PROGRESSIVE ARCHITECTURE

newsletter

DECEMBER 1951

- Completely fed up with their treatment by Commissioner John Taylor Egan's office, 13 of 16 members of the Architects' Advisory Committee to the Public Housing Administration resigned on November 5th, with a letter which expressed their continuing "loyalty to the ideals of public housing" but which stated that they desired to make the group resignation "official, public, and conclusive, for the reasons that the very existence of such a committee implies support for present policies of the PHA which, far from supporting, we unanimously condemn."

- The 13 who resigned—Wurster, Haskell, Kennedy, Stubbins, Wetmore, Churchill, Kahn, Whittlesey, Manley, Rowland, Keck, Ford, and DeMars—are annoyed that no meeting of the Committee has been called for 18 months "despite repeated suggestions," but even more with the fact that "the evidence has become unmistakable" that Egan himself "in conversation with Senators, Congressmen and others in authority (has) laid major responsibility for rising costs at the doors of 'architects' extravgant ideas.'" The letter points out that a more obvious reason for high bids was the slowness, during a period of rising costs, of PHA processing.

- The principal reluctance on the part of the three who did not resign (Neutra, Saarinen, Teare) was a fear that the group resignation would be publicized as a slap at public housing as such. The letter makes very clear that this is not the case.

- The Architectural League of New York announced on November 16 that Walter Gropius had won the Howard Myers Memorial Award for the best writing contributory to public understanding of architecture. The piece which won was "Not Gothic but Modern for our Colleges," in the "New York Times" of October 29, 1949. Two mentions were given: to Walter L. Crees, for "Architecture and Learning: A Collegiate Quandary," in "The Magazine of Art," April, 1950; and to Jean Murray Bangs (Mrs. Harwell Hamilton Harris) for a piece on Maybeck called "Prophet Without Honor," in "House Beautiful" for May, 1950.

- Department of Commerce's and Department of Labor's construction report for the first ten months of the year discloses the following statistics: total new construction, $25 billion, against $23 billion in 1950; private construction, $17.5 billion (up $1/3 billion); public construction, $7.7 billion (up $1 2/3 billions). For the ten month period these went down, compared to 1950's first ten months: new private dwelling units, 15%; private, social, and recreational, 29%; public highway, 4%. With the exception of small "miscellaneous" categories, all other types went up: industrial, 104%; religious, 15%; educational, 22%, etc.—and military and naval, 496%. CMP will, of course, alter these totals by year's end.

- It becomes increasingly evident that work considered non-essential will be further restricted next year. Recent pronouncements by NPA that commercial permits will be almost nil comes as no great surprise. Promises of an easing off later in the year now begin to sound a bit hollow. Several fingers have pointed in recent weeks at one of the great weaknesses in the present system—the fact that no realistic screening of

(Continued on page 2)

newsletter

either civilian or defense requirements—for quantities and for timing—is now taking place. Inflated requests and inaccurate timing of delivery needs have been reported from both defense and non-defense projects. NPA replies that it has been screening, and that the trouble is caused by some padding of quantities in applications, but more by applicants asking for materials in one quarter when they will not be needed until later.

- Confusion as to which products are in the "A" list and which in the "B" list of NPA's Reg. 6 has caused headaches for some manufacturers. Kawneer Co., for instance, points out that its storefront materials now are classified as "B" products under CMP, and therefore need not be listed on CMP-C4 application forms. Accurate lists can be had from Dept. of Commerce field offices.

- As we go to press, word comes that the Honor Awards judgment of the Southern California Chapter, A.I.A., resulted in Victor Gruen's Mid-Wilshire Building (published in this issue) receiving an Honor Award. Top honors went to a school designed by Bob Alexander.

- Particulars about the 1952 Rotch Traveling Scholarship, given by the Boston Society of Architects, can be had from William Emerson, Secretary of the Scholarship, 107 Massachusetts Avenue, Boston 15, Mass. Selection will be made in April, from candidates who are citizens over 31 years old. $3200 is available for travel and study abroad.

- Civil Aeronautics Administration has announced that 226 airport projects costing over $28 billion will be started before June, 1952.

- A. Naughton Lane, Vice-President of Monarch Metal Weatherstrip Corp., has been re-elected President of Producers' Council.

- American Institute of Decorators announces its 1952 Design Competition, with a closing date of February 1st, 1952. Designers and manufacturers of fabric, furniture, floor and wall covering, and lighting items not offered for sale before January 1st are eligible.

- Georgia A.I.A. Chapter set up a Special Committee to study registration problem spotlighted by failure of all 20 applicants last May. Committee polled Chapter members, found that large majority felt Georgia Tech instruction was adequate; stylistic exam question was unfair; present registration requirements inadequate. Committee then wrote P/A saying recent P.S. column reaching same conclusions had done a "disservice," and announced that the "State Board's readiness to co-operate has been most apparent."

- Syracuse Museum of Fine Arts, host to the 16th Ceramic National, announces that a new Award—an Architectural Ceramic Sculptural Citation, for the best use of ceramic integrated with architecture—has gone to Viktor Schreckengost, for work at the Cleveland Zoo's Bird Building, designed by J. Byers Hays of Conrad, Hays, Simpson & Ruth. Citation speaks of "ideal working collaboration."

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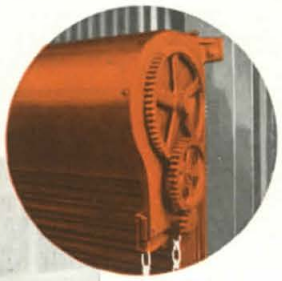
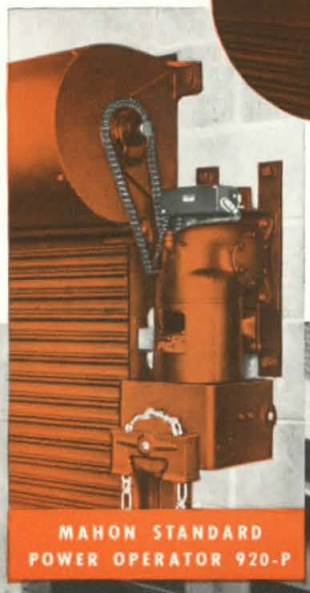
Rolling Steel DOORS



MAHON CHAIN-GEAR OPERATOR



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Rolling Steel Doors offer the ultimate in space economy, permanence, convenience, and protection against intrusion or fire . . . their vertical roll-up action occupies no usable space inside or outside the opening . . . their quick opening, quick closing operation by means of reliable power operators, controlled from convenient points, saves valuable time. Like most other things, there is a vast difference in the quality of rolling steel doors on the market today—a careful check of specifications will reveal this. For instance, the galvanized steel for the interlocking curtain slats of Mahon Rolling Steel Doors is chemically cleaned, phosphatized and chromated to provide paint bond, and the protective enamel coating is baked on at 350° F. prior to roll-forming. This is just one of the extra value features of Mahon Rolling Steel Doors —you will find others. See Sweet's Files for complete information including Specifications, or write for Catalog No. G-52.

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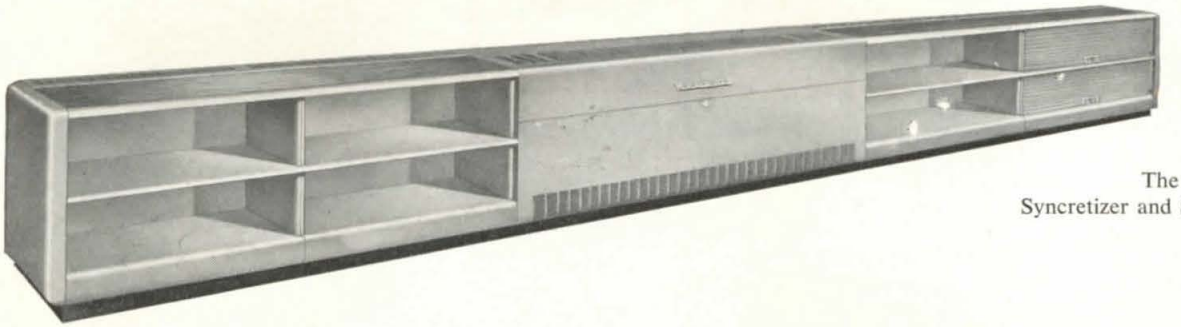
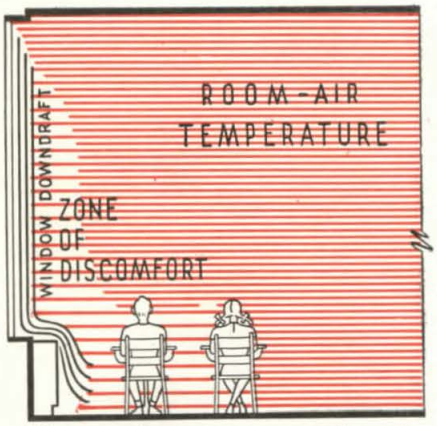
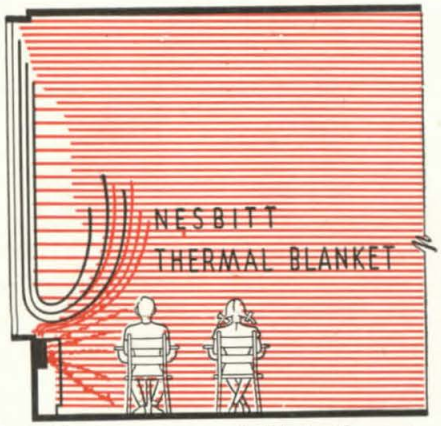


The Nesbitt Package
Syncretizer and Storage Cabinets

The Story of THERMAL



With room-air temperature evenly maintained, downdraft from large cold windows may remain the robber of comfort.



Nesbitt Syncretizer and Wind-o-line temper the downdraft, raise it out of impression range, and improve thermal balance.

THE POSITIVE ANSWER TO WINDOW DOWNDRAFT

Nesbitt

SYNCRETIZER with WIND-O-LINE

THE STORY of classroom heating and ventilating began many years ago with the need for artificial heat in a one-room schoolhouse. A potbellied stove provided the heat.

With multi-room schools came central heat and hot-air, then steam-radiator distribution. Schoolrooms soon became so hot that the need for regular ventilation was recognized.

NESBITT became a character in the story in 1917 with a schoolroom unit that introduced outdoor air and heated air on the bypass principle.

The story progressed as knowledge increased. The *heating* effect of room occupants, electric lights, and the sun's rays became better known. The need for *cooling* during a large part of the classroom day hastened the development of heating and ventilating units.

Room-air temperature was the recognized index of comfort. But the widely divergent temperatures of the unit ventilator's air stream created conflict—*drafts*. NESBITT brought the air stream under separate control—syncretized, or harmonized, its temperature within draftless limits to that of the room air. Syncretized Air, a new standard of thermal comfort, was created—but air temperature remained its popular index.

Comfort Can Now Be "Seen"

Today thermal comfort has another dimension. Besides *air temperature*, we consider the *radiant temperature differential* of the surrounding walls and surfaces of the classroom. The temperature especially of large windows in cold weather is so far below the room-air temperature that it soaks up the body heat of pupils sitting near it and, to a degree, of all others whose bodies can "see" it (are exposed to it). This explains why the comfort *impression* of some pupils is poor even when the air temperature is good—according to the room thermostat.

The Nesbitt Comfort Control

Within the Nesbitt Syncretizer heating and ventilating unit is the Comfort Control which "sees" and "feels" the outdoor air temperature at all times. This control automatically adjusts the temperature of the unit's continuous air stream so as to impose a protective thermal blanket — warm enough to shield room occupants from the chilling effect of cold windows, and cool enough to prevent overheating of the room air.

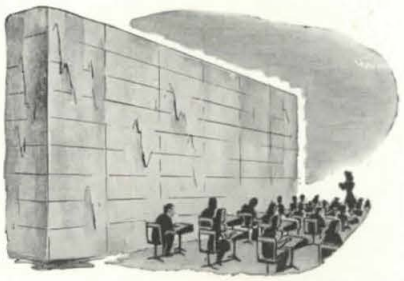
Wind-o-line Radiation

For conditions of large glass area and extremely cold outdoor air—which accelerate the problem of window downdraft, Nesbitt provides Wind-o-line Radiation for integration with the Syncretizer. Wind-o-line consists of fin-and-tube radiation in a grilled wall-hung casing to extend from both ends of the ventilating unit for the full length of the windows, at the sill line—and continued, if required, along cold outside walls. (Or it may be had as a component of the storage cabinets in installations of The Nesbitt Package.)

Unlike the attempts to draw off window downdraft as recirculated air—which are easily proved to be ineffecti

Like all good stories
this one has *conflict . . . solution . . .*
and a *happy ending*

(READING TIME: Four minutes—and worth it.)



In very cold weather large window areas become a "wall-of-ice" in the classroom.

COMFORT in the Schoolroom

-Nesbitt Wind-o-line solves the prob-
m of *heat loss* logically with a *heat*
in where and when needed. Convected
urrents of warm air from the grille
mper the cold downdraft and divert
s flow upward and above the heads
f the room occupants. Radiation from
e casing or cabinet helps to balance
e radiant temperature differential.

lappily ever after"

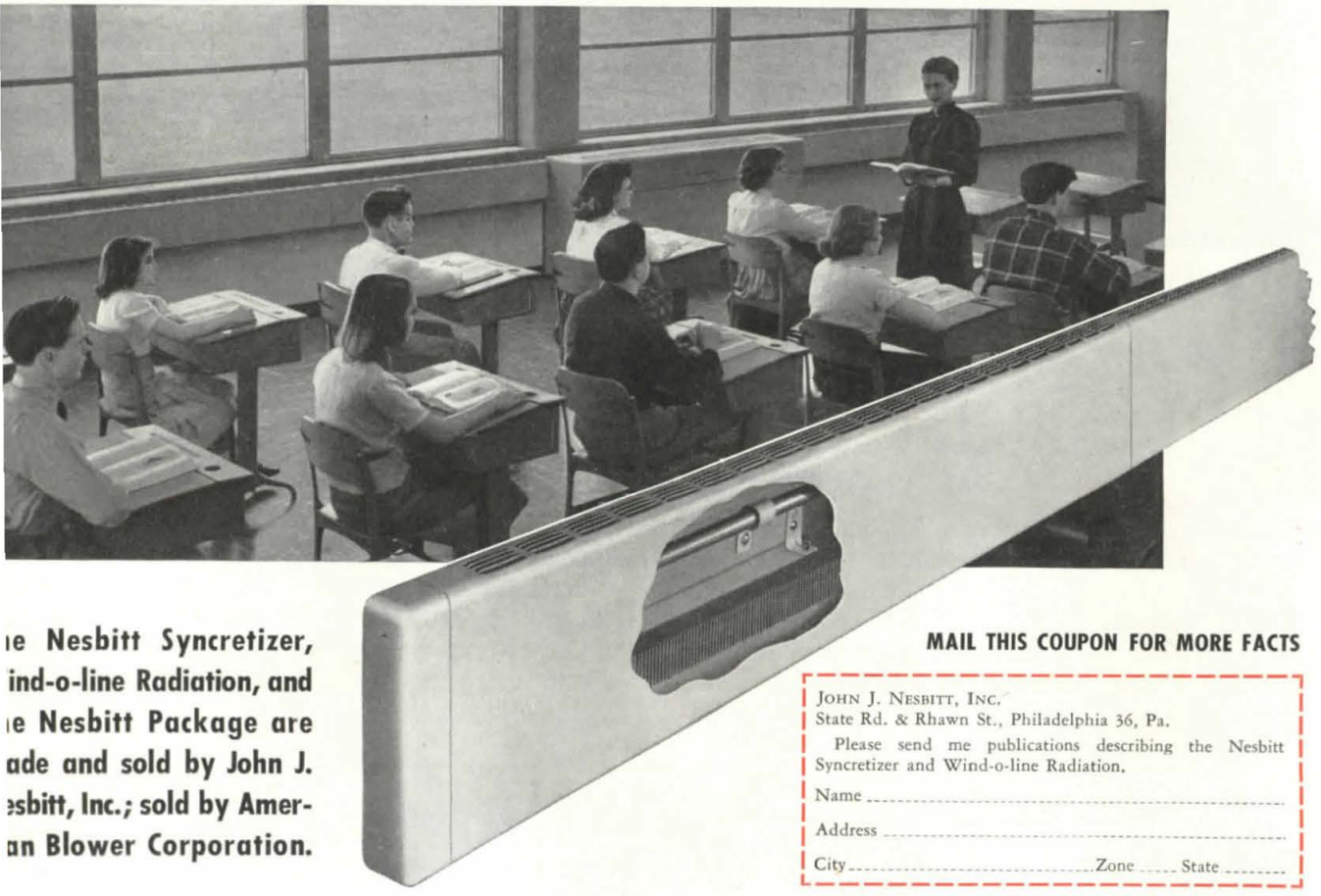
For school officials, architects and
ngineers who have a personal interest in Thermal Comfort the story turns out well: NESBITT SYNCRETIZED AIR—with Wind-o-line Radiation where desired—a *symmetrical* environment in which room-air and surface temperatures are better related to bodily heat exchange for a classroom comfort unequalled by any other system.

This is the story up to now. If it is ever to have a sequel, NESBITT expects to write it!

JOHN J. NESBITT, INC., STATE ROAD & RHAWN STREET, PHILADELPHIA 36, PA.

The Nesbitt "thermal blanket" protects pupils from the cold window downdraft.

A cut-away view of Wind-o-line Radiation, and photograph of a typical installation.



ıe Nesbitt Syncretizer,
ind-o-line Radiation, and
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City ..... Zone ..... State .....

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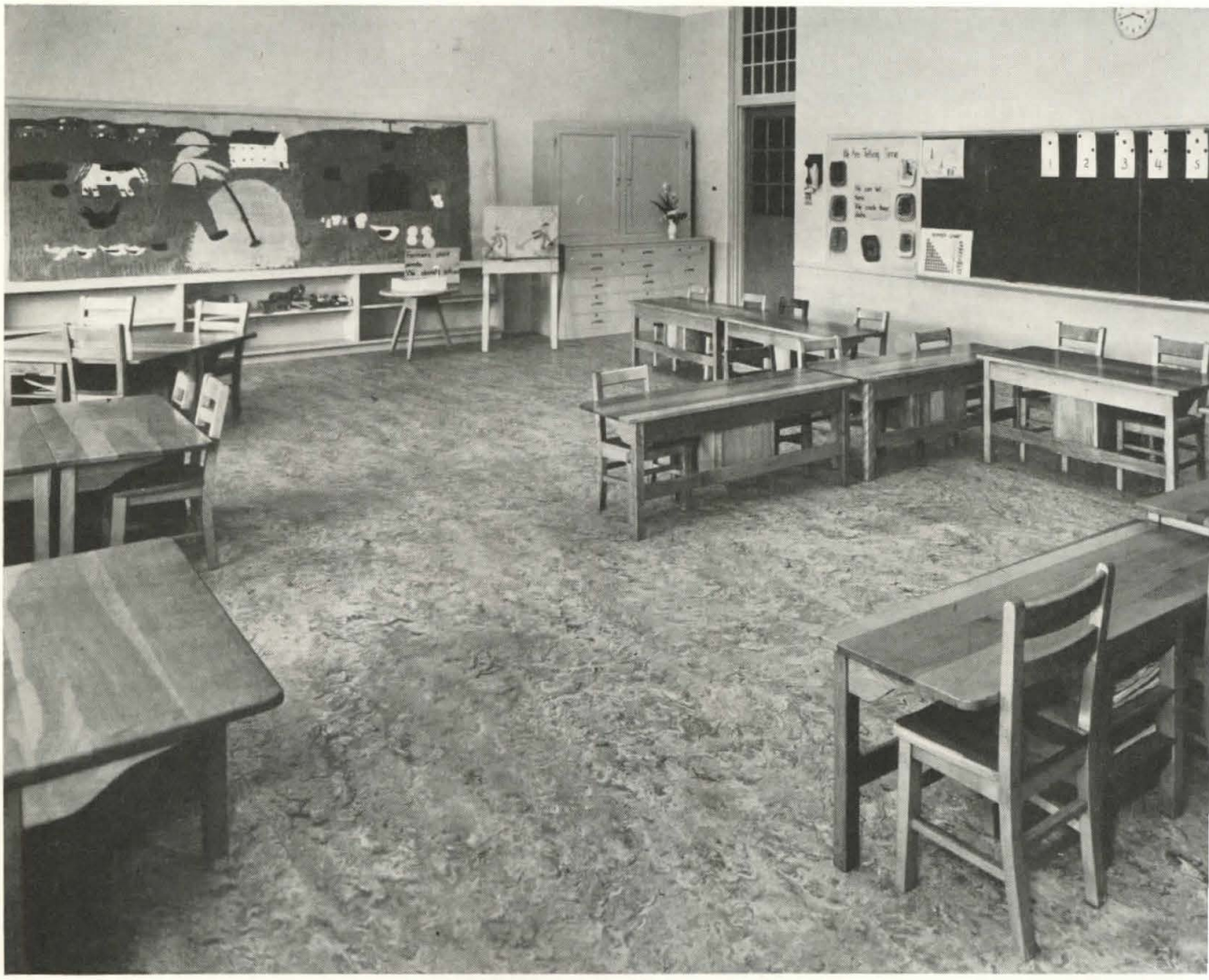


1. Here's just one example of how attractive Nairn Linoleum helps to carry o a motif. Shown here is a classroom at the Franklin School, Newton, Ma

insist on the 4-square features o

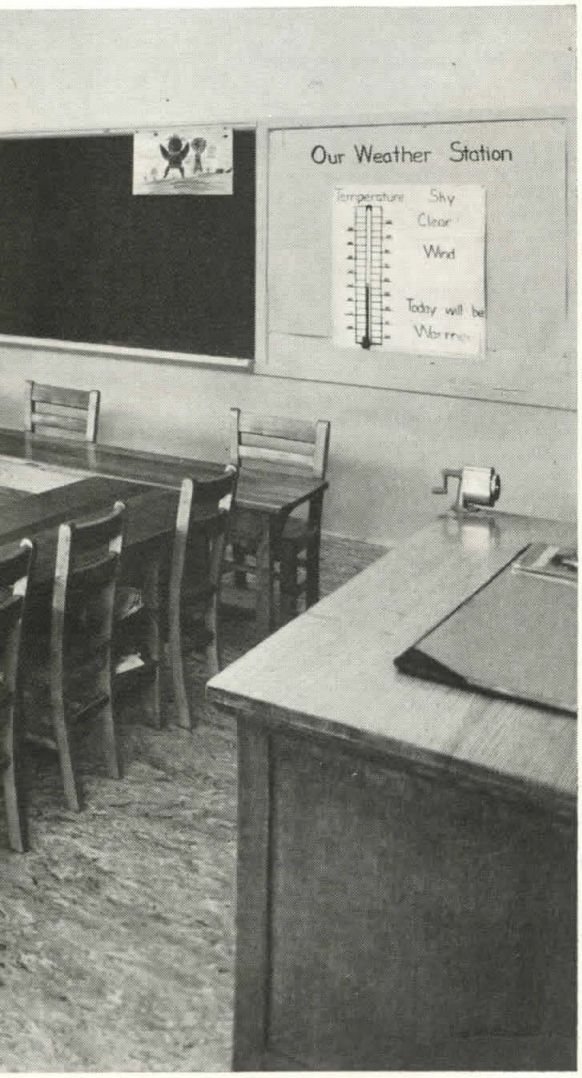
Let's talk about school flooring. The important things are easy maintenance, quiet resilience, long life and cheerful good looks. That's why so many architects choose Nairn Inlaid Linoleum for schools all over the country. They know that Nairn's true resilience reduces foot traffic noise to a minimum . . . that Nairn's crevice-free surface—so quick and easy to clean—affords the highest measure of sanitary protection. Nairn Linoleum comes in a wide range of handsome colors —many unusual and distinctive in design—each *made* to keep its sparkling beauty through years of toughest wear. No other floor material offers such dollar value in low upkeep and long, trouble-free service!

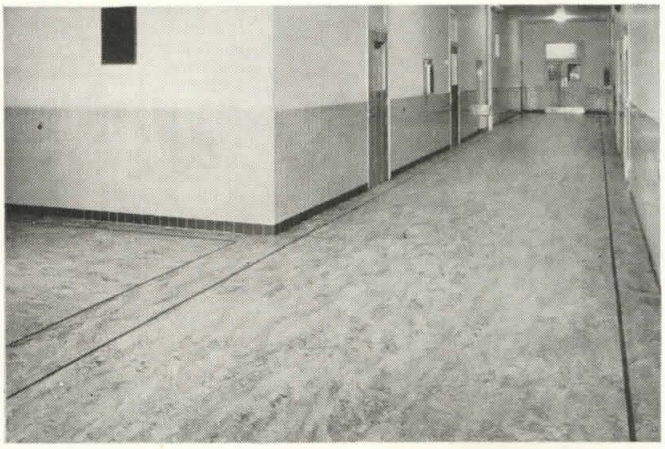
For your specifications: Nairn Linoleum— Nairn Wall Linoleum—Nairn Asphalt Tile. Congoleum-Nairn Inc., Kearny, New Jersey

NAIRN LINOLEUM

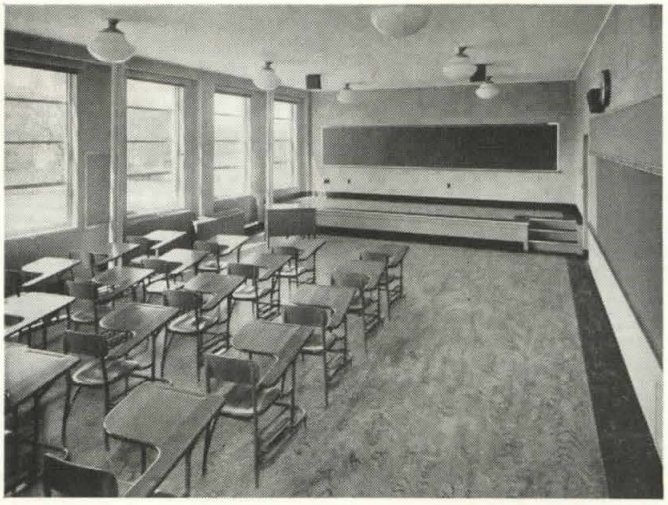
Trade-mark ®

school flooring problems...





2. The school corridors at the Wall Township Grade School, Monmouth County, N. J., carry a constant flow of heavy traffic. And that's where Nairn *proves* its economy with extra-long life, quick and easy maintenance.



3. In the classrooms of the Euclid Senior High School, Euclid, Ohio, Nairn Linoleum's crevice-free surface assures sanitary protection at its best . . . makes for quick, thorough cleaning.

Nairn Linoleum!

NAIRN
SATISFACTION GUARANTEED OR YOUR MONEY BACK

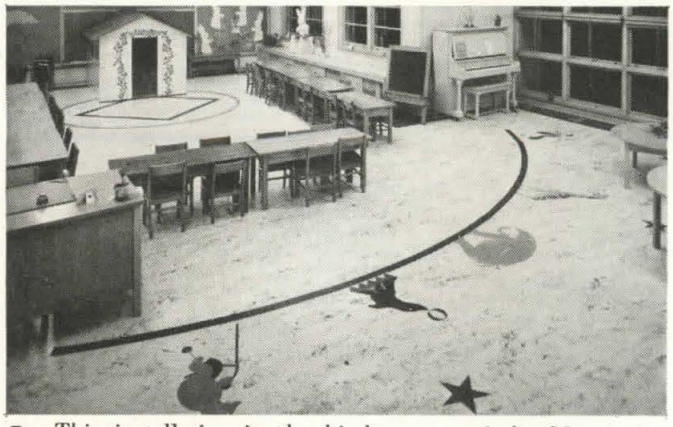
1. Long Life

2. Enduring Beauty

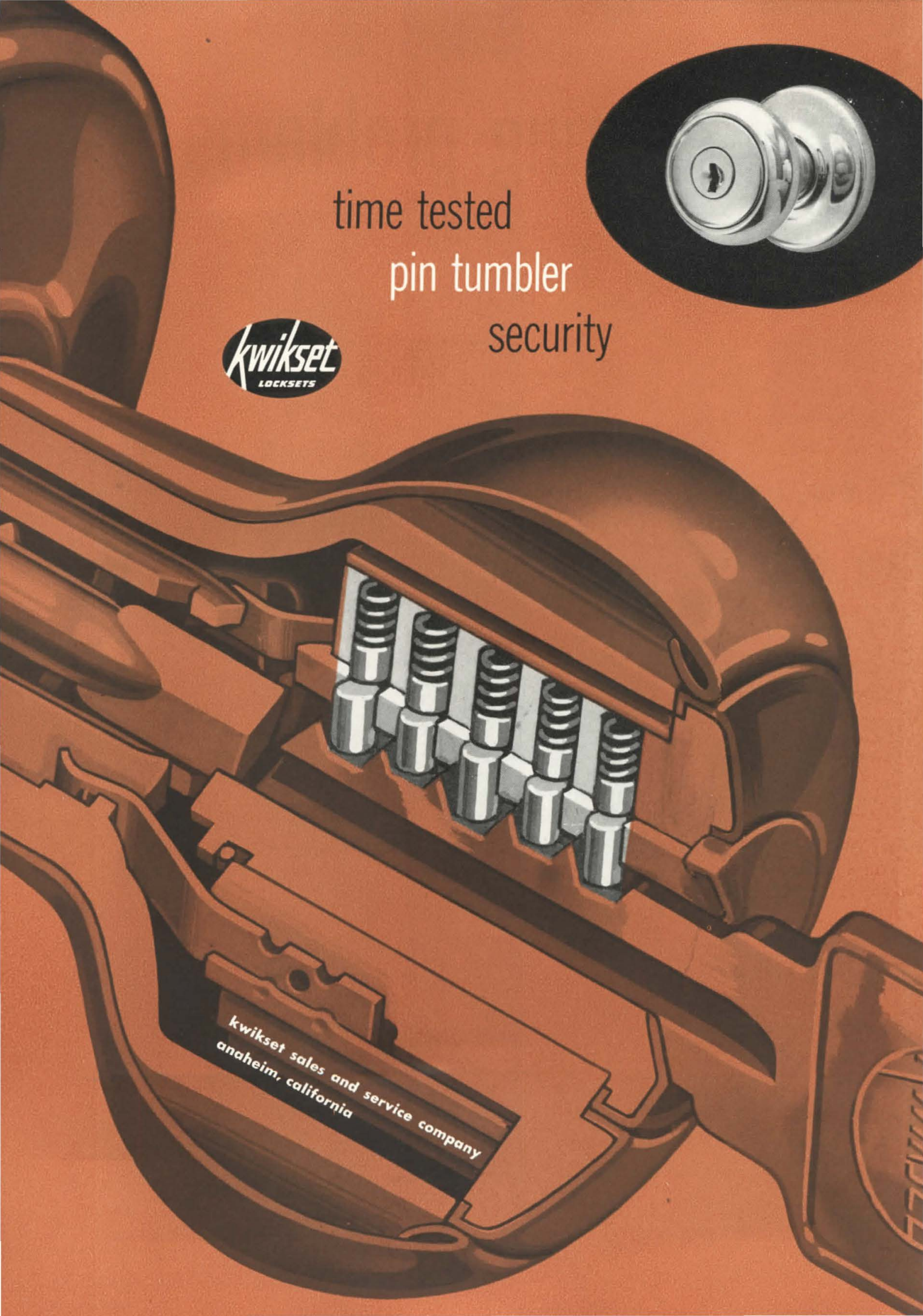
3. Easy Maintenance

4. True Resilience

or FLOORS
nd WALLS



4. This installation in the kindergarten of the Moccassin School, Buchanan, Michigan, again demonstrates the flexibility of Nairn Linoleum to reproduce the architect's design for an interesting, special-purpose floor.


time tested
pin tumbler
security
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LOCKSETS
kwikset sales and service company
anaheim, california

p/a

VIEWS

MARRIAGE OF INTERESTS

Dear Editor: I have just received a copy of the September issue of your Journal and have found very great interest in reading "The Pros and Cons of Architecture for Civil Defense." I should explain that as Master of Works and City Engineer to the City of Glasgow I was responsible during the greater part of the war for the design and construction of air raid shelters, £4,000,000 having been expended for the purpose. With the advent of new weapons of attack however, there is evidently a need to reorient thought upon the matter of what would constitute effective shelter protection, it being clear that no structure other than a continuous structure in steel or in reinforced concrete would be able to withstand the blast and other effects of the new type of weapons likely to be used in aerial attacks. Accordingly while much shelter protection was afforded during the last war within buildings having load bearing walls it would be useless to attempt to use buildings of this kind in which to provide air raid shelter protection in any future emergency.

The economies of providing shelter protection however, become of increasing importance and it would appear to be necessary that the provision of shelters for emergency use must be considered alongside the provision of other facilities for peacetime use. The view I have always held in considering such a marriage of interests is that the urgent problem of car parking in large urban centers should be dealt with in conjunction with the provision of shelter protection. Some years ago I went into this matter very carefully and enclose herewith copy of *Road International* which contains a paper by me on the provision of car parks in large urban centers. You will observe that no reference is made in the article of the possible use of the proposed form of car parks as air raid shelters but it will be clear that the adoption of the proposals at ground floor level in framed buildings coupled with the construction at the appropriate time of closing walls with suitably protected entrances combined with the removal of the light division screens would result in the speedy transformation of such forms of car parks into adequate air raid shelters. It will be observed from perusal of the table on pages 14 and 15 of *Road International* that the arguments of cause and effect inherent in the composition thereof have almost parallel application to the problem of providing air raid shelters in large urban centers. For instance a large number of small car parks (air raid shelters) is preferable to a small number of large car parks (air raid shelters). I might add that it would be unnecessary in order to carry the proposals into early effect to make use of all the proposed facilities. For instance the coin box and meter arrangements which eliminate the need for a cash attendant could be dispensed with and its absence made good by the employment of an attendant. It is quite clear that your Journal has sought to come to grips with this very real problem of finding the right answer to the question of providing protections against aerial attack and I could not read the views expressed by your various contributors without desiring to place at your disposal the result of my thoughts on the joint matters of air raid shelter protection and the provision of car parking in large urban centers. While I note that there is a considerable town planning background to some of the contributions made by the various writers in your journal I have refrained from making any observations on this angle. As author of the Planning Reports for the City of Glasgow I agree with the terms of your summary on page 80 wherein you state "Urban redevelopment along with a planned decentralized program based on regional power development, social need and transportation is to us a much more defensible concept."

A. SPROUL
per Robert Bruce
Glasgow, Scotland

NOT QUALIFIED

Dear Editor: May I congratulate you for your frank expression (P.S. October 1951) and state that I fully concur in your opinion that licensing bodies do not have the right nor are they qualified to give an examination in design or composition. Imagine Meade passing on Wright's design or vice versa!

Examining boards should become realistic if they are to have public confidence. The most important qualifications for good architectural practice are experience plus unquestionably high ethical standards, two matters which seem to receive little consideration by examining boards.

CHAS. WELLINGTON WALKER
Bridgeport, Conn.

FLUNKED ON STYLE

Dear Editor: In view of your interest in the situation here in Georgia with respect to registration for the practice of architecture, I am forwarding a copy of a memorandum to President Van Leer. This was sent him in response to his request that I supply him with a suggestion as to how he could answer a vitriolic letter which raked me over the coals because I had spoken of classical architecture as obsolete. Apparently the issue is causing a good deal of emotional reaction.

HAROLD BUSH-BROWN, Director
School of Architecture
Georgia Institute of Technology

September 14, 1951

MEMO TO: President Blake R. Van Leer
FROM: Harold Bush-Brown
SUBJECT: Our approach to the teaching of architecture Ref. Letter from Frank F. McNeel, dated Sept. 10

Our problems issued to design classes are all contemporary in nature: that is buildings, groups of buildings, community and city planning projects of a kind that the student will later be confronted with when he gets out into practice. I don't think anyone can quarrel with that or expect us to make the student design an Egyptian tomb or a Roman triumphal arch or a classical temple. The conditions of the problem are specific, and the solution is left up to the student. Any criticism or guidance he gets from his instructor is in the form of trying to hold him to fundamentals — functional planning, sound structure, economy and completeness of coverage, and the essentials of good esthetics. The style of architecture is never imposed; the expression is an individual matter, and the student is free to use his framework—and he can even go against his teacher's criticism if he disagrees. The way he learns is through the creative process and this means freedom to make his own decisions. It happens that the youth of today are interested in an architecture which is of today and not of the past, and I could go on about this quite at length. Suffice it to say that we as teachers do not intend to put our students in a straightjacket or force them away from the new and changing fundamental forms which are emerging from what modern science and technology have to offer by reason of the new materials and processes which have been placed at our disposal.

This of course does not mean that we disregard history or dislike classical art and architecture. I personally feel that the teaching of history is today as important as it has ever been, perhaps more so, and I can also develop this theme at length if you desire. I happen to admire classical architecture and believe that no one has ever evolved a more nearly perfect architecture than did the Greeks. But we are not Greeks, and we do not live in 450 B.C.; and our architecture and the character of our cities are bound to be different, just as our art is different from the Renaissance, and as our music is different from that of Mozart. That doesn't mean that we don't like to listen to Mozart, nor does it mean that we do not admire the Parthenon, but if you give a young composer the task of writing a symphony, you would hardly expect what he composes to sound like Mozart; and in the case of an architectural problem, in addition to a matter of art expressing the spirit of an era, there are the hard practical facts of structure and purpose which are at variance with the past and are inevitably making our architecture different.

People don't like change, and that is the only reason architecture has not

(Continued on page 10)

p/a VIEWS

(Continued from page 9)

changed more rapidly and why we still see about us the remnants of eclecticism. Incidentally, I am one who believes that the practitioner owes it to his client to find out what he wants and to give it to him (that of course does not preclude persuasion). There is bound to be a lag in any process of radical change and that is especially true in a practical profession such as architecture; but in my opinion there is no doubt that the change taking place is fundamental and will eventually be complete. I think we would be doing a disservice to our future practitioners if we try to warp them away from their natural bent, to try to hold back the hands of the clock, and artificially to try to change the spirit and character of our times.

It may be of interest to point out that not one of the 50 or more architectural schools in this country is any longer engaging in eclecticism. All students in all architectural schools are, without exception, so far as I know, designing in the contemporary manner.

With regard to the examination by the State Board, your statement which came out in the paper was right to the point. The exam was faulty in a number of respects. Very truly yours,

HAROLD BUSH-BROWN

EDITOR'S NOTE. *My* P. S. *column for October, dealing with the fact that 20 applicants for an architectural license in Georgia had flunked, an examination which called for "classic" design, has drawn a number of interesting responses, including one from the President of the Georgia State Board for the Examination and Registration of Architects, and one from a Special Committee of the Georgia Chapter, A.I.A., both scolding me for what I wrote. I have requested from these gentlemen additional facts regarding points which they say I reported "inaccurately," and their replies have not arrived as this issue goes to press. Both letters will be published next month. In the meantime, we understand that Bernard Tomson will have something to say on the subject in our January issue.* T.H.C.

NEEDS OF THE CORE

Dear Editor: In October 1951 P/A, you have a note regarding the recent C.I.A.M. Conference that exhibits were prepared by students of Harvard, Yale, Illinois Tech, and Pratt. I would like to inform you that, in addition to these exhibits, an exhibit illustrating the needs of the Core was also prepared by the Planning Workshop, affiliated with the Building Industries Division, National Council of Arts, Sciences, and Professions.

SIDNEY L. KATZ
Architects Associated
New York, N.Y.

THE BEST DEFENSE

Dear Editor: Was it Goering or was it a lesser Nazi light who boasted that when he heard the word "culture," he "reached for his automatic"?

It would seem that many of the associations that surrounded the word "culture" for the Nazis have come to surround the word "peace" for ourselves.

Hence our interest and hope in P/A's discussion of the atom bomb, and even more P/A's editors' forthright and cogent statement that the best defense against the atom bomb is the guarantee that it will not be dropped.

For the truth is that any talk of defense against the atom bomb cannot omit a discussion of defense against war itself.

Of course we do not intend to invalidate any steps in the amelioration of our cities that might be undertaken now or any other time. Our cities need redoing and need it desperately. But for heaven's sake let us not launch ourselves psychologically on the World War III bandwagon merely because it offers us as architects a chance to demonstrate this or that planning panacea.

For the real issue is a far bigger one. In fact it transcends mere professional considerations as much as our being *men* transcends our being architects. Let us remind ourselves that World War III, apart from whether it ever could end

(Continued on page 12)

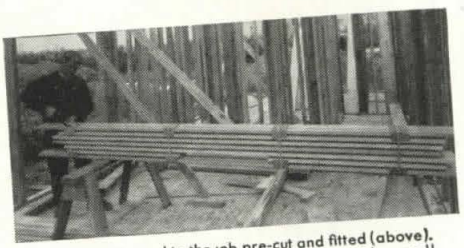
PANEL WINDOW SYSTEM

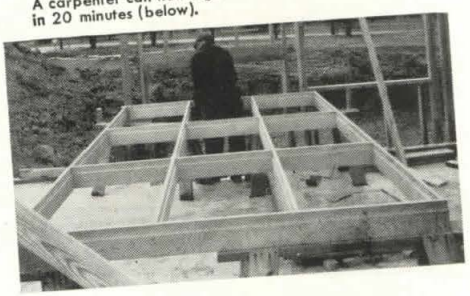
MAKES HOUSES MORE ATTRACTIVE . . . CUTS COSTS

As you know, home buyers today want big windows. Here's a money-saving, time-saving way you can meet that demand *and*—offer them homes glazed with *Thermopane** insulating glass, another appealing feature people want.

The answer is panel window frames. They are being used more and more because of their low cost, attractive appearance and sure-fire sales appeal.

Panel window frames are quickly and easily assembled from rabbeted 2 x 6's, pre-cut and fitted. In 20 minutes, one carpenter can nail together the members for a big 9-light panel window wall.





Frame delivered to the job pre-cut and fitted (above). A carpenter can nail together a 9-light window wall in 20 minutes (below).

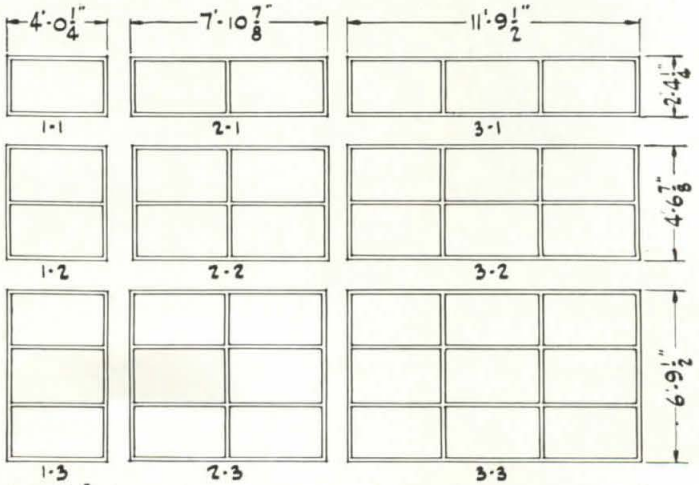
GIVES YOU THE ADVANTAGES OF FLEXIBILITY with the ECONOMY OF STANDARDIZATION

Panel windows are the answer to every space, light and ventilating problem. You have complete freedom in planning window and ventilating areas.

At the right are the basic frame units, 1 to 3 lights wide and from 1 to 3 lights high. These units may be used singly or in multiples for windows throughout the house. Top-hung ventilating sash may easily be set in as many openings as you choose. They can be readily screened and, when made of wood, can be weatherstripped.

In some parts of the country you can now get the 2 x 6 frames from prefabricators, shipped in a bundle to the site for quick assembly and glazing. Or they can be cut and rabbeted by the builder, or by a millwork supplier.

Only two glass sizes are needed for the entire house, 45½" x 25½" for fixed lights and 42½" x 22½" for ventilators. Both are low-cost standard *Thermopane* sizes in DSA window glass.



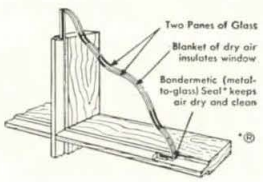
ADD ¾" TO DIMENSIONS SHOWN FOR ROUGH OPENING SIZE

WANT TO KNOW MORE ABOUT IT?...MAIL THE COUPON

FREE DETAILS . . . We will send you free, detail sheets showing how to make and install panel windows.

LOF GLASS *Thermopane*

LOOK FOR THE NAME ON THE SEAL BETWEEN THE PANES



Libbey-Owens-Ford Glass Company
18121 Nicholas Building, Toledo 3, Ohio

Please send me complete information on installation methods for low-cost window walls of *Thermopane*.

Name _____
(Please Print)

Address _____

City _____ Zone _____ State _____

p/a VIEWS

(Continued from page 10)

decisively or not, must necessarily wreak such a destruction of human lives and values as the last war could give only a suggestion.

We have a lot of atom bombs, but so presumably has Russia. As this letter is being written, we are officially informed that the Russians have dropped another atom bomb. Recently a member of the Senate-House Atomic Energy Commission announced that Russia could blast twenty to thirty of our cities at any time it chooses.

What is the answer? Assuredly it is not the manufacture on our side of more and better bombs. Unless we believe, as some of our powerful voices do, that World War III is inevitable, bigger and more ghastly armaments are not the answer. We may search history, but we will find no record of any armaments race leading to anything but war and the final utilization of those armaments.

There is an answer though, and the members of the Building Industry Division of the Council for Arts Sciences and Professions firmly believe that for the preservation of peace certain immediate steps are of compelling necessity. Firstly must come the rehabilitation of the word itself. Peace is not "appeasement," nor is it a surrender of American integrity. Peace is quite as honorable an American pursuit as war and it may be sought courageously and decently. In fact it must be sought for courageously, for to seek it one must be willing to defy McCarthy and McCarran, Luce, Hearstlings, and the whole gang of self-appointed spokesmen for American thinking. The plain fact is that peace has almost become a horrid word, and the pall of hysteria and witch hunt that has settled over the country has had its effect in silencing any but official opinion. And official opinion talks only of war and the inevitability of war.

Interestingly enough *The New York Times* which itself has never been backward in propogating the cult of conformity, nevertheless made a survey of 12 major colleges which it published last May under the title, "College Freedoms being Stifled by Students' Fear of Red Label." The article concluded: "A subtle creeping paralysis of freedom on thought and speech is attacking college campuses in many parts of the country, limiting both students and faculty in the area traditionally reserved for the free exploration of knowledge and truth."

Thought control is everywhere. The BID therefore believes, secondly, that if one truly wants peace, then side by side with the fight for peace must go the fight for the preservation of American liberties and the restoration of the rights of thinking, speaking, writing, and assembly guaranteed in our Bill of Rights.

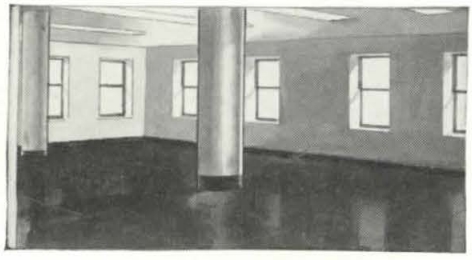
Thirdly, we advocate a conference of the great powers that sincerely and with open mind would attempt to settle our international differences. This would be a conference of equals based on mutual understanding and not on the mechanical counting of numbers of economic or political allies, a maneuver to which the UN has descended.

Lastly, we advocate a disarmament conference that would include total prohibition of the manufacture of the atom bomb together with the destruction of all bombs existing. In this connection it is interesting to recall that our own Baruch proposal for the control of atomic weapons was explicitly based on our own monopoly of possession of the bomb and the means to manufacture it. Since that proposal was first announced, however, Russia has developed the bomb. Yet the official U. S. position still remains the same. We have said again and again that we will not depart from its principles. But even a casual reading of the Baruch plan will show its complete inapplicability to the present situation.

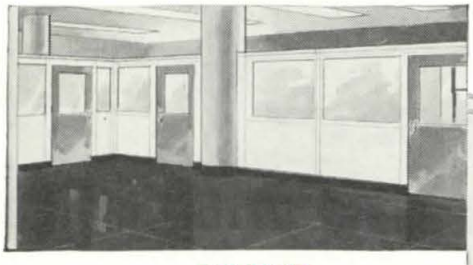
The best defense against the atom bomb is a workable policy that will outlaw the bomb and its threat of total destruction altogether, not plans for a "dispersed" population hiding, ostrich-like, from the consequences of its own folly.

HENRY WRIGHT
New York, N.Y.

How to reduce your clients' FUTURE EXPANSION COSTS



FROM THIS



TO THIS

WITHOUT THIS

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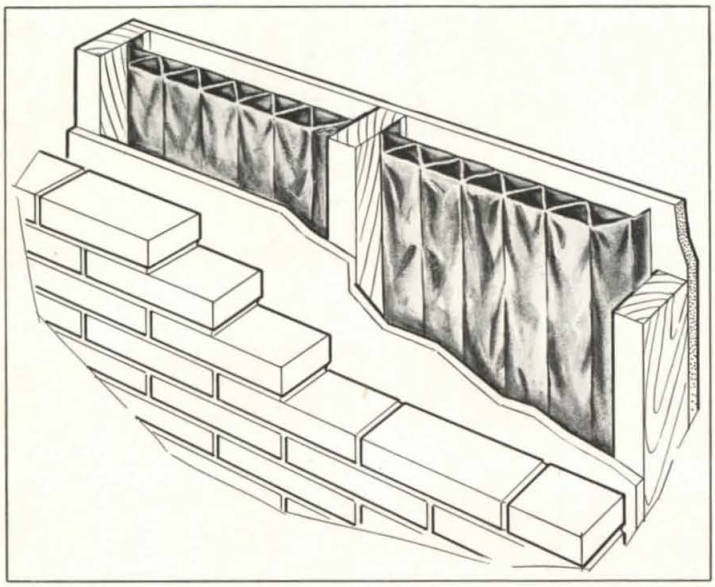

AGAINST HEAT AND COLD IN BUILDING SPACES

Ordinary iron is about 4 times better insulation in an air space than sheepswool, rockwool, asbestos, asphalt paper, brick, plaster, wood, marble, slate, tile, enamel. *Aluminum, brass, gold, silver, and many other metals are 40 times better.*

SPACE has slight density, therefore heat flow by CONDUCTION is slight. CONVECTION, which causes 15%-20% heat flow in space sideways, and 25% to 40% upwards, is BLOCKED by metals in space. RADIATION, responsible for 65% to 85% heat flow in space sideways and 55% to 75% upwards, is absorbed and emitted least by metal surfaces; from 1% to 5% with aluminum, brass, gold, silver; but over 90% with most building materials, including ordinary insulations.

Multiple sheets of metal, suspended in space, and spaced apart, make the supreme heat and cold insulation. One commercial form of this construction is Infra Accordion Aluminum Insulation, Types 4, 6, and 4 Jr.

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RADIATION AND ABSORPTIVITY CHART OF MOST BUILDING MATERIALS AND METALS
The facts contradict most people's preconceptions.

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Up-Heat	**C.134, R 7.46 = 3"**	**dry rockwool**
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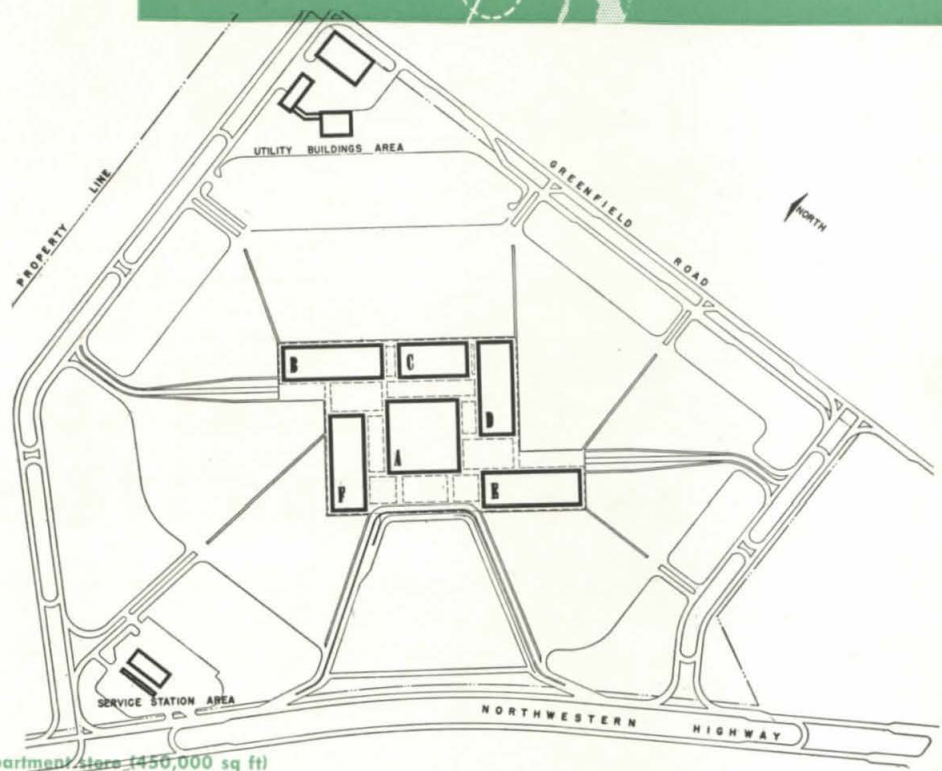
p/a

PROGRESS PREVIEW

shopping cluster near a defense center

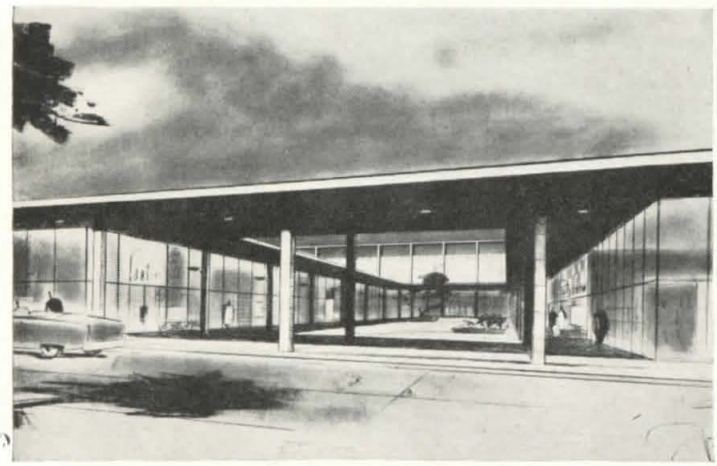


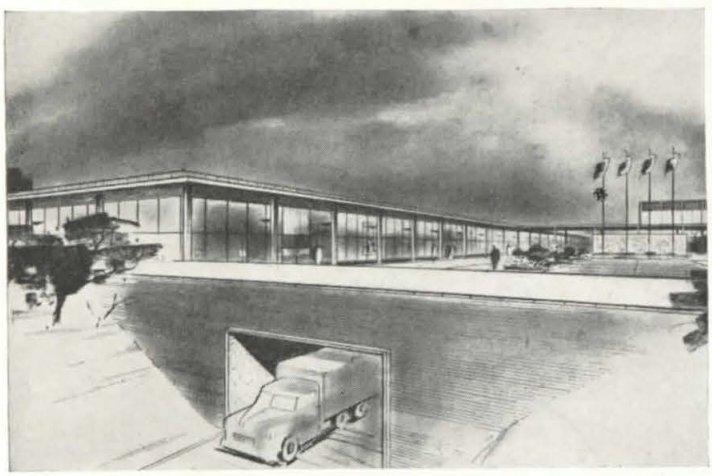
A Department store (450,000 sq ft)
B, C, D, E, F Tenant areas; storage and service basements (600,000 sq ft)

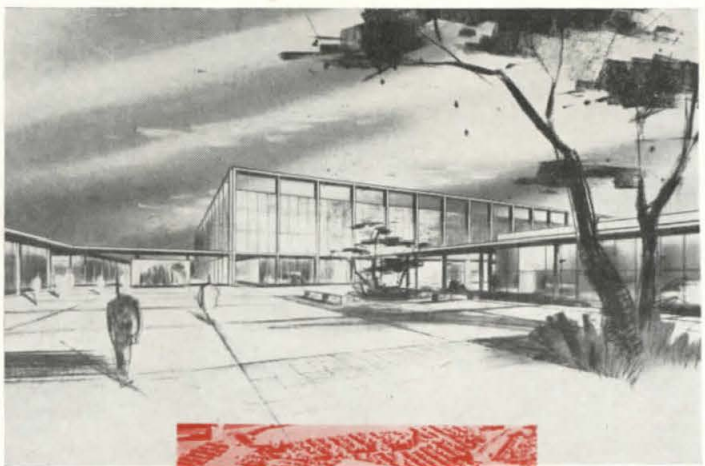
Working drawings now are being made in the Detroit office of Victor Gruen, architect*, for *Northland Center*, second project of the decentralization program of the J. L. Hudson Company of that city. An intensive economic, traffic and architectural research several years ago led to a decision to locate three (possibly four) shopping centers grouped around branch departments stores, at strategic points on the perimeter of the present metropolitan district. *Northland Center* is the second to be designed and will be built, along with

* *Victor Gruen, A.I.A., project architect; Karl O. Van Leuven, Jr., associate in charge; Edgardo Contini, structural design; H. E. Beyster Corp., associated engineers; Larry P. Smith, economic consultant; Homer Hoyt, market analyst; Lloyd B. Reid, traffic consultant; Fred Wilkins, associated, for Hudson Store interiors.*

(Continued from page 15)







Spaciousness of the mall and courts comprising pedestrian circulation for the department store and surrounding shops on the upper level of *Northland Center* is suggested by the architect's perspectives of features of the project. At lower left is shown the exit of the truck tunnel through the basement.

Eastland Center, when government regulations permit.

Size of the shopping cluster, which will occupy 184 acres of the 450-acre site bounded by two major traffic arteries and a secondary highway, was prescribed by the accessibility to the potential market, maximum parking capacity the traffic situation would permit, and other factors determined by the preliminary research. Because of possible traffic congestion at the intersection of the major traffic arteries, the project was located well within the site and secondary access roads were introduced. Less intensive uses (services and possibly a future medical building or other single-purpose structure) are thought valid for the traffic-bound tip of the property. Actual development is to be in two stages: approximately 80 acres in Stage I with property intended for future expansion developed as a greenbelt and garden area to serve as a buffer for adjoining residential properties.

In contrast to *Eastland Center* (a ring scheme), *Northland Center* is designed as a cluster of one-story stores, shops, markets, restaurants, etc., grouped around garden courts and a pedestrian mall surrounding a three-story Hudson department store,

(Continued on page 19)

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R. R. Donnelley & Sons, Co., Chicago, with over 31,000 sq. ft. of Federal-*Featherwei* Precast Channel Roof Slabs. Archt. Albert Kahn Associated Architects & Engine Inc., Detroit; Contr. Peter Hamlin Constr. Co., Chicago.

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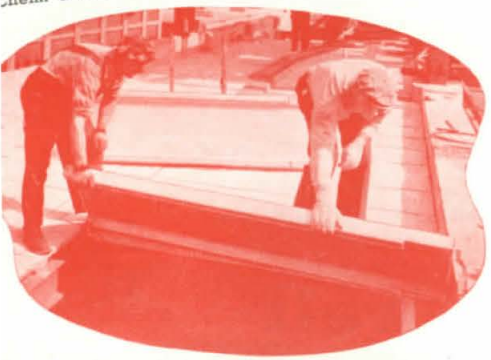

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— and for help with the temperature control, the architect talked to Honeywell!

It's plain to see cartoonist Sam Cobean's wacky characters have their own ideas on how to inspect a home.

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Honeywell *can* help architects and their heating engineers provide the proper thermal environment for any client—anywhere—in any kind of structure. We have a lot of well informed control engineers—in our 91 different offices—who are experienced in doing just that. And we have a lot of literature that's yours for the asking—on the automatic control of heating, ventilating and air conditioning.

So, why not *talk to Honeywell?* Why not *write to Honeywell* about *your* control problem? And why not do it *now?*

For more information on how the Honeywell organization can help you solve your control problems, see the column across the page.

MINNEAPOLIS
Honeywell
First in Controls

(Continued from page 16)

with mezzanine, basement, and penthouse. Tenant areas have storage facilities in related basement areas which are co-ordinated with freight-truck tunnels and loading platforms, service areas, etc. Thus the complex services for merchandising will be out of sight, sound, and smell of the shopper. Construction will be reinforced concrete throughout and the buildings will all be air conditioned.

"In this plan the tenant buildings cluster around the major department store, completely enclosing it, rather than extending like wings in either direction, as they do in the typical mall layout," the architect points out. "The cluster achieves for the shopping center as a whole the *maximum benefit of the pedestrian traffic* the department store generates.

"With this plan, every location is Grade A, either because of its direct relation to the department store, or because it faces a passageway to the center courts, or because it has maximum access to the parking areas."

The department store will also have direct contact with the parking areas at the basement level on one side, where the parking area will be depressed. In Stage I, there will be provision for parking 5000 customers' cars and 1000 employes' cars.

In Stage II, two more "junior" department stores will be added at ends of the center, grouped with additional tenant areas. Parking facilities will be increased to accomodate 9000 customers' cars and 1500 employes' cars. Anticipating this additional load, the architect has set mechanical requirements — steam, electricity, chilled water, sanitary and storm sewers, etc.—for the ultimate development.

Features of *Northland Center* as described by Gruen include:

"All of the buildings, including the department store, will be surrounded by a colonnaded walk to permit sheltered shopping in all seasons of the year. The colonnade will be sufficiently high so that complete store fronts for each tenant can be developed under its protective shelter. No signs will be allowed on the face of the colonnade, the building area above, or hanging from the colonnade ceiling.

(Continued on page 20)

p/a

PROGRESS PREVIEW

(Continued from page 19)

"The buildings will all be connected by covered walks. These walkways will repeat the character of the colonnade and provide uninterrupted, all-weather shopping throughout the center.

"The two large courts which break up the mall pattern will be landscaped and contain minor merchandising units, such as soda fountains, snack bars, and small specialty shops. They will have shaded resting pavilions connected with the landscaped areas to provide sheltered waiting for the relaxation and ease of the shoppers.

"To break up the vista through the courtyards and along the colonnade, sections between columns will be screened off here and there by trellises or by solid mosaic panels. Directories to orient the shopper will be combined with these visual breaks, as well as small, decorative fountains, drinking fountains, mail boxes, waiting benches, etc.

"The entire shopping center will be air conditioned. Steam and chilled water for the individual tenant units will be provided from a central utility plant.

"The basement receiving and loading system will effectively separate truck and service traffic from vehicular and pedestrian shopping traffic, contributing to the convenience and safety of both the shoppers and the service personnel.

"In front of the first-floor entrance and directly over the basement entrance to the department store, a bus stop has been located to serve the entire center.

"A music shell, or outdoor stage, is located in the courtyard in front of the department store. In addition to its use for summer outdoor features, this stage, together with the other two court areas, will be available for general promotional activities for the entire shopping center."

NOTICE

Citation

UNITED NATIONS SECRETARIAT and FOOTE, CONE & BELDING were cited as Offices of the Year by the magazine *Office Management and Equipment*, sponsor of the awards, at a luncheon held October 22.

To stimulate high standards of office design and equipment, the awards are given annually to the winning offices in each of two categories—offices employing more than 500 persons, and those employing less than that number.

Architects for the above mentioned offices are HARRISON & ABRAMOVITZ and FRIEDMAN, ALSHULER & SINCERE, respectively. HARPER RICHARDS was the designer for the F., C. & B. offices.

Other architects receiving honorable mentions were BENHAM, RICHARDS & ARMSTRONG for the Farm Bureau Insurance Cos.; REINHARD, HOFMEISTER & WALQUIST for Dun & Bradstreet, Inc.; RICHARD J. NEUTRA for the Northwestern Mutual Fire Association; and CARSON & LUNDIN for the First National Bank of Tulsa.

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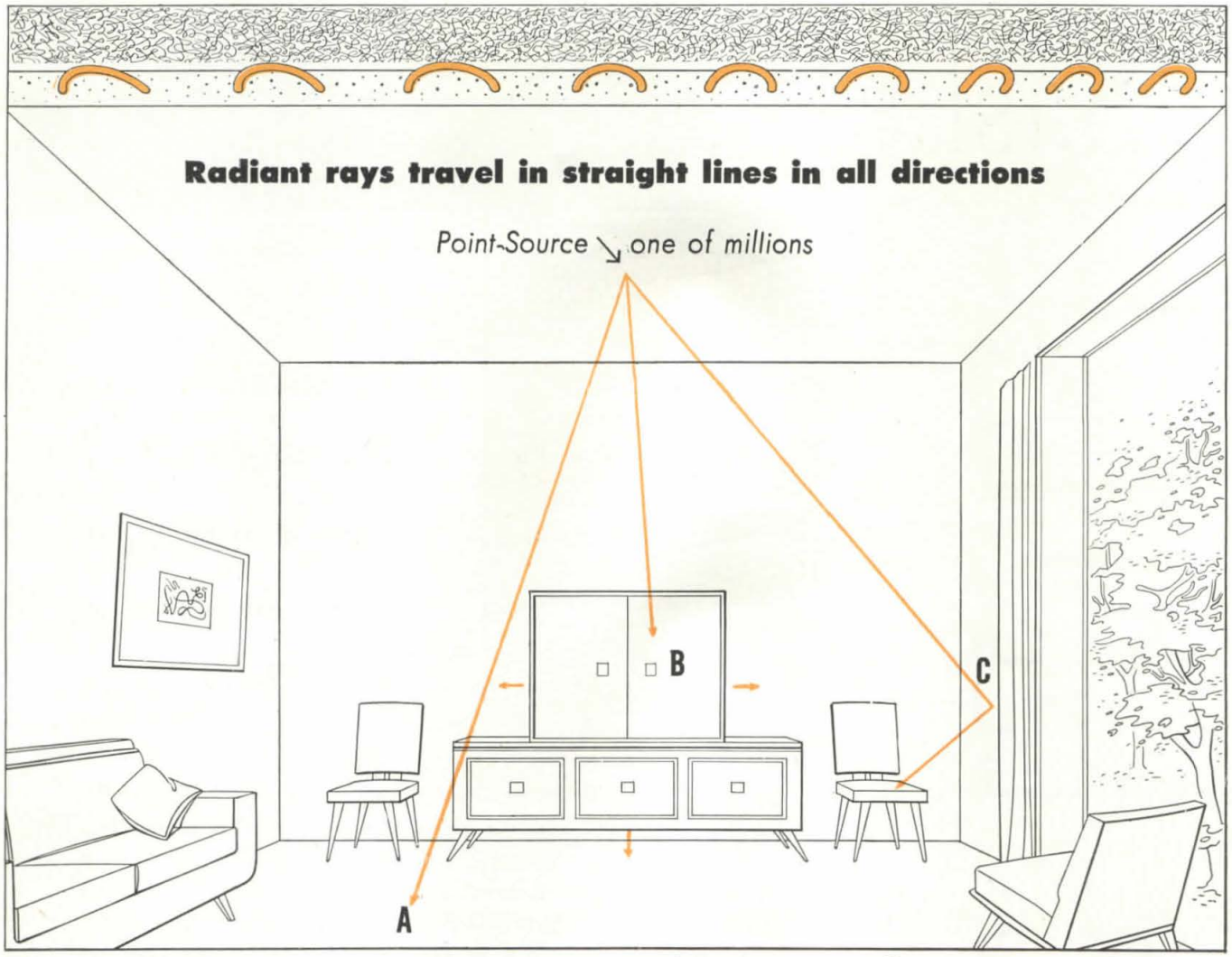

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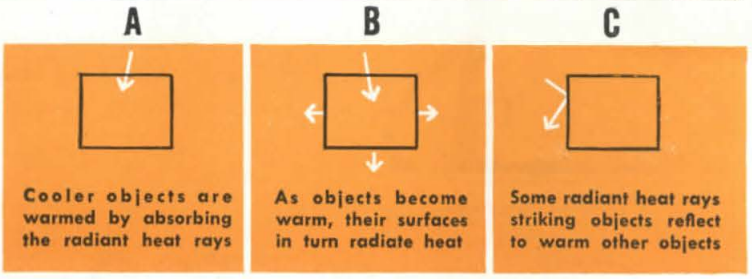

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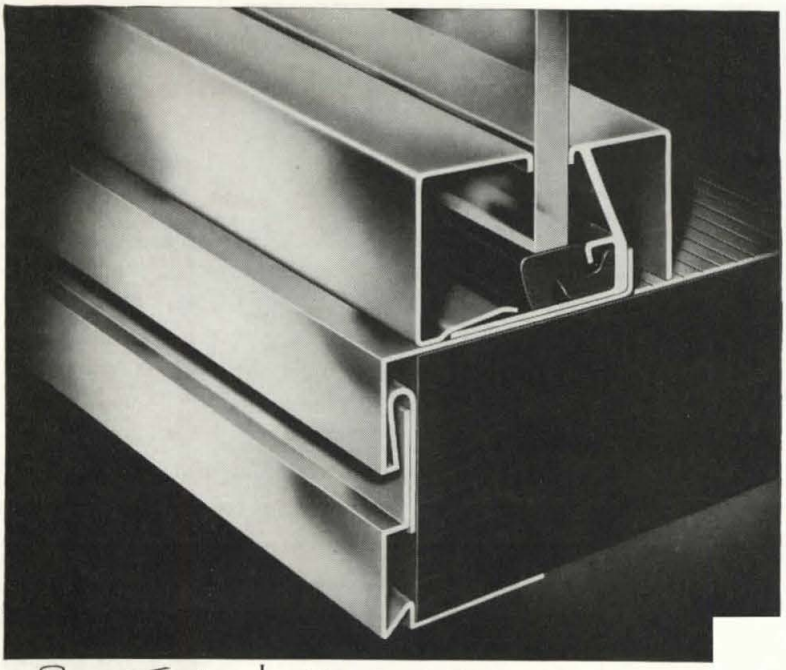

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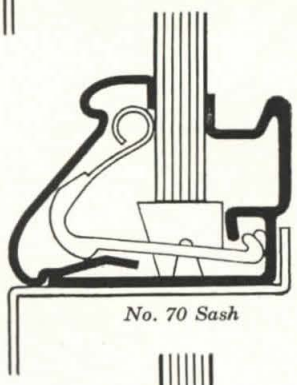
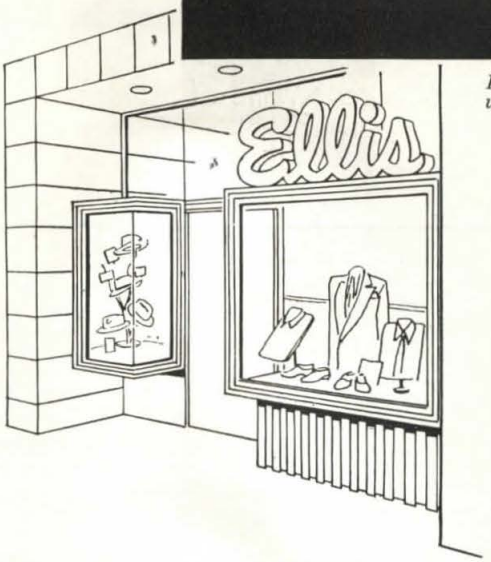


No. 70 Sash

No. 72 Double Face Sash



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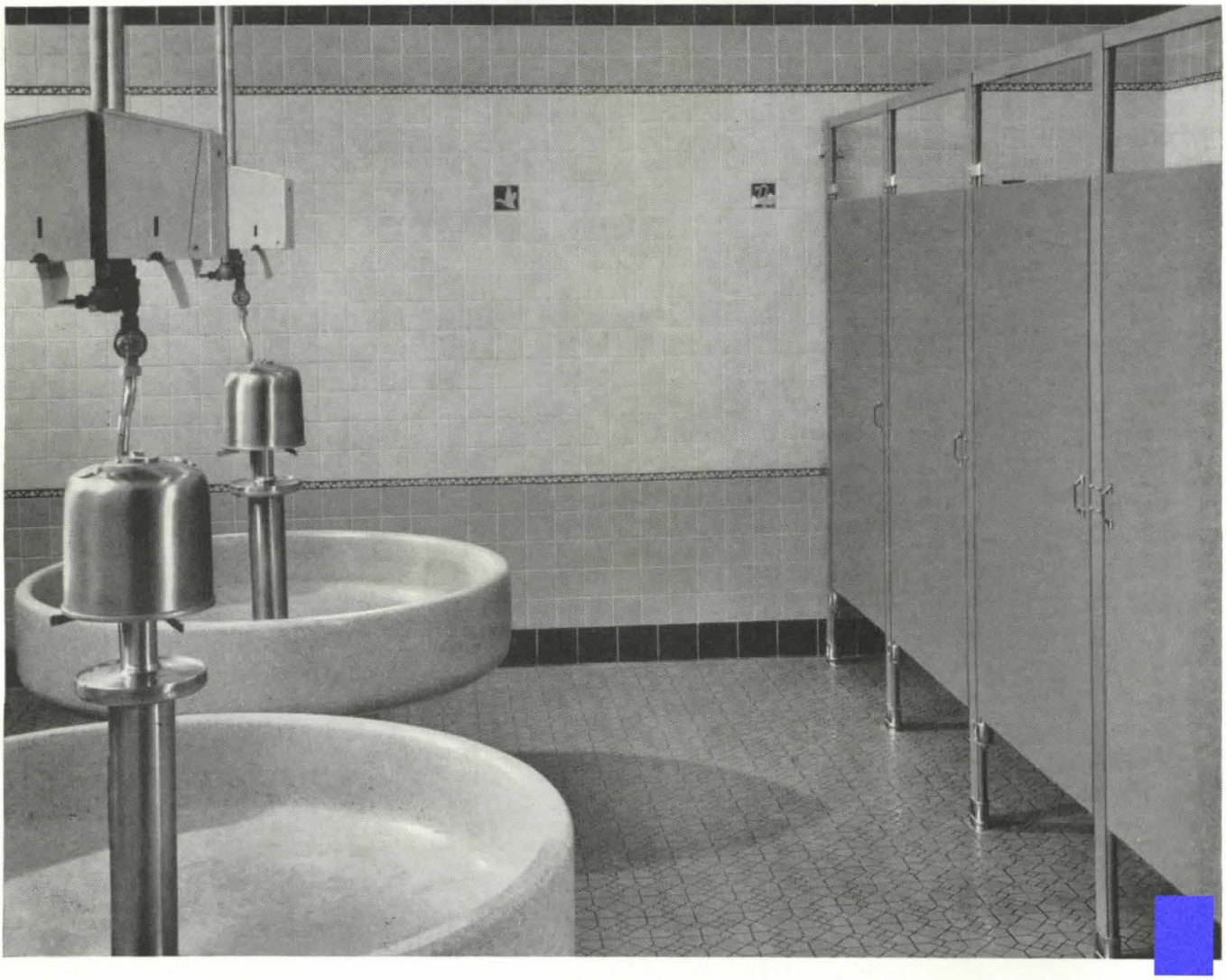

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The Mengel Company is now able to offer you African *Mahogany* Flush Doors at prices actually *less* than you pay for *many* domestic woods!

Operating its own large logging concession and mill in the best Mahogany section of Africa, Mengel imports this King of Woods in tremendous volume. The savings of these large scale operations are passed on to you.

What's more, when you choose Mengel Mahogany Flush Doors, you're assured of finest construction, guaranteed by the world's largest manufacturer of hardwood products. Mengel Mahogany Flush Doors have been tested and proved in thousands of installations. *Better doors cannot be bought!*

Let us tell you about the extra quality, the extra luxury, the extra *value* of Mengel Flush Doors in genuine *Mahogany!* Mail the coupon for complete information.

The Mengel Company . . . America's largest manufacturers of hardwood products • growers and processors of timber • manufacturers of fine furniture • veneers • plywood • flush doors • corrugated containers • kitchen cabinets and wall closets

THE MENGEL COMPANY
Plywood Division, Louisville 1, Ky.

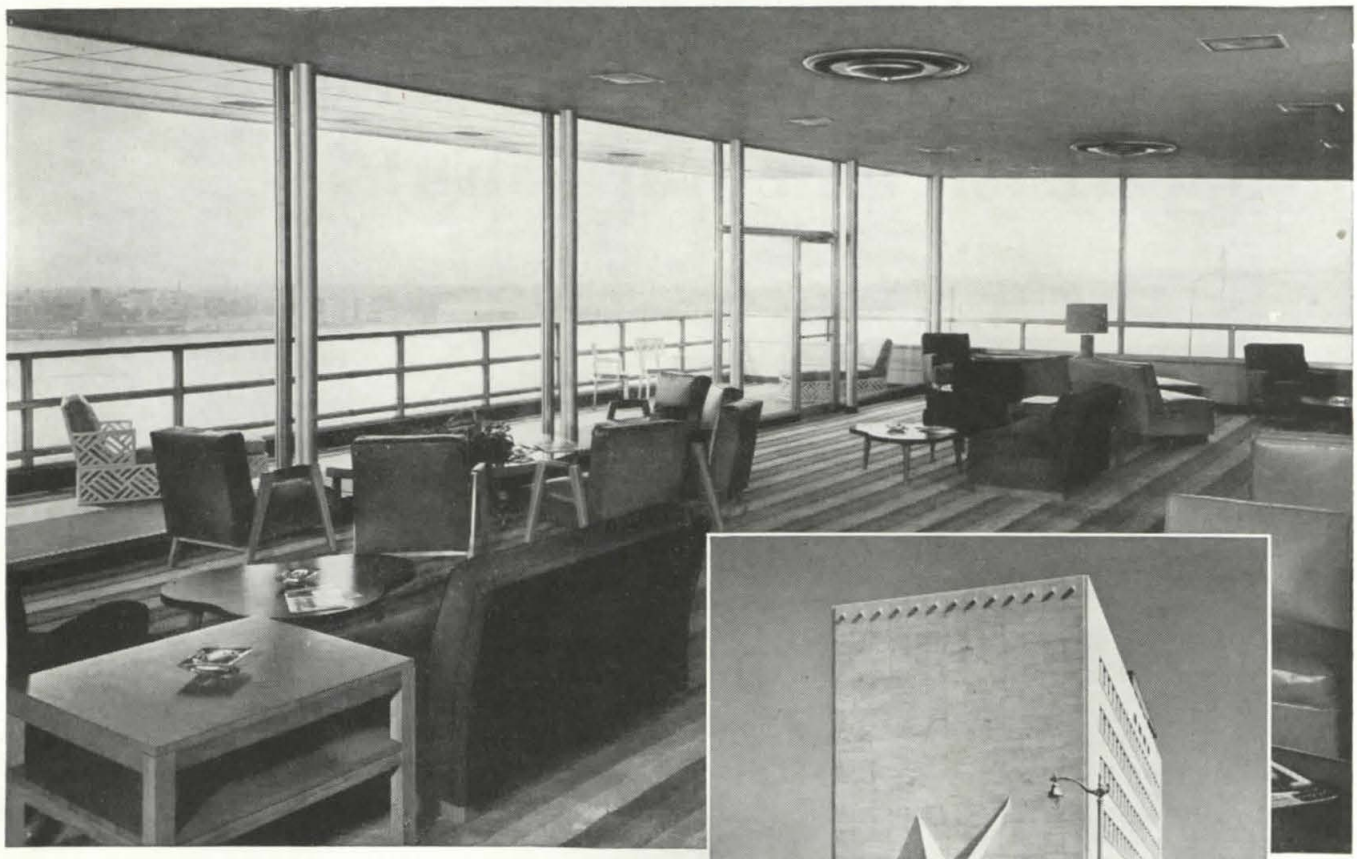
Gentlemen: Please send me full information on Mengel Mahogany Flush Doors—both Hollow Core and Stabilized Solid Core.

Name_____

Firm_____

Street_____

City_____ State_____



Simply beautiful

kno·draft

adjustable air diffusers

In their beautiful simplicity of line, Kno-Draft Adjustable Air Diffusers are grace notes for any decorative theme. But unless you just happened to look ceilingward, you might not ever notice them in the modern lounge above. Nor would they be more obtrusive in period surroundings.

Certainly, Kno-Draft Adjustable Air Diffusers will never call attention to themselves by discomforting the occupants of any room. All that their name implies, Kno-Draft Adjustable Air Diffusers circulate air gently and *without draft* . . . keep temperature uniform throughout the conditioned area. Air volume and flow pattern are adjustable *after* installation . . . thus simplifying the engineering of the job as well as providing flexible control to meet both present and future conditions.

Lounge and exterior, Veterans Memorial Building, Detroit, Mich.
Architects and Engineers: Harley, Ellington & Day, Inc., Detroit, Mich.
General Contractors: Kuhne-Simmons Co., Inc., Detroit
Air Conditioning Contractors: American Refrigerating Co., Detroit

You'll find Kno-Draft Adjustable Air Diffusers in many of America's notable and architecturally significant buildings. Whatever the air conditioning requirements, there are types and sizes to meet them. Write us for detailed information.

KNO-DRAFT DATA BOOK: Complete specifications, engineering and installation data on Kno-Draft *Adjustable* Air Diffusers. To get your copy, simply fill in and mail the coupon. No obligation, of course.

W. B. CONNOR ENGINEERING CORP.
Danbury, Connecticut
Air Diffusion • Air Purification • Air Recovery
In Canada: Douglas Engineering Co., Ltd.,
190 Murray Street, Montreal 3, P. Q.

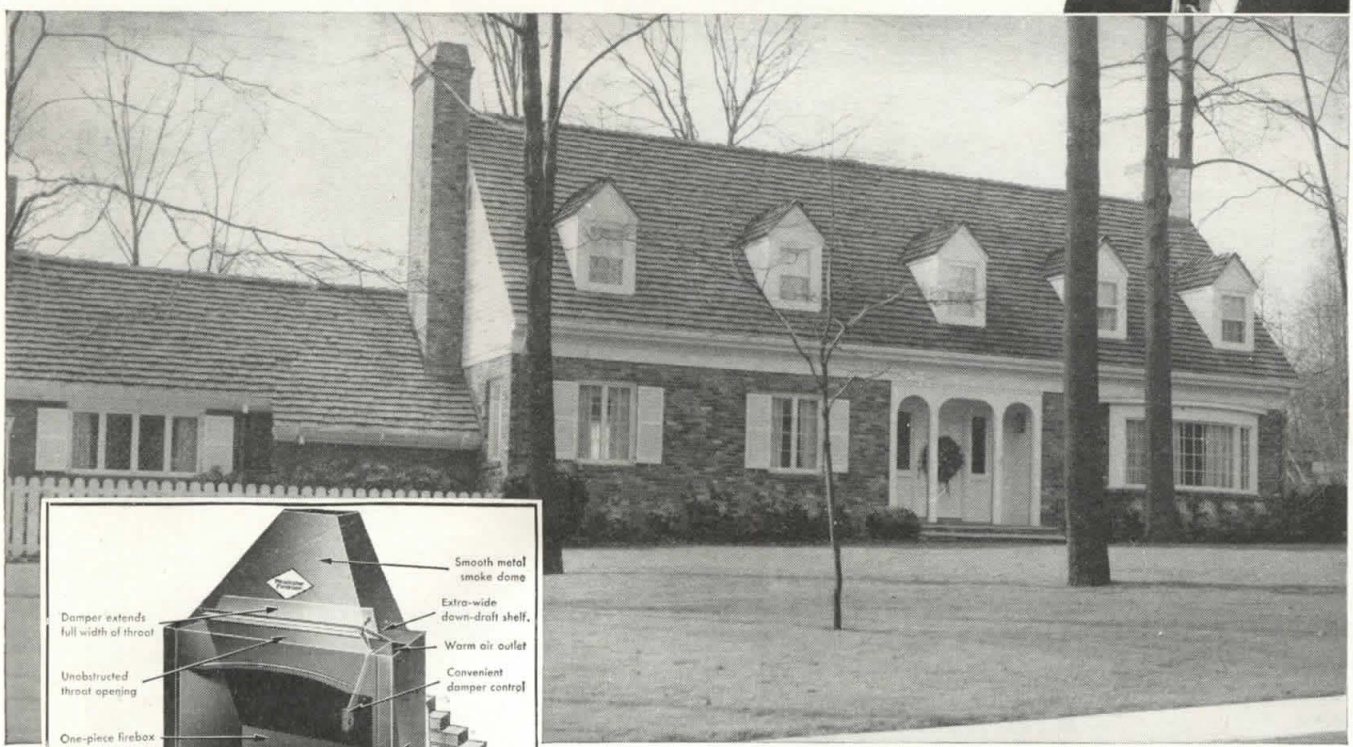
W. B. CONNOR ENGINEERING CORP.
Dept. V-121, Danbury, Connecticut

Please send me, without obligation, my copy of the Kno-Draft Air Diffuser Data Book.

Name .....
Position .....
Company .....
Street .....
City ..... Zone ..... State .....

"A Heatilator Fireplace cuts my supervision time way down!"

says **CARL KEMM LOVEN**
Nationally-known Architect, Glen Rock, New Jersey



This beautiful home is typical of many designed by Carl Kemm Loven that include the Heatilator Fireplace.

There are many Heatilator installations throughout the country such as this lovely Early American style.

"YOU'LL avoid trouble with a fireplace smoking or not drawing properly if you use a Heatilator* Fireplace unit," says Mr. Loven. It is factory engineered and designed so that even an inexperienced mason can install one *with a minimum of supervision.*

NO LIMIT TO DESIGN. A versatile architect, Carl Kemm Loven has designed scores of beautiful homes, summer camps and hunting lodges of every style and decorative treatment. The Heatilator unit fits into his plans perfectly because it allows complete freedom of architectural expression with no restrictions on mantel design or use of materials. It is a scientifically designed, heavy-gauge steel form, complete from hearth to flue, around which any style of fireplace can be built.

A LIFETIME OF EXTRA COMFORT. "A fireplace should be more than a decoration," says Mr. Loven. "My clients want extra comfort, too, and a Heatilator Fireplace gives it". It circulates heat to warm the entire room instead of giving off a little radiant heat and wasting the rest up the chimney.

PROVED FOR 24 YEARS. For complete client satisfaction, specify the Heatilator Fireplace... the first practical method of circulating fireplace heat. The name Heatilator is on both the dome and damper handle. Write today for complete specifications and illustrations. Heatilator, Inc., 9212 Brighton Ave., Syracuse 5, New York.

* Heatilator is the registered trademark of Heatilator, Inc.

HEATILATOR *America's Leading* FIREPLACE

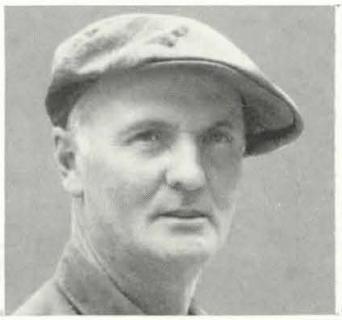
T.M. REG. U.S. PAT. OFF.

Better, Lower-Cost Homes for Your Clien s!

Architects everywhere are giving their clients *better homes at a lower cost* by specifying INSULITE BILDRITE SHEATHING instead of wood sheathing. Read how these builders (below) are building stronger, better-insulated walls with BILDRITE—and cutting their costs on every home. And naturally you're interested in these other BILDRITE advantages . . . tremendous bracing strength—waterproofed throughout—no warping or buckling. You can specify BILDRITE SHEATHING with *confidence!*

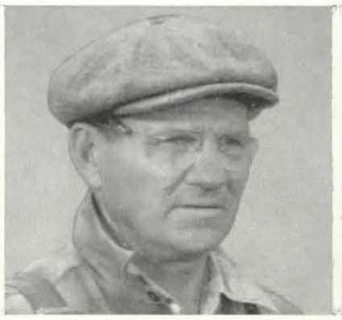
"Insulite Bildrite Sheathing saved me **$286.00** on my latest job. I'm getting superior sheathing jobs, too, because Bildrite is waterproofed throughout and therefore doesn't warp or buckle on the job."

Thomas W. Giles, *General Contractor, Cleveland, Ohio*



"I use Insulite Bildrite Sheathing because it's the best on the market. It also saves me **$169.00** on every house I build."

John Tarolli, *Syracuse, New York*

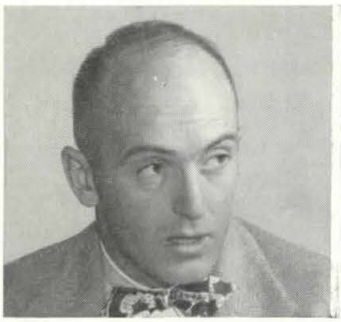


"By using 4-foot Bildrite Sheathing instead of wood sheathing, we eliminate corner-bracing, and also save approximately **$100.00** on every job. We also get far more bracing strength."

Leslie H. Braatz, *L. H. Braatz & Son, Milwaukee, Wisconsin*

"We saved up to **$200.00** per building by using 4-foot Bildrite Sheathing on our Rose Vista apartment project. We've found we get stronger walls with Bildrite . . . without corner-bracing."

E. R. Daleen, *Sauers Construction Co., St. Paul, Minnesota*

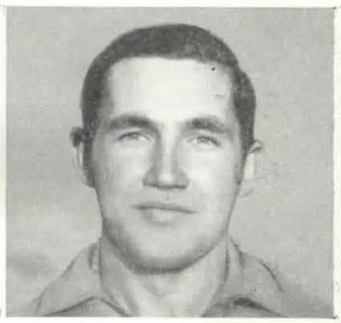


"While building my own home recently, I saved **$253.00** and got stronger, better-insulated walls by using Insulite Bildrite Sheathing and Insulite Shingle-Backer."

George Flagler, *Lynn Construction Co., Chicago, Illinois*

"We save **$105.00** on every job by using 4-foot Bildrite Sheathing (**$40** because of lower application costs, **$25** by eliminating corner-bracing, and **$40** by using Insulite Shingle-Backer on our walls)."

Roy Olson, *Minneapolis, Minnesota*

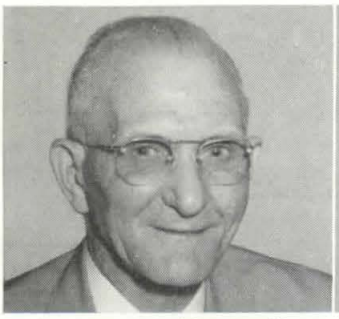


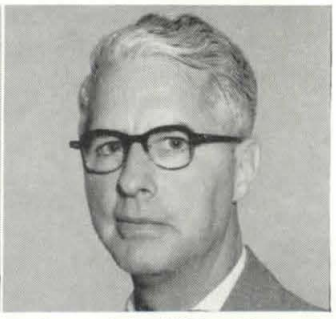
"4-foot Bildrite Sheathing gives us far greater wall strength than we'd get with horizontal wood sheathing—and saves us **$100.00** per job besides."

Stanley Orlikowski, *Quality Builders, Milwaukee, Wisconsin*

"There's no doubt in my mind—Bildrite is the best sheathing on the market. What's more, I actually saved **$218.00** on my latest job by using Bildrite instead of wood sheathing."

Robert Uetz, *General Contractor, Des Moines, Iowa*

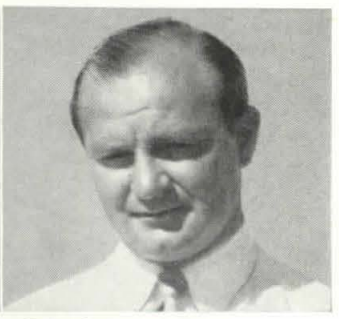




"We've made considerable savings this year—at the rate of about **$100** per job—by using Bildrite Sheathing. But most important is the fact that Bildrite gives us the best sheathing on the market. It doesn't warp or buckle, even after long exposure to the weather, and has great structural strength."

Earl S. Snyder — Hugh J. Bartley

Snyder-Adler-Bartley Construction Co., Toledo, Ohio

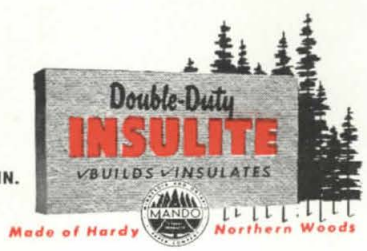


"We're saving over **$100.00** per house by using Bildrite Sheathing on our 365-unit project in Cleveland. Besides, Bildrite is waterproofed throughout and is easier to cut and apply than wood sheathing. And we're also eliminating corner-bracing on every job."

Al Azolino — Charles Delia

Lath-Rite Builders, Cleveland, Ohio

Send for free "Cost-Comparison" folder . . . figure out in *dollars and cents* how much you can save *your* clients by specifying BILDRITE SHEATHING. Just drop us a card at the address below.



12-51

INSULITE DIVISION • MINNESOTA AND ONTARIO PAPER COMPANY • MINNEAPOLIS 2, MINN.

Insulite and *Bildrite* are Reg. Trade-Marks, U. S. Pat. Off.

When should heating equipment go to pieces?

Only when you want it to. When conditions change, for example, equipment that's built in sections can easily be broken down and switched from one place to another.

Carrier's blower-type Heat Diffusers are flexible that way. Specify them today for heating or ventilating a factory or a warehouse . . . a garage or an armory. Years from now they'll still do a complete heating job no matter how much the building's been changed.

You can set them on the floor. You can mount them from the ceiling or trusswork. Or, because they're built in sections, you can easily convert a floor model to a suspension model if you wish.

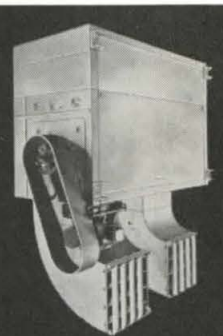
Plants are expanding. Assembly lines must change. Warehouses will get bigger. When they do, it's easy to redirect the warmed air because of Carrier's different types of discharge outlets, each with adjustable louvers.

Carrier Heat Diffuser capacities range up to 1,720,000 Btu's per hour. Air handling capacities go up to 25,000 cfm. For complete information write Carrier Corporation, Syracuse 1, New York.

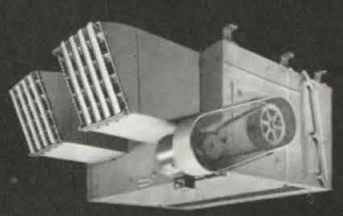
Carrier Industrial Heating Equipment is playing an important role in our nation's present defense effort just as it did in World War II. This type of equipment is used extensively to provide heat economically in industrial plants producing war materials, as well as in plane hangars, barracks, Army and Navy depots and similar military establishments.

Carrier

AIR CONDITIONING
REFRIGERATION
INDUSTRIAL HEATING



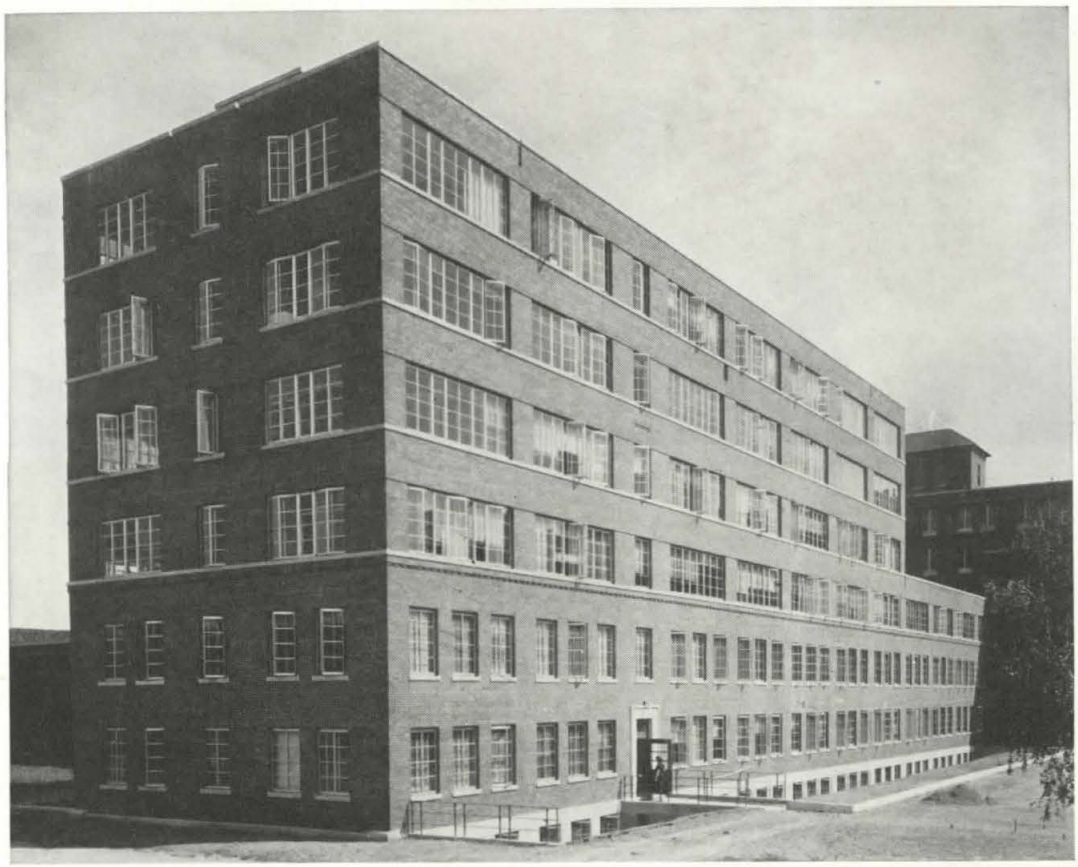
Carrier 46P Heat Diffuser. This vertical suspension type doubles quickly as a floor model when it is necessary.

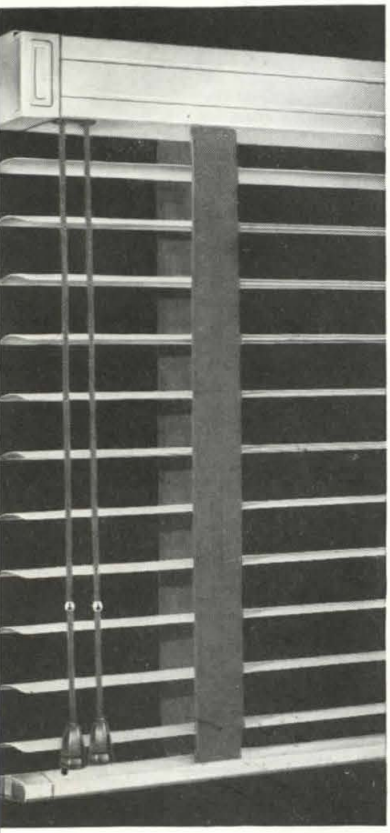


Carrier 46R Heat Diffuser. For horizontal suspension from ceilings or trusswork. V-belt drives permit easy adjustment.

Carrier 46Q Heat Diffuser. Multiple discharge outlets and adjustable louvers supply flexible heating for large areas.

Venetians made with LEVOLOR Orange Line (De Luxe) enclosed heads, 88 slats and bottom bars, are installed in the new Atomic Energy Commission Building at the University of Rochester. Waasdorp & Northrup, Architects; Stewart & Bennett, Inc., General Contractors.





e are features that set LEVOLOR-built etians apart: smart, enclosed head that ses finest precision-built hardware; dur-, springy plastic-coated metal slats; ends disappear in the sleek bottom All are chip-, mar- and stain-resistant. one gentle pull makes tilt-cords even, ks to the LEVOLOR patented tilter hanism.

our catalog in Sweet's Architectural File, -3A, and Sweet's File for Builders, 3E-5.

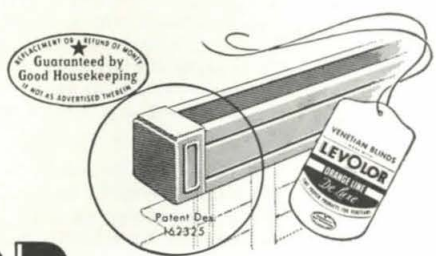
Architects for centers of learning have learned to specify LEVOLOR-equipped Venetians

On the basis of their sound design, efficient operation and long service-life, LEVOLOR-equipped Venetians were installed throughout the new Atomic Energy Commission Building at the University of Rochester. They feature enclosed metal heads; gleaming durable plastic-coated metal slats for easy cleaning; and slender, well-tailored bottom bars that conceal all tape ends!

Specify LEVOLOR . . . and be sure of the best.

Send for your free copy of the LEVOLOR *Architects Manual for Venetian Blinds* (AIA 35-P-3) . . . 16 pages giving you all the factual and visual assistance you need for any installation.

Levolor Lorentzen, Inc., 391 West Broadway, N.Y. 12, N.Y.



LEVOLOR-built Venetians are identified by this head design and this tag.

Specify **LEVOLOR** Trade Mark

Time-proven Products for Venetians

STOP RUST WITH RUST-OLEUM

Effective, long-range *rust control* must start in the plans and specifications for any structure — particularly when iron and steel are important structural materials. Architects and builders find that RUST-OLEUM offers excellent protection — particularly in hidden or inaccessible areas where damaging rust conditions can breed unchecked.

It's particularly essential to safeguard the strength and usefulness of structural columns and beams, metal deck ceilings, crawl spaces and many other details of construction. These are readily damaged over the years where fumes, manufacturing processes and condensation due to limited ventilation cause serious rust damage that may threaten the safety and life of the entire structure.

RUST-OLEUM'S capacity to stop rust has been proved in industrial applications for many nationally-known companies, and leading railroads for the past 25 years. Its tough, pliable, rust inhibiting film resists the basic causes of rust — dampness, brine, salt air, and general weathering — indoors and outdoors.

Discuss effective *rust control* with your clients. To solve your rust-in-construction problems, recommend RUST-OLEUM. Specify RUST-OLEUM as the primary or shop coat on all steel, metal sash, structural beams and bar-joists, fire escapes, etc. Your clients will readily recognize that future protection of sealed-in steel begins with the primer coat.

We're ready at all times to consult with you on rust problems and offer specific recommendations. See the complete RUST-OLEUM catalog in *Sweet's* Architectural File, or write for a copy. Industrial Distributors in principal cities of the United States and Canada carry large stocks of RUST-OLEUM for immediate delivery.

"RIGID ECONOMY, MON!"

Available in many COLORS aluminum and white

Beautifies as it Protects

RUST-OLEUM CORPORATION

2523 OAKTON ST., EVANSTON, ILL.

How to floor the RAINBOW

Design choice is unlimited when you specify Flor-Ever floorcovering made of VINYLITE Brand Resins. Twenty-one lighter, clearer colors in tile form or by the yard make possible more different patterns and effects...more *individualized* beauty!

And don't forget the extra bonus of *wear*. Floors covered with these amazing materials withstand years of hard service without losing their brand-new look. That's because VINYLITE Resins strongly resist water, wear, soap, cleaners, foods, grease and even acid and alkali solutions. Because they are relatively non-porous, dirt can't sink in. Waxing improves the luster, but is *not* needed for protection. Their unique resiliency means quiet comfort underfoot.

These impressive qualities are reason enough for the ever-growing use of flooring made from VINYLITE Resins in homes and public buildings. Defense needs are cutting into civilian supplies, but available materials are as carefully formulated and quality-controlled as ever. Let us send you a list of suppliers. Write Dept. LJ-58.

Flor-Ever is made by Delaware Floor Products, Division of Congoleum-Nairn Inc., Wilmington, Del.

Vinylite BRAND **RESINS**

TRADE B MARK

BAKELITE COMPANY

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Union Carbide and Carbon Corporation

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30 East 42nd Street, New York 17, N. Y.

how an Architect

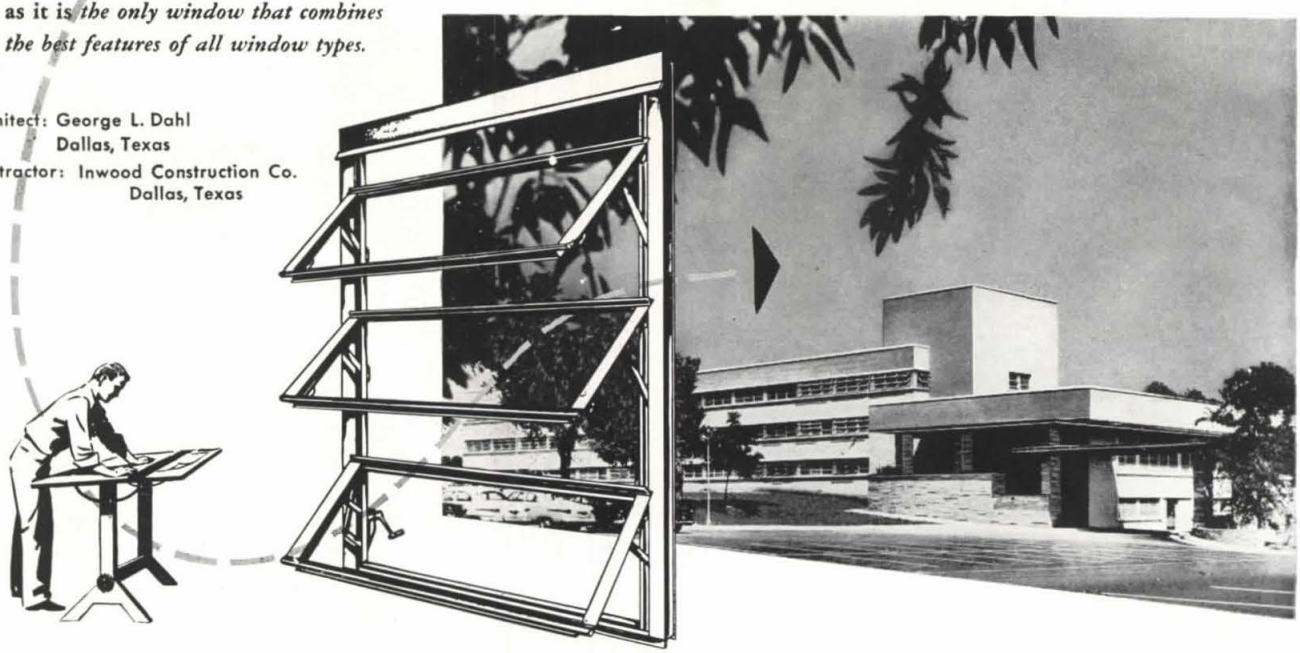
FILLED A "PRESCRIPTION" FOR TEXAS NURSES

...When designing the Methodist Hospital Nurses' Dormitory in Dallas, Texas, architect George L. Dahl searched out the window requirements with the diagnostic thoroughness of a doctor. He knew that the busy life of a nurse made it necessary to have a window that virtually "took care of itself" and could be left open at all times, even when it rained. He recognized that health-conscious nurses would appreciate the value of a window that would provide draft-free ventilation plus sealed-like-a-refrigerator closure. Mr. Dahl naturally specified Auto-Lok -- The Perfect Window -- as it is *the only window that combines the best features of all window types.*

through Auto-Lok PATENTED

The perfect window

Architect: George L. Dahl
Dallas, Texas
Contractor: Inwood Construction Co.
Dallas, Texas



AUTO-LOK HAS EVERYTHING THAT'S IMPORTANT IN A WINDOW...

- Tightest closing -- sealed like a refrigerator.
- Widest opening -- 100% ventilation.
- Ventilation -- even when it's raining.
- Fingertip control -- as easy to open as to close.
- Automatic locking thwarts intruders -- vents cannot be worked loose or jimmied.
- Draft-free ventilation -- air scooped in and upward.
- Delayed action opening -- 100% control of ventilation.
- Clean the outside from the inside.
- Removable inside screens and storm sash.
- Unobtrusive operator -- no interference with blinds, drapes, etc.
- Precision balanced hardware eliminates need for periodic adjustments, absolute minimum of maintenance.
- Architectural beauty -- modern, clean lines adapt to any type structure.

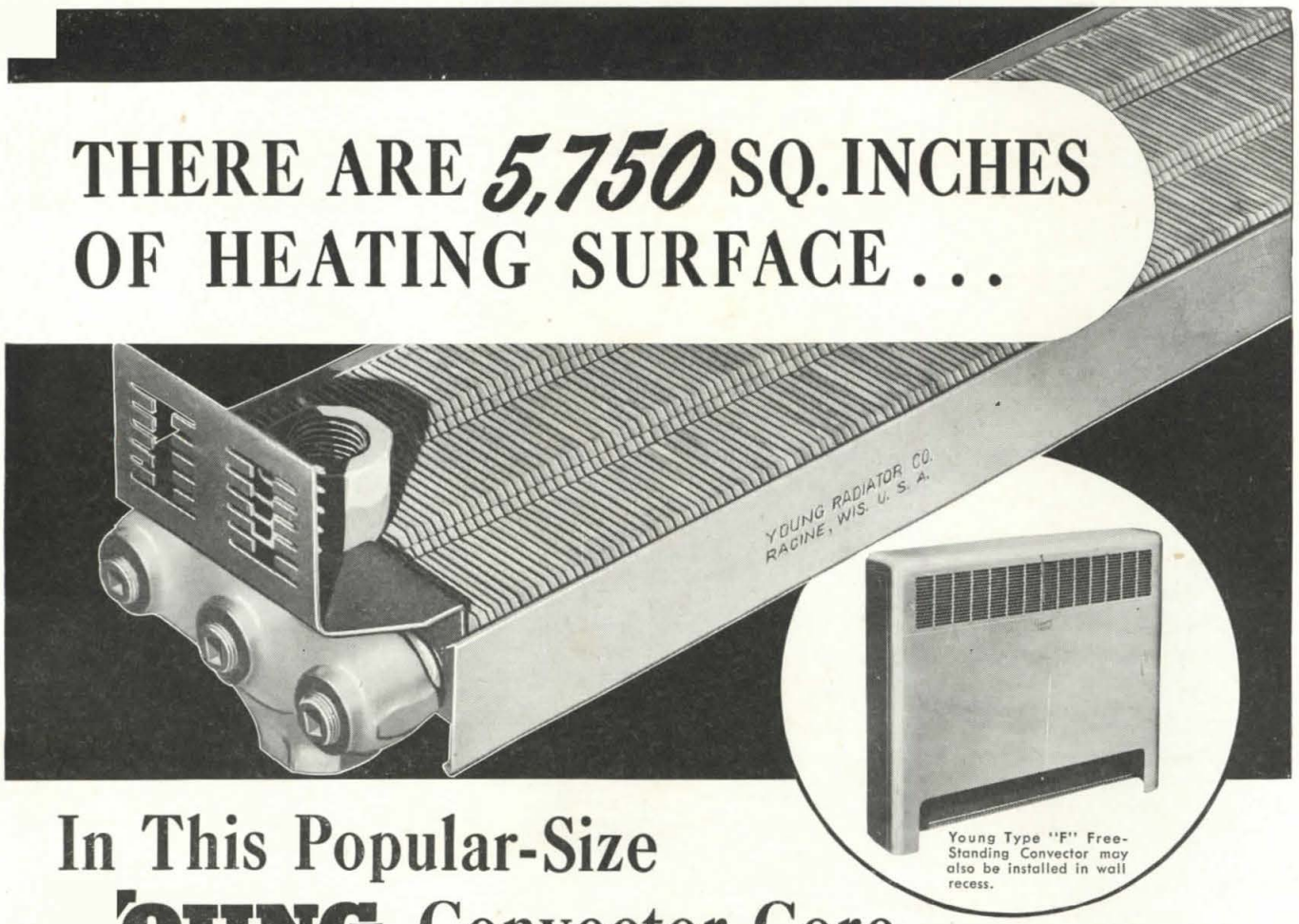
Auto-Lok PATENTED
WINDOWS
aluminum or wood
SEALED LIKE A REFRIGERATOR

LUDMAN Corporation
BOX 4541 • MIAMI, FLORIDA

Tightest Closing Window Ever Made

For further details on Auto-Lok -- The Perfect Window -- see SWEET'S and, by all means, write for the name of your distributor and a copy of the free booklet *"WHAT IS IMPORTANT IN A WINDOW?"* address Dept. PA 12

THERE ARE *5,750* SQ. INCHES OF HEATING SURFACE . . .



Young Type "F" Free-Standing Convector may also be installed in wall recess.

In This Popular-Size YOUNG Convector Core

Efficient heating is assured by the non-ferrous tube-and-fin heating element (illustrated)—developed by Young through a quarter-century of experience in engineering and manufacturing heat transfer products. Heating comfort is a certainty because of the quiet, steady flow of clean, draftless warmth circulated throughout the room by convection currents. Rounded cabinet corners and flanged edges, with styling that permits wall-recessing, produces a unit that is unobtrusive—one which blends harmoniously with any interior.

Versatility is yours, too. The Young Line offers a variety of cabinet styles (free-standing, wall-hung, recessed, low-level, etc.) for every rating—a type for every job. Your nearest Young Representative will gladly give you the details on special Young construction features that shorten installation time and provide complete customer satisfaction through years of use. Or, if you prefer, mail the coupon below for the Young Convector Catalog File.

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Heat Transfer Products for Automotive and Industrial Applications.

Young Quality
T. M. Reg. U. S. Pat. Off.

Heating, Cooling, and Air Conditioning Products for Home and Industry.

YOUNG RADIATOR COMPANY
Dept. 621-M, RACINE, WISCONSIN

Factories at Racine, Wisconsin and Mattoon, Illinois
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LEARN HOW YOUNG CONVECTOR-RADIATORS CAN CUT CORNERS ON HEATING BUDGETS

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"SO EASY TO INSTALL"

"MAINTENANCE IS NIL"

Coast-to-Coast... Builders Acclaim

TYPICAL INSTALLATION AT SOUTHERN APARTMENTS, FT. CAMPBELL, KY. (A WHERRY HOUSING PROJECT)

Thousands of Rusco Prime Windows are being used to speed the completion of these permanent quarters for personnel at Ft. Campbell.

ARCHITECT: E. W. Augustus, *Louisville, Ky.*
BUILDER: Algernon Blair, *Montgomery, Ala.*
CONTRACTOR: Ft. Knox Construction Co., *Louisville, Ky.*

BARKLEY SQUARE DEVELOPMENT, SANTA ANA, CAL.

Burt Huff, the builder, has used 1,332 Rusco Prime Windows on his Barkley Square and Sunshine Homes developments. He says, "We find Rusco very easy to handle during construction and recommend it to anyone interested in eliminating delays and adjustments."

BUILDER: Burt Huff, *Santa Ana, Cal.*

HARVARD AVENUE APARTMENTS, BROOKLINE, MASS.

The builder states, "We are exceedingly satisfied with the appearance and ease of installation of the Rusco Prime Windows, and we now know that maintenance will be practically nil."

BUILDER: R & S Construction Company, *Boston, Mass.*

"EXCEEDINGLY SATISFIED WITH THEM"

"CUSTOMERS APPRECIATE THE FEATURES"

RUSCO Hot-Dipped Galvanized Prime Window

REPORT BIG SAVINGS ON INSTALLATION, LABOR AND MAINTENANCE WITH REVOLUTIONARY PRE-ASSEMBLED UNIT

INSTALLED IN MINUTES in many types of construction—because it is a *complete* window unit. Comes finished painted, fully-assembled with glass, screen, built-in weather-stripping, insulating sash (optional) and wood or metal casing—all ready to place in the window opening!

LOW INITIAL COST, plus savings on installation and minimum maintenance make the Rusco Prime Window that rarest of all combinations—a top quality specification that actually reduces building cost!

THE EXCLUSIVE FEATURES of the Rusco Prime Window offer many other conveniences and advantages. For example, the glass and screen panels are easily removable from the inside. Thus, materials can be passed through the full window opening with breakage minimized. Filtered screen ventilation control permits *regulated* ventilation and full protection for drying plaster. And many others.

For catalog of data and specifications, see your local Rusco Prime Window distributor, or mail coupon below.

STATE-AIDED HOUSING PROJECT, EVERETT, MASS.

Rusco Prime Windows are used throughout on these attractive multiple-dwelling units. Used as flankers on the fixed picture window units, they permit controlled, filtered-screen ventilation.

ARCHITECTS: Drummey & Duffill, *Boston, Mass.*
CONTRACTOR: Concrete Construction Co., *Chelsea, Mass.*

GLASS AND SCREEN INSERTS EASILY REMOVED FROM INSIDE FOR CONVENIENCE IN CLEANING. The Rusco removable sash feature has tremendous appeal as a convenience and safety feature.

RUSCO
ARMCO HOT-DIPPED GALVANIZED
PRIME WINDOW
(VERTICAL SLIDE)

A PRODUCT OF
THE F. C. RUSSELL COMPANY
CLEVELAND 1, OHIO
World's Largest Manufacturer of All-Metal Combination Windows

THE F. C. RUSSELL COMPANY
Dept. 7, PA-121, Cleveland 1, Ohio

Gentlemen: Please send me catalog of informative data and specifications on Rusco Prime Windows.

Name ..... *Title* .....

Company .....

Address .....

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

Steel Shortage Solved on this Job*

Gold Bond Gypsum Lath and Plaster used for 2″ Solid Partitions and exterior Furred Walls

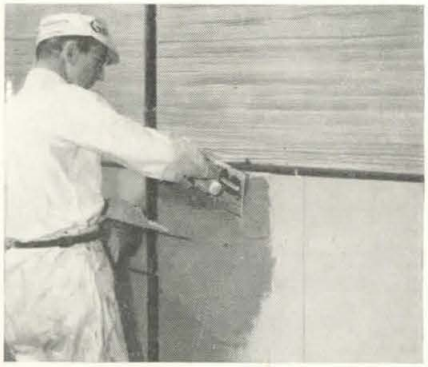
Here are four important advantages of this system: 1. It is a stud-less system using a minimum of metal; 2. It saves up to 7% of usable, rentable space wasted by conventional partitions; 3. It saves money; 4. It has earned fire resistive ratings of 1 and 1½ hours.

A.I.A. File No. 20-B-21. Complete description and specifications of the Gold Bond 2″ Solid Gypsum Lath and Plaster Partition. For your copy, write to Architects' Service Dept., National Gypsum Company, Buffalo 2, N. Y.

*WESTCHESTER APARTMENTS, FORT WORTH, TEXAS . . . *Architect: John H. Graham, Washington, D. C. Associate Architect: Wilson & Patterson, Ft. Worth, Tex. General Contractor: Charles H. Tompkins Co., Washington, D. C. Plastering Contractor: Storbeck & Gregory Plastering Co., Dallas, Tex.*

1. GOLD BOND GYPSUM LATH is firmly held in place by Prong-Lok ceiling runner and metal or wood floor runner. In a test, a 60-lb. sandbag was thumped 12 times against an 8 x 16 ft. test panel before a crack appeared.

2. ONE SIDE of the partition is temporarily braced with horizontal and vertical channels. One centered horizontal channel is needed on walls up to 9 feet. Wood studs or metal can be used for this temporary bracing.



3. SCRATCH COATS of Gold Bond Gypsum Plaster are troweled on both sides of partition. On following day the brown coat is applied to the unbraced side and allowed to set. Bracing is removed for brown and finish coats.

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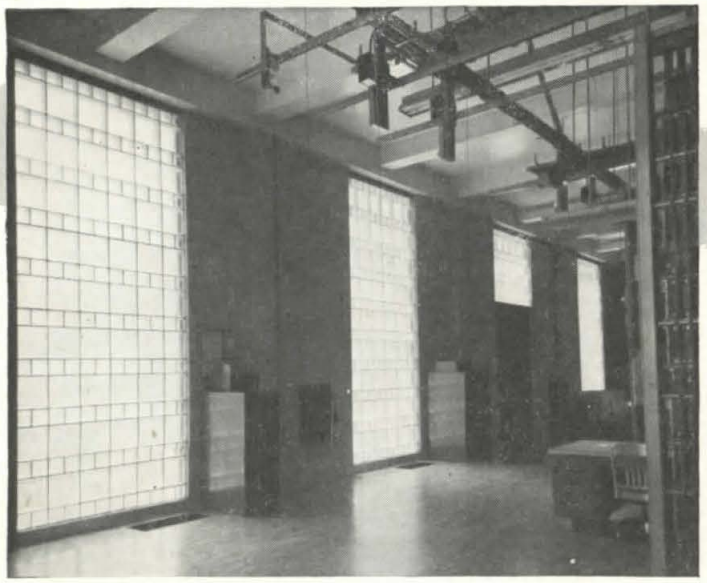
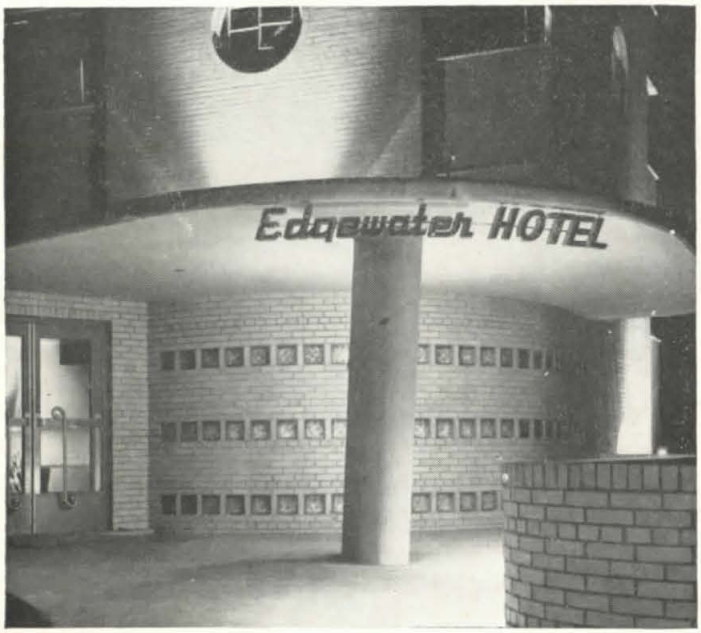


AT the Dixie Exchange, Citizens Telephone Company, Lakeside Park, Kentucky, Architect Harry Hake, Jr. of Cincinnati, Ohio, utilized PC *Decorative* Glass Block patterns in multiple sizes to effect this interesting fenestration design. The inherent high insulating properties of PC Glass Blocks are ideal in helping to keep temperature and humidity adjusted to the close tolerances required by the delicate telephone equipment in this building. And these glass blocks keep out harmful dust and dirt, "make the most of daylighting."



HERE is another example of the adaptability of PC Glass Blocks to practically any architectural need. Decorative patterns of PC Glass Blocks have been used in this unusual curved wall of the Edgewater Hotel, Madison, Wis. Architect: Lawrence Monberg, Chicago, Illinois.

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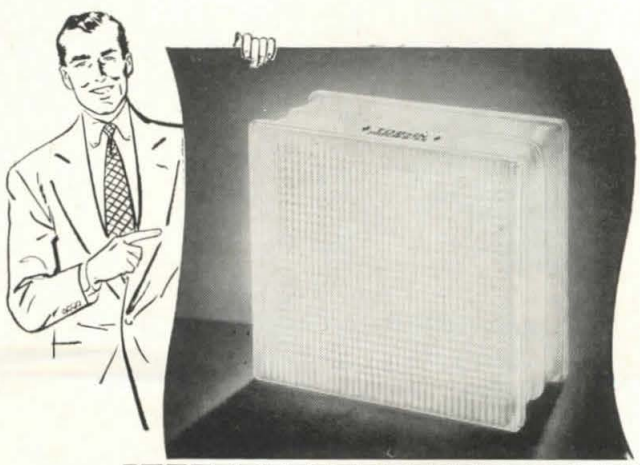

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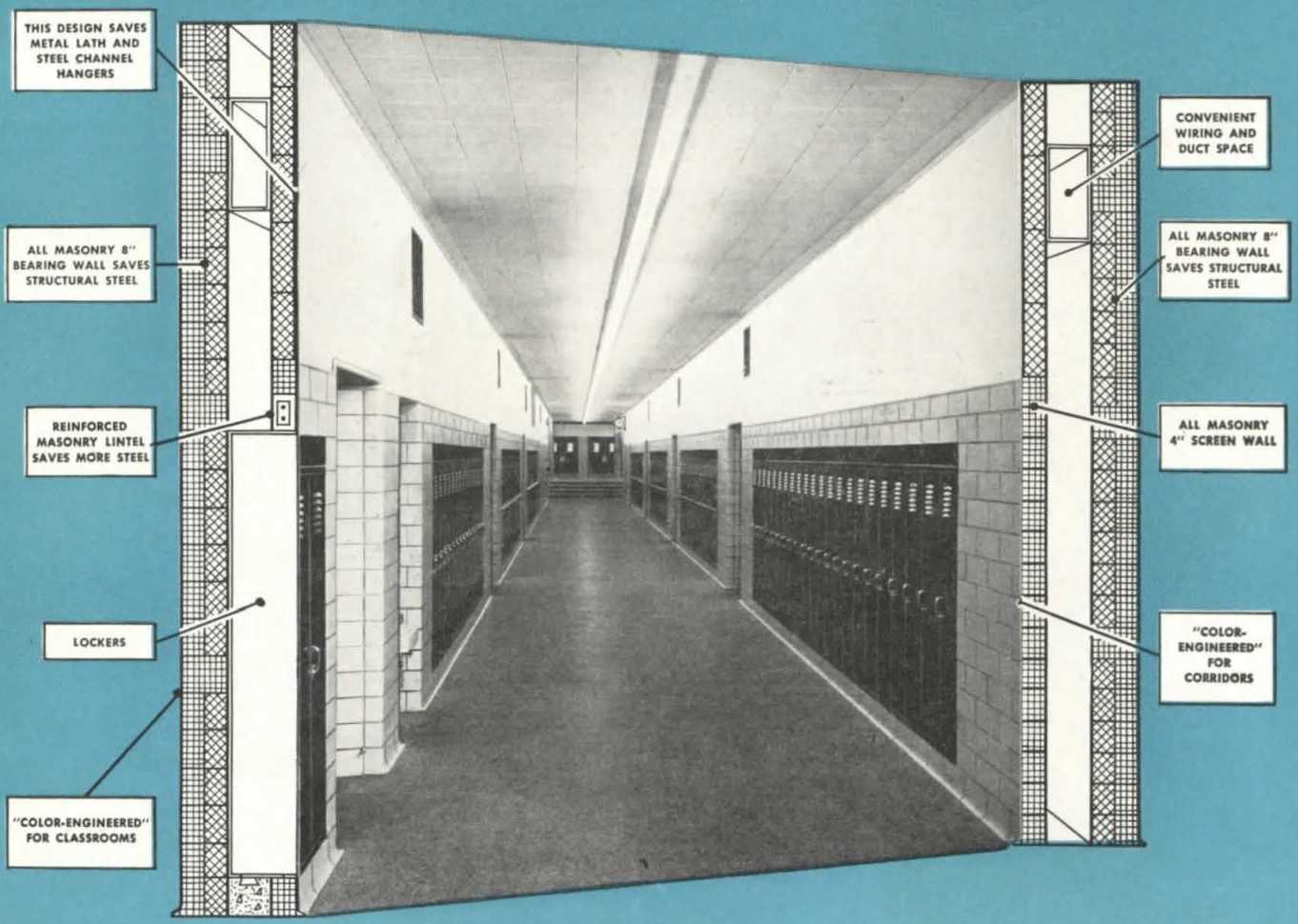

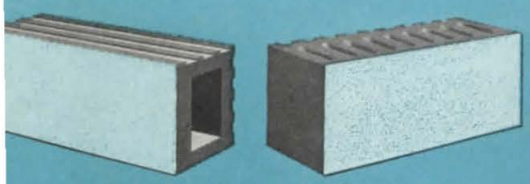

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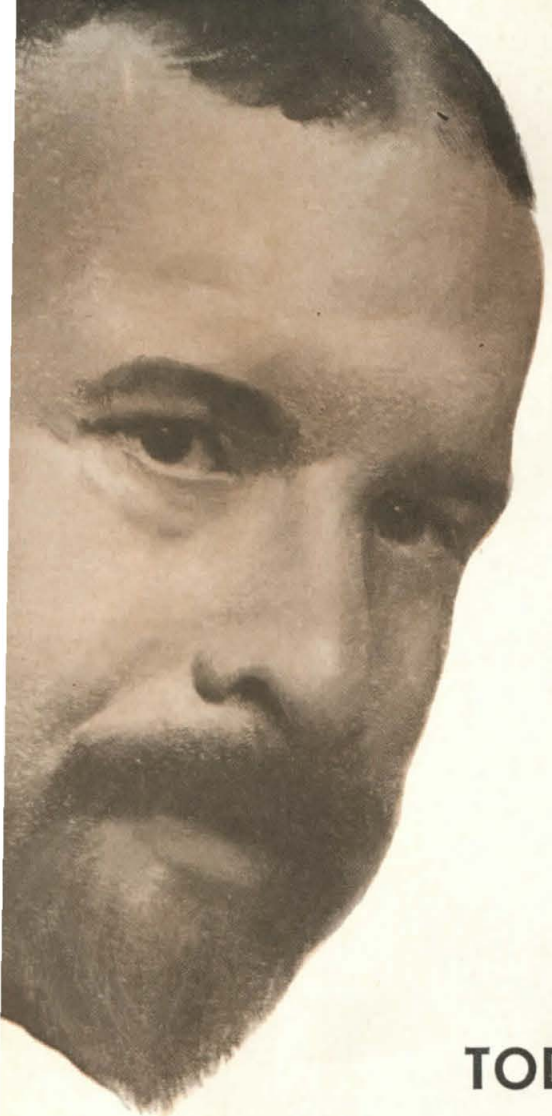

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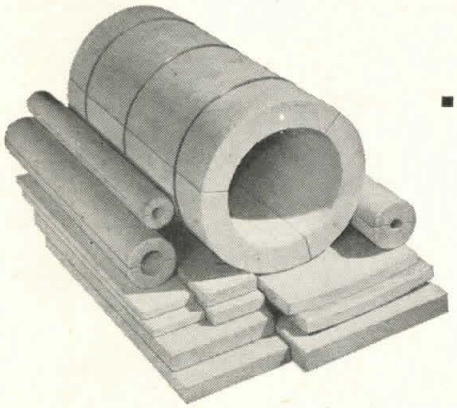

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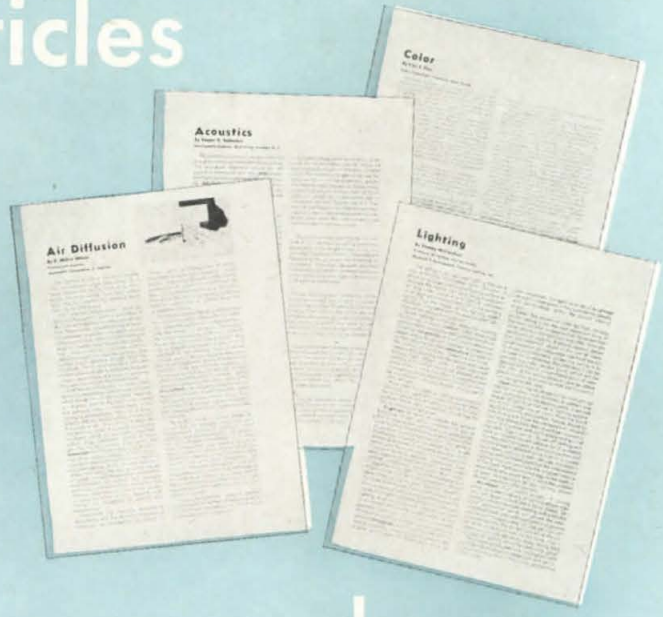

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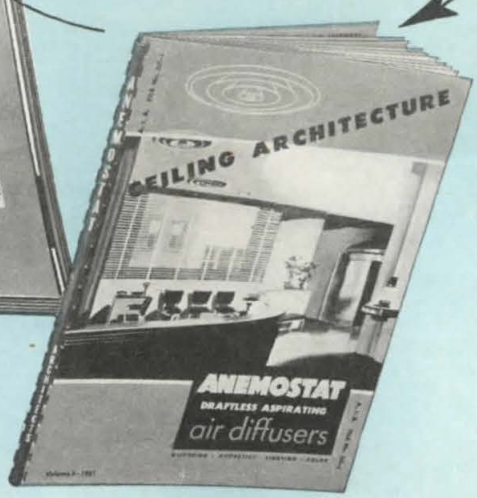

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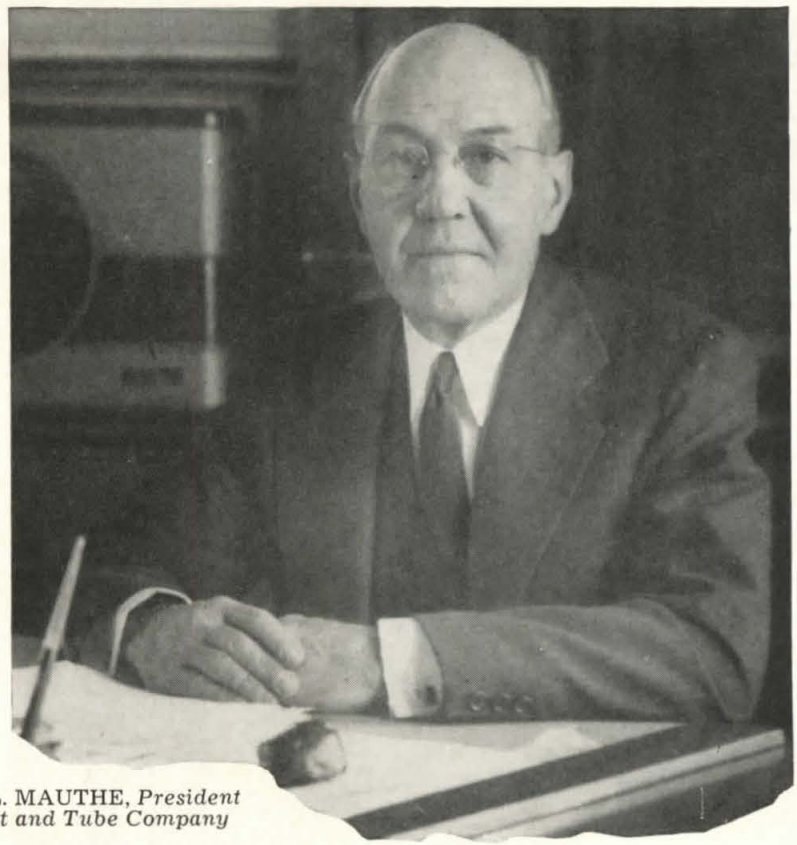

An interview with J. L. MAUTHE, *President*
The Youngstown Sheet and Tube Company

Why are you concerned about iron and steel scrap, Mr. Mauthe?

Our inventories are critically low and the present scrap flow is not sufficient to maintain capacity steel plant operations. Furthermore, if the flow of scrap is not increased, a curtailment of steel production is inevitable.

The industry is using all the pig iron and all the home scrap that is available. The balance of our metallic requirements must be made up through procurement of purchased scrap. Every ton of scrap that we do not get represents a ton of steel that we cannot make.

How much scrap does the industry need?

In 1950, 96,700,000 tons of steel ingots and castings were produced, requiring over 61,000,000 tons of iron and steel scrap.

In 1951, over 65,000,000 tons of scrap will be required, and even more will be needed in 1952.

Where does scrap come from?

About 58% of the total scrap required is produced by the ingot and casting makers, and is known as "home" scrap; the balance of 42% is "purchased" scrap and is procured *from* outside sources.

Purchased scrap generally falls into two categories: Scrap from current fabrication and that which is the result of obsolescence.

There are three important sources from which we get obsolete scrap, much of which is dormant:-

1 - Obsolete machinery and equipment in every industrial plant, at the oil fields and on the farms.

2 - Battlefield scrap, obsolete ships and war material, surplus machinery and equipment, which government can make available.

3 - Countless old automobiles and trucks, which are rusting away in automobile wrecking yards in every section of the country.

What can be done to increase tonnage of purchased scrap?

This scrap must be made available immediately! All industry and government must awaken to the critical nature of the situation. They must realize that if we do not get the scrap, they will not get the steel!

YOU CAN HELP - YOU MUST HELP!
NO SCRAP - NO STEEL

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The Youngstown Sheet and Tube Company - Youngstown, Ohio

there's more to a view than meets the eye!

FOR INSTANCE—quality that the home-owner never sees is built into Curtis Silentite windows. The double-hung Silentite windows which flank this big Curtis picture window have the famous "floating" weatherstrips that assure a snug fit, yet permit easy operation. There are spring bronze leaf type weatherstrips at the meeting rail and also at the bottom rail. Double "Z" type spring bronze weatherstrips at the sides give uniform pressure on both sides of the window in all positions of opening.

TROUBLE-FREE CASEMENTS—Tests made by a nationally known independent laboratory show that Silentite wood casements will reduce by 16.4% the heat loss that usually occurs with ordinary casements, under comparable conditions. Silentite casements are the most weathertight casements made. They will not stick, bind or warp. The sash cannot rattle or vibrate, cannot swing in the wind. Condensation is reduced to the minimum by the use of insulating glass. Screens are furnished.

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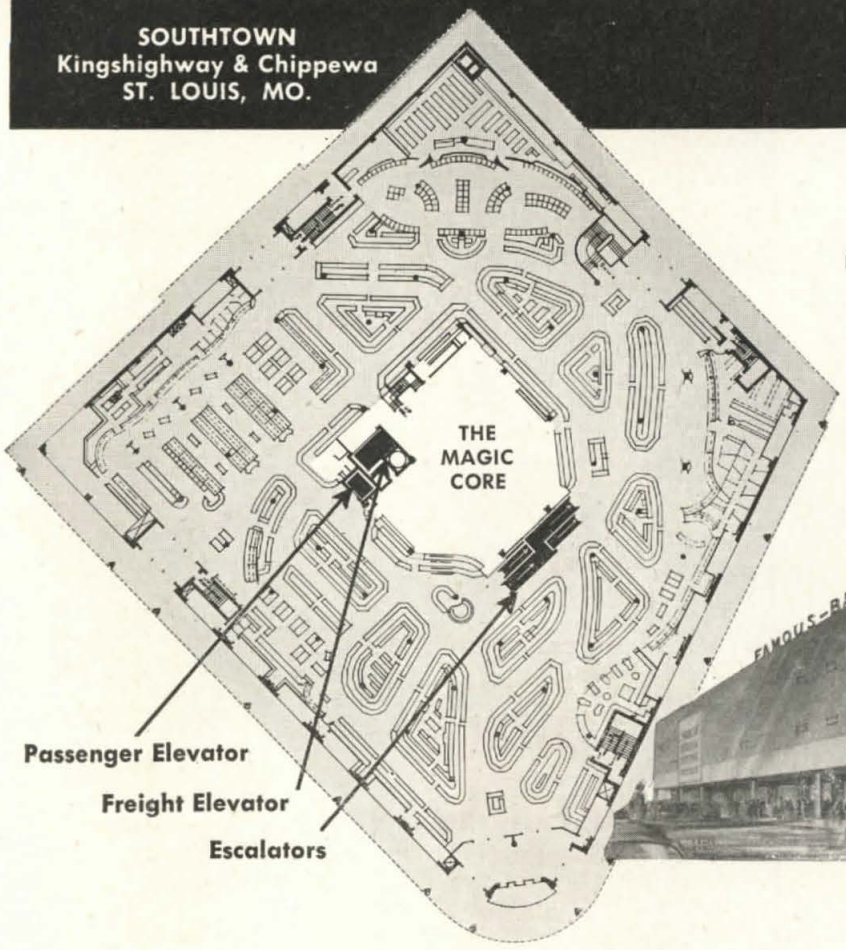

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P. John Hoener, *Architect*
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Famous-Barr says, "Southtown is a famous first—*the only retail store designed around the 'Magic Core'!* It's the most efficient merchandising machine in the country. We predict it will set the pattern for stores to come. Southtown, which opened August 24th, is the third store in Famous-Barr's design-for-service in the St. Louis area. Floor space? Over 300,000 sq. ft. Probably the country's largest suburban store!"

All elevators, escalators, telephones and public rooms are efficiently compacted within the "magic" service core in the center of the building. Departments are arranged in "shallow" design, providing wider open entrance areas and easy traffic flow. Every floor gains 300 lineal feet of wall space for merchandise display and stock. Less walking for sales people should raise their sales volume and improve their peak hour service.

Otis engineers worked closely with the architect and the Famous-Barr management in planning *free-flow* escalator service from parking areas to basement and UP and DOWN to all four sales floors—which are also served by an Otis passenger elevator. Incoming stock is carried by an Otis freight elevator from the basement to "Stockroom Mezzanines" located between each sales floor. All stock is then checked, marked and sent by chute to the selling floor below.

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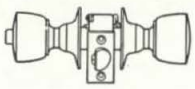
#400 — Communicating Door Lock — Either knob retracts latchbolt except when locked by turn-button in opposite knob.

#402 — Communicating Door Lock — Either knob retracts latchbolt except when locked by key in opposite knob.

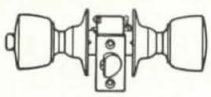
#410 — Passage Latch — Either knob retracts latchbolt at all times.

#415 — Exit Door Lock — Inside knob retracts latchbolt at all times. Outside knob is non-operative.

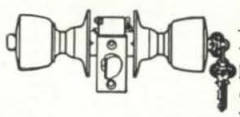
#420 — Bath or Bedroom Lock — Either knob retracts latchbolt except when outside knob is locked by push-button in inside knob. Turning inside knob, closing door or emergency key, nail, etc. in outside knob releases push-button.



#441 — Inner Office or Bedroom Lock — Either knob retracts latchbolt except when outside knob is locked by push-button in inside knob. Turning inside knob or closing door releases push-button.

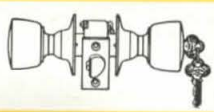


#444 — Exit Door Lock — Either knob retracts latchbolt except when outside knob is locked by turn-button in inside knob.

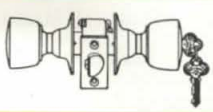


#451 — Exterior or Office Door Lock — Either knob retracts latchbolt except when outside knob is locked by turn-button in inside knob; then by key from outside until turn-button is manually released.

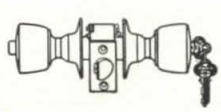
#454 — Apartment House Entrance or Office Building Lavatory Lock — Either knob retracts latchbolt except when outside knob is locked by key in inside knob; then by key from outside until unlocked by inside key.



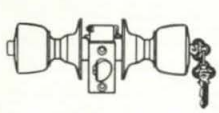
#455 — Classroom, Vestibule or Utility Room Lock — Either knob retracts latchbolt except when outside knob is locked by key in outside knob.



#457 — Storeroom, Utility Room or Exit Door Lock — Inside knob or key in outside knob retracts latchbolt at all times. Outside knob rigid.



#461 — Office Door Lock — Either knob retracts latchbolt except when outside knob is locked by push-button in inside knob; then by key from outside. Turning inside knob or outside key releases push-button; closing door does not release push-button.



#465 — Dormitory or Public Toilet Lock — Either knob retracts latchbolt except when outside knob is locked by push-button in inside knob or by key in outside knob. Push-button is automatically released by turning inside knob or outside key or by closing door; but when outside knob is locked by key, it remains locked until unlocked by key.

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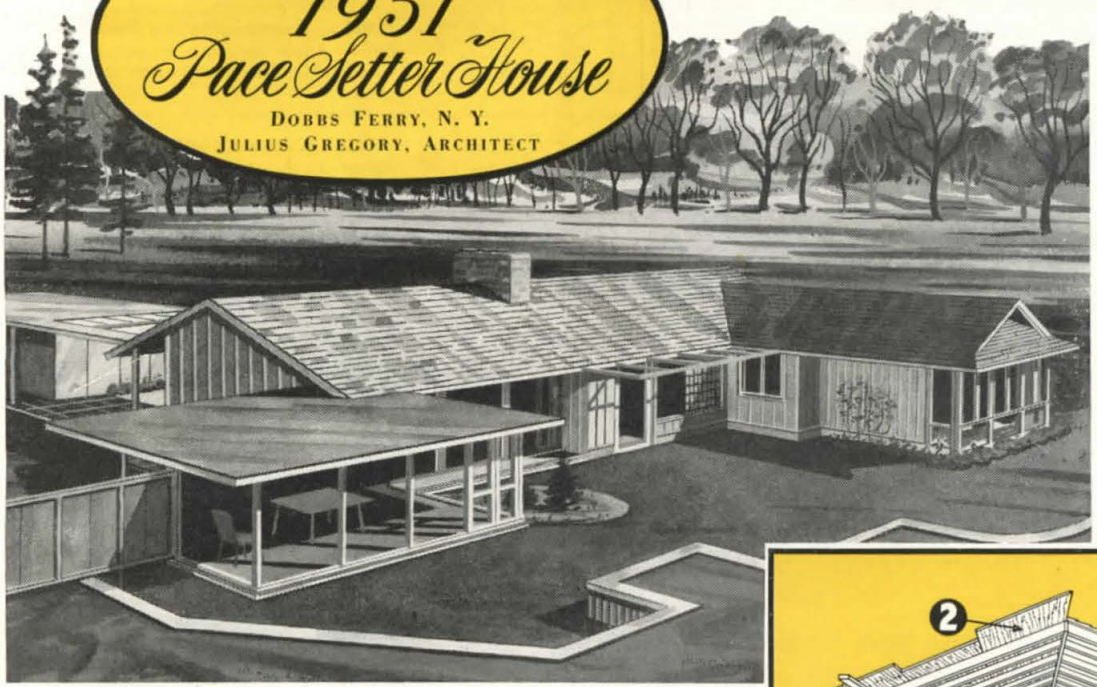
DOBBS FERRY, N. Y.
JULIUS GREGORY, ARCHITECT



Plywood Specified For Finest Construction

EACH YEAR *House Beautiful* builds a Pace Setter house which represents the ultimate in design, construction and use of materials. In the 1951 Pace Setter, Douglas fir plywood plays a major role.

Durable Exterior plywood creates the weather-wise board and batten siding . . . the smooth, flush soffits and breezeway ceilings.

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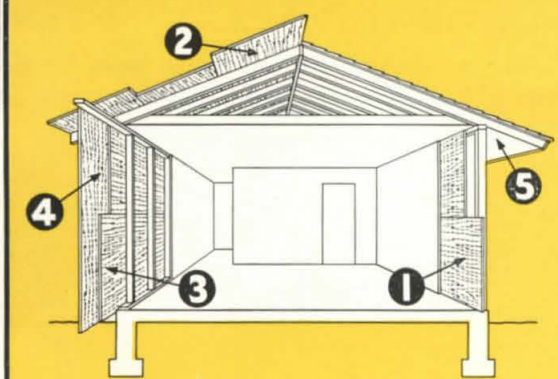

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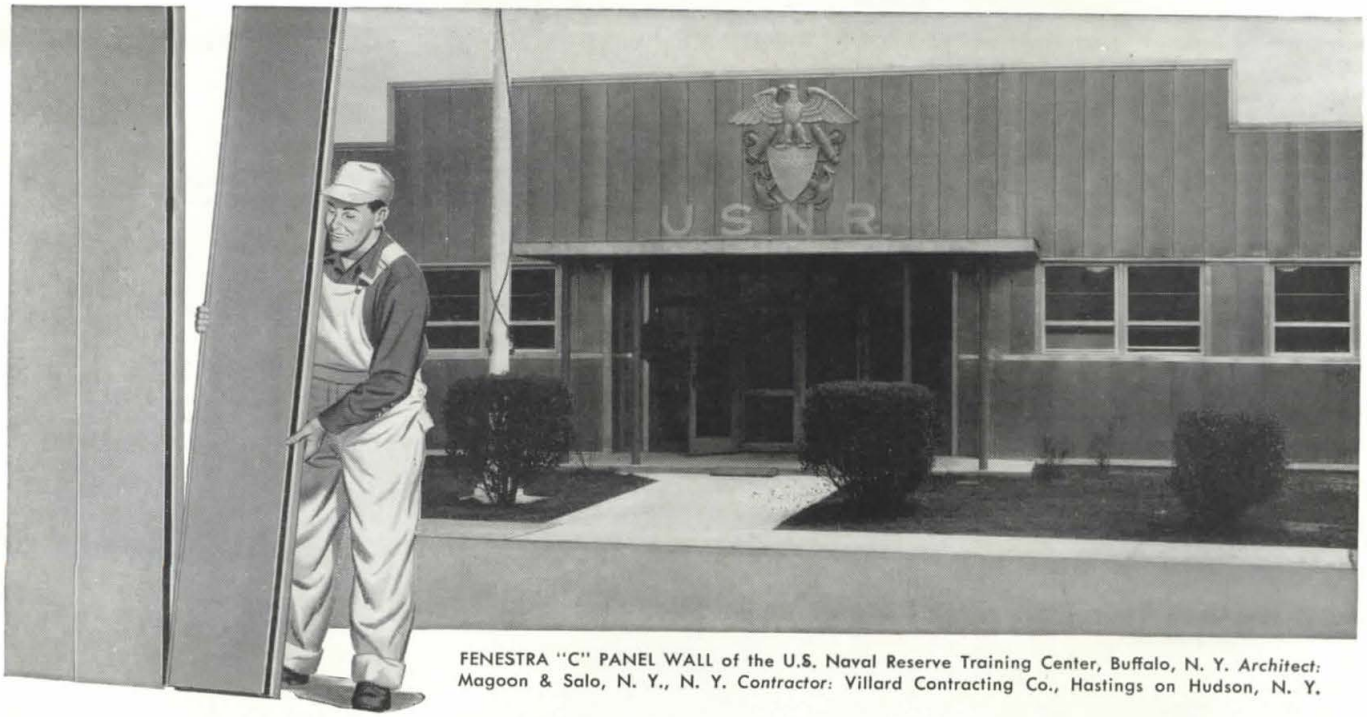

FENESTRA "C" PANEL WALL of the U.S. Naval Reserve Training Center, Buffalo, N. Y. *Architect:* Magoon & Salo, N. Y., N. Y. *Contractor:* Villard Contracting Co., Hastings on Hudson, N. Y.

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A FEW DETAILS ON FENESTRA "C" PANELS

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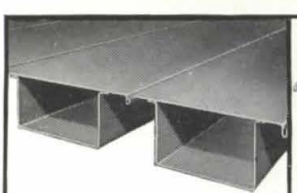
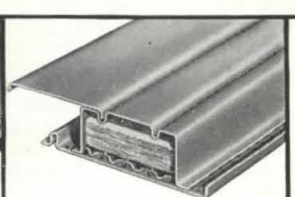
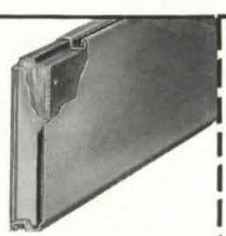


"D" Panels for floors, roofs, ceilings. Standard width 16". Depth 1½" to 7½".



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



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

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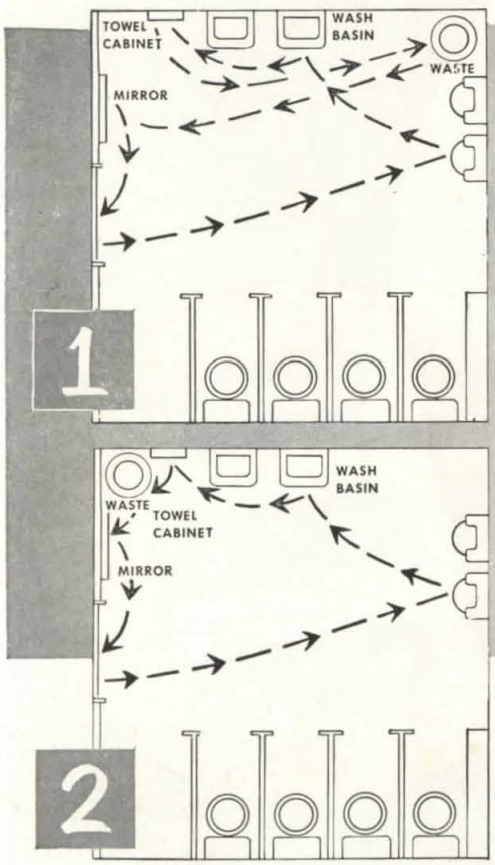
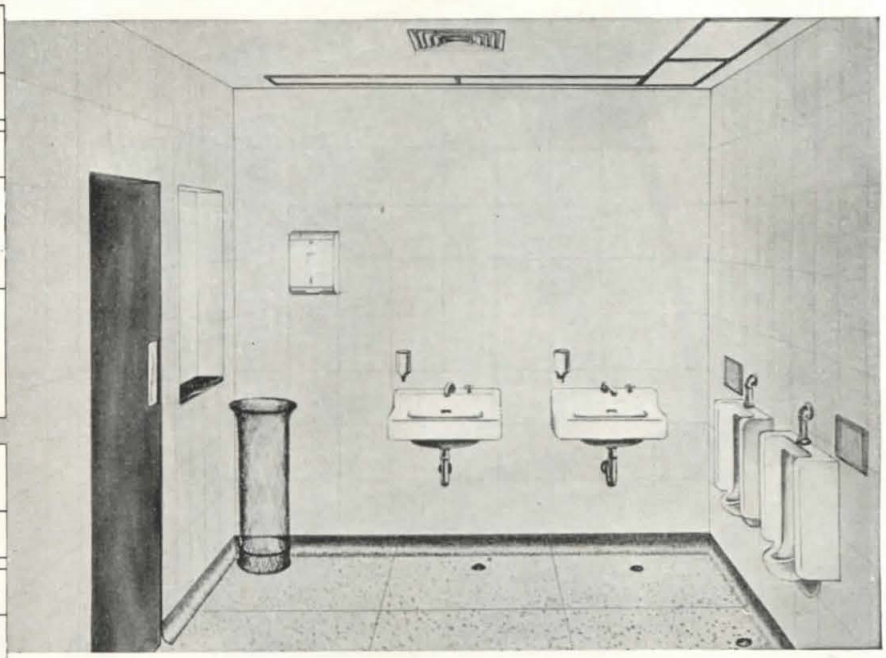
How important is traffic flow in modern washroom planning?





(1) One misplaced piece of washroom equipment, like a waste receptacle on the wrong side of the wash basins, will waste many man-hours a year in washroom traffic jams . . . and use up excess paper towels.

(2) A simple rearrangement lets washroom traffic flow in and out easily, quickly. Recessed vents and lighting, and off-the-floor fixtures, make this small washroom modern in every way.

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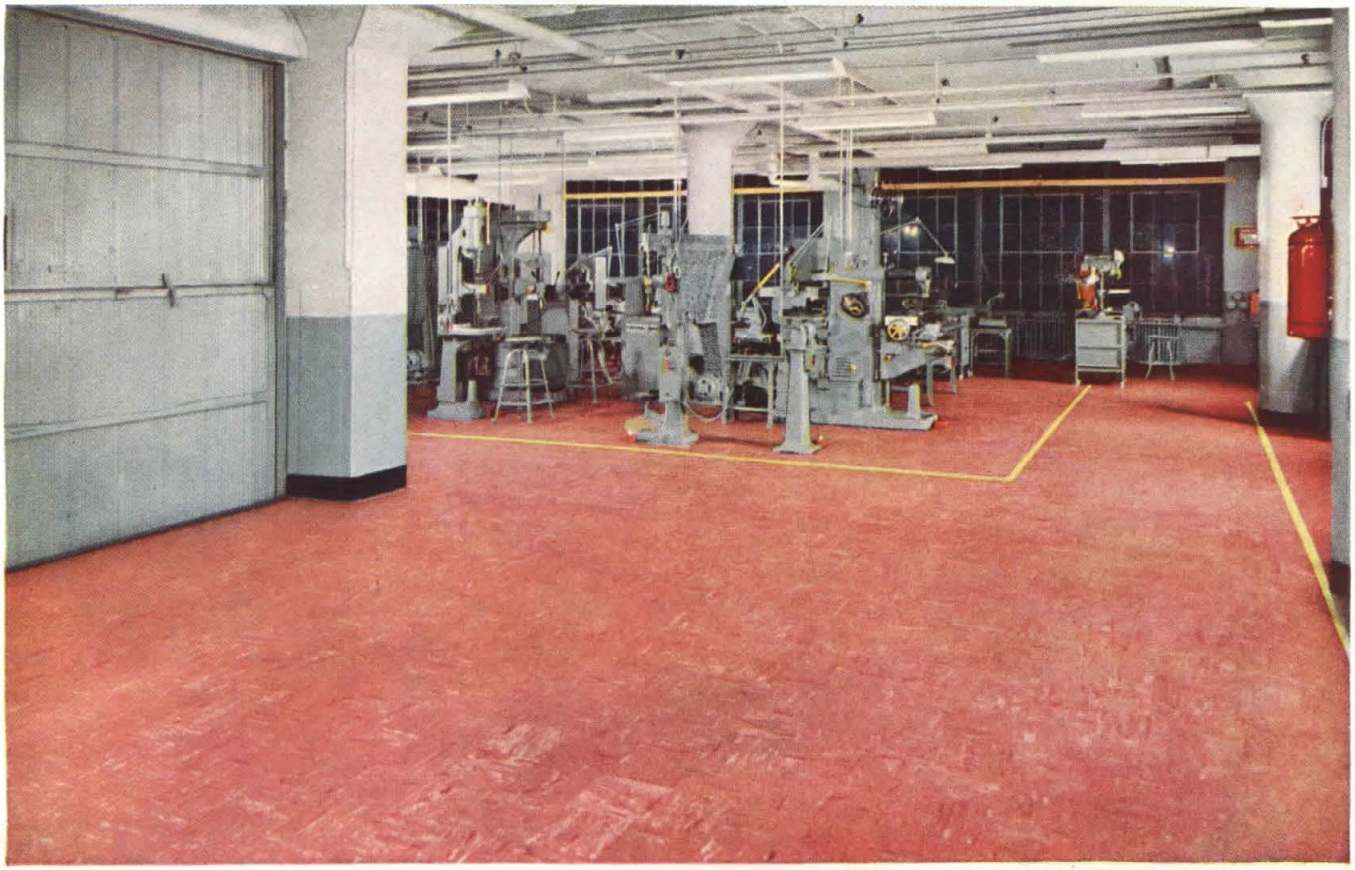

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Every plant operator wants economy. Well, he gets it when he puts in a Tuff-Tex* floor . . . *three-way* economy.

Installation is quick. You don't tie-up space for long.

Put in *unit-laid* Tuff-Tex, and traffic travels over it in a few hours. Economical installation, plus moderate material prices mean *first cost is low.*

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There's your *three-way economy* . . . low first cost, low operating cost, long service life. And, you get many other advantages in utility and appearance.

A Tuff-Tex floor is attractive. You have unusual versatility in design . . . either decorative or functional.

You can inlay your own trademark in the floor . . . or use the unit-laid feature of Tuff-Tex to outline traffic aisles, shipping areas, material bays, and the like.

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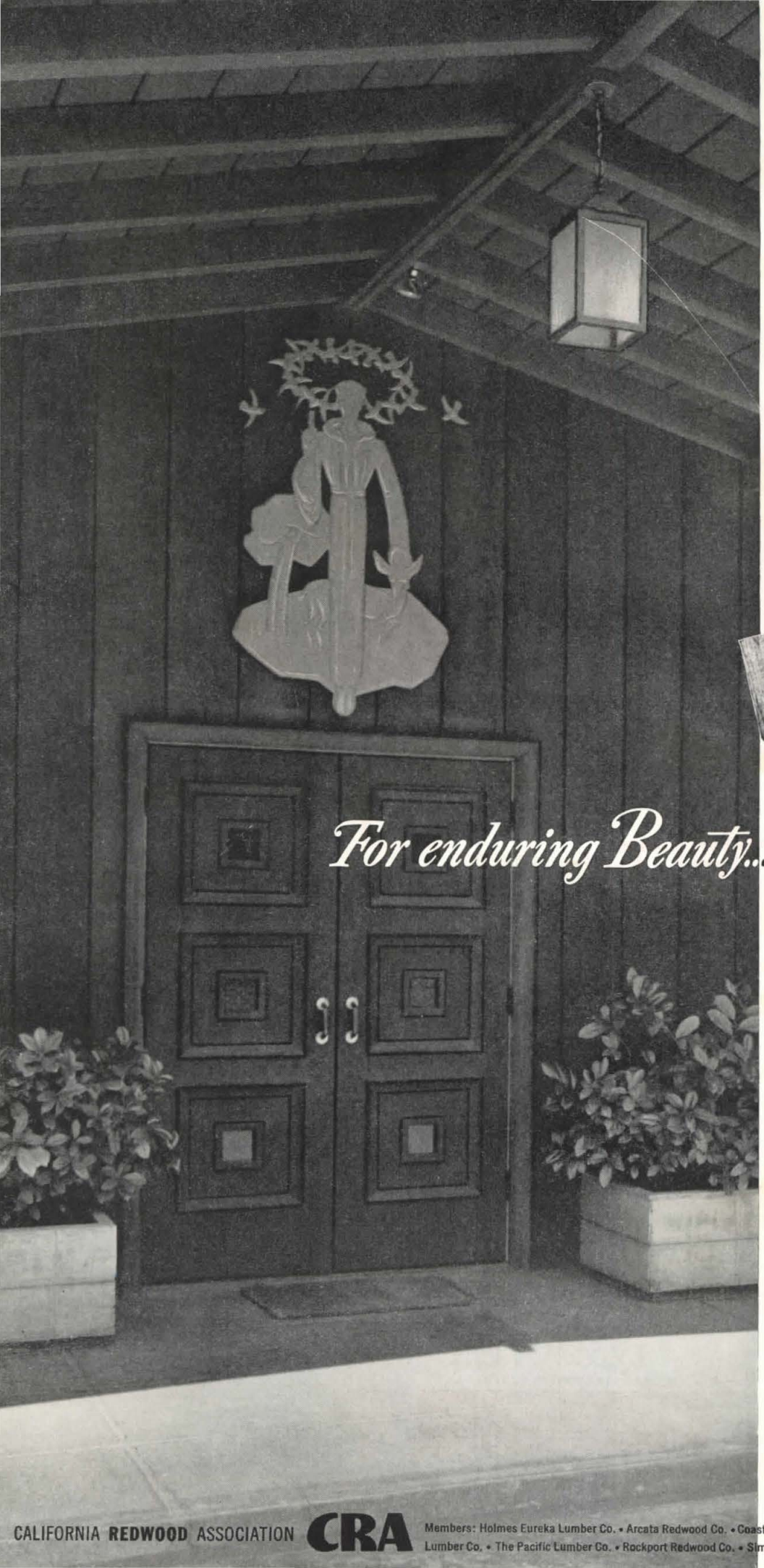

Chapel, St. Francis Episcopal Church
San Jose, California

Architects: Higgins & Root, A.I.A.
Photograph: Lionel T. Berryhill

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residential design

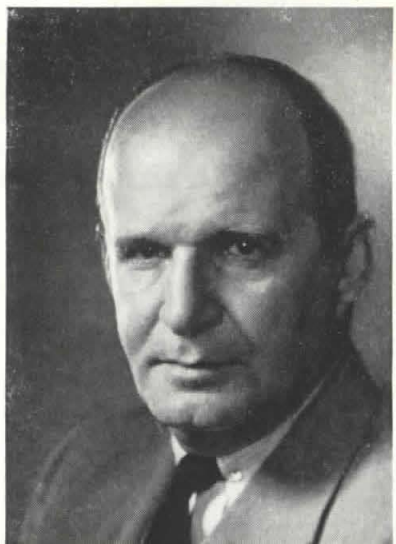
EDWARD D. STONE, ARCHITECT

In the sixteen years of its existence, the office of Edward D. Stone of New York City has increasingly become one of those firms to which one regularly looks for both structural refinement and design progress. Residential work now occupies only about half of the office's energies yet Stone considers that the most gratifying part of his practice since "each problem is unique and personal. It also offers the opportunity to do more buildings numerically so that we can evaluate . . . our ideas."

The Stone office varies in size from 6 to 20 persons, depending on the volume of work. "Most of the men are registered architects," he tells us, "and capable of handling a project from beginning to end. We usually develop about half a dozen preliminary schemes for a house, but after the design is set, the drawings and supervision are done by one man—with criticism from all, including our office boy."

Presentations generally consist of drawings and simple perspective sketches, "but if the budget allows, we like to have models made." Most of the work is contracted on a fixed-sum basis.

A difficulty with house design as a field of practice, Stone admits, is "the rather substantial fee that must be charged to do a really thorough and conscientious job . . . The owner is frequently working to a close budget, and our costs go up proportionally as the budgets go down." Nonetheless, even though he has not found house design "particularly profitable" in a material way, he believes that "an architect can survive on a completely residential practice."



Fabian Bachrach

Edward D. Stone received his training at the University of Arkansas, Harvard University School of Architecture, and the Massachusetts Institute of Technology. After periods of working for Coolidge, Shepley, Bullfinch & Abbott in Boston, and with Schultze & Weaver and the Rockefeller Center Architects in New York, he established his own practice in 1935. Among the well known buildings credited to the Stone office are the Museum of Modern Art in New York (in collaboration with Philip L. Goodwin); the Food Building and New Zealand Building at the New York World's Fair; El Panama Hotel, Panama, and the Fine Arts group for the University of Arkansas. In the past ten years, the office has designed and built about fifty residences, ranging in cost from $30,000 to $200,000. During World War II, Stone was Chief of the Planning and Design Section, Air Installations Division, of the U. S. Army Air Forces.

Exterior walls of the house are surfaced with horizontal, red-cypress siding. A remarkable plan element is the bath plunge, with full window wall (SELECTED DETAIL on *page 65*.

Photos: Lionel Freedman

house I

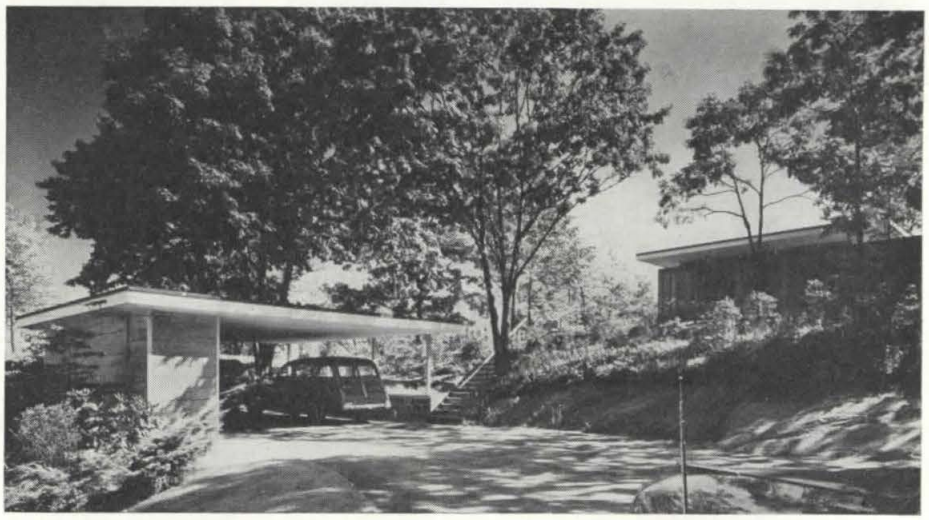
"an attempt at extreme architectural simplicity"

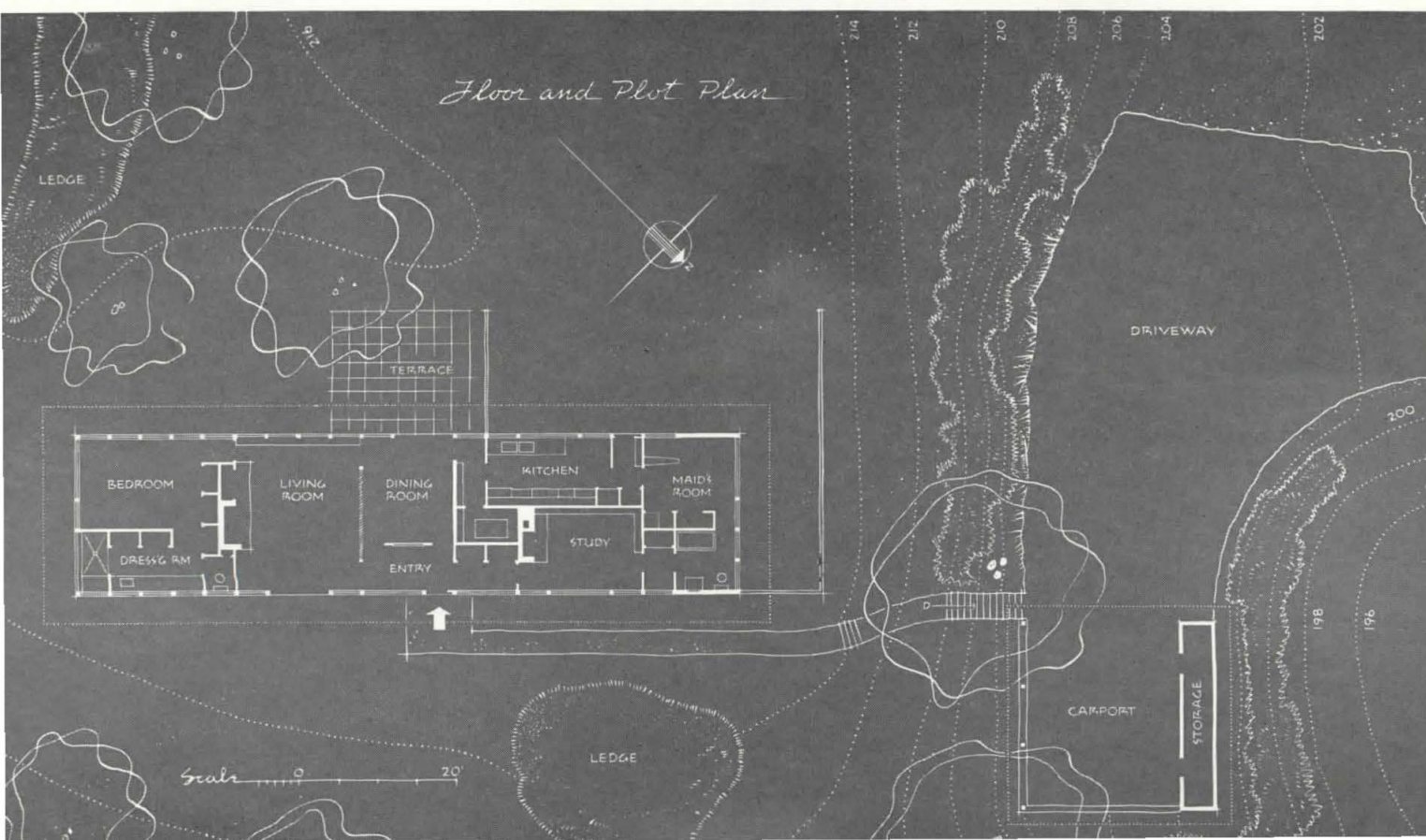
program Urbane home for a husband and wife. The program included quarters for a maid and provision for a very occasional overnight guest.

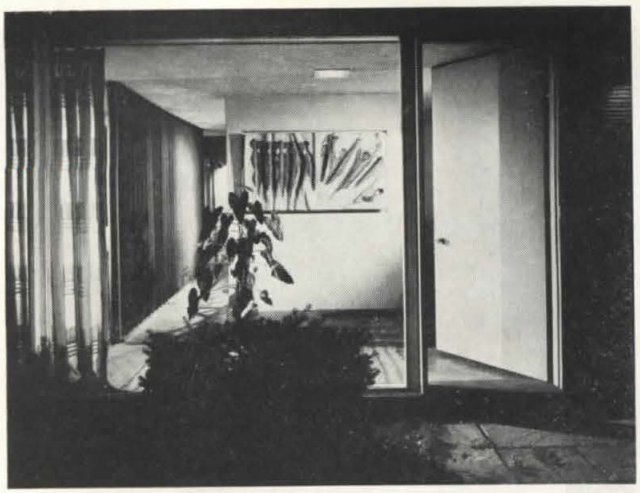
site Top of Westchester County hill that is all but inaccessible by road. Hot, humid summer weather. Good views both northeast and southwest.

solution Views to both sides exploited by large window openings in alternate rooms. Built on a four-foot module, the house is of simple post-and-beam construction. The roof is built-up, gravel surfaced. Heating is accomplished by a radiant system in the floor slab, using an oil-fired boiler; outside temperature control.

Edward D. Stone, Architect Karl J. Holzinger, Jr., Roy S. Johnson, Associates




Floor and Plot Plan
LEDGE
TERRACE
BEDROOM
LIVING ROOM
DINING ROOM
KITCHEN
MAID'S ROOM
DRESSG RM
ENTRY
STUDY
DRIVEWAY
CAR-PORT
STORAGE
LEDGE
Scale 0 20'
216
214
212
210
208
206
204
202
200
198
196

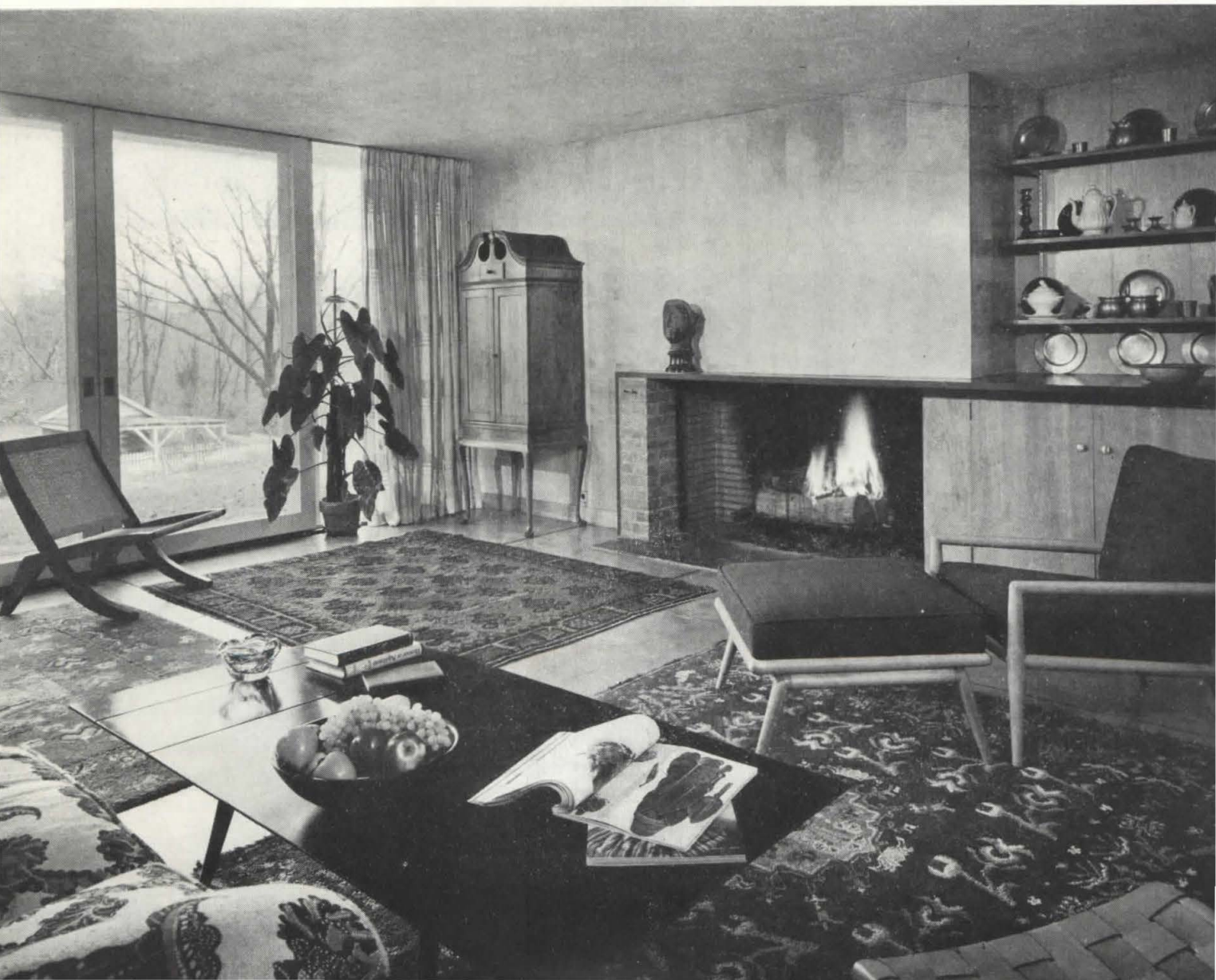


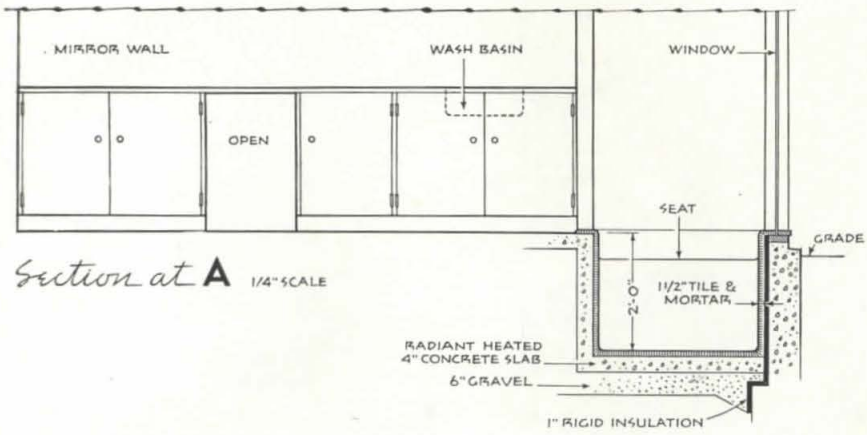
The architect strove to provide a dignified, simple background for the owners' varied possessions. Above is the entry. The partial wall that shields the dining room was specially designed to accommodate a painted sculptural plaque by Joān Junyer.

Right—dining room, with sliding doors pushed back to open to the flagstone-paved southwest terrace.

Below—a corner of the spacious living room.

Acrosspage—details of storage elements and the plunge in the bedroom-dressing room area.

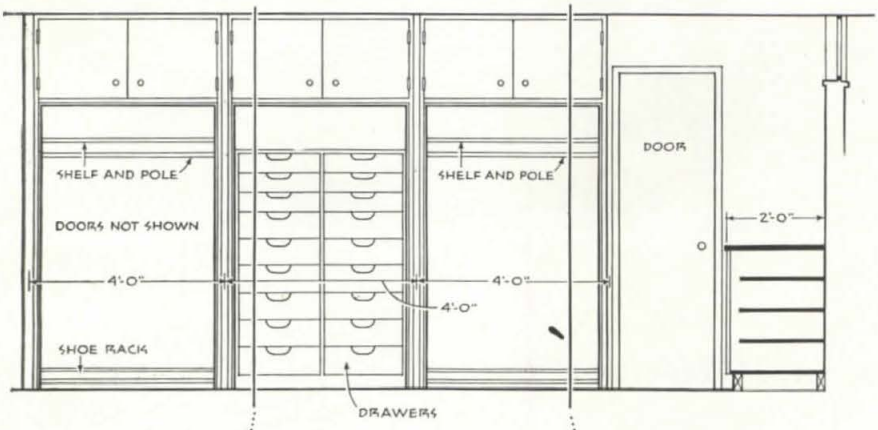




Section at **A** 1/4" SCALE

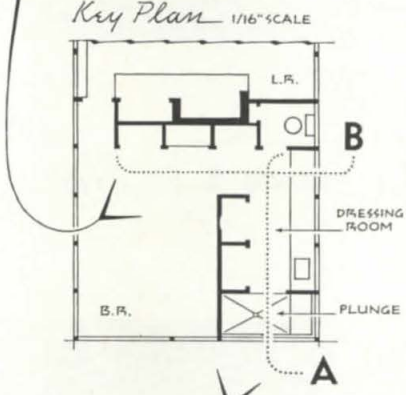
LIONEL FREEDMAN PHOTOS

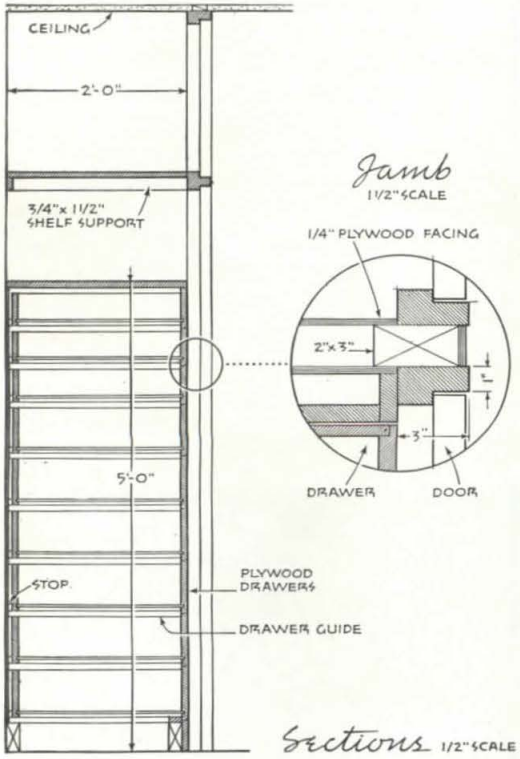
Elevation at **B** 1/4" SCALE



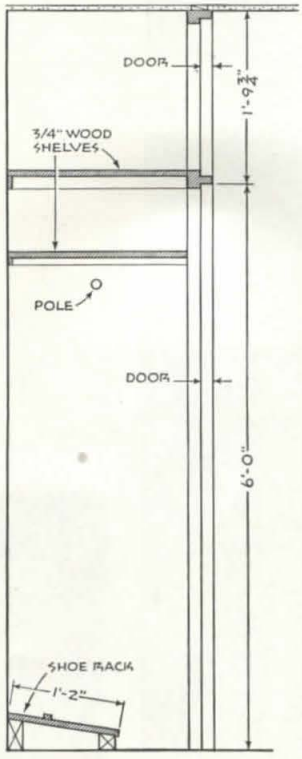
DOUBLE CLOSET IN DRESSING RM SIMILAR

Key Plan 1/16" SCALE





Jamb 1 1/2" SCALE

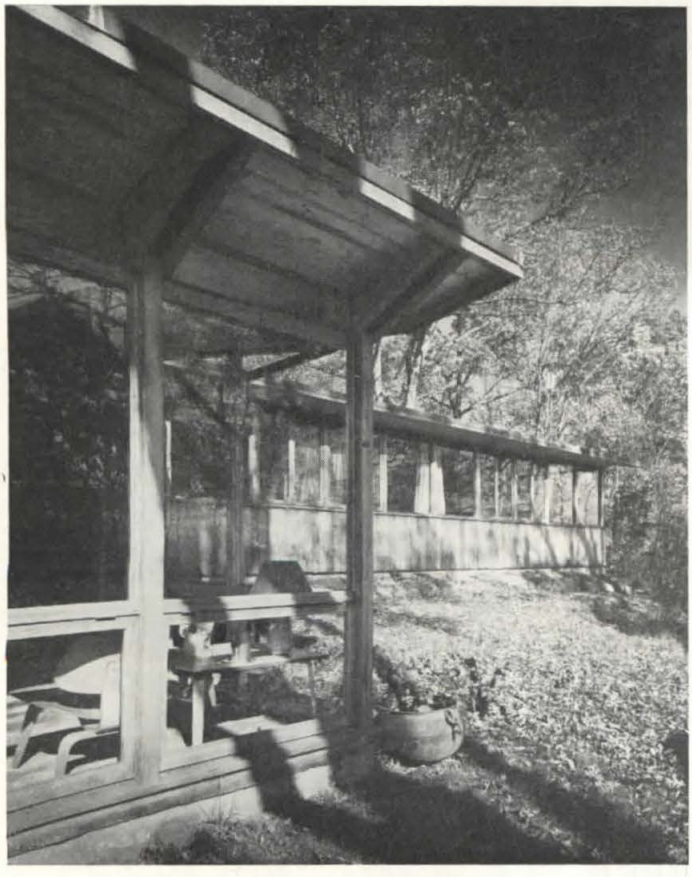


Sections 1/2" SCALE

RESIDENCE, White Plains, N.Y.

EDWARD D. STONE, ARCHITECT
KARL J. HOLZINGER, JR., ROY S. JOHNSON, ASSOCIATES

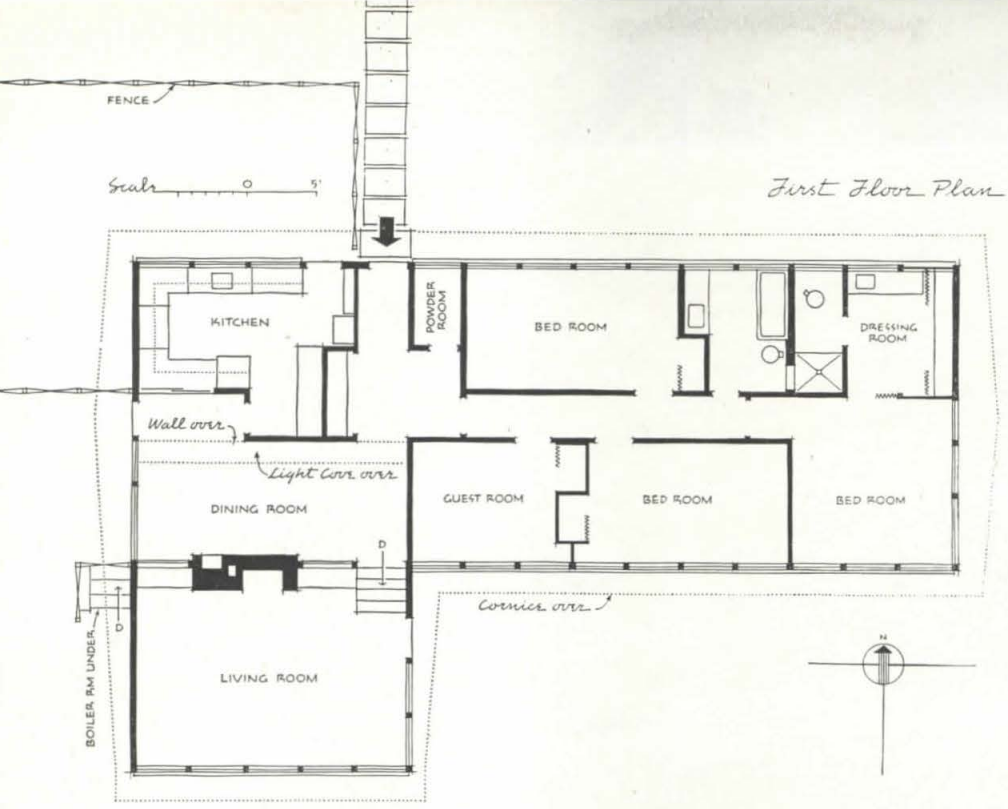
house 2 *"structure exposed as architectural feature"*



program To design and build a house for a large family, as economically as possible.

site Sloping, wooded hillside in Westchester County, with the downslope toward the south.

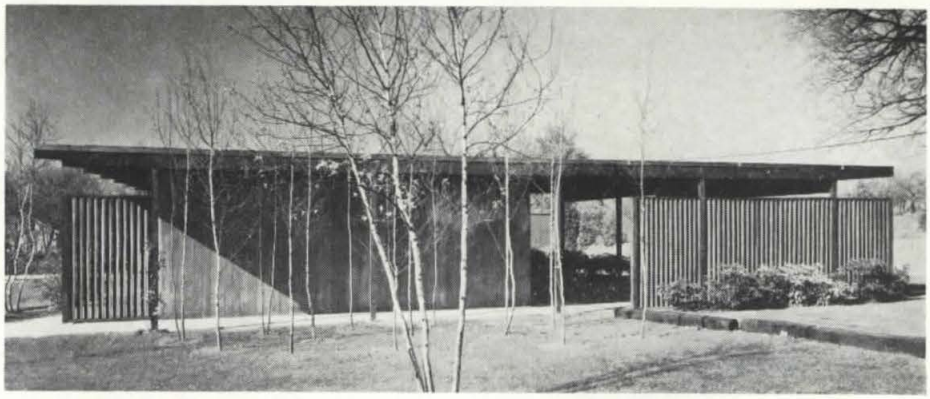
solution House planned within simple L shape, with four bedrooms and two baths in the longer leg; the entrance, kitchen, dining and living spaces in the shorter. Of mill construction (to reduce number of parts and lower labor costs), the structure is laid out on a 4-foot square grid, and the frame also serves as the finish, eliminating trim. Cost: $16 per sq. ft.



Edward D. Stone, Architect/Karl J. Holzinger Jr., Roy S. Johnson, Associates

All exterior wall surfaces are of dry construction. Exterior vertical siding is red cypress. Windows are pine casements (or fixed) with ¼" plate glass. The house is heated by an oil-fired boiler serving a radiant system in the floor slab. *Photos: Lionel Freedman*

Following the site slope, the living area is five steps down from the dining space. At either side of the living-room fireplace (*top photo*), openings look through to the dining space (*left*). At this latter level (*below*), a cooking grill is recessed into the chimney masonry.



house 3 *"simple over-all shape; five-foot module"*

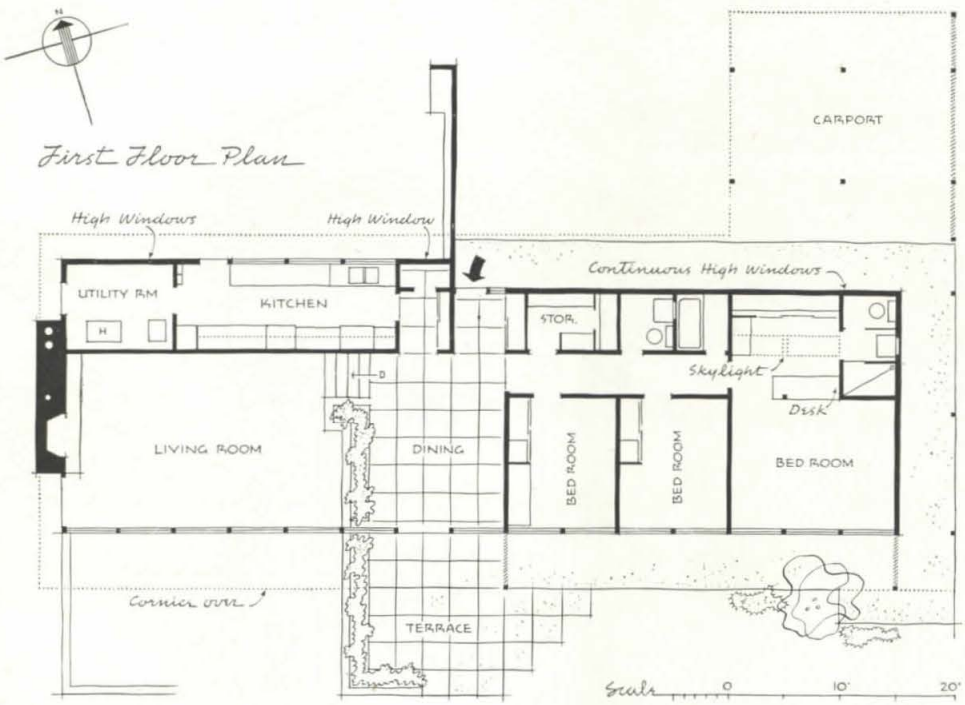
Edward D. Stone, Architect / Karl J. Holzinger, Jr., Associate

program Home for parents, one child and a nurse.

site Westchester County, New York, with fine view to the south.

solution Worked out within a simple rectangle — plus the north-extending carport — the plan divides roughly at the center, with living rooms, to the west; bedrooms in the east portion. Modular like the other houses shown in the group, this house is designed on a 5-foot module, with 4″ x 4″ posts on this centering. Roof framing is of 4″ x 10″ beams, with 2″ plank roof decking. Framing is exposed on the interior. Fenestration consists of select northern white pine sash and polished heat-absorbing glass.

The dining room (*left*), one end of which is used as passage space, is three steps above the living room (*acrosspage*). Below are details of the carport area and (*bottom*) a view of the bedroom wing. *Photos: Lionel Freedman*



Three views of rooms in the bedroom wing—the owners' room (*top, left*) at the east end of the house, and the child's room (*top, right, and immediately above*) alongside. In the latter, plastic tile is the flooring; birch plywood surfaces the walls, and there are ample built-in units to care for possessions.

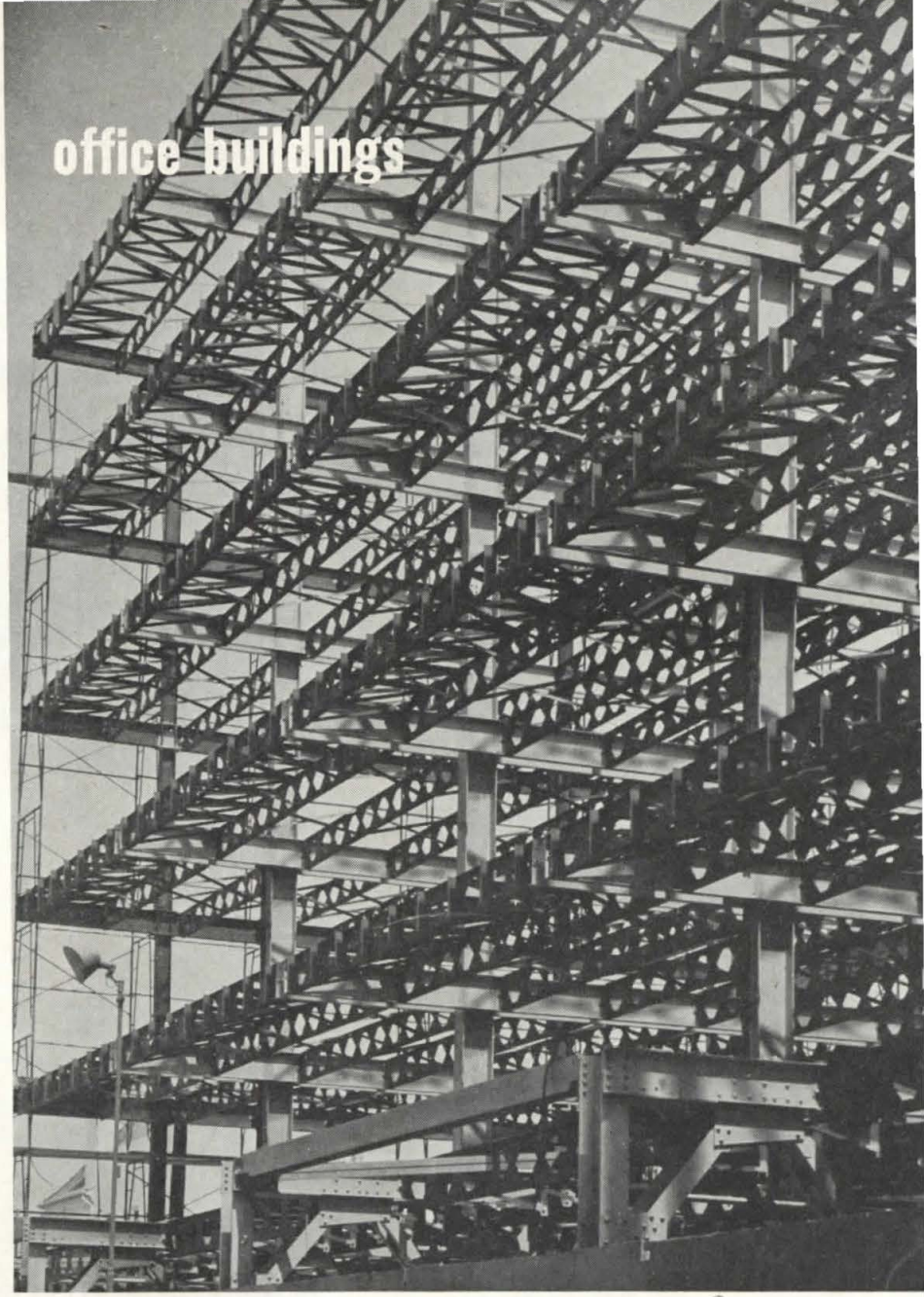
synagogue mosaics

These spirited panels, "Sacrifice of Isaac" and "Cycle of the Zodiac," in 21 hues of stone and glass adorned the nave of a ruined, ancient synagogue uncovered in 1928 by pioneers of Beth Alpha, Israel, digging a channel for water. Well preserved, they are thought to be post-Roman Occupation but their exact age is unknown.

Photos: Eleazer L. Sukenik

p/j critique

office buildings



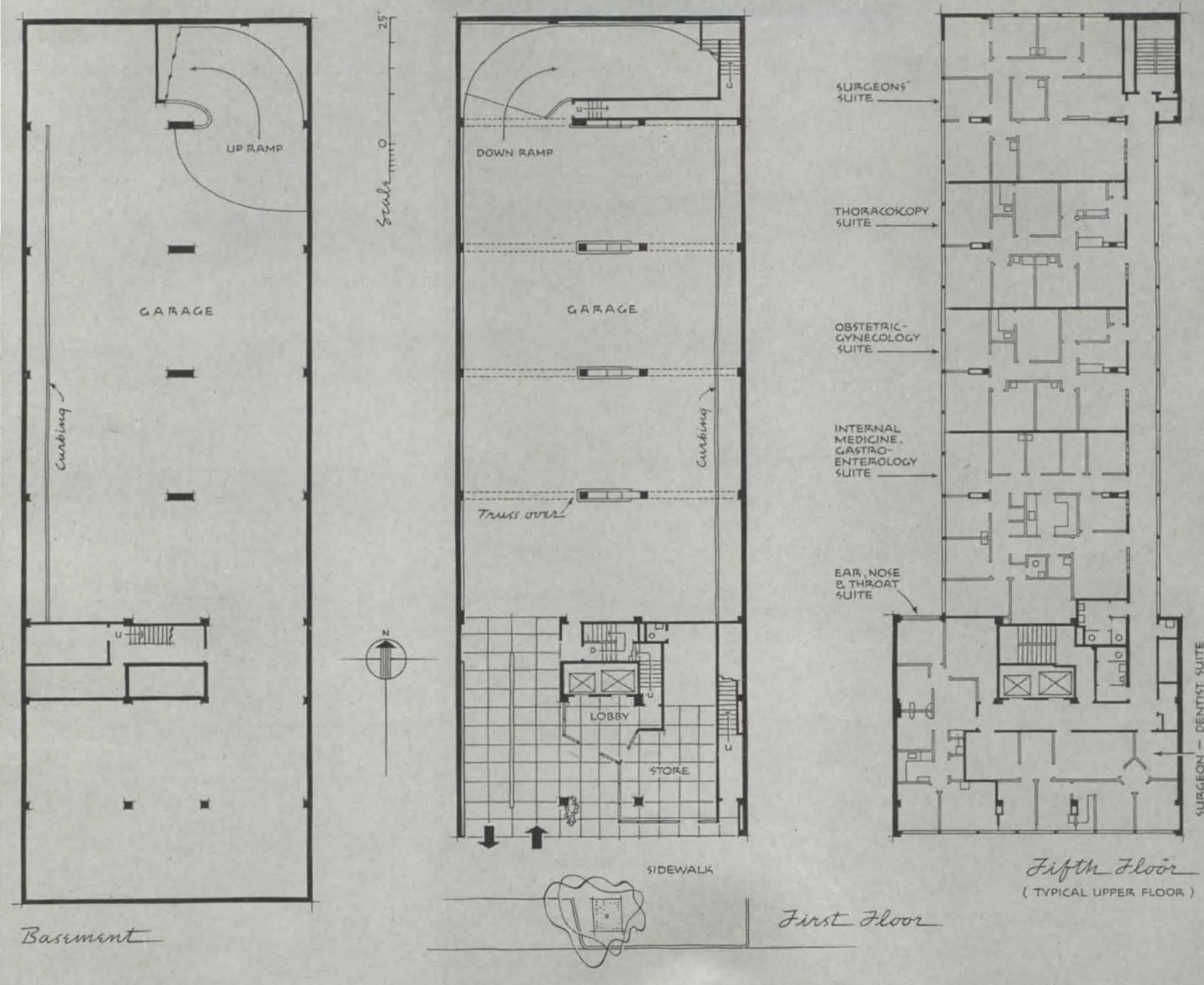
Victor Gruen, Architect
R. L. Baumfeld, Associate
Edgardo Contini, Consulting Engineer
Charles Kahan, Mechanical Consultant
R. P. Randall, Electrical Consultant
Waale-Camplan Co., General Contractor

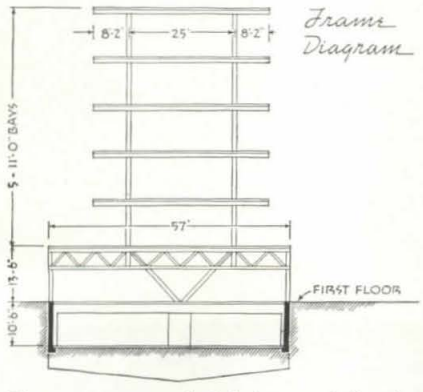
Los Angeles, California

On the face of it, the Mid-Wilshire Medical Building is simply a six-story building on a 57-foot lot on the north side of Wilshire Boulevard. Delving into the program requirements, budgetary and site limitations, however, one discovers that its design called for extraordinary ingenuity on the part of both planner and structural designer.

Chief problems, in addition to providing a flexible typical floor that would accommodate a wide variety of specialized offices, were (1) that a parking garage be incorporated and (2) that the job be built as economically as possible. To solve the latter, the engineers took advantage of a recent local code revision that permits exterior walls with a two-hour fire rating and selected a lightweight steel-framing system, with thin, precast concrete panels for enclosing walls (page 77).

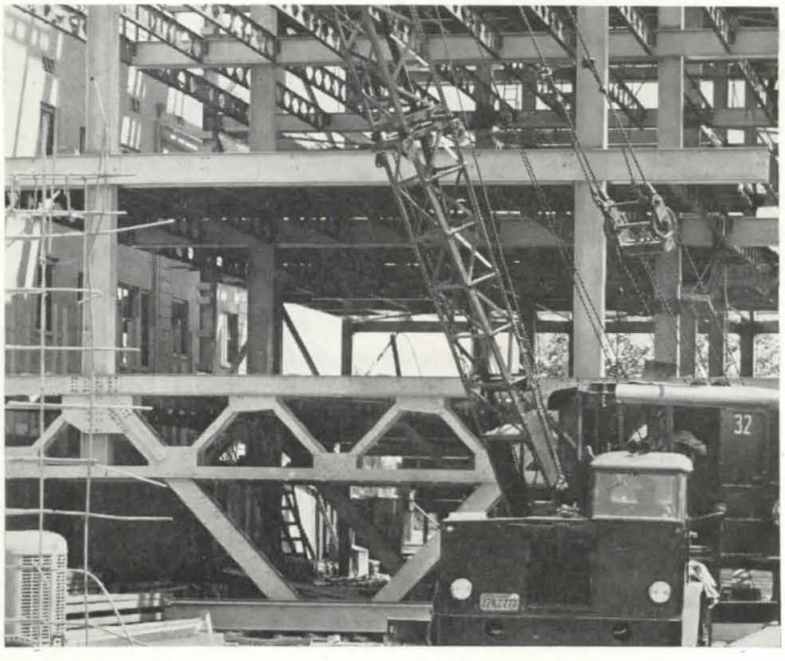
The need for including a parking garage required some method of reducing interior columns to a minimum within the garage space. This was accomplished by transferring loads from the five upper stories of the rear wing of the building (rigid frames supported on two columns with paired-channel horizontal members cantilevered beyond columns) to a single pier, centered under the columns (*diagram, facing page*).





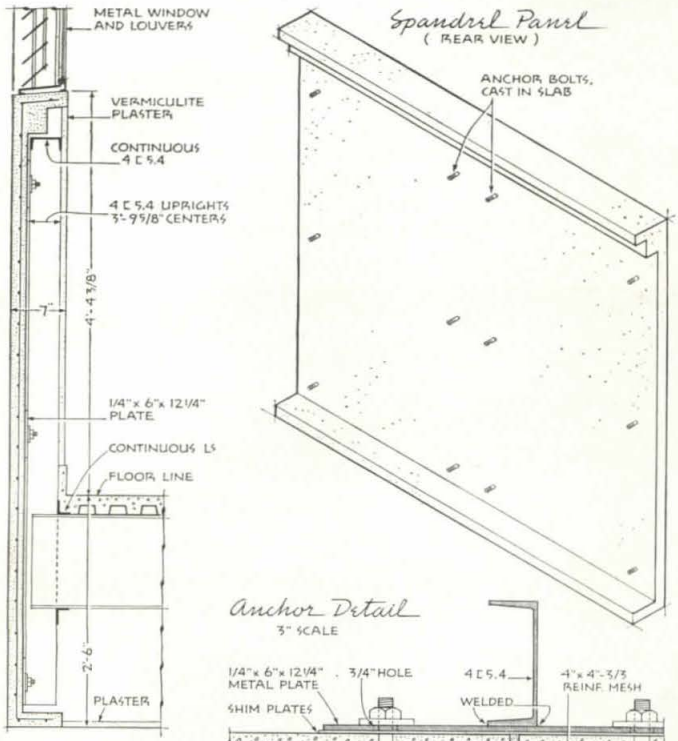
Frame Diagram

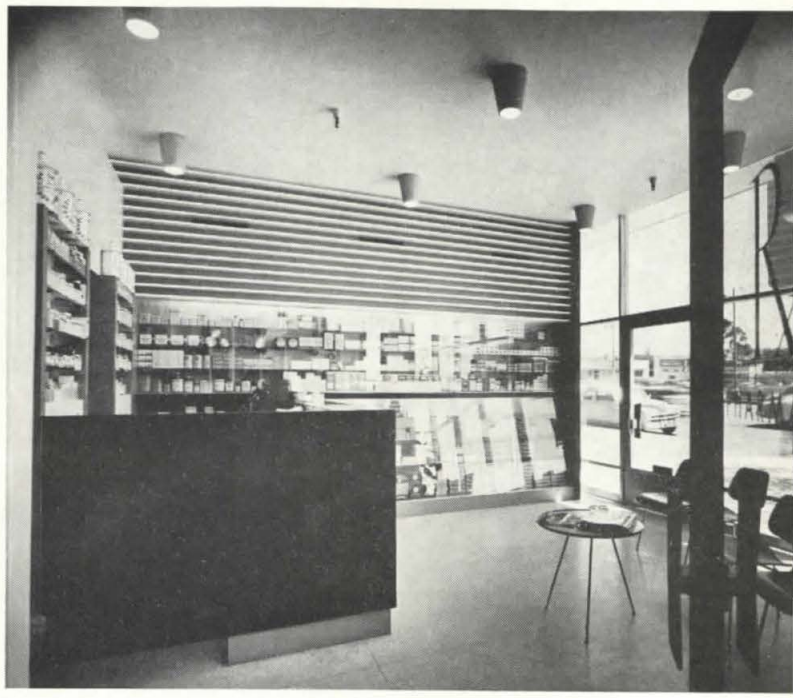
Frames are carried (at second-floor) on trusses through which vertical reactions are transmitted from the columns, then down through diagonal struts to a central pier. To cope with differences between loads on the pier and that on the columns, footings are designed as inverted cantilever beams, anchored at ends on basement walls, the latter acting as continuous longitudinal beams.
Photo: George Hayashida



The lightweight-steel framing system, making wide use of the cantilever principle, reduces dead loads, eliminates heavy wall construction and columns in exterior walls, allowing maximum plan flexibility for office layouts. For enclosing walls, 2-inch-thick precast concrete panels are attached by bolts to 4-inch steel supports—to vertical cantilever channel sections on the front of the building (*details, acrosspage*); to floor-to-floor channel members on the windowless side walls, and to expanded steel studding cantilevered from spandrel beams in the rear side walls where continuous strip windows occur (*photo above*). Light floor construction consists of metal decking topped with 2-inch lightweight aggregate concrete supported on open-web junior joists.

CONSTRUCTION AND EQUIPMENT on page 154





LOS ANGELES, CALIFORNIA

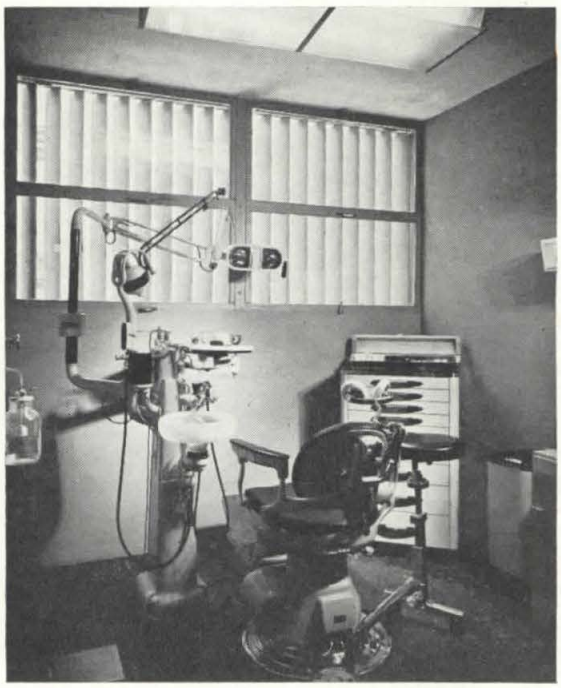
At the front of the building, the precast wall panels with integral crushed-stone facing, are left exposed; inside finish is plaster on metal lath which is attached to the inside face of the channels, leaving an insulating air space. On the rear side-walls, a 1-inch coat of cement plaster forms the exterior facing; vermiculite is used on the interior.

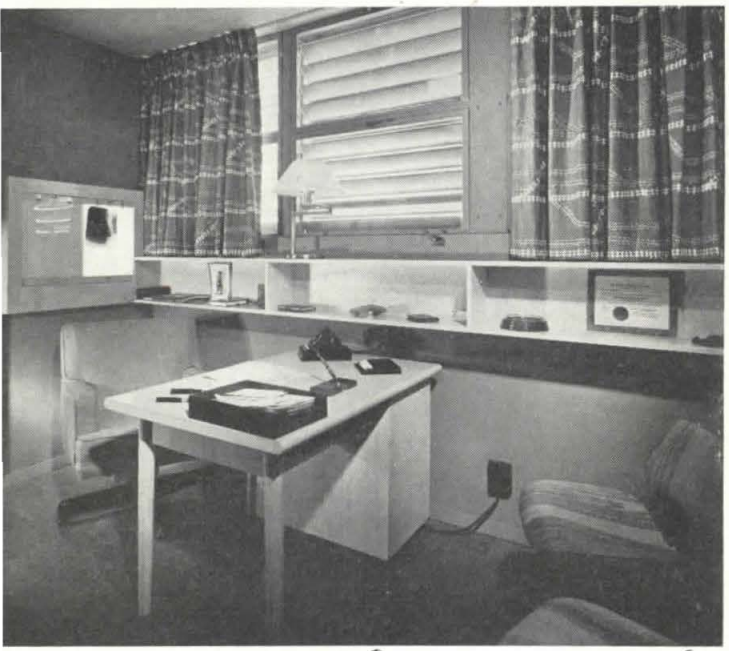
Photos of the garage area show the diagonal struts which transfer building loads from the truss and framing above to the central basement pier. Above are exterior and interior views of the main-floor pharmacy. *Photos: Harry H. Baskerville, Jr.*

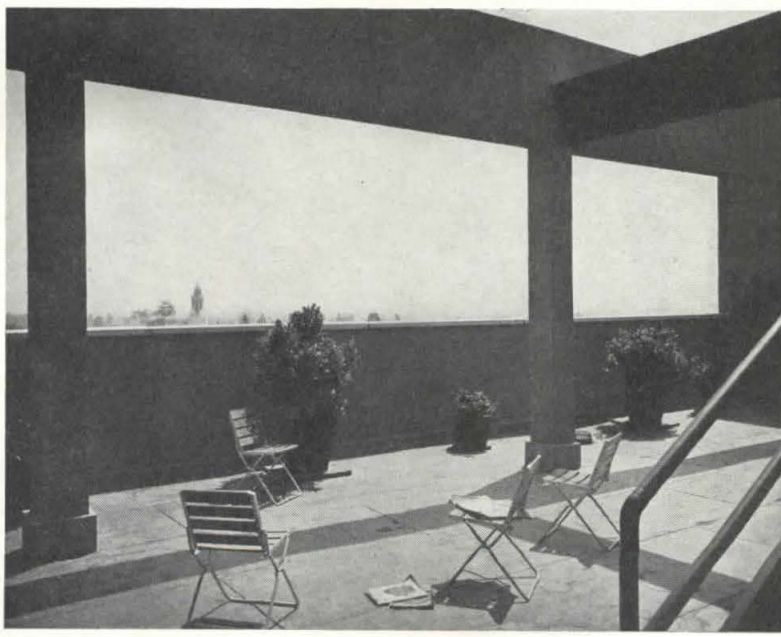
Below—the ground-floor elevator lobby (*left*) enclosed by walls of wire glass; terrazzo floor; and (*right*) a typical office reception room.

Above—a typical corridor, along the east wall of the rear wing and (*right*) a compact office for a secretary-receptionist.

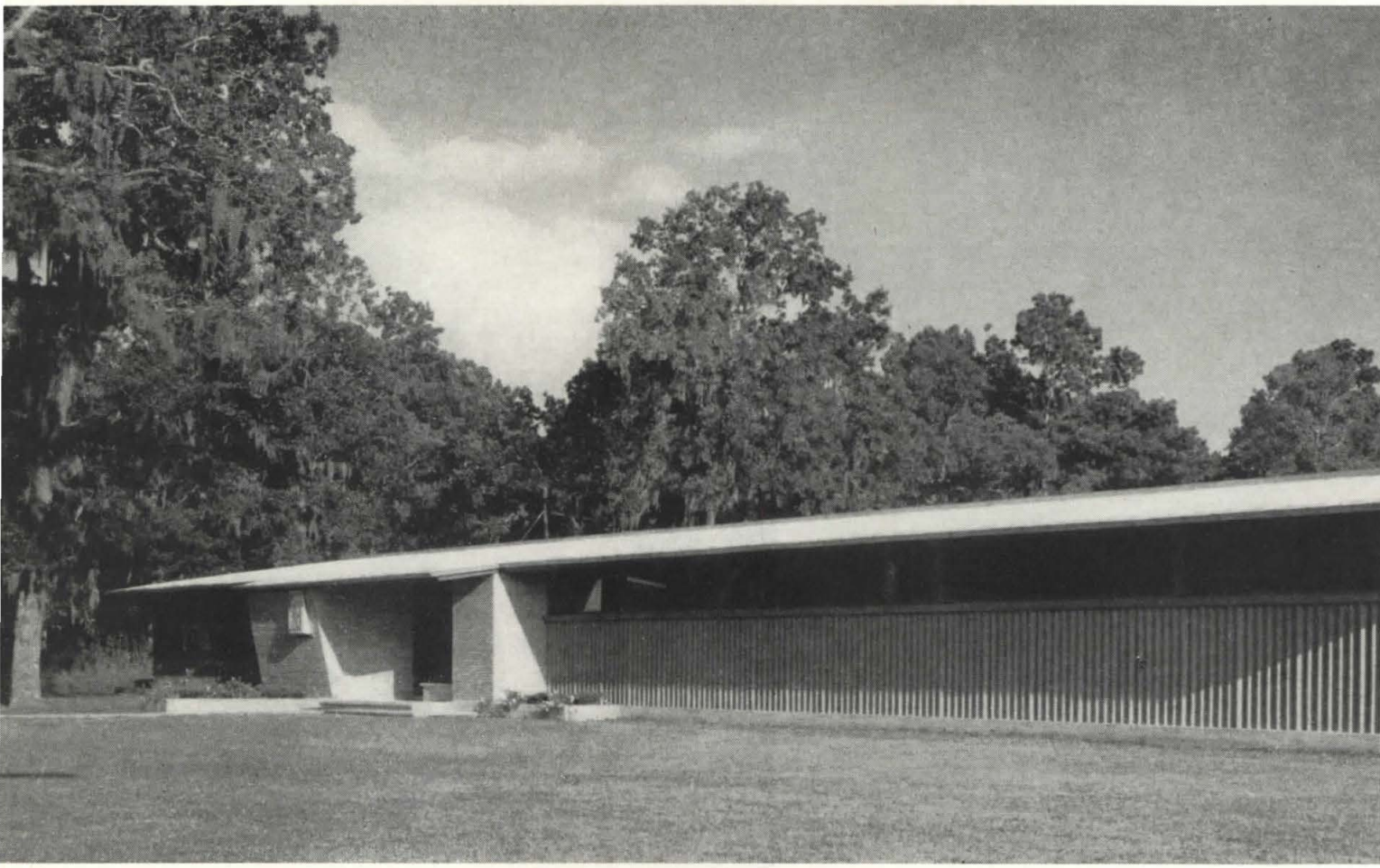
Below — a laboratory *(left)* and a dentist's operating room *(right)*, both on the west wall of the rear wing, with steel sash protected from unwanted sun by operable vertical louvers.





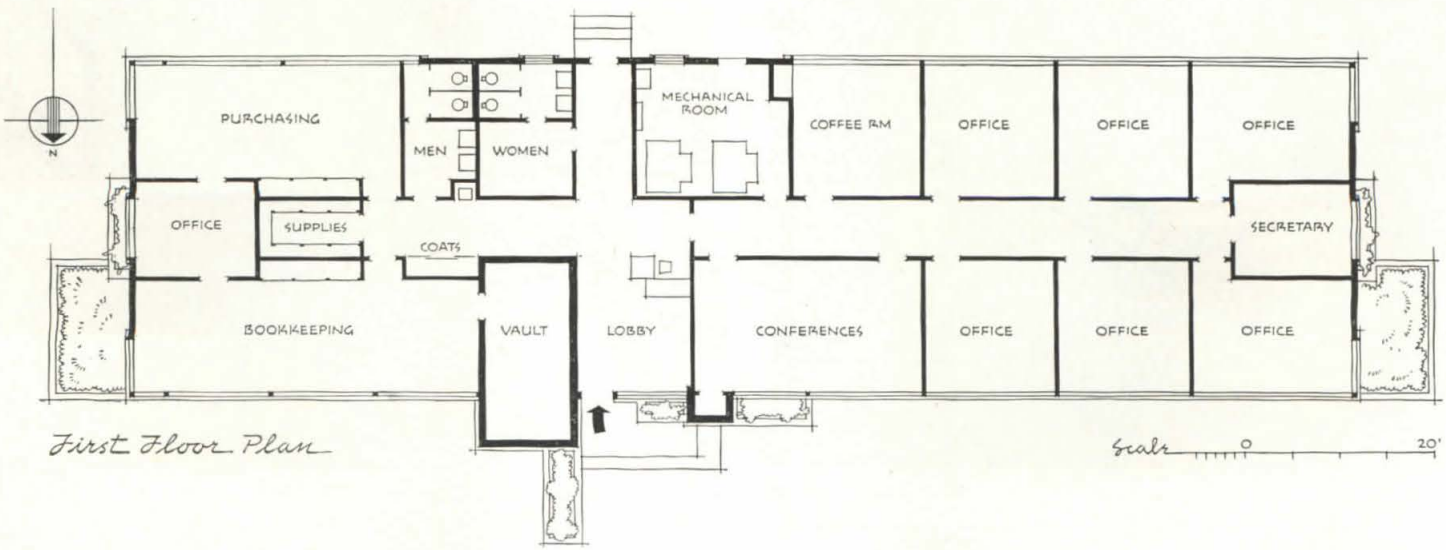


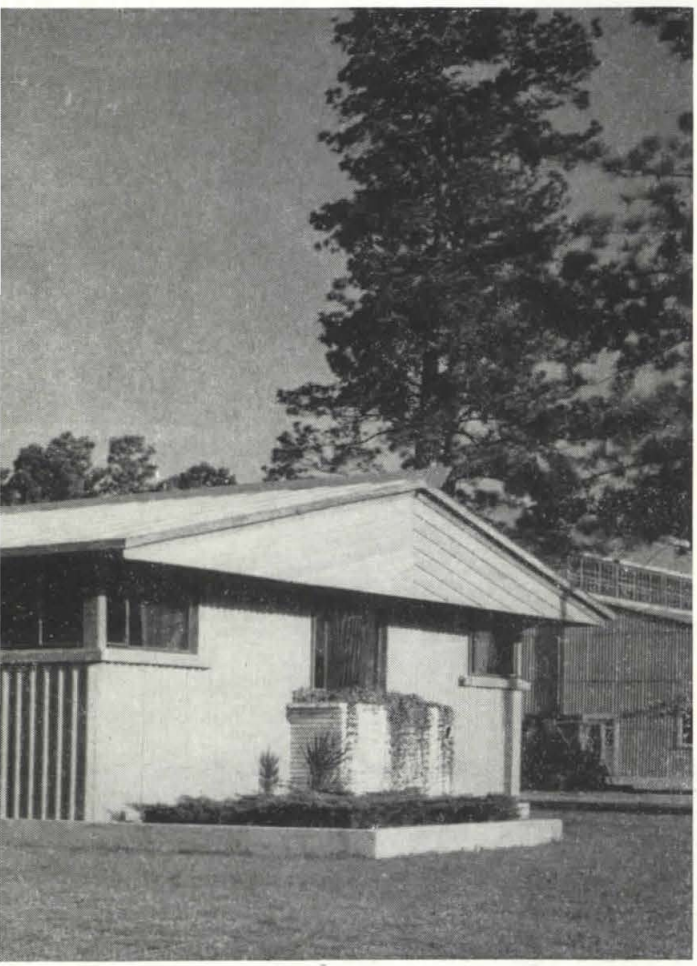
Left — a doctor's office on the south *(front)* of the building, with operable horizontal louvers for sun control. The rooftop penthouse *(above)* commands a broad view of the city.



MacKie & Kamrath, Architects
Walter P. Moore, Structural Engineer
Harris Construction Company, General Contractor

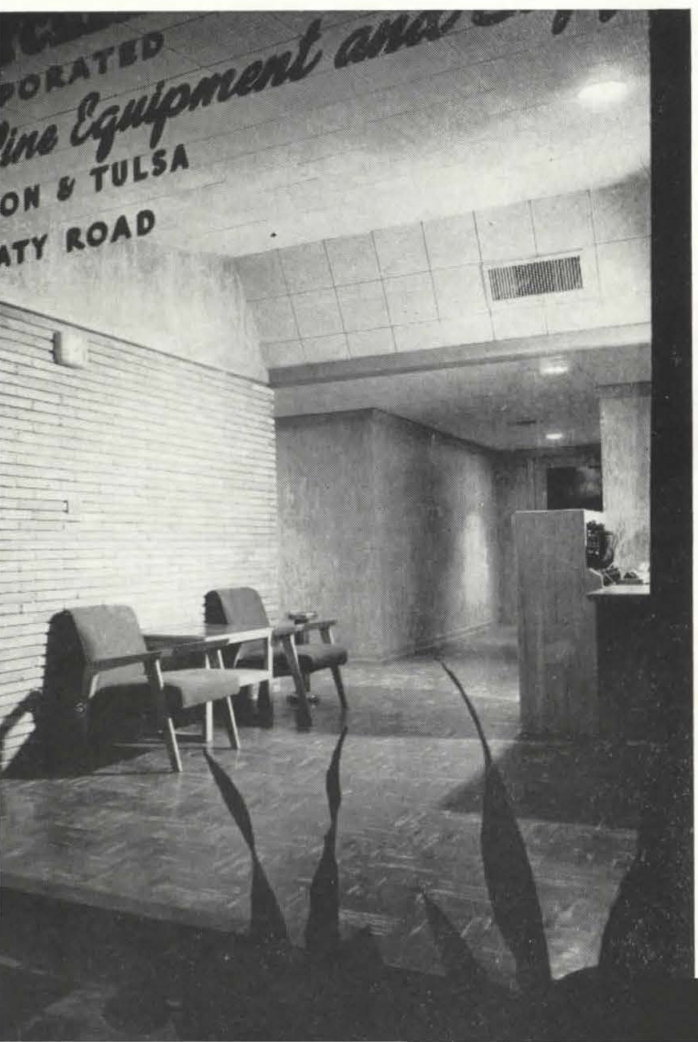
Houston, Texas

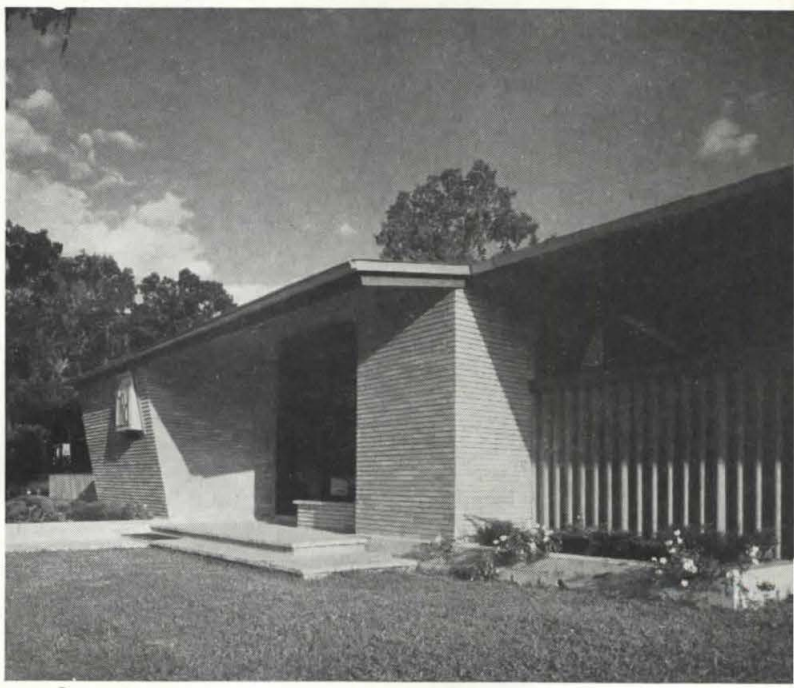




Crutcher-Rolfs-Cummins, owners of this one-story office building, are the world's largest suppliers of equipment to pipeline contractors. Formerly occupying downtown offices, they not only felt that an away-from-the-center location would be no detriment to their business, but they liked the idea of having a well designed office building of their own to serve as a public-relations medium. The new building stands in front of the company's extensive shops and warehouses, on the south side of a much-traveled highway near Houston's city limits.

The plan is arranged within a rectangle, with possibility of extension to the south at some later date. Private offices occupy the west wing; general offices, the east. Although framed in wood, the building is surfaced with materials selected for their fire-resistant qualities—corrugated asbestos cement and brick exterior walls; and standing-seam sheet aluminum roofing. The offices are completely air conditioned; heating is by gas-fired, forced-air units. Ceilings have acoustical finishes, and there is acoustical material in all interior partitions, which are surfaced with various plywoods. Interior lighting is chiefly fluorescent.

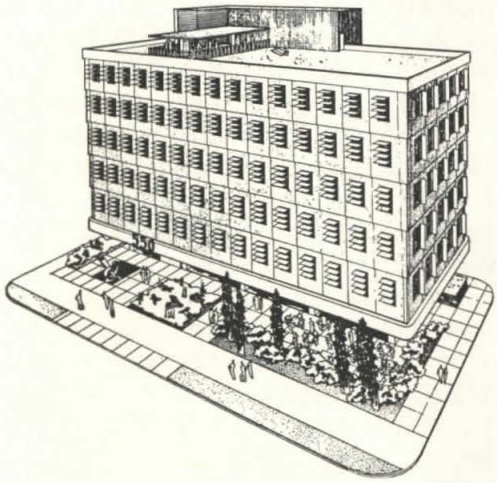




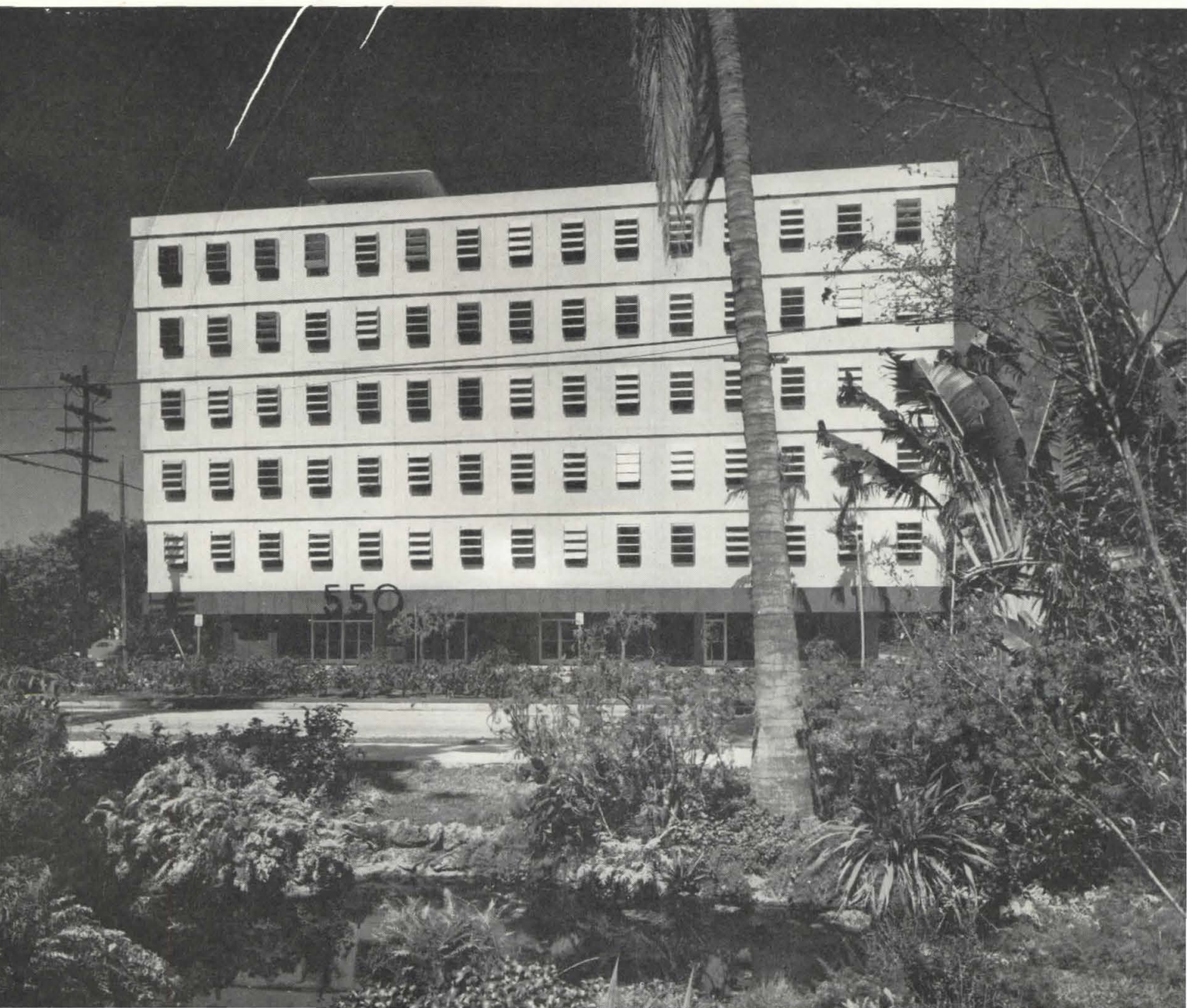
The basementless structure is built on a reinforced concrete slab. Flooring throughout is of asphalt tile, waxed. The exterior corrugated asbestos cement is dark red; the brick, a grayish-pink. Steel sash have ¼" plate glass. The building is floodlighted at night.

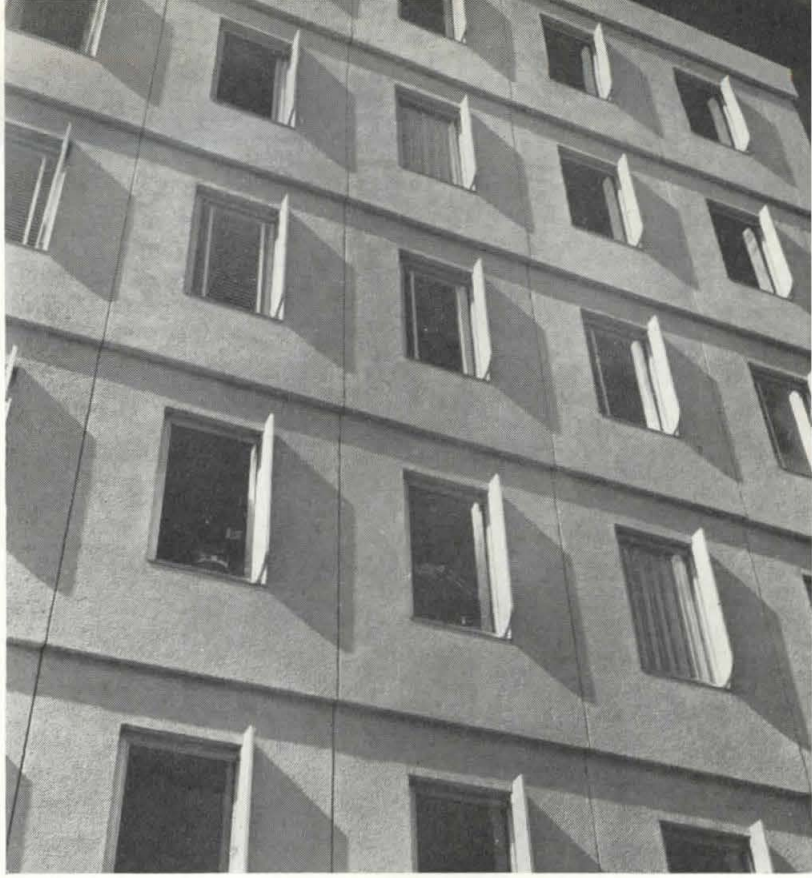
Photos: Wilbur Seiders

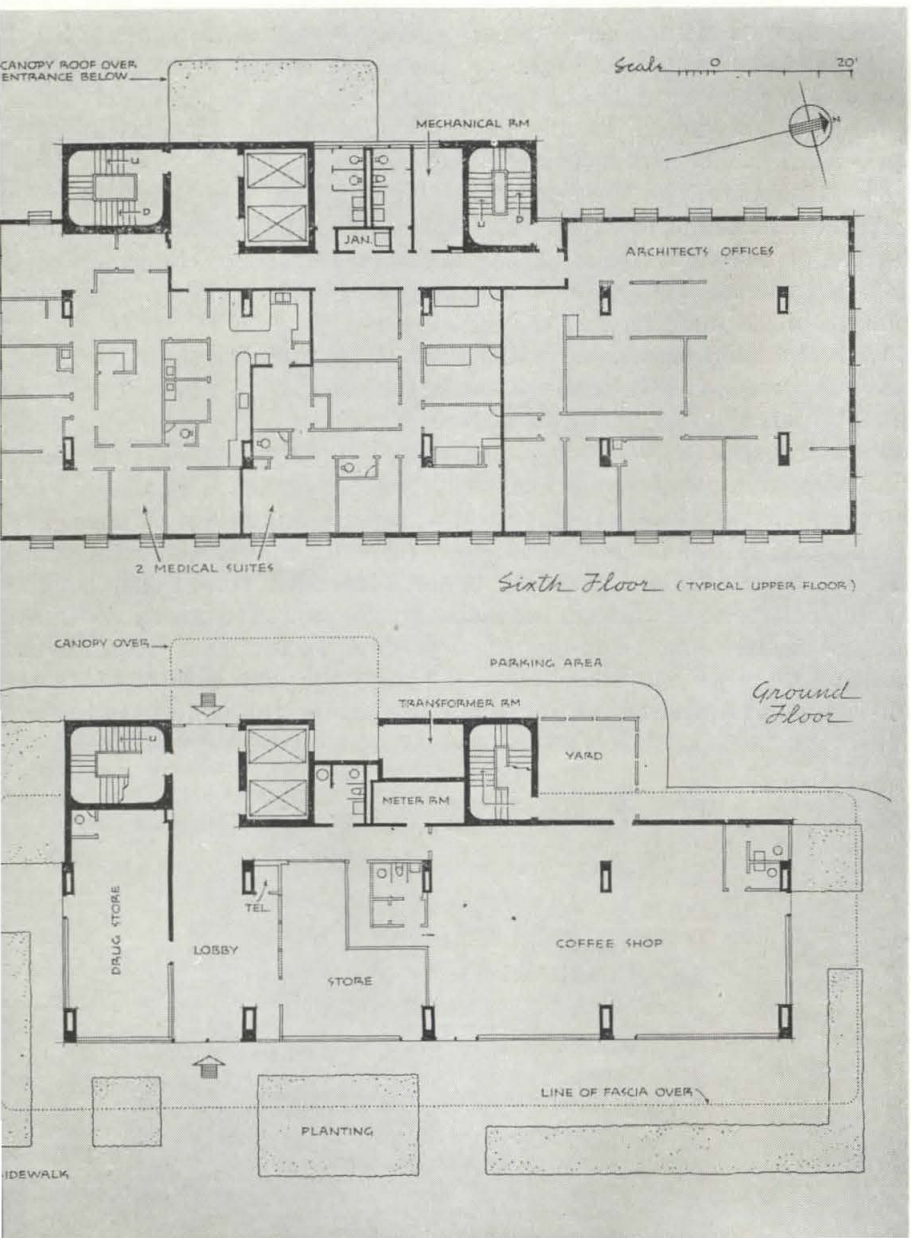
Miami, Florida



Robert Law Weed and Associates, Architects and Engineers
Jorgensen & Schreffler, Structural Engineer
R. L. Duffer, Mechanical Engineer
J. Y. Goach Co., General Contractor







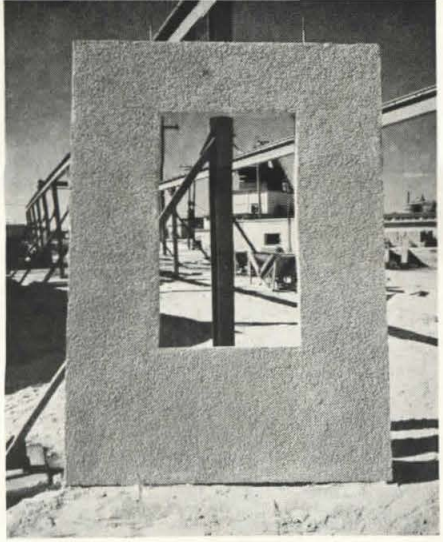
This extraordinary office building, built for a group of co-operative tenant-owners—including the architects—is notable on numerous counts:

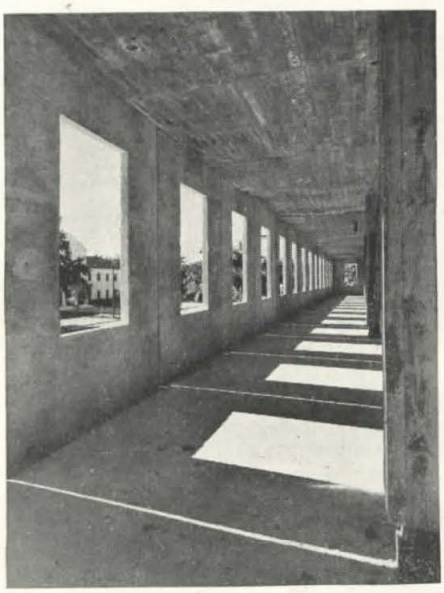
Structural system employing interior columns, cantilevered floor slabs, and lightweight curtain walls, the whole supported against wind stresses of hurricane force by an almost monolithic, vertical service shaft at rear of building (*above, left*).

Selection of materials and surfacing systems for minimum upkeep and long life.

Special thin, precast concrete panels used for a curtain wall that steps outward from the first to the sixth floor, something in the fashion of giant, overlapping shingles (page 85).

Operable aluminum louvers on openings in east, west, and south walls; fixed vertical fins at the western edge of openings in north wall (*above, right*) to minimize entrance of direct sunlight, thereby reducing the air-conditioning load. *Photos: Rudi Rada*





The precast wall panels were delivered to the job by truck, placed vertically around the base of the building below their permanent location, and raised into position. As shown in the SELECTED DETAIL (*acrosspage*) the overlapping panels sit on three clip angles at the base and are attached to the floorslab above by two ¾" bolts, which are cut off after installation. Vertical joints are left open on the face, and closed from the back by snapping into a dovetail joint a spring aluminum strip, well caulked from behind.

Photo at right: Jack Holmes

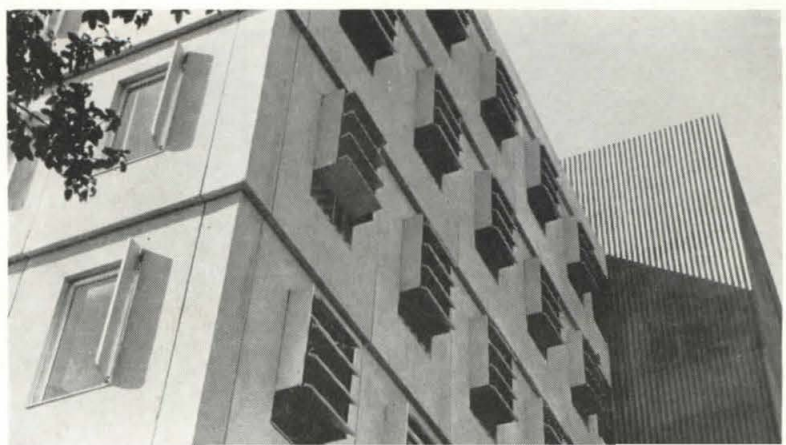
MIAMI, FLORIDA

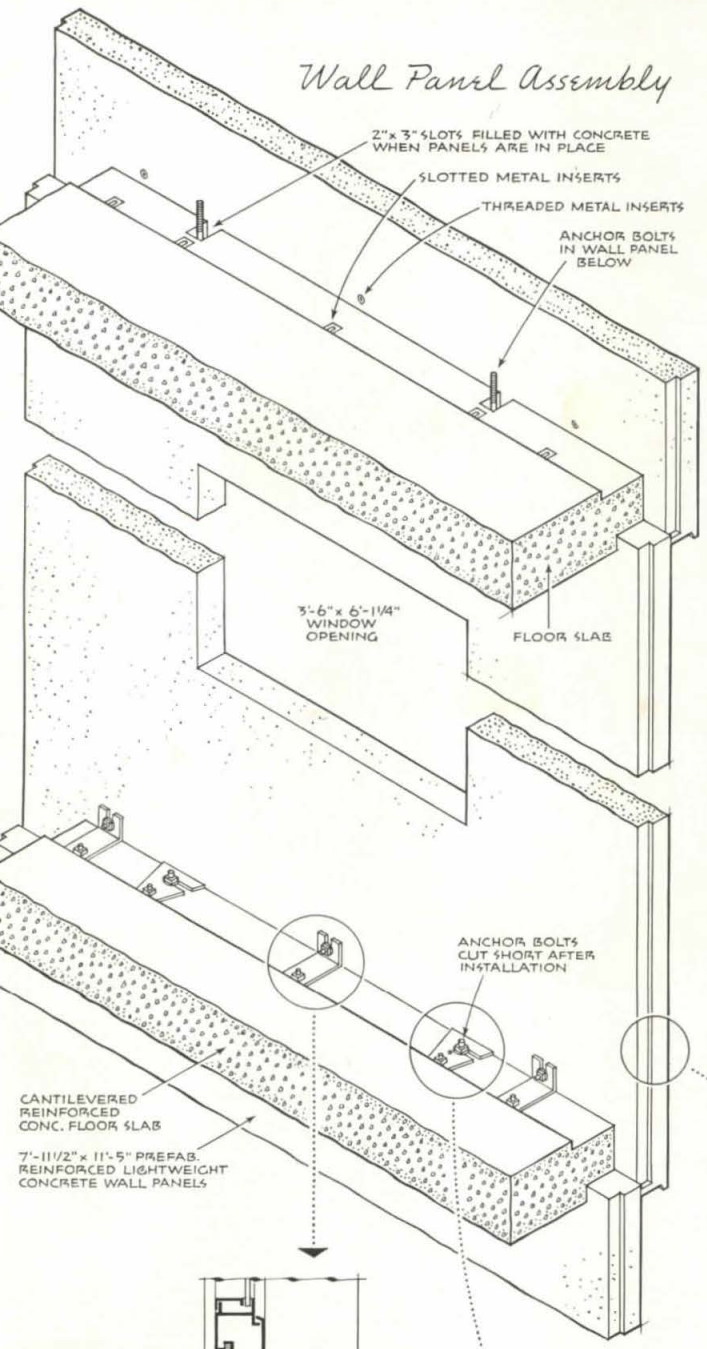
Since the owners of the 550 Building would also be tenants—eleven doctors, three lawyers, one architect, and one medical-laboratory technician—they were exceptionally budget- and maintenance-conscious. Hence, all of the initial design thinking went into finding a structural system and materials that would require least upkeep and have the longest life. Because of the large medical tenancy, provision of extensive plumbing lines was essential, and the owners wished to obtain office floor space that would allow the greatest freedom in partition placement. The site is just across the Miami River from the main business district, on the west side of a broad, esplanaded street.

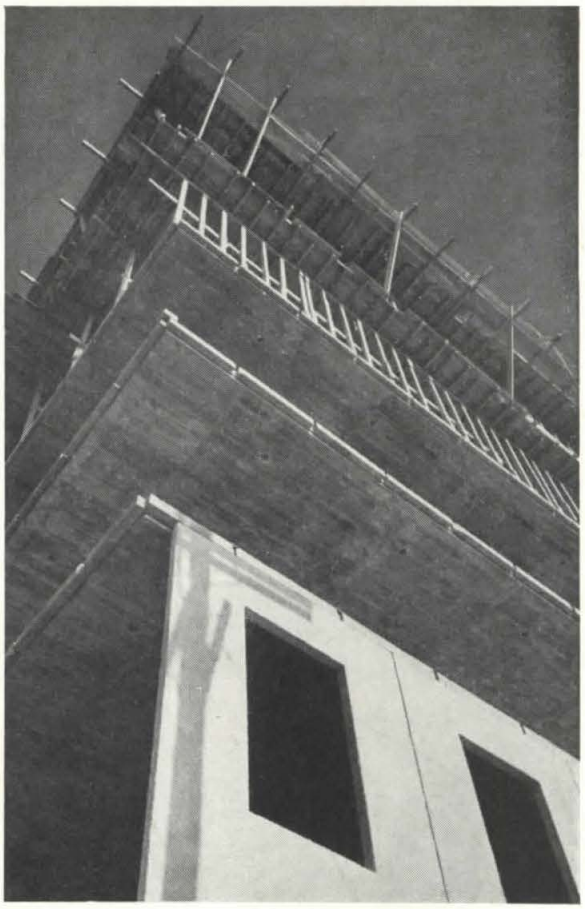
The structural solution consists of paired steel columns (*see plan*) placed 10′-6″ back from the exterior wall line. Adjacent to each column is a slot for plumbing soil and vent stacks. Floors are of flat, plate construction of reinforced concrete, with two-way reinforcement. Steel grillages at column heads take all the shear stress and obviate the necessity for bell capitals and drop panels, resulting in completely flush floor slabs. This made feasible a story height of only 11′-3″, which, in turn, meant sizable savings in building cubage.

The utility shaft at the rear of the building not only centralizes the service elements but acts as a structural anchor for the entire building, since all wind-load stresses are carried in its reinforced concrete walls, making it unnecessary to include deep girders and windbracing at the columns of the main part of the building.

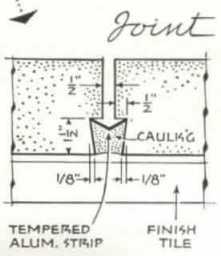
With the deep cantilever of the floor slabs, a lightweight enclosing wall was obligatory. To cope with this, the precast reinforced concrete-panel system highlighted on these two pages was developed. Since continuous fenestration was not wanted, the designers adopted a standard window opening centered in each wall panel, a device that allows wide choice in partition location. For corners, L-section panels were used. The overlapping of the slabs automatically provides a continuous, horizontal, weathertight joint. Precast under controlled conditions, by the Maule Industries of Miami, the slabs are of pumice concrete, with an integral white-cement-and-quartz aggregate facing that requires no painting or other continuous care. To meet the city building-code requirements of a wall with a four-hour fire rating, the panels are backed with 2″ facing tile, which also serves as interior wall finish.

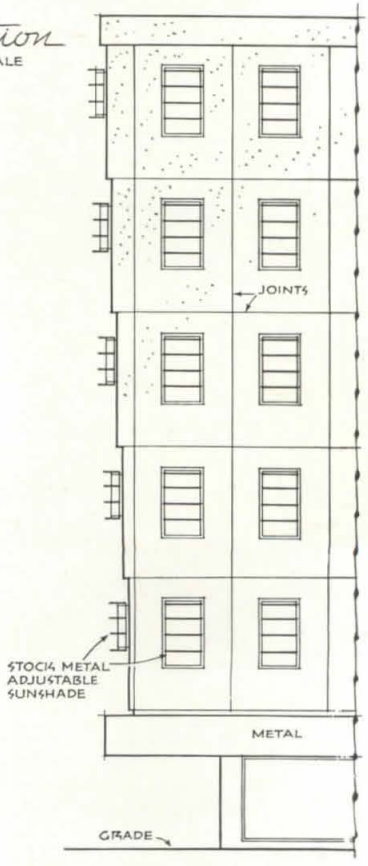






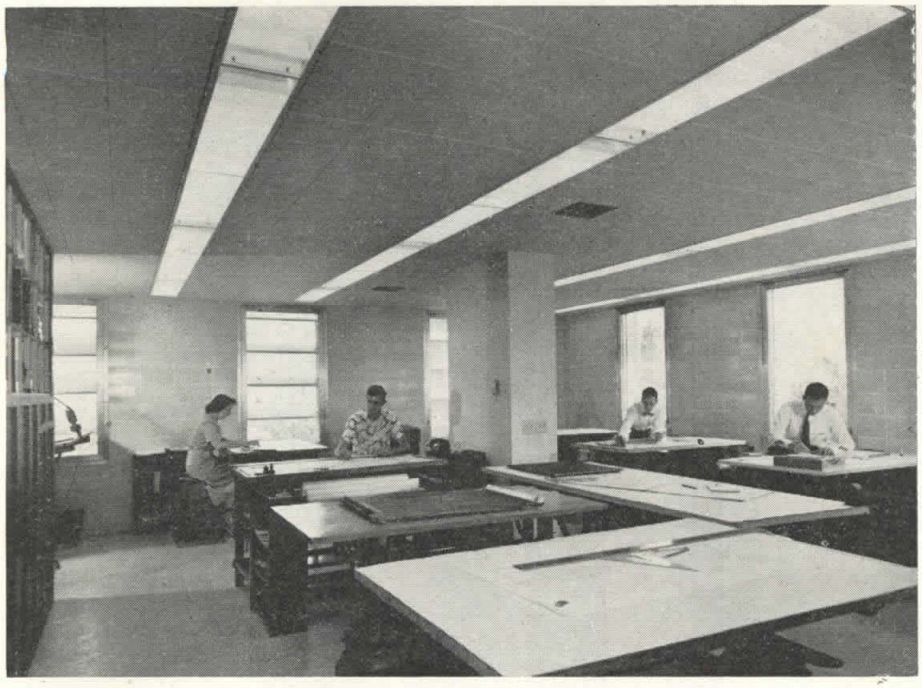
RUDI RADA





OFFICE BUILDING, Miami, Fla.

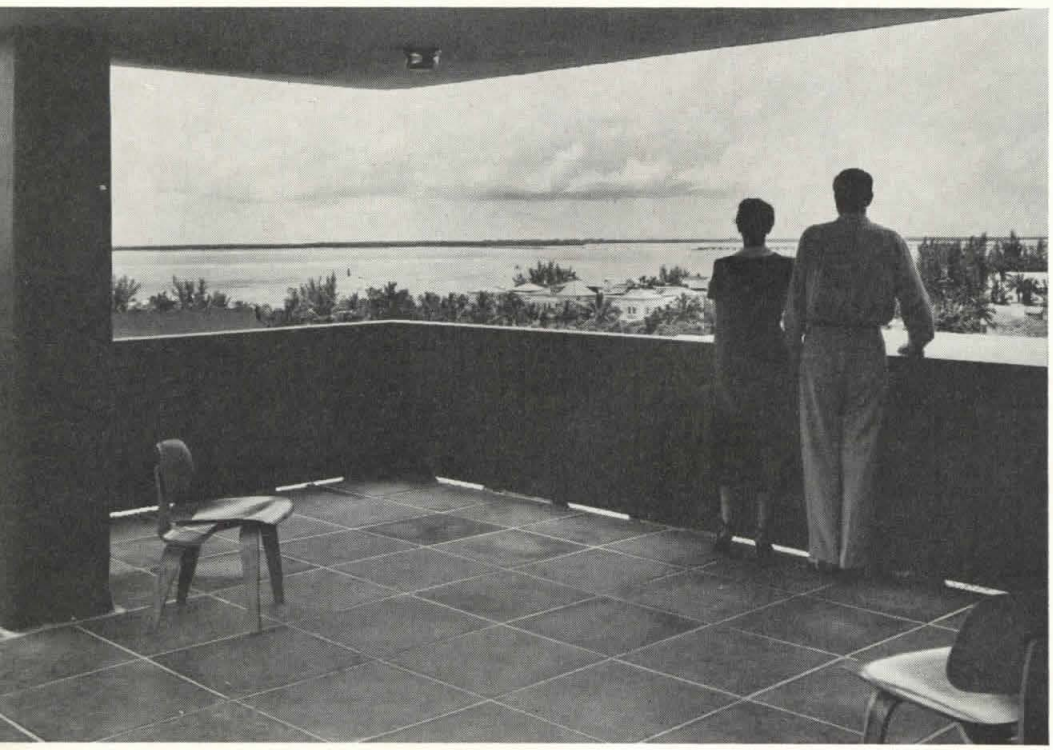
ROBERT LAW WEED & ASSOCIATES, ARCHITECTS AND ENGINEERS



Robert Law Weed & Associates, architects of the building, occupy the north end of the top floor. A view of the drafting room is shown (*above*): terrazzo floor; facing-tile walls; acoustic-tile ceiling.

Right—medical laboratory (*above*) on the fifth floor and (*below*) reception room and library for the three law firms that have offices on the second floor.

Below—rooftop view.



MIAMI, FLORIDA

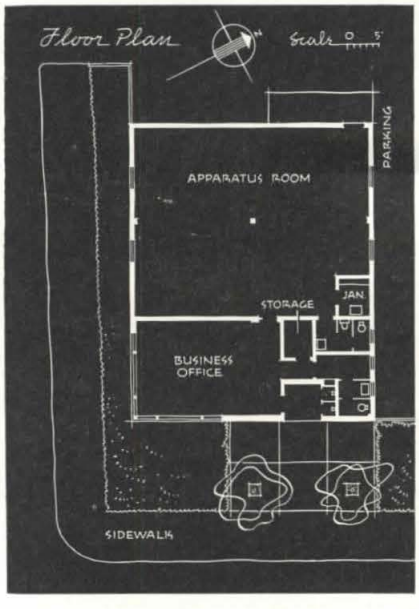
Four Telephone Buildings

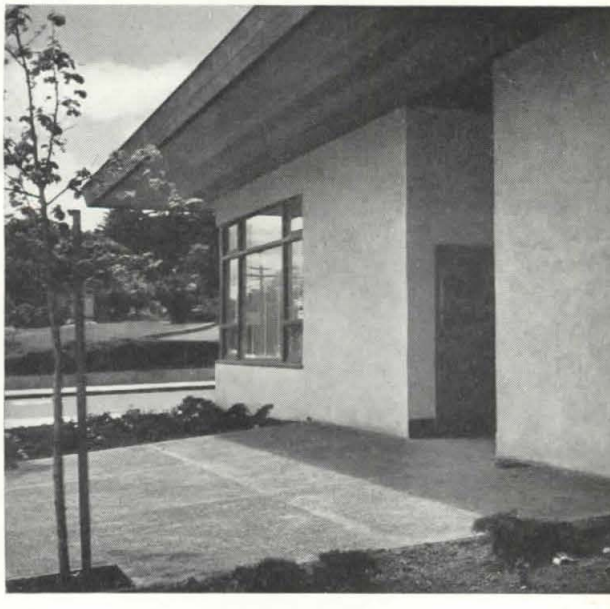
Hervey Parke Clark and John F. Beuttler, Architects

It is an anomaly that the telephone building—a structure whose chief function is the housing of complex modern mechanisms—has tended to remain in demure, conservative architectural dress rather than stepping forward in confident contemporary form to reflect the inherently progressive nature of its operations. On these next few pages, we show a shinier side of the coin—a group of small buildings wherein the architects were able to work with imaginative executives and engineers of the telephone companies involved to achieve a fresh design approach. Of collateral interest are the various design solutions worked out to solve difficult sun-control problems. *Photo above: Roger Sturtevant*

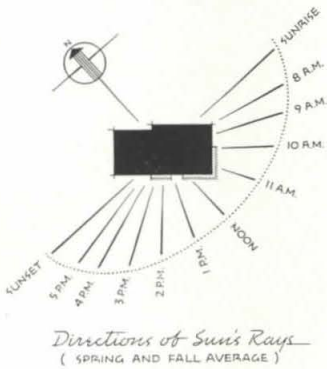
1. Sebastopol, California

Located in a residential neighborhood on a northwest corner site, this little building is but 37′ x 48′ in area and set well back from the street. In order to achieve a relatively domestic scale for the structure, despite a mandatory 12′-6″ ceiling height for the apparatus room, the architects adopted a flat-roof scheme. R. C. Mosely, building engineer for The Pacific Telephone and Telegraph Company, tells us, "at the time the building was completed, comments by the public were very favorable, the general opinion being that the structure was a distinct asset to the community. The building features incorporated into the design are appropriate to and adequate for the operations for which the office is intended."

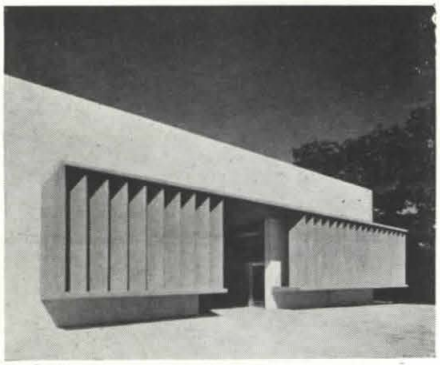


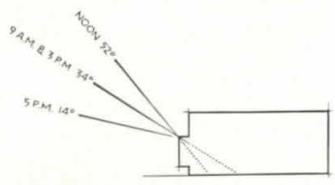


2. Turlock, California

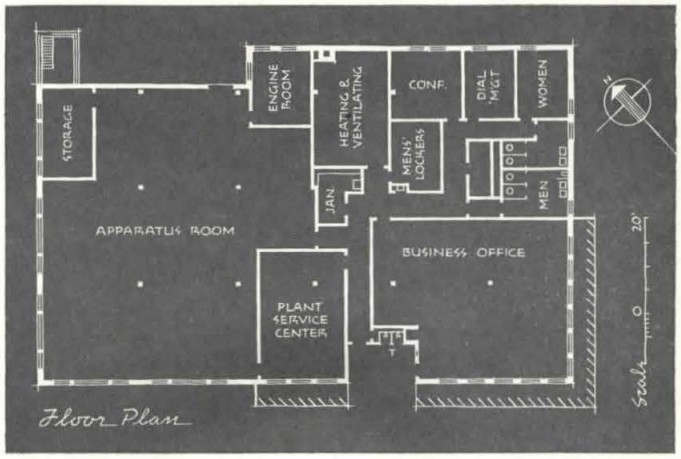


Directions of Sun's Rays
(SPRING AND FALL AVERAGE)



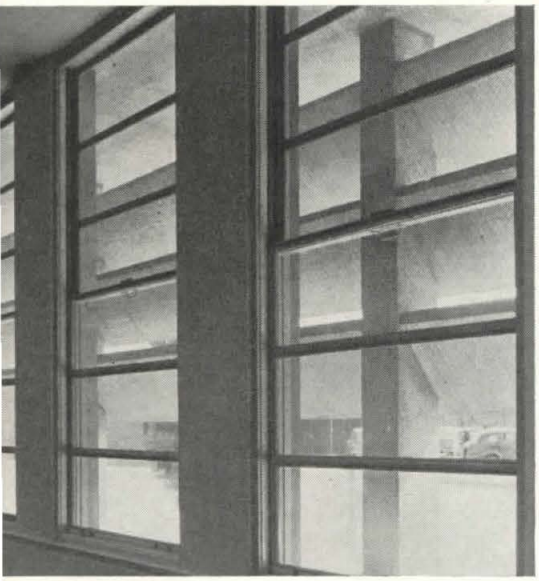


Altitude of the Sun
(SPRING AND FALL AVERAGE)



Floor Plan

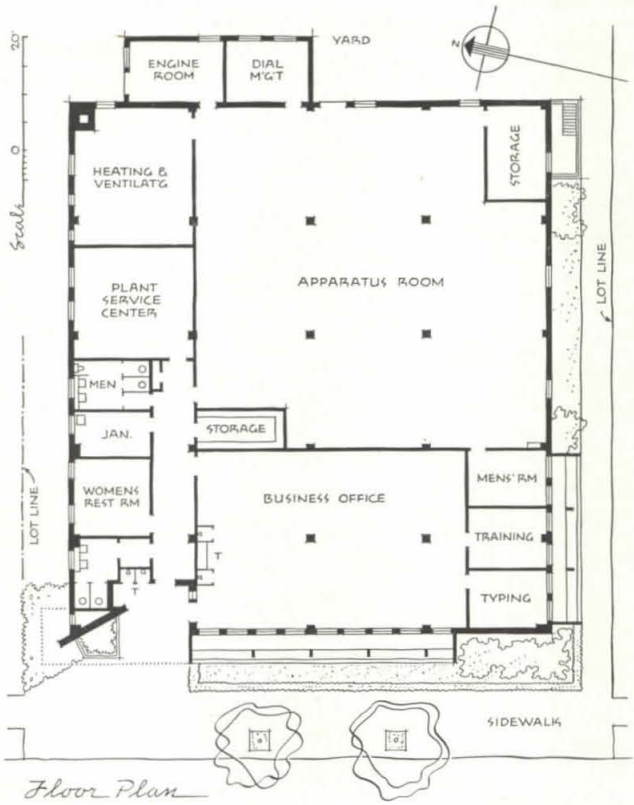
In addition to efficient organization of the customary functional areas—the business office; the apparatus room to house automatic dial equipment; a service center to supervise installation and test of service lines; heater room and stand-by power plant—the design of this main building incorporates a method of modifying the sun's heat by means of fixed, vertical, concrete louvers. The depth between windows and louvers provides not only a heat-dispersion zone for air-temperature reduction but also a passageway to facilitate window cleaning. The building has walls of reinforced concrete, with cement-stucco exterior finish. Interior vertical supports are wood posts, and the roof is wood framed. R. S. Chew was the structural engineer and H. S. Haley, the mechanical engineer. "Nearly everyone likes the appearance of the building," comments F. S. Strasser, manager of the Turlock building. "Customers often remark, especially in summer, that our office is very inviting as there is no glare from the outside, yet plenty of light." *Photos: Roger Sturtevant*



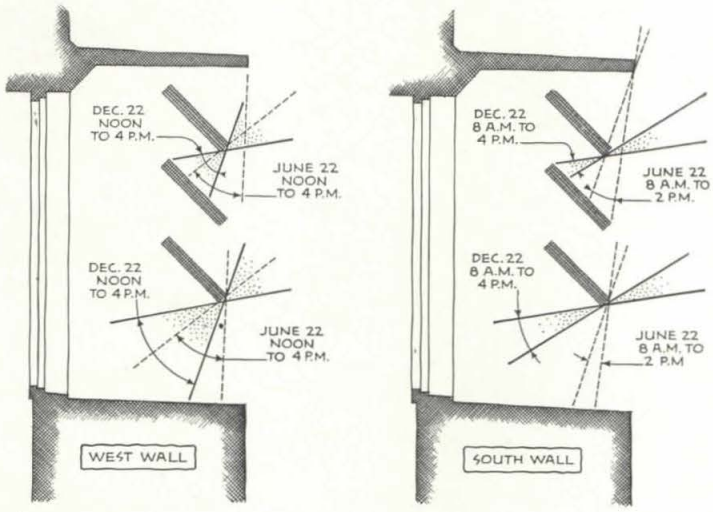
3. Tulare, California

Other than providing a good disposition of the required work spaces, the most important design consideration in the case of this steel-frame and concrete building had to do with control of summer heat. As indicated (*acrosspage*), sun studies were made for various seasons of the year. From these, the fixed, horizontal, reinforced-concrete louver system was developed. The architects comment: "Together with the design for the building at Turlock (*preceding spread*), this may set a precedent for comfortable, therefore efficient, office space in areas where extremely high temperatures occur." The manager of the building, R. C. Sarver, is enthusiastic: "The horizontal louver construction is perfect in every respect. It blocks direct sun throughout the year and gives good natural lighting and also eliminates the use of blinds." R. S. Chew was structural engineer and H. S. Haley, mechanical engineer.

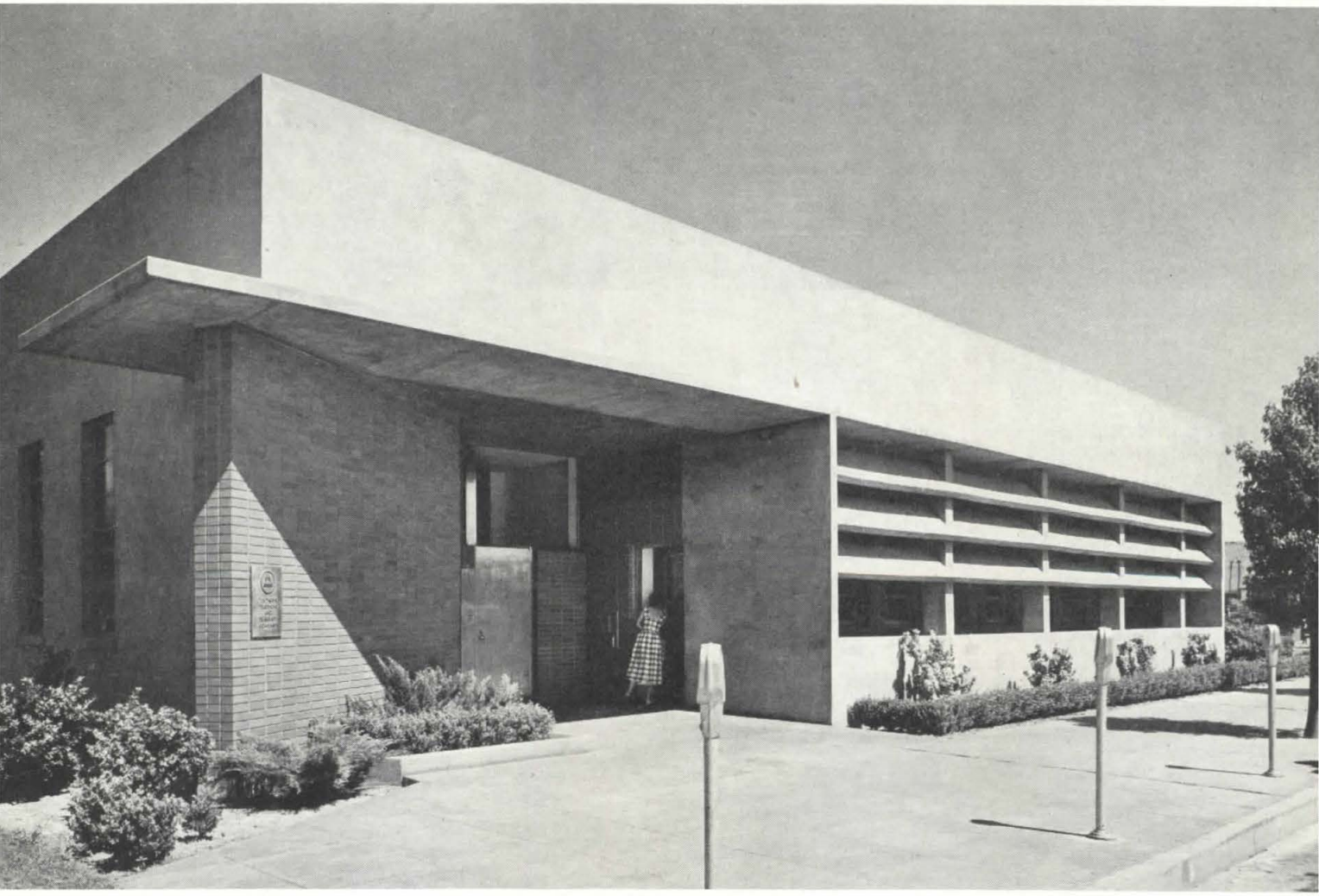
Photos: Roger Sturtevant

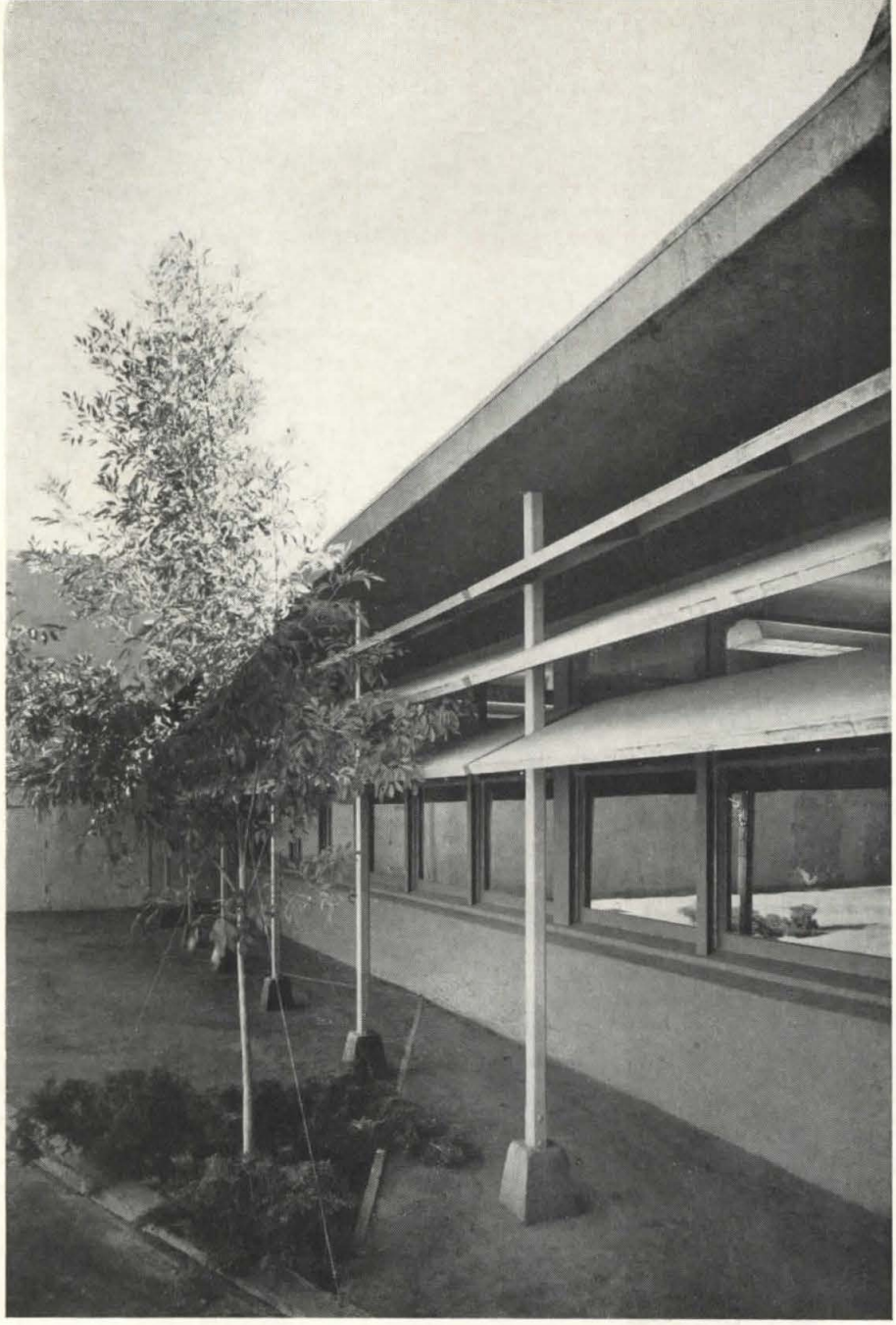


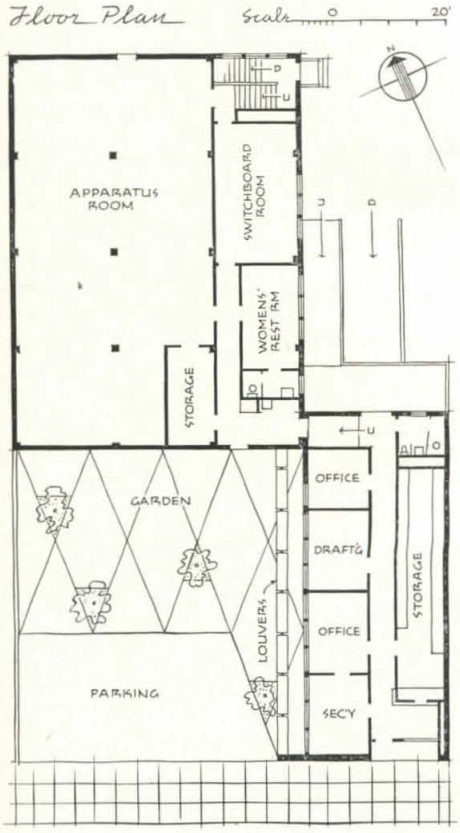
Floor Plan

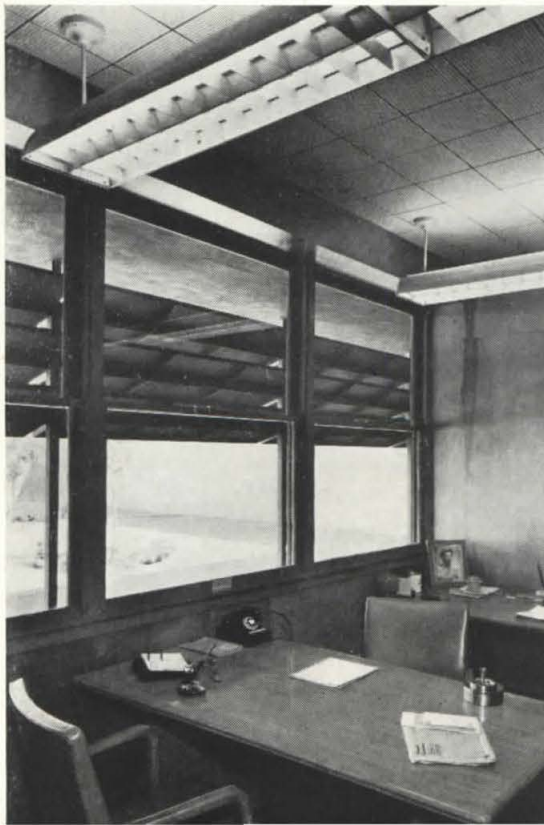


Direction of Sun's Rays









4. Taft, California

The three previous buildings were built for The Pacific Telephone and Telegraph Company. This reinforced concrete structure in Taft is for the Kern Mutual Telephone Company, a small privately owned company which serves the near-by oil-field area. The program involved an addition to the existing building, with relocation of functional areas. The air-conditioned apparatus room is windowless, because of severe heat and possible desert dust. Horizontal louvers control western sunlight in office areas. In this case, the louvers are of asbestos board set well out from the building wall in steel frames. "This system is somewhat less expensive than concrete louvers," the architects point out, "but it does require periodic painting." M. H. Alexander, plant superintendent, states that the building has met every expectation: "The louvers have produced ideal working conditions in the offices." H. J. Brunnier was structural engineer and L.E.Patton, mechanical engineer.

Photos: Roger Sturtevant

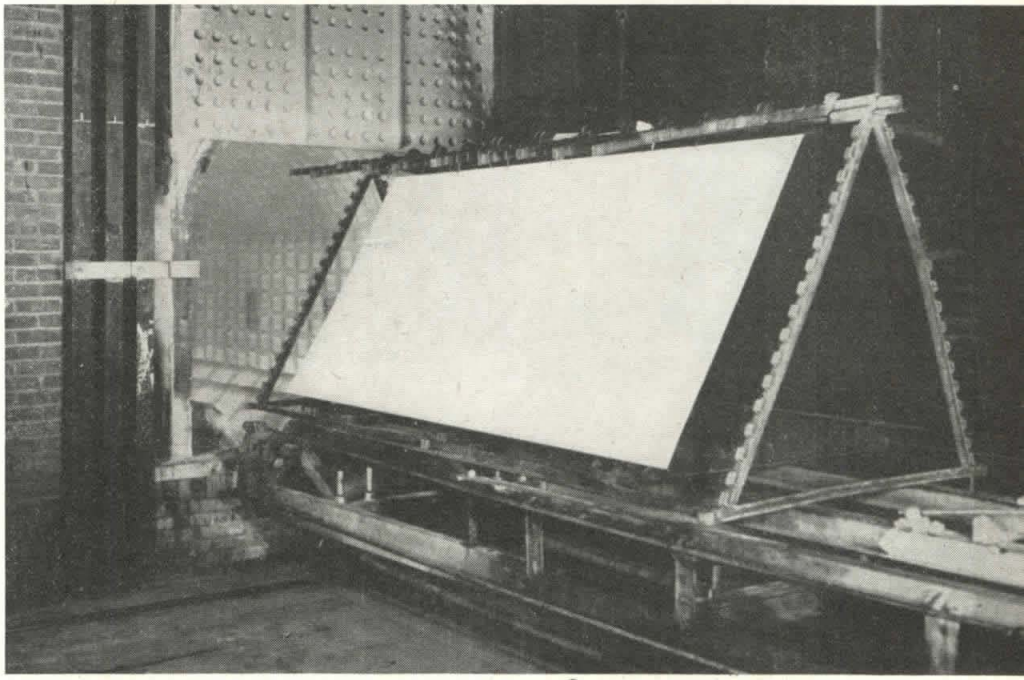


Figure 1—the problem of providing rigidity for large panels has been solved by laminating porcelain enamel to any one of several core materials; with this method, flat rigid units as large as 8′ x 10′ can be fabricated to meet the architect's specifications. A 50 sq. ft. panel *(right)* is about to enter a kiln which has been heated to 1530F.

Possibilities in Porcelain Enamel

By ROBERT A. WEAVER, JR.*

From the days of the great Chinese potters of the Sung dynasty to the present time, porcelain enamel has been in constant production as a decorative and protective finish; yet, in the process of its adaptation from a purely decorative to a functional material many of its possibilities have been lost sight of. The decorative aspects should be allied to, not replaced by, the durability made possible by today's enameling techniques. If this is done, an economical, adaptable, contemporary material is created which might have been made to order for architectural uses.

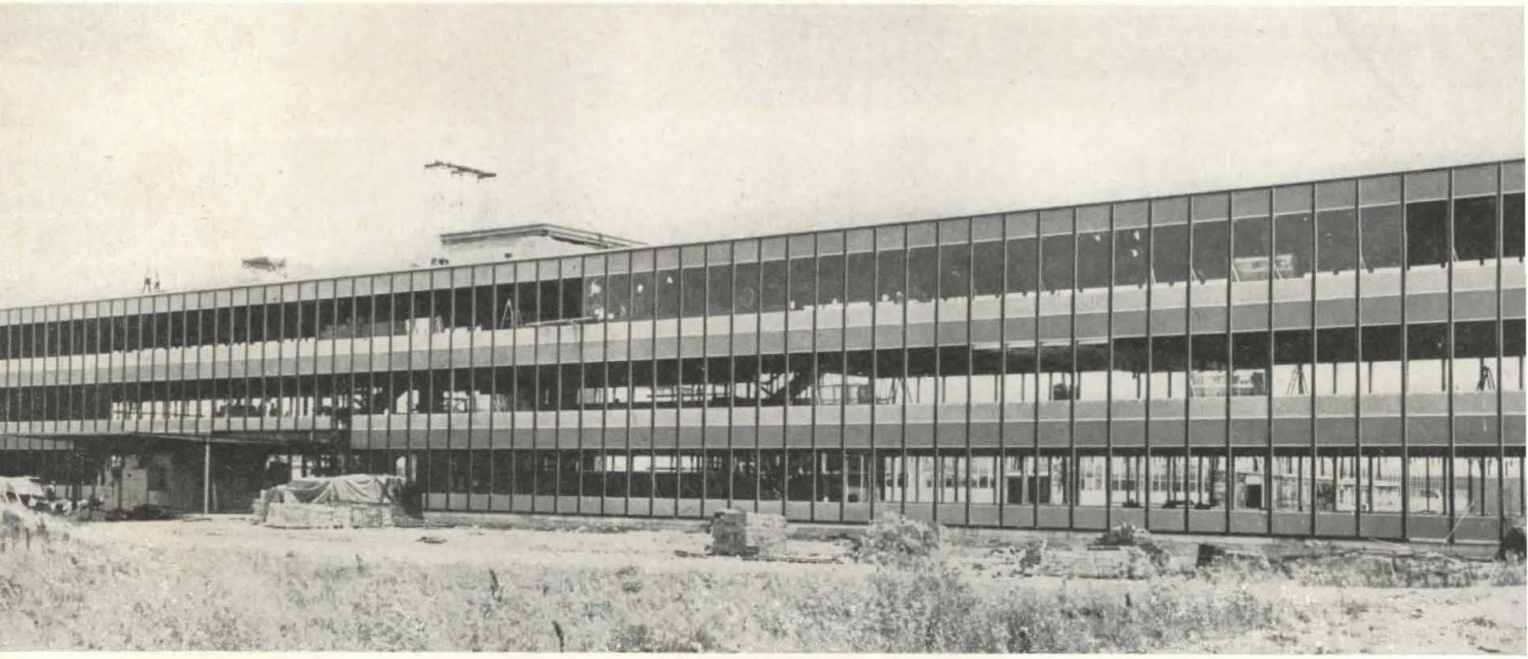
Porcelain enamel is a glass surface fused to a metal base. It is commercially practicable when applied to steel, cast iron, and cast steel. Recent developments have also indicated that enameling on stainless steel and aluminum is a practical possibility. Porcelain enamel is, in a very real sense of the word, a permanent finish. It is acid-, abrasion-, corrosion-, weather-, and thermal shock-resistant, possesses texture and color flexibility, is reflectant and workable as well as being an electrical insulator.

In many ways the fact that porcelain's potential is so little known, is due to the enameling industry's own lack of flexibility and resistance to new ideas. When asked to do something new, the industry has only too often answered that it could not be done in porcelain because of the nature of the material. Porcelain has always been smooth and shiny; therefore, one could only use it where a smooth, shiny material was specified. It chipped; therefore, it would probably always chip. Large size building panels could not be made because of the problem of rigidity. This situation simplified production for the porcelain enameling industry but it did not encourage the use of porcelain or eliminate its drawbacks. With the entry into the porcelain industry of some young firms with a flexible, experimental approach, a more constructive policy is now being tried.

new approach

A flexible approach means that when an architect or an engineer would use porcelain but for one undesirable factor, the industry should then develop a porcelain without that factor. If porcelain is indicated and a shiny surface prevents its use, then the industry should find a way to make

*President, Bettinger Enamel Corporation, Waltham, Massachusetts.



it mat. If the drawback is that porcelain enamel is not a structural material, then the industry must find a way to make it a structural material. In the short time that this new policy has been put into effect, many improvements and new discoveries regarding porcelain have come into being. A mat-surfaced porcelain has already been developed; large panels can now be fabricated *(Figure 1)*; colors can be matched with consistency and exactness; and installation solutions can be worked out to suit any specific type of construction.

Installation methods, gage specification, type of core, etc., are essentially items for the architect and porcelain fabricator to work out together. Size, correct gage, and type of installation to be recommended, depend on whether a panel is to be used decoratively or functionally. A good esthetic effect is often obtained as a by-product of expert texture treatment. Today, the Porcelain Enamel Institute specifies 16-gage metal for architectural porcelain. This seems to be the same thinking which put porcelain into the doldrums, as such a rule of thumb applies only to conventional applications like gas stations. Just as an architect would not specify the same thickness of wood for shingles, clapboards, and railings, the porcelain enamel industry should not specify one thickness of metal for all architectural uses. A more appropriate type of specification would require that nothing lighter than 18-gage metal be used for panels larger than 2′ x 2′, unless the metal is laminated or rigidized in some way.

An architect has the right to expect that if he indicates on his drawings and specifications where he wants porcelain to be used, what

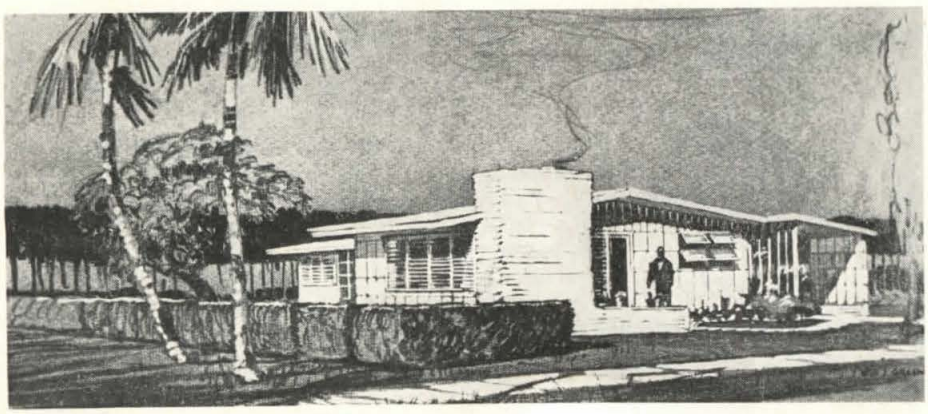


Figure 2—these spandrels *(top)* are prefabricated, porcelain enamel sandwich panels; several types of cores were used in this industrial-research structure.

Figure 3—as in this residential design *(center)*, porcelain panels should be used in combination with indigeous materials.

Figure 4—porcelain panels for a Texas commercial building *(bottom)* were perforated to eliminate distortions which would have resulted from firing.

qualities he wishes it to have, and what effects he wants, the fabricator can take over from there and work out the details, specification, and problems of fabrication and installation. If he is willing to search for a competent manufacturer, the architect will be able to get this type of service. Porcelain enamel companies should have—and some do—a full-time architect and engineer whose services are at the disposal of any client for just such problems as these. This solution is an excellent way to bridge the gap which has caused such trouble in the past between the enamel fabricator and the architect.

The most important recent development in the porcelain enamel field as it affects architecture is lamination. When laminated to other materials, completely flat and rigid panels as large as 8′ x 10′ can be fabricated; panels with many architectural advantages result when this material is laminated to calcium silicate tiles, honeycomb paper, or plywood cores. A sandwich-type panel, composed of porcelain enamel and a core substance, forms a complete, prefabricated curtain wall material. Larger, non-cored panels can also be made if the metal is either rigidized, fluted, corrugated, or perforated to eliminate distortions which form when a large panel is subjected to the terrific heat (1530F) needed for fabrication. Porcelain enamel can even be laminated to some structural insulating boards to form large, flat panels.

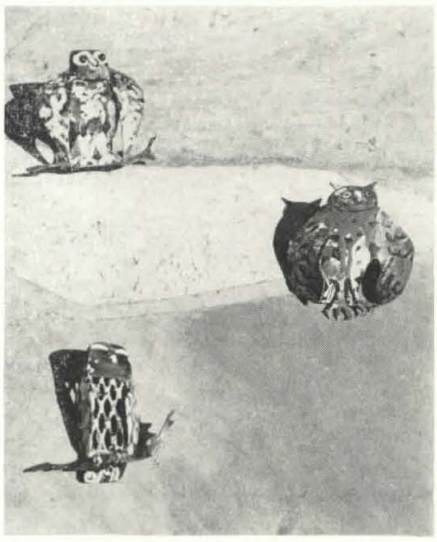
In the event that these new types of porcelain curtain wall, porcelain veneer, and large size porcelain panels are used, special attention must be given to construction. The average porcelain enameler installs a panel—frequently limited to 2′ x 2′ and 16-gage metal—on wood furring strips with interlocking clips. The industry limits itself by staying with this conventional installation, since it discourages the use of porcelain in buildings where the architect is not prepared to use wood furring because a maintenance factor might develop. Although porcelain is in every way a permanent finish, it is only as permanent as its installation. There are now special installation methods suited to structural porcelain which are absolutely permanent.

recent installations

One type of curtain wall material is made by sandwiching an insulating core between two porcelain enamel panels. Setting these composite panels in upright, slotted, or channeled sections permits quick installa-

Figure 5—fireplace *(above, left)* was made for less than one half the cost of the cheapest conventional type. Success of experimental hood *(right)* suggests that porcelain enamel is suitable for many other components of the residence.

Figure 6—hand-enameled owls, corrosion and weather resistant sun louvers, and rigidized-metal frieze *(below)* are combined in a youth library patio.



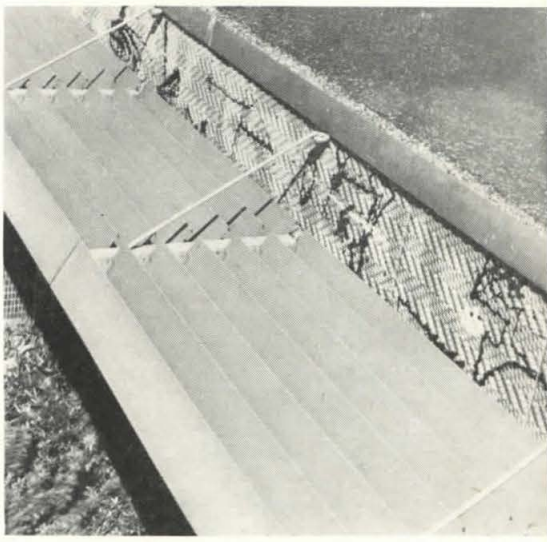


Figure 7—the installation of prefabricated, porcelain window stools and large, porcelain wall panels in bathrooms reduces both erection and maintenance costs.

tion at low cost and columns become a decorative part of the structure as well as the functional lock of the panel itself. Such a panel was designed by Eero Saarinen & Associates for the General Motors Technical Center in Detroit *(Figure 2)*. Colored units ranging from 2′-0″ x 4′-6″ to 4′-8″ square were mounted between steel columns and held in place by means of calk-filled aluminum extrusions; horizontal joints contain both splines and calking. The type of core to which the porcelain skins were laminated in the General Motors building—whether calcium silicate tile, plywood, or honeycomb paper—varies with the degree of heat or fire resistance needed at a given location in the building.

If properly designed, an individual porcelain house can now be built as economically as the Lustron House, which used too much porcelain improperly. The point about porcelain for private houses is that it must be used with imagination and care, otherwise the results may resemble a cross between a gas station and a bean wagon. Porcelain can be used in conjunction with local materials—like coral brick and cypress in Florida and adobe in Arizona—to soften its appearance. Also, it should be specified for places where its use is definitely called for, and even then it need not be the sole material used. The Lustron House *failed* esthetically because there was porcelain throughout the entire structure—even *in areas* where it was totally out of place. Architect Marion Manley has designed a house for Miami, Florida, which contains porcelain and local brick *(Figure 3)*. Conventional pan-type panels were used on the exterior and some porcelain, where needed, can be found in the kitchen and bathroom. By combining these two materials, Miss Manley has produced an individual, warm-looking, economical house which avoids the assembly-line look of the Lustron House while costing very little more.

Veneer panels, prevented from warping by means of perforations, were designed by Raymond Loewy Associates to renovate Ragland's Department Store in Kingsville, Texas *(Figure 4)*. The exterior load-bearing walls, a brick construction with a 150′ frontage, 80′ depth, and 50′ height, were painted a dark pink. A light pink, perforated porcelain facade was suspended 8″ away from the brickwork by means of a light steel framework bolted to the existing structure. The porcelain frontage, approximately 50′ x 20′, was composed of 3′ x 3′ panels separated by non-perforated 1″ strips in the same color. As concealed spotlights play across the surface, the perforations provide textural interest and contrast as the deeper red of the brick appears through the holes. In this case, the textural interest developed from the function of the material, as the perforations were originally intended only to eliminate distortions in firing. This simple renovation gave an up-to-date, attractive appearance to an old building while involving no exterior rebuilding or added maintenance factors.

A most successful way to provide a permanent exterior surface is the method used for the Biscayne and Seagull Hotels in Miami. The architects wished to use porcelain as a protective veneer on parts of these buildings, and, at the same time, wanted to avoid the danger of maintenance problems arising from the hot, humid, Floridian air collecting behind a facade-type veneer. Pan-type units, each specially treated to obtain a rough inside surface, were half filled with a lightweight cement and stacked while drying to provide a flat, inside backing or core. The face of the building was prepared with a conventional cement and the pans set into it. The cement core of the pan formed a bond with the face of the building and a permanent, maintenance-free installation was achieved.

When Carl Koch designed his Acorn Houses, a housing project in Concord, Massachusetts, he wanted to include fireplaces; however, the budget did not allow for even the cheapest conventional ones. Enthusiastic architect-manufacturer collaboration produced a coniform porcelain fireplace which could be stood on legs or suspended from a wall *(Figure 5)*. It needed only a flue as preparation for its installation and could be mounted quickly by screwing it into place. These units were made in three colors—black, gray, and red—and cost $89 each, less than half the cost of the cheapest conventional fireplace. An experimental porcelain enamel fireplace hood installed in a New England residence also proved a practical interior use of this material *(Figure 5)*. Porcelain window sills and stools were designed for a high school in Weston, Massachusetts. After the installation problems were solved for this one structure, subsequent use of porcelain sills and stools in other schools and in office buildings became a simple matter. Experimentation is now going on with porcelain enameled window frames.

At the Fitchburg Youth Library in Massachusetts, porcelain was specified by Architect Koch for the frieze around the top of the building, for the owls perched on the roof, and for the sun louvers in the patio *(Figure 6)*. The panels for the frieze are 20-gage, rigidized steel and are hand-enameled in white, yellow, two shades of blue, rust, and black. They are bolted together and to the face of the building, with an air space at the back. The 3′-high owls were individually designed by Connecticut sculptor William Talbot; before being fired they were enameled by Gyorgy Kepes, Professor of Visual Design at M.I.T. Top and bottom flanges of the sun louvers are bent slightly more than 90 degrees to provide smoothness and rigidity. There are no side flanges; the louvers are supported by metal clips spot-welded to the sides and bolted to wood outriggers projecting from the face of the building.

These sun louvers are only an indication of the many architectural products which can be efficiently manufactured in porcelain enamel, if both architect and fabricator take a dynamic view of its possibilities. There is a great need for a permanent, corrosion-resistant, maintenance-free material for the component parts of a building, and there is every indication that porcelain enamel is it. The enameling industry of today is essentially a young, growing one which has hardly scratched the surface of its potential.

With this article, Engineer Emerick presents a sequel to his report "Comfort Factors Affecting Heating Design" in October 1951 ***P/A.*** *From a study of these two articles, the reader will gain much valuable information concerning the psychophysical factors affecting heating and cooling design.*

Comfort Factors Affecting Cooling Design

By ROBERT H. EMERICK*

Summer comfort may be described by this basic equation—*Metabolism* + *heat removal* = *summer comfort*—where:

Metabolism =the production of heat by the human body, varying from 400 Btu per hour at rest, to more than 1400 Btu during physical activity.

Heat Removal=what the designer does to dissipate these Btu.

While the factors of odor, noise, color, bacteria, and air filtration still must be considered for the ultimate achievement of complete comfort *("Comfort Factors Affecting Heating Design," October 1951* ***P/A)***, the problem of bodily heat removal is of first importance. A slight rise in body temperature as the result of faulty heat removal, is soon followed by a faster pulse, emotional irritation, skin rashes, mental sluggishness and, ultimately—if the body temperature is increased and stays seven degrees or more above normal—by death.

body mechanisms for heat rejection

Our problems as designers for comfort become sharply objective when we examine the body's equipment for heat rejection. In an ambient atmosphere of 72F, we find that nearly half of the total heat production is dissipated by evaporation, illustrated by the 180 Btu of latent heat commonly assumed by designers in their cooling calculations. The remainder, termed "sensible heat," leaves the body by radiation and convection.

This ratio of latent and sensible heat obviously will vary as the ambient conditions vary. If the surrounding temperature comes into equilibrium with the temperature of the skin, then no heat dissipation by either radiation or convection can occur, and the burden of these two mechanisms is transferred in full to the body's evaporative system.

In this state we begin to perspire, starting usually on the face and neck, followed by a gradual spreading to all areas of the body as these additional surfaces are activated to relieve the continuing production of heat. The volume of perspiration emitted by the average person sitting quietly, amounts to approximately 50 cubic centimeters per hour, and the evaporation of this moisture relieves the body of about 110 Btu.

Unfortunately, we must expect the wet-bulb temperature at times to equal or exceed, at least on some areas of the body, the temperature of the skin, and during these periods no evaporation can take place. These 110 Btu then, if not dissipated soon, commence to lift the temperatures of our tissues and the possible result is illustrated by the dramatic Calcutta incident of June 20, 1756. On that night 146 persons, generating a minimum of 58,400 Btu per hour, were confined in a room that allowed less than two square feet of floor space per person. In the morning, only 23 remained alive.

humidity versus temperature

So long as the relative humidity remains at 50 percent or less, evaporation takes place at an adequate rate from the human skin. Control of the humidity for comfort, therefore, becomes essential as the ambient air temperature enters the high 80's and the 90's.

In many sections of the Southwest, evaporative cooling is practical with rather wide satisfaction, additional mechanical refrigeration often being judged unnecessary for comfort. However, we seldom can expect to cool closer than six degrees to the wet-bulb temperature, and in areas where a 78F wet bulb is common, evaporative cooling will not suffice.

Humidity control in these humid regions therefore, is accomplished by mechanical refrigeration, or by the application of adsorption processes in silica gel machines, or by proprietary fluids that abstract moisture from the air as the air passes through a spray of the fluid. Either of the chemical systems requires temperature cooling as a supplementary aid to comfort.

The combination of chemical dehumidification and mechanical refrigeration versus a mechanical system that does both, is a problem of economics. Particularly where we have a strong demand for fresh air, (as in night clubs), chemical dehumidification followed by mechanical cooling, may show substantial economic savings over a straight mechanical system. This sort of arrangement is employed with notable success in the Hotel Willard, at Toledo, Ohio.

thermal shock

There is nothing we can do at the moment to eliminate the thermal shock experienced on entering a cooled room from a hot street, or conversely, on leaving the room for the street.

To limit the shock, we attempt to design cooling systems for a differential of 12 to 15 degrees, but unfortunately this differential often is inadequate to supply comfort to persons more or less permanently housed in the cooled space. The need for a much wider differential when the outside temperature is, say 95F, is a direct result of humidity. An am-

* *Consulting Mechanical Engineer, South Charleston, South Carolina.*

bient of 83F is literally too close to our skin surface temperatures for comfort, since radiation and convection largely decrease or stop, and the dissipation of our 400 or more Btu per hour becomes the complete responsibility of evaporation. In the circumstances, the rate of evaporation tends to be too slow; a feeling of discomfort soon develops, and being human we promptly reset the temperature controls to give us, not 83F, but 72F. We thus re-establish radiant and convective cooling for our skins, but the newcomer to our room is met by an unintentionally chill atmosphere.

Undoubtedly we need practical research into the achievement of comfort at relatively high temperatures, when experienced in combination with controlled low humidities. We possibly may alleviate thermal shock by following this avenue, but meanwhile we need not worry about injurious effects, because there are none. During the recent war, this writer was responsible for the design and installation of air-conditioning systems in the sick bays and operating rooms of many warships in the South Pacific; and in numerous post-battle inspections, the doctors were questioned about thermal shock and its possible dangers. Invariably it was reported as being of no consequence.

drafts

The effect of air movement is mainly this: as the moisture on the surface of the skin evaporates, it saturates the air in contact with the skin and then evaporation stops. If we now remove this stratum of saturated air and replace it with relatively dry air, the evaporative process is re-established and cooling follows. This exchange of saturated air for dry air is readily accomplished by the winds of nature or the breeze of a fan.

Winds and breezes however, if not controlled, may become unpleasant drafts, and in this state will frequently cause pain in an occupant's neck. *(Table I has been developed by various researchers as a guide to what is desirable in air movement; designers will do well to observe it.)*

Direction also can be important in avoiding discomfort from drafts. For example, Figure 1 illustrates a common arrangement for summer cooling found in small retail stores. In this banking room, the certainty of chilled drafts striking the backs of clerks and tellers is obvious. In short, comfort has been purchased but only stiff necks have been delivered.

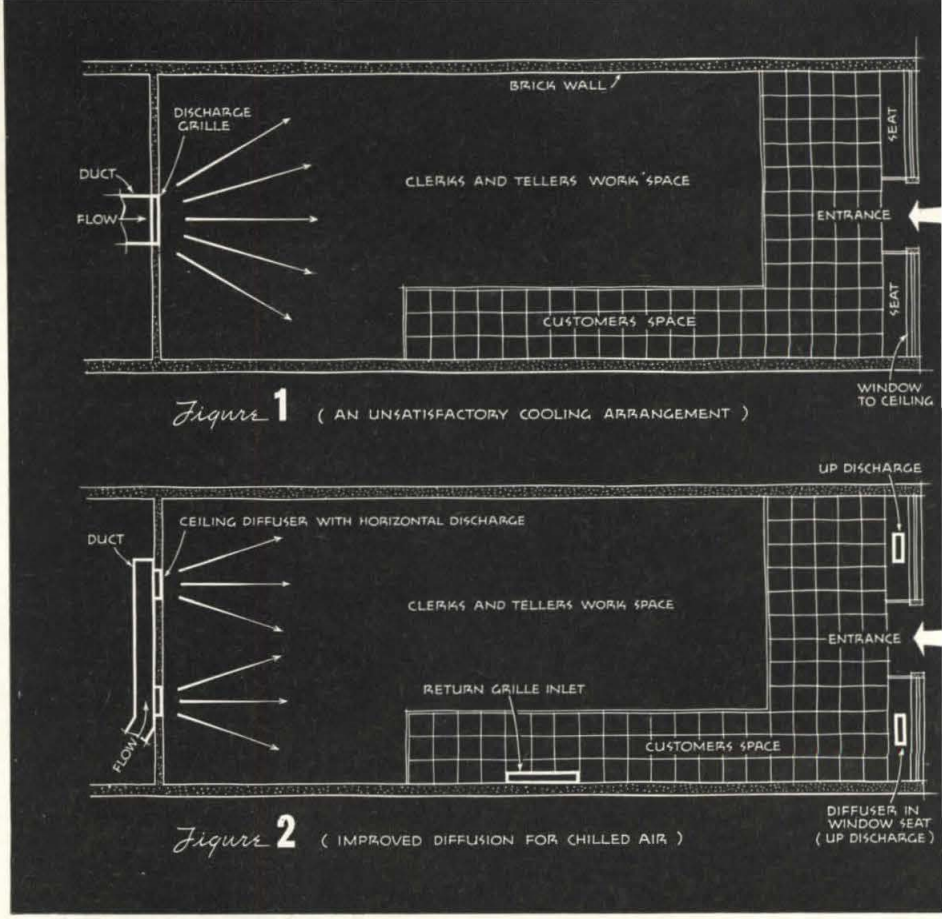


Figure 1 (AN UNSATISFACTORY COOLING ARRANGEMENT)

Figure 2 (IMPROVED DIFFUSION FOR CHILLED AIR)

Figure 2 offers a better solution for cooling a room of this kind. Discharge velocities are reduced by half and in the front of the room, where the major load occurs, the large windows are blanketed by curtains of cool air emerging from ceiling-type diffusers set to blow upward from the window seats.

Air movement provides what is probably the cheapest of all means to summer comfort. Even the attic fan, or the window fan, both common in the small home, so aid the evaporation of moisture from the skin that considerable comfort is enjoyed by people not otherwise able to secure it.

comfort and solar impact

Here is a problem, aside from the delivery of heat from the sun to the human body, that must be solved by the architect. A Cleveland man once told this writer, after a winter visit to Florida, that the impact of brilliant sunlight gave him a feeling of such discomfort that he abandoned his trip and hurried back to the gray skies of Cleveland. Conversely, it is not difficult to find people who exhibit a facsimile of the sun-worshipper attitude.

Unfortunately, many do not recognize these peculiarities in themselves prior to actual experience. The Cleveland man dreamed of Florida until he visited there; the successful salesman builds his dream home in the heart of a suburban woodland and then discovers that surrounding himself with trees instead of people gains him nothing but loneliness and discontent.

The significance of these emotional reactions is important to any evaluation of comfort, since nothing the mechanical designer can do will suffice to bring comfort where the architect has provided the wrong orientation for his client. For a good job all around, the architect must sense the psychology of the people who retain him, providing solitude for the introvert, giving the extrovert a bright place in the sun.

Often the house site is chosen before the architect is called in. In these instances, much can be done by the planting or removal of trees, and by skillful application of color.

the importance of floors

Chiropodists tell us that many pains and aches originate in some maladjustment of the feet. This writer has had clients who reported a swelling of the feet and ankles, with considerable pain, the cause of the trouble being ascribed to the cement floors in the home. That some truth exists in the claim is illustrated by the fact that, after wood floors were laid on the concrete, both the swellings and the pains disappeared. Some measure of resiliency in the floors seems desirable, but again, everybody is not adversely affected

Table I: Effects of Air Velocity

Velocity, feet per minute	Probable impact on persons
Up to 50	Unnoticed.
50 to 100	Pleasant.
100 to 200	Generally pleasant but causing a constant awareness of air movement.
200 to 300	From slightly drafty to being annoyingly draftly.
Above 300	Requires corrective measures if work and health are to be kept at high efficiency.

Note: These velocities are higher than recommended by the A.S.H.V.E. Guide, 1951 Edition. However, when walking through still air at 2 miles per hour, the speed of the walker, relative to the air, is 176 feet per minute and the sense of air movement at this rate is moderate and not unpleasant.

by a nonresilient floor. The phenomenon is a personal one but certainly should be considered when designing for comfort.

A cold floor in the summertime, likewise, can give rise to physical ailings. During the recent war, a ship in the south Pacific reported many complaints from a certain compartment in which colds, aching feet, even some suspected arthritis, indicated that an investigation should be made. This compartment was located directly above a refrigerator room and the steel deck was consistently cool, sometimes damp. The compartment deck was then floored with two inches of fiberglass insulation, sealed with a hot mopping of bitumastic, and finished off with a layer of cement. The complaints ceased. Incidentally, the steel decks of ships rarely cause foot trouble, since they normally are of thin plates and provide some degree of resiliency.

The problem of cool floors is not a common one, but it must be considered if cold water is run through the tubing of a radiant floor panel for summer cooling.

summarizing summer comfort

A summary of "dos" and "don'ts" for designers of summer comfort, is shown on Chart 1. Each is important, but in most cases a control of the humidity will be found the shortest road to a comfortable end.

Chart I: Summer Comfort Design Considerations

Provide	Method
Humidity control	a—Mechanical refrigeration with sub-dew point cooling plus air mixing or reheating.
	b—Adsorption equipment, as silica gel or liquids.
	c—Air precooling with cold water coils or ice.
	d—A combination of a and b, or a and c.
Temperature control	a—Mechanical refrigeration.
	b—Cold water cooling.
	c—Either of the above plus air circulation and mixing.
	d—Evaporative cooling where the wet bulb permits.
	e—Insulation of building roof and walls.
	f—Adequate shading against the sun.
	g—Color selection to reject or absorb sunlight as desired.
	h—Proper use of natural orientation, to take advantage of exposure, trees, prevailing winds, etc.
Air movement and ventilation	a—Gentle air movement by fans.
	b—Correct location of air inlets, particularly chilled air.
	c—Screen or filter air intakes to eliminate dust, insects, and pollen as well as practicable.
Resilient floors	a—Finish concrete or cement with asphalt tile. Alternatively lay wood, either with or without sleepers. Reports are satisfactory on both methods.
Solar impact compensation	a—Consider sun effect when designing the structure, particularly residences where emotional reactions may sometimes follow.

Don't permit	Method
Drafts	a—Maintain air velocities at less than 100 feet per minute, if the moving air impacts on persons.
	b—If the air is chilled before delivery, introduce it well above the head level.
Clamminess in conditioned spaces	a—Maintain the relative humidity at less than 50%.
Inadequate air change	a—See that at least 30 cfm of air is delivered to each person.
	b—In the total air delivered, provide at least 15 cfm per person, from outdoors.
An inexperienced person to design the system	a—Verify the record of engineers and contractors before making a commitment.
Odors, pollen, dust, etc.	a—Follow the methods described under the heating cycle, for comfort.

Streamlined Specifications: Interior Marblework

By BEN JOHN SMALL*

*As a part of this streamlined specification, the author has included a section entitled "Notes To Job Captain." This innovation was started with Small's specification for Asphalt Tile (June 1951 **P/A**) and has since been commented on favorably by The Construction Specifications Institute, Incorporated.*

1. general:

(a) Applicable provisions of "General Conditions" govern work under this Section.

(b) These specifications are of the abbreviated or "streamlined" type and include incomplete sentences. Omissions of words or phrases such as "the Contractor shall," "in conformity therewith," "shall be," "as noted on the drawings," "according to the plans," "a," "an," "the," and "all" are intentional. Omitted words and phrases shall be supplied by inference in the same manner as they are when a "note" occurs on the Drawings. Words "shall be" or "shall" will be supplied by inference where colon (:) is used within sentences or phrases.

(c) The Contractor shall provide all items, articles, materials, operations, or methods listed, mentioned, or scheduled on the Drawings and/or herein, including all labor, materials, equipment, and incidentals necessary and required for their completion.

2. work included:

(a) Furnish labor and materials to complete interior marblework indicated, as specified herein or both.

3. conditions at building:

(a) Marble subcontractor shall report to Architect (through Contractor) any conditions which prevent him from performing his work properly.

(b) Assign marble subcontractor, without charge, adequate storage and working space for carrying on his work.

(c) Furnish without charge to marble subcontractor:

1. Necessary scaffolding.
2. Required safety barricades or weather enclosures.
3. Adequate hoisting facilities during regular working hours.
4. Water, light, and power at convenient locations on each floor.
5. Temporary heat.
6. General cleaning of building.
7. Telephone facilities.

4. kind, surface finish, location:

(a) Marble: as specified; conformed to or within approved sample range and in accord with characteristics and working qualities set forth under their respective group, A, B, C, or D, in "Handbook for Use of Interior Marble," issued by Marble Institute of America, Inc.

(b) Exercise care in selection to produce as harmonious effects as possible. Patch and wax marble carefully where permitted under Marble Institute of America Group Classification in manner to conform to general character and finish of marble.

(c) Surface finishes: sand rubbed or wet sand finish, grit finish, hone or eggshell finish, polish finish, as indicated and specified.

(d) Marble in various spaces: (List in detail trade names of marbles and/or alternates, and finishes selected, and spaces where used. Describe extent of marblework required or reference may be made to "Schedule of Finishes.")

(e) Plaster of Paris, Portland cement, and White Portland cement: A.S.T.M. Standards.

(f) Sand: clean, free from organic and other deleterious matter likely to stain finished work; screen as required for desired results.

(g) Portland cement shrinkage reducing accelerator (used with Portland cement to give cement quick setting characteristics of Plaster of Paris): non-staining admixture that will not corrode anchors or dowels.

(h) Plasticized bonding cement (used in place of plaster or cement): plasticized synthetic resin base that will not stain thru marble; is unaffected by temperature changes or moisture; adhere with strong suction to clean surfaces.

(i) Calking mastic (for setting and pointing): non-staining, knife consistency, elastic, moisture-proof.

(j) Anchors, dowels or cramps: brass, copper or aluminum. Use special cramps, dowels and the like where indicated on shop drawings; elsewhere install ordinary wire anchors as indicated by building conditions.

(k) Cushions (to maintain joints, especially where non-staining mastic is used): aluminum or clear plastic.

5. samples:

(a) Submit samples of various kinds of marble proposed for use. Samples: 4" by 6" or 8" by 12", represent approximate shade, marking, characteristics of variety of specified marble and finishes required. (Where required to show variations in color and markings, submit larger samples or range of samples.)

(b) Label samples on back; designate finished face, building name, kind of marble, group classification, Contractor's name.

6. models:

(a) Where models are required for ornamental carving, they shall show work in full scale, be furnished by others and delivered to marble subcontractor's plant without charge.

7. carving:

(a) Execute carving with skilled workmen, in accord with approved full size details or models. Drawings indicate approximate depth and relief of carving.

8. interpretation of drawings and specifications:

(a) In case of discrepancies, dimensions take precedence over scale sizes; large scale or full size details supersede small scale drawings; specifications prevail over all drawings.

9. measurements (for separate contracts):

(a) If measurements are not established and guaranteed in advance, marble subcontractor shall obtain and verify measurements at building.

(b) Lend all reasonable assistance to marble subcontractor, including services of engineer, if required, for establishment of levels and the like.

10. shop drawings approval:

(a) Submit shop and setting drawings of work specified herein.

(b) Full size details shall show sizes, sections, marble dimensions, jointing, bonding, anchoring, connections with other work, other required details.

11. standing marble and molded work:

(a) Standard thickness for marble where one face only is finished: approximately 7/8"; returns of jambs, pilasters and the like: 7/8", unless otherwise specified. Install joints closely, not to exceed 1/16".

(b) External angles shall have butt joints, unless otherwise specified.
(Quirk miter joints should be indicated and specified; use only above base.)

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* *Associate, Alfred Hopkins & Associates, Architects.* *The author acknowledges gratefully the assistance of the Marble Institute of America, Inc.*

(c) Cut molded work accurately to indicated profiles. Minimum thickness at thinnest point of mold: 7/8".
(d) Set marble by spotting with Plaster of Paris (see note below) and with concealed setting wire anchors secured in wall backing. Install anchors in sufficient quantity to render installation secure. Butter joints fully with Plaster of Paris as each slab is set.
(Standing interior marble where moisture may be a factor, and marble used as exterior veneer, should be set with anchors in conventional manner as above, spotting with Portland cement plus accelerator. Such marble should have joints buttered fully with accelerated cement or buttered with non-staining mastic as each slab is set. As an alternate, use plasticized bonding cement; spot back of marble and wall with plasticized bonding cement; push marble into place. Ordinarily no wire anchors are necessary. Marble so set must be supported from below to prevent movement in shear.)

12. base and plinths:
(a) Base: 7/8" thick unless otherwise indicated; extend 1" below finished floor line. Where marble border is indicated, set base on top of border.
(b) Plinths: as indicated, set on top of finished floor.

13. floor marble:
(a) Others will install rough concrete or cinder fill above floor slab to within 2½" below finished floor line. Clean floor thoroly; fill wet with clean water before laying mortar bed. (See alternate below.)
(b) Size, tile, and border pattern, and jointing of floors; as indicated; 7/8" thick, unless specified otherwise.
(c) Cement bed to receive tile: 1 part Portland cement to not more than 3 to 5 parts of sand mixed quite dry for tamping; spread over rough fill. (See alternate below.)
(d) Tamp marble tile with suitable mallet until bedded firmly to proper floor level.
(e) Remove and back parge tile with wet cement or sprinkle bed with water and cement. In latter procedure, wet tile back. Method of buttering tile edges fully as it is laid is acceptable.
(f) Joints between tile: 1/16" when finished.
(g) Rope off floor for 24 hours; grout with water and neat cement or grout by buttering tile edges as they are laid. Clean surplus joint cement from tile face immediately.
(h) Clean and surface floor with floor surfacing machine after it has set at least 6 days.
ALTERNATE for paragraphs (a) and (c) if 2½" or more is available:
a-(alt.) Others will install rough concrete or cinder fill at least 2½" below finished floor line. Spread tar paper or thin bed of clean, well screened sand over rough fill so that there will be no bond between tile bed and fill. (This manner of installation provides barrier against transmission of ground moisture at grade level and makes cracks in floor due to structural movement less likely.)
c-(alt.) Cement bed to receive tile: 1 part Portland cement to not more than 3 to 5 parts of sand; spread over paper or sand bed.

14. saddles (thresholds):
(a) Flush saddles: approximately 7/8" thick by jamb width.
(b) Raised saddles: (1¼") (1½") thick, rounded or beveled as detailed.
(c) Notch saddles occurring between steel jambs to jamb profile. Run saddles, occurring between wood jambs, under door stops.

15. window stools:
(a) Marble window stools: (plain, polished edge) or (molded nosing); furnished where indicated (on window schedule) or (at window openings in plaster or tile walls); set securely in place. Where practicable, install in one piece; if joints are necessary install joint at mullion centres. Thickness: (7/8") (1¼").

16. stair marble:
(a) Risers and strings: 7/8" thick. Extend risers from top of one tread to underside of tread above, butt string; anchor securely.
(b) Treads and platforms: (7/8"), (1¼") or (2"); butt string. Make platforms, indicated in one piece and projecting to form nosing, same thickness as treads.
(c) Nosings: (plain) or (have nosing molded to detail). Where nosing is formed by separate piece, balance of platform may be 7/8" thick.
(d) Bed in cement mortar treads and platforms on stairs of metal frame or steel pan construction.

17. toilet marble:
(a) (Assemble stiles and partitions with concealed dowel fastenings) or (secure intersections of stiles and partitions or partitions and walls with chromium-plated angles, 3 in height of stall.)
(b) Where toilet enclosures project from wall to allow for pipe space, others will furnish proper supports for marble.
(c) Extend water closet stall (5'-10") or (6'-0") high above finished floor.
(d) Stiles and screen partitions: 1¼" thick (1½" thick if used with heavy doors and coin boxes); extend at least 1" below finished floor line.
(e) Partitions: 7/8" thick, rebated into stiles 3/8"; extend thru backs.
(f) Set dividing partitions 12" above finished floor; rebate into stiles not less than 3/8"; extend thru backs.
(g) Extend partitions 1" into floor.
(h) Urinal stall partitions: 7/8" thick and, if built to floor, extend 2" below finished floor; recess into or extend thru finished wall.
(i) Others will furnish stall doors, door hardware and accessories.

18. shower and dressing stalls:
(a) (Assemble stiles and partitions with concealed dowel and cramp fastenings) or (secure intersections of stiles and partitions or partitions and walls with chromium-plated angles, 3 in height of stall).
(b) Extend shower and dressing stalls 7'-0" above finished floor; recess 1" into finished wall; furnish complete with marble wall linings and marble (or tile and terrazzo) floor slabs as detailed. Stiles: 1¼" thick; partitions and wall slabs: 7/8" thick.
(c) Install marble seats in dressing stalls, of indicated size and thickness.
(d) Rebate vertical slabs at corners; set into slot or rebate in receptor, as indicated.
(e) Joints, except as otherwise specified: 1/16" thick; butter with litharge and glycerine or 1/8" thick buttered with non-staining mastic.
(f) Others will furnish and install precast receptors.

(g) Where lead pan construction is required, pan will be furnished, formed, installed, and connected under "Plumbing Work." (Lead pan should be covered with suitable protection against chemical action.)
(h) Butter bottom, slab backs, and vertical edges that are rebated into marble faces with non-staining waterproof cement.
(i) Others will furnish curtain rods, curtains, all fittings and accessories.

19. marble templates: (a) Marble templates for water closets: 7/8" thick, as indicated.

20. center tops, check desks and deal plates: (a) Use marble of thickness and construction as indicated.
(b) Others will furnish and install backing or other supports for marble.

21. drinking fountains: (a) Provide drinking fountains as detailed. Others will furnish and install hardware for same.

22. columns, column enclosures and pilasters: (a) Use marble of thickness and construction as indicated.

23. cutting and fitting: (a) Co-operate fully with other trades; do such cutting and drilling to accommodate work of others as may be reasonably implied from Drawings and Specifications.

24. delivery and protection: (a) Pack marble carefully for transportation; take necessary precautions against damage in transit.
(b) Furnish, install, and maintain wood guards for protection of projecting members, corners, window stools, saddles and the like.
(c) Protect marble flooring with non-staining materials, against traffic, other damage.
(d) Protect marble adequately from paint, oil and other stains.

25. cleaning: (a) After completion of work and at such time as Architect shall direct, clean marble installation; point any open joints; replace any defective marblework.

NOTES TO JOB CAPTAIN

1. samples: (a) Marble is a product of nature; hence it is impossible to guarantee uniformity of color, veining or any other characteristic that may be represented in any particular sample submitted. A sample will indicate an average color and marking as well as the general texture and specified finish.

2. definition of surface finishes and uses: (a) Sand rubbed or wet sand finish is a smooth surface produced on a cast iron rubbing bed with sand and water. Used for treads, saddles, platforms, and floors; on floors by surfacing operation after setting.
(b) Grit finish is a smooth, dull finish between sand and hone, produced by grits. Used for treads, saddles, platforms, and floors; on floors by surfacing operation after setting.
(c) Hone or eggshell finish is a dull gloss surface giving relatively little reflection of light; produced by a natural or artificial hone by hand work or machine. Used for treads, floors, and standing marble.
(d) Polish finish is a gloss surface that will reflect light and emphasize color and marking of material, produced by a buffer with putty powder applied to a honed surface. Generally used for standing marble.

3. thicknesses: (a) Standard thickness. Unless otherwise indicated or specified, the standard thickness for marble, where one face is finished, is accepted by the trade to be approximately 7/8" from the saw. Finishing processes will reduce any thickness slightly.
(b) Floor tile. Commercial floor tile are approximately 7/8" thick. Standard sizes are 8" x 16", 12" x 12", 10" x 20"; the tile ordinarily are supplied 1/32" scant of standard nominal size in each dimension in order to produce the usual 1/16" joint when laid in floor. Other sizes are classed as floor slabs. In designing a pattern floor, the different varieties of marble selected should have similar wear characteristics.
(c) Molded work. In molded work, the minimum thickness at the thinnest point of the mold should be 7/8". This minimum thickness may have to be increased, depending upon width or height of molded work in question.
(d) Thick slabs. When thicker marble slab work is required, as for counters, sanitary partitions, etc., standard sawing gages produce approximate thicknesses of 1¼", 1½", and 2". (Avoid 1", 1⅛", 1¾", or other intermediary thicknesses where economy is important as these are special and disproportionately costly.)

4. measurements: (a) The progress of any contract can be expedited if measurements can be established and guaranteed in advance. Otherwise the marble subcontractor must delay fabrication until conditions at building enable him to secure measurements. The method of predetermined measurements not only hastens the work, but if established for all trades, reduces costs and prevents many errors.

5. setting materials: (a) Plaster of Paris, Portland cement, litharge and glycerine have been used in standard practice by the trade for years. All such materials should conform to and meet all requirements of standard specifications of A.S.T.M. for each of the above mentioned materials.
(b) Plaster of Paris "SPOTS" (a term used in the trade) are used as backing for standing marble. For ashlar work and smaller pieces these spots are usually sufficient if applied around the location of anchors only. For larger pieces, such as wall panels, spots are usually applied between top and bottom joints in addition to those around anchors. No fixed rule should be given as to the number of spots; this should be left to discretion of marble subcontractor. (Some newer developments in setting materials are described herein. The mention of a brand should serve only as a standard and should not be construed to exclude other materials that have shown results equally satisfactory in long term laboratory tests and field installations and otherwise comply with the requirements.)
(c) Portland cement and shrinkage reducing accelerator. Plaster of Paris is soluble in the presence of moisture and it is not suitable for spotting or jointing on exterior veneer, in shower stalls, in unheated mausoleums, or whenever dampness may be present.
Portland cement and shrinkage reducing accelerator, equal to Sika #C, manufactured by the Sika Chemical Corporation, can be used like Plaster of Paris and will be permanent where moisture is a factor. It is economical

and equal or superior to all other setting materials listed and will be permanent even where moisture is present. Sika #C is usually mixed in a proportion of 1 part Sika #C to 5 parts of water mixed with Portland cement. This mortar has a setting time that allows enough time to set marble in proper position and at the same time quick enough so that minimum support of slab is required. The dilution mentioned may vary depending on type of cement, temperature, and setting time required on each job.

(d) Plasticized synthetic resin bonding cement. This is a black or dark mastic material, impervious to moisture, not affected by heat or cold, that adheres with a strong suction to all clean surfaces without sagging, and sets to a stiff plastic state, not brittle, not hard, but capable of absorbing moderate shock or settlement. It will not "bleed through" a stain on ⅞" marble. Damage to wall backing and expense of spoilage of drilling marble are eliminated, since normally no anchors are necessary in setting vertical marble 2" or under in thickness in this manner. It is especially desirable where setting space is tight or at points where anchoring is difficult. Cushions may be required in joints to avoid movement in shear. This material should be equal to Vermont Bonding Cement, distributed by the Vermont Marble Company.

(e) Elastic non-staining pointing and calking mastic. It is now possible to secure white and gray elastic pointing or calking mastics that are compounded to combine long plastic life and non-staining characteristics. If properly installed, these knife-consistency mastics remain plastic for a long period of years and produce an impervious and elastic joint. They are recommended for buttering joints of thin marble, exterior veneer or ashlar and store fronts and for interior shower stalls, etc. The greater the mass the longer will the mastic retain its plasticity. Buttered joints should be at least ⅛" to 3/16" thick. Superficial pointing of a small joint is of little permanent value. There are also available red and black mastics compounded to be non-staining on dark decorative marbles. Never use cheap, oily mastics or linseed oil putty on marble. Mastics should be equal to those distributed by:

Tremco Manufacturing Company.
Pecora Paint Company.
Vermont Marble Company.

(f) Plastic or aluminum cushions. These are available in 1/16", ⅛", and 3/16" thicknesses and recommended to maintain uniform joints in marble assembled with non-staining mastic where the weight of the marble might force the mastic out of the joint. On light-colored marble, never use wood or lead cushions which may stain.

(g) Integral waterproofing. When casting concrete floor slabs it is important, especially at ground level, to densify concrete to stop transmission of moisture through floor surfacing material. Concrete should be densified by others and made water-resistant by use of integral waterproofing.

6. miscellaneous setting suggestions:

(a) Setting space (a term used by the trade) indicates distance from rough wall backing to finished face of the marble.

(b) Normally 1½" is the minimum setting space. Where reinforcing liners may be required, 2½" setting space should be allowed.

(c) Concealed anchors and dowels are copper, brass or aluminum wire, approximately ⅛" in diameter.

(d) Joints should be buttered fully with joint material, colored, if specified. Superficial pointing of joints after installation is not satisfactory.

(e) Ceiling marble that must be supported by special anchors requires a space not less than 3" back of the marble. Supports and anchors must be sufficiently heavy and numerous to prevent sagging.

(f) Plaster work above marble should be in place before marble installation starts. Otherwise there will be a back charge by marble subcontractor for special protection.

(g) Marble should not be set directly against unpainted structural steel, piping, reinforcing, etc.

7. toilet room and shower construction:

(a) Only such hardware necessary for erection of marble should be included in the marble specifications. This should be chromium-plated brass or any non-staining metal.

(b) Stall doors and all accessories, although ultimately attached to marble, should be supplied by others.

8. framing or wall supports:

(a) All backing and supports required by the marble subcontractor should be furnished and installed by others.

9. external corners:

(a) Unless otherwise specified or indicated, it is accepted by the trade that butt joints should be used. That is, the exposed return of the member should be the accepted or specified thickness of the member.

(b) Another method of treating external corners, especially where only the minimum thickness of marble is required, is what is commonly called a "quirk miter joint." This method involves more labor and it should therefore be distinctly specified when desired.

(c) The quirk miter joint is not recommended for base as this construction forms an unsanitary internal angle at the floor; also, there is more danger of chippage. The use of butt joints is distinctly preferable where members extend to the floor.

10. non-slip inserts and nosings:

(a) It is now possible to have installed either on new work in marble subcontractor's plant or at the site on old work, non-slip inserts and nosings or over-all applications of non-slip inserts. This is recommended for preventing undue wear on stair treads, revolving doors, ramps, etc., and to reduce slip hazards.

(b) The following materials have been used successfully:

Martex: American Abrasive Metals Company.
Natalon: National Grinding Wheel Company.
Non Skid: Non Skid Surfacing Corporation.
Tru-Tread: Vermont Marble Company.

11. maintenance note:

(a) Decorative marbles selected for exterior veneer require cleaning and reasonable maintenance for continued good appearance and therefore should be treated at least once a year with a spray of cellulose acetate or similar plastic lacquer.

p/a products

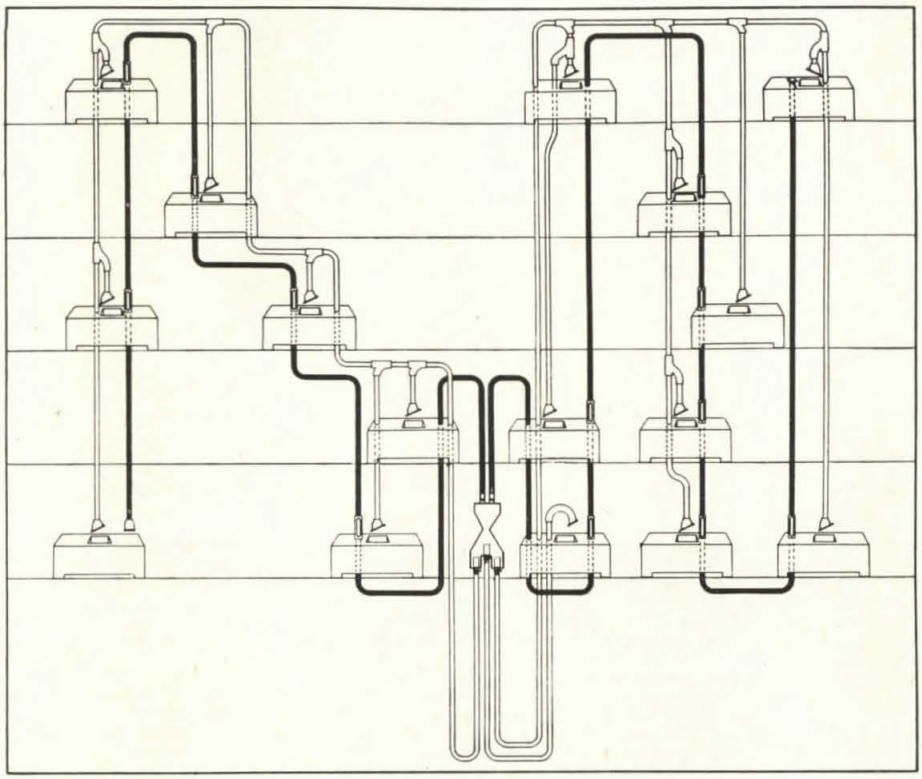


Figure 1

Figure 2, *(right)*

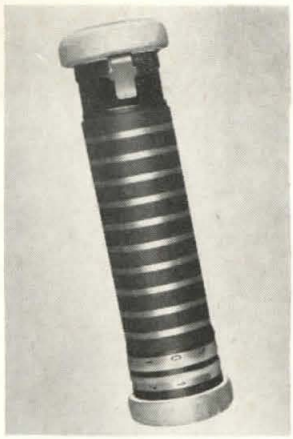


Figure 3

first automatic, selective, pneumatic-tube system installed in U. S.

A new, "foolproof" pneumatic-tube system for inter-office and plant communication—the first of its kind in America and the largest in the world—was recently installed in the office building and mill of the Bridgeport Brass Company of Connecticut. Designed for flexibility, economy of space, and reduced materials requirements, the Bridgeport installation utilizes many of the principles involved in the dial telephone and, unlike the conventional pneumatic-tube system, is both automatic and selective.

The M & G system, a development of Mix & Genest, German subsidiary of the International Telephone & Telegraph Company, employs two electronically controlled loop lines—one for sending, the other for receiving—which serve the nine stations of the Bridgeport plant. (*Diagram of a typical two-loop system is shown in Figure 1.*) The carrier itself, a 13½"-long cylinder with a 2½" inside diameter, has a selective dial on its sheathing that is marked with digits from 0 to 9 (*Figure 2*). The sender dials the number of the station to which he wishes to direct the carrier. After the cylinder is placed in the sender opening of a station (*Figure 3*), it is propelled by suction, at the rate of 1500 fpm, to a central control station where it is routed to the correct receiving line and admitted into its destined station by means of a relay panel and electronically controlled switches. At no point throughout the carrier's transit is there any intervention of an operator or central dispatcher. In the event of overloading, all sender openings lock automatically to prevent the insertion of additional carriers. If a carrier is set accidently for a non-existent station, a control device will dispatch it to a supervisory position—the telephone operator's desk or any other convenient location—where its proper destination can be determined for redispatching.

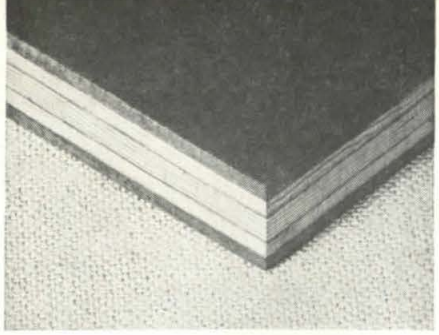
The relay panel at the central point not only directs the course of each carrier, but it also provides temporary blocking devices between traveling carriers to avoid collision. In addition, it controls a signal annunciator on which the tubes in operation and blower performance, as well as incorrectly dialed carriers, blown fuses, or any power failure, are visually indicated.

Allocation of a special room for the central station is not essential; the equipment is so designed as to fit into any location having a through wall—in dead corners, corridors, unused spaces near elevator shafts. By eliminating the need for a main dispatching room, a saving of almost 100% in floor space is realized.

Fewer tubes are employed in the M & G system. In a 15-station manual system, for example, from 10,000 to 12,000 feet of steel tubing are required, as compared with 4000 to 5000 feet for a similar sized automatic installation (*Figure 1*)—a saving in materials cost of more than 50%. Since fewer tubes are employed, considerably less air volume is required to operate the carriers, so that smaller blowers and air piping can be used.

Additional stations may be added or eliminated with comparative ease. The number of stations that can be installed is practically limitless and can vary from a few automatic stations with pushbuttons instead of a central, to several automatically operated pneumatic tube centrals with interconnecting facilities for hundreds of receiving and sending stations.

The M & G system in the Bridgeport Brass plant was supplied and installed by the International Standard Trading Corporation of New York, an associate of the International Telegraph & Telephone Company.



Plyron panel material combines plywood core with smooth, tough surface of hardboard. Strong, rigid, puncture-proof, dimensionally stable properties give material many diverse applications—concrete forms, flooring, cabinet work, table tops, etc. At present being produced by 10 Western plywood manufacturers, in 4′ x 8′ sheet forms. For further information, write directly to: Douglas Fir Plywood Assn., Tacoma Bldg., Tacoma 2, Wash.

air and temperature control

Delta Suspended Furnace: oil-fired, warm-air furnaces for basementless houses; may be suspended from ceiling or installed in crawl-space beneath house. Built-in refractory-combustion chamber, air filter, and large waterwheel-type blower fan shipped with factory-assembled unit. Available in two ratings: 75,000 and 110,000 Btu. Delta Heating Corp., Trenton, N. J.

Winter Air Conditioners: oil- and gas-fired units for both up-flow and horizontal-flow installations, in sizes ranging from 120,000 to 200,000 Btu capacities, that heat, filter, humidify, and circulate warm air in every room in house. Automatic blower, burner, and humidifier eliminate manual operation. All models encased in heavy-gage steel, finished in blue baked enamel. Majestic Co., Huntington, Ind.

Climatrol Oil-Fired Convertible Winter Air Conditioners: two new convertible units, assembled on solid steel base to eliminate need for concrete setting or grouting. Welded-steel heat-exchanger and wrap-around radiator easily cleaned by removing front cleanout panels; corrosion-resistant casing lined with asbestos backed with aluminum foil; extra insulation serves to keep cabinet cool by reflecting heat into heat exchanger and also provides quieter operation. Capacities from 90,000 to 110,000 Btu. L. J. Mueller Furnace Co., 2005 W. Oklahoma Ave., Milwaukee 15, Wis.

National Packet: all-in-one automatic heating plant, which includes steel boiler, gas burner, tankless or storage type heater, now available for use with natural, mixed, or manufactured gas. Compact proportions designed for installation in homes, stores, individual apartment units, motels, and similar locations. Rating of 77,000 Btu per hour. National Radiator Co., 221 Central Ave., Johnstown, Pa.

Hi-Boy No. 70A: completely assembled furnace features precast combustion chamber of heavy-gage steel construction, cold air and filter rack on lower side of furnace, and flanged, automatic burner; accessibility doors provided for easy servicing. Rated at 75,000 Btu. Quiet Automatic Oil Burner Corp., 33 Bloomfield Ave., Newark 4, N. J.

Refrigerated Kooler-aire: packaged air-conditioning unit, containing all elements of central station plant, employs two separate refrigeration circuits designed for economical operation at either full or half capacity; suitable for installations involving load variations and requiring true capacity control. Easy conversion to heating plant made by addition of steam or hot-water heating coil. Offered in 15, 20, 25, 30, 40, and 50 ton capacities. U. S. Air Conditioning Corp., 3300 Como Ave., S. E., Minneapolis 14, Minn.

construction

Beam Load Selector: handy, pocket-sized selector devised for those who use Unistrut metal framing, to determine amount of weight which can be supported by various Unistrut sections under varying conditions of span and unbraced height. Selector also determines number of sections required to support given load. May be obtained without cost by writing to company. Unistrut Products Co., 1013 W. Washington Blvd., Chicago 7, Ill.

Mobilwall, Types FF and FM: newly designed, permanent steel partitioning, only 2-3/8" thick, uses less critical material but is structurally improved so as to give stronger partitioning with increased sound reduction values. Completely flush at all joints; new interior construction features half-link plates permitting lay-in wiring through posts. Easily handled and erected by one man, thus effecting labor savings in installation. Virginia Metal Products Corp., Orange, Va.

doors and windows

Sliding Hollow Metal Door: designed to solve problems of door-swinging space in small apartments, homes, and offices. Constructed of fine quality steel, electrically welded throughout for maximum strength and rigidity; will not warp, bind, or sag. Entire frame, overhead track, and sliding mechanism are completely fabricated, making installation a simple, inexpensive operation. Concealed floor guide prevents contact between door and frame, eliminates all danger of scratching door surface. Available in standard 2'-6" x 6'-8" size. Diebold, Inc., 1411 Fifth St., S. W., Canton, Ohio.

Challenger "800": new line of 19 semi-heavy duty latchsets and locksets to meet requirements of virtually every building need. Non-rusting aluminum housing, heavy steel sleeve spindle and retractor. Hollymade Hardware Mfg. Co., 4865 Exposition Blvd., Los Angeles 16, Calif.

Pierson 20-20 Window: "all-glass" window consists of redwood frame and no hardware except for pull-latch which locks closed or part open window; knockdown-frame comes in seven redwood pieces ready to nail together into wall framing; requires no sashes, putty, or weights. Two glass panes are used, with one of them sliding (glazing not included with fabricated window). In one size at present: 4'-0" x 3'-0". Ernest Pierson Co., 4100 Broadway, Eureka, Calif.

electrical equipment, lighting

Controlite: universally-adjustable, recessed and semi-flush spotlights with steel housing and satin-chrome finish, intended for dramatic-effect lighting in display windows, showrooms, theaters, etc. Light source from R-40 reflector lamps; two models equipped with louvers. Marvin Mfg. Co., 3071 E. 12 St., Los Angeles 23, Calif.

Wafer-Thin: medium by-pin fluorescent light fixture, using 4-foot T-12 40w lamps, designed to harmonize with any type commercial interior. Unit is completely wired and ready for line lead connections. May be flush or suspension-mounted individually or in continuous rows. Mitchell Mfg. Co., 2525 Clybourn, Chicago, Ill.

Heat-A-Lite: household fixture consisting of overhead light, air circulator, and electric heater, all in one ceiling-installed unit; suitable for bathrooms, bedrooms, nurseries, and other small areas to be heated, lighted, and air circulated. For summer comfort, some models are equipped to operate without heating element to provide cool air throughout room. NuTone, Inc., Madison & Red Bank Rds., Cincinnati 27, Ohio.

Lite-Mite: tiny portable fluorescent utility lamp producing intense but cool illumination of up to 450-footcandles of light. Contains two 4w fluorescent tubes and all components within 2" x 6" shade in black wrinkle finish. Jacknife support bracket may be removed from lamp base for permanent lamp installation to desk, table, bench, or machine, and still have full lamp adjustment. Stocker & Yale, Inc., Marblehead, Mass.

Thermostatically controlled electric panel produces even, comfortable heat by means of Pyrex glass sheet, 16" x 24", backed by conductive coating which serves as heating element when electricity is switched on. Elimination of glowing coils or grids and comparatively low temperature of panel surface—it may be touched momentarily without burning finger—contribute to indefinitely long life of element. Berko Electric Mfg. Corp., 179-05 Jamaica Ave., Jamaica 3, N. Y.

finishers and protectors

Blond: clear, pale coating, oil-based and resin-free, to protect and improve appearance of interior woodwork and linoleum; non-slippery on floors. Can be applied by brush or spray, dries hard in two hours. Either gloss or dull application may be given. Linseed Oil Products Co., 359 Del Monte St., Pasadena, Calif.

sanitation, water supply, drainage

Stone-Lined Hot Water Tank: designed for residential use in present capacities, new seamless tank of heavy-gage steel has 33-gallon water capacity and will deliver from 28 to 60 gallons of hot water per hour, depending upon heater size used. Interior is lined with ½"-thick composition stone, protecting tank from rust and corrosion and offering insulation to conserve water and fuel. Especially suitable for use in localities where extreme alkalinity and acidity are found. Mor-Flo Heater Corp., 2175 E. 76 St., Cleveland 3, Ohio.

Utility Pump: portable, completely submersible pump for sump usage in boiler-room pits, underground utility installations, elevator pits, and other low areas in factory layouts; may also be used to drain flooded areas, pumping out new excavations, ditches, etc. Submersible feature made possible by means of patented, automatic, liquid-level control swtich which eliminates need for float. Unit weighs 50 lb., can be moved and set into operation quickly. Kenco, Inc., 1125 N. Ridge Rd., Lorain, Ohio.

specialized equipment

Talk-A-Phone CL Series: low-priced, flexible intercommunication system adaptable to wide range of uses in industrial installations, offices, stores, institutions, etc. Incoming calls may be answered from distance of up to 40 ft. from any master or substation; substations may be called selectively, or exclusively to any master station, and any master may be used privately or not, at option. Master stations equipped with talk-listen switches, stand-by, station selectors, and volume control, while staff stations require no manual operation. Available in five-station and ten-station combinations. Talk-A-Phone Co., 1512 S. Pulaski Rd., Chicago, Ill.

p/a

MANUFACTURERS' LITERATURE

★ *Editor's 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

1-138. Radiant Sunshine Comfort (EL-16), 8-p. booklet describes radiant heat panel consisting of tempered glass with chemical heating element fused into back surface; heat is radiated when electricity passes through element; panel is encased in steel frame and is easily installed in new or existing buildings. Types of panels, specifications, photos. Appleman Glass Works, Bergenfield, N. J.

1-139. Controls for Heating and Air Conditioning, AIA 30F (F-1753-3), 46-p. catalog. Illustrations of thermostats, motor-operated valves, control motors, and accessories such as transformers, power boxes, relays, etc. General engineering data, diagrams. Barber-Colman Co., Rockford, Ill.

1-140. Air Filter Sizes (D51-7), 49-p. catalog containing practically all makes and models of filter-equipped warm air furnaces and blower-filter-equipped units, indicating filter size and number of filters used in each case. Table of contents alphabetically arranged by company name. Owens-Corning Fiberglas Corp., Nicholas Bldg., Toledo 1, Ohio.

Circular illustrating four steel boiler installations in warehouse, plant, and two office buildings; descriptions of types used; other models for heating, power, and process steam shown. Also, folder on compact, steel-riveted boilers, originally designed for ships, now adapted as best source of high pressure steam for power and industrial process purposes; construction features, ratings and dimensions table, plans. Kewanee Boiler Corp., Kewanee, Ill.:

1-141. Specify Kewanee Steel Boilers (858)

1-142. Scottie Junior, AIA 34-B-1 (99)

1-143. Selectrol (Vol. 1, No. 4), 22-p. brochure on steam-operated water chiller for air conditioning applications and as source of low-cost chilled water for industrial process requirements in baking plants, breweries, dairies, food processing and storage, leather and textile industry, etc. Description and layouts of several actual installations, *application* techniques, photos. Servel, Inc., Evansville 20, Ind.

construction

3-119. Featherlite Expanded Shale Aggregate, file folder of recent literature. Descriptive and technical data on lightweight expanded shale aggregate for structural concrete and concrete products. Featherlite Corp., Tower Petroleum Bldg., Dallas, Tex.

3-120. Embeco Method for Setting Floor Brick (E-27), 4-p. bulletin recommending use of special, non-shrinking mortar in installation of floor brick and heavy tile. Advantages, photos illustrating laying of brick and tile, specifications. Master Builders Co., 7016 Euclid Ave., Cleveland, Ohio.

3-121. Foamasol, 6-p. folder describing foaming and dispersing agent, in liquid form, for air-entrained concrete. Field and lab tests, tables, uses. Onyx Oil & Chemical Co., 190 Warren St., Jersey City 2, N. J.

3-122. Expanded Metal Meshes (493 EM), 26-p. catalog. Manufacture of expanded sheet metal and its uses. Types of meshes, sizes, weights, dimensions, engineering data, expanded metal accessories. Penn Metal Co., Inc., 205 E. 42 St., New York 17, N. Y.

3-123. Stone Creek and Ava Face Brick, AIA 3-F, 28-p. catalog presenting 21 full color reproductions of face brick in straight shades and blends. Photos of different buildings illustrating versatility and adaptability of brick, data on bonds and mortars. Stone Creek Brick Co., Stone Creek, Ohio; Ava Brick Co., Ava, Ohio.

doors and windows

4-128. Barcol Overdoors and Electric Operating Equipment (F1406-11), 16-p. catalog. Complete descriptions of overhead doors for residential garages and commercial, industrial, and institutional buildings. Application and installation details, layouts. Barber-Colman Co., Rockford, Ill.

4-129. Fenestra Industrial Steel Windows (IND-4), 8-p. catalog section. Descriptions of pivoted, commercial projected, and security windows. Uses, construction features, methods of operation, types and sizes, detail drawings, specifications. Detroit Steel Products Co., 2250 E. Grand Blvd., Detroit 11, Mich.

4-130. Kawneer Architectural Metals are Unequalled, 18-p. booklet showing uses of metal entrances, flush doors, storefront assemblies, awnings, and trim for all types of buildings. Photos, illustrations. Kawneer Co., Niles, Mich.

4-131. Securit Interior Glass Doors, AIA 17-A (BRSD-1), 4-p. folder illustrating interior door made of ⅜" tempered glass patterned on both sides, providing sufficient *light to enter* through but preventing people from seeing in; complete with Sargent hardware in bronze or chrome finish. Advantages, details, standard sizes. Libbey-Owens-Ford Glass Co., Nicholas Bldg., Toledo 3, Ohio.

4-132. Finishing Hardware, 24-p. catalog designed to assist writing of Finishing Hardware specifications in simplified form, when such information is not available. Illustrations of door and window hardware for all types of buildings and door functions. Lockwood Hardware Mfg. Co., Fitchburg, Mass.

4-133. Series "410" National Lockset (410), 8-p. catalog describing precision-engineered locksets with all exposed parts made of solid brass or bronze, for exterior and interior doors. Types, cross-section drawings, finishes. National Lock Co., Rockford, Ill.

4-134. Durall Aluminum Tension Screens, AIA 35-P-1, 12-p. booklet demonstrating rust- and stain-proof screen made with reinforced screening edges that eliminate need for side frames; special tension design keeps screen taut and insect-proof. Features, construction details, installation data. New York Wire Cloth Co., 445 Park Ave., New York 22, N. Y.

electrical equipment, lighting

5-91. Aluminum Ceiling-Pan-Type Fixture Constructions with Higher Wattage Ratings, AIA 31-F-2 (951), 4-p. folder. Specification changes, establishing new standards of higher wattages now used with ceiling-pan-type fixtures. Explanation of critical temperature points at which control of heat may be required; types of fixtures, cross-sections, descriptive data. Art Metal Co., 1814 E. 40 St., Cleveland 3, Ohio.

Two publications on fluorescent lamp ballasts: non-technical booklet explains role of ballasts in operation of fluorescent lighting; other booklet describes how G-E ballasts are classified according to amount of natural hum they emit. Sound rating chart gives typical applications of fluorescent lighting, ar-

ranged according to ambient noise levels, and recommending the right ballast for each application. General Electric Co., Schenectady 5, N. Y.:

5-92. Fluorescent Ballast Tells Her Story (GEA-5731)

5-93. G-E Ballasts Are Now Sound-Rated (5205)

★ **5-94. Holophane Datalog,** AIA 31-F-2, 64-p. catalog. Detailed information on lighting equipment designed for specific purposes in hospitals, commercial, industrial, institutional, and outdoor areas. Performance, recommended illumination levels and other engineering data, photos, drawings. Holophane Co., 342 Madison Ave., New York 17, N.Y.

5-95. Commercial Fluorescent Lighting, AIA 31-F-23 (433), 28-p. catalog presenting wide range of high efficiency slimline models, open-type, glass-shielded and louver-shielded troffers, strip lighting units, spotlights, and other lighting units. Detailed data on accessories, illustrations. Mitchell Mfg. Co., 2525 Clybourn, Chicago, Ill.

5-96. Light for Plant Safety and Security (B-4791), 24-p. booklet provides complete plans for outdoor industrial lighting. Application suggestions and techniques, lighting requirements for typical plant areas, descriptions of power distribution and control systems, methods for mounting street and floodlights, illustrations. Westinghouse Electric Corp., Box 2099, Pittsburgh 30, Pa.

finishers and protectors

6-46. Laykold Fibrecoat (B-13), 4-p. brochure on weatherproof mineral asphalt coating for protection of bituminous, metal, concrete, and other surfaced roofs. Application data, uses, approximate costs, specifications, colors. American Bitumuls & Asphalt Co., 200 Bush St., San Francisco 4, Calif.

Two folders: one, containing color samples of latex emulsion interior paint and chart of harmonizing color combinations; the other, on methods of paint application on different types of wall surface. Glidden Co., 11001 Madison Ave., Cleveland 2, Ohio:

6-47. The 100% Latex Wall Paint (C-233)

6-48. Helpful Hints (F-299)

insulation (thermal, acoustic)

9-61 Ehret Insulation, 8-p. booklet on 85% hydrated carbonate of magnesia insulation material reinforced with asbestos fiber, available in sectional and segmental pipe covering, as flat blocks, and cement. Recommended insulation thicknesses and application procedure, brief data on other insulation and asbestos building products. Ehret Magnesia Mfg. Co., Valley Forge, Pa.

9-62. Many Forms for Many Uses, 12-p. bulletin outlining properties and uses of various forms of Fiberglas insulation material. Types, photos. Owens-Corning Fiberglas Corp., Nicholas Bldg., Toledo, Ohio.

interior furnishings

9-63. An Architect's Manual on Mohawk Carpets, AIA 28-E, 24-p. booklet. Basic information on standard types of carpet weave, method of fabricating, recommendations of proper carpeting and cushion for specific purposes, glossary of carpet terms, photos. Mohawk Carpet Mills, Inc., 295 Fifth Ave., New York 16, N.Y.

specialized equipment

19-196. Rotary Leva-Docks (RE-400), 12-p. booklet. Analysis of loading dock problems in plants, followed by detailed description of hydraulically operated loading ramp designed to facilitate transfer of materials between loading dock and trucks or trailers. Multiple installation layout for mechanized loading dock, plans and sections, installation instructions. Rotary Lift Co., 1055 Kentucky St., Memphis, Tenn.

surfacing materials

Two folders describing processed, prefinished hardboard simulating natural woods. Uses, installation data, specifications. Lustrewood Process Co., Bristol, Conn.:

19-197. Lustrewood Hardboard, AIA 23-1 (9-136)

19-198. Installation and Specifications, 23-L

19-199. Medley Blocks Sell Homes!, 4-p. featuring flexible, easily installed parquet floor blocks manufactured of selected hardwood bonded to 30-lb. asphalt saturated felt membrane. Types of patterns, sizes, installation data, typical application photos. H. G. MacDonald Co., 134 Railroad Ave., Monrovia, Calif.

19-200. Plascor, AIA 23-D (PL 7), 4-p. brochure illustrating smooth-surface floor tile composed of Tygon plastic and resin-impregnated cork; resists chemicals, greases, alcohols, and water; shows no deterioration under exposure to air or oxidizing conditions. Detailed data on properties, sizes, colors, application directions, photos. U.S. Stoneware Co., Tallmadge, Ohio.

vertical traffic

★ **20-7. Electric Stairways** (B-4582), 32-p. buyer's guide. Information to assist architects, engineers, and building management in preparation of plans for electric stairways. Cutaway view shows component parts; available sizes, price data, applications, arrangements and layouts, maintenance, typical plans. Westinghouse Electric Corp., Elevator Div., Jersey City, N.J.

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4-133	4-134	5-91	5-92	5-93	5-94	5-95	5-96
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the eyes have it!

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As you read this your eyes are doing more than seeing—they are bringing into action your entire body—nerves, muscles, circulation.

And you are burning up energy—piling up fatigue in direct proportion to the amount of light available for vision. Medical science has proved eyestrain has a marked effect on the well-being of all. So it's necessary then that seeing be done with ease and in comfort. That's why proper illumination is all-important and there's where metal windows come in, for they admit more daylight than any other window.

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When McCulloch Motors executives modernized and enlarged their Los Angeles plant, they chose adhesion type Ceramic Veneer combined with face-brick for a colorful building facing. Where the old exterior required expensive maintenance, the new Ceramic Veneer needs little upkeep and no painting, yet will retain its beauty for the life of the structure.

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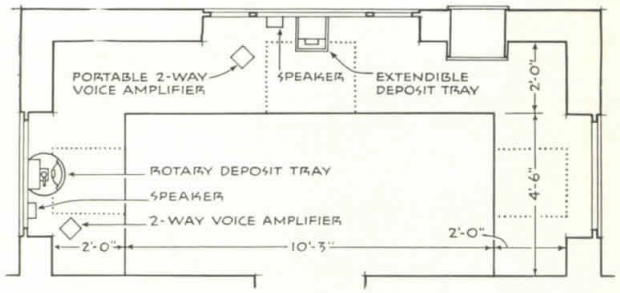
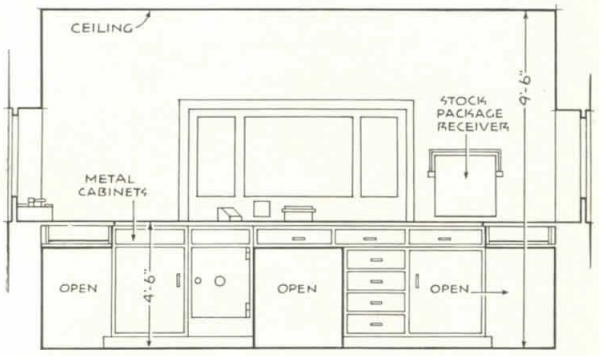
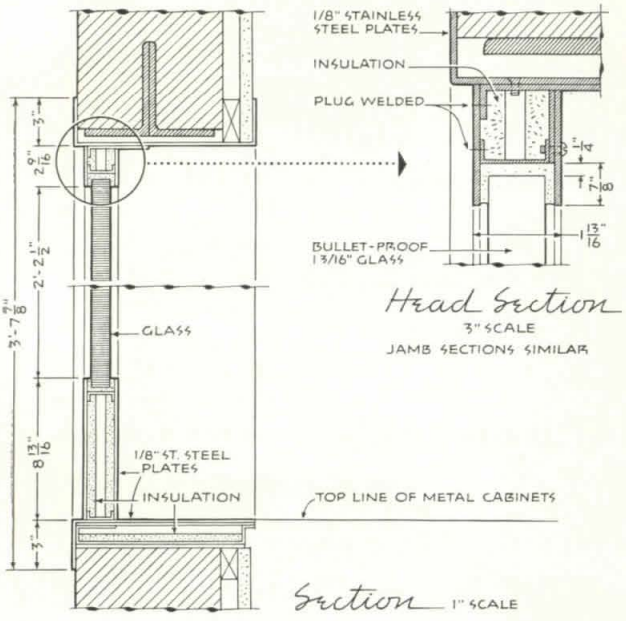


Plan 3/16" SCALE

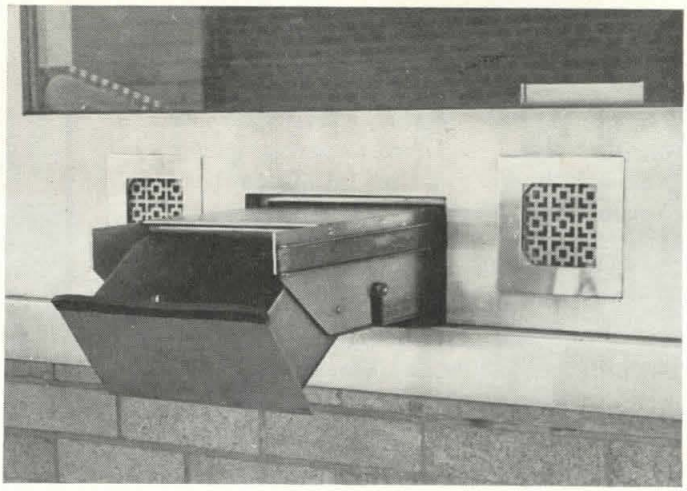


Section 3/16" SCALE

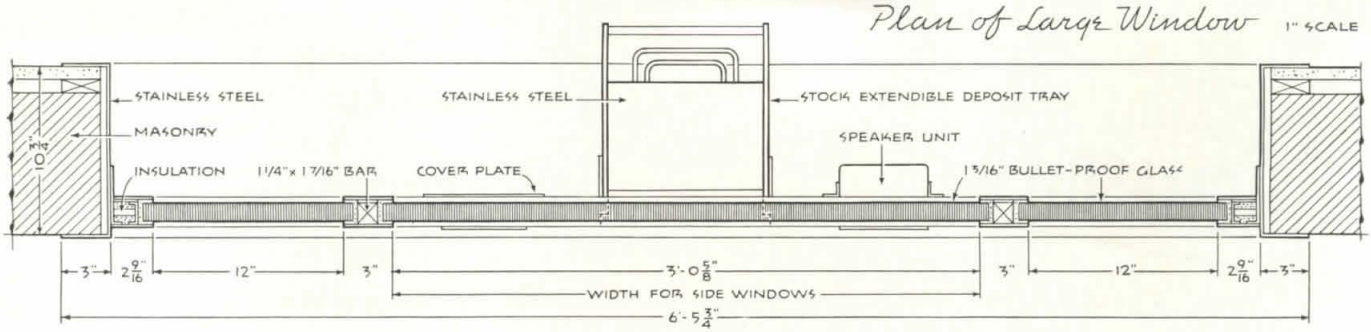


Head Section
3" SCALE
JAMB SECTIONS SIMILAR

Section 1" SCALE



Plan of Large Window 1" SCALE



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JOSEPH G. CONRATH, CONSULTING ENGINEERS

ANOTHER ADVANTAGE OF BUILDING WITH HOMASOTE...

AS INTERIOR FINISH

—the perfect base for paint or wallpaper

—with no unnecessary wall joints or batten strips

When you use Homasote for interior finish, you get great structural strength, maximum insulating efficiency and sound-deadening qualities—*all in one material.* The Big Sheets—up to 8′ x 14′—are completely *weatherproof* and permanently *crackproof.* You have a drier and quieter house. You are forever through with unsightly wall joints and batten strips. You have the perfect base for paint or wallpaper.

Wood-textured Homasote Panels are individually molded from actual boards—reproducing all the grain and texture of natural wood.

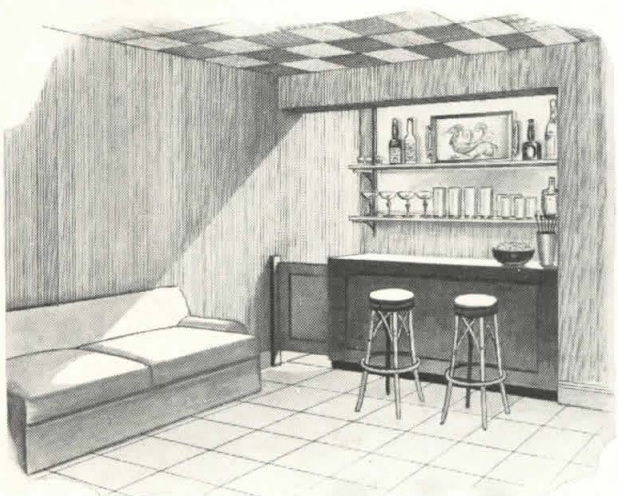
Striated Homasote Panels are the newest and finest development in structural insulation. By varying the panel widths, the angles at which they are cut and placed, you have infinite variety of pattern.

Both Wood-textured and Striated Panels may be stained or painted to achieve almost any desired color effect—pastel or dark, solid or treated to bring out the interesting lines. Homasote in any form may be used for exterior finish as well as interiors.

Let us send you literature and samples on all three types. Kindly give us the name of your lumber dealer and address your inquiry to Department **47**

STANDARD—in Big Sheets up to 8′ x 14′

WOOD-TEXTURED—in panels 16″ x 96″ 32″ x 96″ 48″ x 96″



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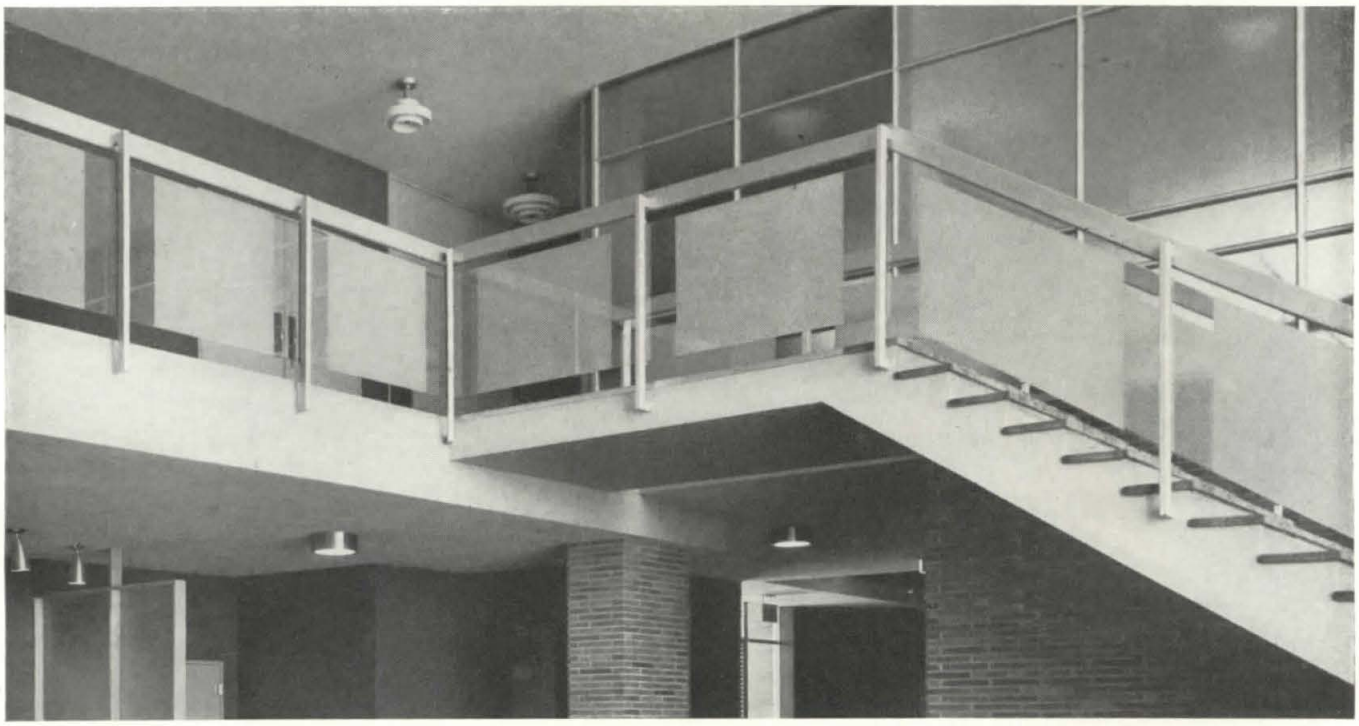
. . . oldest and strongest insulating-building board on the market

Nova Sales Co.—a wholly-owned Homasote subsidiary—distributes the Nova Roller Door, Nova-I. P. C Waterproofing Products, the Nova Shingle and Nova-Speed Shingling Clip and the Nova Loc-Nail. *Write for literature.*



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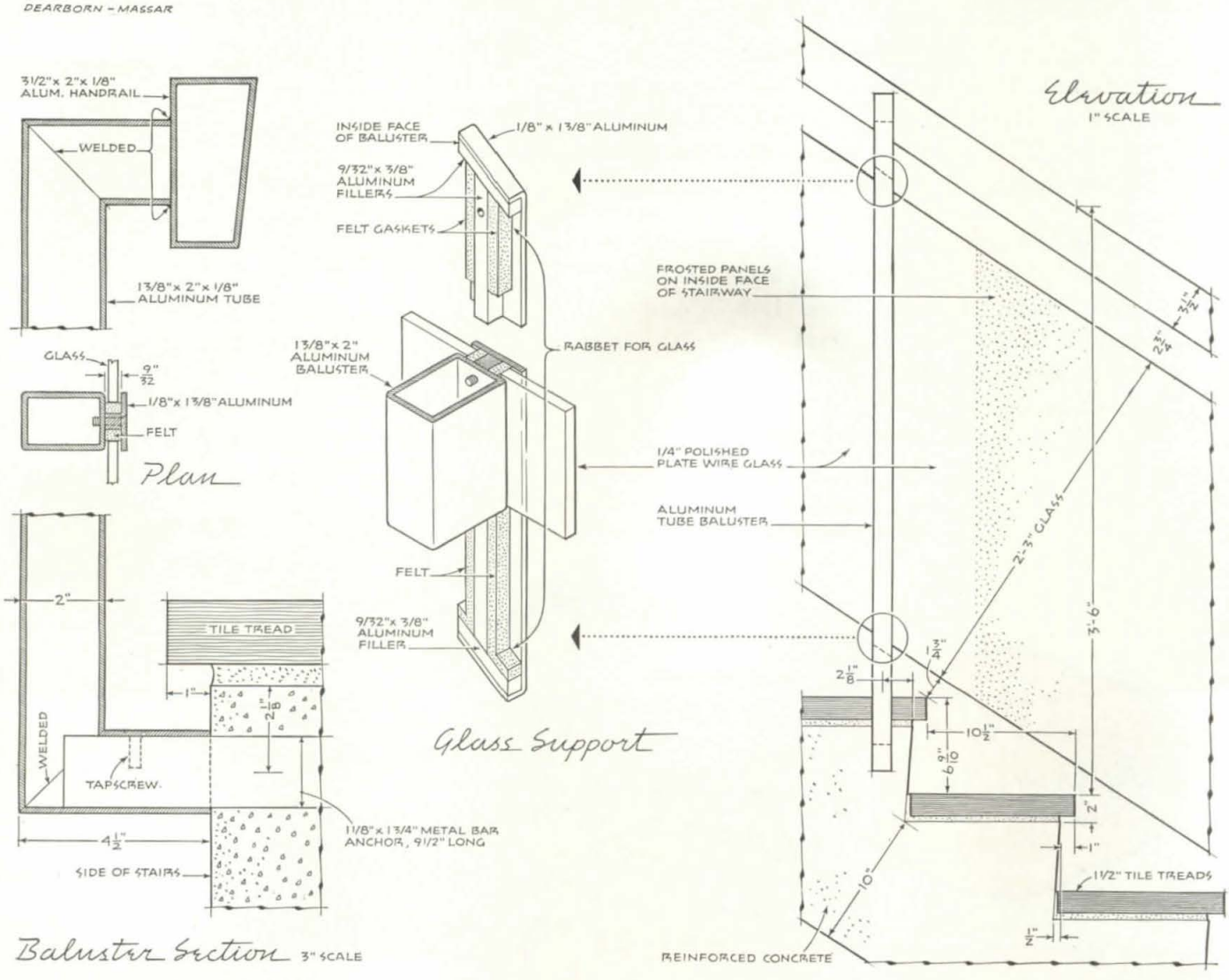

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30,000 yds. of Wheeling Diamond Lath
70,000 ft. of Expansion Corner Bead
"Pave the Way" for Better Plastering!

IT'S New York's newest fully air-conditioned building: the 32-story companion structure to the world-famed Chrysler Building. For their part in its construction, Lathing Contractors William J. Scully, Inc. chose Wheeling products. Almost seven acres of Wheeling Diamond Lath, more than thirteen miles of Wheeling Expansion Corner Bead assure a firm "foundation" for plastered walls and ceilings.

The Wheeling Line of Building Materials includes Steelcrete Reinforcing Mesh, Expanded Metal, Metal Lath and Metal Lath Accessories, Tri-Rib Steel Roof Deck, ExM Angle Partitions and ExM Vault Reinforcing to meet #10 insurance classification.

Building photo courtesy
W. P. Chrysler Building Corporation

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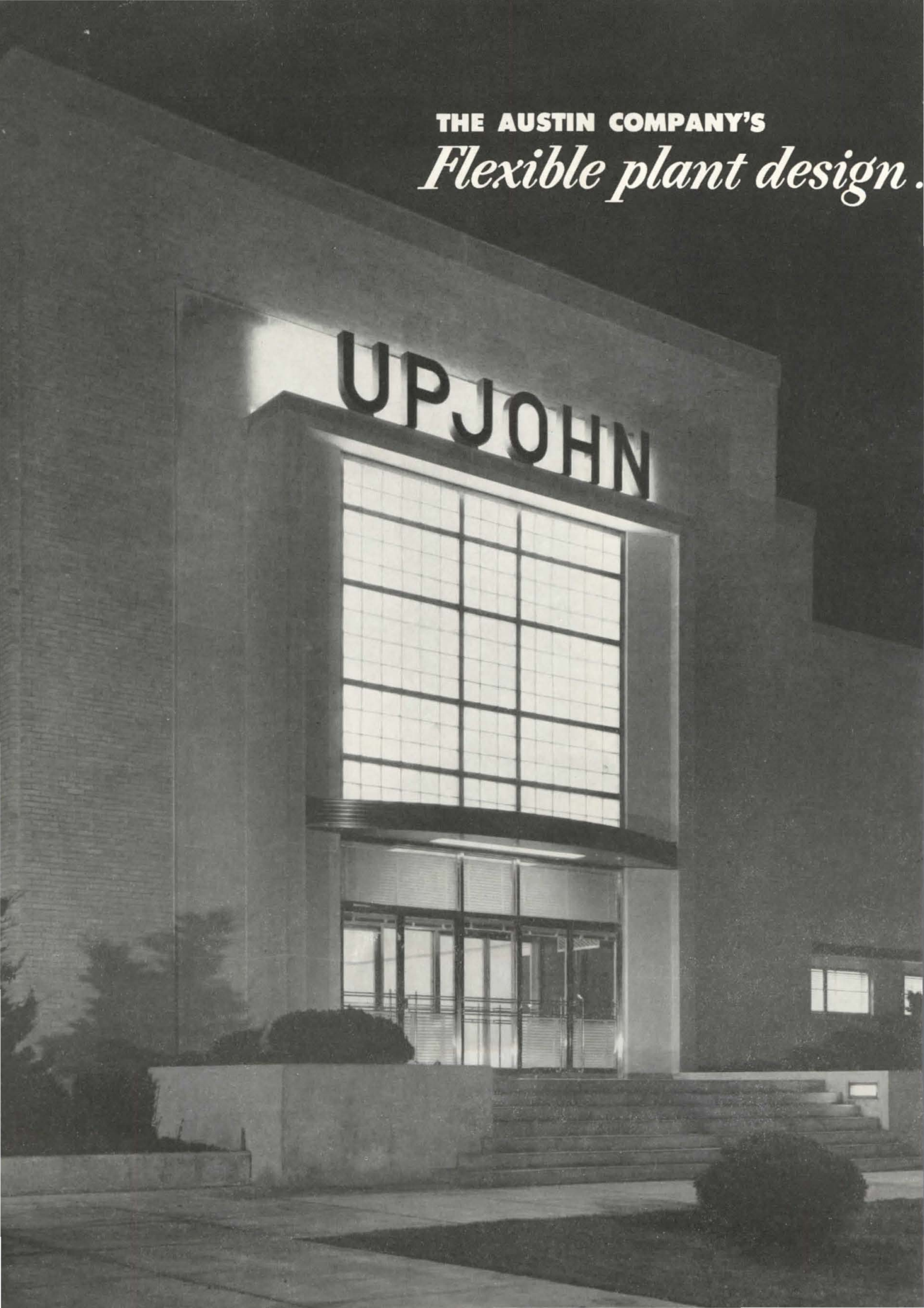

THE AUSTIN COMPANY'S
Flexible plant design.
UPJOHN

a production man's dream

The Upjohn Company's new 33 acre plant on a 1500 acre site, outside Kalamazoo, Michigan, is like a precision-engineered laboratory instrument. Here, mechanical building services are developed to a new level in the industrial building field. Here, they have provided for complete flexibility of future operations . . . with room to expand and install new machinery . . . the ability to convert quickly from one product to another.

This kind of assignment fascinated research-minded Austin engineers. Working closely with the Upjohn management, Austin engineers developed a warehouse-production-packaging setup that "accomplishes everything in one motion." Realizing the need for a simpler and less expensive suspended ceiling, Austin also developed a revolutionary "integrated" ceiling, where lighting fixtures are set in all-inclusive "troffer" beams. These beams serve as wiring raceways and eliminate all conduit. They also serve to eliminate framework used to support ceiling tile, duct work and sprinkler lines.

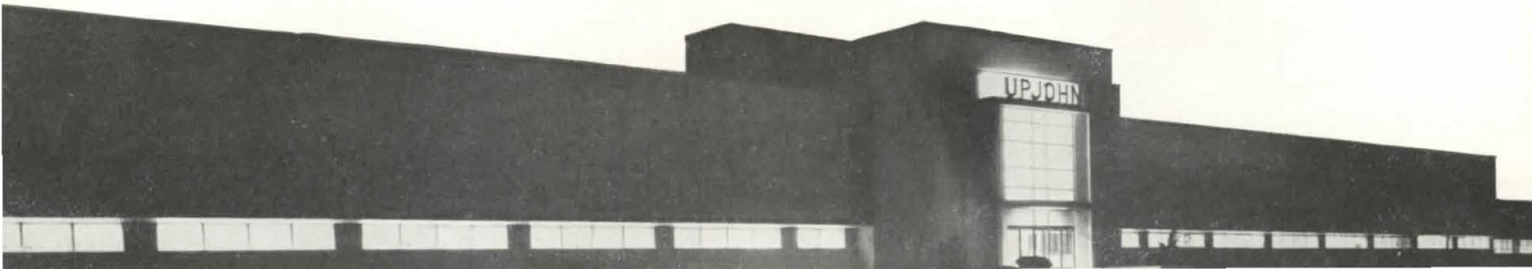
stin's new "integrated" ceiling was developed under the direction of J. K. Gannett ght), Vice President in charge of Engineering and Research, for use in the new Upjohn nt.

It is significant that The Austin Company, whose credo is "function must precede building plan," selected Day-Brite lighting fixtures to illuminate this ultra-modern factory. They realized that Day-Brite fixtures *are* functional in every way . . . providing the right kind and amount of *modern* light . . . providing the quality that means years of trouble-free service . . . the lower installation, maintenance and operating costs that are important to the architect, the builder, the plant production man.

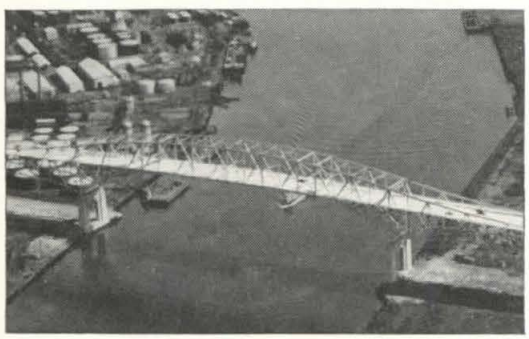
Day-Brite has designed a line of lighting fixtures which include the perfect answer to any building or industrial project . . . and *every* Day-Brite fixture sold is guaranteed to give stellar performance at reasonable cost. Do *you* know Day-Brite?

Day-Brite Lighting, Inc., 5405 Bulwer Ave., St. Louis 7, Missouri. In Canada: Amalgamated Electric Corp., Ltd., Toronto 6, Ontario. Distributed nationally by leading electrical wholesalers.

"DECIDEDLY BETTER"
DAY-BRITE
Lighting Fixtures



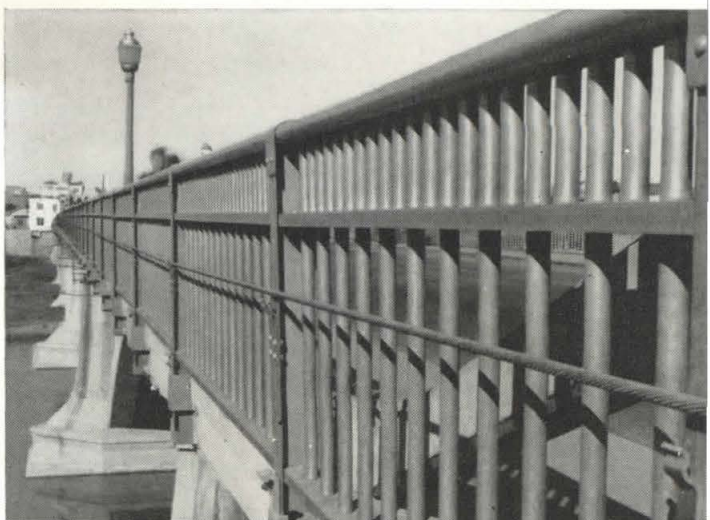
THESE BRIDGES CARRY



Five miles of railings made of Alcoa Aluminum stretch across Philadelphia's recently completed Penrose Ave. Bridge. Longest and highest ever built by the Pennsylvania Dept. of Highways, the bridge was designed by Modjeski and Masters, engineers.

Railings of Alcoa Aluminum on this Little Rock, Ark., railroad bridge have stood up through fifteen years of smoke and soot; never needed paint or upkeep.

International Bridge, Laredo, Texas, has aluminum railings installed in 1935. In the event of floods, the entire railing can be quickly removed.



PROOF OF ALUMINUM'S ECONOMY AND LONG LIFE

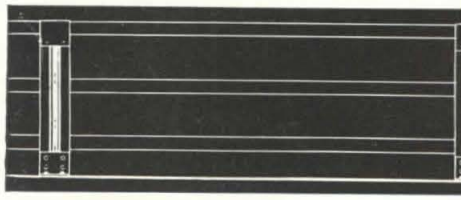
Exposed to the elements on every side, often smothered in smoke and fumes, difficult and expensive to paint, a bridge railing is typical of the places where aluminum's freedom from the damaging effects of rust and corrosion pays off many times over. You'll find proof of this on bridges in every part of the country.

For example, aluminum railings installed nearly a quarter century ago on five bridges in the Chicago area still are structurally sound. *And they've never needed a cent for maintenance.* We will be glad to supply you with the locations of these and many other bridges throughout the country if you'd like to see for yourself how Alcoa Aluminum stands up to time and weather.

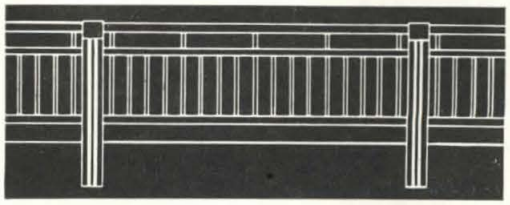
Service reports, design and engineering details are covered in Alcoa's "Report on Bridge Railings." For a free copy call your nearby Alcoa Sales Office or write, ALUMINUM COMPANY OF AMERICA, 1890M Gulf Bldg., Pittsburgh 19, Pennsylvania.

ALCOA

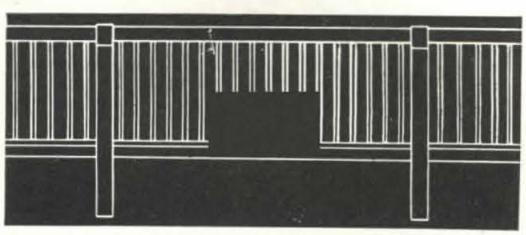
FIRST IN ALUMINUM®



Clark St. Bridge over the Chicago River has aluminum railings installed in 1929. Smoke and weather have had no adverse effect on the aluminum.



Bridge railings of Alc Aluminum are fabricat by several qualified m ufacturers. Shown he are a few of the ma practical design sugg tions contained in Alco report on Bridge Railin Write for free cop



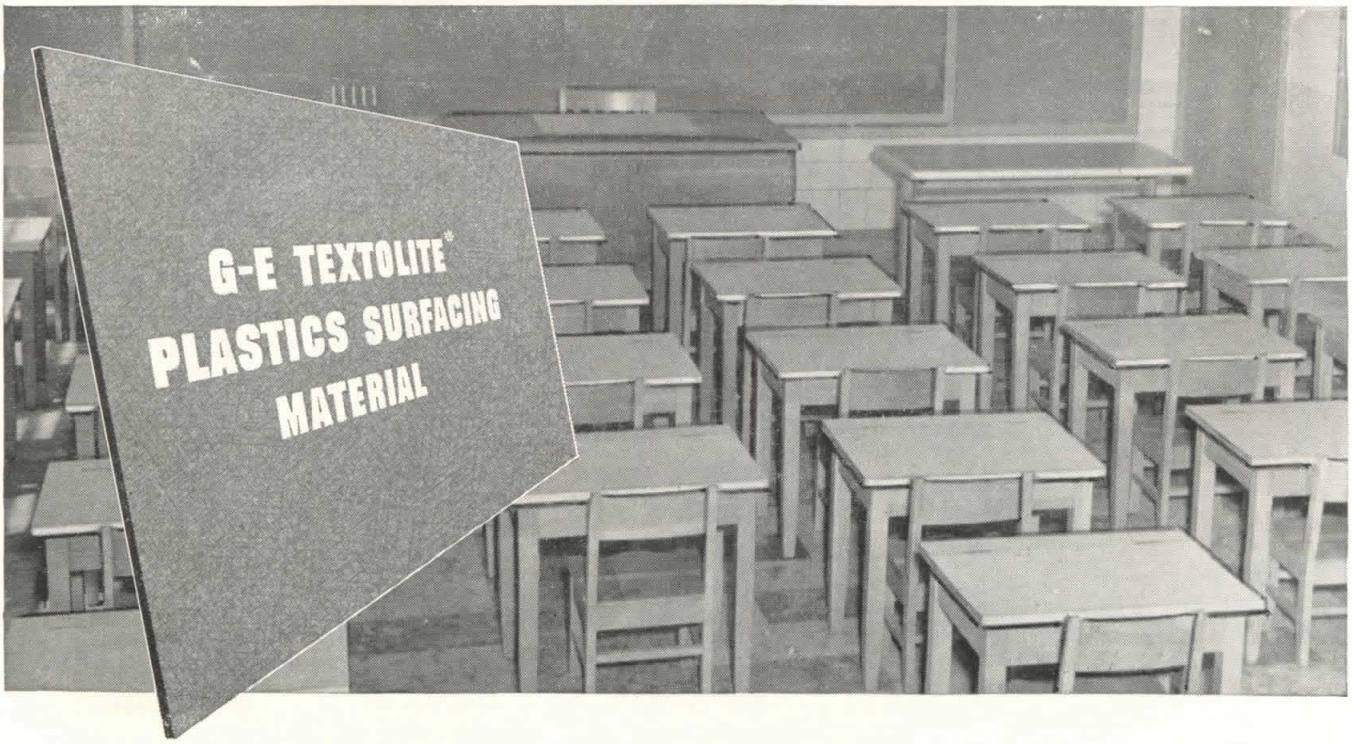


TABLE TOPS

DESK TOPS

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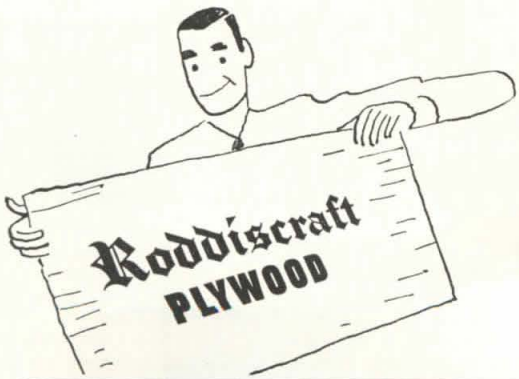

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New Hyde Park, L. I., N. Y.

p/a REVIEWS

BOOKS RECEIVED

Reports of the East Kilbride and Glenrothes Development Corporations. Edinburgh, His Majesty's Stationery Office

Planning and Building the Modern Church. William Ward Watkin. Architectural Record, 119 W. 40 St., New York, N.Y., Sept. 1951. 163 pp., illus. $8.50

Heating Design and Practice. Robert Henderson Emerick. McGraw-Hill Book Co., 330 W. 42 St., New York 18, N. Y., Oct. 1951. 453 pp., illus. $8

Houses Have Funny Bones. Royal Barry Wills. The Bond Wheelwright Co., 145 E. 63 St., New York 21, N. Y., Oct. 1951. 179 pp., illus. $3

La Caracas de Ayer y de Hoy. Su Arquitectura Colonial y La Reurbanizacion de "El Silencio." Carlos Raul Villanueva. Book of photographs.

Road International. Spring 1951. International Road Federation, American Region, 550 Washington Bldg., Washington 5, D. C. 71 pp., illus. 50¢ a copy

An Essay Toward Architecture. Pierre C. Zoelly. Carnegie Press, Carnegie Institute of Technology, Pittsburgh, Pa., 1951. 47 pp., illus. $2.50

BOOKS

NATURAL VENTILATION

Some General Considerations in the Natural Ventilation of Buildings. *W. W. Caudill, S. E. Crites, and E. G. Smith. Research Report No. 22, Texas Engineering Experiment Station, College Station, Texas, 47 pp., 8½" x 11.*

The Feasibility of Using Models for Predetermining Natural Ventilation, *By E. G. Smith. Research Report No. 26, Texas Engineering Experiment Station, College Station, Texas. 28 pp., 8½" x 11.*

The first of these two publications—an unassuming, half-mimeographed, half-photographed report—contains within its plain covers one of the very first succinct and easy-to-understand analyses of the natural movement of air through buildings to be prepared. Very effectively it informs the interested architect and engineer on the basic principles of using natural ventilation to improve the livability and usability of structures. The photographs excellently concretize a text which, by the nature of the subject, has to be somewhat complicated.

After a series of paragraphs and photos illustrating the eight major characteristics of air flow through buildings, three typical applications of these characteristics to imaginary buildings are described, in one of which a very useful purpose for wide roof overhangs is presented. Six planning considerations for the application of the stated principles to any building design are then discussed, with photographs of existing buildings or building details that show typical examples. An analysis of the value of models for making accurate predictions of natural ventilation effects, completes the report.

The second publication is an expanded study of the experimental models, which were briefly evaluated in the over-all report on natural ventilation (*above*). Though it is considerably more technical than the summary report, and is

(Continued on page 122)

p/a REVIEWS

(Continued from page 121)

probably beyond the knowledge of the average architect as far as physics goes, it nevertheless has much of interest to the non-specialist, including a description of an actual experimental building (30 feet long) which the Station constructed, and a two-foot model of the same building, which was used to compare results and find out if models could be relied upon to give as useful data as the full-scale building. The major difficulty encountered seems to have been to make sure that the model was extremely accurate, since, as the report states, "small changes in a structure may cause large changes in the air-flow pattern." Model accuracy, however, was found to be feasible within ordinary ranges of construction variations.

The method outlined is not suitable for many industrial buildings and for tall, heated structures, in both of which thermal convection is a matter of high importance in the control of the building's interior climate. It is primarily useful for the study of residences and other fairly low structures.

GROFF CONKLIN

INTERIM REPORT

Moisture and the Durability of Wood-Frame Walls: Housing Research Paper No. 16. *R. C. Reichel, Division of Housing Research, Housing and Home Finance Agency. U. S. Government Printing Office, Washington, D. C., 1951. 20 pp. 15 cents*

This is a somewhat premature report of work being done on moisture control and elimination of condensation at Pennsylvania State College, under the auspices of the Housing and Home Finance Agency. Prof. E. R. Queer and Prof. F. A. Joy conducted the work, under the supervision of R. R. Britton, of HHFA.

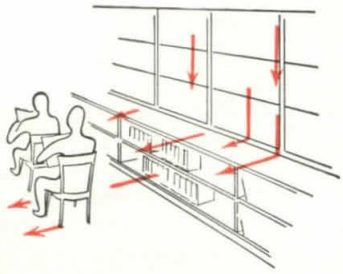
Twenty-two constructions, built to test various types of walls with and without insulation, with good and bad workmanship, were placed in a test shell which was exposed to normal weather during the 1950-51 winter. The report covers only this one rather mild winter, but even so it contains some interesting results.

No worthwhile conclusions can be drawn from *these* results, except the already-known one that a frame structure containing materials that can be damaged by condensation will probably be damaged if it is insulated without adequate vapor barriers or ventilation.

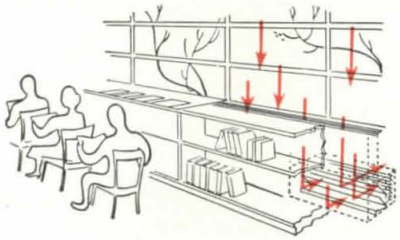
(Continued on page 124)

ARCTIC BLASTS HALF THE SCHOOL YEAR!

The DRAFT STOP system traps drafts



OUTMODED METHODS *of ventilation allow drafts and cold air to sweep into classroom. Temperatures vary throughout the day and in different sectors of the room. Such systems are still in use today and unnecessarily so.*



MODERN METHOD—*the DRAFT|STOP System engineered by Herman Nelson actually swallows down drafts yet introduces fresh air, heated to the correct comfort level.*

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MOLINE, ILLINOIS

(Continued from page 122)

More detailed and reliable results will not be available until several winters have passed; this is particularly true of the tentative conclusion that "insulation in itself did not appear to be a contributing factor in the blistering of the exterior paint," a somewhat controversial statement.

It is unfortunate that the types of insulation and vapor barriers tested did not include any reflective foils. This seems nearly inexcusable, in view of their growing acceptance and also because of the fact that they combine both insulating and vapor-barrier qualities in the same material. It is to be hoped that some reflective insulation and vapor-barrier panels will be added to the structure for all subsequent tests.

GROFF CONKLIN

SPECIALIZED AID

Church Maintenance Manual. *Roger C. Whitman. Doubleday & Co., Inc., Garden City, N.Y. 1951. 255 pp., $3*

With costs of building materials and new equipment at a peak, the major items of maintenance, repair, and replacement are straining the budgets of all community churches and synagogues. Effecting small repairs to prevent deterioration and expensive overhauls is now, and will continue to be, more important than ever before. With these factors in mind, the author has written this book as a basic reference guide for clergymen, caretakers, sextons, ladies' societies, and all those who are concerned with the upkeep of church equipment, buildings, and grounds. The manual offers information and advice on such varied subjects as the cleaning of altar-ware and the care of cut flowers; chapters on the cleaning of church interiors, care of linen, repair of floors, walls, ceilings, bells, organs, and pianos; maintenance of exterior walls, windows, roofs, belfries, and church grounds. Painting is discussed thoroughly, as is the efficient operation of heating, plumbing, and lighting systems. There is a complete index for easy reference, an up-to-date bibliography, and a maintenance calendar serving as a general reminder of particular tasks to be done during each of the four seasons. E. T.

FROM ALL FAITHS

A History of Religious Architecture. *Ernest Short. W. W. Norton & Co., Inc., New York, N. Y., 1951. 326 pp., 6" x 9", illus. $6*

Any person reading this book will find that he is getting a fairly good background in the history of religion, as well as in the history of architecture. Short writes very well indeed and he has chosen the illustrations with great care.

The book begins with a description of what are almost prehistoric religions, the structures for which were grass huts; it ends with descriptions of 19th century revivals of Classic and Gothic buildings. In between, the author discusses buildings of all religions, including Mayan and Aztec. The temples of Karnak and Luxor, the Jewish temples, and the early Egyptian, Greek, and Roman temples are all described by Short. As the history of Christian religious buildings is traced, so is the history of Buddhist and Hindu religious buildings

(Continued on page 126)

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p/a REVIEWS

(Continued from page 124)

in India and China and the mosques of Islam.

A History of Religious Architecture is not a brand new book. It was originally published in 1925 under the title, *The House of God,* but the publishers say that this present edition (the third) has been completely revised and brought up-to-date. W. W. A.

THE M. I. T. CONFERENCE

Housing, A National Security Resource. *Published by Albert Farwell, Bemis Foundation, and the School of Architecture and Planning, Massachusetts Institute of Technology, Cambridge, Mass. $1*

The conference and exhibition reported on in this booklet were held last January at the conclusion of the industrialized housing course given during the previous fall term by the Department of Architecture at M. I. T. At the inception of the course, twelve graduate students organized themselves into teams for the purpose of investigating the industrial production of houses, and the exhibition presented the results of their course projects and investigations. Case studies were made of various systems and a proposal for investment in a scheme for mass production of houses was submitted by each group. The opening addresses, given by Professor Carl Koch and Pietro Belluschi, and the ensuing panel discussions, are fully summarized. A number of panels selected from the student exhibition illustrate the final pages of the booklet. E. T.

REFERENCE SHELF

Esempi di Arredamento Moderno di Tutto il Mondo *by Roberto Aloi, Ulrico Hoepli Editore—Milano. Vol. 3 Salada Pranzo. 1951, 168 pp., illus. Vol. 5 Sale di Soggiorno-Camini, 1951, 180 pp., illus. $3.80, $4.13*

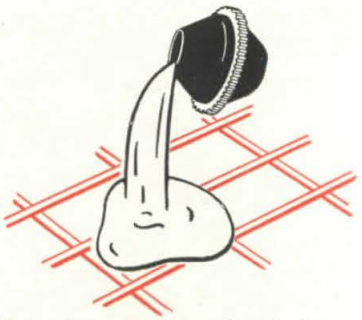
Two books, Nos. 3 and 5 showing Dining Rooms and Living Rooms respectively, are the latest additions to a planned series of 18 volumes, the first two of which appeared last year and were reviewed in these columns.

Each *Esempi* book is a collection of the best examples of contemporary interior and furniture design in a given category. The title for the series, which means *Examples of Modern Furnishings from All Over the World* is an accurate description of what can be found in these books.

(Continued on page 128)

Reinforcing famous buildings

American Welded Wire Fabric



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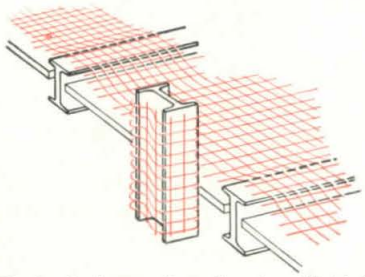
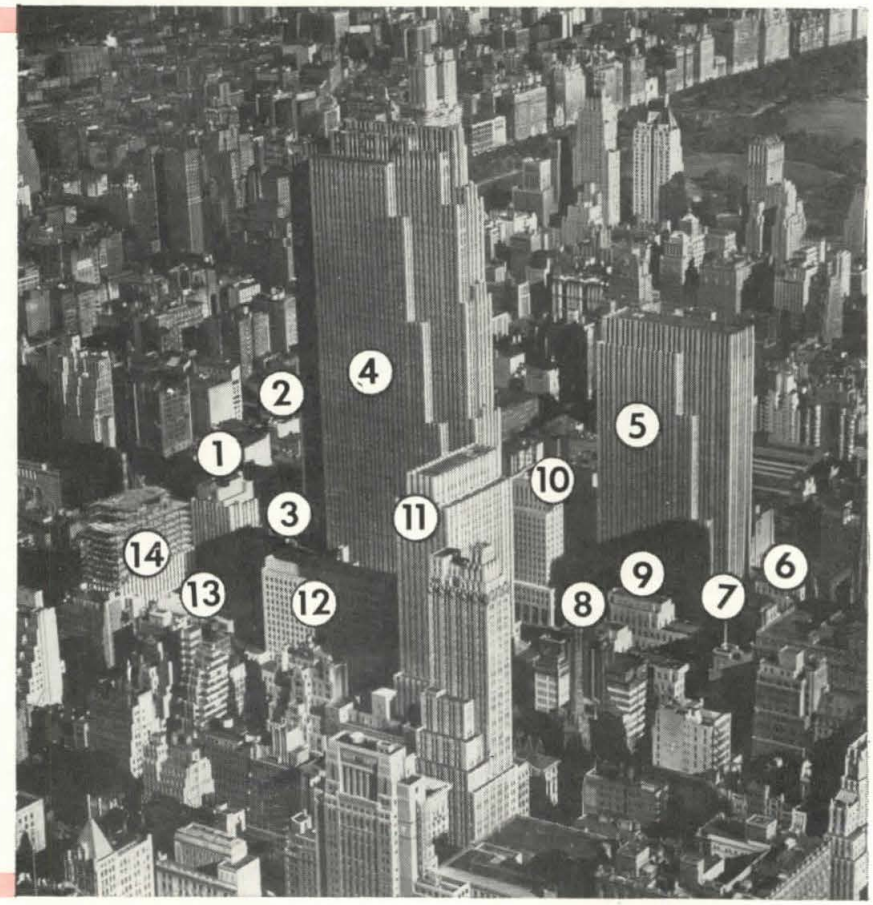


This sketch shows where American Welded Wire Fabric is used in modern steel and concrete buildings. It reinforces walls, floors and roofs, can be draped over beams and girders and wrapped around pillars. Many uses of concrete in irregular shapes are made practical by American Welded Wire Fabric reinforcement.

All 14 buildings of Rockefeller Center, New York City, utilized American Welded Wire Fabric in their floor constructions. The buildings at right are keyed for easy identification:

(1) RCA Building West. (2) RKO Building. (3) Radio City Music Hall. (4) RCA Building. (5) International Building. (6) International Building North. (7) International Building South. (8) La Maison Francaise. (9) British Empire Building. (10) Associated Press Building. (11) Time and Life Building. (12) Eastern Air Lines Building. (13) Center Theatre. (14) United States Rubber Company Building.



Every type of concrete construction needs

AMERICAN WELDED WIRE FABRIC

reinforcement

USS TRADE MARK

UNITED STATES STEEL

p/a

REVIEWS

(Continued from page 126)

These are authoritative selections with respect for variety of solution. There is no attempt at dramatic presentation but Aloi employs the knowing device of mixing the material nicely for a provocative change of mood and design approach.

The generous size photographs, all of which have appeared in magazines here and abroad, are arranged in simple catalog fashion and numbered for ready reference to captions in Italian, French, and English.

These books are arranged first to show interiors in general, then specialized areas which combine with the given interior, and finally examples of related furnishings. These bright, paper covered books are selective and instructive reviews of recent work and for the architect and designer it is always fun and stimulating to see what he and his colleagues have been up to.

We are heartened by the trend towards multi-lingual text for books about art, architecture and design. These books have always been shared and the additional work of translations seems little enough to complete and admit their universality.

It is also a way to learn more about another language. However, I sincerely hope that the Italians do not rely on these translations for the betterment of their English. *Palysander* is frequently used to describe furniture but no English dictionary reveals the meaning of this intriguing word. "Deck-Chair with slope regulable" and "Felter Armchair . . . upholstered by a blue-violet velvet" are really not too frequent to interfere with your understanding—but somebody ought to tell those Italian-English dictionary makers.

Each book has an illustrated, authoritative-looking introduction, tracing the precedents for the material that follows. It is regrettable that this as well as the main titles have not been translated too. S. S.

ARTIST'S VIEWPOINT

Country Buildings—How to Appreciate Them and How to Sketch Them. *William R. Finch. The British Book Center, Inc., New York. 132 pp., illus. $6.75*

The author of this book is one of those rare artists who believes that members of his profession should understand the materials used in a building, and the method by which it is built before proceeding to draw it. In fact, he devotes a whole chapter to this subject. The title of the book is quite descriptive but since it is an English book the country buildings included do not have much relation to similar buildings in the United States.

Finch feels that though anyone can draw, not everyone who draws will necessarily be an artist. With this in mind he begins to give instructions in freehand drawing starting with the cube and the elements of two point perspective and moving slowly (because he believes in practice) to shades and shadows, and drawing the cylinder, the pyramid, and the cone. With every step the student is taken by the hand, so to speak, and given a full explanation of how the fundamentals shapes apply to almost any object he may wish to draw.

The book has innumerable sketches by the author of some charming native architecture including clay lump and cob construction, stone lab and thatch roof construction, timber framing and a lot more.

The book will be of interest primarily to artists and architectural students but anyone interested in English small

(Continued on page 130)

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THE MODERN STYLE IS CLAY TILE

p/a REVIEWS

(Continued from page 128)

houses, cottages, farm buildings, barns, etc., will find Finch's sketches very pleasant in themselves. W. W. A.

CAROLINA RESORT

Southern Pines—Its Growth, Its Future. *A study prepared by the Mayor's Planning Committee, with assistance of John R. Hampton and Seward Weber, Department of City and Regional Planning, University of North Carolina, Chapel Hill, N. C. 29 pp.*

As one of their course requirements, two graduate students of the University of North Carolina were elected to assist the Mayor of Southern Pines and a group of interested citizens in the preparation of a special town planning program. Results of their correlated investigations reveal the existing problems of that town, its natural and industrial resources; population distribution and its growth, in comparison with neighboring areas. A schematic map of Southern Pines illustrates desirable areas for new housing, schools within walking distance, neighborhood stores, adequate parks and playgrounds, a traffic center, and the like. The final chapter of the report emphasizes the desirability and need for community control of zoning and subdivision of land. E. T.

GREAT PERIODS

French Provincial Decorative Art. *Catharine Oglesby. Charles Scribner's Sons, New York, 1951. 214 pp., illus. $8.50*

With the ever-growing interest and popularity of French Provincial furniture and decorative accessories for use in present-day interiors, this handsome book will be welcomed by the neophyte as well as the connoisseur. The beginner, especially, has here a wealth of material from which to acquire background and a knowledge of the great periods of French decorative art during the Eighteenth and Nineteenth Centuries. Each of the 22 chapters, dealing with virtually every type of furniture and decoration—chairs, armoirs, desks, tables, mirrors, lighting fixtures, ceramics, to mention but a few—is replete with much useful information, handled in an expert manner. Of particular value is the chapter dealing with the various styles of furnishings, named after the rulers of France, from the time of Henry IV (1589-1610) down through the Napoleonic era which ended in 1814.

In addition to six full pages of color illustrations, there are more than three

(Continued on page 132)

BRIXMENT

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LOUISVILLE CEMENT COMPANY, Incorporated, LOUISVILLE, KENTUCKY

p/a

REVIEWS

(Continued from page 130)

hundred photographs and sketches which admirably complement the text and enhance the enjoyment of the reader. No one interested in decorative arts, whether from the layman's or the professional's point of view, will want to miss this book. FRANK A. WRENSCH

CHOICE OF HOUSES

McCall's Book of Modern Houses. *Mary Davis Gillies. Simon & Schuster, Inc., 1230 Sixth Ave., New York 20, N.Y. 192 pp., 13" x 10¼", illus. $5*

The twenty-nine contemporary houses presented in this large, chastely-bound volume, were especially selected by the architectural editor of *McCall's* from hundreds of homes featured in that magazine from 1945 through 1950. A few were designed for *McCall's* to help its readers with such problems as price limitations, size, room arrangement, expansibility, and livability; others, because they have workable floor plans, represent progressive construction techniques, utilize new materials, and are considered beautiful, in addition to providing all the facilities for comfortable living.

This collection of residential work by prominent architects throughout the United States is handsomely displayed in photographs—more than 100 of them in full color. In every case there is an over-all photograph of the house showing what it looks like from the garden or street, or both. Interior photographs point out fireplace design, interior trim, built-ins, wall surfacing, flooring, and lighting. Complete floor plans are included as well as elevation drawings and a list of basic materials and techniques used in the construction. All of these houses are in the lower- and middle-price bracket. No prices are quoted, since construction costs vary everywhere and change almost from day to day.

Every phase of planning, financing, building, landscaping, decorating, and furnishing is covered in the text section of the book, in simple, knowledgeable terms that should enable the potential home builder and buyer to approach a contract for a house with a more critical and knowing eye. E. T.

NOTICES

New Addresses

SPAHN & BARNES, Architects, 1950 Lee Rd., Cleveland Heights 18, Ohio.

EDWARD M. Y. TSOI, Architect, Humble Bldg., 909 S. Jefferson Davis Pkwy., New Orleans, La.

DAVID L. BOCKIUS, JR., Architect, 13 N. Main, Ashland, Ore.

DOUGLAS HONNOLD, Architect, 306 N. Doheny Dr., at Beverly Blvd., Los Angeles 48, Calif.

WESTON HOLT BLAKE, Architect, 903 Jefferson St., Wilmington, Dela.

IRVING DICKSTEIN, 307 Alma St., Palo Alto, Calif.

Exhibits

THE ART ALLIANCE, Philadelphia, Pa., announces two exhibits of interest to architects and designers: Paintings by Ozenfant, December 3 to December 31; and Exhibit of work of Wolfgang Roth, Broadway stage-set designer, January 28 to March 3, 1952.

H. C. Chambers, *Architect*

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out of school

By CARL FEISS

Christmas is around again and I'm faced with the problem of deciding on which of the innumerable, attractive, and highly breakable plastic toys I should buy for the kids. There is something particularly final about that sharp crack or crunch as they disintegrate—bright-colored Humpty-Dumpties whose demise is accompanied by perfectly justifiable tears and recriminations. There ought to be a law against the day after Christmas.

I'm going to pick up where I left off last month on planning education and the technical schools, but before I do that there is something to get off my chest. As you have probably gathered by this time, the old perfesser is highly peripatetic. In his weird and wayward wanderings he sees many things which create a miasmic dyspepsia. Perhaps the most galling is the constant reappearance of that vested interest in inertia that permits the wanton destruction of so much of our priceless and irreplaceable American architectural heritage. This heritage is yours and mine to enjoy, to protect, and to perpetuate.

Let me give you a good example to think about. In the small Kentucky city of Paducah, tucked behind its concrete rampart against the Ohio River, are a few remnants of a once fine valley architecture. The city has so few distinguished buildings and so little of its fine past shows up in the listless mediocrity of its structures that the visitor is hard put to find something worthwhile to look at. But on the same block as the Irving Cobb Hotel, in the center of town on Kentucky Avenue, are two wonderful old houses, about to be swallowed into the limitless future of oblivion—the fragile Colonel Hicks or Fowler House and the dignified bulk of the General Lloyd Tilghman House. They were both built around 1848 and are notable for their architectural quality and historical association. Both are in the final stages of disrepair. Even as I write, they could disappear to be replaced by parking lots or even less utilitarian and attractive land uses. Across the street from the Hicks House is a beautiful small Greek Revival building in yellow-painted brick, with a well proportioned Corinthian porch. It stands a fair chance of quasi-survival, as it is now occupied by a business college.

I don't care how contemporary-minded you think you may be, you have a responsibility as architect, planner, engineer, teacher, or just plain citizen, to see that the American heritage remains real and a visible part of our community of interests. No archeological reconstruction, no simulacrum of the past, ever provides the emotional verity so important to a full understanding of ourselves, where we came from and why we are where we are at this point in history. Don't drop a tear for Paducah. Drop one for yourselves! Paducah's loss is your loss.

●

Referring to the November issue, I was talking about the relationship of design

(Continued on page 136)

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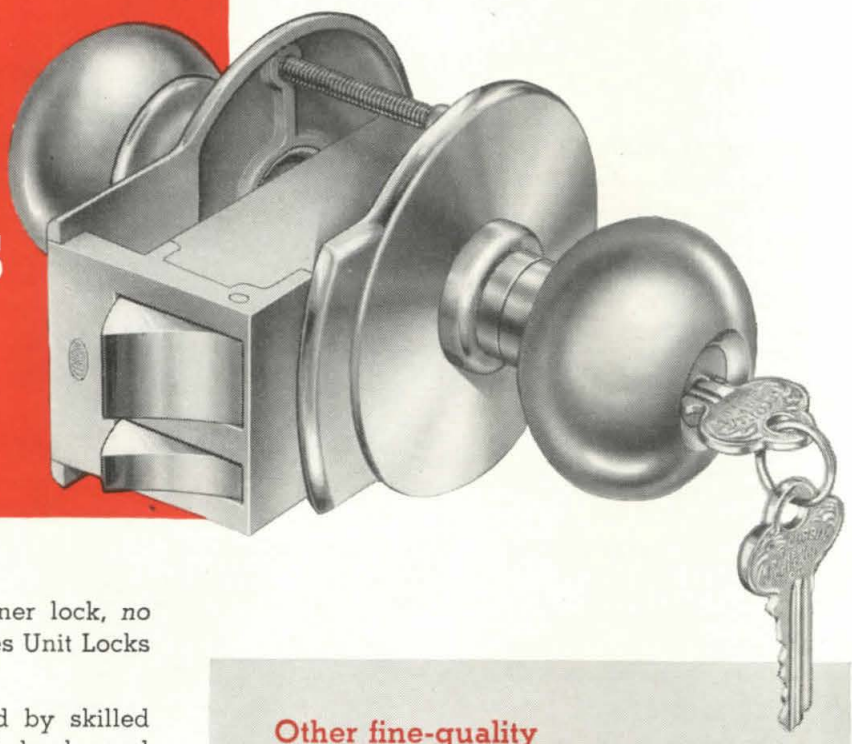

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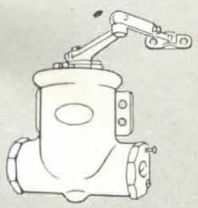
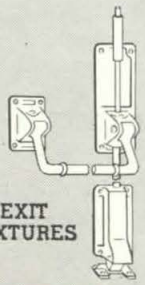
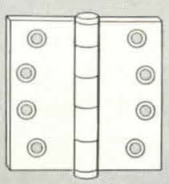


DOOR CLOSERS



EXIT FIXTURES



CAST IRON BUTTS

FLUSH BOLTS

out of school

(Continued from page 134)

to planning training, using as a base the *Report of the Committee on Qualifications of Planners* prepared for the Ministry of Town and Country Planning, in the Department of Health for Scotland in 1950. This report is better known as the Schuster Committee Report, after its Chairman. I won't hark back to what I said, as this article will be a direct continuation of the previous one. May I suggest a review?

Some American planners feel that, being an architect by training, I am overly prejudiced in my emphasis on the design disciplines as part of planning education. May I make this point clear? I do not believe that a planner has to be a graduate of an architectural school. However, if he *is* a graduate of the right kind of architectural school, such a training as he should have received will prove most beneficial to his future work. For it is clear by this time that a well designed and comprehensive architectural training, including those social sciences so necessary to an understanding of contemporary problems, provides much of the experience in synthesis so heavily emphasized in the Schuster Report.

The ideal training program for a planner, as I have previously indicated, is still to be found. It may well be that it will *not* be found in the architectural schools. Perhaps it will crop up in some centralized, campuswide focal point still to be determined. At the graduate level we are beginning to see indications in this direction. There are several universities where a graduate degree in planning already results from the agreements reached between deans and department heads, to break down the cell walls which traditionally imprison so much of education. In time, this may provide the freedom of search and of finding so vitally needed in the training of modern man. And there are the freedoms so hard to achieve within those feudal baronies which shackle the prisoner-student in the chains of a fixed curriculum, with the dry bread of tradition in education for sustenance and the dean as jailer. There is perhaps a need to return to the days of Abelard and the wandering scholar, when education was not weighed on the balance of credits—and the diploma was evidence of knowledge and not an imitation sheepskin. But the climate in which we live is not yet favorable to such freedoms. For in our desire to become "professionals" in fields of our major interests, we tighten the prerequisites to our future and restrict the boundaries of our learning. The dilemma, then, in which both inquisitive student and liberal teacher find themselves is going to be difficult to surmount. However, it can be done.

(Continued on page 138)

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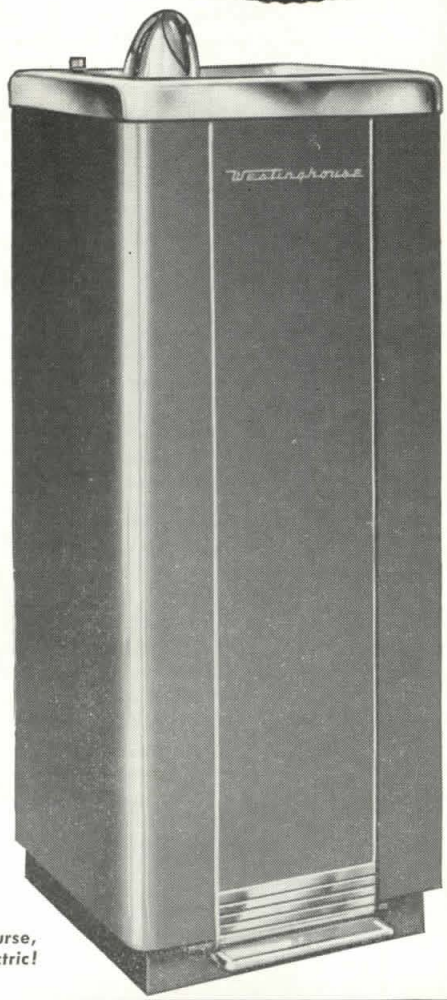

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YOU CAN BE SURE . . IF IT'S
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out of school

(Continued from page 136)

The field of planning is hard to limit. It is as broad as the horizon and as narrow as a city lot. Physical planning, which here must be our center of interest, encompasses the nation, the region, the state, the region within a state, metropolitan areas, cities, neighborhoods, blocks, lots within blocks, and buildings on the lots. That's a lot of territory. And there are many people and large sums of money and trying political situations involved in the problems to be solved within this territory. And there is the law of the land which is not to be broken, but which must be kept flexible to assist whatever solutions to the many needs of people and of place are found in the physical plan.

It is this vast complex of learning that has prevented early decisions on training for planning. This is also one of the reasons why attempts to solidify training programs at this time would jeopardize necessary future flexibility of inquiry and method. The present situation is hopeful and healthy and will be as long as the student guinea pig enters into the experiments now being undertaken on him, with a full knowledge of and interest in the experiments. That is up to the professors and, to a degree, up to the student.

To return to an earlier premise in this thesis: somewhere in the planning process the physical plan requires a physical design. The gigantic Grand Coulee area project has a social and economic objective spelled out in terms of physical design involving land-use patterns and structures developed on a series of specific and carefully designed maps, which diagram in detail the planned relationships between man's objectives and the creations of nature. A plan for the State of Iowa encompasses land use, communication, conservation, and development programs. The scale is great but the objectives may be no different than those which your own local planning commission may have in exerting design control over a subdivision development at the edge of town.

What is demanded of the planner is not talk, but a plan. What is demanded of the plan is a physical come-uppance—a solution in specific physical terms which is sufficiently realistic to be subject to ultimate accomplishment within economic, physical, administrative, and legal means—and which will accomplish a social objective. There is a certain type of maturity coupled with imagination prerequisite to success in this field. It is not solely a drafting-board job. Ability to meet with people—political ease, if you want to call it that—is essential. The selection of students and their training, in or out of the architectural environment, and in or out of undergraduate or graduate curricula,

(Continued on page 140)

Architect saves time and money in new hospital construction with

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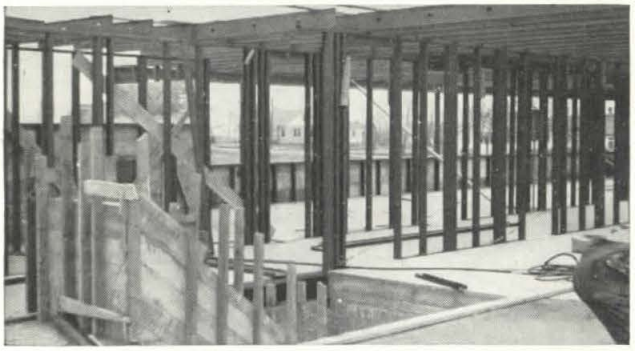
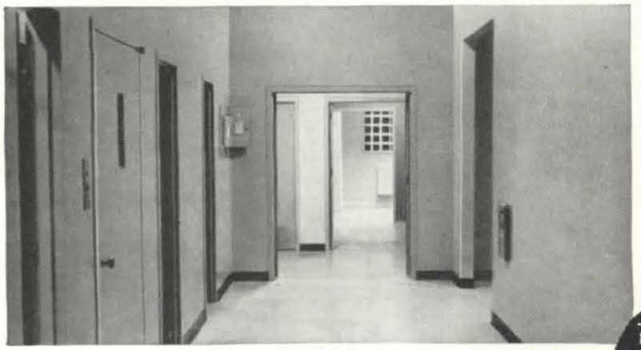


Interior view of Redfield (S.D.) hospital under construction. Stran-Steel framing comes pre-cut, pre-punched, treated with rust-inhibiting paint.

Exterior view of construction. Electrical wiring is installed through factory-punched holes in framing members.



Spick-and-span interior of the hospital shows how flush finishing of walls and doors lends convenience, promotes sanitation.

Architects are quick to recognize the many advantages of Stran-Steel *nailable* framing in commercial and industrial construction. Read what Mr. A. McWayne, of Perkins and McWayne, architects and engineers, Sioux Falls, S.D., says:

> "We are well pleased with the Stran-Steel construction as incorporated in the hospital at Redfield, South Dakota . . . Stran-Steel offers many possible savings in time and cost of construction."

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out of school

(Continued from page 138)

requires an intelligent appraisal of not only aptitudes and judgment, but whether or not the applicant for planning training is a fit candidate for public life. The planner differs from the average architect in this salient respect. He is a public figure whose every action is in the public service and subject to the public eye. An introspective or shy individual may make a competent architect, but he is a flop as a city planner.

●

The Schuster Report mentions that at Durham University in 1945 and at Manchester University in 1949, five-year undergraduate courses of planning have been inaugurated. However, the report does not mention affiliation with schools or colleges and at the time of writing there had only been one graduate from Durham, so all that can be said is that we await with interest . . . There are, to the best of my knowledge, only six undergraduate planning *degrees given* in the United States, all connected with technical collegiate schools. The trend, both here and abroad, seems to be toward graduate rather than undergraduate degrees. What appears to be happening is that at the undergraduate level in the architectural schools the first two or three years are devoted to the basics in design, construction, and the humanities; and in the last three or two years the student is permitted a "planning option" depending on his aptitudes, interests, and competency. Few undergraduate planning degrees are given, as I have said, but credit is received in some instances for a planning major (or minor, if the architectural curriculum is a major), or in a few cases a degree is given with the planning major attached. However it is done, such undergraduate work remains in the minds of the faculty as preliminary to one or two years of graduate work with the professional designation in the degree.

We could go on at great length here detailing the planning curricula at Rutgers (in the College of Engineering and under Ed Wilkens) or at Michigan State College (in the Department of Landscape Architecture and Urban Planning under Harold Lautner). Or we could distinguish between the planning training in the Department of Architecture at Illinois Institute of Technology and that of the Graduate Program in City Planning in the Department of Architecture at Yale (in the School of Fine Arts), the planning curricula of each under L. Hilberseimer and Christopher Tunnard respectively.* The permutations and combinations of types of parental authority are many and the variables infinite. We had better await the evaluation of these present planning curricula until the findings are available which Fred Adams will make in his planning education survey mentioned in the previous article. We can easily get lost in the catalogs.

The direction planning training is taking at the graduate level is towards a further broadening of the scope of undergraduate work. In several instances metropolitan and regional planning wait for the sixth and seventh years. While courses in government and economics may appear in the early years, heavy emphasis is placed on these in the graduate program. The tendency is always towards a freer range of study, more electives, and more actual work experience. Perhaps the finest specialized development in graduate planning training is the expansion of the "project method" into the field of the community at large. Nearly all graduate schools of planning, in and out of the architectural atmosphere, depend on

*For other course references see November 1951 "Out of School".

(Continued on page 142)

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out of school

(Continued from page 140)

experience in the field as a major part of the training. Co-operative or assistance programs with local planning commissions or citizens' groups are common enterprises. Student teams are formed and joint projects undertaken, joint studies made, and joint plans prepared and presented for review. This system seems to work well everywhere, although there are cases where a school's welcome has become somewhat outworn because of too much emphasis in one or more particular problem area. The team or task-force system is particularly valuable in teaching the average highly snooty architectural student the fine art of team play and human relationships, neither of which germinate too luxuriously on the drafting board.

Perhaps one of the most interesting results of the contact of the planning teams with the community is the new respect being gained in many localities for the services a university may render. The real life experiences which the students obtain at the same time make them more readily useful upon graduation. The trick is to combine in proper percentages the right amount of theory and the right amount of practice.

●

I hope I have made clear that there is as yet no fixed pattern of curricula, teaching method, or location of planning education. While I am certain that the present experiments and flexibilities are healthy and are essential to the explorations mandatory in a rapidly changing scene both inside and out of school, I deplore again the lack of intercommunication between schools. Both the A.I.A. and the American Institute of Planners have failed the professions at the student and professorial levels in providing the necessary vehicles for correspondence, contact, and dissemination of information. Once a year, at conventions, a few of the school men and a few of the students get together and warily compare notes and deliver their *bei unses* in a speech or two. But no one today is in a position to assess the changes now taking place, and there is no sounding-board for experience and ideas. As I read the letters to this column, many of which cannot be published because of space considerations, this need for a central intercommunication system becomes more and more apparent.

The Schuster Report lays great stress on the development of a central planning institute. It feels that for Great Britain the existing Town Planning Institute provides an obvious foundation on which to build in order that the following three main purposes might be achieved:

"(1) as to education, the encouragement of further experiments and the critical observation of those made,

(Continued on page 147)

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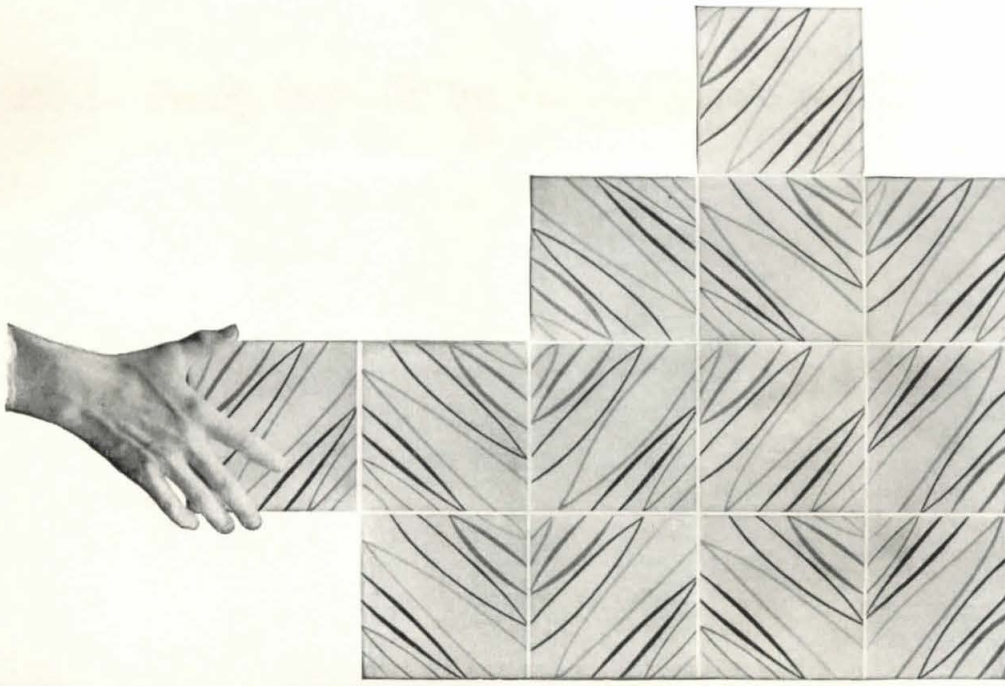

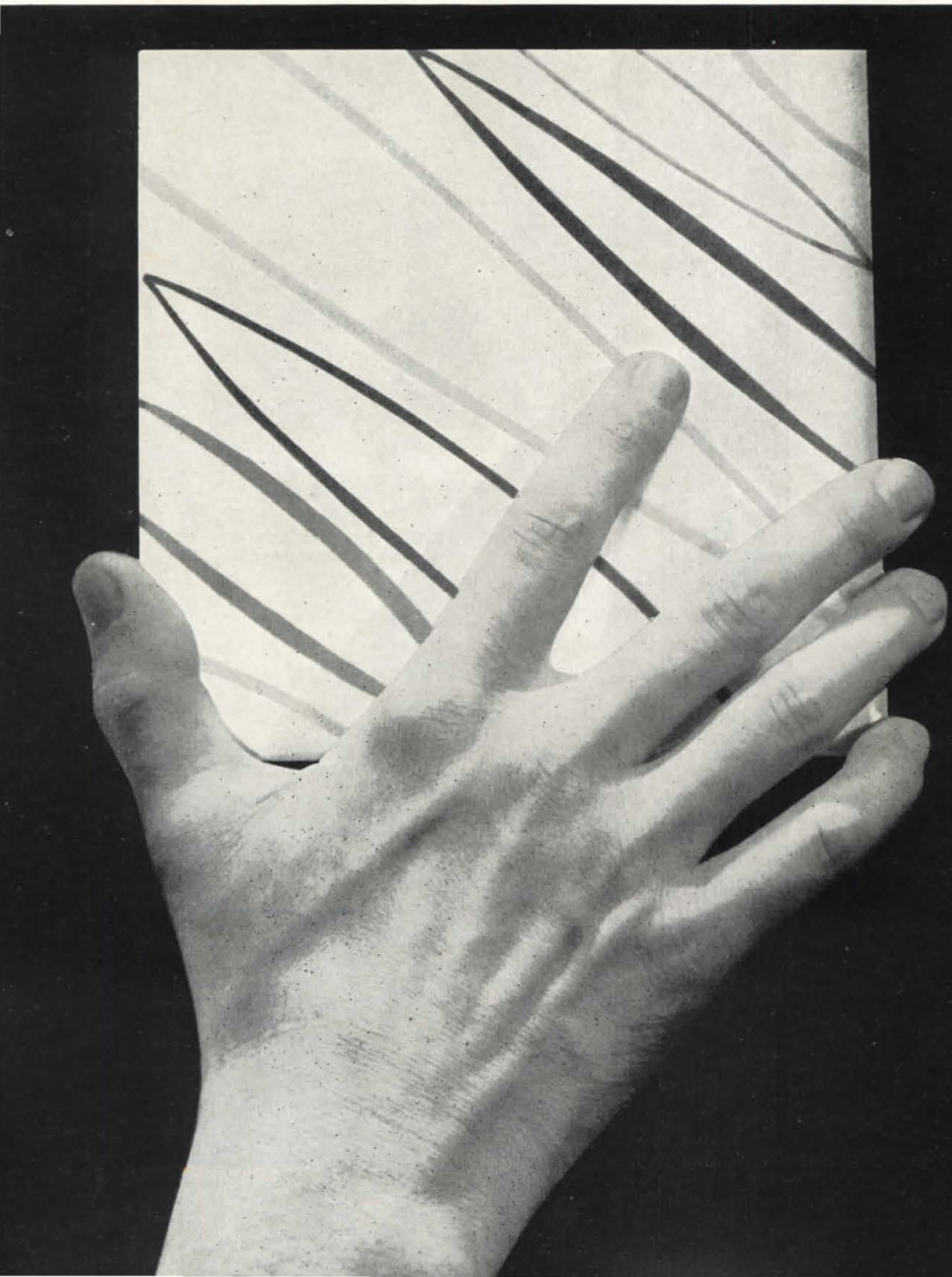

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illustration of new Mosaic Formfree Decorated Tile at work. This ely floor-to-ceiling fireplace is a striking feature of HOUSE BEAU-UL's 1951 Pacesetter House, Dobbs Ferry, N. Y. The floor is finished time- and grime-defying Granitex® Mosaic pattern No. 1779-A3.

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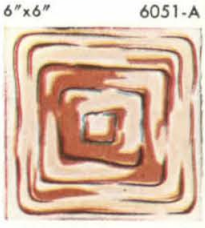
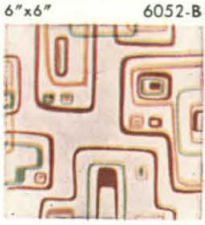


6"x6" 6052-B



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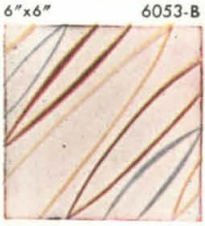

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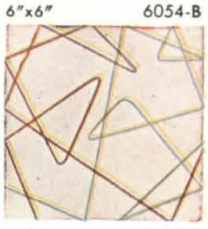

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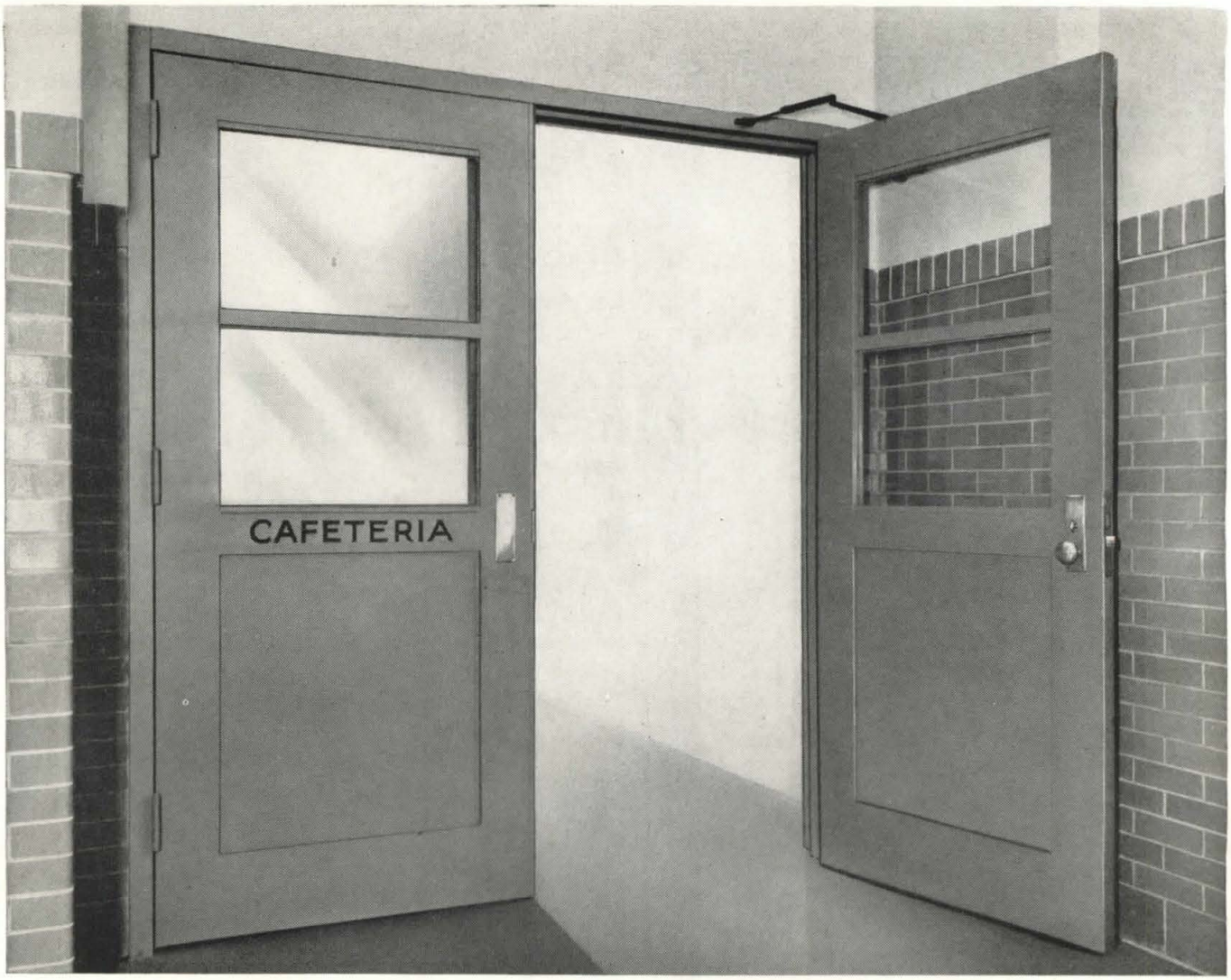

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(Continued from page 142)

"(2) as to the advancement of thought and knowledge, to act as a clearing house for progams of study, to indicate which investigations are most needed, and to undertake or sponsor some studies on its own initiative,

"(3) as to the marks of professional qualification, to evolve an effective system for granting recognition to persons qualified in the sense of these conclusions."

It may well be that in a small country with strong, centralized planning powers authorized by the central government, such reliance is safe. Here in the United States, before we accept these recommendations as a continuing responsibility to be assigned to the American Institute of Planners we must recognize our vast regional character, our multitudinous education institutions, and above all, our different patterns of planning and development practice under a very different government and a different social structure. That the A.I.P. and A.I.A. both should be continually concerned with such problems goes without saying.

This brings me to a final point for this article, though not by any means the last on the subject of planning education. At the present time there is a serious shortage of well-trained and well-qualified city planners in the United States. Each month the *News Letter* of the American Society of Planning Officials lists in its "Help Wanted" columns the positions available throughout the country. This is only a partial listing at that, but it is an impressive one. Salaries are still too low in many areas to offer inducements to many. However, wonderful opportunities are now available to ambitious young men to rise rapidly in a field that is definitely understaffed and in which inventive genius, political sagacity, and plenty of common sense are at a premium. While it is the kind of market which swells many a young man's head, it is also one which forces him to produce or get out. There is now a sufficient number of important local, state, and national planning programs aimed at solving problems on housing, defense, slum clearance, urban redevelopment, general planning, zoning, subdivision control, traffic, suburban expansion, to absorb every graduate of every planning training program now in the cloisters, for some years to come. The main difficulty, it seems to me, is the gearing of the educational institutions to training this kind of technician—the planning kind of technician—to the public service.

The public service in a democracy is a curious and puzzling phenomenon. A man to survive in it must plan on twenty years of stomach ulcers and calluses on his hide from being rubbed too much the wrong way too many times. He must endure all the sorrows of young Werther (without the love interest), and expect for his pains someone else to get the credit. Above all, he must expect no thanks for his years of public service and an obituary no longer than that of any ordinary mortal. But in his soul, and public servants have souls, if he has done a good job, he will know that a monument has been built. That can be a consolation.

(Continued on page 148)

out of school

(Continued from page 147)

But don't ask me why men go into the public service today to face the thankless and often vilifying climate of public opinion. For whatever reason, thank God, there are real men and women who are eager to enter the Service and who perform with distinction. The practicing architect may look down on city hall politics, but he should always remember that city hall controls much of his livelihood, the character of his building, his construction methods, and the materials he uses. On an even larger scale, the controls and direction of city building, the planning and zoning, the codes and ordinances, the activities of the many city departments concerned with city development and maintenance are all dependent on trained technicians—or something very much worse.

Perhaps the serious shortage in trained city planners is an encouraging phenomenon in itself. Perhaps it indicates the fact that our people are awakening to the real problems of civic chaos. After all, not long ago there was no such shortage of planners. But then our eyes had not been opened to the chaos either.

Happy New Year!

●

letters to the schoolmaster

Dear Sir: In connection with your recent discussion of student magazines in OUT OF SCHOOL, a P/A feature to which I always look forward with pleasure and interest, I thought that you might like to know what we are doing in this line at the Panama University.

Our magazine started informally some three years ago, as a voluntary effort of a group of students, all working on it without any pay in their free time. By now we have conquered for our magazine a definite place in the university, though we are still wrestling with many problems, some of them inherent in the fact that our university is still very young (founded only 16 years ago, first graduation in Architecture in 1950!). As you may see from the enclosed last three issues, our editorial policy includes publication of student's designs, articles relating to architecture and architectural education, and the discussion of educational problems in the school, as these arise. Just now we are in the middle of a campaign for a revision of our program, which we consider could be improved in some of its aspects. The first of the three issues which I enclose contains our present program, while the third contains the program proposed by

(Continued on page 150)

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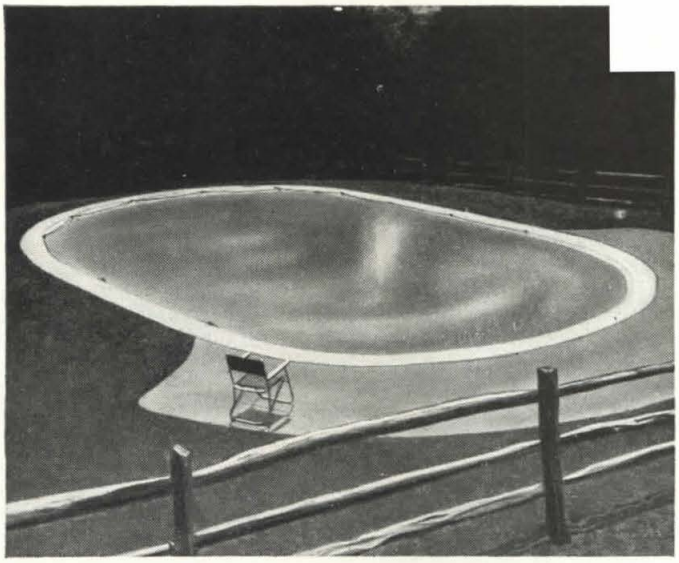

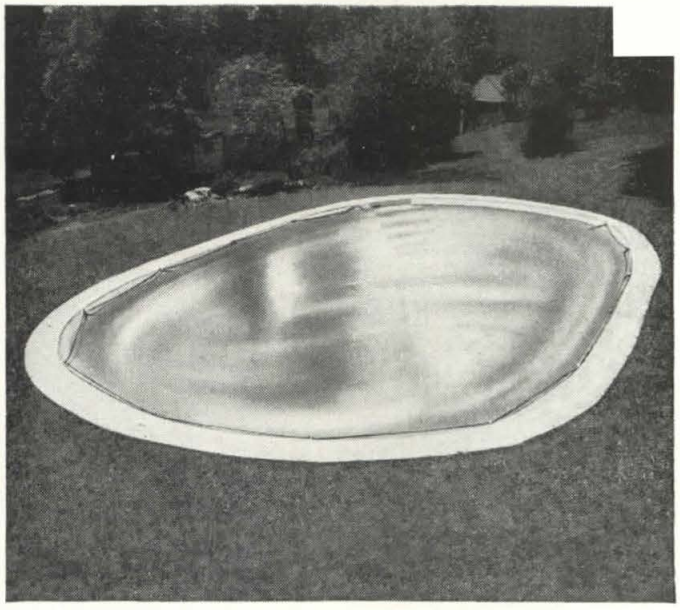

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out of school

(Continued from page 148)

us, which has already been approved in principle during informal discussions with professors and students. During these discussions your column frequently has helped us to reinforce our arguments.

The magazine, which appears about every three to four months, is financed entirely by advertising and subscriptions, the latter both in Panama and in other countries throughout the free world. The question of continuity, which you raised in your last column is here also a difficult problem, so much so that though I myself graduated already last year, I am still in charge and will be until after the publication of the next issue, due in October, after which the new editor will take over. We are trying to assure the subsistence of the magazine by taking in as helpers students of fourth, fifth, and sixth year, so that there will always be available a sixth year student to fill the post of editor, the preceding editor remaining on the staff in an advisory position.

RICHARD HOLZER, Editor
Modulo
Republic of Panama

Dear Mr. Holzer: *I was very happy to receive your letter of September 27, with your interesting comments on how you conduct a student publication in Panama. I am sorry that I am not able to produce for the readers of my column copies of the three interesting issues of* Modulo *which you sent on to me. Since writing my article on student publications, I have received copies of other student publications including the very interesting first two issues produced in North Carolina State College by the students in the school of architecture there.*

The main problem that we face in this huge country is the production of a national magazine for the interchange of ideas of our many educational institutions and possibly in such interchange the reprinting of articles and photographic material produced in the publications of the individual schools.

Congratulations on a fine publication and I do hope that I will have an opportunity of seeing succeeding issues of Modulo. CARL FEISS

NOTICES

New Addresses

MAX M. SANDFIELD, Architect, 4013 Cedar Springs, Dallas, Tex.

L. G. SHERBURNE ASSOCIATES, Designers, 108 E. 37 St., New York 16, N. Y.

WALKER & POOR, Architects, 787 Fifth Ave., New York 22, N. Y.

MICHAEL M. KANE, Architect, 12381 Cedar Rd., Cleveland Heights 18, Ohio.

Appointment

The School of Design of North Carolina State College announces the appointment of HUGO LEIPZIGER-PEARCE as Professor of Architecture; EDUARDO F. CATALANO, Associate Professor of Architecture; ROY GUSSOW, Assistant Professor of Design; LESLIE J. LASKEY and LOUIS TAVELLI, Instructors in Design; and KENNETH MCCOY SCOTT, Instructor in Architecture.

LEWIS MUMFORD, Visiting Professor for the past three years, returns to the School for a fourth year.

Visiting lecturers during 1951-52 will be: ALDEN B. DOW, R. BUCKMINSTER FULLER, LUDWIG MIES VAN DE ROHE, PIETRO BELLUSCHI, and NAUM GABO.

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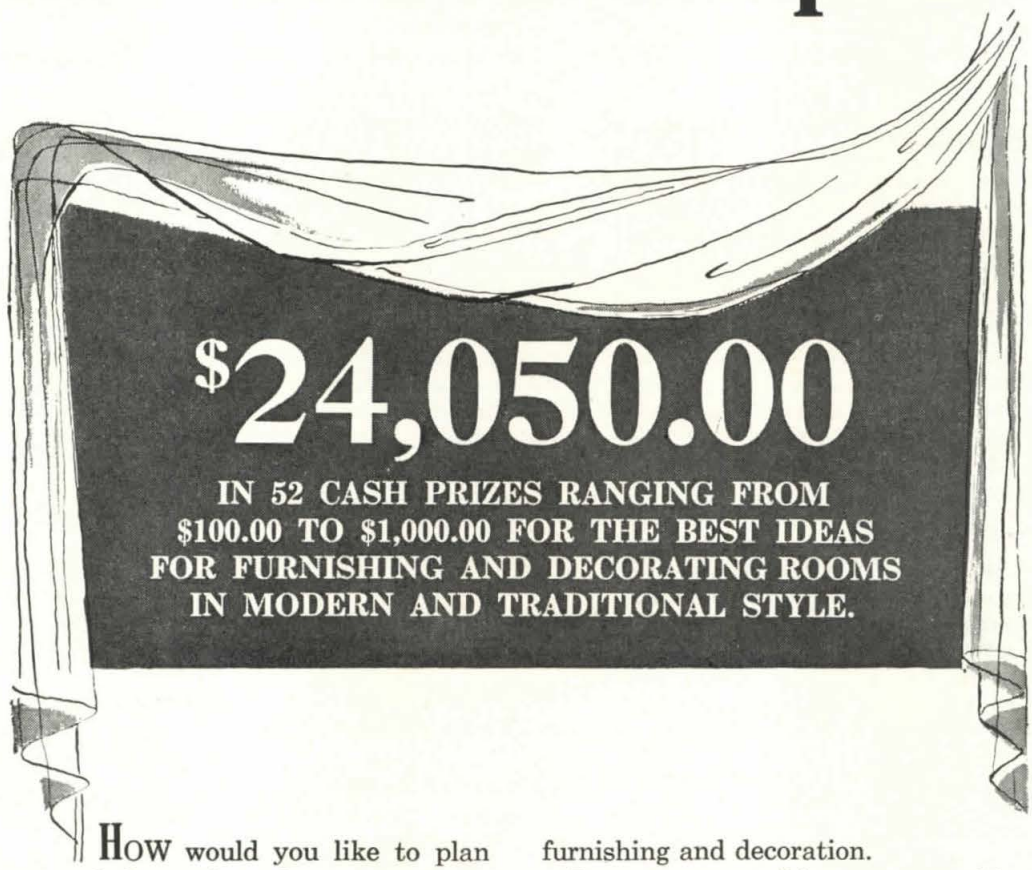

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In addition, the Tribune, just as it has in previous years, plans to reproduce the winning designs, or adaptations of them, in full color in the Chicago Sunday Tribune with its circulation of more than 1,500,000 copies.

Everyone is eligible to compete, except employes of the Chicago Tribune and its subsidiaries, members of their families, and of the Jury of Awards, which, as in the past, will be composed of authorities of recognized high standing in the field of home furnishing and decoration.

It costs you nothing to enter this competition. For complete information to help you prepare your entry, send today for your free copy of the rules which will be sent to you postpaid. Don't delay. Fill in the coupon, paste it on a postcard, and mail it today.

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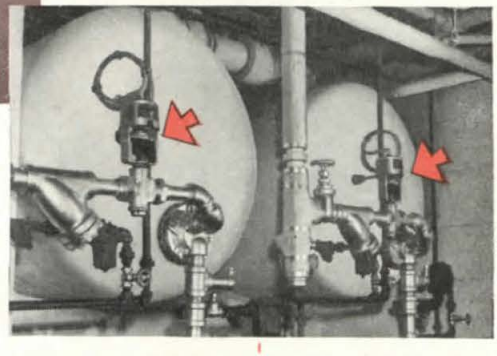

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(a67)

it's the law

By BERNARD TOMSON

IT'S THE LAW in December 1949 P/A discussed the licensing statutes of Kentucky and Ohio. It was pointed out, at that time, that the exceptions to statutes licensing architects could so emasculate the intended benefits and purposes of the legislation, that in reality, the practice of architecture by incompetents was authorized.

The article concluded by stating:

"The significance of the existence of statutes such as those discussed cannot be overlooked. It permits incompetent persons to practice architecture and thus to jeopardize 'life,' 'health,' 'property,' and 'public welfare.' In those states where this situation exists, the local architectural organizations must be militant to bring home to the public and to the legislators the danger inherent in such statutes on the books. In other states, such as New York, where the practice of architecture is generally prohibited to those *not qualified*, it is equally important for the local organizations to see to it that the letter and spirit of the statutes are scrupulously obeyed. The practice of architecture by incompetents bilks the public and cuts into the livelihood of the architect, who has spent many years preparing to practice. Such a situation should not be tolerated by architects and, if properly brought home to the public, will not long be permitted to exist."

●

The practice of such emasculation is more widespread than is generally recognized and the process is apt to be regressive as well as progressive. A good example is Oklahoma's licensing statute which was seriously weakened by amendments in 1949, providing that the statute making it mandatory for architects to be licensed was inapplicable to:

". . . any building, or to the repairing or remodeling of any building, to be used for one family residential purposes, duplexes, or apartment houses not exceeding two (2) stories in height, Hotel, Lodge, or Fraternal or Institutional building not exceeding two (2) stories in height, nor to any schoolhouses where the reasonably estimated total cost of such building, remodeling or repairing does not exceed the sum of Ten Thousand Dollars ($10,000), . . ."

The practice statute of Nebraska exempts from the requirement of obtaining architectural license:

". . . persons, mechanics or builders from making plans, specifications for or supervising the erection, enlargement, or alteration of buildings, or any part thereof, to be constructed by themselves or their own employees for their own use."

The practice statutes of Missouri and Kansas are similar to the above quoted section.

The State of Iowa has in effect what is generally referred to as a title statute:

"Nothing contained in this chapter shall prevent any person from making plans and specifications or supervising the construction of any building or part thereof, for himself or others, *provided he does not use any form of the word or title 'Architect.'*

The licensing statute of Iowa further provides, however, for a "certificate" and for its revocation for:

1. Fraud.
2. Gross incompetency or negligence in the planning or construction of buildings.

(Continued on page 154)

Andersen Casements, St. Paul, Minn., home, Norman Johnson, architect

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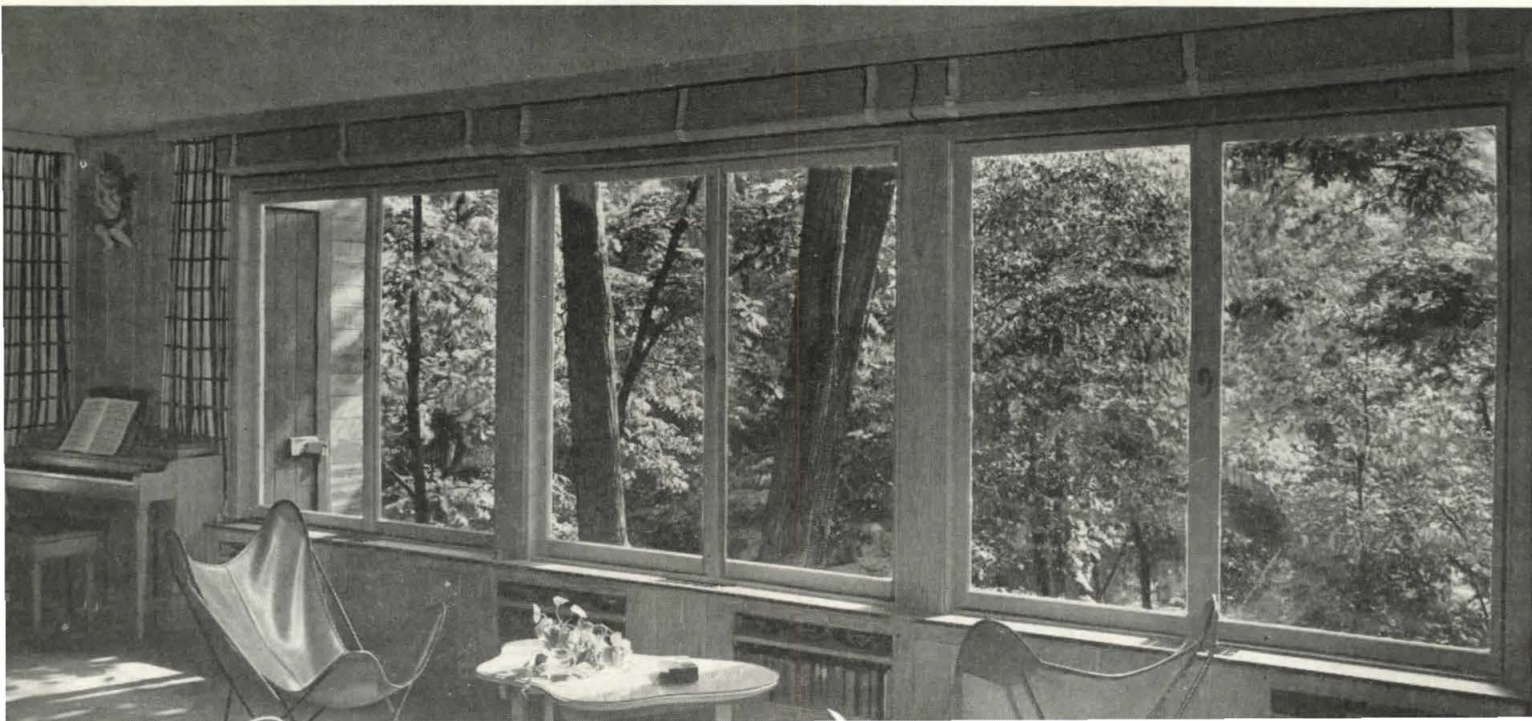

it's the law

(Continued from page 152)

3. Habitual drunkenness or drug addiction.

It should be noted that there is no provision in this statute preventing an unlicensed, unethical, incompetent, negligent, and habitually drunken fraud from designing and supervising the construction of buildings. The architect, whose certificate has been revoked for any of the aforementioned reasons, is still permitted to practice the profession of architecture provided only he does not use the title "architect."

The emasculated statute of Iowa quoted above is in direct contrast to the engineers' and land surveyors' statute of the same state which has no important exceptions:

"No person shall practice professional engineering or land surveying in the state unless he be a registered professional engineer or land surveyor as provided in this chapter . . ."

The chapter further provides that the requirements for the engineering license are:

1. A four-year college engineering course and two years practical experience.
2. A written examination.

This is a good engineers' statute. Its administration is, of course, not here considered.

●

Architects throughout the United States should be aggressive in dealing with the problem of weak licensing statutes which permit incompetent designers to prey upon the public. Unfortunately there is some muddled thinking even within the profession on this problem. It is sometimes stated that such a statute "protects" the architects and creates a "favored" class. Such an illogical argument would be applicable to the practice of medicine, pharmacy, law, or any other profession where licensing is necessary "for the public health, safety, and welfare." This is the test and not whether architects are benefited. When the question is squarely put—"Is it necessary for the 'public health, safety and welfare' for architects to be licensed?", the answer is not only plain, but has already been answered in the affirmative in almost every state in the union. The recognition of this as a fact should permit no exceptions which endanger life, health, safety, and welfare.

CONSTRUCTION (see page 76)

Foundation: reinforced concrete. **Frame:** structural steel—Junior Steel Company. **Floors:** steel decking—Truscon Steel Company. **Roof:** lightweight steel decking—Truscon Steel Company. **Waterproofing:** admixture in concrete, masonry mortar, and Portland cement plaster—Super Concrete Emulsions.

(Continued on page 156)

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(Continued from page 154)

Limited. **Insulation:** acoustical: multi-layer, asphalt-treated, cellulose fiber material—Kimberly-Clark Corporation. **Floor surfacing:** asphalt tile—Mastic Tile Corporation of America; rubber tile—Kleistone Rubber Company, Incorporated. **Ceiling surfacing:** vermiculite plaster—Zonolite Company. **Wall surfacing:** precast concrete panels—C. D. Wailes Corporation. **Roof surfacing:** built-up—Flintkote Company, Pioneer Division. **Roof drainage:** roof and deck drains—J. A. Zurn Manufacturing Company. **Partitions:** interior: steel studs—Inland Steel Products Company; gypsum block—Builders Gypsum Corporation; metal toilet partitions—Henry Weis Manufacturing Company. **Windows:** steel sash—Detroit Steel Products Company. **Doors:** hollow-core, flush doors—Roddis Plywood Corporation; wood-veneered, calcium-silicate fire doors—United States Plywood Corporation; rolling, steel fire door—Kinnear Manufacturing Company. **Hardware:** locksets, door closers—Lockwood Hardware Manufacturing Company; panic exit—Vonnegut Hardware Company. **Paint:** for exterior masonry—Wesco Waterpaints, Incorporated; corridors—Paramount Paint & Lacquer Company; other interiors—W. P. Fuller & Company.

EQUIPMENT

Elevators: Otis Elevator Company. **Lighting:** office area: surface mounted fixtures—Century Lighting, Incorporated. **Plumbing and sanitation:** water closets—American Radiator & Standard Sanitary Corporation; water heater—A. D. Smith Corporation; flush valves—Sloan Valve Company; fire sprinkler system—Grinnell Company, Incorporated. **Heating:** hot water system; low pressure heating boiler—Bryan Steam Corporation; temperature controls—Powers Regulator Company. **Air conditioning:** complete, central ventilating system with heating and cooling coils; compressor—Worthington Pump & Machinery Corporation; grilles—Air Factors, Incorporated; ceiling diffusers—Air Devices, Incorporated; controls—Powers Regulator Company.

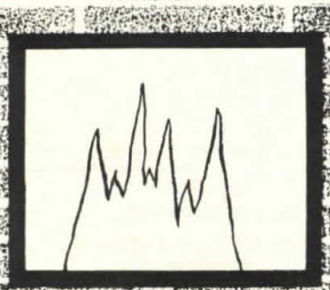
CONSTRUCTION

Foundation: reinforced concrete spread footings. **Frame:** steel columns and grillages—Bushnell Steel Products, Inc. **Walls:** precast panels—Maule Industries, Incorporated. **Floors:** reinforced concrete, flat slab—C. J. Bryson Steel Company. **Waterproofing:** calking of joints between precast slabs—Pecora Paint Company, Incorporated. **Insulation:** acoustical: ceiling tile—Armstrong Cork Company; thermal: roof insulation—Celotex Corporation. **Floor surfacing:** terrazzo—Venetian Art Marble & Terrazzo Company. **Wall surfacing:** exterior: quartz chips in white cement—Maule Industries, Incorporated; interior: architectural facing tile—National Fireproofing Corporation. **Roof surfacing:** 20-year bonded, built-up—Certain-teed Products Corporation. **Roof drainage:** drains inside building in wet columns—Josam Manufacturing Company. **Partitions:** interior gypsum block and plaster—National Gypsum Company, United States Gypsum Company. **Windows:** metal framed—Universal Corporation; store fronts—The Kawneer Company; skylights over stair towers—Giffen Industries, Inc. **Doors:** metal—Williamsburg Steel Products Company; wood—Atlas Plywood Corporation; metal elevator—Otis Elevator Company; aluminum and glass entrance—The Kawneer Company; louvers for metal doors—Air-O-Lite Company. **Hardware:** locksets—Schlage Lock Company; door closers—L. C. N. Closers, Incorporated; rolling door hardware—New Castle Products. **Paint:** interior walls—Pittsburgh Plate Glass Company.

EQUIPMENT

X-ray equipment: Kelley-Koett Manufacturing Company. **Elevators:** Otis Elevator Company; cabs—Southeastern Elevator Company. **Lighting:** office and lobby areas: recessed slimline troffers with louvers or glass—Pittsburgh Reflector Company. **Electrical distribution:** service entrance switch—I. T. E. Circuit Breaker Company; panelboards—Frank Adam Electric Company; wiring devices—General Electric Company. **Plumbing and sanitation:** water closets, lavatories—American Radiator & Standard Sanitary Corporation; toilet seats—C. F. Church Manufacturing Company; flush valves—Sloan Valve Company. **Heating:** oil-fired, hot water system; boiler—Ames Iron Works. **Air conditioning:** chilled water unit—Acme Industries, Incorporated; direct-driven compressor—Carrier Corporation; ceiling diffusers—Air Devices, Incorporated; blowers—American Air Filter Company, Incorporated; filters—Owens-Corning Fiberglas Corporation; controls—Barber Colman Company; cooling coils—Aerofin Corporation.

as fundamental as a chimney flue...



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Attractive, easy-to-clean facing is Enduro-Ashlar Architectural Terra Cotta in a mottled buff, with brown mottled trim, in units 24" x 24".

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HOUSTON, TEXAS
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The general color of the terra cotta is warm buff-grey, harmonizing with the brick field. The lattice grills are buff-grey with reveals of deep red. All trim, spandrels, belt courses, parapet and coping and lattice grills are of terra cotta.

Versatile all ways, available always — that's Enduro-Ashlar Architectural Terra Cotta. Possessing remarkable plasticity of form, color and texture, it can be custom-made in units large or small, for interiors or exteriors, plain surfaces or decorative sculpture, in an unlimited range of ceramic colors. The versatility of this time-proved building material gives you complete design freedom . . . and because terra cotta is not classified as critical, it is always available. Moreover, the original richness and beauty of its glazed finish can be retained indefinitely by simple soap-and-water washings. Whether you're designing housing or hospitals, industrial plants, schools or business buildings, Enduro-Ashlar Architectural Terra Cotta offers many outstanding advantages. *Construction detail, data, color samples, estimates, advice on preliminary sketches, will be furnished promptly without charge. Send your inquiry today.*

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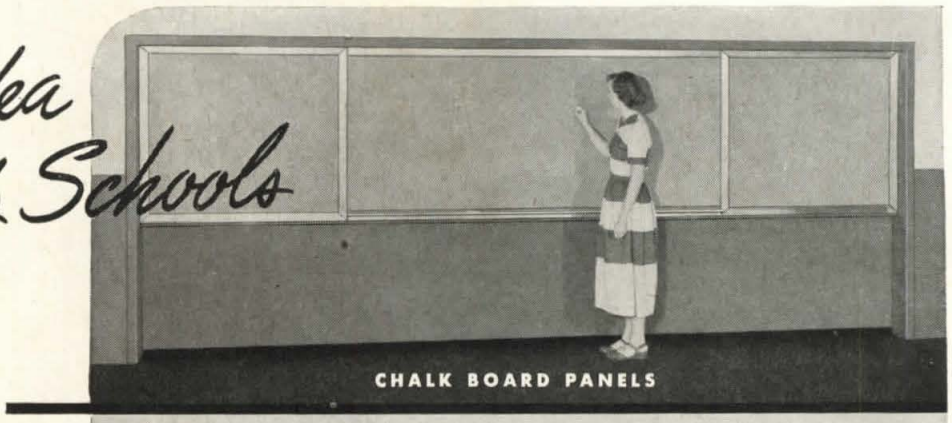

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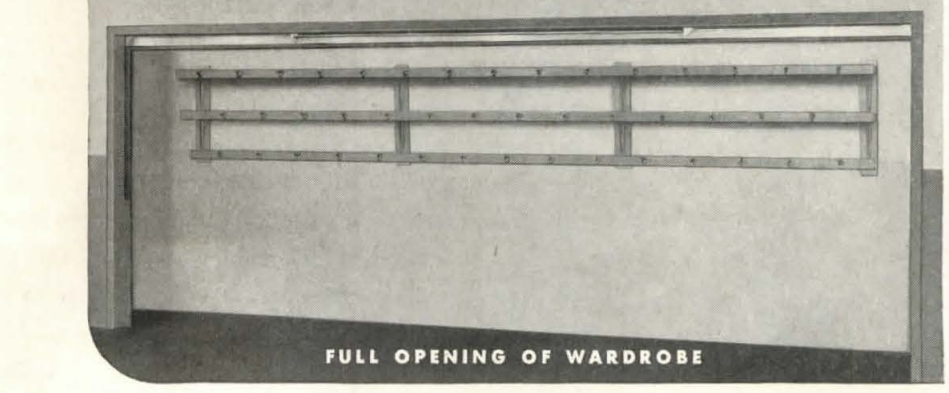
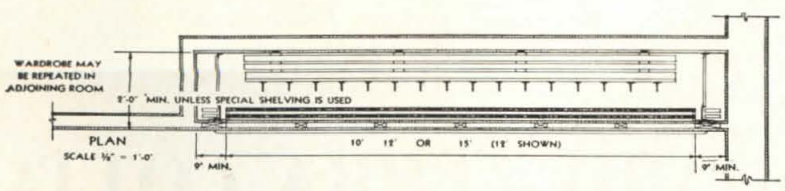


FULL OPENING OF WARDROBE



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This building is a true expression of its southern location and of this electrical age. The ledges are sunshades, not ornamentation; the floors are electrical working areas, not merely platforms. Even the method of construction is modern.

The steel subfloor—Q-Floor—can be used during construction to replace much material that is needed only temporarily in old-fashioned construction. The Q-Floor can be laid at the rate of 32 sq. ft. in 30 seconds, welded to the frame and goes up as fast as the frame. Therefore, it is used as a permanent working platform by all subcontractors. More men can be on the job at one time than with older methods of construction. Materials can be stored close to where they will be used, saving storage space and extra handlings.

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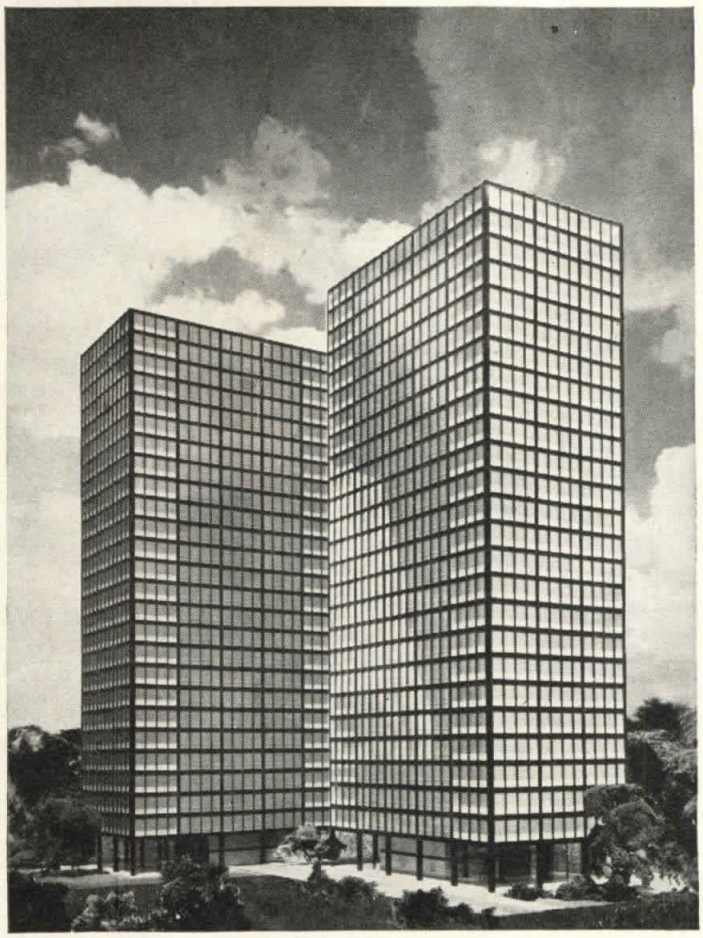

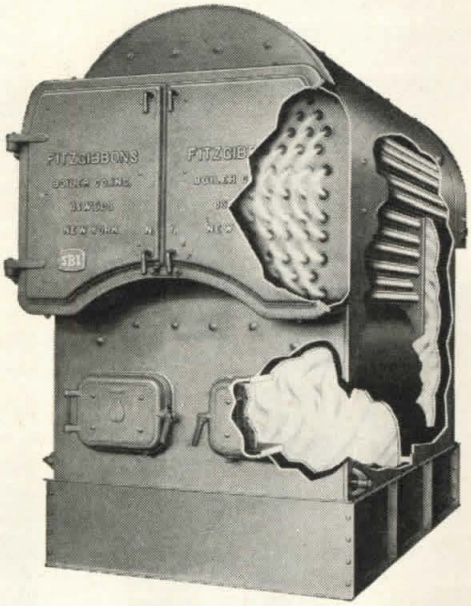

Three Fitzgibbons 24,290 sq. ft. "D" Type boilers, oil-fired, heat this unusual glass and steel Chicago apartment building. Architects, Pace & Associates. Associate architects, Holsman, Holsman, Klekamp & Taylor. Designer, Ludwig Mies van der Rohe. Heating contractor, William A. Pope Company, Chicago.

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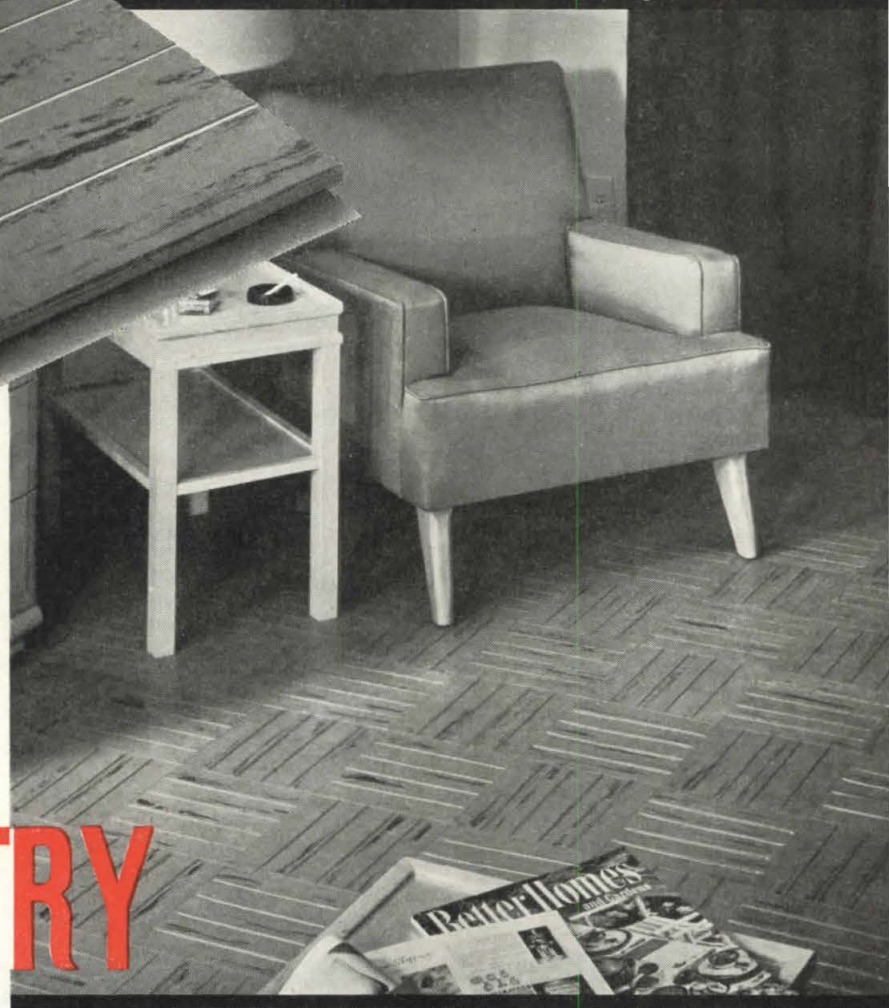

Model apartment in State House Apartments, Washington, D. C. • Builder: Jerry Maiatico • Flooring Contractor: Associated Flooring Co., Inc.

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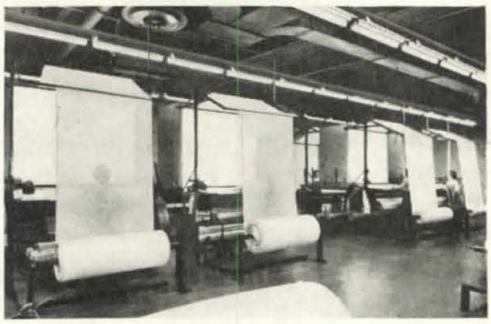

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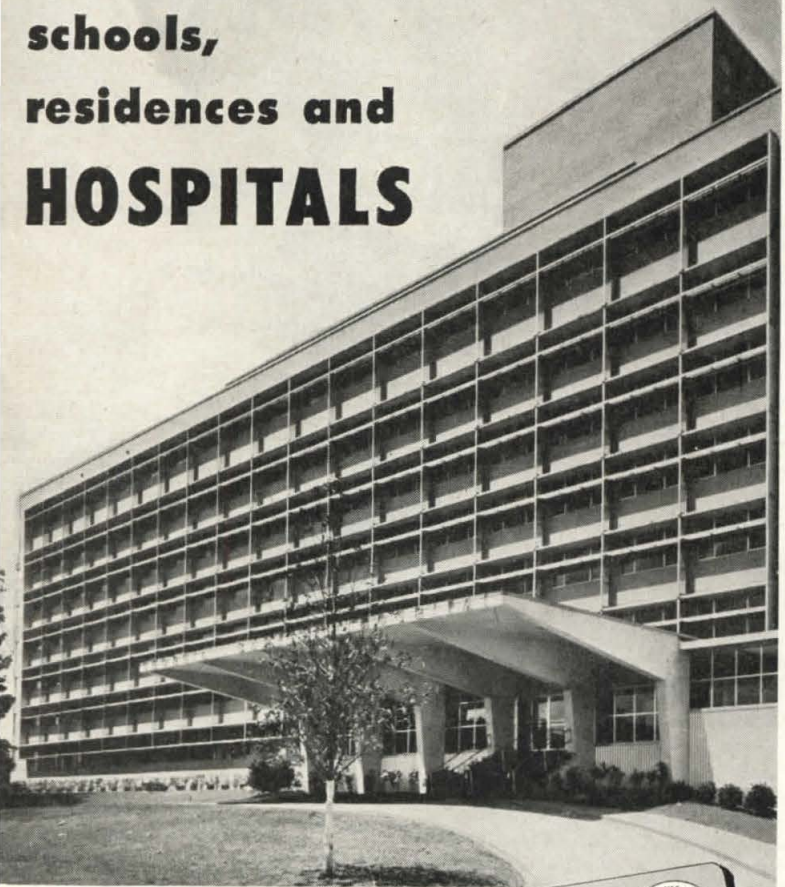

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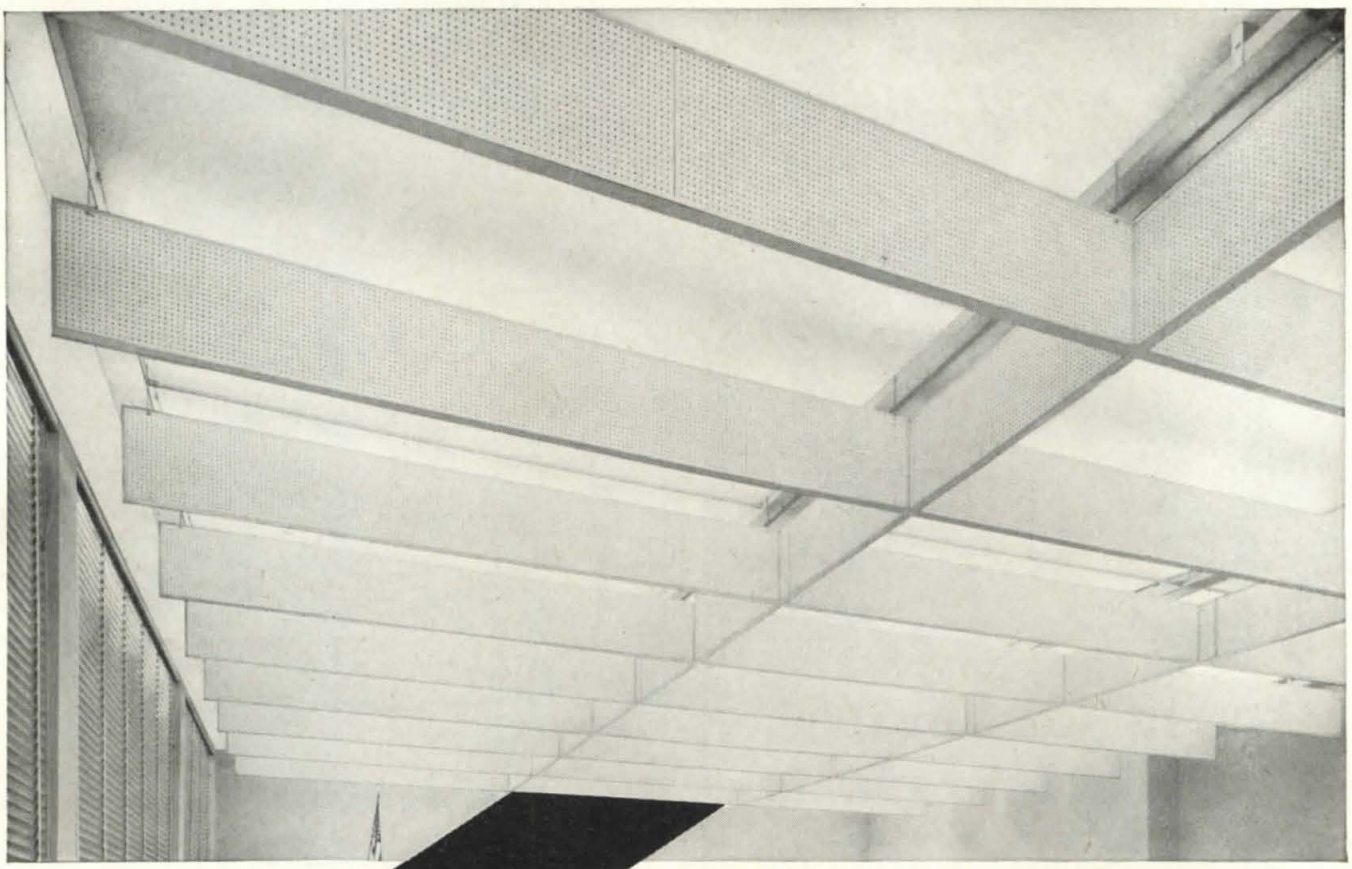

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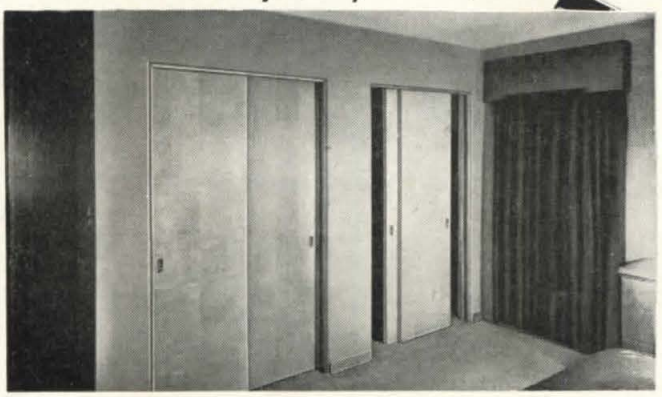

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"***It has been a selling feature*** throughout the many homes, large and small alike, which we've built in the Lincolnwood suburban area, and our customers are very pleased with its smooth, dependable performance."

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175°	82.0	8	85°	55.0	60
165°	83.0	23	75°	104	109
155°	83.5	38	65°	171	175
145°	82.0	52	55°	289	259
135°	74.5	58	45°	438	339
125°	66.0	59	35°	565	355
115°	60.5	60	25°	650	301
105°	53.5	57	15°	740	209
95°	44.8	49	5°	815	77
			0° ⎓	825	

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0°–40°	948	20.5	90°–180°	404	9.0
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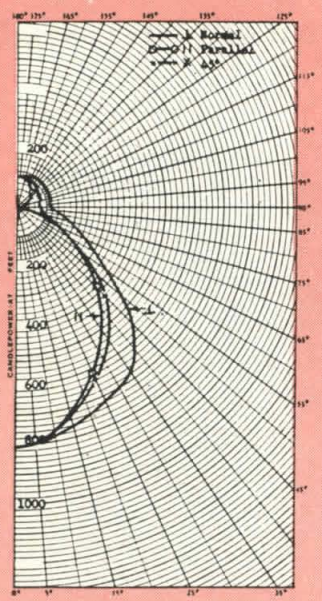

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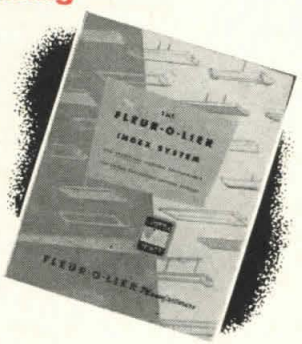

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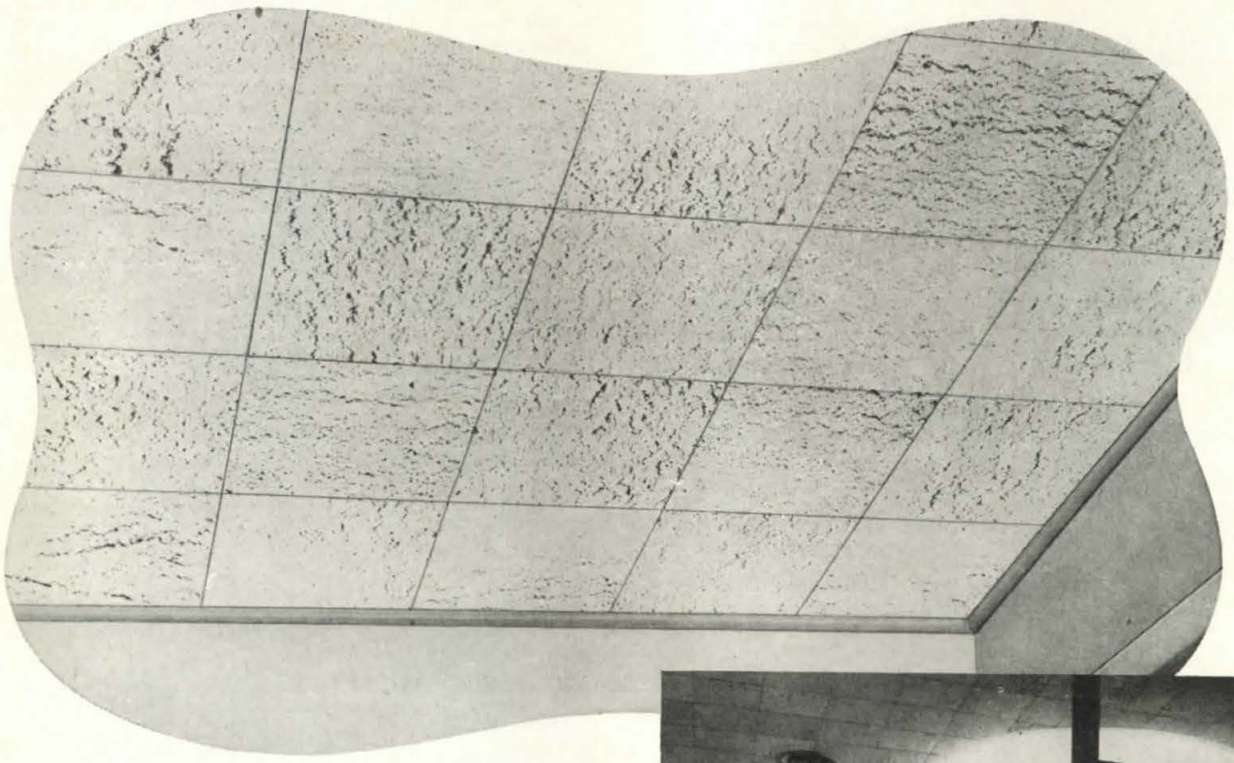

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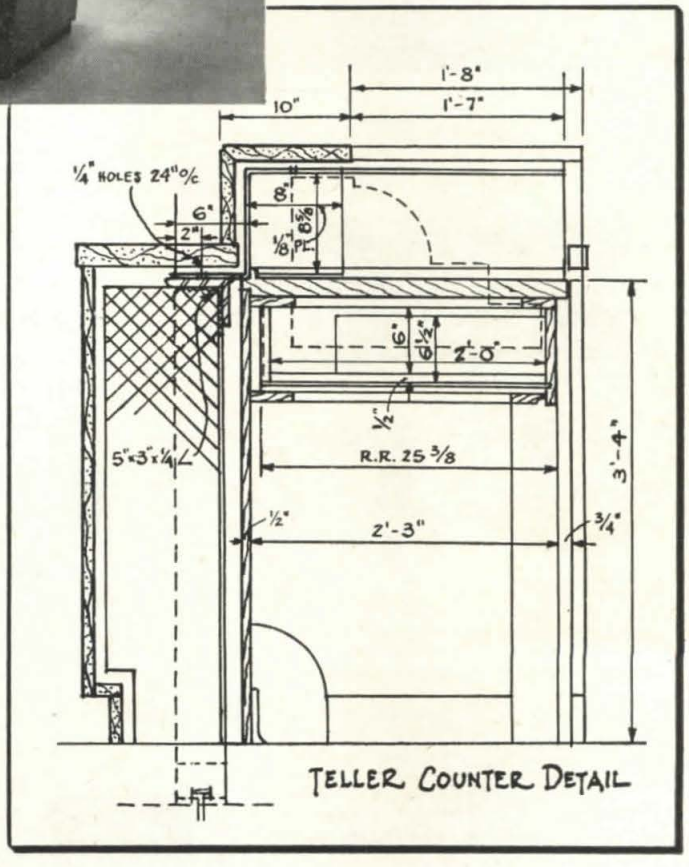

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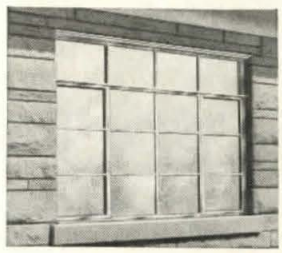

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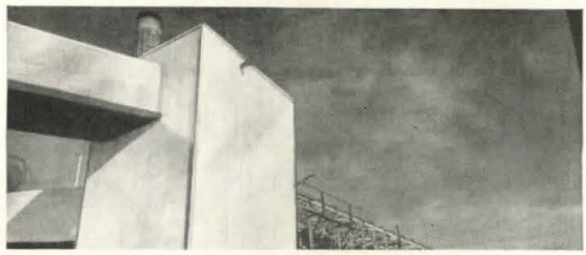

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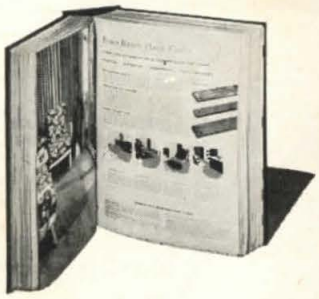

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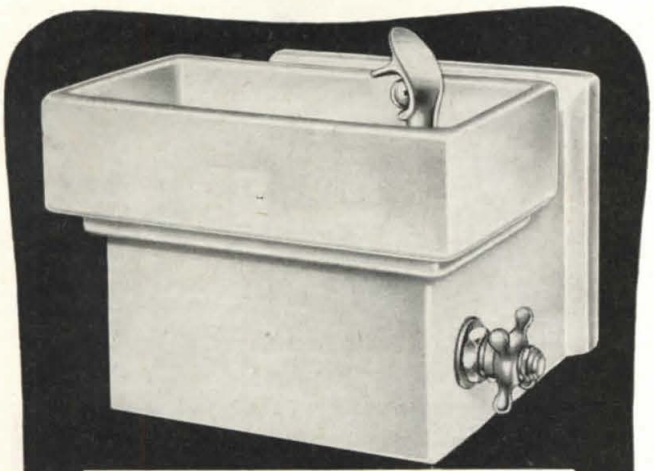

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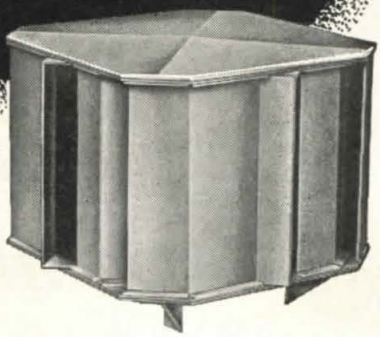

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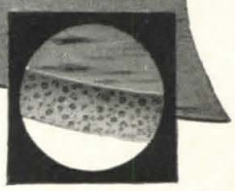

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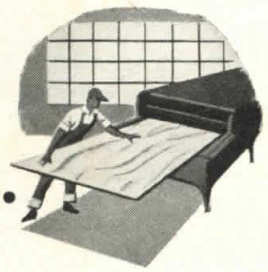

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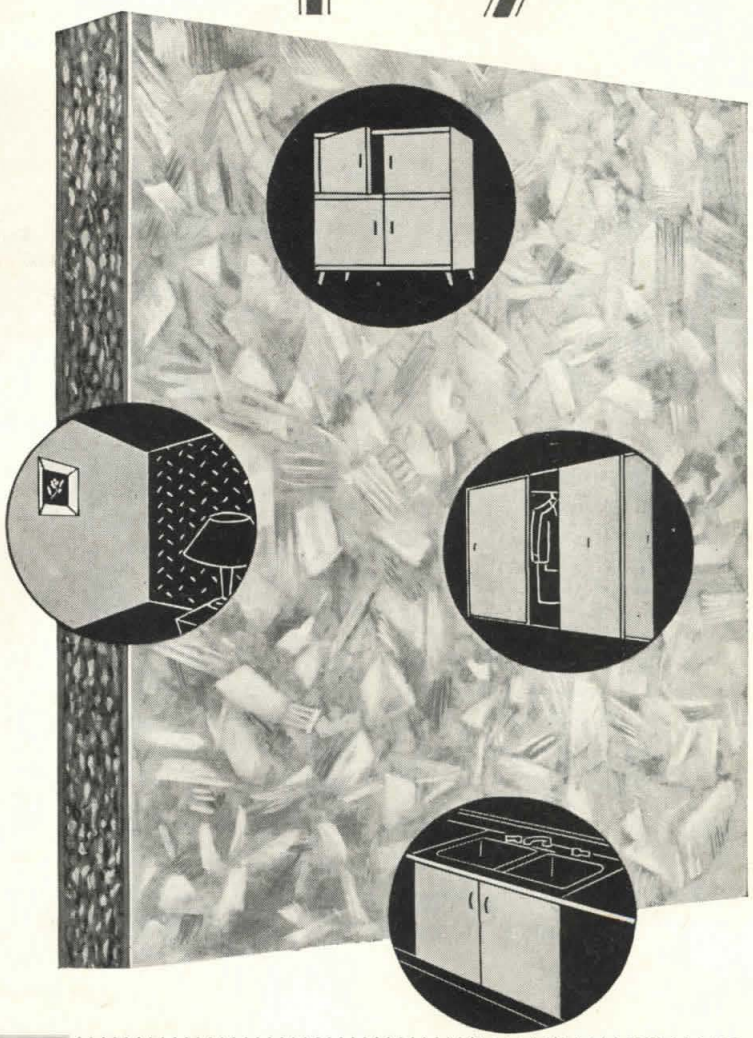

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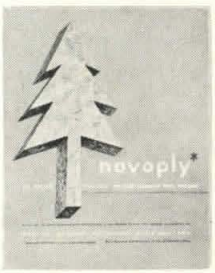

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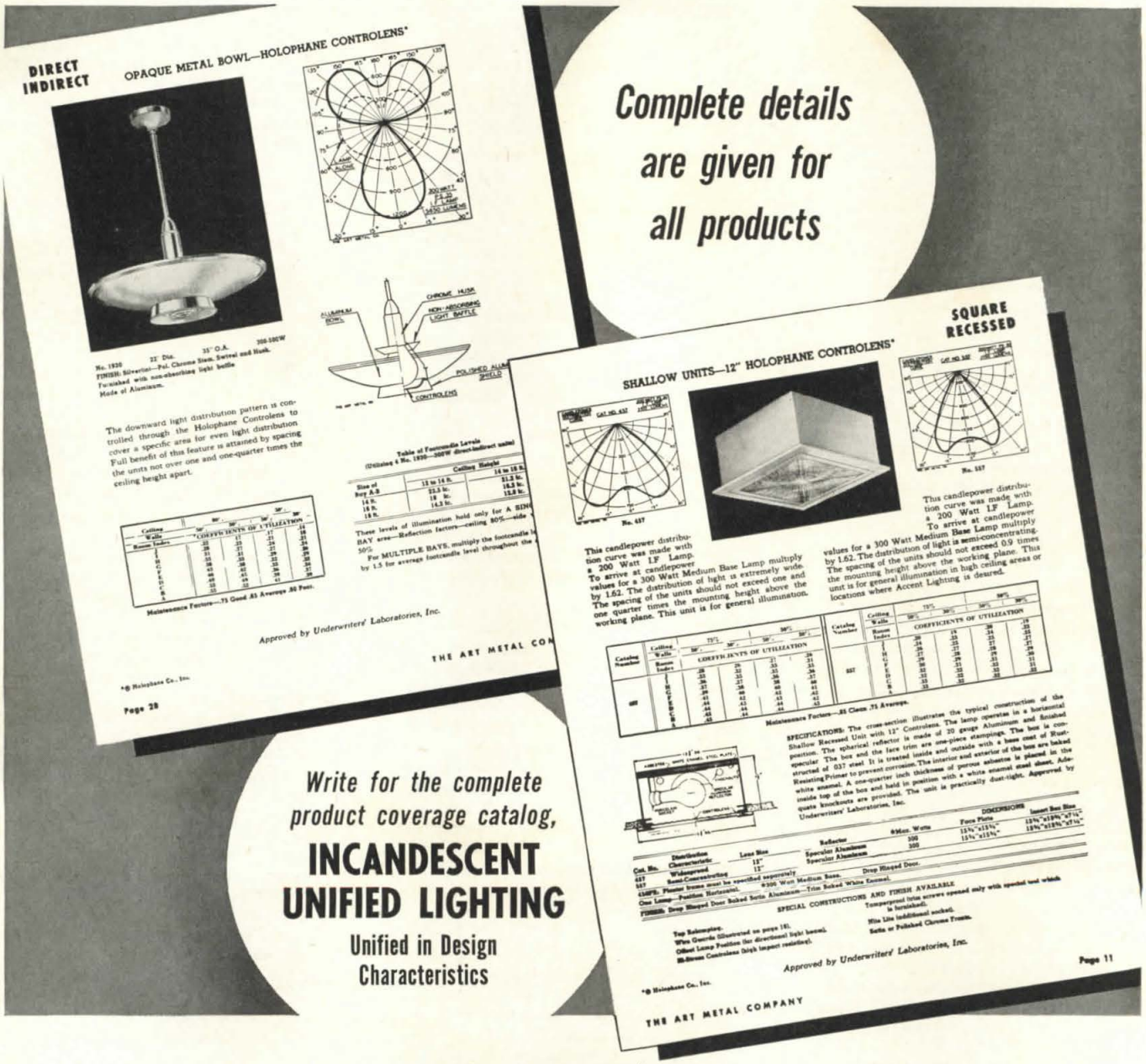

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HUMOROUS WRITING is a most delicate art. It requires a particular kind of wit, an acute and sympathetic feeling for social relationships, a delicate balance between understatement and exaggeration. Pure *humor*, as well as satire, is an important aspect of literature and has done much through man's history to deflate pomposity, to make subtle points that would have been lost through more serious presentation, and to provide sheer pleasure and relaxation.

On the other hand, it is very easy to be *funny*—and just plain poking fun can be a cruel and dangerous sport. Funny statements are more likely to be based on untruths than on the shift in emphasis which is the basis of humor. Something ridiculous—because of context, outrageousness, crudity of expression—draws a laugh from the funny man's audience, in contrast to the chuckle that more subtle humor gains by an unexpected emphasis of the truth. From children who say to one another, "Go stick your head in a pickle barrel" and an educated man who uses phrases such as "It's enough to drive you nuts," the techniques for gaining a snicker range to the use of sure-fire laugh-producing "tags" whenever a thing one doesn't like is referred to. For instance, science and research can always be made a target by referring to the complexities of charts and graphs; and contemporary architecture can always be made the butt of a joke by referring to flat roofs and chromium plating. Being funny is as dangerous as it is easy because it can be so damaging to reputations and to serious endeavours.

The reason for this little essay is that Peter Blake has seen fit to write a funny piece about contemporary house design for the November issue of *Harper's* magazine. It is called "How to Tell a Modern House" and it is illustrated with some wonderful drawings by Robert Osborn. I have no idea what impelled Peter to be so funny about this subject in a magazine that has already published several articles on architecture which indicated a strong prejudice against recent developments, and one of whose editors is also skillful (and much more subtle) at the business of being funny about modern design. (I will come back to Mr. Russell Lynes later). I'm afraid that I wasn't at all amused by Peter's piece. It is so full of the unfair, untruthful clichés of the funny man—the sure search for the belly laugh—that I think it is one of the most damaging pieces to the public understanding of today's trends that has yet been written. Let me give you a few quotes, just for the laughs, and tell why I think they are reprehensible.

●

"Exhibition houses . . . have remote controls for windows, color TV and sliding walls, cakes of soap with magnets inside, infra-red broilers, trees outside bristling with thermostats, ozone diffusers, brise-soleil, *child-pits, and so on. Enough to drive you nuts."*

DAMAGE: By coupling useful things (sliding walls, outside thermostats, etc.) with ridiculous-sounding things, *all* are made to seem ridiculous. *Very* funny. This should make a lot of people immediately laugh by association, when Southwest Research Institute promotes an exhibition house to show that architect builder homes can be well designed.

●

"Some houses get all ensnarled with their natural setting. They never let the outside stay outside, or the inside stay inside: this is privately referred to as an 'indoor-outdoor relationship.' "

DAMAGE: The term "indoor-outdoor relationship" has been popularized by a number of large-circulation consumer magazines, and has caught the general fancy sufficiently so that there is now a wide appreciation of the fact that houses need not be tight cubicles, and that the site is important. By the funny interpolation of the word "privately" *Harper's* readers are given to understand that extension of the house to the outdoors is a proprietary idea advanced by a small coterie of peculiar designers.

●

". . . some architects resort to cantilevers. Frequently the result is a rapid failure of nerve in the dweller, and a somewhat more gradual failure of cantilever in the cantilever. Frank Lloyd Wright, who started it all, believed that cantilevers would stop earthquakes, and as a matter of cold fact, they did—in 1923, in Tokyo."

DAMAGE: This garbled bit of funny-business, is, I suppose, calculated to make the layman feel uneasy about cantilevers, which, as any architect or engineer knows, can be designed as accurately as any other structural form. Appreciation and enjoyment of structure comes with understanding, and a cantilever can be explained and understood easily. The public can also be easily confused about these newer structural possibilities and Blake is doing his best. And no structural principle can *stop* an earthquake, Peter.

●

"prefabs . . . These are brilliantly efficient. They rarely work."

DAMAGE: Prefabs are not supposed to be "brilliantly efficient." Many devoted people, such as Carl Koch and Henry Hill, are working on the prefabrication principle, in the hope that it may ultimately help reduce construction costs. Which one doesn't "work," Peter?

"somebody who should be stuck into a pickle jar decided recently that everything inside a house must always be just about equally warm, equally cold, equally dry, and equally wet. This is called microclimate and can be readily understood with the aid of charts, graphs, dry-bulbs and wet-bulbs."

DAMAGE: This is the most reprehensible hilarity in the article. Microclimatology (which has nothing whatever to do with air-conditioning) is a young science growing rapidly in importance, served by a number of hard-working and little-understood scientists. Public understanding of its implications for architecture and town-planning had been nil until Jimmy Fitch, in an excellent article in *The Architectural Forum* some years ago, Elizabeth Gordon, through her informative series in *House Beautiful*, and the A.I.A., through publication of technical data, brought some knowledge of what was going on to architects and possible clients. This now becomes a great joke. Hilarious, isn't it?

●

"the pristine house . . . Its walls are either pure glass or pure brick. Its floor is pure chromium. Its roof is flat and also pure chromium."

DAMAGE: This seems pretty obvious. I don't particularly like that house either, but I admire the fact that it achieves its pristine simplicity *without* the impression of chromium finish. To pull in the old "flat-roof, chromium floor" tag to make it seem funny is very corny.

●

I THINK THAT THIS SORT OF THING is a lot of fun among a group of architects who can afford to laugh at themselves, but I wonder if Peter Blake realizes how his piece will be used by, and will bring great glee to, the people who stand against any advance in architecture and engineering? There is no secret, for instance, about the attitude of Russell Lynes, one of *Harper's* editors. In the October issue of *House & Garden* (which soberly features a house where "a brightly dressed life-size figure of Victorian carriage boy sits smiling on a bench" and, by means of a phonograph attached to it, "on the Greek Revival porch greets guests, 'Glad to see you' "), Mr. Lynes has a funny piece about honesty in architecture. "Honesty in architecture," he says, "is an idea that is just about a century old . . ." He goes on to say that "actually, the modern concept of honesty in architecture is a prudish one . . . and this seems to me an oddly puritanical point of view for architects who are not, as far as I know, distinguished for their celibacy." See the technique again? Bring in a reference to amatory activities by these roistering architects and you can make even architectural expression seem very funny indeed.

I guess I'm just an old sour-puss. I'll go stick my head in a pickle jar, Peter.

Thomas H. Creighton