

PROGRESSIVE ARCHITECTURE

newsletter

April 1950

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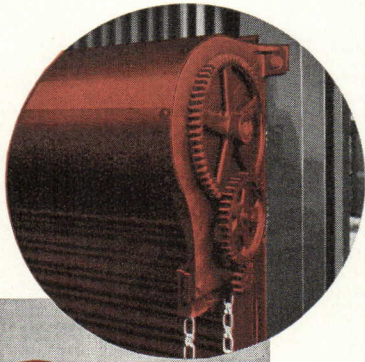
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- The town of Jasper, Indiana has launched a new approach to garbage disposal problems. The town will cease garbage collections, build sewers, and individual citizens as well as restaurants, schools, etc., will install G.E. garbage disposers which they will purchase from the city. More than half of the home owners have placed orders, and others are expected to follow suit, or as an alternative find a means of home incineration.
- A large hospital commission in Nashville, Tenn., to be sponsored by the State and the University, has been sought by a number of outstanding firms. 16 architects were interviewed recently by the governor; guess is that the job will go to local architects with an outside associate.
- Expansion of airport facilities will be important field in years just ahead, says Walther Prokosch in report for Urban Land Institute. Anticipated 60% increase in air passenger traffic by 1955 will cause need for enlarged and new terminal structures. Access to residential areas of cities rather than business districts will be new trend, the report indicates. Technical development will be reduction in number of runways. Separate passenger and freight airports should now be planned for.
- Two days after N.Y. press conference at which Lustron Corp. spoke optimistically of distribution plans and cheaper models, RFC foreclosed on \$37½ million loan. Speculation is that some method of carrying on under receivership may be found, since complete liquidation of Lustron's assets would result in almost total loss.
- U. of Illinois announces the Kate Neal Kinley fellowship, to the amount of \$1000 for study in music, art, or architecture. Applicants must be less than 25 years old, and prove unusual promise in their fields. Information about applications can be had from Dean Rexford Newcomb at the University.
- Buford Pickens, head of Tulane's architectural school, is new president of Society of Architectural Historians.
- 18 retailers concentrating on modern home furnishings have formed a new trade association called Contemporary Furniture Retailers. Sam Bordelon, of Bordelon Interiors, Chicago, was elected acting president at the first meeting, the idea for which came from Alfred Auerbach.
- M.I.T. announces plans for most worth-while conference, August 21-26, on the subject of Space Heating With Solar Energy. There will be both an educational section (4 or 5 lectures) and a symposium section. It is expected that the outstanding researchers in this field will attend and compare notes, in open sessions. A small registration and tuition fee will be charged. Details will be announced later in the spring.

- Growth in number of small businesses, including architectural practices, is indicated by fact that there were 2,900,000 business firms in the country in 20's, 3,300,000 in 1939, 3,900,000 now. In 20 years income from non-incorporated businesses has grown from \$8 million to \$25 million. Mortality rate is about 750 bankruptcies a month at present.
- How architectural firms fit in this picture is indicated by a recent P/A survey in 15 representative cities. These facts were uncovered: 75% of the architectural firms in those cities today were not in business in 1941; 33% of the firms which were in business in 1941 have disappeared; the total number of active firms in the cities studied has tripled during the 8-year period.
- J. C. Nichols, planner and developer of the Kansas City Country Club District, died last month. Based on fairly expensive homes Nichols' development was a landmark in planned access, planned shopping centers, planned parking facilities, adaptation to topography, etc.
- With Wurster going to California, the scuttlebut in the architectural school field centers around M.I.T. deanship. Many rumors involving many educators and architects; apparently no decision yet.
- Yale University's Department of Architecture (George Howe, Chairman) announces a new program in city planning, leading to the degree of Master of City Planning. Study will be two years on a graduate level, open to a limited number of professional degree holders. Christopher Tunnard will be Director of Planning Studies.
- Producers' Council has developed two presentations for meeting of architects or others, with a number of manufacturers discussing their parts in the solving of a joint problem. One has to do with toilet-room planning, and brings together fixtures, accessories, and fittings. The other discusses attachment methods — adhesives, welds, pins, and studs.
- Competition among contractors is now greater than at any time since the war, reports Associated General Contractors. Survey conducted among members turned up unanimous opinion on this score.
- The popular house in 1950 will be "of no definite architecture type" according to an interesting survey completed by National Assn. of Real Estate Boards. It will be a one-story "bungalow, will have no dining room, no basement, smaller kitchen, more closet space than now common. Low cost (averaging \$9000) but larger lot is desired by the U.S. public. "Porches" are wanted sometimes still formally on the front, but more often on side rear, "serving as outdoor living room."

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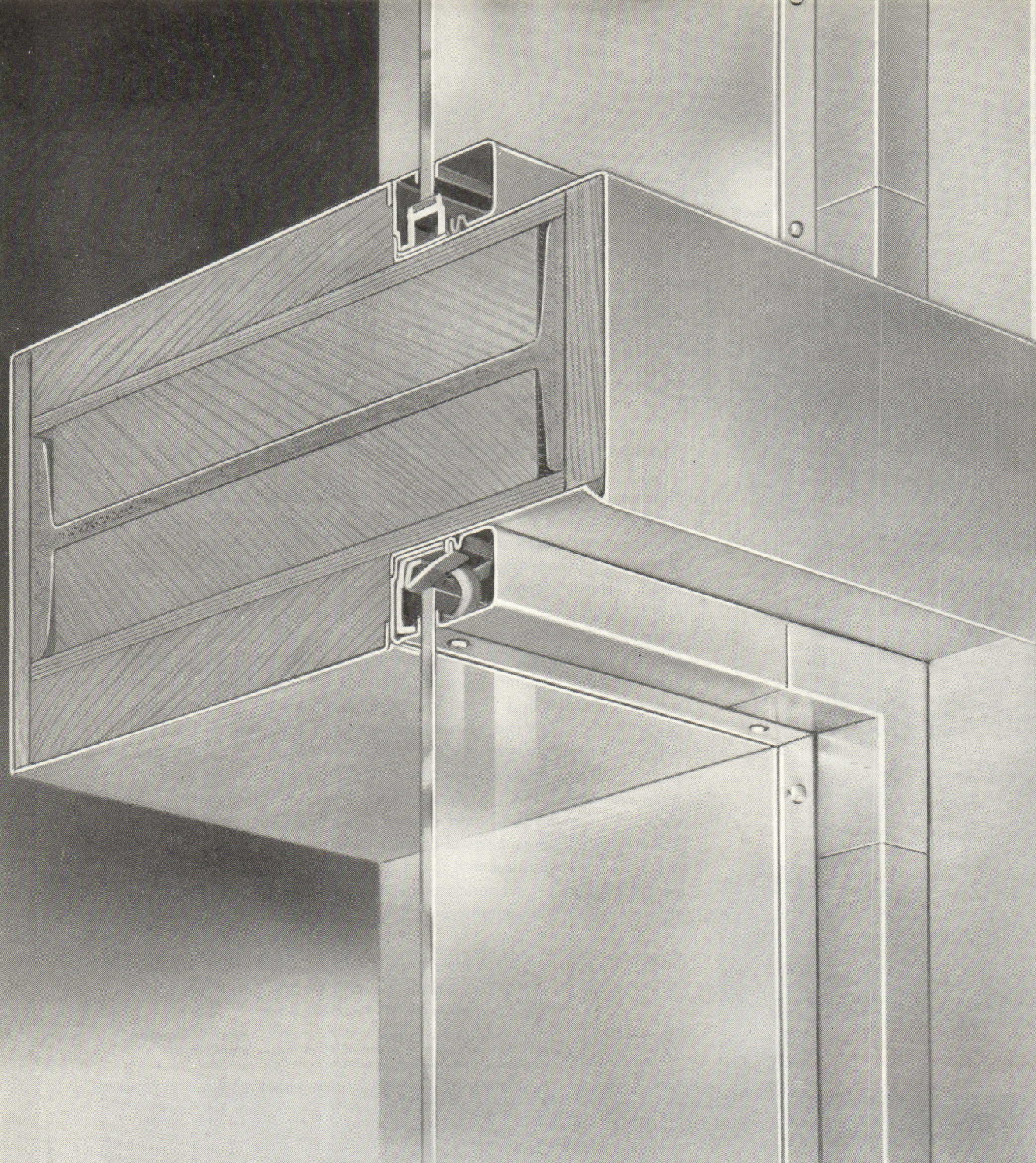
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Herpolsheimer's, Grand Rapids, Mich.

Architectural talent and ingenuity result in outstanding modern store fronts when Kawneer Metals are used with skill and imagination.

Striking proof is offered by this department store designed by Perry, Shaw and Hepburn, Architects, Boston, Massachusetts for Allied Stores Incorporated, George L. Ely, Store Designer.

Combining simplicity, good taste, and originality, this handsome front arrests the attention of shoppers, displays merchandise, and invites people inside to shop.

Kawneer Metals and Entrances, styled and engineered to the highest contemporary standards, were used extensively. One of the stock assemblies specified was the cleanly-designed glazing sash pictured at left. Selected from the wide variety of Kawneer Stock Mouldings, this unit holds glass securely and resiliently in place in the giant four-story show window

(as pictured) and in the large sidewalk show windows.

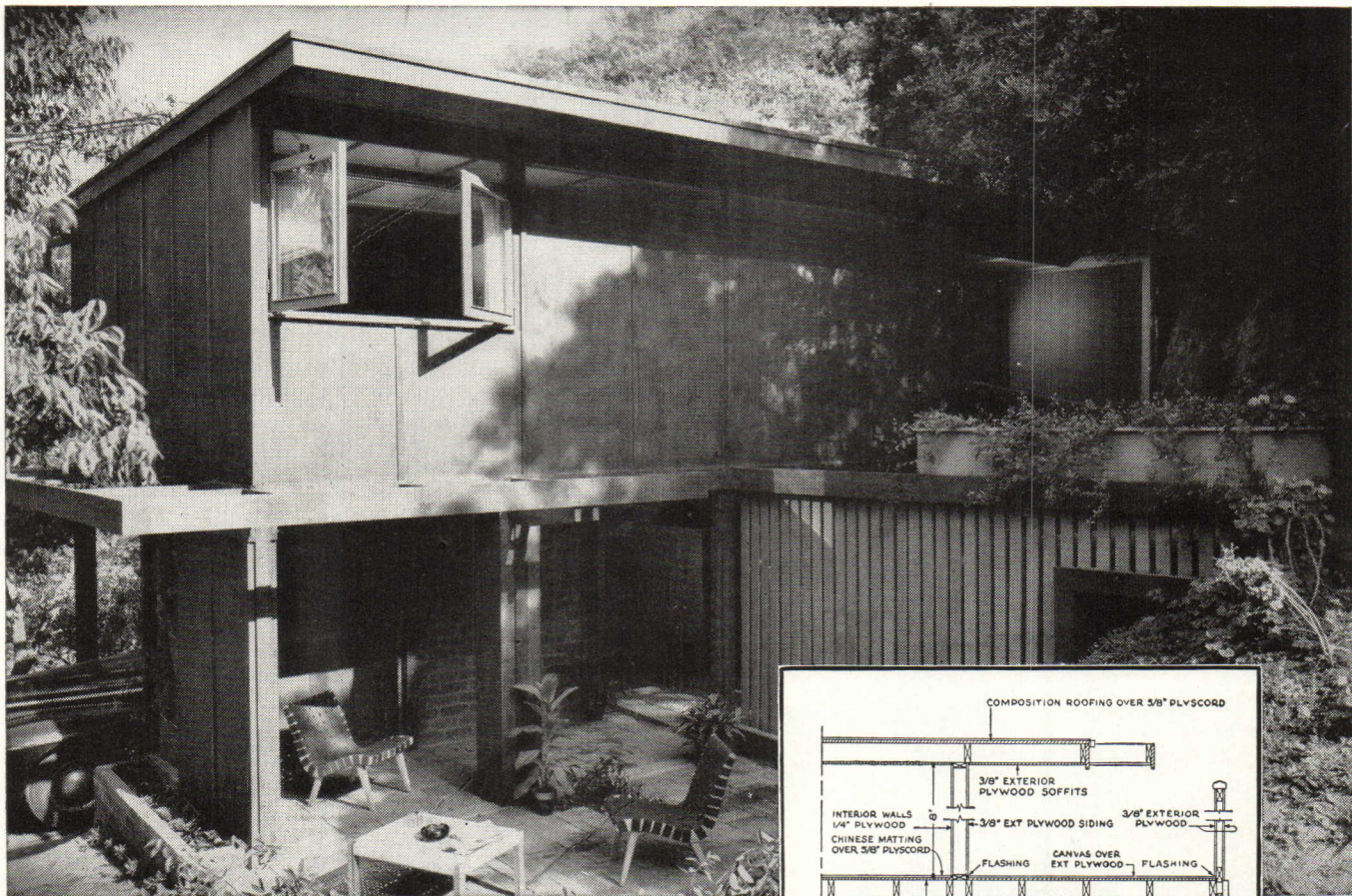
The use of well-designed Kawneer Stock Metals meets your clients' demands for lower building costs, because these units cost less than special, made-to-order assemblies. Your own operating costs are also reduced by eliminating drafting and detailing.

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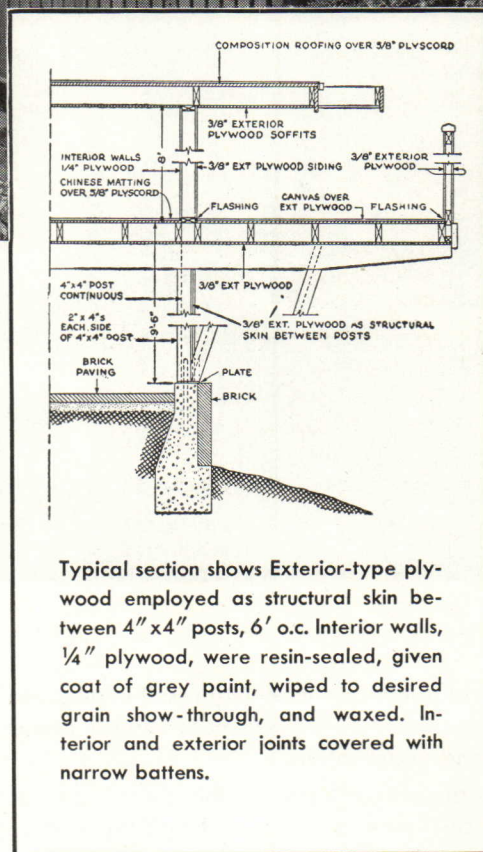
"With Plywood, Design and Structure Can Be Treated as a Single, Integrated Unit,"

Says Architect Gordon Drake

AN excellent example of the contemporary search for more livable, more economical design is this award-winning Los Angeles home by Architect Gordon Drake of Carmel and San Francisco.

In its conception, design becomes structure . . . structure becomes design—a simplification of approach made possible by the unique properties of Douglas fir plywood.

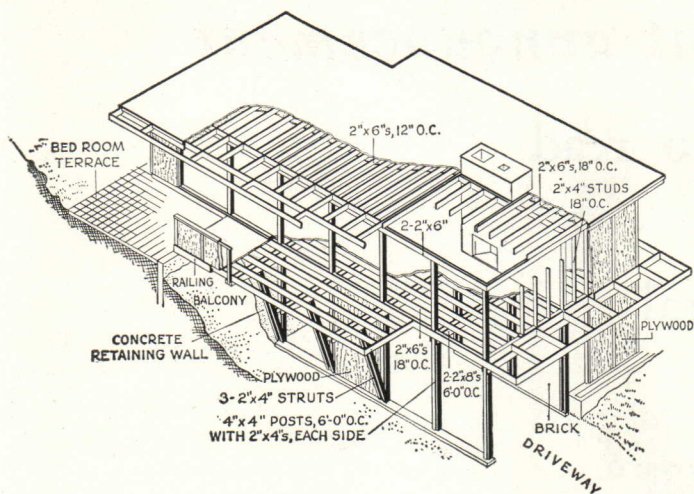
Mr. Drake says: "Because plywood is at once a structural and a finish material, offering both strength and beauty, many construction economies were effected in this home. Plywood makes possible new architectural conceptions, enabling the designer to concentrate on essentials without sacrifice of beauty, charm or utility."



Typical section shows Exterior-type plywood employed as structural skin between 4" x 4" posts, 6' o.c. Interior walls, 1/4" plywood, were resin-sealed, given coat of grey paint, wiped to desired grain show-through, and waxed. Interior and exterior joints covered with narrow battens.

Douglas Fir
Plywood

AMERICA'S



Progressive Architecture said this about the house: "Seldom does one see work in which structure, site and clients' needs merge so completely. Conditioned by the particular circumstances, the construction system here is also the esthetic concept." Isometric shows elements of the wood post-and-girder construction, employing plywood as a structural diaphragm for floor and roof and as a structural skin for walls.



Plywood exterior treatment is both simple and dramatic. Contemporary design is a "natural" for this modern panel material.

Charming simplicity key-notes the interior treatment, blending glass and plywood walls to achieve warmth and spaciousness.



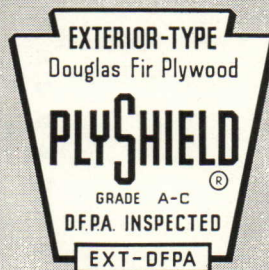
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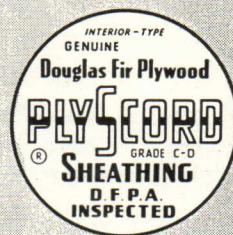


BUSIEST BUILDING MATERIAL

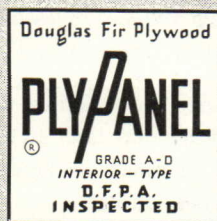
These Grades of Plywood Will Prove Most Useful in Home Construction



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PlyScord is the unsanded construction grade—for strong, rigid wall and roof sheathing and subflooring. Use it for basement and foundation forms, too; can be stripped and re-used for sheathing on the same job.



PlyPanel is the "one-side" grade of Interior-type plywood—for real wood paneling, cabinets, built-ins. Provides a smooth, firm underlayment for wall-to-wall floor coverings, too.



For complete data on Douglas Fir Plywood, including information on other grades, see Sweet's File, Architectural, or write for basic catalog—sent free to any part of the United States. Just write any of the offices listed at the left.

Aⁿ important announcement
to all who read
or write
architectural
books



Wm. W. Atkin
Appointed Architectural Editor,
Reinhold Book Div.

Reinhold Publishing Corporation, publisher of *Progressive Architecture* and the world's leading publisher of professional architectural books, is pleased to announce the appointment of Wm. W. Atkin as Architectural Editor for the Reinhold Book Division. Mr. Atkin replaces Jeffrey H. Livingstone, who has resigned.

This is another forward step in the continuing development of an already distinguished architectural book publishing program. This program, started several years ago, was planned to provide architects with the latest and best information and data on the design and construction of contemporary buildings, on office practice and on presentation techniques. Among its outstanding features in recent years has been the "Progressive Architecture Library," a succession of authoritative big books each devoted to a single important building type—e.g., Apartment Houses, Hospitals, Shops and Stores, Theatres and Auditoriums, Schools, etc.

Analogous books on churches, shopping centers, motels, specific types of schools and commercial buildings—new books on architectural law, architectural models, building economics, contemporary structure and other subjects of importance to architects, engineers and draftsmen—timely revisions of earlier works—these are all part of the program for the near future.

Mr. Atkin is ideally equipped for the execution of this program and for the development of a continuing flow of outstanding new architectural books. Educated at New York and Northwestern Universities, where he studied both architecture and journalism, he has had considerable practical experience in the building field and in writing. He has been on the staffs of *American Home* and the *Architectural Forum* and most recently has been Technical Advisor for the Revere Quality House Division of Southwest Research Institute. He has authored numerous articles on buildings and their maintenance in architectural journals, shelter magazines and newspapers, and is co-author of the book "The Encyclopedia of Home Care and Repair," published by Lantern Press in 1948.

In his important new duties and responsibilities Mr. Atkin will be backed up by all the facilities of the Reinhold Book Division, the world's leading publisher of architectural books, and of *Progressive Architecture* magazine, the outstanding professional journal in this field. Architectural men everywhere are invited to give him *their* suggestions and ideas at all times.

Reinhold Book Division

Reinhold Publishing Corporation, New York 18, N. Y.

WHY THE STYLES?

Dear Editor: At last I have had a chance to sit down and pore over the January P/A. In the limited space you had, I think you did a remarkably good job of reviewing the work of your profession for the first 50 years. For a non-professional like myself, this will provide one more important addition to the other careful reviews of this dynamic period.

I got the impression that, as in many other fields, the top-grade architects during this period have been far in advance of the thinking of their clients and that, given a more sophisticated public, advances in design would have come about much more rapidly. But, dependent upon the public as they were for their fees and not having access to large funds available for research, as in the medical or chemical fields, they have made remarkable progress. The limit here, obviously, is the great expense of each experiment.

Frankly, as a lay reader, I would have wished for just a little more interpretation in this work. The explanation for the skyscraper style and the pseudo grandeur of the movie palaces may be clear enough, but why did the particular styles employed have such a vogue? Why, for example, did the terra cotta Gothic of the Woolworth building satisfy the clients? I don't know whether such interpretation would be possible or valid, but for those who wish to take part in the advancement of this important art in the future, such interpretation of the influencing forces of the immediate past might be extremely valuable. For example, there is a style which I will call Miami Spanish which even had a wide vogue in northern cities 10 to 30 years ago. You see today in wealthy mansions, even here in Philadelphia, in some office buildings and all the way down to gasoline stations and cheap housing developments. Now, what ever got this started and why did people who are as un-Spanish as possible fall for it—even demand it? This may sound like carping with an editorial job extremely well done. It was not meant to be. I fully realize that our staff had a choice to make—whether to do a good reporting job or a critical examination—and since the opinions of your readership must be widely varied, the former obviously must have seemed the more discreet. In any rate, I feel the book must be of tremendous value and interest to its readers.

CLEVELAND LANE
Philadelphia, Pa.

AVOIDED PIT FALLS

Dear Editor: The January issue a wonderful job—congratulations and thanks to all concerned. You have neatly avoided all the pitfalls of compression—contents and visual result splendid.

SERGE CHERMAYEFF, President
Institute of Design
632 North Dearborn St.
Chicago, Ill.

MIRROR OF PAST

Dear Editor: Heartiest congratulations on your January 1950 issue. "U.S. Architecture 1900-1950" efficiently presents a moving panorama of architectural history.

In turn, it is a fine commentary on, and a mirror of our immediate past, logically relating the effect of life, events, and scientific trends on the architect's work.

We found it inspiring.

JAMES A. MITCHELL
DAHLEN K. RITCHEY
Pittsburgh, Pa.

TOP-NOTCH ISSUE

Dear Editor: We thought your January issue of P/A was a top-notch issue. It was extremely well done and must have required a tremendous amount of work.

KARL KAMRATH
MACKIE & KAMRATH
Houston, Texas

RECORDING CHANGES

Dear Editor: A few weeks ago I finished reading the January issue of P/A. Just recently in the midst of my course in History of Architecture, it occurred to me that no mention of the great movement in building during the past 50 years is made in any of the standard history textbooks.

I would like to congratulate you on an issue that included great buildings of modern architecture, and many of the great changes in the world that were the motivating forces in the development of the new esthetic. This issue, as well as others to come, will always be, aside from a valuable reference, a supplement to the story that began with man's earliest efforts to provide shelter.

ALVIN JAFF
New York, N.Y.

P/A AWARDS DECISION

Dear Editor: The issue of the "Memo from the Octagon" under date of January 11 mentions your fine co-operation in discontinuing P/A's annual awards in favor of the A.I.A. program of honorable mention. Your work was very well handled and developed considerable interest, so we know it was valuable for your publication.

We are glad to know that the Honor Award Committee has agreed to broaden the program incorporating suggestions on your part. Our compliments on your fine attitude which we know is prompted by interest in the advancement of the profession.

GLEN STANTON
Portland, Oregon

LIGHTING A NECESSITY

Dear Editor: In response to previous requests for suggestions may I express my approval of the very fine article on lighting in the February issue of P/A. I had nearly decided to cancel my subscription before this month's issue arrived.

I wish to suggest that more of similar material be included from time to time. Also, when preparing descriptive articles of new buildings, more about lighting should be included. Of course a good unflashed, untouched photograph helps the lighting engineer; it would help still more, and aid the architect also, should you describe how that particular lighting system improved the over-all success of the specific area, as you do describe the interior finishes, space planning, heating, or basic structural design.

To me, lighting is much more important than many of the expensive trimmings or attempted luxury. Lighting affects the health of the individual both physically and financially. Lighting can promote or discourage sales, increase or delay production, affect labor turnover, improve or destroy the general appearance of a building. In short, it is just as important to maintain superior lighting as it is to provide adequate heating facilities.

May we hope that you as editors will place an equal emphasis on lighting in future issues of P/A.

C.M. GLIDDEN
Illuminating Engineer

RECOMMENDS DUPLEX

Dear Editor: I wonder why there has been so little mention of duplex apartments in the past few years. They are still being built, but why is there so little interest in them from an architectural standpoint?

There appears to be little difference in the four-unit apartment and the duplex from an investment standpoint, as

(Continued on page 10)

(Continued from page 9)

the duplex commands a higher rental per unit thus, making the return on investment very nearly the same or perhaps more when it is considered that in the duplex a caretaker isn't required, nor is central heating.

JOHN R. RAMEY, JR.
West, Mississippi

INTERIOR DESIGN

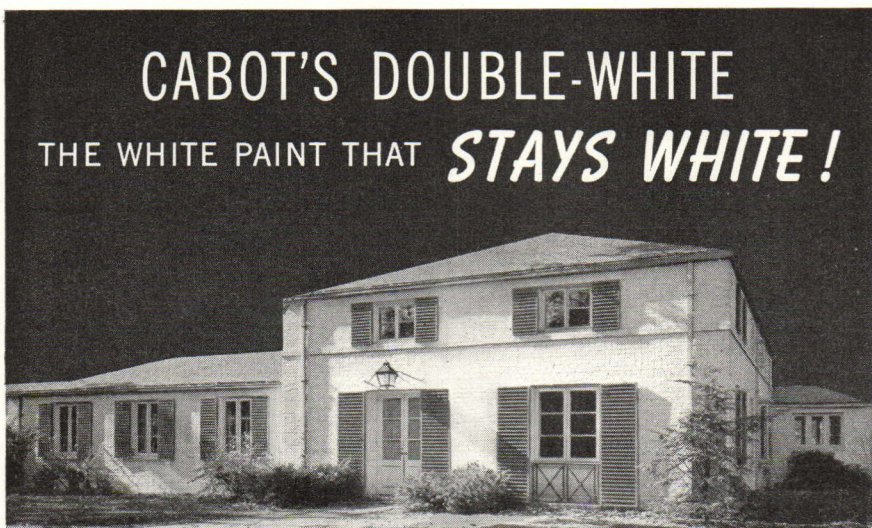
Dear Editor: Your P.S. in December 1949 PROGRESSIVE ARCHITECTURE re architects and furnishings has created much comment in our office—both pro and con as to the ethical method of furnishings distribution and what part

you expect the professional interior designer to play in the manufacturer-architect relationship. We have chosen this profession because of its obvious necessity and for its future merit, and therefore resent perhaps the discussion of furnishings and housing collectively without mention of this specialist.

It is our contention that we were trained to be an aid to the architect in regards to the interior finishing of his building. Contrary to the decorator viewpoint, we feel the architect, of his own designs, to be the only capably versed interior planner. With that thought in mind, since our interest lies solely in contemporary building, we have established what may be termed a co-adjutant's position—where otherwise the architect-decorator, a decoritect (conversely, archdecorator), system exists. Briefly the situation is this: Since the architect is the creator of the master building plan, he either has or has not given considerable thought to how the structure is to function, therefore he should be aware of every possible means of making his creation perform properly. We all know however, that this is becoming a specialized world, and that the architect who conscientiously devotes his research time to the best possible contemporary building method cannot possibly be responsible for knowing the furnishing field from the latest Nelson creation, or an unknown designer's masterpiece, to the most recent discovery in fabric chemistry. Nevertheless, the architect is the planner and has the greatest opportunity to foresee through close association with the client and his family, the requirements and limitation for both the client and the structure. The architect therefore, is almost in the position to dictate what furnishing requirements are necessary. From this point on the architect has the choice of several things: Let the decorator "take over" (enough said) grope for his visualized furnishings; or contract for the client, together with the construction breakdown contract the furnishings mandatory for the successful completion of his building.

The interior designer then is read to supply the architect, on a contract basis, all furnishings needed and in conjunction is able to offer the facilities and the professional knowledge for procuring, processing, or fabricating such needs, notwithstanding the psychological and physiological analysis of color texture, and pattern accumulation. As the architect sets up his office, the designer also establishes an office and showroom, complete with files and samples of all contemporary furnishing fabrics, accessories and so on, by the best designers. The architect in most cases knows precisely or approximately what the requirements are for a particular problem. In any case, the designer is able to show a complete collection of such contemporary pieces which will be acceptable. He will either supply

(Continued on page



Architect: Irwin Jones, New York

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VIEWS

(Continued from page 10)

them directly or purchase for the architect, via the furnishings contract, receive the deliveries and pursue any further processing necessary for the finishing of such pieces. At the architect's discretion the interior designer will sit in on architect-client discussions and, according to the architect's selec-

tion, have for presentation to the client large color cards of paint manufacturers (architect's choice), floor coverings, furniture, and drapery fabric samples prescribed.

Such co-ordination between architect and interior design consultant allows the architect complete control of his

building, provides the manufacturer with an excellent distribution agent and, of course, benefits the client immeasurably through his assurance of a furnished dwelling by budgeting of initial cash for the non-financeable furnishings. Interior Designs Ltd. has found this plan very successful in creating closer harmony among all parties involved in promoting fine structures.

LEWIS S. BALDON
The Baldons & Associates
Los Angeles, Calif.

SALTING THE ROOF

Dear Editor: The article on weather conditioning of roofs in the December P/A moves me to send in a few notes on one of my favorite subjects. Here in South Florida, we have many problems more or less peculiar to the locale not entirely unique, but just enough different so that we can't be as completely tropical as Guam or Puerto Rico nor do we have to be as particular about cold as Maine or Minnesota.

While white roofing tile has for many years been our chief insulator (in the economy brackets) against heat on roofs, it's an imperfect choice. Recently experiments have been made with vermiculite roofing tile, but the material so far is weak and it's too soon to evaluate. In any case, tile roofs are too limiting in design, so for some time we have been developing other methods. It is my belief that more widespread use of them may be indicated in northern climates.

In 1939 or 1940, we first coated a gravel roof with lime and cement poured on thick from a sprinkling can and found that it did four things for us:

1. It allowed the use of the lower sloping roofs, that we were previously unable to use for residential work, and freer planning.
2. It gave us good heat reflection.
3. It stabilized the gravel, so that it would not wash or blow away.
4. It presented a pleasing appearance, which enabled us to sell the idea.

The war interfered with the development of this system, but when I returned to practice we began working on it again. It presented some bugs—the right proportion of cement, lime, salt, and water and application problems—but we have finally worked out what seems to be a workable procedure. We sweep off a good deal of excess gravel, mix lime and cement and sea water (sea water seems to have the right salt factor) to a pea soup consistency, so that it will pour through a sprinkling can whose holes have been enlarged with an ice pick or 20-penny nail; pour on so that the mixture fills the voids; sweep the surface with

(Continued on page

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VIEWS

(Continued from page 12)

stiff broom to obtain an even surface and texture. It's a cut-and-try formula and is probably incorrect, but it seems to work. One contractor reversed the proportions of cement and lime and got a well-stabilized roof, but it wasn't really white.

The mixture crazes a bit, but so far

we have not had any continuous cracks, with temperatures varying from about 32° to a nominal 90° outside temperature. Too much salt causes flaking. If too thin, the mixture will not cover or anchor the gravel properly, and obviously if too thick cannot be evened out by sweeping.



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the Balanced Door in THE ALLSTATE BUILDING, Chicago, Ill.

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The Door that lets

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Ellison
the **BALANCED DOOR**

We very often use reflective insulation along with this, particularly where the finish ceiling follows the slope of the rafters. It is our practice to use a continuous screened eve vent 1" to 2" wide, so we usually turn the insulation paper side up at the bottom of the ceiling or roof joists so that strong winds will not flutter the foil or tear it loose. (One of our early foil jobs was quite effectively dispersed by a small hurricane.)

More recently, we have added the use of vermiculite in the base plaster as a standard specification with the hope of added protection, but principally because of its light weight, workability, and inert qualities. (We have no accurate figures on its actual insulating value used this way.)

In a job just completed we went "out on a limb" to pour 1½" of vermiculite over a low sloping pitch and gravel roof, where the use of exposed ceiling joists was indicated. In this case we swept off all the loose gravel, using what remained to bind the vermiculite and provide some measure of stabilization for the pitch. The pour was screeded off to a ground at the ridge and a deep gravel stop at the eave. We found that the pour should be damped or floated with some pressure at the point of setting-up to eliminate shrinkage cracks. The surface was painted with a white cement waterproofing, again to help in the job of heat reflection and to lessen moisture absorption. The roof hasn't been in place long enough for us to offer a real judgment of heat reflection or absorption, but we are quite confident that it will do a satisfactory job.

With the thought that the information may encourage further developments for special conditions, let me add two more systems we have recently used.

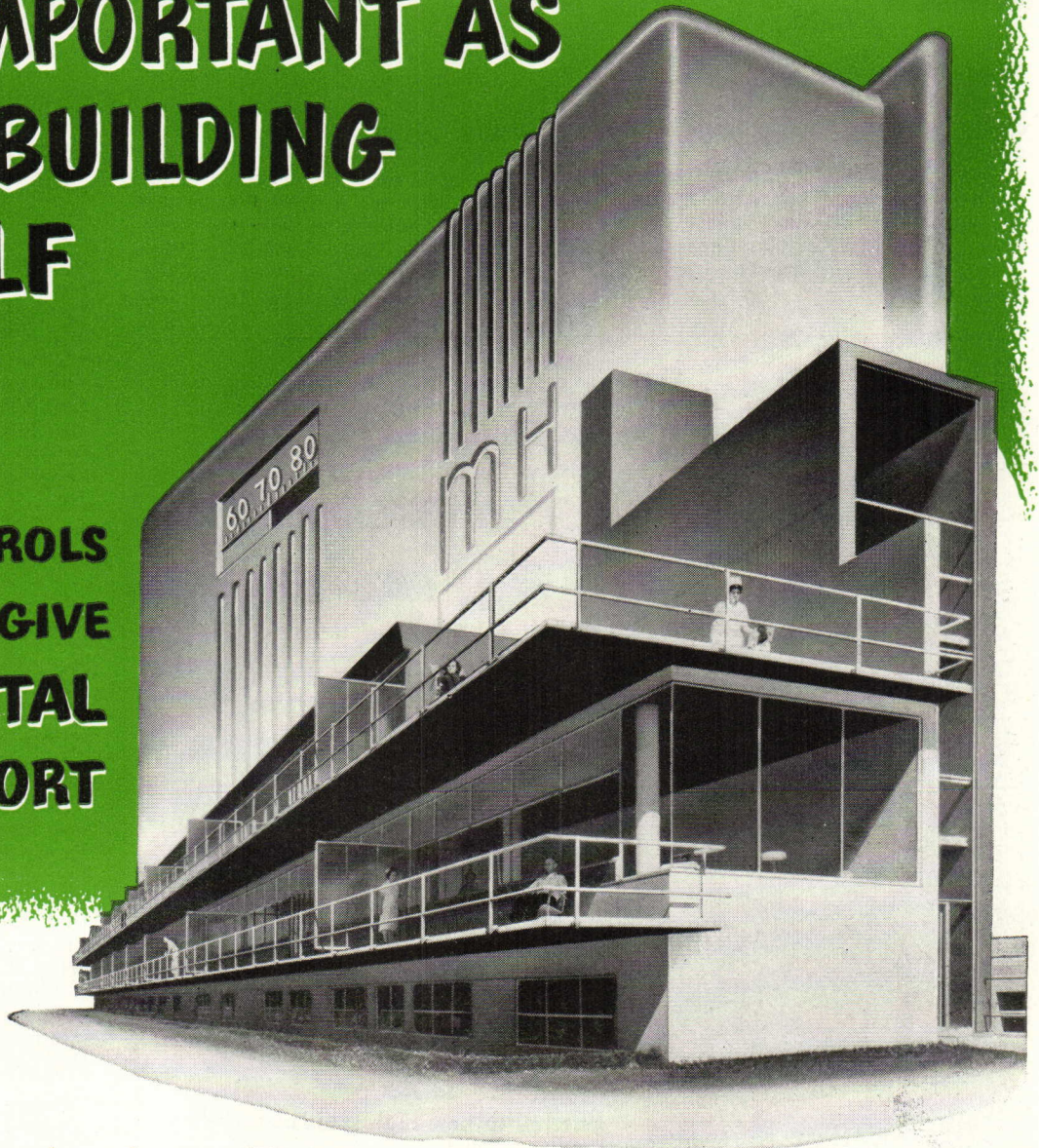
Just being completed is an addition to the Sea Ranch Hotel, north of Fort Lauderdale on the ocean. The structure is a cellular system of reinforced concrete and concrete block masonry for 16 rooms. Two stories high, 19' bay 16' with an 8' cantilever deck on one side and a 5' cantilever passage on the other. The bearing walls on 19' centers are concrete masonry, with flush marginal columns. Floors are 10½" thick using 8" x 8" x 16" partition block 20" on centers to form flush panel beam construction. The ribs are reinforced with ¾" round rods in the bottom and 6" x 6" #10 mesh continuous in the slab.

There are 3' wide flush beams over the supports with negative reinforcement both ways. On the roof, which is 25' x 160' (with a slope), 8" x 8" x 1" vermiculite concrete block were used as spacers. Using approximately 3500 lbs of concrete, the roof was machine-troweled to a dense finish and sprayed with a curing agent. The exposed concrete was painted in stripes to enhance the

(Continued on page

AS IMPORTANT AS THE BUILDING ITSELF

THE CONTROLS
THAT GIVE
HOSPITAL
COMFORT



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Architects: W. L. Pereira, Hollywood
Wm. A. Ganster, Waukegan, Ill

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FIRST IN CONTROLS

(Continued from page 14)

cabana motif and to keep temperatures down.

Only a month old, the roof has no cracks or checks of any kind. We don't guarantee that it won't, but are convinced of its durability, and expect that it will provide a reasonable factor of insulation.

Another venture into the field of insulation is the use of 2½" vermiculite concrete slab over steel floor lath on concrete joists as a base for radiant floor panel heating in one-story construction. Our local conditions often require a self-supporting floor construction (on piling over filled land, with

need for raising floors 3' to 4' over normal grades to avoid inundation during hurricane tides).

We have three such installations in operation and again the time element is too short to be absolutely sure of performance. Our cold weather is usually of short duration and moderate intensity. Rarely do we have frost conditions, but the need for some heat occasionally is real. For those who can afford it, the panel system appears to be the answer. We are in the second season of operation with apparently excellent results. Contrary to popular opinion in this area, the lag in heating and cooling of the floor is not a factor. Heating pipes were fastened directly to the vermiculite concrete floor with 1½" of cement/sand to cover the pipe and provide a setting bed for marble and terrazzo floors. Total floor thickness is approximately 5" to 6". A similar system should work in other localities where conditions are approximate.

ROBERT E. HANSEN
Fort Lauderdale, Fla

PAINTED ROOFING

Dear Editor: On page 72 of December 1949 P/A, top paragraph, left column the statement is made: "Aluminum roofing shingles showed a temperature rise from 19.4° to 41.6°—only a little better than lampblack."

We appreciate that this information was taken from a Bureau of Standards report BMS-64 in which three types of shingles including aluminum are tabulated. It is our understanding, however, that these were all asphalt shingles the term aluminum applying only to the color of the shingle or the granules on it and not to the material of the shingle.

In fairness to manufacturers of aluminum roofing and aluminum shingle this point should be made clear.

C.O.P. KLOPP
Product Manager—Building Industries
Aluminum Company of Canada, Limited

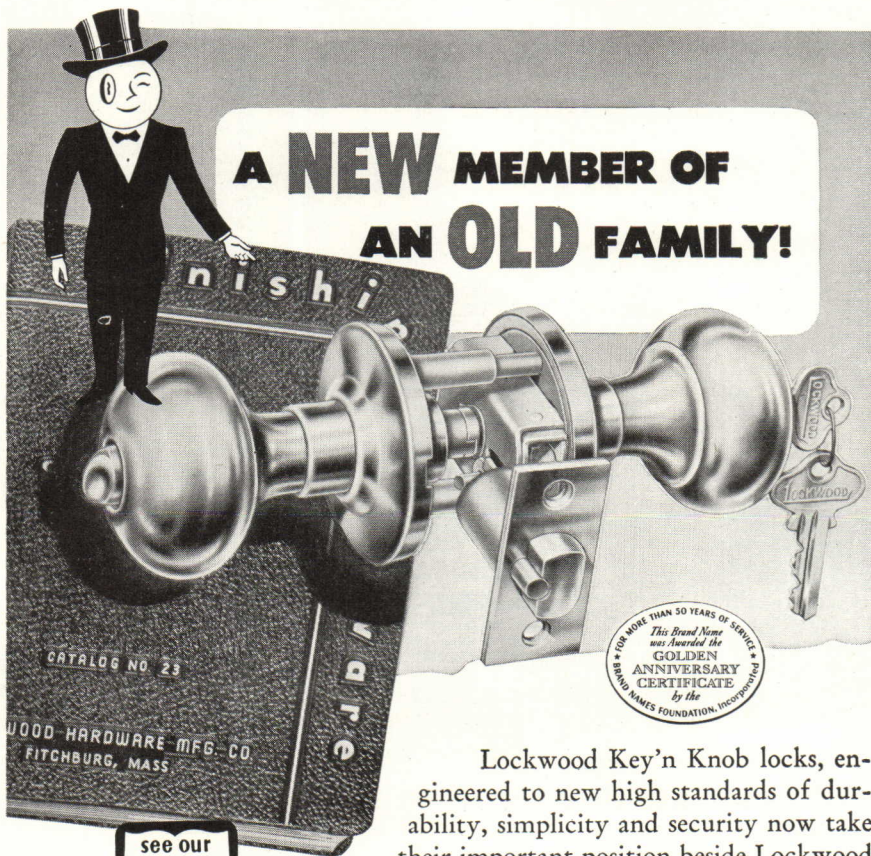
Bureau of Standards report from which the information was taken indicates, text only, that "roofing shingles, aluminum" referred to roofing felt painted with aluminum paint, not to aluminum shingles. Solid aluminum shingles were not tested or reported in the Standard document quoted.

B.H.

NOTICES

PRIZE WINNER

ELIZABETH GRAHAM BELL, student architecture at Carnegie Institute Technology, is winner of the \$500 prize in a small homes design contest for women students sponsored by "American Builder" magazine and the National Association of Home Builders.



A NEW MEMBER OF AN OLD FAMILY!



Lockwood Key'n Knob locks, engineered to new high standards of durability, simplicity and security now take their important position beside Lockwood HEAVY DUTY and STANDARD grade

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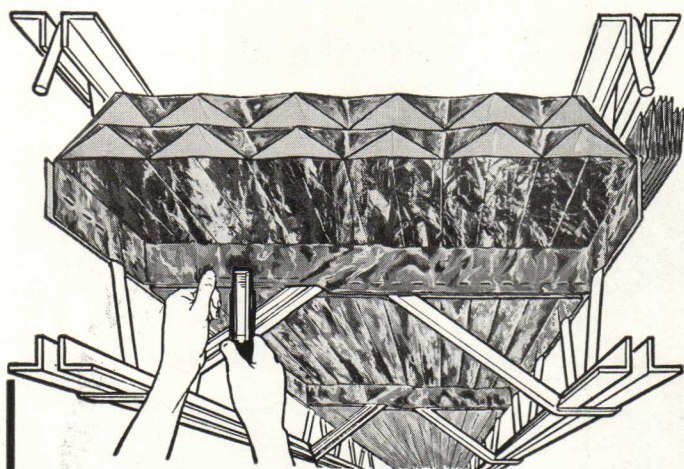
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Contrast this with the necessity of heating-up tons of steel and mass insulation (usually wet) which wastefully emit 90% heat on the cold side. In summer, iron, steel, mass insulations, and most building materials, continue to radiate uncomfortable heat into a room long after the outside air has cooled. Multiple accordion aluminum sheets not only are cool at night, but all through the hot summer day often maintain temperatures 10° to 20° cooler than the shade outside.

Insulation as described above is technically called Type 6 Infra.

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PROGRESS REPORT



21 ACRES is a group project entered into by 13 families, on 21 acres of rolling land adjacent to Ardsley, N. Y. Each house is on a site of 1½ acres, the final acre and a half being held in common for development for community purposes. In the group are a number of architects and designers—Roy S. Johnson and Stanley Torkelson, both of Edward D. Stone's office, Lionel Freedman, the architectural photographer, Fred M. Ginsbern, Martin Glaberson, and Irving Rubin—who formed a design team for the entire project.

They worked out a structural system, basically 3" x 6" posts supporting 3" x 8" rafters meeting on a solid ridge detail, over which 2" tongue and groove roof planking is laid. Posts are on a 4' module, and within this simple system infinite variation in the design of the houses has been found possible. Exterior walls consist of panels within the 4' module, which are filled with doors, windows, wall panels of Durisol, or combinations of these. Gable ends are generally covered with red cedar siding. No two houses are alike in plan or appearance and sizes range from a one bedroom arrangement to a rather large house which has two stories on the openhill side.

Completed costs of the houses average about \$10.00 a square foot. The group formed a corporation for the purpose of building and a great deal of the work has been done on a direct labor and material basis. Rough and finished carpentry is particularly excellent, and is credited by the architects in the group to workmen on the job who became interested in the project as a challenge to old-time craftsmanship.

After the construction process is finished there will be no co-operative aspects to the development other than maintenance and development of the common property; individual lots are privately owned.

PROGRESSIVE ARCHITECTURE will document this unusually successful venture in full detail later in the year, when all of the houses are finished.



Photos: Lionel Freedman: Pictor

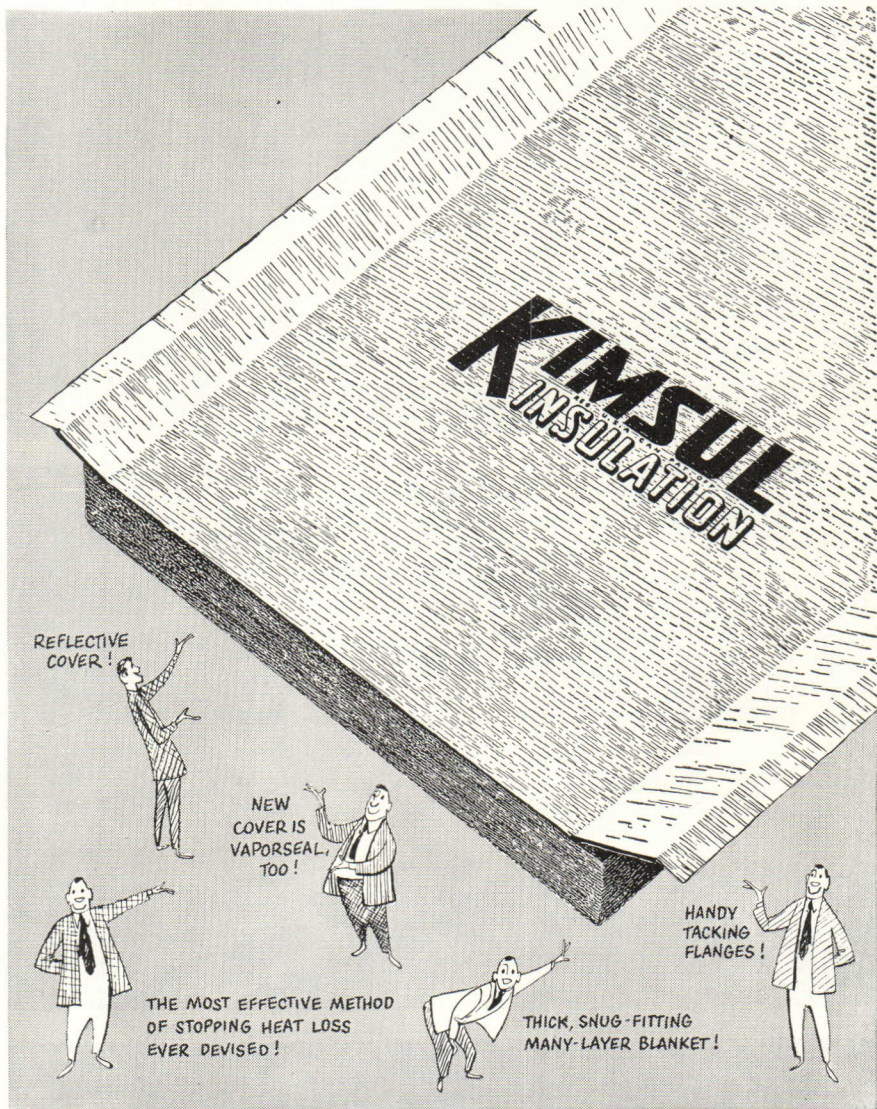
New Kimsul* reflects heat ...shuts out condensation!

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For further information on new Reflective KIMSUL Insulation, contact your KIMSUL Dealer, or see literature in Sweet's Architectural and Builder Catalogs, or write directly to Kimberly-Clark Corporation, Neenah, Wisconsin.



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KIMBERLY-CLARK CORPORATION, Neenah, Wisconsin



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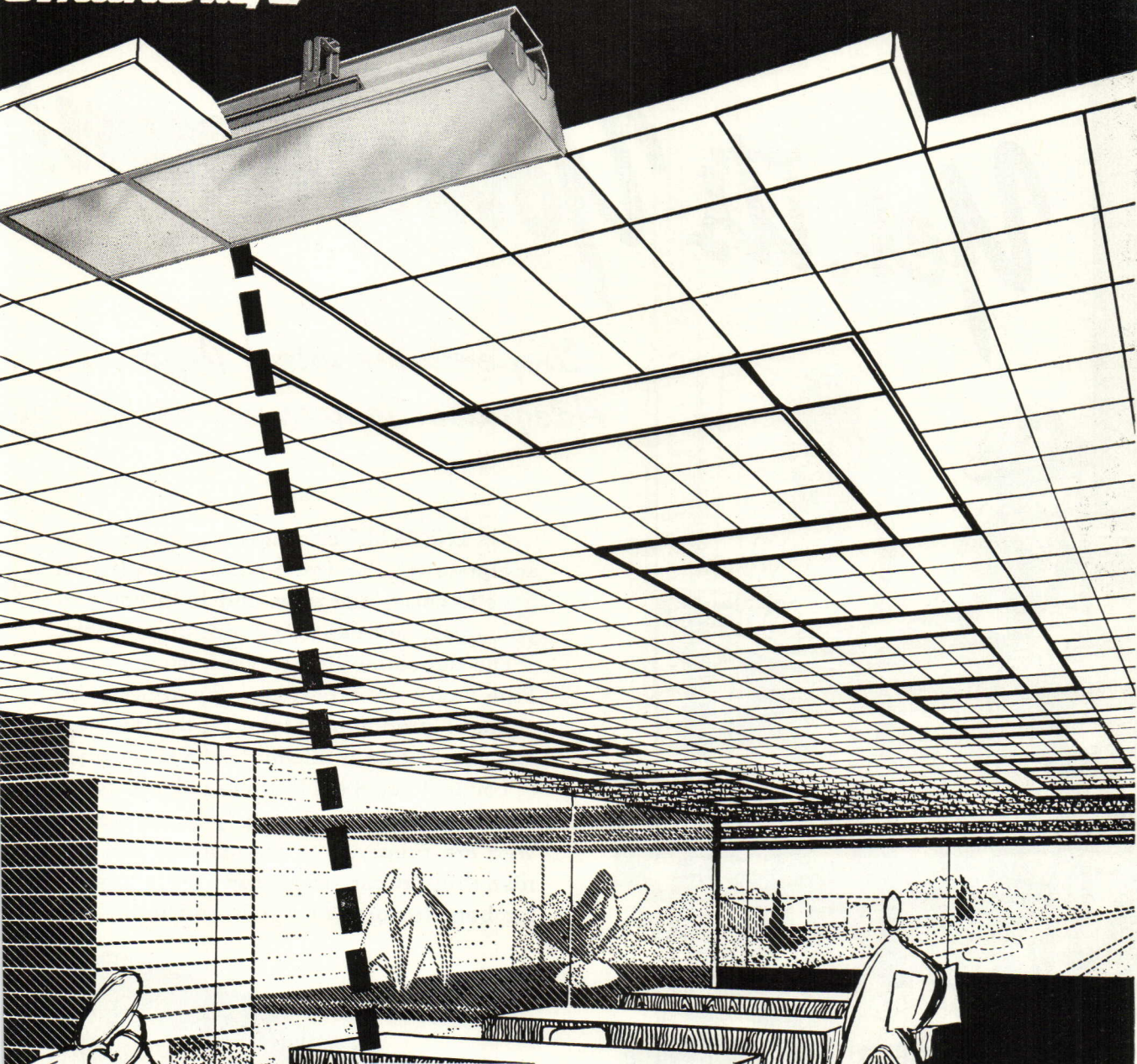
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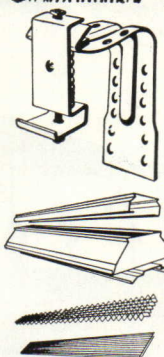


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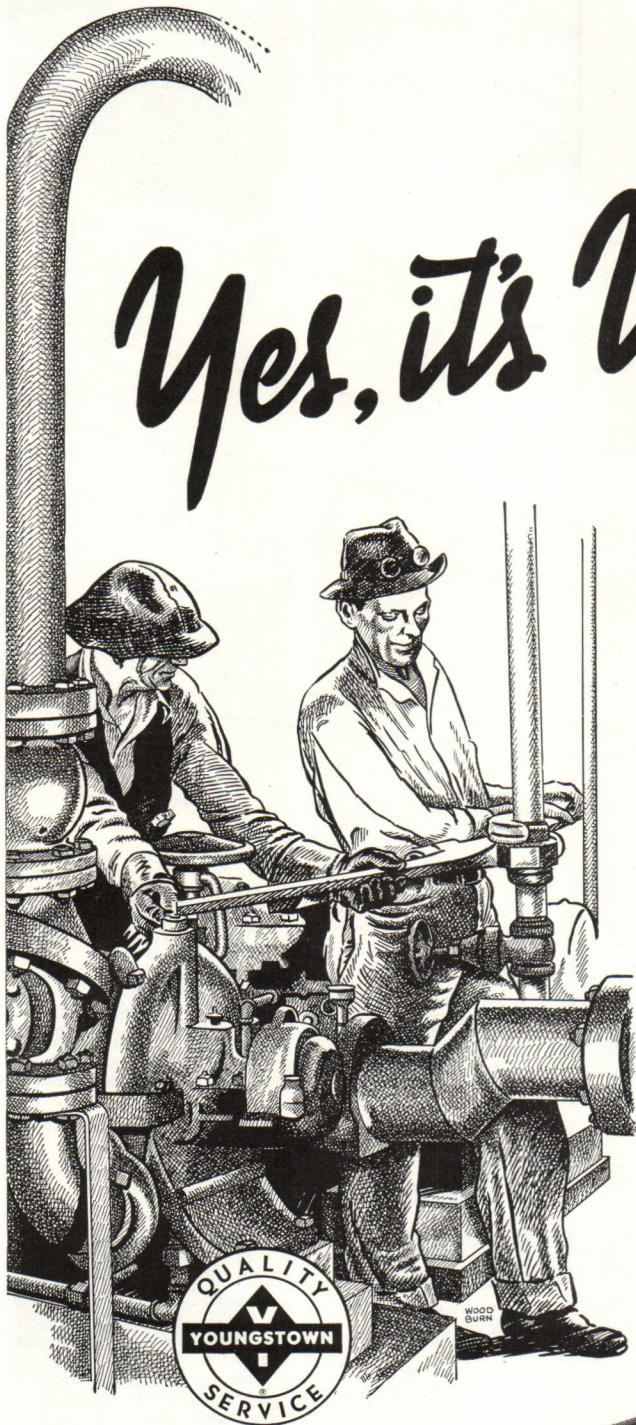
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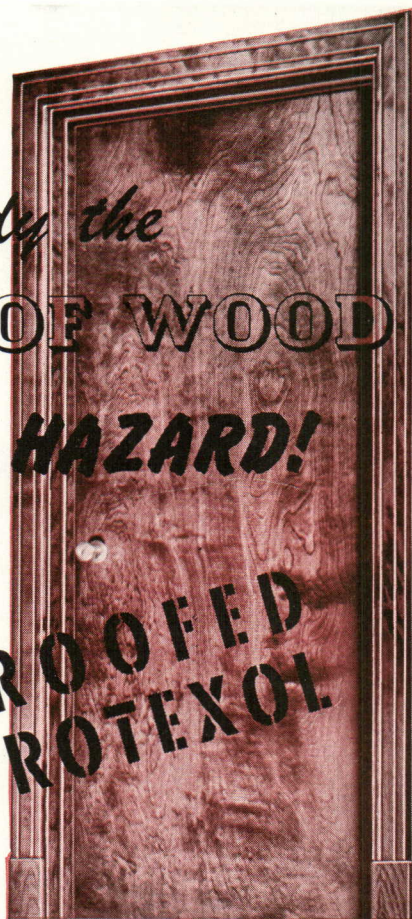
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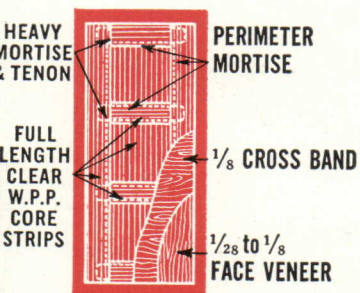
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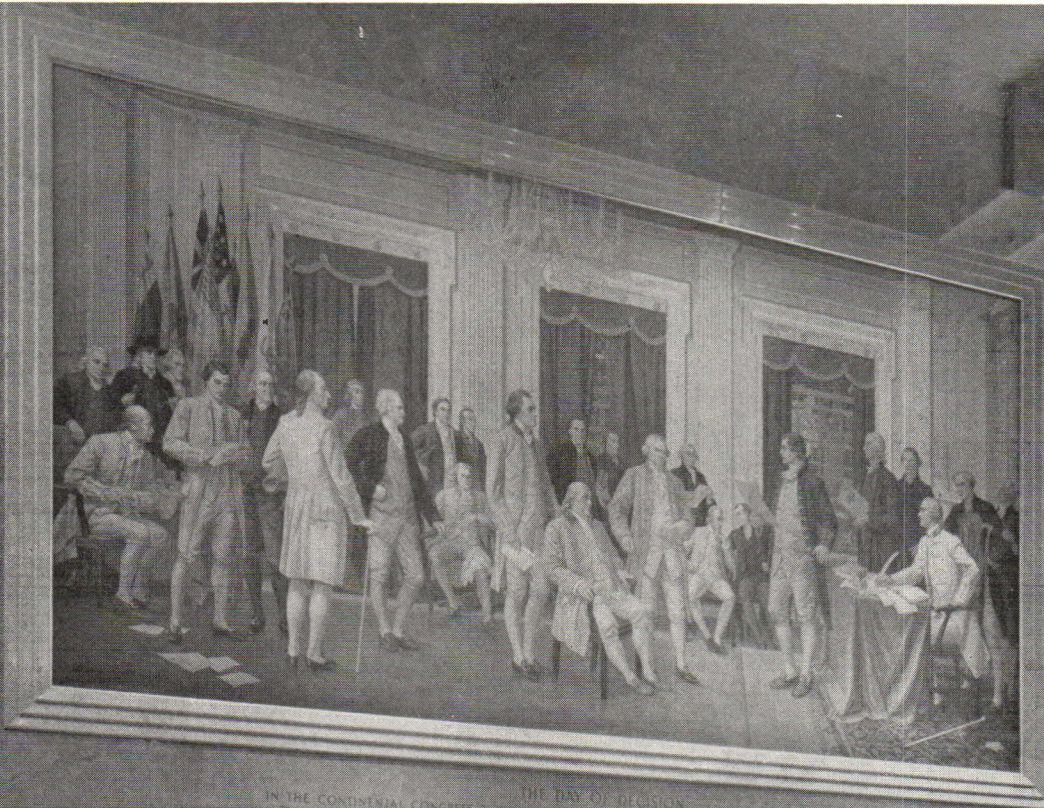
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A VARIETY OF FACINGS AVAILABLE in Kaylo Laminated Panels including: cement-asbestos, porcelain enamel, wood veneer, aluminum, steel, plastics, zinc-coated steel, stainless steel and Monel.

Kaylo core material is a remarkable chemical composition which is completely inorganic, incombustible, rot-proof and undamageable by water.

Other Kaylo products include: wood-faced and metal-faced firedoors; insulating roof tile, heat insulating block, and pipe insulation.

KAYLO[®]

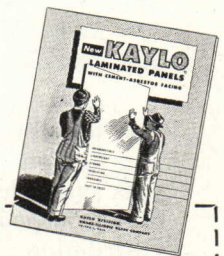
LAMINATED PANELS

OWENS-ILLINOIS GLASS COMPANY
Kaylo Division • Toledo 1, Ohio

SALES OFFICES:

Atlanta • Boston • Buffalo • Chicago • Cincinnati • Dallas • Minneapolis
New York • Philadelphia • Pittsburgh • St. Louis • Toledo • Washington

**SEND COUPON
FOR LITERATURE**



OWENS-ILLINOIS GLASS COMPANY
Kaylo Division, Dept. N-28, Toledo 1, Ohio

Gentlemen: Please send me literature on Kaylo Laminated Panels.

NAME.....

FIRM.....

ADDRESS.....

CITY..... STATE.....

Easiest way to Insulate Casements

...for comfort
and fuel savings



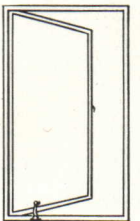
Here's comfort right up to the windows, even on cold days — for these Pella Casement Windows, made in Pella, Iowa, are self-insulated with *Thermopane*. Architects: Gerow and Conklin, Toledo.

● Home owners like the comfort and convenience of self-insulating windows. They enjoy freedom from bothering with storm sash spring and fall. *Thermopane** all through the house gives them what they want. It adds salability, creates long-lasting satisfaction with the home.

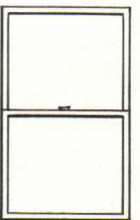
Fifteen companies now manufacture **aluminum** casement and double-hung windows to accommodate *Thermopane*. Ten manufacturers make casement and double-hung **steel** windows for *Thermopane*. Eight manufacturers have standard **wood** windows available in both double-hung and casement styles for *Thermopane*. Many local sash houses regularly fabricate to order double-hung and casement wood windows as well as framing for inexpensive window walls. Write for a list of *Thermopane* window manufacturers.

Thermopane is made in more than 80 standard sizes for all types of sash—wood and metal. Contact sash suppliers for information on types and sizes available. Write for a list of standard sizes of *Thermopane* units, or see your L·O·F Glass Distributor. *®

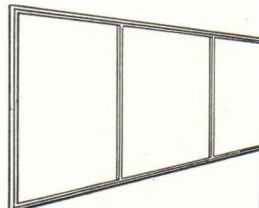
Casement windows — *Thermopane* is a simple answer to the problem of insulating them. The entire sash is operated at will because *Thermopane* is glazed into it.



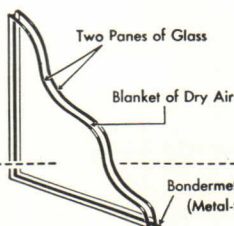
Double-hung windows — there are 28 standard-sized *Thermopane* units to fit the most commonly-used dimensions of this type of sash.



Window walls and picture windows — *Thermopane* units are available in sizes to fit standard wood, steel and aluminum picture windows.



FOR BETTER VISION SPECIFY **THERMOPANE**
MADE WITH POLISHED PLATE GLASS



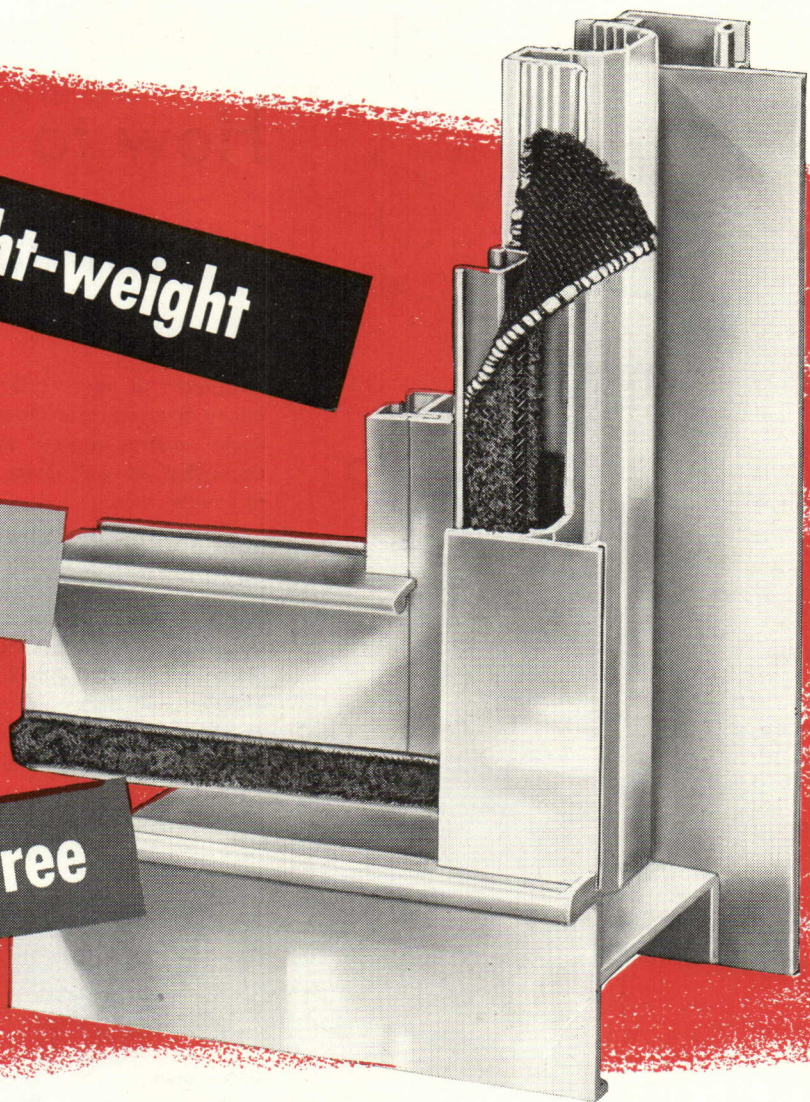
Thermopane

MADE ONLY BY **LIBBEY·OWENS·FORD GLASS COMPANY**
4745 Nicholas Building, Toledo 3, Ohio

light-weight

weather-tight

maintenance-free



Adlake aluminum windows are ideally suited to curtain wall construction

Although designed for a lifetime of service in *any* building, modern or traditional, Adlake Aluminum Windows are a "natural" for curtain wall installations. Built of lightweight aluminum, they do away with the cost of painting and maintenance, and keep their smart good looks and finger-tip control for the life of the building!

What's more, only Adlake Windows combine woven-pile weather stripping and serrated guides to assure minimum air infiltration. Adlake Windows never warp, swell, rot, rattle or stick, and installation is amazingly simple: *you can complete all exterior work first and then simply set the window in place!*

For complete information, please drop us a card today. Address The Adams & Westlake Company, 1103 N. Michigan, Elkhart, Indiana. No obligation, of course.



THE **Adams & Westlake** COMPANY — 

Established 1857 • ELKHART, INDIANA • New York • Chicago

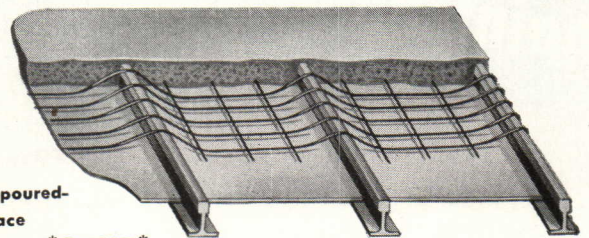


How to kill **3** birds with one stone . . .

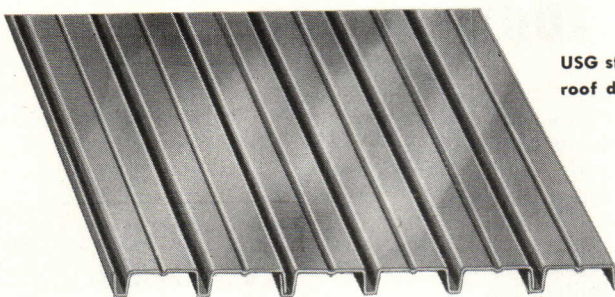
One letter or phone call will bring your U.S.G. representative out to give you complete information about **three** types of roof decks—poured-in-place gypsum, precast gypsum, and steel deck. His wide knowledge of roof deck requirements is always at your service.

If you have a specific problem, a U.S.G. engineer will gladly go over it with you, and come up with a dependable recommendation—one that's completely unbiased *because United States Gypsum offers all three types of roof decks.*

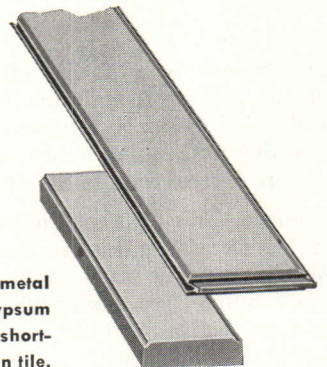
Whether your plans call for a pitched, flat or curved roof, there's a U.S.G. roof deck that fills your requirements best. All U.S.G. roof decks are incombustible, lightweight, strong, quickly installed and easy to maintain. Be *doubly* sure of your next roof deck—*consult* U.S.G. . . . *specify* USG.



USG poured-in-place SHEETROCK*-PYROFILL*



USG steel roof deck



USG precast metal edge gypsum plank and short-span tile.

*T. M. Reg. U. S. Pat. Off.



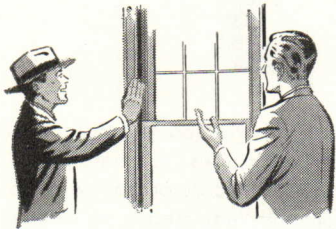
United States Gypsum

For Building • For Industry

Gypsum • Lime • Steel • Insulation • Roofing • Paint

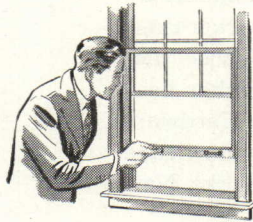


Why Silentite Windows ... make happy home owners!



WEATHER STAYS OUTSIDE

Patented "floating" weather-strips—exclusive Curtis-designed weather-stripping at head, meeting rail, and sill—*plus* the insulating value of a wood window. That's why Silentite windows are weather-tight—dust-tight. Wind infiltration is reduced to a minimum—comfort stays *in* while the weather stays *out*.



EASY YEAR-ROUND OPERATION

No tugging, no straining, to open a Silentite window. Silentite spring suspension keeps these windows operating easily through constant use. No rattling or banging either—and, of course, no weights, cords or pulleys. Curtis also makes Silentite in casement units.



MODERN BEAUTY IN 12 STYLES

Slender mullions—wide glass areas—beautiful Mitertite trim—these qualities put Silentite windows at the head of the beauty parade. Silentite windows are available in 12 sash styles—all economical because they are quickly installed. Silentite is a popular choice with women.

Curtis makes a complete line of architectural woodwork for the modern home. Make your next house "all Curtis."



Curtis Companies Service Bureau
PA-4S Curtis Building
Clinton, Iowa

Please send me book on *Silentite windows*, including casements.
I am architect contractor prospective home builder student.
(Please check above)

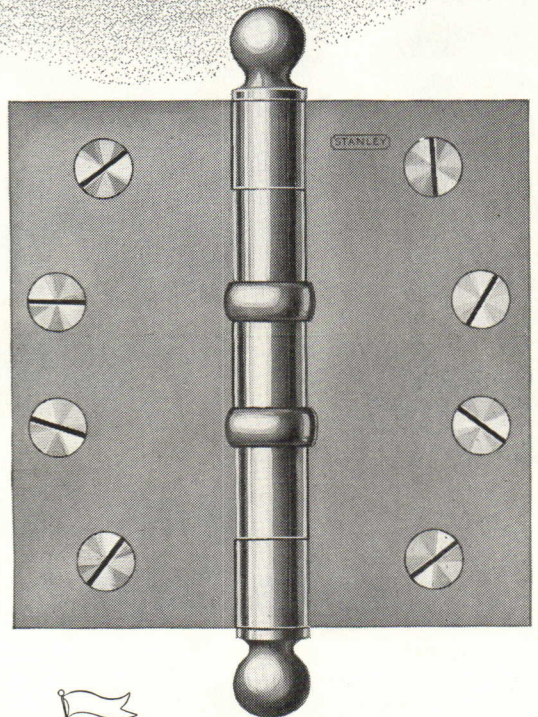
Name.....
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For Hinge-and-Door
teamwork...

specify **STANLEY**
TEMPLATE
BUTT
HINGES
for metal doors

Architects like the smooth operating efficiency and long life of Stanley Ball Bearing Template Hinges. Every Stanley Template Butt Hinge fits *exactly* the sinkage and screw hole location in both door and jamb made to U. S. Standard Template.

This hinge and door teamwork—made dependable by Stanley accuracy in manufacture—will save worker time, cut building costs, and assure the durable service that makes satisfied clients. Insist on butt hinges that bear the name Stanley. There is an architectural Hardware Consultant in your vicinity whose specialized knowledge and training is at your service. The Stanley Works, New Britain, Connecticut.



Specify Extra Heavy 4 Ball Bearing Template Butt Hinges. On heavy hollow metal doors or hollow metal doors with high frequency service.



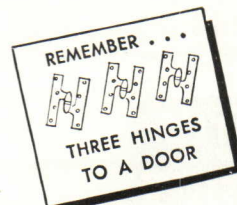
Specify 2 Ball Bearing Template Butt Hinges. For medium weight doors receiving average frequency service, BB174 Template shown here is recommended.



Stanley Template Butt Hinges are made in steel, brass, bronze, stainless steel, aluminum, and are exact in size and gauge of metal. Each hinge is stamped with the class number on the back.

STANLEY

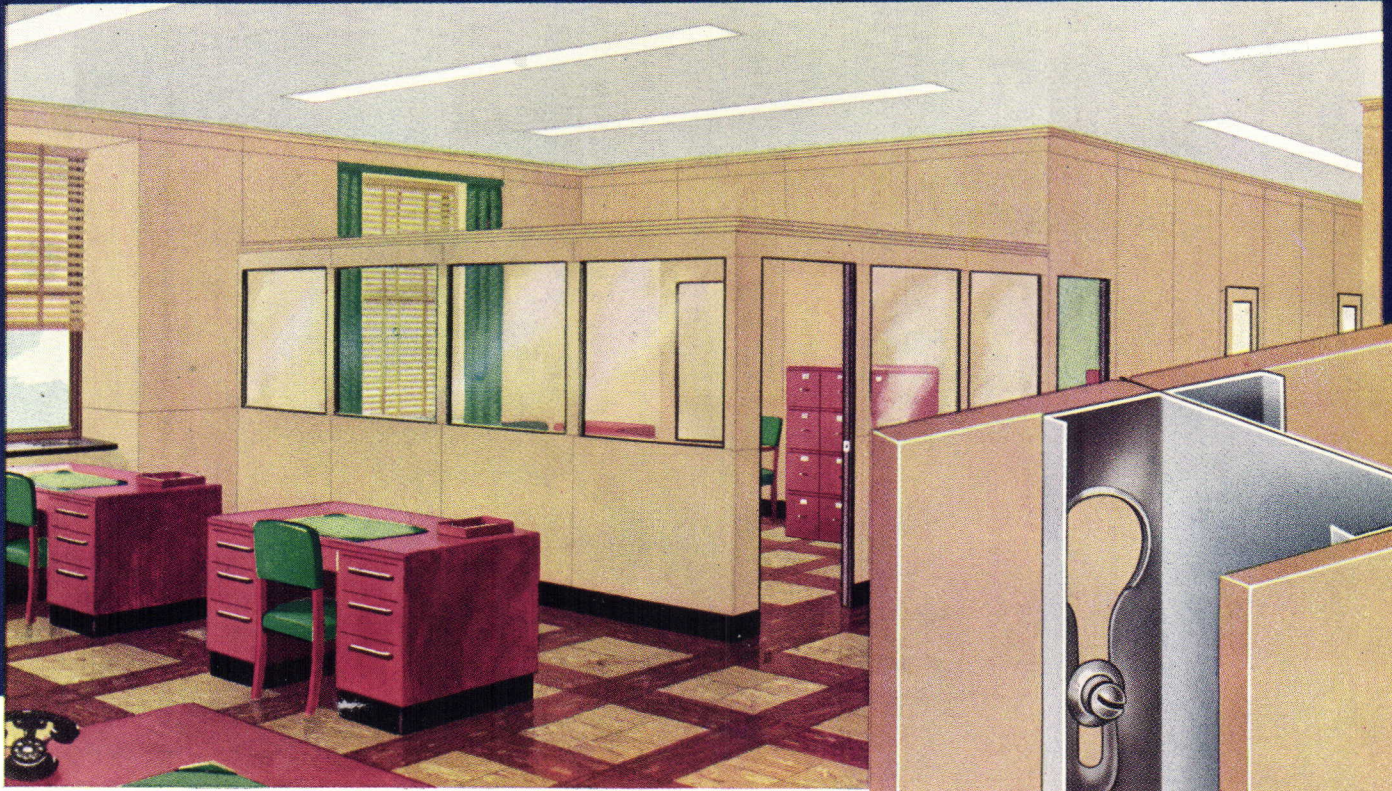
Reg. U. S. Pat. Off.



HARDWARE • TOOLS • ELECTRIC TOOLS • STEEL STRAPPING • STEEL

NOW! Asbestos Movable Walls

WITH THE PANELS "integrally colored"



NOTE HOW THE COLOR GOES ALL THE WAY THROUGH!

No paint to wear off, chip, or peel . . .

A totally new and important feature has been combined with the basic advantage of *flexibility* in J-M Movable Wall construction.

Johns-Manville scientists have perfected a process for introducing inorganic pigments throughout the asbestos panels used in J-M Movable Walls.

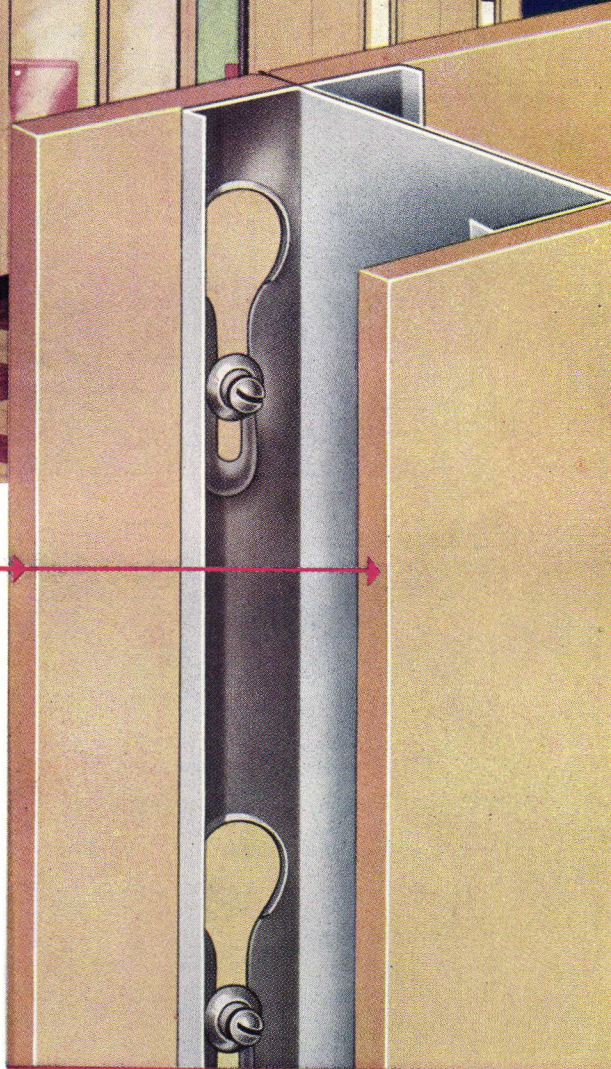
As a result, these beautifully-textured, fireproof panels are now "integrally colored" at the factory. That of course means the color is not a painted or baked-on surface coating; it is an *in-*

trinsic part of the structural material—goes *all the way through* each panel.

With no paint to wear off, chip, or peel, your walls will have that "first-day newness" *every day* for years and years to come!

By eliminating the cost of periodic painting and decorative treatment, the new Transitone Movable Walls will help you to meet your wall-and-partition requirements *economically*.

Transitone panels are hung on steel studs, forming a 4" double-faced partition. Also used as interior finish for the outside walls. Lighter than ever, they are readily installed or re-located. For details or an estimate, write Johns-Manville, Box 290, New York 16, N. Y.



Cutaway of J-M Movable Wall construction. The 7/16"-thick asbestos panels, on patented steel studding, are available in a light tan or light green. Note color is not a surface coating; it actually goes *all the way through* each panel.

Johns-Manville



Transitone

MOVABLE WALLS with asbestos panels colored all the way through





Insulux Prismatic Glass Block panels control daylight in new Augsburg College & Theological Seminary, Minneapolis. Architect: Lang & Raugland, J. A. Brunet and A. T. Lang Associates, Minneapolis, Minnesota.

important facts about Insulux Fenestration*

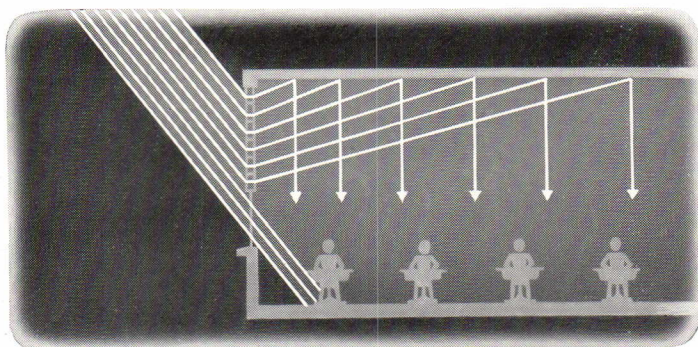
*Insulux Fenestration: Light-directing glass block above a clear glass vision strip.

THERE are many good reasons for specifying Insulux Fenestration for daylighting in school classrooms. Outstanding ones to jot down and remember:

- a. Prisms inside light-directing glass block bend the daylight up to the classroom ceiling which reflects it down onto the working surfaces.
- b. Because glass block directs the major portion of the light above the horizontal, its surface brightness is low, and shades over the panel are unnecessary.
- c. Light-directing glass block distributes daylight evenly and controls daylight illumination so that brightness ratios are low and seeing is made easy.
- d. Windows below light-directing glass block provide ample vision and ventilation.

Full information about light-directing glass block can be had by writing to the makers, American Structural Products Company, a subsidiary of Owens-Illinois Glass Company. Pioneers in daylighting, this company developed a light-directing glass block as early as 1937, and currently maintains a daylight research laboratory at the University of Michigan.

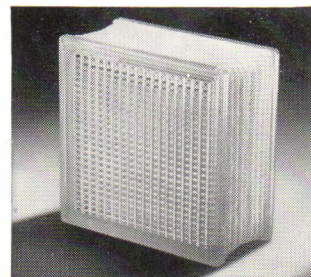
ADDRESS: American Structural Products Company
Dept. G-120, P.O. Box 1035, Toledo 1, Ohio



Drawing shows how Insulux light-directing glass block bends incoming daylight to ceiling from where it is reflected to children's work surfaces. Daylight distribution is more uniform; contrasts throughout the room are lowered. Since most of the daylight is directed upward, the panel has a low surface brightness, and shades are not required.

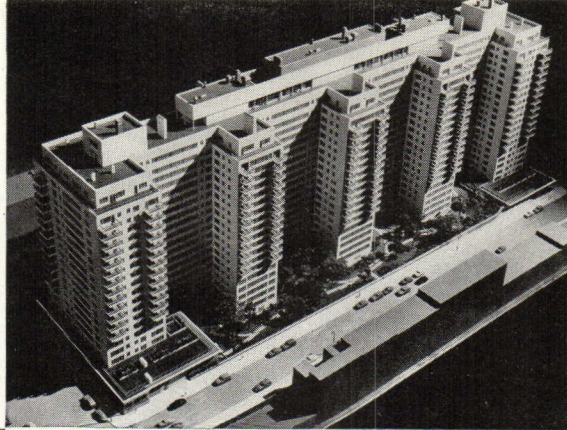


Photograph of light beam through Insulux light-directing glass block.



INSULUX
GLASS BLOCK®

STANWORTH, Princeton, N. J. (Below) comprises 23 one and two-story garden-type apartment buildings, designed to harmonize with surrounding fine private homes. *Architects:* Holden, McLaughlin and Assoc. *General Contractors:* Wm. L. Crow Const. Co. *Floor Contractors:* Builders' Wood Flooring Co.



MANHATTAN HOUSE, New York City
When completed in 1950, will contain 582 apartments in a 19-story and penthouse building occupying an entire block. *Associated Architects:* Mayer & Whittlesey—Skidmore, Owings & Merrill. *General Contractors:* Cauldwell-Wingate Co. *Floor Contractors:* Builders' Wood Flooring Co.

FRESH MEADOWS, Queens, Long Island
A modern residential community of 3,000 apartments in 138 two and three-story and two thirteen-story structures. *Architects:* Voorhees, Walker, Foley and Smith. *General Contractors:* George A. Fuller Co. *Floor Contractors:* Builders' Wood Flooring Co.



**In all three
New York Life
apartment
developments**

It's Bruce Block Hardwood Floors

The apartment developments of the New York Life Insurance Company, pictured above, vary widely in location, architecture, planning, size, and rental rates. But, in all three, ideas and materials have been used which provide beautiful, modern apartments for tenants and sound investment value for the owners.

Take the floors, for example. In Fresh Meadows, Stanworth, and Manhattan House, Bruce Blocks give rooms the natural, friendly quality of hardwood plus decorative modern design. These floors are beautiful and stylish, yet so homelike and livable. They are quiet and comfortable underfoot . . . and are easy to keep clean and shining at all times.

These solid hardwood floors are thrifty for owners because they last the life of the building. Even after many years of hard service, their original beauty can be restored by refinishing.

Found in 9 out of 10 largest apartment projects

Bruce Hardwood Blocks have been selected for 9 out of 10 of the nation's largest apartment developments owned and operated by insurance companies. Over 100,000,000 sq. ft. have been used in apartments, homes, offices, schools and stores from New York to California. This hardwood flooring is particularly adapted to modern construction because it can be laid in mastic directly over concrete, without wood subfloor or screeds.

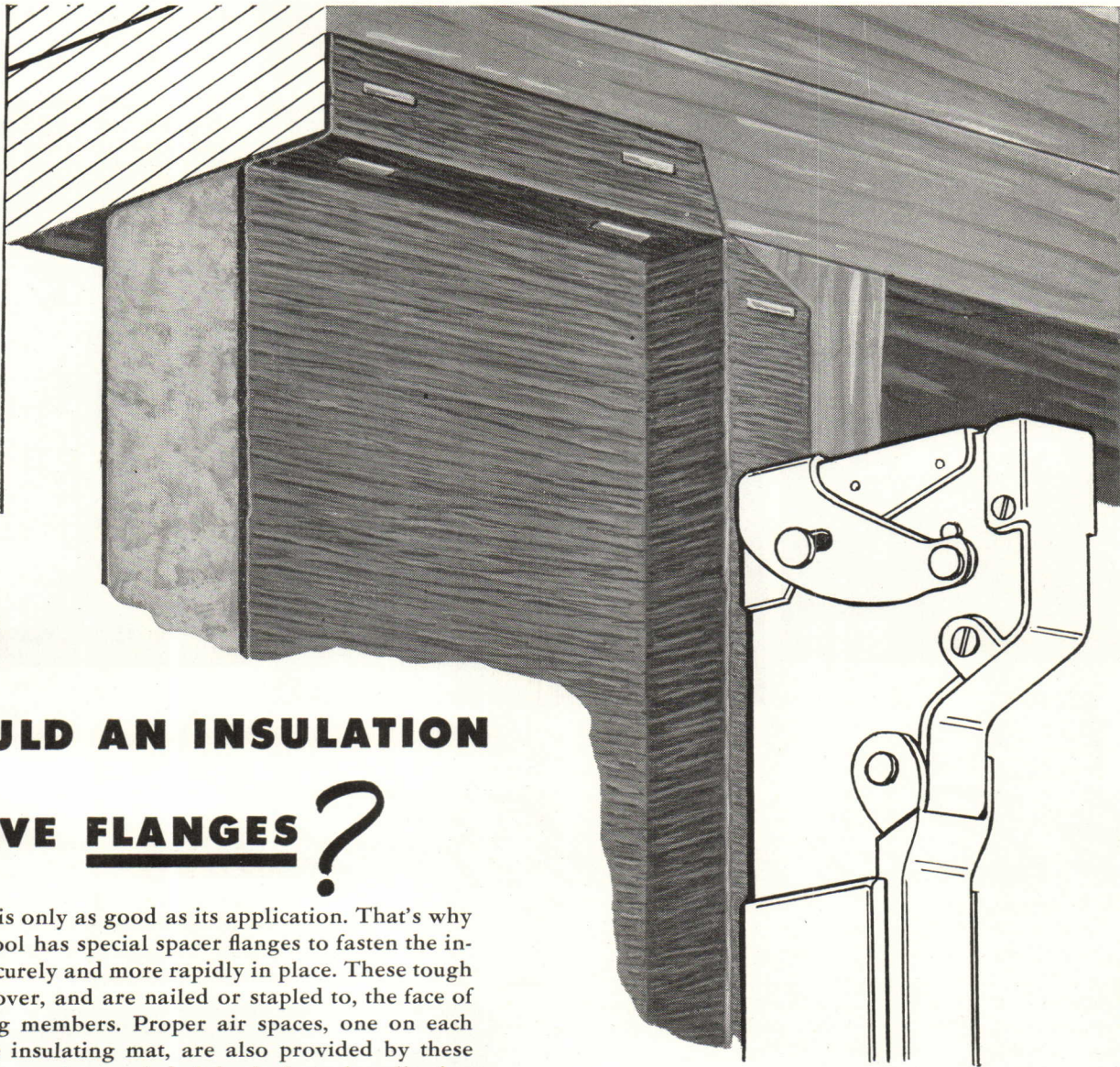
See our catalog in Sweet's Files, and write for new full-color literature on "Modern Hardwood Floors."

Bruce Block Hardwood Floors



PRODUCT OF E. L. BRUCE CO., MEMPHIS 1, TENN.
World's Largest Maker of Hardwood Floors





**WHY
SHOULD AN INSULATION
HAVE FLANGES ?**

Insulation is only as good as its application. That's why Balsam-Wool has special spacer flanges to fasten the insulation securely and more rapidly in place. These tough flanges fit over, and are nailed or stapled to, the face of the framing members. Proper air spaces, one on each side of the insulating mat, are also provided by these flanges. The result: a sealed, tight, foolproof application for maximum Balsam-Wool insulating efficiency!

Balsam-Wool, the completely *sealed* insulation, constantly adds latest scientific developments to its own time-tested features . . . combining practical "on-the-job" experience with laboratory research. The ever-increasing popularity of Balsam-Wool as the *complete* insulation results from these advantages to you and your clients:

You'll want to specify Balsam-Wool on your next job . . . for it's the insulation that stays put for life. Send today for your complete set of Balsam-Wool Data Sheets in A.I.A. folder.



- **Continuous, Integral Vapor Barrier**
- **Sturdy Wind Barriers**
- **Double Air Spaces**
- **Special Spacer Flanges**
- **Rot and Termite Treatment**
- **Highly Fire Retardant**
- **Rigid Quality Control**

32 Data Sheets provide hard-to-get facts on insulation application problems . . . mail the coupon now!

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SEALED INSULATION

BALSAM-WOOL • Products of Weyerhaeuser • NU-WOOD*

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Wood Conversion Company
Dept. 117-40, First National Bank Building
St. Paul 1, Minnesota

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Distinctive Design

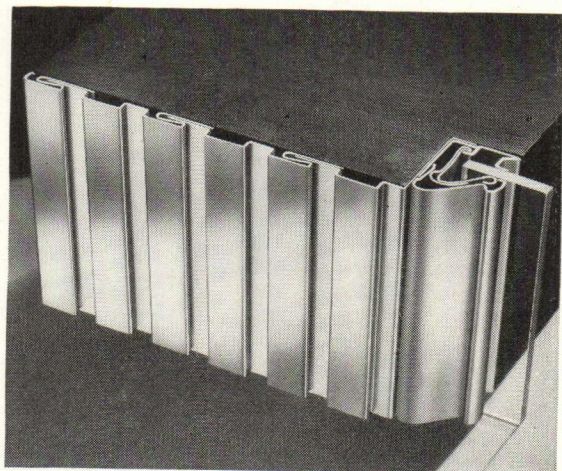
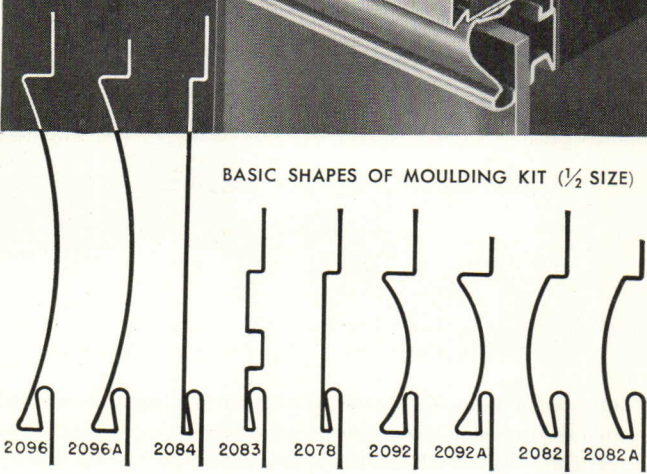
WITH THE NEW

Pittco Premier Moulding Kit

• Most of the basic mouldings in the new Pittco Premier Moulding Kit are interchangeable, and may be combined, both horizontally and vertically, in a wide range of attractive patterns. Thus, an architect can give a distinctively different appearance to each of several adjacent store fronts through the selection and arrangement of a variety of mouldings.

The transom bar and jamb shown here illustrate two of the many moulding combinations possible with the new Pittco Premier Moulding Kit. Its basic shapes are detailed below, at left.

This versatile Moulding Kit introduces fresh style and beauty into the field of Store Front design . . . another result of "Pittsburgh's" constant research to be first with the solution to architectural and building problems encountered in the field.



PITTCO STORE FRONT METAL

PAINTS • GLASS • CHEMICALS • BRUSHES • PLASTICS

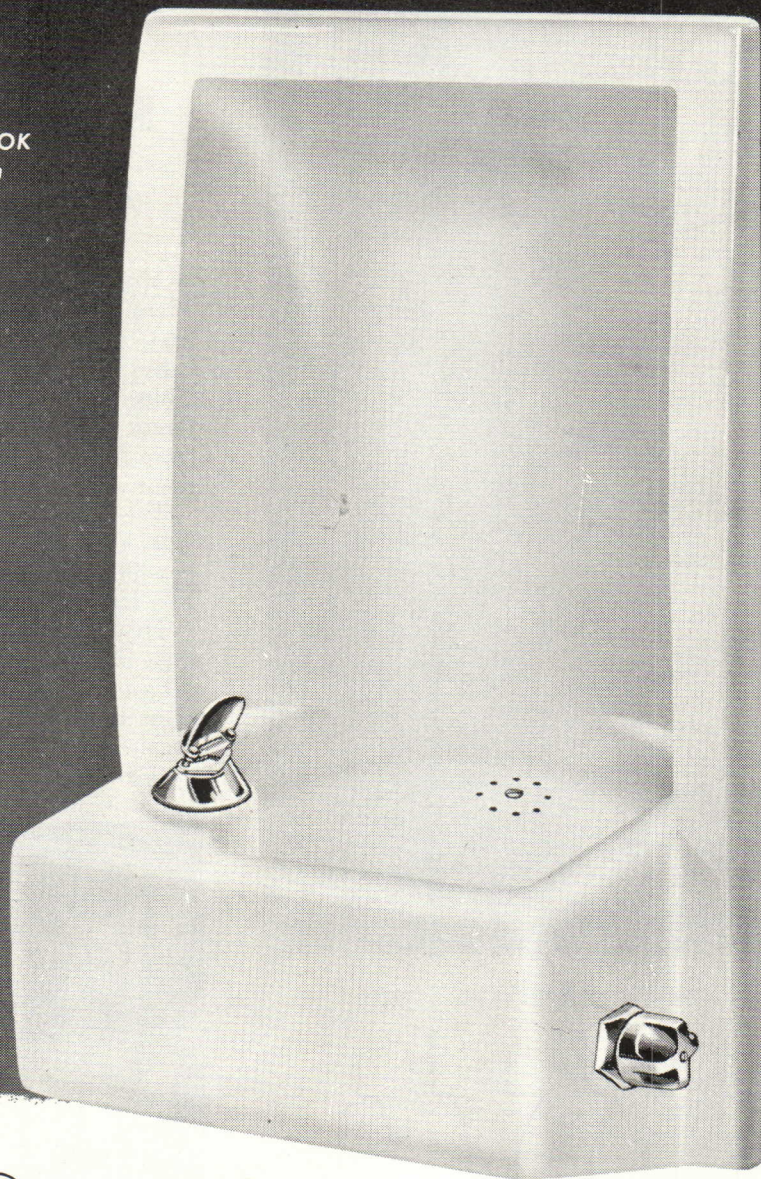


PITTSBURGH PLATE GLASS COMPANY

CRANE

the preferred school plumbing

CRANE COOLBROOK
Drinking Fountain



One of a complete new quality line ideal for school installations. Removable cover plate for easy access . . . bright vitreous china for quick cleaning . . . durability to withstand years of tough school usage. For everything in school plumbing, consult your Crane Branch or Crane Wholesaler.

CRANE

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PLUMBING AND HEATING
VALVES • FITTINGS • PIPE

Seamless smooth asbestos lined steel reinforced

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

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

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

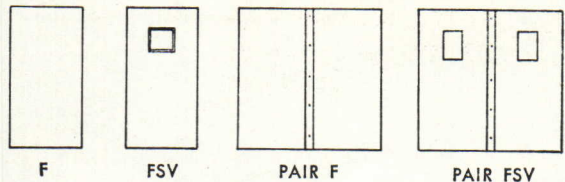
Ask for details.

THE

Richmond
FIREPROOF
DOOR CO.

ELIGIBLE
TO BEAR CLASS
"B" "C" "D" and "E"
LABELS
UNDERWRITERS'
LABORATORIES

RICHMOND
Flush kalamein door



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THE RICHMOND FIREPROOF DOOR COMPANY
DEPT. PA4 RICHMOND, INDIANA

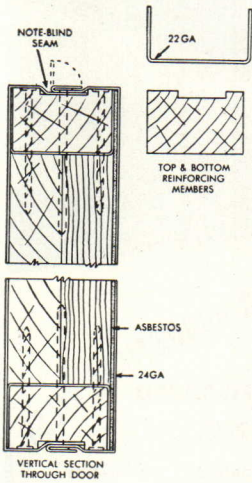
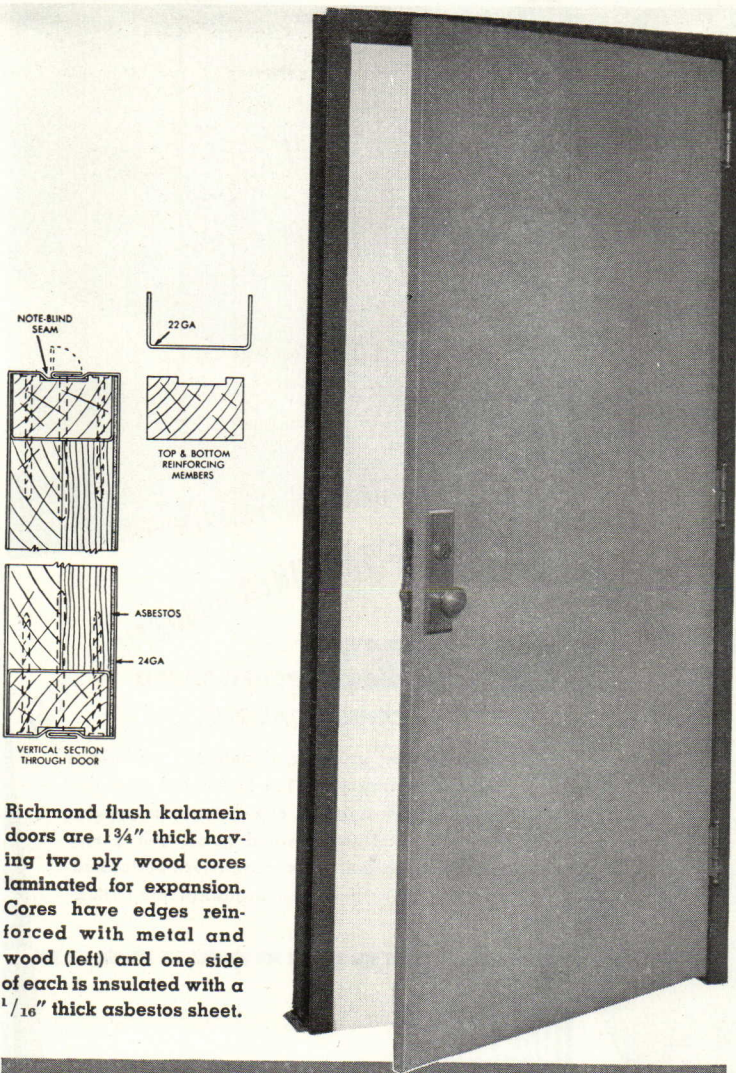
Gentlemen: Please send service sheet R1 containing complete information and specification, Richmond flush kalamein doors.

Name

Company

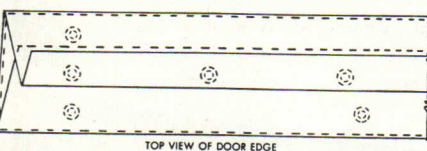
Address

City..... State.....



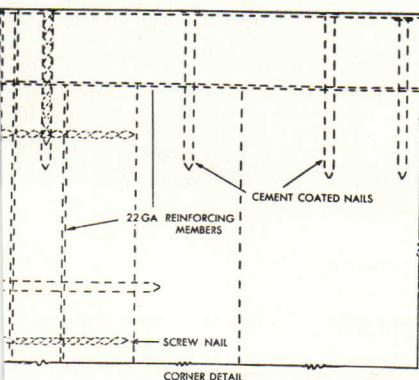
Richmond flush kalamein doors are 1 3/4" thick having two ply wood cores laminated for expansion. Cores have edges reinforced with metal and wood (left) and one side of each is insulated with a 1/16" thick asbestos sheet.

DETAILS explain quality

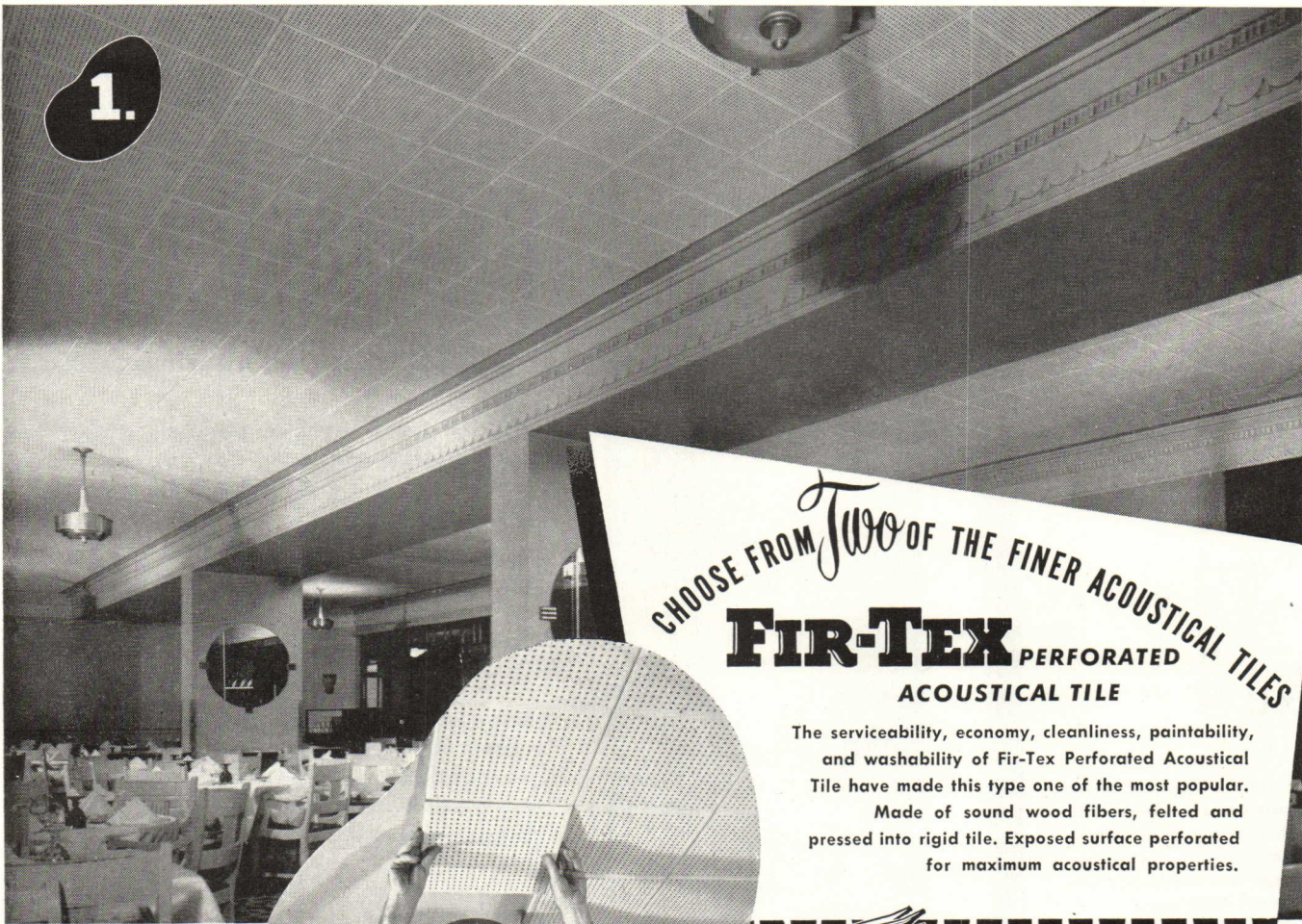


NO SEAMS - All seams in the metal covering of Richmond flush kalamein doors are in the center of the door edges and are thoroughly filled with solder and ground smooth. All doors are prepared at the factory to receive hardware. That is - all necessary reinforcing, mortising, drilling and tapping for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

NO WAVES • NO BUCKLES
Cores are covered inside and out with 24 gauge galvanized steel glued under enormous pressure to insure flat surfaces free from buckles and waves.



1.



CHOOSE FROM *Two* OF THE FINER ACOUSTICAL TILES
FIR-TEX PERFORATED
ACOUSTICAL TILE

The serviceability, economy, cleanliness, paintability, and washability of Fir-Tex Perforated Acoustical Tile have made this type one of the most popular. Made of sound wood fibers, felted and pressed into rigid tile. Exposed surface perforated for maximum acoustical properties.

2.



INCOMBUSTIBLE
ACOUSTICAL TILE

For sheer beauty, Dantore tile can be put at the top of the list. Its fissured travertined surface provides character and distinction as well as unexcelled acoustical properties. Being incombustible, Dantore tile is ideal for use in such public institutions and buildings as hospitals, schools, hotels, theatres, restaurants.

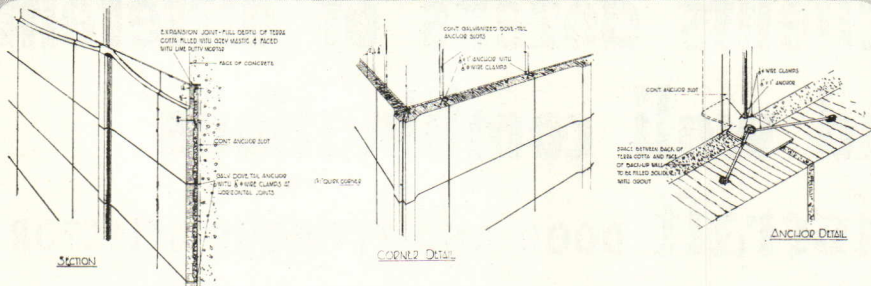
DANT & RUSSELL SALES CO., 8 South Michigan Ave., Chicago, Ill.

Gentlemen:

Please send me name of nearest applicator-distributor.

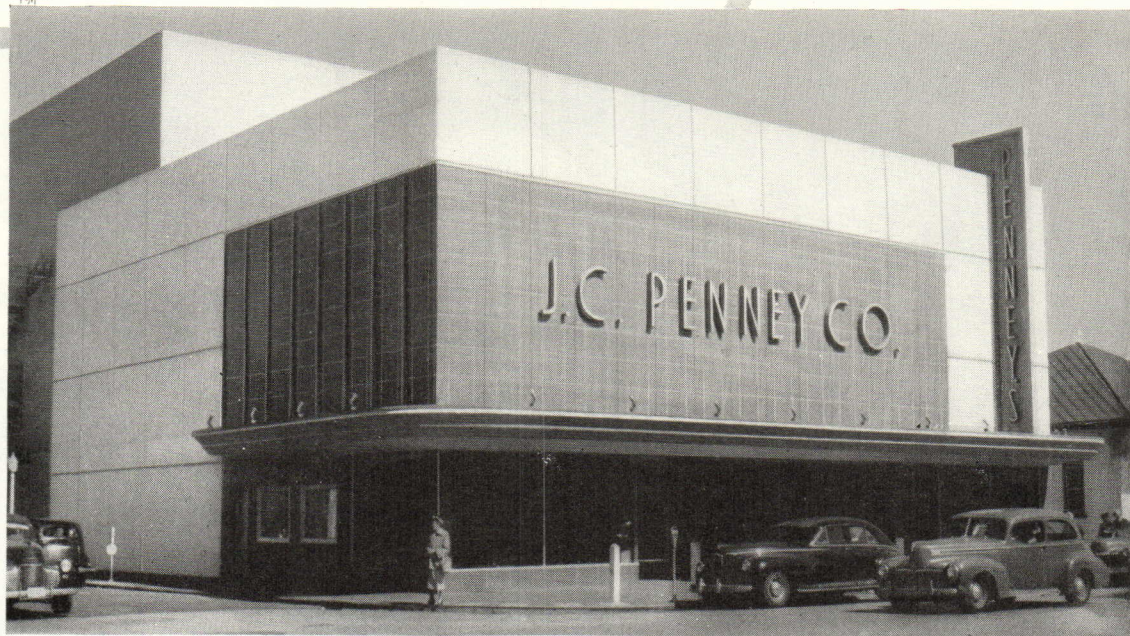
Name _____

Street No. _____ City _____ State _____



J. C. PENNEY CO. STORE
 Clearwater, Florida
 Roy W. Wakeling—*Architect*
 R. M. Thompson Co.—*Builders*

*Striking example of today's
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 Ashlar Architectural Terra
 Cotta. Color is sea green,
 in units 24" x 24".*



You enjoy complete creative freedom

when you design with

ENDURO-ASHLAR ARCHITECTURAL TERRA COTTA

You can achieve any desired effect with Enduro-Ashlar Architectural Terra Cotta, for it possesses remarkable plasticity of form, color and texture. This time-proved terra-cotta is tailor-made to meet your most exacting requirements—severe surfaces or decorative sculpture, brilliant colors or delicate tints, individual units large or small. This explains why more and more architects are specifying Enduro-Ashlar Architectural Terra Cotta to highlight the modern motif in architecture—for mercantile, industrial and monumental construction, and for modernization. Besides providing maximum appearance, it assures minimum maintenance . . . its original richness and beauty can be retained indefinitely by simple soap and water washings.

Construction detail, data, color samples, estimates, advice on preliminary sketches, will be furnished promptly without charge. Send your inquiry today.

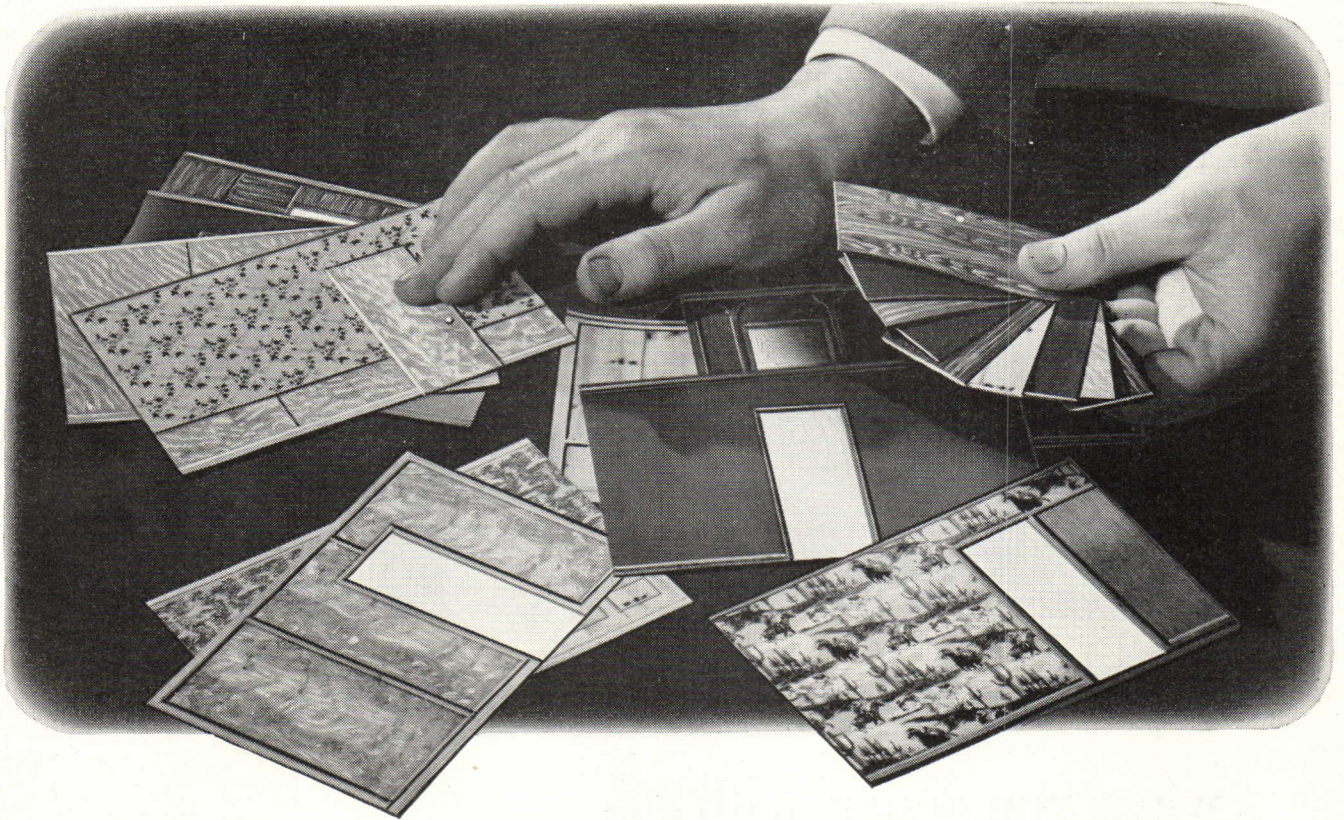
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 PLANTS AT PERTH AMBOY AND SOUTH AMBOY, N. J.

Show your clients dozens of different door and wall combinations

WITH THE **Roddiscraft** DOOR AND PLYWOOD SELECTOR



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Hari Van Hoefen, Architect

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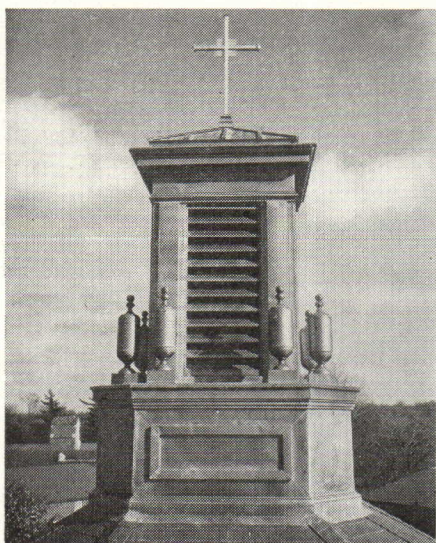
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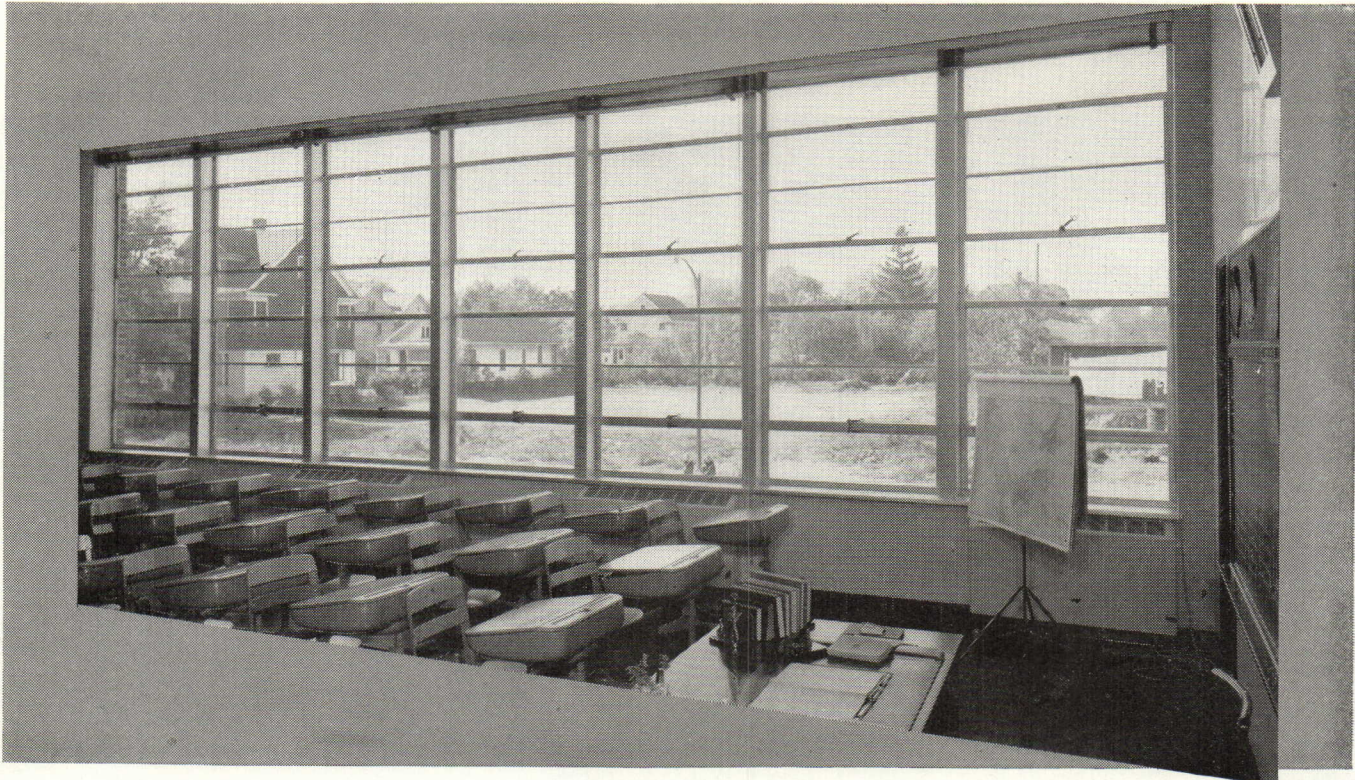
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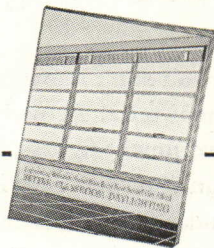
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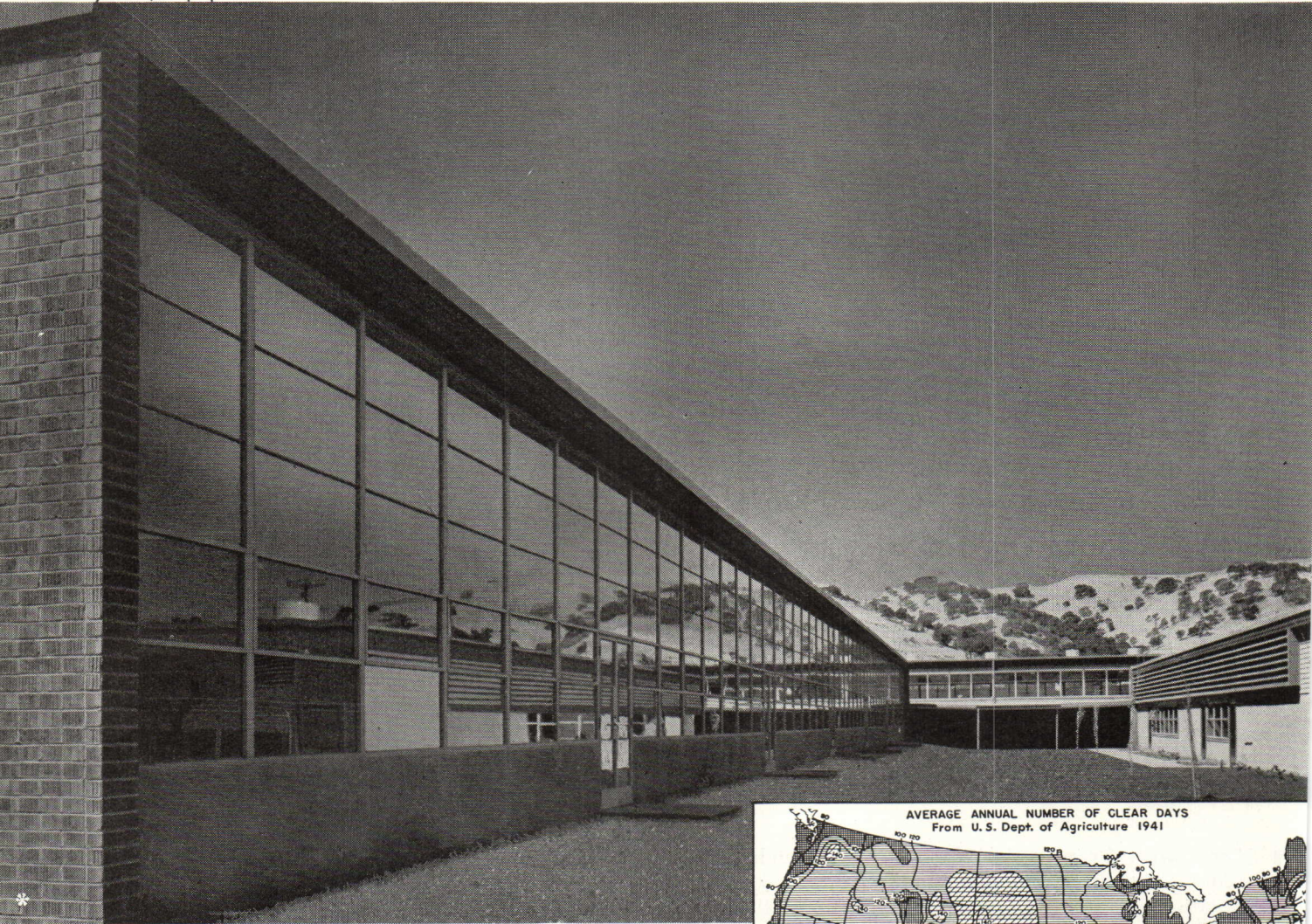
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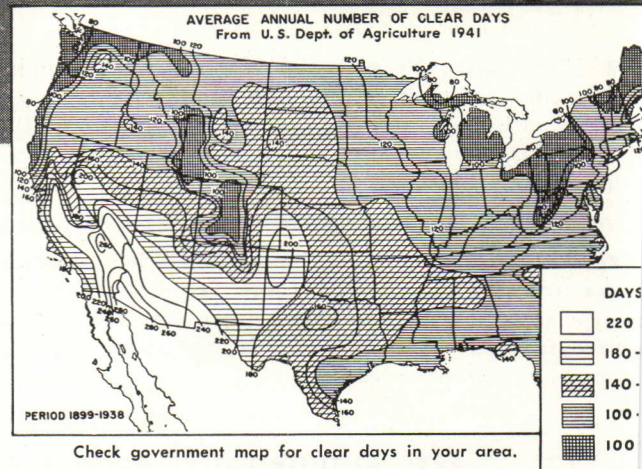
The Sun Hides on Most School Days...but...

Montecito School, Martinez, Calif.



Ceco Steel Windows provide *plenty* of daylight for Good Vision

Maybe you don't know how elusive old Sol can be during the school term. Actually, he hides most of the time. So say government figures. In 90% of the country, there are less than 130 clear days in a whole year when you deduct weekends. Then subtract 90 summer days and it's easy to see most school days are overcast. Therefore, it's most important in providing light for schools to use a window that admits the most daylight. Here, Ceco Steel Windows



Check government map for clear days in your area.

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*Bamberger & Reid, architects. Roger Sturtevant Photo.

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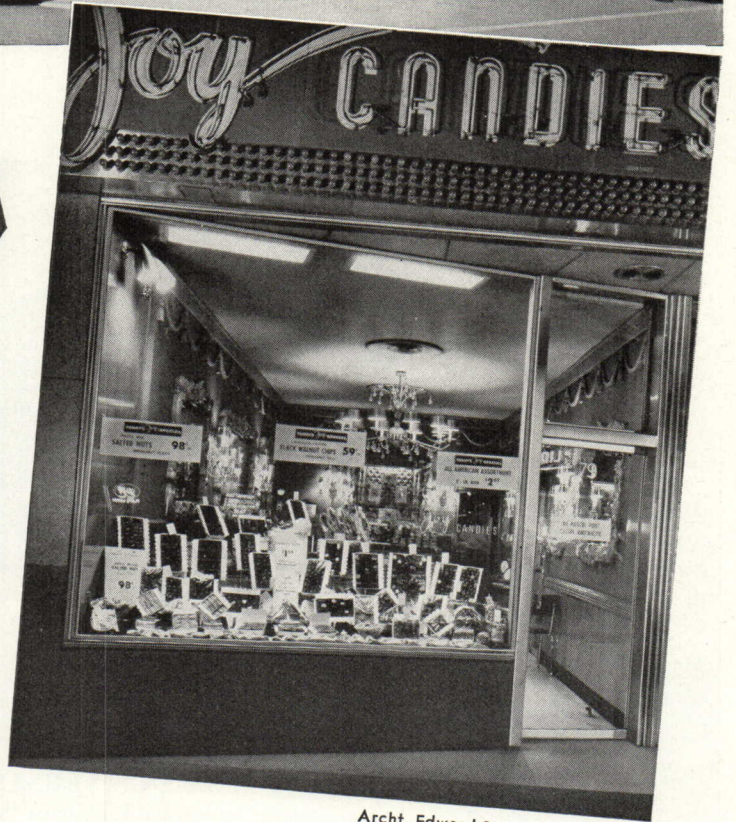
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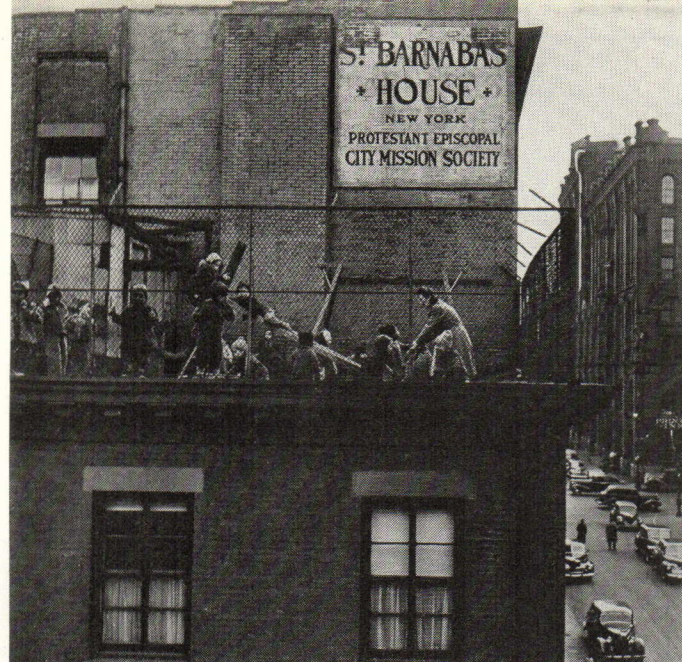
DESIGN VERSATILITY—The field of the ceiling consists of 32 in. square louver or “egg-crate” grids with 3 in. cells. Units are of treated aluminum having low surface brightness. You can use specially colored units for accent as shown above . . . you can introduce spot lights for high attention to floor displays as shown at the left . . . you can form patterns with solid modular units in aluminum color or contrasting shade . . . luminous corrugated modular units may be used . . . any Flexi-Module units may be used in endless combinations with conventional opaque ceiling materials.

FLEXI-MODULE LIGHTING—Many variations are easily obtained in both **QUALITY** and **QUANTITY** of light by choice of the number and color of the fluorescent light sources. The light of the sky is simulated without awareness of the ceiling source of the illumination. Don't forget, too, that for unbroken ceiling planes all piping and unsightly service lines are hidden above the suspended Flexi-Module surface.

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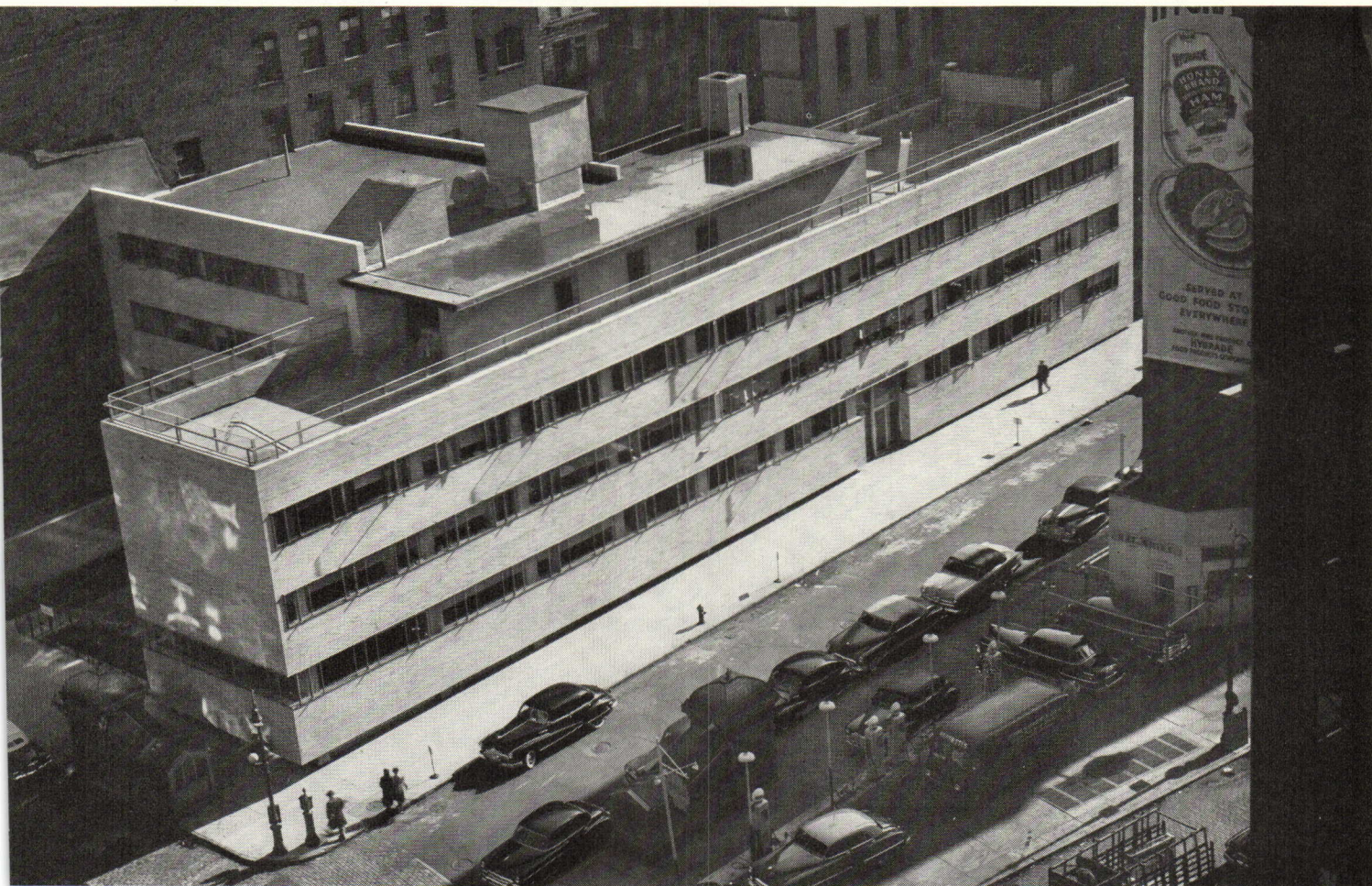
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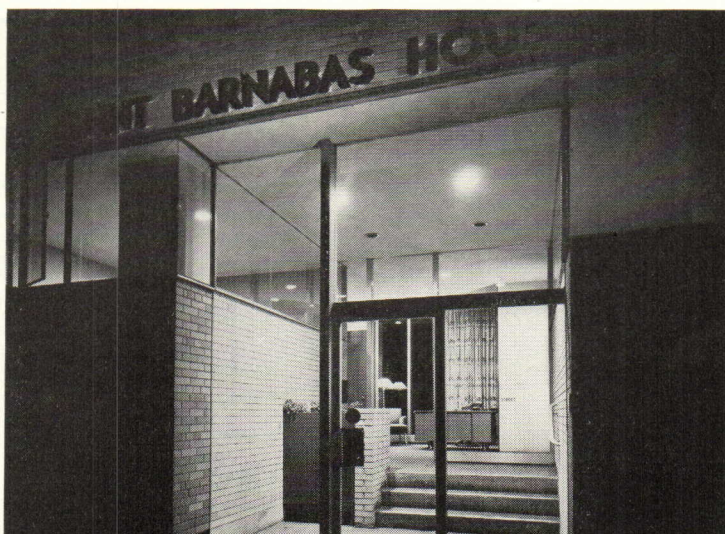


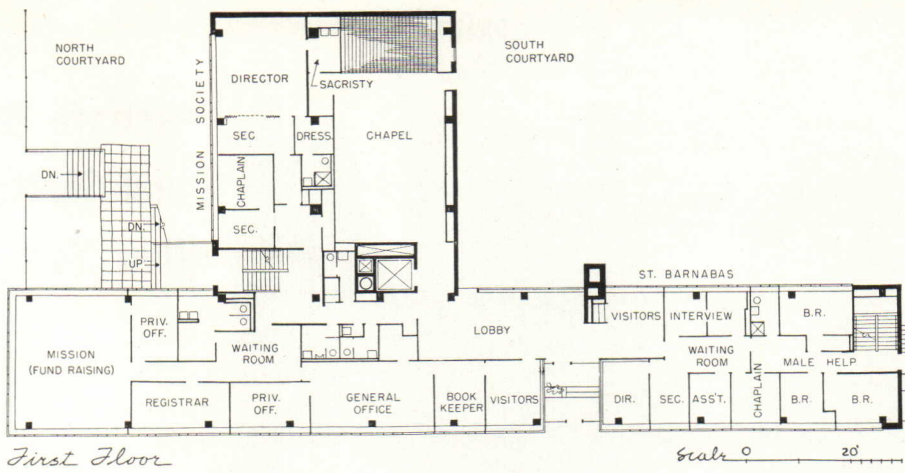
Welfare Offices and Shelter: New York, N. Y.

KETCHUM, GINA & SHARP, ARCHITECTS

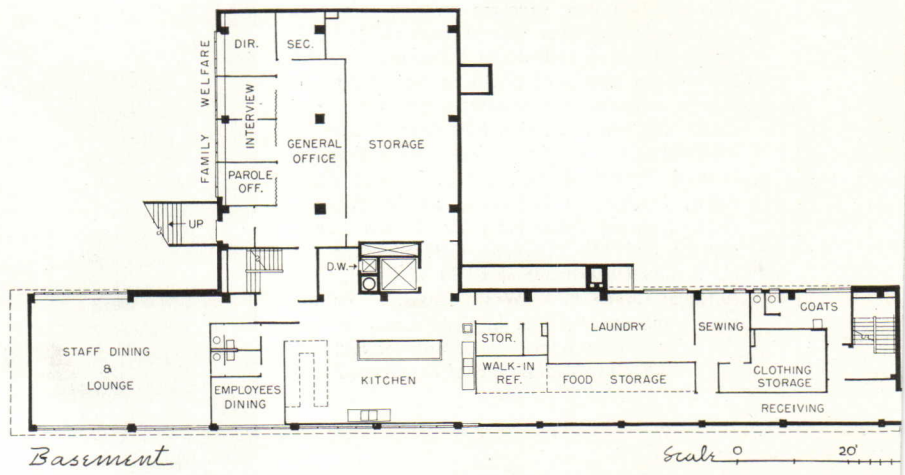


This splendid new structure offering refuge to temporarily homeless women and children replaces several wretched old buildings, of which the rooftop play yard photo at top of page is a grim reminder. The architects ask that special credit be given to the following: Robert D. McKinnon, Jr., Design Project Chief; Fred N. Severud, Structural Engineer; V. Falotico Associates, Mechanical Engineers; Stanley McCandless, Lighting Consultant; Dr. Leonia Baumgartner and Miss Cornelia Goldsmith (of the N. Y. City Department of Child Welfare), Consultants; Canon E. F. West, consultant on the chapel interior. William L. Crow Company was the general contractor. *Old photo: Pix, Inc. All other photos: Lionel Freedman-Pictor*





First Floor

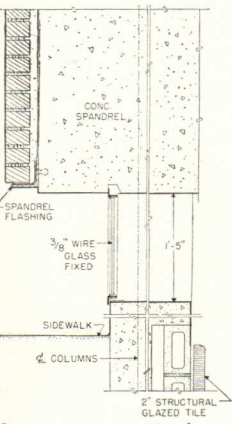


Basement

program: Replacement of old and obsolescent buildings of Saint Barnabas House with a new headquarters for the New York Protestant Episcopal Mission Society; complete facilities for a shelter for homeless women and children of every race and creed, one of the Society's important activities (the Society conducts many others all over the City of New York; summer camps for children, etc.); a family-welfare department; a chapel. The architects describe the chief function of Saint Barnabas House as "giving temporary shelter to homeless children—survivors of the daily fires, automobile crashes, desertions, and other drastic occurrences in which their parents have become involved"; it also offers refuge for women guests—17 expectant mothers and 8 older women—going through difficult situations.

site: Corner of Mulberry and Bleecker Streets, in the heart of the Bowery, the site of the old buildings the new structure replaces.

solution: A multi-story, fireproof structure, arranged in a T-shape plan, the entrance and main living quarters for the homeless women and children (as well as for the staff) occupying the streetfront crossbar of the T; the rear extension dividing the property into north and south courts. From the north court, direct access is provided for the Mission Society offices (rear and left-hand portion of first floor) and the Family Welfare offices (rear of basement floor which, due to excavation for this courtyard, is largely above grade). General organization of the building is as follows: Basement—delivery and storage, laundry and main kitchen (which, via dumbwaiter, serves all floors), and offices for the family-welfare activities; Ground Floor—main entrance, lounge, interviewing, fund-raising offices, chaplain's offices (for both the Mission Society and for the shelter), and the chapel; Second Floor—women's floor (elderly women in rear wing; unwed, expectant mothers in forward portion of floor); Third Floor—school-age (6-11) boys and girls; Top Floor—pre-school-age (up to 5) children, nursery, play porch, and roof deck.



Section of Setback at Base

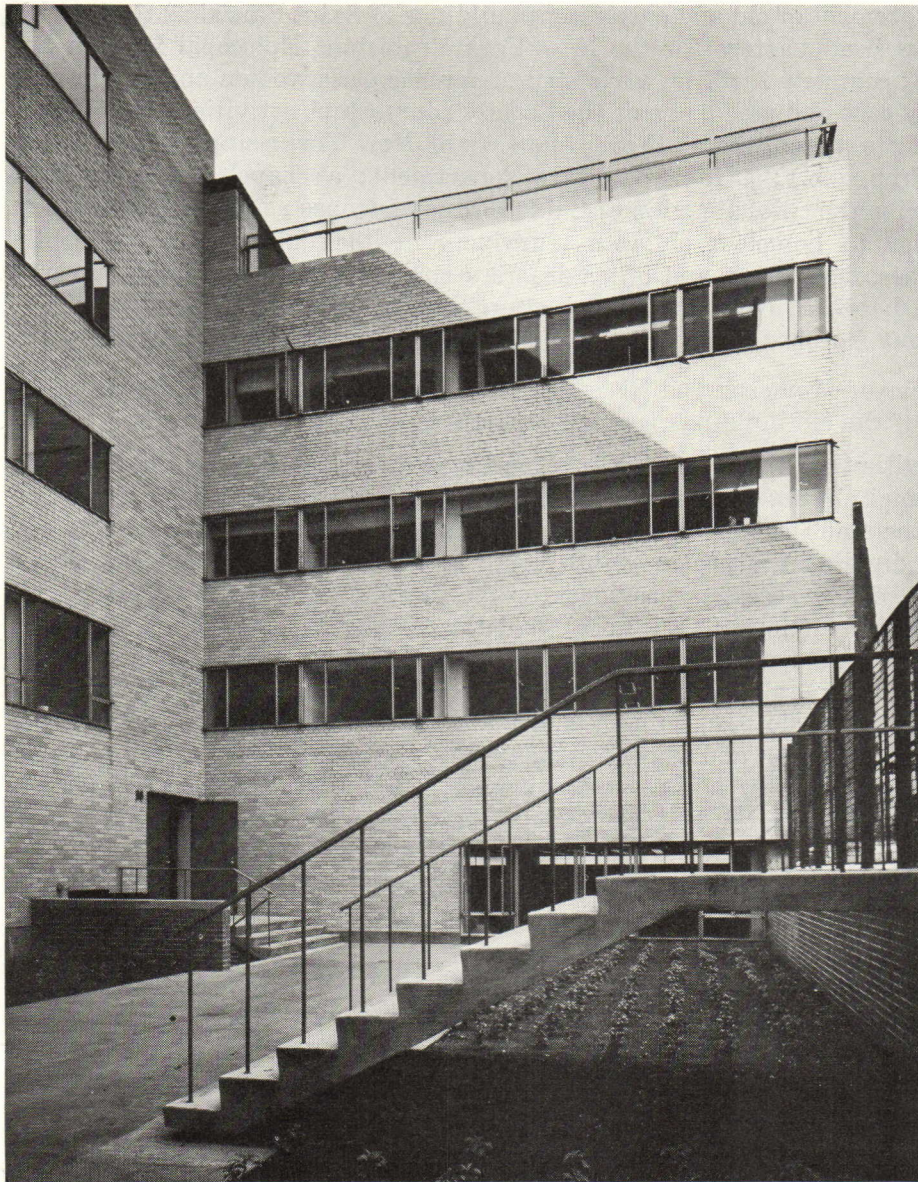
A structural detail of particular interest is the projection of the building envelope in front of the structural columns. At sidewalk level (see section at left), this becomes a setback concealing high, wire-glass windows opening into basement rooms. Use of this detail, in place of the customary, flush, granite base, effected a saving of \$25,000, the architects tell us.

materials and methods: CONSTRUCTION: *Frame:* reinforced concrete. *Walls:* buff brick; interior walls surfaced with plaster, paint, or wallpaper. *Floors:* concrete, surfaced with either asphalt tile or rubber decking. *Roofing:* 5-ply built-up; play deck surfaced with neoprene and granite chip. *Insulation:* acoustical—plaster; thermal—cellular glass in roof; sprayed fiber in walls. *Partitions:* 2" plaster; metal. *Fenestration:* aluminum sash; 1/4" plate glass. EQUIPMENT: *Heating:* oil-fired furnace; low-pressure, hot-water system; automatic controls. *Lighting:* recessed downlights; recessed fluorescent units; recessed lens-tube units.



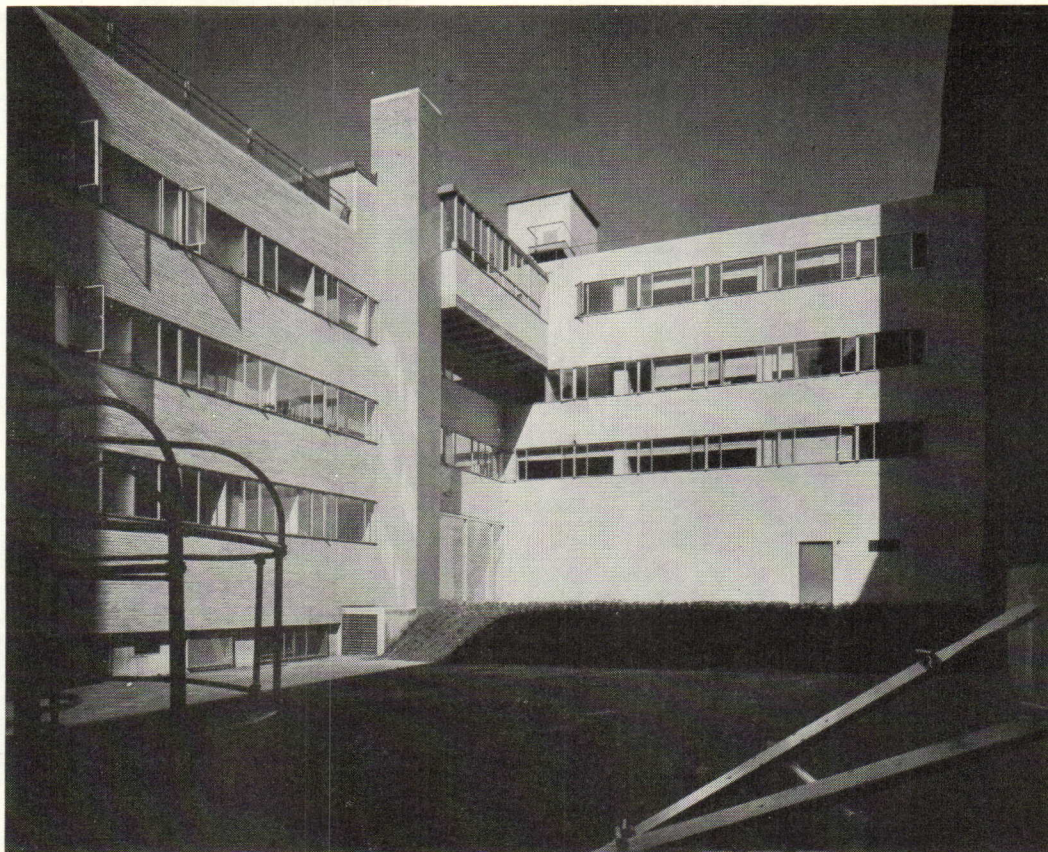
A sub-cellar (not shown) contains (in the right-hand, forward portion) storage rooms and boiler room. Laundry and kitchen facilities on the basement floor serve all departments. The staff dining room and lounge has a large window overlooking the north courtyard from which (down a few steps) there is direct access to the family-welfare wing at rear. On the first floor, the main entrance opens into the lobby (photo at left) and looks out through tall windows to the south court. In-coming guests are interviewed in the wing to the right, the southern end of which contains living quarters for the male help.

WELFARE OFFICES AND SHELTER, NEW YORK, N. Y.



Photos at left: top—the north courtyard; a bridge-like, reinforced concrete flight of steps, spanning a planted area, lead in from the side street. In the corner the opened door marks the entrance to the Mission Society's offices, located on the first floor; concealed behind the brick wall immediately to the left of this door are steps leading down to the Family Welfare Division offices.

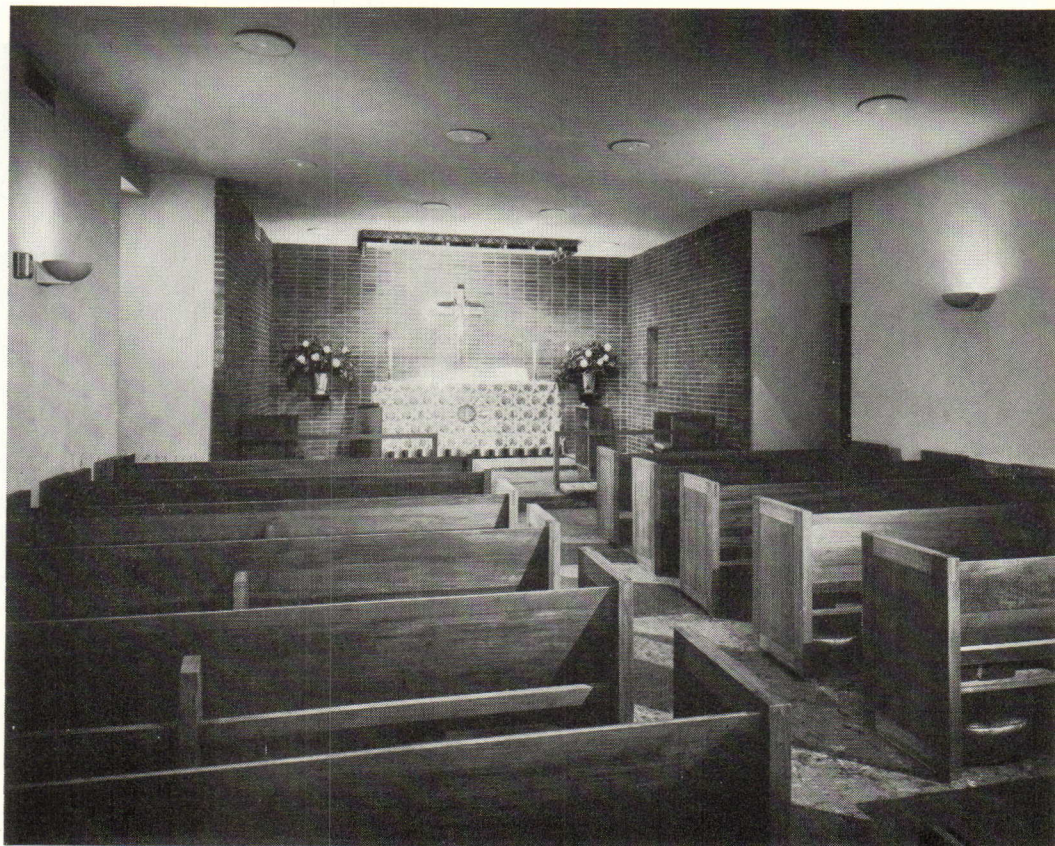
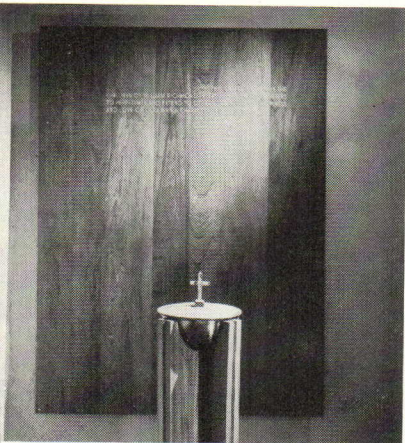
Bottom: the staff lounge and dining room, located in the basement, with large window looking out on the north courtyard; natural woods and light robin's-egg blue and canary yellow coloring in the fabrics were selected for their cheerful, restful aspect.



Above: the south courtyard-play yard. The blank wall straight ahead (with a single door) is the side of the chapel; at top, left, is the children's play deck.

Left: the teakwood dedicatory plaque and baptismal font in the chapel, spotlighted from above.

Below: The Chapel. Chancel walls are dark red brick, waxed and polished. The altar cloth is richly embroidered; handwrought cross and vases are silver. All wood objects and furnishings are of teak; acoustic plaster surfaces wall and ceiling; flooring is gray linoleum. Artificial lighting creates a soft, dignified illumination in the windowless room.

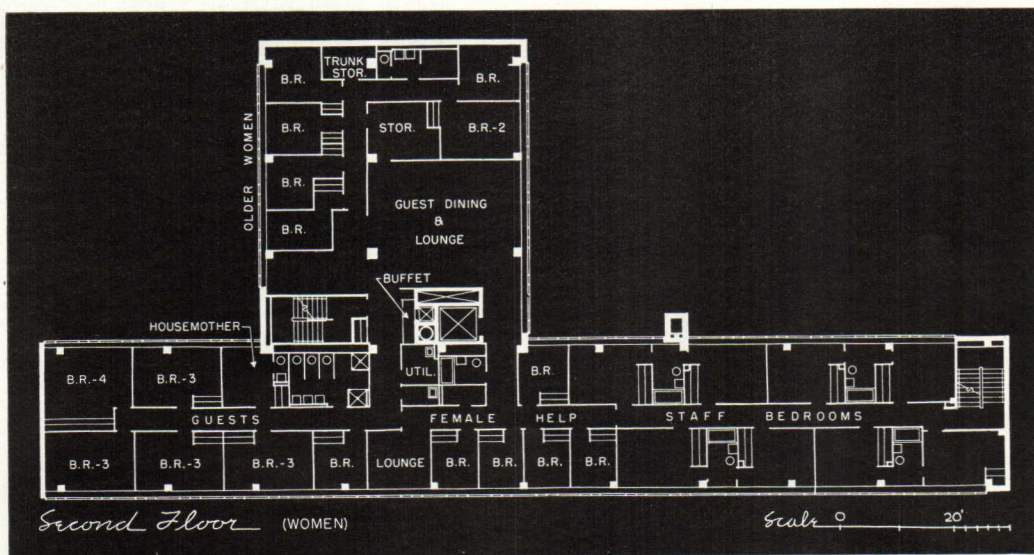


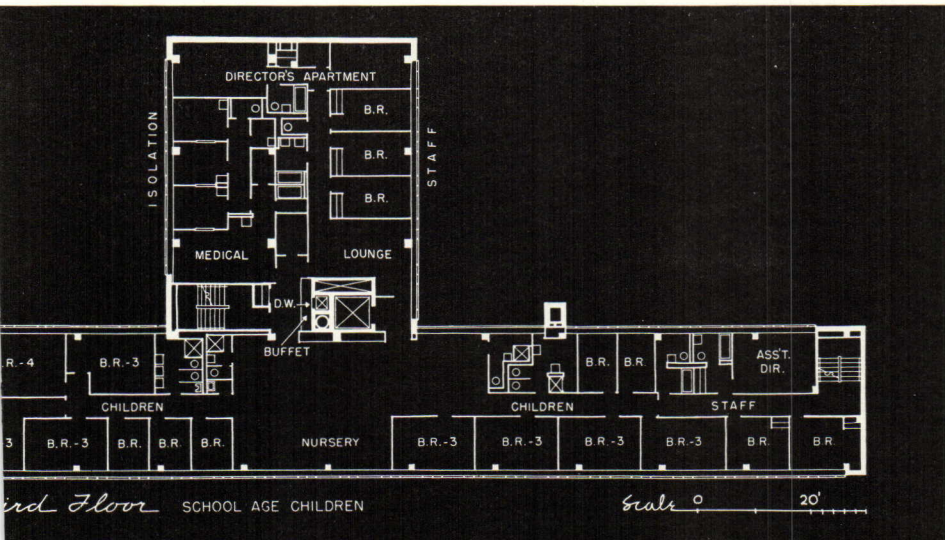


The second floor provides living quarters for women guests—17 expectant mothers and 8 older women. Bedrooms are of three types—single, double, and triple, all furnished with individual beds, bureaus, and chairs. Above: dining room-lounge for women guests; light-weight, easily moved furniture allows flexibility in arrangement.



Typical single bedroom for a woman guest; comfortable furniture; ample space.



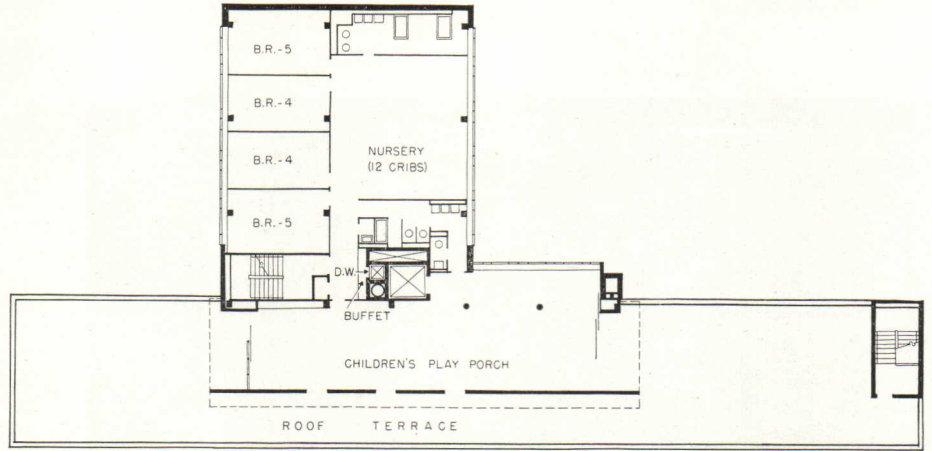


The third floor has space for 30 school-age children—separate bedroom groups and toilets for boys and girls, but a common playroom-dining room (photo below). An outdoor play yard is provided in the south court. Meals, prepared in the basement kitchen, come up by dumbwaiter and are served from the adjoining buffet table.

Right: a typical room for three children. The institutional atmosphere has been consciously minimized. Each room has a different decorative scheme, worked out to provide a home-like aspect.



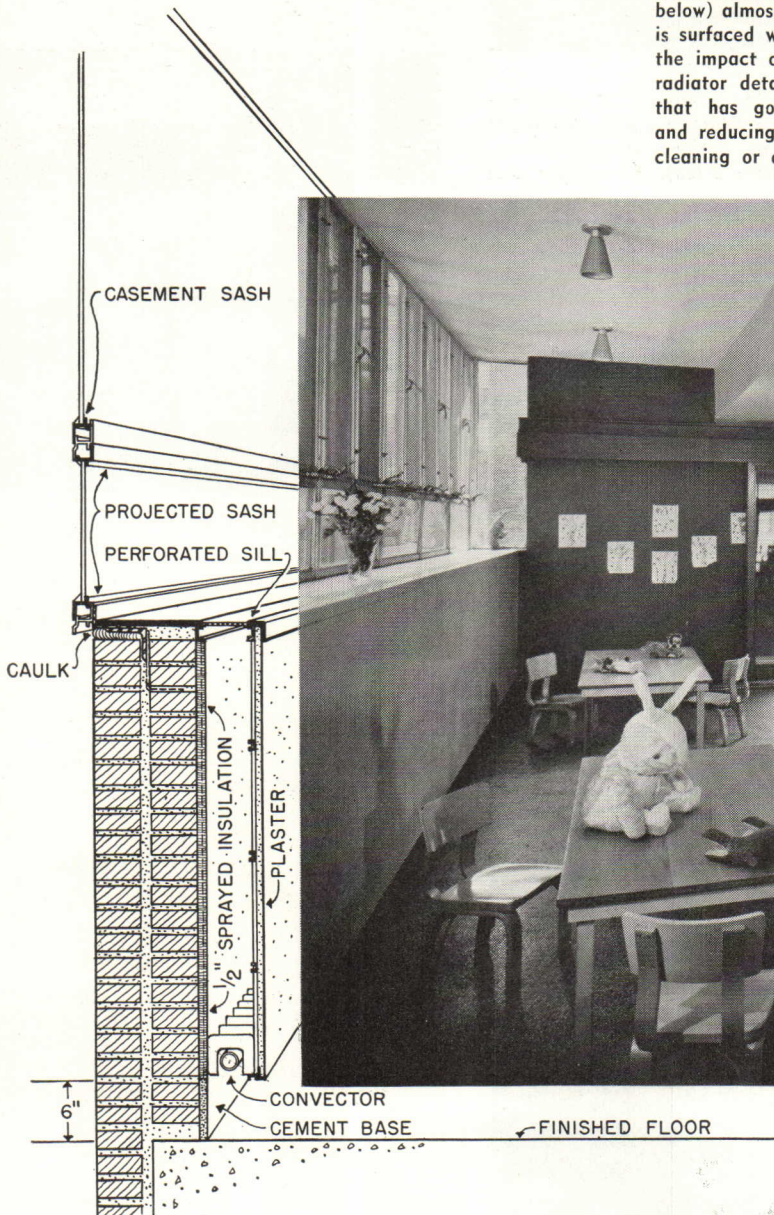
WELFARE OFFICES AND SHELTER, NEW YORK, N. Y.



Fourth Floor (PRESCHOOL AGE CHILDREN)

Scale 0 20'

On the fourth floor, space is provided for 30 children under 5—a large, sunny nursery; serving pantry; indoor-outdoor play area (photo below) almost a city block in length. The deck is surfaced with rubberized cement to cushion the impact of spills and falls. The wall-hung radiator detail (below) is typical of the care that has gone into simplifying maintenance and reducing the number of things that need cleaning or dusting around.





Bank: Houston, Texas

MacKIE & KAMRATH, ARCHITECTS

program: Neighborhood bank for an industrial area, with space alongside for stores and a branch postoffice. Anticipation of future growth. Two-lane drive required for drive-in teller service. Initial plans contemplated adding five floors of rental space. Budget limitations finally reduced this to two. When second floor is added (along south and west), bookkeeping, accounting, and executives' offices will move, providing space for expanded first-floor facilities.

site: 160' x 245' lot, bounded on east by heavy traffic artery (which emerges from an underpass); a major avenue to the north; railroad right of way on the south.

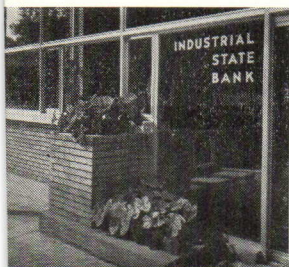
solution: Building placed at northeast corner of site, where underpass artery and the avenue meet; remainder of site (except for space allocated for shops and post office) devoted to the drive-in lane and parking space.

materials and methods: CONSTRUCTION: *Foundation:* concrete. *Frame:* steel. *Walls:* hollow tile, brick, finished (inside) with plywood or plaster. *Flooring:* asphalt tile, rubber tile, or carpet, over concrete. *Roof:* concrete and vermiculite over steel joists; built-up roofing. *Insulation:* acoustical—sprayed asbestos ceilings and portions of side walls; thermal—cotton batts; vermiculite over banking room. *Partitions:* plywood and/or plaster; metal. *Fenestration:* aluminum sash; 1/4" plate glass.

EQUIPMENT: *Heating and air conditioning:* gas-fired hot water boiler; radial air-conditioning unit with condenser and directly connected motor; automatic controls; double-deflecting diffusers; tube and fin type coils. *Other equipment:* telephone PBX board; music amplifiers; automatic door closer.

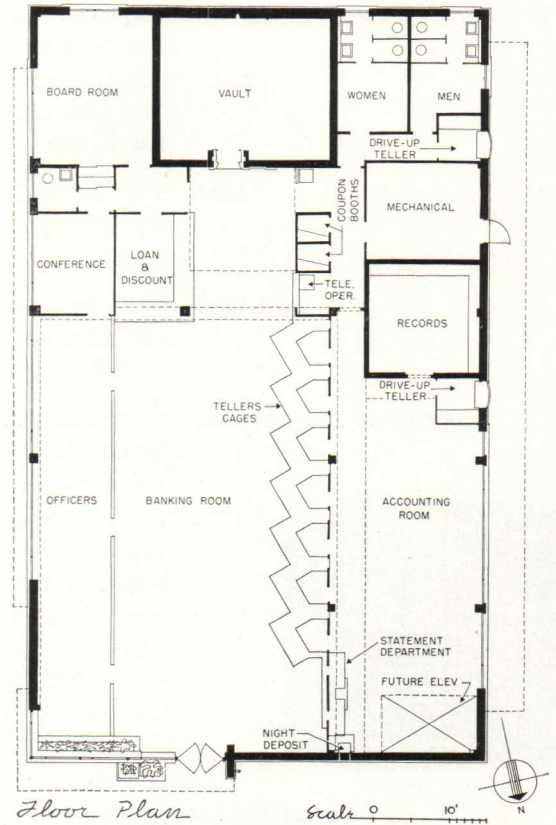
the architects: See biographical data, page 50, December 1948 P/A.

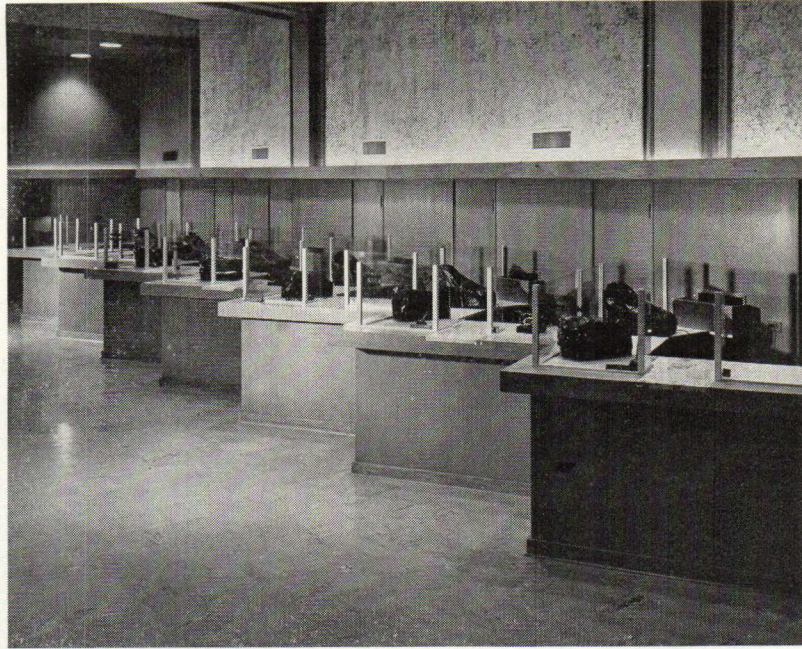
Photos: Dorsey & Peters





Above: banking floor, looking toward rear; when second floor is added, officers' space (along left-hand wall; detail, photo below) will move into space now occupied by accounting department (which will move upstairs), to make way for additional line of tellers' cages. Perforated acoustical panels surface upper parts of walls.





Above: detail of tellers' cages, with sawtooth arrangement to simplify standing in line.

At left: detail of west wall of bank, showing the two drive-in tellers' cages, shaded by a five-foot-deep canopy.

Below: general view of the banking floor, looking toward main entrance; ceilings and upper portions of walls are finished with sprayed-on asbestos acoustical material. Ceiling troffers (aligned with structural columns) contain both concealed lighting and air diffusers; downlights are mounted flush.





Two Furniture Showrooms

OFFICE OF GEORGE NELSON; ERNEST FARMER, DESIGNER IN CHARGE

1. Grand Rapids, Michigan

program: The home-office showroom for the Herman Miller Furniture Company, for which George Nelson is one of the chief designers. A major problem was to provide desirable display spaces for the company's entire line, at the same time avoiding a crowded or warehouse appearance.

site: Large, almost rectangular space in an existing building.

solution: Quite definite partitioned spaces organized around a central rectangular area, treated as a courtyard. Though not set up as a series of furnished rooms, furniture groupings are arranged in logical and harmonious relationships; semi-partitions of net hangings, translucent screens, etc., serve further to divide the major spaces. The interior court-like area contains a minimum of furniture, an effective foil to the busier surrounding display rooms. Color is an important element in the effectiveness of the design—partition walls painted white, beige, light blue, dark blue, yellow, sienna, dark brown, and a few surfaced with natural wood siding. A wide variety of lighting fixtures and devices adds good theater, plus flexibility, to the display palette—flush-mounted down lights; adjustable ceiling mounted lamps; concealed fluorescent lamps; not to mention the company's own line of lamps, which are used throughout the exhibits.

the designers: *George Nelson:* Yale College; Yale School of Fine Arts; American Academy in Rome. Many years an editor—with *Time*, and *Architectural Forum*. At present, contributing editor (*Interiors*), and *Architectural Consultant (Holiday)*. Opened office for practice of architecture and industrial design 1947.

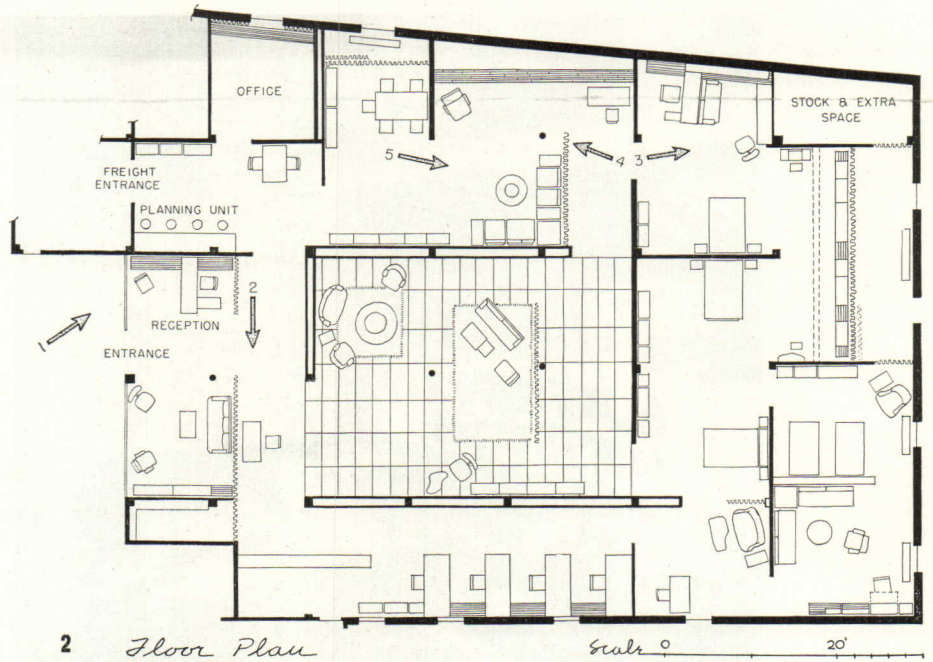
Ernest Farmer: Worked in furniture and interior design for ten years before joining George Nelson in 1946. Previous activities include furniture design with Gilbert Rohde.



Nelson



Farmer



From the public hall a wall of vertical boarding continues from the corridor to the receptionist's desk, broken only by the panel and floors of tempered plate glass.

Split view showing (at right) portion of receptionist's office-waiting room; display of storage units at end of passage, straight ahead, and a glimpse of the central "courtyard," at left. The abstract fish is a Nelson sculpture. A ceiling-hung curtain separates the waiting room from the main display areas.

Photos: Hedrich-Blessing Studio





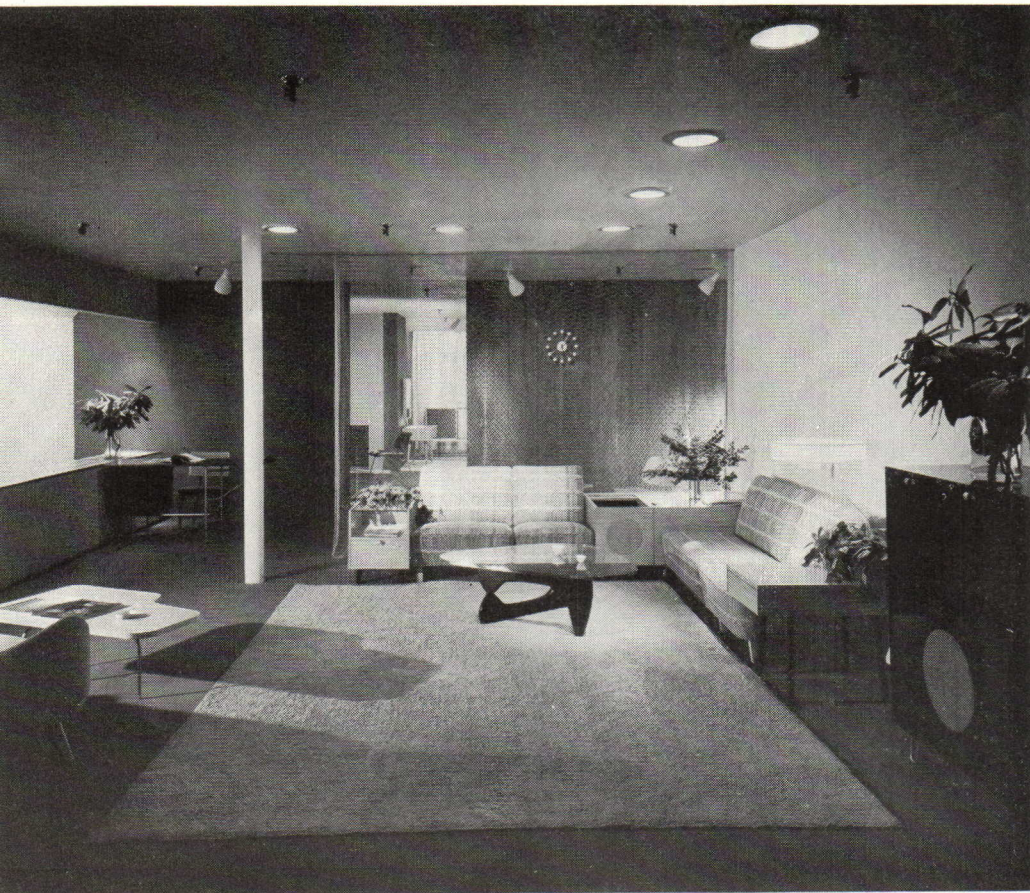
3

3. A corner of the bed-sitting room display space. Wall at left, dark brown; "fireplace" wall, light blue.
 4. Looking through a net curtain division into the area where living and dining-room furniture is shown.
 5. Looking at opposite end of living-room furniture area shown in 4. Wall at right is white; background partitioning, red.

4



5





2. Chicago, Illinois

program: To develop, with a minimum budget, the Chicago showroom for the Herman Miller Furniture Company. No funds for elaborate partitioning or complicated lighting schemes.

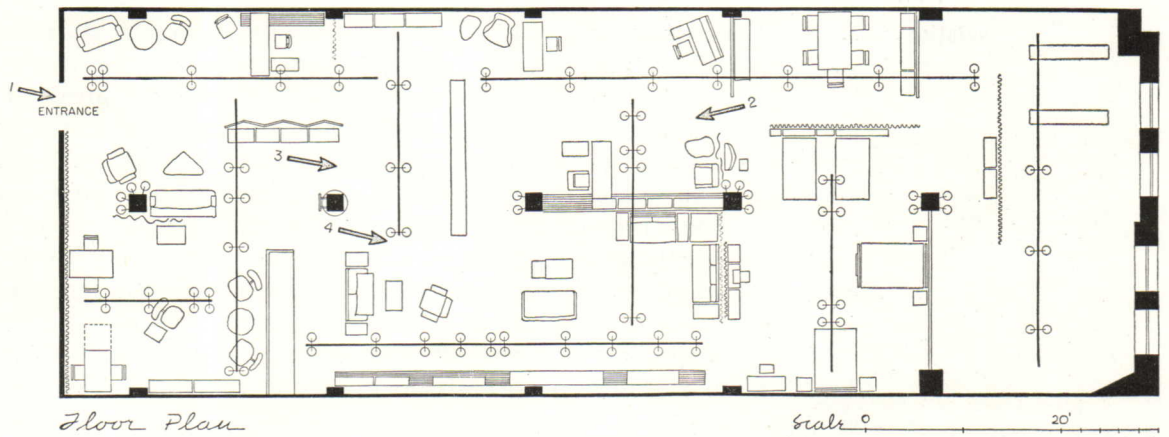
site: A sizable, deep, rectangular space in the Merchandise Mart.

solution: No solid partitions of any kind; subdivisions into specialized display areas accomplished by means of curtaining, hung from ceiling tracks, or by alignments of furniture storage units (chiefly Nelson designed). Lighting ingeniously solved by a series of ceiling hung continuous plug-in ducts, to which adjustable units—direct, indirect, flood or spot lights—may be attached at any point along their length. Almost limitless effects are thus made possible. In contrast to the Grand Rapids showroom, this one provides a neutral background (except for some draperies) throughout—white walls and ceiling, an uninterrupted floor, except where small rugs or carpets serve to highlight a display grouping.

Abstract symbols that decorate the column visible through the entrance door (photo at top of page) are symbols for the chief designers of the Miller furniture—Eames, Nelson, Noguchi, and Laszlo—with the stylized M. trademark of the furniture company, at the bottom.



2



4



(two pages back): The entrance to the showroom, seen from the public hall.

Partial partition at left serves as background for possible room groups, though attempt is made to develop "model" rooms; in the background is a grouping of related storage units.

View back into display space, on other side of low partition seen in Picture 2.

The right-hand wall of the showroom, with various available cases set up on the company's bench that Nelson designed. Rectangular patterns on the wall indicate the dimensioning of the various items. Notice the suspended lighting ducts, with lamps plugged in wherever needed.

Photos: Hedrich-Blessing Studio

3



Protecting Your Partnership

By KENNETH G. ALLEN

Whether you are a partner or have an individual practice employing associates who might qualify in the future for partnership with you, one or more of the business planning fundamentals to be outlined in this article may be useful to you. The same is true if you are an associate in a large firm and look forward to your own partnership some day. Any one of these plans might prove the decisive factor in stabilizing your professional practice.

In the March 1949 issue of *P/A*, the editor discussed the factors to be considered in the selection of a suitable partner to insure a compatible and efficient professional association. In his column called *IT'S THE LAW*, Bernard Tomson in February and April, 1950, discusses the legal problems which a partnership involves, and he points out the need for careful planning both for continuing professional activity and for possible dissolution of the partnership by death or otherwise. Here, as a logical sequence, we shall discuss ways and means of protecting the professional association after it is consummated, including the element of continuity of service for your clientele. Partners who are working together smoothly in a successful practice find it difficult to conceive that anything could occur which might, overnight, completely destroy the momentum of production for their clientele and security for themselves. The purpose of this article is to bring out into the light of day, for your examination, a few possible hidden hazards, together with corrective steps which may be taken now to prevent unforeseen circumstances disrupting the functioning of your smooth-running organization.

your written agreement to preserve continuity

The first hazard to the partnership which is often overlooked, especially in a young firm, is the possibility of the loss of a partner through sudden and premature death. The law states clearly, according to legal counsel, that the death of a partner automatically and instantly terminates a partnership. It further states that the duty of the survivors is to liquidate the business assets and settle with the estate of the deceased partner, before they may reorganize. This can be a very expensive and unpleasant experience for all parties concerned. Living partners may go through many years of pleasant business and professional association with no serious differences and with complete understanding. However, upon the death of one of these partners one or more things may occur to destroy completely all of the good will and fine feeling that has been developed over the years.

There have been cases where the family of a deceased partner has taken very aggressive action against the surviving partners; well-meaning friends may attempt to advise the family. On the other hand, it has been noted

in some instances that surviving partners are not well-disposed toward the family of a deceased partner and in those cases the family may not receive too much consideration in liquidation proceedings. The situation becomes more complex if minor children survive the deceased partner, as minors are afforded special protection in the settlement of an estate.

Passing over the unpleasant and seemingly callous aspects of these possibilities, their occurrence in actual experience and observation points to the wisdom of taking certain steps now and specifically executing a valid written agreement between living partners.

If you are practicing without partners, your need for a written agreement with an associate or another architect may be even more acute. By this procedure in several cases continuity of service and family remuneration have been accomplished in a most satisfactory manner for all concerned.

Obviously, a formal agreement which can accomplish these certainties in a variety of cases must be custom-made and requires the guidance of specialists experienced in this field. Failure to have a valid written agreement between living partners in accordance with their joint wishes almost invariably leads to difficulties when one of the partners is lost. Existence of such an agreement eliminates these difficulties. And yet the written agreement is but one part of the planning that you should consider.

your keystones

An architect who is a good business man should insure his firm against the loss of key persons, whether partner or not. Essential as any one partner or group of partners may be to each other, successful architectural or engineering firms frequently count heavily also upon the skills and abilities of technical experts or "key men."

For instance, the structural engineer who has worked on many of a firm's projects through the years inevitably carries in his own head vast amounts of detail and specialized information peculiar to the firm. His long experience in working with the firm and his familiarity with their designs constitutes an asset which is very specifically locked up in him as an individual. The loss of his services through total disability or premature death could be very expensive for the architects who utilize those services.

In a large architectural firm with numerous partners there may be one or more "junior" architects (not partners) who are in complete charge of specific jobs working under the general supervision of a partner. Such a young man might be more familiar with the project than is the partner in charge. He may even know more about it than anyone else in the firm. Like the struct

engineer, this young architect often carries many details on his head. Not infrequently he has working agreements with the contractor and sub-contractors which may not have been confirmed in writing. As a job supervisor, he might be making trips by air as often as once or twice a week. To replace him and at the same time try to maintain the momentum of progress on the job while someone else is becoming acquainted with all its details becomes a costly and serious problem for the partners.

The structural engineer and the young architect in charge of a job are only two examples of "key" individuals whose loss to the partnership might be expensive. The financial shock of such a loss can be absorbed economically by proper business conservation planning.

Protecting the firm credit

Another matter often overlooked in protecting the partnership is the unexpected event which might impair credit. There have been instances of a senior partner, virtually in retirement, who had personal means with a substantial credit standing which made it possible for the firm to enjoy substantial credit when needed for financing architectural jobs. Occasionally, this individual is not even in the partnership, but is a good friend of the partners, or one who might be termed a silent partner. If the backing of such a man is lost, the partners soon find their ability to receive credit is severely curtailed—usually almost immediately. This may come at a very awkward time when considerable investment has been made in prospective work and renderings, or in getting a job started before the payments have begun to come in. More than one firm has experienced very rough going and taken two or three years to regain financial equilibrium, due to the loss of the man responsible for a fine credit standing. You may anticipate a similar situation by recognizing his economic value if such a man is helpful to your credit standing, and taking steps promptly to protect your partnership against the loss of his backing.

Cost of protection

It is customary for a firm to carry insurance on its material, equipment, and buildings. The purpose is to supply immediate cash to replace them if destroyed. It is not as practicable and economical to insure the productive capacity of your personnel for the same purpose. The cost of the partnership of insuring against loss of key personnel is no greater than is that of protecting its buildings and equipment against fire and other forms of destruction. Specifically, each \$1000 of protection to insure any one of the foregoing partnership personnel problems may have had for a net average cost as low as \$1.40 per year. This figure represents the actual net cost outlay to the firm over the period of years of its business life. Naturally, this actual net cost to the firm will vary somewhat in each individual case, in accordance with the different risks, duration, and requirements involved. In general, however, it is true that it costs no more to insure the productive capacity of a man in the firm for \$1000 over a period of 15 or 20 years, than it costs to insure equipment and buildings for \$1000 for the same period. Furthermore, the annual cost per \$1000 of protection is approximately the same whether the purpose is for protection on the life of the individual who is necessary for credit standing, on the life of a valued key employee or consultant (such as a structural engineer or the architect

in charge of one of the jobs), or whether it is to protect the families of the partners themselves and the uninterrupted continuity of surviving partners to function under the terms of a written living agreement.

Over a normal span of professional life activity, the actual annual cost per \$1000 of protection could be even less than the \$1.40 figure previously mentioned. For example, three architects in partnership were insured in 1920 for \$50,000 each. The partnership paid the annual premiums. One partner died in 1944 and the surviving partners received \$50,000 net, free of all income tax. They have left the fund on deposit with the insurance company since 1944 and receive interest at a minimum rate of three percent. Under the contract settlement options, they may convert to guaranteed life income (also free of income tax according to tax counsel) at any time, with a return of \$84 per year on each \$1000 (8.4 percent). And, in addition, there are total cash reserves in the two policies on their own lives which exceed the total premiums paid over the years for those two policies. Not much cost there! These cash reserves also may be converted at any time to guaranteed monthly income for life.

Protecting the partners' retirement security

Finally, in devoting most of your professional life to building a successful firm, a further requisite in the complete protection of your partnership is provision for a guaranteed life income for all partners upon attaining the age of retirement. Any plan to protect your partnership must be erected on the foundation that fully as many partners will survive to age 65 or 70 as will pass on prematurely prior to that time. Careful planning, therefore, indicates that any long-range protection of the partnership must place as much emphasis on life income security for the partners who reach retirement age as it does on the hazards of loss along the way.

It is just too bad that present regulations do not extend the same tax advantages to partnerships as they do to corporations in setting up a pension for the partners themselves. Competent tax counsel seem to concur in this opinion. It is possible, nevertheless, to develop a satisfactory arrangement for the retirement security of partners. Such an arrangement has collective advantages over the usual method in which each partner maintains an individual program for creating his own retirement income.

In conclusion, let us point out the need for co-ordinated planning of all the factors entering into the matter of protection of partnerships. Just as the architect acts as co-ordinator of all the design and construction elements which finally produce a building, so it is advisable to have some one person delegated to co-ordinate the activities of an architect's attorney, accountant, tax adviser, executor, insurance and annuity specialist, trustee, and duly appointed guardian of his children. You may find among these individuals that one of them has specialized in the over-all end product and is qualified to act as your co-ordinator. Although certain fundamental technicalities are common to all business, each plan must be as truly custom designed to suit the individual case as is the creative design of each individual architectural structure. True business conservation planning ties together into one whole the individual work of your consulting specialists in their respective fields, and thus makes sure that none of the known hazards in your business has been overlooked.



House: Northeast Harbor, Maine

HARRISON, FOUILHOX & ABRAMOVITZ, ARCHITECTS

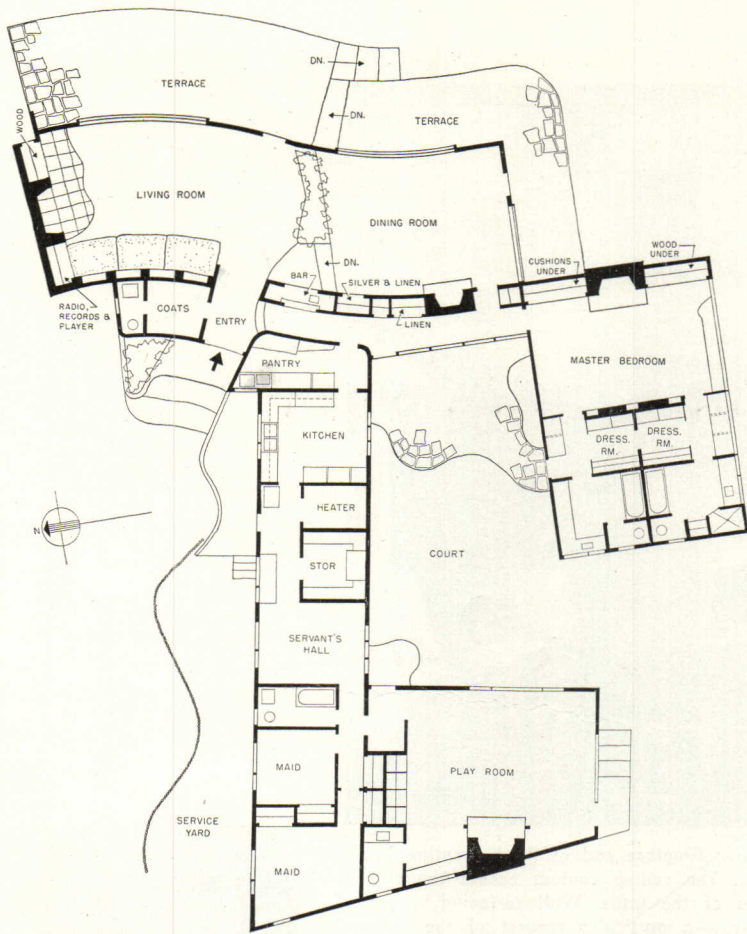
program: Summer home for parents of a family with several children—plus a children's playroom; existing cottages on the property provide sleeping quarters for children and guests.

site: Wooded point of land, with ocean views to the east and south.

solution: The reverse curve of the long living-dining-room was literally developed from a pre-construction session of stake-placing, wherein owners and architects determined locations for view windows, openings toward sun, and desired sizes of areas. Children's playroom placed well apart (for obvious reasons) at the end of servants' wing.

materials and methods: CONSTRUCTION: *Foundation:* concrete. *Walls:* frame, surfaced on the exterior with white pine boards and battens; inside, with pecky cypress plywood. *Floors:* mahogany, carpet, linoleum. *Roof:* built-up roofing. *Insulation:* mineral wool. *Fenestration:* special wood sash and casements. EQUIPMENT: *Heating:* electric unit heaters; fireplaces. *Lighting:* individual wall fixtures; directional pin-point spotlights in ceiling.

the architects: A firm of architects who, in various associations (past and present), represent one of the best known design groups in the country. Wallace K. Harrison and the late André Fouilhoux had an important part in the design of the Rockefeller Center, New York. Harrison & Abramovitz are at present serving as co-ordinating architects for the United Nations Headquarters.



Floor Plan

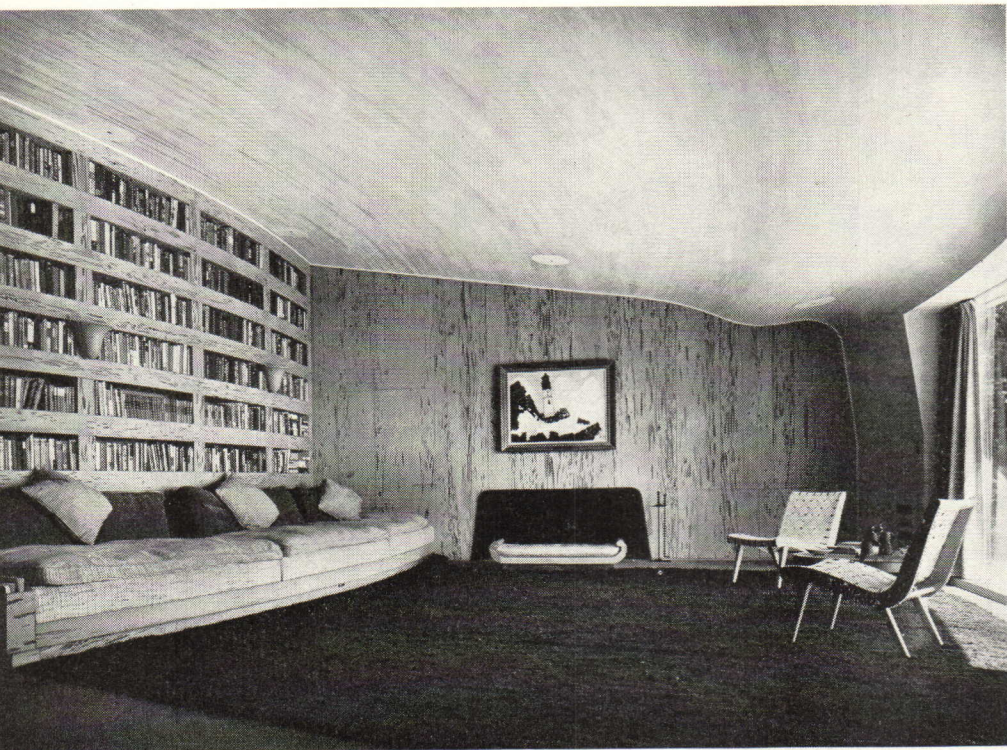
Scale 0 15'



Across page: view from southeast. Sash throughout are fixed; ventilation is handled by means of louvers or opened doors. Stone for the chimneys is native granite; pine for the exterior walls comes from Maine.

At left: the path to the front door; the high wall (and fence extension) shield the service terrace and yard.

Photos: Tom Leonard



Above: fireplace end of the serpentine living area. The ceiling contour echoes the curved form of the walls. Wall surfacing is pecky cypress—a particular request of the owners. Concealed cabinets at left of fireplace house a radio, record player, and record collection. At right of fireplace, doors near the floor provide access to a firewood closet, that is fed from outdoors.

Right: full-length view of room; dining table, carved by Isamu Noguchi, in foreground.

Below: the master bedroom (also with cypress wall finish) has a full-width view window; the fireplace (left) is raised to approximately bed height.

HOUSE: NORTHEAST HARBOR, MAINE





a p/a case study

ARCHITECTURE IN WASHINGTON, D. C., 1949-1950

Photo: Horydczak

Architects in the national capital have been very busy for the last 18 months. What kinds of buildings have resulted? Where is the emphasis on design and type? How high are the standards? We invite our readers to make the evaluation of a year's work in one city. All the Washington offices were invited to contribute to this initial Case Study of a new P/A series, recording fully and uncritically the current architectural work in representative American cities. In this case the metropolitan area covered includes the several Maryland and Virginia counties adjacent to the District of Columbia. Some interesting comparisons are suggested by the pictures on the following pages which report the activity in various categories. Architects who gather in Washington next month for the 82nd convention of the American Institute of Architects will have an opportunity to visit many of these buildings.

Strong local factors must be weighed in viewing Washington architecture. Congressional indifference to the voteless city has impeded municipal advance for 75 years and resulted in some shocking contrasts. Some of the world's most hideous rat-ridden slums are hidden by government colonnades and pretentious (tax-free) blocks. The business district has as many routine modernistic store fronts as any other town but "official" architecture has had its effect on other building types. Schools, hospitals, even churches, have been influenced by the sometimes florid, sometimes chaste, sometimes just colorless government work. The conglomerate population also clings insistently to flatly average hometown taste. Whole neighborhoods are so positive that their houses are in a Colonial tradition, that architects and clients who want anything different must find sites outside the District and older subdivisions.

Nevertheless, architects with design ability and conviction have been able to produce some excellent work. Here and there one finds a disciplined contemporary expression, there is some of the highly personal (perhaps romantic) approach to design, and there is a great deal of "traditional" work being done. All in all, Washington has produced in the last 18 months an architectural product typical of U.S. architecture—1950.

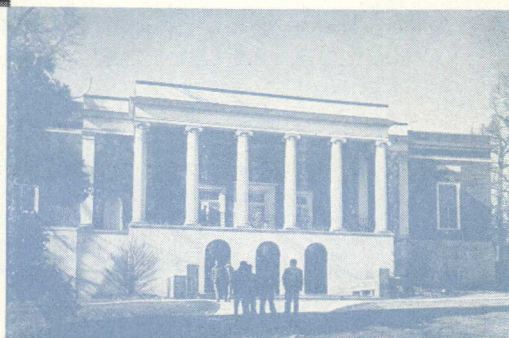
Forest Grove elementary school, Silver Spring, Md. (cost: \$176,000). Ronald S. Senseman, architect. Another school completed by this architect in the first year is Oak View elementary school, north of Takoma Park, Md. (cost: \$210,000) which won a Washington Board of Trade "Award of Merit"; the same architect has under construction standard classroom units at seven schools (total cost: \$712,000), all for Montgomery County Board of Education, Rockville, Md. Photo: Leet Brothers



Dining Hall, University of Maryland, College Park, Md. Katherine Cutler Ficken, architect. Photo: Gretchen Van Tassel



Burgundy Farms School, Alexandria, Va. (remodeled from old dairy barn). Charles M. Goodman Associates, architects and engineers. Photo: Rodney McCay Morgan



1 High School for Negro Children, Rockville, Md., first unit, under construction for Montgomery County Board of Education. McLeod & Ferrara, architects. This firm recently completed Emory Grove elementary school for Negro children, Montgomery County, Md.; an addition to Peyton-Randolph School, Arlington, Va.; has under construction Rollingwood and Rockville colored elementary schools, Montgomery County, Md.; and the Abingdon and Dominion Hills elementary schools, for Arlington County, Va., School Board.

Rendering: John W. McLeod

2 Archbishop John Carroll High School (1,000 boys), Washington (including gymnasium, auditorium, and residence for 40 teachers). Murphy & Locraft, architects. This firm also has under construction Mount Calvary Parish School, Forestville, Md. (including auditorium to seat 500, convent, and private chapel for 18 nuns); and Academy of the Holy Names, Silver Spring, Md. (10 classrooms and gymnasium). Completed in 1949 were Sheehan Hall (14 classrooms and 17 faculty offices), Regan Hall (dormitory for 100 women and dining room), and St. Vincent de Paul Chapel (seats for 600), all for the School of Social Science, Catholic University of America, Washington. Rendering: Thomas H. Locraft

3 Yorktown elementary school, Arlington, Va., recently completed. Rhees Burket, architect. This architect has under construction Stratford Junior High School (including 33 classrooms, gymnasiums, auditorium, shops, cafeteria, library, etc.) for Arlington County, Va., School Board and Western Junior High School (including 14 classrooms, gymnasium, auditorium, shop, cafeteria, library, etc.) for Montgomery County, Md., Board of Education. Rendering: Richard Collins

4 Hume Elementary School, Arlington, Va., under construction. Dickey & Graham, associate architects. Rendering: Wm. H. Shoemaker

5 Hannah Harrison School of Industrial Arts, Washington (home and school for working women). Faulkner, Kingsbury & Stenhouse, architects. This firm also is completing a dormitory group for the Protestant Episcopal Theological Seminary, Alexandria, Va. Photo: Robert C. Lautman

6 Dormitory for Marjorie Webster Junior College, Washington (dormitory, classrooms, and chapel), nearing completion. E. Burton Corning & Raymond G. Moore, architects. Rendering: Richard Collins

7 Housing for married students (one- and two-room apartments), American University, Washington, under construction. Charles M. Goodman Associates, architects and engineers. Part of dormitory group by this firm.

The architects of Washington supplied us so generously with photographs of work completed in 1949—and renderings of jobs now under construction—that the editors found it necessary to restrict the representation of each office to one picture for each building type. The examples shown reflect the character of new work there and the captions list other jobs reported by the offices; comprising together a record of the volume of construction. It should be noted that there is also in progress a considerable amount of remodeling that could not be shown due to space limitations.

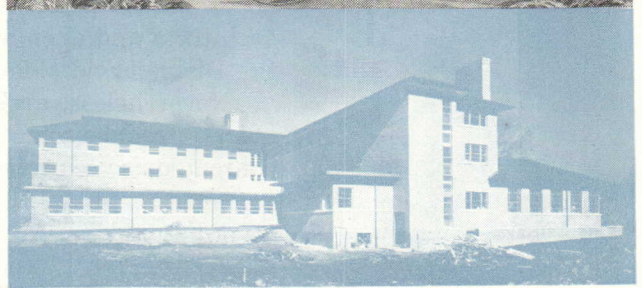
Increased pressure for adequate schools has resulted from the postwar expansion of Washington, particularly in the populous suburban communities. Additions to old buildings supplied the first demand until the more extensive building program indicated here was started last year. The Washington Board of Education has already asked a budget increase of \$8,670,995 for the fiscal year starting in July principally for new school buildings (75% for more Negro schools).

Too late for inclusion in the picture record, Hilyard R. Robinson advised us that he has under construction for Howard University two dormitories and an architecture-engineering building, costing over \$2,000,000, which should be added to the total of school and college work reported.

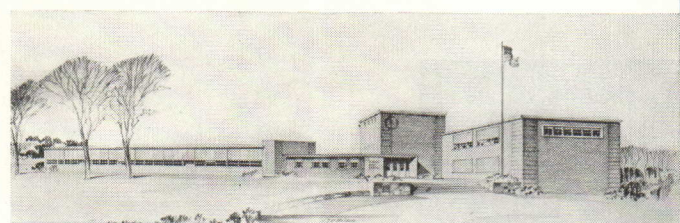
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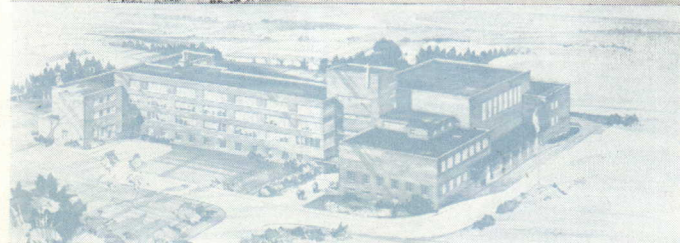
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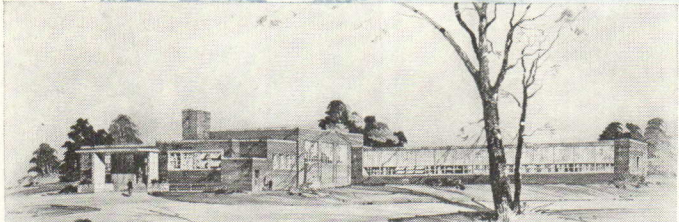
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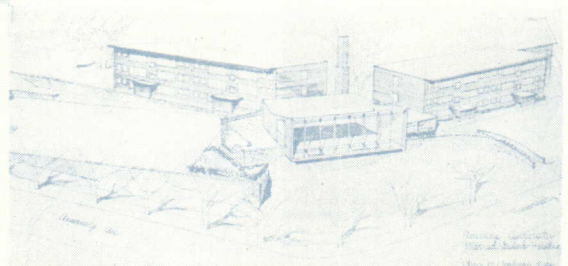
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religious structures

Church building committees are apparently as cold to new interpretations of liturgical requirements in Washington as anywhere in the country. The briefest analysis of the "church problem" reveals that the body of ritualistic prescriptions relates to exact plan, not to design expression. But generations of architects have been misled by fiercely conservative clergy and laymen into the impression that it is somehow devotional to repeat endlessly—with noticeably decreasing skill and accuracy—those superficial elements that characterized medieval or 18th century religious structures. The few departures from conventional denominational architecture are thereby highlighted—and are usually cause for much local comment and discussion.

The new churches of Washington, as shown here, tell the same story. Some are by firms whose buildings of other types, on following pages, range from good to excellent by contemporary standards. But in this field they especially remind us that long-departed architects worthily expressed the religious aspirations of their own time and society. One of the notable exceptions is the Church of St. Clement (below) reflecting the creative skill of an architect and a young muralist, fortunately commissioned by a forward-looking clergyman to provide a contemporary building for the devotions of a contemporary congregation.

9



Jewish Community Center, Montgomery County, Md. (meeting rooms, recreation facilities, classrooms), under construction. Norman Kertzman, Max Barth, and Leon Julius, associated architects.

Rendering: Max Barth

Educational and social activities building for First Methodist Church, Laurel, Md. (cost: about \$100,000), under construction. J. Rowland Snyder, architect.

Rendering: J. Rowland Snyder

Greenbelt Community Church, Greenbelt, Md., under construction. McLeod & Ferrara, architects. This firm also has under construction Sunday School buildings and church additions as well as Bethany Baptist Church, Washington, Arlington Baptist Church, Arlington, Va.; Silver Spring, Md., Baptist Church and has recently completed a Sunday-school building for First Presbyterian Church, Arlington, Va.

Rendering: John W. McLeod

Church of Christ, Washington (auditorium to seat 1,000, minister's house, church offices) under construction. Murphy & Locraft, architects.

Rendering: Thomas H. Locraft

5 Chevy Chase Baptist Church (seats for 750), Chevy Chase, Md., under construction. E. Burton Corning & Raymond G. Moore, architects.

Photo: Gretchen Van Tassel

6 St. John's Protestant Episcopal Church, Bethesda, Md. (seats for 500). Faulkner, Kingsbury & Stenhouse, architects.

Photo: Walter van Durand

7 Additions to All Saints' Episcopal Church, Chevy Chase, Md., recently completed. William N. Denton, Jr., architect.

Rendering: Joseph A. Parks

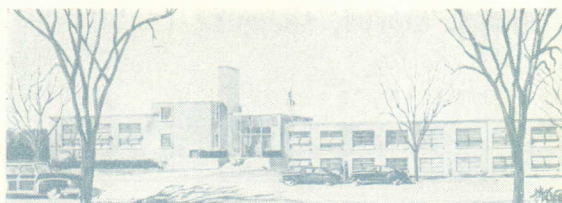
8 Southern Baptist Church, Washington (seats for 600), under construction. Howard H. Mackey, architect. He is also building the Mt. Pleasant Baptist Church (seats for 500) in Washington.

Rendering: Howard H. Mackey, Jr.

9 Church of St. Clement, Alexandria, Va., recently completed. Joseph H. Saunders, architect; Robert E. Davidson, Cranbrook, mural painter. Chosen by committee of Episcopal clergy as one of "10 Finest Examples of American (Episcopal) Churches."

Photo: Robert C. Lautman

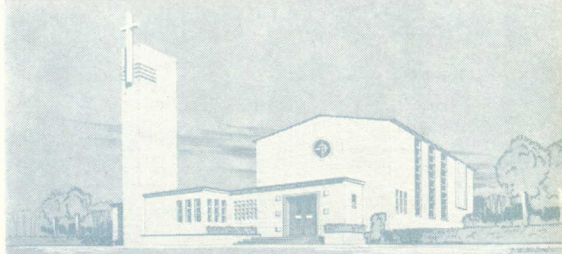
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Architects of commercial buildings have long congratulated themselves that alert businessmen, being prejudiced in favor of promotion and efficiency, are amenable to advances in design. Pioneers of this century such as Wright, Perret, and Aalto received their first large commissions from merchants and manufacturers—with historic results. These afforded opportunities to create contemporary structures that would be visited and used by thousands, thus multiplying the influence and acceptance of better design. At the same time, they demonstrated that production increased when workers were released from industrial prisons and that orderly merchandising was more successful than the ages-old haggling amid a musty jumble.

In Washington the modern shop and office building made its appearance later than in great trade centers of the country. But the business of the capital—there is virtually no industry or manufacturing—is now being conducted in more and more modern structures. When William Lescaze's balconied Longfellow Building was built on Connecticut Avenue in 1941 the Cave Dwellers and their clique angrily protested. Their worst fears have been realized: the influence of the building is apparent in some of the newer office blocks. The older influence of the government designs is still apparent, especially in scale, fenestration, and addiction to white surfacing that glares through the long summers. Shade and broad lawns of the many Washington parks are then the more grateful.

Smaller commercial structures and the almost standardized "smart shops could be found in any American city, competing wildly with each other and in violent contrast to the nondescript blocks they occupy at street level. Business is good, though, because the 200,000 government workers and their families readily accept the familiar fronts of stores such as they patronized back home. Since Washington is far-spread, motoring almost a necessity for the residents and every unzoned intersection or outlying shopping street has its sales and service structures. For the new suburban housing groups there are some well-planned shopping centers.



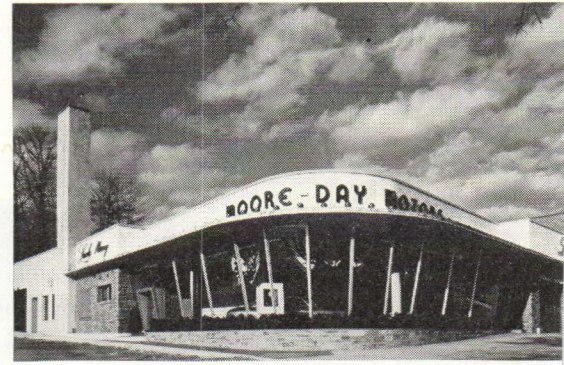
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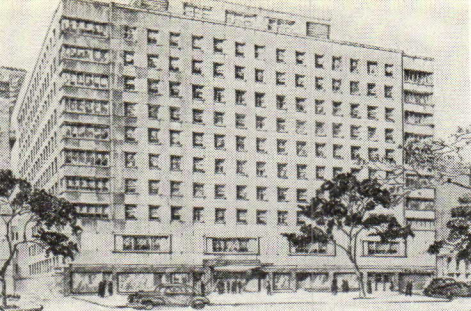
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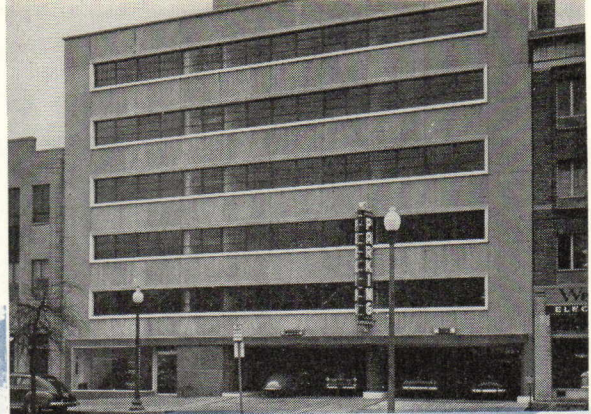


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Store for C. F. Armiger, Inc., Silver Spring, Md. Clifton B. White, architect. This architect also recently completed display buildings for Wellborn Motors and Suburban Motors, Inc., both in Silver Spring. Photo: O. L. Varela

6 Cafritz Office Building being built by Cafritz Construction Company, Washington. LeRoy L. Werner, architect. Rendering: LeRoy L. Werner

7 Mayflower Office Building, Washington. F. Wallace Dixon, architect. Ring Engineering Company, builder. This firm also recently completed the Ring Building and Ring Building Garage Offices, Washington. Photo: Walter van Durand

11 Drive-in branch bank for American Security & Trust Co., Washington. Mills & Petticord and Associates, architects and engineers. Photo: Leet Brothers

Wire Office Building, Washington, recently completed by Alvin L. Aubinoe, Inc., builder. Aubinoe, Edwards & Beery, architects. Rendering: Joseph A. Parks

Hahn Shoe Store, Washington. William N. Denton, Jr., architect; Ketchum, Gina & Sharp, consultants. Photo: Ezra Stoller: Pictorial Services

8 K Street Garage, Washington (400 cars). LeRoy L. Werner, architect, for Cafritz Construction Company. This building won a Washington Board of Trade "Award of Merit." The firm also has under construction a parking-office building on Eye Street, N.W. (450 cars; 204,000 sq. ft. of rentable office area). Photo: Elkay Photographers

12 Meat-packing plant for Southern Hotel Supply Co., Washington. Mills & Petticord and Associates, architects and engineers. Rendering: R. E. Collins

Building for Moore-Day Motors, Inc., Washington. William N. Denton, Jr., architect. Photo: Walter van Durand

9 Downtown cafeteria, Washington, for Hot Shoppes, Inc. Maurice B. Gill, architect, and Joseph G. Morgan, architect for interior. Gill is chief architect for the restaurant chain. Photo: Chas. Baptie Studios

13 Sales and Service Station for Akers Oldsmobile-Cadillac Co., Alexandria, Va. Arthur L. Anderson, architect. Photo: Walter van Durand

Stores for Empire Properties, Inc., Arlington, Va., recently completed. E. Burton Corning & Raymond G. Moore, architects. The firm also completed two dress shops in Arlington last year and has under construction there two store-office buildings and a parking garage. They have also started a parking garage in Washington for George Washington University. Photo: Gretchen Van Tassel

10 Shop for Konrad's, Washington, under construction. Charles M. Goodman Associates, architects and engineers.

14 Lee Shopping Center, Arlington, Va., for Arlington Building & Development Corporation. Allen J. Dickey, architect. Photo: Allen J. Dickey

15 Warehouse for Valley Forge Distributing Co., Washington, recently completed by Berla & Abel, architects. Photo: Robert C. Lautman



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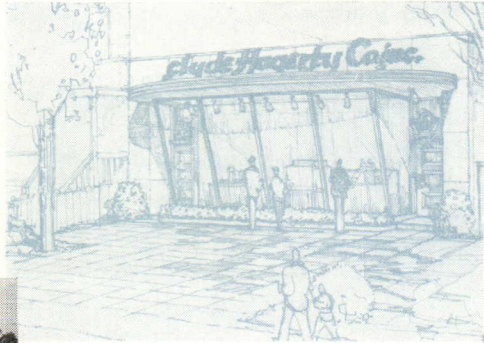
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shops, stores, shopping centers

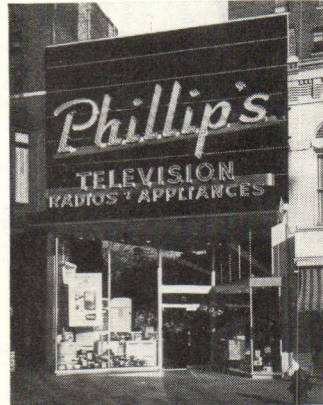


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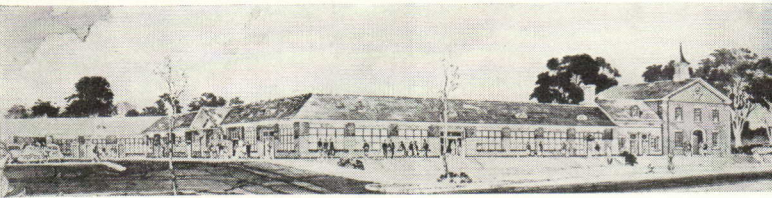
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16 Fur shop for Wm. Rosendorf, Washington, recently completed by Berla & Abel, architects.

17 Shopping Center for Belle-View Apartments, Inc., Fairfax County, Va. Mills & Petticord and Associates, architects and engineers.

18 Office and Showroom for Clyde Hagerty Co., Inc., Washington, recently completed. J. Rowland Snyder, architect. *Rendering: J. Rowland Snyder*

19 Queenstown Shopping Center (seven stores), Prince Georges County, Md., recently completed. E. Burton Corning & Raymond G. Moore, architects. This firm also has a second unit of this shopping center (one large store) under construction, as well as other shopping centers, including Willston (25 stores), in Fairfax County, Va.; Potomac (nine stores and a theater), in Montgomery County, Md.; Langley Park (25 stores and a theater) and Bladensburg (eight stores), both in Prince Georges County.
Photo: Gretchen Van Tassel

20 Phillip's Radio & Television Store, Washington. Norman Kertzman, architect. The same architect also recently completed a store and office building for Goozh Gifts, on Pennsylvania Avenue.
Photo: Gretchen Van Tassel

21 Service Station for Pohanka, Washington. Howe & Foster, architects, J. Rowland Snyder, associated.
Photo: Robert C. Lautman

22 Office building, air-conditioned, for Virginia Hotel Company, Washington, under construction (cost est. \$2,300,000—under \$1.12 per cu. ft.). A. R. Clas, architect.

Other building types

The architects practicing in Washington receive, in addition to the customary office commissions, a share of work for various government departments and agencies. Justement's model for the new Federal Courts Building (bottom of page) suggests that even the major buildings have now been freed of the over-size New Rome manner. The new General Accounting Office (not shown) now under construction is vast, but essentially a simple office block designed by Public Buildings Service, General Services Administration. Work for the Department of the Army done by Mills & Petticord (right) is more imaginative in treatment, while the recent work of the Bureau of Yards & Docks, Department of the Navy, is continuing the structural and design traditions that have distinguished that bureau's achievements. Renovation of the White House and the Capitol, though well publicized, was not ready to be photographed.

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Woodmont Country Club, under construction. F. Wallace Dixon, architect; Harvey Warwick, consulting architect. Ring Engineering Company, builder. Rendering: J. E. Dundin

Group & Squadron Administration Building, Air Force National Guard, Department of the Army, Washington, is one of a series of military buildings under construction, designed by Mills & Petticord and Associates, architects and engineers. Others include a Squadron Administration Building, a Parade Building, a Gymnasium for Chief of Engineers, Department of the Army, and an Engineer-Aviation Battalion Building. Rendering: Joseph Hennessy

Sculptor's Studio for Alice Decker (Mrs. Davidson Mersers), Washington. Theodore W. Dominick, architect. Photos: Robert C. Lautman

Hotel DuPont Plaza, Washington, completed in 1949 by Alvin L. Aubinoe, Inc., builder. Aubinoe, Wards & Beery, architects. This firm also recently completed the Hotel Congressional on New Jersey Avenue. Photo: Robert C. Lautman

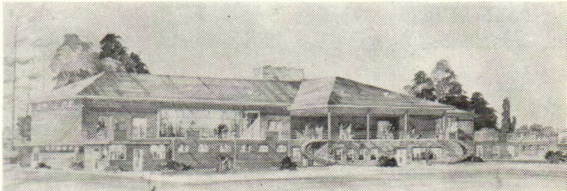
Transmitting Station and Tower for Bamberger Broadcasting Services, Inc., Washington. Berla & Bel, architects. Photo: Robert C. Lautman

George Washington University Hospital, Washington. Faulkner, Kingsbury & Stenhouse, architects. Photo: Blakeslee-Lane

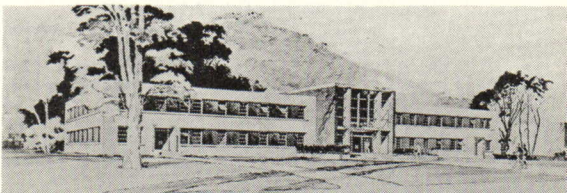
Grandstand for Rosecroft Raceway, Oxon Hill, Md. Hur L. Anderson, architect. Photo: Leet Brothers

Model of Federal Courts Building, Washington. Justement, contract architect under direction Public Buildings Service, General Services Administration. Photo: Horydczak

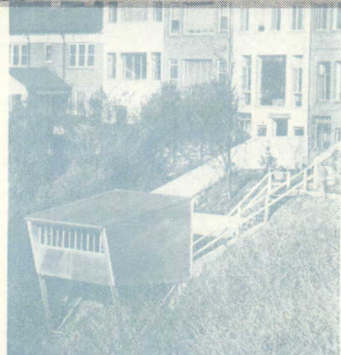
Pan-American Administration Building, Washington. Albert Kelsey and Harbeson, Hough, Livingston and Carson, architects, Philadelphia and Washington. Photo: Horydczak



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houses

The houses collected for this section of the Case Study reflect accurately the startling range of commissions executed by the Washington offices in a year. The majority are in suburban communities of the Maryland and Virginia counties adjacent to the District of Columbia, because available sites and clients' wishes are restricted in the older neighborhoods. In Georgetown, whose rows of preserved or restored 18th and 19th century houses are cherished by many, departures in design are almost prohibited by community sentiment. Some newer neighborhoods have copied the original houses and restrictions as well. Apparently this is the one taboo that invading wealth does not readily overturn in the capital.

Even in many of the suburban areas developed within recent years the rule is adamant against contemporary expression and tolerance toward any approximation of "Colonial." But, as shown here, some clients have found sites where they could build excellent houses designed for them by local architects. The speculative builders, with one or two exceptions, prefer a middle-of-the-road standard that has resulted in the "ramblers," "ranch houses," and "Cape Cod" all too familiar in America. In all, about 9,250 single dwellings were built last year.

Houses built in Washington do not go unnoticed by the residents, who have an established weekend afternoon habit of driving around and visiting anything just roofed. Ten to twenty thousands a day will visit, walk through, and compare with surprising candor any house furnished and opened as a "Model Home." And they want one for each Saturday and Sunday!



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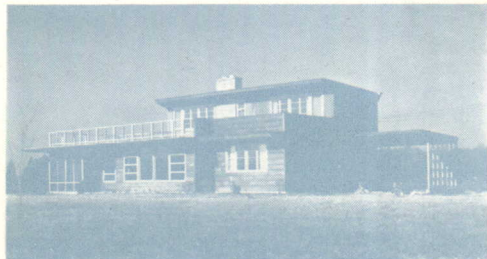
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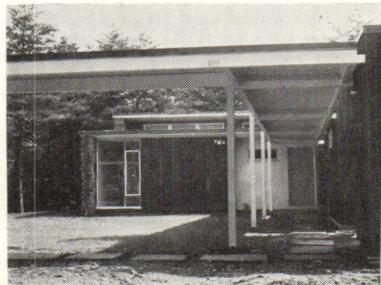
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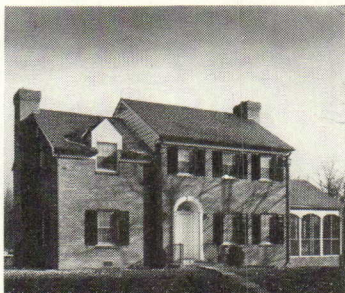
1 Kingsley E. Fowley house, Arlington, Va. Allen J. Dickey, architect. Photo: Allen J. Dickey

2 Dr. Harold H. Whitted house, Washington, Howard H. Mackey, architect. He has four more houses of this type under construction. Photo: Howard H. Mackey

3 Dr. and Mrs. Irving Burka house, Washington. Leon Brown, architect. Photo: Robert C. Lautman

4 John V. Olson house, Oxon Hill, Md. Mayhew W. Siess, architect, who also recently completed a one-story house on the adjoining lot. Photo: Robert C. Lautman

11



5 Osceola A. Thaxton house, Westgate, Md. Deigert & Yerkes, architects. This firm also recently completed the Kent A. Yoke house, Bethesda, Md.; the Gale McLean house, Potomac, Md.; the Morris Eigen house, Langley, Va.; the G. Clark Brant, Jr., house, Riverview, Md., and a house for Mrs. C. L. Watkins, Rockville, Md. The firm also has under construction three other one- and two-story suburban houses of comparable design. Photo: Robert C. Lautman

6 Douglas Laird house, St. Mary's County, Md. Francis Palms, Jr., architect. He also recently completed the Murray C. McComas house, Gibson Island, Md. Photo: Robert C. Lautman

7 Joseph D. Coppock house, Bethesda, Md. J. P. Trouchaud, designer. This architect also recently completed the William Diggs Wright house, Washington. Photo: Robert C. Lautman

8 Harry N. Hirshberg house, Montgomery County, Md. Arthur H. Keyes, Jr., & Basil Yurchenco, architects. Keyes also recently completed his own house in Washington. Photo: Gretchen Van Tassel

9 Mr. and Mrs. Willard Walter house, Washington, recently completed. Grosvenor Chapman, architect. He also recently tackled the problem of fitting a modern house for himself among the historic houses of Georgetown. Rendering: Grosvenor Chapman

10 J. H. McCarthy house, Falls Church, Va. John Graham, Jr., architect. Photo: Porter Studios

11 G. F. Horine house, Quaker Lane, Alexandria, Va. Gordon D. Rust, architect. He also recently completed the George Galland house, Bishop's Lane, Alexandria, and has started construction on four comparable one- and two-story houses in the area. Photo: Robert C. Lautman

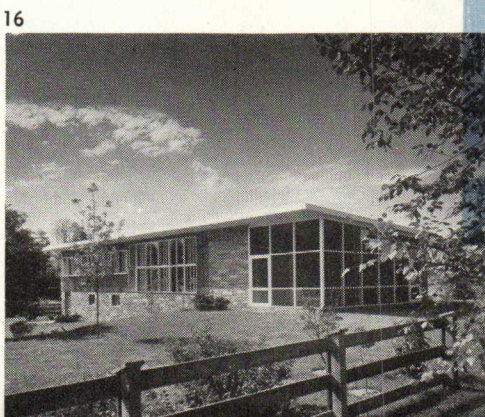
12 Mary L. Ruhl house, Washington. Norman Kertzman, architect. Photo: Horydczak

13 Katherine De Reeves house, Washington. Clifton White, architect. This architect also recently completed a house at Bethesda, Md., for Mr. and Mrs. Charles Schupp. Photo: O. L. Varela

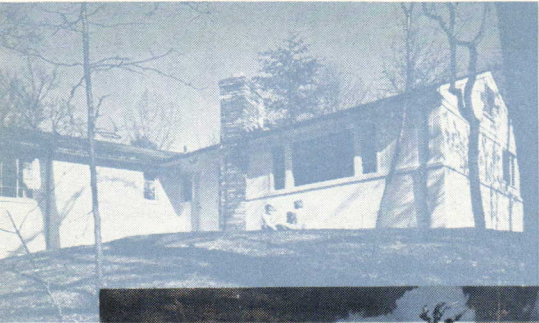
14 Paul R. Hoffmaster house, Washington. Walter Grand Byrd, designer. Photo: Del Ankers

15 Mr. and Mrs. Walter Waggoner house, Garrett Park, Md. Alexander Richter, architect. This architect, who is assistant professor of architecture at Howard University, also recently completed other contemporary houses in Garrett Park; as well as three group developments in Fairfax County, Va.—"Auxemont" (56 houses), "Oak Haven" (34 houses), and "Poplar Heights" (36 houses). Photo: Robert C. Lautman

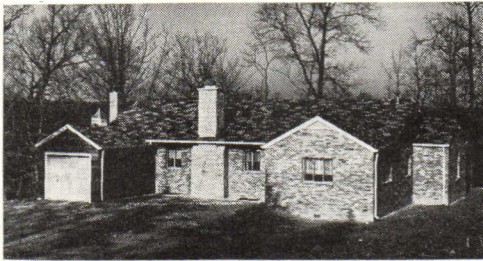
16 Ormston house, McLean, Va. Harry E. Ormston, architect. Photo: Richard Garrison



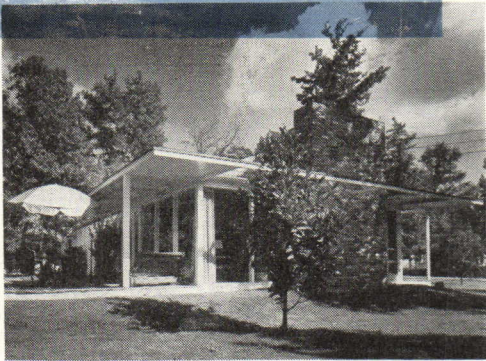
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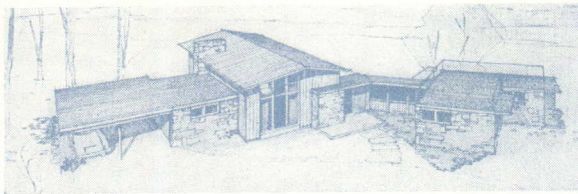
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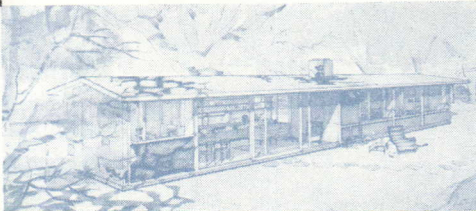
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17 John house, Bethesda, Md. Carl LeMar John, architect. Thomas H. Roth, builder.

Photo: Gretchen Van Tassel

18 William M. Parrott house, Fairfax County, Va., overlooking Potomac River. Richard L. Parli, architect. He also has recently completed a smaller house in Washington and another, approximately this price class, in South Arlington, Va.

Photo: Robert C. Lautman

19 Mr. and Mrs. Irving I. Axelrad house, Tauxemont, Alexandria, Va. Charles M. Goodman Associates, architects and engineers. This firm also recently completed six other houses near Alexandria, a house in Washington; and has under construction another house in Washington and one in Bradley Hills Grove, Md.—all expressions of design for contemporary living.

Photo: Rodney McCay Morgan

20 Mr. and Mrs. Louis Corea beach house, Deal, Md. Mills & Petticord, architects and engineers. This firm also has under construction a house for Mr. and Mrs. Jack R. Turney, in McLean, Va.

Rendering: Joseph Hennessey

21 Dr. and Mrs. David Riach house, Chevy Chase, Md. Chloethiel Woodard Smith, architect. This was a Washington Board of Trade "Award of Merit." The same architect now has under construction a smaller house in Rockville, Md., a weekend house and a larger, more luxurious house in the Briarcliff section of Washington.

Photo: Richard Garrison

22 John G. Shaffer, Jr., house, Fairfax, Va., recently completed by Nicholas Satterlee.

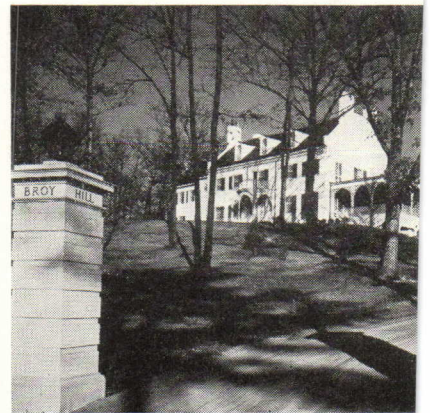
Rendering: Nicholas Satterlee

23 Mr. and Mrs. M. T. Broyhill house, "Broy Hill" Arlington, Va. Horace W. Peaslee, architect.

Photo: Gretchen Van Tassel

24 Newman house, Falls Church, Va., being completed, William Smull, architect.

Photo: Robert C. Lautman



other building types

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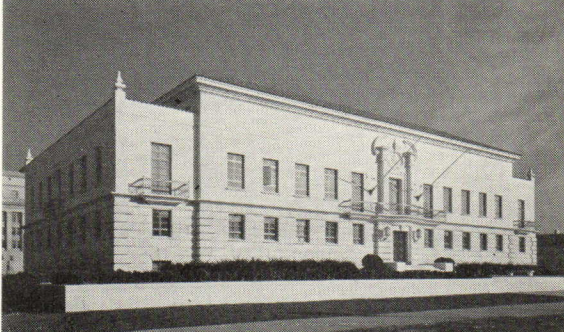
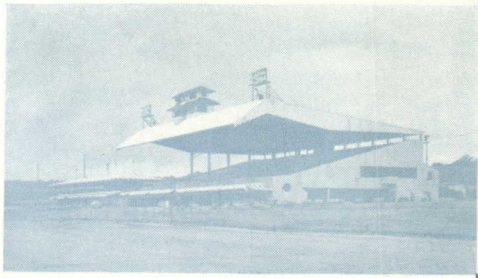
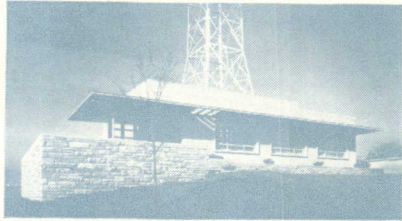
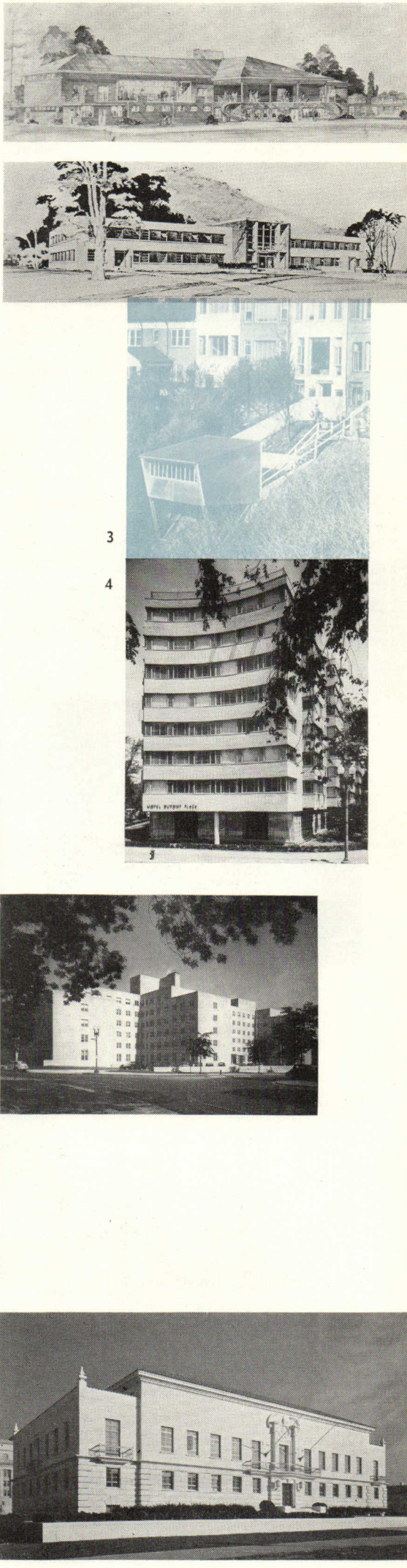
Transmitting Station and Tower for Bamberger Broadcasting Services, Inc., Washington. Berla & Mel, architects. Photo: Robert C. Lautman

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Model of Federal Courts Building, Washington. Design by Justement, contract architect under direction of Public Buildings Service, General Services Administration. Photo: Horydczak

Pan-American Administration Building, Washington. Albert Kelsey and Harbeson, Hough, Livingston & Carson, architects, Philadelphia and Washington. Photo: Horydczak



multiple dwellings

1 The Kenmore elevator apartments (379 units), fully air-conditioned, Washington, under construction. Philip M. Jullien and Co., architects and engineers. *Rendering: Wm. H. Shoemaker*

2 Co-operative apartments (50 units), Washington, completed in 1949 by Leon Brown, architect. *Photo: Robert C. Lautman*

3 Washington Circle elevator apartments (263 units), fully air-conditioned, Washington, recently completed. John H. Graham, architect. This firm also designed the recently completed Hilltop House air-conditioned elevator apartments (94 units). *Rendering: John H. Graham*

4 Apartment house for F. Baldi, Washington, nearing completion. Arthur L. Anderson, architect. *Rendering: Richard Collins*

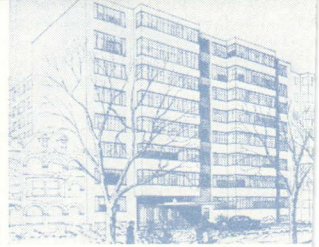
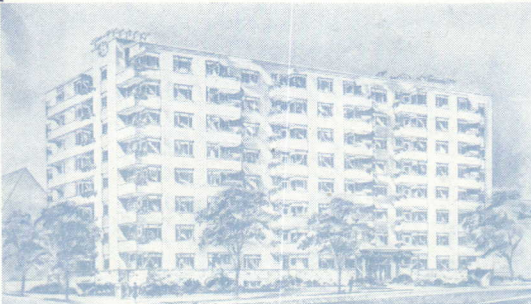
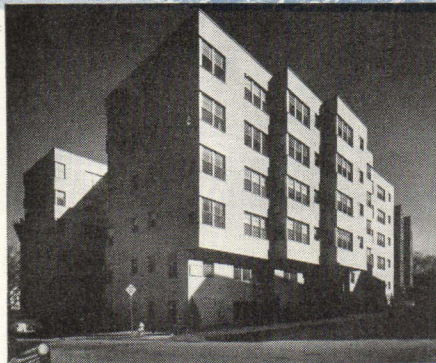
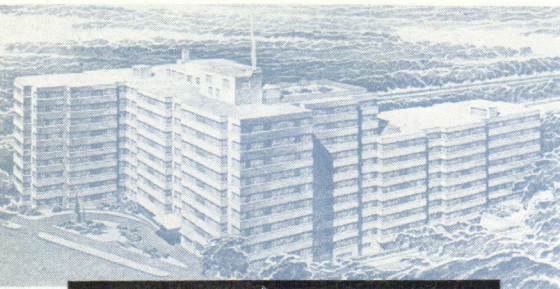
5 The Whitehaven apartments (485 units), Washington, nearing completion. Aubinoe, Edwards & Beery, architects, and Alvin L. Aubinoe, Inc., builder. *Rendering: Joseph A. Parks*

6 Boston House apartments, Washington, under construction. Berla & Abel, architects. This firm also has, nearing completion, Potomac Park apartments and apartments for Temple Realty Co.

Apartments in Washington are not only more numerous than in other cities of comparable size—largely because of the (politically) seasonal population attached to or doing business with the government—but they are also more carefully studied in plan and more comfortable. Nowhere else is there the number of firms paying such special attention to the amenities of urban apartment-living. Some of the firms, Berla & Abel for instance, have made a national reputation in this field alone. Obviously this is not to say that all Washington apartments are well planned and well designed: there is also the purely routine work to be found. Some 22,000 units were built last year.

Housing developments continuously being added around the capital are almost uniform: good site planning generally well adapted to the terrain, fairly unimaginative orientation, general disregard of Potomac Valley climate. An occasional project has appeared in recent years that is excellent in planning and expression throughout.

In addition to the projects represented by the pictures and captions here, more work in this field has been reported. Too late for inclusion were Adams Mill Plaza apartments and Parkwood Plaza apartments, Washington; University Park apartment group, Takoma Park, Md.; Elmar Gardens apartments, Prince Georges County, Md.; and a speculative "Rambler" house, all by Milton J. Prassas. Also Northwest Park apartments, Prince Georges County, Md., and Andrews Field apartments (Air Corps), Md., both by Victor E. DeMers



Conspicuous Waste in Lighting and Air-Conditioning

By SAMUEL ADAMS BOGEN*

When you drew up plans for your latest air-conditioned building, each 100-watt lamp shown on the plans added \$20 or more to the cost of the air-conditioning system!

Each time you substituted a 150-watt reflector lamp in a cheap high-hat fixture, for a 40-watt unit, you added \$14 to the cost of the job!

Each time you used a 150-watt filament lamp instead of a 40-watt fluorescent lamp, you increased the electrical energy consumption of that job, not by 110 watts, but by 137 watts!

And finally, most installations using projector and reflector lamps for interior lighting cannot be successfully air conditioned regardless of cost!

These are startling statements and will not go unchallenged. All but the last, however, are susceptible of simple proof, thus: One ton of air conditioning represents the absorption of 12,000 Btu per hour; this is the definition of a ton. One watt is equal to 3.4** Btu per hour. Therefore, one ton is equivalent to $\frac{12,000}{3.4} =$

3500 watts. Or, 100 watts is equal to 1/35 ton. Now, a ton of air conditioning in the average commercial occupancy today costs about \$800, sometimes much more, sometimes a little less. Let us take \$1000 as an average figure. By simple arithmetic, then, our 100-watt lamp, or 1/35 ton, costs \$800, or \$23. Therefore our first statement was conservative!

Let us now take the second statement. An inexpensive high-hat fixture for a 150-watt reflector lamp costs about \$9. Suppose we tabulate it and the other cost elements:

Cost of lighting fixture	\$ 9
Cost of installation (not including wiring)	2
Cost of 150 watts of air conditioning @ \$23/100w	35
Total	\$46

Now compare this with similar

figures for an inexpensive 40-watt fluorescent unit:

Cost of lighting fixture	\$16
Cost of installation (not including wiring)	4
Cost of 50 watts of air conditioning (allowing 10 watts for ballast loss)	12
Total	\$32

The difference between \$46 and \$32 is \$14, so our second statement is proved. We have ignored the saving in wiring costs by the use of the fluorescent unit so that the \$14 difference is conservative.

To prove the third statement, that electrical energy consumption is increased by 137 watts when a 150-watt filament lamp is used instead of a 40-watt fluorescent unit, we must consider a few more factors. As a rough average we may say that a ton of air conditioning requires about 1.3 horsepower in motors for compressors, fans, etc. One horsepower equals 750 watts; but, since motors are not 100 percent efficient, let us take 1 hp as equal to 1000 watts. Therefore, one ton equals 1.3 hp equals 1300 watts in energy consumption by the air-conditioning equipment. If a 100-watt lamp adds 1.35 ton to the air-conditioning plant, it also adds $\frac{1300}{35}$ or 37 watts.

Our 150-watt filament lamp therefore results in an electrical load of:

Lamp load	150w
Air-conditioning power load $\frac{150}{100} \times 37$	56w
Total	206w

But the 40-watt fluorescent lamp and its 10-watt ballast consume:

Lamp and ballast load	50w
Air-conditioning power load $\frac{50}{100} \times 37$	19w
Total	69w

Therefore the difference in total electrical load between 150 watts and 40 watts of lighting in an air-conditioned area is not 110 watts, but 137 watts!

The statement that most installations using projector and reflector lamps, or other sources of high beam

candlepower, cannot be successfully air conditioned is not susceptible of such rigorous proofs at this time. But observation of a number of recent store jobs indicates that there is nevertheless a substantial degree of truth in it. The problem for the air-conditioning designer is not to get rid of the total heat of the lamp; that is easy. The serious problem lies in the disposal of the radiant energy component of the lamp's total energy consumption. Let us consider what happens to the energy that we feed into a typical 150-watt filament lamp.

This is how it breaks down:

Visible radiation	10%	15w
Heat radiation	70%	105w
Heat conduction and convection	20%	30w
Total	100%	150w

Since the visible radiation is converted to heat upon absorption by the various surfaces that it strikes, we may say that 80 percent of the filament lamp electrical energy becomes radiant heat energy. This radiant energy is absorbed to a negligible extent in its passage through the air; but it is absorbed very readily by human skin, hair and clothing, and by the surfaces of furniture, walls, floors, and ceilings. The furniture, walls, floors, and ceilings become warm and in turn become radiators. But the major damage is done when the radiant heat strikes skin, hair and clothing first. This impinging radiation can be taken care of—at a certain cost—by reducing air temperature, provided that the radiation received by people at various points in the room does not vary appreciably from point to point.

How often is this proviso realized in practice? Very seldom indeed, if high candlepower sources are used. Consider a typical case: In a store with a 10'-0" ceiling, recessed high-hat fixtures are located on 6' centers over the jewelry counter. Each unit is lamped with one 150-watt, PAR-38, projector floodlamp. This lamp has a fairly sharp light cutoff at an angle of 30° from its vertical axis: The beams of light from adjacent lamps overlap at 4'-9" above the floor.

* Consulting Engineer, New York; Faculty Member, Polytechnic Institute of Brooklyn. ** Calculations in this article are carried to 2 significant figures.

A salesgirl 5'-6" tall working in this area is subjected to intense radiation on hair and forehead at some moments, and to practically no radiation on her head at other moments, while her hands at counter level receive a fairly uniform radiation. Finally, when she walks to the wrapping desk, she enters, let us assume, a fluorescent area with very little radiant heat. How does she feel under these changing conditions?

If the air temperature is such as to result in comfort under the light center, it will not result in comfort anywhere else, and vice versa. The situation is analogous to the problem of air conditioning a kitchen. Obviously the conditions that suit the man at the oven cannot suit the man at the salad counter. To design for the average of these two conditions is to satisfy neither. The answer seems to be that if you must throw radiant heat into a room in large quantities, do it uniformly, so that it can be compensated for. And by doing it uniformly, we mean uniformly at the occupants' head level, and not on "the working plane" which is the usual reference area in lighting calculations. This can be done by placing narrow beam lamps very close together, or by using wide beam equipment.

Another solution to the problem, of course, is to avoid the use of intense radiant heat sources. Consider the input to a typical 40-watt fluorescent lamp, which breaks down as follows:

Visible radiation	21%	8.4w
Heat radiation	26%	10.4w
Heat conduction and convection	53%	21.2w
Total	100%	40.0w

To this we must add approximately 10 watts ballast loss, all of which becomes conducted and convected heat. We may say that 19 watts, or 38 percent of the total input becomes radiant energy in a 40-watt fluorescent lamp. Compare this 19-watt radiation with the 120-watt radiation from a 150-watt filament lamp!

The comparisons made in the course of this article between the 150-watt projector or reflector lamp

and the 40-watt fluorescent lamp were not made by chance. In use, these are two almost equal light sources. The initial output of a 150-watt PAR-38 projector floodlamp is 1150 lumens; while the initial output of a 40-watt, 3500° white fluorescent lamp is 2300 lumens. In use in typical lighting fixtures this lamp has an output of about 50 percent, or 1150 lumens. Therefore, the two sources will give about equal average light intensities.

With the fluorescent lamp, or a well diffused filament lamp unit, the word "average" means something, since it is fairly easy to design a uniform lighting installation in which the "average" intensity approximates the actual intensity over much of the working area. But with the high beam candlepower lamps, "average" illumination is frequently a meaningless phrase. If point A on a counter top is at 120 footcandles, and point B, 3' away, is at 20 footcandles, do we have an effective average of 70? Arithmetically, yes, but for practical purposes we can hardly be said to have any average at all since the arithmetical average occurs so seldom.

Filament lamps in general and reflector and projector lamps in particular have grown very attractive to the architect in recent years because they do permit high lighting intensities with minimum lighting fixture size. A carefully designed reflector lamp fixture may be made quite unnoticeable in the finished ceiling. This cannot be done with fluorescent lamps, it is true. But most architects, and many engineers, are under the impression that the filament light source also saves money, and this is certainly false in air-conditioned occupancies. Indeed, when the air-conditioning cost is considered, it becomes apparent that low-cost filament units are a luxury that few jobs these days can afford in any quantity. The high-hat becomes in the lighting field, as in society, a symbol of conspicuous consumption!

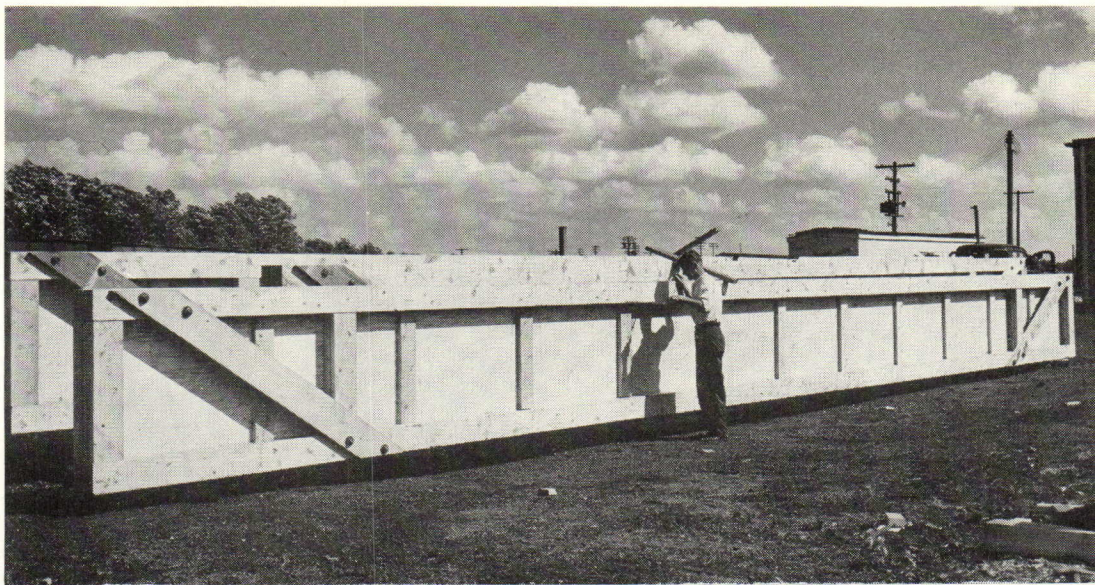
There are, of course, other differences in the performance of filament and fluorescent lamps, such as lamp life, maintenance of lumen output, replacement cost, and color. Each of these, and others, must be considered and evaluated for each job to determine where true economy and suitability lie.

Color has been a strong point in favor of filament lamps, with good reason. But new colors of fluorescent lamps recently placed on the market give reasonably close approximations to the color of incandescent light, and may be used successfully where this color is required. Examples of such use are restaurants, bars, shoe stores, cosmetic departments, evening dress departments and so on, depending on the predominant color of the merchandise being sold, or on the color of light in which it is normally to be seen.

It must be admitted that the discussion of radiant heat from lamps is quite controversial. The Joint Committee on Lighting and Air Conditioning of the Illuminating Engineering Society and the American Society of Heating and Ventilating Engineers does not consider radiant energy from light sources to be a particularly serious air-conditioning problem. But it must also be noted that the last report of this committee was published in September, 194 (see Transactions of the Illuminating Engineering Society), when intensities were lower and projector and reflector lamps were not in use for interior lighting. It may be that people only *think* they are warm when standing in an intense light beam, as the committee seems to feel, but the discomfort resulting from that thought must still be relieved by the lighting designer, the air conditioning designer, and the architect.

But there is no controversy about total heat from light sources, about the need for keeping projector costs within reason. We conclude therefore that much more serious consideration must be given to complete fluorescent lighting in air-conditioned buildings.

wood girders, of glued construction throughout, are massive in appearance. Monorails can be located anywhere, not just at panel points, these girders are well suited for industrial buildings. Photo courtesy of American Roof Truss Company.



Laminated Wood Arches and Girders

By R. J. WADDINGTON*

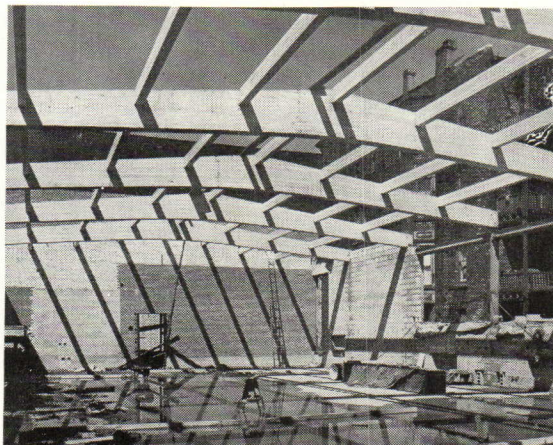
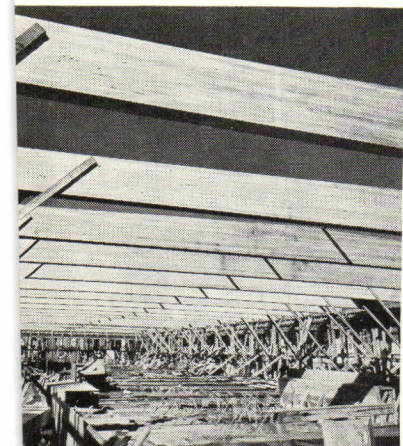
Laminated wood construction, the gluing together of several laminae to form one structurally sound member, originated in Germany before World War I and later spread to Switzerland, Norway, Denmark, and Sweden. As a result of its many advantages, this type of construction has become increasingly popular in the United States, principally during the last decade. Finished members may be either curved or straight, and as they span long distances with safety and grace, they are well suited for use in churches, auditoriums, clubhouses, showrooms, gymnasiums, restaurants, farm structures, and some industrial projects.

Construction costs may be frequently reduced through the selection of laminated wood structural methods. This is especially true with some types of arches, as they act at once as both columns and roof supports. As the attractive appearance of laminated girders obviates the need of boxing, another economy is achieved. Lighting effects are often simplified. Laminated members are structurally sound and will last indefinitely. Arches of this type will not check or warp, as solid members occasionally do, and because they employ a minimum of steel, con-

* Vice President, American Roof Truss Company.

Left: glued laminated girder construction employed in a west coast warehouse. Columns are solid sawn timber.

Below: this laminated roof girder spans approximately 80 ft. Note sloping top and slight camber; erection braces at sides are temporary. Both photos courtesy of Timber Structures, Inc.



Left: flat arches bear directly on wall or column bearing plates. These arches are less expensive than those with greater curvatures, as only two-inch laminations are required. Photo courtesy American Roof Truss Company.



Left: laminated three-hinged arches, acting as both columns and roof supports, are widely used in churches, recreation buildings, and auditoriums. Photo by Hedrich-Blessing; courtesy of Unit Structures, Inc.

Right: glued laminated arches with timber purlins and roof sheathing. Photo courtesy Timber Structures, Inc.

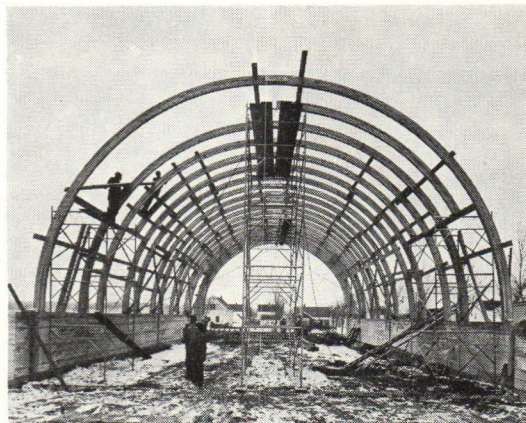
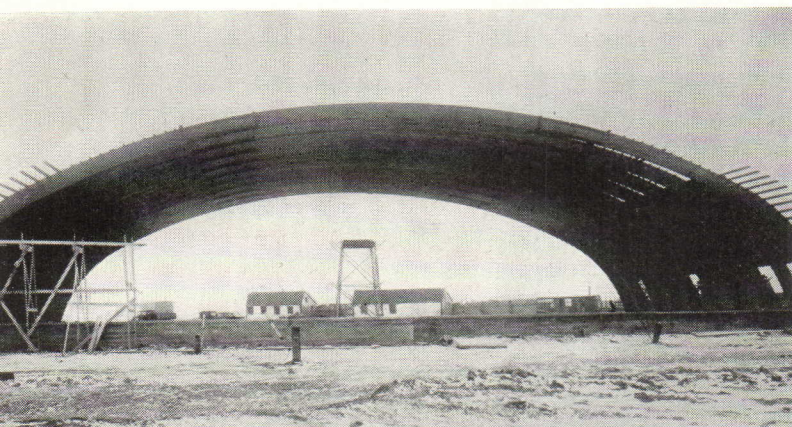


ditions likely to induce rust or corrosion are not detrimental. Little or no assembly is required at the job-site, so construction time is reduced. Various grained laminae provide a pleasing appearance; the size and shape of the structural members offer excellent resistance to fire; shrinkage is eliminated as only kiln dry lumber is employed.

Structural grade fir or yellow pine is generally employed in the fabrication of laminated members. Two-inch lumber is specified for laminates with very small curvatures; one inch or less where larger radii

Left: beam arches in bomber hangar, placed 10 ft. on center, span 152 ft.; arches are 35 ft. high at center. Photo courtesy Rilco Laminated Products, Inc.

Right: laminated rafters in this church are placed 4 ft. on center and span 42 ft. Photo courtesy Unit Structures, Inc.



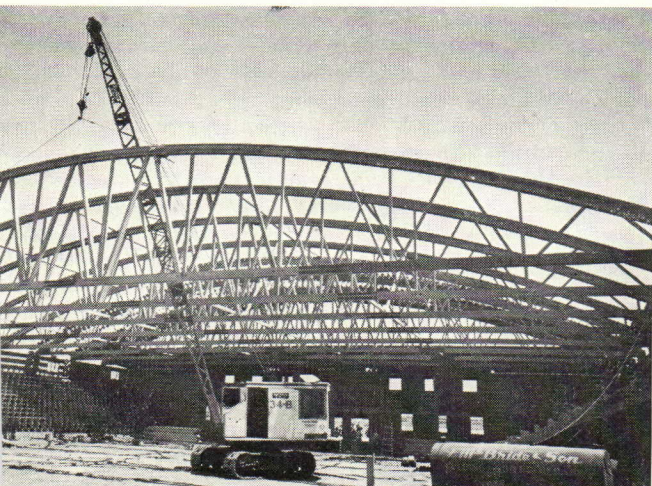
are required. Yellow pine lumber is considered best for large curvatures because of its capacity for bending. The superiority of today's glues has made possible the many excellent installations of this material. Casein glue is used primarily for indoor construction; urea-resin and resorcinal-phenol glues are especially useful for members requiring water-resistant qualities. Laminae are glued together under pressures ranging from 100 lbs. to 200 lbs. per sq. in.

A preservative usually acts as a sealer and base coat. Stain, paint, varnish, liquid wax, or shellac may be applied over this coat; the architect must specify the finish he desires, as the manufacturer prepares the exterior surfaces of the laminates in conformance with the final finish.

In shipment and erection, arches and girders should be protected from adverse weather conditions. Angles and bolts should be set in masonry before members are delivered to the site.

The photographs on these pages illustrate the principal architectural forms that result from the use of glued laminated wood structural members.

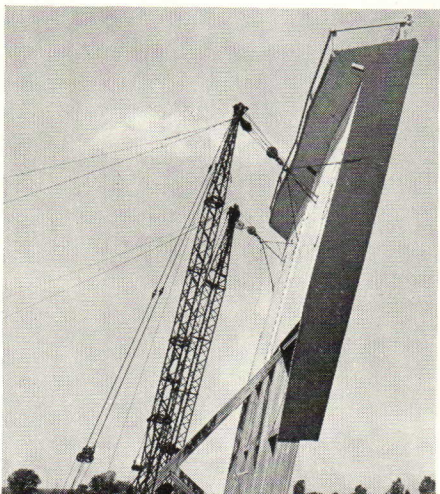
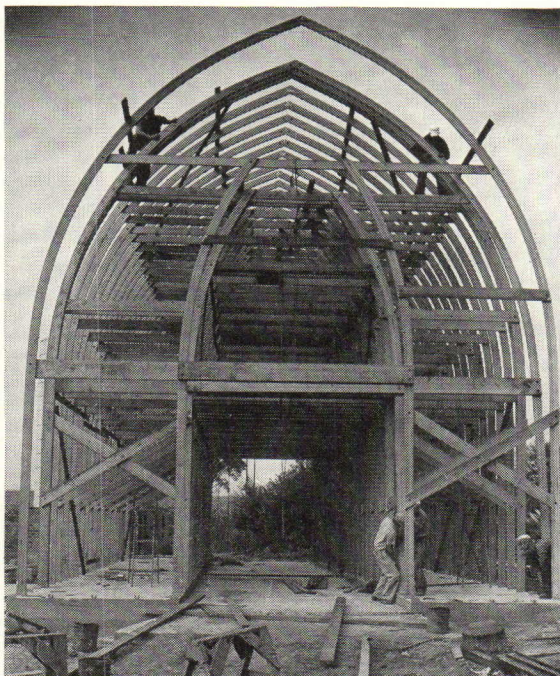
Left: arched bowstring roof trusses safely and economically span distances of 200 ft. Photo courtesy of American Roof Truss Company.



Below left: glued timbers were employed as the vertical supporting members of this screen tower for a drive-in theater. Towers are assembled, painted, and wired at ground level, then swung up into position. Upper photo shows laminated members attached to steel swivel shoes embedded in concrete. Both photos courtesy of Timber Structures, Inc.



Below: laminated structural members have many uses for farm structures. These workmen are erecting a corn crib. Photo courtesy of Rilco Laminated Products, Inc.



streamlined specifications

By MORTON ISAACS* AND BEN JOHN SMALL**

This article, second of a series illustrating the application of streamlined specification to electrical installations (see Part I, page 79, November 1949 P/A), deals with the main power source or service. As services for projects covered in this series vary widely it will be necessary to modify this specification to meet job requirements.

An industrial plant that purchases electric power at primary voltage, installs voltage transformation equipment and the necessary switchgear to control power distributed through the plant, requires a specification that is quite different from one applicable to an apartment house. Even in the industrial plant there are many variations to be considered. Utility lines may be overhead or underground; it may be desirable to install voltage transformation, metering, main and/or feeder control equipment outdoors. The project may require either pole line equipment or manholes and related sub-grade structures. Furthermore, several types and grades of equipment are available; each may be suitable for the project but subject to final selection by variables such as 1) need for service continuity; 2) space conditions; 3) need for meters; 4) power source(s); 5) local codes; 6) local utility requirements; 7) cost. Thus it is obvious that this series cannot cover the entire subject, and specific examples must be used.

In order to illustrate the application of streamlining to this particular phase of electrical work, three types of projects are illustrated: 1) an industrial plant; 2) a commercial building; 3) a residence. Each illustration will be specified as though it were the actual service for the hypothetical project; this will be done to maintain the continuity of the series, so that a complete specification will be available at the conclusion of the series. In each case, certain assumptions will be made regarding characteristics. These assumptions will be varied to cover the greatest possible number of conditions, so that the reader may select parts of these illustrations for use in an actual specification.

Illustration 1, industrial plant, assumes:

1. Electric energy purchased from local utility.
2. Characteristics of available power: two 4160 volt, 3 phase, 4 wire, 60 cycle feeders, each having maximum short circuit capacity of 150 MVA.
3. Local utility furnishes and installs conductors from existing primary feeders to user's switchgear.
4. Local utility supplies metering transformers and installs meters. User provides and installs meter and instrument transformer housings in accordance with utility company specifications. User provides meter wiring in accordance with utility company specifications.
5. Other details as shown on Diagram 1.

PART 4—SERVICE (Illustration 1)

1. definitions and abbreviations

(a) Definitions contained in "American Standard Definitions of Electrical Terms" published by ASA govern the terms used herein, except as noted.

(b) Abbreviations used (and on Diagram 1) are:

- KVA—Kilovolt amperes
- MVA—Millions of volt amperes
- V—Volt
- ∅—Phase
- F—Cycle (frequency)
- A—Ampere
- W—Watt
- WH—Watt hour
- KWH—Kilowatt hour
- IC—Interrupting capacity
- MCM—Thousand circular mils

* Guy B. Panero, Consulting Engineers
 ** Associate, Alfred Hopkins & Associates, Architects

ELECTRICAL WORK, PART 2

1. source and distribution characteristics

- (a) Incoming supply:
1. Electrical energy will be supplied to this project from facilities of Electric Light and Power Company (hereinafter called "utility").
 2. Energy will be furnished to user's facilities through two 4160V, 3 ϕ , 60F, alternating current primary feeders.
- (b) Distribution characteristics:
1. Energy for ½ horsepower and larger motors, welding units, and primary side of lighting transformers: 480V (nominal), 3 ϕ , 60F, alternating current.
 2. Energy for motors smaller than ½ horsepower, lighting units, and miscellaneous power: 120/208V, 3 ϕ , 4 wire, 60F. (Exceptions from 120/208V distribution for miscellaneous power will be necessary for signal communication systems. These exceptions are noted under applicable parts of this specification.)

3. equipment

- (a) Equipment shown in "Service One Line Diagram": unit substation type(1) in indoor(2) type housings.
- (b) Where more than one unit of any particular piece of equipment or apparatus is required, such units: product of one manufacturer.
- (c) Entire unit substation:(1) assembly of single approved supplier.
- (d) Ratings in accordance with AIEE standards:
1. Capacity 2000 KVA
Frequency 60 cycle
Phase 3
 2. Two incoming 4160V, 3 ϕ , primary circuits. Two main secondary circuits, 480V, 3 ϕ . Eight secondary, outgoing circuits, 480V, 3 ϕ . Six secondary, outgoing circuits, 120/208V, 3 ϕ .
- (e) Substation(1) consists of following equipment, co-ordinated:
1. Incoming line switchgear sections, each with 3 pole, double-throw switch, fuses and fuseholders.
Switch: 3 position, open or selection of either primary feeder. Switch minimum rating: 5000V, 400A continuous current, 20,000A momentary current, 10,000A for 5 seconds; switch contacts: air break.
Fuses: rated at 5000V, twice normal transformer current at full rated load and IC of 150 MVA. Fuse holders: product of manufacturer of fuses or specifically approved for service. Provide potheads, wiring and connections as required.
 2. Two transformer sections, each as follows: 3 ϕ , askarel(3) cooled, 1000 KVA, 60F, 4.16 KV wye primary, 480V delta secondary. Details in accordance with applicable sections of standards C-57.1 of ASA. Four 2½ percent taps (two above and two below normal rated high voltage and rated for KVA) in high voltage winding. Externally operated manual tap changer. Tap changer: operated only when transformers are de-energized.(4) High voltage and low voltage bushings and connecting throats: co-ordinated properly to simplify field connections and assembly.
 3. Two 480V sections with two indoor(2) type metal enclosures having hinged front doors, removable rear plates, copper buswork, provisions for connection to transformer sections and following equipment mounted in each section:
One main secondary air circuit breaker rated at 1200A, 600V, 50,000 ampere IC, 3 pole, single-throw, silver plated(5) main contacts, manually operated,(6) drawout(7) type, with time-overcurrent protection and instantaneous short circuit trip. Provide interlock so arranged that double-throw primary switch (associated with each main breaker) cannot be opened or changed in position unless this breaker is open.
Four feeder air circuit breakers: each rated at 600A, 600V, 25,000 ampere IC, 3 pole, single-throw, silver plated(5) main contacts, manually operated, drawout(7) type, with time-overcurrent protection and instantaneous short circuit trip. Provide clamp type cable connections for cables. One transformer section, 3 ϕ , askarel(3) cooled, rated at 200 KVA, 480V delta primary, 120/208V wye secondary, 60F. Details in accordance with appliance sections of standards C-57.1 of ASA.
Four 2½ percent taps (two above and two below normal high voltage and for rated KVA) in high voltage windings. Externally operated manual tap, designed for use only when transformer is de-energized. High and low voltage bushings and throat connections to simplify field connections. Three circuit(9) breakers on 120/208V section. Circuit breakers similar to those in 480V section, except continuous current ratings: 200A,(10) and 15,000 ampere IC.

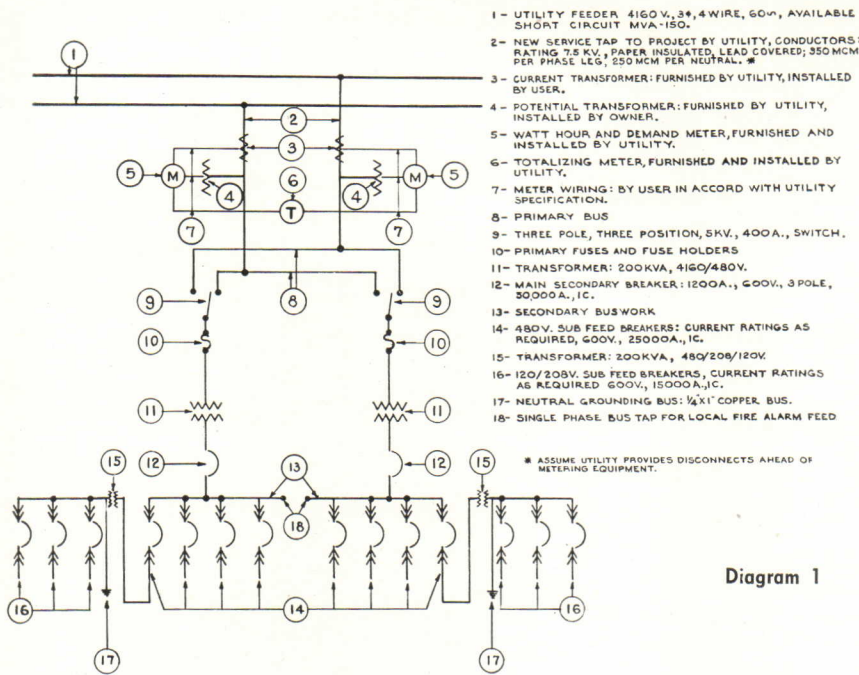


Diagram 1

4. wiring and miscellaneous connections

- (a) Conduit: galvanized, exposed within switchboard room.
- (b) Conductors:
 1. Primary connections: IPCEA voltage rating 7.5 KV, varnish cambric insulated bra covered.(11)
 2. Metering connections: utility specifications.
 3. Grounding: copper bus, 1" by 1/4" or 4/0 bare copper, soft drawn.
 4. Secondary connections: NEC type RH.(11)
- (c) Grounding: ground neutrals of 480/208/120V transformers and equipment frames. Neutral ground individually, using separate conductor from each to final ground connection. Maximum resistance (dc) to ground: 3 ohms.

Illustration 2, commercial building, assumes:

1. Electric energy purchased from local utility.
2. Characteristics of available power: 120/208V, 3 ϕ , 4 wire, 60F system.
3. Utility furnishes and installs service taps into buildings.
4. Utility furnishes and installs meter.
5. User installs meter housing.
6. User furnishes and installs meter wiring in accord with utility specification.
7. User furnishes and installs service switch and distribution board.
8. Service switch and distribution board is combined in one housing, metal-enclosed dead-front type.
9. Other details as shown on Diagram 2.

PART 4—SERVICE (Illustration 2)

- 1. definitions and abbreviations
- 2. source and distribution characteristics

3. equipment

- (a) and (b) Same as illustration 1.
- (a) Incoming supply: 120/208V, 3 ϕ , 4 wire, 60F. Supply conductors installed and connected meter housing by utility.
- (b) Distribution: power for all uses distributed at 120/208V. (Exception for signal and communication systems noted under applicable parts of this specification.)
- (a) Equipment shown in "Service One Line Diagram": product of one manufacturer and assembled in one unit.
- (b) Service switch and distribution board: one unit, metal enclosed, dead front.
- (c) All switches: pull out type, fusible, 3 pole, 250V, current ratings as on diagram (or 10) in individual housings.
- (d) Switch jaws: double break, visible for inspection when door is open.
- (e) Switch jaws and fuse clips: removable from within each unit without dismantling unit.
- (f) Entire panel: flush (12) type, door in door with cylinder lock over primary door section cover live parts.
- (g) Panel box: hot dipped galvanized; (13) provide one knockout (14) for each conduit shown on diagram and following space: (15)
 (Specify desired space)
 (Specify trim finish) (16)
- (h) Meter housing: conform to utility specification.
- (a) Conduit: galvanized.
- (b) Conductors not otherwise specified under other parts: NEC type RH (17) except for meter wiring install type specified by utility.
- (c) Install grounding in accord with utility specification and NEC.

4. wiring and miscellaneous connections

Illustration 3, residence, assumes:

1. Electric energy purchased from local utility.

PRELIMINARY SPECIFICATIONS: ELECTRICAL WORK

- 1 - INCOMING 120/208V. SERVICE BY UTILITY.
- 2 - METERING EQUIPMENT IN ACCORD WITH UTILITY SPECIFICATION.
- 3 - SERVICE SWITCH, 600A, 250V., FUSED.
- 4 - DISTRIBUTION PANEL BOARD BUS.
- 5 - SUB FEED FUSED SWITCHES, CURRENT RATING AND FUSING AS REQUIRED, 250V., 3POLE, PANEL BOARD TYPE.
- 6 - GROUNDING IN ACCORD WITH UTILITY SPECIFICATION AND GOVERNING CODE(S).
- 7 - SINGLE PHASE BUS TAP FOR FIRE ALARM FEEDER.

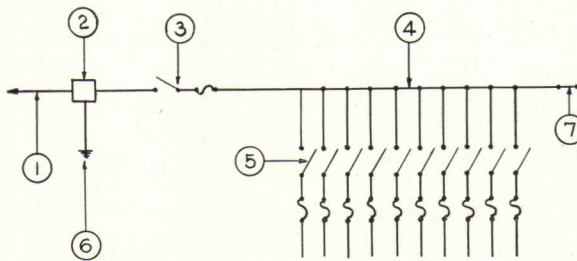


Diagram 2

- 2. Characteristics of available power: 115/230V, 1Ø, 3 wire, 60F system.
- 3. Utility installs aerial service drop to building.
- 4. User installs standpipe and conductor from point adjacent to attachment of service drop to outdoor meter.
- 5. User installs outdoor meter housing.
- 6. User installs wiring from meter housing to distribution panel.

PART 4—SERVICE (Illustration 3)

**1. definitions and abbreviations
source and distribution characteristics
3. equipment**

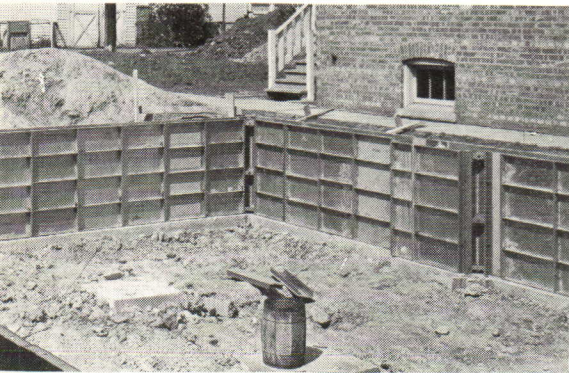
- (a) and (b) Same as illustration 1.
- (a) Incoming service and distribution: 115/230V, 1Ø, 3 wire, 60F.
- (a) Meter housing: outdoor type, conform to utility specification.
- (b) Distribution panel:
 - 1. Totally enclosed.
 - 2. Pull out main fused switch.(18)
 - 3. Pull fused switch for range.(18)
 - 4. Branch circuits, four 15A, two 20A, one 35A, 1 spare 30A(19) plug fused holders.
- (a) Conduit: galvanized. Conduit fittings: galvanized, threaded.(20)
- (b) Conductors: NEC type RW in conduit exposed to weather; NEC type R in all other wiring.
- (c) Grounding: conform to utility specification and NEC.

wiring and miscellaneous connections

REFERENCES

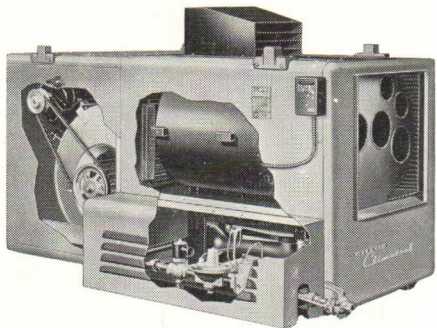
- 1. Substation as used in the specification is defined as the assemblage of equipment necessary for metering, primary control, voltage transformation, and secondary control all contained in unit type, co-ordinated housings arranged for final connection and major assembly in the field.
- 2. Specify indoor or outdoor, as required.
- 3. Specify air, oil, or askarel, as required.
- 4. Specify taps and tap changer to suit individual project.
- 5. Optional, specify other contacts, if desired.
- 6. Optional, specify electrical operation, if desired.
- 7. Optional, specify stationary type, if desired.
- 8. Specify continuous current ratings as per job requirements.
- 9. For actual specification, detail conduit connections and conductor sizes. Other items may be required as: monorail and chain hoist for lowering drawout type breakers, ammeters, voltmeters, clocks, watt meters, all of which should be specified in accordance with job requirements.
- 10. Specify actual required continuous current ratings.
- 11. Indicative only, specify voltage rating and insulation, as required.
- 12. Indicative only, specify whether flush or surface type or whether enclosure suitable for hazardous area or outdoors is required.
- 13. Indicative, specify prime coated black iron or other finish.
- 14. Or conduit tap.
- 15. Knockout or conduit taps may be left for shop drawings, specified or shown on the drawings; job conditions will dictate policy to follow.
- 16. Panel box trim is generally prime coated to permit finish painting on job under painting contract or subcontract, thus the flush panel is painted same color as walls. Specify deviations from this procedure.
- 17. RH indicative only, specify desired type.
- 18. Specify ratings.
- 19. Indicative only, specify required number and ratings.
- 20. Indicative only, specify desired type.

magnesium forms have several advantages for concrete foundations



Above: each unit is "Heliarc" welded, and annealed to relieve welding stresses.

Below: conditioner is equipped with both bottom support channels and hanging brackets.



standby electric plant powered by air-cooled engine

To help fill the demands created by an increased interest in stand-by electric power a new model has been placed on the market by the Kato Engineering Company. Known as Model 45HFW4, it is powered by a two-cylinder air-cooled engine. As there is no radiator, winter freezing problems are eliminated and installation can be accomplished in the coldest weather. Although electric cranking may be added if desired, the engine is normally equipped with a high-tension magneto which requires handcranking. There is no need for batteries.

vibrationless electric tool performs three duties

An electric eraser which develops a speed of 3000 rpm and prevents burning or tearing of drawings and tracings has been added to the power tool line of Dremel Manufacturing Company. The vibrationless motor permits pinpoint accuracy; a sliding snap-type switch has been built into the handle

Right: lightweight instrument incorporates burnisher at opposite end of erasing shaft.

Concrete forms made of magnesium have been added to the line of products manufactured by the Symons Clamp and Manufacturing Company. Although forms of lumber and plywood, which Symons will continue to produce, are less expensive, the new units will prove cheaper for contractors who specialize in foundations. The new type will last longer and may be erected more rapidly.

Principal advantages are: 1) weight is less than three pounds per foot; 2) panels will not swell when wet, or contract or rust when drying; 3) precision

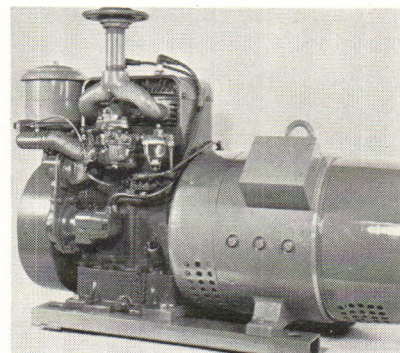
unit designed for attic or crawl space installation

Type 155, L. J. Mueller Furnace Company's new gas-fired horizontal winter air conditioner, has been especially designed for attic or crawl space installation in new small home construction, or multiple installation in large one-level homes. These units may be used to advantage in basementless homes, as they occupy no floor space and permit houses to be constructed without utility rooms. They may also be installed with perimeter, zone control, radiant, or conventional forced warm air systems. Available in 60,000 and 90,000 Btu input capacities, Type 155 is American Gas Association approved

production makes them automatic, accurate; 4) forms rent at same price as those of plywood. Units are available in three sizes: 2' x 4', 2' x 6', and 2' x 8'. Adjacent units are connected with flat steel connecting bolts; outer and inner walls are held in alignment with slip ties. 2' x 4's held in place by "T" plates hold entire wall unit in line. The 3/16" facing leaves no waves or depressions in the concrete. Inside and outside corners are likewise available. Symons Clamp and Manufacturing Company, 4257 Diversey Ave., Chicago 39, Illinois

for natural, mixed, manufactured, or Butane air gasses, and for high altitude installation without derating.

Outstanding features include an air welded steel, updraft, tubular heat exchanger; a cast iron, raised diameter burner which provides instant ignition with no cross-lighting problem and a large single-port air shutter free from clogging. Multi-blade centrifugal blowers mounted on rubber at the rear eliminate noise and vibration. Cold air may be brought in from either side, back, or bottom. L. J. Mueller Furnace Company, 2005 W. Oklahoma Avenue, Milwaukee 15, Wisconsin.



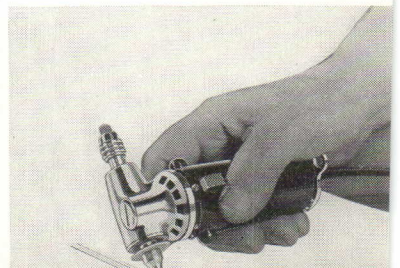
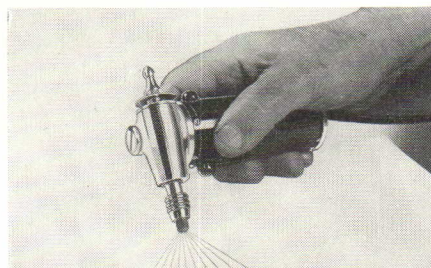
Above: five KW, self excited, A.C. generator, 110/220 volt, three wire service, 60 cycle

The generator has a rated capacity of five kilowatts and will start single phase motors in sizes up to three horsepower. This plant runs at 1800 rpm; however, during continuous operations when it is used as the sole source of electrical supply, the manufacturer recommends a lower speed of 1200 rpm. Available with automatic transfer switch, the generator is designed to give inherent voltage regulation; regulation is held to eight percent on non-inductive loads. The dimensions are: 37" long, 28" high, and 22" wide. Kato Engineering Company, Mankato, Minn.

for intermittent or continuous operation. The entire weight of the device is less than 12 ounces.

A burnisher at the opposite end of the eraser shaft has a ball point which smoothes erased areas for perfect redrawing or reinking; a rotating abra-

sive disc located at the base of burnisher for sanding leads is an additional time saver. This tool is finished complete with six foot rubber cord and plug, three grades of 1/8" eraser tips, and six extra abrasive discs. Dremel Manufacturing Company, Racine, Wisconsin.



this month's products

Air and temperature control

Cooling Tower: especially adaptable to self-contained air conditioning unit, but applicable to any installation with water cooled compressor. Unit has water turbine drive; only electrical connection needed is for small pump. No bearing parts; fill material, over which water sprays to dispense heat removed from air-conditioned areas, is of waterproof asphalt impregnated board. Available in 4 models, ranging from 5 to 15 tons of refrigeration capacity. Carrier Corp., Syracuse, N.Y.

Window Room Air Conditioner: one h.p. unit for home or business use. Incorporates two separate rotary Meter-Miser refrigerating systems providing "selective" cooling; adjustable covers in grille directs air to any part of room. General Motors Corp., Frigidaire Div., Dayton, Ohio.

Oilboiler: oil-fired warm air furnace, small, compact (40" high by 40" deep by 20" wide); tight heat exchanger corrugated to give 90% more prime heating surface. Three sizes available: 70,000, 90,000, and 110,000 Btu. Quiet Automatic Oil Burner Corp., 17 Grove, Montclair, N.J.

Cabinet Convectors: recessed, semi-recessed, free standing, and wall hung types, for use with steam or forced hot water systems. Heating elements have seamless copper tubes bonded into patented aluminum fins. Heavy gauge steel cabinets; front panels easily removed by hand. Produced in lengths of 4' increments from 16" to 64". Rittling Corp., 1292 Niagara St., Buffalo 13, N.Y.

Model 200 "Vapomaster" Humidifier: consists of cast aluminum chamber with external fins—at chamber, float valve, and necessary water injection. Unit extracts waste heat from stack evaporator water; not dependent on air currents for operation. Installation said to be very easy. Skuttile Mfg. Co., 4099 Beaufait, Detroit 7, Mich.

Flush Flow Control Valve with Vent Tube: use on all automatically fired forced circulating hot water heating systems. Valve quickly lifts all air accumulating in top of furnace flue passes it directly into pressure tank. Increased heating efficiency; frequent venting radiators, convectors, etc., unnecessary. Available in 5 sizes: 1", 1 1/2", 2", 2 1/2". A. Thrush & Co., Peru, Ind.

High Capacity Hassock-Type Floor Fan: will circulate 100 cu. ft. of air per minute without creating draft. Quiet operation. Finished in maroon and chrome. Westinghouse Electric Corp., Box 2099, Pittsburgh, Pa.

Construction

Post-Beam: dual-purpose plastic-coated steel, serving first as adjustable support column in early stages in residential and light industrial construction, eliminating temporary post installation, and eventually embedded in concrete floor as permanent fixture. Post is 4" high, weighs about 40 lbs.; assembly in used welded plates at top and bottom, and is used for periodic adjustments during construction stages. Akron Products Co., Toledo, Ohio.

Doors and windows

Access Panel: made of galvanized steel with prime coat of baked paint, designed with reinforcement and wide "built-in" plaster edge. Special device assures positive locking and closing of door. In wide range of sizes to meet requirements of different building trades. Pop Bros. Mfg. Co., 9017 Blue Ash Rd., Rossmoyne, Cincinnati, Ohio.

Aluminum Window: projected type with deep sections, welded construction and strong weathering; will accommodate glass up to 1/2" thickness. Unit designed especially for schools, hospitals, and office buildings. Metal Flinn Mfg. Co., 700 E. Godfrey Ave., Philadelphia 20, Pa.

Sliding Door: steel sliding closet door. Completely packaged unit consists of two flush doors operated on ball-bearing rollers in a steel door frame. Finished in baked enamel coat, assembly may be easily painted on any color. Doors may be purchased separately for use in wood frame openings. Craft Mfg. Co., Rossmoyne, Ohio.

Truscon Classroom Window: intermediate weight steel window. Large upper fixed light recommended for glazing with one of many types of 1/8", 1/4" wire glass; lower portion glazed with 1/8" or 1/4" clear glass. Other glazing possibilities, depending on climatic and solar factors. Either or both panels may be vented. Truscon Steel Co., 1315 Albert St., Youngstown, Ohio.

Thrift Basement Window: riveted construction of heavy hot rolled steel. May be opened fully or halfway; sash easily removed for cleaning or glazing; frame prepared for storm sash and screen; cam action lock holds sash and frame tightly. Vento Steel Products Co., Inc., 262 Colorado Ave., Buffalo 15, N.Y.

Electrical equipment, lighting

No-Shok Safety Duplex Receptacle: incorporating safety built-in rotary cap which automatically closes outlet when not in use, providing protection to adults and children and reducing fire hazards. Bronze contacts, lifetime spring action, double walls of Bakelite insulating heavy duty terminals. Bell Electric Co., 1844 W. 21 St., Chicago 8, Ill.

Skylette Fluorescent Slimlines: fixtures, finished in baked white enamel, with removable ends, permitting continuous mounting. No partitions at joints of troffers below reflectors to break even flow of light; patented device assures permanent alignment. Available with 2, 3, or 4 lights. Neo-Ray Products, Inc., 315 E. 22 St., New York 10, N.Y.

Varicell: unit providing stabilized and regulated source of variable d-c voltage from a-c power lines; operates from 95 to 135v, 60 cycle, single phase alternating current line; delivers direct current output that is variable from 0 to 30v. Superior Electric Co., Hannon Ave., Bristol, Conn.

LTG Flex-A-Power: overhead electric power trolley busway to carry power over full length and breadth of plant or building for lighting, small power tools, business machines, appliances. Outlets may be tapped by two devices—insert plug or trolley—at any point along busway. Rated 50 amperes, 250v; 2, 3, or 4 circuits available in one compact housing with independent control over each. Trumbull Electric Mfg. Co., 1936 Woodford Ave., Plainville, Conn.

Industrial Fluorescent Luminaires: 2- and 3-lamp units with 2 1/2" and 5" lamp spacing heavy duty lampholders. Starters mounted in lampholders, accessible without removing lamps. Available with open-end and closed-end porcelain enamel reflectors. **Shallow Troffer Luminaire:** with incandescent spotlighting. Shallow design requires only 7 3/4" above finished ceiling. Three types of shielding available. Westinghouse Electric Corp., Box 2099, Pittsburgh 30, Pa.

Insulation

Infra Type 6: aluminum thermal insulation consisting of three permanently separated sheets and two fiber partitions that are flame, mold, and vermin proof. Provides six reflective surfaces with emissivity and absorption of only 3%. For installation in ceilings and floors, between beams, steel girders, trusses; under concrete surfaces, under or over radiant heating panels. Infra Insulation, Inc., 10 Murray St., New York, N.Y.

Interior furnishings

Colorbestos: flameproof drapery material, much lighter in weight than ordinary asbestos cloth, and believed to be first commercial asbestos textile for drapery purposes. For theaters, hotels, schools, ships, etc. May be used as decorative wall covering. Produced in 10 plain colors and 3 different weaves. Johns-Manville, 22 E. 40 St., New York 16, N.Y.

Sanitation, water supply, drainage

Easy Flush Pedal: attachable foot pedal for converting hand operated flushing action on toilets to foot pedal flush. Eliminates unflushed toilets and sticking valve problem which result in wasting water. Accommodates all flushometer and tank type water closets on

new or existing installations. Finished in chromium plating on heavy gage brass. Approved Products Co., 205 E. 42 St., New York 17, N.Y.

Automatic Gas Water Heaters: 1950 line for home and commercial use, with type and size for every hot water requirement, Ruud Mfg. Co., 2934 Smallman St., Pittsburgh, Pa.

Explosion-Proof Drinking Water Cooler: designed for potentially combustible areas, such as paint and chemical plants, refineries, collieries, etc. Special construction makes it impossible for any operating mechanism to generate static electricity. Hermetically sealed compressor and motor; foot pedal flow control is optional equipment. Teprite Products Corp., 47 Piquette, Detroit 2, Mich.

Residential Hot Water Boiler: design is combination of water tube, fire tube, and refractory-lined firebox construction. Unit fired by electronically controlled pressure atomizing oil burner. Fiberglass insulation. Only 55 1/2" high, requires 25" square floor space. Will-Burt Co., Orville, Ohio.

Specialized equipment

Norge Refrigerators: 1950 line includes 6, 8, 10 cu. ft. models, some with automatic defrosters, others with side freezers. All models completely restyled. Borg-Warner, Norge Div., 670 E. Woodbridge St., Detroit 26, Mich.

Elkay 39" Budget Sink: reported to be lowest priced, guaranteed-for-life stainless steel sink on market. Elkay Mfg. Co., 1874 S. 54 Ave., Chicago 50, Ill.

Frigidaire Appliance Line: newly styled refrigerators, all equipped with improved, sealed rotary Meter-Miser compressors providing more cold with no increase in current; one-piece construction, improved insulation. Also new 30" electric ranges with extra-large full-width ovens, new large capacity freezers and improved electric dehumidifier for residential and commercial use. General Motors Corp., Frigidaire Div., Dayton 1, Ohio.

Automatic Electric Clothes Dryer: tumbler type unit, fully automatic. Holds 8 lbs. clothes (dry weight). Cabinet measures 30" wide x 24 3/4" deep x 36" high; finished in white baked enamel; outer panels easily removed for servicing any part of chassis. Thor Corp., 2115 S. 54 St., Cicero 50, Ill.

Westinghouse Kitchen Appliances: new front-opening automatic dishwasher allowing for unbroken working surface above; will wash and dry equivalent of dinner service for eight. User merely turns control, machine takes over entire process including automatic shutoff. Available in three models. **The Rancho:** newly designed electric range said to be lowest priced full-sized range produced by company since war. Kneehole desk appearance achieved by use of U-shaped chrome tubing leg on right-hand side and by placing oven and storage unit on left-hand side. Space under stove can be used to store stool, wastebasket, etc. Westinghouse Electric Corp., Mansfield, Ohio.

Triangular Scale: for architects and engineers, made of Vinylite rigid plastic strips gripped by aluminum core; resists water, oil, grease, most chemicals. Markings on edges of scale fins will withstand continuous wear without rubbing off. Wolsey Co., Inc., 727 Kohler St., Los Angeles 21, Calif.

Surfacing materials

Decor-Mould: decorative wood molding designed exclusively for closet interiors. Special patented grooving permits clean break by hand every 3" or 4"; moldings are predrilled for easy mounting. Available in wide variety of traditional and modern patterns, in 6 colors. Bendix Mfg. Co., 192 Lexington Ave., New York 19, N.Y.

Luxwood: newest addition to line of decorative plastic laminates; said to be most authentic photographic reproduction of natural wood grain ever offered in decorative material of this type. Available in 5 finishes, including mahogany, gray, and three shades of blonde. Formica Co., 4633 Spring Grove Ave., Cincinnati 32, Ohio.

Enduro: industrial floor tile, asphalt based, can be subjected to hardest usage and installed on practically any type of underflooring. Will not harden or become brittle, is highly slip-resisting. Comes in dark brown, black, dark green, in 12" x 12", 18" x 18", and 18" x 24" tile sizes; and in 24" x 48" and 36" x 36" slabs. Sloane-Blabon Corp., 295 Fifth Ave., New York 16, N.Y.

MANUFACTURERS' LITERATURE

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

AIR AND TEMPERATURE CONTROL

1-10. **Air-Trol (FS)**, 4-p. illus. folder describing fireplace screen consisting of fireproof glass louvers in metal frame that may be opened or closed to increase or decrease draft; fine bronze mesh behind louvers retains sparks; smoking eliminated. Advantages, models. Dollinger Corp.

1-11. **Fans for 1950 (Unit X6549)**, 32-p. illus. catalog. Presents complete line of air circulators, desk and stand fans, attic and window fans, kitchen ventilators, etc. Design and construction specifications, performance data, dimensions, index. Emerson Electric Mfg. Co.

★ 1-12. **General Controls (53G)**, 100-p. illus. catalog offering line of automatic pressure, temperature, level, and flow controls for heating, air conditioning, refrigeration, and other applications. Descriptions, technical and general data, specifications, tables, charts, index. General Controls Co.

1-13. **Motor Stokor (S-254)**, 12-p. booklet describing coal-burning heating unit for hot water, hot air, steam, or vapor system. Advantages. Hershey Machine & Foundry Co.

Two illus. bulletins on pressed steel furnaces, gas or oil fired. Models, specifications, general information. Morrison Steel Products, Inc.:

1-14. **Mor-Sun (49-8-A)**

1-15. **Mor-Sun (48-14-8)**

1-16. **Chromalox Built-In Air Heaters**, AIA 31-K-3 (F-1514A M), 4-p. illus. folder on recessed, fan-type electric heaters with thermostatic controls, totally enclosed heating units, silent operating motors. Advantages, installation directions, selection chart, models, ratings, prices. Edwin L. Wiegand Co.

CONSTRUCTION

3-8. **California Redwood Association**, 8-p. booklet giving general characteristics of redwood. Yard grades, applications, standard specifications, comparative properties. California Redwood Assn.

3-9. **The Nailock Method**, AIA 39-B-1 (Cat. 2), 8-p. illus. booklet describing improved, suspended ceiling construction system employing "nailing channels" for installing acoustical ceilings and other nailable materials to steel, concrete, masonry construction. Description of uses, specifications, details, installation methods. Sanymetal Products Co., Inc., Nailock Steel Div.

3-10. **Vermiculite Plaster Fireproofing**, AIA 21-A-7, 16-p. illus. booklet on plaster aggregate for floors, roofs, columns, beams, girders, trusses, providing as much as four hours fire protection to structural members. Properties, comparative weights of various systems of floor construction, typical applications, typical details, fire test summary. Vermiculite Institute.

DOORS AND WINDOWS

4-9. **Bonderized Steel Windows**, 8-p. illus. booklet giving specifications for projected, intermediate casement, and pivoted windows. Dimensions, details, hardware. Bogert & Carlough Co.

4-10. **Better Classroom Daylighting**, AIA 16-E (TE-6), 20-p. illus. booklet suggesting methods of improving quantity and quality of daylight in construction of new schools. Minimum daylighting requirements, recommended window sizes, control of brightness through blinds, shades, or special glass, proper interior decoration, seating arrangements, classroom equipment, brightness ratios. Detroit Steel Products Co.

4-11. **Screen-O-Matic**, 4-p. pamphlet and price list on automatic, Lumite window screening that rolls into metal housing when not in use; will not corrode, stain, or bulge. Advantages, installation drawing, operation. Lockhart Mfg. Corp.

4-12. **Hamptonite (1001-70)**, 4-p. illus. folder describing moderately priced wood flush doors in variety of constructions, weights, and finishes. Also, examples and descriptions of decorative plastic laminates. Plywoods • Plastics Corp.

4-13. **Fabrico Screens**, 4-p. folder on aluminum screens for wood or metal windows. Advantages. Screens & Fabricated Metals Corp.

Two bulletins, one on elevator doors, the other, on industrial doors. Types, plans, details, specifications, sections, elevations. Security Fire Door Co.:

4-14. **Security Elevator Doors**, AIA 33-G

4-15. **Security Industrial Doors**, AIA 17A2

4-16. **St. Louis Doors**, AIA 33G, 12-p. bulletin describing manually operated and motor operated freight doors, fire doors, and dumbwaiter doors. Descriptions, construction, details, space requirements, motor operation, types, specifications. St. Louis Fire Door Co.

4-17. **Woodco R.O.W. Windows**, 4-p. folder, 3 data sheets, and price guide

on fully removable wood windows with metal-covered wood guides replacing weights, cords, pulleys. Advantages, typical installation drawings, stock sizes and layouts. Also description of stock and screen combinations. General Woodcraft Co., Inc.

ELECTRICAL EQUIPMENT, LIGHTING

★ 5-5. **Remote Control Wiring System (16-299-1)**, 16-p. booklet illustrating system of wiring homes, farms, office buildings, factories, etc., in which control of 125v power circuits is performed by low-voltage relays in isolated circuit. Advantages, components, installation details, circuit diagrams, dimensions. General Electric Construction Materials Dept.

5-6. **Magnette Panelboard Circuit Breakers (Bul. 3100)**, 8-p. illus. booklet giving development, performance, and advantages of non-thermal, fully magnetic panelboard circuit breakers. Graphs, schematic diagrams, views, ratings, circuit breaker attachments. Heinemann Electric Co.

★ 5-7. **Architect's Guide to Hospital Lighting**, AIA 31f28, 55-p. hardcover book covering 81 layouts of specific general hospital areas, suggesting combinations of lighting arrangements, types of lighting equipment and wattages. General lighting principles, color factor, specification catalog data, diagrams, color identification chart, index. Holophane Co.,

Bulletin describing 8 different models of electric generating plants, either a-c or d-c. Selection of type and size, general data. Folder on Diesel electric plants for continuous heavy-duty service. Standard equipment, general data. D. W. Onan & Sons, Inc.:

★ 5-8. **Onan Electric Plant (A168H)**

5-9. **Onan Diesel Electric Plant (A192B)**

5-10. **Prescolite**, AIA 31-F-231 (Cat. 4-p. catalog and specification drawing of recessed lighting fixtures for residential, display, and commercial poses. Types, finishes, basic housing advantages. Pressteel Co.

5-11. **Trimline Series (C-503)**, folder with loose catalog sheets describing line of commercial, industrial and institutional fluorescent fixtures and equipment. Applications, general and technical data, drawings. Sylph Electric Products, Inc.

FISHERS AND PROTECTORS

1. **Atlas Protective Coatings**, 4-p. booklet. Corrosion-resisting coatings for protection of concrete, metal, and wood surfaces. Types, container sizes, colors, applications, surface preparation. Atlas General Products Co.

2. **One Aluminum Paint Can't Do Everything**, 4-p. folder illustrating uses and uses of aluminum paint. Prices. Skybryte Co.

3. **Chemical Resistant Coatings** 5-1-LS), 4-p. folder describing characteristics and uses of vinyl maintenance coatings, metal primers, vinyl ink lining, and rubber-based enamel. Application directions. Wilbur & Wilms Co.

INSULATION (THERMAL, ACOUSTIC)

1. **How to Select an Acoustical Material** (AD-21-1249 B), 16-p. illus. book-pointing out problems of sound and control through proper selection of acoustical material. Types, characteristics, sound-absorption coefficients, installation methods. Armstrong Cork Co.

2. **Vermiculite Insulation and Lightweight Aggregates** (g-24), 8-p. illus. brochure. Description and uses of fill and insulation, insulating concrete and plaster aggregates, and acoustical plaster—all made of vermiculite. Application instructions, tests, general data. Zonolite

INTERIOR FURNISHINGS

1. **Fourteen Masterpieces**, 4-p. catalog supplement illustrating metal and mahogany rubber chairs, wood, metal and glass tables designed by William Armstrong. Photos, specifications. Edgefield Furniture Co., Inc.

2. **BSC System**, 16-p. illus. brochure describing component parts of contemporary built-in furniture such as drawers, shelves, panel doors, drop leaves, and set compartments. Specifications and related data, photos, drawings. Herman Miller Furniture Co.

3. **Nuclear Collection**, portfolio containing blueprints and photos of modern upholstered furniture, illustrating unusual combinations of units into multis. Specifications, leg details, connection, price list. Harvey Propper,

**HEATING EQUIPMENT
HOT WATER SUPPLY, DRAINAGE**

1. **Frigidaire Water Heaters** (WA-...), 6-p. illus. folder presenting line

of automatic electric water heaters. Advantages, construction, specifications, wattages, voltages, dimensions. General Motors Corp., Frigidaire Div.

19-8. **Booster Heaters for Dish-Washing Machines** (D-50), 6-p. bulletin. Electric immersion heaters, providing rinse water at proper temperature for commercial dishwashing machines, to comply with health regulations. Construction, advantages, standard ratings, prices, dimensions, installation and operation, water pressure regulators, recovery rates for various temperature rises, ordering data. Industrial Engineering & Equipment Co.

SPECIALIZED EQUIPMENT

19-9. **Apartment Telephone Systems and U.S. Approved Mail Boxes**, AIA 31 (160), 24-p. bulletin illustrating line of mail boxes and telephone systems for housing. Architectural specifications, instructions on selection and ordering of equipment, wiring diagrams, bell systems, door openers, non-electric door chimes, accessories, replacement parts. Auth Electric Co.

19-10. **Julius Blum & Co., Inc.** (Cat. 6, 1950), 112-p. catalog describing line of stock elements for fabrication and assembly of ornamental metal work. Seven sections covering railings, treillage, saddles and nosings, moldings, tubing, shapes, and rods, ornaments, miscellany. Illustrations, sizes, dimen-

sions, weights, numerical index. Julius Blum & Co., Inc.

Two booklets on moderately priced and de luxe electric kitchen ranges; folder describing kitchen wall and base cabinets, sinks, and counter tops. Features, color photos. General Motors Corp., Frigidaire Div.:

19-11. **The New "Thrifty 30"** (RA-2366)
19-12. **De Luxe Electric Ranges** (RA-2229)
19-13. **There's a Wonderful New Frigidaire Kitchen for Your Home** (KA-1912-2)

19-14. **Majestic Building Necessities**, AIA 14, 23-p. illus. catalog presenting line of building products including asphalt doors, attic ventilators, basement windows, coal chutes, furnaces, fireplace dampers, incinerators, grilles and grates, outdoor fireplaces, window wells, etc. Descriptions, specifications and sizes, photos, drawings, details. Majestic Co.

SURFACING MATERIALS

Two catalogs on wide range of glazed and unglazed clay tile, tile trim, china bathroom accessories. Classifications and uses, color charts, patterns, sizes, shapes, specifications. American-Olean Tile Co.:

19-15. **The Color Book of Tile**, AIA 23a
19-16. **Real Clay Tile**, AIA 23a

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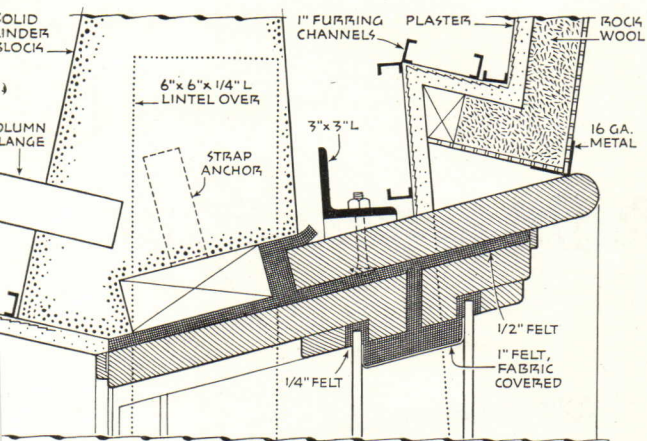
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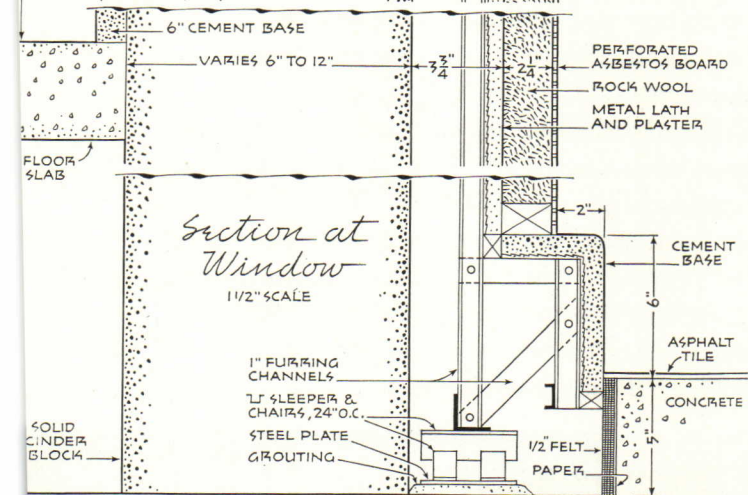
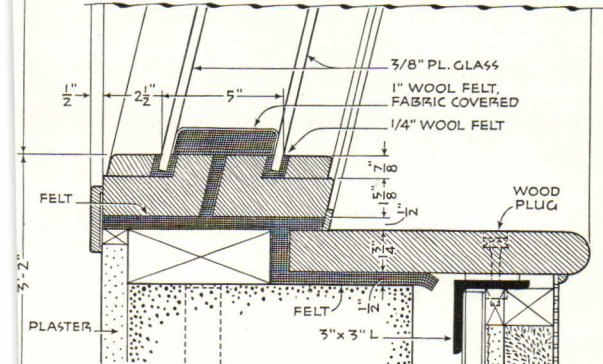
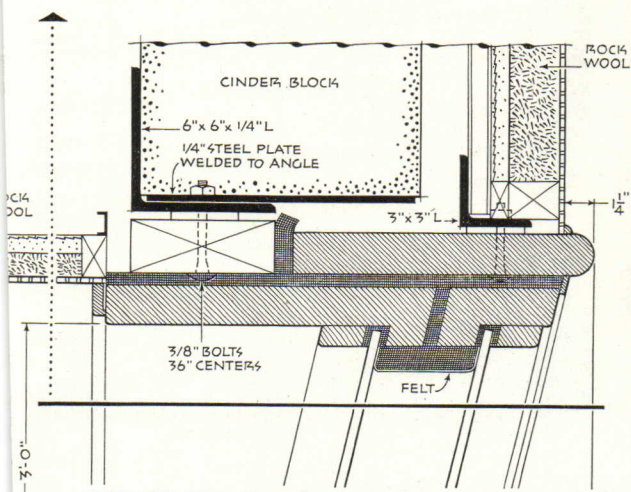
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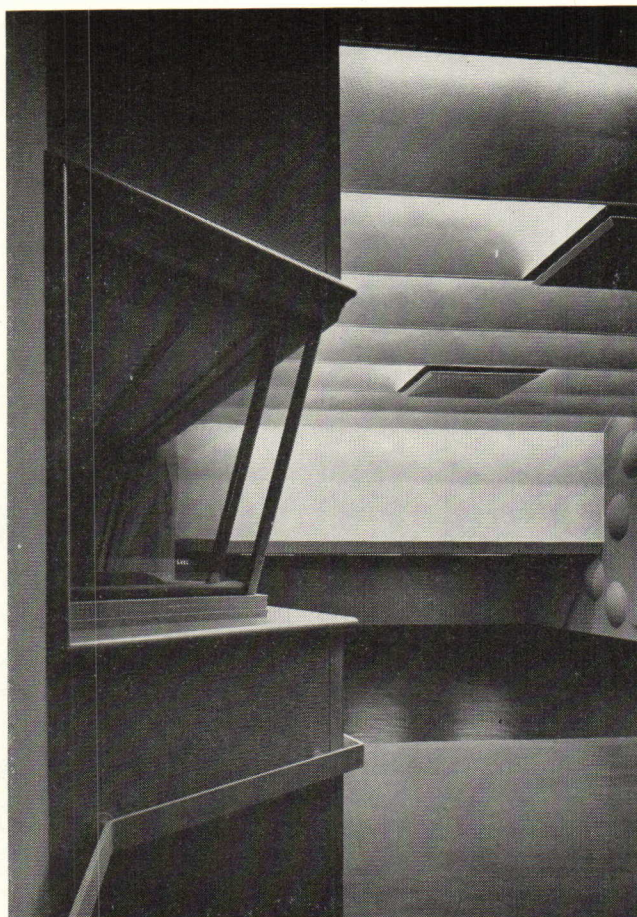
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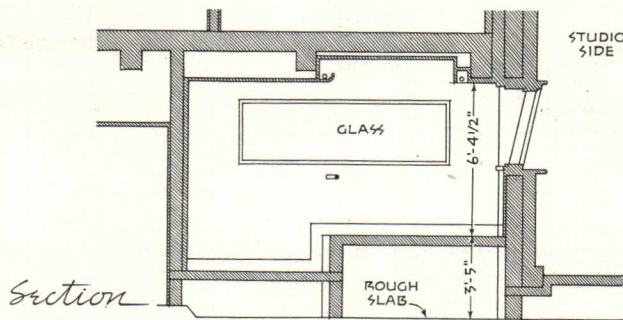
Plan at Jamb



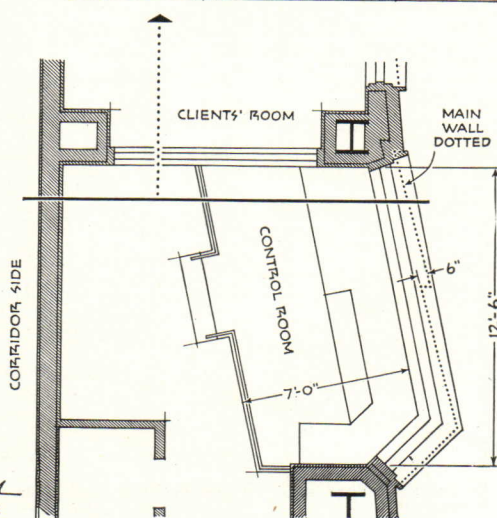
Section at Window
1/2" SCALE



GOTTSCHO - SCHLEISNER



Section

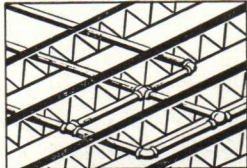


Plan
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TRUSCON
"O-T"
 STEEL JOISTS

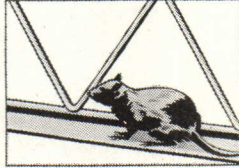
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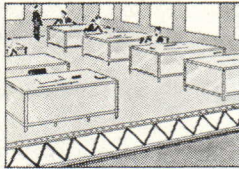
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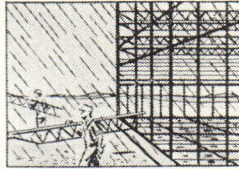
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because steel is impregnable to insect and animal life



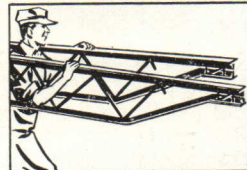
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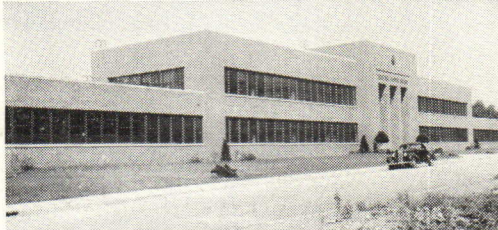
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through dead air space and built-up materials



ALL-WEATHER BUILDING
because not dependent on setting concrete



LIGHT WEIGHT
permits quick, convenient handling and placement with a minimum amount of labor



WIDELY USED *in factories, office buildings, apartments, schools, hospitals and similar structures*



ECONOMICAL *through savings in supporting framework and foundations; speed of erection; insurance; maintenance.*

for architectural *advancement*

Truscon "O-T" Open Truss Steel

Joists offer the architect and builder an extremely modern instrument for rigid, fire resistant, economical and light weight floor construction. This unit is a Warren truss having top and bottom chords of wide tee-shaped members and a plain round continuous web member. The bottom chord is continuous from end to end of joist and bent up at the ends to form the bearings. These steel joists are fabricated by means of electric machine welding under pressure, making positive connections at all joints. Study the many advantages described above—then write for free illustrated literature on Truscon "O-T" Open Truss Steel Joists.

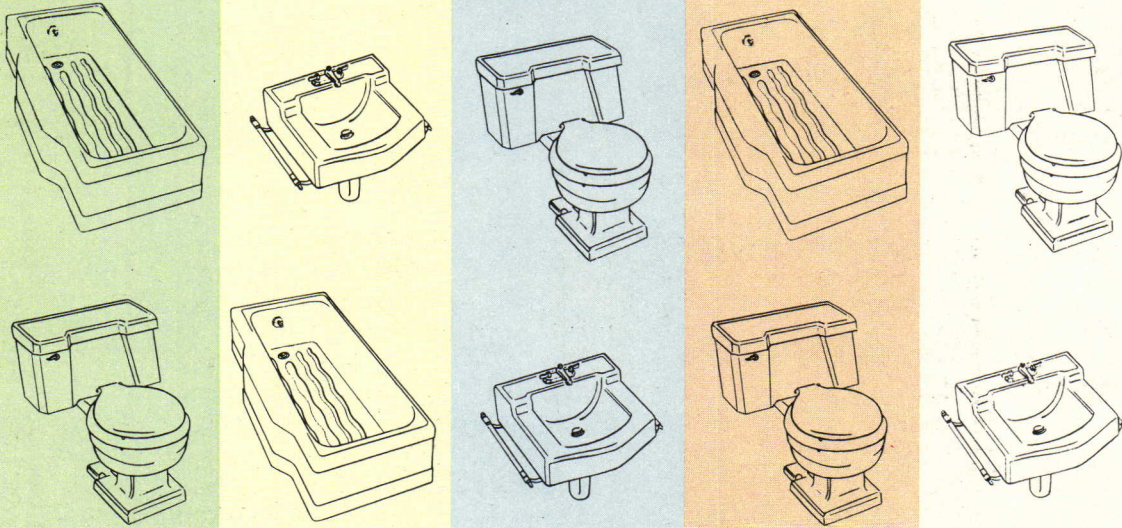


FREE Book on Truscon "O-T" Steel Joists. Write for it. The Truscon Steel Company Manufactures a Complete Line of Steel Windows and Mechanical Operators . . . Steel Joists . . . Metal Lath . . . Steel-deck Roofs . . . Reinforcing Steel . . . Industrial and Hangar Steel Doors . . . Bank Vault Reinforcing . . . Radio Towers . . . Bridge Floors.

TRUSCON STEEL COMPANY
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 Warehouses and sales offices in principal cities

TWICE

as many people want colored fixtures as white!

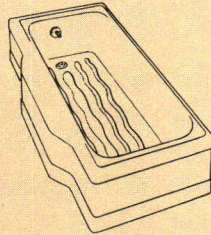
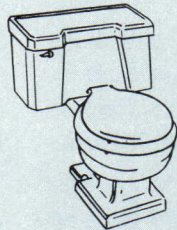
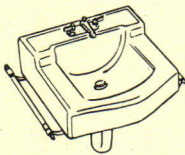
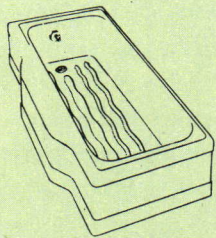


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at the never before price of only 10% more* than white!

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SPARKLING WHITE

Check the latest surveys! You'll find that of all the people asked, *two-thirds* prefer colored bathroom fixtures. Briggs gives them—and you—a choice of the *four most popular decorator colors* for only a few dollars more! No wonder successful builders all over the country are specifying Briggs Beautyware in color. No wonder wide-awake plumbing dealers are promoting it for all it's worth! Join them by ordering America's favorite colored fixtures, today!

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*10% additional charge for colored-ware applies to complete sets including Briggs brass fittings.

Front View

Side View 1/2" SCALE

1/4"x 2" METAL WASHERS

at Base

ARCHITECT'S OWN HOME, Lexington, Massachusetts

HUGH STUBBINS, JR., ARCHITECT



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Building for the David Bradley Manufacturing Works of Sears, Roebuck and Company at Kankakee, Illinois ... designed by Sessions Engineering Company. All welded design permitted an unusually low steel weight of 6½ pounds per square foot of area, a saving of two to four pounds per square foot over standard riveted practice.

By E. O. SESSIONS

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WE have frequently submitted our continuous-beam rigid-frame welded designs along with alternate riveted designs to fabricators for comparative bids. Where the fabricator has had previous experience with welding of frame members, the bids for the welded designs have been similar or lower than for riveted designs.

Potential savings in the cost of fabricating structural members plus greater speed in the erection of buildings are two fundamental reasons why there will be a noticeable trend toward the welding of new buildings in the future. The construction industry, at present, is under-

going a gradual change in its basic concepts of structural design. When the present "growing pains" have been remedied, it is our belief that the greater percentage of industrial plants and multi-story buildings will be designed and erected by arc welding.

Our opinion results from 35 years experience in designing many different types of structures. Since 1934, however, we have specialized in engineering principally two types of industrial buildings, the welded rigid frame design and, where this has not been feasible, reinforced concrete design.

Upon casual observation of practically any riveted building framework, it becomes evident that there is an obvious excess of material and work required for

this type of construction. Most riveted designs have deep trusses, small bays and are generally cluttered with reinforcing members, angles and plates. Welded designs, on the other hand, need only simple angles and butt plates welded to beams or columns with fast downhand arc welding techniques during shop fabrication.

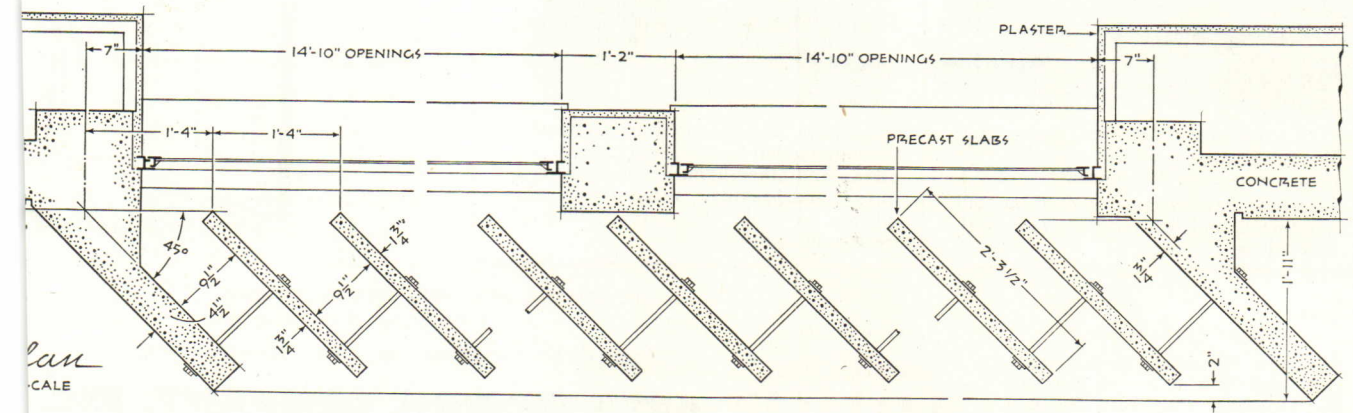
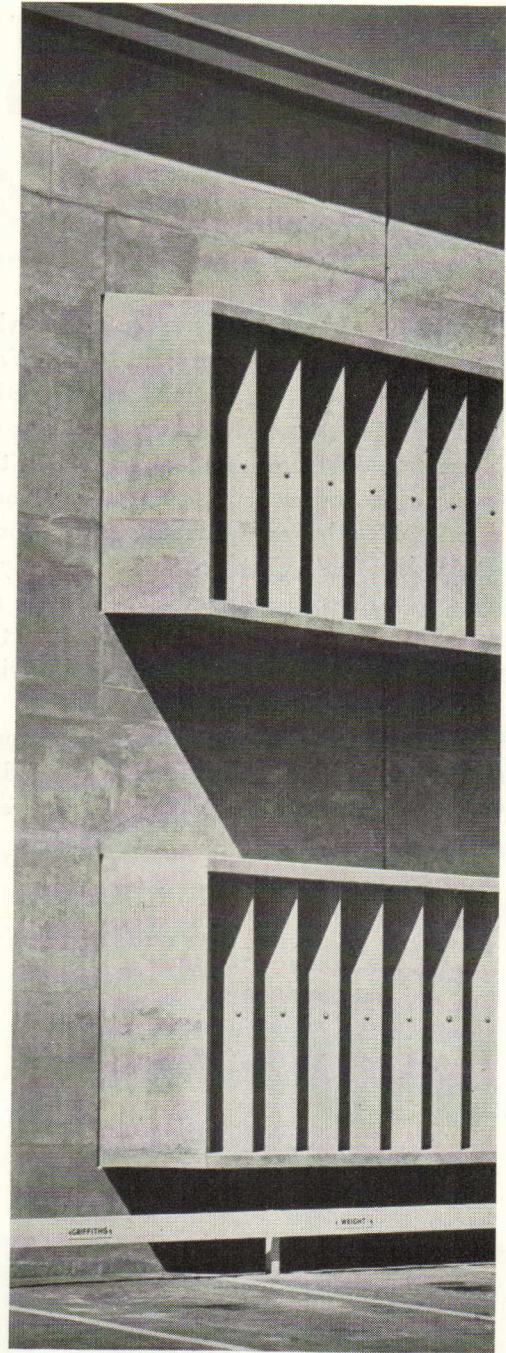
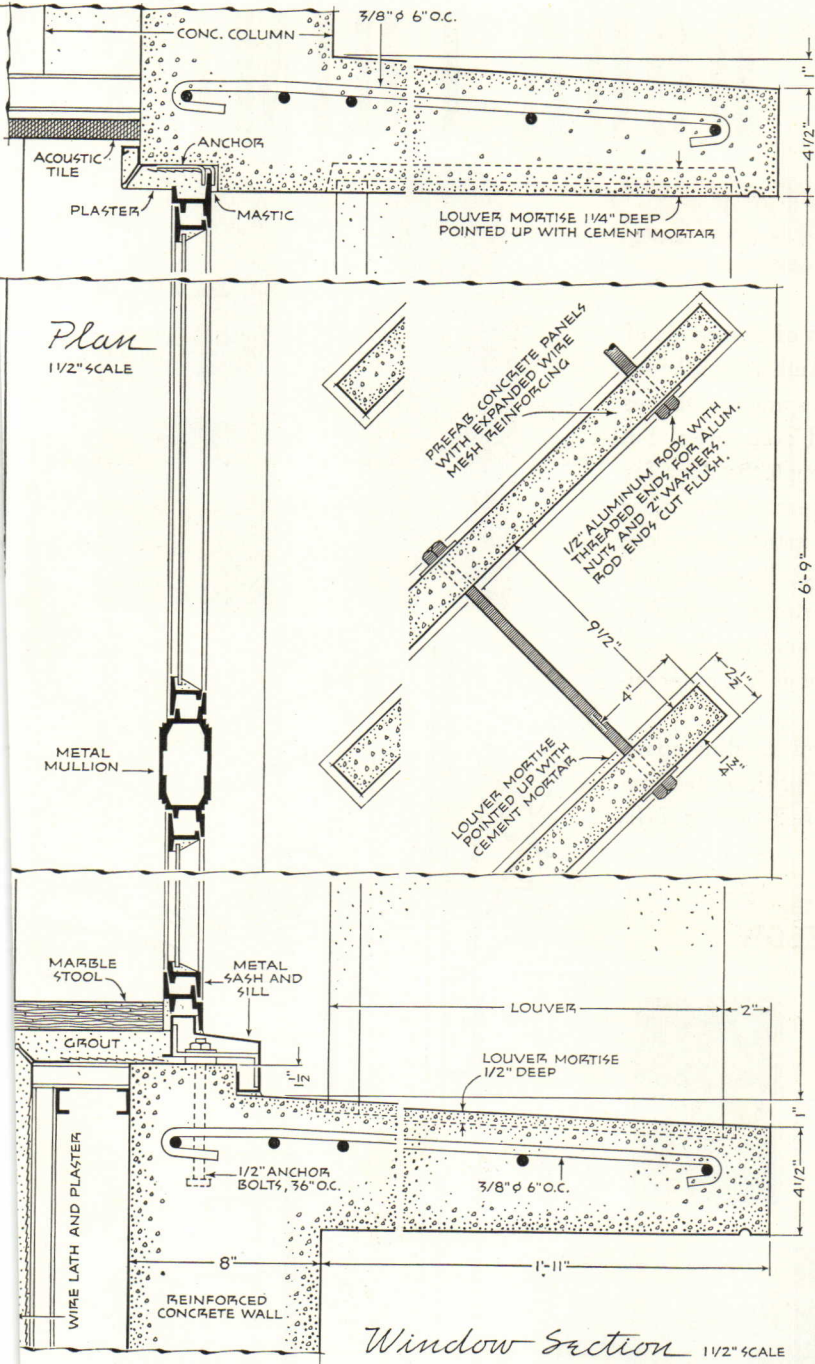
As progressive architects and engineers become more experienced with welded structural designs, building specifications will insist on this type of construction rather than permit the choice of an alternate construction. While it requires more hours of designing time to turn out a properly designed welded structure, from our experience at least, the results more than justify the added effort.

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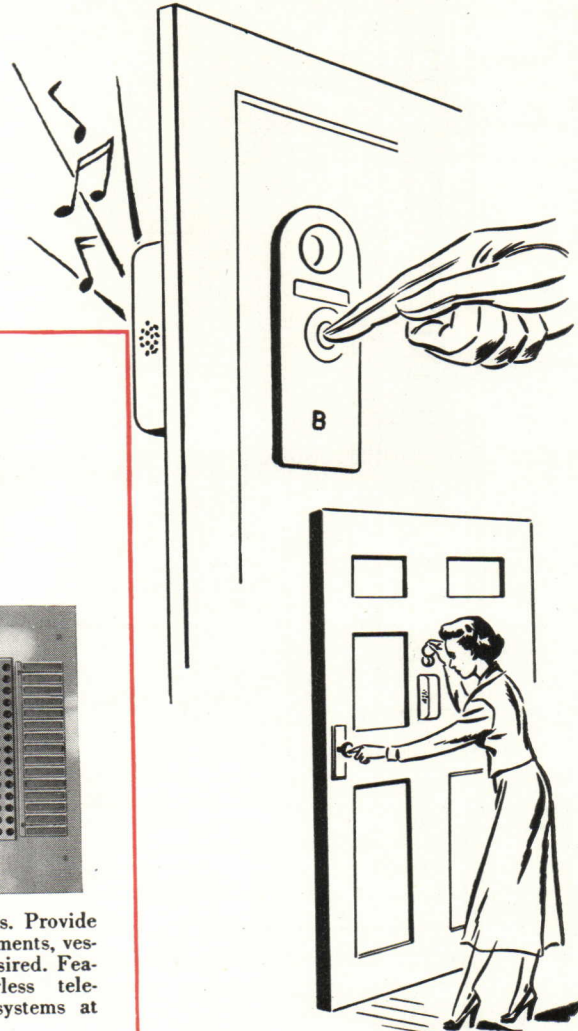
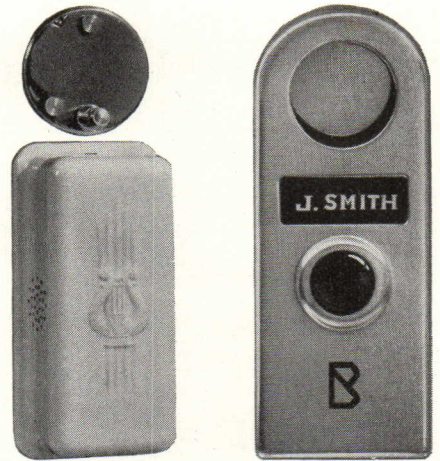
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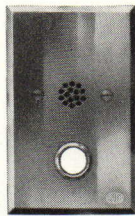
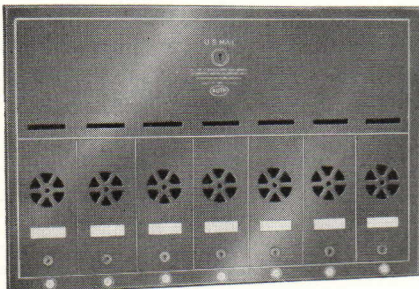

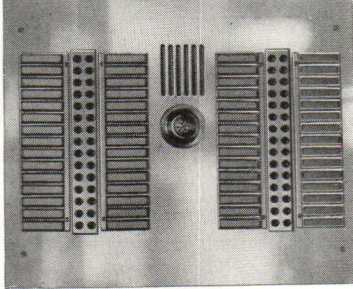
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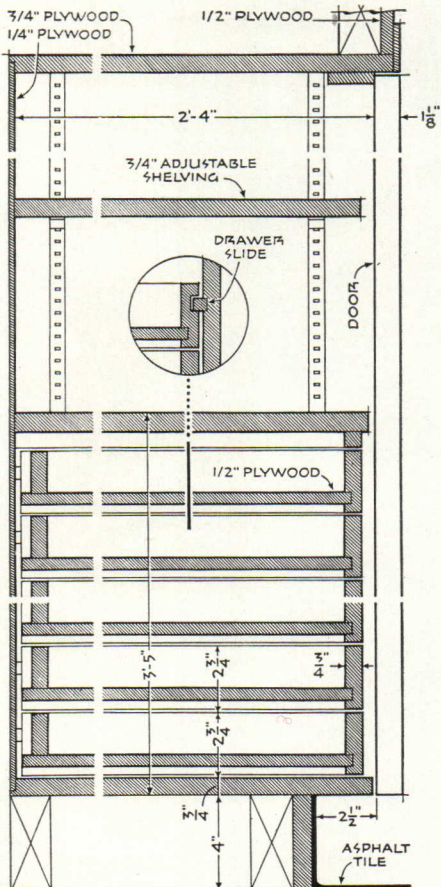


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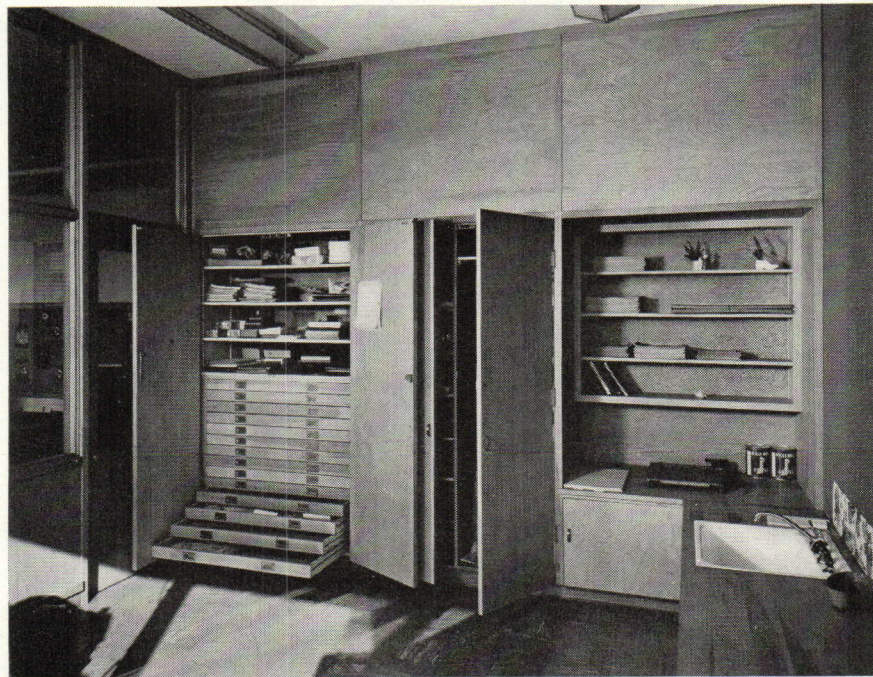
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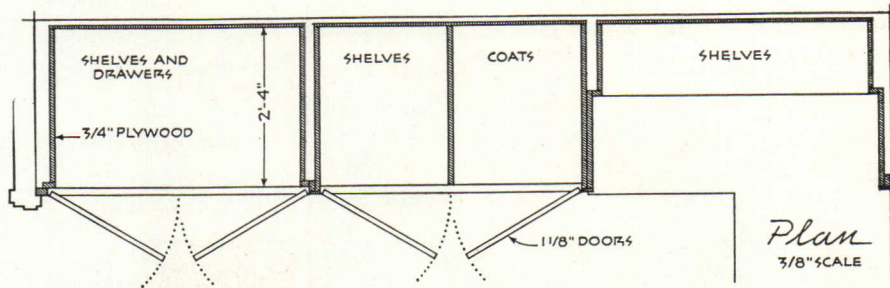
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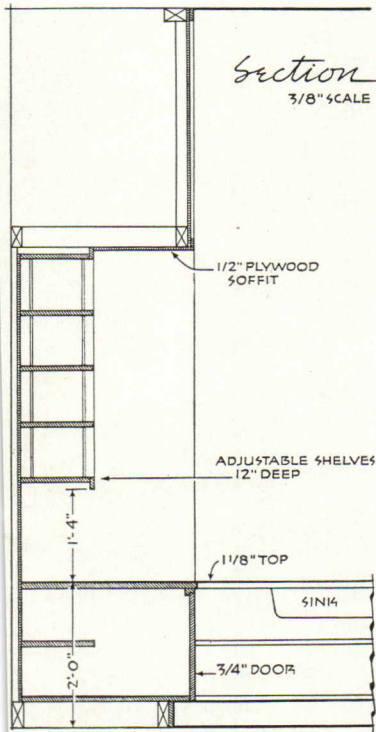
Section A 1 1/2" SCALE



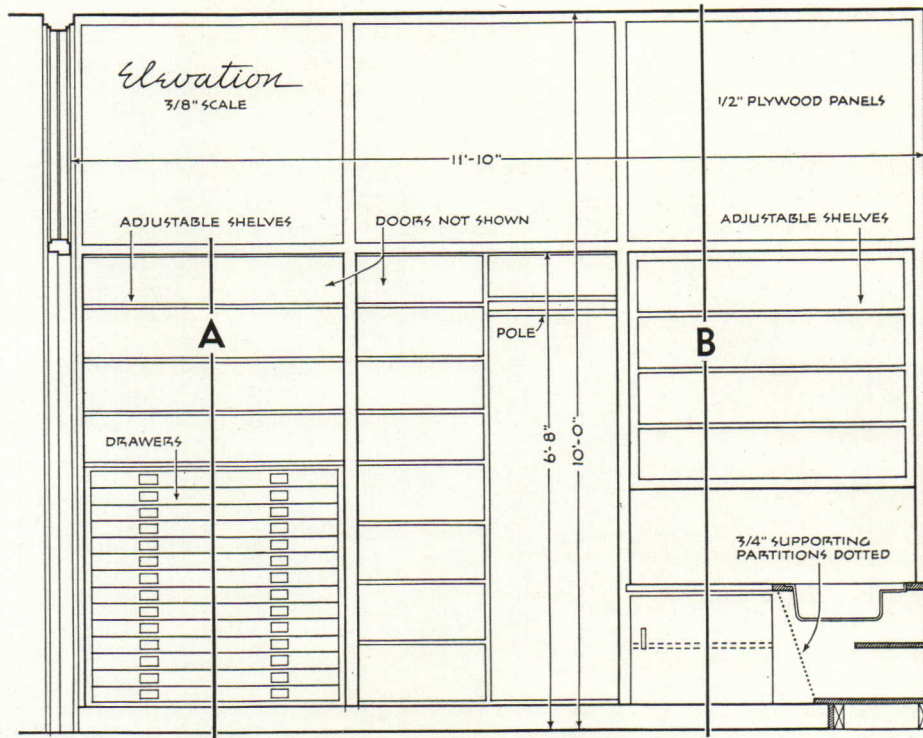
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Plan 3/8" SCALE

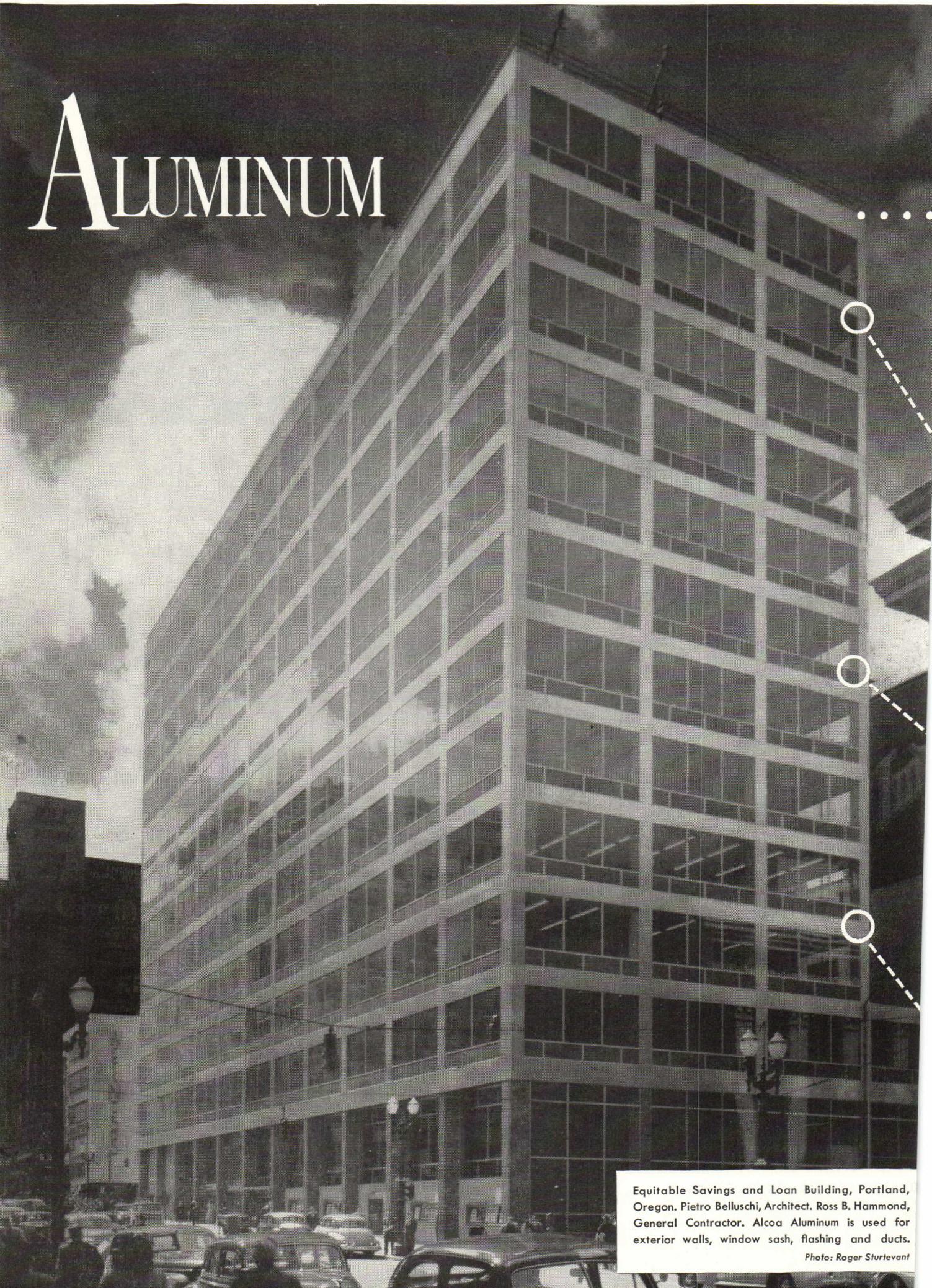


Section B 3/8" SCALE



Elevation 3/8" SCALE

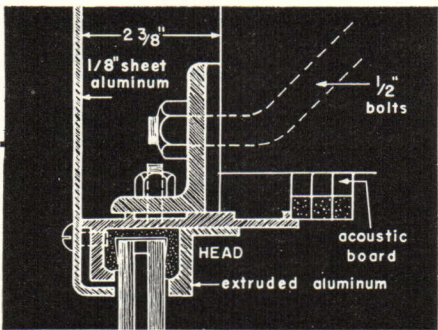
ALUMINUM



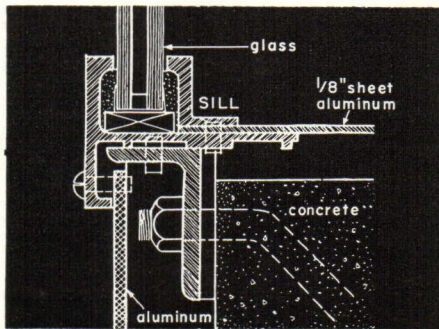
Equitable Savings and Loan Building, Portland, Oregon. Pietro Belluschi, Architect. Ross B. Hammond, General Contractor. Alcoa Aluminum is used for exterior walls, window sash, flashing and ducts.

Photo: Roger Sturtevant

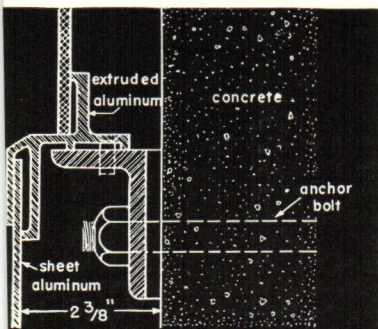
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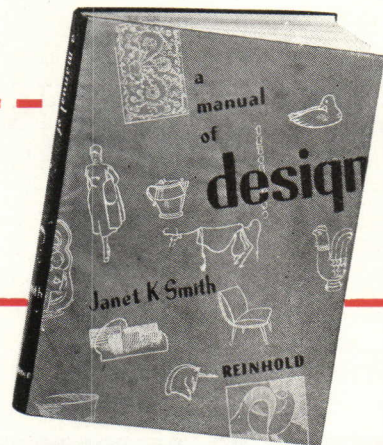
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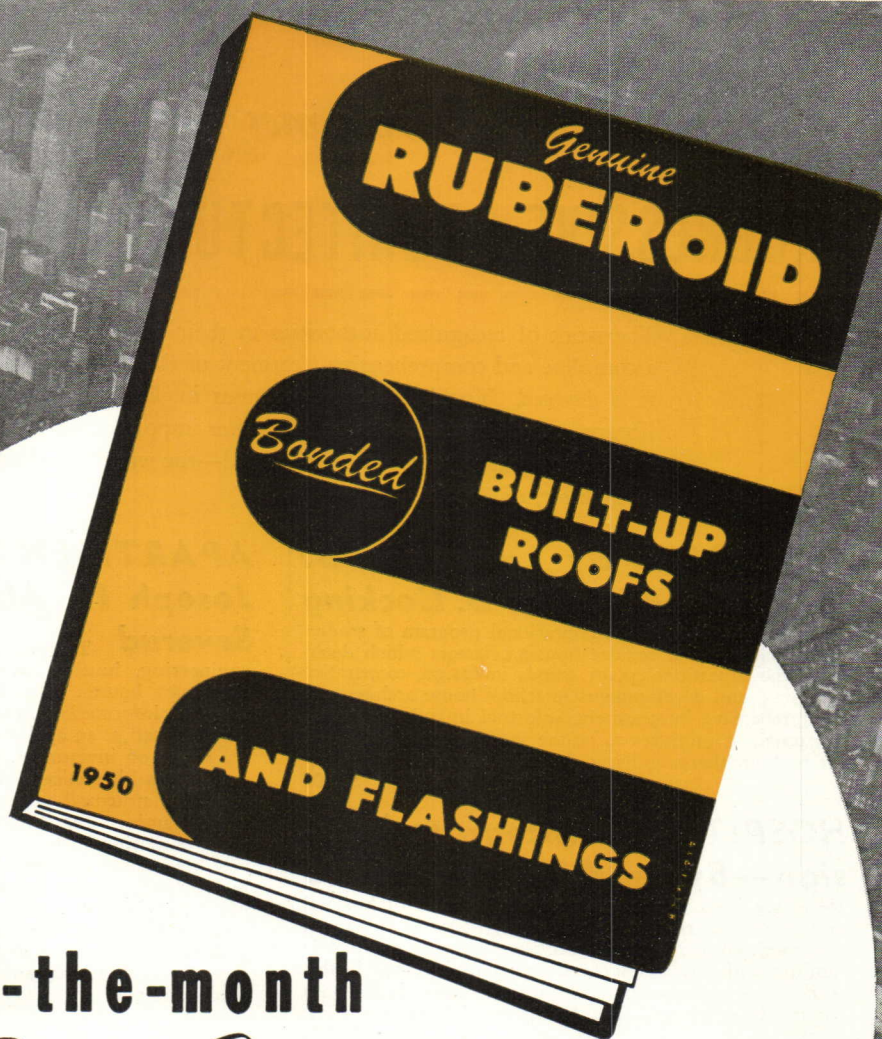
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technical press



By JOHN RANNELLS

The A.I.A. is in the process of re-evaluating the schools and the licensing examinations. This corner suggests that some attention to the techniques of science might save the earnest researchers from merely refining the mistakes that architectural education has been guilty of, these past several decades.

There is a risk that the new committee set up by President Walker may be so occupied with surveying that their solutions will be based primarily on what was, instead of what should be and that they may disregard (by taking for granted) the bigger problem into which this survey fits—the status of the architectural profession itself in our society. At the same time, there appears to be too little attention to the scientific method of determining and solving a problem in architecture on the part of many practitioners. In their concern with architecture as an art, it seems possible that even some of our best men have not kept up with the techniques or even the philosophy of scientific inquiry, in order to determine what their application to planning and building problems might be.

A recent joint statement on the scientific approach (three articles in *Science*, Nov. 4, 11, 18, 1949)* should interest the architects. Its title, "Psychology and Scientific Research," may not appear apt but the very generality of its subject fits our case very well, especially if we hold on to the mistaken notion that scientific research is concerned only with measurable quantities. The first article, "The Nature of Scientific Inquiry," describes how we build up our understanding (of any situation) and how we adjust our understanding to changing situations.

What we bring to a situation is an accumulation of impressions, awareness, knowledge—an assumptive or firm world which we have built up in the process of adjustment to life. This accumulation is not inherent in external things. It takes on meaning as we gradually build, through tested experience, a pattern of expectancies on which we can base action. This is the theme of Adelbert Ames' work on perception previously reported. (See page 20, December 1947 P/A, "Form Still Folds Its Function.")

But the changing world of reality keeps getting out of fit with the pattern we have made: *And so we run into*

hitches in everyday life because of our inadequate understanding of conditions giving rise to a phenomenon and our ability to act effectively for a purpose becomes inadequate. When we try to grasp the inadequacy intellectually and get at the why of the ineffectiveness of

our purposeful action, we are adopting the attitude of scientific inquiry.

This is the attitude of ordinary common sense, too, but with a difference. In the daily life situation, we are in-

(Continued on page 112)



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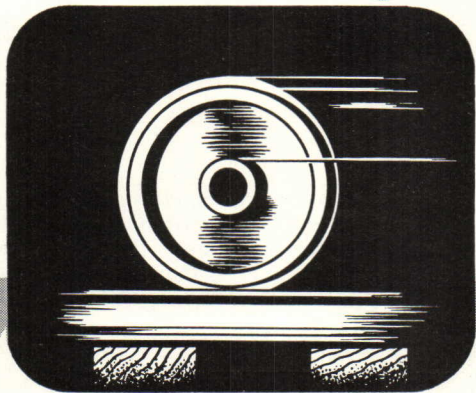
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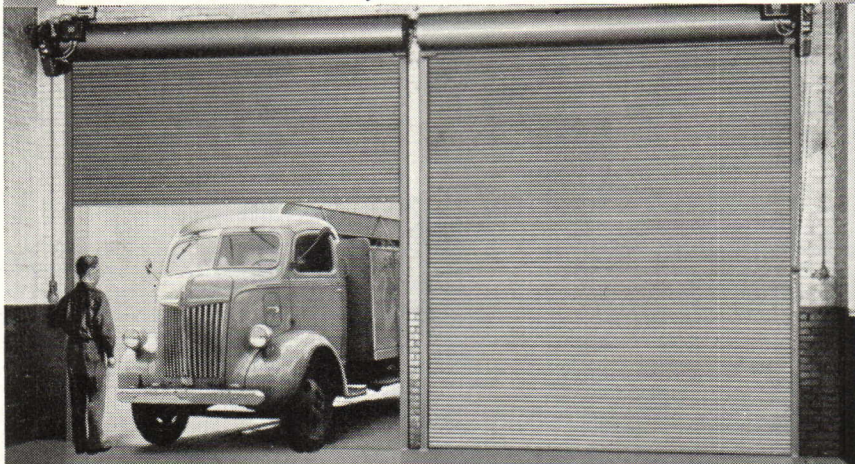
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technical press

(Continued from page 111)

involved in it ourselves and being pushed around by it. In the scientific situation we can, to a large degree, be in control. By using not only the ways of working but the ways of thinking, that science has proved out, we can greatly increase our ability to handle new situations in our own practice.

The process involved in scientific inquiry would seem to be somewhat as follows: 1) sensing the inadequacy of the conceptual aspects of our assumptive world, thereby being faced with a problem for which we must seek an answer; 2) deciding on all those aspects of a phenomenon that might have a significant bearing on the problem—deciding on those aspects except for which the functional activities in question would not exist; 3) picking out from the various aspects assumed to be involved those that seem most important in terms of the original hitch we faced and that will serve as bases for standards we can think about and manipulate; 4) working out some method of changing those aspects we have chosen as variables or bases of standards and conducting our empirical investigation accordingly; 5) modifying our assumptive world on the basis of the empirical evidence concerning the validity of formulations that have resolved an immediate problem.

The solving of the immediate problem will automatically give rise to new hitches and the above process constantly repeats itself.

The second article, "Scientific Inquiry and Scientific Method," gets down to cases and points the way for constructive work. First the air has to be cleared of some misconceptions. Scientific research is not just a method of investigation—progress will be hampered if we forget that what is known as the scientific method is a means of pursuing scientific inquiry. The first article dealt with the nature and purpose of scientific inquiry at some length in order to give background to this key relationship.

The all-important consideration in scientific research is the problem of setting up a problem for scientific investigation. If the formulation of the problem does not contain within itself the possibility of going beyond what is not scientifically established, then succeeding steps in investigation are futile.

It is the way in which the investigator poses his problem that determines where he will come out—what functional activities he will feel have bearing on the problem, which of these he will use as the bases for standards.

(Continued on page

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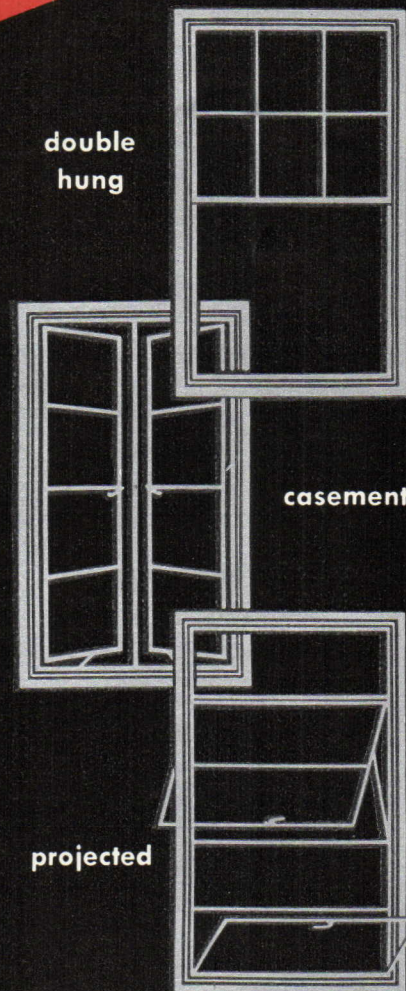
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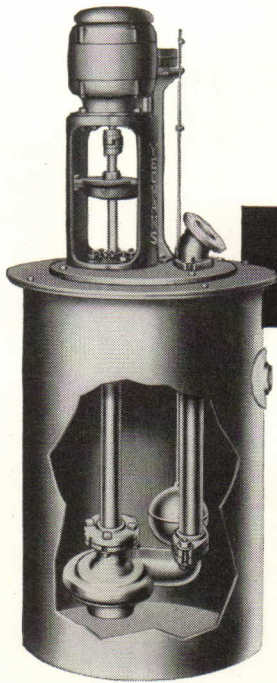
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technical press

(Continued from page 112)

in empirical investigation, and what methodological procedures he will follow or try to devise. In this connection it is relevant to note that the popular conception of what makes a scientist "great" is that he has solved problems that have long baffled others. While this may be true enough, a review of the history of science will show that in general the solution of a problem is relatively easy once the problem has been posed and that the real scientific contribution of those scientists we now regard as outstanding is due to the way in which they have formulated problems which they or others have solved.

(Here is strong confirmation of the spreading conviction among architects that a soundly worked out program is not only essential but is considerably more than half the battle—the rest is easy.)

The tremendous advances in the physical sciences since the 17th century, for example, are due more to improved formulations than to changes in methodology. In the 17th century and continuing into the 20th, science sought all-inclusive "laws" and felt that reality was firmly in hand. But today both all-inclusive laws and reality seem more elusive than ever. Contemporary physics is seeing its ultimate particle disappear, physiology is realizing that it is not dealing with the classical closed energy system. The need for a basic conceptual reformulation to bring about newer and greater understanding is apparent on all sides.

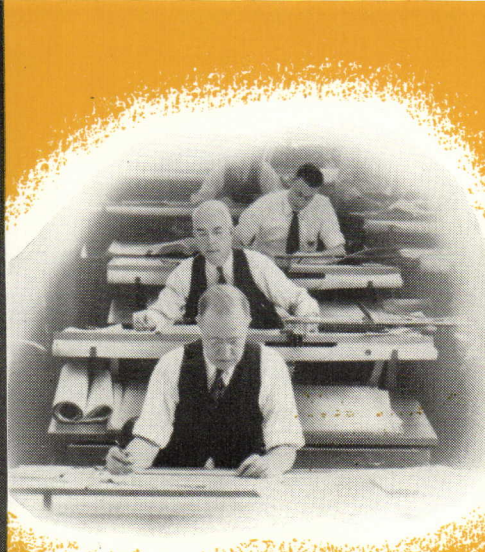
So you see the scientists also have trouble keeping their thinking straight. The big difference between them and the architects seems to be that the scientists have been there before. Changing concepts are the breath of life to their way of working, while the very idea of formulation of concepts comes hard to the architect. But we do recognize the need. Walker puts it this way: "Granting the need and desirability of an architectural evolution, does it necessarily follow that the architect may not accomplish a clear statement of his place in society, just as the oath of Hippocrates has had meaning since the fourth century before Christ until the present time? I believe that if we had some simple statement of purpose we could pass on as an ideal we might achieve less exhibitionism, less museum acclamation, and much more honest architecture . . ."

The articles go on to point out, in considerable detail, the difficulties and misspent efforts caused by lack of clear formulations. They draw attention

(Continued on page 1

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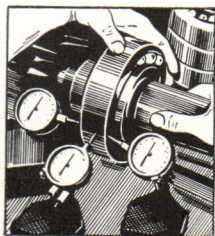
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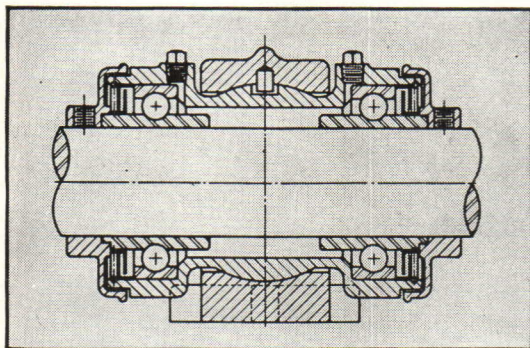
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technical press

(Continued from page 114)

the avoidance of important problems in the concentration on method—"The shotgun approach in which the idea seems to be that if one only gathers enough data, possibly with the use of new gadgets or apparatus, one must sooner or later come out with some sort of scientific result" (Francis Bacon started this some three hundred years ago and he was right—in his time)—or the "quantitative" approach in which the investigator is so busy measuring that he gets sidetracked from the more important matter of what data are important and even avoids important problems to which quantitative methods don't apply—or the tricks that words or familiar patterns or traditional abstractions can play on us. We architects are on familiar terms with that last one. We could pile up example after example (*cliché on poché*) that we are all too familiar with, and our clients sometimes point out others that we are still blind to.

It is tempting to quote and quote by the articles are there to read if anyone is really interested. And they aren't just adversely critical. The purpose after all, is "to accelerate the kind of scientific research that will increase our understanding of man." Many examples are given of ways of thinking and working in various fields. Written in plain English, by golly. A sort of procedure manual for tackling unfamiliar problems might be abstracted from the second article. It is to be hoped that the authors will produce something of the sort in the course of their collaboration.

Only the third article, "The Transnational View in Psychological Research" gets into technicalities and terms that the layman might not follow. The authors are primarily concerned, of course, with psychologists; but architects can read and think, too. We can be strengthened in our thinking and our planning by the use of some of the techniques of science.

NOTICE

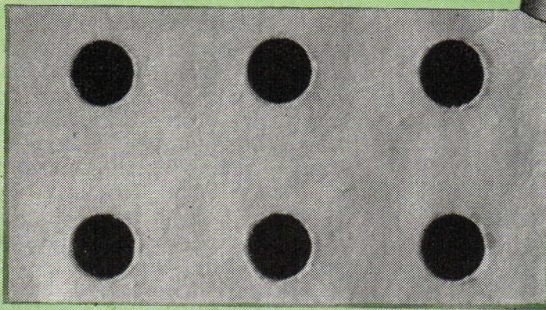
APPOINTMENT

KONRAD WACHSMANN, architect and signer, has been named professor in charge of advanced building research and design at the Institute of Design at the Illinois Institute of Technology.

No. 3 of 5 SOUND Reasons Why Simpson Acoustical Tile is SUPERIOR

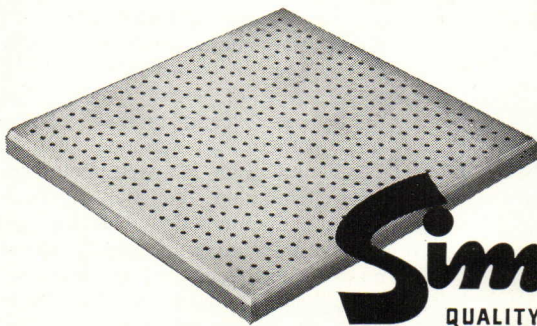
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Unretouched photo showing small portion of the surface of Simpson quality Acoustical Tile.

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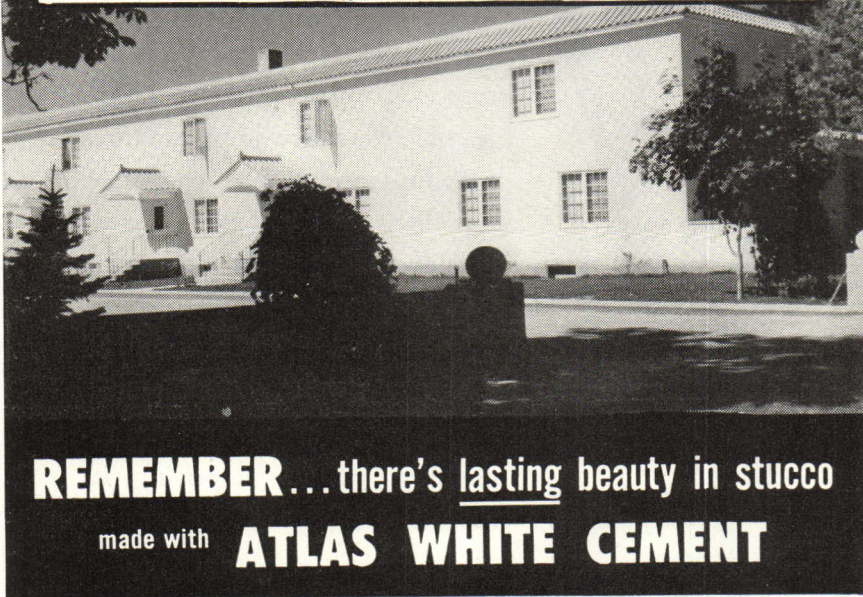
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REVIEWS

BOOKS

DESIGN SOURCES

European Architecture in the Twentieth Century. Arnold Whittick. Published by Crosby Lockwood & Son, Ltd. London, 1950. 249 pp., illus., 30/-

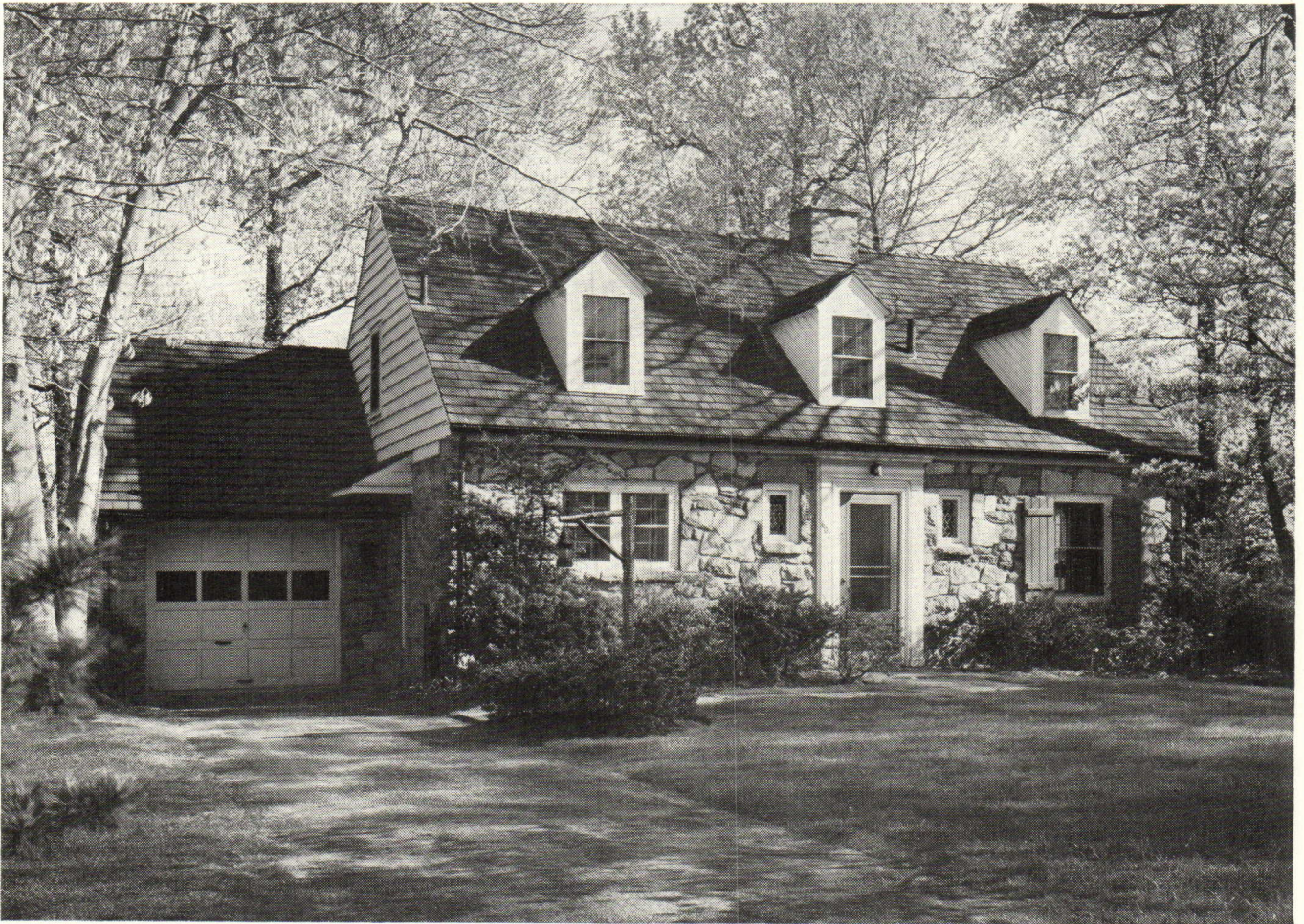
This is the first volume of a series that will eventually tell the story of European architecture in the first half of the 20th century. For a start, Whittick has prepared a historical background study and carried this forward as far as 1924. The next volume will cover the period from 1924 to 1933, while the final book will take in the remainder of the first 50 years.

Lewis Mumford recently pointed out that the trouble with the 19th century was that it began in 1815 and ended in 1914. Whittick has, in effect, come up with the same conclusion and as a result this first volume of his is not much more than a prologue from the Revivalism of the early 19th century to the Bauhaus. It is a little unfortunate that this fact immediately invites comparison with Dr. Pevsner's earlier history of the period, *Pioneers of Modern Design*. Since the two approaches to the same development differ considerably in emphasis, a comparison is worth going into in some detail.

Whittick states that he has "sought for the explanations of the changes in the appearance of buildings mainly in the development of the craft of building and science of construction and in the satisfaction of social needs." This is the approach recently made popular in this country by authors like Jan Fitch and John Kouwenhoven. On the other hand, Dr. Pevsner, if I understand him correctly, does not believe that architecture is merely the automatic consequence of mechanical and social events—a view that finds a parallel in certain historical theories of the 19th century. Instead, he stresses the "historical accident," the direct intervention of the individual architect through creative acts, and the possibility of such acts to shape the esthetic preferences of their time.

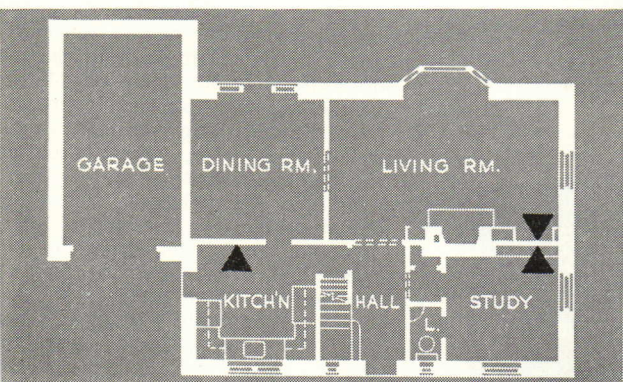
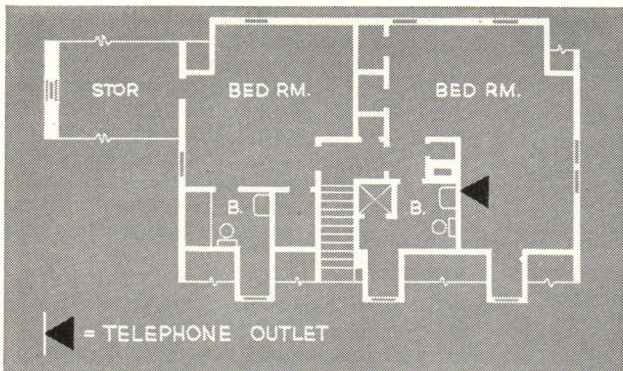
Certain curious attitudes develop when one accepts the first theory. One of them is a reluctance to admit to the influence of the other arts upon architecture (since the latter is assumed to be a kind of social science, anyw

(Continued on page



EDWIN A. NEALE, Architect

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REVIEWS

(Continued from page 118)

Another is a tendency to wax enthusiastic about very ugly buildings that make an obscure technological or sociological point. And, finally, just as there is no discussion of the influence of other arts, so there is little reference to the development of modern furniture and other applied design—a most important testing ground for new architectural ideas.

All this is a serious matter in any discussion of the origins of the modern movement: it is hardly possible to exaggerate the importance of *L'Art Nouveau*, for example, in breaking down the imitative eclecticism of its time and thus opening the way to more revolutionary developments. Yet Whittick, in a very brief chapter without illustrations, states that *L'Art Nouveau* "had little influence on architectural design," only to have to admit little farther on that Mackintosh, O'Riordan, Van de Velde and, eventually, even his hero, Eric Mendelsohn, were all under the *Art Nouveau* spell.

In a similar instance, concerning the influence of *De Stijl* on modern architecture, Whittick merely refers to a general cubist imprint upon the work of the great pioneers. There is no tribute to Van Doesburg, to Van Eesteren, to Rietveld or to Mondrian. J.J.P. Oud, the only member of the group mentioned by Whittick, is discussed largely in a technological frame of reference.

The least pardonable omission, however, would seem to be Whittick's failure to mention the influence in Europe of the 1910 *Wasmuth* publication of Frank Lloyd Wright's work, which, like other "historical accidents"—more to change the shape of European architecture than many a technological invention.

These are isolated faults. Yet they are symptomatic of a kind of self-imposed straitjacket in which several architectural historians find themselves today. Supposing they were frank enough to admit that architecture is above all an art; it would then be reasonable to admit further that many of the sources of modern architecture can be found in the painting and sculpture of the past 75 years. For these arts continue to flourish even when architecture reached the heights of eclecticism.

Where Whittick tells the story of the "science of construction and of social needs" he comes up with a good deal of valuable material. The chances are that he will follow with a historical prologue with some observations that may fill in the gaps left in the present volume. PETER B.

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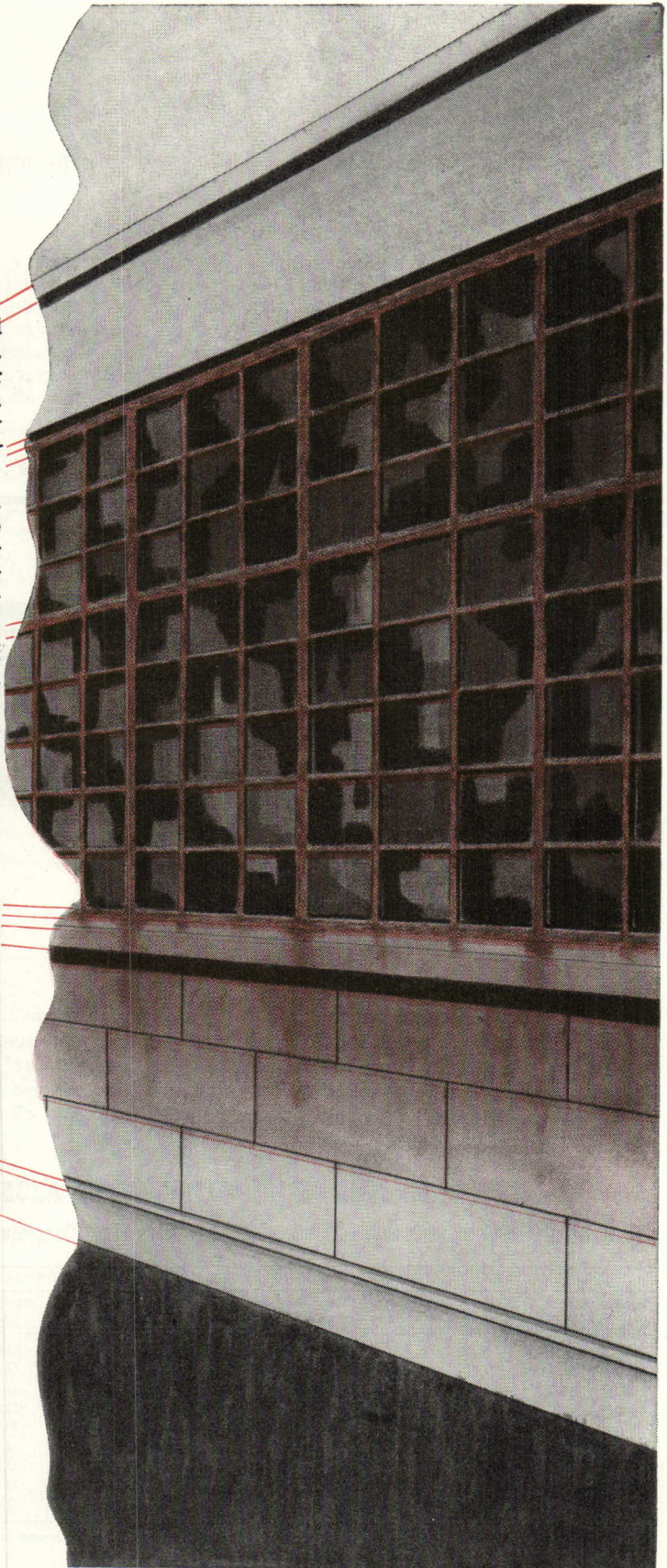
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all the property and assets of the partnership existing at the time of its dissolution, and wind up the partnership affairs. The dissolution of a partnership by the death of one of the partners ends the mutual agency of each of the partners and the community of interest of the partners only subsists long enough to enable the survivors to settle the affairs of the business.

The effect of the death of one partner upon the financial status of the survivor was aptly illustrated in a case litigated recently in Arkansas. In that case, a partnership operated a hotel business. The partnership contract had no provision relating to the death of either of the partners. Upon the death of one of the partners, his executor agreed with the surviving partner to continue the operation of the hotel business. Subsequently the executor of the deceased partner demanded that the business be liquidated. The surviving partner contended that the continued operation of the partnership business constituted a sale and assignment of the deceased partner's interest to him and that he was entitled to continue the business in his name. He further contended that the estate of the deceased partner had no claim for the value of the deceased partner's interest in the business. The Arkansas court ruled that the partnership business could not be carried on by the surviving partner, and that the assets would have to be sold to the public or private sale. The court would not consider the economic undesirability of immediate liquidation. It stated the rule as follows:

"The legal rule is fixed on this subject. If the survivors of a partnership carry on the concern, and enter into new transactions with the partnership funds, they do so at their peril, and a representative of the deceased (partner) may elect to call on them for the capital, with a share of the profits, with interest. If no profits are made even if a loss is incurred, they must be charged with interest on the funds thus used and the whole loss will be their

The importance, therefore, of the partnership agreement containing a *modus operandi* to cover the contingency of death of one of the partners, is evident. There are many possible provisions that can be used to fill this requirement.

(Continued on page

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3	0.376	.375	0.11	1.178	0.262	0.015	0.143
4	0.668	.500	0.20	1.571	0.350	0.020	0.191
5	1.043	.625	0.31	1.963	0.437	0.028	0.239
6	1.502	.750	0.44	2.356	0.525	0.038	0.286
7	2.044	.875	0.60	2.749	0.612	0.044	0.334
8	2.670	1.000	0.79	3.142	0.700	0.050	0.383
9*	3.400	1.128	1.00	3.544	0.790	0.056	0.431
10*	4.303	1.270	1.27	3.990	0.889	0.064	0.487
11*	5.313	1.410	1.56	4.430	0.987	0.071	0.540

*These sections have the same weight and area as bars formerly known as 1" Sq., 1 1/8" Sq. and 1 1/4" Sq.

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*Bar numbers are based on number of 1/8" included in the nominal diameter of the bar section.



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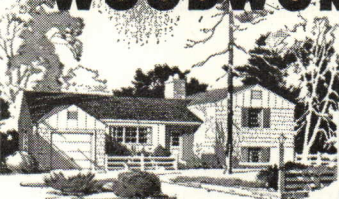
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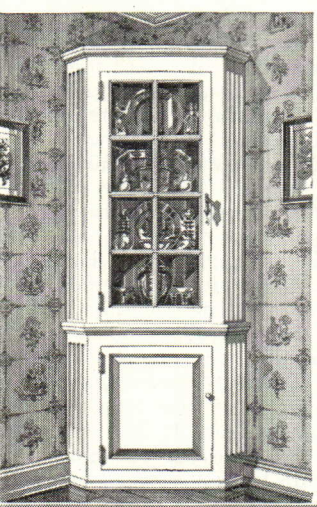
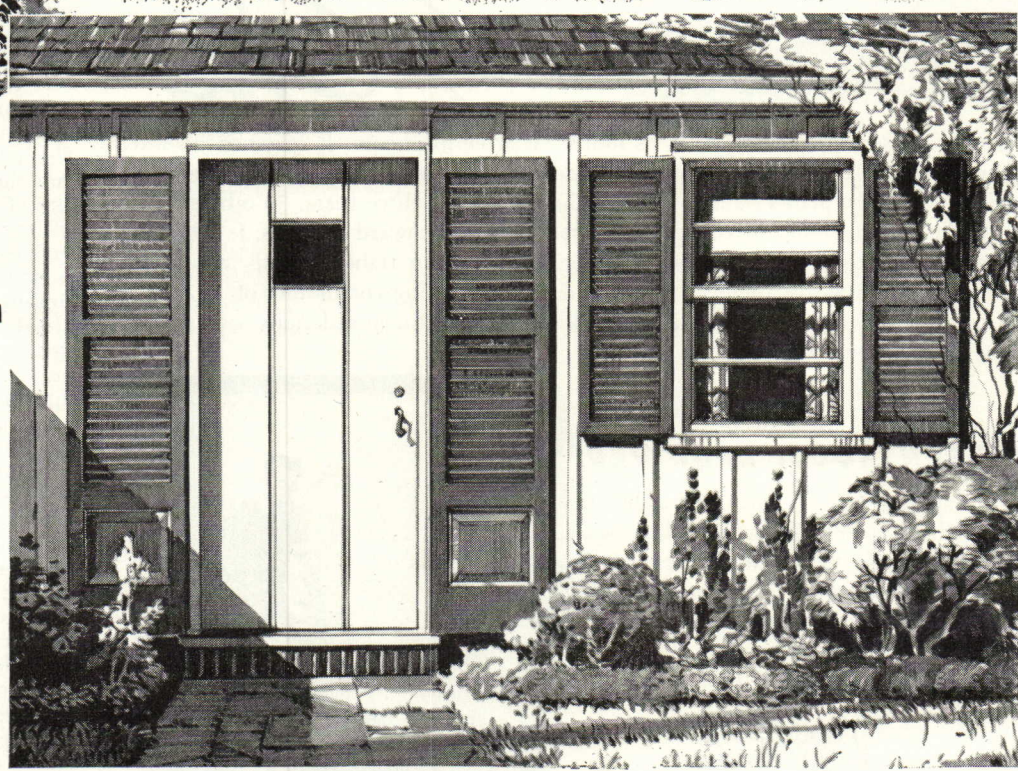
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* This is a continuation of the column in February 1950 P/A, relative to the partnership relationship.

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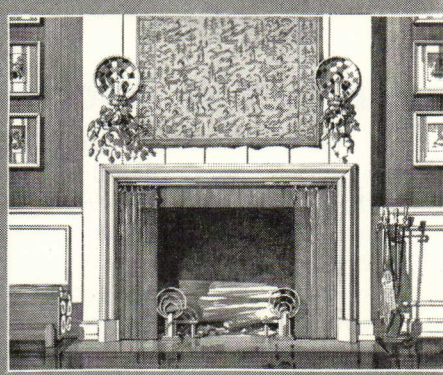
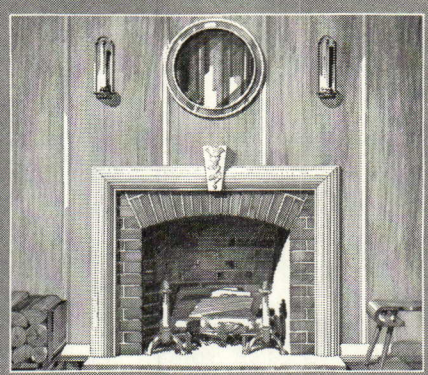
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it's the law

(Continued from page 122)

partnership agreement may provide that in the event of the death of one of the partners the partnership be liquidated over a period of time. This will enable the surviving partner to achieve the maximum benefits from the liquidation. The partnership contract may provide that the heirs, administrators, or executors of the deceased partner shall carry on the operation of the partnership business together with the surviving partners. Such a provision is usually binding upon the survivors but is optional with the representative. The partnership agreement may provide that the interest of the deceased partner shall continue in the partnership business and that upon the death of one of the partners the partnership need not be liquidated. Such a provision will be binding upon all of the parties.

Many partnership agreements provide that upon the death of one of the partners the surviving partner will have a preferential right to purchase the interest of the deceased partner and to carry on the business. If a workable formula determining the interest of the deceased partner is delineated in the partnership agreement, future disputes will be avoided. The value of the interest of the deceased partner may be based upon book value or upon actual value or determined by some other formula. It should be specifically provided in the partnership contract whether the good will is to be considered in determining the value of the deceased partner's interest or whether good will shall become the sole property of the surviving partner. It has often been deemed advisable for the contract of partnership to provide that mutual life insurance policies be taken out on the lives of each of the partners, in order to enable the surviving partner to have sufficient funds to purchase the deceased partner's interest, based upon a formula value set forth in the partnership agreement. By careful and prudent planning, both the surviving partner and the estate of the deceased partner can be fully and adequately protected from a financial viewpoint upon the death of one of the partners.

There is a direct relationship between the provisions of a partnership agreement relating to the survival of the business and the provisions that should be contained in the last will and testament of each of the partners. No matter what plan is evolved in the partnership agreement to cover the contingency of the death of one of the partners, the wills of each of the partners should be in conformity with such plan.

(Continued on page 123)

Fedders

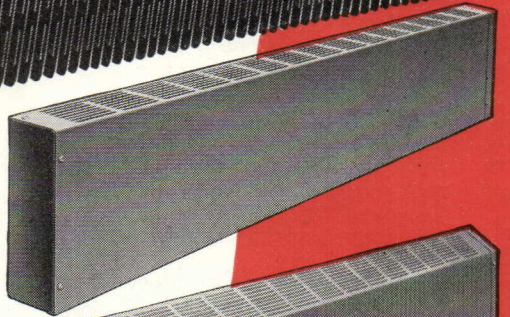
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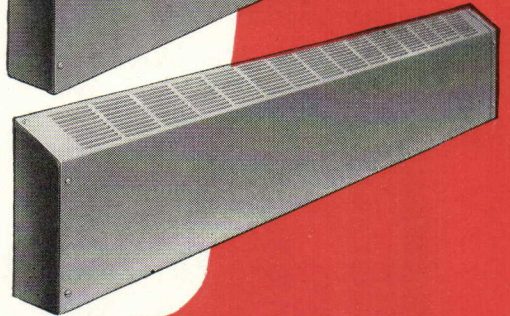
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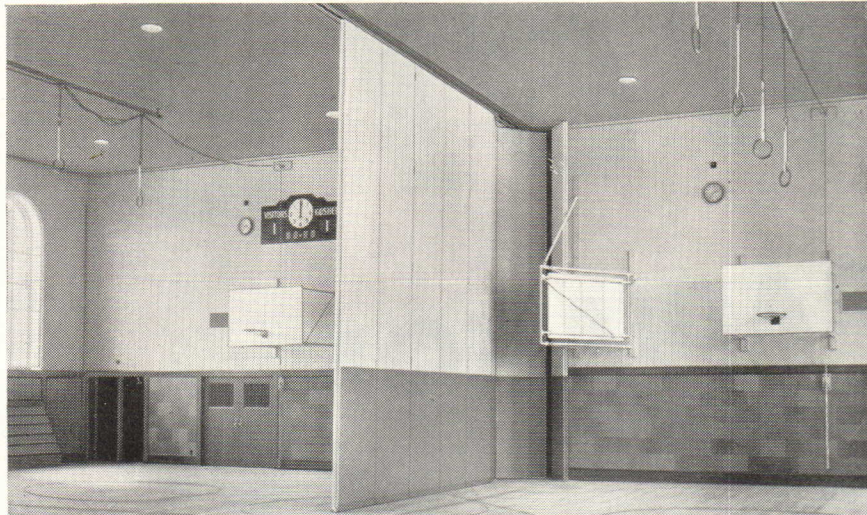
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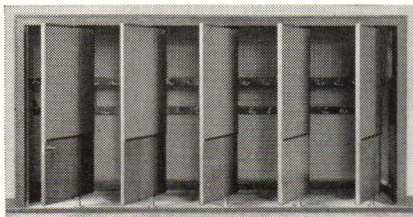
R-W DeLuxe FoldeR-Way Partition, Central School, Goshen, New York. Robert R. Graham, Architect.

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it's the law

(Continued from page 124)

Where the interest of the deceased partner is to be purchased by the survivor by means of insurance provided for that purpose or otherwise, the estate will be the recipient of a large cash sum. It may be desirable to provide for a testamentary trust to protect the widow and children of the deceased partner and for sound investment of such cash. If the partnership business is to be carried on by the legal representative of the deceased or if the interest of the deceased in the business is to be maintained, it will be of importance to provide in the wills of the partners for sufficient liquid assets to pay for estate taxes and administration fees. If it is the desire of the partners that the partnership continue after the death of one of them and that their legal representative continue to operate such business, the wills of the partners should contain testamentary provisions sufficiently broad to empower the executors to carry on the business with facility and without the necessity of constant application to court for authorization to perform acts in connection with the continued operation of the business.

The partnership interest may be the most important asset of the estate. Contrary to a popular belief that if a man dies intestate, his assets do not go exclusively to his wife, but may be shared by other heirs. In New York, for example, if a man dies without a will, his wife is entitled to only one-third of his estate and his children are entitled to the balance. Only a valid will can provide for a different result or prevent a number of heirs from exercising their divergent views on the operations of the surviving partnership. Understandably, the results in the absence of a will or with one poorly drawn, can be emotionally as well as financially disastrous.

As was pointed out in the February column the partnership agreement should contain a definitive and express provision outlining the financial arrangement between the partners and the method by which management and control is to be exercised. It is also important that the relationship of partners to third persons be considered at the time the partnership agreement is drawn and that the powers and limitations of the partners to bind the firm be delineated.

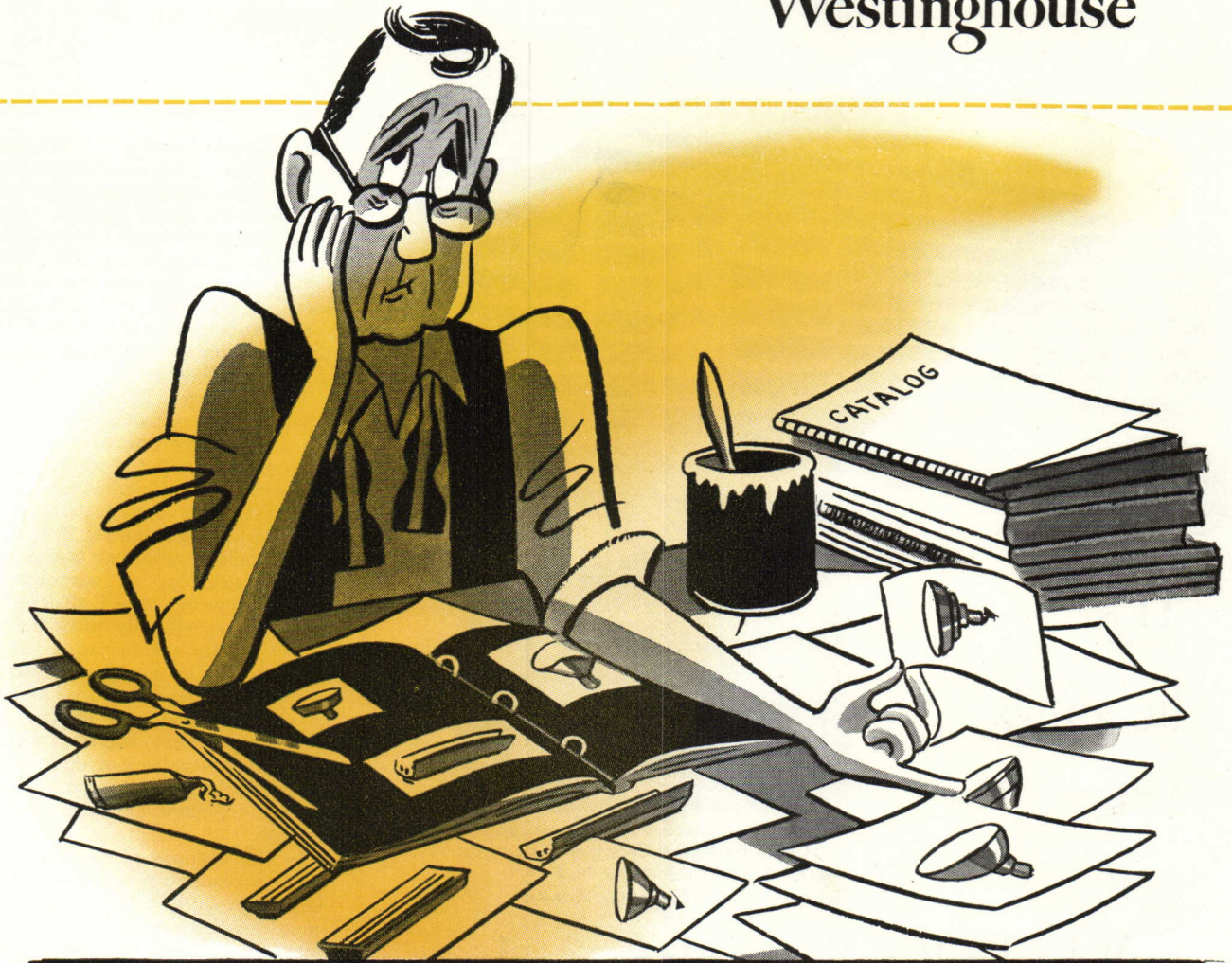
Each partner is both principal and agent in his relationship to every other partner, and consequently each partner

(Continued on page 126)

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it's the law

(Continued on page 126)

may be legally liable for the activity of every other partner. However, the authority of a partner to act as agent for the partnership is limited to transactions within the scope of the partnership business. It is consequently desirable to set out in the partnership contract the scope of the partnership business and those express limitations considered desirable, upon the rights of the partners to bind each other.

The Uniform Partnership Act provides that all partners will be bound by the act of any one of them which is *apparently* conducted in the business of the partnership. Even where the activity in question is not authorized by the partnership agreement, if it is within the apparent scope of the business of the partnership, all partners will be bound. However, the Uniform Partnership Law specifically provides that unless expressly authorized, a partner has no authority to assign the partnership property in trust for creditors, dispose of all the good will of the business, confess judgment, submit a partnership claim to arbitration, or do any other act which would make it impossible to carry on the ordinary business of the partnership.

In the absence of specific provision in the partnership agreement the courts have been called upon to consider questions dealing with the authority of partners to bind the partnership. The nature of the partnership is often decisive in these considerations. The association of architects is designated as a "non-trading partnership" in contrast to a partnership conducting a commercial business. In the case of a non-trading partnership, the presumption is made that no partner has been given the right to bind the firm by a promissory note. In the case of a commercial partnership it is presumed that a principal of the firm who borrows money or gives a note in the name of the firm is acting for authorized partnership purposes. Many partnership contracts, in order to protect each partner from indiscreet activities of any other partner, provide for the necessity of more than one signature on checks. No matter what the type of partnership the rights, limitations and powers of the partners who bind the firm should be expressly stated.

In gross outline, a partnership agreement should set forth in detail:

1. The term of the partnership.
2. The financial arrangements between the partners.
3. How control and management of the business is to be exercised.
4. A consideration of the impact on the partnership of death, withdrawal, illness of a partner.
5. The rights and limitations of the partners to bind the firm.

out of school



By CARL FEISS

The loss of command over the human environment is not the cause of the breakdown of civilizations.

ARNOLD J. TOYNBEE

"But it is sure as Hell a contributing factor."

CARL FEISS

For those readers who have followed me so far in these personal thoughts on

architectural education, it may have become apparent that there is a theme, a light threnody, veining its way through the heavy body of words. It took nearly seven issues before I dared drop the atomic phrase "comprehensive architecture" on the community of educators and educatees. The bomb was a dud! Hardly an architect as much as broke

a lead or wiggled his ruling pen and not an educator stopped talking. Undaunted, however, your columnist pursues his illusive theme, a huntsman lost in a forest of ideas.

Next month we architects convene in Washington, D. C. (in a forest of columns), to talk about architecture and particularly about city planning. It has taken a hundred years to get around that. So we are really celebrating not just the passage of time and honoring tradition of the A.I.A. but we are honoring ourselves with a break in the tradition. *Limited Architecture* may in time become as obsolete as Federal architecture, for it has long been apparent that it is, with few exceptions, the plan of Washington and not the building which establish the character of the city. The tragedy is that the two together could not have been so combined that a comprehensive architecture could have eventuated which would have created a truly great city.

City planning is not new in the manuals of the A.I.A. or the architectural schools. The emphasis, however, has remained an integrated one—it has always remained either separate or as a highly specialized technique which has had only a scattered application to the curriculum or to real life architecture. Many painters paint without a frame in mind and too much art is done for the blank and unknowing walls of a museum. The art of architecture has suffered much in the same way. The art and science of architecture—the broad scientific humanism of architecture—the fine art of architecture which combines the physical sciences with the sciences of human nature and with the science of environment, knows no boundary line.

In previous articles we have touched briefly on planning education in schools. The "Grand Plan" of the Beaux Arts days was mentioned in the January issue. For a change, let me propose something. I mentioned in January that only a few of the Grand Plans were ever built. Be that as it may, during the period of most intense B.A.I.D. control of the schools, the Grand Plan kept large-scale thinking alive and held materially in maintaining some breath to tightly formalized design.

Modern city planning education—the technical and professional schools seems to have started in the school departments of landscape architecture. I am under the impression that the Henry V. Hubbard at Harvard is about as responsible as anybody arousing interest in the subject in the

Executive Dining Room, Chase National Bank, 18 Pine St., New York City



FROM *Soup* TO NOTES

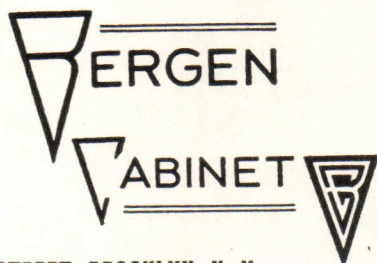
WE are not privy to the subjects discussed in the Williamsburg Dining Room at Chase National Bank headquarters. But it is conceivable that the conversation could range from "soup to notes". However, there is something we can refer to with authority, and that's the versatility of Bergen Cabinet aged-in-the-wood craftsmanship.

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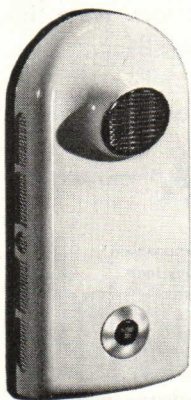
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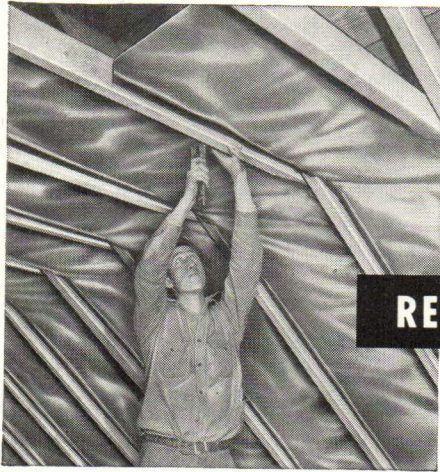
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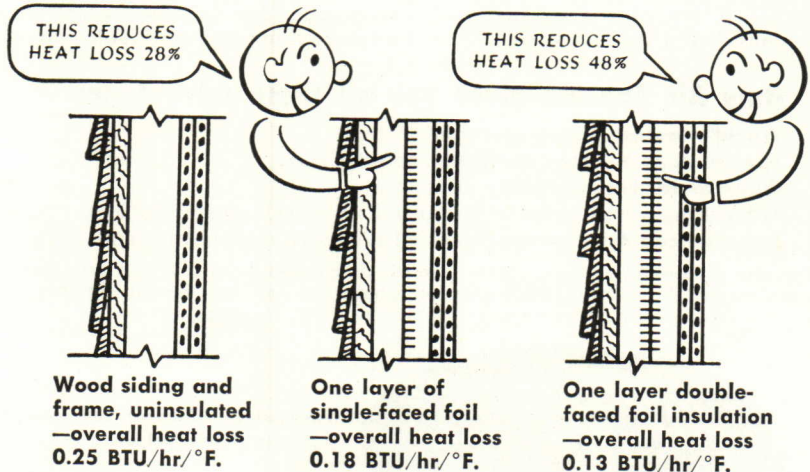
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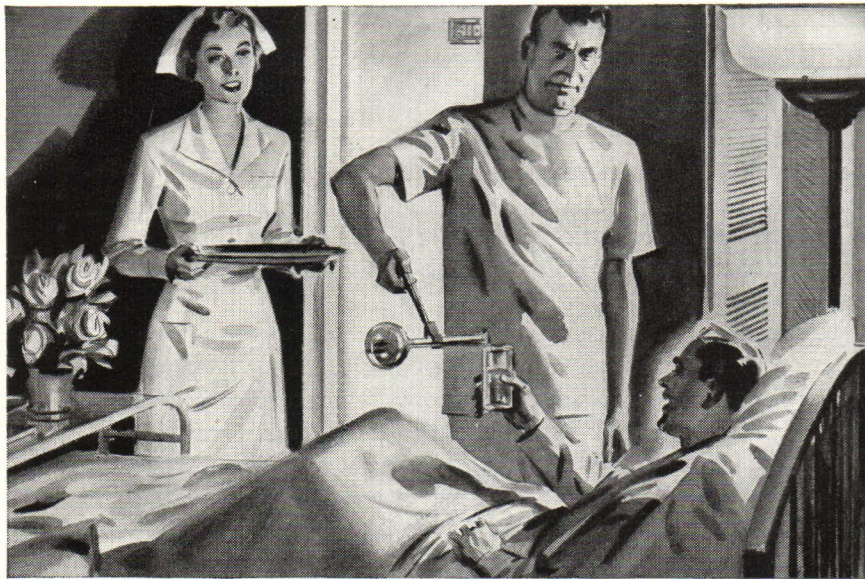


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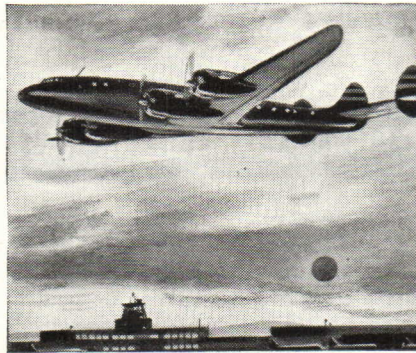
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out of school

(Continued from page 130)

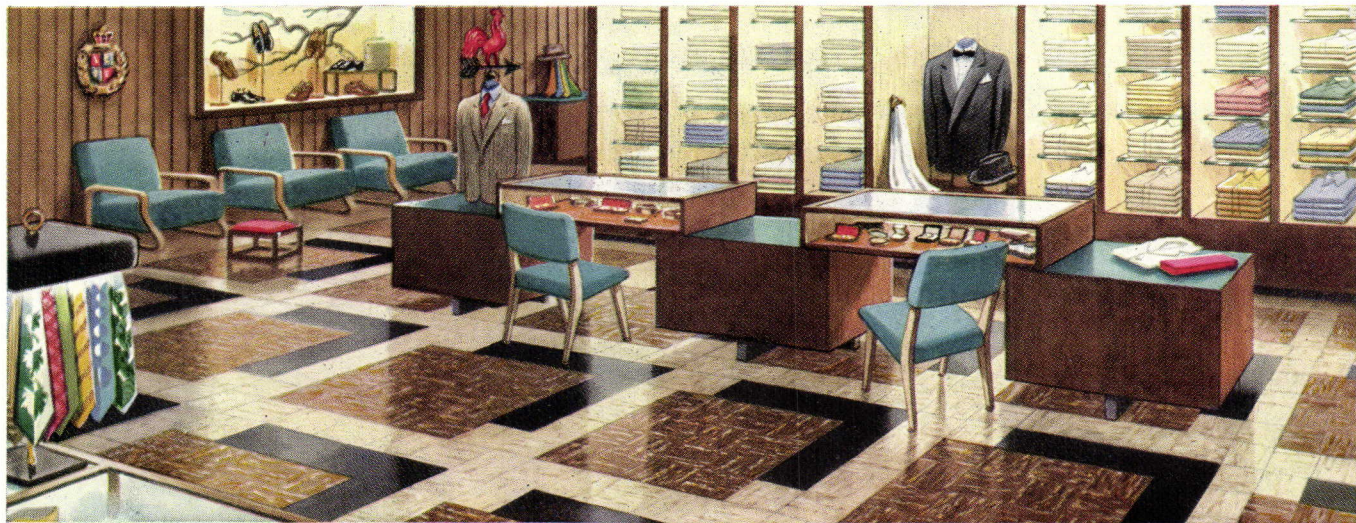
schools. The landscape school at Illinois was also in the field at an early date. When I say early date, the time is purely relative because not much of significance in planning training occurred until the early 1920's. Nearly all important early modern American city planners came out of landscape training. Besides Hubbard, there is a distinguished list of names, including John Nolen, Sr., Henry Wright of Radburn, Arthur Comey, Russell Black, Harlan Bartholomew, and by adoption from Great Britain, Thomas Adams of the New York Regional Plan. Most architects are unfamiliar with either the names or accomplishments of these men who made the first studies in the harmonizing of environment with land use and movements of people.

But the standard training for landscape architects was not the most satisfactory incubator for planners. A predominant part of the programs was, of necessity, devoted to botany, horticulture, and the complicated science and esthetics of planting plans. Also the design traditions of Italian, French and English gardens did not lend themselves too well to translation into city wide planning. (I know whereof I speak, since my career began, believe it or not, as an undergraduate landscape student under the beloved Robert Wheelwright and Frank Schrepfer at the University of Pennsylvania in 1925.) However, no sound landscape school could avoid the history of city planning any more than it could fail to mention the relationships between the plan of the gardens of Versailles and the plan of Washington. The relationships between the landscape school and the schools of architecture themselves were, however, quite vague or often non-existent and so what planning advances were made in landscape education failed largely to influence architectural education.

The landscape architect came into city planning through park and recreation work. Parks were extended or attenuated into parkways as the automobile grew in importance, and parkways grew into subdivisions, and subdivisions grew into little plans for suburban communities, and these in turn grew into plans for whole towns.

Both the architect and the landscape architect in the early years of their schools remained indifferent to the social consequences of architecture. The reforms engendered by the establishment of building codes, tenement house laws, and zoning—though to have drastic effect on the practitioner—remained unimportant in the schools and the fore of little responsibility later to

(Continued on page



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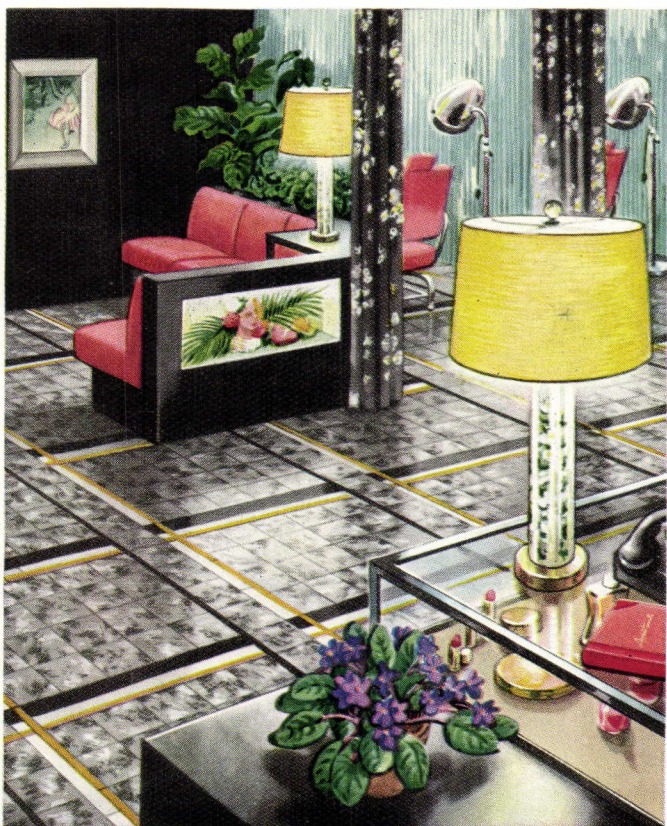
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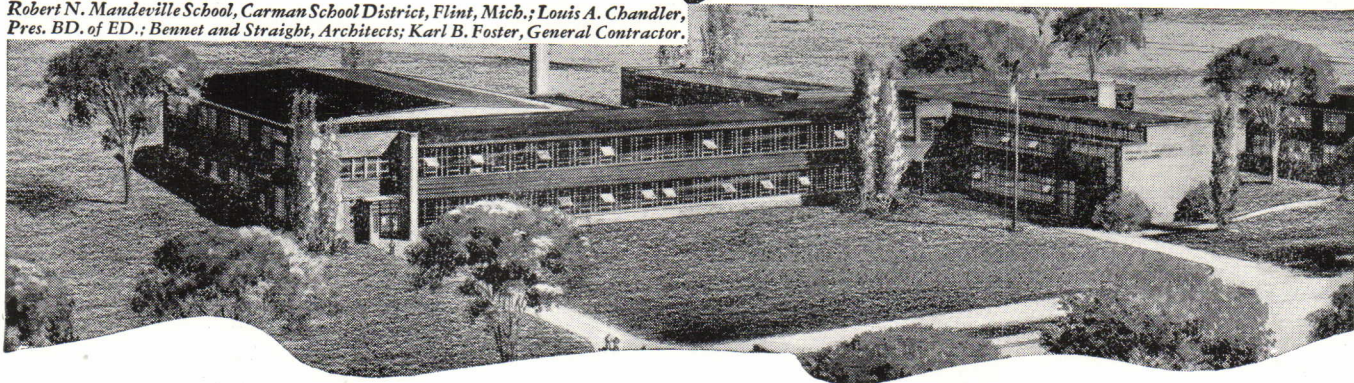


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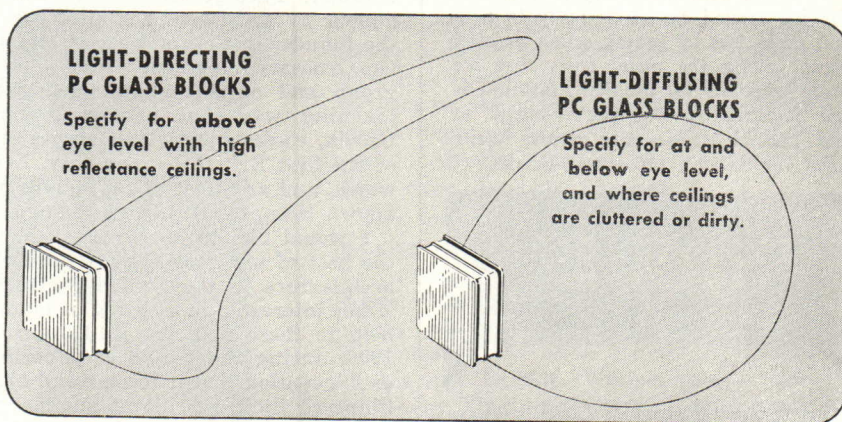
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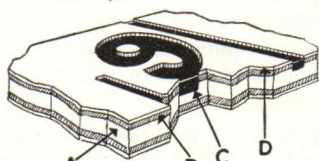
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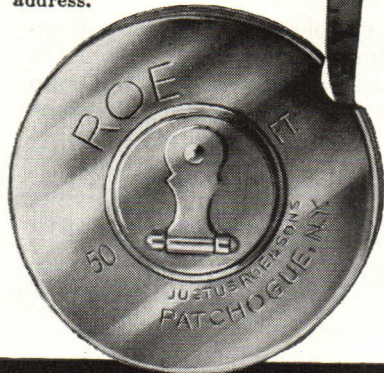
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(Continued from page 136)

little background to the thesis on which I am about to embark. The schools, during the depression years, prior to World War II, found out about large-scale housing and site planning from the many high-grade European periodicals, books, and visiting architects. Housing and planning in Scandinavia, Holland, and Germany opened new vistas of design and new elements of construction to consider. Students and faculty, traveling abroad, directed their interests more and more to modern architecture and planning and less to the cathedrals. The schools, perforce, changed their pace and interest though not with much inherent good will. It was a slow process. Eliel Saarinen, in opening a school for planners at Cranbrook in 1932, added much weight to the value of planning. By 1933, when the first significant steps in Federal housing architecture were to begin, there was still little school interest reflected in the design programs. Per usual, the faculties were slower to respond than the students or even, in this case, than the practicing architects.

The most important planning schools, largely at the graduate level, beginning with Harvard, M.I.T., Columbia, Illinois, Iowa, and followed in varying degrees by others, have all developed planning as either an adjunct or a specialty. While Harvard, M.I.T., Columbia, and the University of California at Berkeley, are now trying to identify the planning specialist, a fundamental issue is not being solved. (It should be noted that at Berkeley, North Carolina, and others, the Planning Department is not in the architectural school.)

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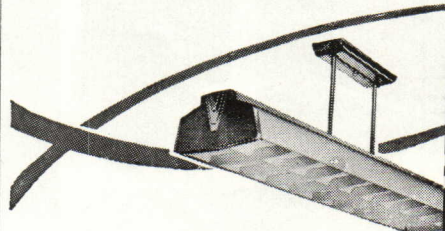
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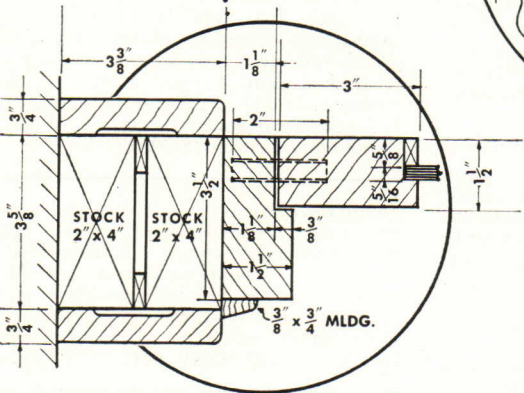
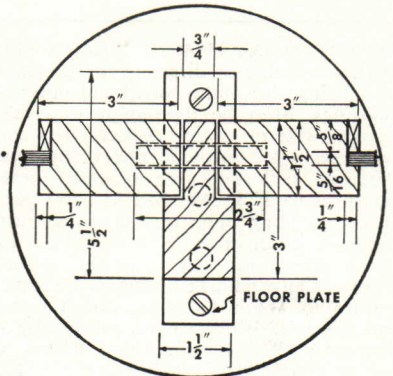
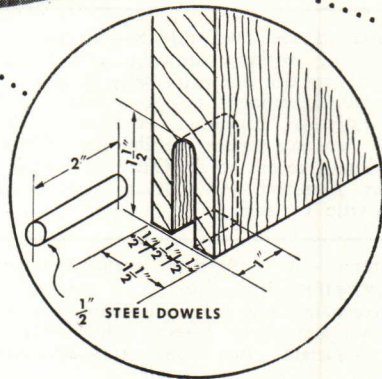
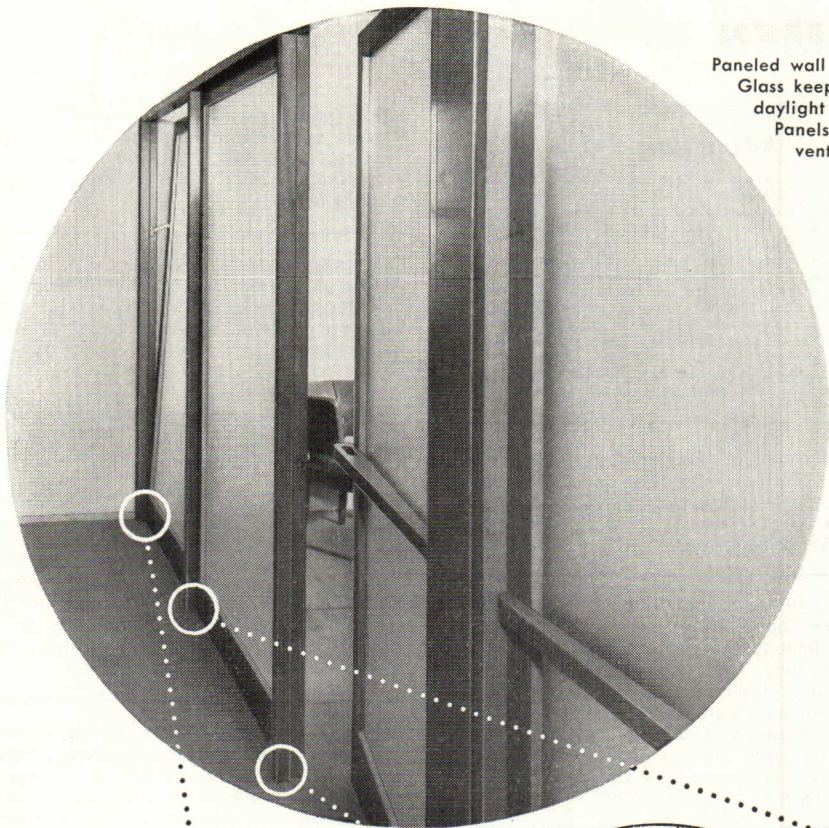
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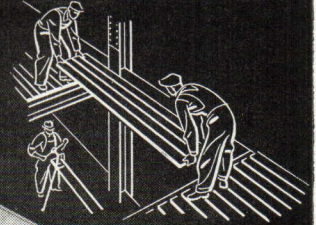
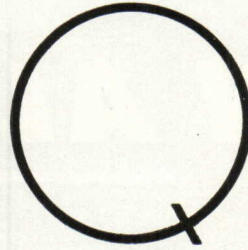
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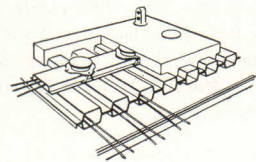


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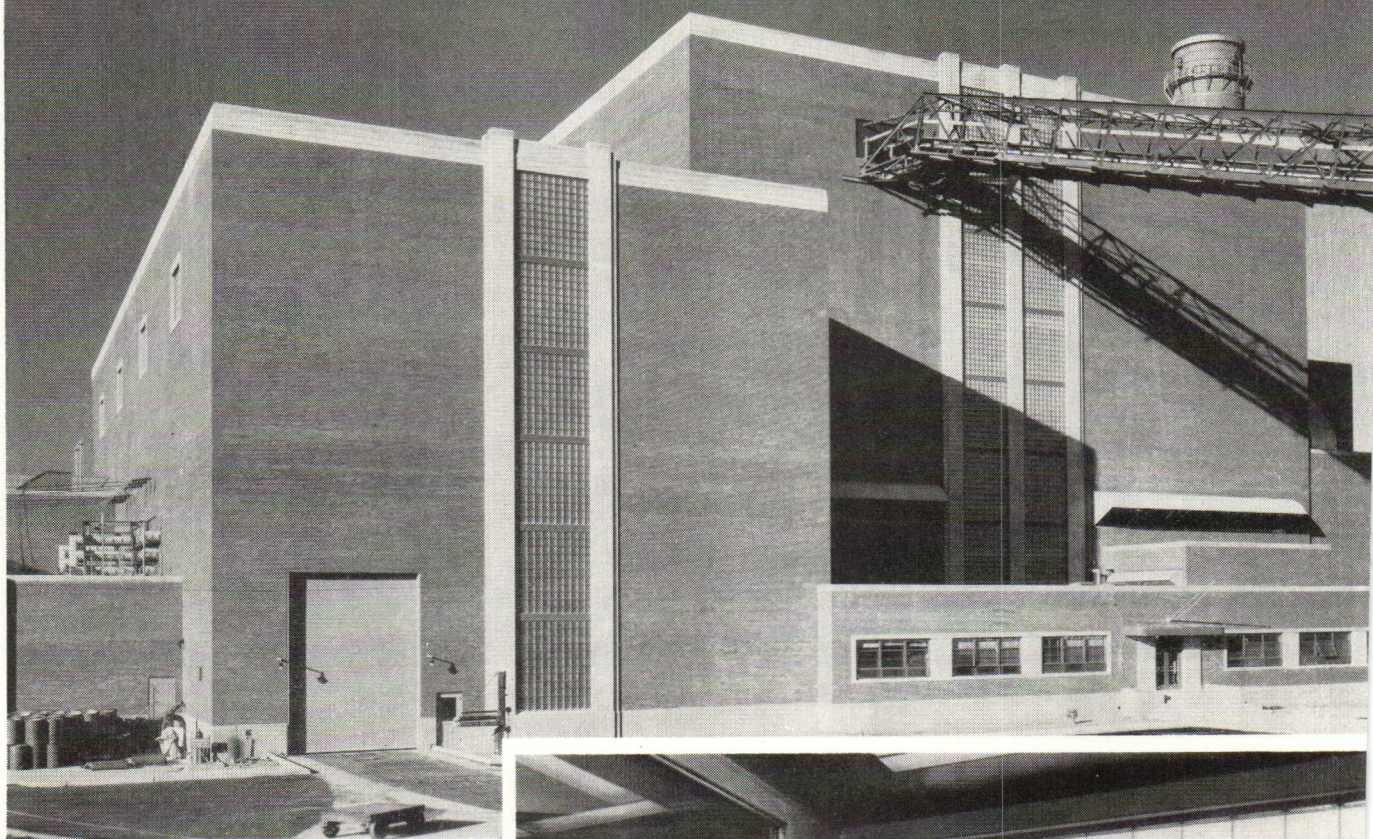
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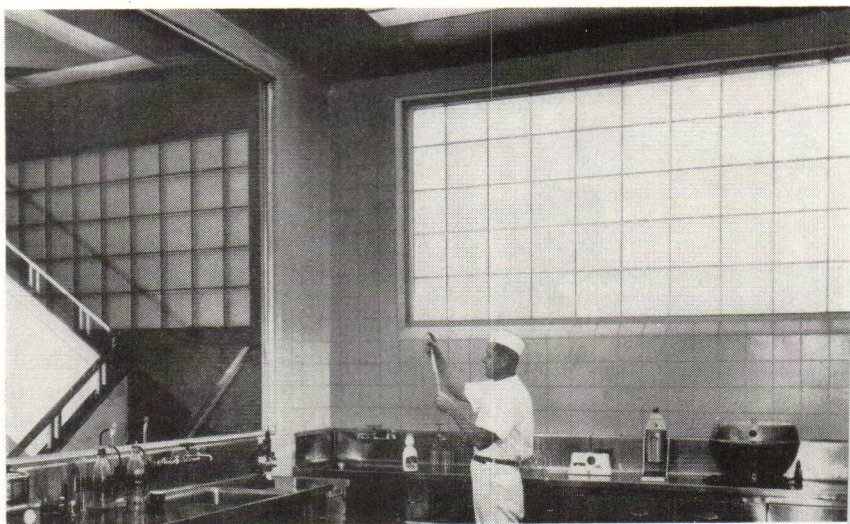
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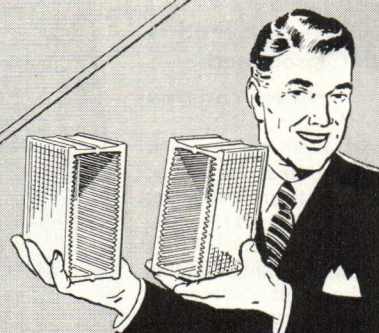


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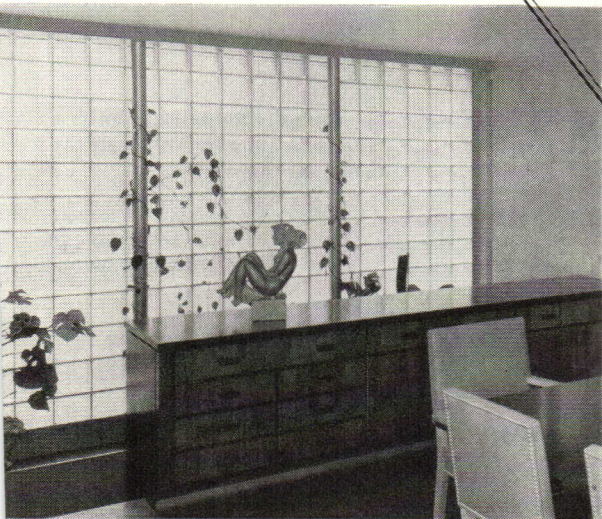
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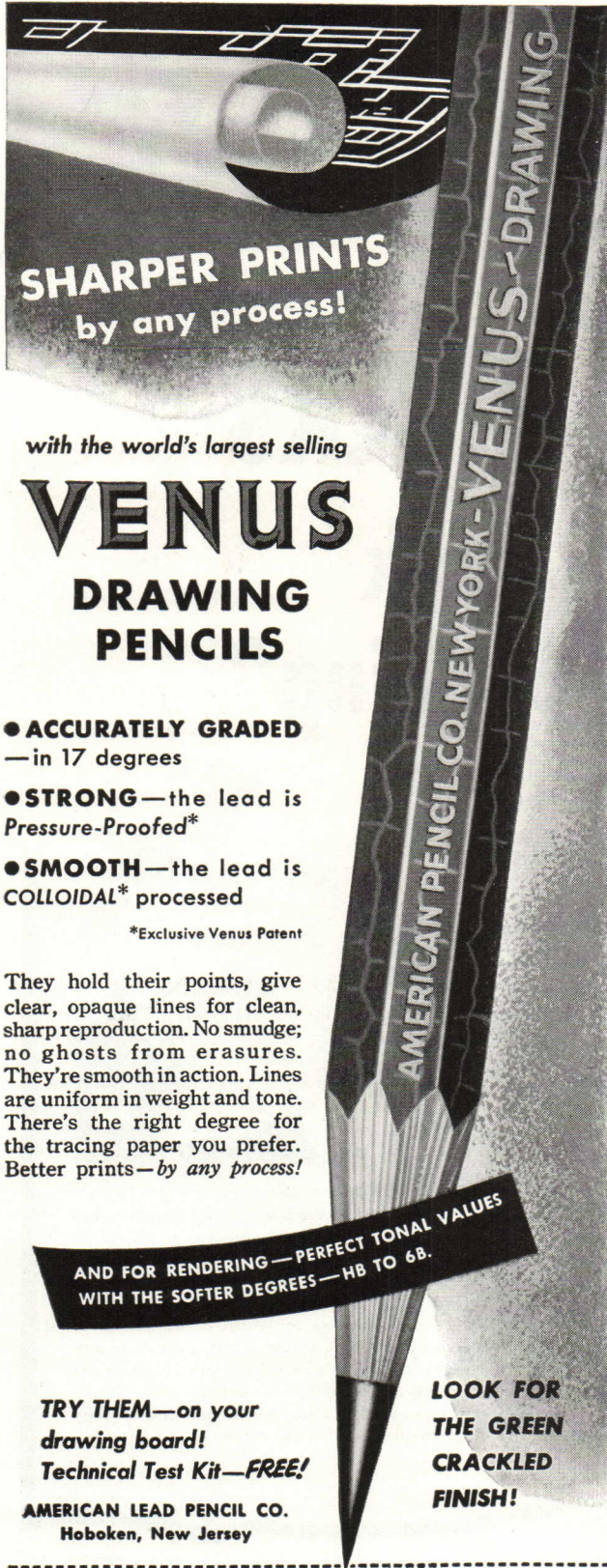
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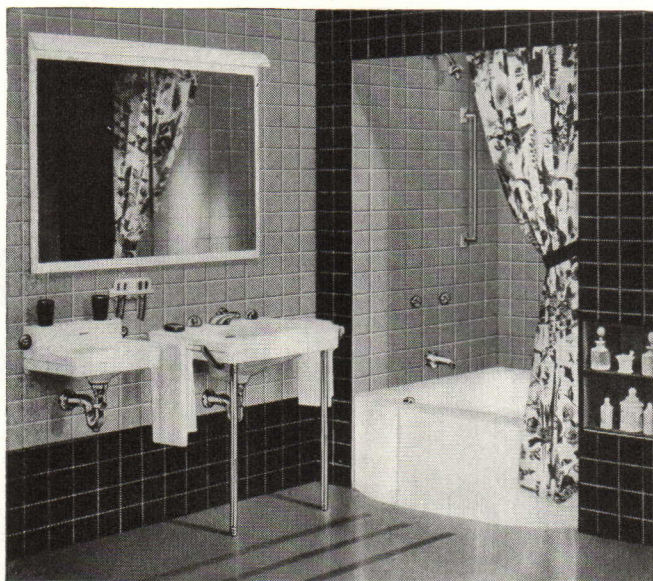
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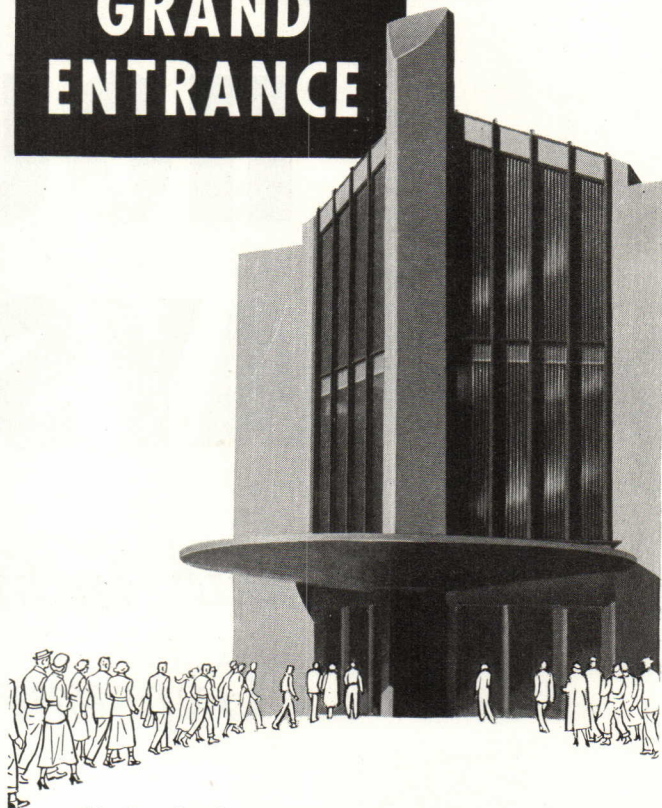
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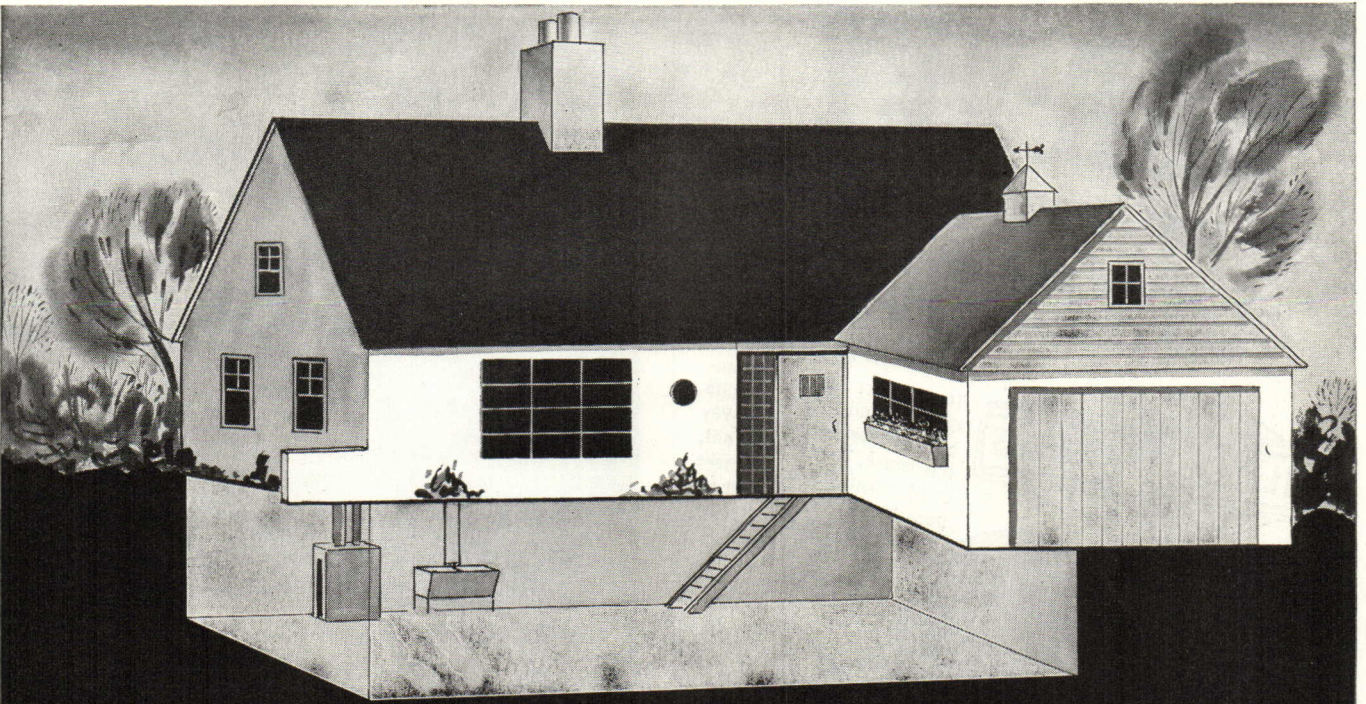


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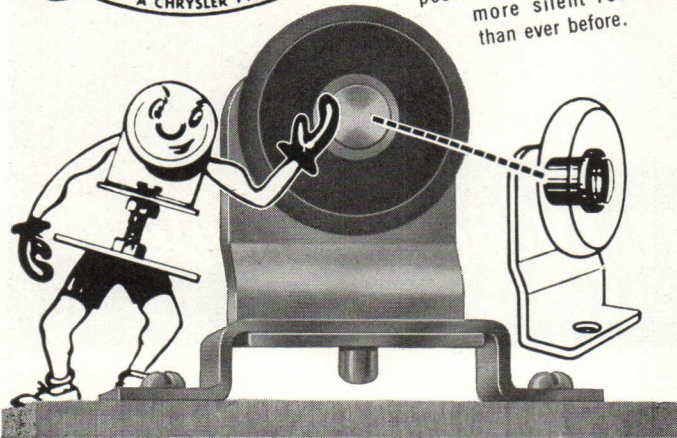
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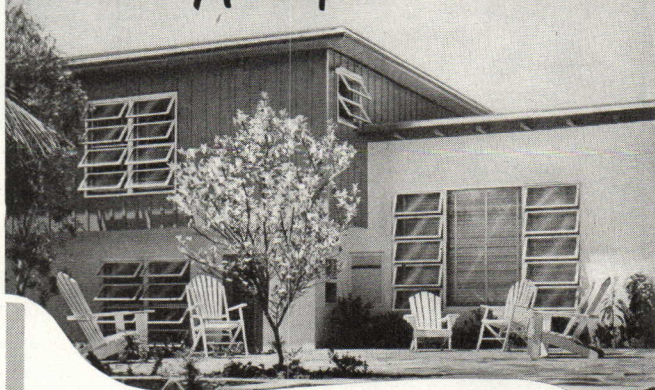
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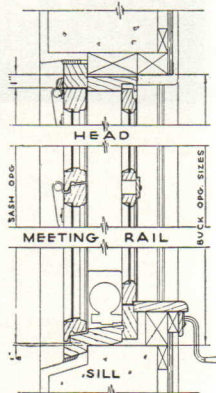
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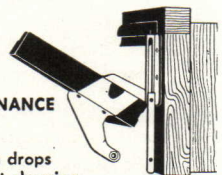


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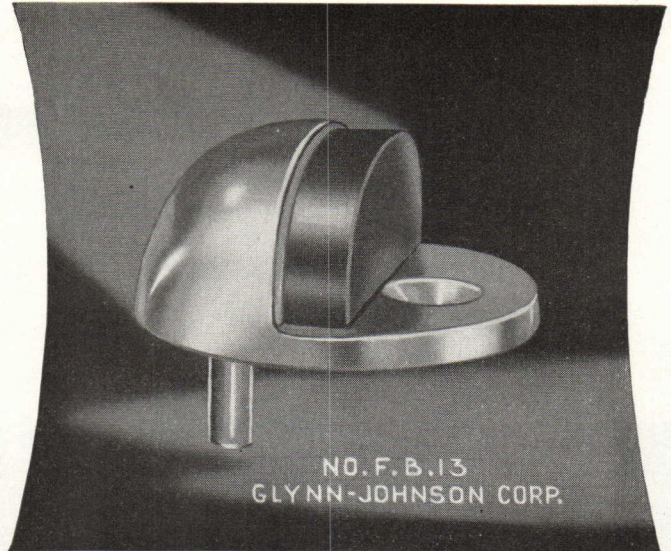
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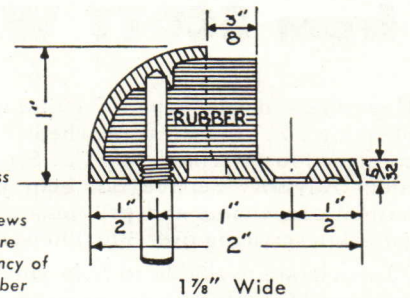


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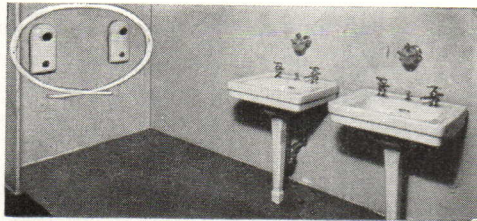


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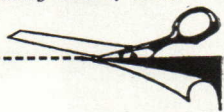
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To some, Mr. Morse will perhaps best be remembered for his museum work—as museum instructor at the Detroit Institute of Arts and as associate in radio for the Metropolitan Museum. As an editor, Mr. Morse is still better known—as editor of the Detroit Institute of Arts "Bulletin," managing editor of the "Art Quarterly," editor of the "Magazine of Art" from 1942 to 1947, art editor of "48, the Magazine of the Year," and director of publications for the Art Students League of New York since October, 1948.

As a writer, his record is no less impressive, including as it does many reviews and articles on art in leading magazines and newspapers, fiction and non-fiction in "Adventure," "St. Nicholas," "Esquire," "London Evening Standard," etc., stories in "Adventure in Fiction" and "Short Stories of America," and the "Wartime Guide Book to the American Collections of the Metropolitan Museum of Art."

It is undoubtedly his radio and television work, however, which has brought this versatile and prolific man the greatest prominence. This includes the program, "Living Art," broadcast over the CBS network for the Metropolitan Museum of Art and the American Federation of Arts in 1941-42, which remained on the air the longest of any network art program; frequent appearances as chairman of the CBS program, "Invitation to Learning"; writer and commentator of a series of "Museum Visits" for CBS television; and, more recently, appearances on the CBS television program, "People's Platform." He is at present outlining a series of thirteen art programs which CBS plans to televise in the autumn.

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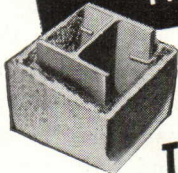
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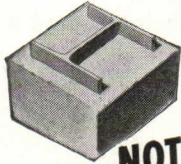
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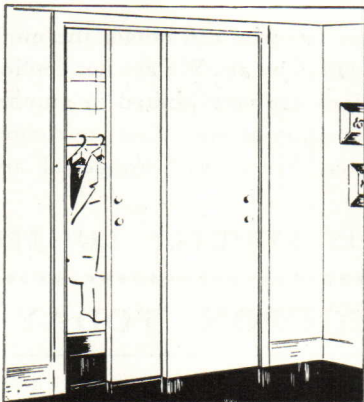


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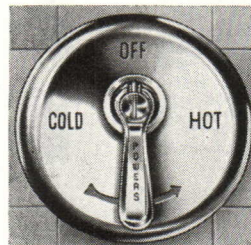
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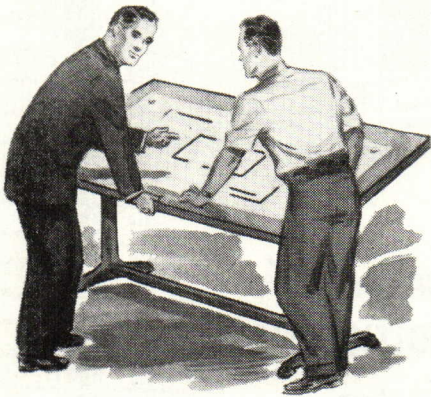
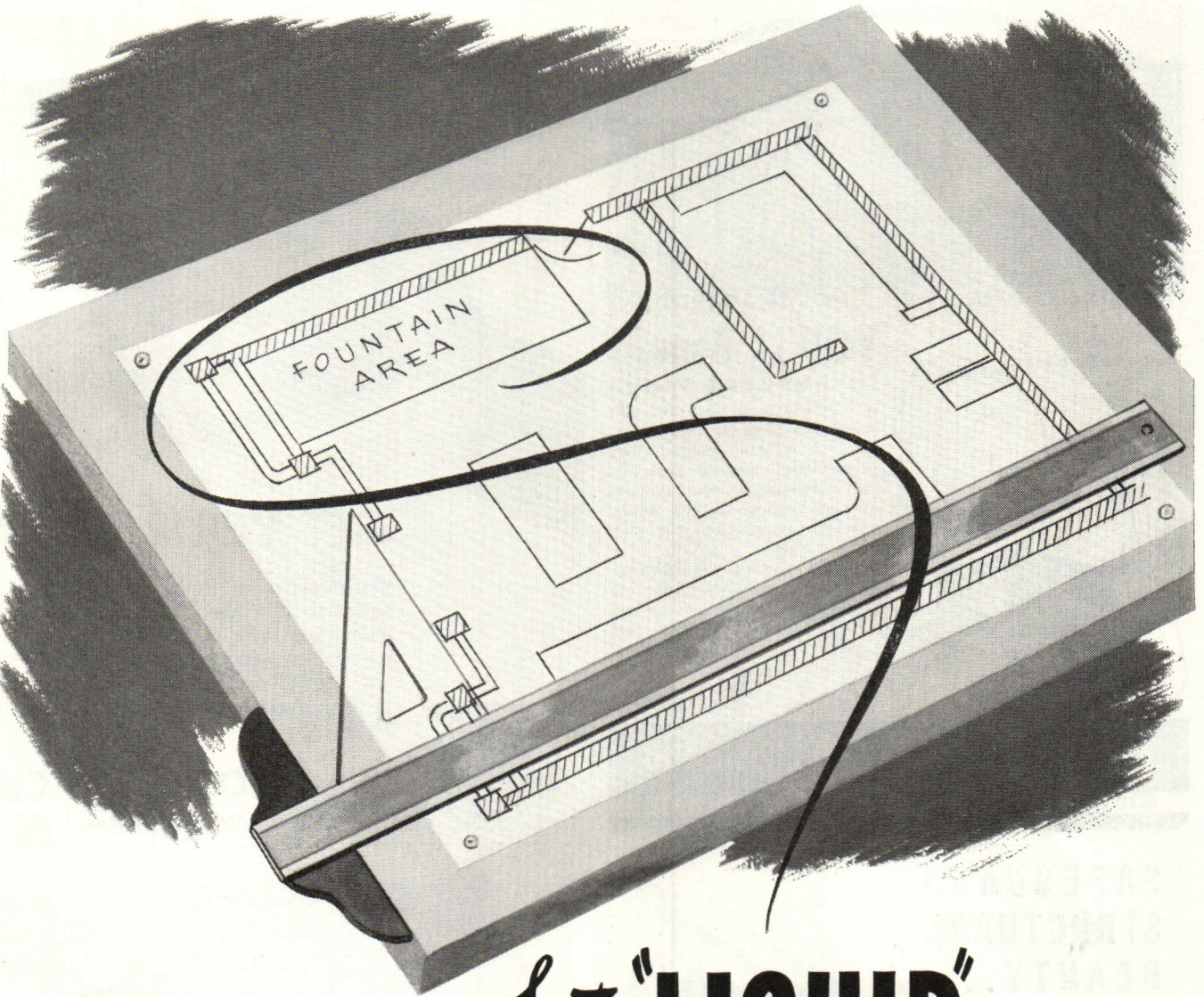


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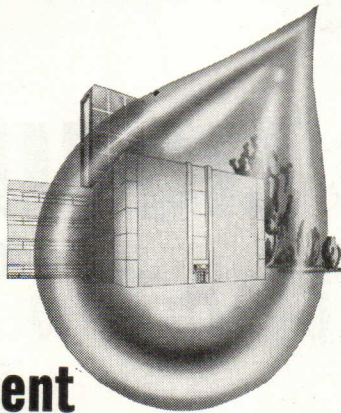
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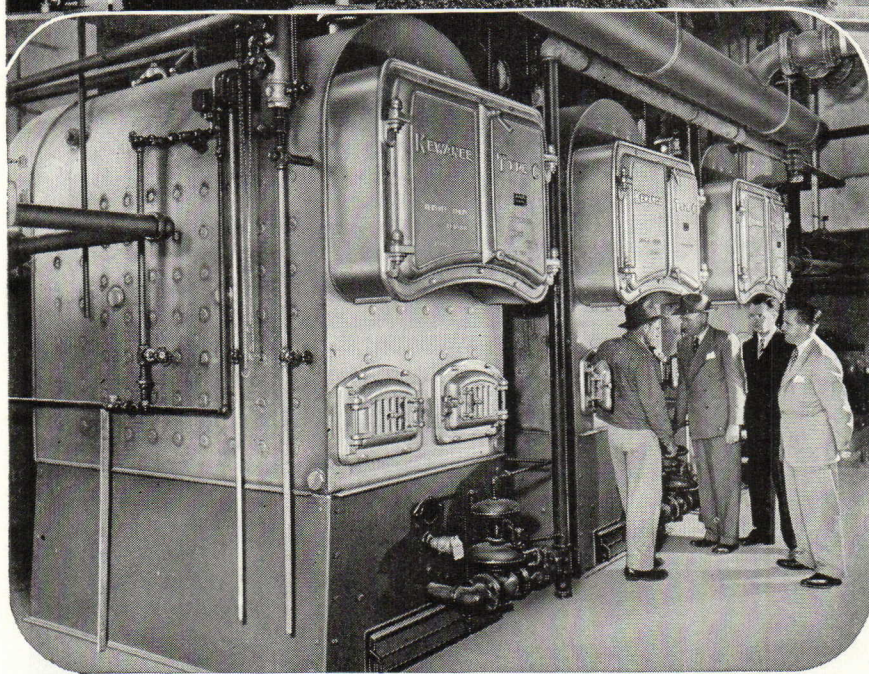
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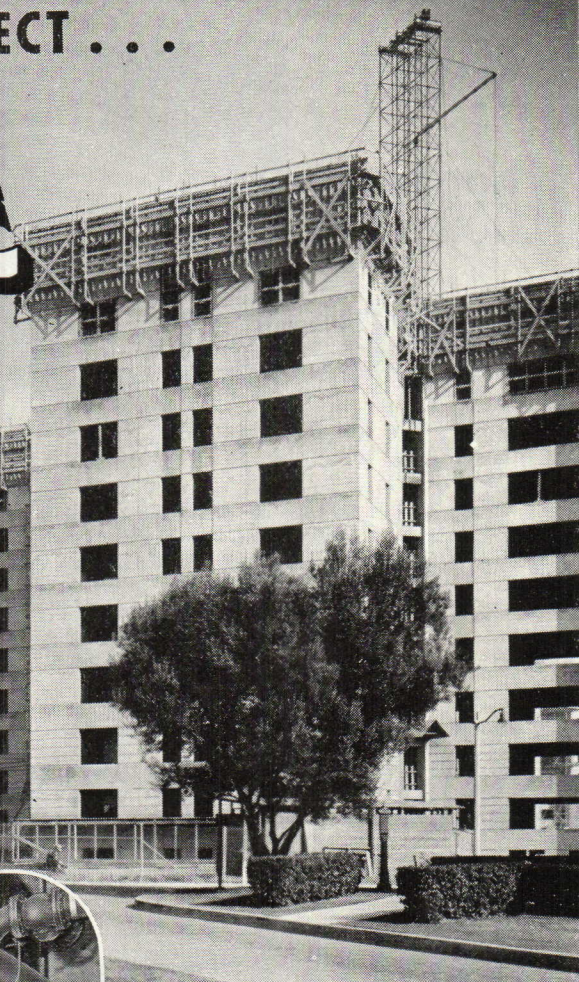
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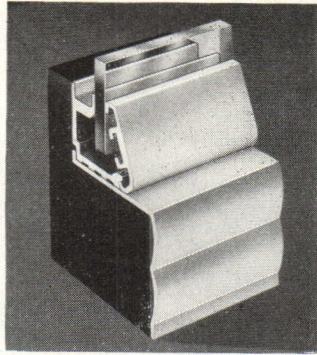
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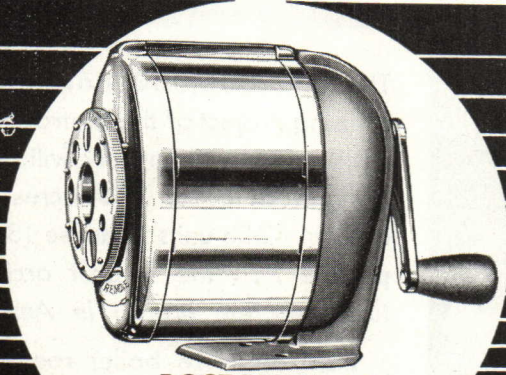
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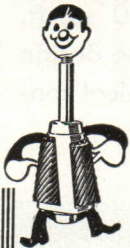
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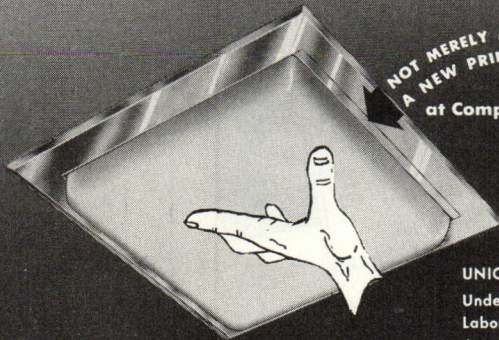
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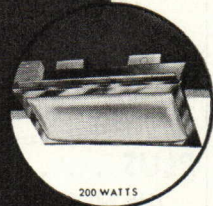
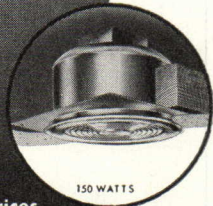
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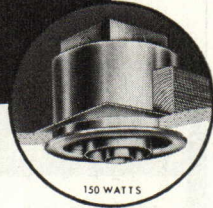
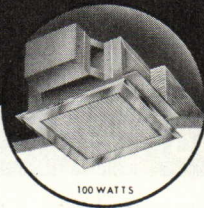
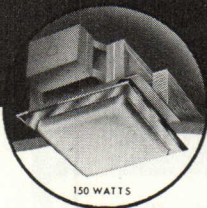
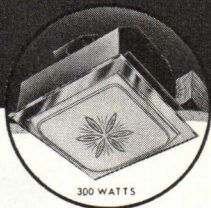
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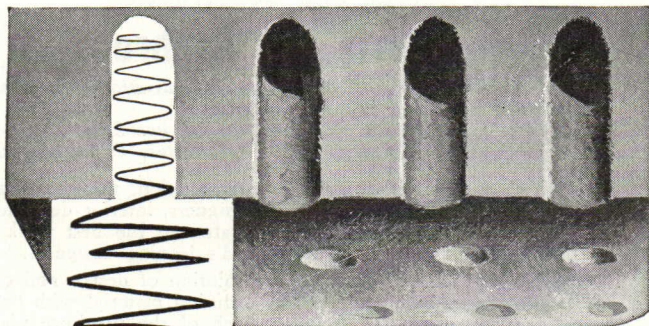
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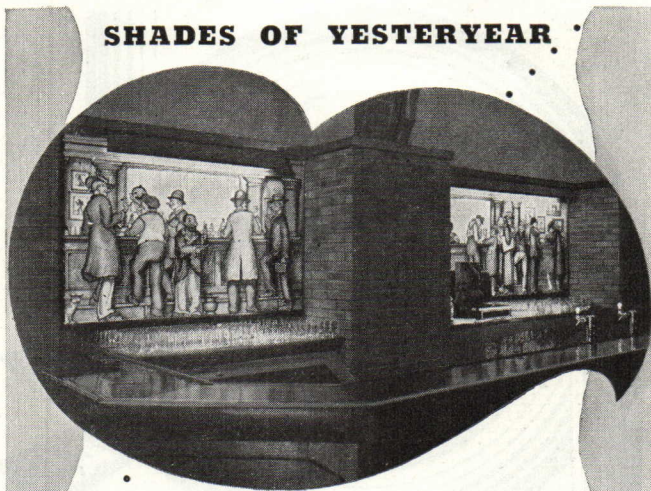
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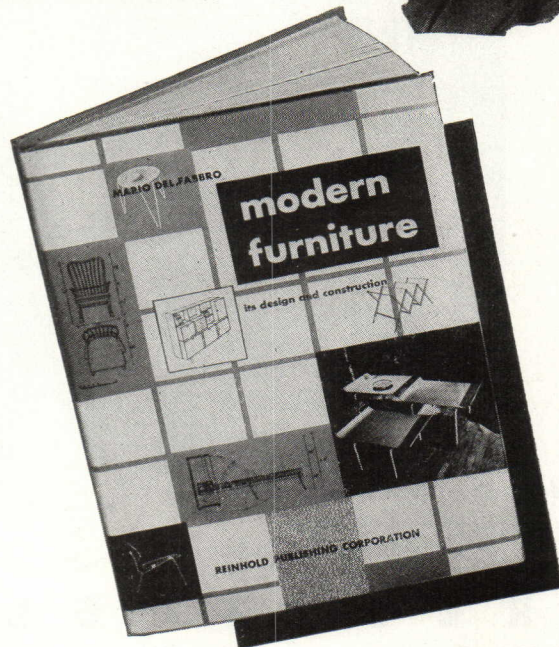
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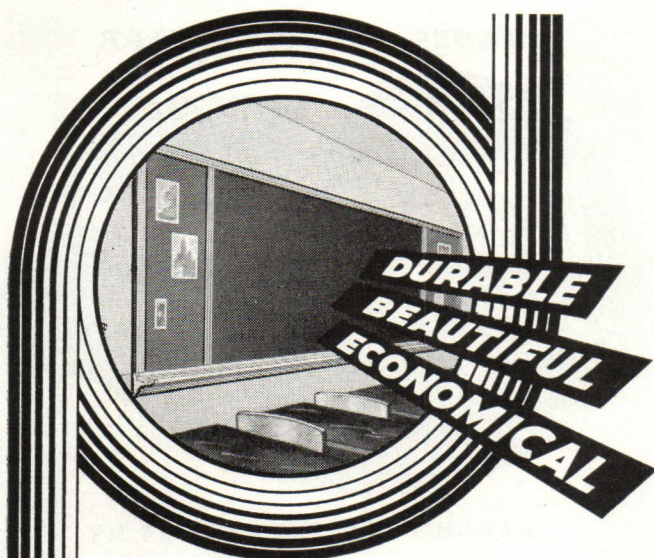
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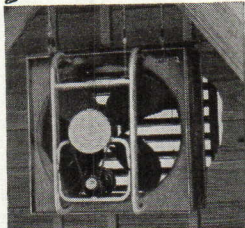


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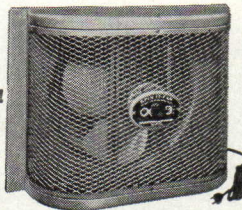


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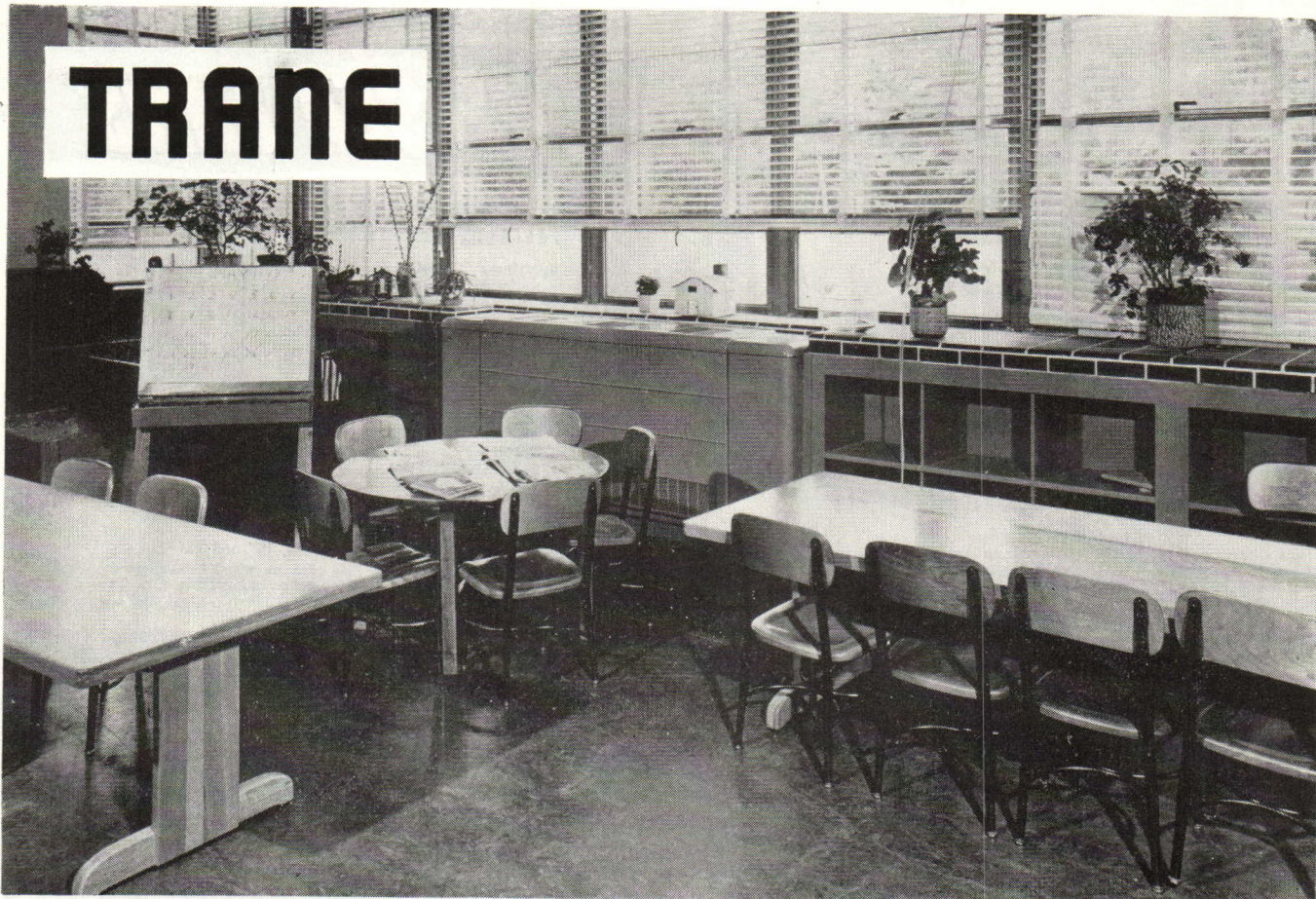
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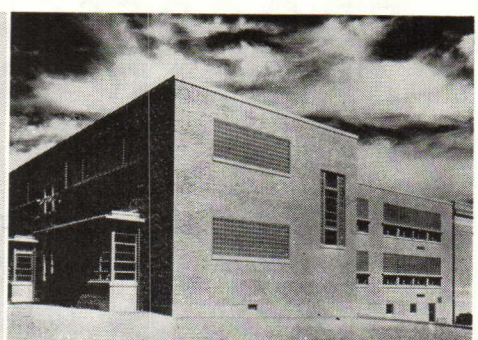
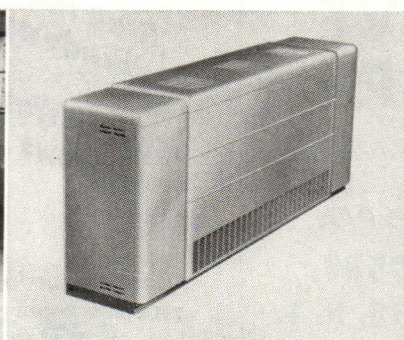
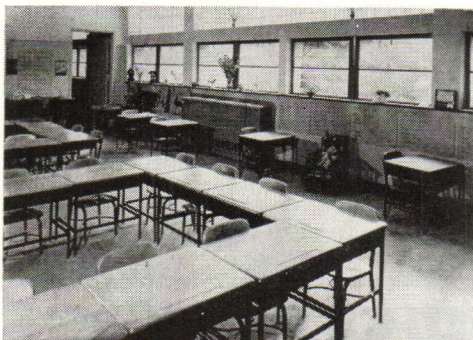
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SELECTED PRODUCERS' BULLETINS

Careless and improper methods of nailing tongue-and-groove hardwood flooring often result in tongue splitting. When this occurs, squeaks and creaks may develop with the failure of flooring strips to hold together as securely as they should, according to a statement made by the Maple Flooring Manufacturers Association. Good flooring nails are obtainable, but correct nailing technique must be followed to avoid trouble with all of them. Nails should be driven at an angle of 45° to 55°; the first nail or two driven should be "toe-nailed" towards the preceding flooring strip to which it joins. This method assures tight end joints.

The spiral floor screw, which drives like a nail but turns and holds like a screw, is gaining popularity; authorities report little or no tongue-splitting, bending, or waste. The Maple Flooring

Manufacturers Association recommends the following nail specification:

"For 3/8" flooring: 4-penny cut steel flooring nails or 1 1/2 No. 1 spiral floor screws, driven 9" apart.

"For 25/32" flooring: use 6, not over 7-penny cut steel flooring nails or 2 1/4 and 2 1/2 No. 5 spiral floor screws, driven not over 16" apart.

"For 33/32" flooring: use not over 7-penny cut steel flooring nails or 2 1/4 and 2 1/2 No. 5 spiral floor screws, driven 12" or 16" apart.

"Wire casing nails may be used where cut steel or spiral floor screws are not obtainable. Use only non-splitting type wire nails, and nail to each support bearing (joist or sleeper)."

A three-month survey of the states east of the Rockies, conducted by the Remington Corporation, of Cortland, New York, revealed widespread interest in single room air conditioners, for which the record-breaking summer of 1949 was partly responsible. Architects, distributors, dealers, and consumers in these areas will be further interested in Remington's substantial price cuts, ranging from \$65 to \$140, on both window air conditioners and console units.

A new weather resistant hardboard suitable for exterior building has been developed by the Forest Fiber Products Company, of Forest Grove, Oregon. During the manufacturing process a plastic treatment is applied to selected Douglas fir fibers; after the board is formed an additional surface treatment is given.

The plastic application provides greater structural strength and resistance to water, soap or alkali, and general wear. Like standard hardboard, this new material is grainless so that it will not splinter. The hard, smooth surface will take any type of finish by spraying, baking, or brushing.

EQUATEMP, a bronze balancing valve which provides positive leak-tight shutoff and adjustable flow in a single valve has been introduced by the Ohio Brass Company, Mansfield, Ohio, for use with hot water radiant heating systems. The closing and balancing actions of the valve are accomplished by a butterfly disc. The disc is fitted with a composition rubber ring which assures tight shutoff for bleeding or venting of lines. Straight-through design of the oversize port permits optimum flow through valve and eliminates turbulence. This valve accommodates any one of several standard venting attachments; a well drilled into the stem provides a handy method for taking temperature readings. These valves are available with solder-type ends in sizes 3/8 to 1/2 inch, or with screwed ends in sizes 3/4 to 1 1/2 inch.

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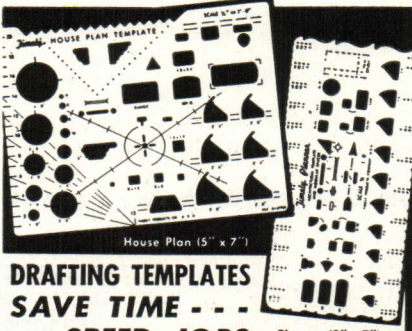
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Address

P.S.

ARCHITECTS ARE OFTEN ASKED to design buildings—especially commercial structures—with the possibility of adding additional stories in the future. This always sounds like a sensible idea, but the clients seldom realize all that is involved. In the case of the MacKie & Kamrath bank illustrated on page 57, for instance, an original scheme for five additional future stories was studied, and it was found that the structural system and the foundations required for this possible addition would have made the original first-stage building prohibitively expensive. The idea was dropped, but in the meantime the design of the building had gone ahead under the always complex program of providing an original low building which would not look truncated and an ultimate tall building which would not seem to be an afterthought. Although the economics didn't work out, it seems to me that the esthetics were pretty well solved. The illustration shows how the building would have looked with added stories.



This month, however, in the 12 pages devoted to the study of current work in Washington, D.C., we have tried to do a purely news-reporting job. This is the last year's output of the architectural profession in our nation's capitol. The total output, as accurately presented as we, with the help of a number of Washington people and the Washington Metropolitan A.I.A. Chapter, could accomplish that job. For the information of all, we show *all* the work. Some of it is good, some is bad, some is interesting, some is dull. We don't attempt, in the presentation, to editorialize. Here it is—you look at it and draw your own conclusions.

I am going to permit myself here to speculate on what those conclusions might be. Here we are in the middle (or toward the end) of a great period in man's history. We are very proud of our social and economic system—so proud, in fact, that we are ready to act as missionaries in teaching it to other people, ready to fight for its preservation even before the drop of a hat. Other great periods in history have produced their equally great architectural achievements. We have the benefit, today, of many converging and possibly culminating influences—the Renaissance and post-Renaissance traditions, the growth of modern thought and modern science, the studies and experiments of the great innovators of our time, the most tremendous technological developments in building construction and control of the environment that have ever been made. We are a sensitive people;

we have adopted a democratic political philosophy which is the bravest attempt yet to make all people happy and productive and cultured. What an exciting and wonderful architectural expression all this must have!

Well, it's demonstrated on pages 79 to 82. What do *you* think? Is the work in your own community as good; better; worse?

IT IS A CUSTOMARY COMPLAINT OF VISITORS from abroad that the architectural journals in the United States give a completely false picture of architectural development in this country. They come to our shores expecting to see work of great competence and dignity on every hand and they discover that it is necessary to search with a carefully drawn map or a personal guide, through the byways and the side streets, for the accomplished work which they had thought to find all about them. There is, in fact, some of this disappointment when an architectural visitor from the middle west, say, comes to New York, or when an easterner makes his first trip to the west coast. By editorial selection—by publishing only what the editors, using whatever criteria they have established for themselves, consider the "best" of current work—the magazines each month fail to give a realistic impression of the over-all quality of today's design. We justify that attitude and that program by asking what possible benefit it would be to readers of our papers to show them pictures and describe to them in a given number of words, anything less than the most able work.

AS A POST-SCRIPT TO A POST-SCRIPT

I would like to quote from an article in the February 1950 issue of the *Journal of the A.I.A.* Frederick N. Clewley, architect of Los Angeles, Calif., was asked to publish only the work of registered architects. It is his idea that we should be interested not in architecture, but in legally defined architects. He says, "The architects are fast coming to desperate straits due to the inroads of 'industrial designers,' 'plan services,' 'commercial building services,' and just plain 'signers.' We have been asleep so long on defensive measures (or thoughts) that we have allowed these competitors (a terrible word) to get more than a foot in our field..." I just raise the question as to whether "defensive measures" are the means with which to attack those "desperate straits." Could it be that "competitors" would be more readily eliminated by more frequent design competence on the part of the licensed profession?

Thomas H. Wright