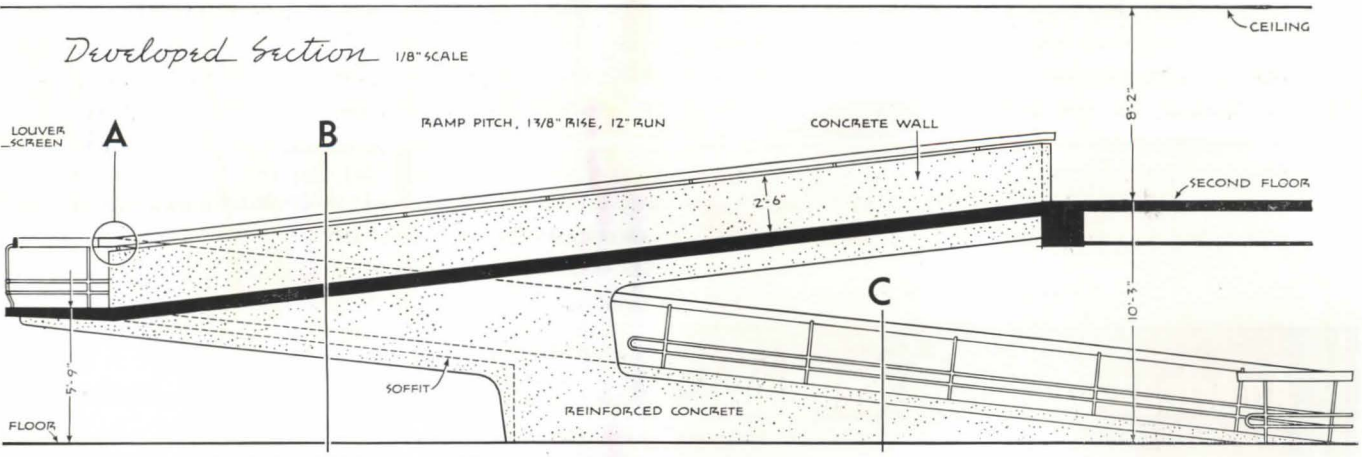
DAMORA





ADUATE COMMONS PROJECT, HARVARD UNIVERSITY, Cambridge, Mass.

itects Collaborative, Architects; Brown, Lawford & Forbes, Technical Assistants

A Useful Reference When Planning Industrial Construction

FREE...

New Booklet Shows How Tiled Walls and Floors

SLASH *Maintenance* .... RAISE *Morale*

American-Olean's new Booklet 300 has been prepared especially to help architects and their industrial clients plan tile installations that pay their way many times over in lower maintenance costs and improved employee morale.

Many full color photographs of actual installations show you industrial washrooms, locker rooms, dispensaries, kitchens and cafeterias that can be cleaned as easily as a china plate ... with walls and floors of ceramic tile that will outlast the building ... and never cost a cent for "touching up".

Accurate color illustrations of wall and floor tile combinations suitable for industrial and institutional use are pictured, with complete specifications.

You'll want a copy of this practical, useful American-Olean Booklet. Copies have already been mailed to most architects. If you have not received yours, or need additional copies, we will be glad to send them to you.

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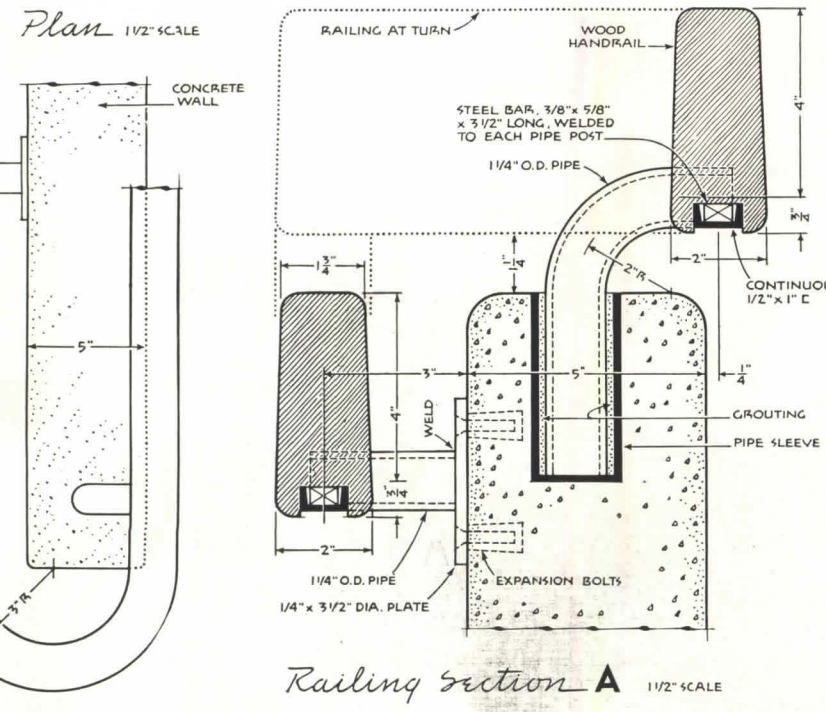
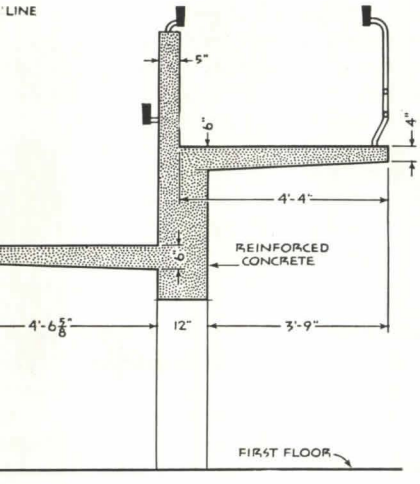
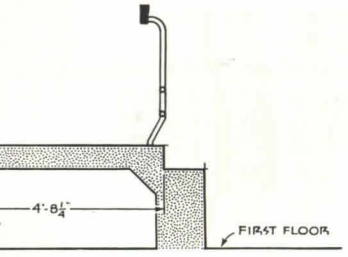


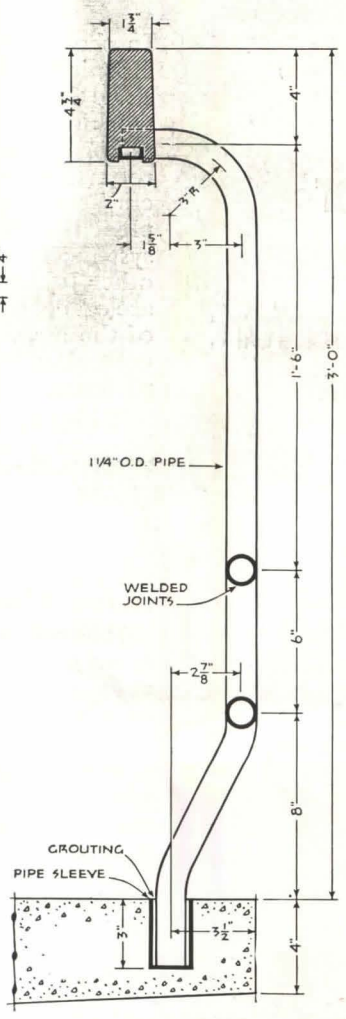
Railing section A 1½"SCALE



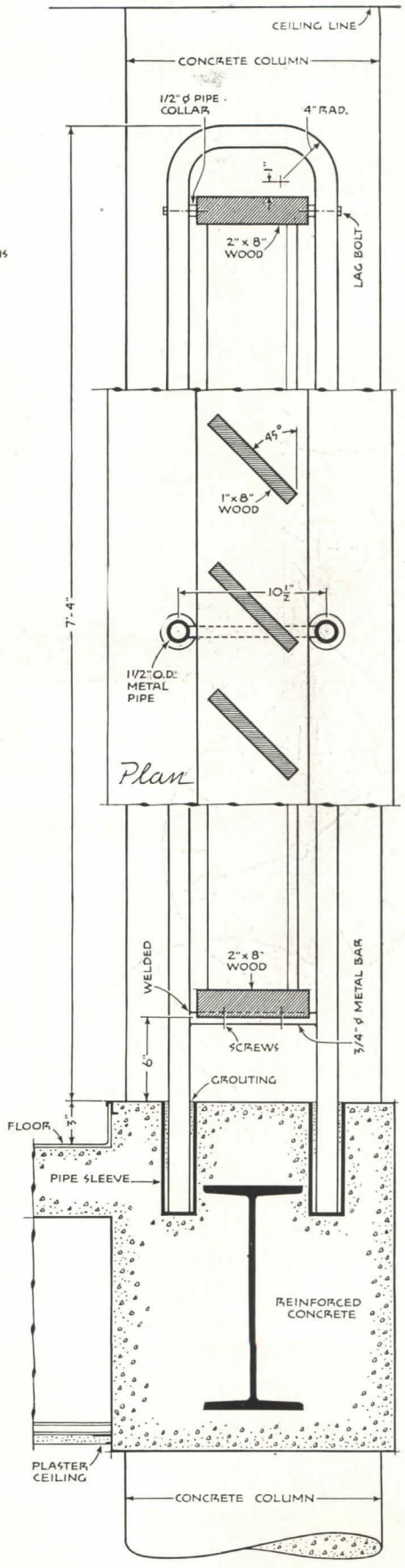
ion B 1/4"SCALE



ion C 1/4"SCALE



Outside Railing 1½"SCALE



Screen section D 1" SCALE

UATE COMMONS PROJECT, HARVARD UNIVERSITY, Cambridge, Mass.

ects Collaborative, Architects; Brown, Lawford & Forbes, Technical Assistants

Good Samaritan Hospital, Los Angeles, Calif.
Lunden, Hayward & O'Connor, architects;
Ralph E. Phillips, mechanical engineer;
Howe Bros., heating contractors; Los Angeles

On 24-hour duty

IN HOSPITALS

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AUTOMATIC TEMPERATURE CONTROL

for labor-saving comfort and safety

In the thoroughly up-to-date Good Samaritan Hospital in Los Angeles, 70 Johnson *Individual Room Control* Thermostats are on "24-hour duty," working around-the-clock to maintain precisely the proper temperatures for every purpose. The room thermostats operate Johnson mixing dampers at the double "tempered and warm air" plenum chambers of the 15 central-fan heating systems in the building. "Behind the scenes," other Johnson instruments, valves and dampers are on continuous duty, so that the temperature of the air, for heating and for ventilation, are controlled at exactly the right levels in those plenums.

With Johnson Automatic Control in command hospital personnel are relieved of such oft recurring chores as operating radiator valves and checking room temperatures. Assured of comfort and safety for patients, the staff is free to devote more time to professional duties . . . and with added energy—thanks to Johnson Temperature and Humidity Control.

Johnson Control meets the most exacting safety requirements. *Pneumatically* operated, it is always safe, even in the presence of explosive anesthetic gases. Also, Johnson Humidity Control guards against the dangers of static electricity.

Whether the problem involves control of temperatures and humidities in a single operating room or an entire hospital, call a Johnson engineer from a nearby Branch Office. His advice is yours for the asking. JOHNSON SERVICE COMPANY, Milwaukee 2, Wisconsin. Direct Branch Offices in Principal Cities.

JOHNSON *Automatic Temperature and Air Conditioning* CONTROL

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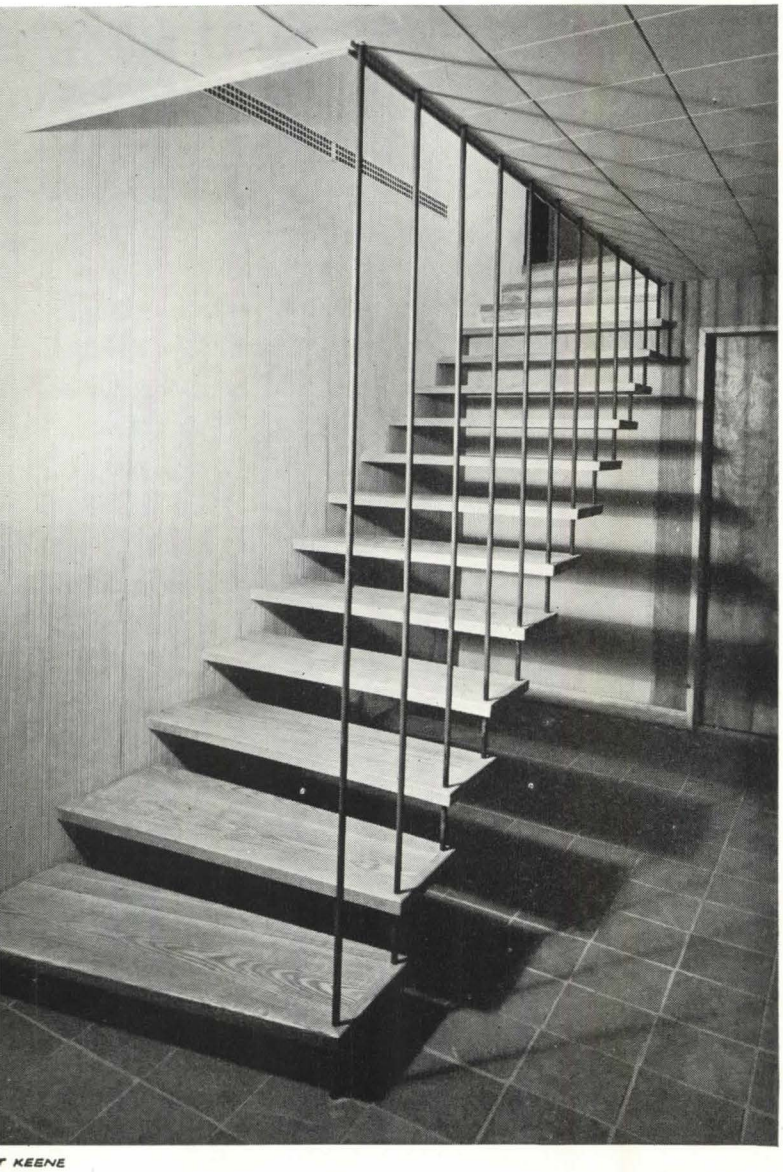
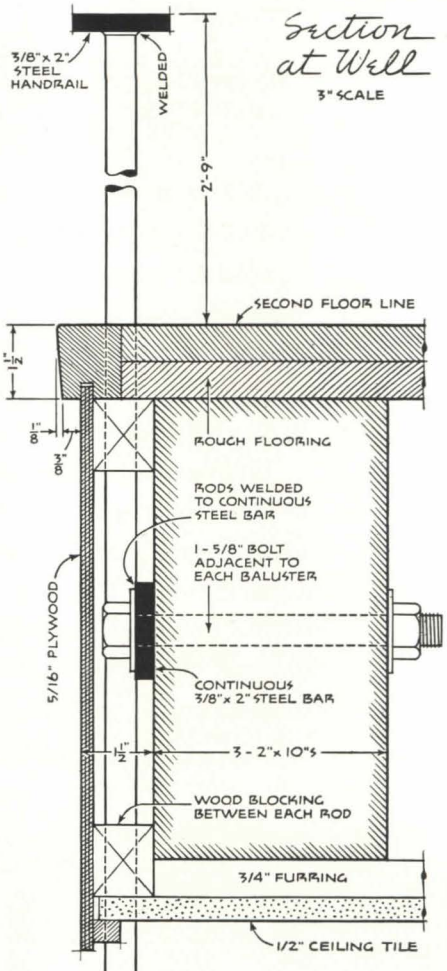
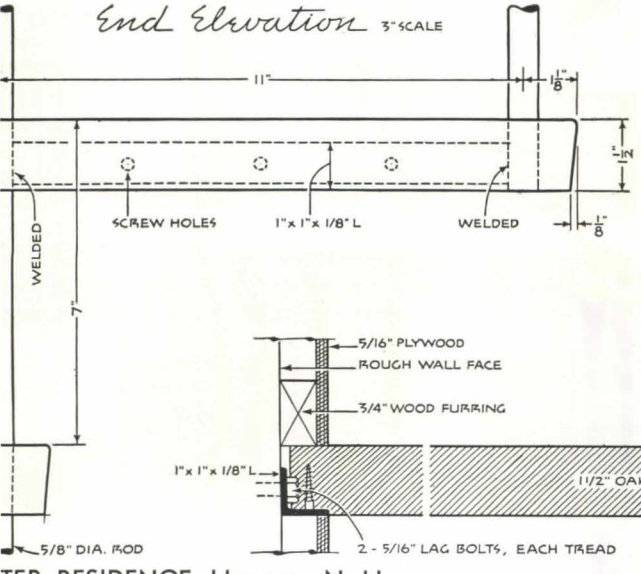
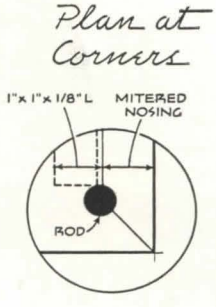


T KEENE







TER RESIDENCE, Hanover, N. H.

& M. K. Hunter, Architects

On the beam for Sunbeam

When a company begins a long range building program in critical times there's need for greater care in selecting materials and services. That was the situation facing the Sunbeam Corporation, their architects Olsen and Urbain and the contractors Campbell-Lowrie-Lautermilch, Inc.

Where could they be sure of steel products of engineered excellence? Where could they be sure of a follow thru detailing service? Could all this be found at ONE source to save time . . . increase efficiency? Such a challenge led to us here at Ceco for we had been delivering that kind of service successfully day after day . . . year in year out.

Design called for three types of windows. Architectural Projected, Commercial Projected and Horizontally Pivoted Steel Windows met the need. Precision Engineered, they assure the tightest weather seal ever . . . can't warp, rot or swell. Maintenance cost is lower too. And since muntins are slender they let in more light than any other type of window opening and allow 100% controlled ventilation so important in industrial buildings.

Because doors had to be fire resistive,

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Olsen & Urbain, Architects — Campbell-Lowrie-Lautermilch Inc., Contractors

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Ceco Industrial Doors were specified. Rugged and serviceable, they're made to last the life of a building. On the structural side Ceco supplied reinforcing steel and prepared erection details...on windows and doors Ceco performed the erection work.

Here from ONE source, the architect and contractor found a broad service that could be tailored to fit the job . . . a specific service featured by Ceco. Today more and more architects, engineers and contractors depend more and more on Ceco in solving building problems.

In construction products

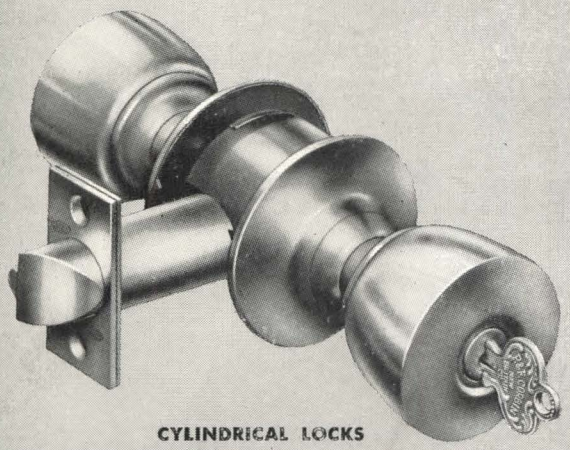
CECO ENGINEERING

makes the big difference

Offices, warehouses and fabricating plants in principal cities

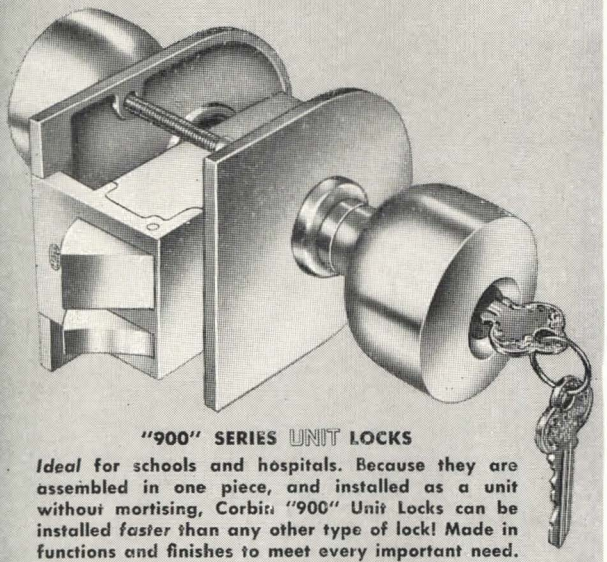
PRODUCTS LIKE THESE

...make CORBIN the world's



CYLINDRICAL LOCKS

For every type of construction. Heavy-Duty, with extra-quality features, including ⅝ inch throw and the famous smooth-working, long-lasting roll-back Corbin latch principle. 100% reversible. Made in 13 most-used functions.



"900" SERIES UNIT LOCKS

Ideal for schools and hospitals. Because they are assembled in one piece, and installed as a unit without mortising, Corbin "900" Unit Locks can be installed *faster* than any other type of lock! Made in functions and finishes to meet every important need.

MORTISE LOCKS

Made in a variety of functions and weights for every requirement. Can be masted-keyed with other Corbin cylinder locks.

For convenience . . . for unsurpassed economy an satisfaction for your clients, it pays to base you specifications on the *complete* line of Corbin lock and builders' hardware. Take locks, for instance Because Corbin manufactures *every major typ of lock,* you are never limited in choice. You ca switch from type to type *as requirements var* Yet all locks can be master-keyed as needed an harmonious in design. No need for costly over specification or inadequate under-specificatio here! In addition, Corbin offers *all* the hardwar to equip a building . . . plus experienced repre sentatives whose up-to-date knowledge can be o invaluable help to you.

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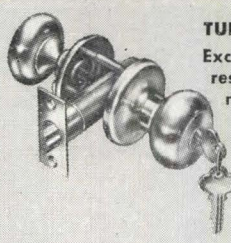
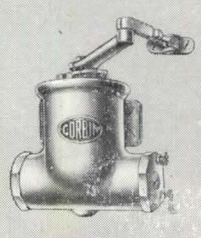


TUBULAR LOCKS

Excellent for use in residences and apartments. Corbin time-tested pin tumbler security at low cost. Functions for every residential door.



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... and MEN LIKE THESE!

most widely used builders' hardware

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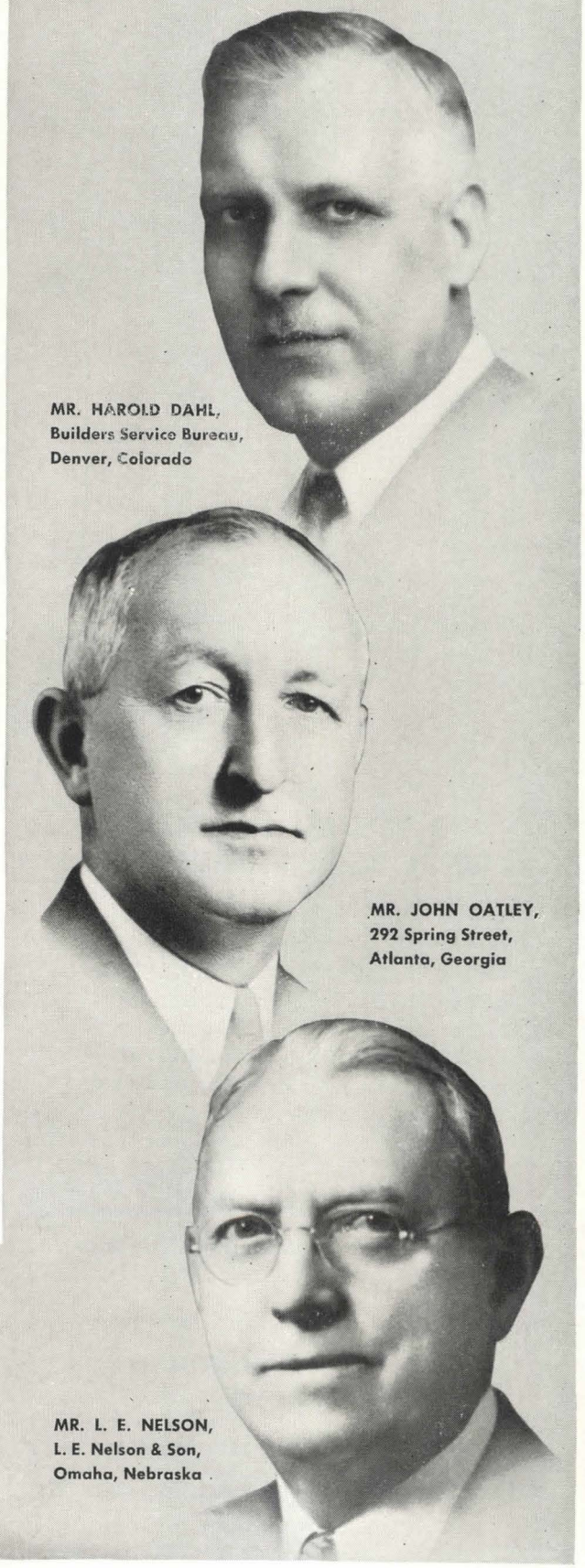

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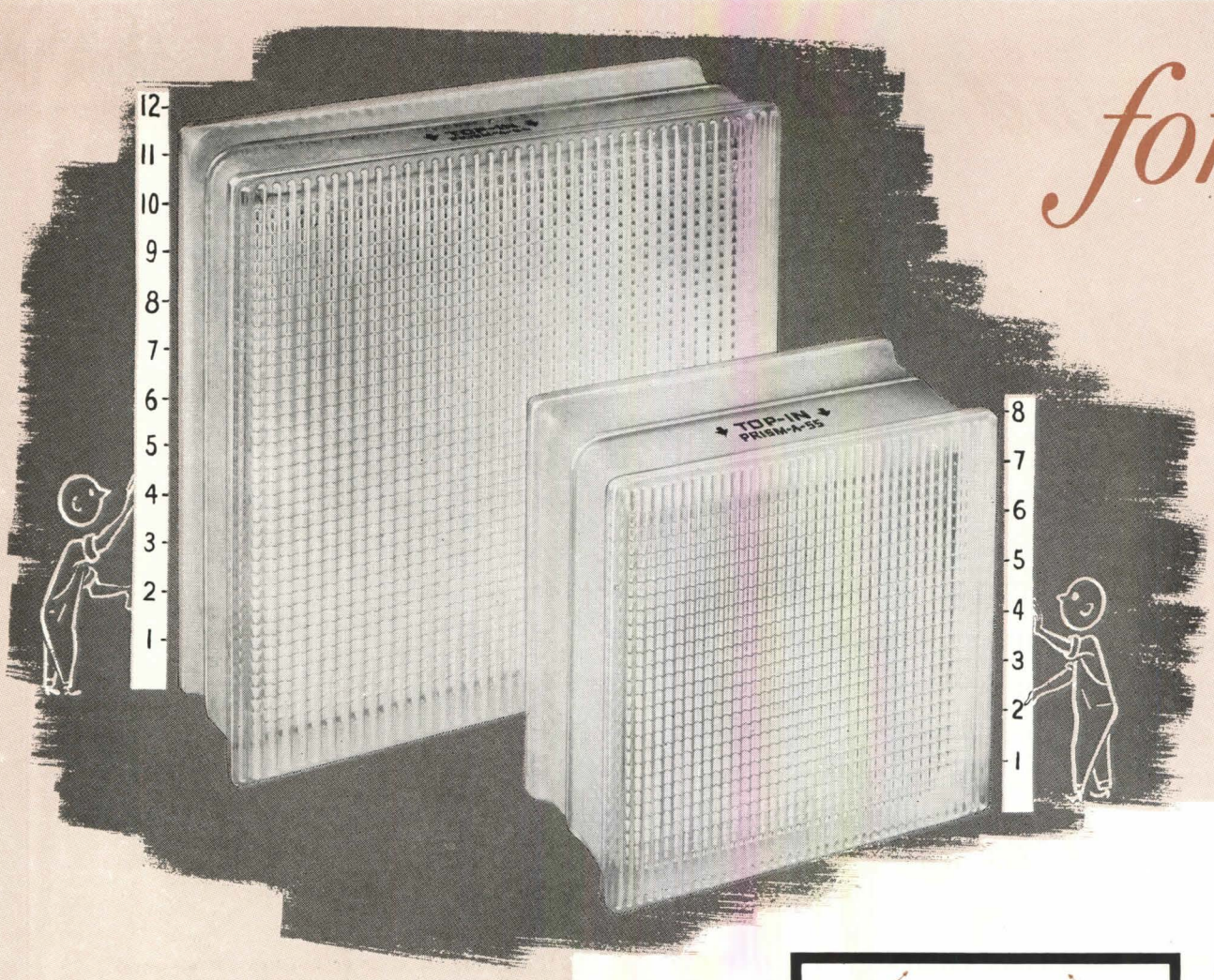

A NEW DESIGN SCALE FOR PC GLASS BLOCK PANELS

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- ★ Improved Daylighting
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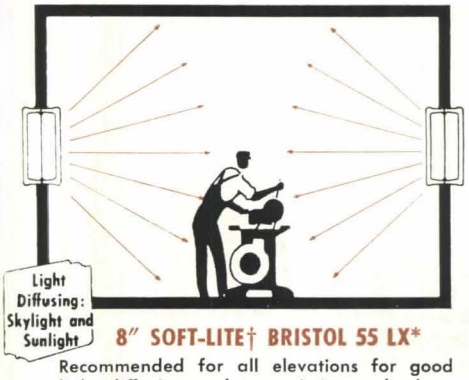
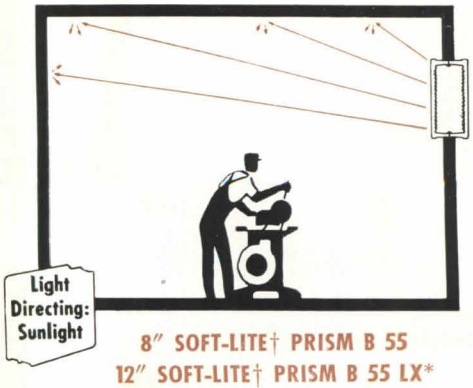
- ★ Fewer Replacements



8″ SOFT-LITE† BRISTOL 55 LX*

Recommended for all elevations for good light diffusion and transmission and where good thermal insulation is important.



8″ SOFT-LITE† PRISM B 55
12″ SOFT-LITE† PRISM B 55 LX*

Recommended for sun-elevations where good daylighting and glare control for critical seeing tasks are important.

new design flexibility-

PC 8″ and 12″ Functional Glass Blocks now permit wider variety of applications and design

● To give architects greater design flexibility, *three* 12-inch Functional Glass Blocks, pioneered by Pittsburgh Corning, were recently added to the 8-inch line. This permits the modern building to incorporate either 8- or 12-inch patterns, or both; or it may include these two sizes intermingled to produce interesting panel designs.

The diagrams on these pages indicate correct application of both 8″ and 12″ sizes for each elevation. PC Glass Blocks are available in both light-directing and light-diffusing patterns.

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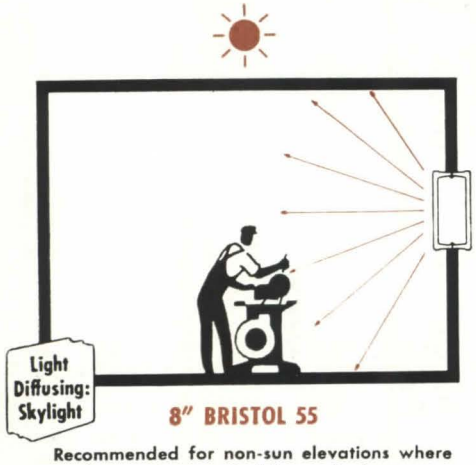
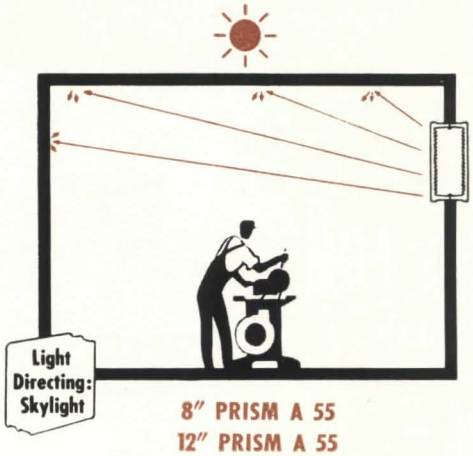
PC Glass Blocks distributed by Pittsburgh Plate Glass Company; W. P. Fuller & Co. on the Pacific Coast; Hobbs Glass Ltd. in Canada; and by leading distributors of building materials everywhere.

Select the patterns best suited for your application



8″ BRISTOL 55

Recommended for non-sun elevations where moderate glare control is required.



8″ PRISM A 55
12″ PRISM A 55

Recommended for non-sun elevations where good daylighting and moderate glare control for critical seeing tasks are important.

8″ SOFT-LITE† ESSEX B 55
12″ SOFT-LITE† ESSEX B 55 LX*

Recommended for sun elevations where good glare control is required.

*uble cavity block with fibrous glass screen insert. †T. M. Reg. Applied for.

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Without obligation, please send me complete data on the full line of Pittsburgh Corning Functional Glass Blocks.

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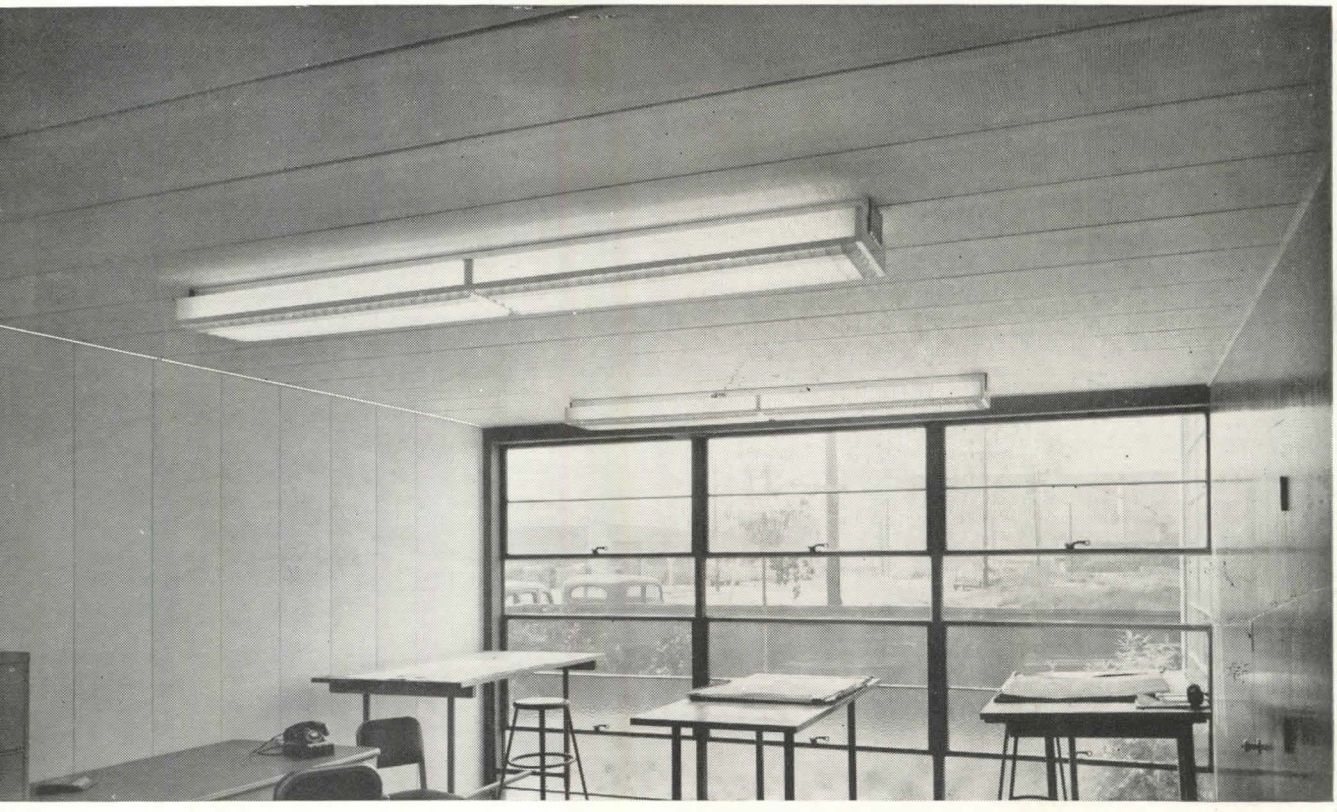

Combination Acoustical-Structural Ceiling of Fenestra "AD" Panels in Architectural Office—Walter R. Steyer Office Bldg., Los Angeles, California. The side wall at left is Fenestra "C" Panels. *Architect-Contractor:* Walter R. Steyer.

Fenestra gives you quiet without a cover charge

No bills for covering this ceiling with special material. Here, the silencer *is* the ceiling . . . and the structural subfloor or roof above.

Fenestra* Acoustical "AD" Metal Building Panels lock together to form a solid structural part of the building—saving building time, labor, materials and money.

An "AD" Panel is a strong metal box beam with a flat, smooth surface top and bottom and open space between. The top surface forms the subfloor or roof deck. The perforated bottom surface forms the ceiling. In the open space between, is glass fibre insulation.

This new kind of an acoustical ceiling is practically indestructible. You can wash it or paint it without hurting its acoustical efficiency. It is noncombustible. It is there, good looking and efficient, for the life of your building.

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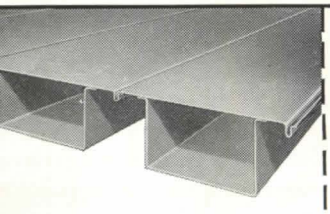
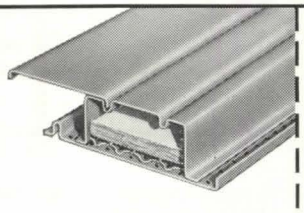
Fenestra METAL BUILDING PANELS

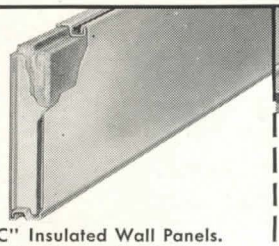
. . . engineered to cut the waste out of building



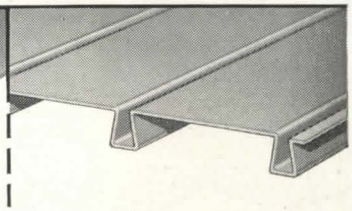
"D" Panels for floors, roofs, ceilings. Standard width 16". Depth 1½" to 7½".



Acoustical "AD" Panels for ceiling-silencer-roof. Width 16". Depth up to 7½".



"C" Insulated Wall Panels. Standard width 16". The depth is 3".



Holorib Roof Deck. 18" wide—lengths up to 24'. Surface can be plain or acoustical.

pa REVIEWS

books received

Modern Furnishings for the Home. William J. Hennessey, Reinhold Pub Corp., 330 W. 42 St., New York, N. Y., 1952, 296 pp., illus., $10

Building Trades Blueprint Reading and Sketching. Basic course. Delma lishers Inc., Albany, N. Y., 1952. 193 pp., illus., $3.25

Bauen Mit Glas. Otto Volckers. Julius Hoffman Verlag, Stuttgart, Ge U. S. Distributors: Architectural Book Publishing Co., Inc., 112 W. 46 St. York 19, N. Y. 184 pp., illus., $7.50

Fire Tests of Steel Columns Protected With Siliceous Aggregate Co U. S. Department of Commerce. Building Materials and Structures Repo Washington 25, D. C., 1951. 12 pp., 15 cents

Plastics in Building. Joseph B. Singer. The Architectural Press, 9-13 Annes Gate, S.W. 1, London, England, 1952, 192 pp., illus. 18s

Sunset Patio Book. Lane Publishing Co., Menlo Park, Calif., 1952, 17 illus. $2

Impressions Respecting New Orleans. Benjamin Henry Boneval Latrobe. umbia University Press, 2960 Broadway, New York, N.Y., 1951, 196 pp., $8.75

Louis Sullivan. Hugh Morrison, Peter Smith, 321 Fifth Ave., New York, 391 pp., illus., $6

Architects' Year Book 4. Jane B. Drew, Trevor Dannatt, Editors; E. M Fry, Herbert Read, Ove N. Arup, Editorial Board, Paul Elek, 10 Bell London, N. W. 3, England, 1952, 296 pp., illus., $11

cycles of the slums

Housing Market Behavior in a Declining Area: Long-Term Chang Inventory and Utilization of Housing on New York's Lower East Side *Grebler. Columbia University Press, 2960 Broadway, 1952. 265 pp.*

The Lower East Side of Manhattan was the scene, during the last q of the 19th Century, of the most intensive settlement of immigrants i single part of this country. The tens of thousands of families from so and eastern Europe, exploited by sweat-shop employers and ruthless lords alike, found themselves crowded into a single section of the gr metropolis under working and living conditions which soon becam torious for everything that we now think of as characteristic of the or the substandard area. By the early part of the 20th Century, technical progress in building design had advanced concurrently w aroused awareness of the social dangers implied in having so la mass of our fellow citizens working and living under such unfav conditions, the Lower East Side became the focal point of the ma vestigations into, and experiments with, the improvement of slum by means of various approaches—the settlement house, school and ground programs, enactment and enforcement of fire and health regul applicable to factories and dwellings, and finally, the "housing move in all of its manifold aspects.

Subsequently, other slum areas in New York, as well as elsewh the country, came in for similar but somewhat later attention: by the r of the 1930's and with the coming of the New Deal, the "better h movement" was fully on the march and many changes—most of the the better—began to appear in slum areas everywhere. But the East Side had a head start on them all and by now, with man projects adorning it, the remaining but sizable portion of unredeve area of the Lower East Side has passed through another phase—t the residential area which is declining through a movement of popu away from it. This is due, in part, to the cutting off of immigration ing the quota laws of 1924; and, in part, to the fact that second an generations of the original slum inhabitants have become prospero moved elsewhere. At the present, the Lower East Side is by no me congested or as substandard as it was and much less of a problen than other slum neighborhoods.

But the very fact that an area of this sort should have gone t two complete cycles within the recent past makes it an appropriate

esearch, whether economic or social. Dr. Grebler's book is, therefore, ost valuable and timely one for every student of city development in eral, and of housing in particular, who wishes to get a comprehensive ire of the changes that have taken place in such an area. Written ely from the economic point of view, with somewhat less emphasis on social and technical aspects, Dr. Grebler's book is, nonetheless, as ul for the questions it raises for further investigation as for those it vers with facts and figures. ROBERT C. WEINBERG

rniture design

Herman Miller Collection—new edition. *The Herman Miller Furniture pany, Zeeland, Mich., 1952. 9" x 11¼". 116 pp., 200 photographs diagrams. $5*

iture catalogs are becoming ever more elegant. In fact, *catalog* in aditional sense is no longer the word for it! We have here the luce of one manufacturer, file-sized and A.I.A. numbered, but the nan Miller Collection is called a book, cared for as a book, and *is* mportant book for anyone interested in contemporary furniture design. architects and designers specifying from the line, it is a handy or- zation of the pertinent facts and figures. As for prices, these are d in a separate brochure correlated with this volume.

eorge Nelson and Charles Eames are associated not only in the design he chairs, tables, and casegoods for the company but with the show- ns that display them and the ads and books that tell about them. Herman Miller Company is not one to underestimate the power of itect-designers. By giving them jurisdiction over display, presentation, (in a sense) even selling, they have reaped high standards and plete design integration. This handsome volume speaks well for the cy. It is a fine book to look at and a pleasure to consult for facts.

he *Herman Miller Collection* is divided into sections called Storage, ping, Dining, Leisure, and Work. These include the furniture designed Nelson plus some pieces by Isamu Noguchi and by the Danish firm, lt-Neilsen. Each section is prefaced by an analysis of the particular emporary living need and of the furniture that follows. A separate on is devoted to the work of Eames. Photographs are used expan- y and all pieces are well documented by dimensioned drawings, eral and specific data about modular systems, construction, finishes, ware, etc. The documentation takes many forms. For instance, a s of questions and answers is an effective device for giving some c information about storage units.

eorge Nelson, as Director of *Design*, writes both the preface and a word to the second edition, telling us in smooth style the history and osophy behind the line. Also included are biographical sketches of designers involved.

he book, in the main, was designed by the George Nelson office, with Eames section by Ray and Charles Eames and their office. Many viduals were involved and all hands are duly credited in the back he book. Our one criticism of the book is that its permanent binding not allow for additions that must come from a growing line. Of se, with a flexible binding, scattered pages are a danger. Perhaps hought is that the intactness of the Herman Miller Collection can be r symbolized by the intactness of its binding. S. S.

(Continued on page 141)

Dormitory Bldg., St. John's University
Collegeville, Minn.
Architect: R. V. McCann

COLLEGE DORMITORY with "built-in" MONEY SAVER

Quality Approved

ALUMINUM WINDOW

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DOUBLE-HUNG

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Aluminum Window Manufacturers Associat

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REVIEWS

tinued from page 139)

nan's potentialities

nd Technics. *Lewis Mumford. Columbia University Press, 2960 Broadway, New York, N.Y., 2. 162 pp. $2.50*

use of his prominence as an author in the s of philosophy and architecture, Lewis ford, for many years an architectural and l critic, was selected to give the Bampton ures in America at Columbia University last . This book contains the six lectures as they e originally delivered. One might say that searching appraisal of the arts and sciences tually a "summing up" on the author's part, n this short volume he expresses the essence he philosophical viewpoints that have won such recognition.

roughout history there have always been opposing impulses within man—the artistic, h is subjective, and the technical, which is, ourse, objective. In lucid manner and with d judgment, Mumford shows the relation- of those impulses down through the ages. also touches upon this relationship as he it in these disturbed times and, in a very ted analysis, expresses his conviction that is an over emphasis on technics. Believing man is now at "a moment of splendid po- alities and promise," he strongly urges a th of personal initiative. He also believes man, if he is so inclined, should make use achines in a temperate but intelligent and ive way and seek within himself a spiritual th—a rebirth which Mumford feels is much ed.

nether one agrees with the author's view- s, there is no denying that this book will se much interest and stimulate the reader's ght. For to propound his thesis on art and ics, he delves deep into the history of ing, sculpture, architecture, engineering, printing. He drives home his opinions with ples that show how first one and then the of the two forces has been predominant. s no snap judgment, for few have behind such a wealth of information based on d study.

his article, "Symbol and Function in Archi- e," he takes a rather gloomy view of con- porary architecture, feeling that "our best tects are full of technical facility and cal- ed competence but still going through me- cal motions." This, as well as many other e author's opinions, will not be shared ally by members of the profession, but at the opinions are worth thinking about. One t help but feel the deep sincerity of the r's convictions. FRANK A. WRENSCH

using thermostats

Controls for Central Heating Systems. *Small Homes Council, University of Illinois, Urbana, Ill. 8 pp., illus. 10 cents*

Improper location and use of the room thermostat is one major cause of failure to maintain comfortable temperatures in the home, according to the nontechnical circular issued by the Small Homes Council at the University of Illinois. Recommendations are given for correct placement of room thermostats for the most efficient operation; there are also descriptions of suitable controls for different types of fuel-burning systems—coal, coke, gas and oil furnaces and boilers, with four pages of charts to simplify the selection for home owners.

E. T.

out of school

by Carl Feiss

Midsummer madness is upon us. By this time, the student still in school should have found a summer job. The tired professor relaxes with design of a small house or a bit of lallygagging in Europe. Catalogues for the year 1952-53 are at the printer, and the die is cast. There is nothing more irrevocable than a catalogue, once the dummy has been edited and sent back. And it is now that fears set in, because the school year is built and the structure is ready for occupancy and management. Will there be enough tenants and will they pay out? Have competitors figured a new angle?

In previous issues, I have discussed teaching for the building industry and the relationship between the business of building and the art, science, and business of architecture. Frankly, I am not satisfied that adequate progress is being made in the field of business management in the training of builders, nor am I satisfied that the universities and the schools of architecture are sufficiently interested in the subject. There are not enough colleges business administration which consider building industry in their curricula and national lay attitude on the universality of "impractical architect" is so well establis that it may take generations to eradicate i

I am sure that, by this time, I have s ciently established with you my interest in esthetics of comprehensive architecture. Th is more that I ultimately hope to be able cover in this column in the entire field of sign training. It is a subject of constant cern. But right now the proper integration business training with the purposes behind gressive architectural design is a fundame educational issue. You may not be interes but you should be. I urge you to cons what I am about to say.

●

When an architectural student graduates to he may have been lucky to have had semester hours in professional practice, w will include some study of contracts. He know little or nothing about the financing the building operations with which he ho to spend a lifetime. He will have had l or no experience with the field of investm finance, including mortgages and loans, t tion, insurance, payrolls, bookkeeping, l and material costs, accounting, credit financ overhead costs, salary schedules, office sp rentals, travel costs, social security, and many other items on a long list which any but an architectural student or professor draw up.

It is accepted practice of architectural ed tors to omit these items from an already gested curriculum, with the certainty that th problems of practice can be and will learned in the office. So be it, for the ment. Now let us look at the other side of partition: Where is *the business* of build buildings being taught? Where should third largest industry in the United St vitally affecting each and every one of us, tain its leadership?

You will notice I use the word "leadersh There is an important distinction between l ership and craftsmanship. I have a great spect for craftsmanship and do not in any belittle it here. Adequate training in the s of building in the trade schools, the t union schools and in certain types of techn institute and junior college work, is as esse as any training to be given anywhere. C prehensive architecture, the all-inclusive a tecture of all building, depends on many the sound skills and careful craftsmanship we find gradually disappearing in the build

(Continued on page

out of schoo

(Continued from page 142)

trades. While this is a special subject to
discussed later, I want it made clear here th
in my discussion of adequate leadership in t
business of building, or the business of co
prehensive architecture, the training of the m
who saw the wood, lay the bricks, handle t
plumbing, wiring, glass, steel, and all the re
is fundamental in training for leadership.

●

It is here that I come back to the thesis I ha
mentioned in these columns several times b
fore: the architect is a quasi-professional, wit
out the appropriate and proper contract r
sponsibilities which the business of comprehe
sive architecture requires. The code of ethi
which the A.I.A. insists is essential to assu
the honesty, integrity, *and selflessness* of t
architect in his business dealings, and whi
prevents him from contracting and building
he should, is as artificial and unmanageable
the Volstead Act. Every practitioner knows t
subterfuges now in use to evade these sil
old stipulations, dating back to the day wh
architecture was primarily a luxury, and t
gentlemen who indulged in it (not ostensib
for a profit), were artists and "gentlemen"
the old school. Those days, I hope, are go
forever. May we continue to be gentleme
if not members of the Union League Clubl

But, my friends, there are still the gentlem
and ethical practitioners of private enterpri
The American businessman is quite often
honest man. I have even known builders a
contractors with standards of practice every
as high as if they were subject to a so-call
professional code of ethics! I am a great b
liever in codes of ethics, but at the same ti
I know, and you know, if a man is going
sin, he is going to sin. If he is subject
professional stigma, there may be some hesi
tion on his part. But I, for one, do not a
cannot believe that practicing comprehensi
architecture, practicing building as it should
practiced, from start to finish, is a sin.

We all know that one of the reasons for t
prohibition of the architect in the building a
contracting business is the fear that he mig
make a profit on materials and labor within
fixed contract. I personally wouldn't begrud
him *a profit if he performs* as the contract
quires. For I am sure that were he to do t
entire building job, he would do a better to
building than he does today. Maybe you w
inquire whether such a man can still be call
an architect. In many parts of South Amer
and in Europe he is. And I like much of
work being done by these generalist archite
—who are certainly professionals.

(Continued on page 1

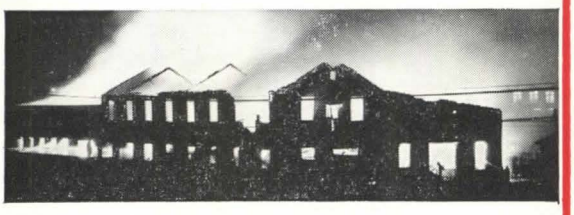
30 DAY FIRE GUTS WAREHOUSE

FAILS TO DESTROY STOCK OF FIRE-CHEX ASBESTOS-PLASTIC SHINGLES STORED INSIDE

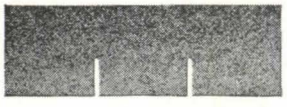
"We Saw it With Our Own Eyes! Carey Fire-Chex Shingles are Fireproof!", Say Officials of Mohawk Building Materials Corporation

RENSSELAER, N. Y., December 6, 1951 —The fire that broke out on November 6 and destroyed two sections of the Rensselaer warehouse, owned by the Mohawk Building Materials Corporation, was finally extinguished last night, 30 days after the alarm was turned in.

Although the fire in most sections of the building was brought under control within ten days, it smouldered in the insulation board and roofing section for a full month. In this section, eighteen inch brick walls collapsed during the early stages of the fire, burying the roofing and insulation to a depth of over ten feet. Firefighters scored complete victory last night, when they spread this mass with a bulldozer and extinguished the flames.



As the rubble was cleared away, several piles of Carey Fire-Chex shingles were observed to be still standing. The wood pallets on which the shingles were piled had burned away, and the paper cartons were gone, but the shingles were still in good condition. Officials of the Mohawk Building Materials Corporation stated that the Carey Fire-Chex shingles were just slightly stuck together on the 12″ edges, but not enough to prevent sliding them out from beneath the wire ties. "We saw it with our own eyes. Carey Fire-Chex shingles are fireproof," said C. Lawrence Fenner, vice president of the firm.



Fire-Chex asbestos-plastic shingles are an exclusive product of the Philip Carey Mfg. Company, Lockland, Cincinnati 15, Ohio, widely known manufacturer of asbestos and asphalt building materials. Coated with a patented asbestos-plastic, Fire-Chex have been tested by Underwriters' Laboratories, Inc. and found to resist fire so effectively that they are rated "CLASS A" without underlayment by Underwriters' – the highest possible rating for fire protection. Fire-Chex are the only roofing material of any kind to carry this highest fire-protective classification.

Steel I Beams Twist Like Pretzels . . . But Fire-Chex Virtually Unscathed During "Baptism by Fire"

FIRE-CHEX are 'tops' for beauty, too! They're the only shingles designed for application in gorgeous Shadow Blend Roof Designs, copyrighted as 'works of art.' Ask your Carey dealer to give you the profit-pyramiding facts about FIRE-CHEX—pronto! Or, mail coupon for sample of Fire-Chex and informative literature!

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Gentlemen:

Please send me a sample of Carey Fire-Chex asbestos-plastic shingles and informative literature. I will not be obligated in any way.

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FIRM_____

ADDRESS_____

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out of schoo

(Continued from page 144)

Our habits of thinking based on a no pertinent tradition limiting architectural pr tice has constituted a severe limitation on t conversion of the building industry into sound and modern business and industrial e terprise. It has also been responsible for narrowing of the horizons of education and t training for the ultimate leadership so bad needed in the conversion of the entire buildi industry from a scattered handicraft complex an orderly and enterprising enterprise. It h proven a serious handicap in the field of bu ness research and industrial research in bui ing, has segregated such research from tho who could be trained for leadership, has tra ferred to the universities the same concept disorder generated by present practices, and so doing, perpetuates the untenable.

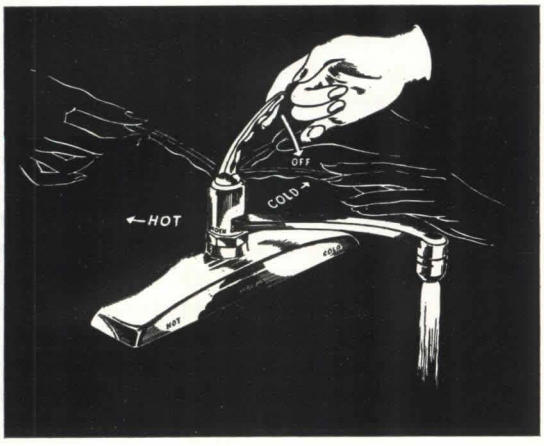
I know of no educational institution, u versity, college, or technical institute, which even approaching the total job which must done. In a few places, colleges of Business A ministration have recently taken on courses even four-year curricula in the building indu try—a step ahead. Building research, includi "architectural" items, is developing in seve research institutes or foundations on a f campuses. In a few instances, there is attempt to tie some of this research in with t work of an architectural school. There is slight breeze blowing in the right directi but it is a timid breeze, and hardly stirs t air. We are in the low-pressure area of t doldrums of a bad habit.

One of these days one of our leading edu tional institutions will take the initiative a train for comprehensive architecture. It will up a real center for building education— leadership in the field of the design of ma environment. Such a center will combine w the training of the social scientist (includ the urban sociologist, and the public adm istrator), training in architectural design a collateral design, construction and engineeri business administration, labor relations, r estate, and building law. This will take g not common to our institutions of higher lea ing these days. In the first place, within th institutions the hidebound divisions into scho and colleges, the untransferability of cre hours, and the fixations on prerequisites in hierarchy of courses and the accolades of grees would have to be broken down. A one of the most difficult problems to be would be the bookkeeping—a complex

(Continued on page

controls temperature and flow
single-handle water faucet

Deck-type MOEN faucet.



The Moen faucet's single-handle control of both water temperature and flow provides several advantages over conventional faucets. A free hand is not needed to operate it . . . the back of the hand, the wrist, or elbow can be used (see diagram at left).

Moen single-handle mixing faucets are now in use in schools, hospitals, industrial plants, restaurants, commercial structures, and home kitchens.

It is manufactured by the MOEN VALVE COMPANY, a Division of Ravenna Metal Products Corp., 6518 Ravenna Ave., Seattle 5, Wash. For detailed information consult your local plumbing supplier, or write for free copy of A.I.A. File No. 29-H-5. Use coupon below.

data

Advantages of Moen single-handle mixing faucet over conventional types.

1. Single-handle (lever) controls both temperature and volume.
2. Greatly reduced danger of scalding because position of handle indicates water temperature before faucet is turned on.
3. Utilizes water pressure to help keep valve tightly closed.
4. When faucet is 'on', equal water pressure on top and bottom of piston affords feather touch control.
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7. Minimum number of parts. Can be serviced without disconnecting faucet.
8. Available in styles to fit all sinks.

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Address	6518 Ravenna Avenue, Seattle 5, Wash.
Your name	
Firm	
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out of schoo

(Continued from page 146)

pretty foolish business system in universitie these days. Even though all the money come from one pot, books are kept on student, facu ty, and maintenance costs on a student pe class per school basis. This throws a gimmic into the free movement of both students an faculty between schools. When an engineerin school services an architectural school with faculty member, the deans begin battles budgets which loudly reverberate in facult meetings, further fractioning the campus.

Somewhere, someday, some president chancellor or provost will say in polite aca demic terms, "To Hell with this nonsense! Let design programs for service and leadership i the logic of man's requirements and his abili to fulfill those requirements. We are no longe medieval cloisters, despite our architecture. W are modern educational institutions, training fo the best interests of mankind. We should wor less about accrediting our schools in the trad tions of accepted practices than we do in the accrediting on the honor roll of the history mankind's progress. Our students, therefor under the guidance of competent progra analysts, shall be free to roam the halls education to select those courses which w lead to those destinations of service and caree to which their aptitudes and interests aspir I am the Joshua who blows down the walls Jericho and offers you the Promised Land- and your tuition's worth of education on th side."

●

What could this mean to the training of co prehensive architects? Trouble, I'm afraid. the first place, if our schools were to gradua men with beliefs that they should be free practice architecture as any situation might r quire, including the handling of real estat building and contracting contracts, direct nancing, and the other aspects of the buildi business, they would be anathema to the A.I. and the state architectural licensing boar Such a graduate would enter a hostile wor of traditional attitudes about the inviolabili and superiority of our present system of arc tectural practice. If he were not to fetter hi self with an A.I.A. membership (and I ha been for years and am a loyal member of t Institute), and if he were to take out a licen to perform as a builder or building contrac instead of an architect, he would be free act and do as he would choose in the bui ing world. Some highly competent men, you know, have signed themselves as "

(Continued on page 1

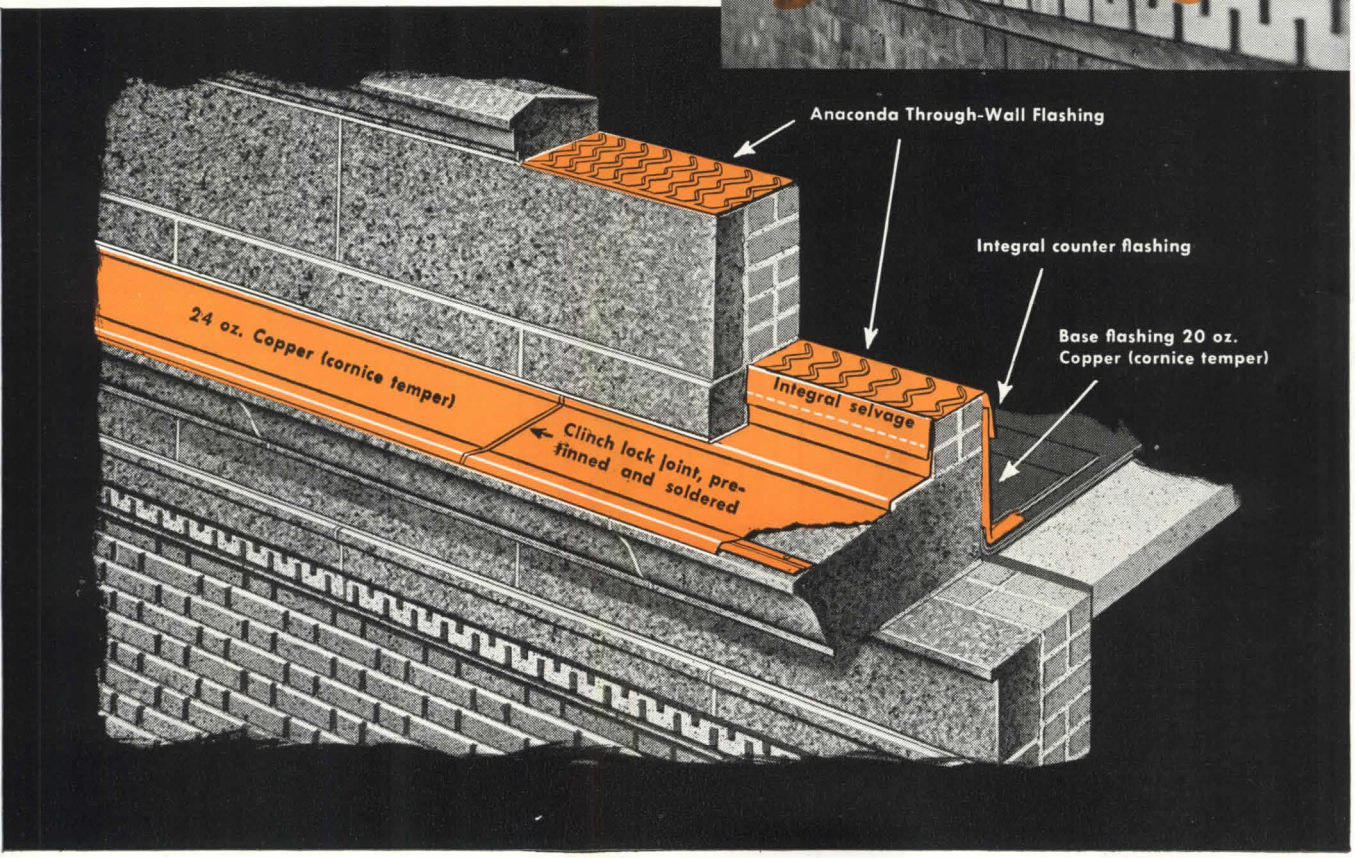
use **copper** wisely

correct flashing could have prevented this

This photograph illustrates what can happen when water penetrates a masonry cornice and parapet. Here frost has damaged the cornice beyond repair.

Had the parapet and cornice been flashed as shown on the drawing, water absorbed by the coping would have been diverted toward the roof. Flashing above the cornice would have prevented the spalling which was caused by water entering the vertical joints and freezing.

Because all masonry is porous and absorptive—proper flashing design is essential to sound and lasting construction. The American Brass Company is always glad to discuss and offer suggestions on any problem involving sheet copper in building construction. 5239



WRITE FOR DETAIL DRAWINGS

The purpose of recent research and investigation by Anaconda building specialists has been to develop methods of using a minimum of sheet copper for maximum results in the protection of buildings from weather. This work has resulted in a series of drawings which show suggested detail of new applications and improved methods for sheet metal work. These drawings, including the one shown here, are available in a complete portfolio on 8½" x 11" sheets convenient for filing. Send for your set now. Ask for Portfolio S. Just write to The American Brass Company, Waterbury 20, Conn.

for better sheet metal work—use

ANACONDA®

copper

out of schoo

(Continued from page 148)

signer" or "architectural designer" and avoide architectural restrictions on their business well as their design abilities. This is not th solution. Running away won't help.

Further problems facing a reform in arch tectural education in and out of school is th highly conservative attitude of the educato themselves. While many are practicing arch tects themselves, their experience and trainir limit their imagination and courage to tack as large a problem as this reform suggest This is an easily understood attitude and sympathize with it. Few of these men are a quainted with the collateral business and r search fields. Few have had experience b yond certain limited types of contact with labo financiers, realtors, and builders. Few me chandisers of building materials and equipme men have bothered to root out the educator These teachers are overworked, underpaid, ar subservient to a system. Also they have litt or no means of continued intercommunicatio between schools on a campus or between car puses. The grapevine between schools is large rooted in hearsay, and is anything but strong vine which can bind ideas together. other words, it is going to be a slow ar arduous task to bring about the co-ordinatio of comprehensive architectural training, badly needed on the campus for the ultima benefit of the building world.

I would like to think that perhaps, someda the president of a university will call togeth a conference on architectural practice and e ucation. I would like to hope that at such conference some person of stature in th architectural world would get up and say more forceful terms than I can what needs be said on this subject. I would like to hop that at such a conference a carefully selecte group of curriculum builders from a wide are of educational fields would sit down with plan to rebuild architectural and building trai ing to conform, not with conformity but wi what America needs from what could be great fraternity of builders. I would hope th one of the objectives these men would s would be that no building or community wou be too small or too inexpensive or too large too costly to need the services of the compr hensive architect. The making available to th world of the best in technology and handicra the best in business and the social science and the ordered planning of the processes building through the guidance of our scientis and technologists, our philosophers and d signers, is a consummation devoutly to be d sired. It can be and must be done.

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Now you can make interior color schemes *complete*—with these distinctive Ponderosa Pine Decorator Doors. With their delicate shadow-lines and beautifully proportioned panels, they offer you and the home owner almost unlimited decorative possibilities. What's more, you have a wide variety of Ponderosa Pine paneled doors to choose from, styles that fit every type home, contemporary or traditional.

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Our new consumer booklet, "Latest Color Style News," contains a wealth of information on Ponderosa Pine Decorator Doors, information which you, too, will want for your file. Mail the coupon now for your free copy.

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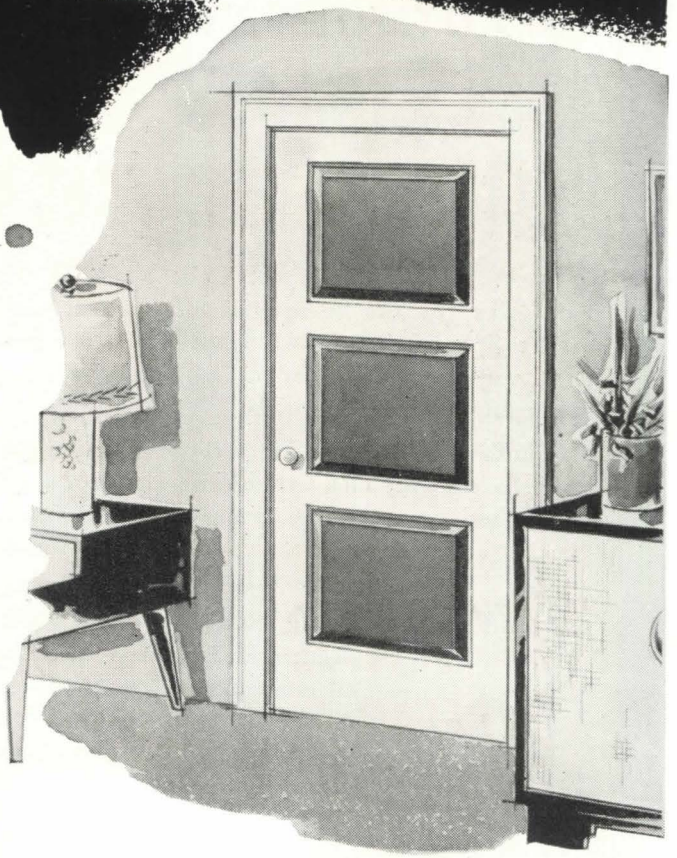
WOODWORK



The Rancho, 3-equal Panel Decorator Door

(Catalog No. ND-103)

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it's the law

by Bernard Tomson

This supplement to Chapter 20 of Tomson's Architectural and Engineering Law *(Reinhold) was begun here last month. They should be considered in relation to the principle that there is an implied condition that the architect's plans, when completed, will be suitable and proper for the purposes intended; and that a building ordinance, in effect, becomes a part of the contract between the architect and owner as though it had actually been written into the contract (see pp. 262, 263, 274, and 275).*

esthetic zoning
part 2: residential

The previous column (June 1952 P/A—Esthetic Zoning, Industrial Areas) discussed the New York City Zoning Resolution (Art. 2, Sec. 3) relating to the erection of light-industry projects in residential areas. Under that regulation, the City Planning Commission considers esthetic suitability in relation to the facts peculiar to each proposed project and not by any rigid set of rules. One of the *factors which receiv* a great deal of consideration by the Co mission was, in *each* case, the appearance the project at the proposed site and its blen ing with or enhancing of the immediate are

This month's column will concern itself w recent "esthetic zoning," as applied to sidential areas. During the past few ye municipalities, faced with expanding housi activity in suburban areas, have enacted zo ing laws regulating the character of resident development. These enactments were an tempt to preserve for the residents the adva tages of a distinctive and attractive rural e vironment. Some legislation has concerned self exclusively with the promotion of esthe and artistic development of new residential co struction in the *community. In April,* 1950, Village of Scarsdale (State of New York) acted a law (December 1950 P/A) by wh the Village sought to eliminate "look-alik homes, using indicia of uniformity rigidly forth in its ordinance. (See *Footnote* [1]) enforcement of the law was left in the hands the building inspector with a review of his termination, by an appeal to a Building Boa composed of three residents, at least one whom is to be an architect.

On February 15, 1952, the Village of Gard City (New York State) enacted legislation aim at the accomplishment of this same purpo but by a procedure providing flexibility in operation. (See *Footnote* [2])

The Garden City local law, as did the Sca dale law, lists the indicia of similarity, but w a great deal less rigidity and employs a no approach. (See *Footnote* [3])

●

The law provides for *initial* consideration any application by a Board of Review, crea under Section 2, which reads in part as follo

"There is hereby created a Board of Revi consisting of five members, who shall se without compensation. All members of s Board shall be residents of the Village of G den City and shall be persons deemed by Board of Trustees to be qualified by reason training, experience, or civic interest, and reason of sound judgment, to determine effects of a proposed building, group of bu ings, *or plan of building development* on desirability, property values, and developm of surrounding areas and on the developm of the village as a whole."

In effect, what is provided for, by statute, is a fresh consideration of the "es tics" of each building, as it is proposed. procedure is similar to that employed by City of New York, for the erection of li industry projects in residential areas.

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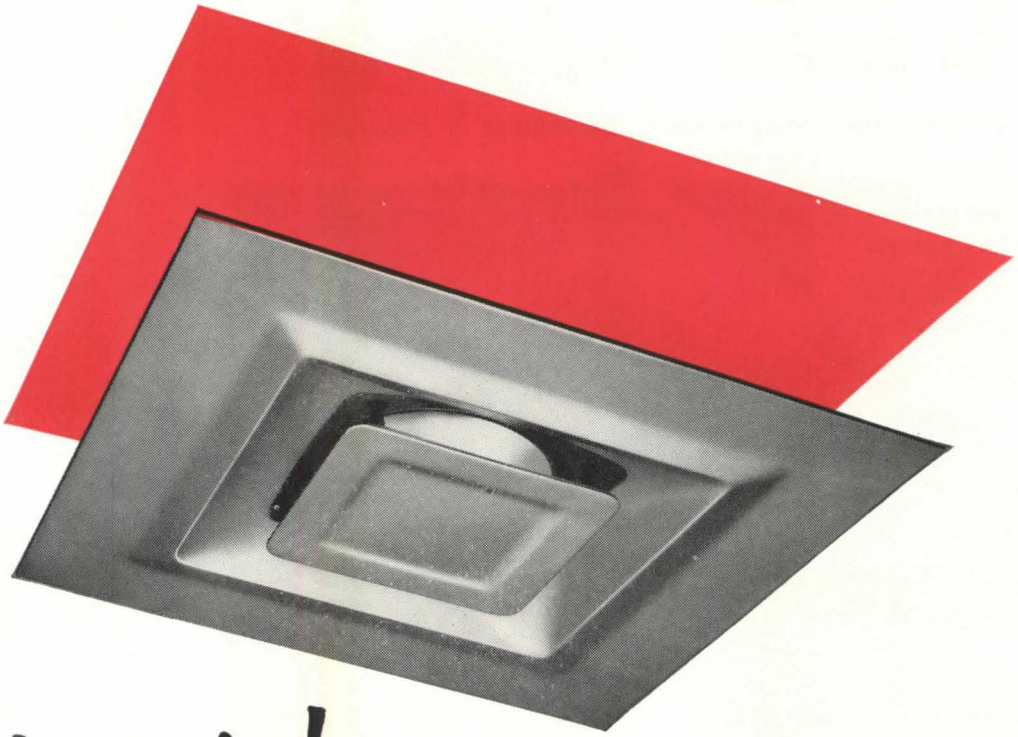

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You can get the new *square* Kno-Draft in two brilliantly conceived modern designs — both for quick, easy installation. *Type KP* features overlap style construction. *Type KPT* is designed for T-bar installations, snapping snugly into perforated acoustical-type ceilings.

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it's the law

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Board of Review, in disapproving any applic tion, may specify modifications in design of t building or buildings that will be adequate render them acceptable under the provisions the law. Other procedural devices which op ate to the benefit of the applicant are: (1) t Building Inspector must refer an applicant the Board of Review within three days; (2) t Board of Review must disapprove an applic tion within eighteen days, or else must issue permit; and (3) any party aggrieved has a rig of appeal to the Board of Zoning Appeals.

The legislation leaves to the Board of Review great deal of discretion. The indicia of simil ity are flexible, and the Board of Review granted the authority to vary (to a degre other legislation in this same field. Section of the law reads, in part:

"With the purpose of encouraging the m appropriate use of land throughout the Villa the Board of Review may vary the minim floor area requirements set forth in Zoni Ordinance No. 29 of the Village, as amende so as to reduce said requirements by not m than ten percent, if, by reason of greater frontages or areas or side yard widths or l percentage of lot coverage by building ar than are specified by said zoning ordinar or by reason of the provision of public common open space as a part of the develo ment or exceptionally skillful lot arrangem and site design, the result of said variat will be in harmony with the character of neighborhood."

For the lawyer, the "Garden City" Zon law presents some very interesting questions to its enforcibility, legality, and constitutio ity. For the architect, it raises a further teresting question as to how effective it prove to be in the application of "esthe considerations to community planning.

1. *"Section 2. Except as provided in local law, no building permit shall be sued under the Building Code of the Vill for the erection of any building for oc pancy as a dwelling for one or two fami if it is like or substantially like any ne boring building, as hereinafter defined, t in existence or for which a building per has been issued, in more than three of following six respects:*

"(1) Height of the main roof ridge, in the case of a building with a flat roof, highest point of the roof beams, above elevation of the first floor;

"(2) Height of the main roof ridge ab the top of the plate (all flat roofs shall deemed identical in this dimension);

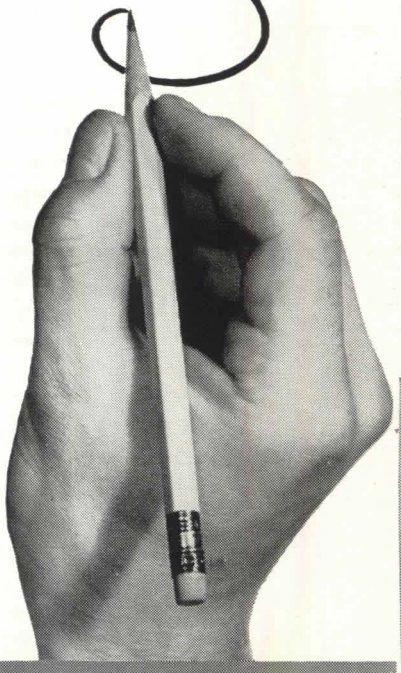
"(3) Length of the main roof ridge,

(Continued on page

you can spell *Selection*

with a capital "S"!

Double-hung window units—window walls—fixed sash—casements—windows for attics and basements—they're all in the broad Curtis Silentite line. Here is the wide selection that simplifies your planning and building—creates harmonious fenestration for any architectural style—while it provides *extra* window value for the home owner. Silentite wood window units save time and labor on the job—insure lasting satisfaction.



In every region of the country, Curtis Silentite double-hung window units have proved their superior weather-tightness—their ability to operate easily under changing conditions of humidity, temperature and precipitation. For no other double-hung window has the Silentite "floating" side weather strips—special patented weather-stripping at head, meeting rail and sill.

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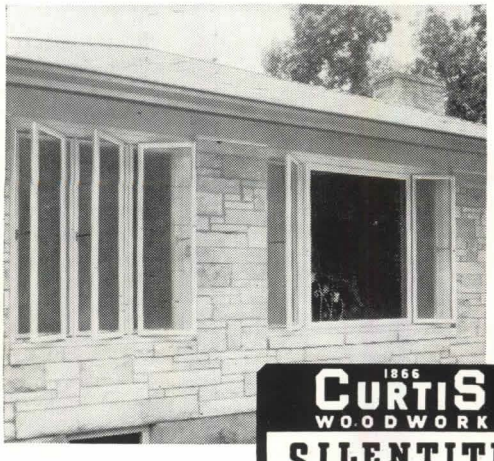

Silentite casement units are the result of long years of research to provide a casement that is truly weathertight—free from rattling and sticking. Tests show that Silentite casements can save as much as 16% of the yearly fuel bill in a home. These casements come as complete units with all parts machined and prefitted; carton-packed, including all operating hardware. Pre-fit screens and insulating glass are available. Several sash styles.

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(Continued from page 154)

in the case of a building with a flat r length of the main roof;

"(4) Width between outside walls at ends of the building measured under main roof at right angles to the length th of;

"(5) Relative location of windows in front elevation or in each of both side vations with respect to each other and u respect to any door, chimney, porch, or tached garage in the same elevation;

"(6) In the front elevation, both (a) r tive location with respect to each other garage, if attached, porch, if any, and remainder of the building, and (b) eit (i) height of any portion of the build located outside the limits of the main r measured from the elevation of the first fl to the roof ridge, or, in the case of a roof, the highest point of the roof beams, (ii) width of said portion of the building it has a gable in the front elevation, oth wise length of said roof ridge or said roof in the front elevation.

"Buildings shall be deemed to be like e other in any dimension with respect which the difference between them is more than two feet. Buildings betw which the only difference in relative lo tion of elements is end to end or side side reversal of elements shall be deemed be like each other in relative location such elements. In relation to the prem with respect to which the permit is soug a building shall be deemed to be a nei boring building if the lot upon which it any part of it has been or will be erected any one of the following lots, as shown the tax map of the Village:

"(a) Any lot on the street upon which building to be erected on said premi would front which is the first or the sec lot next along said street in either direct from said premises, without regard to tervening street lines;

"(b) Any lot any part of the street frontage of which is across said street fr said premises or from a lot referred to subparagraph (a) of this section;

"(c) Any lot any part of the street frontage of which faces the end of, and within the width of, said street, if there less than two lots between said premises the end of said street;

"(d) Any lot on another street which joins said premises on such other street;

"(e) Any lot any part of the street frontage of which is across such other st from said premises or from a lot referred in subparagraph (d) of this section; provided, however, that, notwithstanding of the foregoing provisions of this sect no building shall be deemed to be a ne boring building in relation to said prem if its rear elevation faces the street u which the building to be erected on premises would front."

2. *"The Board of Trustees hereby f*

(Continued on page

BRIXMENT ASSURES A GOOD BOND

After all is said and done, the first function of a mortar is to form a good, tight *bond* with the brick. Upon this characteristic depend both the strength and the water-tightness of the wall. A good bond is particularly important in securing water-tight walls, because most cases of leakage are caused by the passage of water *between* the brick and the mortar.

Brixment mortar assures a good, strong, *thorough* bond because: (1) Its great plasticity permits a more complete bedding of the brick, and an increased area of contact between the brick and mortar.

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it's the law

(Continued from page 156)

(a) that excessive similarity, dissimilarity, or inappropriateness of design in the exterior appearance of residential buildings in relation to the prevailing appearance of residential buildings in the vicinity thereof would adversely affect the desirability of the immediate area and neighboring areas for residential purposes; (b) that inappropriateness or excessive dissimilarity of design in the exterior appearance of residential buildings in relation to the characteristics of design generally prevailing in the village would discourage the most appropriate use of land throughout the village; and (c) that such excessive similarity, dissimilarity, or inappropriateness, would impair the benefits of occupancy of existing residential property, impair the stability and value of both improved and unimproved real prop produce degeneration of residential erty, with attendant deterioration of c tions affecting the health, safety and m of the inhabitants of the village, and de a proper relationship between the tax value of real property and the cost of m cipal services provided therefor. It is purpose of this local law to prevent and other harmful effects and thus to mote and protect the health, safety, m and general welfare of the community.

3. *"The Board of Review shall disap any application for a building premit r red to it if the Board finds by a unani vote of all the members present at meeting at which said vote is taken tha building for which the permit is soug any building of a group of buildings ered by the permit would, if erected, detrimental to the character, pro values, or development of the surroun residential area or of the village as a u as to produce one or more of the har effects set forth in Section 1, by reaso*

"(a) excessive similarity of design i lation to any other structure existing o which a permit has been issued, or to other structure included in the same pe application, on a plot abutting on the street and within two hundred fifty fe the proposed site, in respect to one or of the following features of exterior d and appearance:

"(1) apparently indentical façade;

"(2) substantially identical size an rangement of either doors, windows, port or other openings or breaks in the fa facing the street, including reverse arr ment; or

"(3) other significant identical fea such as, but not limited to, construction terial, roof line and height, or other d elements;

provided that a finding of excessive sim ity of design shall include not only that similarity exists but, further, that it such a nature as to produce one or mo the harmful effects set forth in Section

"(b) excessive dissimilarity or inapp ateness of design in relation to any structure existing or for which a permi been issued, or to any other structur cluded in the same permit application, plot abutting on the same street and u two hundred fifty feet of the proposed or inappropriateness or excessive dissimi of design in relation to the characterist residential building design generally pr ing in the village, in respect to one or of the following features:

(1) cubical contents;
(2) gross floor area;
(3) height of building or height of
(4) other significant design features,

(Continued on page

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(Continued from page 158)

as, but not limited to, construction mate or quality of achitectural design; provided that a finding of excessive similarity or inappropriateness of design s include not only that such dissimilarity inappropriateness exists, but, further, it is of such a nature as to produce one more of the harmful effects set forth Section 1.

"In disapproving any application fo building permit the Board of Review r specify modifications in the design of building or buildings or any of them will be adequate to render the same ceptable under the provisions of this la law."

NOTICES

exhibit

An exhibition entitled, BROOKLYN IN PR RESS, by students of the Department of Ar tecture, Pratt Institute, in conjunction with Brooklyn Chapter of the A.I.A., will be on through September 1. The exhibit offers account of the progress of the Borough in fields of architecture and planning. View old Brooklyn architecture are included. exhibition may be seen at the Brooklyn seum, Brooklyn, N.Y.

conference awards

VINCENT KLING, Philadelphia Architect, w "single award" from the Pennsylvania So of Architects for "most meritorious compl work" of the year, at the recent Middle lantic Regional Conference, A.I.A., held Philadelphia. His citation, read at the Presidents' dinner at the Bellevue-Strat Hotel by J. Roy Carroll, Jr., Chapter Presi explained that "the work of VINCENT KL particularly his Kimberton Farm School and Craft Building and the School Reside fully justify this Award to him."

ALFRED BENDINER, Philadelphia Architect was prominent in arranging the Middle lantic Conferences, won the 1952 VENZIE PORATION Award "for the architect makin finest contribution to painting and sculpt

PHILADELPHIA CHAPTER Prizes for outstan materials exhibits at the Conference wer ALUMINUM COMPANY OF AMERICA, KENTILE COMPANY, Second; and PITTS PLATE GLASS COMPANY, Third.

(Continued on page

Skidmore, Owings & Merrill, *Architects*

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modular products

Manufacturers whose products (at least some) are available in standard sizes that have been co-ordinated on the basis of the accepted four-inch module are requested to advise The American Institute of Architects accordingly. A directory of manufacturers of modular-size building materials is now being prepared; it will also include helpful suggestions for the architect on modular-drafting practice. Names and addresses of these manufacturers should be sent to: WILLIAM DEMAREST, JR.
Secretary for Modular Coordination
The American Institute of Architects
1741 New York Avenue, N. W.
Washington 6, D. C.

lighting merger

Operations of ELECTRO MFG. CORP., Chicago, and BRIGHT LIGHT REFLECTOR CO., INC., of Bridgeport, Conn., have been merged under the name, ELECTRO SILV-A-KING CORP., to produce an expanded line of fluorescent and incandescent lighting equipment. Under CHARLES I. SCHNEIDER, as president, facilities of both companies and sales organizations will be maintained and co-ordinated.