Progressive Architecture

4/48

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Progressive Architecture
(PENCIL POINTS)

April, 1948

Mr. Ellsworth Johnson
260 California Street
San Francisco, California

Dear Mr. Johnson:

Thanks for your letter in which you complain about "a 'modern' eclecticism as vicious as the historical eclecticism of a few years ago." It came the day after a symposium at the Museum of Modern Art in New York on "What Is Happening in Modern Architecture," which was dominated by men who defended the original and the present use of the term, "International Style." Seeing variations, particularly in residential work, and noticing what Lewis Mumford has called a "native and humane form of modernism," these people have invented a new label—the International Cottage Style.

Let us state once more our attitude on this whole subject of styles. We don't believe a distinction should be drawn between Modern architecture and Traditional architecture, nor between International design and International Cottage design. We believe the only difference that should be noted is the old one between good architecture and bad architecture. Good architecture, for our money, is that which solves a given human problem in a way that is appropriate to its time, its locality, and the technological means available. Bad architecture is that which is socially inept, misuses the materials and tools at hand, ignores the special requirements of the site and the region, and ends up with a structure which has to be cloaked in borrowed stylish tricks. It has always been thus, through the whole history of architecture.

We believe that there are all sorts of good individual and regional expressions developing today. We say hurrah for all serious progress, and down with all eclecticism, "historical" or "modern," or whatever it may be called.

Sincerely,

The Editors

The Editors

P/A:czm

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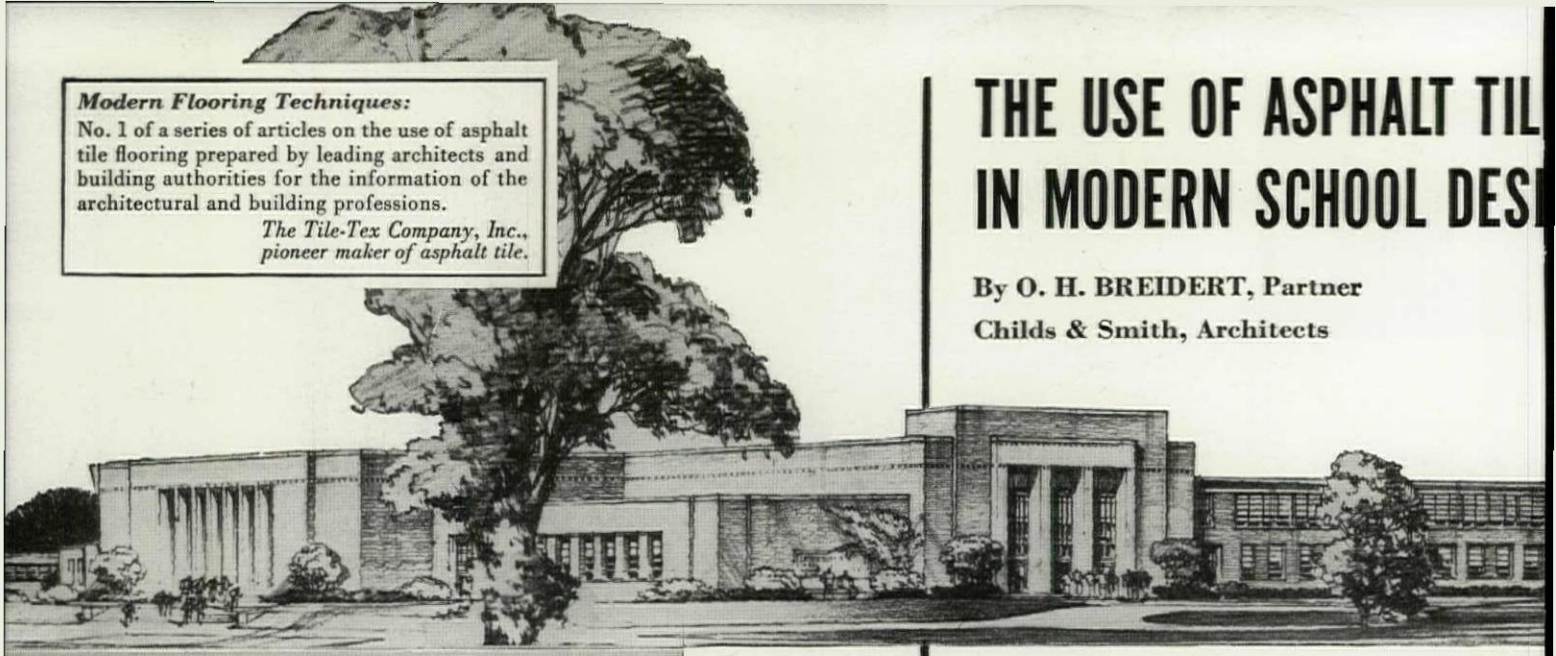
Modern Flooring Techniques:
No. 1 of a series of articles on the use of asphalt tile flooring prepared by leading architects and building authorities for the information of the architectural and building professions.

The Tile-Tex Company, Inc., pioneer maker of asphalt tile.

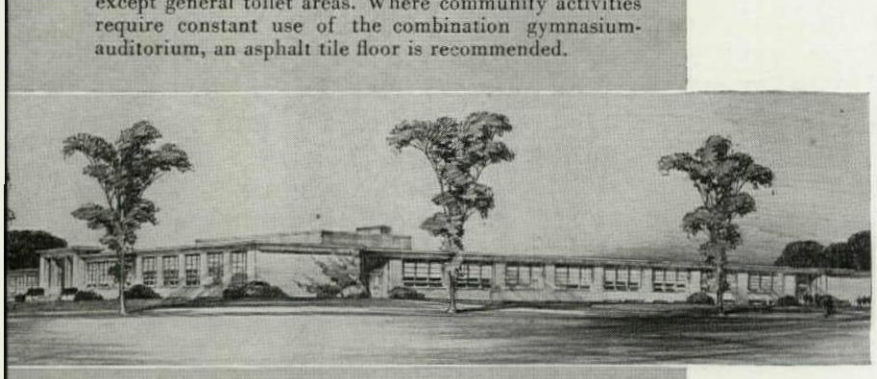
THE USE OF ASPHALT TIL IN MODERN SCHOOL DES

By O. H. BREIDERT, Partner
Childs & Smith, Architects

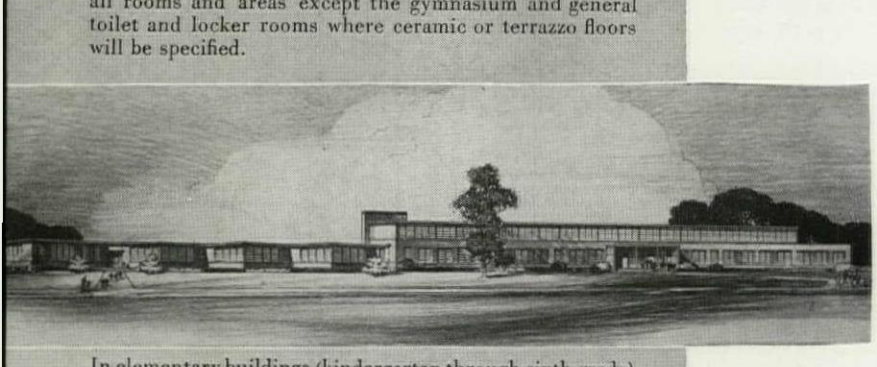


In a senior high school, as illustrated above, we find that asphalt tile floor covering and base is most practical and economical throughout *all* rooms and corridors, with the exception of the gymnasium, shower, locker and toilet rooms and industrial arts department.

Postwar school model. Asphalt tile to be used here in all except general toilet areas. Where community activities require constant use of the combination gymnasium-auditorium, an asphalt tile floor is recommended.



Our plans for a junior high school call for asphalt tile in all rooms and areas except the gymnasium and general toilet and locker rooms where ceramic or terrazzo floors will be specified.



In elementary buildings (kindergarten through sixth grade) asphalt tile can be used throughout all rooms with the exception of general toilet rooms, where ceramic or terrazzo floors are recommended.

The architectural firm of Childs & Smith, Chicago, Illinois, has been in constant touch with problems of school design for 35 years. Its current school work consists, in part, of elementary, vocational, junior and senior high schools and junior colleges plus other special school buildings for these and other communities: Hinsdale, Ill., Shelbyville, Ill., Watseka, Ill. Wilmette, Ill., Kankakee, Ill., Flossmoor, Ill., Cedar Rapids Iowa, Clinton, Iowa and Wisconsin Rapids, Wis.,

IN A continuous practice of architecture over a per of 35 years, we have found that a floor and base asphalt tile is the most practical and economical t of floor covering for new educational buildings b from the standpoint of initial *and* maintenance co

Asphalt tile floors, if properly cleaned, waxed a buffed after installation, require a minimum amo of maintenance throughout the year to keep th clean and bright in appearance. Thorough clean and waxing by an efficient janitorial staff several tir a year along with regular daily sweeping, will keep asphalt tile floor in excellent condition for many yea

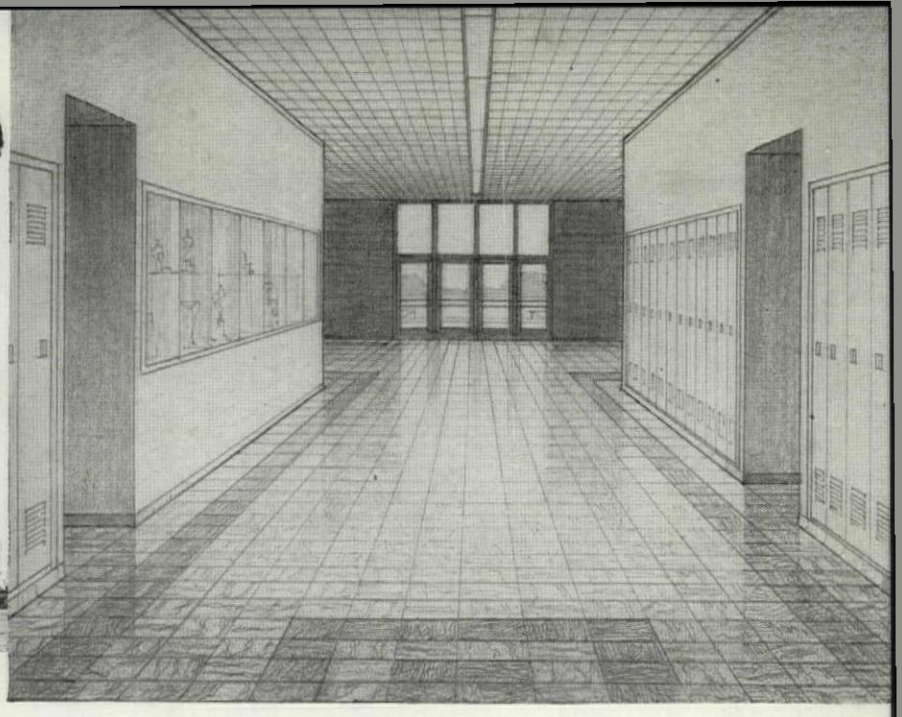
With the proper handling of design and color co binations, the architect may use asphalt tile to des school floors to fit any decorative requirement. Asph tile can be obtained in a variety of colors and siz This makes it possible to use simple designs employ one marbleized color throughout the classroom more complex decorative design in entrance lobbi foyers, corridors and special rooms.

Asphalt tile is the only type of resilient floor which can be installed safely over concrete sub-flo in direct contact with the earth. Its performance not affected by normal moisture and dampness.

Recommended uses of Asphalt Tile in specific areas

Corridors • Asphalt tile is a most practical flooring corridor and stair hall use because of its long we ing qualities. Attractive pattern and pleasing co combinations may be devised to add color and inter to these areas. Where corridors must necessarily narrow, asphalt tile floors can be laid out to give t effect of greater width. Recommended, too, is the u of directional lines to indicate student traffic.

Classrooms • An asphalt tile floor laid over concr and with a set-on base is ideal for all classrooms elementary through junior college buildings. In t classroom sketched at right, light colored marbleiz tile in ⅛ inch thickness in standard 9 x 9 or 12 x inch sizes is indicated. Light colored asphalt tile p vides needed light reflection and conforms to the m ern trend in classroom color schemes, namely, natu colored furniture and light wall and ceiling decorati



marbleized floor in one color is recommended because doesn't distract pupils and is easiest to maintain.

nchroom, Cafeteria and Kitchen • A greaseproof 3/16 ch asphalt tile is advised for all food serving or ning areas. An interesting floor pattern is important cause these, like all rooms under the modern hool plan, should be designed for a dual function. he cafeteria dining area shown at right below can be nverted quickly into a room for school parties and ncing. A properly treated asphalt tile floor is an cellent surface for dancing.

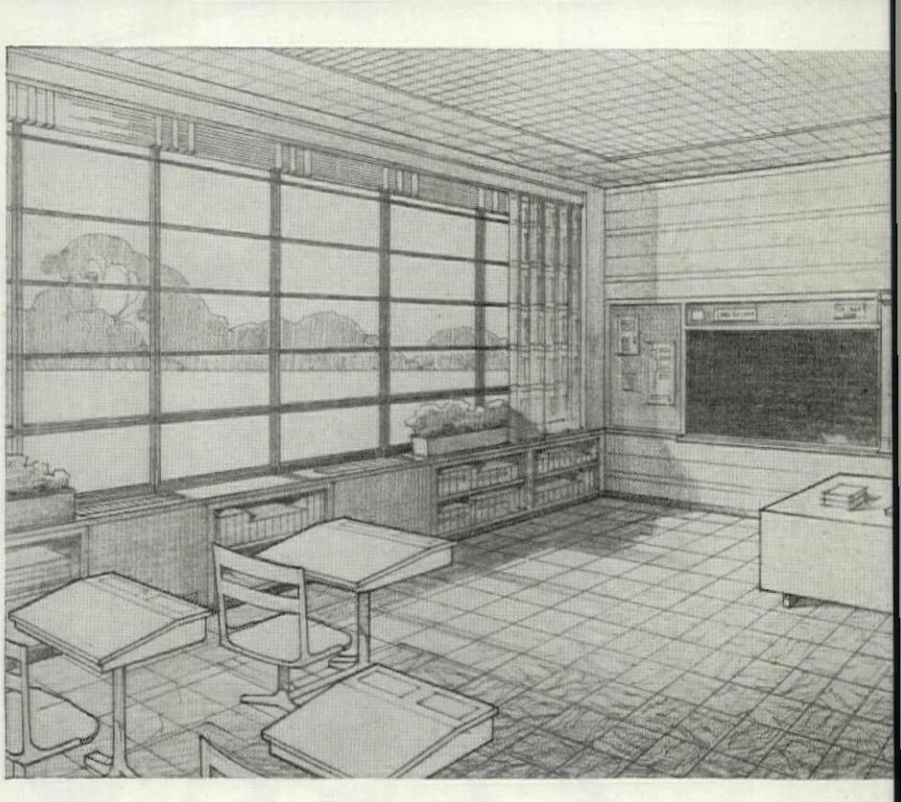
ndergarten or Play Rooms • Asphalt tile floors have ny advantages in elementary (kindergarten through th grade) schools, especially in play room areas here game and court lines are required. These lines n be set in a plain, light colored asphalt tile in a ld of medium colored marbleized tile, thus eliminat- g constant repairing and repainting of the lines. ttractive floor designs are particularly important in odern educational programs for younger children.

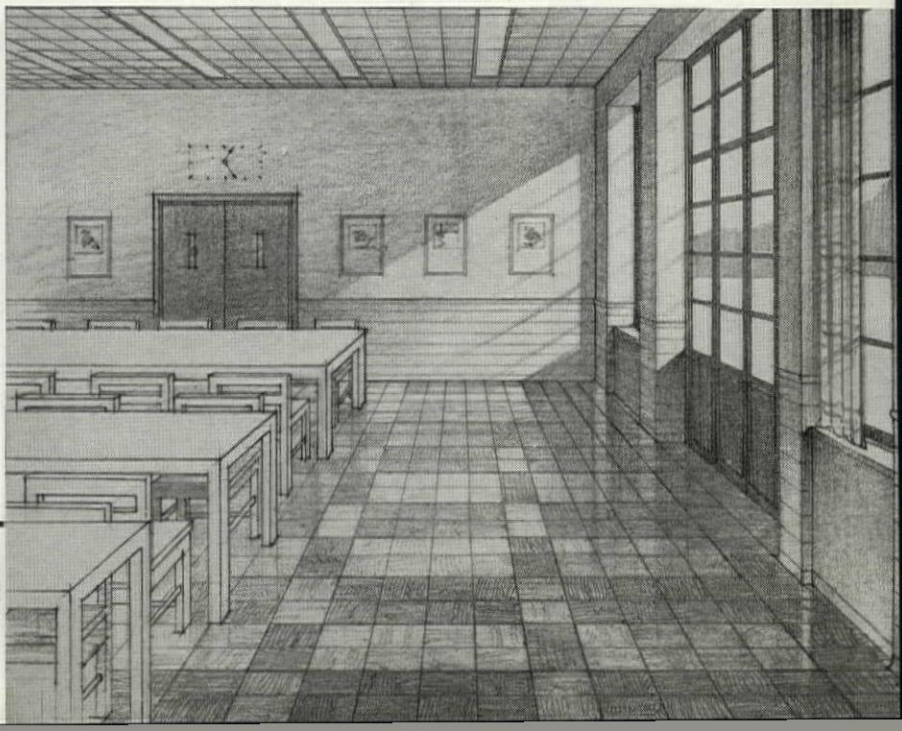
oilets and Lavatories • Asphalt tile is an excellent or covering for small toilet rooms and lavatories connection with kindergarten and lower grade oms, toilets in administration and health departments d teachers' rest rooms. For large general toilet rooms, owers and locker rooms, ceramic tile, terrazzo, art arble or marble are more practical materials.

novating and Rehabilitation • In addition to new ucational structures asphalt tile is being used in the habilitation of existing schools to reduce floor main- nance costs—to solve the problem of floor repair onomically—to provide a more comfortable floor—and change the purpose and character of specific rooms.

• • •

he Tile-Tex Company is proud of the role that Tile-Tex sphalt Tile has played in the building of America's hools. This* quality *asphalt tile flooring has been roughly proved in over 23 years of service in school ildings. For more information or reprints of this article, rite The Tile-Tex Company, Inc. (subsidiary of The intkote Company), Chicago Heights, Illinois. Sales fices in Chicago, New York, Los Angeles and New Orleans.*





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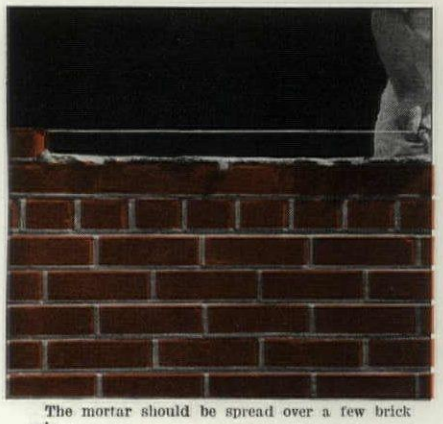
BRIXMENT Makes Good Workmanship EASIER!

The pictures below show an example of good workmanship — and of bad workmanship. They also explain why mortar such as Brixment makes it *easier* for the bricklayer to deliver good workmanship.

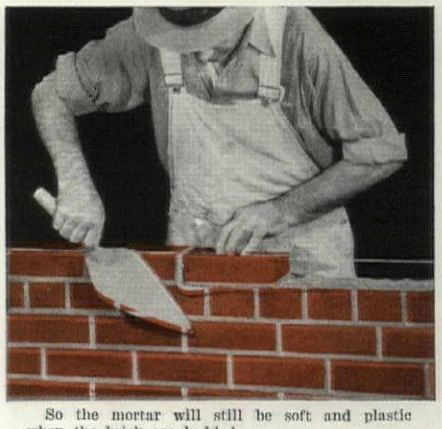
No. 2 OF A SERIES—

THE RIGHT WAY AND THE WRONG WAY—IN BED JOINTS

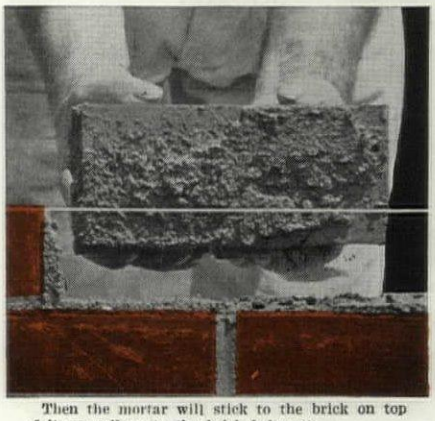
When absorbent brick are used, especially in hot weather, mortar should be spread out over only a few brick at a time. The brick should be placed on this mortar immediately, before it can stiffen.



The mortar should be spread over a few brick only.



So the mortar will still be soft and plastic when the brick are bedded.



Then the mortar will stick to the brick on top of it as well as to the brick below it.

BRIXMENT makes good workmanship *easier* because it holds its moisture longer than ordinary mortars, when spread out on the wall. This enables the bricklayer to properly bed the brick before the mortar has stiffened too much.

Brixment mortar has greater plasticity, higher water-retaining capacity and bonding quality, greater resistance to freezing and thawing, and freedom from efflorescence. Because of this combination of advantages, Brixment is the leading masonry cement on the market.

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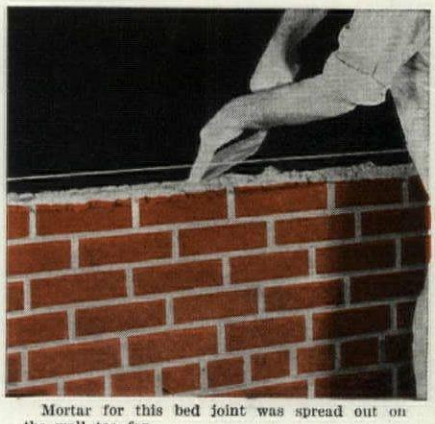
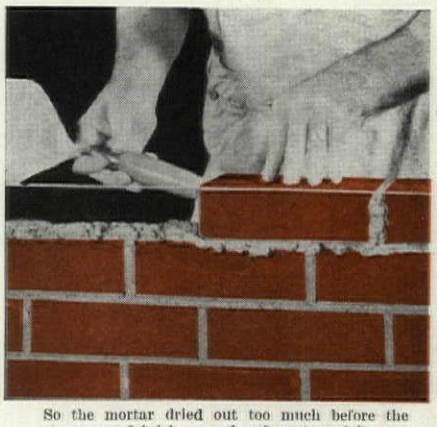
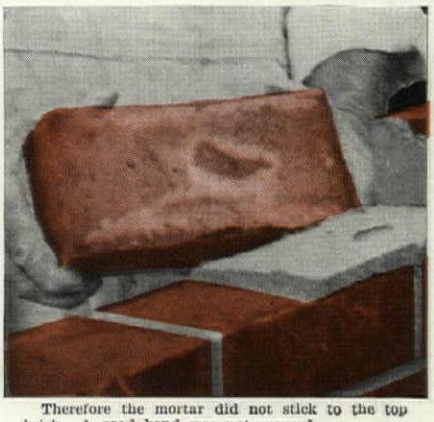
If the mortar is spread out too far, or if any delay occurs between spreading the mortar and placing the brick, the mortar will be sucked dry and will not stick to the brick placed on top of it.



Mortar for this bed joint was spread out on the wall too far.



So the mortar dried out too much before the next course of brick was placed on top of it.



Therefore the mortar did not stick to the top brick. A good bond was not secured.

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14-Story Structure Erected Speedily, Quietly by Arc Welding

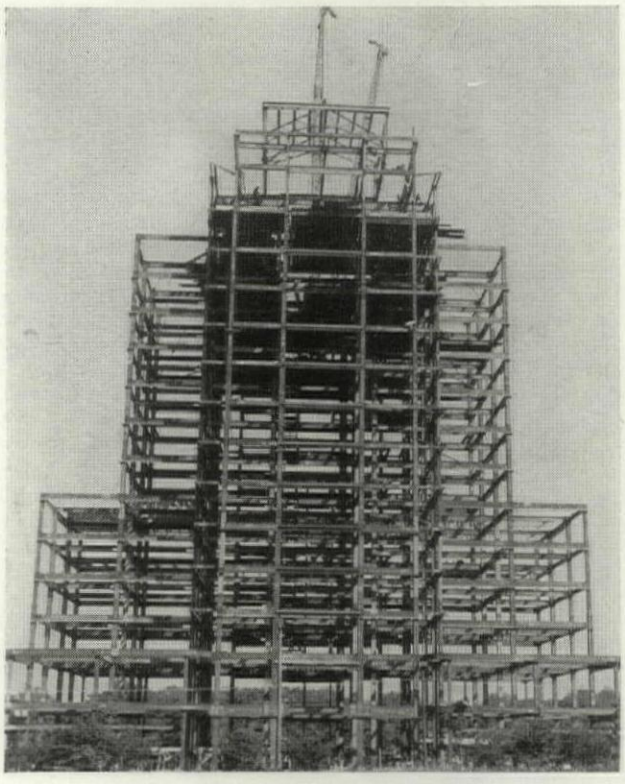


Fig. 1. All-welded structure of Hermann Professional Building.

By John R. Long, Mgr.
Houston Sales Office, Consolidated Steel Corp. of Texas
Orange, Texas

ONE of the tallest structures ever erected by arc welding is the Hermann Professional Building, a unit of the new Texas Medical Center under construction in Houston, Texas. The building is 14 stories with an additional first and second penthouse and hipped roof.

The 1400-ton structure (Fig. 1) was completely erected in 60 working days which is considered excellent speed for a building of this size and type. Considerable saving in steel tonnage was realized due to the structure's welded design. Eleven welders used approximately 40,000 pounds of Lincoln "Fleetweld 5" electrode for shop and field welding.

This is one of the first buildings of its type erected in the South, and exemplifies the rigidity and solidness of arc welded structures. There are 57 columns which, when set, were found to join perfectly.

Fig. 2 shows a connection from the spandrel beam to the corner column. Due to the flange connection, stiffener plates were required in the web and since the spandrel beam was centered on the flange of the column, the stiffener plate acts as a connection plate for the spandrel. Their entrant cut was necessary due to pipe chases in the floor.

As shown in Fig. 3, the column at the corner of the elevator opening is the only portion of the structure where cross-bracing was employed. It shows a typical connection of one of the many beams throughout the job that were offset from the center line of the columns. Due to the various types of conditions, a design was made of each connection and drawn in detail before any structural detailing was started. This enabled us to design nearly all connections for downhand welding. A welding sequence was employed throughout erection which proved economical in the fact that none of the structure had to be replumbed after welding had been completed. Engineers checked each column with a transit, and the column corners showed no more than a $\frac{1}{8}$" variance from top to bottom.

The architect firms which had joint responsibility for this job and the erection sequence are Hedrick & Lindsley and Kenneth Franzheim, both of Houston. The general contractor is Linbeck & Dederick Construction Co., Houston, and the Consolidated Steel Corporation of Texas is the fabricator and erector.

Conspicuous by its absence on this job was the noise usually associated with structural work. Silent erection, one of the advantages of arc welded structures, is particularly important in areas where quiet must be maintained.

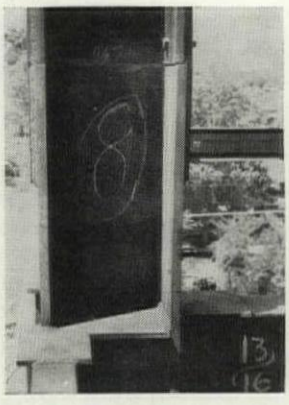


Fig. 2. Welded connections are simple in design. Bolts serve only to hold plates in position for welding.

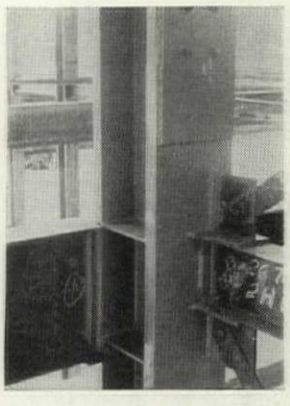


Fig. 3. Corner of elevator opening showing only place where cross-bracing is employed.

LIGHTER CLASSROOMS

Dear Editor: In the article, "Two Classroom Types" (February 1948 PROGRESSIVE ARCHITECTURE), appears a reference to the Lowell School, Salina, Kansas, by Charles W. and John A. Shaver, which is singularly interesting.

The diagonal placing of classrooms for improved natural lighting has considerable merit, particularly if reduced cubage actually compensates in cost for increased perimeter.

Precisely the same room arrangement was employed by Abraham et Le Meme, architects of Paris, France, 1928, in the Sanatorium de Plaine-Joux, Mont Blanc. While its adaptation to schools is unique, it is believed to have proved its utilitarian value in the project referred to above.

G. EVANS MITCHELL
Cleveland, Ohio

THE PLANNING PROCESS

Dear Editor: Your PROGRESS REPORT in the February 1948 issue expresses some optimism about city planning trends and refers to a few of the many commendable examples of consultant-prepared master plans or pilot studies about which attractive brochures have recently been published. However, if you wish to note progress in city planning, and if you wish to discover where planning has been most dramatically brought down to earth, look at some of the work that is being done by official (and even unofficial) *planning staffs.*

Planning is not a commodity; its objectives go far beyond the preparation of "plans" and designs. Planning is a *process,* and as such must have continuity, local participation, and local application before it can begin to be called successful. However commendable the consultant-prepared plans may be, and I do not wish to detract from their quality or usefulness, they must inevitably remain "largely a matter of theory" until they have been so accepted by the locality as to result in application of the *planning process.* It would be just as appropriate for the architect to sell his building plans without supervision, or even without specifications, as for the planning consultant to submit a Town Master Plan and consider his job complete.

There are probably 1500 official local planning agencies in the country, more than half of which are relatively ineffective. However, there are scores of planning agencies, with full- or part-time technical staffs, that are making, collectively, the largest single contribution to contemporary planning. Working with legislators and administrators on problems of today as well as of tomorrow, these planning staffs are the mainstays of the planning process. If some of these leave something to be desired in terms of vision and of spectacular reports, the majority make up for any such deficiencies by virtue of their effectiveness. The greatest hope for planning lies in its recognition as a continuing and essential part of the governmental process.

ROLAND B. GREELEY
Associate Professor of
Regional Planning
Massachusetts Institute of
Technology
Cambridge, Mass.

"FAVORABLE" PLANNING

Dear Editor: A PROGRESS REPORT, in the very essence of the word, was selected by you in the December issue, i.e., "Form Still Follows Function." Two months later, February, the essence of the word would be more like retrogression, or perhaps condoned by a national habit of wishful thinking.

Your first paragraph was to the point, in essence, "planned communities are so rare as to be classic." Then by some great faith, other than fact, you would hope to believe that such a rarity was soon to be corrected. We have had planned communities for many past generations, but what we are speaking of are the ones not only planned but built . . . therein lies the rarity.

Does not this impact of historical fact point a direction of research toward city building other than placing our hopes in the most recent crop of city designers and pretty perspectives? Seeing no change in the approach to city building problems, I can see no change from this historical precedent other than its repetition, more chaos and filth piled higher and wider. I can see no greater waste of time, effort, and what's left of our "take-home pay" than spending more of it on these many city planning schemes, unless it is to again prove a point. The lesson is becoming tedious.

Is it not time to ask, *why?* Why have not these many designs of the past been put into effect? Many have been excellent designs; the incompetence has not been in the planning. Even F.L.W. has tried a few. *No building. Why?*

The course of most city planning projects follows an initial period of public enthusiasm, into chaotic bickering in which "interested" factions compete for favorable planning decisions. Favorable planning is not what the city planner is thinking of, but to the controlling pressure groups the design factors of planning are in terms of how "property values" will be affected. . . . The whole resolves into a complete negation and the blight that the city planner had hoped to correct grows worse. . . .

Can the people longer permit private speculation in values created by society in which city building plays such an influential part?

P. BOGEN
Portland, Ore.

SECTIONS AND DATA

Dear Editor: The February issue of PROGRESSIVE ARCHITECTURE deserves compliments. The presentation on the house by the Walker Art Center gives coverage to a job in a manner which has been too long delayed. Postcard pictures may be fine for lending institutions, but construction sections and technical data are of much greater interest to members of the profession.

CHARLES GRANGER
Austin, Tex.

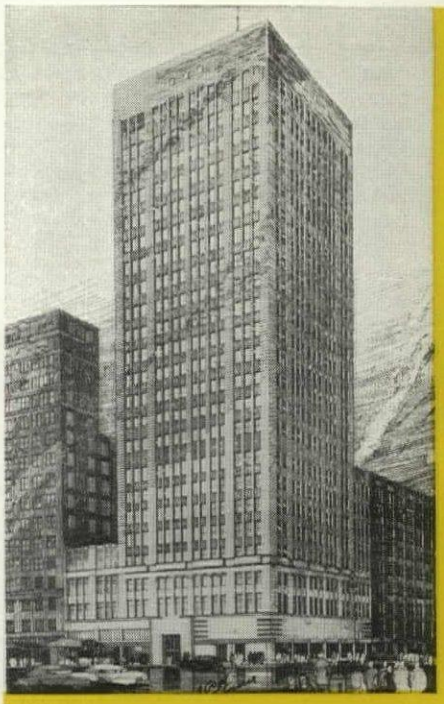
PAYING THE ARCHITECT

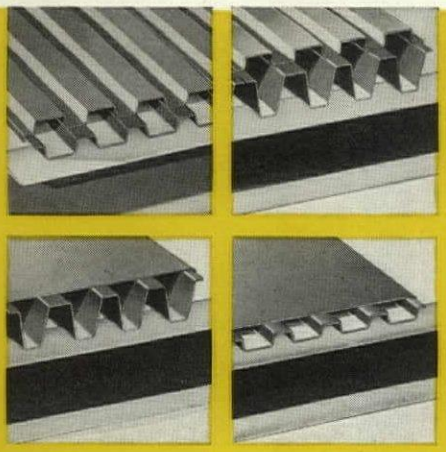
Dear Editor: Mr. Tomson's article and your footnote explaining the "three times drafting costs" arrangement for establishing architectural fees seem to omit a cardinal point. It is my practice to charge an hourly sum for my own time ($8.00) which is supposed to pay me for time spent in design, travel, supervision at the site, and writing specifications. Drafting time is charged at cost, plus 200 percent for overhead and profit in accordance with your statements, but I charge my own actual time at the straight rate above (not subject to the "plus for overhead") in addition.

During the past year I have done four jobs independently on the above basis, and one job in association with another firm, so far with satisfactory results on the whole. One client with whom I made the arrangement in writing before doing work (I have always made a point of stating my terms clearly at the beginning) was annoyed at the size of the bill. Hereafter I intend to estimate the cost of my own work (which in this case has nothing to do with the building cost) in order to avoid such misunderstandings. Of course, the more efficient draftsmen and office in general, the less the cost.

It has been interesting to me to observe how closely the above system compares with the usual commissions and portions thereof due the architect for conferences, sketches, preliminary and working drawings, etc. Whether this is due to psychological factors and the need of a defense, or to actuality, since some leeway in my own design time is obviously possible in billing, is difficult to determine. My bills under this sys-

(Continued on page 10)





▲ The Q-Floor is available in a variety of depths suitable for whatever load-bearing strength is required. They are welded to the steel frame. Two men can lay 32 sq. ft. in half a minute, the main reason for the speedy construction. The dry steel floor becomes an immediate working platform for all other trades.

▲ National Standard Bldg., in Houston, Texas, was designed by Alfred C. Finn, Architect, W. E. Simpson, Struct. Eng., and R. F. Taylor, Mech. Eng. By using steel Q-Floors by the H. H. Robertson Co., of Pittsburgh, Pennsylvania, construction time is usually reduced 20 to 30%. These complete 4-hour floors, weighing less than forty pounds to the sq. ft., account for the remarkable building feat told in this story.

Construction is dry, free from forms and shoring; incombustible and clean. There is no delay for wet materials, another factor making for early completion date, a point much in mind with owners. Q-Floor, with suspended ceiling, weighs less than forty pounds per sq. ft., yet earns a four-hour fire rating. ▲

NATIONAL STANDARD BLDG. USES Q-FLOOR

originally designed for 8 extra floors... got 14

The largest and most progressive postwar buildings have specified steel Q-Floor by the H. H. Robertson Company. Main reasons are that construction time saved makes for early occupancy date, offsetting possible occasional delay in delivery of steel.

Also, the electrical availability over the whole floor appeals to architects and owners alike. It saves architects great expense in the drafting room and increases the building's earning power. The Q-Floor fittings can be seen at any General Electric construction materials distributor's.

National Standard Building in Houston was originally designed for eight monolithic stories to be added. W. S. Bellows Construction Co. was able to add fourteen stories because of the light weight of steel Q-Floor.

For details and cost (they cost less than the carpet that covers them) write to the

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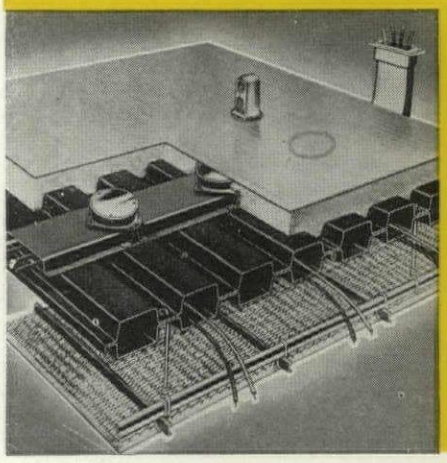
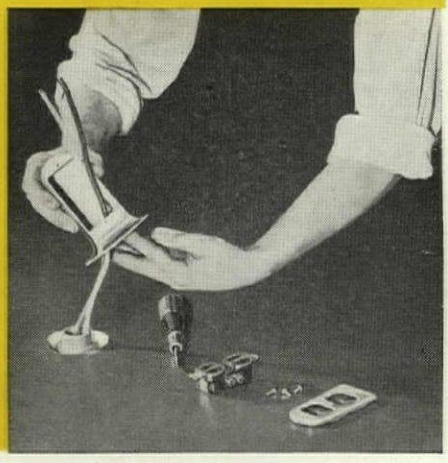


◄ Tremendous amount of drafting room headache is saved by Q-Floor's electrical flexibility. The steel cells are crossed over by raceways for wire of all electrical services. An outlet can be set up on every six-inch area of the exposed floor. Layouts are permanently flexible. Outlets and partitions can be located after occupancy.

An electrician merely drills a small hole ► to establish an outlet. No fuss, no trenches. This relieves architects of need for costly electrical planning. The floor plans are always modern because Q-Floor is prepared for any electrical device, even those not yet on the market.



(Continued from page 8)

tem seem to run within 10 percent one way or the other of the percentage basis.

At this time I feel that this cost system is most applicable to alteration work, as being fairer to the client. My standard fee for residential alteration has been 15 percent of the total costs, which is probably too high for some trades, like painting, for example. For new work the old systems may be better, especially the cost plus fixed percentage. This allows more adequate compensation for sketches in case a satisfactory design is produced in quick time.

My present practice is to explain all these systems to residential clients and let them decide. Some have elected it; those who didn't are more easily persuaded to pay a higher basic commission, which sounds cheaper by comparison.

GEORGE SAVAGE
Cambridge, Mass.

KEEPS HIM POSTED

Dear Editor: I have been an interested reader of *Pencil Points* and its successor, PROGRESSIVE ARCHITECTURE, for a number of years and have relied upon these publications to keep me posted on new materials and their application in the building field. This information has enabled me to advise clients on building problems though I have not actually drawn their plans.

In view of the above I found the January 1948 issue of extreme interest, with its list of new materials and the producers of same, also the interesting arrangement of a variety of types of structures incorporating the use of some of these materials.

I also enjoy comparing my own reactions to designs submitted for publication and the comments of others actively engaged in the profession, as expressed in VIEWS. In all, I find it a very worthwhile book for anyone having any part in the building planning field.

PAUL A. WIRTH
Somerville, Mass.

REAL CONTRIBUTION

Dear Editor: I think the January issue of P/A was a real contribution to serious architecture. The influence-of-products theme, the business-like cover, the brief to-the-point presentation for hurried and harried readers, the attractive format and typography—all add up to a notable editorial achievement.

LUTHER LASHMIT
Northup & O'Brien
Winston-Salem, N. C.

CIVIL PROTEST

Dear Editor: In Maude Kemper Riley's letter to the "VIEWS" column in PROGRESSIVE ARCHITECTURE for December, 1947, my work, *Shellfish*, included in the current Chicago Art Institute Annual, is described as "a curvaceous marble abstraction . . . made by a man who had fired bricks all his life." The caption below the photograph of *Shellfish* says it is one of several "works by a number of artists who have never exhibited in any public museum or gallery before, such as John R. Baxter, firebrick factory worker of Walnut Creek, California. . . ."

As a matter of fact, my connection with firebrick manufacture is technical and experimental; I have never actually made a firebrick, though I have tested, or developed formulas for, a good many —just as I have tested and developed ceramic bodies for sculptural use. And the statement that I am one of the Art Institute's newly discovered artists is mistaken. I have exhibited works of sculpture for a number of years, at the Los Angeles County Museum Annuals, at the San Francisco Museum

(Continued on page 12)

THE PRODUCERS' COUNCIL, Inc. 815 - 15th Street, Northwest, Washington 5, D. C.

NATIONAL ORGANIZATION OF MANUFACTURERS OF BUILDING MATERIALS AND EQUIPMENT

March 5, 1948

To the Editors
Progressive Architecture
330 West 42nd. Street
New York 18, New York

Gentlemen:

In a letter addressed to the President of the Producers' Council in the stimulating January issue of Progressive Architecture, you emphasized the influence of available building products on architectural design and called on producers and architects to collaborate in advancing the "right use of the right materials".

I am happy to advise you that the need for the type of collaboration you recommend is fully recognized by the members of the Council and that we are working actively with the American Institute of Architects to that end.

As you know, the 26-year-old affiliation between the Council and the AIA recently has been modernized and renewed. To quote from the Council's Certificate of Incorporation, the affiliation is intended "to develop and provide facilities for improvements in building materials, equipment, and their use; to develop and encourage improved methods and types of building design and construction; and to assist in the improvement in the science of building".

Through the Joint Technical Committee, composed of members of both the Council and the AIA, problems such as your letter posed will be fully explored.

In the local chapters of the Council and the Institute similar local Joint Committees cooperate in presenting factual information on building materials and their usage. Such programs bring up to the minute data on building materials and equipment to the specifying and buying groups of the industry.

That the Council is in full accord with the objective you mentioned is demonstrated, we believe, by the intensive work we have done in recent years in the development of modular coordination and the Industry Engineered Housing Program, in our support of efforts to modernize restrictive building codes, and in our endorsement of the program of the Building Research Advisory Board. These projects all bear directly on the problem in question.

The Council and its members will welcome the advice of architects in the development and improvement of their materials and will gladly assist the architects in the development of their designs, as you suggest.

Your recognition of this vital problem should do much to expedite the necessary collaboration between producers and designers. We shall report to you at a later date on the actual progress which is achieved in line with your recommendation.

Sincerely yours,

David S. Miller

David S. Miller, President

THE AMERICAN INSTITUTE OF ARCHITECTS
1741 New York Avenue, N.W.
Washington 6, D. C.

DEPARTMENT OF EDUCATION AND RESEARCH
WALTER A. TAYLOR, Director THEODORE IRVING COE, Technical Secretary

March 8, 1948

VIA SPECIAL DELIVERY

The Editors
PROGRESSIVE ARCHITECTURE
330 West 42nd Street
New York 18, New York

Dear Sirs:

The Department of Education and Research joins in the response to your January Open Letter to the Producers' Council because your emphasis on the relation of building products to design is in line with Institute policy and program in several respects.

In the educational field the policies of our Board and our Committee on Education and the program of this Department are based on the principle that architectural education must be a lifelong continuous process.

The Producers' Council was formed a quarter century ago at the instigation of and with the cooperation of The A.I.A., based on a resolution relating to "The desirability of better understanding among architects and producers as to their common interest in the characteristics, properties and appropriate utilization of products entering into construction." This collaboration has taken varying forms during the intervening years.

The present agreement of affiliation between A.I.A. and Producers' Council engages the two organizations in the following activities related to the subject in question:

"To raise the standards of advertising and the dissemination of useful data and information —"

"To advance knowledge of the most effective use and assembly of materials —"

"To assist in the education of students of architecture, engineering and related construction —"

The A.I.A. and the Producers' Council, have since 1939, jointly sponsored A.S.A. Project A-62, Modular Coordination. We are actively concerned with provisions for solving the problems of materials in combination. The 1948 program includes a research project in the application of modular and time study principles to multiple dwellings. Another item of this year's program is the development of a series of educational films relating to the building industry.

These activities are coordinated by the Joint Committee of The Institute and the Council, this Department, and the Executive Secretary of the Council.

The Department of Education and Research and the Field Secretary of The A.I.A. are aiding and encouraging educational joint meetings, at local and regional levels, between Institute chapters and Council chapters, with the aid of the schools of architecture. Your journal can serve the profession by continuing to emphasize the relationship of materials to design and by publishing examples and pertinent data. Emphasis upon the real fundamentals of architecture will aid in dissolving the fruitless "style" argument.

The increasing complexity of human requirements and of building techniques, calls for more effective assistance by all agencies in keeping the architect up-to-date.

Sincerely yours,

Walter A. Taylor

Walter A. Taylor, Director
Department of Education and Research

WAT:dc

ccs: Mr. Coe
Mr. Jamieson
Mr. Purves

(Continued from page 10)

of Art (where I have shown sculpture in several Annuals and major exhibitions, and have had a one-man show) and at the De Young Museum in San Francisco. I was the recipient of the $900 Phelan Award in Sculpture for 1946, and I am an active artist member of the San Francisco Art Association. Walnut Creek is only an hour's drive from San Francisco, so that I seldom miss seeing current art shows at the city's three major museums and numerous small galleries, and often am able to discuss them with other professional artists of the Bay region.

I should appreciate your printing this correction, not because I would in the least object to being thought of as the very charming primitive Miss Riley has pictured (or, if not primitive, at least exponent of somewhat rural inspirations) but because I believe it is highly important to make proper distinctions in the criticism of contemporary art.

My work, of which I believe *Shellfish* is quite typical, does spring from a deep love of nature, but it is also the result of a great deal of scholastic research in the history of sculpture and related arts, and of a rather severe technical discipline. Its simplicity of form is the outcome of emotion controlled by intellect and considerable experience. I am in no position to claim these as inherently superior qualifications to untutored spontaneity, which at times produces its own simplification. I merely want to point out the danger of confusing the two phenomena in so-called modern art. A painting by Kane or Pippin might well hang side by side with a Paul Klee at the same exhibition, and to the casual eye the two pictures might look not unlike—but it would be a mistake to attribute to them the same psychological genesis. And a similar distinction must surely be made in the field of sculpture.

I hope all this will not be taken as a sweeping criticism of Miss Riley's letter, which impressed me as generally very enlightened in attitude, and as showing a civilized viewpoint concerning artistic values.

JOHN R. BAXTER
Walnut Creek, Calif.

NO "ONE" WAY

Dear Editor: Supplementing your OBSERVATIONS regarding research (December 1947 PROGRESSIVE ARCHITECTURE): We need unbiased research performed by people (preferably the architect himself whenever possible) who are not only free from commercial interests but who possess sufficient stature to permit an objective view of their own research and that of others. Too often are we told that there is only one correct way to do a certain thing and too often do we believe such statements.

HENRY L. BLATNER
Albany, N. Y.

NOTICES

NEW PRACTICES, PARTNERSHIPS

RICHARD R. HANSEN has opened an office at 1201 E. 63rd St., Kansas City 5, Mo.

S. Y. SAITO and THOMAS H. FLINN have formed a partnership with offices at 513 Lafayette Bldg., Waterloo, Iowa.

CLARENCE A. SMITH has reopened his office at 1000 Peachtree St., N. E., Atlanta, Ga.

GEORGE NELSON has announced a new practice located at 343 Lexington Ave., New York 16, N. Y.

MARY CAROLINE COLE has opened an office at 1107 Sunset Dr., Tulsa, Okla.

M. DE WITT GROW has announced a new practice with offices at 4125 Monroe St., Toledo 6, Ohio.

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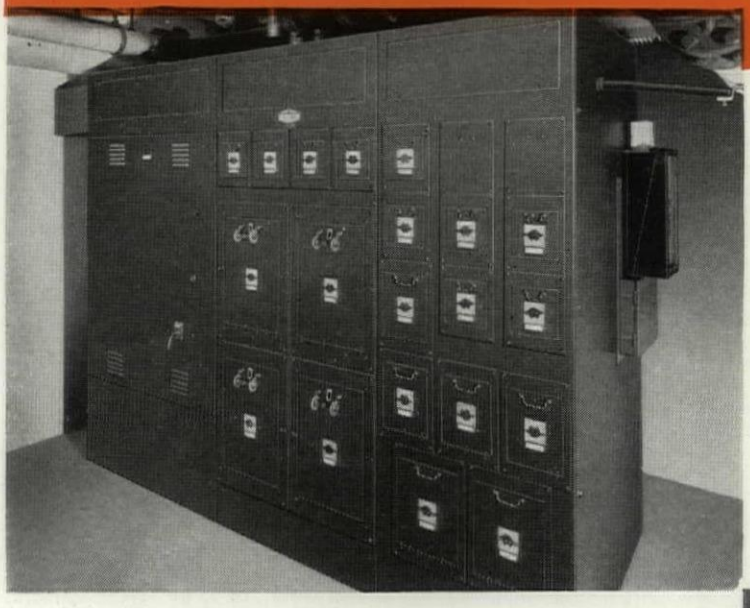

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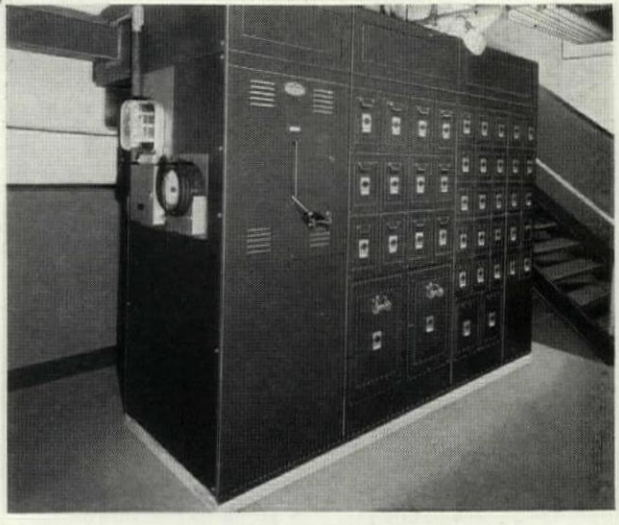

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ARCHITECTURE 1947

Progress in architectural design and construction methods during 1947 has been broadly evaluated by C. L. V. Meeks of School of the Fine Arts, Yale University, in a contribution to Encyclopedia Britannica 1948 Book of the Year. Excerpts are printed here with permission of Encyclopedia Britannica, Inc. (Our editorial remarks are in italics.)

1947 saw a considerable increase in the total volume of civil building over the years preceding it. In America, housing reached the volume of the great boom of 1925. Elsewhere the end of the year saw appreciable gains in spite of strikes, shortages, and such setbacks as the blizzard in Great Britain. Materials and construction benefited by new inventions, housing by increased mass production, and there were a number of notable buildings completed. The degree of recovery from the war was highlighted by the preoccupation of architects and planners with values, such as arose out of the consideration of the designs for the Permanent Headquarters of the United Nations . . .

Materials and Construction. Technological innovations poured forth, although some were announced before they had been thoroughly tested . . . Alfred Poor announced "Hexadrome," which is based on a system of four-inch triangles, with a high weight-strength ratio . . . The John B. Pierce Foundation announced a resilient concrete, made with asphalt, which was as comfortable as wood flooring, but more durable and more economical.

In Great Britain, a war product, "Holoplast," was adapted for structural purposes. The web is made of plastic-impregnated paper tubes with a variety of surfaces. It was found light, durable, impervious to damp, vermin- and fireproof. This age may become known as the era of sheet building materials, so important are they becoming. The structural skeleton is already well known; to this core, a modern type of skin is the essential complement . . . Lescaze and Davison offered a metal-clad, insulated wall panel *(for multistory buildings)*. Welded sheet metal was being applied to other purposes than fuel storage. Rigidized sheet metals permit many possibilities for new expression, particularly in returning curves to the architectural vocabulary, so boringly rectangular of late. Shell-concrete construction for long spans continued to be studied, notably in the Jewish Center by Mendelsohn for Cleveland. Such developments also point up a trend toward reducing the weight and bulk of architecture, both in fact and in appearance; a closer approach toward . . . airplane and boat design. Prefabricated structural units in concrete were tried with some success in small office buildings . . .

One of the goals of low cost architecture, the unification of the roof and the wall seemed nearer at hand. Kenneth N. Lind's system of a single truss for this purpose was in production by Production Line Structures. Many designers, notably J. C. Campbell and W. K. Wong, were adapting the Quonset Hut with great success to houses, farm buildings, factories, banks, and a motel.

Manuel Flores' system, called "DC," of lowering the forms for concrete floors from the top of skeleton buildings was introduced into Texas from Mexico.

Interest in cavity wall construction was growing . . . Welding for steel frame buildings was becoming recognized as potentially superior to riveting. For bridges, the return to the tubular members proven to be economical in the Eads and Firth of Forth bridges of the last century was proposed. Air cleaning by electronic precipitation increased. Its advantages to health and its savings in time and money for laboratories and department stores were acknowledged.

Heating. Heat pumps, for house heating, were in *(limited)* production . . . In radiant heating, methods of cold bending the pipes were improved, preformed tubing panels were announced, and a tube with integral fins became available. Research in solar housing was continued at M.I.T. and at Purdue *(and University of Colorado)*. More study is still required to evaluate all the factors which contribute to the initial and long-run economies expected of this system. Short-period storage of solar heat seemed to promise great economies; one method used a filler of Glauber's Salts.

Housing and Research. All over the world housing continued to be the primary architectural problem. Rising costs of labor and materials, together with shortages of materials, delayed the programs envisaged by thoughtful people and governments . . .

In the United States the Building Construction Research Board of the National Academy of Sciences had not gotten far; neither had the research program of the American Institute of Architects. The Committee of the Hygiene of Housing of the American Public Health Association was doing the best work . . . Helmut Landsberg's work in microclimatology was published during the year. It indicated the values to be derived from intensive local studies. A hopeful sign was the developing acceptance of modular coordination by industry and the recognition by the Producers' Council of the need for coordinated research. Two other stumbling blocks to mass production and increased volume of building were lifted when the American Federation of Labor in the Chicago area signed an agreement to remove some of the jurisdictional barriers to new methods of construction, and in the New York area when an agreement stabilizing labor costs was signed, thus enabling estimates to be made on a firmer basis over a long period. There were other signs of increasing stability in building costs at the end of the year, such as upset price contracts and voluntary lowering of prices on some items of house equipment.

During 1947 nearly three-quarters of the housing built in the United States was found to be in the hands of large-scale operators, who it was believed were the only ones who could by mass production methods bring the cost of small houses closer to the incomes of those for whom they were intended. Even so, the average price of a small house, about $8,000, was still $1,000 more than could be afforded . . .

Events. In 1947 the American Institute of Architects, for the first time, held seminars for the exchange of information on hospitals, schools, and town planning. Princeton University was host to a conference of architects and planners, at which a . . . distinguished international group discussed the problems of the profession in an informal atmosphere. The discussions were to be published. The International Congress of Modern Architects (C.I.A.M.) met at Bridgewater, England, (for the first time since 1937) and exchanged data on city planning on a worldwide basis.

The year was characterized by a flood of architectural publication, thus undamming several years of pent-up research and information. The criticism of current buildings, never a very active concern of the press in the United States, was notably stimulated by the initiation of a series of critical articles, on hospitals, stores, and apartments, in PROGRESSIVE ARCHITECTURE, and by the resumption in *The New Yorker* of Lewis Mumford's column, "The Sky Line." With the enormous increase in building activity, criticism . . . was a desirable concomitant.

The first great architectural competition for many years was begun in 1947, the Jefferson National Expansion Memorial Competition . . . Notable architectural exhibitions held during the year were those of the work of Louis Sullivan in Boston and Mies van der Rohe in New York.

Planning. Large-scale planning projects were under discussion during the year. These included the previously announced plans for the Cidade dos Motores in Brasil; La Rochelle-Pallice in France; numerous projects in Russia and Great Britain. In the United States the replanning of large cities such as Pittsburgh and Philadelphia, focused toward huge expositions, strategically installed in department stores, where they would receive more attention from the public than if they had been in the usual museum. Modern techniques of publicity and striking installations were also effectively employed. Good progress was being made in Los Angeles under the Regional Zoning Act. A book, *Communitas*, by Paul and Percival Goodman, was received with unusual approval, since it contained a fresh and inspiring approach to the problems of city planning in terms of durable human values.

(Continued on page 16)

(Continued from page 14)

Hospitals. The largest class of building, after housing, was the Veterans Hospital Program for which about a billion dollars will be spent. While still in the planning stage, the program became badly snarled in red tape, but toward the end of the year was moving again. Local architects were employed, and the designs are correspondingly varied; they included conventional and progressive schemes.

Important Buildings. Palm Springs, California, saw the completion of three distinguished buildings: houses by Richard Neutra and Raymond Loewy, and a tennis club by Paul R. Williams and A. Quincy Jones, Jr. This luxury resort in the desert seemed to stimulate original, imaginative design, characterized by lightheartedness and exceptional freedom . . .

At Lincoln, Massachusetts, Carl Koch built a house which carried the current romantic trend in domestic architecture to a new point . . . Two houses by Schweikher & Elting belonged to another current of modern practice . . .

Gordon Drake, of Los Angeles, was another architect whose personal handling of the modern idiom indicated that architecture was reaching a level of maturity which permitted . . . refinement.

At Cambridge, Massachusetts, Alvar Aalto, the Finnish architect, was beginning the erection of a dormitory which promised to introduce new qualities into the field of collegiate architecture.

The King County Central Blood Bank, in Seattle, Washington, combined the almost irreconcilable qualities of inviting casualness and significant dignity. Its publication was also noteworthy; since a feature of the planning was the circulation of the blood donors in, through, and out of the building, a model was photographed at each stage in the process, thus graphically illustrating the functional character of the plan.

The new TVA dam at Fontana was completed. It was considered by some to be an admirable solution to the problem of monumental design . . . it derives in part from the Swiss Pavilion of Le Corbusier with a less logical use of the forms, and in part from the Foro Mussolini at Rome.

The outstanding event of the year, both for the wide interest taken in it and its significance in world history, was the design for the United Nations Headquarters Building in New York. The aim of the architects, a board of design consultants comprising ten of the leading architects of the world, was "to inscribe in stone and steel the achievements of the human race up to this time." The resulting design was criticized for failing to express this aim in suitably symbolic terms. The architects, pressed for time, had decided to concentrate on a workshop for peace, intending to raise the quality of the final solution by further study after a satisfactory basic scheme had been approved.

NOTICES

APPOINTMENT

JOHN KNOX SHEAR has been named associate professor and assistant head of the Department of Architecture at Carnegie Institute of Technology, Pittsburgh, Pa. Since October of last year, Mr. Shear has been assistant professor of architecture at Princeton University.

MEETING

The first Congress of the International Union of Architects is scheduled for June 28 to July 1, 1948, at Lausanne, Switzerland. The U.I.A. was formed by the merging of the Comite Permanent International Des Architectes (C.P.I.A.) and International Reunion of Architects (R.I.A.) last year. Theme for discussion by the Congress will be "The Architect and His New Problems," including problems of prefabrication, planning, and State influences. Complete information may be obtained from the Swiss Provisional Committee for the International Union of Architects, 2, Avenue du Theatre, Lausanne, Switzerland.

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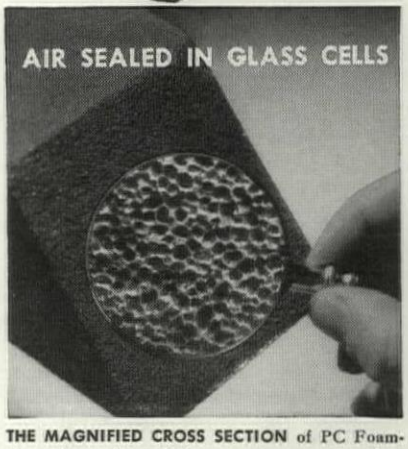

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SHOWS

"THE CONTEMPORARY HOUSE AND ITS NEIGHBORHOOD," an architectural exhibition sponsored by the New Jersey and New York Chapters of the A.I.A. for the New Jersey State Museum will be continued until April 16, 1948, at the Museum, State House Annex, Trenton, N. J.

The first home show to be held in northern California since the war will take place in San Francisco's Civic Auditorium April 7 through April 14, 1948. THE SAN FRANCISCO NATIONAL HOME SHOW will include model homes completely furnished, and gardens. It is being sponsored by the San Francisco Real Estate Board and the Associated Home Builders of San Francisco, Inc.

THE SECOND INTERNATIONAL STORE MODERNIZATION SHOW, which will be held July 6-10, 1948, in Grand Central Palace, New York, N. Y., has appointed its Advisory Committee. Harold R. Sleeper, President, New York Chapter, A.I.A., will head the committee; Morris Lapidus, José Fernandez, Morris Ketchum, Jr., Daniel Schwartzman, and Thomas H. Creighton, Editor of PROGRESSIVE ARCHITECTURE, will assist. The Committee will plan the daily clinic conferences, a major contribution to the program.

John W. H. Evans, Managing Director, has announced that plans for the College Competition for "The Shopping Center of the Future" have been expanded and invitations sent to 68 American and Canadian colleges. Architectural colleges in foreign countries may also participate, State Department regulations permitting. Winning drawings and models will go on tour throughout the major cities in the United States.

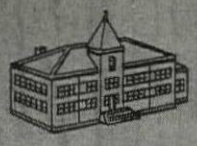
Last year's show brought store owners and executives, architects, and contractors from 46 states and territories, every province of Canada, and 26 foreign countries. This year's show is expected to draw an attendance of over 25,000.

FELLOWSHIPS, COMPETITIONS

THE INTERNATIONAL COMPETITION FOR THE DESIGN OF LOW-COST FURNITURE, with prizes and grants totaling $55,000, was declared officially open in January and will continue through October 31, 1948. Awards will be made by the jury within two months after the competition closes. Information and entry blanks may be obtained by writing to Edgar Kaufmann, Jr., Director, Department of Industrial Design, Museum of Modern Art, 11 W. 53rd St., New York 19, N. Y. The competition is open to designers in all countries and is sponsored jointly by the Museum and the Museum Design Project, Inc.

The College of Architecture and Design, University of Michigan, has announced that the competition in design for the GEORGE BOOTH TRAVELING FELLOWSHIP IN ARCHITECTURE will be conducted during the two weeks beginning April 3, 1948. The competition is open to all graduates of the school who have not reached their 30th birthday by that date. Prospective candidates may write to the office of the College of Architecture and Design, University of Michigan, Ann Arbor, Mich.

A collaborative competition among students of painting, sculpture, architecture, and landscape architecture has been announced by the ASSOCIATION OF THE ALUMNI OF THE AMERICAN ACADEMY IN ROME. Prizes of $200 and $100 will be awarded those teams submitting designs judged by the jury to be the most successful collaborative efforts by students of three or more of these arts. Drawings must be submitted by April 5, 1948. Information is available at the American Academy in Rome, 101 Park Ave., New York 17, N. Y.



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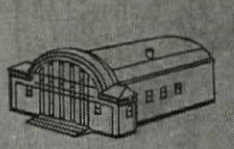

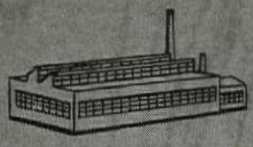

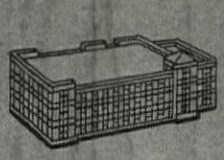

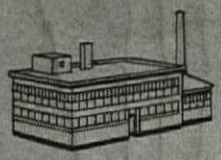

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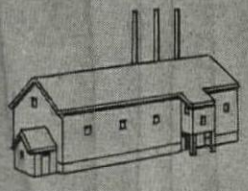
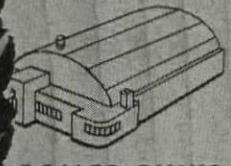
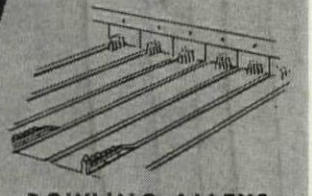


FLOUR MILLS

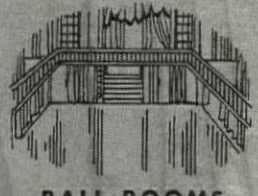
STORES



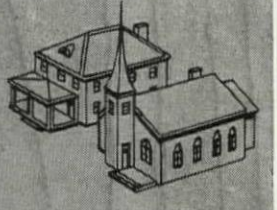
ROLLER RINKS



BOWLING ALLEYS



BALL ROOMS



HOMES AND CHURCHES

DURING the past half century, association members have produced more than four billion feet of Northern Hard Maple Flooring in strips and blocks. And many floors of this tough-fibred, tight-grained wood laid thirty to fifty years ago are still giving satisfactory service. Northern Hard Maple wears evenly and is highly resistant to slivering and splintering. It remains resilient, smooth and beautiful through the years —easy to clean and maintain. That's why this remarkable wood is the economical flooring for schools, gymnasiums, factories, textile mills, bakeries, flour mills, stores, roller rinks, bowling alleys, ballrooms, homes and churches. And although Northern Hard Maple has been in short supply, it is now becoming more and more available.

Early in its life the association perfected better methods of milling, kiln drying, matching and finishing Hard Maple. It prepares and publishes Grading Rules which are in general use. It issues recommended specifications for the construction of Northern Hard Maple Floors. As a result, the MFMA trademark is the symbol of excellence on which builders rely: a guarantee as to grade, millwork, kiln drying and matching.

Association activities will be continued so that additional valuable contributions may mark its next fifty years. Research on new applications of Northern Hard Maple Flooring in the buildings of tomorrow is under way.

MAPLE FLOORING MANUFACTURERS ASSN.
Room 354, 46 Washington Blvd.
OSHKOSH, WISCONSIN

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SINCE 1897

FLOOR WITH *NORTHERN* HARD MAPLE
BEECH AND BIRCH

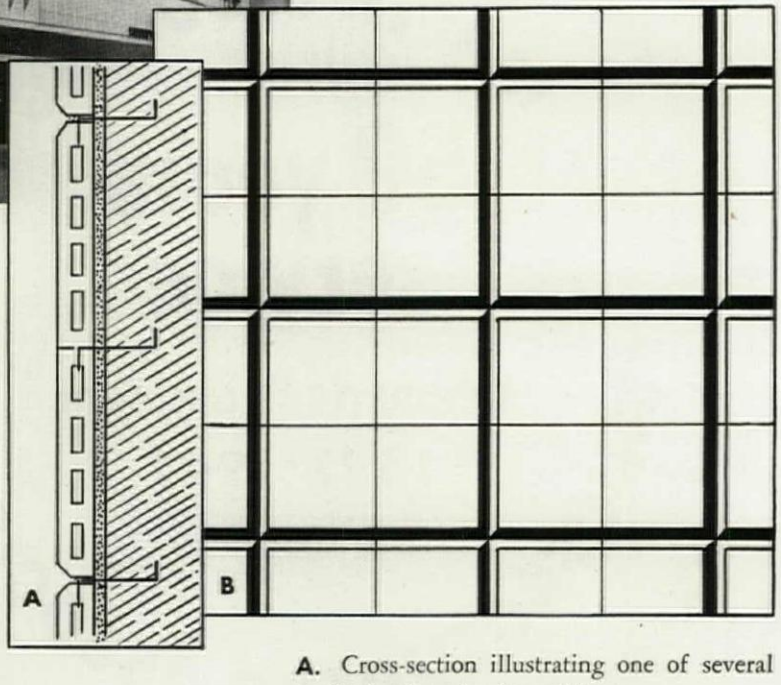
BURDINE'S, Fort Lauderdale, Florida
Abbott, Merkt & Company—*Architects*
Caldwell-Scott Construction Co., Inc.—*Builder*

●

Main facade of brilliant turquoise blue matte glaze terra cotta, ashlar size approximately 2′ 4″ x 2′ 4″ with "V" rustication effecting panels almost 5′ square.

ENDURO

ARCHITECTURAL TERRA COTTA



A. Cross-section illustrating one of several methods of anchoring ashlar to masonry.

B. Detail illustrating rusticated ashlar set four to the panel.

RUSTICATION, utilizing Enduro Architectural Terra Cotta, is one example of practicality in architectural design.

With "V" rustication, the effect of very large panels may be obtained while the individual ashlar is of a size and weight to facilitate easy handling in transit and construction.

No surfacing substance has the plasticity of form, the limitless range in color and texture inherent in Enduro Architectural Terra Cotta.

Firing at intense temperatures develops a surface that defies weather and city grime. Original brilliancy of color is restored with simple soap and water washing — even after years of exposure.

Whatever your design requirements, Federal Seaboard is ready to assist in the dynamic utilization of architectural terra cotta. Construction detail, data and suggestions, color samples and estimates will be sent on request—all without cost.

F S T C

Address your inquiries and sketches to the New York office.

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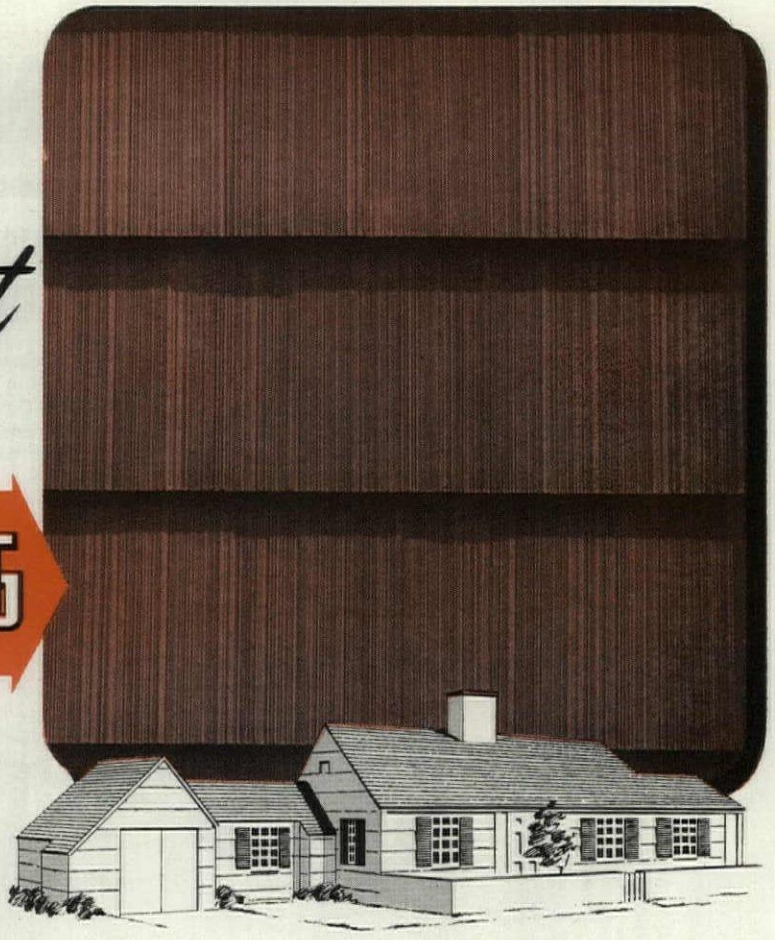
PERTH AMBOY, N. J. **SOUTH AMBOY, N. J.**

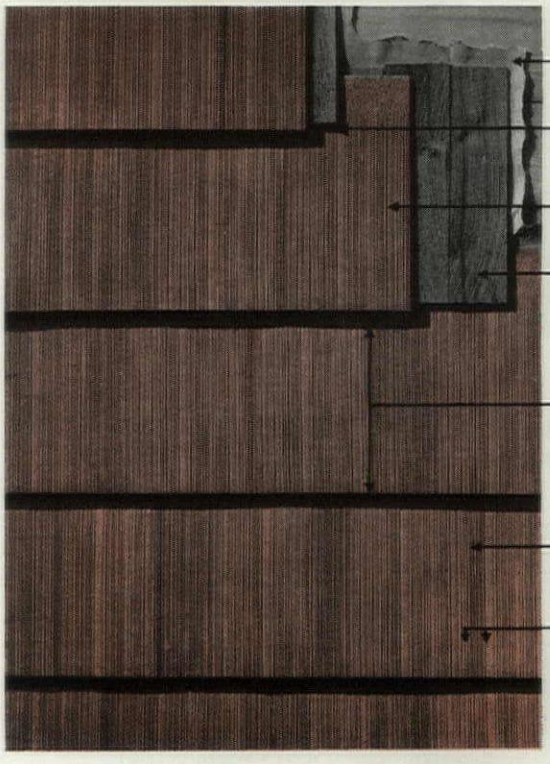
Achieve this Sidewall effect

WITH

DOUBLE-COURSING



Sidewalls of double-coursed cedar shingles or processed shakes are economical and long lasting. The maintenance cost is low, scale and proportions of the building improved and a warm, tight, attractive job assured. The architectural pattern of double-coursing is modern and attractive.



Unsaturated building paper is laid between Shingles and sidewall sheathing.

Outer course is laid ½" lower than the under (concealed) layer, providing attractive thick appearance and shadow line.

No. 1 CERTIGRADE CEDAR SHINGLES or pre-stained Cedar Shakes may be used for the outer course.

Unstained No. 2, No. 3 or undercoursing Grade Shingles are used for the under course.

Weather exposures may be varied to achieve many desirable architectural effects. Sixteen-inch shingles or shakes may be exposed up to 12" to the weather. Eighteen-inch shingles allow exposures as great as 14" to the weather.

Cedar Shingles and Shakes may be laid with either tight or spaced joints, depending on the effect desired.

Two rust-resistant, small head 5d nails per shingle or shake for outer course, applied 2" above butt-line and ¾" from edges. Use a third nail in shingles wider than eight inches. Each under-course shingle may be stapled temporarily, or held in place with one 3d nail.

Send for free "Double-Coursing" folder which explains how to estimate quantities and compute costs—a real time saver.

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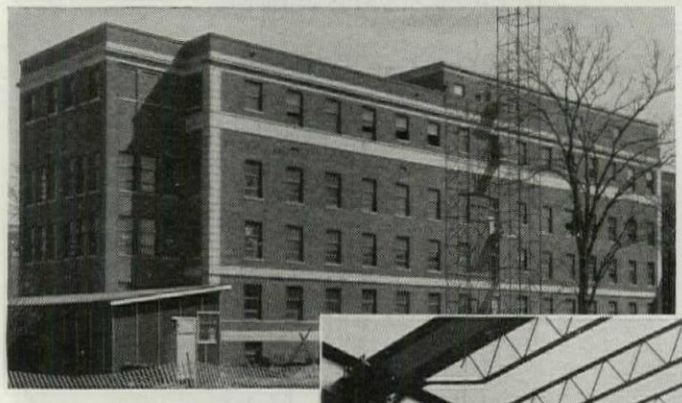


ABOVE: Youngstown Hospital, North Side Unit, Youngstown, Ohio. Joseph Bucheit & Sons Co., Contractors. Kling & Frost, Architects.

RIGHT: Truscon "O-T" Joists in position in the Youngstown Hospital, North Side Unit.

BELOW: Truscon Double-Hung Steel Windows as used in the Youngstown Hospital, North Side Unit.

TRUSCON STEEL BUILDING PRODUCTS HELP STRUCTURES GO UP FASTER—BETTER

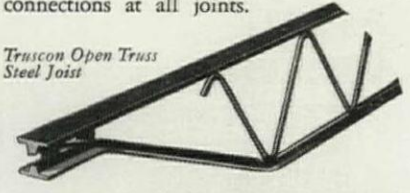
Youngstown Hospital, North Side Unit, Youngstown, Ohio, used Truscon "O-T" Open Truss Steel Joists, Concrete Reinforcing Bars and Double-Hung Steel Windows in the new wing recently completed.

Efficient construction progress, with the high standards of safety required for structures of this type, were achieved with the aid of Truscon Steel Building Products in this new addition.

A major factor in the steady construction progress on the building was the use of Truscon "O-T" Open Truss Steel Joists.

In practical use Truscon "O-T" Open Truss Steel Joists are very simple to install, being completely shop fabricated and reaching the job ready for placing. Each joist is marked to correspond with the erection diagram, thus greatly simplifying and speeding construction work. Thorough tests under extreme loadings have demonstrated their all-around dependability.

Fundamentally, the Truscon "O-T" Open Truss Steel Joist 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. Web members are continuous and of the same diameter from end to end. High pressure electric automatic welding is used to make positive connections at all joints.



Truscon Open Truss Steel Joist

The underslung design of the bearing permits maximum headroom under the supporting girders. The open web allows the passage of pipes and conduits.

Truscon "O-T" Open Truss Steel Joists are successfully meeting the demands for an economical and fire resistant floor, in all types of building construction. They are designed and manufactured in accordance with the specifications of the Steel Joist Institute and the Simplified Practice Recommendations (S.P.R. 94-30) on Open Web Steel Joists as issued by the U. S. Department of Commerce, Bureau of Standards.

Write for illustrated literature.

TRUSCON DOUBLE-HUNG STEEL WINDOWS USED IN NEW ADDITION TO YOUNGSTOWN HOSPITAL

In the new addition to the Youngstown Hospital, Truscon Series 46 Counterweighted Double-Hung Steel Windows with sill vents built integral were used. This well-designed window is an original development by Truscon, to meet the demand for a high quality, custom built, double-hung steel unit.

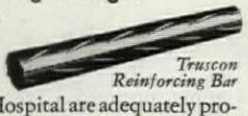
The Series 46 Double-Hung Window, either spring balanced or counterweighted, is especially recommended for educational buildings, hospitals, hotels and offices. Weatherstripping or spring bronze at head, meeting rail, sill, and jambs, provides constant weathertightness and easy operation. Lever type lift handles are a convenient operation feature.

Maximum window sizes of 6'0" by 10'0" for single units and 10'0" by 10'0" for integral twin units are available. Window members are accurately formed to shape and all joints are securely welded. New billet steel, electro-galvanized, combined with Bonderizing and baked-on paint applied to all exposed and interior surfaces insures long life and low maintenance. Screens, storm sash and window cleaner bolts are available.

Sill ventilators when desired are built integral. They provide convenient draft-free ventilation so essential in hospitals and schools. The range of window sizes provides ample height for normal class room lighting needs. For hotels, double-hung windows are particularly advantageous since they are familiar in appearance and operation to everyone.

Large Quantities of Truscon Steel Bars Used for Reinforcing Strength

The rigid standards of safety required in a structure such as the new addition to the Youngstown Hospital are adequately protected by Truscon Concrete Reinforcing Bars.



Truscon Reinforcing Bar

These bars are special rolled sections of high grade steel, with a series of longitudinal and diagonal ribs so designed as to provide the maximum bond with the surrounding concrete. Write for information.

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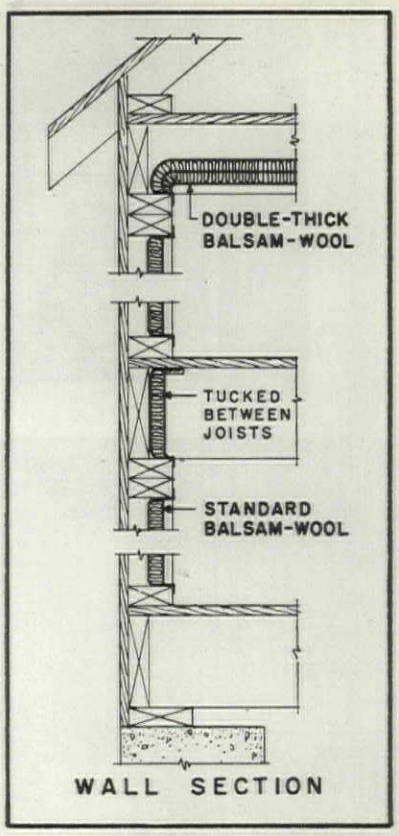

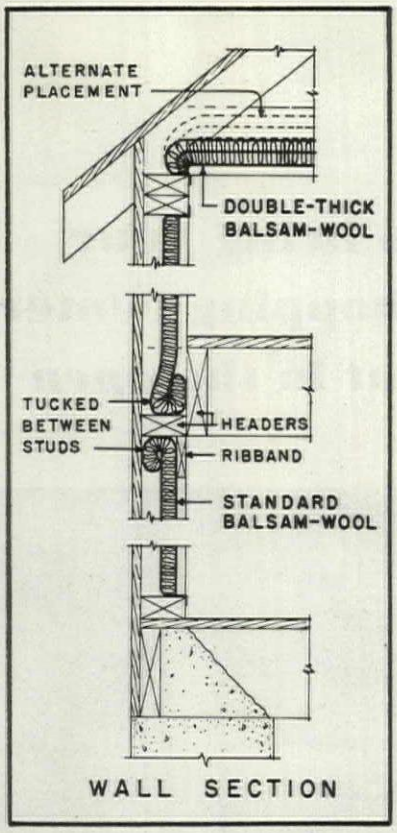

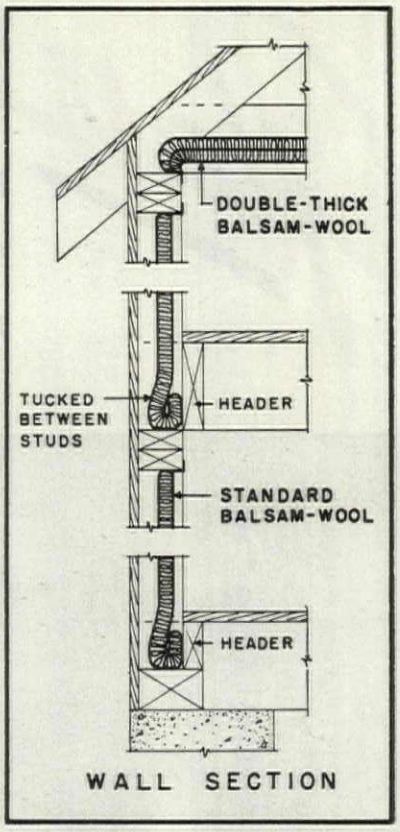

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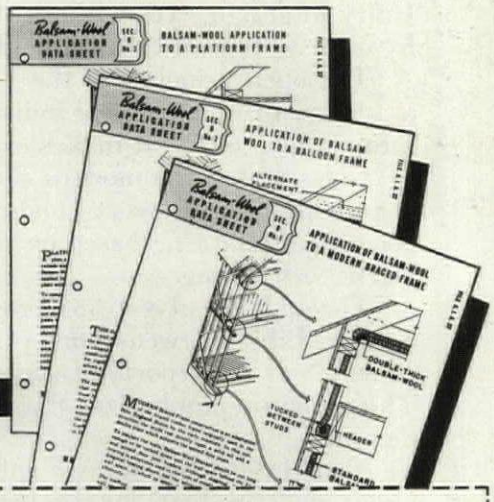

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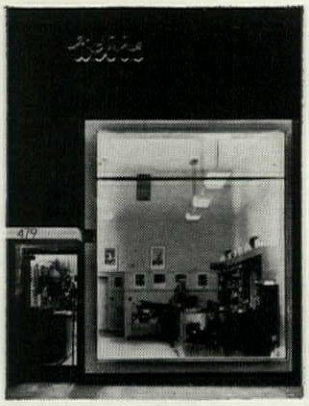

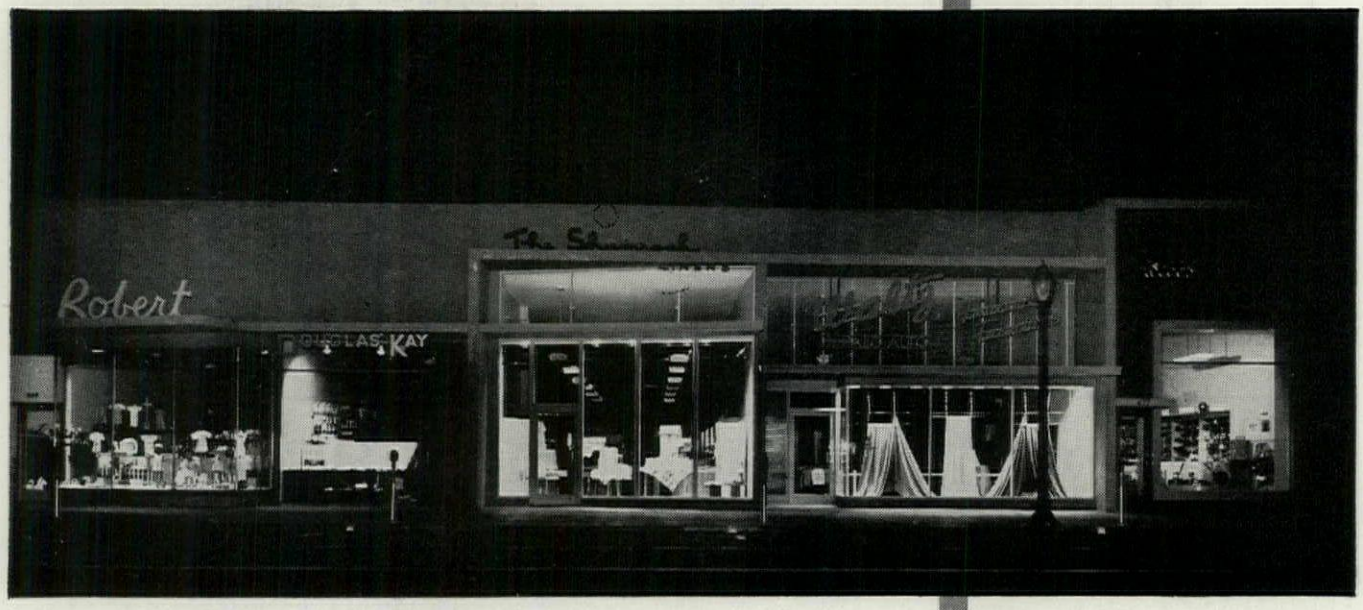

Unity in design—yet with all the individuality required by owners' desires or merchandising requirements.

The open principle of the Visual Front can be used, as above, to unite several individual stores into an integrated group, yet makes each store easy to identify.

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● Five Visual Fronts in a row . . . each one distinctive, yet each an integral part of this open-front shopping center.

Close-up of Webb's Photo Supply shows how large glass areas put each store interior on display. Architect: Leslie Nichols, Palo Alto, California.

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POLISHED PLATE GLASS for large windows to display store interiors.

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YOU as a leader in your community have a sacred obligation--to yourself, your family, your neighbor and your country, Use your experience and knowledge to the full extent of your ability to shape a public opinion which will help to establish right and justice for a lasting world peace, and preserve our country's cherished heritage of freedom for the individual.

Only through the intelligent, active work of community leaders can we keep America as the impregnable citadel of liberty and freedom.

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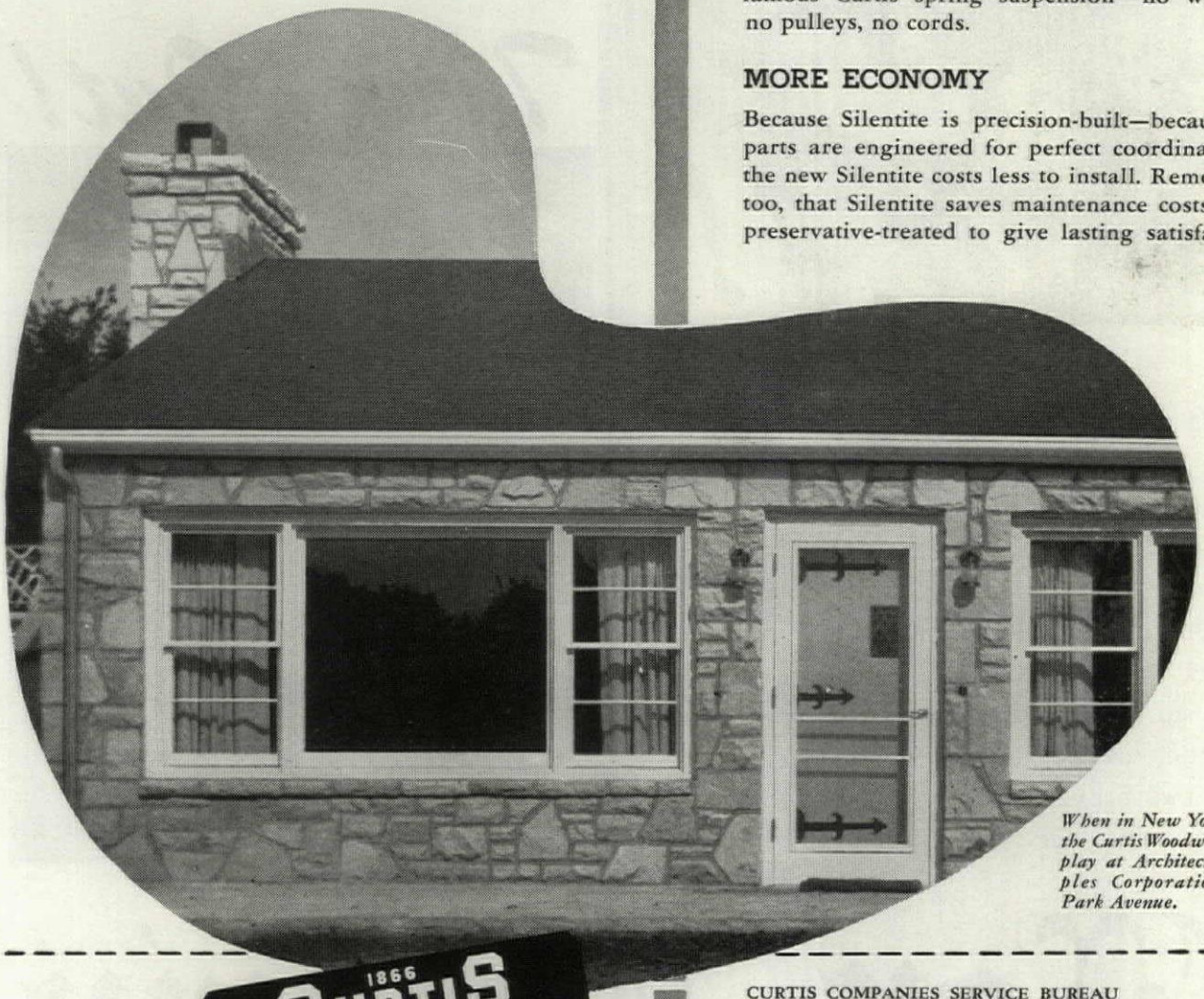

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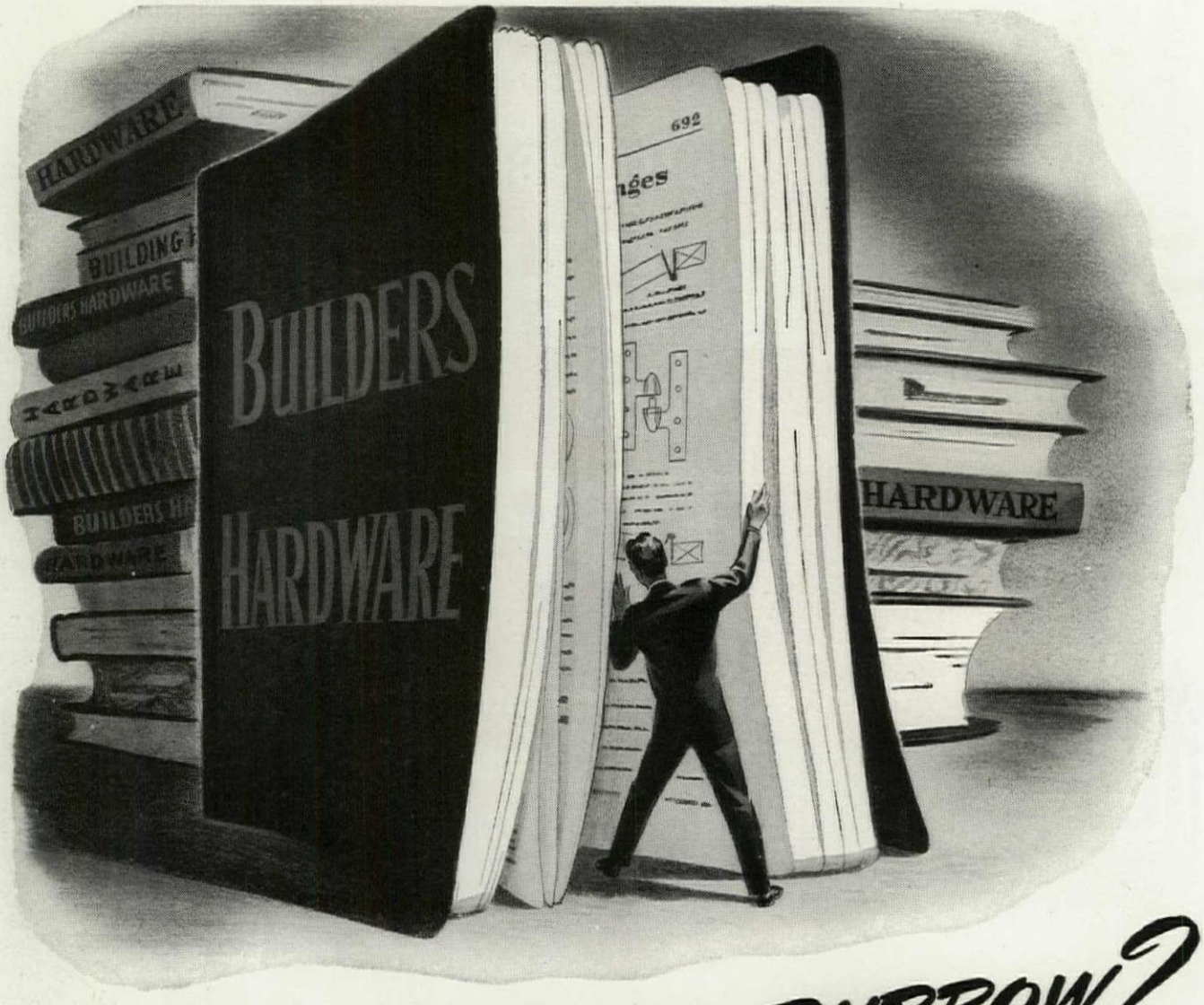

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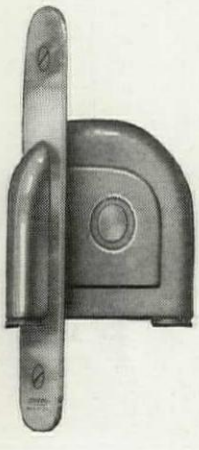

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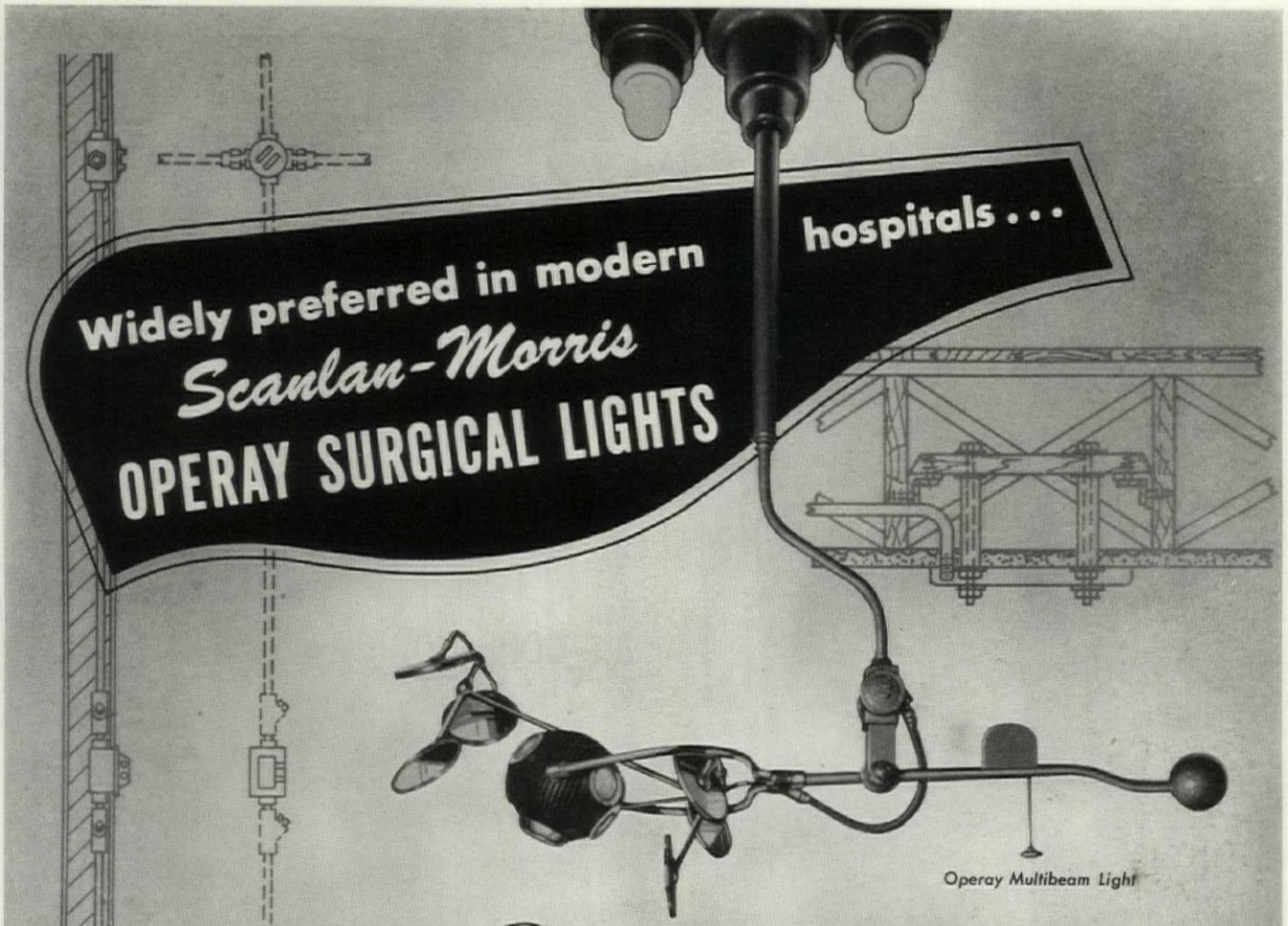

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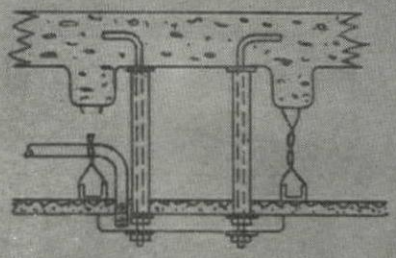
Provision for adequate lighting for today's surgical techniques is an important factor in the planning of the modern hospital.

More than 40 years of manufacturing and installation experience qualifies the "Ohio Chemical" Technical Sales Service Department to supply hospital architects with valuable data and assistance on operating room lighting.



SEND FOR VALUABLE TECHNICAL DATA

Mail the coupon below for the catalog of Scanlan-Morris Operay Surgical Lights, containing complete wiring diagrams and instructions on installations of lights for efficient operating room illumination. Submission of floor plans will bring layout suggestions (without obligation) to fit specific requirements. Helpful information on Scanlan-Morris Surgical Lighting and Recessed Cabinets for hospitals also will be supplied on request.

THE Ohio Chemical & MFG. CO.

1400 East Washington Ave., Madison 3, Wisconsin

Represented in Canada by Oxygen Company of Canada Limited, Toronto and Montreal, and Internationally by Airco Export Corporation, 33 West 42nd Street, New York

THE OHIO CHEMICAL & MFG. CO.,
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(Please attach professional card or letterhead)

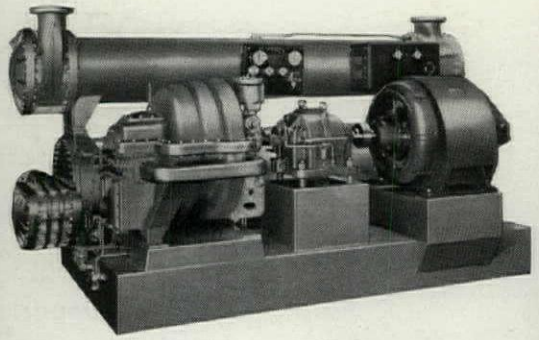
Name.....

Address.....

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

PA

what's at the bottom of efficient air conditioning?



In most top-flight hotels, hospitals, office buildings, department stores and other major installations, it's a Carrier centrifugal refrigerating machine.

It's there because this Carrier machine delivers 100 to 1200 tons of refrigeration day after day—and does it at lowest possible cost.

The Carrier centrifugal takes far less space than most refrigerating equipment of equal capacity . . . costs less to install and maintain. And it is the *only* centrifugal with the dollar-saving Carrier all-metal shaft seal. This seal prevents metal-to-metal contact of moving parts in operation, reducing wear and saving costly refrigerant. And the centrifugal offers the added advantages of such exclusive Carrier features as Lo-Fin tubing to increase efficiency and cut weight, and an economizer to pare operating cost.

With a Carrier centrifugal, you get the benefit of Carrier's matchless experience in air conditioning. Carrier engineers have worked with architects and consulting engineers on air conditioning and refrigeration installations for over 45 years. Carrier Corporation, Syracuse, New York.

Carrier AIR CONDITIONING • REFRIGERATION • INDUSTRIAL HEATING

They Help Your Customers

Stay out of Trouble!

Whether your customer is a manufacturer, distributor, upholsterer, furniture dealer—or the final purchaser, whether home-owner or hotel-chain owner—here's help where it *counts.*

Cloth coated with VINYLITE Brand Plastic keeps customers out of many kinds of trouble.

No trouble about color—not only are all shades of the rainbow available, but they are *fast,* even under sunlight. No trouble about texture and finish—so many types are available. No trouble about wear—they withstand *aging,* without cracking, flaking, chipping or peeling. No trouble about washing—or damage from oils, greases, alkalis or most acids! No trouble about fire-resistance—they may be formulated to meet New York City and Boston requirements.

And no trouble about workability—these materials drape and shape well around corners, curves and edges . . . give a snug fit . . . tuft and channel well.

It's that tough, pliable, ageless coating of VINYLITE Brand Plastic that's responsible. Customers who stay out of trouble keep coming back—for more VINYLITE Plastic-coated cloth! Available through many fabricators—write Department CY-58 for list.

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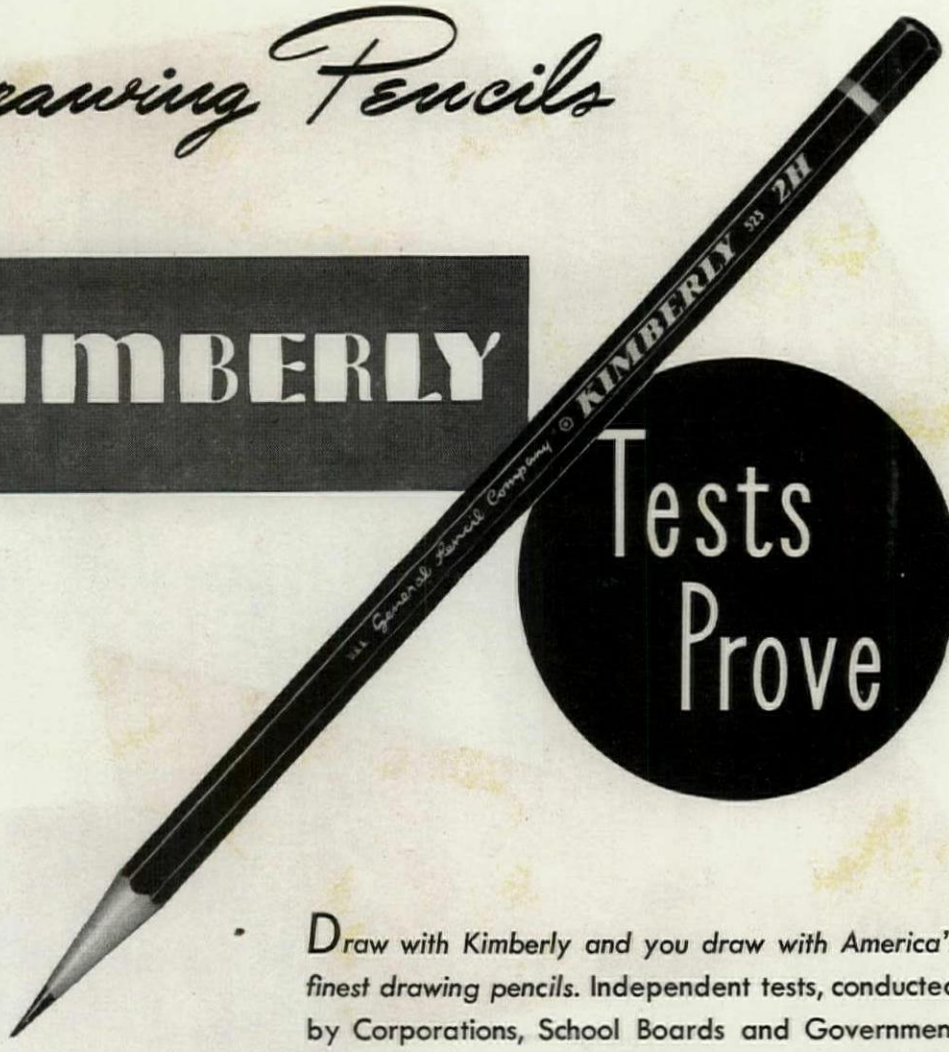

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Woodworking Plant, Holly, Michigan;
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Sturdy, Noncombustible STEEL FLOOR

Neat, Attractive STEEL CEILING

Both in Fast!

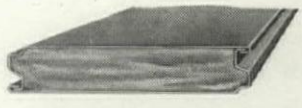
with Fenestra Building Panels

Fenestra Building Panels were real timesavers in this Michigan woodworking plant. The topside provided a smooth, level base for the concrete wearing surface . . . the underside ceiling ready for final spray coat of paint.

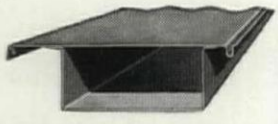
No special skills were required to lay the 221 squares of Fenestra Type D Panels. The panels lock together simply and firmly—making a platform for other work, with flat surface ideal for wheeling in other materials.

When desired, the channel side can be up and flat surface down. Or cover plates can be used to provide two flat surfaces. The panels are prime-coated, ready for application of concrete, mastic and wood or linoleum, or other surface material of your choice.

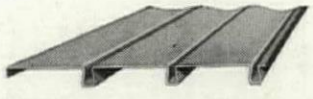
Fenestra Building Panels are suitable for all types of buildings. They save construction time and money, not only in floors and ceilings, but also in walls, partitions and roofs. The building pictured above, for example, is roofed with Holorib Insulated Steel Deck. See Sweet's Architectural File for 1948 (Section 3c-1) or mail the coupon for full information.



TYPE C FOR WALLS. Two metal members pressed together, with felt at each side to prevent metal-to-metal contact. Filled with insulation and closed at the ends, at the factory. Standardized in 3" depth and 16" width, in 18 gage painted steel or 16 B & S gage aluminum.



TYPE D FOR FLOORS. Box beam formed by welding together two steel sections. Side laps interlock to form continuous flat surface. Standardized in 16" width. Depth 1½" to 9". Gages 18 to 12. Type AD available with two flat surfaces.



HOLORIB ROOF DECK. Steel sheets reinforced by three integral triangular ribs on 6" centers. Flat surface for mopped application of insulation and roofing. 18" wide. Lengths to 24' to fit. Gages 18 and 20 are standard.

Fenestra
BUILDING PANELS FOR ROOFS / WALLS / FLOORS

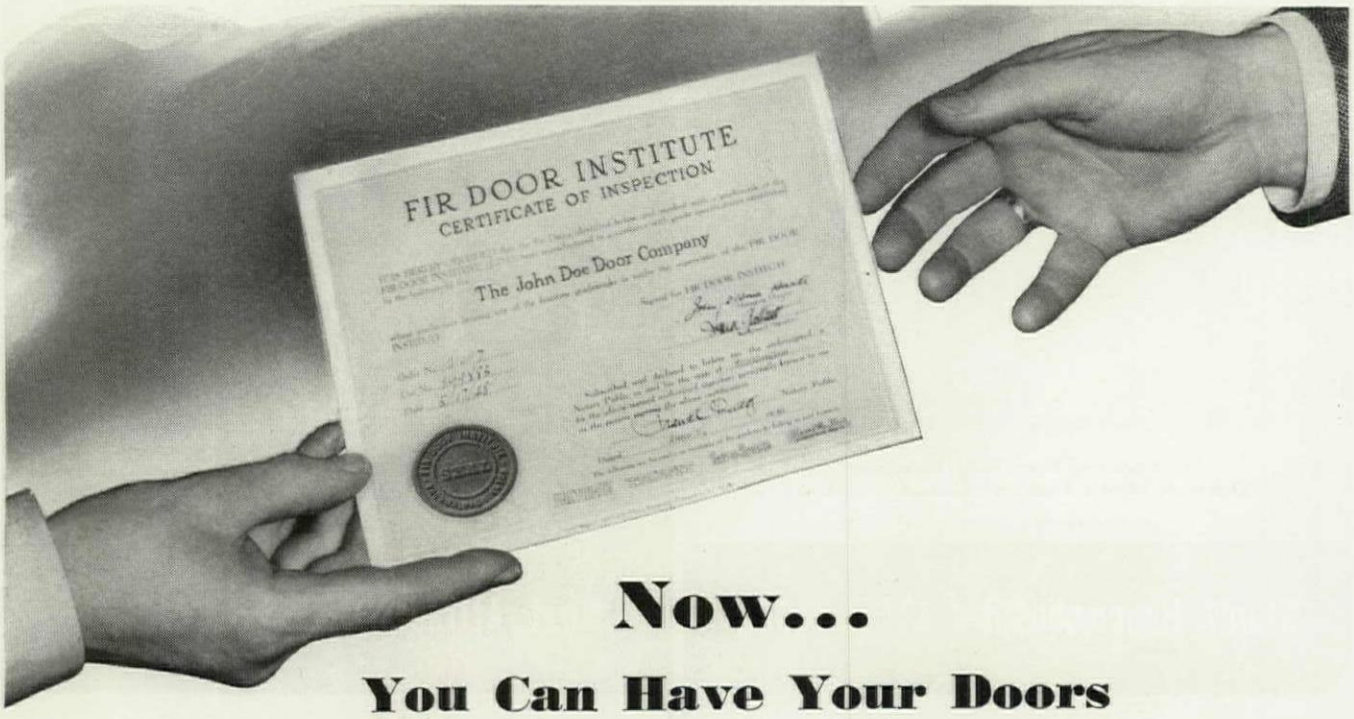
DETROIT STEEL PRODUCTS COMPANY
Building Panels Division
Dept PA-4, 2253 E Grand Boulevard
Detroit 11, Michigan

Please send me, without obligation, information on Fenestra Building Panels.

Name_____

Company_____

Address_____



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Official Fir Door Institute Inspection Service covers workmanship, appearance, grade, and dimension specifications. Every inspected door is clearly stamped with an official F.D.I. "grade trade-mark"—graded A, B, C, or MR in accordance with Fir Door Institute quality standards. The F.D.I. grade mark—plus the notarized Certificate of Inspection—is your symbol of fine craftsmanship.

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Tacoma 2 Washington

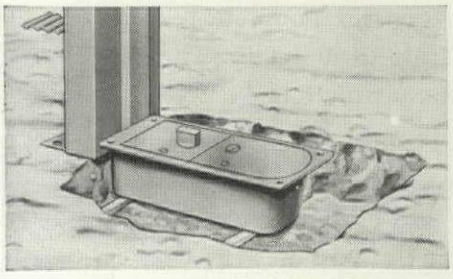
THE NATIONAL ASSOCIATION OF DOUGLAS FIR DOOR MANUFACTURERS

Why Overhead Door Closers Cost Less

than Floor Type Closers . . . and do a Better Job!

They are Simpler to Install

The cost advantage of using an overhead concealed closer rather than the floor type begins with installation. With costs of on-the-job work so high these days, the architect must do what he can to keep them down.



Floor type closer set for grouting

To install a floor type door closer a recess must be prepared in the floor, by setting a form while the floor is poured or by chipping out the concrete after the rough floor is in. Beams and conduits often make locating the closer difficult.

Frame prefabricated for overhead concealed closer

If a threshold is used it must be of the box type or one specially cut and drilled to take the closer, both expensive.

Note that the overhead closer is simply secured into openings blanked out of a metal frame and door at the factory, or easily mortised into a wood frame and door.

No Expensive Thresholds

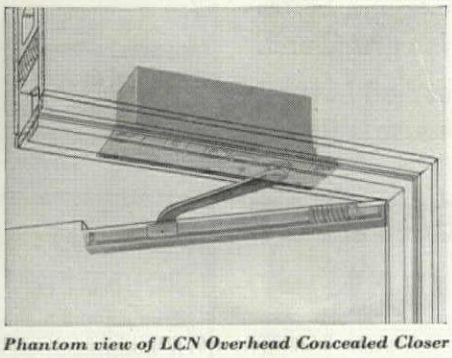
With the overhead closer a simple extruded threshold can be used, or none at all, as conditions require, at a substantial saving.

No Separate Door Holders

As most types of LCN overhead concealed door closers offer a hold-open feature in the closer itself there is no need for separate door holding devices—another saving in cost.

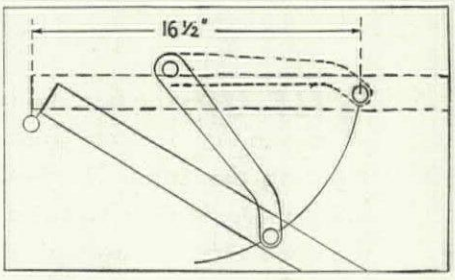
No Separate Shock Absorbers

Most LCN overhead concealed door closers have built-in "back check" or shock absorbing features, so no separate devices for this purpose are needed—another saving in cost.



Phantom view of LCN Overhead Concealed Closer

Overhead Closer is More Effective



Since an overhead concealed closer is not in the way of foot traffic, its power can be applied much farther out from the hinge (see diagram) than that of a floor closer. Result: greater leverage, less strain, longer life, lower maintenance.

We Make Both Types of Closers

We're not prejudiced. We make three series of LCN floor type closers and believe them the finest of their kind. But we recommend the overhead type wherever possible, as they cost less installed, cost less to keep in shape, and give better results.

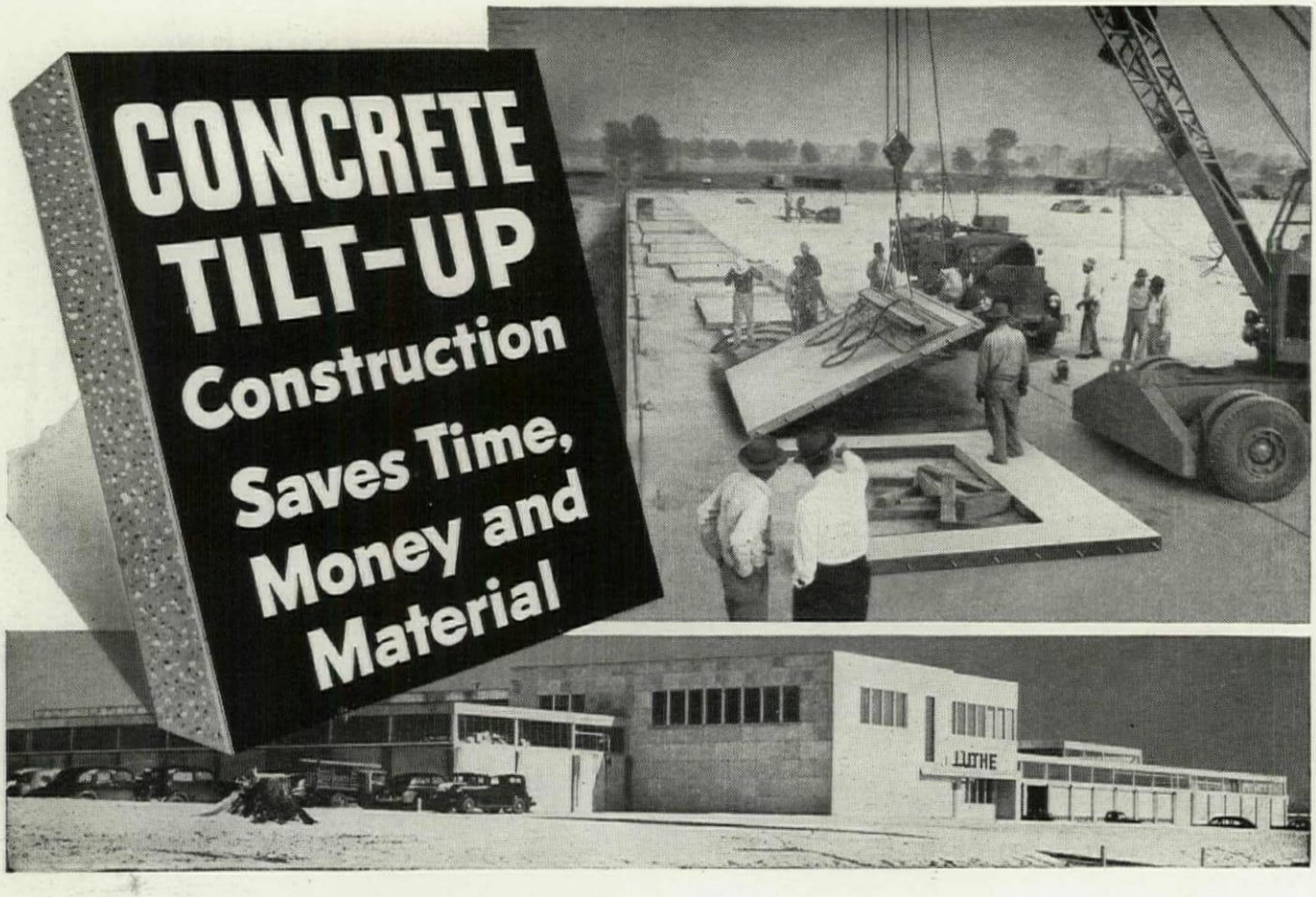
Send for Latest Information

The LCN catalog 11-b is really a handbook of good door control, showing applications of 10 types of concealed closers, principles of operation, getting needed leverage, types of exposed closers, etc. We'll gladly send you a copy. No obligation. Address LCN Closers, Inc., 466 W. Superior St., Chicago 10, Ill.

LCN

Overhead and Floor Type Concealed *and* Surface Type Door Closers

CONCRETE TILT-UP Construction Saves Time, Money and Material



TILT-UP, the fast, modern and economical method of concrete construction was used in building the Luthe Hardware Company warehouse in Des Moines, Iowa—a structure with more than two acres of floor space.

Tilt-up construction is adaptable to individually designed or standard buildings and is practical for one-story or multi-story structures. It is quick and easy and reduces form building and form handling to a minimum.

Wall panels are cast flat in simple edge forms —usually right on the concrete floor—and then tilted up into position with power cranes or hoists. Panels can be sized to meet a wide variety of requirements. Cast-in-place piers and beams tie the panels together into one integrated unit.

Structures built by the tilt-up method have all the desirable properties of any concrete building. They are firesafe, decay-proof, trim and neat in appearance. Their first cost is moderate, they last a lifetime and cost little to maintain. They are truly ***low-annual-cost*** construction.

Learn more about this time-saving, economical method. Write today for free technical bulletins, containing design and construction details. Distributed only in the United States and Canada.

●

The new Luthe Hardware Company concrete warehouse in Des Moines is a 240 x 420 ft. structure with a two-story, 45 x 75 ft. office wing. Tilt-up construction was used throughout, except for the office wing projection, which is cast stone.

Tilt-up panels are 11 ft. high, 13 ft. 8 in. long and 6 in. thick. Only seven sets of edge forms were used to build 73 wall panels.

Engineering and construction work by The Weitz Company, Inc.; Brooks-Borg, architects of Des Moines, consultants on architectural design.

Upper photo shows 5½-ton wall section being tilted into position. Lower photo is a view of the completed building.

PORTLAND CEMENT ASSOCIATION

Dept. 4-25, 33 W. Grand Avenue, Chicago 10, Ill.

A national organization to improve and extend the uses of portland cement and concrete . . . through scientific research and engineering field work

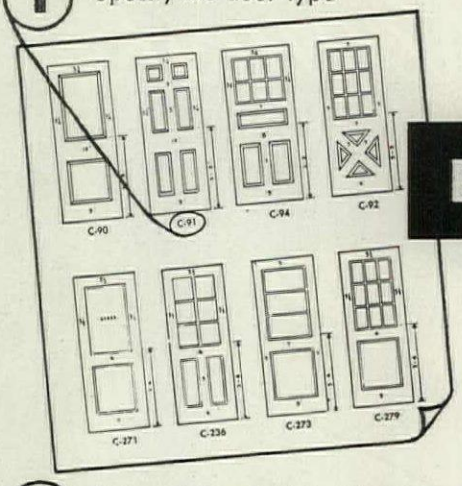
Now Available . . .

SOUND FILM ON TILT-UP CONSTRUCTION

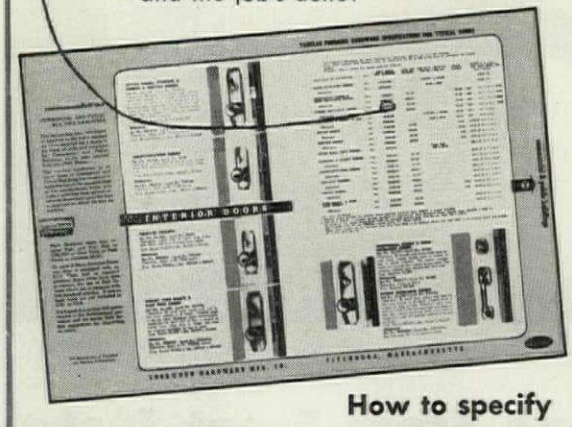
Our new 16 mm. sound film on tilt-up construction is available for showing at group meetings of architects, engineers or contractors. Requests should be made at least three weeks before date of meeting.

FOR ANY DOOR OPENING . . .

1 Specify the door-type



2 Select all the Finishing Hardware for that particular door from Lockwood's *"Simplified Specifications"* and specify the Unit Number. It's as simple as that! One, two —and the job's *done!*



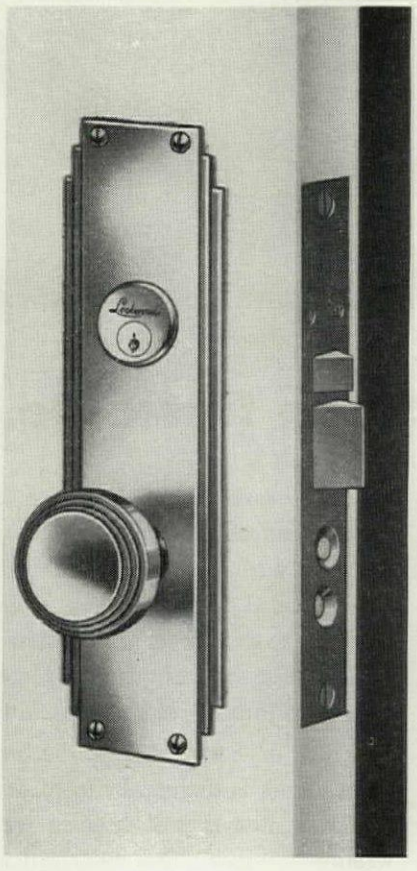
How to specify Finishing Hardware in 2 QUICK STEPS

Lockwood's *"Simplified Specifications"* has quick answers to your Finishing Hardware questions on six types of buildings. Look up any particular door; you'll find all the hardware needed, lockset, hinges, door-stop, kick plate . . . even the door closer; but you use a single Unit Number in writing your Specifications. The hardware estimator fills in the details. Without a doubt, Lockwood has really streamlined finishing hardware specifications.

You'll find *"Finishing Hardware—Simplified Specifications"* in Sweet's 1948 Architectural File —or if you'd like a free copy for your own desk-top, just ask for it on your letterhead.

Earmarks of good designing

ALAMAC . . . a Lockwood design beautifully executed in Cast Bronze. Its fine lines, though modern, appeal to discriminating architects. Cast in Bronze, each piece of hardware in the Alamac pattern consistently matches in color. Like the balance wheel of a fine watch, the knob action of Lockwood "Standardized" Heavy Duty locks—used in the Alamac series—is the same in either direction: smooth, quiet, easy. Yet it is quickly positive—as true as time. Balancing the leverage of the hubs achieves this—another unmistakable earmark of good designing.



L-83A

Lockwood's house is made of pages taken from "Simplified Specifications" IT'S ALL IN SWEET'S!

Lockwood

HARDWARE MANUFACTURING COMPANY

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Because it's stainproof beyond any other wall covering ever created, resisting stains of *all* kinds from public or private wear... Resists fire, too!

Because it's durable and comes up smiling-fresh after 25,000 soap and water washings... over 20 years' normal care! Varlar's stainproofness *completely* penetrates and lasts for life.

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Merchandise Mart, Chicago 54, Illinois

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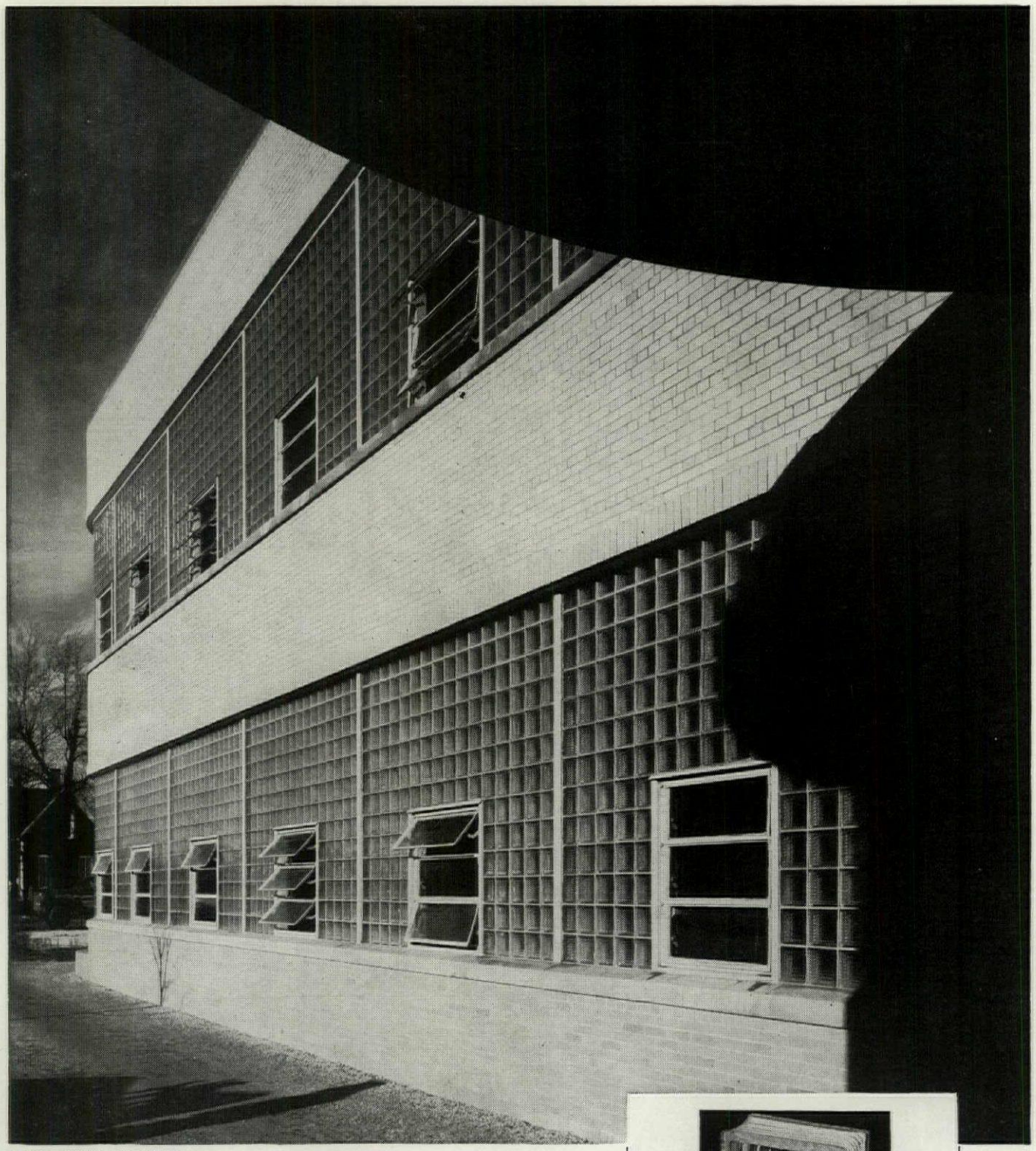
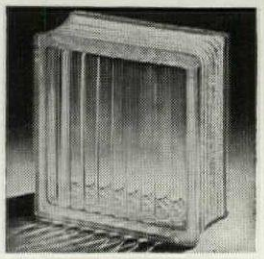


DEAN MILK COMPANY, HUNTLEY, ILLINOIS.
ARCHITECT: VICTOR L. CHARN, CHICAGO. CONTRACTORS: RAGNAR-BENSON, INC., CHICAGO.

Grade "A" daylighting: Continuous Insulux Glass Block panels bring excellent daylighting to interior of this modern creamery. Insulux reduces infiltration of dust and dirt, helps maintain high sanitation standards. Window inserts furnish necessary ventilation.

For details consult GLASS section of Sweet's Architectural Catalog or write Dept. E-23, American Structural Products Company, P. O. Box 1035, Toledo 1, Ohio.

American Structural Products Company is a wholly owned subsidiary of the Owens-Illinois Glass Company. It has taken over the manufacture and sale of Insulux Glass Block and other Owens-Illinois structural products.



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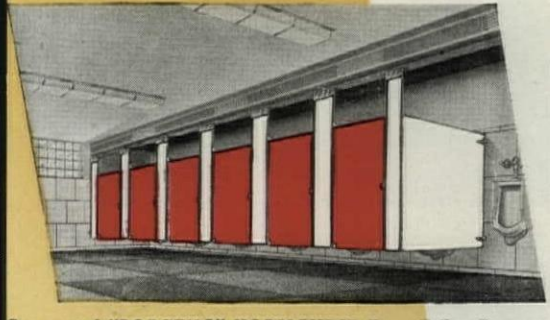
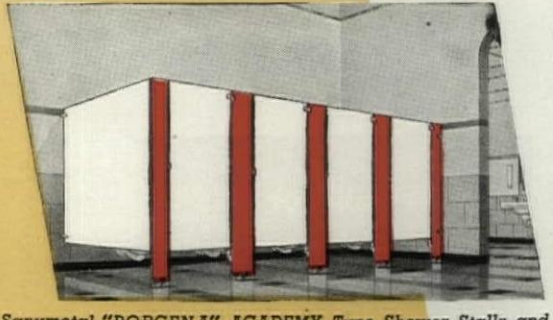
The Ascendancy of Good Taste Coupled with Convenience in Toilet Room Environments Makes the Bare Functional Type of Toilet Room Obsolete.

Sanymetal "PORCENA" ACADEMY Type Toilet Compartments are suitable for conservative but modern toilet room environments.

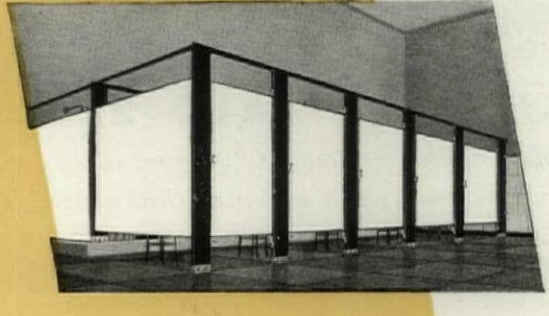
tal "PORCENA" CENTURY eiling Hung Toilet Compartoffer the utmost in sanitation ovide modern, distinctive toilet environments for schools, utions, terminals and other buildings.



Sanymetal "PORCENA" NORMANDIE Type Toilet Compartments endow a toilet room environment with dignity and good taste.



Sanymetal "PORCENA" ACADEMY Type Shower Stalls and Dressing Room Compartments provide the utmost in sanitation for tourist camps, gymnasiums, clubs, Y. M. C. A.'s, etc.



● Simplicity, cleanliness and good taste will not be denied expression in building interiors of the future. Toilet compartments usually dominate a toilet room, influencing the toilet room environment.

Sanymetal "PORCENA" Toilet Compartments are fabricated of ageless and fadeless material, porcelain on steel, which is a glass-hard, stainless material that always looks new, does not absorb odors, is moisture- and rust-proof, and resists the corroding of ordinary acids. The glistening "PORCENA" finish, which can be wiped clean as easily as a porcelain table top, requires no painting or refinishing.

Sanymetal "PORCENA" Toilet Compartments combine the results of over 33 years of specialized skill and experience in making over 80,000 toilet room installations. Ask the Sanymetal Representative in your vicinity (see "Partitions" in your phone book for local representative) for further information about planning suitable toilet room environments. Refer to Sanymetal Catalog No. 19-B5 in Sweet's Architectural File for 1946.

THE SANYMETAL PRODUCTS CO., INC.
1683 URBANA ROAD • CLEVELAND 12, OHIO

Sanymetal*
*Trade Mark Reg. U. S. Pat. Off.

"PORCENA"
(Porcelain on Steel)

TOILET COMPARTMENTS, SHOWER STALLS AND DRESSING ROOMS

GOLD BOND

ACOUSTIMETAL

"ACOUSTIMETAL" is the last word in sound conditioning! It provides maximum noise reduction and high light reflection. It's practically indestructible, and of course, it's *fireproof* to fit new building code specifications.

"Acoustimetal" is adaptable to remodeling as well as new building. The perforated Acoustimetal Pan, containing spacer-grid and sound absorbing Acoustipad, is quickly and simply snapped into the patented T-Bars mounted on the ceiling. Ideal for use with modern troffer type lighting. The satin-smooth baked enamel finish is smart in appearance and can be washed repeatedly and repainted again and again without loss of sound absorption. The 12" x 24" pans are quickly removable, for repair to wiring, piping, and air ducts. True, Acoustimetal costs more than ordinary inflammable sound conditioning, but the savings in maintenance more than cover the difference. For complete details, write for our new illustrated Acoustimetal folder!

You'll build or remodel better with
Gold Bond

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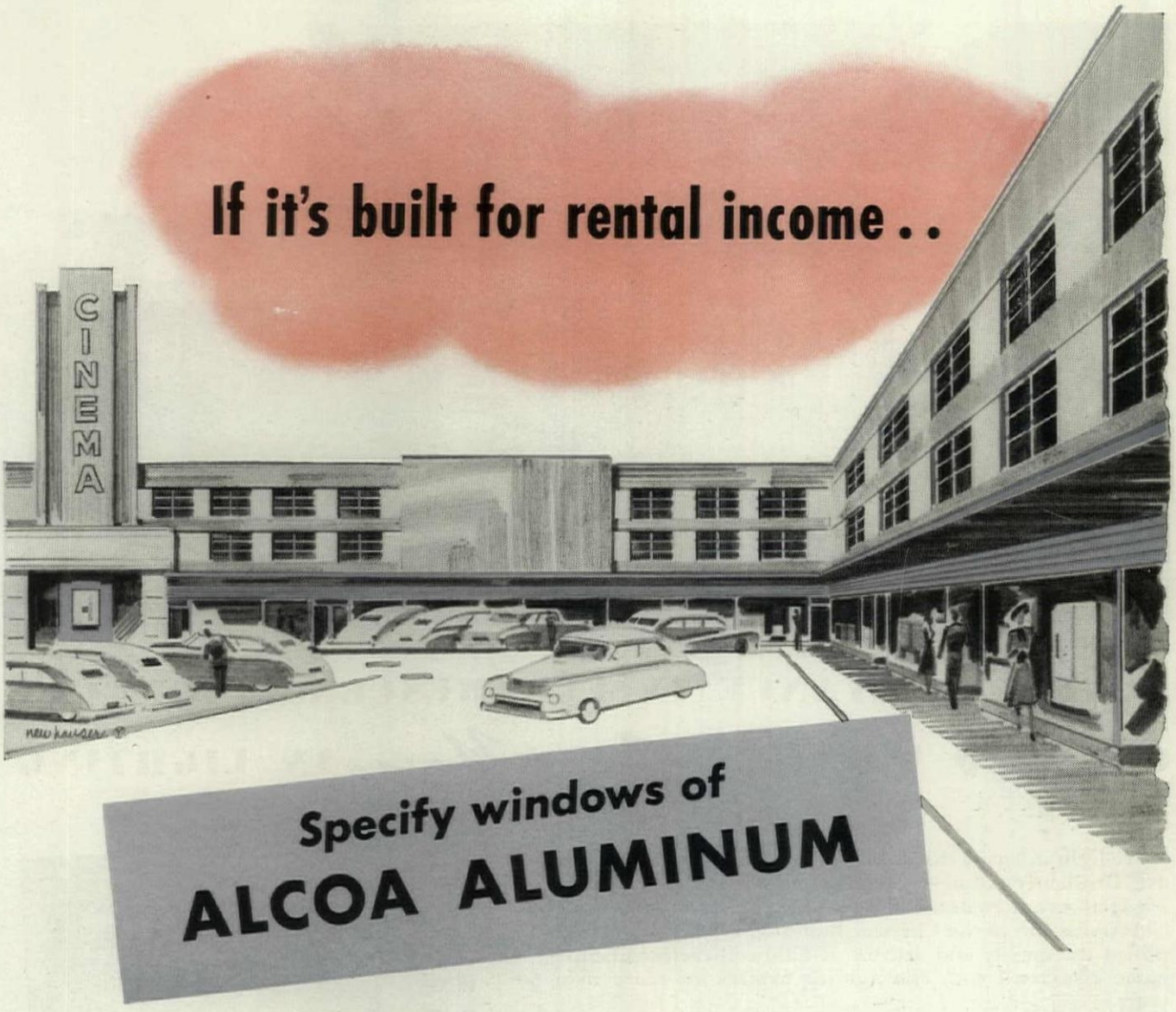
Over 150 Gold Bond Products including gypsum lath, plaster, lime, wallboards, gypsum sheathing, rock wool insulation, metal lath products and partition systems, wall paint and acoustical materials.



If it's built for rental income..

Specify windows of ALCOA ALUMINUM

Will that new building show a profit ten years from now . . . twenty years from now? Not if maintenance costs eat up the income! Before you build, be sure you cut window maintenance costs to the bone. Make sure your specifications call for quality windows made of Alcoa Aluminum.

Non-warping, corrosion-resistant aluminum windows eliminate painting costs; are easy to keep clean and attractive. Aluminum windows stay snug fitting and weathertight. Alcoa Aluminum can't shrink or swell; will not rot or rust away.

Quality aluminum windows, in all standard types and sizes, are available for every type of building—commercial, industrial and residential. For information on any application of aluminum, write ALUMINUM COMPANY OF AMERICA, 1868 Gulf Building, Pittsburgh 19, Pa.

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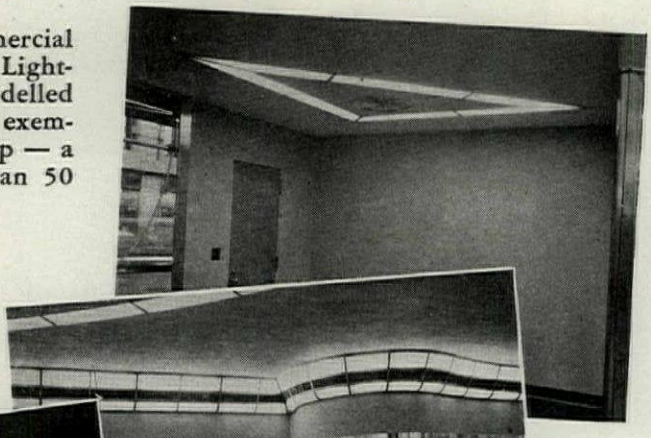
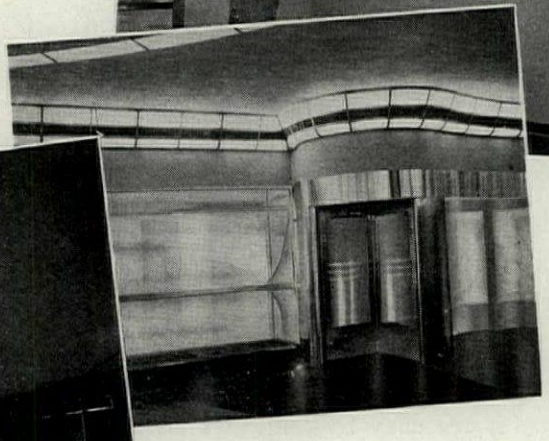
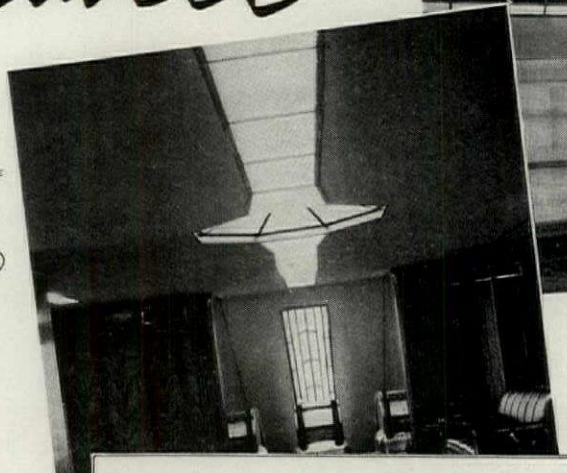
ALCOA ® ALUMINUM 1888 1948 60 YEARS OF SERVICE

A GREAT ADVANCE IN FLUORESCENT LIGHTING COUPLED WITH *A Great Name* IN LIGHTING

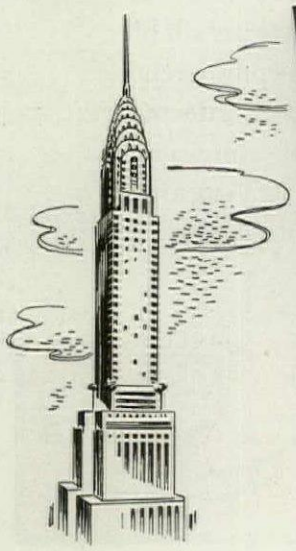
More light intensity than ever before attempted for commercial use. Brilliantly executed designs in Caldwell Fluorescent Lighting Fixtures as new as the cars on display. Here in the remodelled Chrysler Salon in the Chrysler Building, New York, are exemplified the quality and artistry of Caldwell craftsmanship — a name associated with fine lighting fixtures for more than 50 years.







Caldwell



EDWD. F. CALDWELL & CO., INC.
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Rodney McCay Morgan Photos

GRANDSTAND

GEORGIA SCHOOL OF TECHNOLOGY, ATLANTA, GEORGIA

BUSH-BROWN & GAILEY
Architects

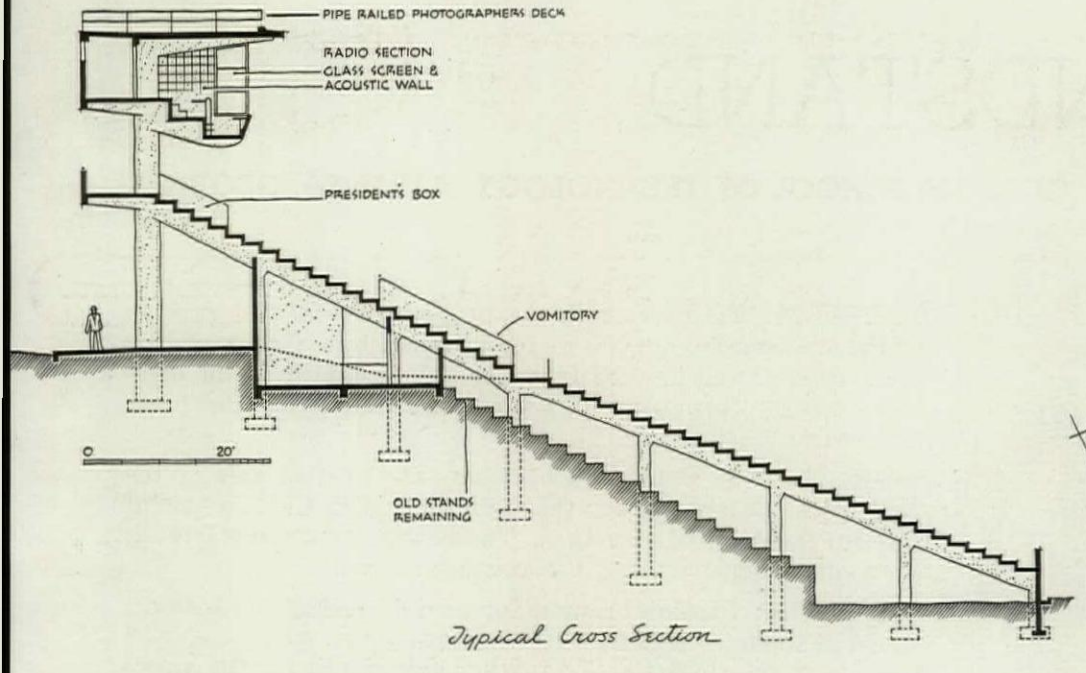
P. M. HEFFERNAN
& R. L. AECK
Associate Architects

J. J. POLLARD
Structural Engineer

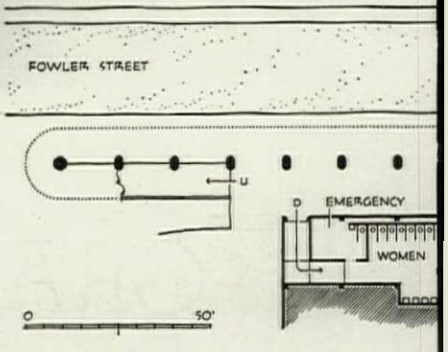
PROBLEM: To increase the seating capacity of this portion of the stadium from 6,000 to 16,000 spectators (by extending both outward and upward from the area occupied by the original seating); provision of a protected section for the press and radio.

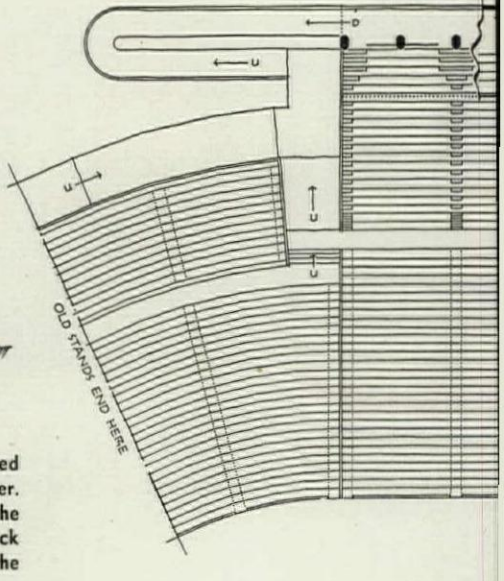
SITE: Existing slope with bleachers at the west side of the field, with a street at rear that was flush with the top row of seats of the original structure. The new grandstand was built over, and independent of, the existing stands.

SOLUTION: Seating brought forward 40 feet at the bottom; street at top narrowed by 12 feet; seating carried up about 18 feet above the sidewalk. To further gain depth for the structure, the stadium was cantilevered over the sidewalk, this in turn helping counteract the forward cantilever of the press-radio box, supported at the upper level on a single row of columns; the whole scheme worked out in a forthright expression of reinforced concrete.



Typical Cross Section





PLANS. Spaces beneath the grandstand (adjoining the street-level concourse) are variously assigned to concession areas and toilet rooms. Five vomitories lead from this concourse into the stadium proper. Depending on location of seats, crowds are either deployed through the vomitories (for seats in the lower portion of the grandstand) or led via the switchback ramps at the ends up to an outside deck corridor at the rear (for seats in the upper area). Stairs from this cantilevered corridor lead up to the radio-press box balcony, from which, in turn, stairs provide access to the top deck.

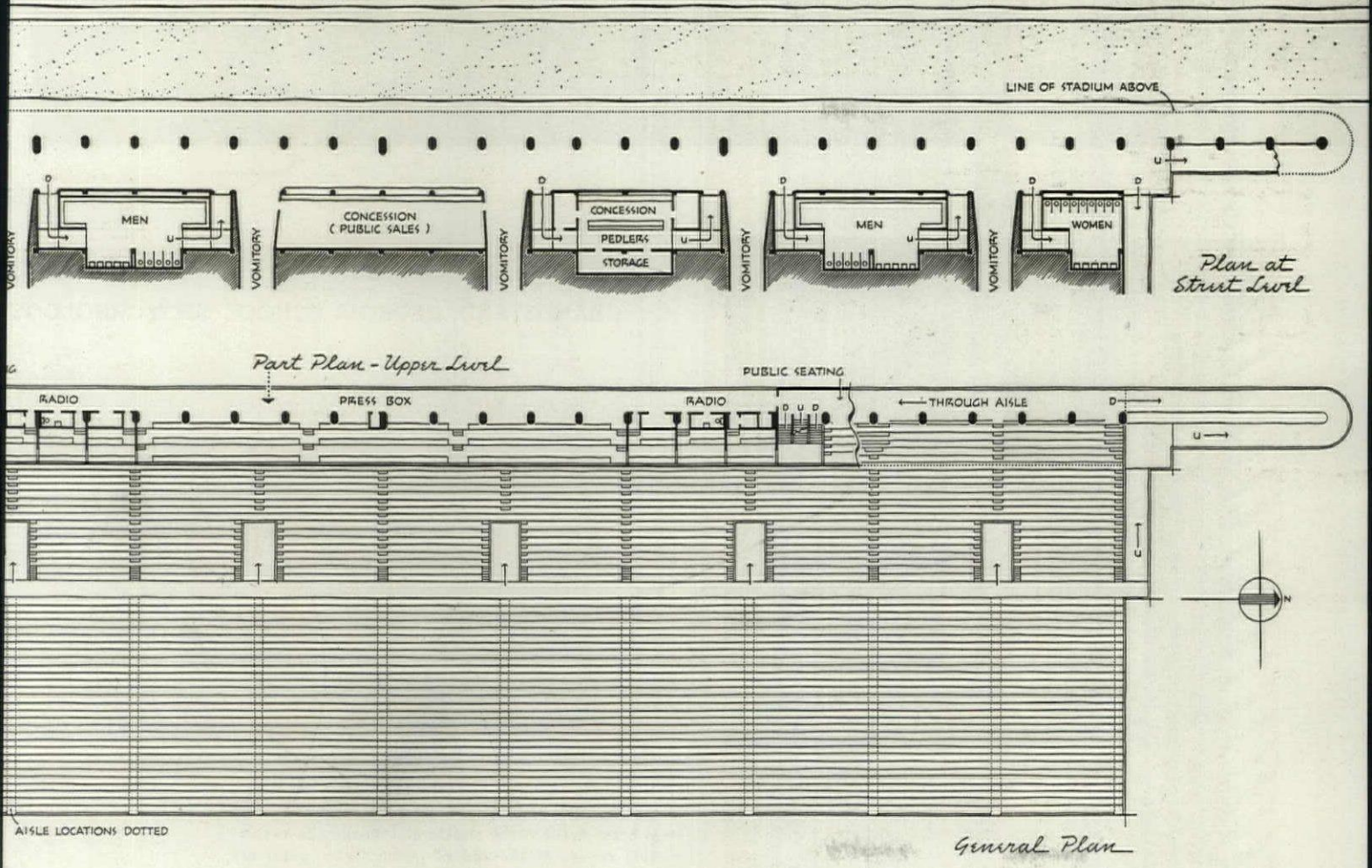
GRANDSTAND
GEORGIA SCHOOL OF TECHNOLOGY

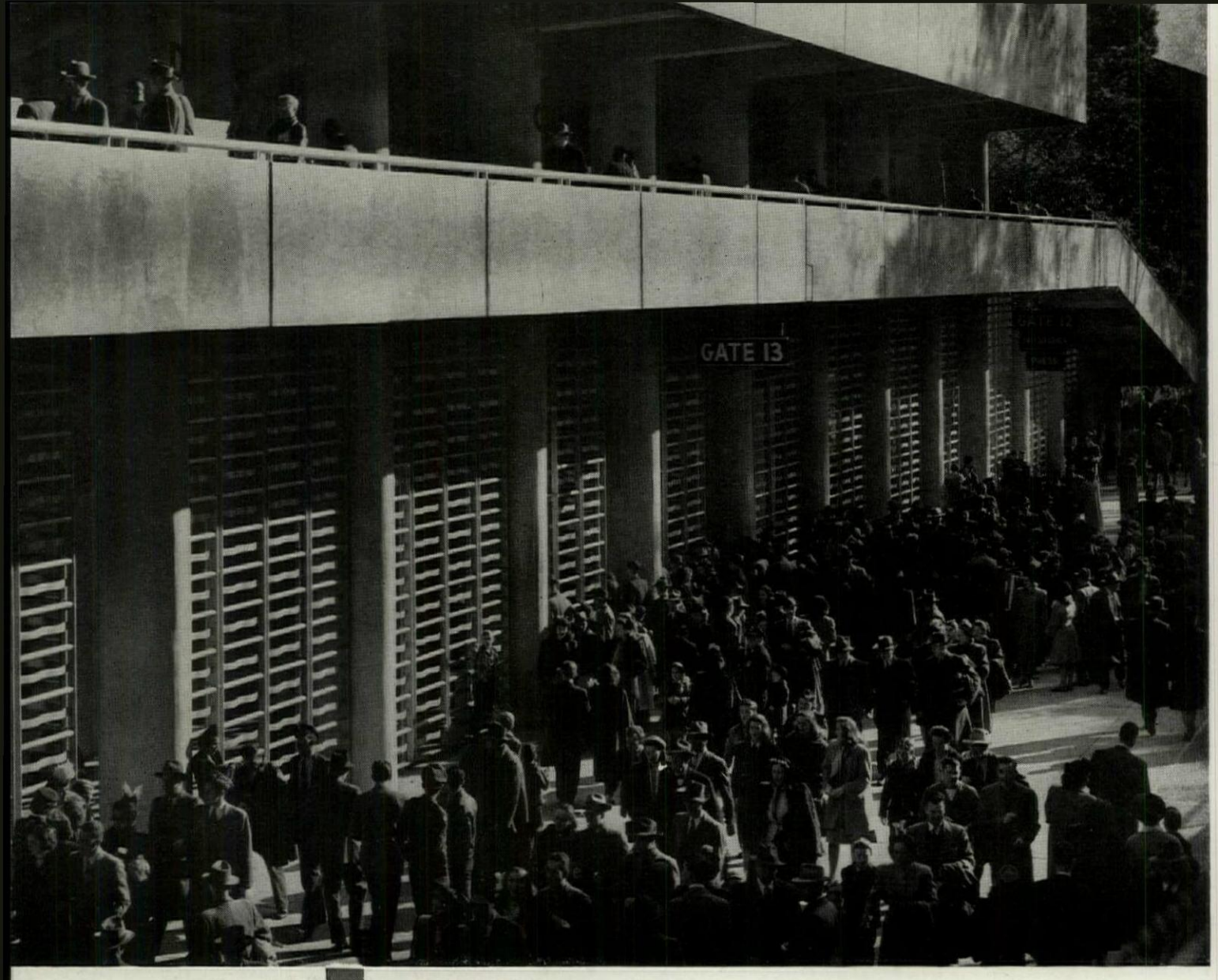
BUSH-BROWN & GAILEY, Architects

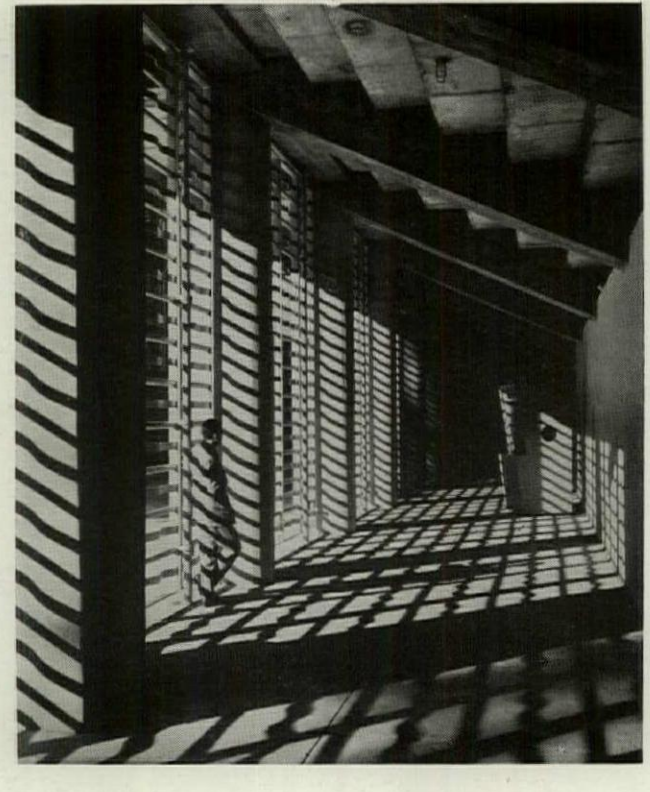
P. M. HEFFERNAN & R. L. AECK
Associate Architects

J. J. POLLARD, Structural Engineer

ENTRANCES FROM THE STREET serve curved ramps at either end of the grandstand leading to the upper level, and also lead to the street-level vomitories opening out to a point about halfway up in the stands. The flat-top deck is for photographers' use; the three reinforced concrete masts support batteries of floodlights for night events. Eventually, bridges across the street will join the upper level of the stands directly with the college campus.







GRANDSTAND, GEORGIA SCHOOL OF TECHNOLOGY

BUSH-BROWN & GAILEY, Architects

P. M. HEFFERNAN & R. L. AECK, Associate Architects

J. J. POLLARD, Structural Engineer

CONCOURSE. Exterior and interior views of the street-level concourse. Full-height gates of pipe and strap steel occur between the structural columns. To accommodate crowds at the end of games, these gates are thrown open, while at arrival time they are kept closed to simplify the process of ticket-taking and routing.

Mr. Bush-Brown tells us that "while all members of the firm and others naturally had a hand in the design of the grandstand, those most responsible were R. L. Aeck, P. M. Heffernan, and J. J. Pollard."

Richard L. Aeck's experience includes work with a design firm in Bogota, Colombia; general practice in Atlanta; post as District Architect for Pan American Airways in Recife, Brasil; association with Bush-Brown, Gailey & Heffernan; and, finally, establishment of the firm of Aeck Associates in Atlanta.

R. McC. Morgan

AECK

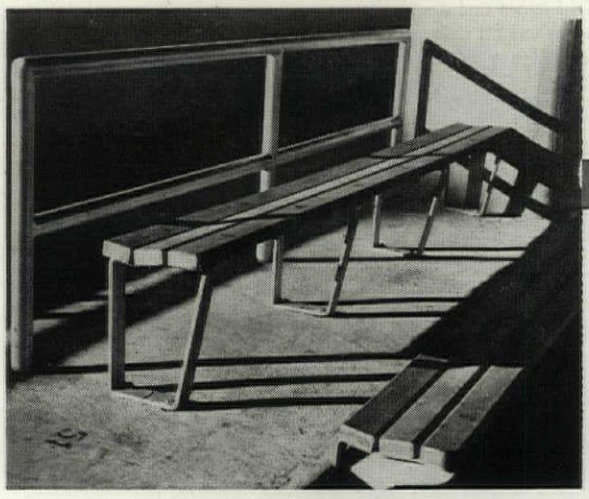
HEFFERNAN

University Studio

POLLARD

Paul M. Heffernan has been teaching since 1938 at the Georgia School of Technology and is now professor in charge of architectural design. Private practice has included work with architects in Ames, Iowa, and Atlanta. Associated since 1943 with Bush-Brown & Gailey in the development program for the Georgia School of Technology, he is now a member of the firm of Bush-Brown, Gailey & Heffernan.

James J. Pollard holds degrees and professional registration in both architecture and civil engineering. He has taught mechanical engineering at Tulane University and architecture at the Georgia School of Technology and currently is professor of architectural engineering at the University of Texas, and chairman of the University's newly formed Department of Architectural Engineering.



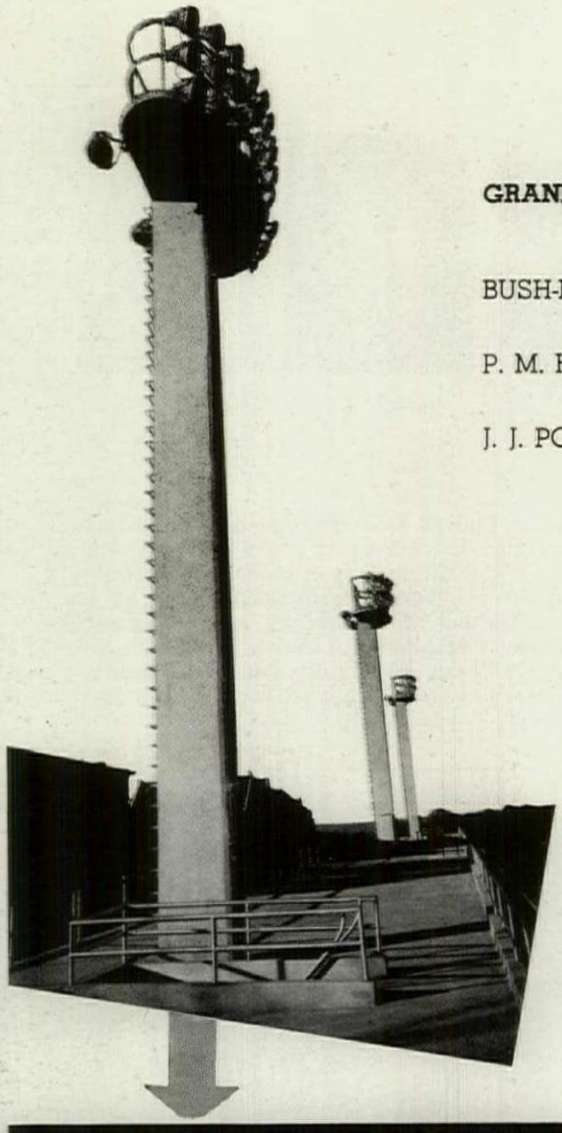
SEATING. Carefully rationalized seating consists of open wood strips (3 cypress 2 x 4's) resting on metal brackets secured to the riser, except in the case of the top row (photo above) where tread-type supports are used. Desirable by-products of this scheme: easy cleaning; all rows same width; curved and tilted top surface provides form-fitting seat; tilting also drains off rain water, retarding deterioration, which is further avoided by attachment of wood strips from beneath instead of from above. This also eliminates tearing of clothes on screw heads. The form ties used for construction of treads and risers serve to anchor seat supports; number of each seat is branded into the front 2 x 4.

GRANDSTAND, GEORGIA SCHOOL OF TECHNOLOGY

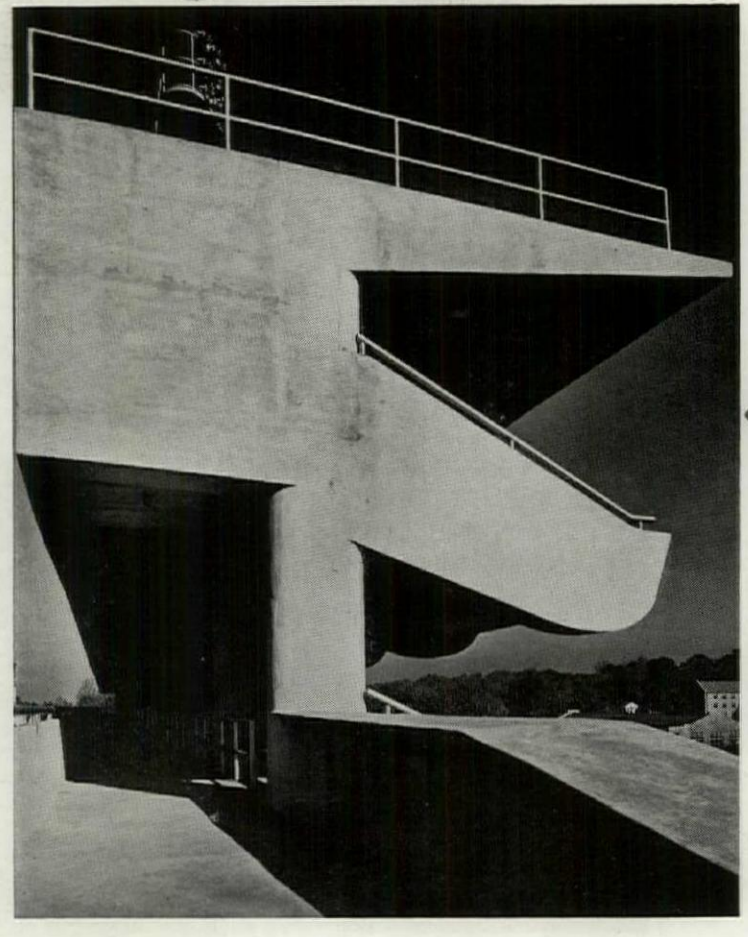
BUSH-BROWN & GAILEY, Architects

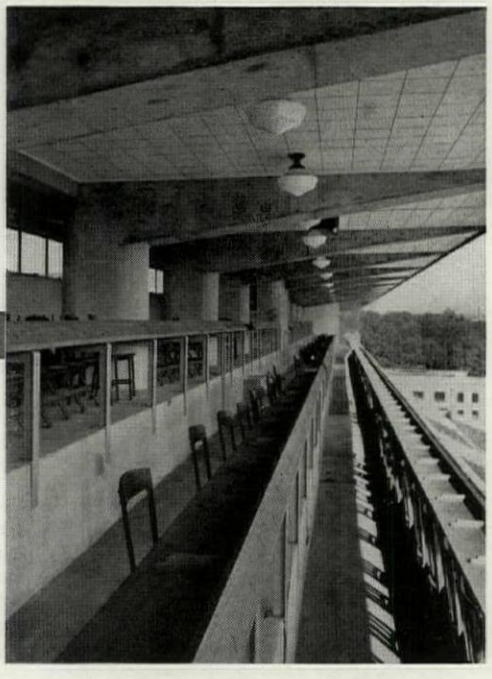
P. M. HEFFERNAN & R. L. AECK, Associate Architects

J. J. POLLARD, Structural Engineer



THE FLAT-TOP DECK extending the full length of the grandstand provides both access to the light masts and an excellent perch for photographers for catching shots of plays from almost any angle.





THE OPEN-FRONT PRESS BOX section of the superstructure. The soffit is lined with acoustical material; in the case of the six radio rooms, acoustical surfacing is used on the rear and two side walls as well.

F. Bariotti Photos (except on page 54)

STADIUM, TURIN, ITALY

RAFFAELLO FAGNONI, Architect

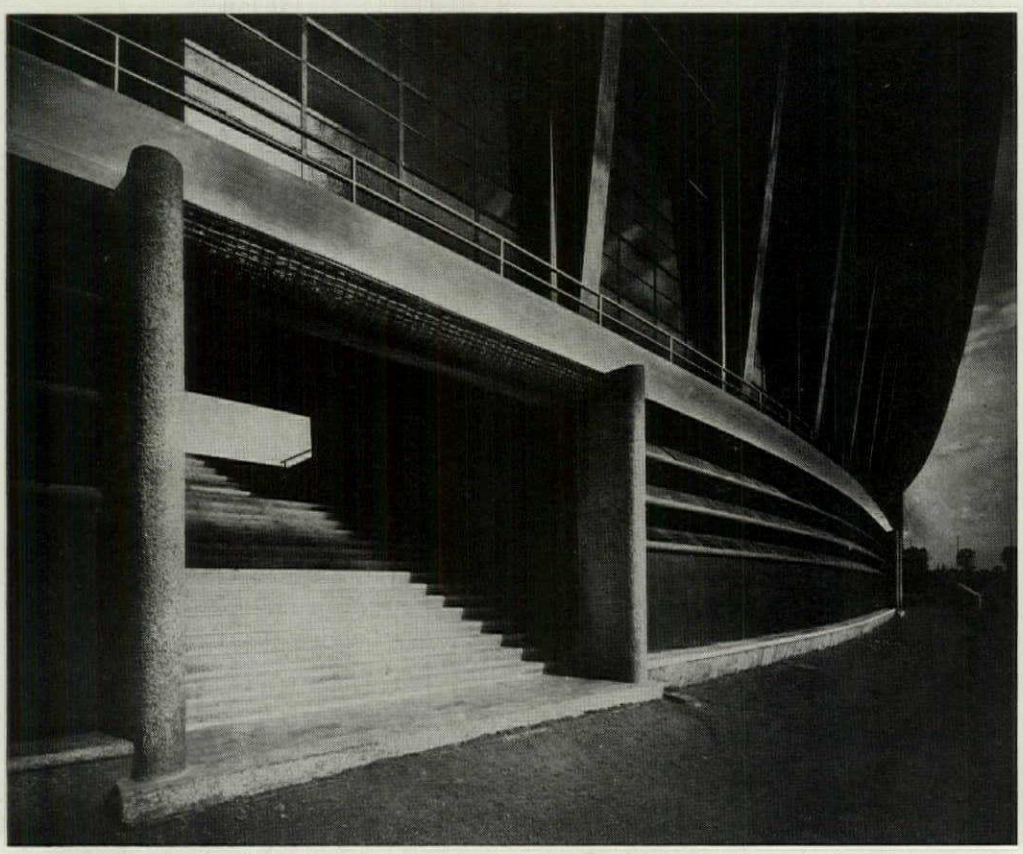
Most of the buildings built during the fascist regime were chiefly notable for their ideological symbolism and pomposity. Here and there among them, however, the architect managed to produce progressive work in spite of the outrageous sponsorship behind it. We believe the Turin Stadium is one such exception. On at least three counts, this huge arena makes useful contributions to design progress: as a good working solution to the common problem of accommodating crowds who come to witness outdoor sports events, in the skillful use of reinforced concrete, and in final design concept.

THE EDITORS

THE ELLIPTICAL BOWL completely surrounds the field. Twenty main entrances feed into a mid-level aisle on the field side and thus, via stairs, either up or down to the tiers of seats.

STADIUM, TURIN, ITALY

RAFFAELLO FAGNONI, Architect



ONE OF THE 20 ENTRANCES leading into the stadium.

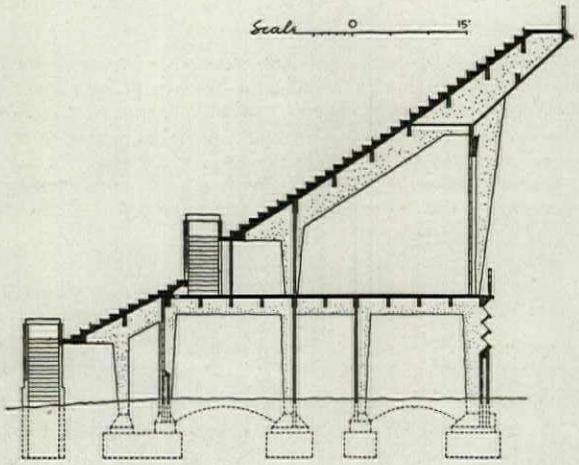
VIEW FROM UNDER THE CANTILEVERED CANOPY of the grandstand. In addition to a football field, the grounds include a six-track course for track events; two long-jumping units; four areas for high jumping and pole vaulting. The stadium seats 45,000 persons.

THE GROUND FLOOR, opening out to the field level directly, includes dressing and locker rooms. At the second level (underneath the lower portion of the seating) are various large rooms for reunions, exhibitions, office space, etc.

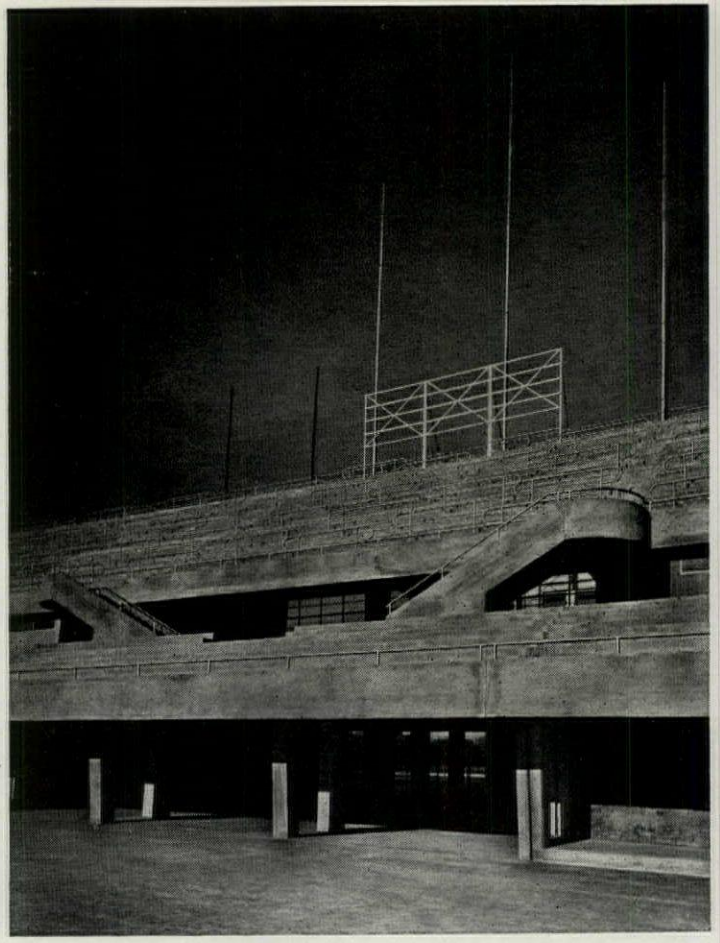
Pairs of columns occur beneath the outer edge of the great cantilevered roof, which is flush with the soffits of exposed concrete girders. Underneath the canopy is seating for 5,000 spectators.

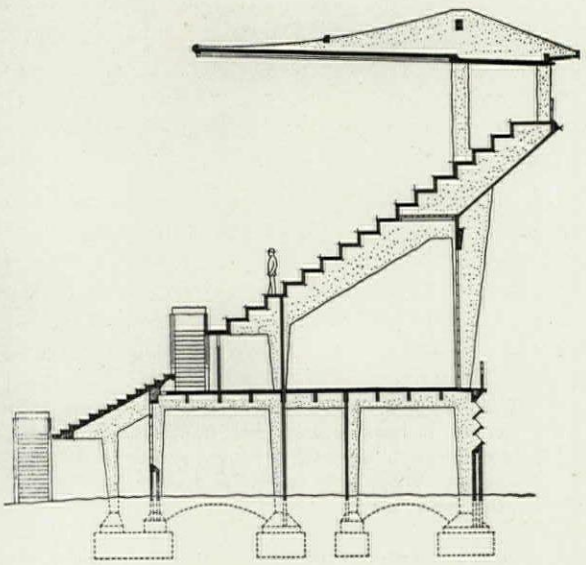
STADIUM, TURIN, ITALY

RAFFAELLO FAGNONI, Architect



TYPICAL SECTION through bleachers, showing slope of seating and location of horizontal traffic aisle leading to both upper and lower stands.





SECTION THROUGH GRANDSTAND AREA

THE ARCHITECT AND CITY PLANNING

y HENRY S. CHURCHILL

PROGRESSIVE ARCHITECTURE is proud to publish Mr. Churchill's stirring analysis of the responsibilities—and opportunities—facing the practitioner in the field of architectural urbanism. We predict that it will annoy those planners of the "City Statistical" as well as those dreamers of the "City Beautiful" who were upset at P/A's "Progress Report" in February, which hinted at these widening vistas which Churchill elaborates in the following article.

Henry Churchill, architect and city planner, is author of the book, "The City Is the People" (Reynal & Hitchcock, Inc., New York, 1945), is an active member of the A.I.A. (serving as the Atlantic Area Vice-Chairman of the Committee on Urban Planning) as well as several planning organizations, and is a partner in the firm of Churchill-Fulmer Associates. He has been consultant to the FPHA and to the Division of Housing of the State of New York.

n the last few years I have spent a good deal of my ime in the practice of what is today called "city lanning." As an architect, I am neither amused nor dified.

n the few brief years that a separate profession of ity planning has arisen it has already adopted a ut-and-dried technique and become a process of diag- osis without imagination. Like psychology and soci- logy it is full of hocus-pocus such as the substitution f six-syllable words for the shorter ones used by ommonfolk to say the same things.

Much of this, I think, is due to the prevailing business elief in the power of statistics. Give your average usinessman a set of statistical tables and he thinks ou've proved something. Give him a graph and he is onvinced. The current technique of city planning is lmost wholly one of charts, tables, maps, inhabited y a two-dimensional being called the statistical aver- ge. The objective is to show how the city can be nade sound financially, how its growth can be planned ccording to the dictates of present-day real estate nd fiscal practice. These are worthy objectives, and re a necessary part of the day-to-day work of plan- ing commissions, budget commissions, and city coun- ils. One must consider the bread of cities, but one nust not forget that cities are built of stone. It is the tones we as architects must be concerned with, for ddly enough, the stones of the city are the bread of ts spirit. So that to the very necessary work of the tatistician, the economist, and the doctorer-upper nust be joined the concepts of the architect, to give o the whole the human values and the integration of orm that make a city more than a place in which to reed and earn a living.

To take part in the planning of cities is to return the rt of architecture to its old scope and to return the lanning of cities to its old dignity as an art. It is a mistake to think that the task of the architect today s more complex, more arduous, more hedged about y the practical than it was in ancient days. Rome truly was not built in one day, nor from the neat engravings of any one Pontifex Maximus, master builder, or favorite papal architect. It is interesting to read of the difficulties that beset Domenico Fontana, one of the greatest urban architects of the Renaissance. Although a favorite of powerful Popes, the contemporary slum landlords fought his clearance schemes, persuaded the city fathers to refuse funds, and made every effort to block his plans. Da Vinci was commissioned to replan Milan, but nothing was done. On the other hand, partial schemes and new towns succeeded, such as the Capitoline, Fontana's approach to Vatican City, the town of Palma Nuova, the consolidation and rebuilding of the suburbs of Nancy, and many others.

So that then as now the architect, and above all the urban architect, had to be a fighter for the principles of his art against those who could see nothing but the immediate, who hated change, and who confused the practical with the dull. The architect has never been free in his art, as the painter is free to take canvas and paint, or the writer to scribble at will. Architecture has always been limited by the most severe conditions of use and cost. Yet as an art it must transcend these limitations, or it is not an art at all; only a trade, and not a very profitable one.

In this plea for the rededication of the architect to the service of beauty and imagination I am not talking about the specious efforts at city planning that went by the name of the "City Beautiful." That movement of the early century was, like the then contemporary architecture, based on the fallacies of eclecticism. It was pompous and slightly ridiculous, and it failed because it had no real relation either to civic needs or to human purposes. It was, in its way, as incomplete as the statistical planning of today. There was no truth in the City Beautiful, and there is no beauty in the City Statistical. Truth and Beauty, as Keats and Alfred North Whitehead have pointed out, are inseparable and indistinguishable. Since they are based on the reality of the present, neither is absolute nor changeless; both are relative, dynamic, and contemporary.

Our cities today are obsolete, and the physical evidence is hardening of the traffic arteries. There are many other symptoms, well known to all of you. The cause is the impact on their structure of the remarkable technological changes in communications, manufacturing, and medicine. Behind these is the basic revolution in science, particularly in chemistry, electronics, and nuclear physics. The problem is how to

reconcile these forces with antique finance, reactionary law, and uncomprehending administration. It is almost a case of the irresistible force meeting the immovable body. Fortunately, the body politic is not quite immovable.

To my way of thinking, the architect should not be too concerned with how these forces are resolved. He can well leave that task to others—to the politicians, the economists, the dabblers in the social sciences. The architect, dealing with the physical and the human, can make clear what the *form* of the new city must be. He deals in space, structure, people, the relations of things as three-dimensional order.

THE ARCHITECT'S BROADER VISION

I know, of course, that economics is the foundation of sound city planning, that potential employment, future population, and all the rest are necessary guides and limitations. I know too that politics is always with us, and that compromise is the way to accomplishment if not to honor. My point is that while these things are indeed a part of city planning, they are not all of it: that, as a matter of fact, some very fine city planning was done by architects long before logarithmic paper and the method of least squares were even a gleam in a statistician's eye. So these working data need not worry the architect too much, and while he accepts them as part of the program, he has other things to think about.

These other things may range from a practical solution of our immediate problem to great schemes and dreams, depending on the man and the opportunity. Sometimes the two combine, as in the problem of parking, the number one problem of every city. For instance, it has been seriously proposed and even legislated that every building shall provide its own parking and unloading facilities within itself or on the same lot. Apply that to downtown Cleveland, or to any "downtown." There would be curb cuts every hundred feet, at least, to enable cars to roll in and out of the stream of heavy traffic in the street, across heavy pedestrian travel. Is that a remedy or a confusion? I do not even bring up the economics involved in such a proposal, for a moment's thought will show that this is not an economic question at all. It is one of sound sense in the physical relations of moving objects, and the structures that surround the space in which they move, and the purpose of their movement.

Within this frame lies a variety of solutions for the urban architect. Any solution must be on the grand scale, for it affects and is affected by all phases of city planning. A proper solution will open new patterns and new visions for the arrangement of streets, open spaces, and buildings. In the architect's thinking economics needs to be only a secondary consideration for the simple reason that the eventual acceptance of any real solution will be forced by the pressure of economic necessity. That is to say, in our major cities at least, the cost of a real solution is bound to be less than the cost of the continued losses entailed in no solution. The sums spent for expressways is an example of what I mean. The money they cost is fantastic, yet we spend it willingly to move traffic swiftly from city to city, without fully realizing that unless adequate terminal facilities are provided, they really make no sense. Sooner or later our cities have *got* to open up, regardless of shortsighted real estate obstructionism.

NEW CITIES—NEW OPPORTUNITIES

Besides the architectural opportunities in replanning and in rebuilding our cities, there will be even greater ones in planning new cities. Decentralization, or as some prefer to call it, *recentralization*, is no longer a theory but a fact. The overconcentration and supercongestion that culminated in the peak of the late twenties are now definitely on the decline. The movement out from the center is no longer merely one of the well-to-do to the suburbs. It is now a genuine process of forming new nuclei in the metropolitan areas. Industry, labor, and retail commerce are seeking room for expansion and better living. Industry after industry has found that the one-story factory is the most efficient to operate, and this to an extent that makes it profitable to scrap seemingly perfectly good multistory plants. The operational savings pay for the change in a few years. Moreover, the benefits extend beyond the efficiency of the process of manufacturing. Shipping costs are cut because of easier truck access; the parking problem for employees and visitors is solved. Labor is better satisfied because it is better housed, because it is possible to raise families decently, in decent surroundings. Taxes are lower, too.

The continuation of this draining off of industry and population will, of course, have serious economic effects on the old cities. However, it is not the economics that I wish to emphasize, except to point out that the worse off those cities become, the greater the necessity for replanning them and also, in some ways, the easier it will be. My point is that not since the development of the cannon into an effective weapon during the late fifteenth and early sixteenth centuries has there been such an opportunity for the urban architect. At that time too, there was a remarkable increase in the number of new towns, for military and economic reasons. The new explosives required wholly new patterns for defense, and the period saw the rise of the military engineer, the specialist in defensive fortifications. He was an offshoot of the architect just as the "city planner" is today. The rise of mercantilism and the widening of the world's horizons to the Americas, the influx of gold which made a monetary system possible, and the revolutionary shift from feudalism to imperialism were forces making for the founding of new towns throughout Western Europe.

Much of this is at least analagous to conditions today.

There are other interesting parallels. Old and established cities deteriorated. The great Hanseatic cities withered. Venice became a hollow shell; in the course of a hundred years or so the vast Spanish Empire shriveled away as English power swelled.

Nearly all the new towns were planned; they did not just grow. Since they had to be fortified, they were strictly limited as to size. There were various types of towns—military, commercial, even religious; some were conservative in plan, some were experimental. A vast amount of theory was developed along both military and esthetic lines, and a lot of books were written expounding these theories. There were as many land-grabbing schemes then as now, and the authorities passed endless laws to control them. Presumably they did as little good as similar laws do today.

Most of these towns have been ruined by nineteenth century industrialism. We have now before us the possibility of creating new industrial towns for our time as handsome architecturally as these were in theirs. For note well that similar general forces are again at work; a change from an oligarchic industrialism to a more democratic economy; a widening of international relations; enormous technological developments; a vast shift in the balance of trade power and routes, with the accompanying fall and rise of states; a wholly new military weapon.

As to this last, it is unpopular, or at least unfashionable, to talk about the atomic bomb. I doubt the wisdom of this ostrich-like attitude. If it is true for the moment that there is no actual defense against the bomb, still its effects can be to some extent mitigated. Dispersion is one method, and it ties in with the pressure for dispersion for other reasons I have already spoken of. Another method might be by division of cities into cells or units enclosed by bomb- and blast-proof concrete structures or walls. Such a device would permit the sacrifice of one cell in order to save the others. It would really mean the revival of the old walled city, a curious reversion, to say the least. Or the limited-size greenbelt may be part of the answer. I am sure there will be as many books and theories and plans for these towns of the atomic age as there were for the towns of the age of gunpowder.* As architects, we are bound to contribute to the thinking on this; we cannot, as intelligent professionals, leave it to the wholly destructive military mind. Or to the improvisation, inadequate and desperate, of war.

PLANNING TOWARD NEW HORIZONS

Some of my friends have said, "How can you talk that way? We must plan for peace and not even think about the bomb, because if we are to have another war there is no use of planning anything at all." I cannot agree, for I have little faith in the pacific instincts of the alleged human race. I think we will have more wars. On the other hand, I have great faith in the biological will to survive. We have created a force of vast destructive power: I was about to say of *incalculable* destructive power, and then I remembered that that is just what it is not, and that therein is the saving grace. For the atomic bomb is a *calculated* release of atomic power; it is unlimited power calculated and controlled. That is the great achievement for the human race. The bomb is but an incident.

The scientists have enlarged our physical horizons almost unbelievably. It is the function of the arts to enlarge our spiritual horizons. It is the art of architecture that does this in three dimensions, for all to see all the time, not just when they open a book, or sit down to listen to music, or pause to look at painting or sculpture. Architecture, *urban* architecture, is our environment and cannot be escaped. It affects, subconsciously, even those who are the least aware of it.

The manifestation of that subconscious effect is what is called civic pride. Go to any city, town, or village and the citizen will say to you, the stranger, "You must see our Court House," or a new bridge, or beautiful street of fine residences, or what not. Something somewhere in his environment gives him satisfaction, pride. It is beautiful, it is unique to his town, it rejoices him. When this feeling extends to the whole city, or a large part of it, that is a triumph of architectural urbanism and not just city planning. The Acropolis, the Capitoline, the Place de la Concorde, the Chicago Lake Front come to mind; or a quiet street in a town, or the chimneys of industry above the long lines of railroad tracks.

As we build and rebuild we must weld together the new elements of our time: the parking place instead of the market square; the expressway and its appurtenances—overpasses, clover-leaves, traffic signs, gas stations; the factory and its surroundings and approaches. They must be put to the service of the new needs for people; for these of course are changing, or perhaps it is better to say their desires and the possibilities of fulfillment are changing. And I venture to think that if we will provide these things as we should, in harmonious space relations, adequately planned for the sites of beautiful structures, the whole of architecture will rise to new heights and new dignity. For what is so depressing as to design a building that is smothered by its surroundings, or that has only a front, facade architecture as it is so largely practiced today? On the other hand, a fine setting is an inspiration for a fine building, for every structure that can be well seen becomes a task for care and thought and beauty.

So that in our old cities and in those yet unbuilt we can have great new and exciting vistas, if only we have the imagination. We need not fear that we will depart too far from reality. William Blake has said, "Everything possible to be believed is an image of truth." As long as we deal with people and things we cannot go far astray, although we may not be able to build all that we can believe in and hope for.

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* See *The Problem of Reducing Vulnerability to Atomic Bombs*, Ansley J. Coale, Princeton University Press, 1947.

FOUR SCHOOLS

PA Critique

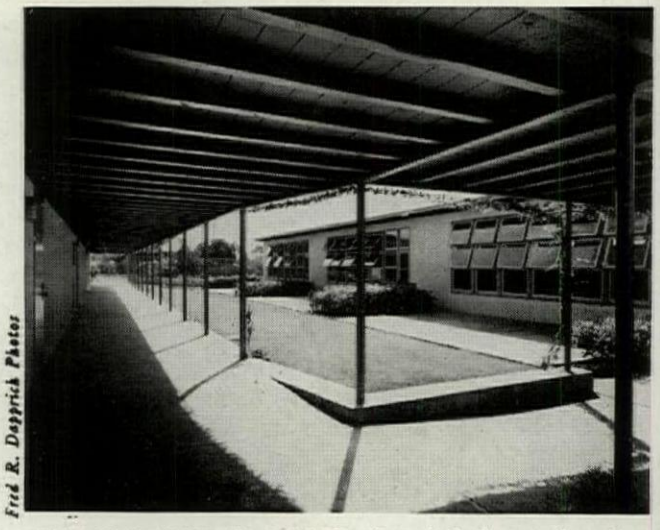
If we accept the definition of architecture as nothing less than the control of the physical environment to assist human beings toward the most fruitful and interesting lives possible, the school at once assumes enormous importance. For these space-enclosing shapes that we call schools become, in fact, the molds within which thought and habit patterns of future generations of adults are constantly being developed.

WHAT is taught is, of course, of fundamental concern. But the architect has no greater influence on this aspect of the educational problem than any other curious citizen. No alchemist—or piece of architecture—can change a retrogressive teaching program into a stimulating, forward-looking activity. On the other hand, a well planned school, properly lighted and sensibly constructed, can assist a progressive program both measurably and immeasurably. For instance, if a good level of light is provided at desk height at all times, each child is enabled to approach his studies in a beneficial atmosphere; and this light level is a measurable thing. Current lighting practice recommends a meter reading of 30 foot-candles. There are dozens of other such performance factors that can be accurately predetermined. What cannot be precisely measured is the ultimate effect of good school architecture on the child—how his outlook on life and contribution thereto are affected. Much can be inferred or assumed, however. And it would be a cynic indeed who would argue for provision of less good conditions than we know to be possible, within the allowable budget.

In this month's Critique, we present four schools of widely varying types—a kindergarten-primary unit, an elementary school, a high school, and a senior high and trade school—in widely separated locations—Washington, California, Georgia, and Massachusetts. While none of these is a perfect performance, each, in numerous ways, sets worth-while goals to aim at.

In our consideration and criticism of these four projects, we have been greatly assisted by the advice and questions of two serious students of the school problem —Walter H. Kilham, Jr., architect, of the firm of O'Connor & Kilham; and Kenneth H. Bailey, architect-researcher-teacher, who has recently worked at Columbia's Teachers College on a project survey of this country's rural schools that includes planning recommendations to local school boards. Their comments and ours were relayed to the four architectural firms whose work is shown here for clarification or rebuttal.

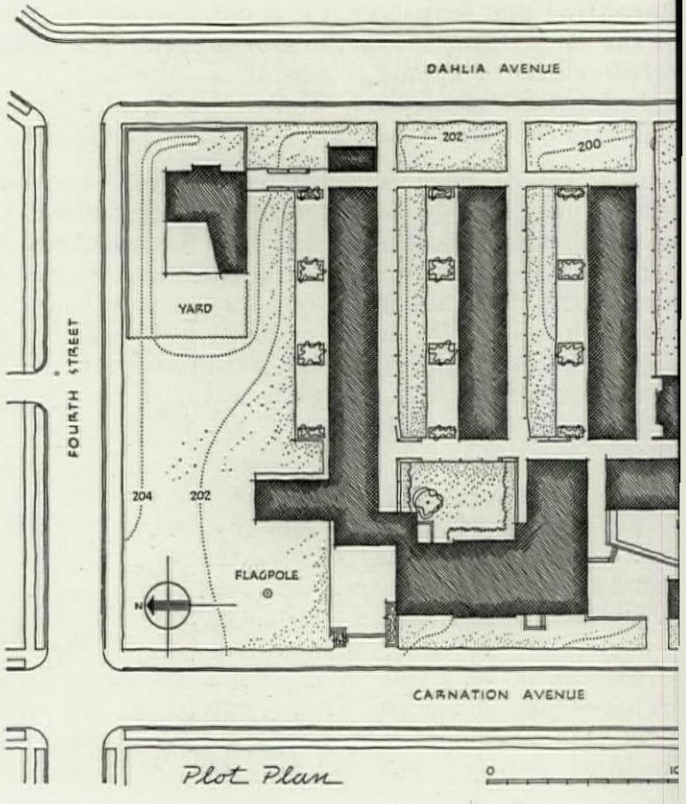
The Editors



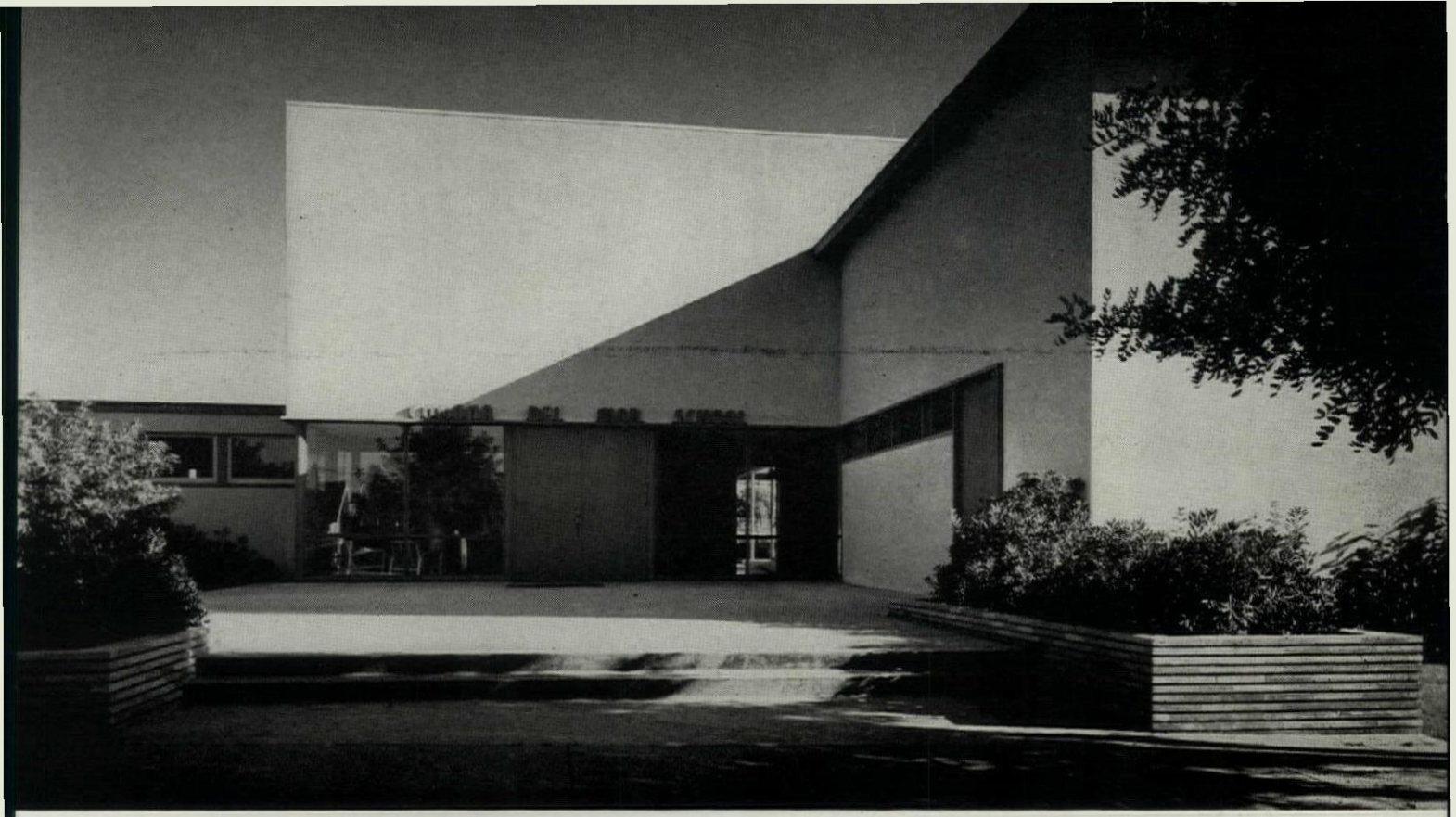
Fred R. Dapprich Photos

REGARDING NOISE IN COURTS, the principal says that since playing is not allowed here, there is no disturbing noise. Width is 39'-8"; commonly accepted width in California is 35'.

1 ELEMENTARY



Plot Plan



SCHOOL, CORONA DEL MAR, CALIFORNIA

MARSH, SMITH & POWELL, Architects

PROBLEM: An elementary school to serve a beach community. Budget required an economical construction system and functions of auditorium and cafeteria combined.

SITE: Four-acre site made up of two neighboring blocks with the street between closed—a slope of 15 feet from the north to the southwest; the school located on the upper portion.

MAIN POINTS ADMIRED: Finger-type plan with open corridors; standard orientation of classrooms; cross light and ventilation by means of clerestory strip above corridors; carefully worked out planting scheme; apart, but related, kindergarten unit, with its own play space.

CHIEF QUESTIONS: Isn't much time consumed in shifting from cafeteria to auditorium? Doesn't handling of dirty dishes require crossing incoming traffic path? Is foyer space adequate for handling crowds in bad weather? Does outdoor space between wings become noisy at times? Is stage adequate for play productions? How are lateness and truancy controlled in so spread-out a scheme?

CENTRAL COURTYARD—"cafetorium" in distance. In foreground is one of the two covered cross walks that lead past the classroom wings to the playground to the south. Planting is a notable feature of the scheme.

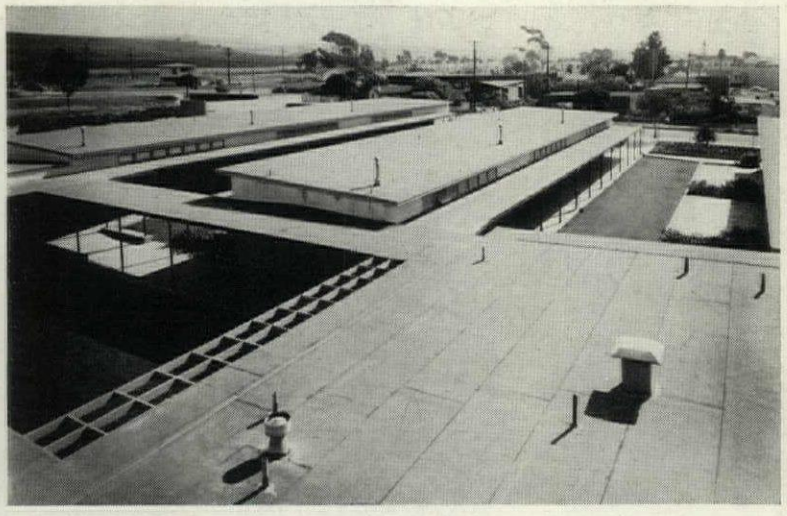
1 MAIN COURTYARD. Notice the outdoor drinking fountains at right, foreground.

1. ELEMENTARY SCHOOL, CORONA DEL MAR, CALIFORNIA

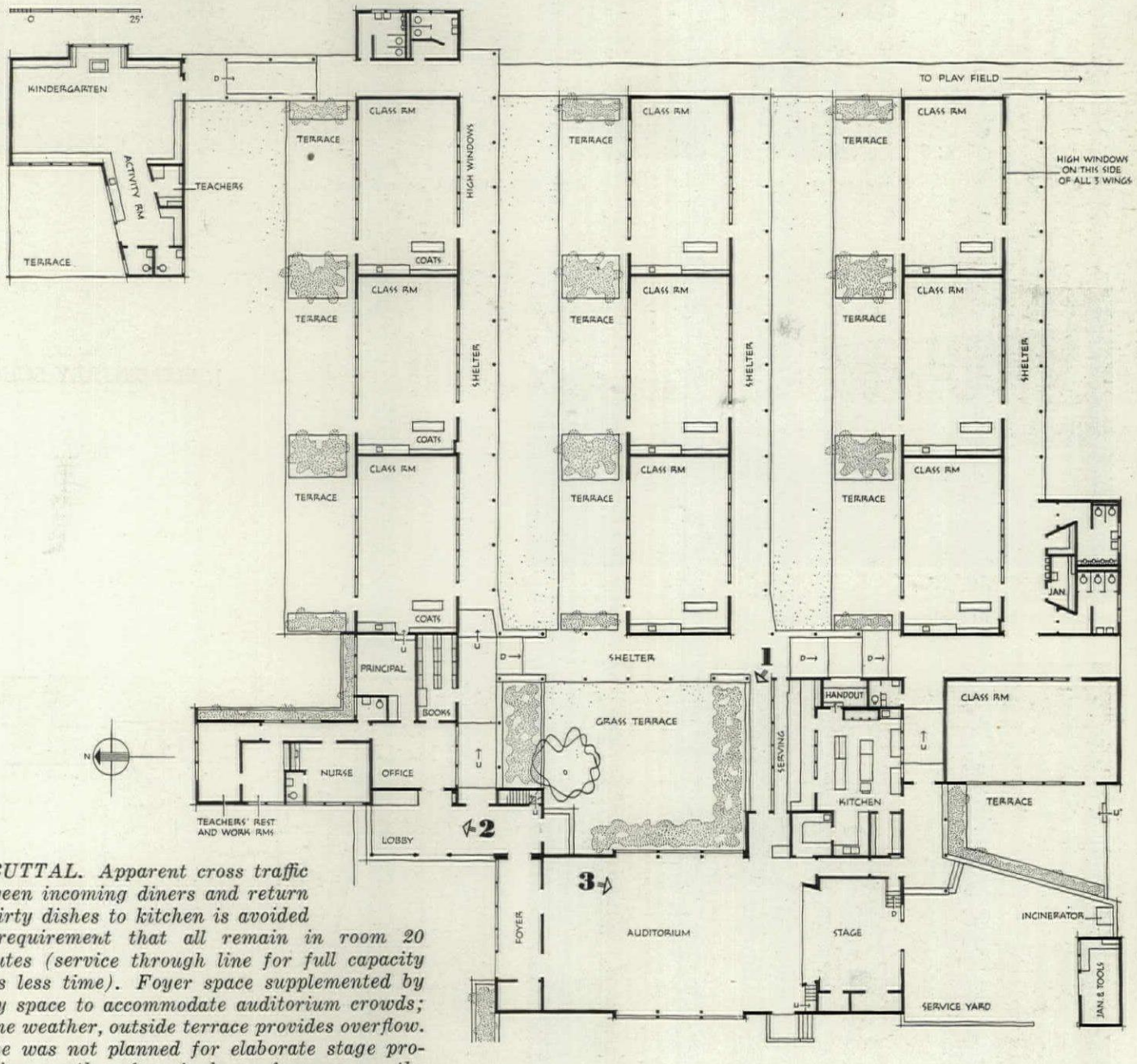
MARSH, SMITH & POWELL, Architect

2, 3 ENTRANCE LOBBY. Eventually, this room will be comfortably furnished as a reception lounge. Floor is asphalt tile.

AUDITORIUM. Time required to shift to cafeteria use: about 30 minutes. Light controlled by both blinds and draperies.



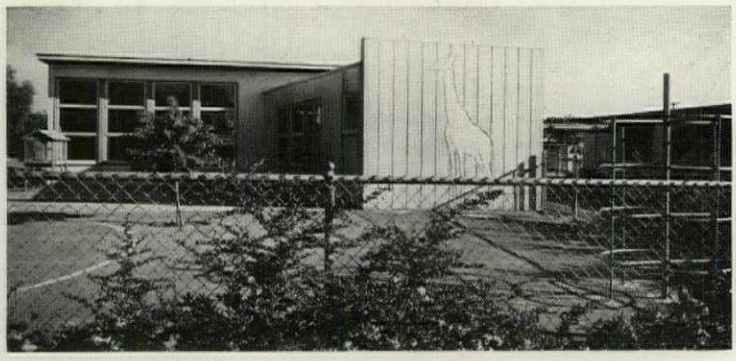
STRUCTURE. Building built on a concrete slab over 6-in. rock fill; walls are 6-in. stud; ceiling (roof) joists are 2" x 14" spanning the 24-ft. width of standard wings; to span "cafetorium," trussed steel joists are required. Some shear walls are wood sheathed, with ¾-in. material; diagonal sheathing on the roof acts as a diaphragm to resist lateral stresses. Exterior walls are finished in stucco.



REBUTTAL. Apparent cross traffic between incoming diners and return of dirty dishes to kitchen is avoided by requirement that all remain in room 20 minutes (service through line for full capacity takes less time). Foyer space supplemented by lobby space to accommodate auditorium crowds; in fine weather, outside terrace provides overflow. Stage was not planned for elaborate stage productions, rather for single performers, or the simplest playlets. Lateness and truancy are controlled by individual room teachers.

4, 5

TOILET BLOCK COVERED SHELTER (toward playfield)

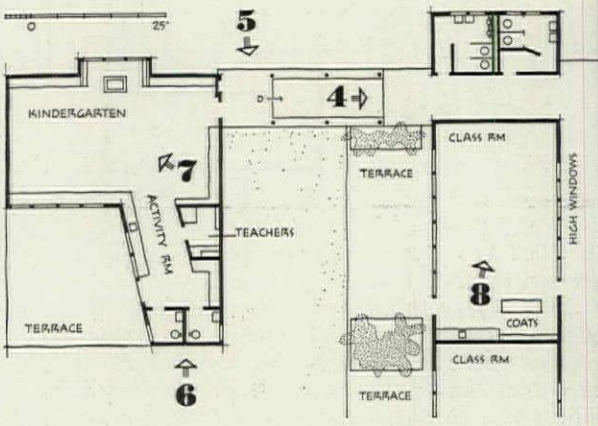


6

KINDERGARTEN. The giraffe on the end wall of the activity wing was executed in the fresh plaster by Merrell Gage.

7

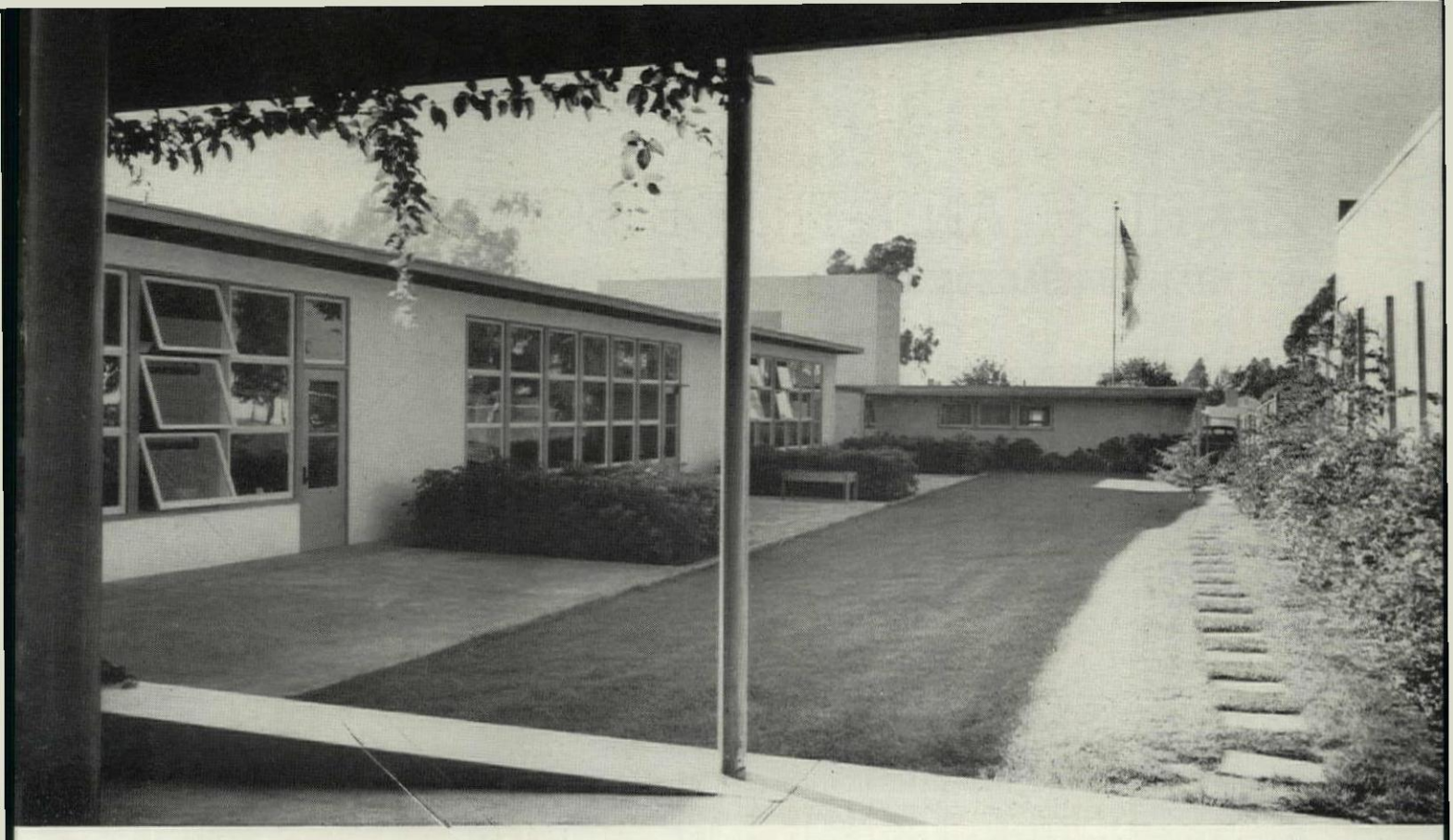
INTERIOR, showing pool with raised edge and child-scale equipment. The ceiling slopes from 10- to 11-foot height.



ONE OF THE COVERED WALKS leads to the kindergarten wing complete with its own fenced-in playyard. As in the classrooms the kindergarten is lighted by plastic-bowl fixtures, and the ceiling is finished with 16" x 32" tiles of fibrous acoustic material

1. ELEMENTARY SCHOO

MARSH, SMIT



CLASSROOM WING (outdoor classrooms) ADMINISTRATION KINDERGARTEN

ORONA DEL MAR, CALIFORNIA

POWELL, Architects

8

SROOMS are all bilaterally lighted, with big windowed areas facing north, indow strips on the south above the roof level of the covered walks outside. lt tile floor.

SMITH POWELL MORGRIDGE

Present members of the firm of Marsh, Smith & Powell are DAVID D. SMITH, HERBERT J. POWELL, and HOWARD H. MORGRIDGE. **Mr. Smith** is a Kentuckian, a graduate civil engineer (Stanford), a licensed architect and structural engineer, and former Commissioner of Building and Safety for the City of Los Angeles. His particular duties in the firm are structural design, specifications, and supervision.

Mr. Powell hails from Illinois, earned his master's degree in architecture at Harvard, worked in New York offices, instructed in architecture in U.S.C., is a licensed architect, and a Fellow of A.I.A., past president of the Southern California Chapter. Last year he served as president of the California State Board of Architectural Examiners. His chief duties are architectural design and supervision.

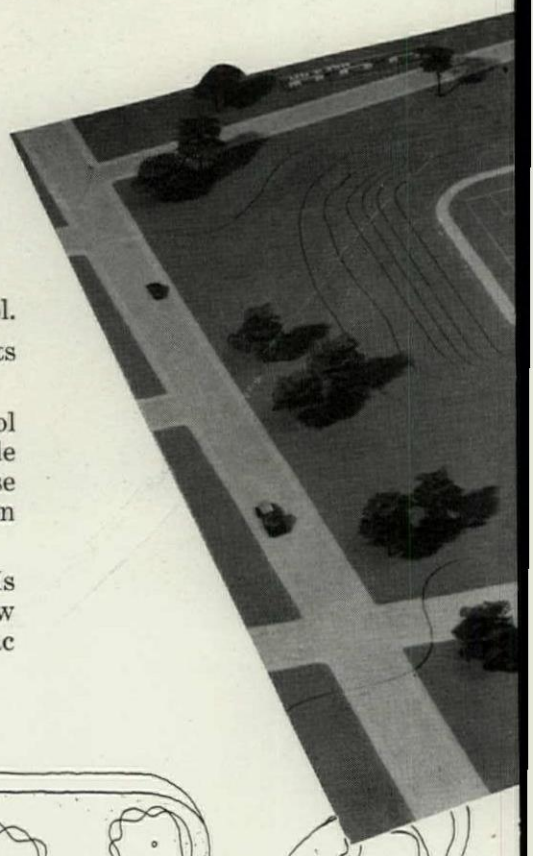
Mr. Morgridge, a native Californian, is the new member of the firm—received his architectural training at U.S.C., worked with two or three firms, including Marsh, Smith & Powell, before the war took him off for two years of service. During his college years, Mr. Morgridge did much free-lance delineation and served as cub draftsman for Van Pelt & Lind of Pasadena.

2 HIGH AND TRADE SCHOOL

WALTHAM, MASSACHUSETTS

THOMAS WORCESTER, INC., Engineers and Architects

EDWIN G. JOHNSON, Designer

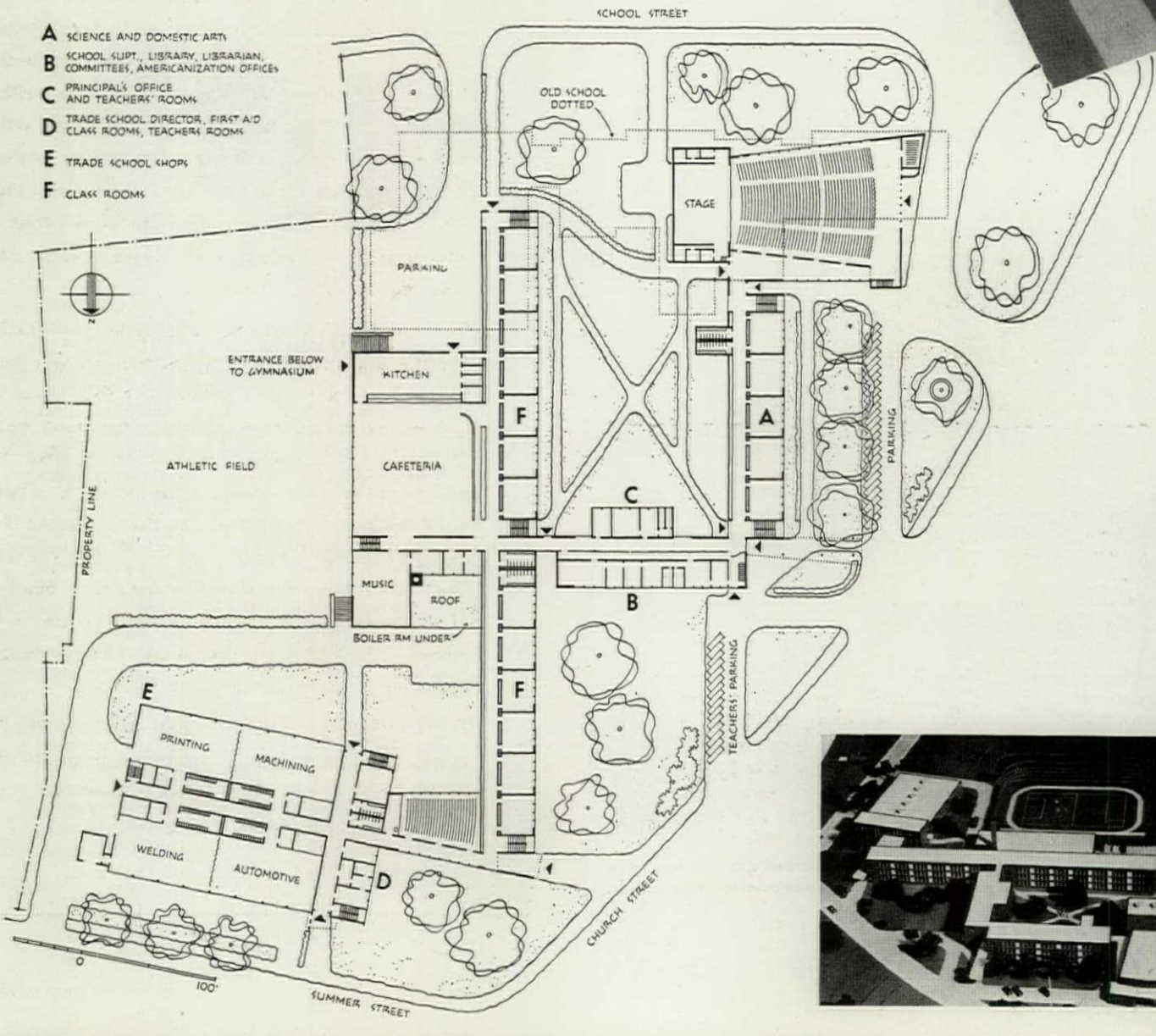


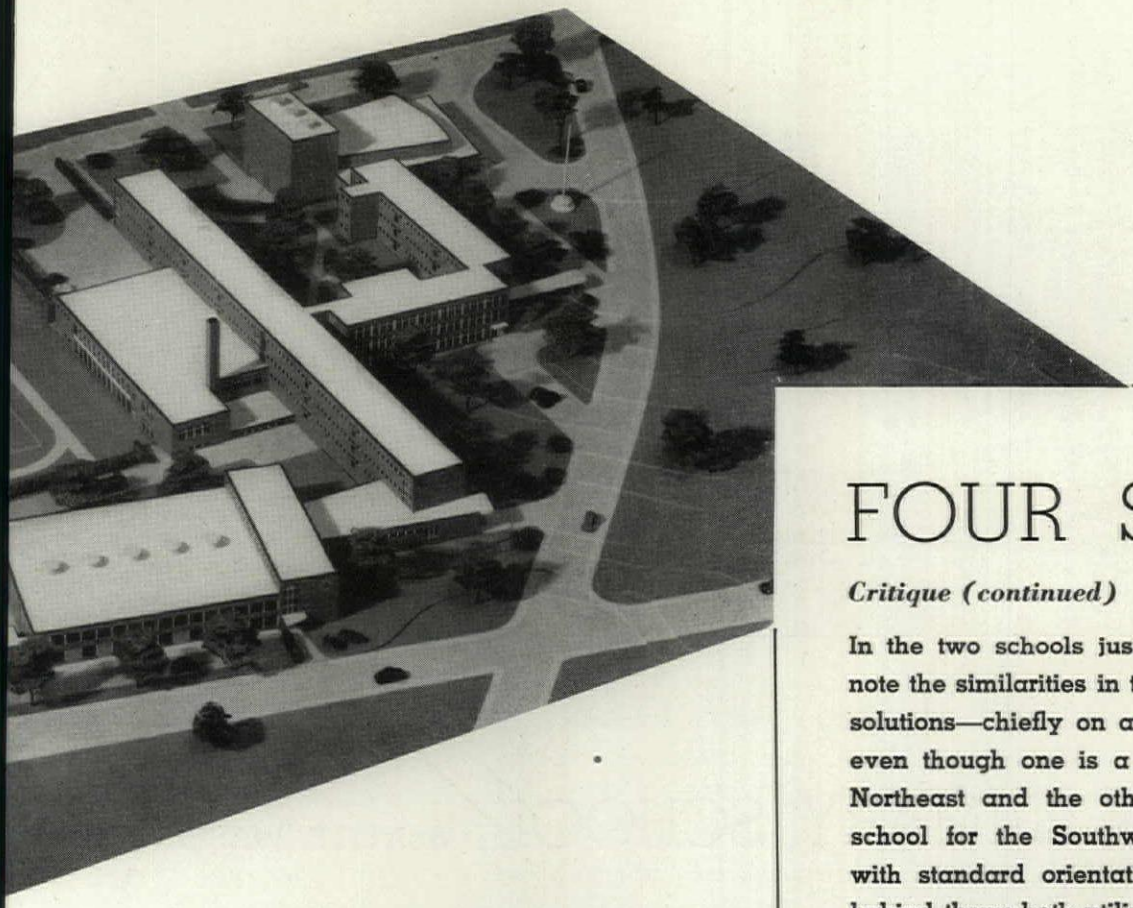
PROBLEM: A projected, consolidated senior high and trade school.

SITE: Block north of main street, readily accessible from all parts of the city.

MAIN POINTS ADMIRED: Use of site, with main wings of school paralleling contours, the playfield assigned to gully area at rear; single orientation of all classrooms; placement of auditorium for joint use of school and community; isolation of trade school block; direct design expression with repeated—hence, economical—structural elements.

CHIEF QUESTIONS: Why western orientation of classrooms? Is routing space to auditorium adequate? Why so large a stage? How are deliveries to second floor of trade school handled? Are cul-de-sac locker rooms preferable here to alcoves off shops?





FOUR SCHOOLS

Critique (continued)

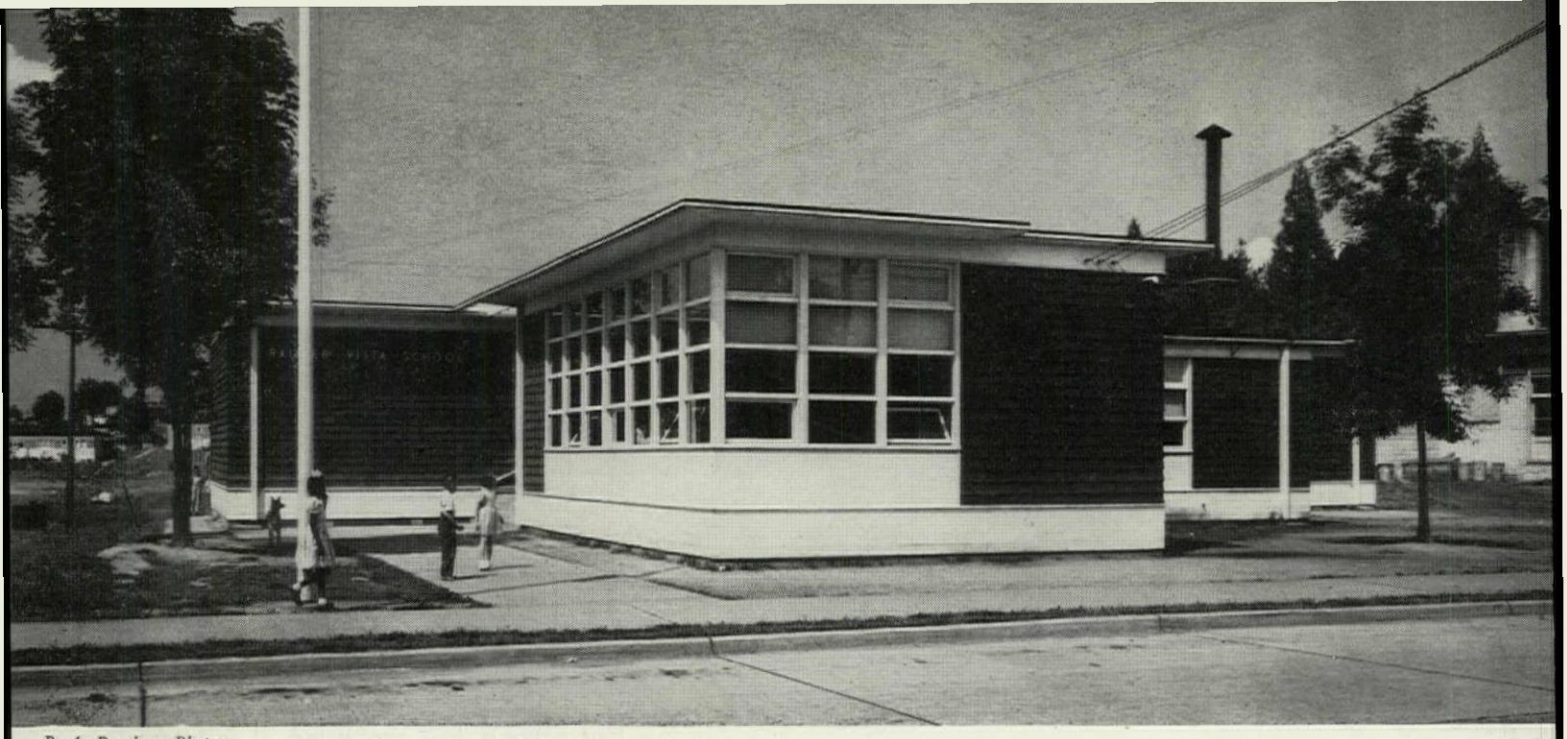
In the two schools just presented, it is interesting to note the similarities in the progressive approach to the solutions—chiefly on a performance basis—that exist, even though one is a multistory high school for the Northeast and the other a pavilion-type elementary school for the Southwest. Both employ classrooms with standard orientation with traffic corridors lined behind them; both utilize maximum allowable window area in their main light-source wall; both consider community as well as school functions; and both are designed as rounded educational institutions with facilities for play provided as a sharpener for the wits. In the final design sense, while neither shows pretensions of being anything it is not, both reflect a nice esthetic consideration in the ordering of the selected materials and structural methods that results in a convincing, pleasing school character.

The next school shown is a type on which little of architectural merit has appeared in the professional press—the very small school. In this case, the three-classroom unit serves kindergarten and primary-age children in a housing project near Seattle. But its implications for the small rural unit are obvious. For here, within very limited means, a contemporary version of the little red schoolhouse has been worked out. Not only does it suggest some advanced planning ideas for this type of problem, but it achieves an appropriate, almost residential scale that harmonizes with the area of dwellings that surrounds it.

From this disarming little job, we turn finally to consideration of a fireproof, reinforced concrete high school built as part of a civic development of a community near Atlanta, Georgia.

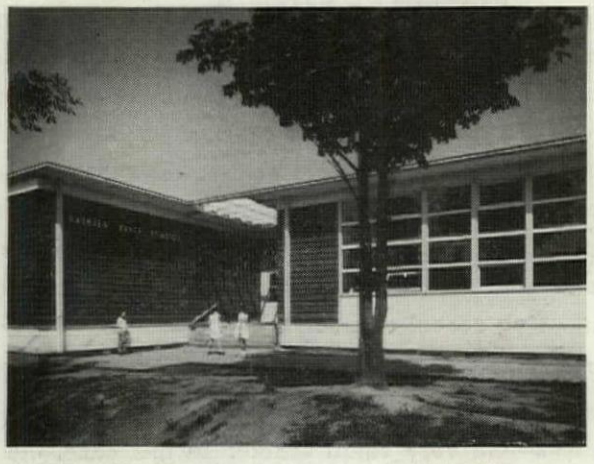
Edwin G. Johnson, born in Boston, studied naval architecture before switching to "shore-side" architecture, in which latter field he obtained his training at the Boston Architectural Club and from experience in several Boston offices. Since 1946, he has been in private practice, in partnership with John M. Whitcomb.

REBUTTAL: Western orientation? No classes after 2 p.m. Circulation to auditorium admittedly not fully studied at this stage; present thought is to have entrances along side wall, with sufficient cross aisles. Large stage explained since auditorium would be only large, modern gathering place in city of 45,000. Supplies to trade school second floor mostly lightweight; for heavy things, chain hoist at end of block. Locker scheme undergoing restudy.



P. A. Dearborn Photos

3 PRIMARY SCHOOL, SEATTLE, WASHINGTON



THE BUILDING is of frame construction, with red cedar outside and wallboard within.

BLANKED END WALL of west kindergarten is because of distracting, near-by view.

HOLMES & BAIN, Architects

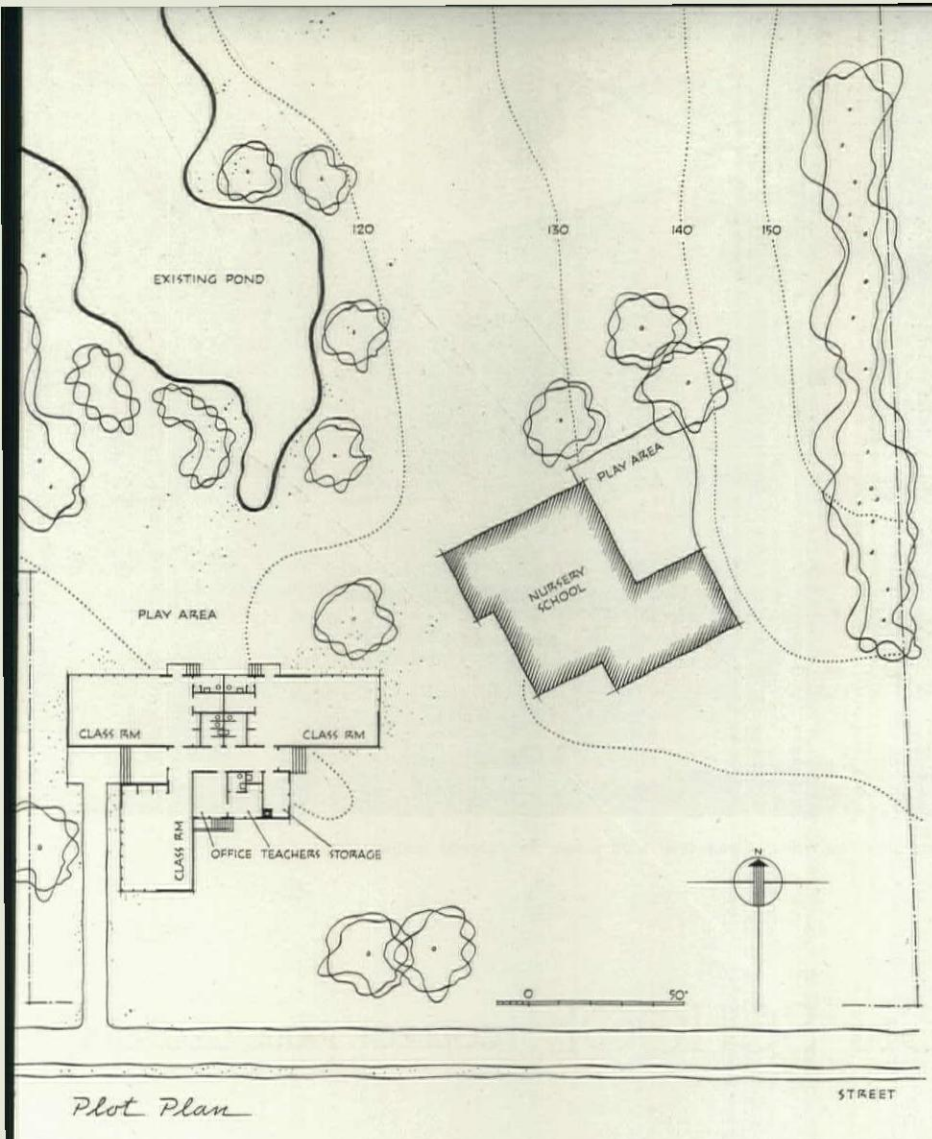
PROBLEM: A war-emergency school to serve kindergarten-primary age children of a neighboring housing project. Since the school was built at a time when practically every board was rationed, strict economy was required throughout.

SITE: Sloping property (shared with a nursery school), with a small lake downhill at the rear.

MAIN POINTS ADMIRED: Pleasing domestic scale and character, without resort to cottage-y clichés; child-scale of the individual rear entrances to kindergartens; some of the principles of the individual corner-lighted, projecting-classroom scheme applied to the small school.

CHIEF QUESTIONS: Why chiefly north light in kindergartens? Why no windows in west end of west kindergarten? Does climate allow use of north doors in kindergartens throughout school year? Why no provision for feeding? Are outside stairs to furnace room protected?

REBUTTAL: North light for kindergarten accepted as best compromise, since street to south is noisy and unattractive, and view to north was most agreeable. North doors are usable throughout the school year. No provision is made for feeding, as all children live within short walk of school. Though they do not appear on the plans, stairs to basement are protected by a curb and fence.



Plot Plan

HOLMES

BAIN

J. Lister Holmes, both a graduate engineer (U. of Wash.) and architect (U. of Pa.), worked in offices in New York, Philadelphia, and Seattle before establishing his own practice in Seattle in 1922. A member of A.I.A., he has served as president of the Washington State Chapter, on the Washington State Architects Examining Board, and the Seattle Planning Commission.

William J. Bain, with whom Mr. Holmes was associated on the Rainier Vista School, is a member of the Seattle firm of Naramore, Bain, Brady & Johanson. A Fellow of A.I.A., he received his training at M.I.T. and is a past president of the Washington State Chapter of A.I.A.

CLASSROOM WINDOWS extend up to ceiling, helping to equalize light throughout room. Indirect fixtures produce 30 foot-candles at desk level. Some of the extensive blackboard area provided has here been converted to other uses.

CITY AUDITORIUM. Used for school games and plays as well as civic activities. Connected with school by covered loggia.

4 HIGH SCHOOL, COLLEGE PARK, GEORGIA

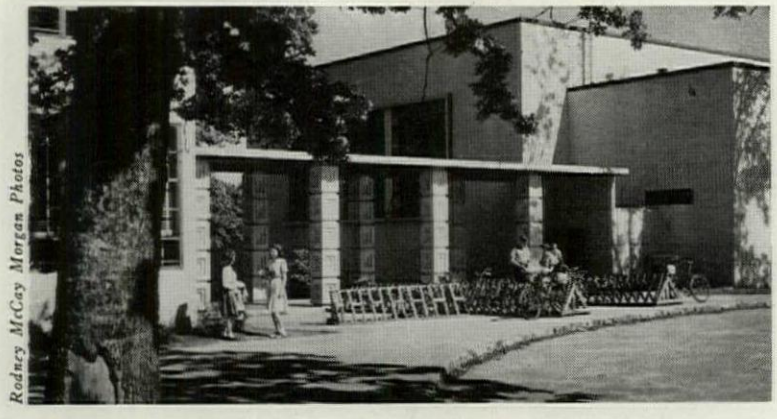
STEVENS & WILKINSON, INC.
Architects and Engineers
(formerly Burge & Stevens)

PROBLEM: A fireproof, county high school, built in conjunction with an existing city auditorium.

SITE: Nine acres of wooded, county-owned land, adjoining a 17-acre city-owned property of the same character. Practically flat.

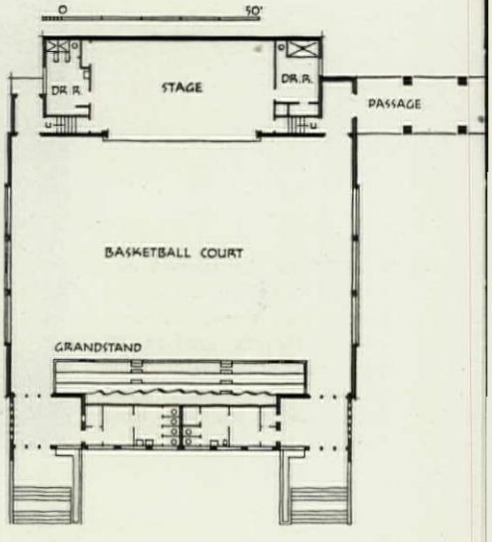
MAIN POINTS ADMIRED: Splendid site; esthetically pleasing use of concrete; piers of side walls large enough to minimize beam at window head, allowing window areas to extend to ceiling line; planned for both school and community use.

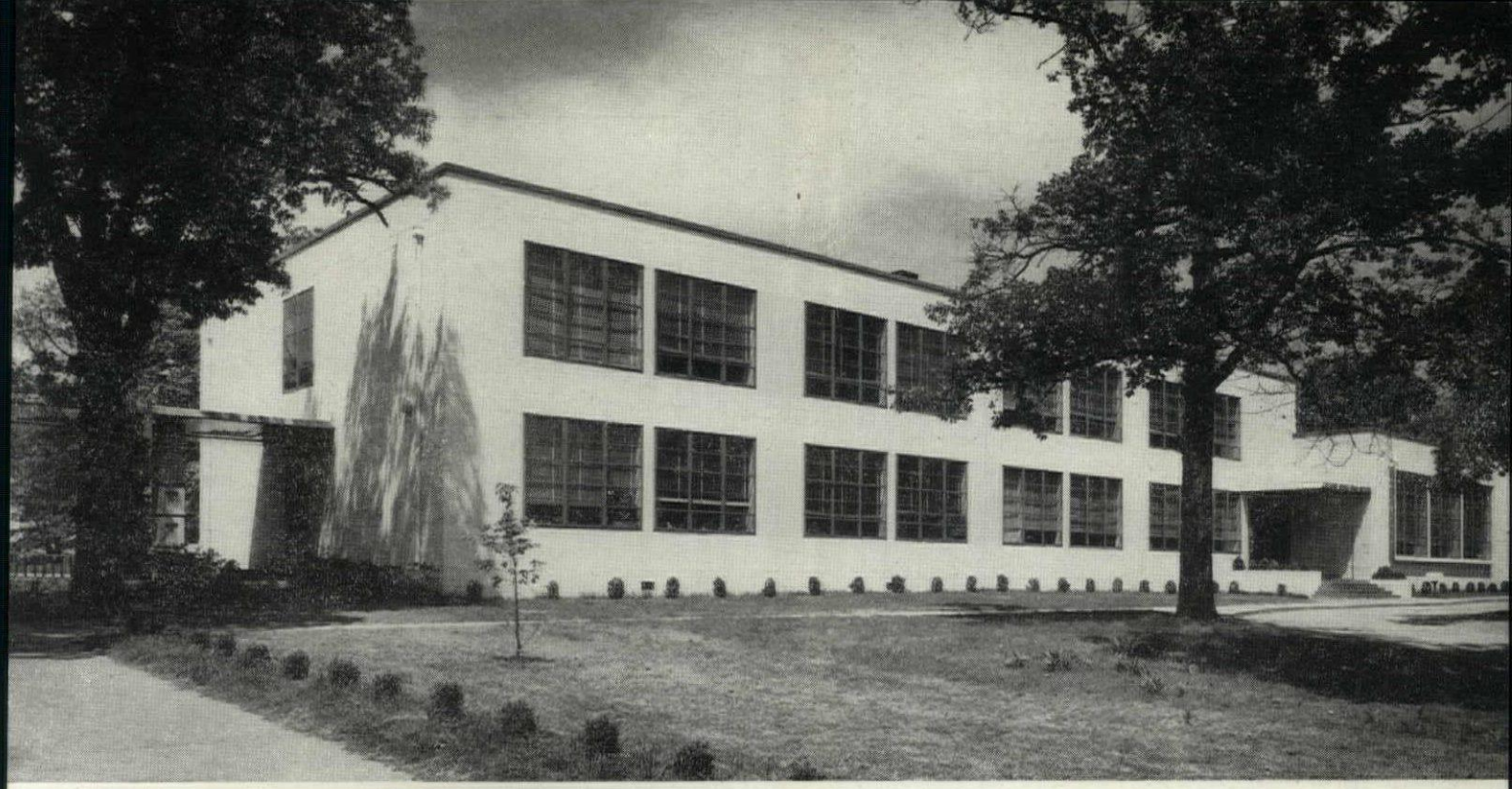
CHIEF QUESTIONS: Why corridor locker arrangement rather than in-room scheme? Why dietitian's office widely separated from kitchen? Isn't clinic room too small? Is there sufficient space for demonstration setups in lecture room between labs on second floor? Can room partitions be moved to accommodate changed curriculum?



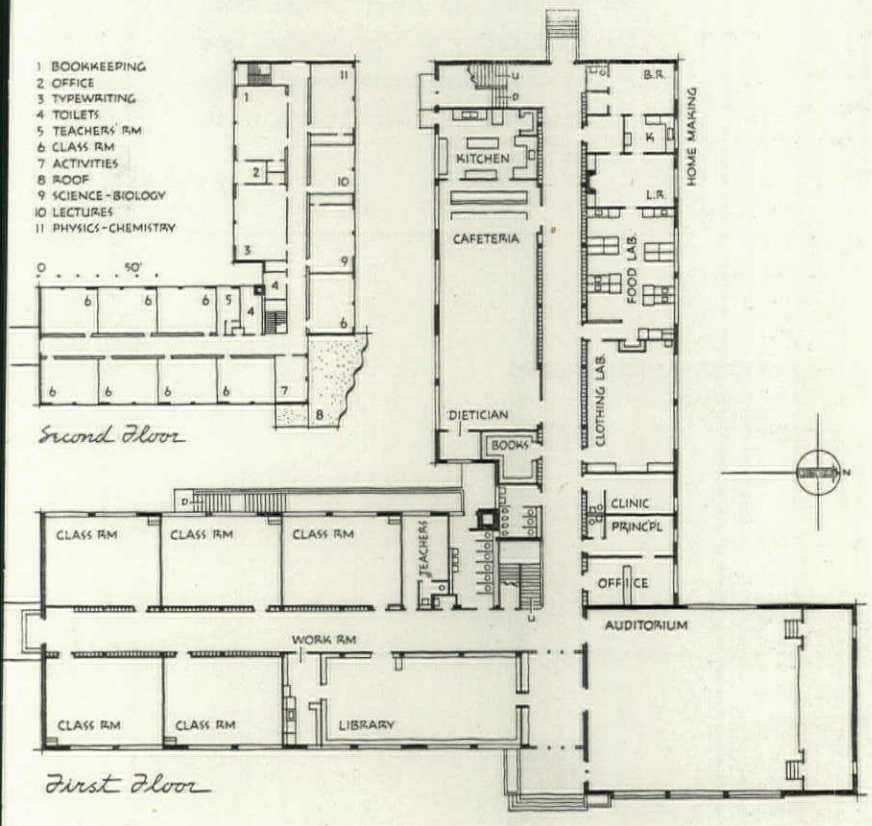
Rodney McCay Morgan Photos

LOGGIA connecting school and auditorium; columns are of cast, concrete units.





CHOOL BUILDING. Monolithic concrete, with form-board markings left for texture; painted buff.



STEVENS

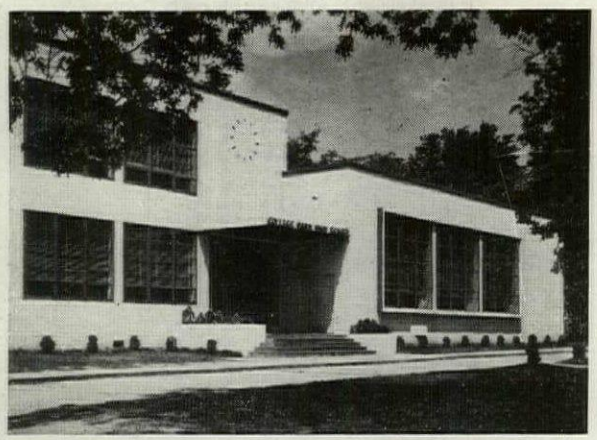
WILKINSON

Stevens & Wilkinson, Inc., is the direct descendant of the firm of Burge & Stevens, founded in 1919 by **Flippen D. Burge** and **Preston S. Stevens,** both of whom were graduated from Georgia Tech. In 1938, **James R. Wilkinson** became an associate member of the firm, and after Mr. Burge's death in 1945, the firm name was changed to Stevens & Wilkinson, Inc.

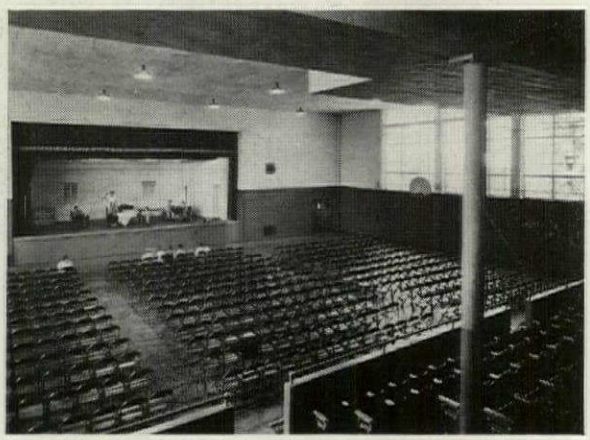
REBUTTAL: Home-type classrooms are the rule in this school; hence corridor lockers, the best compromise. Apart location of dietitian's office was a program requirement. The clinic is small, but it is used only for minor injuries; if anything worse occurs, patient goes to hospital. In lecture room, only simple demonstrations are used; movable casework stores required elements. The building was not specifically planned with flexibility of arrangement in mind; however, the partitioning (plastered hollow file) is nonbearing.

4. HIGH SCHOOL, COLLEGE PARK, GA.

STEVENS & WILKINSON, INC.
Architects and Engineers



SCHOOL ENTRANCE. Small auditorium at right is used solely for school assemblies, speeches, etc.



THE AUDITORIUM has a seating capacity of 1500. Like the school, it is of monolithic concrete construction. Ceiling is finished with an acoustical material.

FOUR SCHOOLS

Critique (continued)

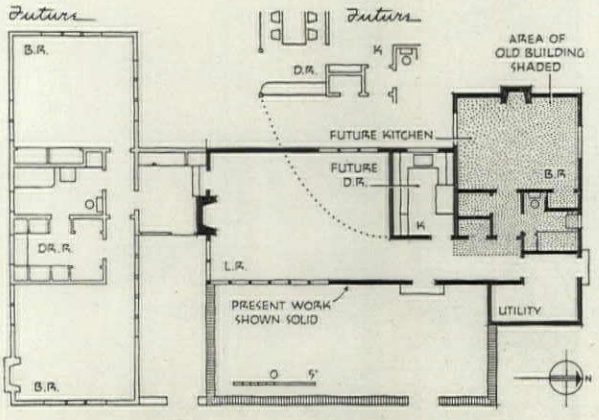
All four of the schools studied have broader dimensions than their own physical selves. In the case of at least two of them—the Corona del Mar School and the school proposed for Waltham—carefully considered landscaping schemes are either completed or anticipated. The Georgia school, built on park-like public land, is part of the community's chief civic development. The plan of the little primary school in Seattle, consciously conditioned by a vista of the lake at the rear, is directly related to the near-by nursery building.

Thus these four schools do considerably more than illustrate aspects of plan, structure, or design to challenge designers involved with similar assignments. They demonstrate the desirability of—one wishes one might say a firm trend toward—designing units as integral parts of the larger whole.

THE LIBRARY. Construction allows the big windows to reach practically to the ceiling line. Asphalt tile is the floor covering here, as it is throughout the building.

P. A. Dearborn Photos

HOUSE, SHERWOOD, OREGON



PLAN: Shaded area in north wing indicates boundaries of original cabin; at left is the new wing. When this wing is added, the present kitchen becomes a dining space; the present bathroom, the new kitchen.

PIETRO BELLUSCHI, Architect

PROBLEM: A small cottage that incorporates an existing one-room cabin; planned for future expansion into a two-bedroom home.

SITE: Country land, with a wooded ravine at the rear (west), an orchard to the east.

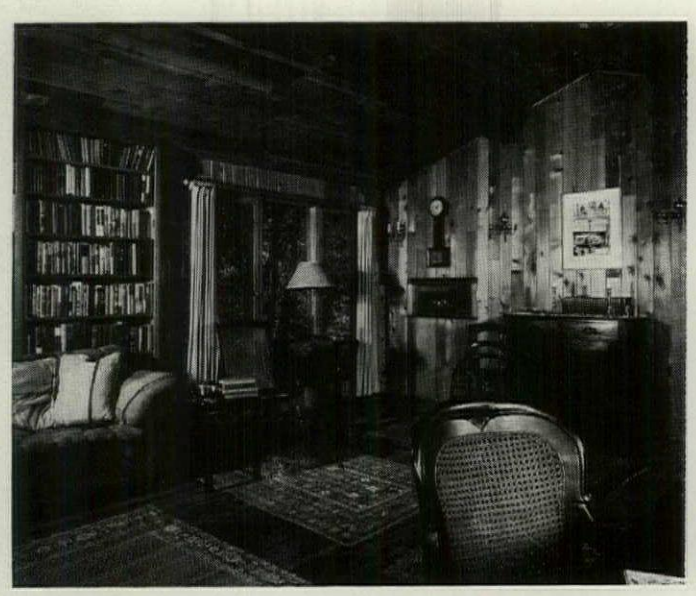
SOLUTION: Bedroom-bathroom area occupies space of the old building; utility room, hallway, small kitchen, and large living-dining room added; future wing to the south will include two bedrooms, dressing room, and bath.

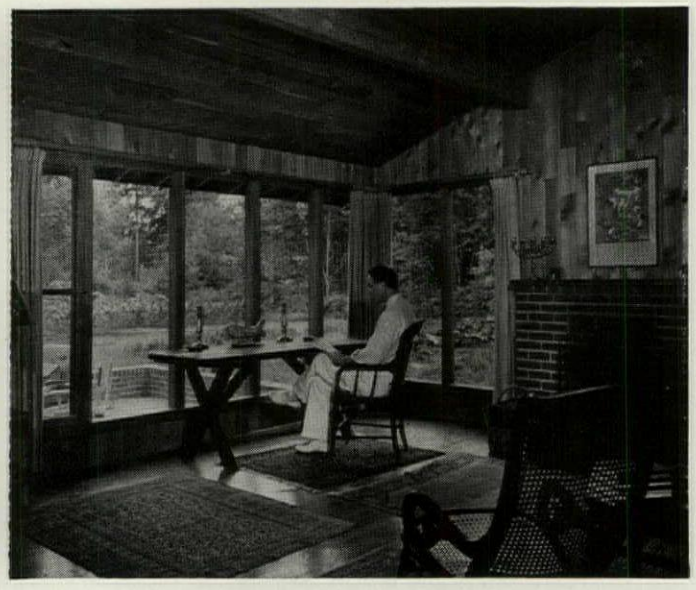
IN SUM: Good contemporary design applied to the problem of the small house. Unusually direct and pleasing handling of wood as a structural and surfacing material.

THE CEILING BEAMS running the length of the room avoid the clutter of an A-framing system.

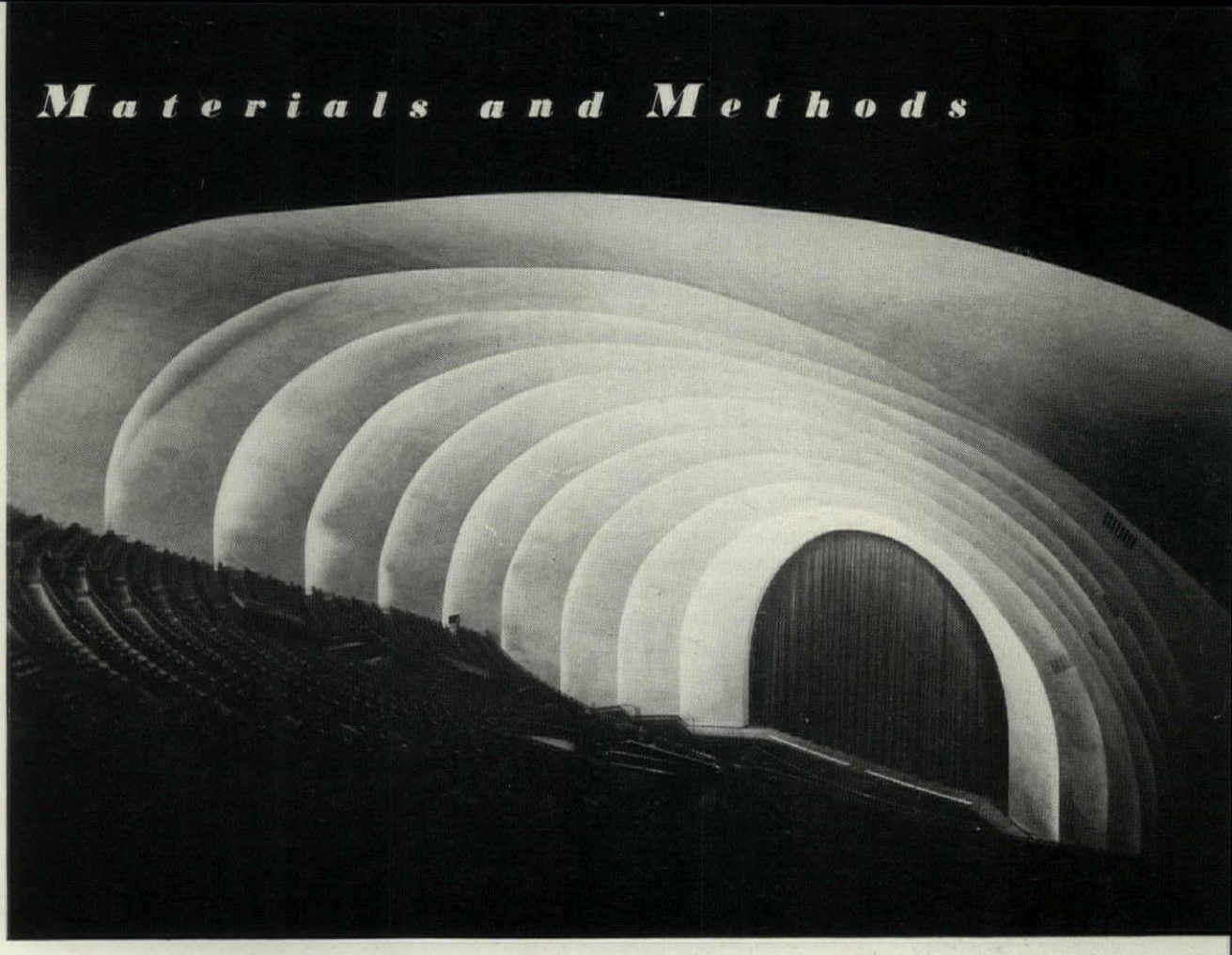
HOUSE, SHERWOOD, OREGON

PIETRO BELLUSCHI, Architect





WALLS AND CEILING are completely finished with cypress; flooring is fir. The owners applaud the sense of space, particularly when opened to the terrace. Their comment: "The living room with its many large windows makes us feel as if we were living in the outdoors . . . It's the most cheerful room we know."



Gran Rex Theater, Buenos Aires; Alberto Prebisch, architect. In this auditorium (a large movie house much like New York's Radio City Music Hall), the clever treatment of lighting induces a luxurious mood in the audience.

THE AUDIENCE SEES PART I

By HAROLD BURRIS-MEYER and EDWARD C. COLE

PART I of this article covers all the elements which govern the actual physical shape of a theater auditorium for movies or "live" shows; PART II (to be published next month) analyzes the factors that govern design of auditorium lighting. Both must be considered thoroughly by the theater designer if the audience is to see the performance well.

In PART I:

REQUIREMENTS THAT DETERMINE THE PLAN (horizontal sight lines, desirable seat location and arrangement, the importance of visual acuity);

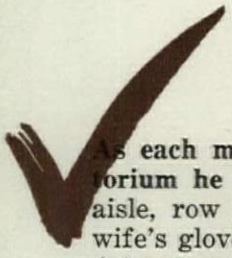
REQUIREMENTS THAT DETERMINE THE SECTION (vertical sight lines, seating dimensions, floor slope requirements for safety, etc., "dish" of the orchestra floor);

VARIATIONS TO SUIT DIFFERING CONDITIONS (type of performance, type of theater, maximum capacity vs. optimum viewing).

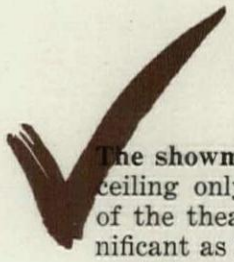
An architect, to plan a theater intelligently, must know the purpose of each element thereof. The derivation of design from function presupposes a clear and complete understanding of function. Function, as it concerns *seeing* and the architectural requisites developed therefrom as they apply to the auditorium, is the subject of this article.

The audience comes to the theater to see the show. This is the primary consideration governing all

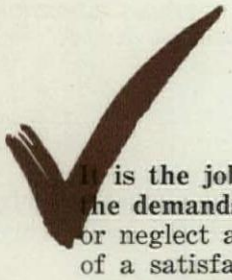
planning on the audience side of the proscenium. The audience generally thinks of the show as that which takes place on the stage or the screen. The competent showman, however, sees to it that the audience feels itself part of the show from the moment it comes within sight of the theater until it has turned the corner after leaving. He endeavors to make the impact of his showmanship felt every minute the audience is present. He must then provide, by means which the audience appreciates visually, for convenience, comfort, safety; for the audience's desire to see and be seen, the control of attention, the elimination of distraction, the creation and maintenance of mood.



As each member of the audience enters the auditorium he wants to see: the usher, the steps, the aisle, row and seat (including the hat rack), his wife's gloves (on the floor), the program, the show (at an angle and distance consistent with visual fidelity and credibility), the emergency exit, the regular exit. Many members of the audience will want to see and be seen by other playgoers. No member of the audience wants to see a silhouette of the occupant of the seat in front, the show distorted by angle to the side, above, or below, or insignificant because of distance, or an illuminated exit sign, or a twinkling galaxy of orchestra-stand lights when he is trying to pay attention to the show.



The showman wants the audience to see: walls and ceiling only as they contribute to the atmosphere of the theater, objects of decoration which are significant as focal points in the decorative scheme and contribute to the feeling of luxury, the organ console and orchestra when they are part of the show. The showman wants to conceal from view all elements in structure or equipment which will detract from the desired atmosphere of the house or fatigue the audience, as: backstage areas sometimes visible through the wings, loud-speakers about the proscenium, stage lighting units (balcony pans, insufficiently masked booms at the sides of the house), orchestra and organ console when their visual aspects are not essential to the show, or bright open light sources.

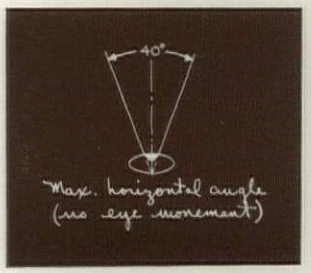


It is the job of the architect to satisfy completely the demands of audience and showman. To ignore or neglect any of the items listed, or to fall short of a satisfactory solution of the problems implicit in them will inevitably increase hazards and impair the theater's function and earning power.

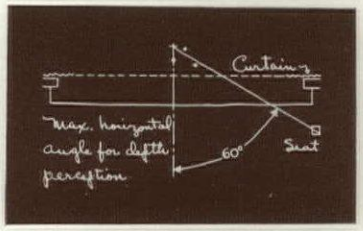
SIGHT LINES

If the patron is to see satisfactorily, plan and section must conform to a number of limitations which are set forth in the following list. To design an auditorium is to determine a seating area within these limitations and to establish position (not shape) of walls and shape of floors therefrom.

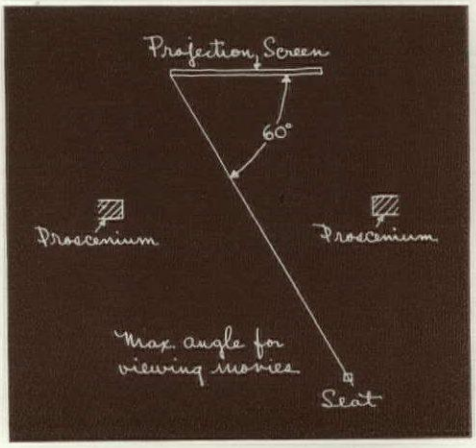
1—The horizontal angle of polychromatic vision (no eye movement) is ca. 40°.



2—The horizontal angle to the center line at which objects onstage, upstage of the curtain line, cease to bear the intended relationship to other objects onstage and to the background is approximately 60°.



3—The horizontal angle to the projection sheet at which distortion on the screen becomes substantially intolerable is 60° measured to the far side of the projected image.



4—Judged by the audience's ability to recognize shapes, and confirmed by free audience choice of seats, the following is the order of desirability of locations:

a—front center (except when the screen is close to the front row);

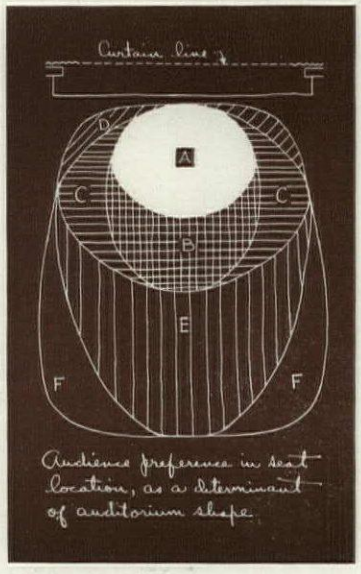
b—middle center;

c—middle side;

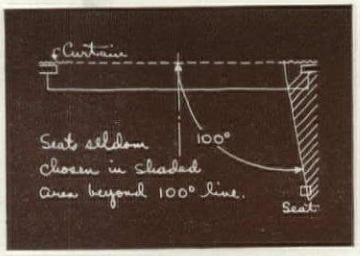
d—front side;

e—rear center;

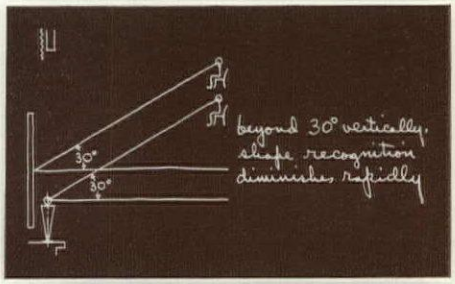
f—rear side.



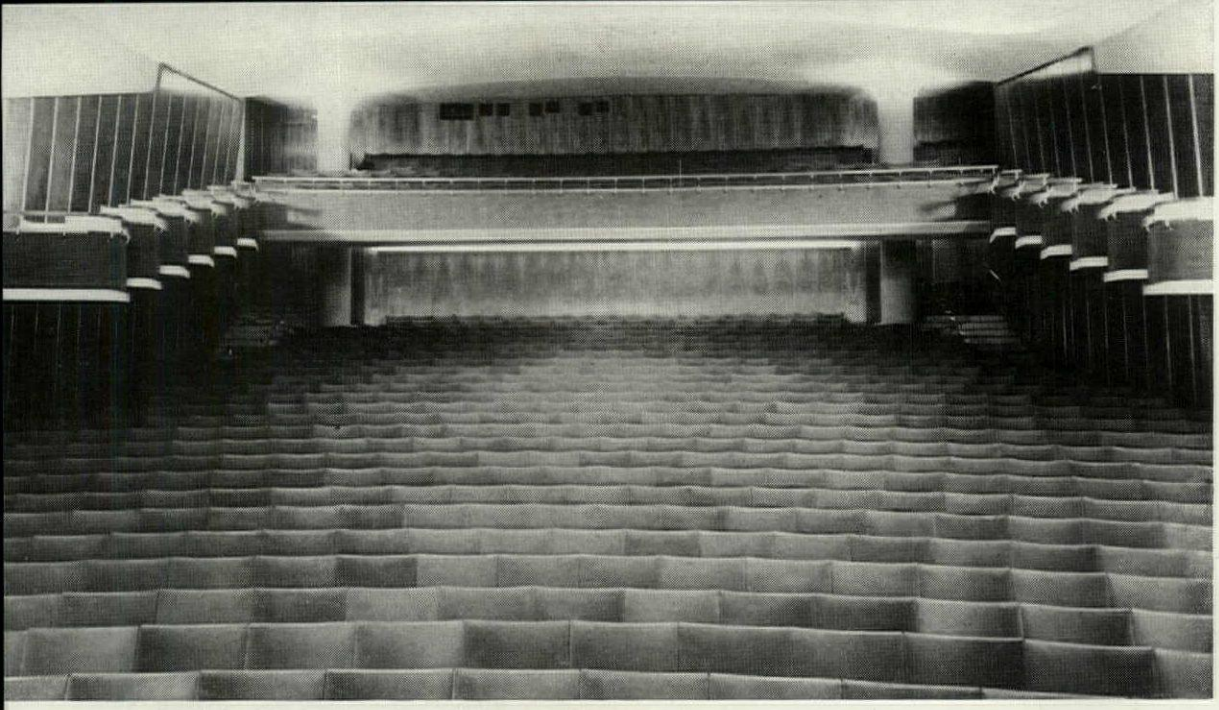
5—Audiences will not choose locations beyond a line approximately 100° to the curtain at the side of the proscenium.



6—The vertical angle beyond which ability to recognize standard shapes falls off very rapidly is approximately 30°.



7—The recommended maximum angle of motion picture projection to the horizontal is 12°.



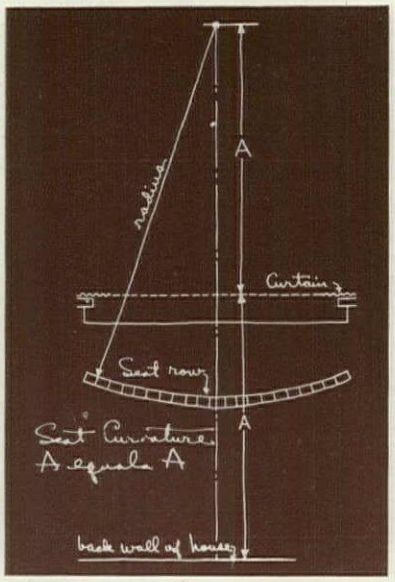
Seating in the Park Theater in Stockholm (Björn Hedvall, architect) is staggered for unobstructed vision; note also the flat seat-backs, which are found to be more comfortable than the usual curved, shoulder-pinching seat, and the use of "continental" seating (seat rows far enough apart so that longitudinal aisles are unnecessary).

PLAN

If the foregoing limitations are applied in the horizontal plane for any given proscenium opening, they will limit an area of maximum value as seating space which is approximately elliptical. It is interesting to note that this shape for an auditorium plan was pioneered by the late Joseph Urban who had little of the present data to work with and may safely be assumed to have chosen the shape largely on esthetic grounds. A fan shape provides additional seating space at minimum sacrifice of sight lines, but nobody wants the seats in the extreme rear corners.

SEATING

Occupants of all seats are visually related to the performance when the seats are oriented toward the stage. This necessitates curving the rows of seats.



The center of curvature is located on the center line of the auditorium approximately the depth of the house behind the proscenium.

STAGGER

To provide best visibility from any seat, no patron should sit exactly in front of any other patron unless more than one row distant. This requirement makes it necessary to stagger seats. Staggering is accomplished by the nonuniform placement of seats of varying widths in succeeding rows. Unless the walls of the theater are parallel (which is acoustically hazardous), it is extremely unlikely that more than a very few rows can be made up of seats of uniform width. The lack of uniformity thereby introduced provides the means by which staggering can be accomplished. Seats are made with uniform standards and interchangeable backs and seats so that a wide variation of seat width is possible and a variation from seat to seat of an inch or two, cumulatively enough to accomplish satisfactory stagger and make rows even, is not noticed by the patron.

AISLES

Aisles are of questionable desirability except in the largest houses. They must, however, be employed in many localities because of building laws which make no provision for continuous-row or so-called "continental" seating in which all rows are widely spaced and serve as transverse aisles. Many a bad sight line has resulted from putting the maximum legal number, usually 14, seats into each row in every section. Obviously, for purposes of seeing, radial aisles are best, with curved aisles only slightly

less efficient. Aisles perpendicular to the curtain line often have the accidental result of making side sec-

tion seats undesirable. The box office would like a theater with all seats in the center section. A center aisle wastes the most desirable seating area in the theater and inevitably causes the objectionable condition of seats directly in front of each other near the aisle.

DEPTH OF HOUSE

There are many formulas used to determine the depth of the house, or more accurately, to determine the relationship between depth of house, width of house, and width of screen or proscenium. They vary considerably and are all empirically derived on the basis of existing theaters, with too little reference to whether such theaters are good or not.[1] Practically, there are only two significant considerations in planning the depth of the house:

1—Visual acuity. Normal human vision can perceive a minimum dimension or separation equal to 1 minute of visual arc. Translated into space measurement this means that at 10 feet a normal eye can perceive a dimension of .035 inches, at 50 feet, .175 inches, and at 100 feet, .35 inches. Details of actors' make-up and facial expression are not plainly recognizable at distances of more than 50 feet from the stage.

2—Capacity.[2] The larger the house, the lower can be the price per seat or the greater the gross. If the box office is not to be considered, capacity may be limited by optimum seeing requirements, and the last rows kept within 50 feet of the stage. As various requirements operate to increase capacity, the distance of the rear seats from the stage must be increased and seeing conditions impaired in proportion. The theater operator may compensate the occupants of these seats by charging less for them. For shows involving live human actors, 75 feet is generally accepted on grounds of visibility as maximum house depth.

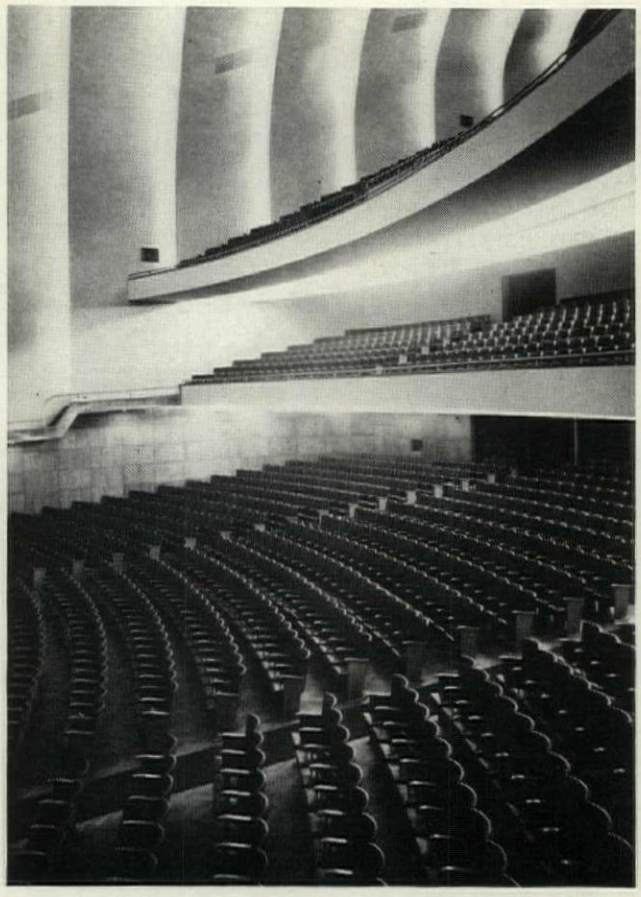
In theatrical entertainment which has as its chief visual component human actors (flesh shows), the degree to which these performers must be seen to satisfy the audience and put the show across varies.

A—Details of facial expression and small gesture are important in legitimate drama, vaudeville and burlesque, intimate revue and cabaret.

B—Broad gesture by single individuals is important in grand opera, presentation, musical comedy, and the dance.

[1] Typical are the following:
Optimum depth equals 4 times screen width.
Maximum depth equals 6 times screen width.
Depth equals 1.25 to 2.35 times house width when house width is 2.5 to 3.5 times screen width.

[2] Seat spacing is a function of comfort and safety, not a visual consideration, and must be planned according to a set of requisites and limitations not treated here.



Gran Rex Theater, Buenos Aires, has a steeply pitched orchestra floor.

C—Gesture by individuals is unimportant and movement of individuals from place to place is the smallest significant movement in pageant.

It follows then that theaters planned for the types of entertainment listed under **A** must be limited in depth of auditorium so that visibility from the remotest seat still allows the occupant to perceive facial expressions (not over 75 feet).

Theaters planned for the types listed under **B** may have greater distance from the stage to the remotest seat, but this distance is set at a maximum beyond which the individual actor is diminished to insignificance (ca. 125 feet).

Spectators in the last rows at the Radio City Music Hall in New York, looking through a distance ranging from 160 feet to over 200 feet, depending on the location of the performers onstage, see a ballet reduced to the size of midgets, and an individual performer, even with the dramatic enhancement of a follow spot, is a very insignificant figure indeed.

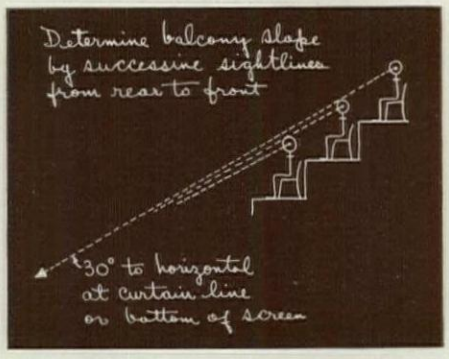
SUMMARY

Given the proscenium opening and capacity, laying out the orchestra and balcony or balconies in plan becomes a simple and straightforward process. Sight lines determine proscenium splay and house width. Visibility limits and capacity determines depth. Minimum distance from stage or screen to first row is determined in the section.

(Continued over-page)

SECTION

The vertical angle of 30° at the spectator's position establishes the distance from the closest seat to the screen or to the highest significant object on the stage. The lowest seat in the orchestra must be located where the patron can just see the stage floor (except in the case of theaters built for motion pictures only). The highest seat in the balcony must be on a line which is not more than 30° to the horizontal at the front curtain at the stage floor if it

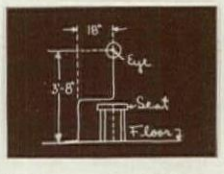


is not to be beyond the limit of reasonable distortion. The standee at the back of the orchestra must be able to see the top of the screen, which is usually as high as any significant portion of a stage setting. Each spectator must see the whole stage or screen over the heads of those in front of him. Within these limits the floor slope of orchestra and balcony can be laid out: the first step in determining auditorium section.

Several methods have been offered heretofore for developing the floor slope. Doubtless others will be offered in the future. The authors present the following method as one which assures unobstructed vision from all seats. It may be noted that this system produces a floor slope considerably steeper than that in many existing theaters. It also produces better seeing conditions.

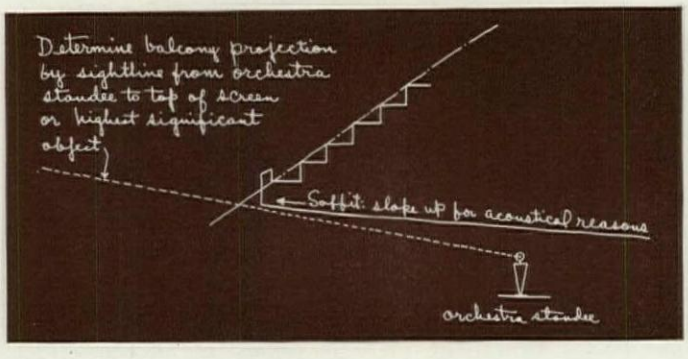
To determine floor slope, establish eye position of spectator on first row in center line by approximately 30° vertical angle above. For live shows, stage floor will be approximately 2″ below this level. For theaters designed solely for motion pictures, the location of the stage floor is not critical; the position of the bottom of the screen is.

A point 3′-8″ below, and 18″ in front of the eye position will be the floor level for the front row. Draw a



sight line from the eye position to downstage edge of stage, and extend it back of the eye position for the front row and draw vertical lines at the points thus established. Establish a point 5″ above the intersection of the extended sight line and the vertical line just established. This is the eye position for the second row and the floor level at the front edge of the second row seat is 3′-8″ below and 18″ in front of the eye position. Repeat this process to the back of the house and draw in the floor slope. Where the slope exceeds 1½″ per foot, platforms are required.

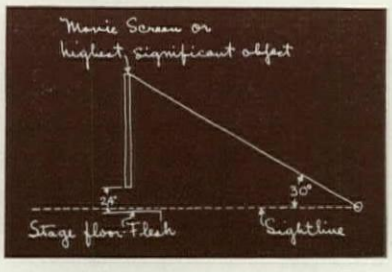
The standee's eye level behind the rear row of seats is assumed to be 5′-6″ above the floor level of the last row. The sight line from this position to the



top of the screen or highest probable curtain trim establishes the minimum height for ceiling under balcony.

Raising the stage will reduce the floor slope. If the stage floor is above the elevation of the first row eye position, the upstage portion of the floor will be invisible from the first row. It is generally preferable to leave the upstage floor out of sight by perhaps as much as 6 inches from the first row, to having an excessive floor slope, especially if more than one balcony is used.

When planning for motion pictures only, the lower sight line from the first row will come to the bottom



of the projected picture, approximately 24″ above the stage floor, or still higher if a reverse floor slope is planned.

In laying out the balcony, sight lines are laid out from rear to front because it is unsafe to change balcony slope. The focal point onstage is the point farthest downstage at which visibility is requisite, or, in the case of motion pictures only, the bottom of the screen. The maximum forward extensity of the balcony is then determined when the location of the spectator's eye position has been moved forward to a point beyond which the floor and supporting structure would intersect the upper sight line of the orchestra standee.

As a rule, the pitch of balcony floors should not change since that would entail a change of riser

height for aisle stairs and introduce attendant hazards. If vision from the rear row in the balcony is adequate, the rest of the balcony is satisfactory.

In theaters designed only to show motion pictures, the first row need not be located so that the patron can see the stage floor. It is satisfactory if he sees without obstruction the bottom of the screen which is seldom placed less than 2 feet above the stage floor. Raising the screen makes it possible to flatten the contour of the orchestra. The reversed floor slope developed by Ben Schlanger makes use of this relationship to get the maximum number of seats into the zone of least visual distortion.

FLOOR DISH

The planning of the floor slope is not completed when pitch of orchestra and balcony has been laid out on the center line. It depends also on the curve of the rows of seats. The whole row must be at the same elevation if the seats are to be level. The floor therefore is not a sloped plane, but a dished surface in which horizontal contours follow the seat row curve. The floor section at the center line, rotated horizontally about the center of curvature of the rows of seats, will determine the orchestra floor shape. The balcony is planned the same way save that the floor consists of treads and risers.

COMMENT

It has been established that conditions of seeing limit the depth of the house. Since capacity is a function of depth and width, increasing the width increases the capacity. However, since sight lines from the side seats limit the angular spread of the side walls, the width can only be increased by increasing the proscenium opening. The width of the proscenium opening is a function of the kind of productions contemplated for the theater, according to the following table, and cannot be arbitrarily increased.

PROSCENIUM WIDTHS FOR KINDS OF THEATRICAL PRODUCTION IN FEET

	Minimum	Usual	Reasonable Maximum
Drama	26	30 to 35	40
Vaudeville, Revue	30	35	45
Musical Comedy, Operetta, Presentation	30	40	50
Opera	40	60	80

It is apparent that a theater designed for maximum efficiency for motion pictures (reverse floor slope) is almost completely useless for any other sort of production except large screen television, a single performer, or at most a quartet.

In cases where it is unnecessary to build to minimum visibility standards, wall angles may be narrowed, floor angles increased, and balcony omitted, and visibility from the worst seats thereby raised to a point considerably better than what is just saleable. A very real problem, however, is to prevent precedent or personal prejudice from so influencing auditorium design as to cause the inclusion of large numbers of unsaleable seats. One manager insisted, after floor slope and stage height had been determined and the auditorium floor laid, that the stage floor be lowered some 10 inches below the height called for in the plan, in the interests of, as he put it, "intimacy." From the middle of the orchestra in that theater it is hard to see below the level of the actor's navel.

Greek theaters were semicircular (horizontal sight line angle 90° to center line). This was all right in Greece where there was no proscenium. It is obviously not all right where a proscenium is used or where realistic box sets are employed. Yet, a misguided reverence for ancient practice still gives us some theaters with impossible sight lines.

Opera houses of the Renaissance had side boxes for the very good reason that the people in the boxes competed (often successfully) with the stage show for audience attention. This condition persists, but it is worth noting that the best example of such a theater in America has not made a nickel for a decade. Nevertheless, theaters with at least vestigial side boxes are still built.

It is perhaps unnecessary to add that theaters planned in conformity with the principles here set forth may adhere in spirit to almost any superficial architectural style by the discreet planning of service and decorative elements which do not affect the basic shape of the theater. In theaters which are being rebuilt, it is often possible to retain the desirable features and still provide a good theater.

(Continued next month)

Office Practice

PRELIMINARY SPECIFICATIONS

In P/A for 2/48 an article on office practice procedures emphasized the importance of establishing a clear architect-client business relationship at the very beginning—in the matter of fees, responsibilities, duties. The next point in the design process at which there might be some misunderstanding and some temptation to avoid clear statements is when preliminary designs come up for approval by the client.

The difficulties at this stage are due to several facts. First, the architect cannot guarantee estimates of cost, but the client would like an accurate statement of how much money he is likely to spend. Secondly, the architect's drawings at this stage are usually single-line, sometimes even diagrammatic—even more difficult for a layman to read than more fully annotated working drawings and details. Finally, there have been many decisions made during preliminary conferences, some recorded, but many of them not.

For these reasons (and for others which individual architects will find in their own practices), a fairly comprehensive set of *preliminary specifications* is a valuable document to prepare at the end of the preliminary discussion period. This preliminary specification is not to be confused with an outline specification, or a specification brief, as it is sometimes called, which is a way of beginning work on the final contract draft. True, it will help in the preparation of that later brief, but the document under discussion is a separate thing, serving its own functions. Those functions are:

1. **To provide a basis for preliminary cost estimates as accurate as they can be made at this stage.**
2. **To provide a record, for client, architect, and estimator, of the basis on which the preliminary cost estimate is made.**
3. **To provide in simple but complete form a record of all decisions about basic design and construction system, materials, equipment, finishes, etc.**
4. **To provide an outline of agreed-to data for the preparation of working drawings and contract specifications.**

To accomplish these purposes, the preliminary specification should be brief and to the point. The "streamline" form seems particularly applicable for this use. Charts, tables, and schedules should be used as much as possible. In the sample specification of Mr. Beacham's that follows, only one of the several schedules which he used in the actual job is reproduced—the others were similar in form and have not been shown because they had application only to this particular project. In Cowgill and Small's *Architectural Practice* (Reinhold Publishing Corp., 1947) a number of schedule forms are indicated and discussed.

In studying the specification below the reader will notice clarity combined with concise statement; general requirements and data, construction systems, and major materials and finishes are clearly defined in few words, all of which are important.

PRELIMINARY SPECIFICATION
FOR
THE HIBSON BUILDING
Greenville, South Carolina

EUGENE W. BEACHAM, Architect
JAMES D. BEACHAM, Associate
Greenville, South Carolina

January 1, 1948

PART 1. GENERAL INFORMATION

1-A. LOCATION OF BUILDING SITE.—Southeast corner at the intersection of Main and Washington Streets, Greenville, S. C.

1-B. NAME OF CLIENT. — Mrs. Jessie Mae Price of Greenville, S. C., agent for the owners of the building site (Mrs. Jessie Mae Price, Mrs. Sara E. Garrell, Mrs. Elizabeth Whitney, and Mrs. Janie C. Parriss), hereinafter referred to as the "Owner."

1-C. ACCOMPANYING DRAWINGS.—Preliminary drawings "A" to "F", entitled "Hibson Building," dated January 1, 1948.

PART 2. GENERAL DESCRIPTION OF THE WORK

2-A. GENERAL REQUIREMENTS. — General scope of work: Construction of a 3-story building designed for the use of store and office occupants, as indicated by the accompanying drawings and this specification.

1) **Incidental work required:** Demolition of existing building and structures now on the site.
2) **Work to be excluded from estimates and contract:**
a) Plate glass store fronts and display windows (exception: Store No. 5).
b) Lighting fixtures in all stores.
c) Electric water heater for barber shop.
d) Painting and finishing in stores.
e) Gas piping in basement.
3) **Mechanical and electrical systems required:**
a) One passenger elevator serving all floors.
b) Heating system serving all regularly occupied spaces.
c) Mechanical ventilation for barber shop and stores (exception: Stores No. 2, 4, and 5).
d) Electrical system for power and lighting.
e) Summer air conditioning system serving the 2nd and 3rd floors.
f) Plumbing systems.
4) **Future extensions contemplated:**
a) Construction of two additional stories.
b) Extension of building along Washington Street to Brown Street.
c) Installation of a freight elevator and an additional passenger elevator.
5) **Type and standard of construction:** "Semi-Fireproof Construction," as classified by the Building Code of the National Board of Fire Underwriters (hereinafter referred to as the "NBFU Code"), Section 1002.

2-B. DATA FOR ESTIMATING. — Approximate areas involved:

1) **Area of building site:** 11,120 sq ft
2)

Spaces provided	Floor area (incl. walls)	Rentable area (net)
Basement (barber shop and 6 store basements)	11,380 sq ft	8,840 sq ft
1st floor (8 stores)	11,232	10,000
2nd floor (28 offices)	9,635	6,915
3rd floor (28 offices)	9,635	6,915
Penthouse	725	
Total	42,607 sq ft	32,670 sq ft

3) **Total content of building:** 534,000 cu ft

2-C. STRUCTURAL DESIGN DATA.—

1) **Soil:** Firm clay; assumed bearing capacity, 6,000 lbs per sq ft.
2) **Floor and roof loads** (uniformly distributed live-loads per sq ft of floor area):

1st floor, throughout,	100 lbs
2nd and 3rd floors	60
Stairways	100
Penthouse	100
Roofs	30
Sidewalks	300

3) **Concrete strengths required:**
For concrete footings and fireproofing 2,500 lbs psi
For other concrete 3,500 " "

PART 3. SITE PREPARATION AND EARTHWORK

3-A. DEMOLITION.—Scope: All materials of existing building and structures (exception: the part of the east wall necessary to enclose the owner's existing, adjoining 1-story building). See NBFU Code, Section 920.

1) **Disposal of old materials:** All become the property of the contractor; to be removed from site except as provided following.

2) **Contemplated reuse of old materials:** Hard, whole brick in underpinning existing, adjoining construction, and in nonbearing interior basement walls; sound lumber for scaffolds, forms, and other temporary construction.

3-B. EXCAVATION.—Scope: As necessary for basement, foundations, and sidewalk areas indicated; approximately 4,300 cu yds.

1) **Incidental excavation:** Old foundations.

2) **Known existing conditions:** Small, unfinished basements exist approximately at points indicated. Extensive rock in excavations is not anticipated.

3-C. UNDERPINNING REQUIREMENTS. — Scope: Adequate support of all existing construction adjoining building site.

1) **Type of underpinning:** Brick masonry on reinforced concrete footings, or reinforced concrete throughout.

PART 4. FOUNDATIONS

4-A. FOOTINGS AND WALLS.—Type: Spread footings, throughout; all construction built of reinforced concrete.

4-B. INCIDENTAL WORK.—Sub-grade drainage required: Open-joint tile drain at outside of exterior foundation walls, along north and west lot lines. See "Plumbing System."

PART 5. STRUCTURAL FRAMING

5-A. FRAMING SYSTEMS.—For basement: Reinforced concrete columns, bearing piers, and floor construction. See NBFU Code, Section 808.

1) **General framing:** Structural steel columns, beams, etc. See NBFU Code, Section 809.

a) **Type of steel framing:** A.I.S.C. Type 2.

2) **Floor and roof framing:** See "Floor and Roof Construction."

3) **Wood framing required:** Metal-covered bulkheads over exterior return-air ducts at penthouse walls; ceilings over toilet rooms in stores; mezzanine balconies indicated in Stores No. 1 and 2.

5-B. MISCELLANEOUS REQUIREMENTS. — Fireproofing required: 3-hour protection for steel columns and for girders and beams supporting masonry walls; 2-hour protection for girders and beams generally; all in accord with NBFU Code, Section 1002 and Appendix A.

1) **Provisions required for future extensions:** Flush-capped columns at top surface of roof slab; bracket members on framing where required for future horizontal construction; framing for future elevators.

PART 6. FLOOR AND ROOF CONSTRUCTION

6-A. TYPES OF CONSTRUCTION.—Basement floors: Concrete slabs placed over porous fill, reinforced with steel-wire fabric.

1) **First floor:** Reinforced concrete girders and monolithic joist-and-slab floor construction.

2) **Other floors, and roofs:** Concrete slabs supported on steel-joist construction, placed over paper-backed, steel-wire fabric reinforcement. See NBFU Code, Section 809-12.

6-B. INCIDENTAL CONSTRUCTION.—Roof fill: Lightweight concrete made with stabilized Vermiculite aggregate.

PART 7. EXTERIOR WALL CONSTRUCTION

7-A. TYPES OF CONSTRUCTION.—Walls below grade: Reinforced concrete. See NBFU Code, Section 803.

1) **Walls above grade:** Generally, brick facing on exterior side, bonded into hollow clay-tile backup masonry.

a) **Penthouse and parapet walls:** All-brick masonry.

7-B. INCIDENTAL WORK.—Facing materials; coping; etc.: See "Exterior Finish."

1) **Waterproofing required:** Built-in, masonry-flashing material (WASCO copper-fabric flashing, or Sandell's metal-reinforced fabric flashing) installed over tops and exterior faces of spandrel beams, lintels, shelf-angles, etc., and under masonry sills and copings.

7-C. MISCELLANEOUS WORK.—Chimney construction: Solid brickwork throughout; firebrick lining to roof level; poured concrete cap.

PART 8. EXTERIOR FINISH

8-A. FACING MATERIALS.—For street fronts: "Mo-Sai" architectural-masonry slabs and trim.

1) **For other walls, chimney, etc.:** Select, all-hard common brick (exception: stucco finish applied over common brick facing on parapets and walls of penthouse and light court).

2) **For entrance vestibule:** Glass block walls above "Mo-Sai" base; cement plaster ceiling.

8-B. INCIDENTAL CONSTRUCTION.—Copings: "Mo-Sai" on street-front walls; limestone or cast stone on other walls.

1) **Window sills:** See "Windows."

2) **Store front transoms:** Glass block work provided with "Marathon" unit ventilators; supported on structural steel framing.

3) **Marquise:** See "Miscellaneous and Ornamental Metalwork."

PART 9. ROOFING WORK

9-A. GENERAL REQUIREMENTS.—Roof covering: 4-ply built-up roofing with gravel finish; Class "A" according to NBFU Code.

1) **Roof flashing:** 5-ply, fabric-type base flashing, lapped into roof covering and turned up on vertical surfaces; metal cap flashing.

2) **Guarantees required:** 15-year guarantee on roof covering and fabric flashing; 3-year guarantee on metal flashing.

9-B. ROOF METALWORK REQUIRED.—Flashings, gutters, down-spouts, gravel stops, etc., all of sheet copper; roof ventilators of galvanized steel.

PART 10. MISCELLANEOUS AND ORNAMENTAL METAL EQUIPMENT

10-A. MISCELLANEOUS MATERIALS AND EQUIPMENT.—Such items will include necessary anchors, bolts, nails, and other rough hardware; also, inserts, hangers, wire ties, etc., for the work of mechanical and electrical trades; cleanout door for chimney; corner and wheel guards; sidewalk doors and ventilators.

1) **Sidewalk doors:** All-metal, watertight construction; non-slip top surfaces of aluminum.

2) **Sidewalk ventilators:** Aluminum or bronze frames and grilles; flush, non-slip top surfaces.

10-B. ORNAMENTAL EQUIPMENT.—Such necessary equipment will include the items following:

1) **Marquise:** Cresting, facia, and soffits of aluminum, supported on structural steel framing.

2) **Metal awnings:** Overlapping, ventilating aluminum-louvers mounted on a structural steel or aluminum frame; as made by Coolvent Awning Company; (required for office windows on east and south elevations).

3) **Letter chute:** Complete, government-approved mailing equipment having a letter opening on each floor above basement; mail box located in 1st floor "lobby"; aluminum finish on all exposed metal parts.

10-C. STAIRWAYS. — General requirements: Metal stair construction conforming to the standards of National Association of Ornamental Metal Manufacturers. See NAOMM Architectural Metal Handbook, Part III.

1) **Stair schedule:***

PART 11. INTERIOR WALLS AND PARTITIONS

11-A. TYPE OF CONSTRUCTION.—In basement: Brickwork of thickness indicated for nonbearing walls and partitions; reinforced concrete bearing walls.

1) **Walls, partitions, and furring above basement:** Generally, of standard gypsum block construction; of hollow clay-tile construction where requirements call for ceramic, marble, or Portland cement finish; of unit type where indicated.

2) **Movable partitions:** See "Equipment and Furnishings."

3) **Toilet room compartments:** Johns-Manville "Transite Toilet Compartments" with hardwood doors and necessary hardware and accessories.

PART 12. WINDOWS

12-A. GENERAL REQUIREMENTS. — Unit windows: Stock units fabricated from "intermediate" weight rolled-steel sections, or aluminum windows corresponding to the sizes and designs indicated; complete with manufacturer's operating hardware; all conforming to Metal Window Institute standards.

1) **Window schedule:***

a) **Class of aluminum windows (alternate):** Series CPA-2 as made by Aluminum Window Corporation.

b) **Sills for unit windows:** Extruded aluminum; Alcoa's Type A for use with windows in brick-faced and stucco walls; sill shown on Fenestra's page 23 in Sweet's Catalog (1945) for use with windows in "Mo-Sai" walls.

2) **Glass block windows:** Units 8" x 8" in size. See NBFU Code, Section 807, for usage requirements.

a) **Store front transoms:** See Par. 8-A(2).

3) **Display windows:** Polished plate glass set in aluminum store front construction.

12-B. INCIDENTAL REQUIREMENTS.—Window stools: In stores, service stair and penthouse, cement; in office-floor toilet rooms, ceramic tile; in offices, aluminum.

1) **Insect screens:** Window manufacturer's standard equipment required only for windows in stores.

2) **Shop finish required:** Standard Bonderizing finish on all ferrous metal surfaces, followed by a priming coat of iron oxide paint.

*** Typical of the schedules employed by the author is this WINDOW SCHEDULE.**

Location	Mark	Design and type (MWI)	Glazing
Stores (in rear walls)	(G)	"Security" S-941181	cl sheet glass
Store toilets	(H)	"Security" S-32130	cl sheet glass
Offices	(A, B, C & D)	"Combination" 635	pol pl glass
Offices	(E)	"Combination" 614	pol pl glass
Offices	(F)	"Combination" 615	fig obs glass
Penthouse	(I)	"Com Projected" B-23141	wire gl

(Continued on page 84)

PART 13. DOORS

13-A. **GENERAL REQUIREMENTS.**—Stock-design metal and wood doorways of types, sizes, and materials indicated; complete with trim and necessary accessories and operating hardware.

1) **Metal door schedule:***

2) **Wood door schedule:***

13-B. **HARDWARE FOR DOORS.—Scope:** All items necessary for the suitable equipment and convenient operation of the building.

1) **Quality and material:** Equal to Corbin's; cast bronze (exception: butts of wrought bronze).

2) **Finish of hardware:** Polished bronze (US10) for steel doors; white bronze (US25) for aluminum doors; dull chromium finish (US26D) for wood doors.

3) **Requirements for principal equipment:**

a) **Locks:** Cylinder-type locks in general (exception: bit-key locks for inner doors in barber shop and for store toilets).

b) **Lock sets:** Knob sets required in general (exception: handle sets required for entrance doors to barber shop and stores).

c) **Unit-type lock sets:** Required for entrance doors to offices, also for doors to office-floor toilet rooms.

d) **Panic-bolt lock sets:** Required on corridor doors to service stair.

e) **Deadbolt locks without trim:** Required on double-acting doors; 2 cylinders.

f) **Butts:** Ball-bearing type; 3 required for each single-acting wood door; 2 for each single-acting metal door (exception: 3 butts for each door more than 3'-0" in width).

g) **Hinges:** Checking floor-type required for double-acting doors.

h) **Door checks:** Required for machine room door, barber shop and store entrances; also for doors to service stair and office-floor toilet rooms.

i) **Door holders and shock absorbers:** Concealed, overhead type required for double-acting doors.

j) **Top and bottom bolts:** Concealed-type required for doubled swing-doors.

k) **Push bars:** Required on store entrances, and on both sides of double-acting doors.

l) **Letter drops:** Required for barber shop and store entrances, and for entrance doors to offices.

m) **Kick plates:** Required for doors to machine room, barber shop, store room, stores, and office-floor toilet rooms.

n) **Door stops:** Required for all doors not equipped with closers or checks.

13-C. **SHOP FINISH REQUIRED:** Bonderizing and priming of all ferrous metal equipment, as specified for steel windows [See Par. 12-B(2)]; complete shop-finishing of aluminum and flush-veneer wood door equipment.

PART 14. INTERIOR FINISH

14-A. **GENERAL REQUIREMENTS.—**

1) **Interior finish schedule:***

14-B. **PLASTERING.—Furring work:** Furred and suspended ceilings; cornices, soffits, and similar falsework; framing for recessed lighting fixtures; fireproofing of structural steelwork where concrete or masonry protection is not required; all of rolled-steel shapes.

1) **Plaster base over furring:** Metal lath.

2) **Lathing accessories:** Corner beads; base screeds; ground casings; all of galvanized steel.

3) **Type of plastering:** Not less than ¾" thick; 2 coats on masonry; 3 coats on lathing.

14-C. **ACOUSTICAL FINISH. — Acoustical tile:** Mineral-type units; ¾" thick; such as U.S.G. "Acoustone."

1) **Acoustical plaster:** Asbestos-fiber type, ¾" thick; such as K-M "Limpet."

14-D. **MARBLE WORK.—Material:** Natural Virginia "Greenstone."

1) **Surface finish required:** Sawn at right-angle to natural bed and sand-rubbed, for floors and wearing surfaces; smooth and polished for standing surfaces.

14-E. **CONCRETE FLOOR FINISH. — In Basement:** 1" concrete topping-mix applied over prepared base-slabs.

1) **On other floors:** "Dusted-on" monolithic finish.

14-F. **BASE.—Cement base:** Flush-base, ¾" thick, applied after terrazzo finish floors are in place.

1) **Transite base:** J-M's colored and lacquered material, ½" thick, matching base on movable partitions in office spaces.

14-G. **TERRAZZO.—Floors:** 2 colors; 1¾" total thickness, applied direct to concrete floor slabs.

1) **Door plinths:** Required for doors having wood frames and trim.

14-H. **CERAMIC TILEWORK.—Floors:** 2 colors; 3" x 3" hexagonal pieces and 1" x 1" square pieces.

1) **Wall tile:** 4¼" x 4¼" pieces of one color; coved base; wainscot cap and horizontal feature strip of a contrasting color; bull-nose tile used at windows.

14-I. **WOOD FINISH.—Material:** Birch or gum; straight-grained sapwood of grade suitable for a light, natural finish.

PART 15. THERMAL INSULATION

15-A. **INTERIOR INSULATION. — Scope:** Over ceilings throughout the first floor.

1) **Material:** Standard mineral "Rockwool" or "Fiberglas" insulation, in batt or roll form (exception: granular form for use in close places); 2" thick.

2) **Roof insulation:** See "Floor and Roof Construction."

PART 16. EQUIPMENT AND FURNISHINGS

16-A. **MOVABLE PARTITIONS.—Type of equipment:** Fireproof, full-height partitions made up of salvageable, interchangeable units, complete with doorways and glazed openings indicated; such as J-M's "Movable Transite Walls, 'Imperial Type,'" with wood flush-veneered doors.

1) **Alternate:** Martin-Parry's "Flush Type Movable Steel Partitions" with flush hollow-metal doors, having a wood-grained finish on all exposed surfaces.

2) **Hardware:** Manufacturer's standard equipment consistent with the quality, design, and finish of specified hardware for adjacent doors in fixed partitions.

16-B. **VENETIAN BLINDS.—Extent required:** For all windows on office floors.

1) **Type of equipment:** All-metal, enclosed-head type having 2"-wide aluminum slats.

PART 17. MECHANICAL SYSTEMS

17-A. **GENERAL REQUIREMENTS. — Scope of work:** Systems of plumbing, heating, mechanical ventilation, and summer air conditioning.

1) **Provisions required for future extensions of systems:** As necessary for contemplated extensions of the building, all systems being designed and sized therefor. See "General Description of the Work."

2) **Headroom required throughout basements:** 7½' minimum.

17-B. **PLUMBING WORK. — Systems required:** Water supply; cold water distribution; hot water supply and distribution; fire protection; sanitary waste and drainage; roof and floor drainage; footing drainage; plumbing fixtures; gas piping.

1) **Cold water service.—Source** of supply: City water main in Main Street.

a) **Entrance point:** Near southwest corner of building.

b) **Service main:** 3" in size; run along basement ceiling to boiler room.

c) **Branch-lines required:** Valved branches for boilers, water storage-heater, standpipes, air conditioning equipment (in both basement and penthouse), plumbing fixtures, and electric water heater for barber shop.

2) **Fire protection system:** 2" standpipes supplying hose equipment housed in cabinets at locations indicated; for "first-aid" fire protection. See NBFU Pamphlet No. 14.

3) **Hot water service.—Source:** Steam piping from boilers connected with storage-type water heater.

a) **Storage-heater tank:** 200-gallon storage capacity; designed for 125 psi working pressure; equipped with copper-tube heating element capable of heating 120 gallons of 140-Deg water per hour, and modulating control valves; such as Patterson Kelly's Type B.

b) **Piping system:** Circulating piping to serve lavatories (exception: barber shop lavatories) and service sinks; equipped with circulating pump with automatic control (50 gpm capacity) on return line.

c) **System for barber shop:** Circulating piping run from electric water heater (50 gpm capacity; to be provided and connected by tenant) located in adjacent store room, to barber shop lavatories.

4) **Sanitary system. — Scope:** Sewer-connected soil and waste drainage system for the plumbing fixtures indicated.

a) **Connection point with public sewer:** In Main Street, opposite southwest corner of the building; approximately 10' below grade.

b) **Location of main soil line:** Against south wall of basement (supported on masonry piers or steel wall-hangers).

c) **Location of soil line from office-floor toilets:** In pipe space at rear of main stair, and across basement ceilings (run parallel with structural beams) to south wall.

d) **Location of office-lavatory and drinking fountain waste lines:** At structural columns, and across basement ceilings, to south wall.

5) **Roof and floor drainage.—Scope:** A piping system installed to serve roof and floor drains indicated; also to carry off waste from air conditioning equipment; connected to storm sewer in Main Street.

a) **Connection point with storm sewer:** Below curb line opposite southwest corner of the building, approximately 6' below grade.

b) **Location of main drainage line:** Against south wall of basement; (supported on wall-hangers).

c) **Collection point for basement floor drainage:** Sump pump pit located in boiler room.

d) **Sump pump for basement floor drainage:** Automatic electric pump having a capacity of 2,600 gph; with discharge line from pump connected to main drainage line.

e) **Roof drains:** Cast iron, with removable dome-strainer; such as Josam's #410-S.

f) **Floor drains:** Cast iron, with removable anti-tilting grate and supplementary strainer; such as Josam's #530-A.

6) **Footing drainage.—General description:** An installation of open-joint drainage tile placed on the exterior side at the bottom of foundation walls along Main and Washington Streets; covered with a porous fill; graded to discharge into a sump pump pit located in the sidewalk area near the southwest corner of the building. (Corners and sharp angles in piping formed with sewer pipe fittings.)

a) **Joint-protection material:** Pieces of coarse burlap; pieces wired to the ends of each adjacent pipe.

b) **Sump pump equipment:** Automatic electric pump having a capacity of 1,500 gph, with its discharge pipe connected to the drainage line carrying roof and floor drainage water.

7) **Plumbing fixtures.—Standard for design and quality:** Crane Company's equipment, except as otherwise noted; all complete with necessary trim and fittings; in accord with plate numbers listed.

a) **Water closets:** Siphon-jet, elongated-bowl, flush-valve type; such as PW-11660.

b) **Lavatories for stores and offices:** Vitreous china bowl with integral shelf-back; such as PW-625.

c) **Lavatories for toilet rooms and barber shop:** Vitreous china bowl supported on single pedestal-leg; such as PW-597 (exception: shampoo supply fitting for lavatories in barber shop).

d) **Urinals:** Vitreous china, pedestal-type; such as C-15643.

e) **Service sinks:** Enameled cast iron; such as C-21360.

f) **Drinking fountains:** Electric combination cooler and fountain having a capacity of approximately 8½ gallons of 50-Deg water per hour (with room temperature at 80 Deg F); such as Halsey Taylor's #612AF.

g) **Accessories for toilet rooms:** Metal paper-holder and coat hook in each store toilet and each water closet compartment on office floors; a liquid-soap dispenser and a mirror for each lavatory in office-floor toilets.

8) **Gas piping system.—Scope:** Concealed gas-pipe risers for future supply of City gas to offices; installed at each interior column in office areas.

a) **Basement piping:** Not included in contract.

* *For typical schedule see preceding page.*

b) **Floor connections required:** A capped "T" located 12" above office floor lines.

9) **Pipe covering required.—On all hot-water piping:** Sectional air-cell covering, pasted and banded; plastic magnesia or asbestos cement on fittings.

17-C. **HEATING WORK. — System in general:** A low-pressure, 2-pipe, vacuum-steam heating system, equipped with a condensate pump on the return line; designed to maintain 70-Deg dry-bulb temperature inside the building, assuming outside temperatures not lower than 15 Deg.

1) **Spaces not to be heated:** Penthouse; store basements; utility spaces in basement (exception: machine room).

2) **Type of heat distribution units.—**For barber shop and machine room: Finned-tube radiation at ceilings.

a) **For stores:** Unit heaters.

b) **For office floors:** Cabinet convectors located below windows.

3) **Control systems required.—**For basement radiation: Modulating control valves.

a) **For store heaters:** Individual thermostats.

b) **For office-floor convectors:** Collective, automatic control, of the intermittent "pulsating flow" type, controling operation of the boiler-firing device, operating through an outside thermostat; such as Warren Webster's EH-10 "Moderator" control equipment.

4) **Principal equipment.—Standards for design and construction:**

a) **Boilers:** Two; steel, portable, water-tube type, designed and equipped for oil firing; cross-connected and installed so that either or both may be used; such as Titusville Iron Work's CM series.

b) **Oil burners:** Constant-pressure type having an oil-burning capacity of 25 gph, wired for and to be actuated by the office-floor control system specified; such as Williams' "Oil-O-Matic" Type JJ.

c) **Fuel oil storage tank:** One 3,500-gallon steel tank equipped and installed in accordance with NBFU standards; located under sidewalk on Washington Street.

d) **Condensation pump:** Duplex type complete with receiving tank, each pump having a capacity of 10 gpm against a discharge head of 15 lbs psi; such as Nash Company's #7615.

e) **Unit heaters:** Horizontal-delivery type, with 2-speed motor controled by thermostat, aquastat, and speed switch.

f) **Convectors:** Wall-hung, enclosed-cabinet type equipped with damper; such as Modine's Type RWC, with "Direct-flo" grilles.

5) **Covering required.—On boilers and hot water storage tank:** Plastic asbestos reinforced with wire netting.

a) **On steam piping:** Sectional asbestos cell, banded; 3-ply covering for supply mains and branches; 2-ply covering for supply risers; supply fittings covered with plastic asbestos.

17-D. **MECHANICAL VENTILATION. — Work included:** Fresh air supply and winter air conditioning for the barber shop; individual exhaust-fan systems for Stores No. 1, 6, 7, and 8.

1) **Barber shop system.—Equipment:** Blower and heater-coil located in machine room, together with supply and distribution ductwork; equipment designed and installed to supply fresh air heated to 70 Deg in winter months, and at temperature of outside air in other seasons.

a) **Required air-changes per hour:** 6 in winter months; 12 in other seasons.

b) **Fresh air supply:** Taken above roof, in duct enclosed in pipe space at rear of main stairway.

c) **Blower:** Centrifugal-type fan driven by a 2-speed motor controled by a speed switch located in the barber shop.

d) **Heater coil:** Copper steam-tubing; steam from boilers controled by a temperature-regulating valve.

e) **Method of exfiltration:** Through louver-openings in barber shop and machine room doors.

2) **Ventilation for stores. — Exhaust equipment:** Propeller-type exhaust fan located in a weatherproof, penthouse-type roof ventilator equipped with a motor-operated, automatic shutter (exception: wall-mounted fan and shutter required for Store No. 8); such as Ilg Company's "Power Roof Ventilator" and wall-mounted exhaust fan and shutter equipment.

a) **Fan motors:** 2-speed, operated manually by a speed switch.

b) **Required air-changes per hour:** 12, maximum.

3) **Duct covering required:** 1/2" insulating board; such as "Celotex."

17-E. **SUMMER AIR CONDITIONING SYSTEM.—General requirements:**

1) **Space to be air conditioned:** Offices and toilet rooms on office floors.

2) **Design objectives:** Maintain 78 Deg F dry-bulb temperature and relative humidity of 50%, under maximum conditions following.

Occupants of building,	200
Outside temperature,	95 Deg F dry-bulb and 76 Deg F wet-bulb
Electric lighting,	3 Watts per sq ft of floor area

a) **Required air-changes per hour:** 8.

b) **Fresh air to be introduced:** 10% of total circulated.

3) **Mechanical plant.—Equipment in general:** Mechanical-compression refrigerating equipment using refrigerant F-12, located in machine room in basement; fans, filters and dehumidification equipment located in the penthouse; distribution piping, ductwork, and accessories; and zoned, automatic control equipment.

a) **Control equipment:** A temperature-control system having a modulating thermostat actuating air-operated, air-stream dampers in each of the zones indicated; complete with air compressor, air tank, and such necessary equipment, located in the machine room; such as Johnson Service Company's "Pneumatic Control System."

4) **Operation.—General requirements:** Quiet; free from noticeable vibration.

a) **Delivery of conditioned air:** Through trunkline ducts located above corridor ceilings, to zoned areas following:*

b) **Method of exfiltration:** Through louver-openings in office doors leading to corridors; through grille-openings in toilet rooms located in vent shaft to roof.

c) **Recirculation collection-inlets:** In corridors, at base of return-air shafts discharging into fan room in the penthouse.

PART 18. ELECTRICAL SYSTEM

18-A. **GENERAL REQUIREMENTS. — Scope of work:** System for power and lighting, including water heating for barber shop; public telephone service.

1) **Work not included:** Lighting fixtures for stores.

18-B. **POWER AND LIGHTING SYSTEM. — Primary service:** 2,400-volt available at power company's pole on Washington Street.

1) **Power company's work:** Furnish and install transformers (in vault indicated) and meters (in machine room); connect primary-service wiring with street circuit.

2) **Entrance service:** 120-208 volt; 3-phase; 60-cycle; 4-wire.

3) **Design objective (lighting):** Lighting service based on the design standards following:*

4) **Metering system:** Meters for power and lighting as designated following:*

5) **Type of wiring:** Run in metal raceways, throughout. Electrical metallic-tubing used generally; flexible conduit in movable partitions; in rigid conduit only where required by City electrical code.

6) **Lighting fixtures:** Incandescent-lamp fixtures required for entrance vestibule, utility rooms and spaces, and store basements; fluorescent-lamp fixtures required elsewhere; all fixtures furnished complete with lamps and necessary operating accessories.

a) **Fluorescent-lamp fixture schedule:***

b) **Incandescent-lamp fixture schedule:***

18-C. **TELEPHONE SERVICE. — Contractor's work:** Provision of a system of empty raceways together with necessary distribution and terminal-outlet boxes, complete and in readiness for the telephone company's installation.

1) **Point of entrance:** At southeast corner of building.

2) **Location of boxes:** Distribution center in closet adjacent to basement lobby; outlet boxes in rear bay of barber shop and stores, and in corridor wall in each office unit.

PART 19. FIELD PAINTING AND FINISHING

19-A. **SCOPE OF WORK REQUIRED. — 1) (Protective):** Surfaces of unfinished materials and equipment ordinarily requiring protection, such as structural steel and iron; ferrous sheet-metal; metal piping and equipment; exterior wood and composition finish, etc. **2) (Decorative):** Exposed surfaces of unfinished materials, such as steel and iron, sheet-metal, wood and composition finish; plaster, etc., including masonry to extent indicated.

19-B. **MATERIALS.—Ready-mixed products of the type indicated in the following schedule:***

PART 20. ELEVATOR

20-A. **GENERAL REQUIREMENTS. — Work included:** A complete and properly working elevator installation for passenger service, serving the basement, 1st, 2nd and 3rd floors; designed, equipped, and installed in accord with applicable requirements of the "Safety Code for Elevators, Dumbwaiters and Escalators," ASA American Safety Standard A17.1-1937.

1) **Type of operation:** Automatic-collective, push-button control, arranged for operation both with or without an attendant; power-operated, automatic-opening doors on car enclosure and at each landing.

2) **Elevator machine:** A traction-geared machine operated by electro-magnetic control, located in the penthouse; with automatic car-leveling equipment.

a) **Duty:** 2,500 lb platform live-load, at 150' rise per minute.

b) **Power supply:** 208-volt, 3-phase, 60-cycle, 4-wire, AC service available at distribution center in basement.

3) **Elevator car.—Platform:** Structural-steel car frame operating on roller guides; with wood sub-floor; provided with rubber tile flooring and an aluminum threshold.

a) **Car enclosure:** Of all-metal construction, having a wood-grained finish on exposed surfaces; net cash allowance of $2,000 therefor including power-operated car doors, hardware, lighting fixture, and accessories.

4) **Car doors and hoistway entrances:** Doors of flush type hollow-metal construction, having a wood-grained finish on exposed surfaces (exception: polished aluminum doorway for 1st floor entrance); center-opening; operated by electric operating-equipment, such as Otis' Type "O."

5) **Signal equipment:** Car-position indicator, buzzer, direction lights, non-stop and door-close buttons, in car; corridor buttons; corridor lanterns with gongs.

6) **Operating requirements:** After all doors are locked in the closed position, the elevator car will move in response to push buttons pressed either in the car or in the corridors.

a) **Without-attendant operation:** During an "up" trip the car will stop at each landing for which an "up" button has been pressed. After each such stop the car will start automatically in the "up" direction until it reaches the highest landing for which a car or corridor button has been pressed. During an "up" trip the car will not stop at any landing where a "down" corridor button has been pressed unless such landing be the highest landing for which any button has been pressed. The car will operate similarly when responding to signals in the "down" direction.

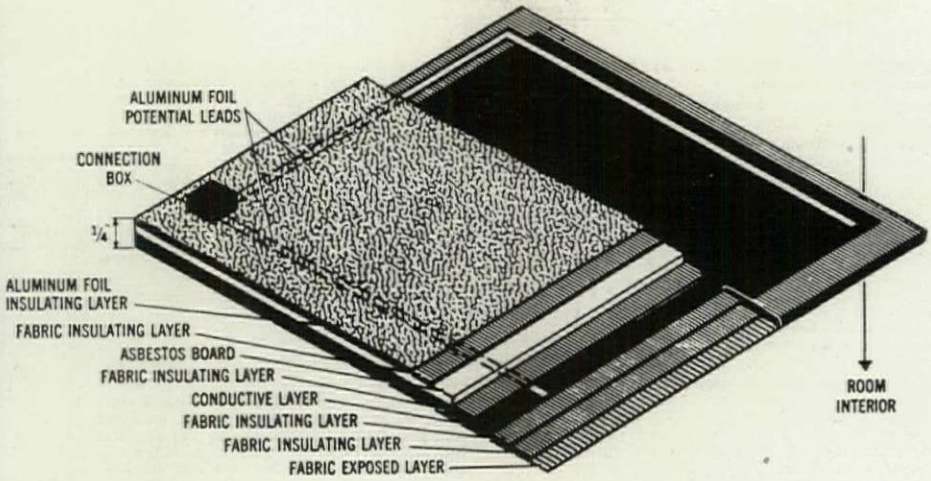
a(1) **Operation of doors:** The car and hoistway doors, automatically operated by an electric engine on the elevator car, will operate simultaneously. The doors will open immediately when the car stops at any landing, or in response to the pressing of a corridor button when the empty car is standing at such floor; they will close after the expiration of a predetermined time interval.

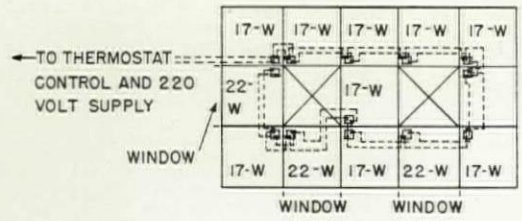
b) **With-attendant operation:** The elevator car and the doors will operate in the manner described for "Without-attendant operation," except as follows:

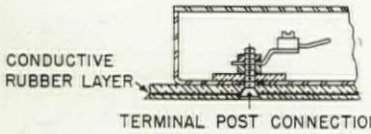
b(1) **The use of a key-operated switch** will cause a "home" landing to be automatically established at the main floor, to which the car will automatically return when all calls have been answered; at the same time, the non-stop and door-close buttons and the buzzer in the car will become effective.

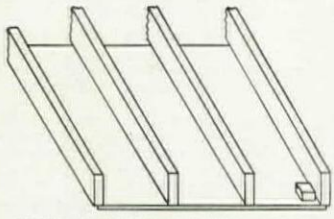
b(2) **Operation of doors:** The doors will operate in the manner described for "Without-attendant operation," except that the closing of the doors will occur only following the pressing of the door-close button in the car.

* *For typical schedule see p. 83.*









Electric Radiant Heating with USKON

A short while ago we traveled (by luxurious limousine, at U. S. Rubber's expense, in a blinding snowstorm) to Raritan, N. J., where the Pierce Foundation is testing *Uskon* radiant heating in a prefabricated house occupied by a family of three. A number of editors made the trip, were wined and dined, and were literally exposed to this new phenomenon. How did it affect us?

As you can read in the accompanying summary, *Uskon* panels conduct electrical current—the heating medium—over their entire surface. The manufacturer advocates ceiling installation exclusively, claiming that floor and even wall installations set up convection currents and are not true radiant heating. That is a question on which heating experts have divided opinions; and so is the question whether it is desirable to rely solely on true radiant heating. An obvious advantage of ceiling installation, of course, is that it eliminates the danger, with wall panels, of having a householder—or a carpenter—nail a picture hanger or molding to the wall, and thus short the whole darn system.

Other than that, we were all quite favorably impressed. The panels, like the electric radiant heating cable system developed by Roberson (see September 1946 P/A), have several advantages: extremely simple installation; very low maintenance; complete local control—which means a cool bedroom, for instance, next to a warm dressing room or bath; elimination of radiators, grilles, etc.; and the relatively insignificant mass of the panels, which permits them to heat up or cool off quickly, reducing the "lag" to much less than is experienced in some types of radiant heating. Of course, cost of electric power is a strong opposing factor in localities where power is expensive; but even in these, installations are being made by those who can afford the cost of the undoubtedly great degree of comfort achieved. At present, production is sufficient only to equip one house a week, on the average, and there are installers to train, computations to figure for each job, and distribution problems to solve. By next fall production is expected to be large enough to make several hundred installations per week.

Another reaction experienced by all of us: our heads felt hot. The surface temperature of the ceiling panels was only 102F (we climbed furniture to put our palms on them), but the ceilings were low. When someone from Pierce or U. S. Rubber reminded us that an open fire bakes our fronts but leaves us cold behind, and a radiator does the same, and we don't complain, the more "technical" among us were satisfied. Why should we complain at being warm on top (instead of baked in front) especially since we were also warm at our feet (as compared to cold behind)? But we could not blame a lady editor from a household journal who remained unconverted. Such a shift in heat source involves much more of a change in customs than the rational engineer readily admits; people become used to familiar discomforts and do not relinquish them readily.

USKON is natural rubber to which have been added particles of carbon black; these conduct electricity through the panels, and in doing so generate heat. There are no wires in the panels. Use of standard unit panels permits the Fire Underwriters to test them and assign fire ratings (approval has already been obtained) whereas, although it is feasible to apply USKON to a proper surface like wallpaper, and connect it to the electrical system, such an installation is tailor-made and has to be fire-rated on the basis of each individual job.

CONNECTION: cable or conduit, to binding posts in electrical boxes on each panel. (Another method, now being developed but not yet available, has lead-in wires from each panel brought to a raceway molding at junction of wall and ceiling.) Panels are connected in parallel circuits, 20 amp max. current per circuit; five circuits for an average small house.

CONTROL: one thermostat for each room or closely related group of rooms, affording almost ideal control; no rheostatic or other modulating control; panels either "on" or "off." Thermostats are standard low-voltage, air-actuated type, but extra sensitive, operating the system at a temperature differential of 1/2 degree F.

ELECTRICAL INPUT: 220 volts (can operate on 110, but the higher wattage required adds to cost of wiring); panels in two wattage densities—17 w/sq ft, for normal use; and 22, for higher temperatures (baths, near large glass areas, etc.).

TEMPERATURES OBTAINED: with ceiling installation, approx. 100F at panel surface; 77F immediately below; 69F at median body height; 65F at ankle level; 69F at floor surface.

INSTALLATION: panels nailed around the non-conductive edges to framing; for center nailing, use nails with insulating sleeves. Usual panel arrangement is peripheral, with standard building boards filling in. Joints between panels may be taped and filled as with plaster-board, or panels may be had with beveled edges for joint emphasis. Panel surface may be sized and finished with paint, paper, fabric; or with a coat of plaster—very thin, so the panel mass will not be substantially increased; greater mass would reduce their sensitivity of response to changing temperatures.

PANEL SIZES: standard size, 4' x 4'; others available in standard dimensions of asbestos-cement board; all to fit normal 16" or 24" framing spacing.

COST: first cost is low, considering that USKON replaces not only the entire heating system but also a portion of the ceiling surfacing. Operating cost varies according to severity of climate and cost of electricity, as well as nature of construction (full insulation is essential). Where power costs more than 1 1/2 cents per kwhr. operation may be quite expensive. Estimates of yearly operating costs for a typical 8,000 cu ft house are as follows:

Pittsburgh	$190.00	Denver	$291.60
Buffalo	247.50	Seattle	220.00
New York City	252.00	San Francisco	43.00
Jacksonville	39.30	Bangor, Me.	170.20
Atlanta	66.93	San Diego	61.00
Memphis	47.00	Chicago	310.00

PA Manufacturers' Literature

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

Air and Temperature Control

1-150. *Rheem Automatic Gas Water Heater, AIA 29-D-2 (RA 78)*, Rheem Mfg. Co. Reviewed March.

1-152. *Aerofuse Damper No. 4, AIA 30-J*, Tuttle & Bailey. Reviewed March.

1-156. *Agitair (Form HGF-101-12-46)*, Air Devices, Inc. Reviewed March.

1-157. *Spencer "C" Heating Boiler (Cat. 47C)*, Avco Mfg. Corp. Reviewed March.

1-158. *Hoffman Series 90 Hot Water System, AIA 30-C-25*, Hoffman Specialty Co. Reviewed March.

1-159. *Attic Ventilation Code (First Edition)*, Propeller Fan Mfrs. Assn. Reviewed March.

1-160. *Rheem Attic Fan Series 2900, AIA 30-D-1*, Rheem Mfg. Co. Reviewed March.

1-161. *Agitair (G-101 Job 25)*, 6-p. illus. bulletin on diffusers, filters, and exhausters for heating, ventilating, and air conditioning systems. Dimensions, advantages. Air Devices, Inc.

Four illus. folders on various types of boilers and hot water heaters. Dimensions, specifications; steam and water ratings. American Radiator & Standard Sanitary Corp.:

1-162. *American Redflash Boiler (Form 634).*

1-163. *Ideal Hot Water Supply Boilers (Form 635).*

1-164. *American Gas Boilers (Form 7028).*

1-165. *American Exbrook Boiler (Form 675).*

1-166. *Frozen Foods—a Billion Dollar Market (CR. 238-4-46)*, 16-p. illus. bulletin on blast freezers which provide high velocity air for fast freezing. Floor-mounted and suspended models. Also refrigeration machines. Advantages, diagrams. Carrier Corp.

1-167. *Steel Boilers and Air Conditioners*, 8-p. illus. booklet on air conditioners, warm air furnaces, residential boilers for mechanical- and hand-firing; also a special boiler for any type of heating system. Specifications, diagram. Fitzgibbons Boiler Co.

1-168. *Foundry Ventilators, AIA 12-K*, 4-p. illus. booklet on a high velocity power unit for the removal of smoke, heat- and dust-laden air. Equipped with improved one-piece, cast aluminum fan; optional breather duct for cooling effect, permitting use of standard motor and also minimizing possibility of corrosive fumes coming in contact with motor. Capacities, dimensions, and weights. H. H. Robertson Co.

★ **1-169.** *Selecting the Right Type of Steam Trap (1600-10M-11-47)*, 4-p. bulletin on four types of traps: inverted bucket, float-thermostatic, liquid expansion, and thermostatic. Guide to assist in correct selection; special features, advantages. Sarco Co., Inc.

1-170. *Equipment for Air Conditioning and Refrigeration (Bul. C-1100-B31)*, 4-p. bulletin on various types of compressors, condensers, and air conditioners. Advantages, photographs. Worthington Pump & Machinery Corp.

Doors and Windows

4-116. *Alwintite Aluminum Windows (Cat. A48)*, Aluminum Window Corp. Reviewed March.

4-120. *Ware Aluminum Windows, AIA 16E*, Ware Laboratories, Inc. Reviewed March.

4-121. *Cipco Builders Hardware (Cat. 47)*, City Plating & Mfg. Co. Reviewed March.

4-122. *Wood Casement Operators*, H. S. Getty & Co., Inc. Reviewed March.

★ **4-123.** *Preslok*, 4-p. illus. brochure on a new push-button door lock. Patented locking mechanism eliminates use of key. Specification; installation data. Preslok Corp.

★ **4-124.** *Thermopane, AIA 26-A (TP-6)*, 16-p. illus. booklet, new, on insulating glass window unit, composed of two or more lights of glass separated by air space and hermetically sealed around the edges with metal-to-glass bond. Technical details, diagrams; specifications, advantages. Libbey-Owens-Ford Glass Co.

★ **4-125.** *Windows and Industrial Doors*, 76-p. illus. catalog on steel doors and windows for every building need. No weights or cords; spring balances equipped with stainless steel tapes. Excellently indexed. Specifications, installation data. Other steel building products, including welded steel fabric, Clerespan joists, complete line of metal lath. Truscon Steel Co.

Electrical Equipment and Lighting

5-110. *Light Conditioning, AIA 31-F (Cat. 17)*, Condi-Lite Corp. Reviewed March.

5-111. *Specifications of the Fleur-O-Lier Manufacturers*, Fleur-O-Lier Mfrs. Reviewed March.

5-112. *Indirect Lighting At Its Best (KV-96-1-47)*, Kurt Versen Co. Reviewed March.

5-113. *Motor Controls (Cat. 10)*, 147-p. illus. catalog on a comprehensive line of manual and magnetic starters, enclosed switches, and accessories. Diagrams, dimensions; key for knockout sizes, list prices, and index. Arrow-Hart & Hegeman Electric Co.

5-114. *Fluorescent Lamps and Auxiliary Equipment (LS-101)*, 6-p. folder on G-E regular, Slimline and Circline lamps, ballasts, starters, lamp holders, etc. Wiring diagrams, dimensions, data, lamp life ratings. General Electric Co.

5-115. *Timing Motors and Devices (Cat. 320)*, 8-p. illus. catalog on synchronous timing motors, timing devices, and clock movements. Profile and shaft drawings; speed, voltage, and frequency listings; all other standard or special variations available in each motor listed. Applications; specifications. Haydon Mfg. Co., Inc.

5-116. *Whiton Steam Turbines (Cat. ST101 1147-10)*, 8-p. illus. booklet on the solid type steam turbine with horizontal split casing, inlet and exhaust connections located in the lower half. Entire rotation unit may be lifted without disturbing turbine alignment with driven unit. Dimensions, engineering drawings, advantages. Whiton Machine Co.

Finishers and Protectors

6-110. *Nu-Wall Plaster*, Nu-Wall Mfg. Co. Reviewed March.

6-114. *"Penta" Preservative*, Chapman Chemical Co. Reviewed March.

6-115. *Sika, AIA 7-B2*, Sika Seal Corp. Reviewed March.

★ **6-116.** *Devoe Painting Guide (Release No. 99)*, 39-p. catalog on the proper use of paints and related materials. Spreading rates, drying time, surface preparation, descriptions of recommended products. Index simplifies location of any desired information. Sales Training Dept., Devoe & Raynolds Co., Inc. (50 cents per copy; make check or money order payable to Devoe & Raynolds Co., Inc.)

6-117. *Wax in Paint (Adv. 235) (1057)*, 16-p. booklet on a wax-fortified interior finish said to combine advantages of wax and paint. Test results; specifications for previously painted, new, or unpainted wood and masonry. List of "wax-fortified" line and colors. S. C. Johnson & Son, Inc.

6-118. *Paint Progress, AIA 25 (Vol. 7, No. 1)*, 11-p. bulletin on new developments and methods of attacking industrial painting problems. Use of zinc chromate primer as base coating for light alloys for maximum corrosion protection. Use of phosphorescent paints; safeguards against moisture with paint film. Consumer's notes on choice of paints, prevention of cracks, flaking, discolorations, etc. Test results, details, illustrations. New Jersey Zinc Co.

6-119. *Protexol Fireproofing, AIA 19:A:33*, 4-p. brochure on a lightweight, fire-retardant wood, also termite- and decay-proof, for all types of construction. Specifications, advantages, rating. Recommended selection of proper treatment. Protexol Corp.

Insulation (Thermal, Acoustic)

9-87. *Kimsul Insulation, AIA 37B (Form KLB-12-9)*, Kimsul Div., Kimberly-Clark Corp. Reviewed March.

9-88. *Spraykote*, Sprayed Insulation, Inc. Reviewed March.

PA Manufacturers' Literature

Two 8-p. illus. booklets on Fiberglas and mineral wool board insulation for low-temperature commercial and domestic equipment. Application, construction details. Physical data chart. Armstrong Cork Co.:

9-90. *Fiberglas Insulation (ED-5-846).*

9-91. *Armstrong's Mineral Wool Board (11-27-1146).*

9-92. *Voltron,* 4-p. folder on flexible plastic tubing and tape for electrical insulation. Available colors, test data, size charts, properties. Industrial Synthetics Corp.

Load-Bearing Structural Materials

12-143. *Bridge-Flooring,* Kerlow Steel Flooring Co. Reviewed March.

From Master Builders Co. Reviewed March:

12-144. *Pozzolith (Form P-2).*

12-145. *Masterbuilt Products.*

12-146. *Besser Modular Standard Building Units (10M 4-47), AIA 10-C,* 24-p. booklet on modular concrete block, brick, and tile; coordination of dimensions according to the new recommendation developed by the American Standards Association in cooperation with the American Institute of Architects. Illustrations of sizes and shapes; advantages. Besser Mfg. Co. ($2.00 per copy; make check or money order payable to Besser Mfg. Co.)

★ **12-147.** *20 Years—A New Era in Concrete,* 41-p. illus. catalog on *Incor,* America's first high early strength Portland cement. Record of 20 years' projects, covering wide range of concrete work such as highway, bridge, and building construction. Advantages. Lone Star Cement Corp.

Materials of Installation

13-63. *New Plastics (CDP 525),* General Electric Co. Reviewed March.

13-64. *Nailock Method (Cat. N-1), AIA 39-B-1,* Nailock Div., Sanymetal Products Co., Inc. Reviewed March.

★ **13-65.** *Housing Construction Specialties,* portfolio of literature on ties, hangers, and all types of metal structural accessories. Some of the products described manufactured by other companies; all are distributed by the publisher of portfolio. Hohman & Barnard, Inc.

13-66. *Nu-Wood Clip System (Form 731-9 50M),* 4-p. brochure on a clip that provides means for attaching Nu-Wood Kolor Fast and Sta-Lite tile and plank to a nailing base. Unit edges have tongue and groove joints; the clip is formed of electrogalvanized steel to prevent corrosion. Application, diagrams. Wood Conversion Co.

Non-Load-Bearing Structural Materials

14-54. *Transite Walls (TR-47A 10-47),* Johns-Manville. Reviewed March.

14-55. *Prest-Glass,* Prest-Glass, Inc. Reviewed March.

Four booklets on copper valleys, flashings, gutters, leaders, roofs, and decks for public buildings and residences. Varieties of construction; applications, illustrations. Copper & Brass Research Assn.:

14-56. *Valleys and Flashings (Monograph I).*

14-57. *Roofs and Decks (Monograph II).*

14-58. *Batten Type Roofs (Monograph III).*

14-59. *Gutters and Leaders (Monograph IV).*

Sanitary Equipment, Water Supply, and Drainage

19-194. *Kitchen Hints, AIA 35-C-1 (Form K-11168-47PB),* Kitchen Mai Corp. Reviewed March.

19-202. *Septic-Tank Systems (Circula Series No. G5.5),* 6-p. bulletin on a sep tic tank for rural and suburban home inaccessible to public sewer systems Design, sizes; installation data. Capaci ties and dimensions. Small Home Council, University of Illinois.

19-203. *Drain-Dri, AIA 29c1 (Bu 3207),* 4-p. brochure on an oversized rustproof cellar drainer. Nonclogging impellers pass any trash that reache them. Features, capacities, sizes weights, and prices. Yeoman Bros. Co

Specialized Equipment

19-200. *Magnesium Folding Chairs* Louis Rastetter & Sons Co. Reviewe March.

19-201. *Kelvinator—Of Course! (Form 633, 634, 635, 636, 637),* Nash-Kelvina tor Corp. Reviewed March.

19-204. *Cannon Signal Systems, AIA 31i,* 16-p. bulletin on all types of signa systems required for hospitals, includ ing time recorder, station annunciator door lights and pilots, etc. Specifica tions; photographs; catalog numbers Cannon Electric Development Co.

★ **19-205.** *Dunbar for Moderns* 24-p. illus. consumer booklet or modern furniture as pieces and as groupings. Decorative accessories from other manufacturers include lamps, pic tures, and wallpaper to harmonize with the furniture. Advantages, historical data. Dunbar Furniture Mfg. Co.

19-206. *Termite Control,* loose-leaf fold er on a sprinkler control system to safeguard buildings from termite at tack. Method consists of slotted pipe installations in all inaccessible areas (dirt-filled porches, stoops, fireplaces etc.), to be treated annually with a powerful toxic. Soil is thoroughly poi soned at all entry points; wood sup ports, debris, tree roots are removed. Specifications, installation examples biological data. The Hill Termite Control Systems.

Surfacing Materials

19-191. *Palladium Mastic,* Fulton Cor nice & Skylight Works, Inc. Reviewed March.

19-207. *Specifications, AIA 25-G,* 15-p. portfolio on treatment of all types of floors with seals, hardeners, finishers. Specifications, design data, properties. Higley Chemical Co.

19-208. *Keystone Kapco Board (820-8 47),* 16-p. illus. booklet on fabricating board of monolithic asphalt mastic composition, claimed to resist water, fire, acid, and other injurious elements. For use in industrial, housing, and prefabricated construction. Tests, advantages, ordering forms. Other products include expansion joints, building specialties, etc. Keystone Asphalt Products Co.

PROGRESSIVE ARCHITECTURE, 330 West 42nd Street, New York 18, N. Y.
I should like a copy of each piece of Manufacturers' Literature listed.

We request students to send their inquiries directly to the manufacturers.

No.	No.	No.	No.
No.	No.	No.	No.
No.	No.	No.	No.
No.	No.	No.	No.

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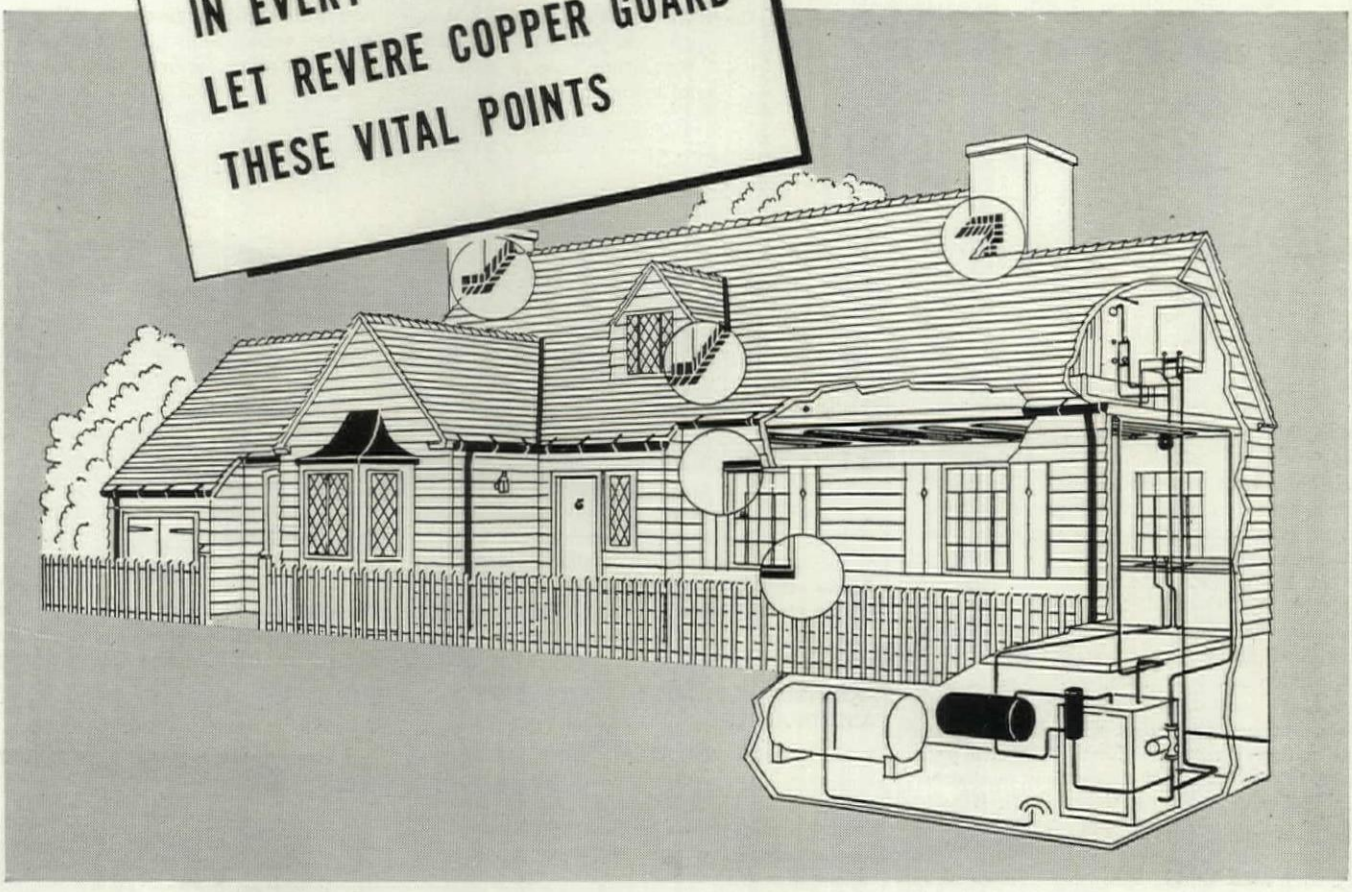
City State

PLEASE PRINT 4/48

IN EVERY TYPE OF HOUSE LET REVERE COPPER GUARD THESE VITAL POINTS



TROUBLE always costs more than Revere Copper. That's why it pays to let Revere Copper guard those vital points where water will cause other materials to rust, rot or corrode.

HEATING. In radiant panel, steam or hot water heating systems, Revere Copper Water Tube insures a lifetime of trouble-free service. Its permanently smooth interior reduces frictional resistance to a minimum. And because it bends readily, and joints are made quickly with solder fittings, it is easier to install, too.

WATER SUPPLY. You insure a free flow of sparkling-clear water when you specify Revere Copper Water Tube for hot and cold water lines. Since interiors do not become clogged by corrosion, the lines can usually be a size smaller than would be required with rustable pipe.

WASTE LINES. Large sizes of Revere Copper Water Tube are now available for soil, waste and vent lines. Experience has proven that copper provides lifetime-resistance to the corrosion action of ordinary waste materials.

FLASHING. Every home, large or small, can now have the protection of copper flashing at all joints where leaks might occur. Consult Revere engineered specifications for every type of construction.

• • •

Other Revere products include: Red-Brass Pipe; Sheet Copper and Herculoy for tanks, ducts, pans and trays; Copper oil burner, heat control and capillary tubes . . . and, of course, Sheet Copper for roofing, flashing and other sheet metal construction. They are handled by leading distributors in all parts of the country.

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New Products

BRIEF NOTES: From another querulous subscriber we've receive protest against the pregnant bathtub now universally manufactur he can see a reason for it as stiffening for stamped sheet metal tu but none in cast iron tubs . . . The sheet product, "K-Veneer," inclu in this month's product list, is worth investigating for any purp ordinarily satisfied by a building board—as combined surfacing a sheathing, for example . . . The Department of Commerce and recently formed Building Products Institute agree that the incre in production of building materials in 1947 over 1939 was greater th the actual volume increase in new construction; that materials diffic ties last year were due to transportation, low inventories, and pr uncertainty; that 1948 should show much improvement on all counts Sylvania has just announced a new warm colored fluorescent lan "Warmtone," as a result of public reaction to ordinary fluorescen cool colors.

AIR AND TEMPERATURE CONTROL

Cornish Fireplaces: limited number of hand-made, kilnburnt fireplaces from England. Available in sections or loose briquette sets, ready for assemblage. Britam Agencies, Inc., 245 Fifth Ave., New York 16, N. Y.

Karol Air Ever Pull: new, patented vent cap; sets nearly flush with roof, disposes of unsightly long pipe and A-vent. Cap maintains an even pull regardless of unusual draft conditions or high winds. Hammel Radiator Engineering Co., 8980 Santa Monica Blvd., Los Angeles, Calif.

Foundry Ventilator: high-velocity power unit designed for the removal of smoke, heat- and dust-laden air. Aluminum, galbestos, or galvanized steel construction; furnished with improved one-piece, cast aluminum fan. Can be equipped with breather duct, which permits use of standard motor and minimizes possibility of corrosive fumes. H. H. Robertson Co., Farmer's Bank Bldg., Pittsburgh, Pa.

DOORS AND WINDOWS

Formed Steel Surrounds: for residential casements or where wider and molded frame appearance is desired. Made of 18-gage electrogalvanized steel, bonderized and painted with baked-on primer. Truscon Steel Co., Youngstown 1, Ohio.

ELECTRICAL EQUIPMENT AND LIGHTING

Saf-T-Plug: claimed to be the only electrical plug on the market to give complete protection against accidents due to faulty outlets; children cannot get into plug with scissors, hairpins, etc. Two dozen packed to a carton. Electrical Saf-T-Plug & Devices Mfg. Co., 769 Venice Blvd., Los Angeles 15, Calif.

FINISHERS AND PROTECTORS

Bakelite and Vinylite Sealer: for application under paint coating on economy lumber. Sealer forms film over "live" knots; impervious to pitch extract and volatile substances that destroy paint long before clear portions of wood need repainting. Bakelite Corp., 30 E. 42nd St., New York, N. Y.

INSULATION (THERMAL AND ACOUSTIC)

Foamglas: pipe insulation of cellular glass construction, for both hot and cold lines, indoors and outdoors. Unaffected by humidity; resists fumes, acid atmospheres, and other corrosive elements. Comes in two equal half-sections, 18" long, and manufactured for all sizes of pipe. Pittsburgh Corning Corp., 632 Duquesne Way, Pittsburgh, Pa.

MATERIALS OF INSTALLATION

Gutter Hanger, Holder, and Fastener: a U-shaped fastening device that can be attached to building walls without necessity of securing roof gutter to the fastening means with rivets or wires. Brune's Sheet Metal Shop, 2319 Rousseau St., New Orleans, La.

Marsh C-100 Caulking: a permanent caulking for wood, steel, masonry, glass joints; may also be used between masonry and wood, around window frames. Packaged in 5 oz applicator tubes. **Marsh C-400 Household Adhesive:** for all-purpose household use. Waterproof, fast-setting. Marsh Wall Products, Inc., N. Main St., Dover, Ohio.

SANITARY EQUIPMENT, WATER SUPPLY, AND DRAINAGE

Triple Service Hot Water Heater: system combines in a single gas- or oil-fired assembly all functions requiring two separate units. Provides water at controlled temperature for home heating, automatic laundry, dishwasher, etc., and bath. Convector or any type of hot water radiant panel heating may be utilized. Surface Combustion Corp., Toledo, Ohio.

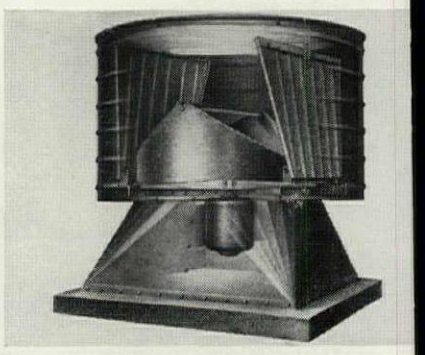
SPECIALIZED EQUIPMENT

Magic Chef Super-Size Range: a one-piece, turret top gas range with enamelled interior. Four nonclogging regular burners and two "giant super-duty" burners give 33% greater heat. Has automatic clock control, bell-ringing timer, and heat regulator. Sanitary burner tray catches spillovers; removable for washing. Insulated with Fiberglas. Oven dimensions: 18" wide, 20" deep, and 14" high. American Stove Co., 4301 Perkins Ave., Cleveland, Ohio.

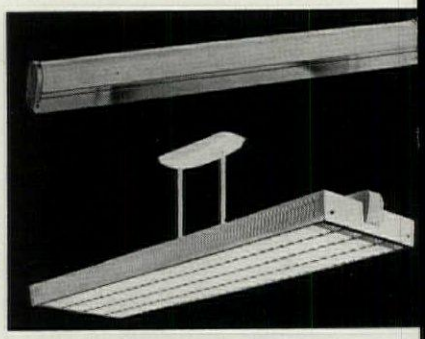
"800" Floor Box: modernized outlet box; steel, zinc-coated body protected against destructive elements. Exposed top of durable, finished brass. Also service fittings for lighting, heating, power, or for telephone, signal systems. National Electric Products Corp., Chamber of Commerce Bldg., Pittsburgh, Pa.

SURFACING

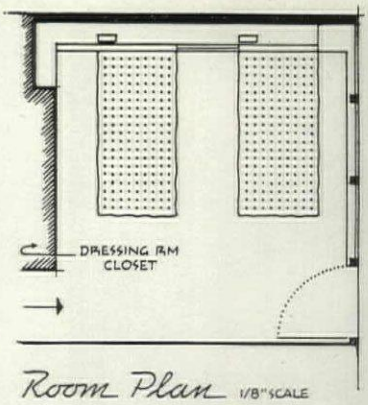
K-Veneer: new, lightweight building board for prefabricated construction. Distention of wood at short intervals through a stretching operation provides space within a wood sheet for expansion and contraction; overall dimensions eliminated. Product is bonded to wood framing; no nails used. Elmendorf Corp., 322 W. Washington St., Chicago 6, Ill.



High velocity foundry ventilator, with fan a motor, designed to minimize effects of corros fumes. H. H. Robertson Co., Pittsburgh,

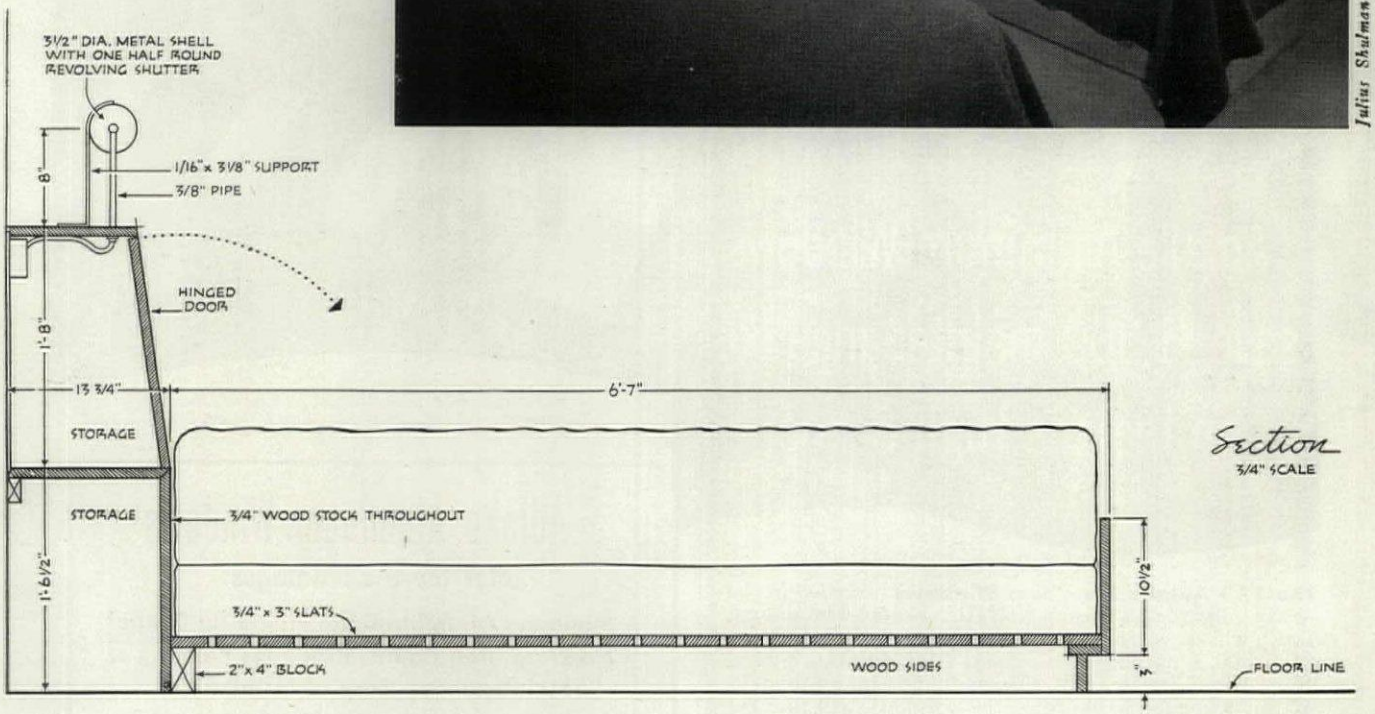


This month is the tenth anniversary of Gener Electric's commercial-scale introduction of fl orescent lamps. Seldom has a new produ influenced design so widely. The effect lighting fixtures alone has been revolutionar the *Unite-A-Lite* strip (top; Moe Bridges Corp Sheboygan, Wisc.) can be plugged end-to-en hung anywhere, moved at will; and Curt Lighting's *Anniversary Luminaire* (above) almost as far removed from the pendant incan descent fixture. From such things as the wid recessed panels below (at the G-E Lightin Institute, Nela Park, Cleveland) have bee developed entire luminous ceilings which pro vide the architect a new medium. And in th ten years, cost of a 20-w fluorescent ha dropped 62.5%, its light output risen 44%, it life increased 150%.

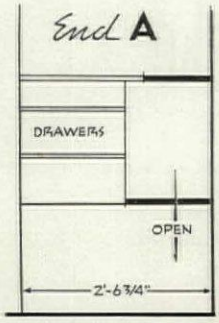


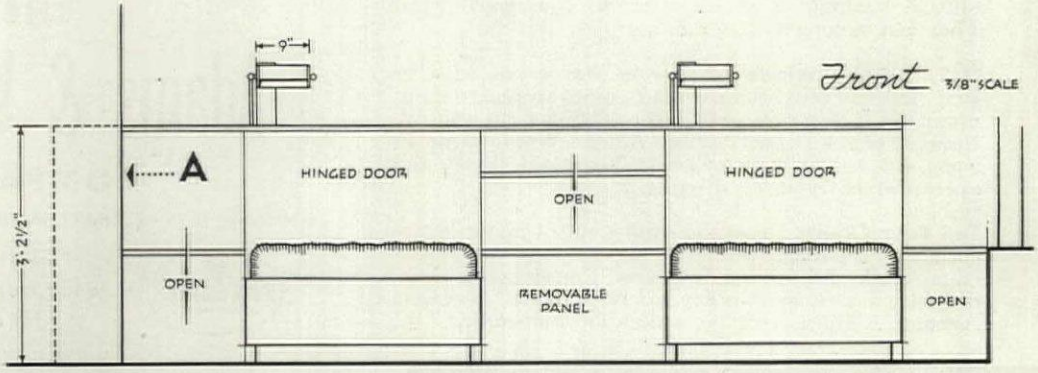
Room Plan 1/8" SCALE

Julius Shulman



Section ¾" SCALE





Front ⅜" SCALE

WARING-LEWIS HOUSE

Los Angeles, California

RAPHAEL SORIANO

Designer

Adlake Aluminum Windows save $1,500 maintenance cost in Indiana High School

*Architect: William S. Hutton, Hammond, Ind.
Contractor: John F. Rahn, Inc., East Chicago, Ind.

The 119 Adlake Aluminum Windows installed in the newly-constructed Bishop Noll High School, Hammond, Ind.*, will cut maintenance costs over a 2 year period by $1,500.00, according to a conservative estimate by the Rev. Alfred James Junk, Principal and Superintendent of the school. At this rate, the windows will pay for themselves within 10 years. *No painting is required* with Adlake Windows, and no maintenance except routine washing! You install them, you *forget* them! They last as long as the building.

Only Adlake Windows combine woven-pile weather stripping and patented serrated guides to assure minimum air infiltration and absolute finger-tip control. Because of their construction, Adlake Windows never warp, rot, rattle, stick or swell. They look lovely and operate smoothly for a lifetime.

Tell Your Clients about the wiping out of maintenance costs and the long, worry-free service they can expect from Adlake Aluminum Windows. For complete data, drop us a post card today at 1103 North Michigan Avenue, Elkhart, Ind. No obligation, naturally.

Adlake Aluminum Windows

offer these advantages:

- **Minimum Air Infiltration • Finger-tip Control**
- **No Warp, Rot, Rattle, Stick • No Painting or Maintenance • Ease of Installation**

THE

Adams & Westlake

COMPANY

Established 1857 • ELKHART, INDIANA • New York • Chicago

Adlake TRADE MARK

Furnishers of Windows to the Transportation Industry for over 30 years

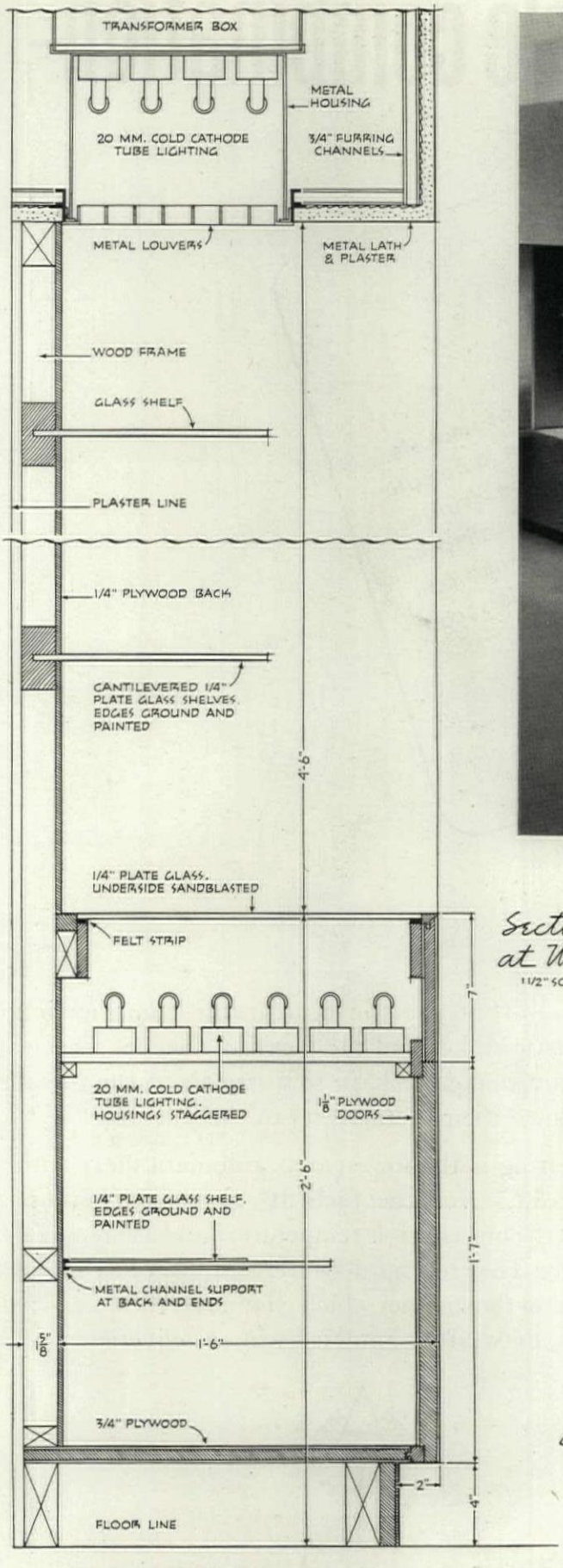
All Adlake double-hung windows carry this seal

SPECIFICATION DH-A1 QUALITY SEAL SPECIFICATION DH-A1

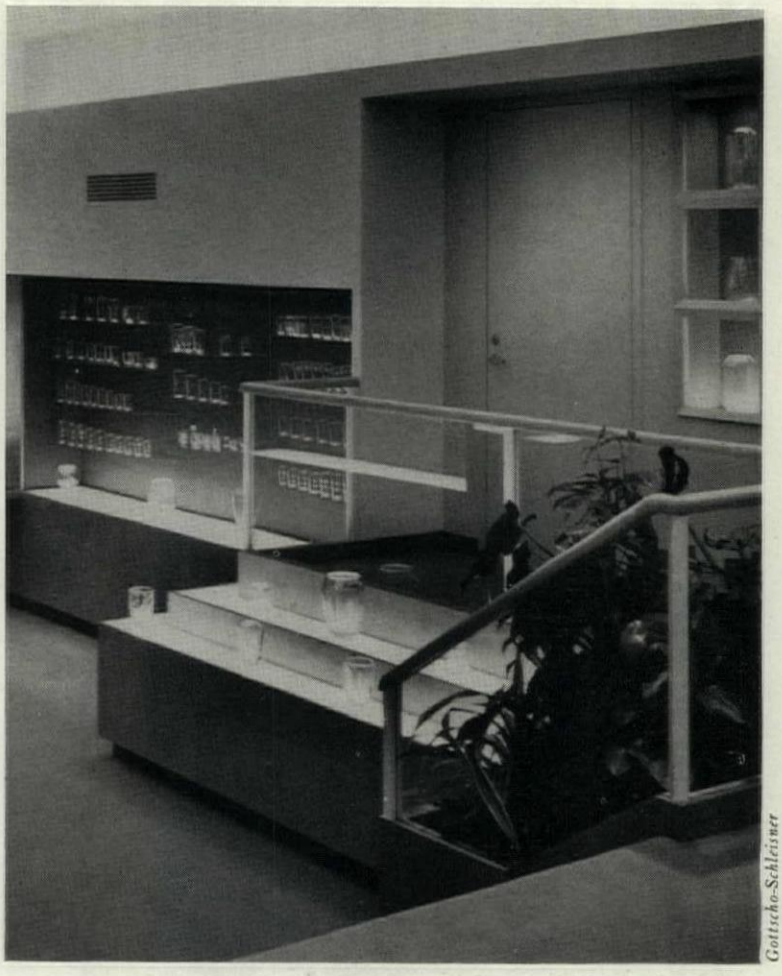
An equivalent of this window has been examined by PITTSBURGH TESTING LABORATORY, conforms in Materials, Construction, Strength of Sections and Air Infiltration requirements to ALUMINUM WINDOW MANUFACTURERS ASSOCIATION Specification DH-A1

MEMBER, ALUMINUM WINDOW MANUFACTURERS ASSOCIATION

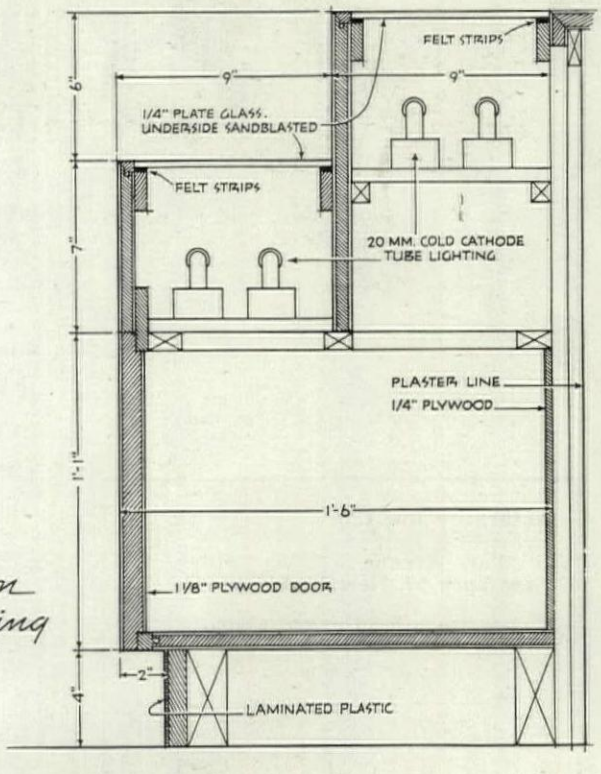
SHOWROOM: DISPLAY SHELVES FOR GLASSWARE



Section at Wall
1 1/2" SCALE



Gottscho-Schleisner

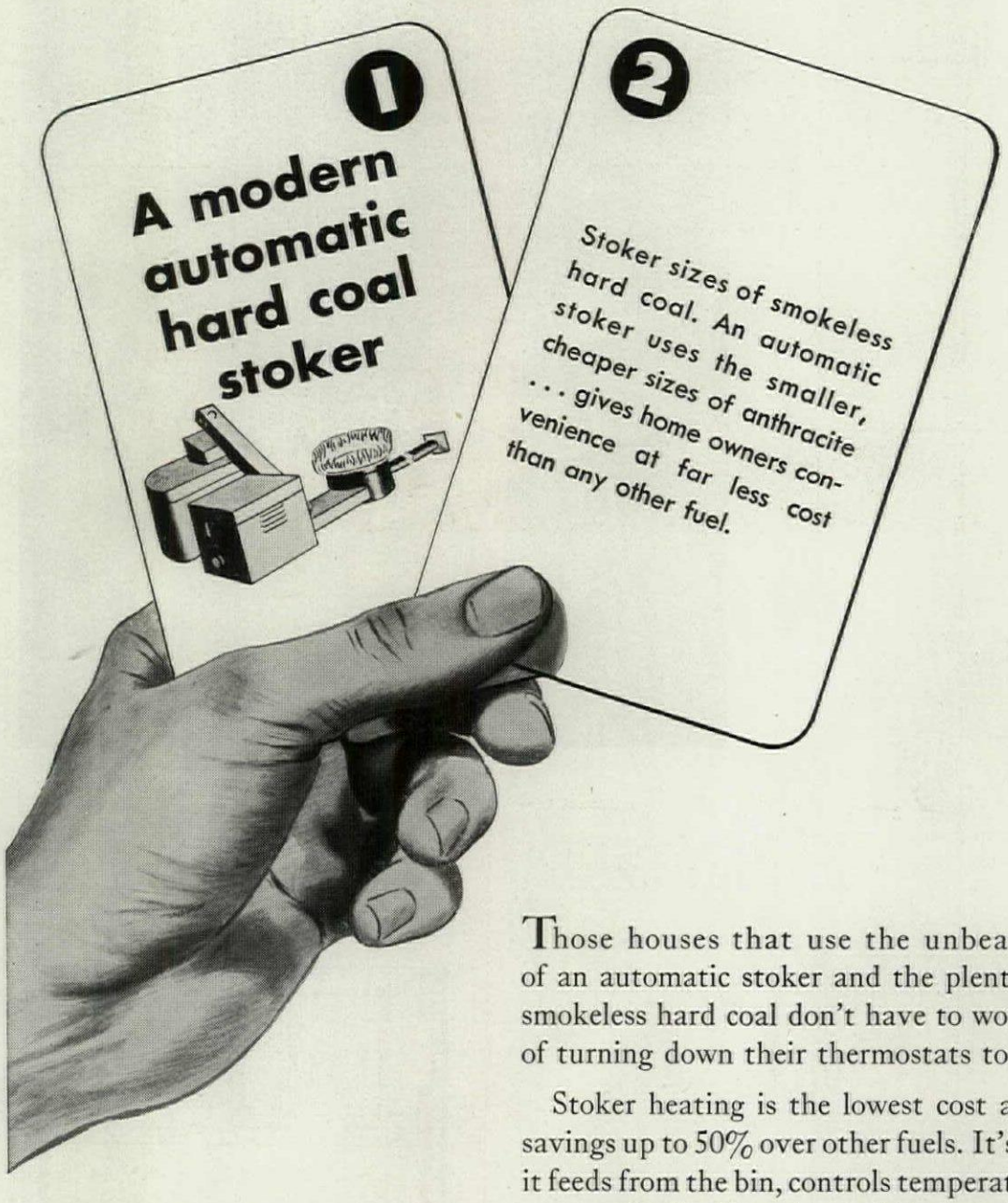


Section at Railing
1 1/2" SCALE

LIBBEY GLASS DIVISION
OWENS-ILLINOIS GLASS CO., New York, New York

CARSON & LUNDIN
Architects

Here's an unbeatable combination—



Those houses that use the unbeatable combination of an automatic stoker and the plentiful cheaper sizes of smokeless hard coal don't have to worry about the threat of turning down their thermostats to chilly levels.

Stoker heating is the lowest cost automatic heat with savings up to 50% over other fuels. It's convenient because it feeds from the bin, controls temperature and ash removal automatically. Then too, a full winter's supply of hard coal can be stored in the summer which eliminates the necessity of depending on weather hindered winter deliveries.

Anthracite Institute
Dept. 4-C
101 Park Avenue
New York 17, New York

Please send me more information on anthracite and anthracite heating.

Name_____

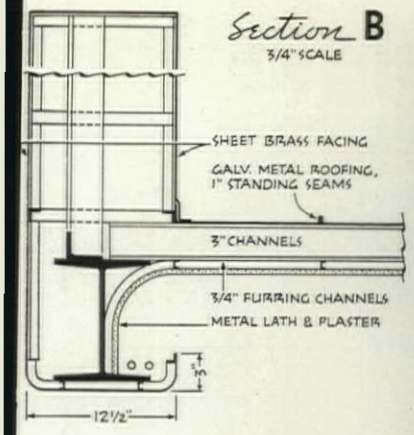
Company_____

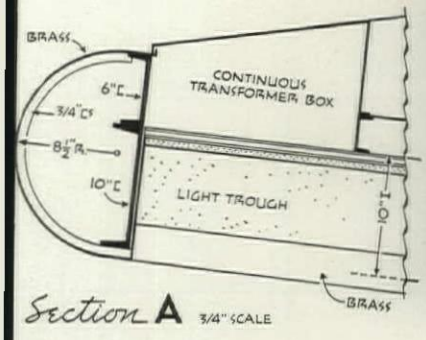
Address_____

City_____ Zone____ State_____

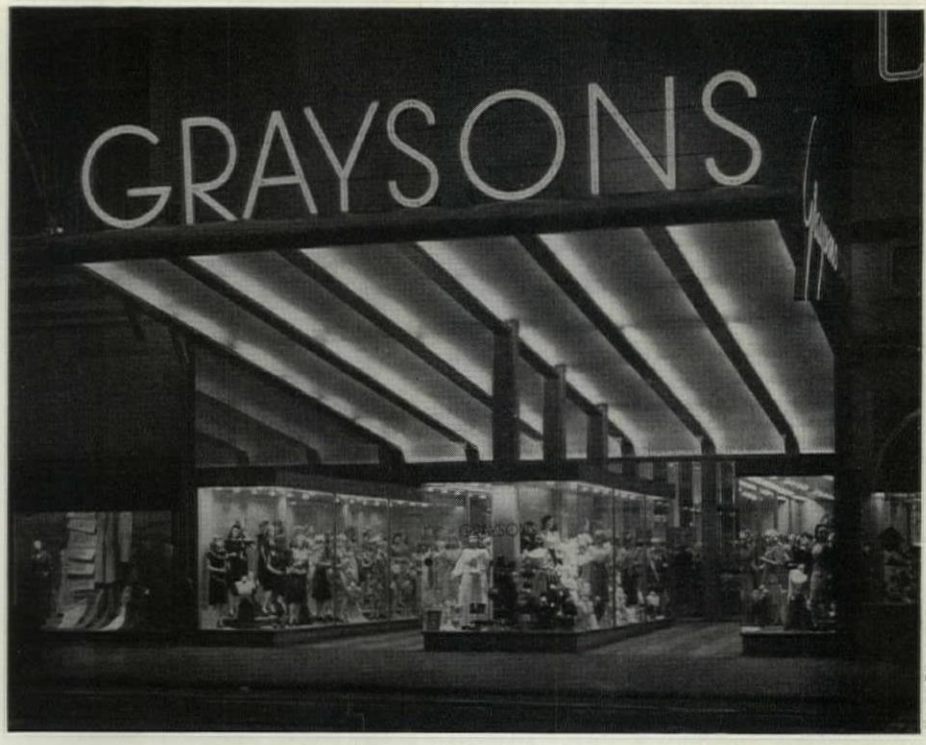
ANTHRACITE INSTITUTE

101 Park Avenue • New York 17, New York

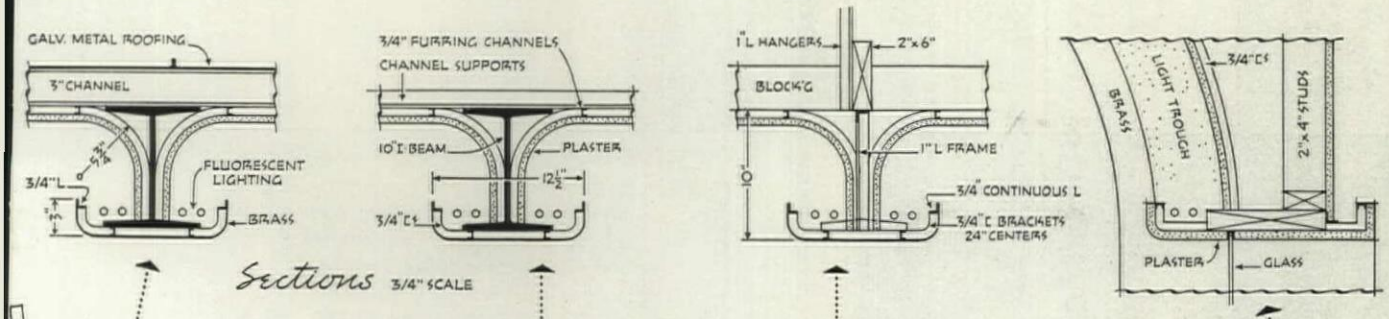




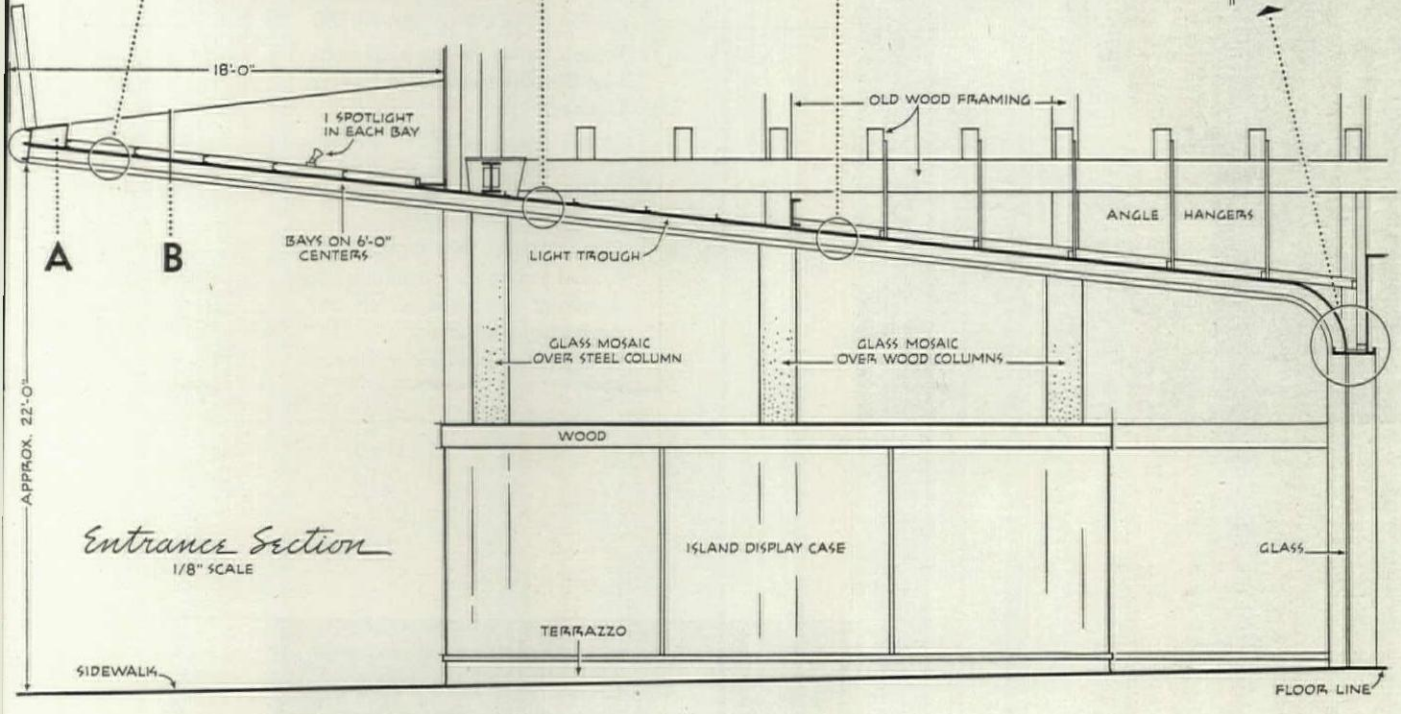
Section A 3/4" SCALE



Roger Sturtevant



Sections 3/4" SCALE

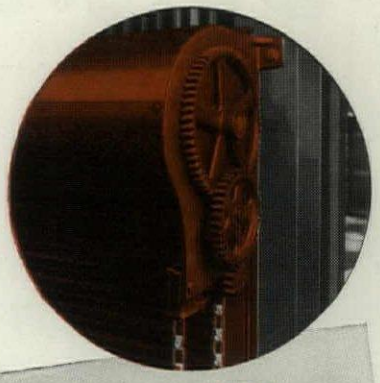


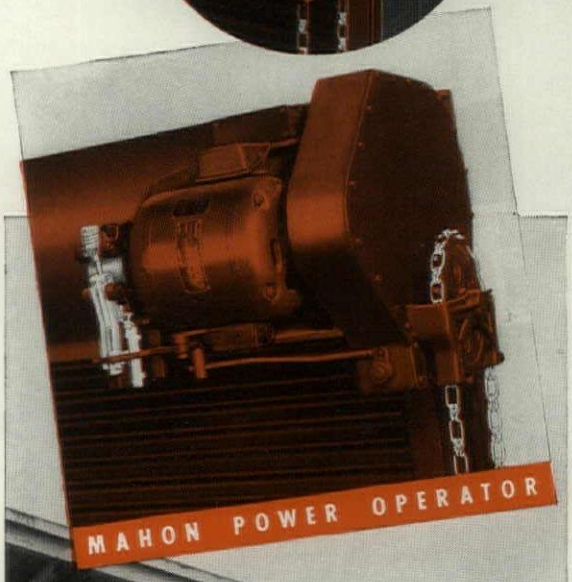
Entrance Section
1/8" SCALE

GRAYSON'S
San Francisco, California

GRUEN & KRUMMECK
Designers

Rolling Steel DOORS





MAHON POWER OPERATOR

Manually • Mechanically • Power Operated

For openings in industrial and commercial buildings there is no better answer than a good rolling steel door . . . their vertical action conserves space . . . they require virtually no maintenance, and they provide more positive protection throughout a lifetime of trouble-free service. A study of Mahon Rolling Steel Doors will reveal why they continue to gain favor among architects and owners throughout the United States and in many foreign countries. You will find, in Mahon Rolling Steel Doors, the latest developments in doors of this type . . . more compact and more practical operators, embodying many features exclusively Mahon—features that are very desirable from an every-day operating standpoint. See Mahon Insert in Sweet's Architectural or Engineering Files for complete information, or call in a Mahon representative.

THE R. C. MAHON COMPANY

Detroit 11, Michigan • Western Sales Division, Chicago 4, Illinois

Representatives in All Principal Cities

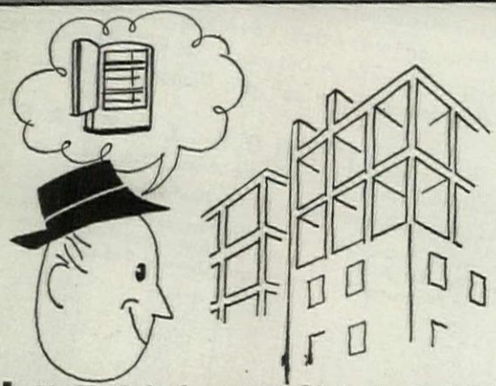
Manufacturers of Rolling Steel Doors, Shutters and Grilles, and Mahon Steel Deck for Roofs, Sidewalls, Partitions, Acoustical Ceilings, Permanent Floor Forms and Oversize Doors.

ROLLING STEEL DOORS, SHUTTERS AND GRILLES TO MEET EVERY REQUIREMENT

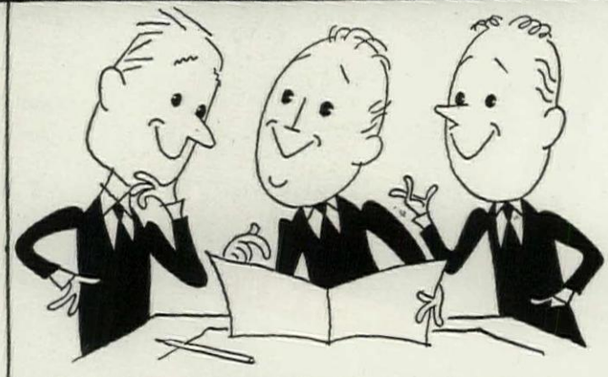
Twenty-two of Thirty Mahon Rolling Steel Doors Installed in a New Freight Transfer Dock for the Wabash Railroad, Detroit, Michigan.

MAHON

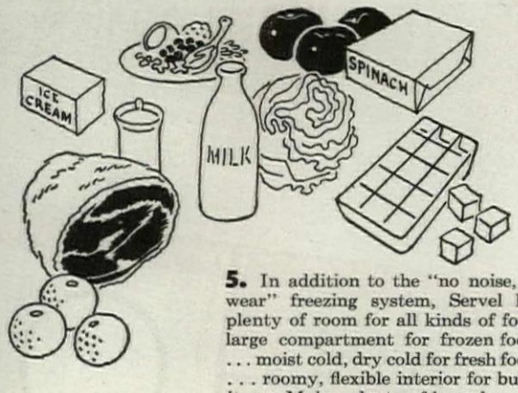
Mr. Martin's tenants never stop thanking SERVEL



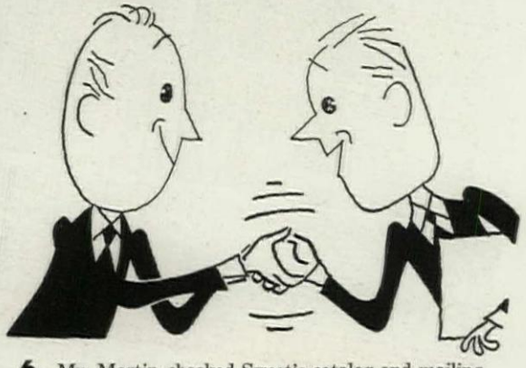
1. Mr. Martin heads a company that owns apartments. During construction of a new one last year, he decided he'd better put in his order for refrigerators. He hadn't given much thought to which make he would choose. He figured that any of the five or six leading makes would be a good buy.



2. All good refrigerators—Mr. Martin and his associates thought—offer pretty much the same modern features. BUT one day they were reminded that there is *one* refrigerator that offers something *more* than all others. Yes, *only the Servel Gas Refrigerator stays silent . . . lasts longer!*



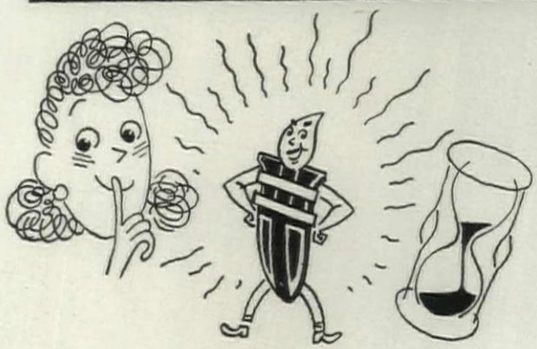
5. In addition to the "no noise, no wear" freezing system, Servel has plenty of room for all kinds of food; large compartment for frozen foods . . . moist cold, dry cold for fresh foods . . . roomy, flexible interior for bulky items. Makes plenty of ice cubes, too . . . and has many other modern cabinet features.



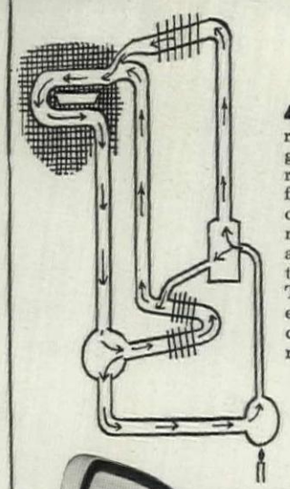
6. Mr. Martin checked Sweet's catalog and mailing pieces from the gas company. Yes, now he was ready to talk to that gas refrigerator salesman who had called on him before. The salesman came, gave the complete Servel story . . . and now Mr. Martin's tenants enjoy the advantages of Gas Refrigeration.

him for their NEW, SILENT GAS REFRIGERATORS

He also thanks himself, for Servel gives dependable service year after year . . . at low cost



3. Mr. Martin had heard the story of Servel's *difference* before . . . but now it really struck home: Servel stays silent, lasts longer, because it freezes with no moving parts . . . No machinery in the operating system to wear or break down . . . A tiny, silent gas flame does all the work.



4. Why is Servel the different refrigerator? Because the small gas flame circulates a simple refrigerating liquid. This refrigerant supplies the constant cold that preserves food and makes plenty of ice cubes. Not a single moving part is used in the entire freezing operation. That means there's no machinery (no motor, no pump, no compressor, etc.) to ever need repair or replacement.

STAYS SILENT. . . LASTS LONGER

Servel

The GAS Refrigerator

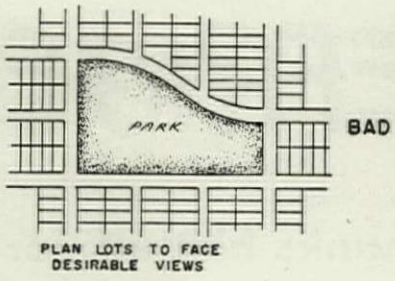
SERVEL INC., EVANSVILLE 20, INDIANA

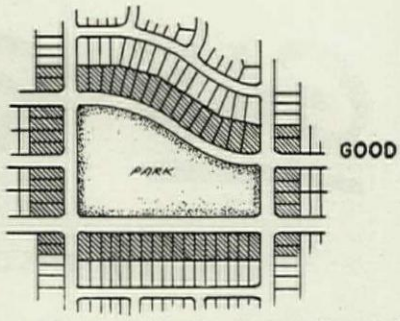
FROM THE TECHNICAL PRESS
HANDBOOKS, MANUALS, PAMPHLETS

Three manuals for architects and planners, *published by the Sacramento City Planning Commission, Sacramento, Calif. 32 pp. each, 8½" x 11", profusely illustrated, paper-bound. 75 cents per manual (plus sales tax in Calif.)*

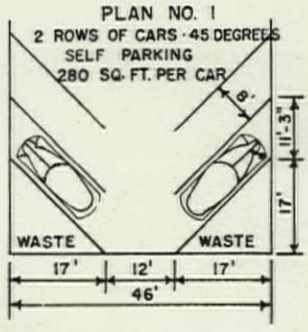
Here, in three modest manuals, the Sacramento City Planning Commission has gathered most of the available data susceptible to standardization, and, furthermore, has condensed it so that the principle behind each standard is completely understandable. *Manual No. 1* covers "Streets and Subdivisions";

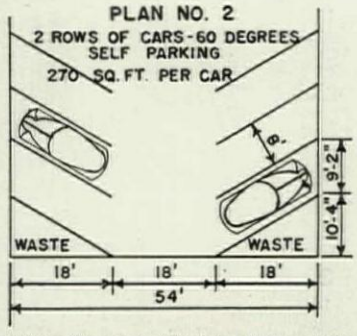
(Continued on page 102)



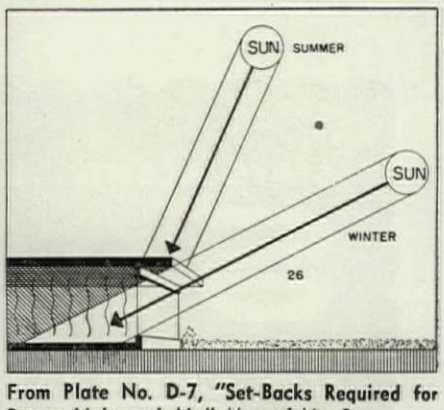


From Plate No. B-5, "Subdivisions That Make Living More Desirable," *Manual No. 1.*



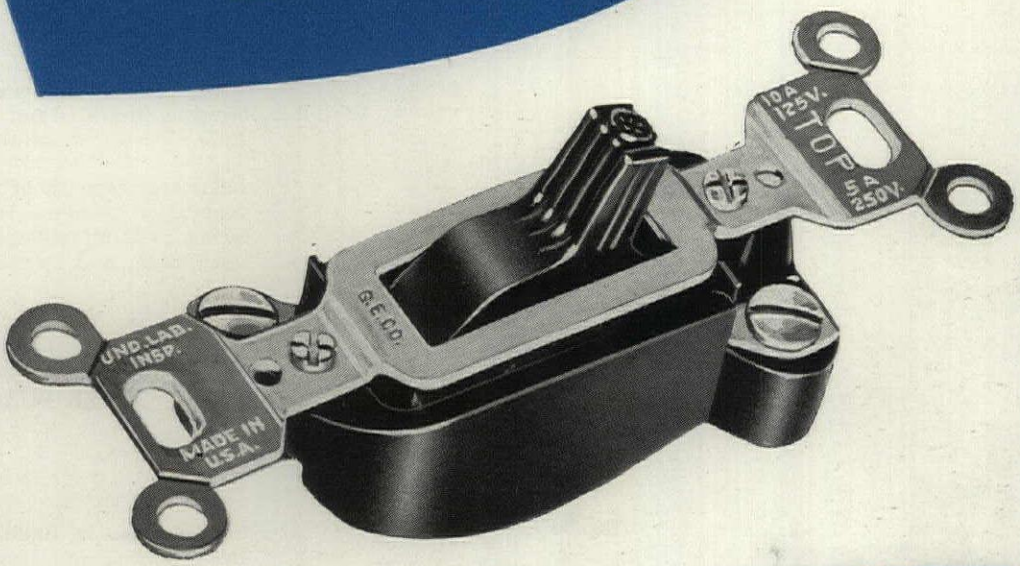


From Plate No. C-6, "Parking Lot and Garage Layouts," *Manual No. 2.*



From Plate No. D-7, "Set-Backs Required for Proper Light and Air," *Manual No. 3.*

A NEW *Silent* SWITCH



NOW RATED 10 amperes for today's heavy loads

Sure, selling a top-quality wiring job is a tough deal when clients can't tell an ampere from an ohm. But here's a brand-new focal point for your "better wiring" specifications – silence and smooth action – *features that can be demonstrated!*

With its new 10-ampere, 125 volts, T-rating, this new mercury switch opens up new fields for silent switch applications, matches quiet operation to today's heavy loads. It's a long-life, specification-grade switch, made well to do its job well – *another G-E first* – to help make good wiring better.

And, when you're specifying high-quality wiring, remember the power of the General Electric name. It identifies a complete line of wiring devices which your clients know they can trust. Ask your General Electric merchandise distributor about the new mercury switch and the rest of this complete line. Section D2-469, General Electric Company, Bridgeport 2, Connecticut.

GENERAL ELECTRIC

(Continued from page 100)

No. 2, "Parking"; *No. 3*, "Set-Backs and Zoning by Design." The plates of drawings (there is almost no text) introduce such little-considered matters as orientation for sunlight into the zoning discussion, and such necessary data as minimum widths of various types of streets into subdivision design. Every architect who deals with subdivisions or city planning should order a set.

FROM THE TECHNICAL PRESS
By JOHN RANNELLS

A Guide for Planning Facilities for Athletics, Recreation, Physical and Health Education. *By Participants in National Facilities Conference. The Athletic Institute, Inc., 209 S. State St., Chicago 4, Ill. 120 pp., 8½" x 11", illus., bibliography, index. $1.50*

This guide is the work of a conference (held in December 1946) sponsored by 14 national organizations and many individuals in the related fields of athletics, recreation, and physical and health education. The approach is broad: planning on a community-wide basis, whether urban or rural, with attention paid to all areas from "neighborhood" to "region." Plenty of "background" is given for understanding the various problems and plenty of specific, detailed recommendations are included for playgrounds, school gymnasia, community facilities, etc.

Attic Ventilation Code. *Propeller Fan Manufacturers' Assn., General Motors Bldg., Detroit 2, Mich., 1946.*

Basic requirements of satisfactory attic ventilation. Covers location of ventilating unit, air changes and velocities, installation and operating suggestions, etc.

FROM OTHER PUBLICATIONS

Heating

Condensation in Buildings. *Richard S. Dill.* Heating and Ventilating, *148 Lafayette St., New York 13, N. Y. Dec. 1947.*

A comprehensive discussion of factors affecting condensation, effects of vapor barriers, ventilation, etc., by a member of the National Bureau of Standards staff.

Embedding Coils in Radiant Heating Panels. *D. L. Mills and L. S. LaTart.* Heating and Ventilating, *148 Lafayette St., New York 13, N. Y. Dec. 1947.*

One of a series of articles covering the radiant heating installation at the metallurgical laboratory of Revere Copper & Brass, Inc., which will be used as a source of experimental data as well as an actual heating system. Copper coils fastened to the back of wire lath offer no difficulties; coils on the face of the lath are more costly to plaster; coils in concrete fill can be installed safely without increasing ordinary costs of placing concrete. Sequence of testing of coil relative to sequence of the various building operations is important.

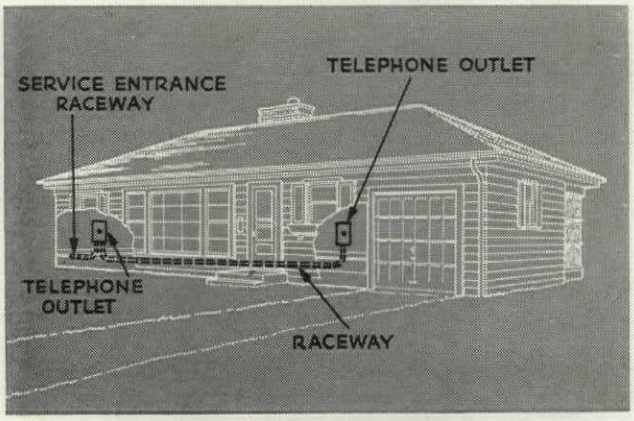
Solar Energy for House Heating. *Irving F. Hand.* Heating and Ventilating, *148 Lafayette St., New York 13, N. Y. Dec. 1947.*

This 15-page article shows how to use solar energy data now available from the U. S. Weather Bureau in a practical way. It covers solar energy received on

(Continued on page 104)

Bertram Weber—Architect

A TELEPHONE RACEWAY COMES WITH THIS COTTAGE



A raceway for concealing telephone wires is an inexpensive feature which adds a lot of convenience to any new home.

Installed within walls during construction, a few sections of pipe or electrical conduit will carry telephone wires to conveniently located outlets. A raceway eliminates the need for exposed wiring on walls or woodwork and assures modern built-in telephone outlets.

Your Bell Telephone Company will be glad to help you plan telephone wiring facilities scaled to cottage or mansion. Just call your Telephone Business Office and ask for "Architects and Builders Service."

BELL TELEPHONE SYSTEM

(Continued from page 102)

vertical surfaces and energy received diffusely from the sky—the first continuous series of these particular types of measurements. Basic material for "solar house" studies.

Solar Radiation Absorption by Wetted Roofs. *W. R. Woolrich and W. M. Rice.* Heating and Ventilating, *148 Lafayette St., New York 13, N. Y. Jan. 1948.*

Report of research at the University of Texas, Austin, with a brief background summary of previous studies on solar absorption. Effects of water depth (one to six inches) and various roof surfaces were studied. Greater depths give greater absorption, but not enough to justify heavier roof construction. Continuous spraying is *most* effective but definitive results by this method are not covered in this article.

Heating and Ventilating Buyers' Directory. *1948 edition. The Industrial Press, 148 Lafayette St., New York 13, N. Y. 320 pp., 5⅝" x 8¼". $1.00*

This new directory covers the fields of air conditioning, piping, heating, refrigeration, ventilation, air sanitation. It is primarily a product directory, listing the names of manufacturers or sources of equipment, supplies, and services.

A trade name section includes both current and obsolete trade names together with the product with which it is associated and the name of the manufacturer. Street addresses of manufacturers are listed separately in the closing section.

Hospitals

Current Hospital Construction Costs. *Isadore Rosenfield.* The Modern Hospital, *919 N. Michigan Ave., Chicago 11, Ill. Jan. 1948.*

Per-bed costs require close scrutiny before acceptance for comparison. Proportion of single rooms, services, etc., have a great effect on cost per bed, less effect on the more reliable cost per cubic foot. The author finds that today it is possible to build certain types of governmental hospitals at somewhere between $5,000 and $7,660 per bed and small voluntary hospitals between $8,000 and $14,000.

Elevators and Dumbwaiters. The Modern Hospital, *919 N. Michigan Ave., Chicago 11, Ill. Jan. 1948.*

Continuing the study by the Division of Hospital Facilities of the U. S. Public Health Service on the functional basis of hospital planning. General discussion giving background for solution of specific problems.

Technique of House Nailing. *Housing & Home Finance Agency, 1947. 53 pp., 6" x 9", diagrams, glossary. Available from the U. S. Government Printing Office, Washington 25, D. C. 20 cents*

Without going into problems of structural framing this pamphlet gives complete information on correct nailing for all situations met in house construction. Fifty large, clear, pictorial diagrams with a minimum of explanatory text for each, illustrate the requirements for every detail. Worked out by the Forest Products Laboratory in collaboration with the technical staff of the Housing & Home Finance Agency, this attractive pamphlet fills a long-felt need for a practical standard of correct nailing.

(Continued on page 106)

FRESH MEADOWS puts the accent on

light...fresh air...convenience

....with central heating

Not a mere "housing development" but a completely integrated, self-contained community for better *family living* for 10,000 people. That is Fresh Meadows, the New York Life Insurance Company's residential development in Queens.

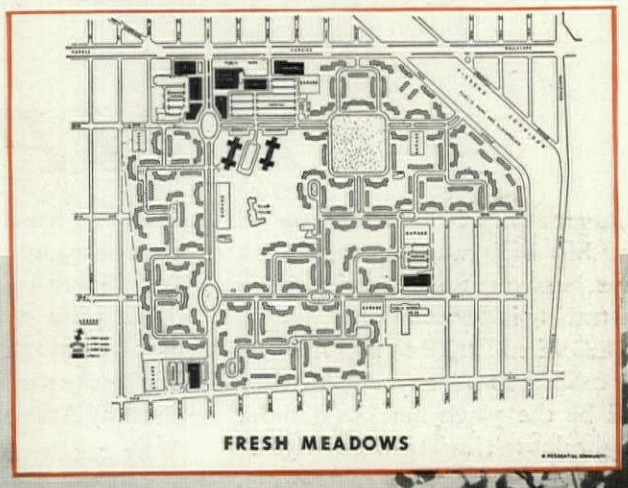
Preserving all the natural beauty of its 170-acre site—a former golf course—Fresh Meadows emphasizes healthful living advantages combined with the shopping and social conveniences of a closely knit community.

A population density averaging 20 families per acre has been achieved through skillful arrangement of the project's 70 two-story, 68 three-story and 2 thirteen-story buildings. Shopping centers, schools, playgrounds, parking areas, etc., have been located with careful consideration to traffic flow.

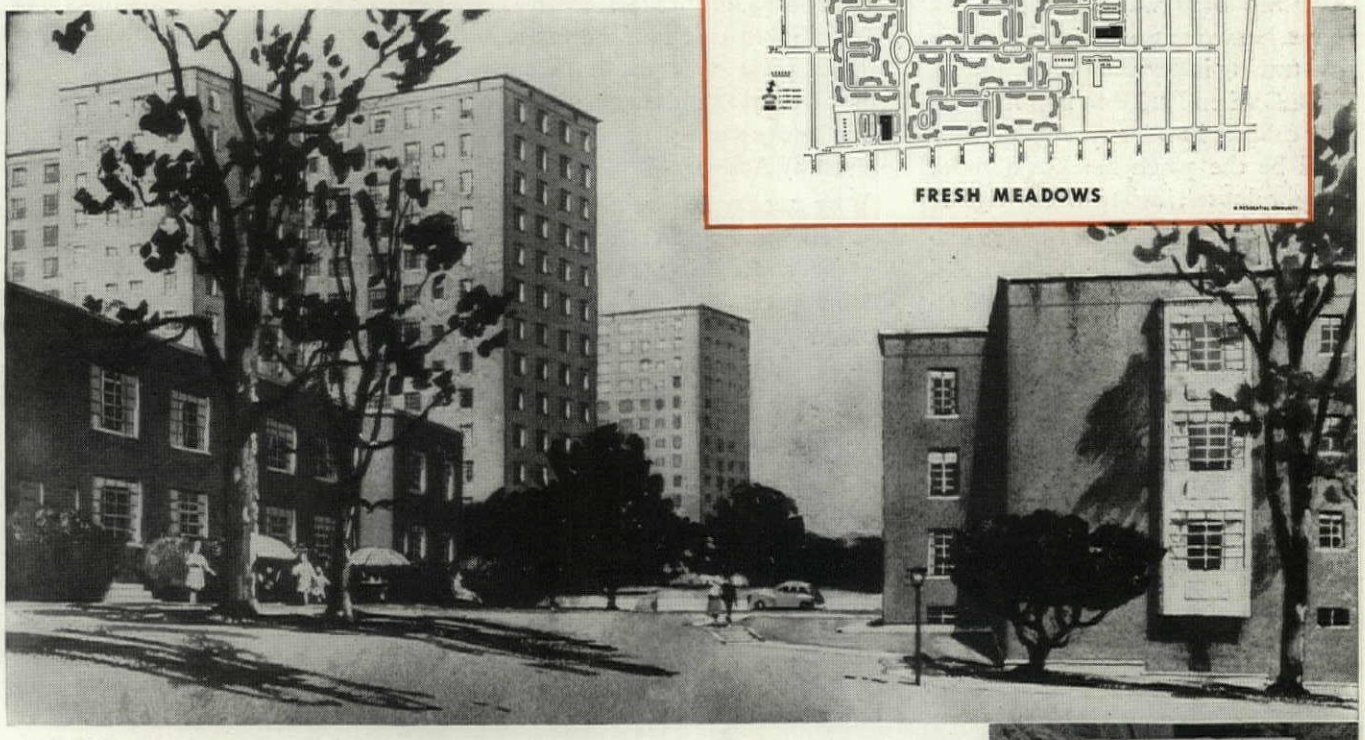
Accenting as it does the priceless health advantages of light, fresh air and cleanliness, with maximum convenience for all, it is only natural that Fresh Meadows provides Central Heating for the entire community. Through Central Heating uniform, clean heat is furnished with economy in fuel consumption. It eliminates the problems usually connected with individual heating plant operation and permits maximum usefulness of space.

It is only natural, too, that widespread use is made of Ric-wiL Prefabricated Insulated Piping throughout Fresh Meadows' Central Heating system. High thermal efficiency and maintenance-free service make Ric-wiL Units the logical choice in today's Central Heating systems.

Architects: Voorhees, Walker, Foley and Smith
Contractor: J. L. Murphy



FRESH MEADOWS



Ric-wiL Units being installed in shallow trench at Fresh Meadows

RIC-WIL

INSULATED PIPE CONDUIT SYSTEMS

THE RIC-WIL COMPANY · CLEVELAND, OHIO

CABLE ADDRESS: RIC-WIL, BENTLEY'S CODE

For a Practical Central Heating Plan for Housing Developments, Form 4503, write the Ric-wiL Company, Cleveland, Ohio, Department 1984.

(Continued from page 104)

Stuyvesant Town. Engineering News Record, *330 W. 42nd St., New York 18, N. Y. Feb. 5, 1948.*

A 24-page group of articles describes this huge project from the engineering point of view, covering many interesting statistics and details of construction and job organization. It is amusing, though, to read that "Stuyvesant Town is almost suburban in its appeal . . . the new buildings occupy only one-quarter of the land." Above this statement is a half-page airplane view of the project with absolutely no land in sight between the 12- and 13-story buildings. The writer doesn't seem to have heard of "density," which is about 120 families per acre in the case of Stuyvesant Town.

Lighting

Fluorescent Lighting Manual. *Charles L. Amick. McGraw-Hill Book Co., 330 W. 42nd St., New York 18, N. Y. Second Edition, 1947. 318 pp., 6" x 9", illus., index. $4.00*

"A practical guide to the effective design, installation, maintenance and repair of fluorescent lighting systems," first published in 1942, the present edition is brought up to date on new types and sizes of lamps, auxiliaries, and lighting techniques, including "lighting comfort."

The text and illustrations are very clear and cover the ground thoroughly. The chapter on color is especially well done. The author has utilized a wealth of technical material from the General Electric Lamp Department, Nela Park Engineering Division, with which he is connected.

Incandescent lighting is not discussed except in comparing costs. The occasional desirability of combining both types in one lighting system is not covered except for several illustrations of a particularly effective installation using both incandescent and fluorescent lighting.

I. E. S. Lighting Handbook. *Illuminating Engineering Society, 51 Madison Ave., New York 10, N. Y., 1947. Approx. 850 pp., 6" x 9", illus., index. $7.50*

At last the multitudinous data on "seeing" and "lighting" are gathered and condensed in handbook form. And a very substantial handbook it is.

It is divided very sensibly into a "Reference Division" (fundamentals of illuminating engineering in nine sections) and an "Application Division" (current practice in lighting in seven sections) and "Manufacturers' Data" (187 pages

(Continued on page 108)

In this new "city within a city"

It's Bruce Block Floors!

Over 11,000 Manhattan families will live in Metropolitan Life Insurance Company's two new housing projects (Stuyvesant Town to the left and Peter Cooper Village on the right.) *Architects:* Board of Design — Gilmore D. Clarke, Chairman; Irwin Clavan, Architect. *General Contractors:* Starrett Bros. & Eken, Inc. *Flooring Contractors:* John T. Swanson Co.

Stuyvesant Town and Peter Cooper Village will have the ideal floors for modern apartment projects—Bruce Hardwood Blocks. Architects and owners have found there is no other type of flooring so satisfactory on these five most important considerations:

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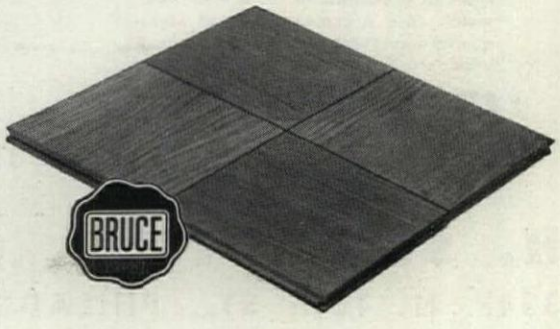


(Continued from page 106)

of very informative advertising with detailed data on many items of commercially available equipment).

The arrangement is most convenient, with pages and illustrations numbered consecutively within each section and each page or illustration number preceded by the section number. This makes for easy cross-referencing and ready "keying" of the different sections of interest to a particular user. The format is open and generous, with large type, very clear line cuts and many good-sized halftones—more like a text than the usual engineering handbook. Each section is concluded by a sizable list of references to the original literature.

The Reference Division covers all the theoretical material from physics of light production, vision, and color to lighting calculations and daylighting—explaining in detail any number of things that might puzzle the nontechnical reader of current technical literature. The Application Division covers in detail a remarkable number of specific problems of lighting interiors, exteriors, sports, transportation, etc., concluding with a section on applications of radiant energy (heat, germicidal, photoelectric cells, etc.).

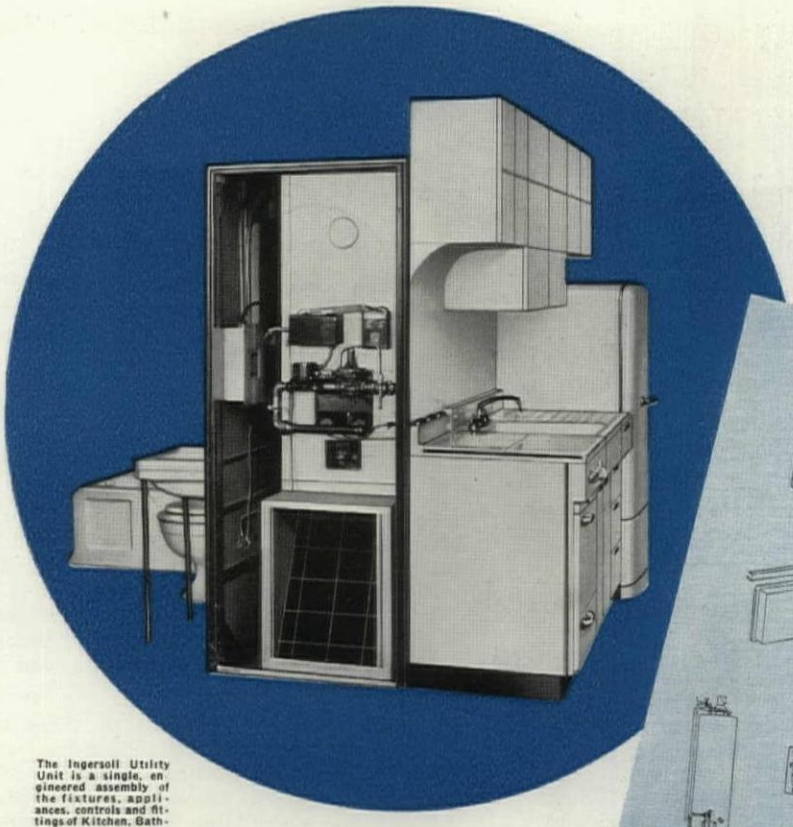
The work demonstrates in every section a sense of the relatedness of lighting to the functioning of the individual (and to architecture). To quote: "The typical luminaire may not be considered an architectural element by most illuminating engineers, but, regardless of terminology, lighting is so integrated with a building's use and appearance that it should always be given consideration in all stages of architectural design and decorative development. Active cooperation between architect and engineer is insurance against practical difficulties."

Neighborhoods Built for Rental Housing. *Land Planning Bulletin No. 4. Federal Housing Administration, Washington, D. C., 1947. 22 pp., illus. For sale by Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C., 15 cents*

Neighborhoods Built for Rental Housing contains photographs, plot and floor plans of nine privately built and financed rental developments in various parts of the nation. A breakdown schedule lists for each the number and percentage of living units of various sizes, the units and coverage per acre, and the percentage based on living units of space on and off the street for parking. General information helpful in solving development plan problems is clearly and interestingly presented.

LAWRENCE E. MAWN

(Continued on page 110)



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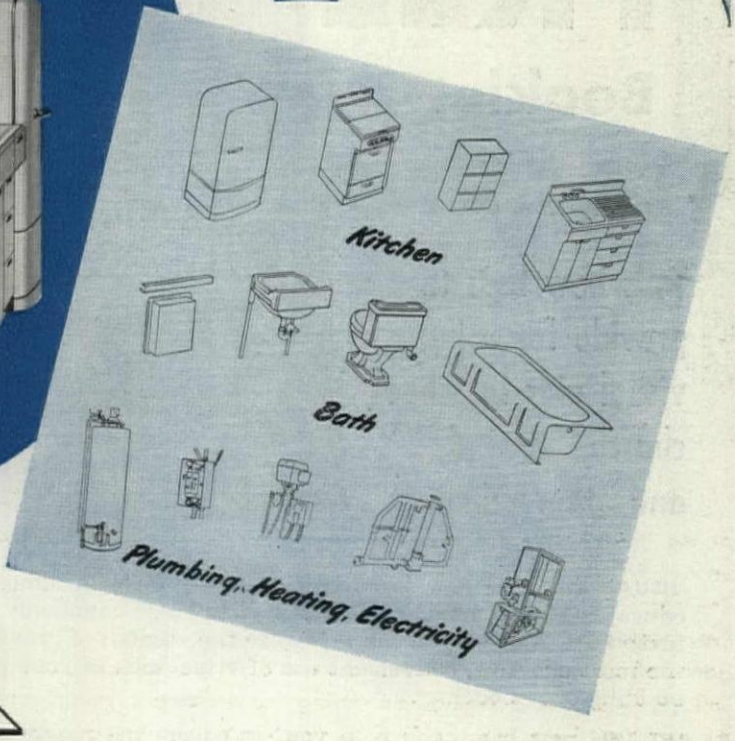

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(Continued from page 108)

BOOKS

AMERICAN BUILDING

The Forces That Shape It. *James Marston Fitch. Houghton Mifflin Co., 2 Park St., Boston, Mass., 1948. 382 pp., illus. $5.00*

The literature of architecture and building construction is greatly enriched by Fitch's book. It is a scholarly work, but that should not frighten anyone, for it is written in an easy, readable manner. It is long and covers a great deal of ground, but it is so well organized that the topics lead inevitably to one another. It will be useful as a text, but it also makes good general reading. It should be read, and read carefully, by everyone connected with the planning and production of buildings.

The book is composed of three main parts, although the author has wisely insisted on a continuous format. First, the historical forces that have shaped American building to date are analyzed, in a series of well documented analytical chapters. From placing the "rosy legend of our Colonial architecture" in a true social and technical frame, this part of the book carries to the close of the recent war, when a "ferment of architectural opinion had produced what was actually a new theoretical basis of architecture."

The next part discusses in technological terms this new basis and its possible effect on the design of buildings. The emphasis is on control and modification of the natural environment, always with the thought in mind that "the criterion for judging building performance must necessarily be *health*." The chapters on temperature control, sonic control, etc., are as thoughtful and thought-provoking as the earlier ones.

Finally, the concluding section deals with space organization, planning, and the search "toward a democratic esthetic." The principal contribution here is a very sensible discussion of the troubling relationship between popular taste and "high style," and the related question of "the Spartan exorcism of art forms from buildings." Fitch feels that "there is increasing evidence that modern architects are revising their mechanistic attitude toward art" (without, one hopes, resort to the "new eclecticism" that is a present phenomenon in many European countries).

The theme which ties the book into one unit is a realization that the conflicts and contradictions which trouble every group connected with the design and construction of buildings today "is in the last analysis an expression of the deeper conflicts within our society it-

(Continued on page 112)

(Continued from page 110)

self." Few students of architectural history, few technical commentators have even seen this relationship, to say nothing of analyzing it as competently as this book does.

T. H. C.

ARCHITECTURAL CASUALTIES

The Bombed Buildings of Britain. *Second, enlarged edition, 1940-45. Edited by J. M. Richards, with notes by John Summerson. The Architectural Press, 9-13 Queen Anne's Gate, Westminster S.W.1, London, England. 202 pp., illus. 25s.*

An inventory of the war losses (architectural) in Great Britain becomes more painful for antiquaries as each enlarged edition appears. Mr. Richards has taken care to record completely the air raid damage to notable structures and the book is enriched by notes on the history and architectural character of the monuments, written by John Summerson from his exceptional fund of architectural lore.

C. M.

BUILDING PROS AND CONS

Home Seekers' Handbook. What You Need to Know Before You Buy or Build. *Gerald L. Kaufman. George W. Stewart, Inc., 67 W. 44th St., New York, N. Y., 1947. 160 pp. $2.50*

This matter-of-fact guide takes the prospective home seeker all the way from making up his mind in the first place to (one hopes) living happily ever after. Ingenious parallel columns of text weigh the pros and cons of renting, buying, building, and altering; attendant matters pertaining to budgeting, architectural service, contractors, choices of materials, methods, and equipment, etc., are painstakingly discussed. Happily, there is no chapter on "styles to choose from." Mr. Kaufman is interested in helping people obtain homes to live in rather than up to.

G.A.S.

ON HOSPITALS

S. S. Goldwater. The Macmillan Co., 60 Fifth Ave., New York, N. Y., 1947. 395 pp., illus. $9.00

This is a collection in book form of many papers written by Dr. Goldwater during the course of his active life, arranged and rewritten so that it reads as a continuous manuscript. Although some of the comments on hospital operation and planning inevitably "date" (the papers used were published between 1906 and 1942), the thinking of this doctor, administrator, and planning con-

(Continued on page 114)

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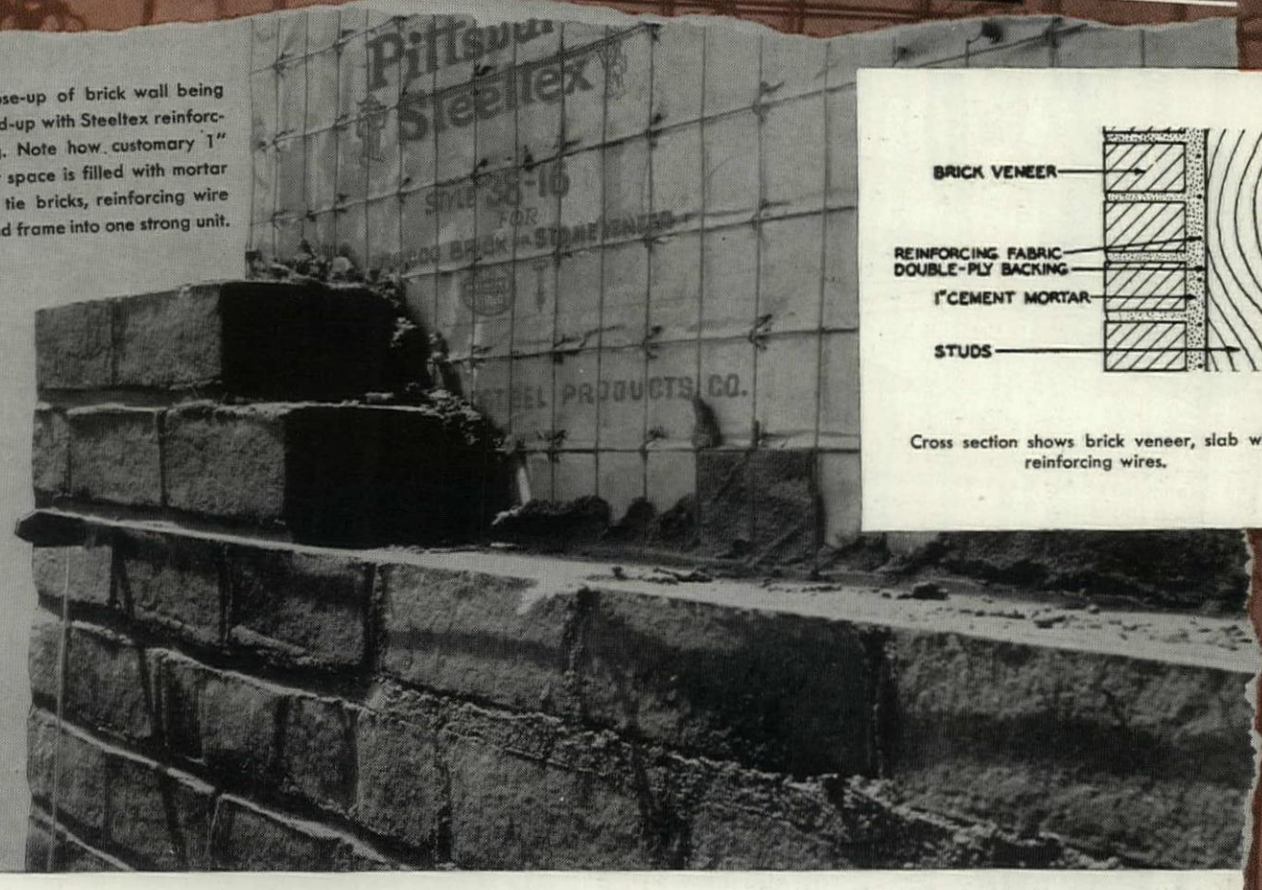

Close-up of brick wall being laid-up with Steeltex reinforcing. Note how customary 1" air space is filled with mortar to tie bricks, reinforcing wire and frame into one strong unit.

Cross section shows brick veneer, slab with reinforcing wires.

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This background photo shows Steeltex—one-third actual size.

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PITTSBURGH STEEL PRODUCTS

(Continued from page 112)

sultant was so advanced that much of it is still applicable. There are some 70 pages of text specifically on planning, and about 80 additional pages of discussion and illustrations of hospitals designed with his help.

T. H. C.

DRAWING BY SEEING

Hoyt L. Sherman. Hinds, Hayden & Eldridge, Inc., 105 Fifth Ave., New York, N. Y., 1947. 77 pp., illus. $2.50

This book is a description of an entirely new teaching method for beginning drawing now in use at Ohio State University. The same technique or developments of it should give wonderful results in architectural education.

The method brings about the ability to draw what is seen by the student as he "senses" it *without any verbal instruction about art, drawing, etc.* This is accomplished by working in the dark at "stand-up" desks, putting down on paper the impression left by an instantaneous flash of simple forms on a screen. The instructor's only task at first is to put the class at ease and keep the succession of slides in proper tempo. Music chosen by the class adds to the cheerful atmosphere.

After a few weeks of this, with patterns of increased complexity including solids of various shapes, the student is able to see and draw what he looks at without concern about technique, having developed a response with his whole personality to the impressions he sees. By the end of a term the class is drawing in full light, using color, working from models, landscape, or any subject without inferiority. Taking a class with this background through a course in architectural design should give the design instructor quite a lift.

Professor Sherman's work ties in closely on the active side with the more theoretical investigations of Dr. Ames at Hanover, N. H., (see PROGRESS REPORT, December 1947 P/A) and in general with the work of the group around Dr. Harmon in elementary education.

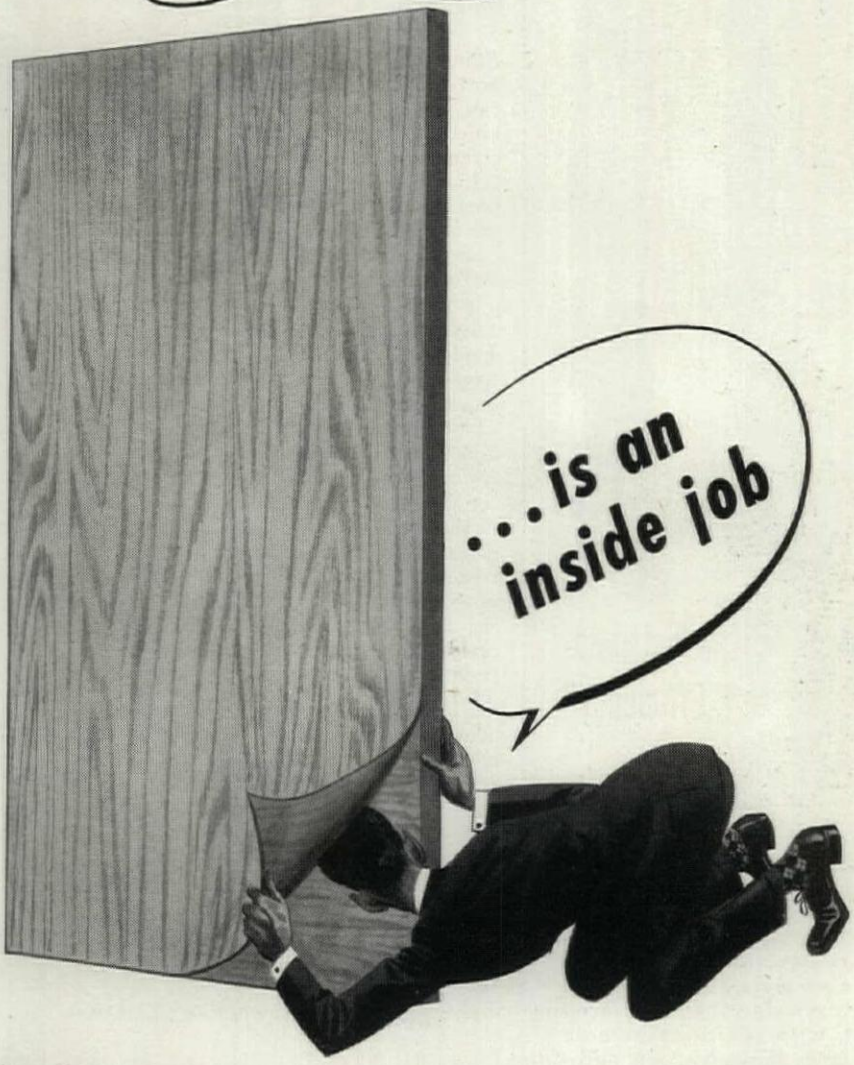
J. R.

SMALL HOUSES

Planning the Expansible House. *Housing & Home Finance Agency, Office of the Administrator, Washington, D. C., 1947. 30 pp., illus. For sale by Superintendent of Documents, U. S. Government Printing Office, Washington 25,*

(Continued on page 116)

Roddiscraft Quality



You know that the faces of Roddiscraft Doors and Hardwood Plywood are smooth as satin — that edges are clean and true — but the quality that gives Roddiscraft Doors and Plywood long life and lasting beauty is an inside job. It's the inside materials — core blocks, glue, crossbandings, plus the care and craftsmanship used in fabrication that makes it possible for Roddis to unqualifiedly guarantee materials and workmanship.

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Reviews

(Continued from page 114)

D. C., 20 cents. **Houses for Moderate Means.** *Randal Phillips. Transatlantic Arts, Inc., 69-81 108th St., Forest Hills, N. Y., 1947. 128 pp., illus. $3.00.* **Veterans' Edition of Small Homes of California.** *Verner B. McClurg. Murray & Gee, Inc., 3630 Eastham Drive, Culver City, Calif., 1947. 46 pp., illus. $1.00.* **Desirable Homes.** *George J. Fosdyke. Murray & Gee, Inc., 3630 Eastham Drive, Culver City, Calif., 1947. 62 pp., illus. $1.00*

Planning the Expansible House shows how the floor plans of six small houses can be arranged to permit intelligent and economical expansion. The good circulation of the smaller house is retained in the expanded house. Privacy, flexibility of use, ease of housekeeping, generous storage space, and ample natural lighting are emphasized; especially noteworthy are the area and layout of the various rooms, their relationships to each other and to outdoor spaces. The orthographic and perspective drawings are good examples of a quick, practical presentation technique. The publication has general excellence and is worth many times its low price. *Houses for Moderate Means* was written for English homebuilders and its value in the original edition and in this second enlarged edition is limited to English readers. If the residences illustrated by photographs and plans are typical of the small English home, then English residential architecture of this class, as judged by our standards, can be vastly improved.

The main purpose of *Veterans' Edition of Small Homes of California* and *Desirable Homes* appears to be the sale at the listed prices of working drawings and specifications for constructing the house that the reader selects from the plans and exterior sketches shown. Except for demonstrating the effect and force of a good rendering technique, neither work has any discernible value for the architect.

LAWRENCE E. MAWN

SIMPLIFIED PERSPECTIVE

William Wirt Turner. The Ronald Press Co., 15 E. 26th St., New York, N. Y., 1947. 236 pp., 6" x 9", illus., index. $5.00

A sound and thorough textbook on perspective, not particularly "simplified," and arranged for classroom use. The explanations are clearly written and complete, making a rather bulky volume. The illustrations are good but a too-great reduction of the more comprehensive plates impairs their usefulness.

J. R.

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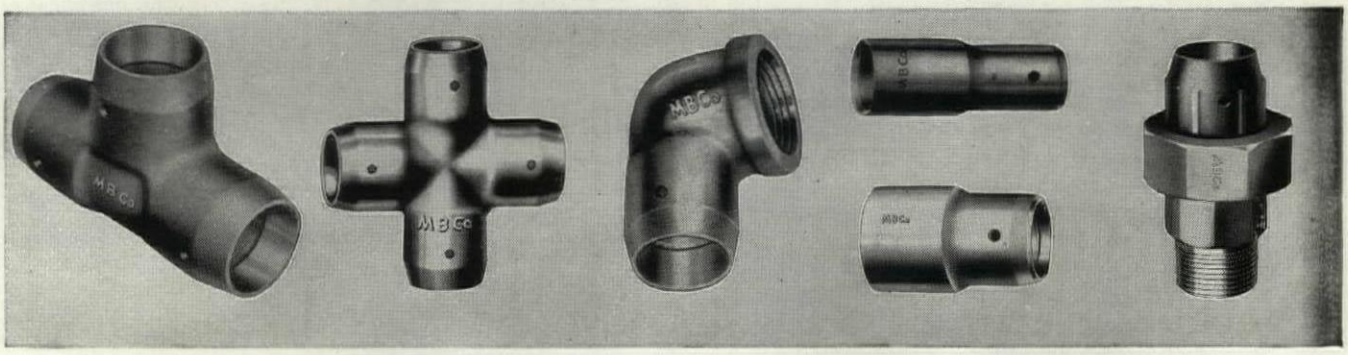

MEN WANTED

ARCHITECT—man with broad general experience, capable of developing complete working drawings from preliminary sketch. Design ability desirable. Work varies. State age, experience, salary expected, and when available. Send recent photograph. Atlee B. and Robert M. Ayres, 3002 Transit Tower, San Antonio, Tex.

ARCHITECTURAL AND STRUCTURAL DRAFTSMEN—competent to develop complete working drawings and details from sketches. State starting salary expected, and address Frampton & Bowers, P.O. Box 637, Huntington 11, W. Va.

MEN TO CONTACT ARCHITECTS, BUILDERS—one of our clients needs two men with architectural, building experience to extend use of nationally-known products. Under 40, willing to travel. Good salary, expenses. Position permanent. Our client's staff knows of this advertisement. Dept. AP, Brooke, Smith, French & Dorrance, Inc., E. Jefferson at Burns, Detroit 14, Mich.

NOTICE: Beginning with the May issue the Jobs and Men department will appear in a new section in the back of the magazine. Insertions for this section will be accepted *not later than the 1st of the month preceding publication.* Legible copy, accompanied by check or money order for $5.00, must be addressed to Jobs and Men, c/o PROGRESSIVE ARCHITECTURE, 330 W. 42nd St., New York 18, N. Y. Insertions may not exceed 50 words.

ARCHITECT—young, of culture, experience, and initiative to take charge of drafting room in medium sized office in Minneapolis, Minnesota, doing large variety of quality work. Should have working knowledge of historical styles as well as contemporary design. Opportunity unlimited and commensurate with capabilities. Box 123, PROGRESSIVE ARCHITECTURE.

ARCHITECT—full-time, wanted by large Cleveland manufacturing company to plan and supervise layout of sales offices throughout the United States. May be young but some experience necessary. Excellent opportunity. State full particulars and salary required. Box 122, PROGRESSIVE ARCHITECTURE.

ARCHITECTURAL DESIGNERS AND DRAFTSMEN — excellent openings. Permanent positions for qualified personnel. Good salaries and working conditions in ideal climate. Write P. O. Box 308, Santa Fe, N. Mex., stating qualifications in detail.

MECHANICAL ENGINEER—fully experienced in making designs, working drawings, and writing specifications for heating, plumbing, and air conditioning. Permanent connection in large architectural-engineering office can be offered to properly qualified applicant. Send record of experience and samples of work. Marr & Holman, 701-703 Stahlman Bldg., Nashville, Tenn.

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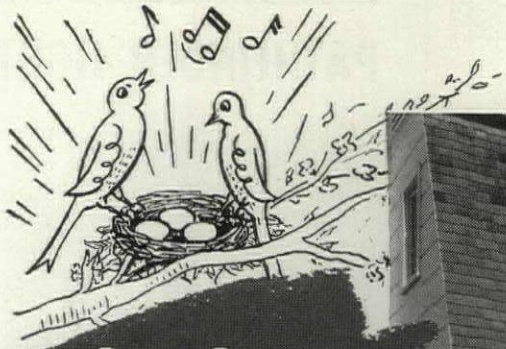

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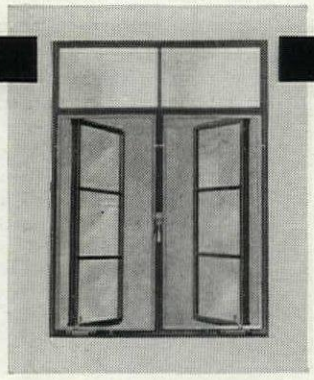

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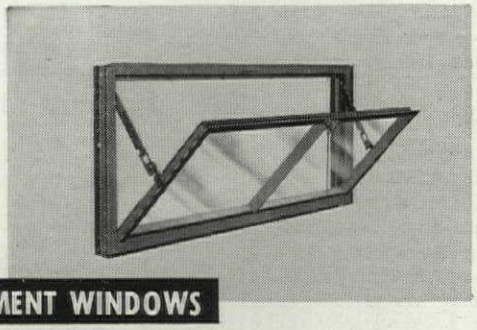

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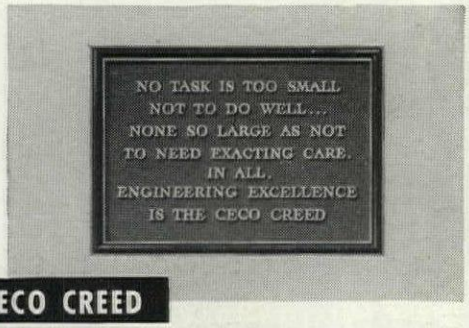

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Jobs and Men

(Continued from page 118)

ARCHITECTURAL DESIGNER — fully experienced on theaters, stores, and industrial work. Must be capable of executing working drawings and details and of directing such effort. Permanent connection can be offered to qualified applicant in large architectural-engineering organization. Send record of experience and samples of work. Marr & Holman, 701-703 Stahlman Bldg., Nashville, Tenn.

STRUCTURAL ENGINEER—with good experience who can design and make drawings for structural and reinforced concrete. Permanent position can be offered to properly qualified applicant in large architectural-engineering organization. Send record of experience and samples of work. Marr & Holman, 701-703 Stahlman Bldg., Nashville, Tenn.

INSTRUCTORS — in architectural design and related courses are needed at the schools of architecture for the spring and fall semesters. Those interested in a career in the teaching profession should apply to Prof. Paul Weigel, Chairman of the Committee on Employment for the Association of Collegiate Schools of Architecture, Kansas State College, Manhattan, Kans.

ARCHITECTS, ENGINEER, SPECIFICATION WRITER — two qualified architectural men, structural engineer and specification writer, wanted by well established mid-Southern firm on commercial and industrial work. Submit complete experience record and personal history. Personal interview will be arranged. Box 107, PROGRESSIVE ARCHITECTURE.

ARCHITECTURAL DRAFTSMEN — capable of developing working drawings, details, etc., for all types of projects. Excellent working conditions and an opportunity to secure well balanced experience. Please give complete experience record and salary in first letter. Hugill, Blatherwick & Fritzel, Architects, 366 Boyce-Greeley Bldg., Sioux Falls, S. Dak.

EXPERIENCED DRAFTSMAN — permanent position with old established company in Wisconsin city of 50,000. Experienced in architectural drafting; design, layout of industrial buildings essential. Practical engineering knowledge and ability to prepare estimates and take off quantities required. Write listing experience, age, references, salary expected. Inquiries confidential. Box 128, PROGRESSIVE ARCHITECTURE.

ARCHITECTURAL DRAFTSMAN — preferably one with experience in design of industrial and commercial structures. Excellent opportunity to affiliate with growing organization. Write giving full particulars. Victor W. Buhr Associates, Engineers, 125 E. Main St., Salisbury, Md.

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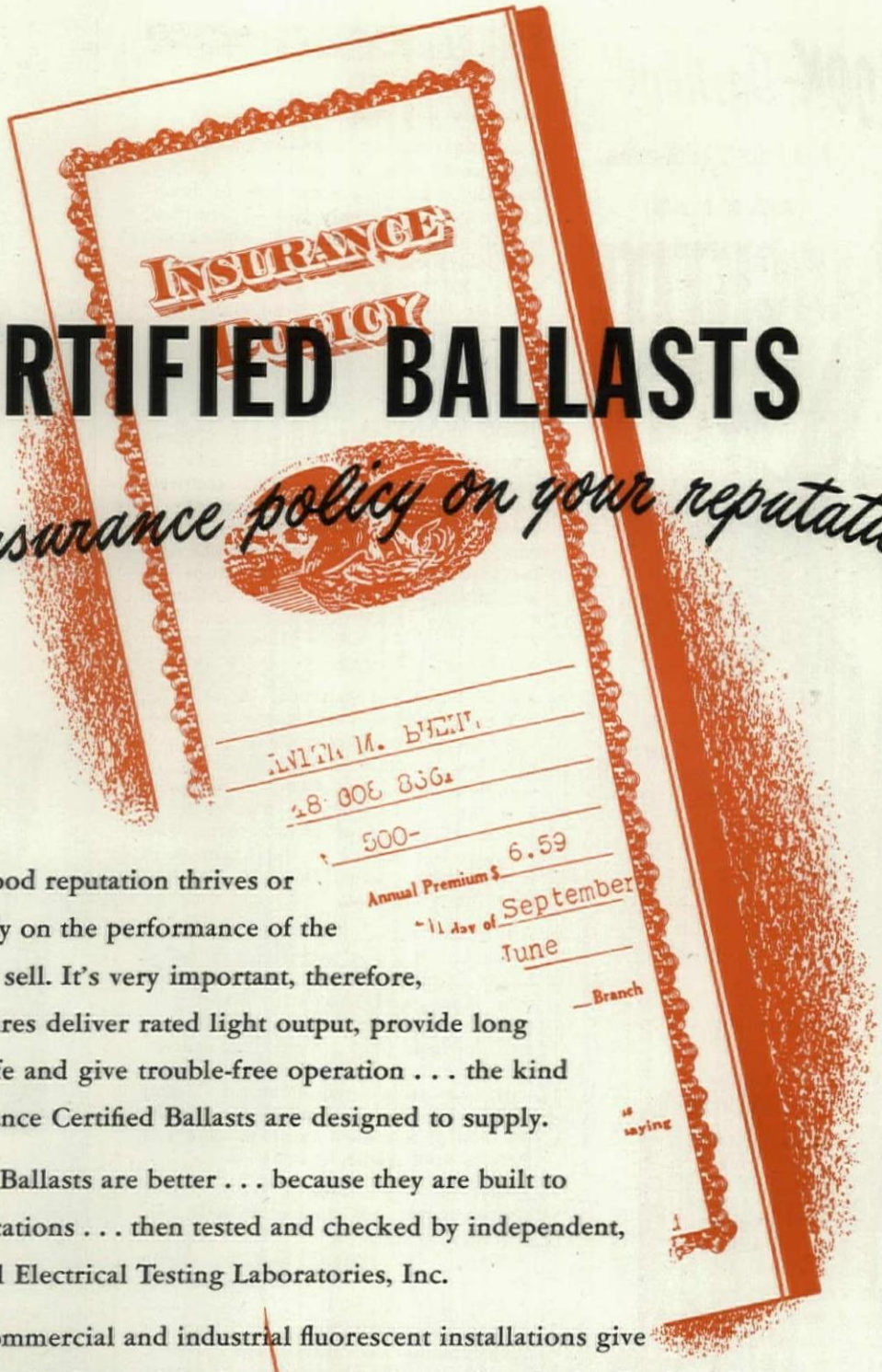

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Jobs and Men

(Continued from page 120)

ARCHITECTURAL MEN—wanted: two high-class men of executive caliber, capable of running large jobs in drafting room. Apply only if well qualified, giving full statement of experience, and salary expected. This is a remarkable opportunity for the right men. Leo A. Daly Co., Architects, 629 Insurance Bldg., Omaha, Nebr.

JOBS WANTED

ARCHITECT—young, Norwegian, 33 years old, wants a job in an architectural office. Nine years' experience in housing, public works, industrial and community development projects, interior architecture, and furniture designing. References and full information upon request. Ivar Paulsen, Architect, M.I.A.F., Drammensveien 44 B, Oslo, Norway.

ARCHITECT — registered, A.I.A., 35, married, wishes responsible and possibly permanent association with progressive western office. Qualified by education and residential, commercial, and field construction experience to handle all phases of architectural practice. Now engaged in important work in well known office. Box 124, PROGRESSIVE ARCHITECTURE.

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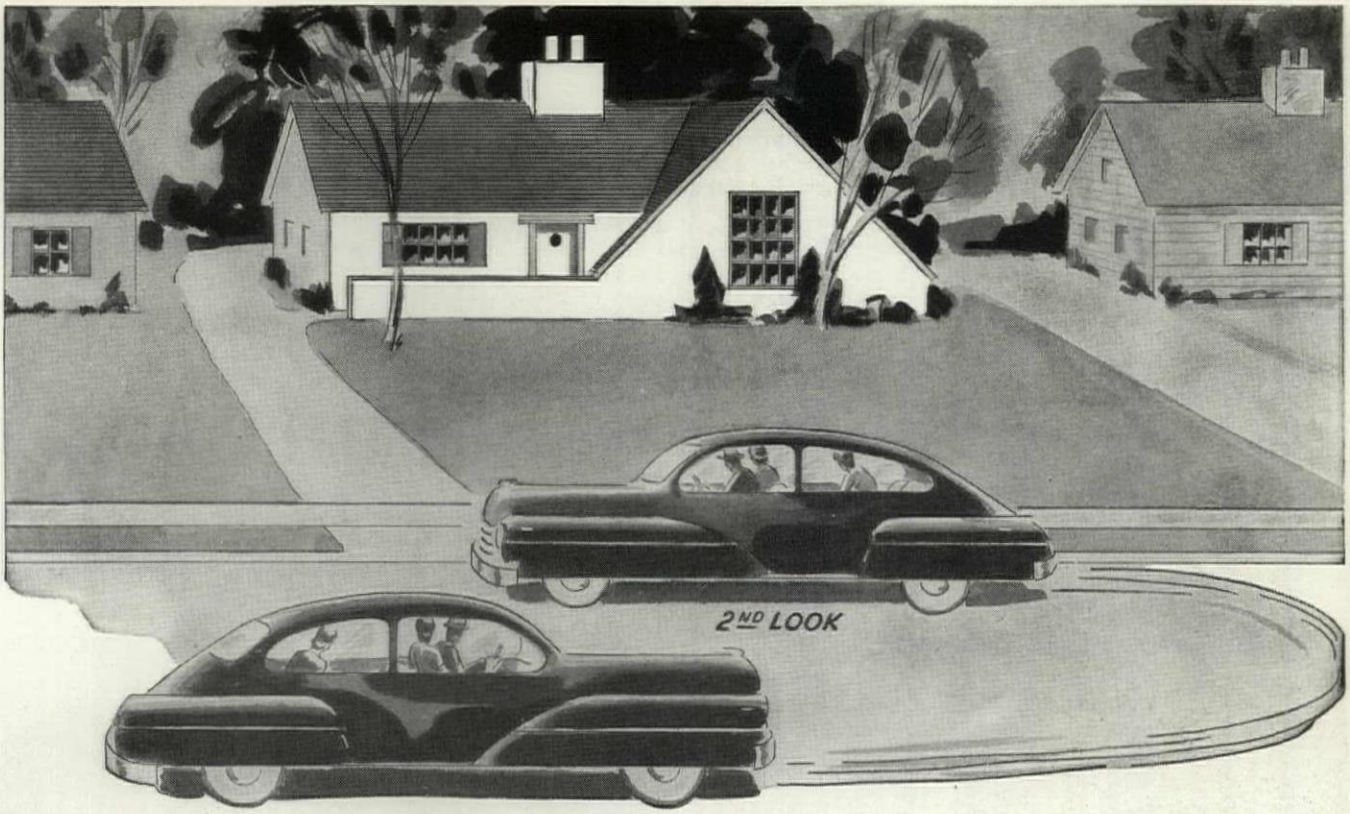
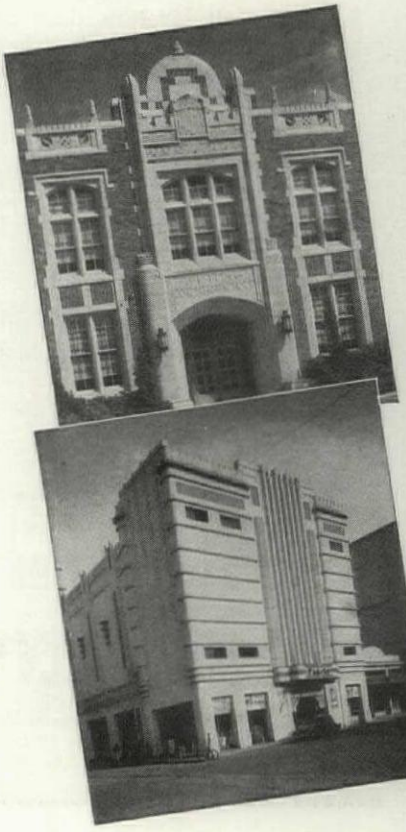
(Continued on page 124)



1ST LOOK

Does your work get the "SECOND LOOK"?



Ever see people drive past a home or building and were so impressed by its beauty that they turned around and drove by again for a "second look?" Invariably, these "second looks" are fostered by outstanding architectural treatment worked out in distinctive materials. Of all exterior finishes, one material predominates for getting "second looks" —that material is Medusa White, the Original White Portland Cement.

For 41 years Medusa White has helped architects create "second look" work. Consider for a moment how Medusa White accomplishes this end. This cement and its twin, Medusa Waterproofed White Portland Cement, make America's finest stucco. Whether gleaming white or tinted with colored aggregate, Medusa Waterproofed Stucco retains its beauty for years. Water containing dirt is repelled at the surface, consequently the dirt washes off.

The most beautiful cast stone doorways, building trim and sculptured work—construction that always creates "second looks"—is cast with Medusa White. Outstanding industrial buildings of white or white and gray architectural concrete are made with this cement. Floors too, of sparkling, colorful Terrazzo, get their "second look" if that Terrazzo has as its matrix Medusa White.

The story of Medusa White for stucco is found in the book, "A Guide to Finer Stucco". Another booklet, "Medusa White Portland Cement", tells of its other uses. Architects who want their finished work to merit "second looks" should send the coupon below for these booklets. They're free, of course.

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Jobs and Men

(Continued from page 122)

basis to produce good architectural as well as acoustical results. Edward J. Content, Roxbury Rd., Stamford, Conn.

ARCHITECTURAL SCALE MODELS—one of most reputable and experienced scale model-makers open for additional projects. Over 20 years' distinguished craftsmanship in exteriors and interiors, block sketch and architectural scale models from sketches or completed plans. Special requirements skillfully served. Louis Fromm — Craftsmen in Scale Models, 207 E. 32nd St., New York, N. Y.

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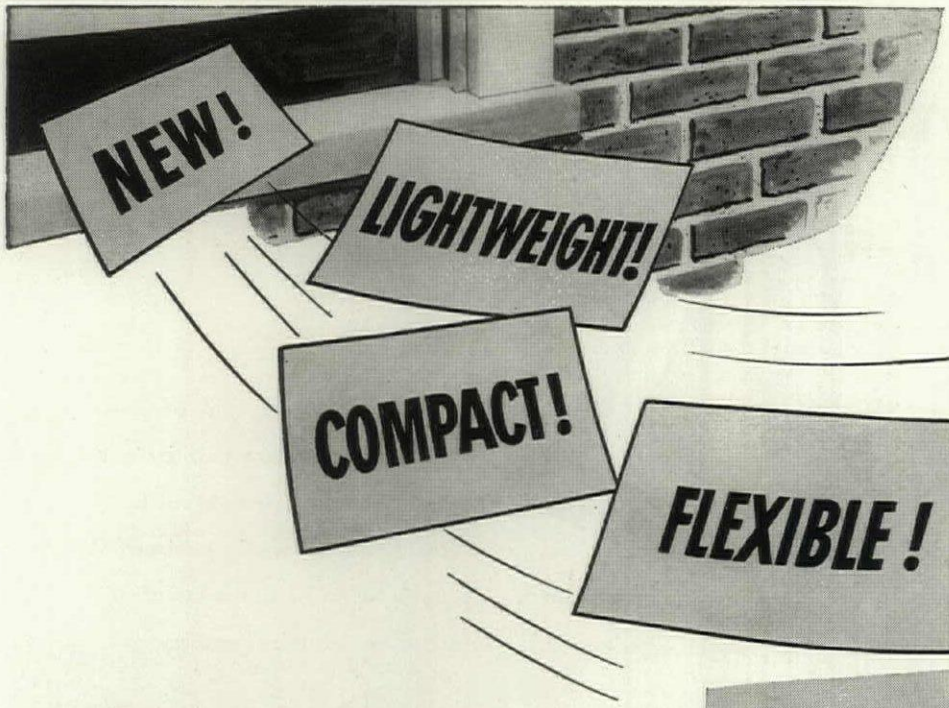
GIFFORD E. SOBEY, 9 Post St., San Jose, Calif.

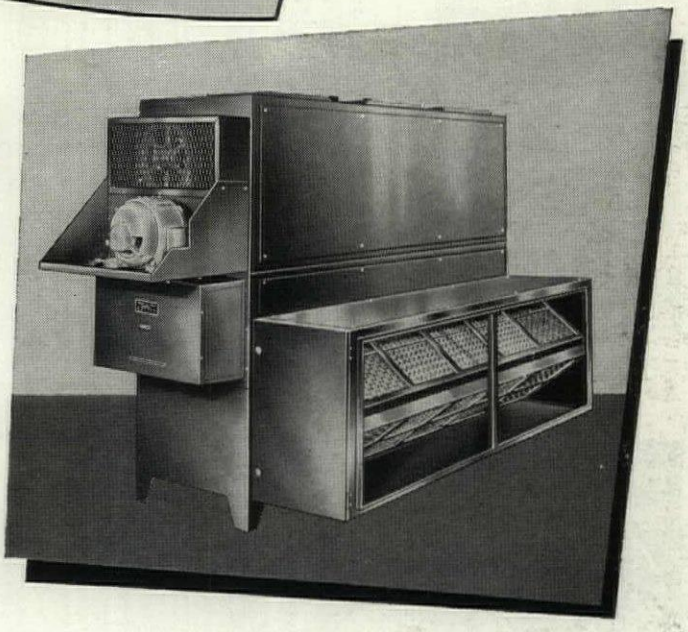
COOPER & PERRY, 211 W. Hill Ave., Knoxville, Tenn.

MILLS & PETTICORD AND ASSOCIATES, Riggs National Bank Bldg., 14th St. and Park Rd., N. W., Washington, D. C.



Announcing!

THE NEW GE CENTRAL PLANT AIR CONDITIONER



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you can use the energy in color to make office quarters more attractive and increase efficiency of workers.

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Watch Houston! In fifty years this thriving Texas city has grown to be the third largest ocean port in the United States. And as Houston reached out into the world, it also reached up. Even its skyline has become famous. And skylines are the business of OTIS. In Houston, for example, OTIS has 893 elevators. That's more than three times the number of all other makes combined!

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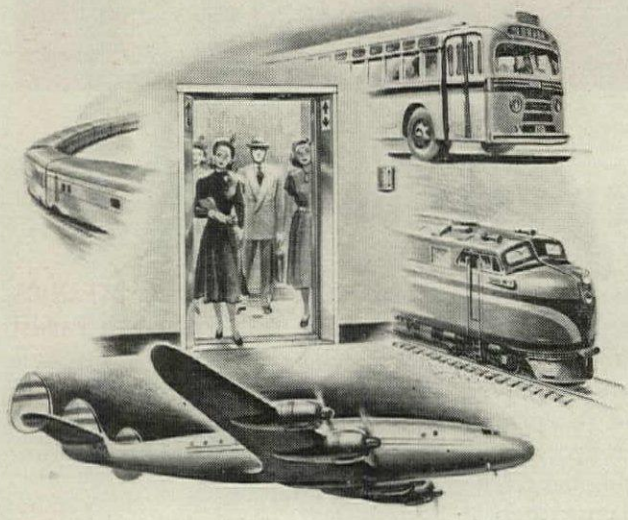
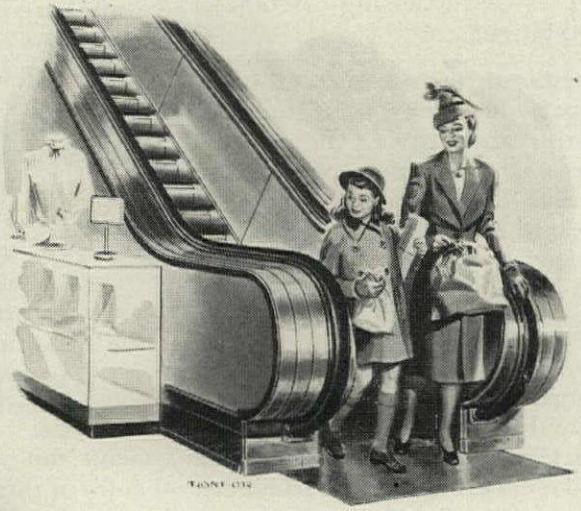
In 1852, Elisha Otis applied the first 'safety' to a freight elevator. It was intended to prevent the elevator car from falling if the hoisting ropes should break. To convince a doubting public he actually cut the ropes to prove its dependability.



HOW DO PEOPLE TRAVEL?

Mostly on elevators. Surprising? Last year, elevators handled *eleven* times more passenger traffic than all domestic airlines, inter-city bus lines and railroads combined.



TRY THIS FOR SIZE.

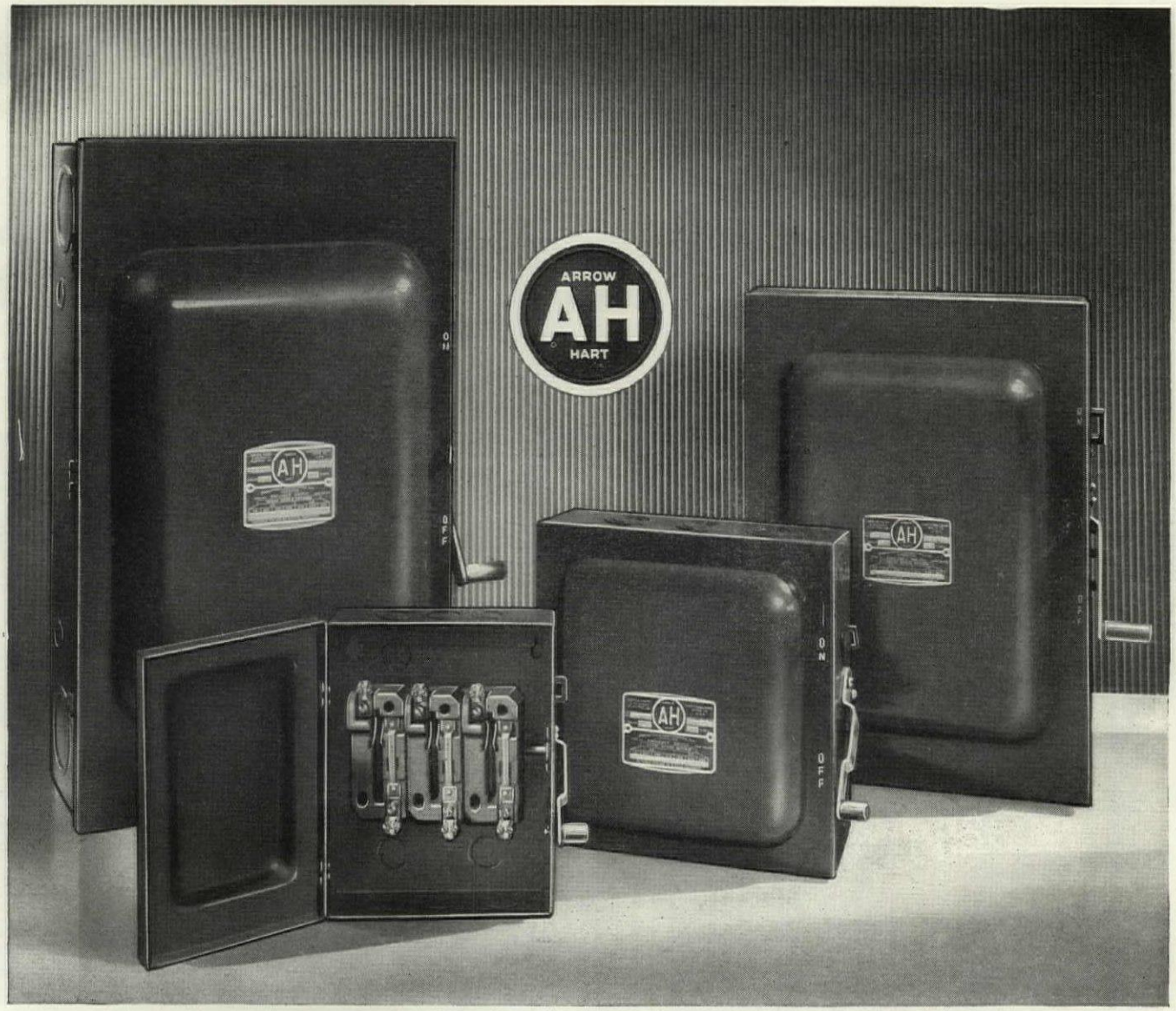
The newest look in an Escalator is the OTIS "32". It's 32" wide 5" below the handrails. That's exactly where width is needed to permit mother and daughter to ride side-by-side in comfortable safety. And the price of the OTIS "32" permits it to fit comfortably into any store's budget.

With 257 offices located in every state of the Union, OTIS is ready to help you plan, erect and maintain freight and passenger elevators and Escalators for use anywhere.

"Escalator" is a U. S. Patent Office-registered trademark of the Otis Elevator Company. *Only Otis makes Escalators.*

ELEVATOR COMPANY

Home Office: **260 11th Ave., New York 1, N.Y.**



Enclosed Switches

TYPES "A" and "C"

These safety controls of the higher grades serve for a wide range of applications, — reliably in all. Each type embodies the finest materials and workmanship its price-class affords. Both types have quick make-and-break precision mechanism, unit base for each pole 60 Amps. and over. Complete range of knockouts, attractive machine-gray finish. Listed as standard by Underwriters' Laboratories, Inc.

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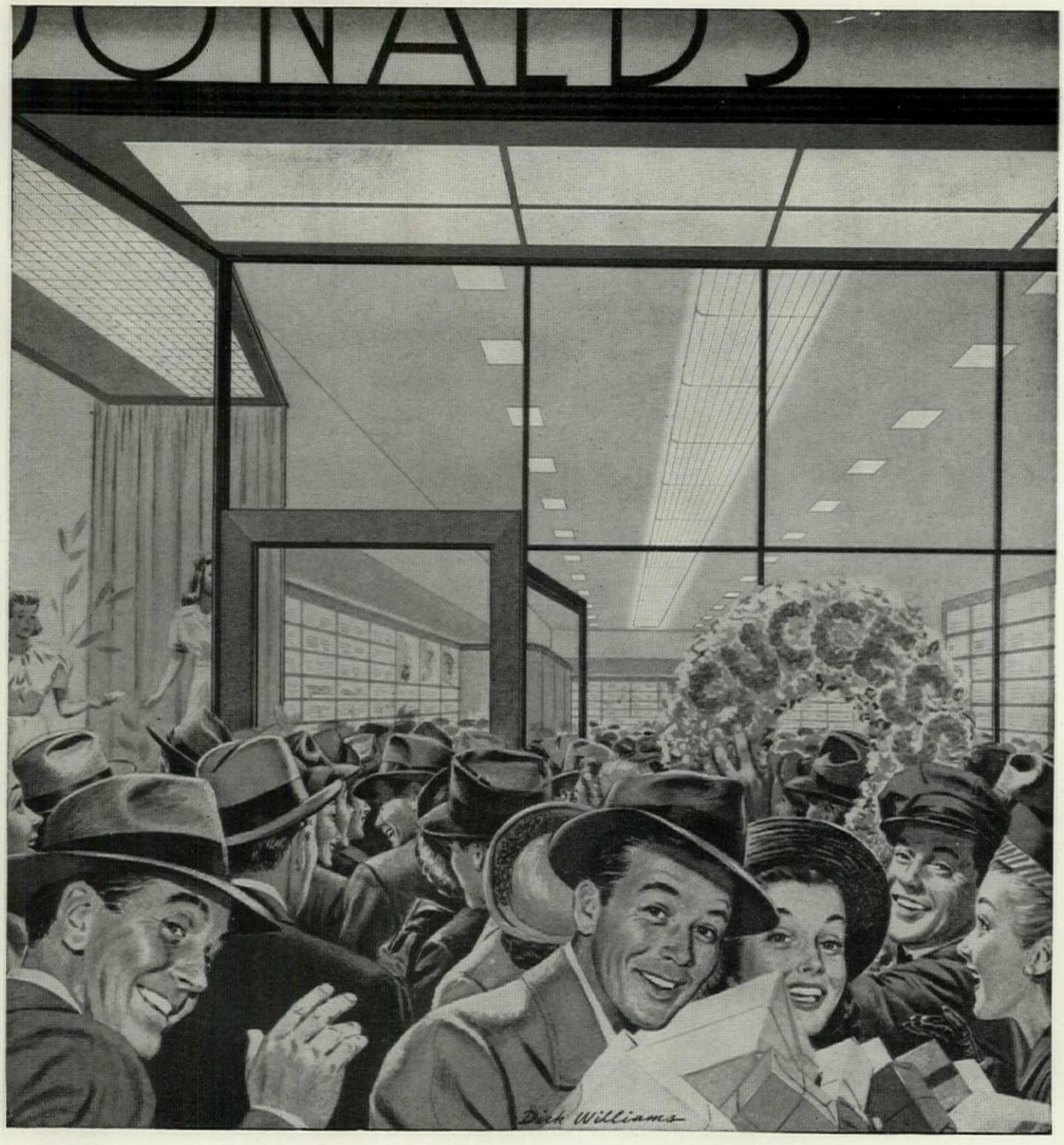
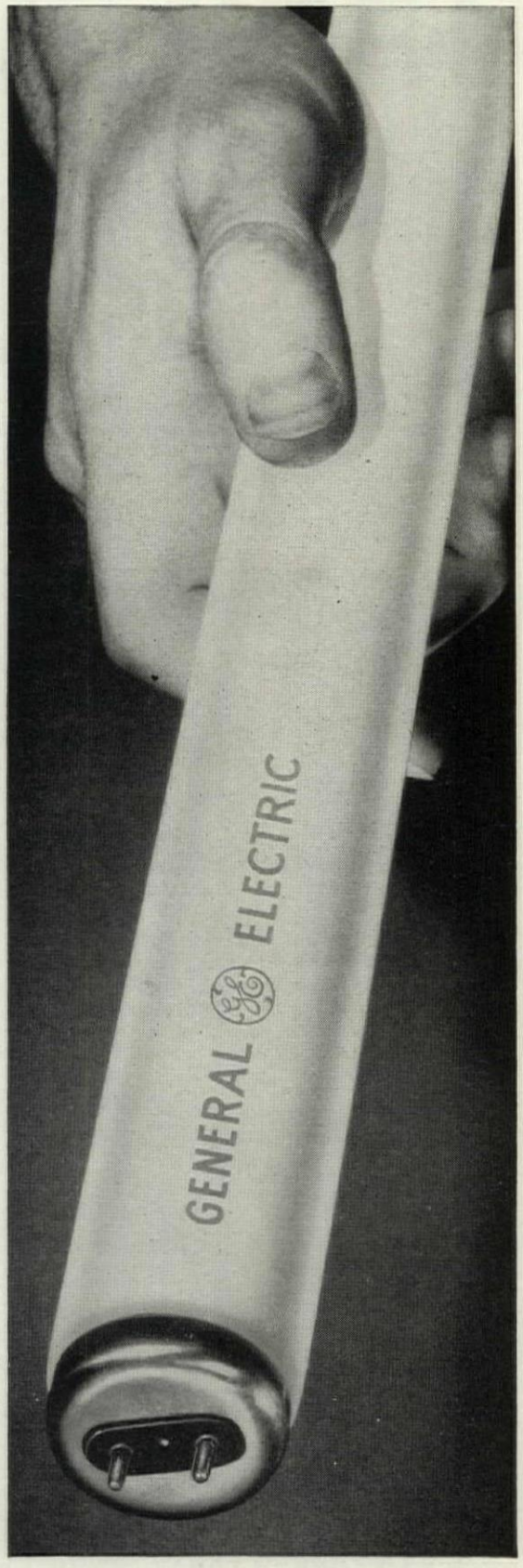
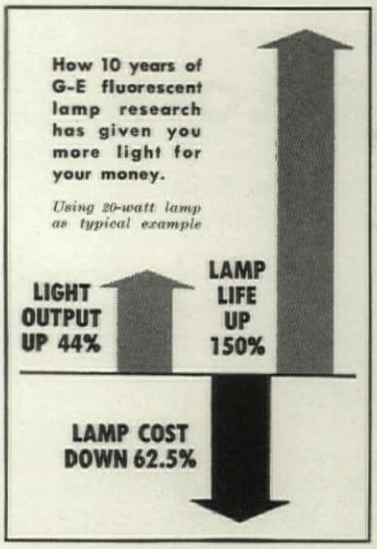


new light old April 21



Another milestone in G-E Lamp research

ONLY 10 short years ago, the first fluorescent lamps were placed on public sale by General Electric. Since then G-E fluorescent lamps have revolutionized lighting in stores, offices, institutions, factories, homes. This rapid acceptance is a tribute to the skill with which architects have applied this great new light source.



From the first, G-E Lamp scientists have led in fluorescent development, working ceaselessly to bring the cost of fluorescent lamps lower and lower—to raise efficiency higher and higher. The chart shows what's happened.

You can count on G-E fluorescent lamps as an increasingly valuable tool in modern lighting. The swift, steady improvement in fluorescent is typical of the persistent effort of G-E Lamp research to give *more light for the money*. It is only one of many reasons why it always pays to specify G-E lamps . . . constantly improved by research to ***Stay Brighter Longer!***

G-E LAMPS

GENERAL ELECTRIC

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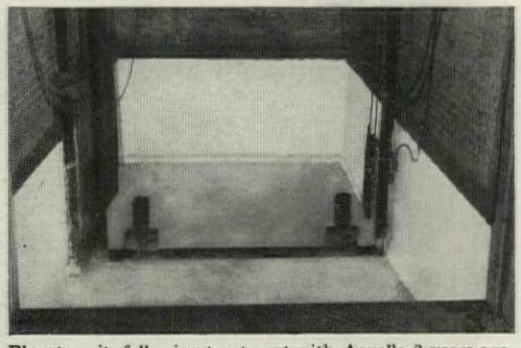
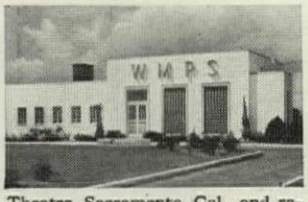
The Barnum Garage, Bridgeport, Conn., is located directly over an old river bed. For years, when the tide came in, the pit filled with 4 feet of water, rusting cables and causing frequent breakdowns. Aquella was applied in 1945. Since then, though surrounded by water, the walls and floor of the pit have remained thoroughly dry.



Elevator pit, following treatment with Aquella 3 years ago.

Over and over Aquella does "the impossible." Working on entirely new principle, this amazing mineral surface coating controls seepage above or below grade, interiors or exteriors. Use Aquella for all porous masonry surfaces —brick, concrete, stucco, stone, cement, cement plaster, masonry units. Brilliant white, also buff, rose, green, grey.



Theatre, Sacramento, Cal., and radio station, Memphis, Tenn., showing beautiful white Aquella finish. Damp, unsightly home (below) now bright and dry after Aquellizing.

Cross section showing how Aquella *penetrates* tiniest pores, then *expands*. Continues to harden with age. Will not crack, peel or rub off.

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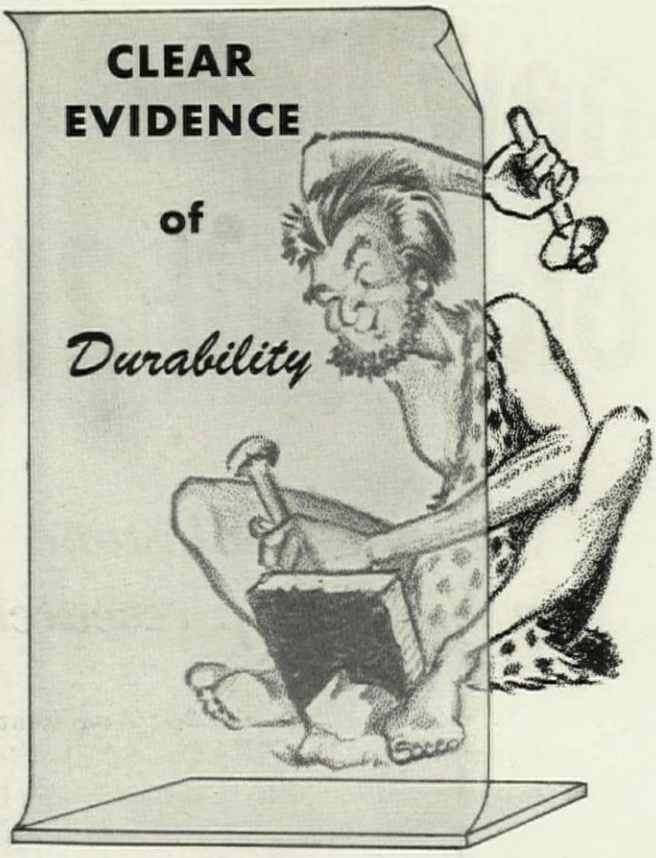

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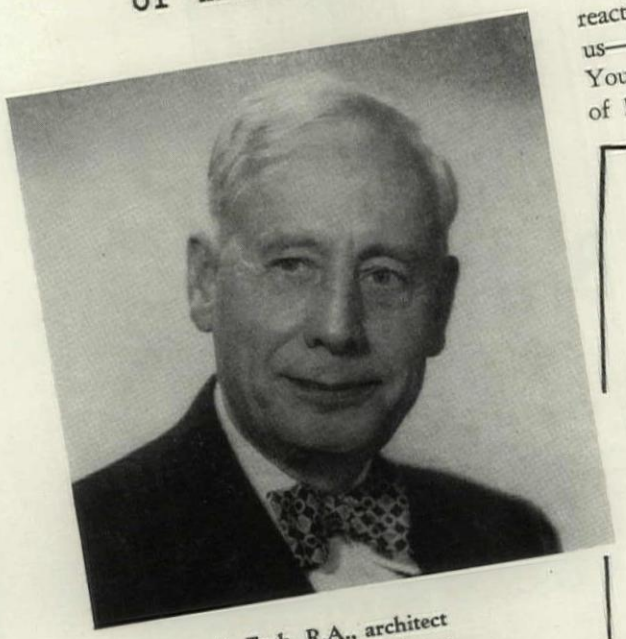

Mr. Robert A. Fash, R.A., architect for the United Cigar-Whelan Stores Corporation. Mr. Fash is a nationally known authority in the field of chain-store design and planning.

The original of the letter shown here is in our files. Also in our files are many interesting "case histories" concerning architects' plans, blueprints, specifications, etc. through to the photos of the completed projects. We'll be glad to show you a representative selection related to your particular field. Call or write us.

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February 25, 1948

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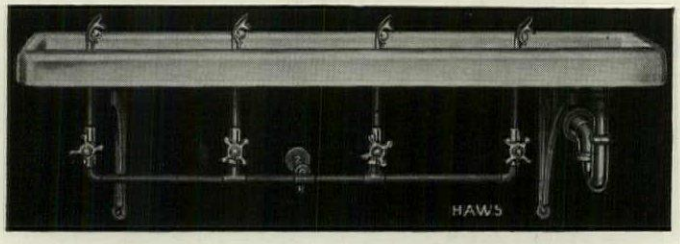

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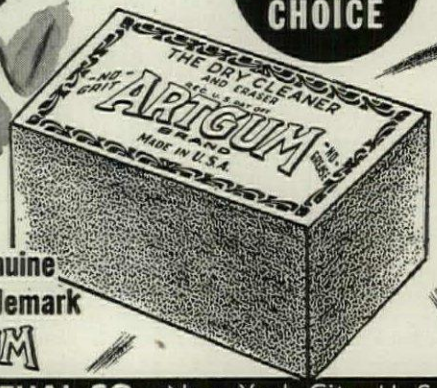

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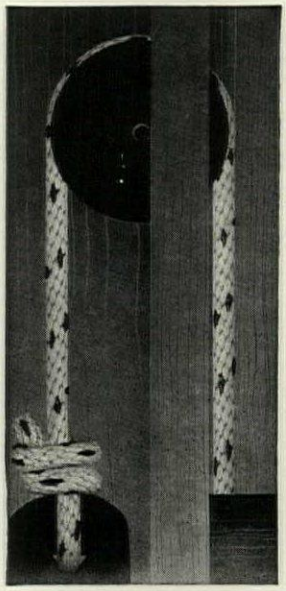

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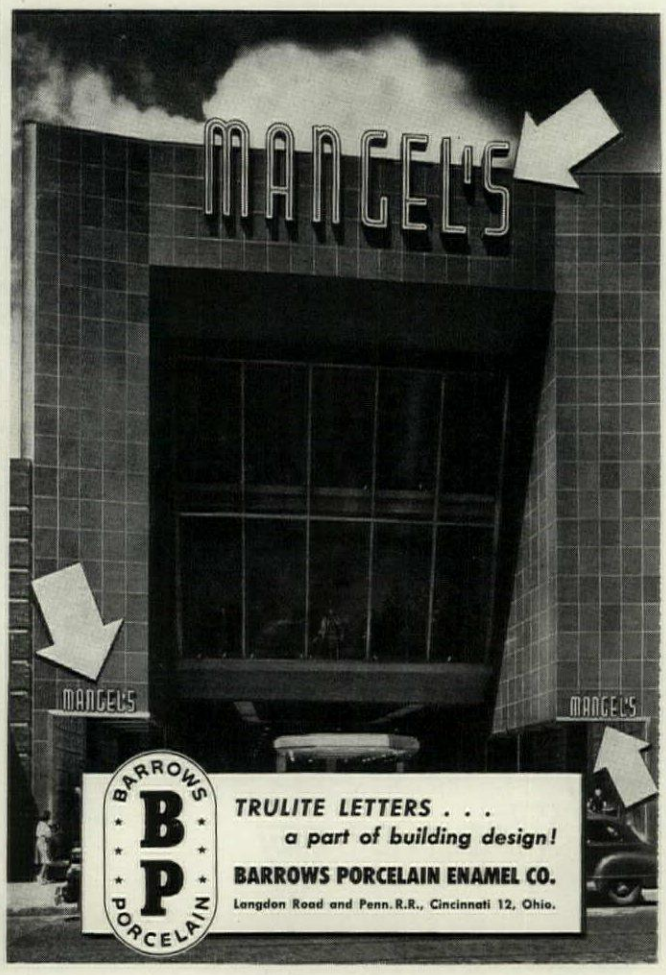

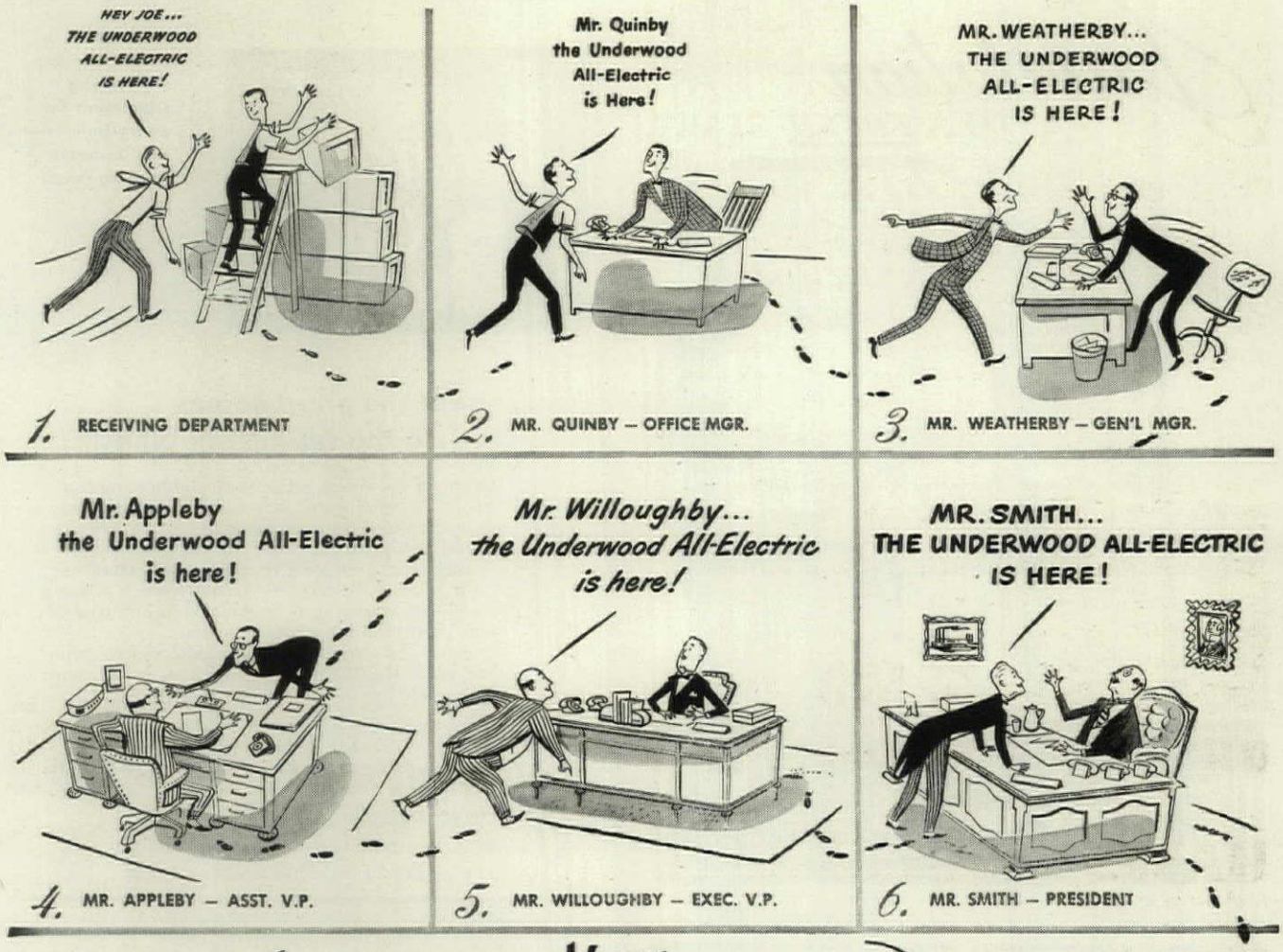

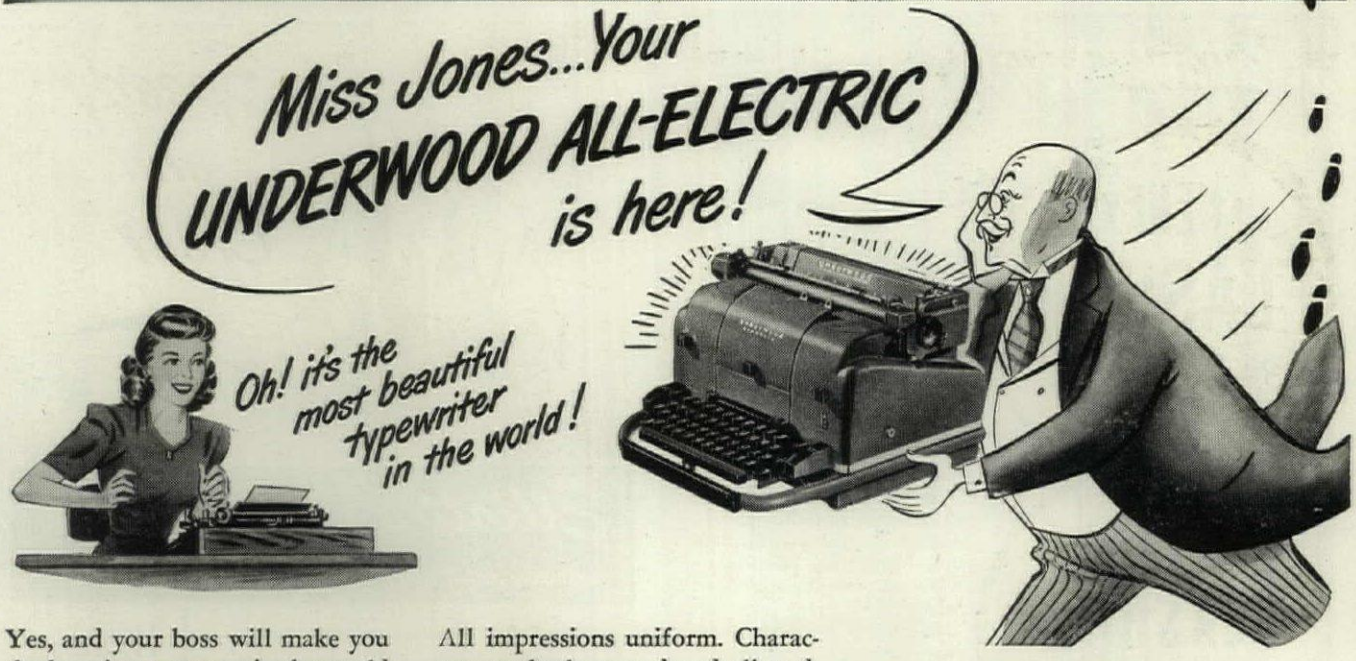

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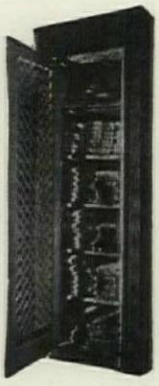

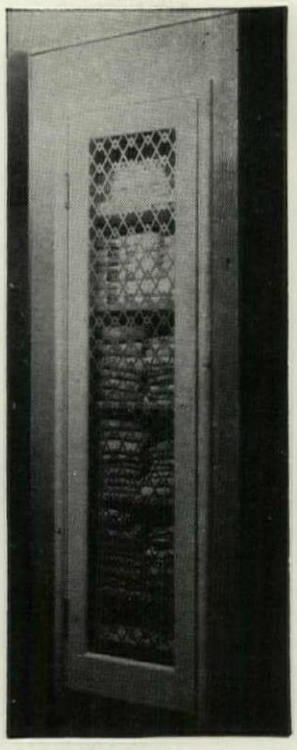

Hendrick Grille

in linen closet door

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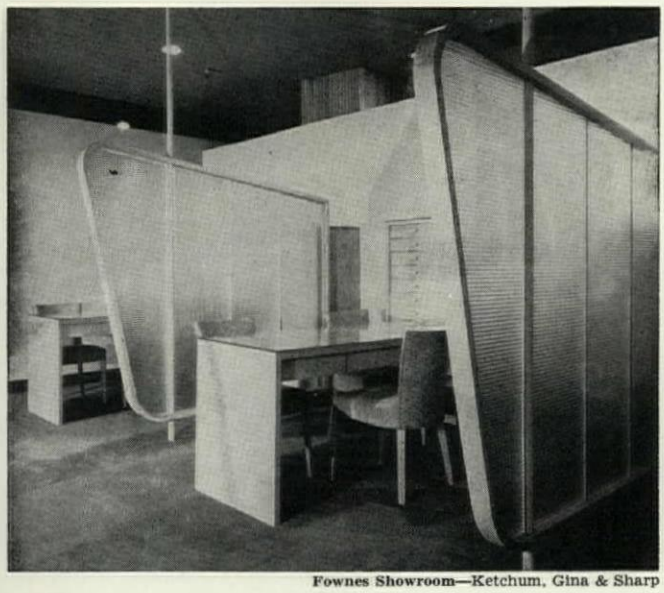

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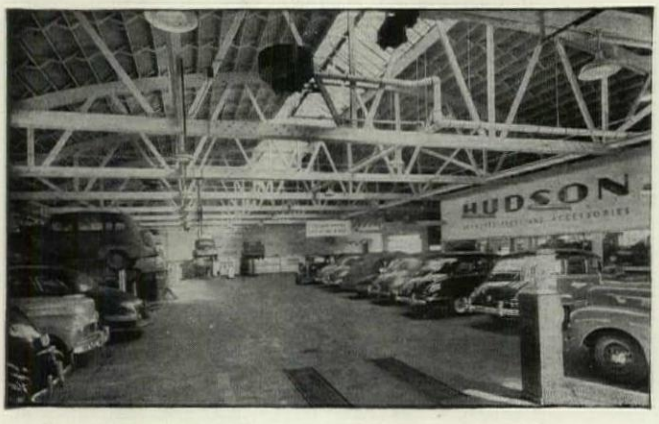

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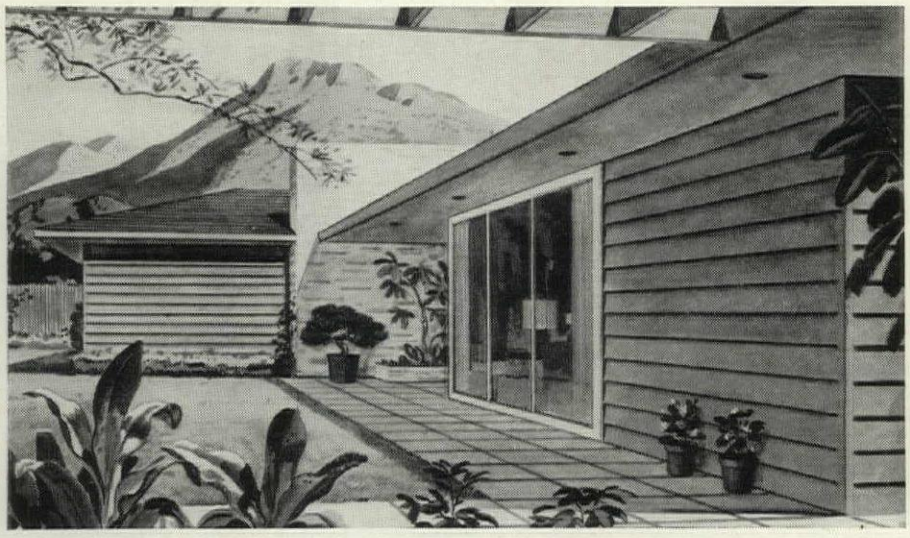

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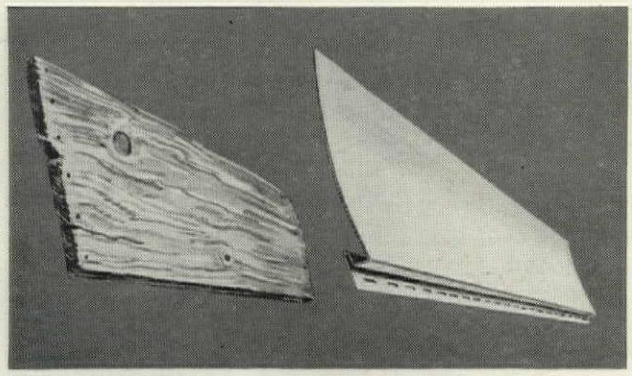

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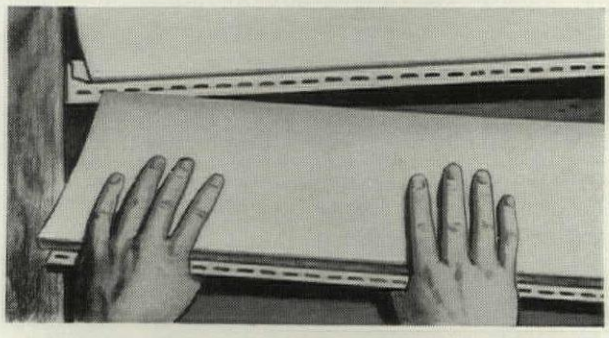

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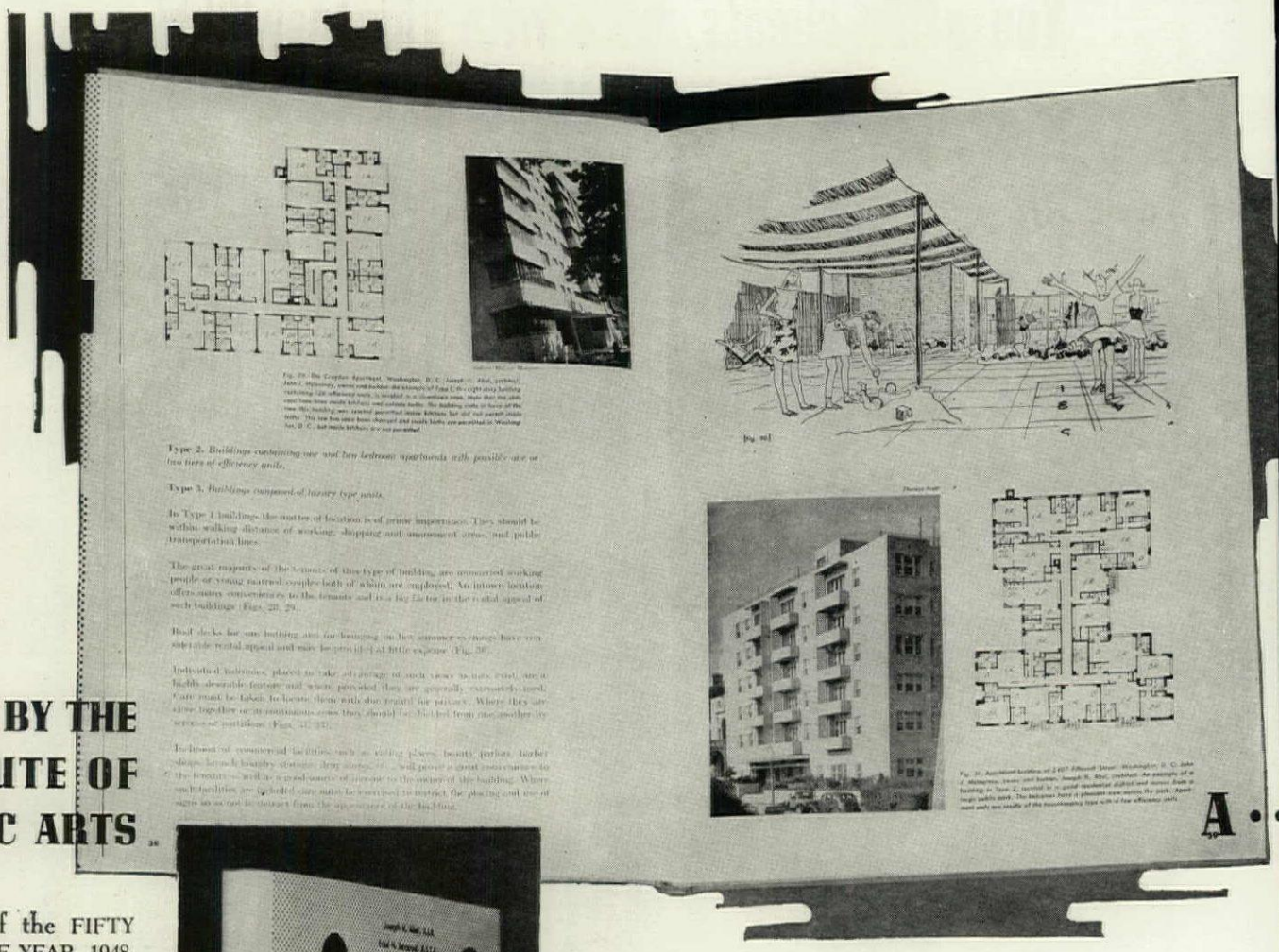

These two pages illustrate the excellent overall treatment.

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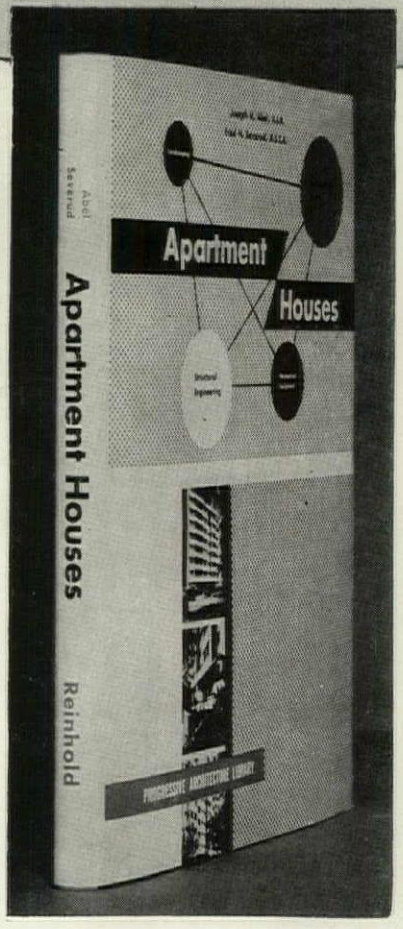
. . . as one of the FIFTY BOOKS OF THE YEAR, 1948, this book will soon be on tour throughout the United States. Copies of the book will be put on permanent display in New York and London. "...as an example of intelligent and straightforward presentation of a difficult subject."



One of the Fifty Books of the Year

APARTMENT HOUSES isn't a textbook in the literal sense of the word. It won't show you how to prepare detailed specifications, nor will it say—"Do this!" But in another sense, it *is* a textbook. Part One, by Joseph Abel, delves into architectural design problems, the building site, building types, planning methods, facilities, trends, and many other important steps in apartment house design.

Fred Severud investigates the topic, Structural Design, in Part Two of APARTMENT HOUSES, while Part Three offers the contributions of four authors—Clifford Strock (Editor of Heating and Ventilating) on Heating and Air Conditioning; H. M. Nugent and W. H. Easton, Jr. (of The Otis Elevator Company) on Elevators; and Alfred Geiffert, (Fellow, A.S.L.A.) on Landscaping.

Each chapter in these three main divisions is edited with care, and the authors have sprinkled the pages with advice of their own gained through years of experience. They've even labeled a chapter, "Pitfalls."

Crammed with facts · · filled with "know-how"

It's not a book to be taken lightly—this APARTMENT HOUSES. It is crammed with facts, filled with "know-how," and written with a flowing pen. You'll find it pleasant—even entertaining—reading. You'll find it stimulating, too. It will lead you to bigger, better designs.

This volume is not an isolated phenomenon. It is the second in a series of design studies of parallel concept—but, more than that its contents and format are a result of Reinhold's continuing interest in architectural publishing, embracing books of many types.

The Reinhold Architectural Library includes books of importance to every professional, no matter what his particular field may be. For instance, if you're a city planner, or interested in such work, Eliel Sarrinen's book might prove valuable. Camillo Sitte has also discussed the building of cities, as have S. E. Sanders and A. J. Rabuck. Or how about CITIES OF LATIN AMERICA by Francis Violich? The choices are varied.

Inspiration books—data books

And then there's the basic problem of running an architectural business. The famous Royal Barry Wills has contributed his thoughts to the problem in one book, while Clinton Cogwell and Ben John Small picked the poignant title, ARCHITECTURAL PRACTICE, for their recently-published treatise on the subject.

Yes, and Don Graf, too! His popular DATA SHEETS are known throughout the architectural world, and his 800-page book is one of our perennial "best sellers." But that's enough. You have an idea of the Reinhold Architectural Library. Now we'd like to have you see these books. Fill out the enclosed coupon and mail it today. The books will be sent on ten days' trial, and if at the end of that time you're not satisfied, we'll refund your money. Fair enough? Then send the coupon today before our supplies of these books are exhausted!

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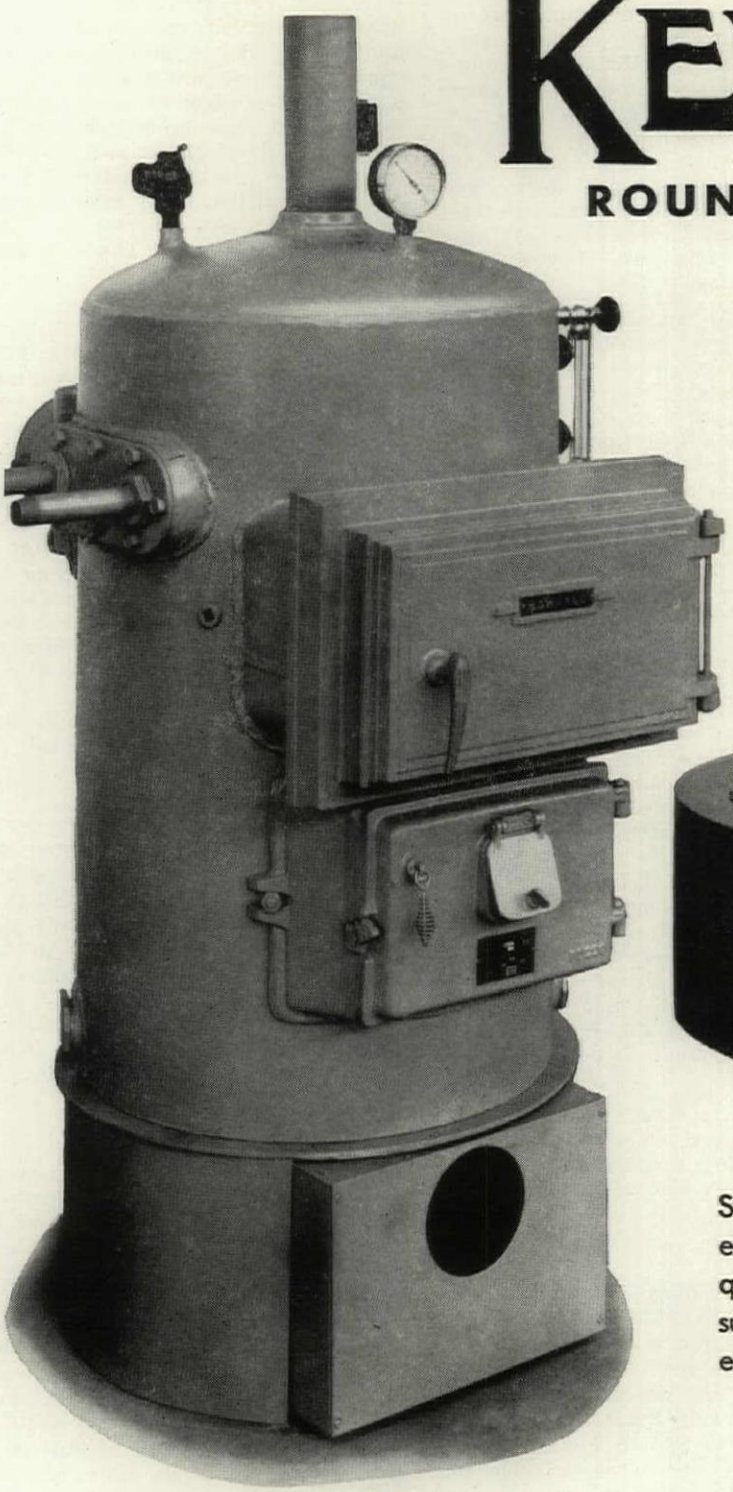

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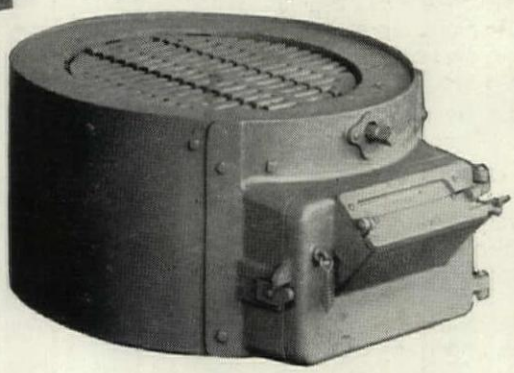

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P/A P.S.

AT THE MODERN MUSEUM MEETING REFERRED TO IN OUR EDITORIAL LETTER THIS MONTH, I was impressed anew with the bigness of Walter Gropius. Sometimes it is disillusioning to meet "great" people; they often turn out to be overvalued, ordinary, or even downright boring. Gropius is no such disappointment. He is undeviating from the principles he believes important, but at the same time he is persuasive, kindly, and tolerant. Some of the world-important architects should never use words to express themselves; they wander into fantasy or double-talk as soon as they leave the drawing board. Gropius, on the other hand, speaks clearly, decisively, and to the point. At the symposium he broke free of those who were trying to tie "modern" work in neat little labeled packages and insisted that the "common denominator" of good design in our time was capable of infinite applications to suit the many problems and the various regions.

•

I DON'T KNOW HOW MANY OF YOU HAVE AN OPPORTUNITY TO SEE THE NEW YORK HERALD TRIBUNE ON SUNDAYS. If you do get hold of a copy, notice the great improvement in what used to be the Real Estate Section. It's become an interesting department of architecture and building, under the editorship of Fritz Gutheim.

The real estate pages of reputable newspapers have long been their weakest features, consisting only, as Charles Abrams has said, of "everlasting optimistic releases by real estate brokers and developers with a financial stake in optimism." Gutheim's handling of material is refreshing and honest, and deserves applause.

While we're congratulating other editors and their employers, it's worth noting that Jedd Reisner, architect whose work we have published, director of architecture for the Beaux-Arts Institute of Design, has become architectural editor of *House Beautiful.* Jedd is a well informed and discriminating architect who should do a swell job as an editor.

•

THIS IS PROBABLY A COMPLETELY UNIMPORTANT MATTER BUT IT INTRIGUES ME FOR SOME REASON. An architect who "prefers to remain anonymous" in this column writes that his office—a fairly large one—has been discussing the matter of a more appropriate name for job captains, and particularly the head draftsman. He feels that "something should be done to bring the titles of these men into line with the more dignified names given to corresponding personnel in, say, advertising agencies and industrial design organizations. We feel that the present titles are hangovers from the garret era." He goes on to say that in his office they are tentatively calling "jobs" by the more high-sounding name of "accounts" and correspondingly renaming their "job captains," giving them the title of "account managers." He'd like to hear what some of the rest of you think about this matter.

Some firms, of course, use the term "project manager" instead of "job captain," but this is a little confusing, because others reserve the "project manager" title for the man who is running the construction operation in the field. Advertising agencies do glorify the position of comparable rank by the name "account executive," but if I had to express an opinion I would lean more to words with an architectural connotation. You may have noticed in Long & Thorshov's story in **P/A** last month that they referred to men in charge of particular jobs as "architects." Why not? Why shouldn't the person who is handling a client's account be the "architect" of that job—within the organization? Whether his name should appear on the drawings, for credit *outside* the office, is another matter. I can imagine opposition to this, however, so I suggest as a compromise that we retain the word *job,* which is good colloquial English, but use the word *architect* instead of *captain,* which is meaningless in an architectural organization. Let Johnny Jones be known as the job-architect of the Smith house. It would sound more impressive to Mrs. Smith, and wouldn't do Jones' morale any harm.

This, of course, concerns only the larger office. Next month we expect to have a topic of equally fascinating unimportance to discuss for the benefit of the smaller office.

•

AN ARCHITECT'S REACTION TO HIS OWN WORK IS ALWAYS INTERESTING. One man I worked for early in my career used to say, whenever he had completed a building, "That's another street I can never walk down." From this editorial point of view we usually see architects plugging their own work, anxious to have it published. However, one prominent designer warned me away from a building I was inquiring about recently. "You don't want to publish that," he told me. "It looks good from the outside, and as far as anyone can tell, from the inside. If you dig into it, though, you'll find it's a very bad design. Better lay off it."

That was a refreshing bit of self-evaluation, and saved us a lot of time. I experienced another instance of modest self appraisal on a recent visit to Albany, New York. Henry Blatner, a most able architect, took me around the town and its suburbs to see his work, and showed me some jobs that he had done a while ago, of which he is not too proud now. In each case, however, he was able to point to development and growth in his own work. Such a designer can never get in the rut that many have traveled; estimating his own progress, he is sure to *continue* progressing. The work on his boards proves it.

•

IN OUR LISTING OF AVAILABLE PRODUCTS IN THE JANUARY ISSUE, we made a mistake that we hasten to correct. I can't believe there was only one error in that mass of tabulated information! We gave the impression that Ric-WiL Insulated Pipe Units had at one time been off the market and were again available. They are available—but at no time have they been anything but. In fact, service to the many architects who specify them has always been good. I'm frankly giving the manufacturers a plug here, because they took it so well; they write, "We still think you did a mighty fine job with the January issue and we are reluctant to call this misstatement to your attention."

•

THE NEW YORK STATE LEGISLATURE HAD FOR CONSIDERATION IN ITS WINTER SESSION a bill of interest to all those who are concerned with over-all planning. At the present writing it looks as though it will die for the time being in the rush of legislators to finish State business and get back home before the spring thaws set in. The bill, Senate Bill No. 1459, would set up a "Division of Planned Development," under a commissioner who would "assist the governor in the physical development of the state and its resources and in the coordination of the various activities of the state and its subdivisions related thereto." This would be done by analyzing, coordinating, developing a "comprehensive and dynamic plan for . . . orderly growth," and, most important to local planning groups, by "informing, advising, and assisting local and regional planning agencies and other groups whose plans or activity affect the physical development of the state." If it doesn't get to the floor this time, perhaps sufficient interest in it will develop so that it will have a fair show in the next session. Couldn't similar efforts at coordination of local planning activities be made in other states?

Thomas H. Creighton

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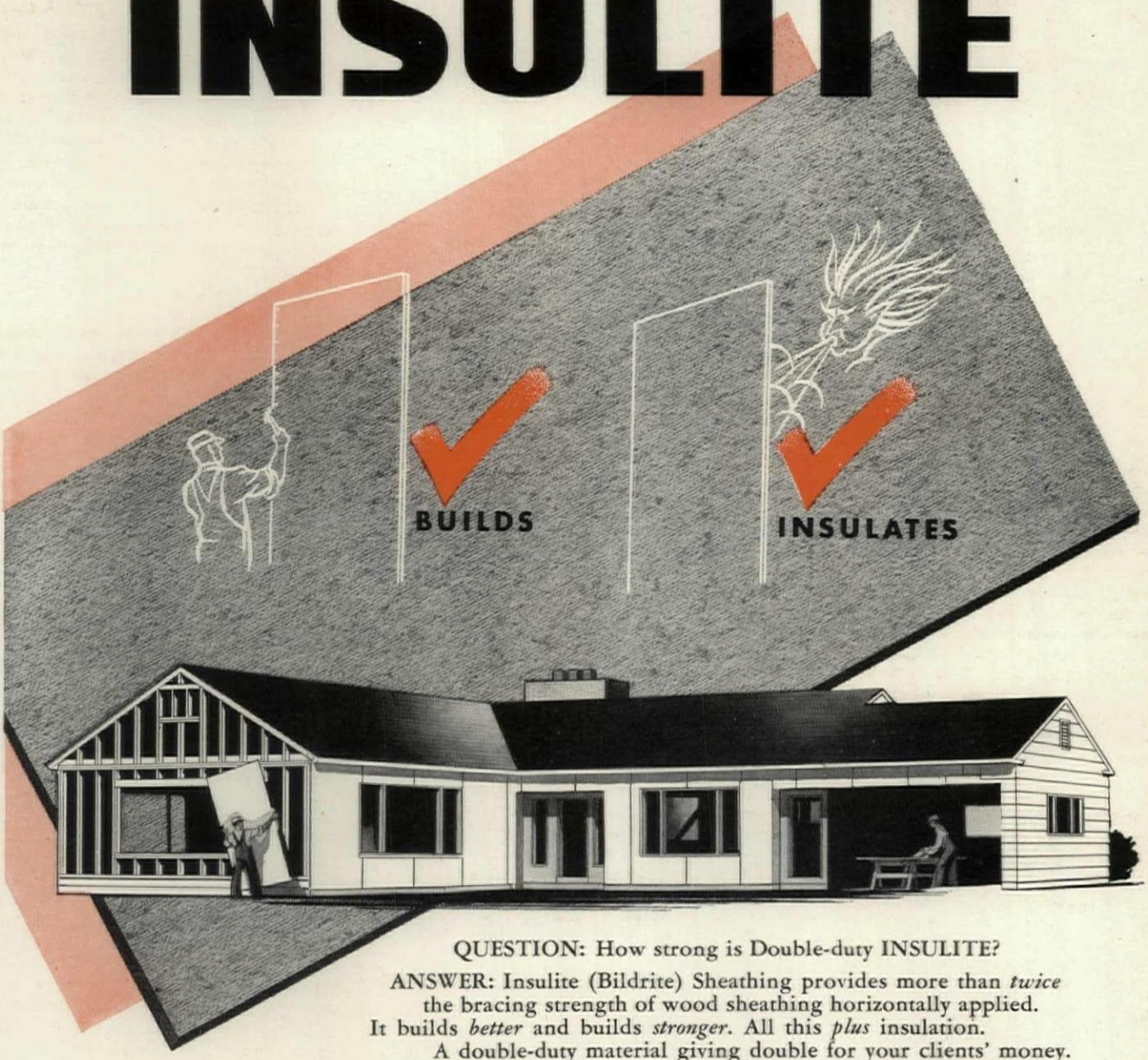
DOUBLE DUTY INSULITE



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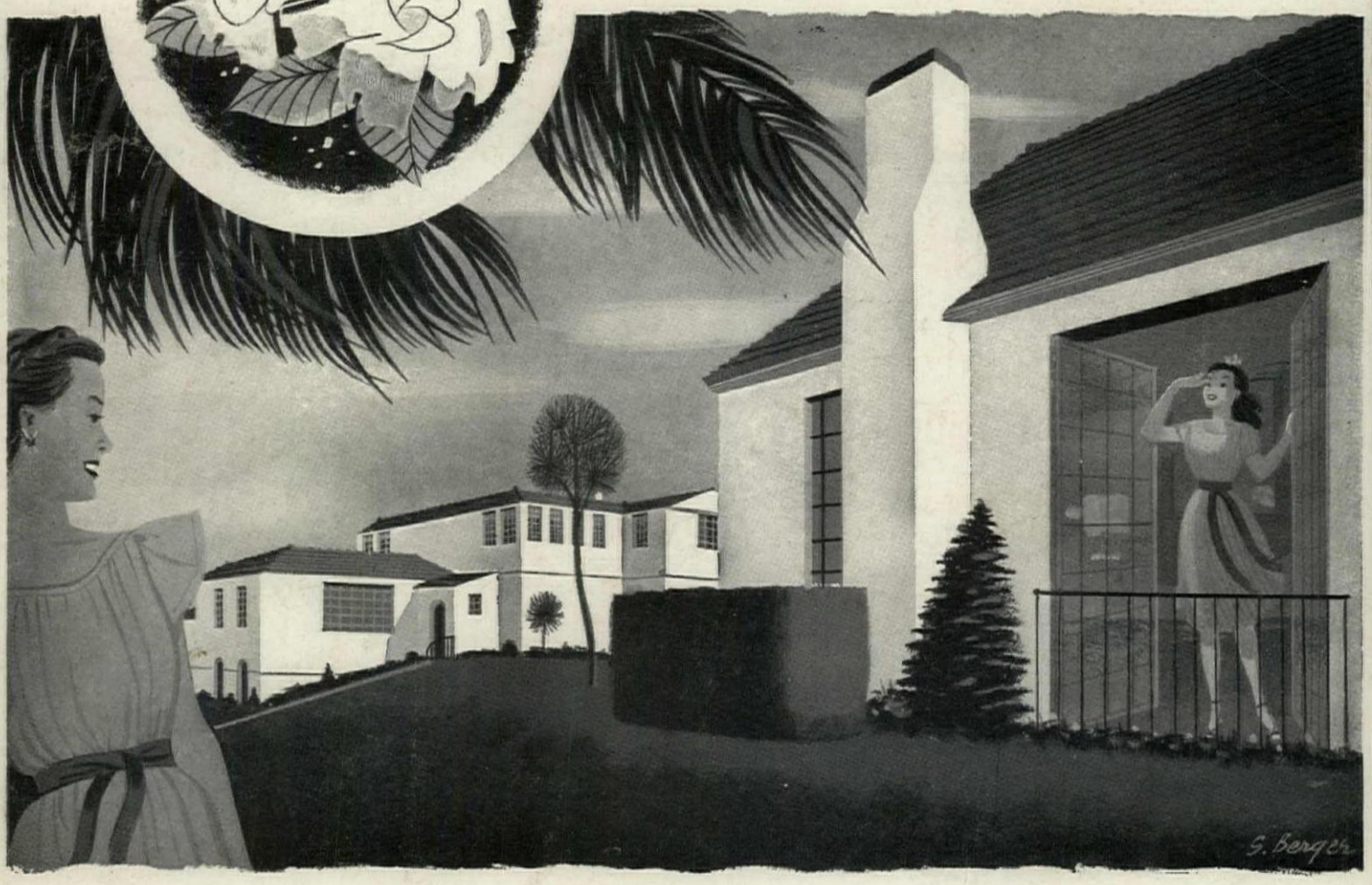

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