PROGRESSIVE ARCHITECTURE

newsletter

March 1950

blished monthly by REIN-OLD PUBLISHING COR-RATION, 330 West 42nd reet, New York 18, N. Y., S. A. Ralph W. Reinhold, airman of the Board; ilip H. Hubbard, Presi-nt; H. Burton Lowe, Ex-tive Vice President and easurer; Gilbert E. Coch-, Vice President and Sec-ary; Francis M. Turner, lliam P. Winsor, John G. cher, Fred P. Peters, Vice sidents. Executive and torial offices: 330 W. 42nd New York 18, N. Y. Sub-ptions payable in ad-ce. Subscription prices to se who, by title, are ar-ects, engineers, specifica-writers, designers, or ftsmen, and to govern-its and government de-tments, trade associa-s, college and technical aries, students, publish-advertisers, and adver-s' executives—$4.00 for year, $6.00 for two years, for three years; to all rs—$10.00 per year in , U.S. Possessions, Can-and Philippine Republic. n America—$10.00 for one , $16.00 for two years, 0 for three years. All r foreign subscriptions—0 for one year, $25.00 for years, $30.00 for three s. Single copy — $1.00. ted by Lotus Press, Inc., West 26th Street, New 1, N. Y. Re-entered as sec-lass matter, January 22, at the Post Office at York, N. Y., under the f March 3, 1879. Volume I, No. 3, March 1950. ed in Art Index.

- A paper read at recent meeting of American Society of Heating and Ventilating Engineers reported findings on baseboard radiation systems, said that air temperature, with little variation from floor to ceiling, can be obtained with satisfactory relative humidities and no excessive drafts.

- Another report at same meeting, by Pierce Foundation engineers, recommended ceiling panels for radiant heating over floor panels, because a floor temperature of more than 75° induces "low vascular tone" in foot and leg. Experiments showed that floor panel heat caused warmer temperature in lower extremities, which could result in improper over-all circulation and prevent alertness.

- Perhaps the most revolutionary paper read at A.S.H.V.E. meeting was one by Dr. F. E. Giesecke, Texas air-conditioning authority, who reported that by leaving the windows open at night and closing them during the day the cost of mechanical cooling might be cut in half.

- A report on The Architect and Long Range Planning for Schools has been issued by the A.I.A. Committee on School Buildings (Kump, chairman). It is an excellent statement of the architect's role in long-range planning studies, his relation to "educational consultants," and the need for a "co-ordinator of all information, who is capable of evaluating, organizing and documenting" all data.

- The report points out that more than educational requirements enter comprehensive planning considerations--population trends, finance, public health, community activities, building economics, fire safety, codes, materials, environmental controls, site planning, and many others are factors. For this co-ordinating task the committee says that compensation "over and above fee for building plans" is needed.

- Konrad Wachsmann is joining the architectural staff at Illinois Institute of Technology. Hopes are to develop advanced study in industrialized building.

- First of the greenbelt towns--Greenhills, near Cincinnati, Ohio, has been sold by Public Housing Administration for 3½ million dollars. Unlike Norris, Tenn., another government-owned town, which was sold to a private individual, Greenhills was bought by a non-profit corporation composed primarily of veterans and tenants.

- Drive-in theaters, of which there were only 52 at start of last war, have reached over 1500 in number with more than 2000 under construction. Planning officials are concerned with traffic hazards involved; American Society of Planning Officials points out that such structures may not be covered by definitions of a "building" in many local codes.

(Continued on page 2)

newsletter

- HHFA announces a 20-member committee to advise the administrator on slum clearance and urban redevelopment problems. Committee includes Harland Bartholomew of St. Louis and Catherine Bauer, soon of San Francisco.

- University of Oregon school of architecture and allied arts will go on an "upper division" basis with 1950 fall session. This means that junior standing in college will be required for admission to the school. Five year degree requirement will continue, so that first two years in effect will be in general arts and sciences, with some non-specialized courses in architecture and art. Oregon, one of largest units in nation, thus may be setting trend to broader background of liberal arts and sciences, without becoming graduate school.

- A bill has been introduced in Congress asking authorization of funds for Jefferson National Expansion Memorial, competition fo which was won some time ago by group headed by Eero Saarinen.

- Fireplace developed for Carl Koch's Acorn House (P/A Award Mention) is being manufactured and sold as a separate item by Acor Houses Inc.

- Columbia University is offering as a summer course a study tour to selected urban areas in the U.S., to visit and study example of urban planning, housing, and architecture. College credit is possible. Fee of $540 plus $7 University fee covers all but meals. Registration closes April 1.

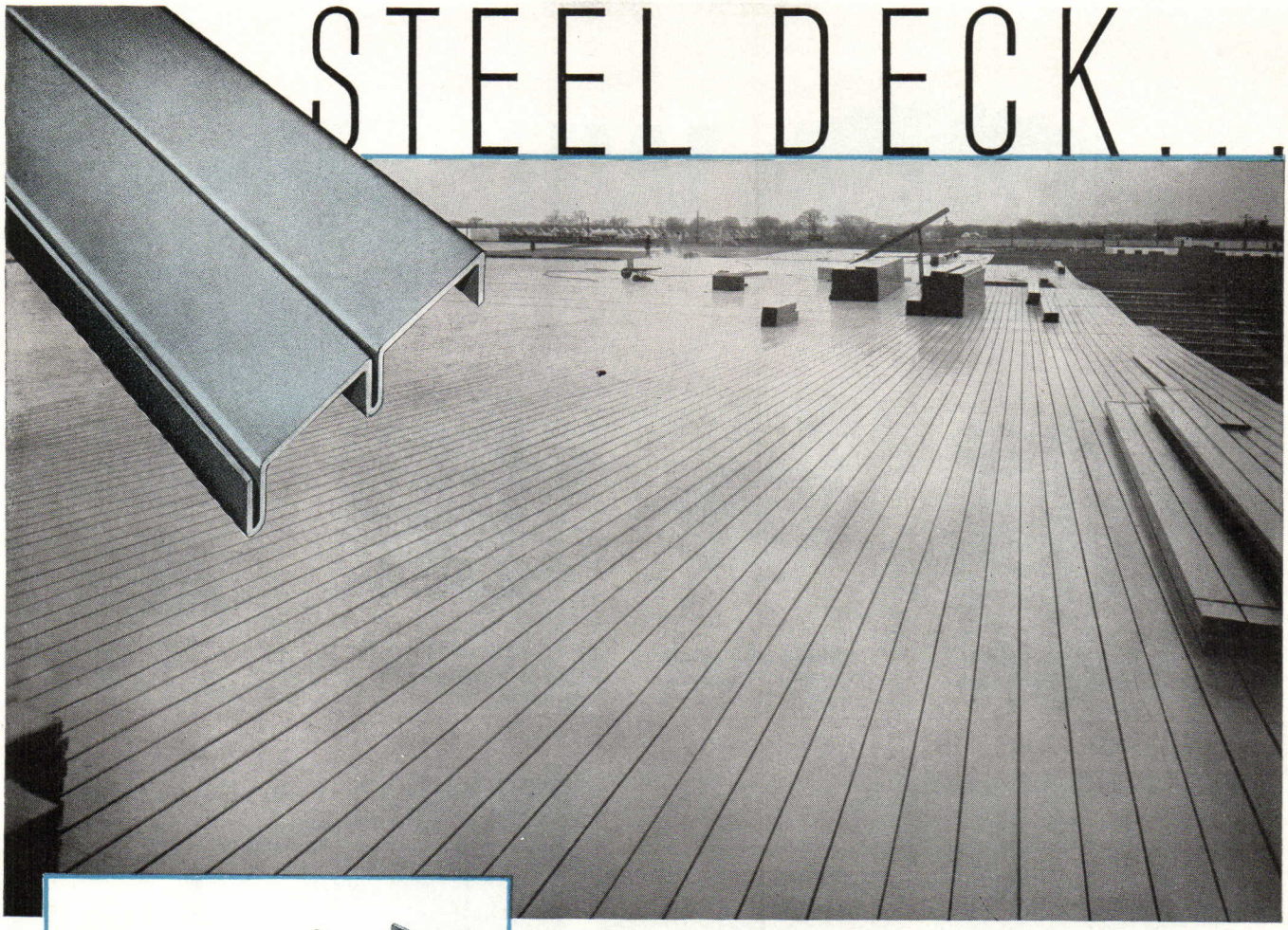
- Federal bills to aid middle-income housing will have tough sled ding. Co-operatives, proven successful in many places, still sound socialistic to some. Banks and insurance companies will consider proposed low interest rates for loans from a government-private corporation unfairly competitive. And on the othe side, demands will come that builders' profits be limited, as i New York State program.

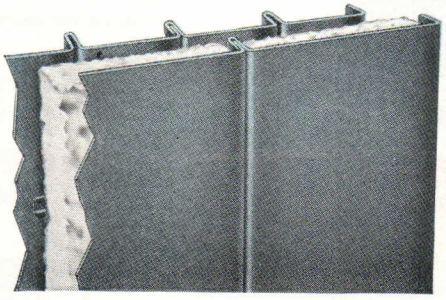
- International Nickel has been granted patents on a ductile cas iron, said to have high tensile and yield strength. Under stress the material, which contains magnesium, behaves elastically like steel rather than ordinary cast iron.

- HHFA has a $10 million fund for assistance to housing activiti in Alaska, to be handled through the Alaska Housing Authority. This, and liberalization of FHA financing will spur even more the recent great construction activity in this part of continent.

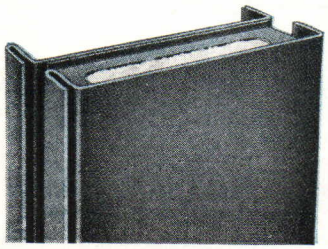
- Most building employers are now complimenting building labor o increased productivity. Much of the inefficiency which appeare after the war--due largely to untrained or rusty mechanics--ha disappeared, and impression is that building efficiency has go up about 20% in last few years. How much of this is due to greater mechanization of construction process, slowly and ofte reluctantly being adopted by the industry, has not been carefully analyzed.

STEEL DECK . . .





INSULATED STEEL WALL
(FIELD CONSTRUCTED)



INSULATED STEEL WALL PANELS
(PREFABRICATED)

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Mahon Insulated Steel Walls are Available in Two Types as Illustrated Above. Heat Transmission Coefficient "U" Equivalent to 18" Solid Masonry Wall.

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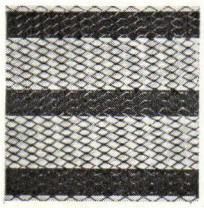
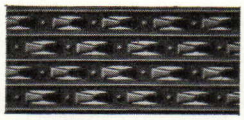


Wheeling Combination Lath. *Diamond or Bar-X-Lath*



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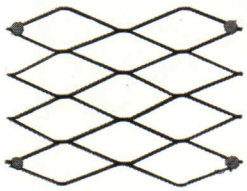

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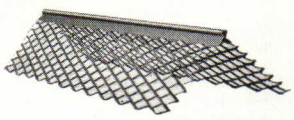

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Wheeling Flat Apron Corner Bead

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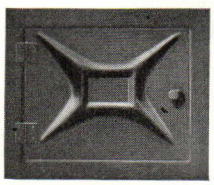
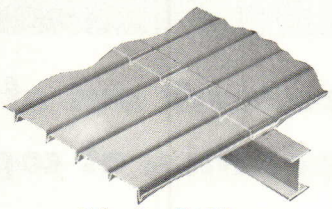
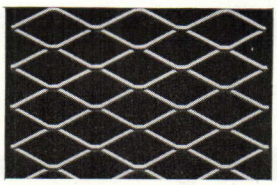


Wheeling Ashpit and Clean-out Doors

Wheeling Coal Doors



Wheeling Tri-Rib Roof Deck



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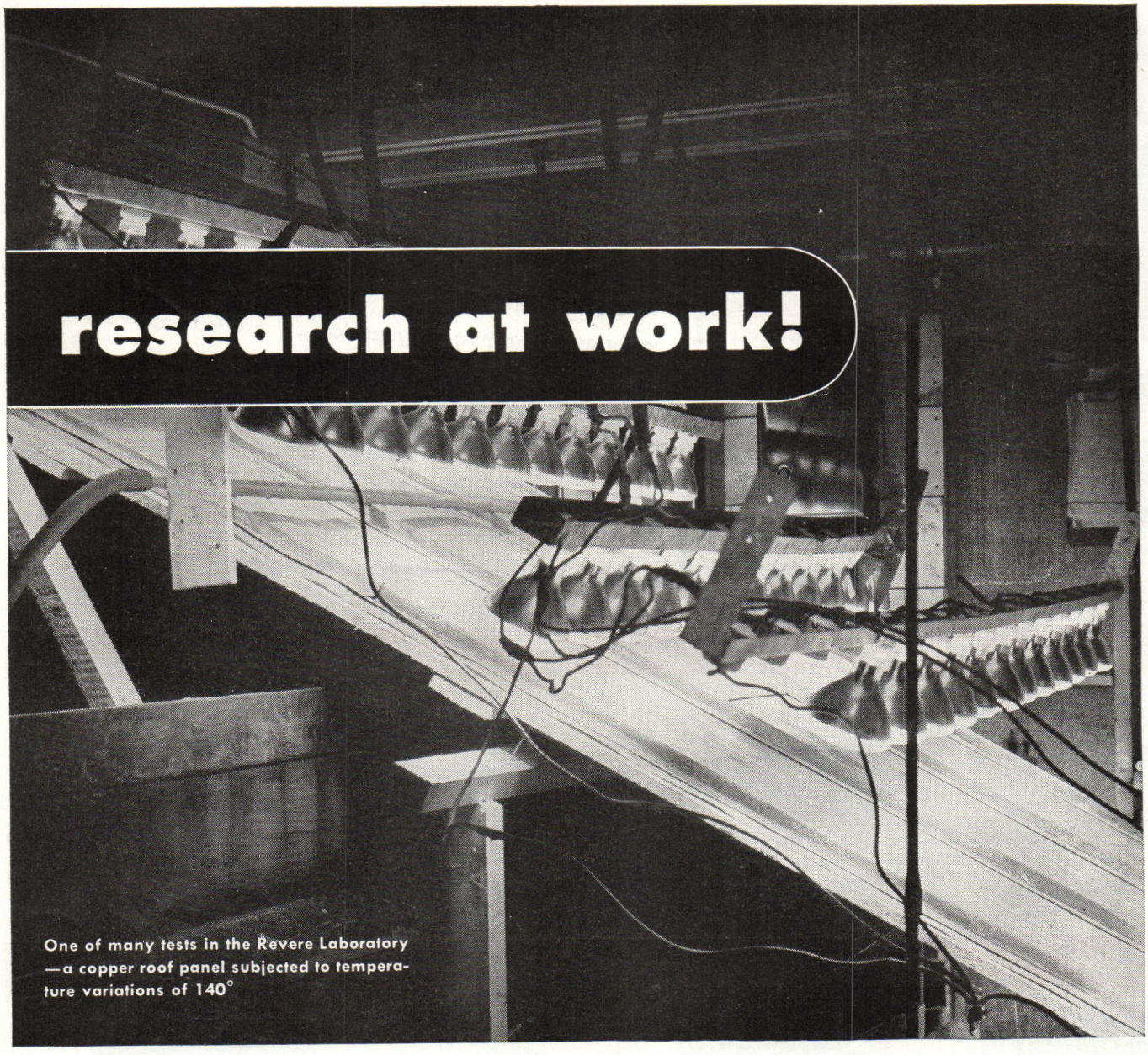


One of many tests in the Revere Laboratory —a copper roof panel subjected to temperature variations of 140°

Taking the guesswork out of the design and application of copper for roofing

● This is the story of the successful conclusion of a Revere Research project, as a result of which new information was uncovered concerning an old application of sheet copper—roofing. For centuries this traditional metal was applied by rule-of-thumb methods; now, for the first time the engineering principles that must be followed have been uncovered and published for all to use. Today it is possible for any ordinarily-skilled designer and sheet-metal worker to be certain that copper roofs, flashings and gutters are strong enough. In other words, you can be sure that the copper is not so thick as to be wasteful of metal, nor so thin as to be too weak for the job it has to do. You can also know that such design details as seams, stiffening members, and expansion joints are right from an engineering point of view.

True Economy

In these days of high costs it is as important not to over-design as it is not to under-design, though probably in the recent past it has been under-design that has been of most concern. Copper has been recognized universally as the prime roofing material. The metal is so highly resistant to atmospheric corrosion, and hence so confidently relied upon, that there has been a constant tendency to cut down on thickness, until in some instances a mere veneer a few thousandths of an inch thick has been applied. Since modern manufacturing methods have made wide sheets of copper economically available at gauges much lighter than were produced for early copper construction, it became essential to determine the minimum thicknesses of copper that could be used without introducing the danger of mechanical failure of the metal under the structural loads that would be applied to it in service.

Roof Walkers

As the first step in this project, a number of qualified Revere metal research workers were sent out into the field. They

checked every copper roof they could see. Such records as were available were studied. In addition, these men clambered over roofs to examine gauges, tempers, sheet lengths, methods of making joints, provisions for allowing for expansion and contraction, and the kind of underlying materials.

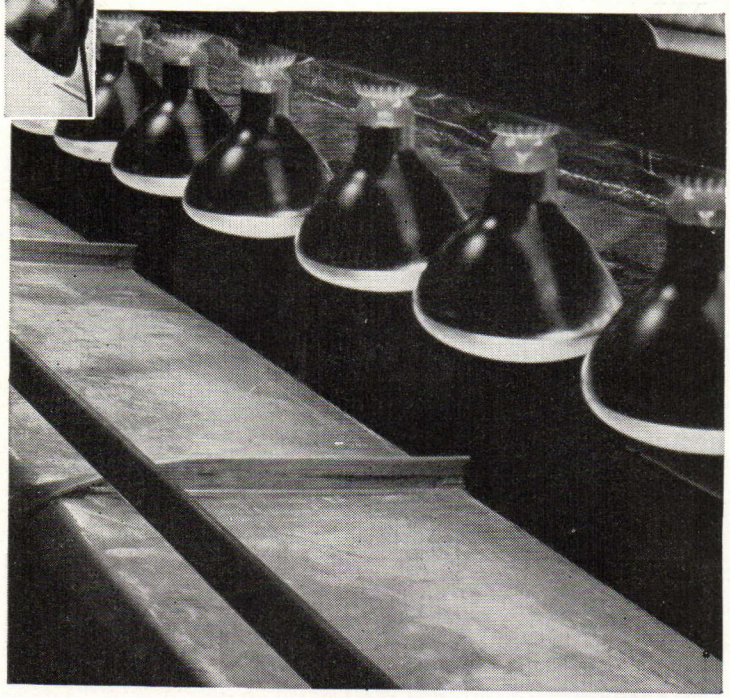
It quickly became evident that complete provision must be made for the expansion and contraction of the metal with changes in temperature. If the copper was not free and able to transmit forces to the expansion joints, buckles would form, and in time repeated flexing of the metal could produce cracks.

Roofing Must Move

The fundamental ideas brought back from the field were these: copper on a roof must be stiff enough to transmit movement; its movement must not be restricted by adherent underlying substances; expansion joints must be properly spaced. These, however, were general conclusions. It was necessary to confirm them, and translate them into working specifications. Laboratory work then began. Full-scale replicas of actual installations were built indoors, and subjected to conditions approximating those that had to be met outdoors. To duplicate the summer sun, batteries of infra-red lamps were used. After the metal had been heated, the lamps were turned off, and a cold "rain" of frigid river water was poured upon it. Thus a temperature change of 140° was produced in a few minutes. Various installations up to 65 feet in length were given this severe treatment six times an hour.

The Speed-Up

These tests were spectacular because of the speed with which things happened. You could see the metal move before your eyes, see where stresses were concentrated and where buckling developed. The action was so pronounced that it was easy to record it in motion pictures, as well as make accurate measurements. Sheet copper thus tested ranged from 16-oz. soft, which had become virtually standard in recent years, to 32-oz. cold rolled, such as was installed in 1873 on the State Capitol in Albany, N. Y., one of many outstandingly successful jobs.



Getting the proof. A standing-seam parapet wall coping cover, installed in the laboratory according to Revere specifications. Withstood 500 cycles of heat and cold, without injury, equivalent to several times the life of an average building.

Strength Needed

At this point it would have been all too easy to say that the tests showed that heavier copper was desirable. That was too easy an answer. It gave no help to the many people who want to use the world's finest roofing material without buying too much of it. So the matter of strength was investigated. Quantitative stress analyses indicated that copper roofs, gutters and flashings must be considered from the structural point of view rather than regarded as mere weatherproofing veneers. The columnar strength of formed sheet copper sections was found to be of particular importance, because such strength is required to transmit movement.

Eventually, after much mathematical work and confirmatory laboratory tests, it became possible to draw up completely new specifications for copper roofings, gutters and flashings of adequate strength and minimum metal. All this information has been printed. It is widely distributed among architects, designers, builders and contractors, roofers and sheet metal workers. This was the first authoritative work of its kind.

A Caution

Such enthusiasm has been aroused by this new, practical approach that attempts have been made to apply the Revere designs and specifications to other materials. It is a fact, however, that each material has individual characteristics which must be taken into account independently. The Revere specifications apply to copper only, and cannot be safely applied to other materials.

Only the size and universal scope of this project differentiate it from our daily collaboration with individual customers. On a private and confidential basis the Revere Technical Advisory Service collaborates with engineers and production men, making a joint attack upon problems associated with such things as choice of materials, cost reduction, process improvement, production rates, product betterment. Will you allow us to study such matters with you?

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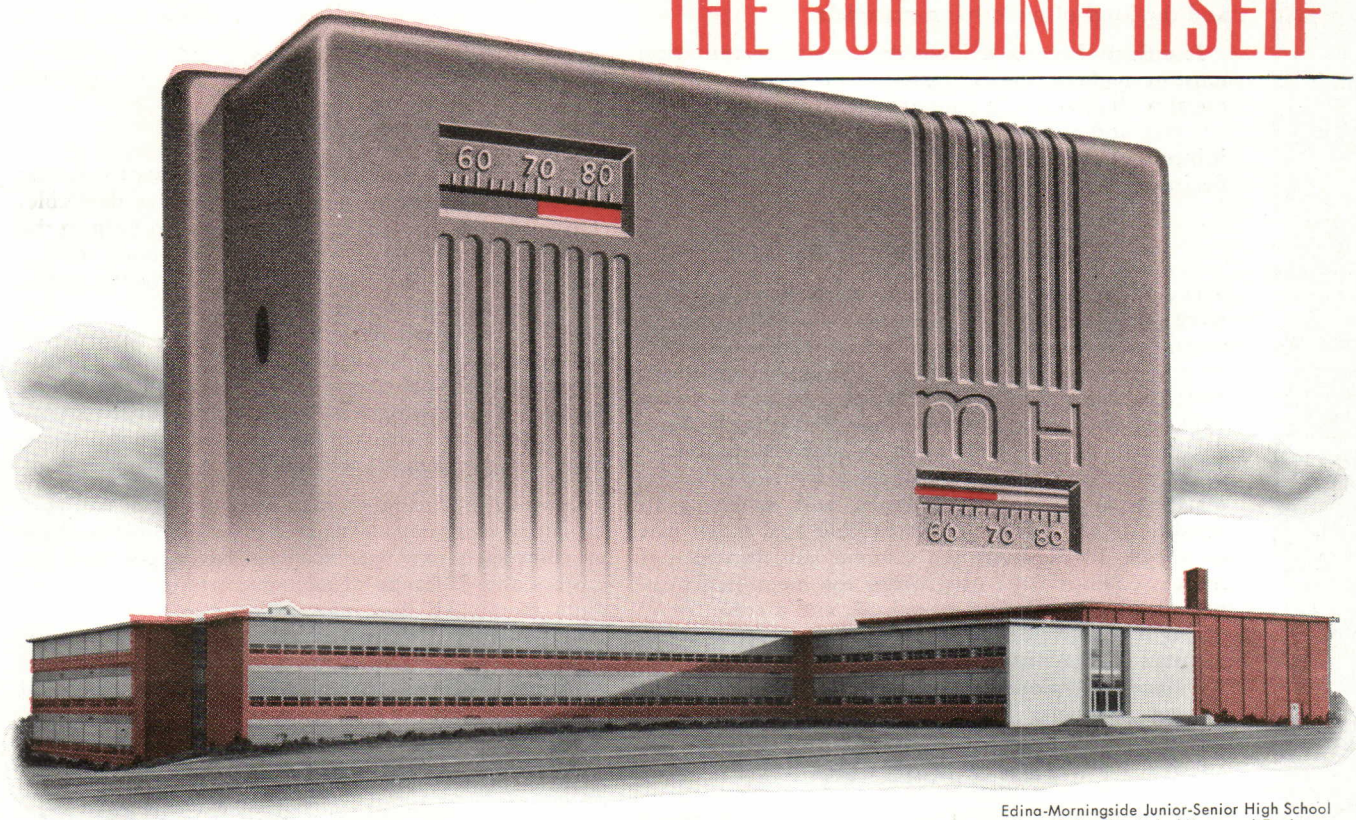

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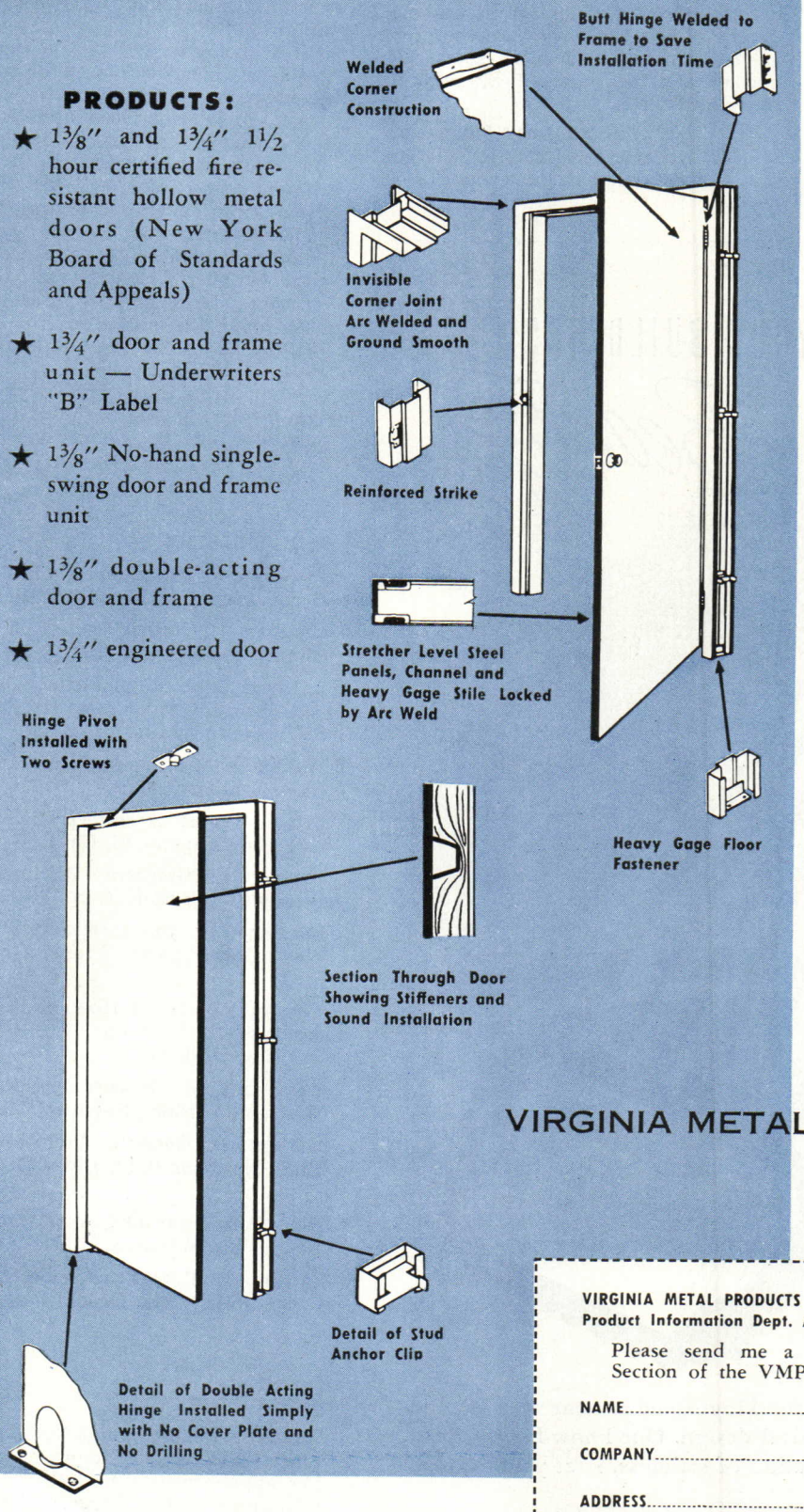

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p/a VIEWS

(Continued from page 10)

INTEREST STIRRED

Dear Editor: Please accept our compliments on your current January issue and its feature "U.S. Architecture 1900-1950."

This has stirred up such interest here, for both current and future reference use, as to make inadequate the single copy of the publication that we normally receive. Therefore, I am wondering if you could send another copy of the January 1950 issue, specifically marked for the personal attention of the undersigned.

G. Ross Henninger
Director of Public Relations
Illuminating Engineering Society
New York, N. Y.

NOTICES

HALF-CENTURY REVIEW

The selection of congratulatory letters in VIEWS indicates the number of "hits" made in "U.S. Architecture 1900-1950" in January 1950 **P/A**. But, sad to report, we must chalk up two errors as well.

Our apologies to *Eliel Saarinen*, who graciously assisted us in obtaining a photograph of Christ Church, Cranbrook, Mich., by Goodhue Associates, but obviously was not the architect, as stated on page 76; and to *Henry H. Saylor*, editor of the *Journal of the A.I.A.*, who called our attention to the omission from the list of "American Architectural Periodicals Since 1900," accompanying Eugene Raskin's article on page 11, of *The Architectural Review* published in Boston from 1891 to 1910 by Bates & Guild and edited from 1904 to 1906 by Saylor.

We regret these errors and trust that readers saving the issue for reference will note the corrections.

NEW ADDRESSES

Pilafian & Montana, Architects, 153 E. Elizabeth St., Detroit 1, Mich.

Charles H. Bauer, Jr., Architect, 31 Clinton St., Newark 2, N. J.

Alexander & Rothschild, Designers and Architect Associates, 316 Peachtree St., Atlanta 3, Ga.

Walter Kuetzing, Architect, Stapleton Bldg., Billings, Mont.

Ulrich Plaut, Architect, 7213 Melrose Ave., Los Angeles 46, Calif.

Joseph J. Geigand, Architect, 23 Orange St., Buffalo 4, N. Y.

Beacham & Beacham, Architects, West Plaza, Lewis Plaza, Greenville S. C.

Francis Keally & Howard S. Patterson Associated Architects, 17 E. 49t St., New York 17, N.Y.

Frederick E. Wigen, Architect, 50 Weichmann Bldg., Saginaw, Mich.

Eugene D. Corwin, Architect, E-81 First National Bank Bldg., St. Paul Minn.

Robert H. Salisbury, Architect, 213 V Wesley St., Wheaton, Ill.

Thomas J. Russell, Architect, 533 Ocean Blvd., Long Beach, Calif.

APPOINTMENT

The School of Design at North Caroli State College has announced the follo ing appointments: H. Th. Wijdevei visiting professor of architecture; Ma uel Bromberg, associate professor design; and Walter Weissman a Lee F. Hodgden, instructors in arc tecture.

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MENGEL *Solid-Core Flush Doors Expand* INTERNALLY— *But* NOT EXTERNALLY!

Mengel Solid-Core Flush Doors represent a radically new *Standard of Stability.* Their unique construction does not undertake the impossible job of *preventing* expansion and contraction caused by changes in humidity — it *controls* these forces to an extent hitherto unknown.

All Mengel solid hardwood core members are deeply slotted at frequent intervals both with and across the grain. *These slots effectively absorb expansion and contraction.* Thus the solid wood *between* the slots can expand and contract as the weather changes, without in any way affecting the stability of the door itself! Futhermore, Mengel's exclusive key-lock dovetails and waterproof hot-press phenolic bonding keep the entire assembly *permanently* tight. . . .

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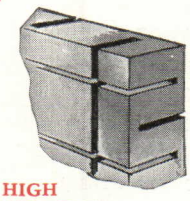
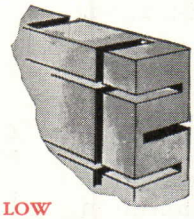


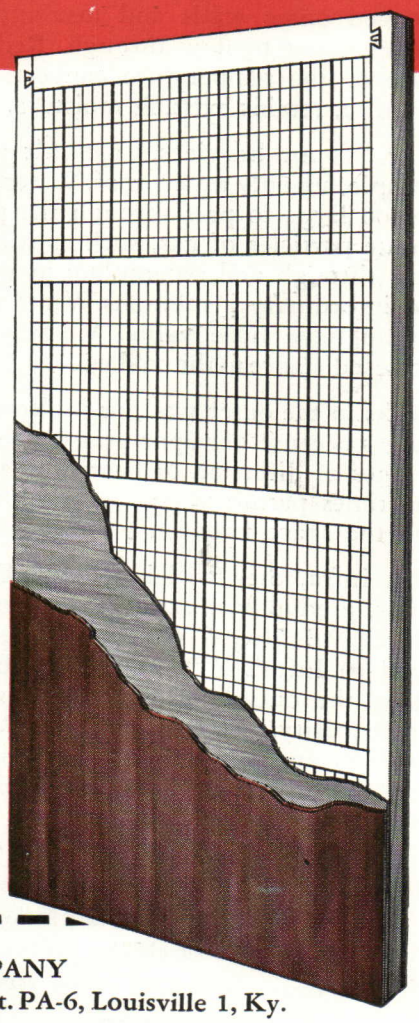
HIGH HUMIDITY

Wood expands under humidity, but expansion is absorbed by deep slots cut both with and across the grain. Note how the expansion of the solid wood has closed the slots.



LOW HUMIDITY

Dry atmosphere has shrunk the solid wood between the slots, thereby increasing the width of the slots, without changing the dimensions of the door itself.



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HEAT FLOW thru space of NON-INSULATED WALL: Conduction 5% to 7%; Convection 15% to 28%; Radiation 65% to 80%.

Use an insulation which has zero permeability to vapor, is non-condensation forming, can retain no moisture, and will force out fortuitous vapor

To force out vapor, permeability of insulations should be AT MOST 1/5th that of outer walls. Otherwise, trapped inside walls, moisture REDUCES insulation values; and DAMAGES wood, plaster and paint.

Water vapor at 32°F has a volume 205,625 that of water. To prevent condensation, and allow for evaporation, a large space is needed between outer walls and insulations which permit vapor to flow through. Reducing the space or the temperature converts vapor to moisture, retains existing moisture.

Most "vapor barriers," asphalt paper for example, are only waterproof. Water molecules are too large to pass through the pores. But minute particles of gas, such as water vapor, sieve through and accumulate in wall spaces and in ordinary insulations. Vents at top and bottom have little value. Vapor travels the shortest distance to the cold wall and condenses.

Breaks in the outer wall, or infiltration under flanges because of vapor pressure, or seasonal changes of direction of heat flow and vapor, sometimes permit vapor or moisture to leak into the space between wall and insulation.

With Infra, they will be PUSHED OUT as vapor, gradually, through the outer walls by PRESSURE FROM WITHIN; because compared to Infra's ZERO PERMEABILITY to vapor, the outside walls have a substantial permeability. Infra Multiple Aluminum Accordion Insulation is also non-condensation-forming, and can retain no moisture.

THERMAL FACTORS, INFRA TYPE 4

Down Heat C .064 equals 5" Dry Rockwool
Up Heat C .109 equals 3" Dry Rockwool
Wall Heat C .105 equals 3 1/7" Dry Rockwool

Vapor Permeability equals ZERO

The cost of Infra Type 4 installed between wood joists, material and labor, should be under 8¢ sq. ft. in new construction.

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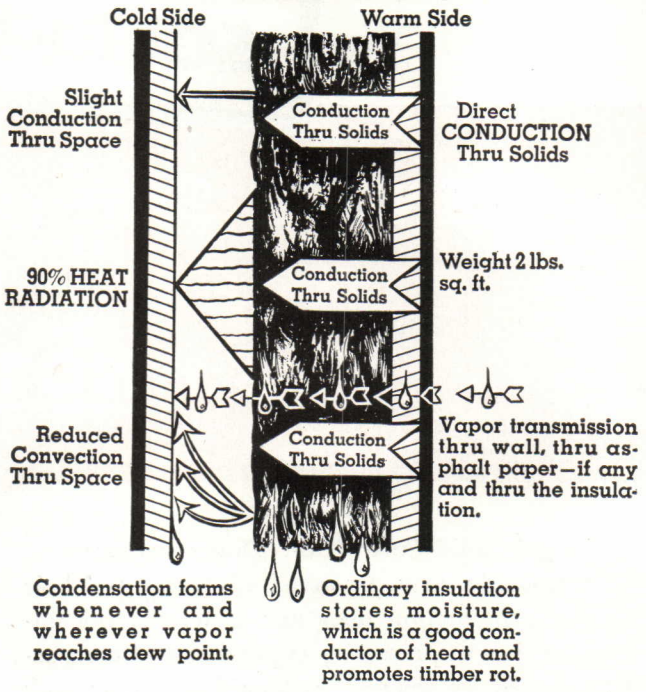
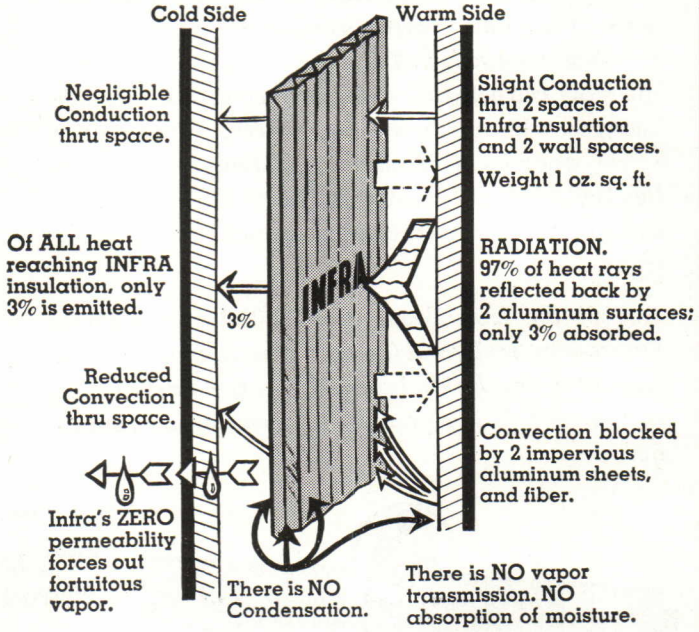


HEAT & VAPOR FLOW THRU WALL SPACE
WITH TYPE 4 INFRA INSULATION



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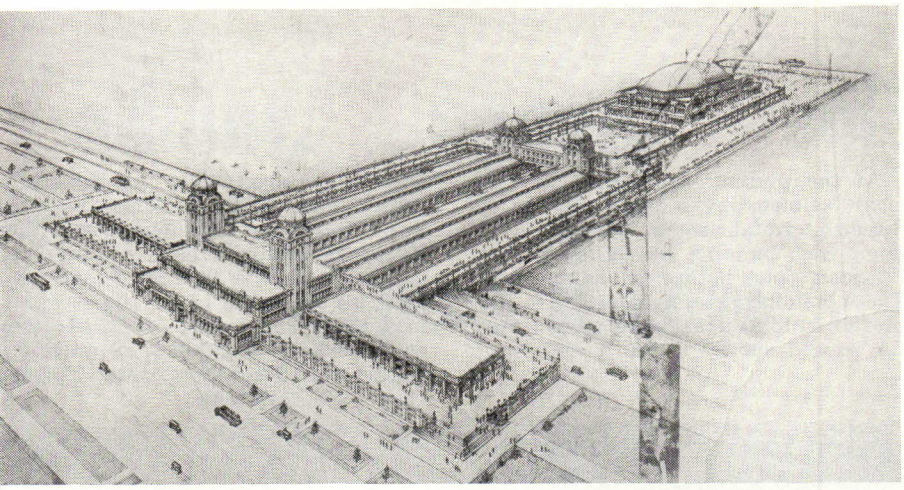

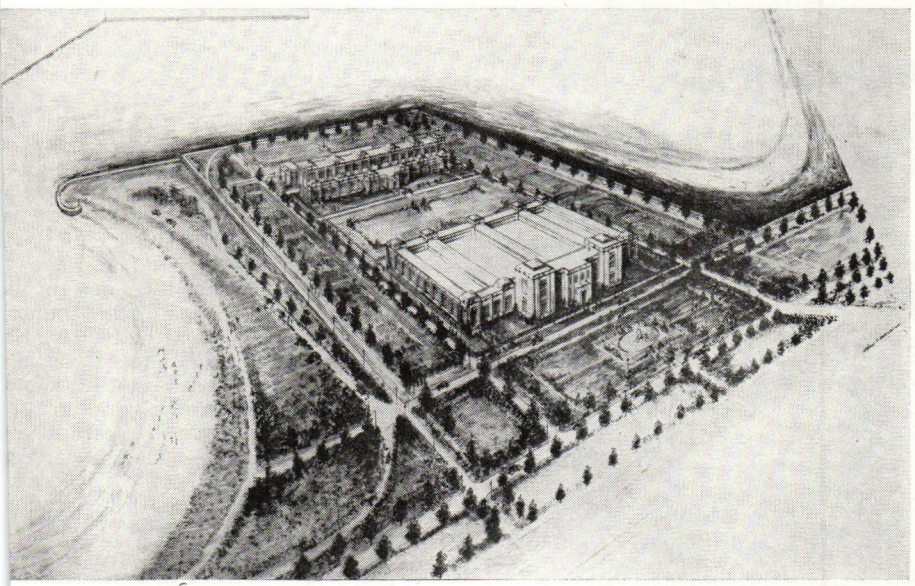

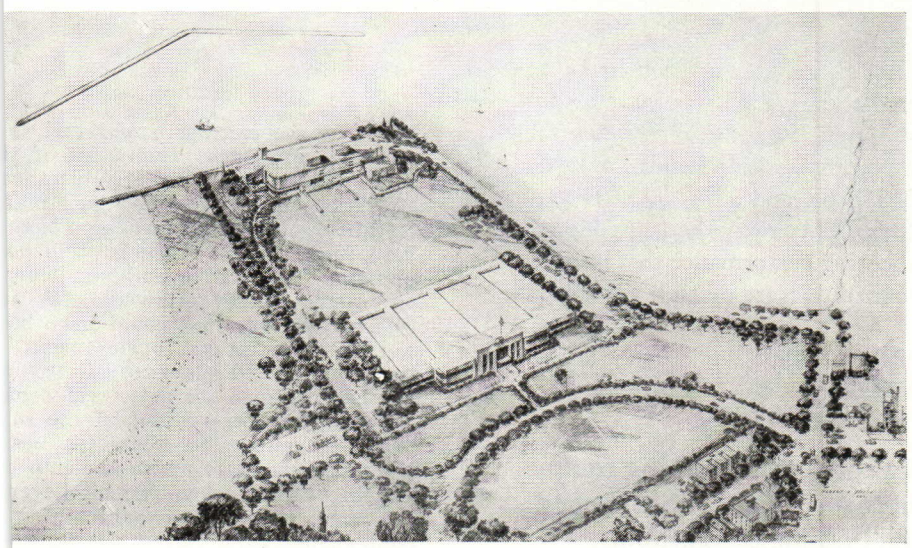

ccessive schemes advanced for Chicago's filtration plant on the shore of Lake Michigan over
e past quarter century offer a pertinent index to lifting of architectural and engineering stand-
ls since the early 20's. When the earliest design shown here (top) was proposed in 1925, the
efront site apparently reminded officials of the World's Fair of 1893 so it was decided to dis-
se the plant as a public recreation pavilion on a grand scale. At the beginning of the Depression
nuch less complicated venture was considered (center) but by 1937 the PWA Federal Style was
ored (bottom). The war years again delayed construction and the final design (see pages
to 84) was not completed until 1948. *Prints: Chicago Department of Public Works*

Building The New Israel

By HARRY P. PORTNOY

Sassa, Israel—During the past year I've been able to observe some of the efforts the infant State of Israel has been making in the fields of housing, government and institutional building, commercial construction, road development, etc. It's no mean task for a country to rebuild war-devastated villages, parts of cities, and farming settlements; with the problems and exigencies increased a hundred-fold, when it means as well the provision of housing, temporary and permanent, for tens of thousands of new arrivals. Admittedly the situation here has its parallel in many European countries, their scope being ever so much larger and more acute in nature. We find that reconstruction in Israel is no isolated occurrence in the world of today—but is needed everywhere. However, it does offer some unique opportunities for observation and study, as well as the fascination that any great building process can offer to those in the related fields, as well as to the general public.

All that has gone before here has been under the supervision and guidance of the British Mandatory Government, so the standards, the techniques, and the methods are mostly British—borrowed and reapplied to the specific climate, and to the geographical, topographical, and cultural needs of the country. (I speak now, on the whole, with reference to architecture and building as executed in the Jewish portions of the country. The architectural achievement within the Arab section of the country is another matter and necessitates a separate discussion.) Of course it must be remembered that the continental architecture of Germany, Austria, France, and the Low Countries has had its influence here as well, through the men who came here in the 30's and 40's from those countries. In the final analysis, the real architecture of this country, as of any country, will be created through the efforts of the nativeborn generations of architects to come.

●

The need of the hour is housing—any sort of housing—for during this winter alone 100,000 new immigrants will be forced to live in immigrants' camps, with a large number living in tents. This figure is proportionately magnified when one realizes that we speak here only in terms of one million of population. So we find small wooden houses, square monotonous block houses and the like (very poorly designed and very minimum) going up all over the country. This is temporary housing, necessitated by expediency, by pressing need. However, from another point of view, from the vantage point of long-range architectural achievement, this can depress standards for many years hence.

(Continued on page 16)

(Continued from page 16)

nificent vista of Haifa Bay and the Mediterranean Sea. This city has the Government Hospital (presented in November 1946 P/A); the new Alisha Hospital, open to the sea and the hills; the new Federation of Labor Building, with its curving façade of concrete and glass, somewhat reminiscent of Mendelsohn's Schocken stores in Germany, although much more daring in design; and many good examples of homes and apartment houses. The city is somewhat confused and crowded, but the new planning commission is hard at work on plans for its development and expansion up to the Camel Range.

●

By far the best buildings have been those *not* executed for low-cost or mass housing needs, but for private interests and individuals. But the future of the country is in its people, the masses of its people, its collective settlements, and its farming communities. Here is where architectural planning and achievement can be greatest.

During the last few years a great deal of effort has gone toward making these planned communities efficient and esthetically pleasing, as well as economically self-sufficient and stable. With the hundreds of new settlements and rural communities have come some new plans—for the particular sites, needs and demands. However, money and perhaps initiative, have been limited and also limiting factors. Too often duplication, repetition, and monotony of design have again resulted.

The greatest lack, as I see it, has been in the creation of esthetic, functional, well-designed homes and cultural structures for these communities. But there are some worthy buildings: the Communal Dining and Cultural Hall at Maaharat, the Neufeld Central High School at Mishmar Haemek, the Mendelsohn trade school at Yagur, the small cultural Hall and reading room at Shaar Hogolan (to mention a few). Of course in any listing of the noteworthy buildings, we can mention the Hadassah Hospital and Medical School in Jerusalem, the buildings of the Hebrew University, the Jewish Agency building in Jerusalem, the plans for the new hospital at Petach-Tiqua, the Dr. Weizman home at Rehovoth, the Schocken Library and Home in Jerusalem (both by Mendelsohn), the Jeshnon Synagogue in Jerusalem, the new community at Tivon, and some of the Rassco development apartment houses. Certainly, there are other buildings that can be considered as worthy exponents of good modern architecture, but space is lacking to mention all of them.

Architecture here in Israel, despite the antiquity of the land, is in its infancy. The needs of the country are great, and the expression in this field can be just as great. Inspiration is present in the building of a new country; materials are scarce but they can eventually be available in relative abundance, and skilled labor can be trained and developed. It will be the task of the new architects to create an inherently original expressive and organic architecture. The future decades can be fruitful in this; and the achievement can be their reward.

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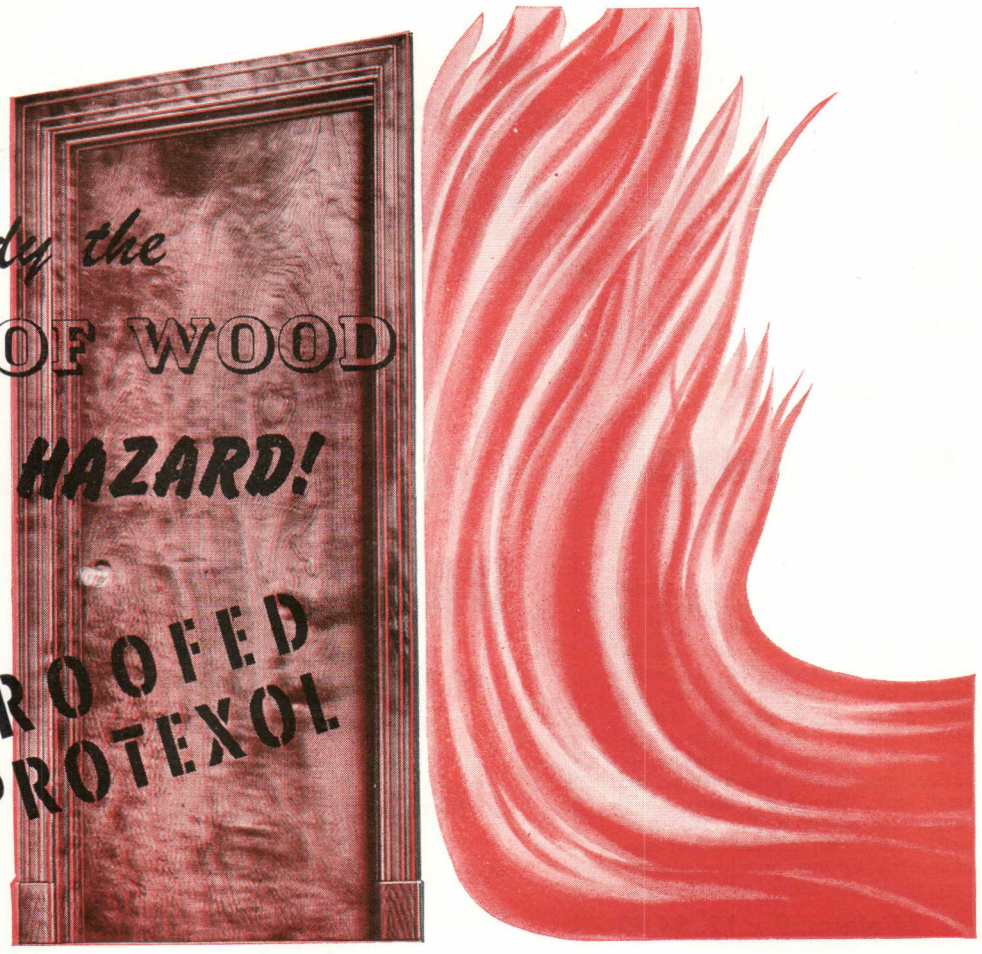

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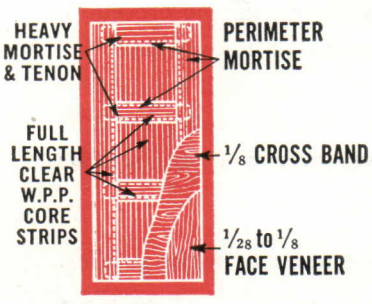

Sectional view of the Protexol-impregnated Fox-Made Wood Fire Door, approved for 60 and 90-minute fire exposures by the New York Board of Standards and Appeals, and Factory Mutual Laboratories.

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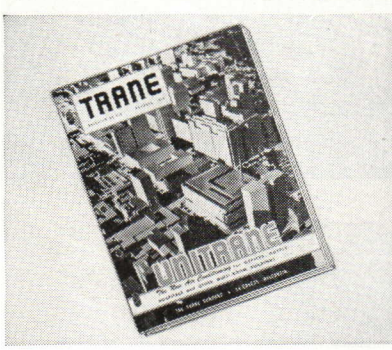
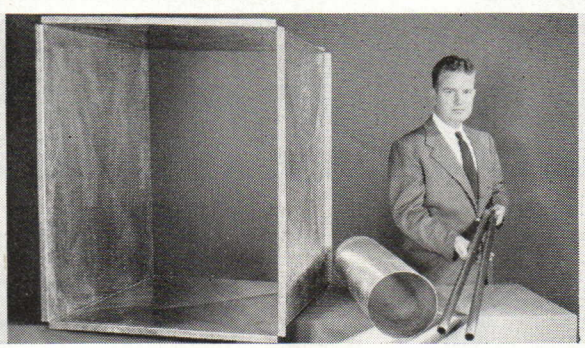
Center: Going, going, gone—from big ducts to small ducts to no ducts at all—UniTrane requires only simple water-type piping such as that being held in the illustration below. *Left:* Data bulletin DS-420 is for architects and engineers. *Right:* "Merely A Matter of Air" is an interesting non-technical discussion of multiroom air conditioning.





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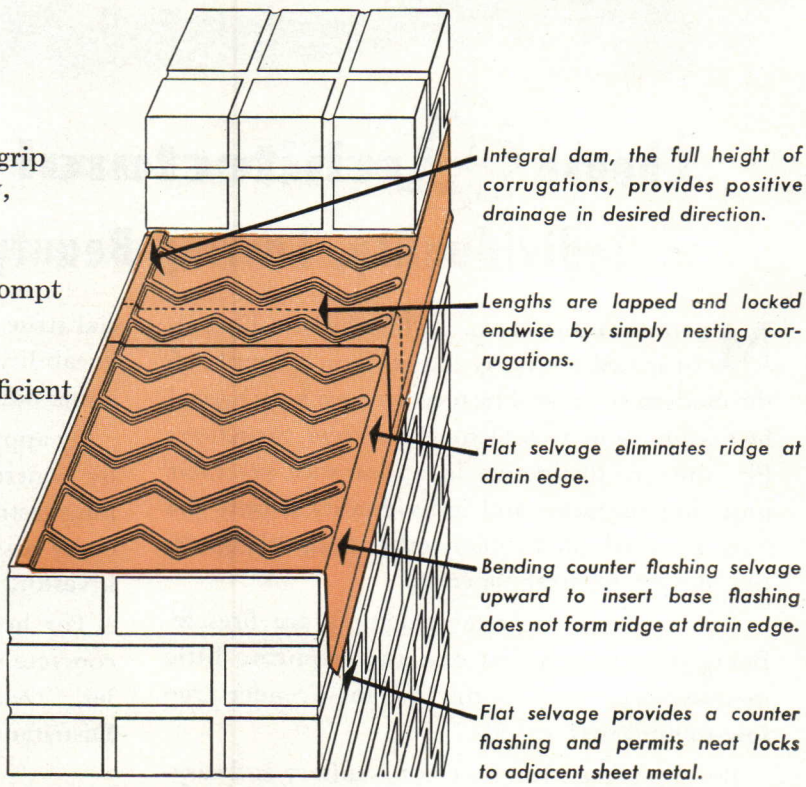

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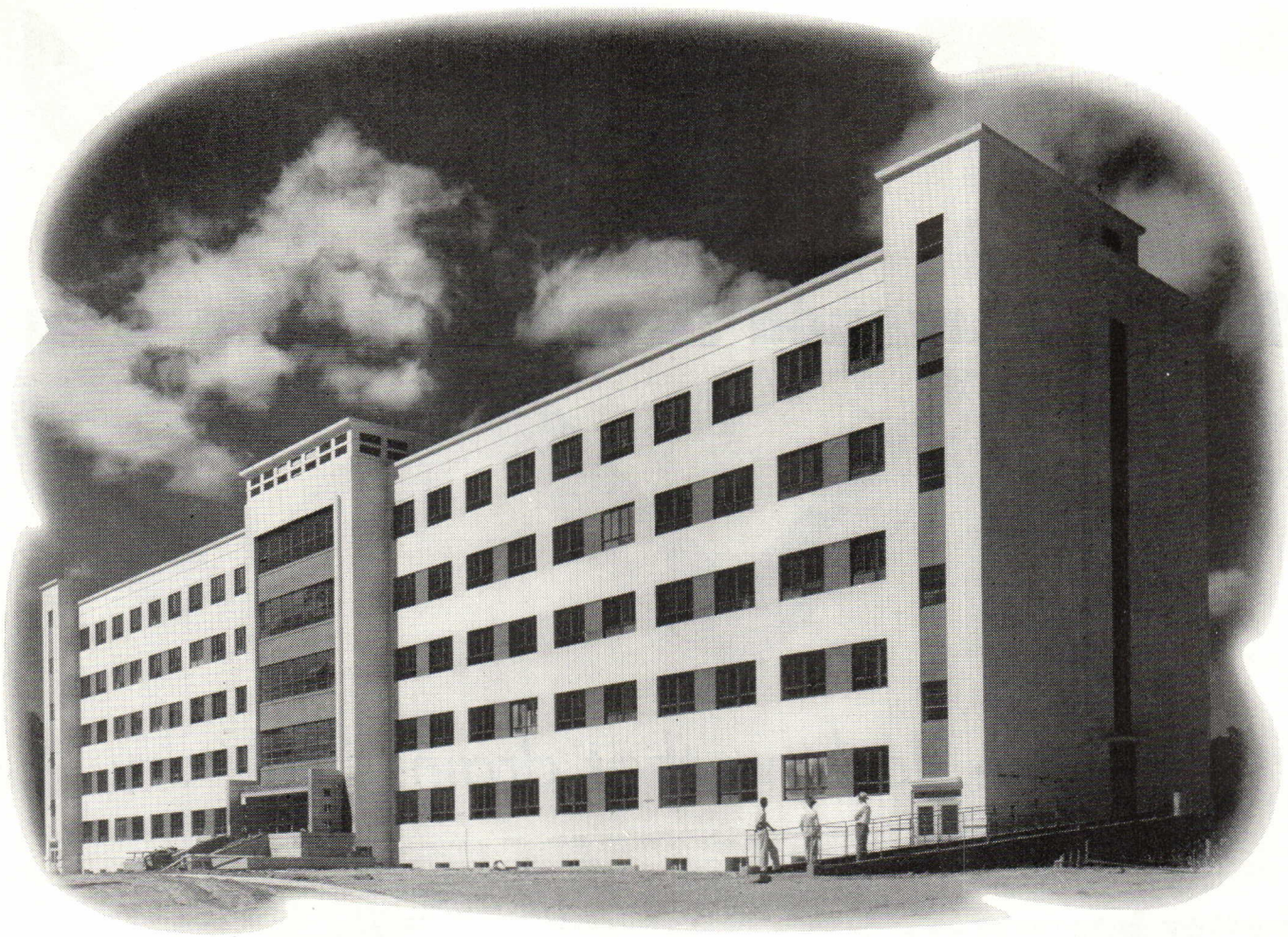

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Municipal Hospital, Tallahassee, Fla., is a five-story, 150-bed structure, 48 x 284 ft. in size. Yonge & Hart, architects and engineers; Southern Builders, Inc., contractor.

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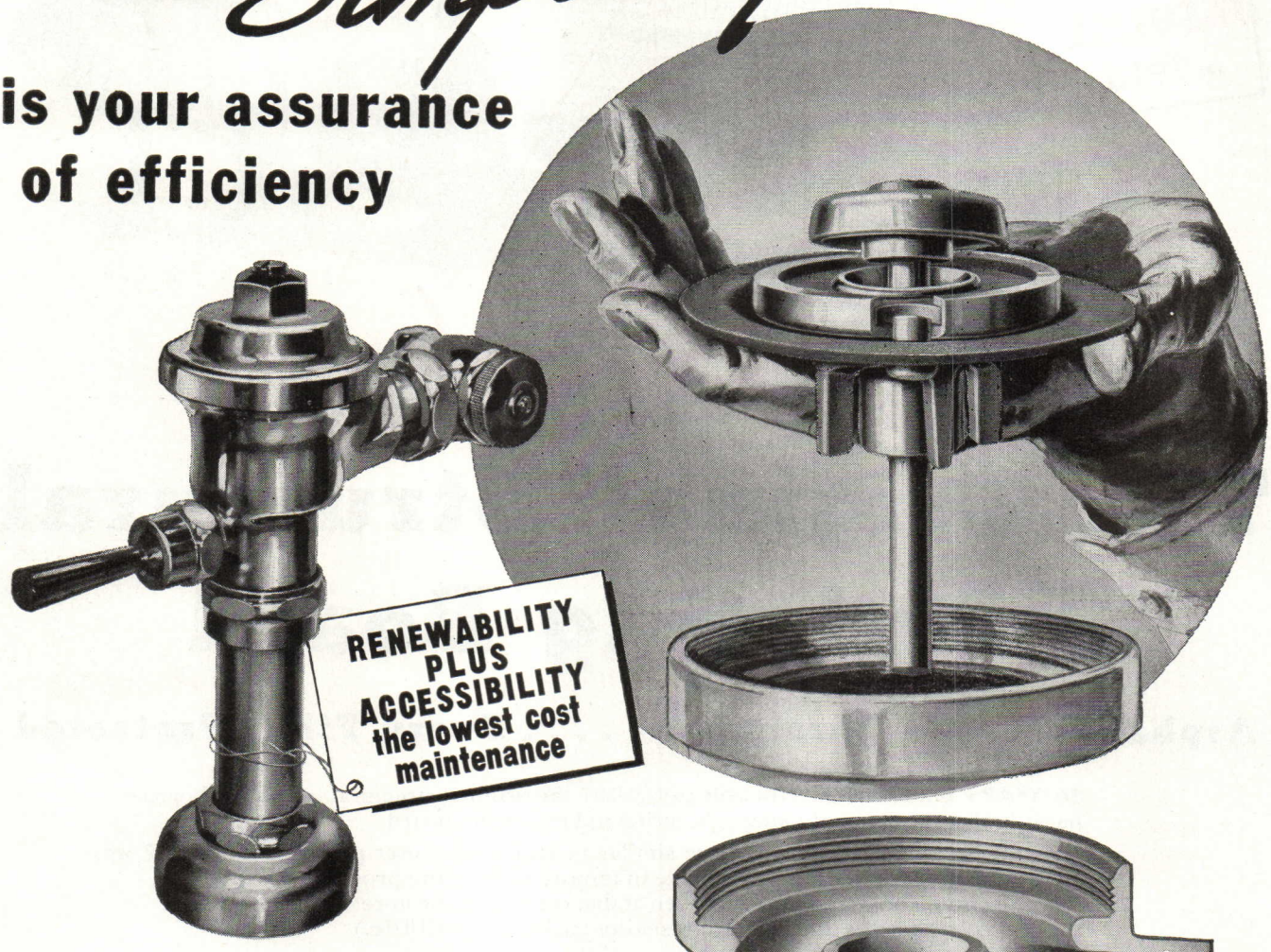

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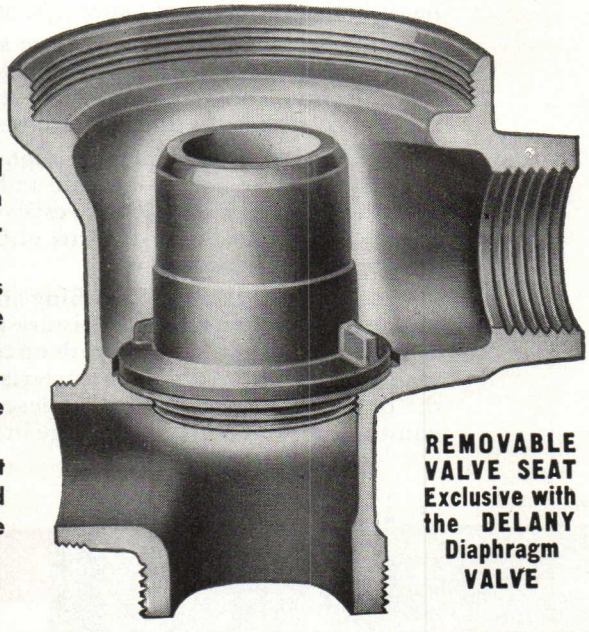

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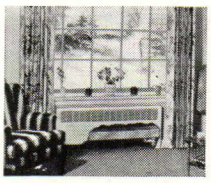

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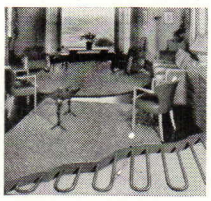
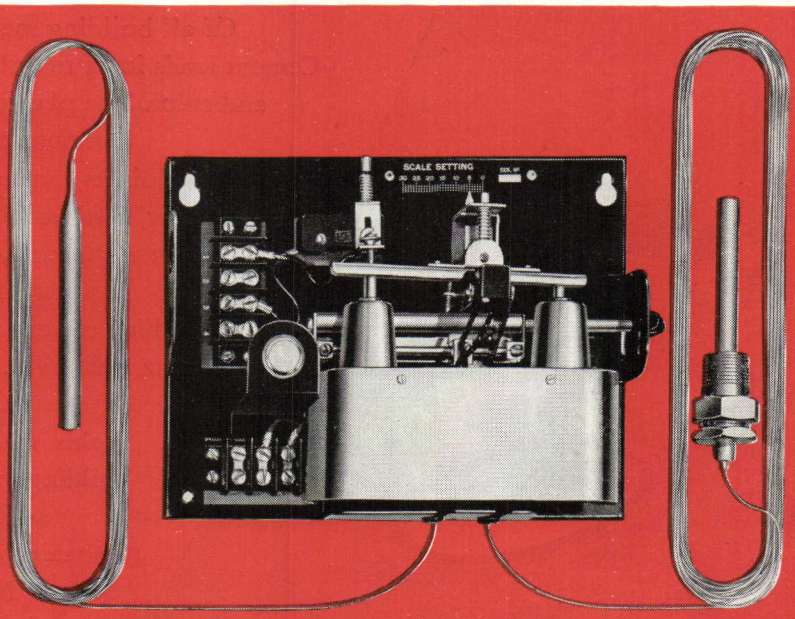


Panel Heating

Baseboard Heating



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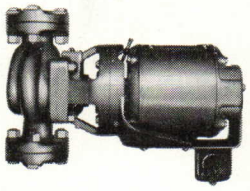

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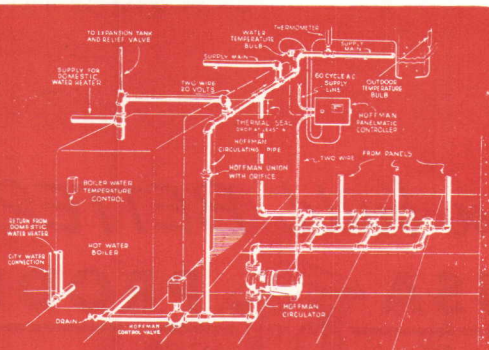

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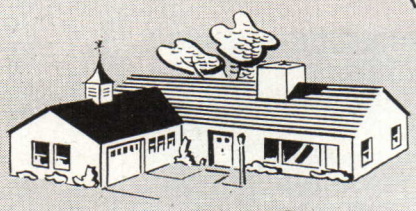

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Truscon Residential Steel Interior Doors and Frames are attractive in design. Handsomely modern in appearance. Precision engineered and manufactured, these doors assure smooth, quiet and trouble-free operation. Outstanding economy of labor and material for installation is a major feature. Steel construction protects against warping, shrinking or sagging during the life of the structure. Efficiency of space and operating convenience are special advantages of the sliding closet doors. Truscon Residential Interior Doors are steel...are strong...are sensible.
Write for the new Residential door catalogue giving complete range of sizes and full details.

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

TRUSCON STEEL COMPANY
Subsidiary of Republic Steel Corporation
YOUNGSTOWN 1, OHIO
Warehouses and sales offices in principal cities

Your "public" wants COLOR

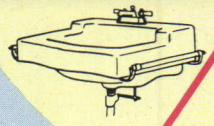
BRIGGS *Beautyware*

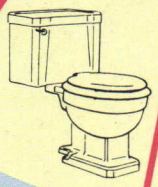
gives them COLOR at the lowest price in history!

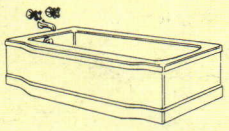
Briggs four exclusive decorator colors, plus white, now available in both porcelain enamel steel and vitreous china.

Briggs Manufacturing Company · 3001 Miller Ave., Detroit 11, Mich.

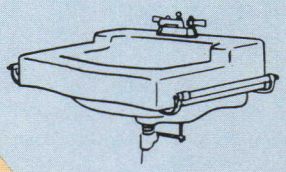
For the first time . . . customers can get the colored fixtures they *want* . . . at a price they can *afford* to pay. Briggs makes it possible! Offers first-quality fixtures in color for *only* 10% more★ than the same stainproof, lightweight, precision-made fixtures in white. Start featuring Briggs Beautyware colored plumbing fixtures, today . . . and you can figure on *quicker* sales, *bigger* sales every day of the selling year!

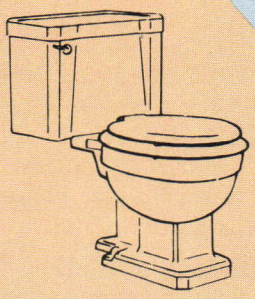


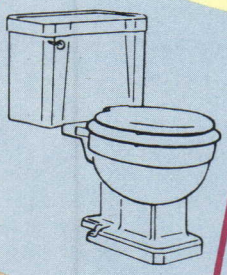


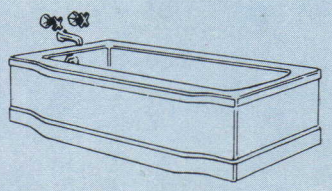


IVORY

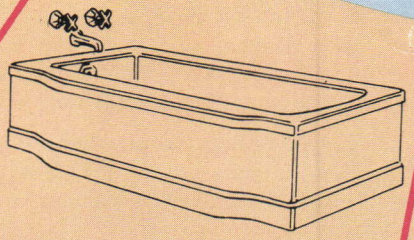


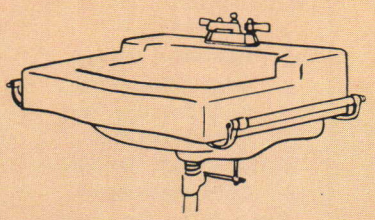




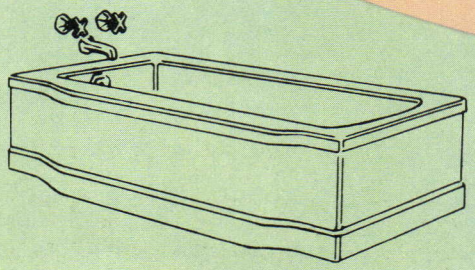


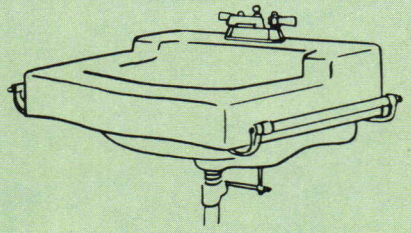
SKY BLUE





SANDSTONE





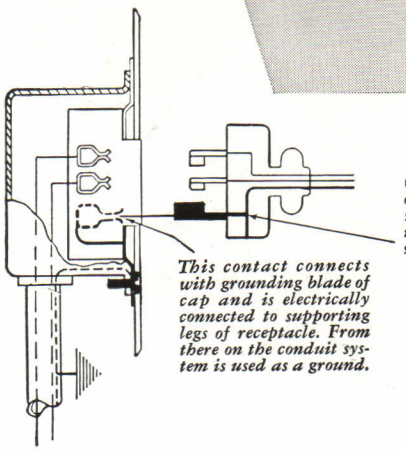
SEA GREEN

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

IN HOME WIRING, TOO... SAFETY BEGINS WITH A GROUNDED RACEWAY

ELECTRUNITE E.M.T.

Gives FULL Protection from SERVICE ENTRANCE to APPLIANCE



This contact connects with grounding blade of cap and is electrically connected to supporting legs of receptacle. From there on the conduit system is used as a ground.

Grounding wire connected to outer steel casing through shunt . . . The wire itself is fastened under a bind screw in grounding terminal.

With a grounded raceway of ELECTRUNITE E.M.T. there's no danger of stray currents running amuck in residential wiring installations. Not only does ELECTRUNITE E.M.T. provide safe, fireproof wiring protection . . . its rigid steel walls furnish a positive ground all the way from the service entrance to the outlet.

Today, with more and more residential wiring installations featuring a variety of motor-driven appliances, the importance of the "extra" grounding circuit cannot be over-emphasized. By specifying grounded raceways of ELECTRUNITE E.M.T. and appropriate receptacles, you assure your clients this vitally-needed protection without excessive cost.

For complete information about modern ELECTRUNITE E.M.T. and its easy-to-install advantages which keep wiring installation moving "on-time", write, wire or phone *today.*

SEE SWEET'S FILE
or write us for detailed information on these Republic Steel Building Products:

Pipe—Sheets—Roofing
Enduro Stainless Steel
Toncan Enameling Iron
Electrunite E.M.T.
Fretz-Moon Rigid Steel Conduit
Taylor Roofing Ternes
Berger Lockers, Bins, Shelving
Berger Cabinets for Kitchens
Truscon Steel Windows, Doors, Joists and other Building Products.

REPUBLIC STEEL CORPORATION
STEEL AND TUBES DIVISION • CLEVELAND 8, OHIO
Export Department: Chrysler Building, New York 17, New York

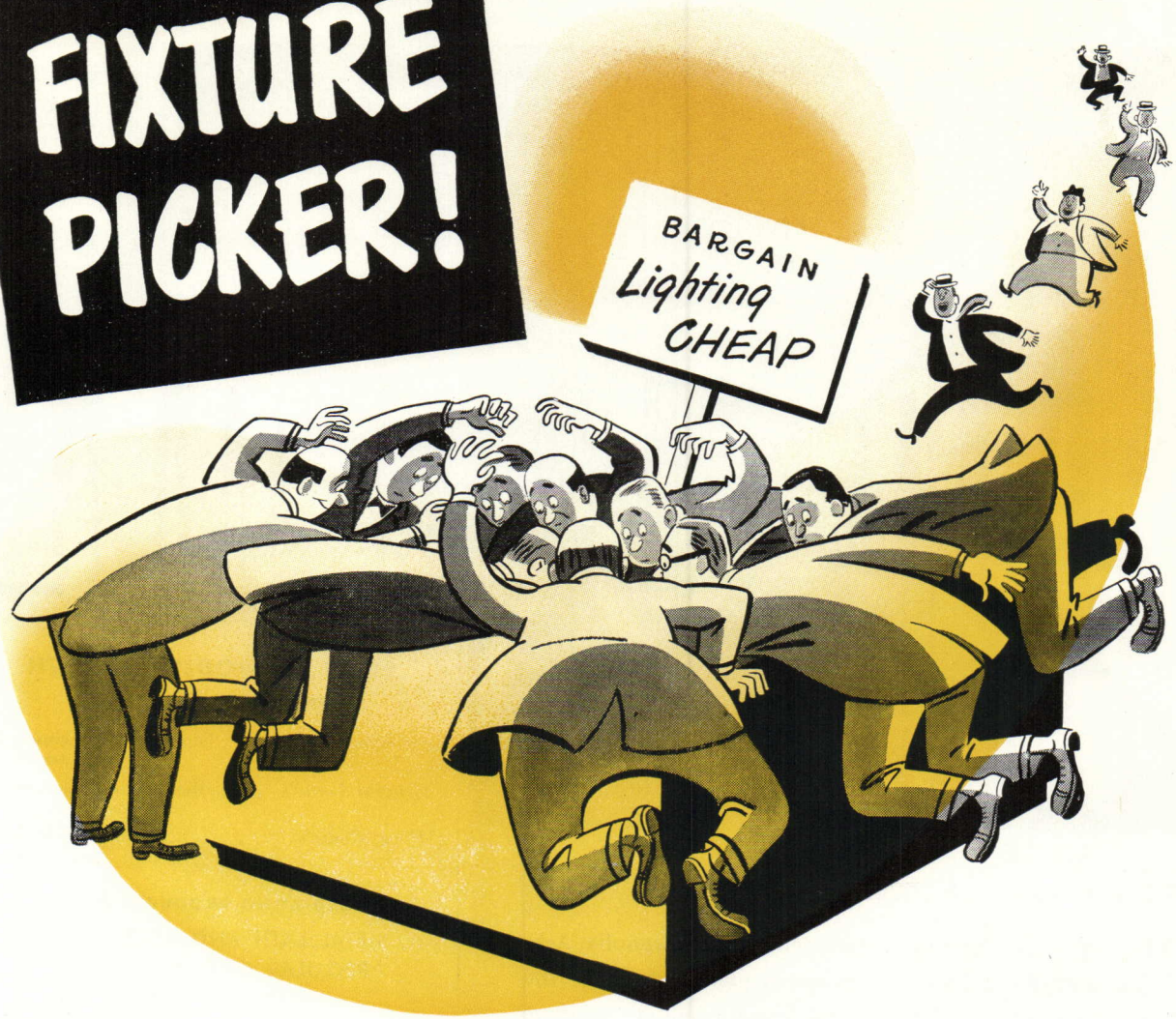
Republic
REPUBLIC STEEL
ELECTRUNITE® E.M.T.

LIGHTWEIGHT THREADLESS RIGID STEEL RACEWAY

YOU CAN BE **SURE**.. IF IT'S

Westinghouse

Don't be a FIXTURE PICKER!



They'll never find a "bargain in lighting" by "picking fixtures". Yet you meet hundreds like this every day. And so do we.

No *one* fixture will solve all lighting problems.

There are, in fact, literally thousands of luminaires engineered to do specific jobs. One may be the right answer—or it may take two or three.

Good lighting combined with practical economics takes the services of a qualified lighting engineer.

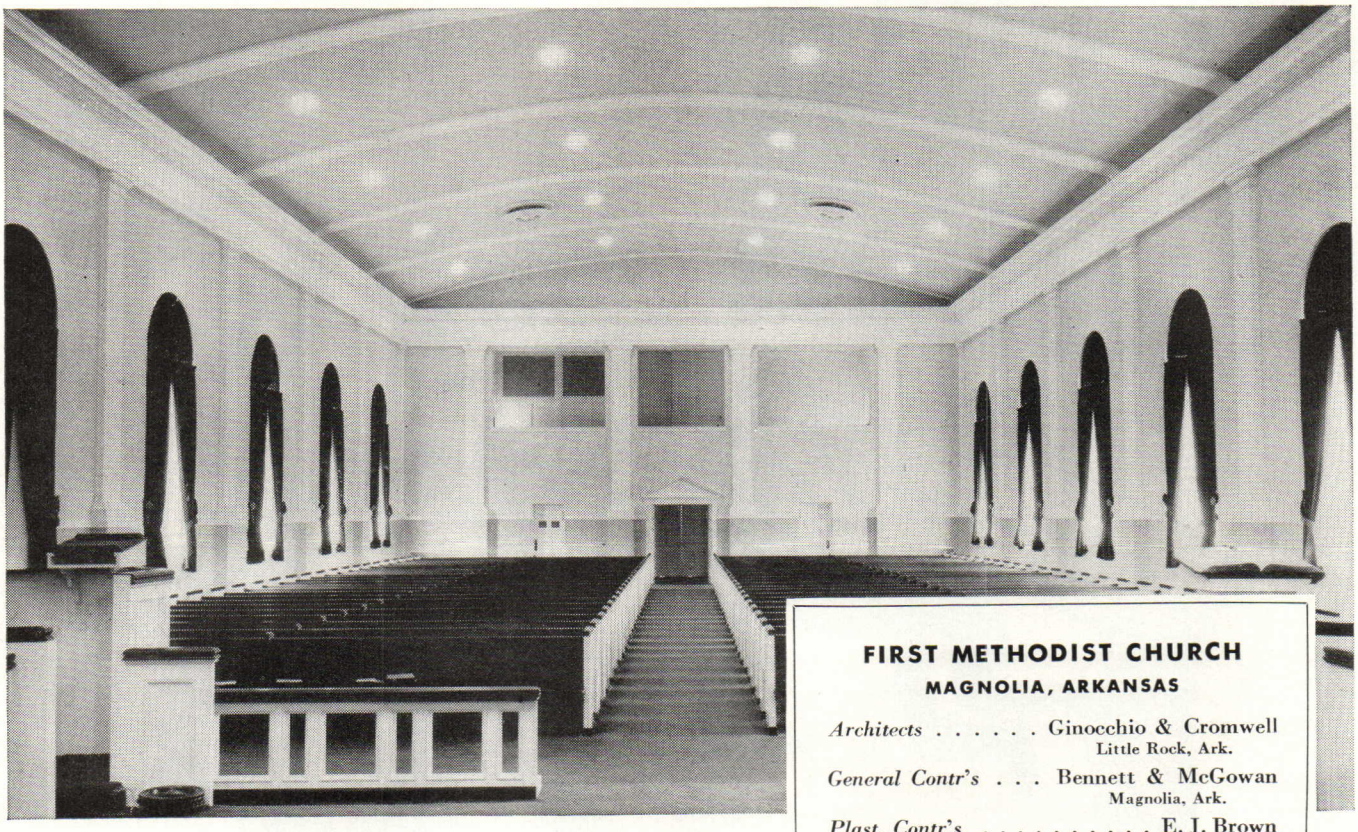
Whether you plan lighting, buy lighting or install lighting, the services of a Westinghouse lighting engineer are available to you. J-04280

WESTINGHOUSE

Westinghouse

PLANNED LIGHTING PAYS

See How Gold Bond Products Work Together For You!



FIRST METHODIST CHURCH
MAGNOLIA, ARKANSAS

Architects . . . . . Ginocchio & Cromwell
Little Rock, Ark.

General Contr's . . . Bennett & McGowan
Magnolia, Ark.

Plast. Contr's . . . . . E. J. Brown
Magnolia, Ark.

GOLD BOND PRODUCTS USED:

METAL LATH AND ACCESSORIES
REGULAR GYPSUM PLASTER
MOULDING PLASTER
GAUGING PLASTER
FINISH LIME
ACOUSTICAL PLASTER

TAKE a good look at this fine new church in Magnolia, Ark. It's a beautiful job and everyone is pleased because the very best products available—Gold Bond products, *made to work together*—were used from start to finish.

Notice particularly that Gold Bond Acoustical Plaster was used on walls and ceilings to insure perfect audibility. On your next job where sound control is an important factor, remember Gold Bond Acoustical Plaster. It is adaptable to smooth or curved surfaces and is applied by regular plasterers. Adds comparatively little to the overall cost.

Next time specify Gold Bond right down the line. You'll have a long-lasting job that will be sure to please any client!

You'll build or remodel better with Gold Bond

NATIONAL GYPSUM COMPANY, BUFFALO 2, NEW YORK

Fireproof wallboards, decorative insulation boards, lath, plaster, lime, sheathing, wall paint, rock wool insulation, metal lath and sound control products.

HAUSERMAN MOVABLE STEEL INTERIORS

Designed for...

SALES *and* SERVICE

MODERN MERCHANDISING calls for pleasant, efficient surroundings in sales and service departments. And like the Arrowhead Oldsmobile Company in Chicago, many businesses are meeting this requisite with Hauserman *Movable* Steel Interiors.

Many styles and types of Hauserman Steel Interiors are available to meet sales and service department needs in businesses of every size. There are matching accessories for every specific requirement.

What's more, these handsome interiors can be quickly, easily moved, and all units can be re-used again and again without affecting their original beauty and efficiency.

Why not learn all the advantages and economies of Hauserman *Movable* Steel Interiors? You can get all the facts from the Hauserman office or representative nearby or by contacting *The E.F. Hauserman Co., 6795 Grant Ave., Cleveland 5, Ohio.* Or if you prefer, write for our fully illustrated, 60-page catalog.

Organized for Service Nationally Since 1913

HAUSERMAN
Movable Steel Interiors

Partitions • Wainscot
Railings • Acoustical Ceilings
Complete Accessories

NOW.. at little or no extra cost

You can include *All-Year*

TODAY, one of the features people desire most in a home is *All-Year* Air Conditioning. Nothing provides them with such ideal year-round comfort — refreshing, dehumidified coolness in the summertime and instant, even warmth in wintertime . . . at the flick of a simple switch. And by deciding to include the Servel *All-Year* Air Conditioner early in the planning stages, you can give clients this ultimate in comfort without increasing the total price.

Recent studies and cost estimates have indicated that the additional expense of *All-Year* Air Conditioning —over and above a conventional heating plant—can be offset by eliminating certain standard units in a house. For instance, a house designed for *All-Year* Air Conditioning needs no porch, no fireplace, and no attic fan. Outside doors and windows may be kept closed; in fact, in many cases the glass may be fixed, which permits the use of a simple wood frame. Thus screens are not needed. In most parts of the country, the total savings will balance the extra cost of the Air Conditioning. And clients feel it's a marvelous exchange. They're glad to learn that there is a way you can give them this perfect, all-year control over the climate of their home.

Consider besides that the Servel unit can be used in any type, style, size or shape of home your client wants. It's not confined to any one type of architecture. Ask your local Gas Company for all the details and feel free to write to Servel, Inc., 2004 Morton Ave., Evansville, Ind.

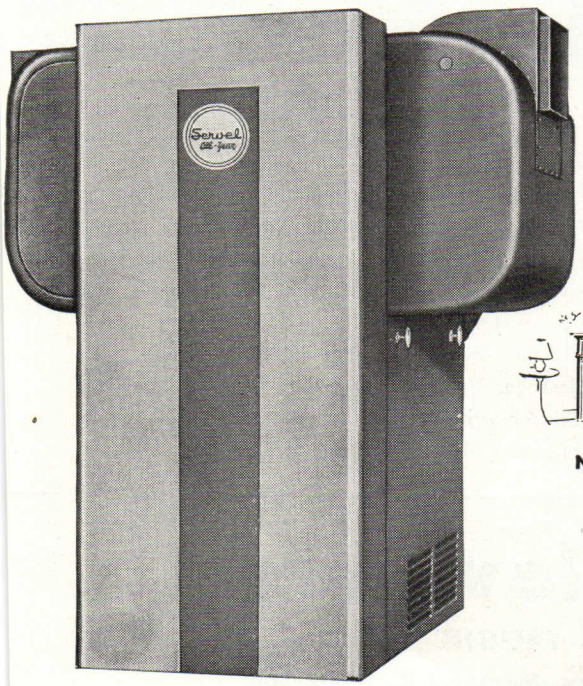
Servel

All-Year AIR CONDITIONER

Freedom Manor in Columbus, Ohio,
designed by Pettit, Oman, Meinhardt & Cleland

air conditioning in your plans

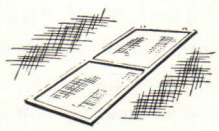
Offset its cost with these savings...



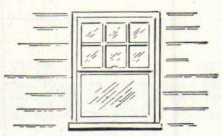
Once you decide to include Servel *All-Year* Air Conditioning, there are a number of conventional features that can be eliminated from a modern home that will balance the added expense of the Air Conditioning. And this exchange wins favor with clients because the things they forego have value only during parts of the year . . . while Servel provides them with perfect comfort the whole year round.

NO FIREPLACE

NO PORCH



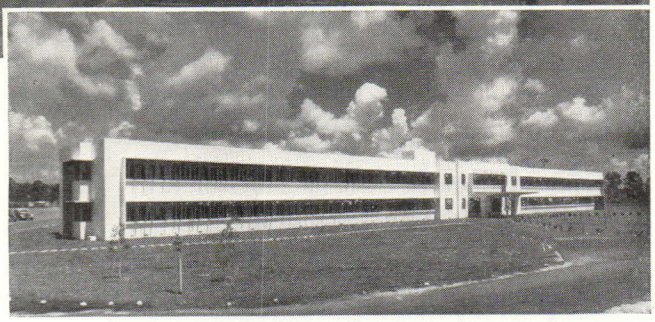
NO SCREENS



LOWER COST
WINDOW CONSTRUCTION

NO ATTIC FAN

Why Rotary Oildraulic Elevators were selected for new Doctors' Hospital at Coral Gables



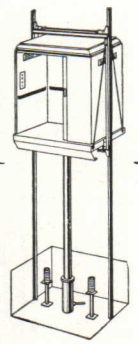
Architects: Stewart & Skinner
Contractors: Fred Howland, Inc.
Elevators installed by: Miami Elevator Co.

■ Quietness was an important consideration in the design of the new Doctors' Hospital in Coral Gables. Rotary Oildraulic Elevators were selected because the Rota-Flow hydraulic power unit eliminates the noise and vibration of ordinary hydraulic elevator pumps. The elevator car rises and descends on a pulsation-free column of oil which is "locked" whenever the car is stopped.

Smooth starting, smooth stopping and precise, automatic floor leveling are other essentials. Patients must be moved without jolt or shock. By means of a balanced-pressure hydraulic control system (Rota-Relief), Oildraulic Elevators operate with velvet smoothness. And Rotary guarantees automatic landings within ¼" of floor level, regardless of load size or rate of speed.

Low installation and operating costs, flexibility of design made possible by eliminating penthouse and heavy shaftway structures, and long life make Rotary Oildraulics the most practical of all elevators.

If a 2, 3 or 4-story building is among your projects for 1950, see our section in Sweet's File or write for Rotary catalog and list of recent installations.



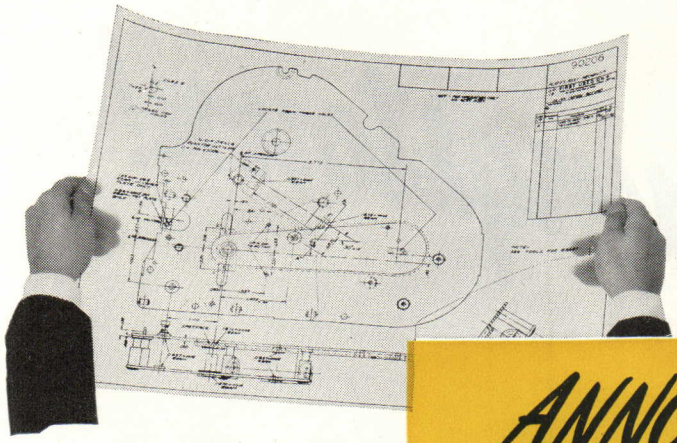
Rotary

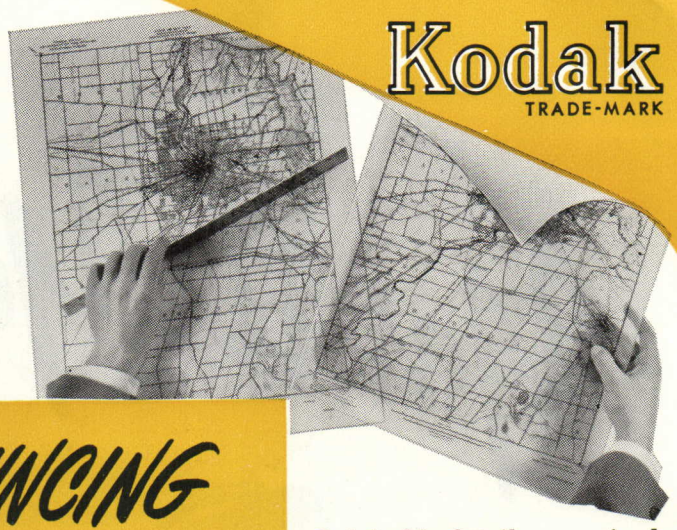
Oildraulic Elevators

PASSENGER AND FREIGHT

Rotary Lift Company, 1115 Kentucky, Memphis 2, Tennessee

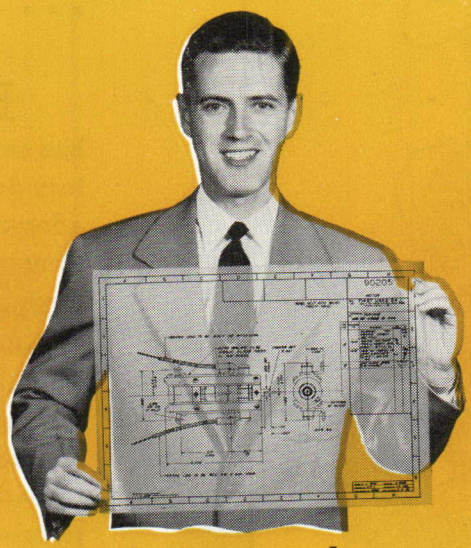
Kodak
TRADE-MARK





ANNOUNCING

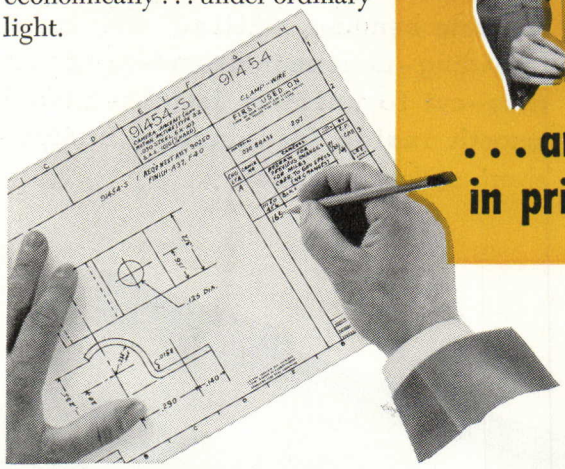
Kodagraph Autopositive Film



. . . and 4 new advantages in print production for you

1. It gives you faster printing intermediates. Now you can speed up quantity print production . . . save time and money . . . with new Kodagraph Autopositive Film! What's more, you, or your local blueprinter, can expose this amazing reproduction material in high-intensity blueprint or direct-process machines . . . or in a vacuum frame; develop it in standard photographic solutions. You get positive intermediates directly . . . and the job can be done quickly, economically . . . under ordinary light.

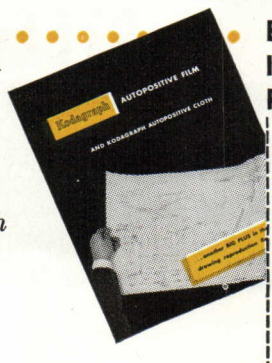
2. It holds detail—amazingly. Kodagraph Autopositive Film combines a high-contrast photographic emulsion and famous Kodak safety film base. It catches the finest line—keeps close lines from "filling in." Think what an aid this new intermediate material will be in producing print-making "masters" from difficult originals . . . how it can save you many thousands of dollars in redrafting costs—while assuring final prints of highest quality!



3. It simplifies revision, reference. Both sides of Kodagraph Autopositive Film are matte-surfaced . . . can be written on with pencil or pen. And since the base is highly translucent, details can be read from either side without use of an illuminator.

4. It even reproduces illustrations and text on opaque stock—giving you sharp, fast-printing "masters" which will produce sparkling direct-process prints. An economical short cut you'll appreciate in preparing data sheets, instruction manuals, and parts lists.

Mail coupon today for this free illustrated booklet giving all the facts on Kodagraph Autopositive Film—*the latest addition to the famous Kodagraph line of reproduction materials.*



EASTMAN KODAK COMPANY
INDUSTRIAL PHOTOGRAPHIC DIVISION
ROCHESTER 4, N. Y.

94

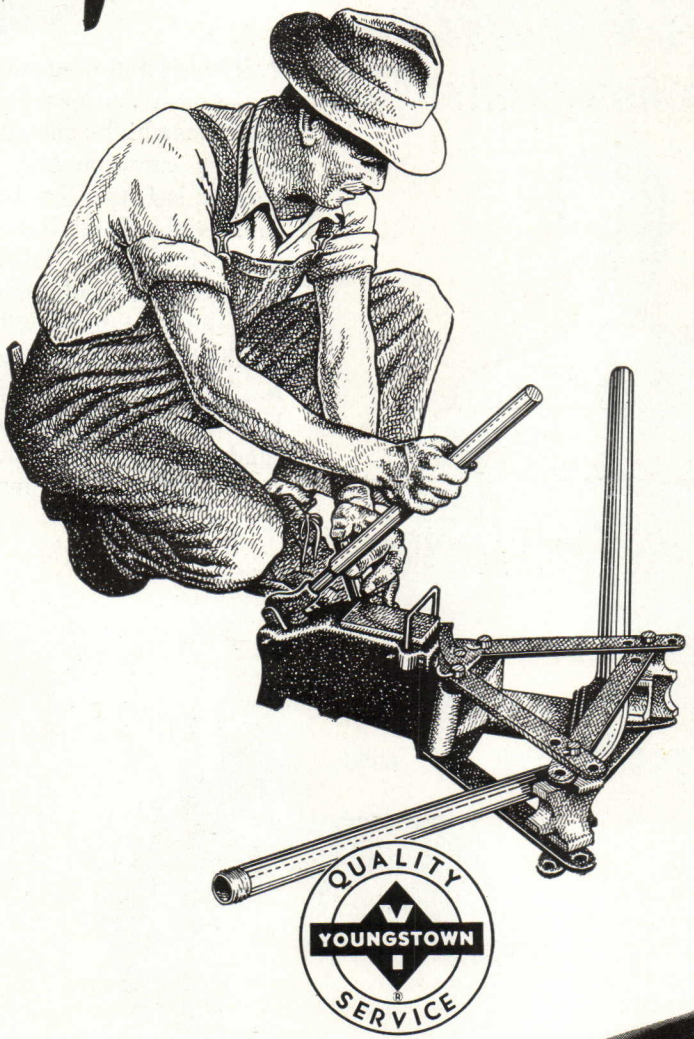
Gentlemen: Please send a copy of your folder on Kodagraph Autopositive Film

Name_____ Position_____
(please print)

Company_____ Street_____

City_____ State_____

Yes, it's Youngstown!



Dependable Steel Pipe ... The Plumber's Friend

FOR 45 years, Youngstown Steel Pipe has served plumbing and heating contractors dependably--enabling them to furnish adequate water and heating systems to customers at lowest cost.

Whether you use a few feet or thousands of miles of Youngstown Steel Pipe, you can depend on its uniformity--uniform in metallurgical and chemical properties for easy, accurate bending, cutting, welding and threading--uniform in diameter and roundness--cut to uniform lengths--uniformly smooth inside for minimum friction--in short, *uniformly satisfactory.*

Youngstown STEEL PIPE

THE YOUNGSTOWN SHEET AND TUBE COMPANY

Manufacturers of Carbon, Alloy and Yoloy Steel

General Offices — Youngstown 1, Ohio

Export Office - 500 Fifth Avenue, New York

PIPE AND TUBULAR PRODUCTS - CONDUIT - BARS - RODS - COLD FINISHED CARBON AND ALLOY BARS - SHEETS - PLATES - WIRE - ELECTROLYTIC TIN PLATE - COKE TIN PLATE - RAILROAD TRACK SPIKES.

NEW METHOD OF FIREPROOFING SLASHES COSTS— SAVES DAYS OF CONSTRUCTION TIME

Prudential Insurance Company Office Building, Los Angeles
Fireproofed with Zonolite vermiculite plaster on beams and interior columns. Applied 1" thick on metal lath.
Walter Wurdeman and Welton Becket, Architects
Murray Erick Associates, Structural Engineer
Wm. Simpson Construction Co., Gen'l Contractors
Reischel and Cottrell, Lathers and Plasterers

ZONOLITE* VERMICULITE PLASTER

Reduces Structural Steel Requirements Up to 15%

Now the job of fireproofing can be done at far less cost . . . *in far less time* . . . with lightweight ZONOLITE Vermiculite Plaster.

Today many leading architects and structural engineers are dispensing with old, cumbersome methods of fireproofing which employ heavy concrete or masonry. They have found ZONOLITE vermiculite fireproofing *the best, the easiest, and the least expensive.*

CUTS COSTS...SOLVES BUILDING PROBLEMS

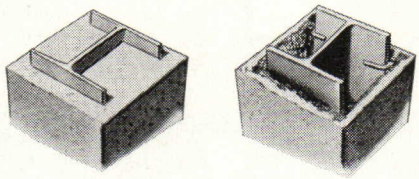
When ZONOLITE plaster is used for fireproofing, the cost of applying lath and plaster approximates the cost of merely *building the forms* for ordinary fireproofing. And because ZONOLITE plaster saves tons of dead weight in construction, structural steel requirements can often be reduced as much as 15%! Actually saved $235,000 in one building, in addition to many days of construction time.

Extra stories can be built on foundations or on existing structures by using Zonolite.

WHY ZONOLITE GIVES THESE SAVINGS

ZONOLITE plaster fireproofing on a typical beam weighs *less than one-tenth* as much as ordinary fireproofing materials. ZONOLITE insulates and protects against fire up to four times as well as ordinary plaster.

ZONOLITE plaster provides lightness, insulation, and fire resistance found in no other material.



Old Method of Fireproofing with Heavy Concrete

New Method of Fireproofing with ZONOLITE Vermiculite Plaster

4-HOUR UNDERWRITERS' RATING FOR VERMICULITE PLASTERED STEEL COLUMN

In a recent Underwriters' Laboratories test for the Vermiculite Institute a steel column with Vermiculite plaster obtained a 4-hour rating—actually withstood test about 4¾ hours before failure. Details on request.

ZONOLITE BRAND VERMICULITE INSULATION

ZONOLITE COMPANY
135 S. LaSalle St.
Chicago 3, Illinois

Member of Vermiculite Institute

MAIL COUPON FOR NEW FREE BOOKLET!

Zonolite Company, Dept. PA-30
135 S. LaSalle St., Chicago 3, Ill.

Please send me a free copy of your booklet, "VERMICULITE PLASTER FIREPROOFING."

Name.....

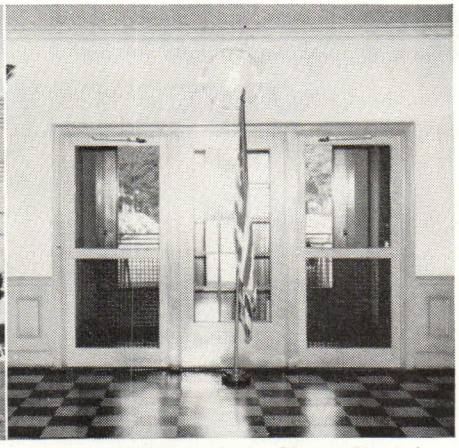
Address.....

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

*Zonolite is a registered trade mark of Zonolite Company

A total of 2200 Roddiscraft Solid-Core Flush Veneered Doors are in use at the United States Navy Medical Center in Bethesda, Maryland.

Roddiscraft Solid-Core Flush Veneered Doors are included in the permanent equipment of the modern Mercy Hospital in Rockville Centre, New York.



The new building of the Nassau Hospital, Mineola, New York, has Roddiscraft Solid-Core Flush Veneered Doors throughout.

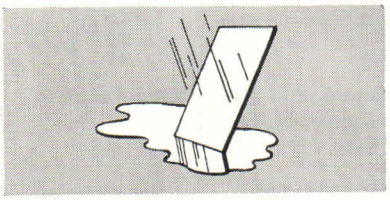
Roddiscraft

SOLID-CORE FLUSH VENEERED DOORS PROVED IN HOSPITAL SERVICE

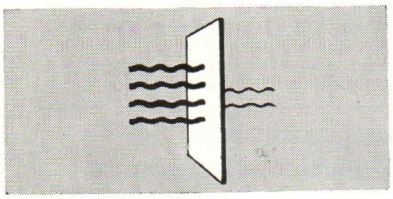
5 reasons why it pays to include these quality doors in your hospital construction plans

Identification and Guarantee—All Roddiscraft Solid-Core Flush Veneered Doors are guaranteed without qualification as to workmanship and materials. Inserted in the hinge rail of every door is a red, white, and blue dowel which permanently identifies the door.

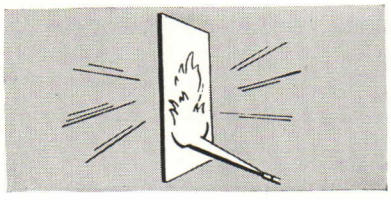
Resistance to Abuse—Roddiscraft Solid-Core Flush Veneered Doors easily withstand the punishment of heavy hospital duty. The entire door assembly is welded into a solid unit—permanently puncture-proof, waterproof, and resistant to decay.



Standard Thickness Face Veneers—Roddiscraft Standard Construction is a feature which adds to the durability of these Flush Veneered Doors. The Roddiscraft method utilizes Standard Thickness Face Veneers—as opposed to ⅛" and thicker veneers. Less moisture penetration — greater durability.



Sound Resistance—The high resistance of Roddiscraft solid-core construction to the passage of sound has been established by independently conducted laboratory tests. The standard 1¾" Roddiscraft Solid-Core Flush Veneered Door develops an average sound transmission loss of 30.9 decibels.



Fire Resistance—One reason why Roddiscraft Solid-Core Flush Veneered Doors are ideal for hospitals is their exceptional resistance to fire. This fact has been established by independent laboratories, where standard Roddiscraft doors exceeded the 40-minute fire test.

Both from the standpoint of utility and safety, Roddiscraft Solid-Core Flush Veneered Doors measure up to the stringent requirements of hospital planners. The service record of these exceptional doors stands as proof in itself. Every day—in new hospitals and old — Roddiscraft Solid-Core Flush Veneered Doors are providing dependable, satisfactory service. It's no wonder that more and more hospitals are turning to Roddiscraft for their doors.

Write for book —"An Open and Shut Case for the Finest Flush Doors" —giving complete details and specifications of the Roddiscraft Door line.

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10 good names to know

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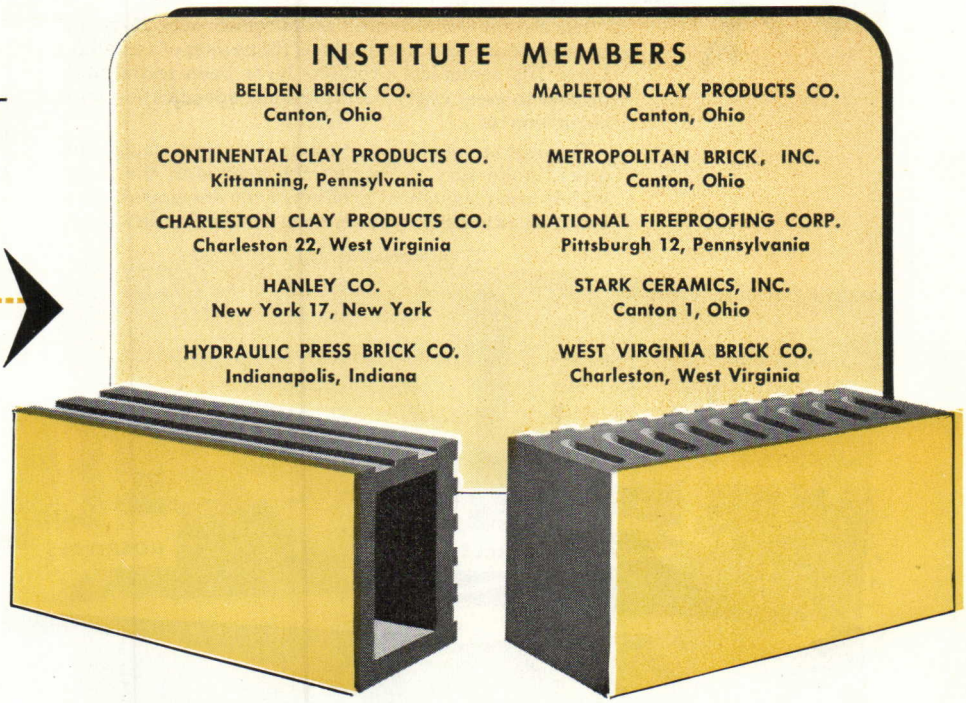

"Can I be sure the Structural Facing Tile I choose is a *quality* product?"

"Can I be sure it comes in dimensions most suitable for easy, economical use?"

There are other questions you could ask, but these two simple ones spring naturally to your mind when you're choosing Structural Clay Facing Tile—the "wall and finish in one."

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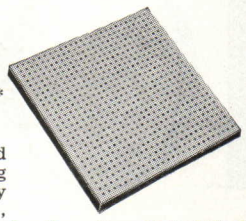
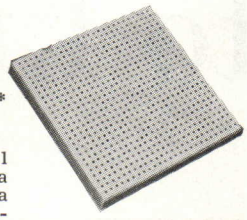


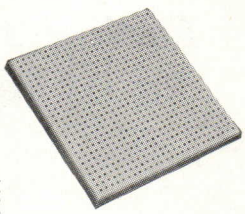
ACOUSTI-CELOTEX* CANE FIBRE TILE

A lightweight, rigid unit, combining acoustical efficiency with a durable, smooth surface. Perforations (to within ⅛" of the back) assure repeated paintability and ease of maintenance. Available in a variety of sound-absorbent ratings. Rot proof and vermin proof (patented Ferox process).



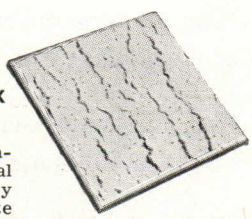
ACOUSTI-CELOTEX* MINERAL TILE

Made of mineral fibre, felted with a binder to form a rigid tile with a universal rating of incombustibility. Perforated with small holes extending almost to the back of the tile, high acoustical absorption is provided together with unrestricted paintability by either brush or spray method.



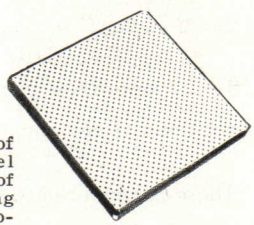
ACOUSTI-CELOTEX* FLAME RETARDING TILE

A cane fibre tile with a flame retarding surface. This tile meets all requirements for *Slow Burning* rating as stipulated in Federal Specifications SS-A-118a. It may be washed or repainted without impairing its flame retarding characteristics—and without loss of sound absorbing capacity. Supplied in all sizes and thicknesses of regular cane fibre tile.



ACOUSTI-CELOTEX FISSURETONE*

A totally new mineral fibre acoustical tile. Attractively styled to simulate travertine, it beautifies any interior and effectively controls sound reverberation. Lightweight, rigid and incombustible, it is factory-finished in a soft, flat white of high light-reflection rating.



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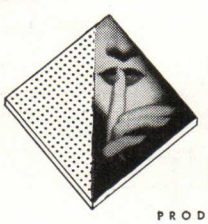
Combines a face of perforated steel with a rigid pad of sound absorbing Rock Wool to provide excellent sound absorption, together with attractive appearance, durability and incombustibility. The exposed surface of perforated steel is finished in baked-on enamel. Acousteel is paintable, washable, cleanable.



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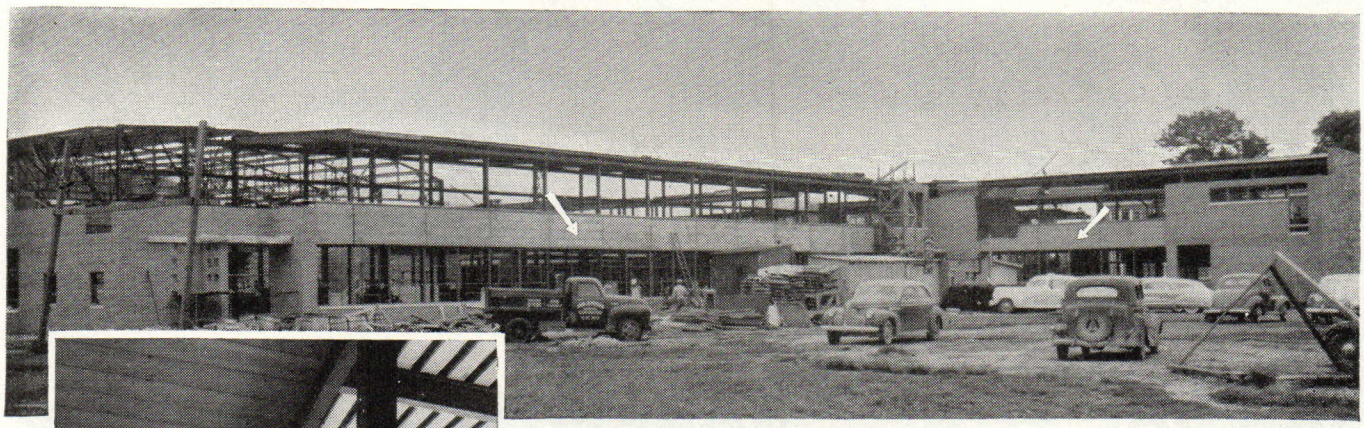
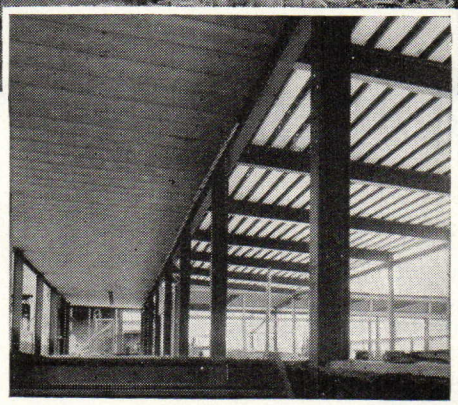
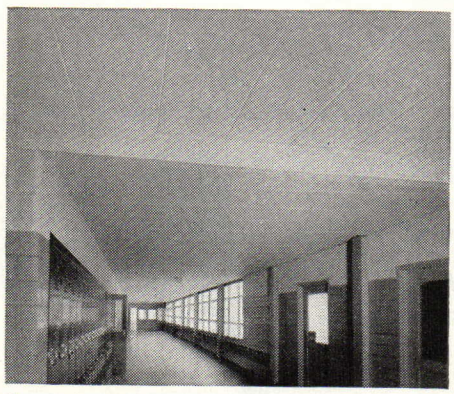


Fenestra insulated "C" Panels used as a spandrel between windows of first and second floors. Four panels high. 14′ long panels laid horizontally.



Exposed corridor roof shows Fenestra "D" Panels laid flat side down. Main roof area under panels at right was finished with suspended plaster ceiling. Roof was finished over a large area early in construction.



Exposed ceiling of structural Building Panels wall to wall. Factory prime-painted, Panels provide a smooth surface, economically finished by adding a coat of paint. Attractive, noncombustible. Note Fenestra Hollow Metal Doors, Fenestra Intermediate Windows.

How Fenestra Steel Panels, Windows and Doors contributed to economical construction in the Robert N. Mandeville High School at Flint, Michigan.

Architects Bennett & Straight of Dearborn, Michigan, faced a familiar set of requirements:

—Large size, with a layout involving considerable perimeter for good daylighting.
—To be ready for fall occupancy.
—Limited budget, calling for low cubic-foot cost.

Convinced of the speed of erecting with Fenestra* Building Panels, the architects checked costs . . . saw how on-the-site labor could be saved if the building was planned specifically to use standard units to minimize special work.

They decided on a 7′ module. Classrooms were established in a 28′ width, with partitions spaced at 14′, 21′, 28′ and 35′ intervals. The structural steel frame was designed in a bay size of 14′ x 28′, saving weight in steel. Saving in roof construction was achieved with standard Fenestra Type D Panels on the 14-foot span. Standard Type C Panels formed spandrels between floors and the window walls of Fenestra Intermediate Projected Windows.

For the roofs of the 100′ x 100′ gymnasium and the shop, Fenestra Acoustical Holorib Roof Deck was used. This provides a surface for application of roofing materials. The underside provides a sound-absorbing, perforated surface. It is noncombustible, and being steel, withstands impact. Holorib was used as the permanent reinforcing form for the seats in the spectator stands of the gymnasium.

Fenestra Panels—Fenestra Windows—Fenestra Doors—combined in this structure to help the architects and contractor achieve their triple goal of a sizable, sound structure, speedily erected, at low cost.

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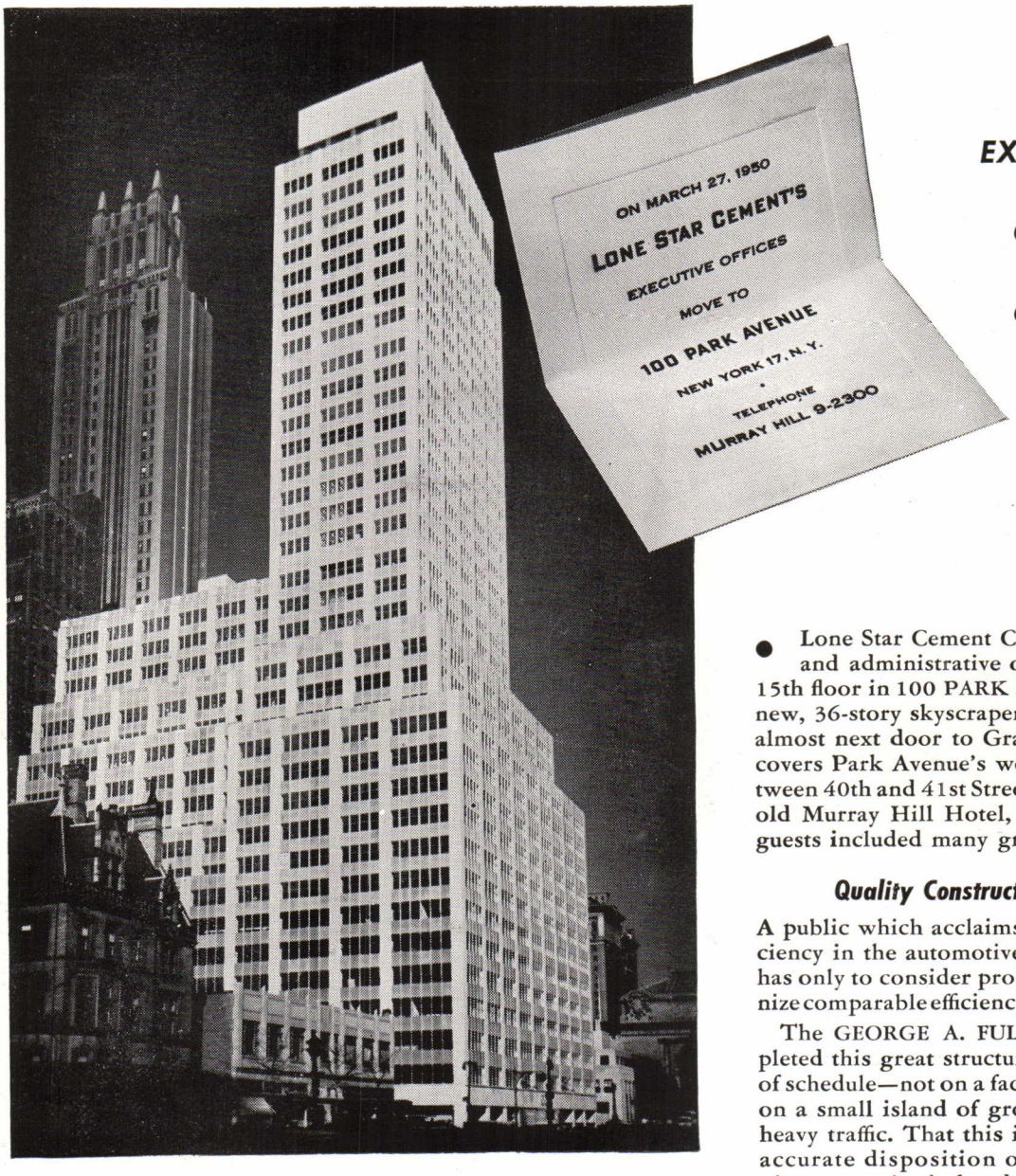
LONE STAR'S NEW HOME



EXECUTIVE OFFICES CONSOLIDATED ON 15th FLOOR OF NEW YORK'S NEW 36-STORY SKYSCRAPER

● Lone Star Cement Corporation's executive and administrative offices will occupy the 15th floor in 100 PARK AVENUE, New York's new, 36-story skyscraper. This great building, almost next door to Grand Central Terminal, covers Park Avenue's westerly block-front between 40th and 41st Street, on the site of famous old Murray Hill Hotel, built in 1884, whose guests included many great figures of the day.

Quality Construction Throughout

A public which acclaims mass-production efficiency in the automotive and other industries, has only to consider projects like this to recognize comparable efficiency in construction today.

The GEORGE A. FULLER COMPANY completed this great structure three months ahead of schedule—not on a factory assembly-line, but on a small island of ground space in a sea of heavy traffic. That this involved handling and accurate disposition of some eight-million pieces or units, in hundreds of different shapes and materials, time-scheduled for arrival and placing, gives some idea of the size, scope and efficiency of the operation.

The use of 121,112 bags of Lone Star Cement in all concrete work typifies the quality of the construction—building-dollar value at its soundest and best.

Owner: **100 PARK AVENUE, INC.**
Architects: **KAHN & JACOBS**
General Contractor: **GEORGE A. FULLER COMPANY**
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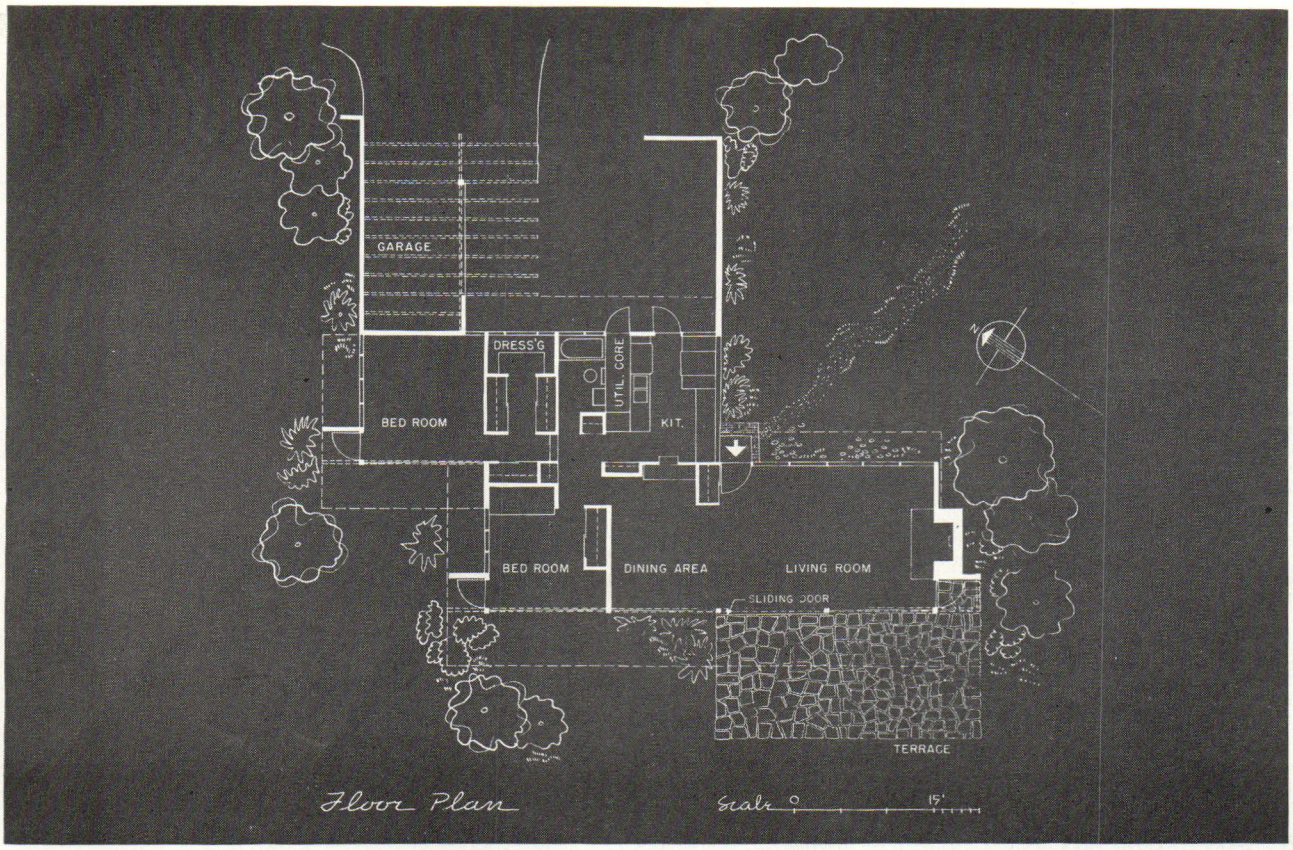
House: Los Angeles, California

RICHARD J. NEUTRA, ARCHITECT

This "Case Study" house, built under the sponsorship of the magazine *Arts and Architecture,* is a thoroughgoing attempt to solve the dwelling problem of an average-size family of the middle-income group. At top is a general view from the southeast, showing diagonal path to the front door; picture beneath is of the windowed garden (southwest) front, indicating the range of openness and closure that is made possible by a huge aluminum-sash sliding wall panel and room-height draperies. Total cost (built in 1947): $18,000. *Photos: Julius Shulman*



HOUSE: LOS ANGELES, CALIFORNIA

program: A two-bedroom house to shelter a young couple wit one child. Privacy and provisions for outdoor living factors to be considered.

site: Generous, slightly uneven land, with a fine stand o bluegum trees; most attractive and away-from-the street view toward the southwest.

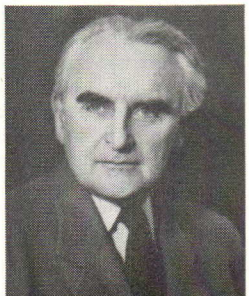
solution: All main living rooms, including bedrooms, organize so that one entire wall faces the favored southwes outlook; each major room with its own door to a outdoor area which (when the planting plan is com plete) will have a high degree of privacy. Kitche and bath organized back-to-back around a patente utility core. Kitchen related directly to large servi yard, also used for outdoor sitting and eating, an as a play yard.

materials and methods: CONSTRUCTION: Concrete foundations. *Frame:* tim ber "chassis." *Walls:* redwood board and batten, c exterior; interior finishes: plaster and hardwoo plywood. *Floors:* waxed asphalt tile over 3½″ co crete slab. *Roofing:* gravel-surfaced, 4-ply compos tion. *Fenestration:* steel sash; plate, crystal, an double-strength B glass. *Doors:* flush slab; alum num-framed sliding door.

EQUIPMENT: *Plumbing and heating:* utility co combining kitchen and bath plumbing outlets, as w as gas-fired heating unit.

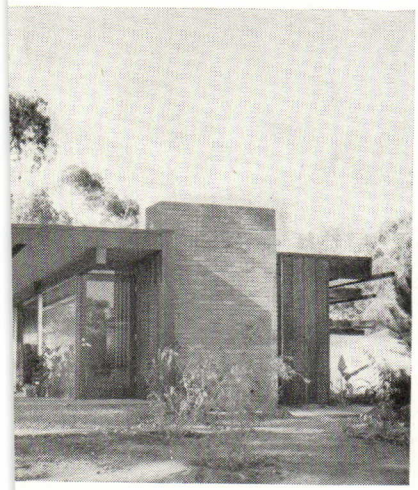
the architect: *Richard J. Neutra:* Polytechnical College, U. Vienna; postgraduate studies at U. of Zurich. Pra tice in various European countries; South Ameri Asia, New York, Chicago, Los Angeles, San Fra cisco, Portland, and Dallas. Home base: Los Angel President, C.I.A.M. American Chapter for Rec struction.

Neutra

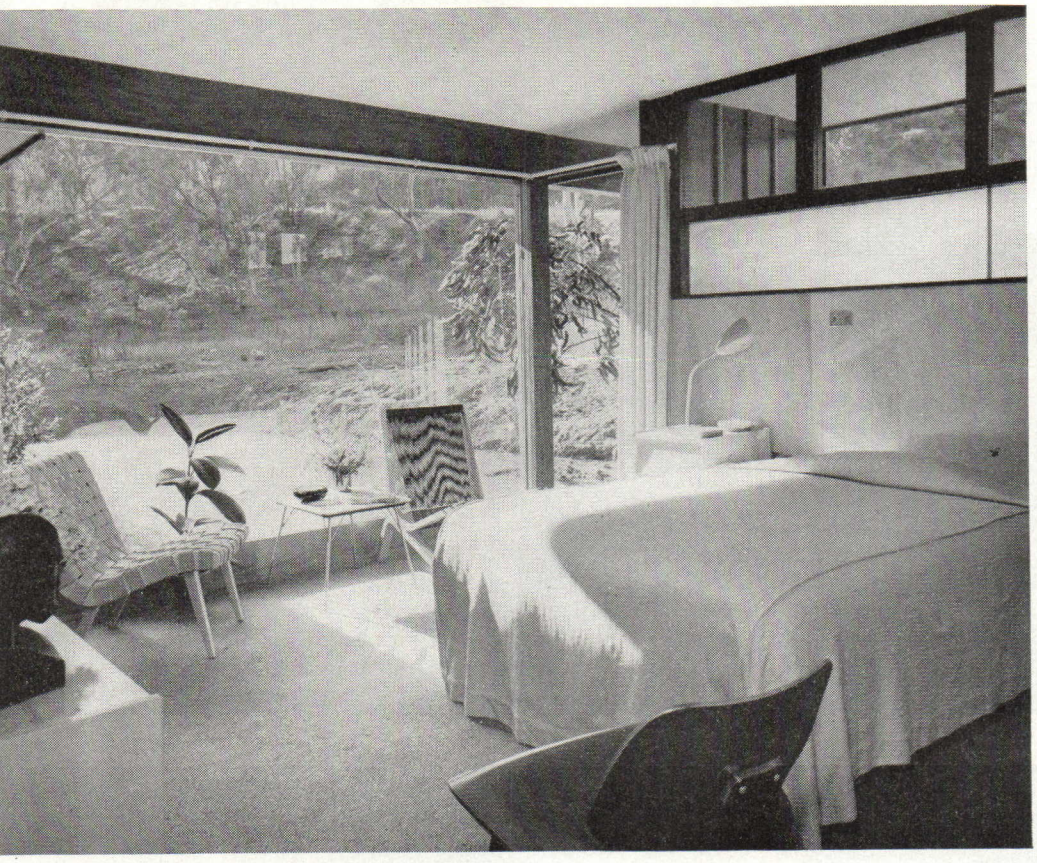


Transparent southwest front, with bedrooms at left, dining and living areas beyond. Each bedroom opens to the outdoors where, eventually, there will be private living gardens.

elow: southeast, fireplace end of the ouse; the deep roof overhang assists sun ontrol. Terrace immediately outside liv- g room is paved with flagstones.

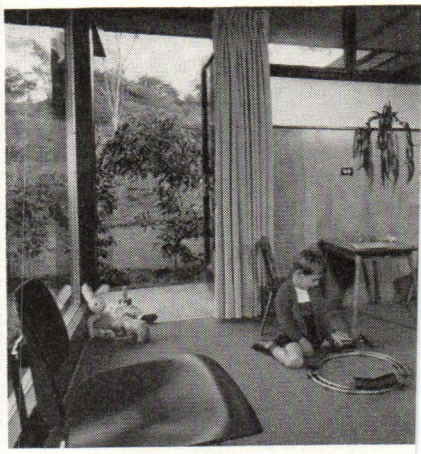


Above and at left: two views that indicate the sense created of much greater space than the square footage actually enclosed; also the intimate relation developed between indoors and out—a line that is wholly erased when the huge, central, aluminum-sash sliding panel is open. Full-length draperies provide as much enclosure as the owner desires.

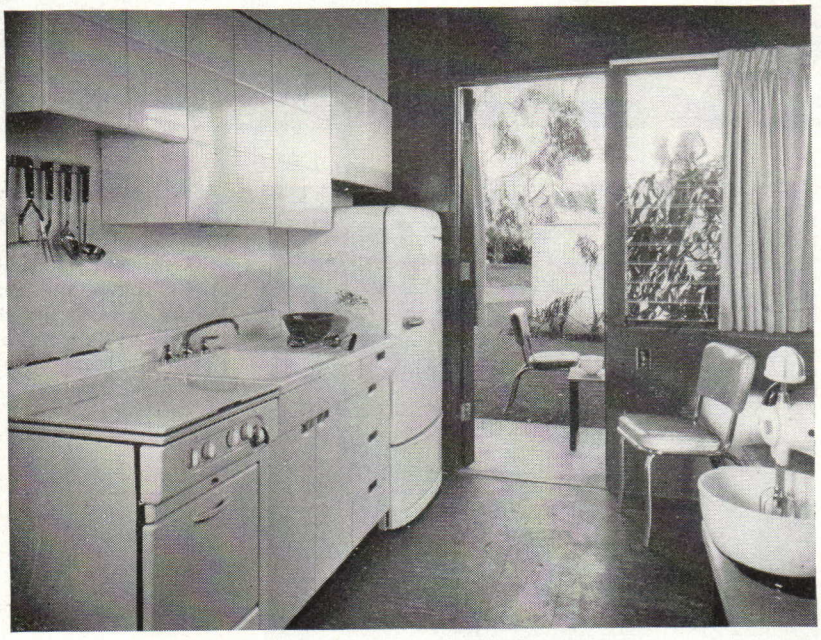


At left: master bedroom, with fixed glass wall (left) overlooking southwest lawn; door to outside at right of corner. Above the bed are operable window panels that provide both light and ventilation. Walls are finished with birch plywood.

Below: the child's bed and playroom is similar in detail to the master bedroom.



HOUSE: LOS ANGELES, CALIFORNIA



Left: kitchen, with equipment (at left) installed against a patented utility core. Door opens out to large, multi-use service and living yard that adjoins the carport.

p/a critique

shoe stores

1

2

In shoe-store design, whatever the quality of merchandise, certain factors are constants. In the first place, each store is a true specialty shop, with high emphasis on a single category of merchandise. Such accessory items as are usually handled—hosiery, slippers, handbags, etc.—are closely related. Another constant is that all of the merchandise is small in scale, must be stocked in considerable quantity, and depends for its successful merchandising on volume sales to a volume trade. These generalizations are among the fundamentals of shoe-store planning that Morris Ketchum, Jr., highlights in his discussion of specialty-shop design in his book *Shops and Stores*. And, for most shoe stores in mid-block locations, the usual treatment of the front is to combine it, by means of extensive use of glass, with the interior "in one glittering display." Only clear exception to the foregoing appears to be the elegant emporium that handles shoes for the limousine trade, which can afford to be as unconventional, original, and exclusive as its customers fancy themselves to be.

All four of the stores shown here (sample views of which appear at right) handle women's shoes—two of them exclusively. Prices of merchandise handled by these stores range from the competitively priced, popular line (1—Morristown, N. J.; Daniel Laitin, Architect), through two medium-price shops (2—Oakland, Calif.; Mario L. Gaidano, Architect, and 3—Washington, D. C.; Morris Lapidus, Architect), to the upper-medium shop (4—Oakland, Calif.; Gruen & Krummeck, Associates) wherein prices start at $15. The Washington store is much larger than the others, being arranged on four different floors, and having departments for men and children as well as for women.

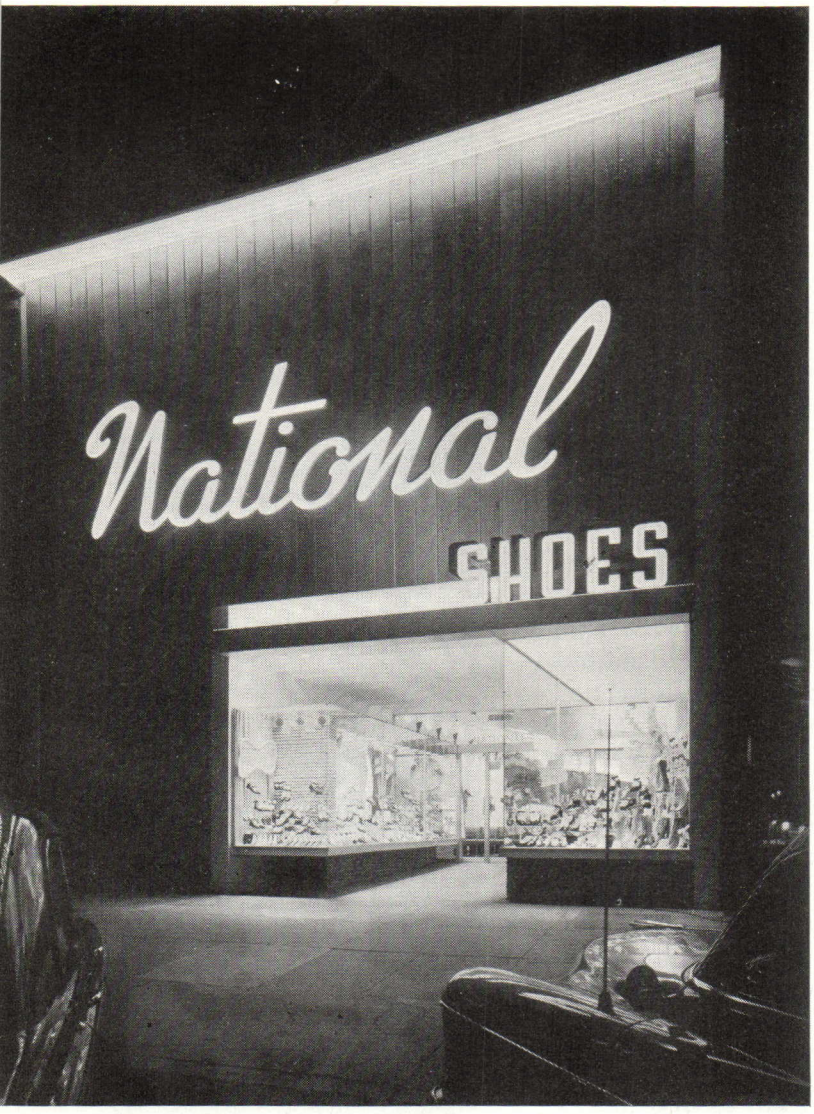
3

Other general principles that Ketchum isolates in *Shops and Stores* are that it is generally wise to echo the front-window display inside the store, so that the customer who was originally drawn into the shop by the window display is reminded of the things the shop carries other than shoes—usually impulse items—while she is having her shoes fitted. He also points out what experience has long since proved: that a well arranged indoor display—not infrequently located at comfortable viewing height for the seated customer—acts as an efficient silent salesman.

Since volume sale is usually a requirement of successful shoe-store operation, the handling of traffic for greatest efficiency—speedy welcoming of the arriving customer; ready access to stock; comfortable provision for prompt selling; and ease in speeding the departing purchaser—is an important planning consideration. Direct routes to the chairs; carpeted areas to cushion stockinged feet; wide enough aisles to avoid snarling of customers and salesmen, and stock space in close relation to the sales area are all assists toward this end. Another is placement of an accessory sales counter of impulse items alongside the cash and wrapping desk. Many a sock has been purchased through this device, that the shopper had no intention of buying when he entered the store.

4

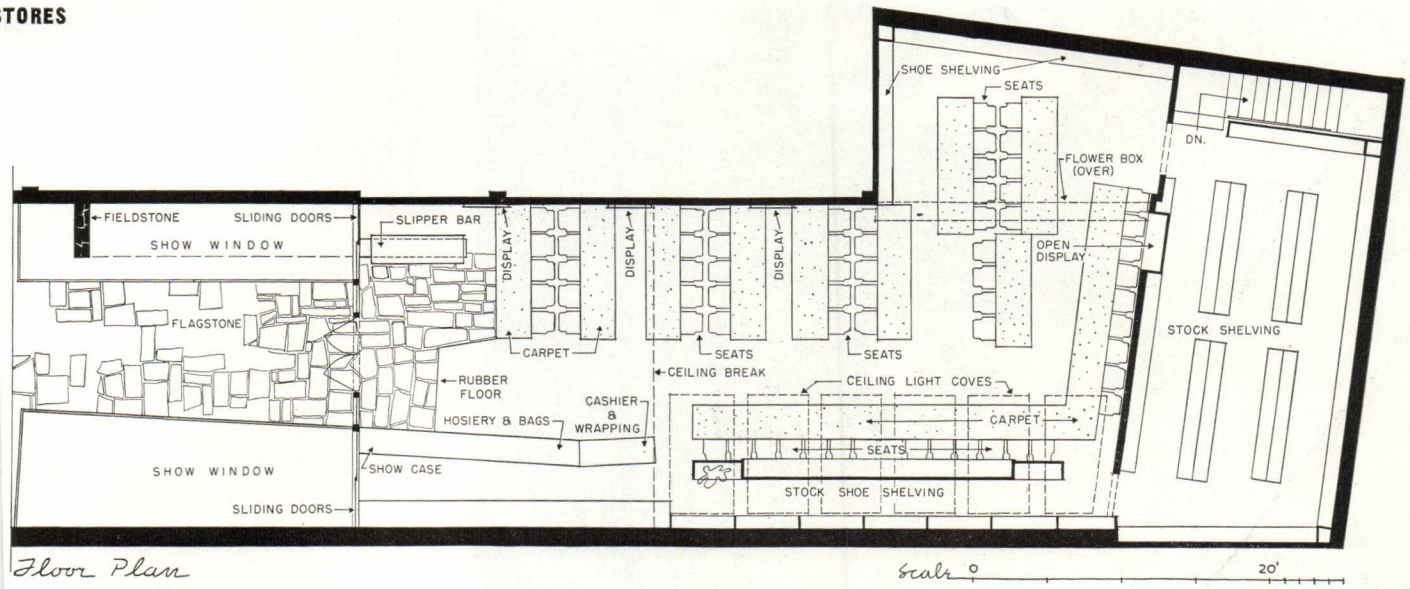
The stores presented here are four recent attempts to solve these fundamental planning problems.



1. Morristown, New Jersey

DANIEL LAITIN, ARCHITECT

Photos: Lionel Freedman: Pictor



program: To provide a colorful, up-to-date store for the sale of inexpensive shoes, within the framework of a 75-year-old building; 15 feet at left side to be partitioned off as a separate rental space.

site: An interior block location fronting on a prominent street.

solution: Entire re-do of store interior and front. Two upper floors of old building blocked off, and this space on front of building utilized as a background for the prominent sign. Open-front treatment, with several design elements—vestibule flagstone flooring; stone window bulkheads —made continuous from outside in. Red, plastic-covered chairs arranged back to back along left-hand side of store, with carpet strips on the floor between them; carpeting also borders lines of chairs against rear walls; stock, on shelves behind low partition at right, and sizable room at the rear. Cash and wrapping counter near entrance, bordered by accessory sales display.

materials and methods: CONSTRUCTION: existing structure. *Flooring:* flagstone; rubber tile; carpet strips. *Walls:* exterior—white painted brick; stone; planking cut from waterproof fir panels; interior—stone; mahogany planking (rear wall and counters) ; wallpaper; white-painted face brick. *Ceiling:* furred down and surfaced with squares of striated plywood. *Fenestration:* aluminum window frames; plate glass.

EQUIPMENT: *Heating and air conditioning:* 7½-ton self-contained unit with heating element and 100 percent fresh air for all-year conditioning; humidification controls. *Lighting:* fluorescent and incandescent, providing 50 foot-candles; special wall and window fixtures.

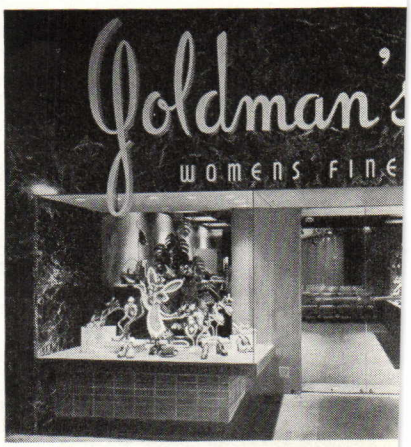
the architect: *Daniel Laitin:* Pratt Institute and New York U. Work with Vahan Hagopian. Seven years with N. Y. Dept. of Public Works designing hospitals and sewage plants. Own practice since 1945.

critique: From every practical consideration this appears to be an efficient small store for speedy and comfortable merchandising—essential requirements for the function to be served. The owners asked for an "outdoor look" and, while this desideratum seems a bit forced for an interior-block building, the architect has furthered this goal through the use of simple, natural materials left exposed for their own worth. The dropped ceiling area toward the rear of the store, with concealed light troughs and exposed flush downlights, also contains air-conditioning ductwork. From the limited view of judging black-and-white photographs, this portion seems a bit broken up and non-integrated. But on the whole, it is a bright, clean job, worked out with restraint—a rare and admirable quality in a shop that handles merchandise in this price class.

Laitin

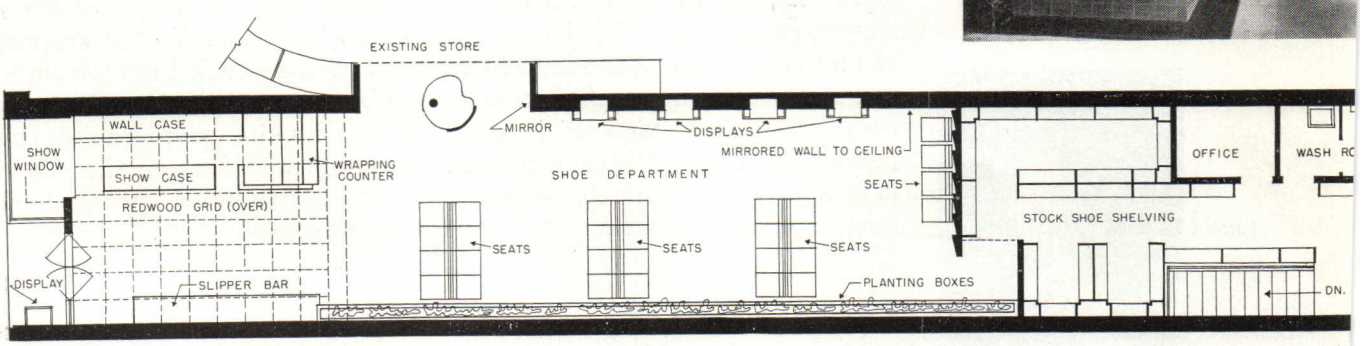
Left: view of rear of store; at far left, a free-form display element organized around a canvassed and painted structural column marks the entrance to the parent store.

Below: The storefront; the verde antique marble continues the existing surfacing of the main store. *Photos: Skelton Studios*



2. Oakland, California

MARIO L. GAIDANO, ARCHITECT



Floor Plan

program: To create a quiet, dignified background for the sale of medium-price shoes for women.

site: An interior-block, old building. The shoe shop is an adjunct to the neighboring women's apparel store; entrance to this parent store occurs about one-third of the way back on the left-hand wall of the shoe store.

solution: Entire stripping of interior and front. Removal of plaster and furring on right-hand wall revealed a handsome old brick wall which the architect decided to leave exposed, after sandblasting and waxing. Slipper bar, accessory counter, and wrapping desk located near entrance; seating organized in paired rows along right-hand wall of store; displays set into mirrored, opposite wall; stock at rear of store.

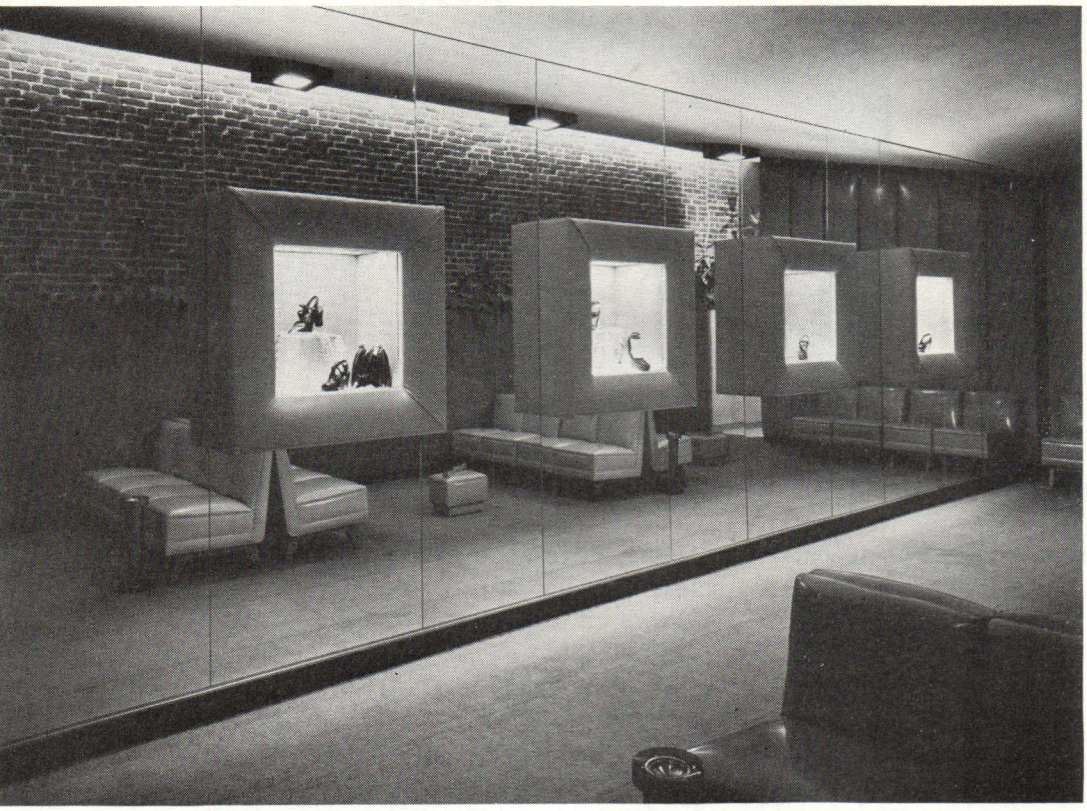
The marble surfacing of the store front matches the existing store; redwood lettering, painted light gray-green; dark green terrazzo floor. Inside, the hung, acoustical plaster ceiling is finished in natural gray; plant trough along rear, right-hand wall is faced with flush-joint, random, redwood boards; ceiling grid toward front of shop is also of redwood; casework, wrapping counter, and wall behind, are finished in silver-fox-stained white oak. Yellow-green vinylite plastic covers chairs, display frames, and rear wall of store; flooring is gray carpeting.

materials and methods: CONSTRUCTION: existing brick-walled, wood-frame-floor building. *Insulation:* acoustical plaster ceiling. *Flooring:* carpet. *Walls:* exterior—marble, brick, glass; interior—mirror, original brick, redwood. *Glazing:* plate glass; tempered plate glass.

the architect: *Mario L. Gaidano:* Calif. School of Fine Arts; San Francisco Architectural Club. U. S. Army Engineer Corps. Work in various offices on West Coast and in Hawaii; own office established in 1947.

critique: Although this shop is less "open fronted" than others shown in this group, the tempered plate glass doors and pedestal-mounted showcase still serve to place the entire shop on display. Organization of the seating is unusually generous, and the colorful plastic fabrics, brick wall, planting, and mirror wall combine to achieve a dignified, inviting environment for the business at hand. In planning, one may question whether placement of the mirror wall for viewing newly tried-on shoes, across the aisle from the seating, may not on occasion produce a slight cross-traffic problem, but one cannot question the appeal of the full-length mirror for effective selling. The exterior of the store seems less successful than the interior, though in plan it is orderly and logical. The curlicue lettering and rather insistent veining of the marble appear a bit fussy in contrast to the bold simplicity of the interior. In general, though, it strikes us that this is a dignified and effective piece of specialty-shop design.

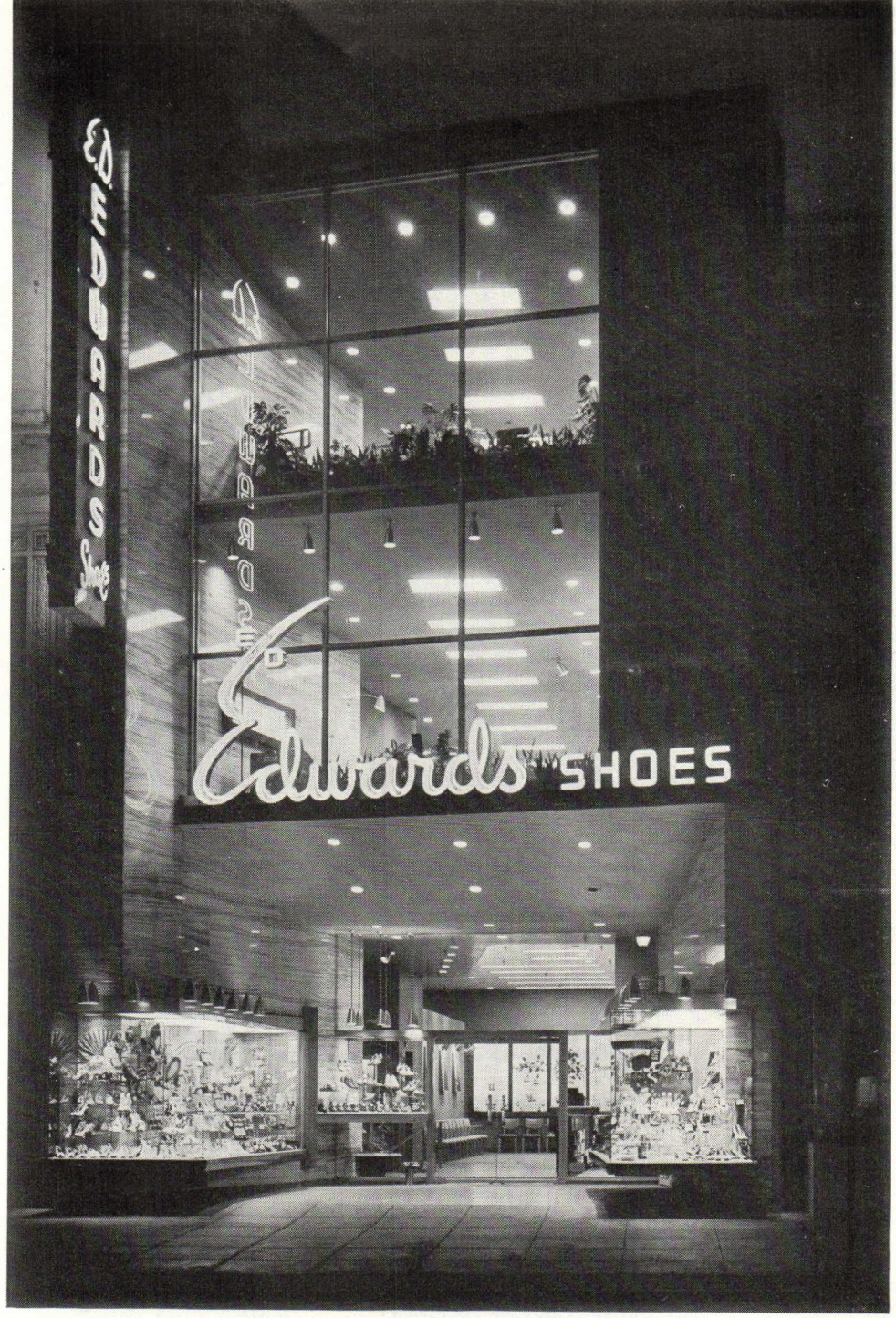
Gaidano



Left, above: the mirror wall with inset display boxes. Fifty percent of the store lighting derives from this source; concealed incandescent lamps at top and bottom of cases throw light upward, into the display, and downward, thus highlighting the area used by customers approaching the mirrors to consider new shoes.

Below: the main seating is arranged in front of a redwood-surfaced plant trough and the refinished old brick wall. Inverted tubular cove lighting in the ceiling enlivens the wall and planting.

2. OAKLAND, CALIFORNIA



3. Washington, D. C.

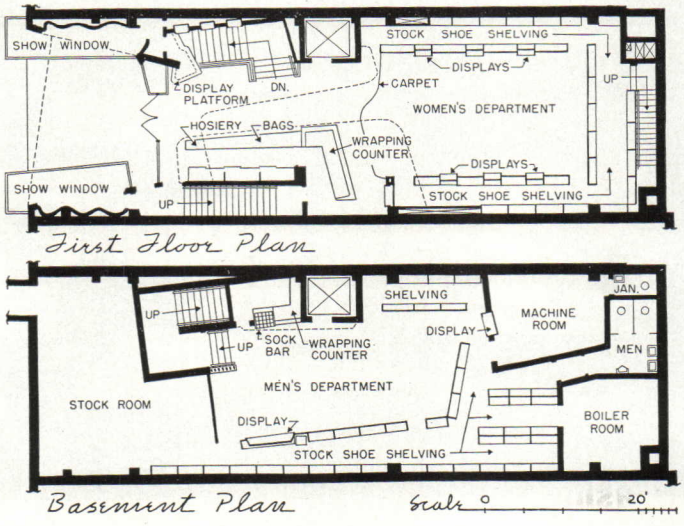
MORRIS LAPIDUS, ARCHITECT

his downtown Washington store carries edium-priced shoes for the entire family -the basement for men's shoes; the main oor, the most-in-demand, shoes for wo- en; the second floor for teen-agers and ore expensive shoes for women; and the ird floor for children. Above—general reet view; below—main floor looking ck toward street.

Photos: Gottscho-Schleisner

Left: sales area for women's shoes, at rear of main floor; partial height wall partitions screen stock room space directly behind. Display boxes are readily scanned by the seated customer.

Below: glass-paneled aluminum and white metal railing, bordering stair to basement; wall-display boxes are set into a striated plywood background.



First Floor Plan

Basement Plan Scale 0 20'

Left: men's shoes sales area at basement level; flooring is asphalt tile. Note exceptionally clear marking of elevator location.

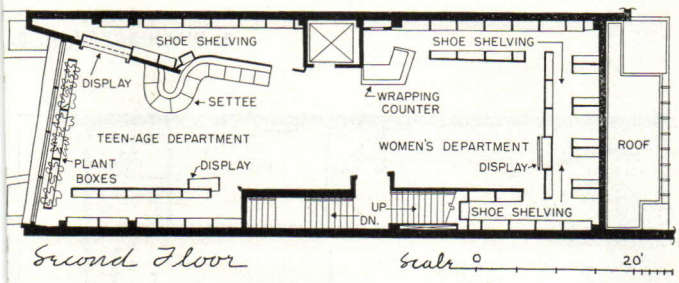
program: Organization of an effective merchandising unit, within a three-story-and-basement building, for the sale of medium-price shoes for infants, boys and girls, men and women.

site: Typical long, narrow store space on a mid-block site in the downtown area.

solution: Recessed arcade-type vestibule entrance, with open front treatment extending through all three above-ground floors; dramatic, splayed-back upper front wall clearly sets store off from its neighbors. The four floors are arranged in co-ordinated departments, each with its stock shelves behind the visible display walls. Each floor has its wrapping desk, with adjoining accessory-sales displays; elevator entrances clearly marked by applied signs above doors.

materials and methods: CONSTRUCTION: *Foundations:* concrete. *Walls, floors, and roof:* reinforced concrete. *Flooring:* cement finished floors covered with asphalt tile in basement, carpeting on other floors. *Partitions:* solid plaster. *Interior wall surfaces:* striated plywood; leather on plaster; marble veneer; rigid wallboard; boards and battens; wallpaper. *Sash:* aluminum. *Lighting:* both fluorescent and incandescent.

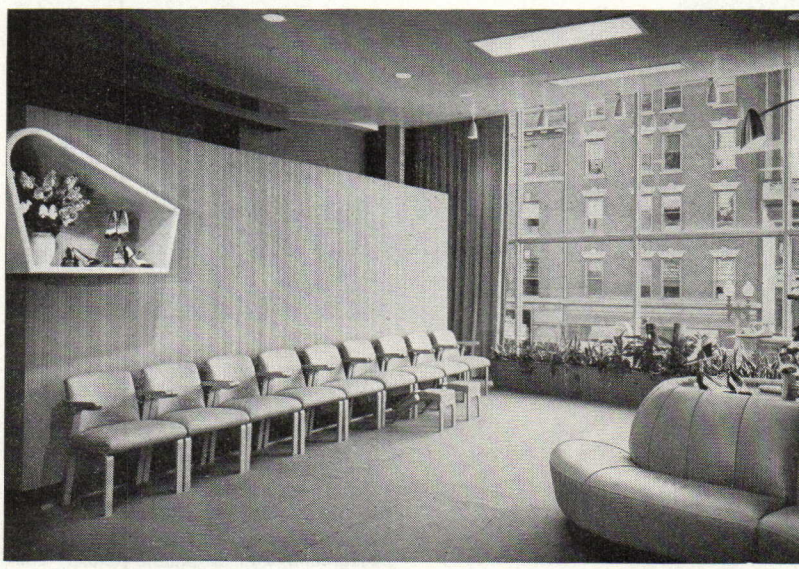
the architect: See photograph and biographical data, page 65, September 1949 **P/A**.



3. WASHINGTON, D. C.

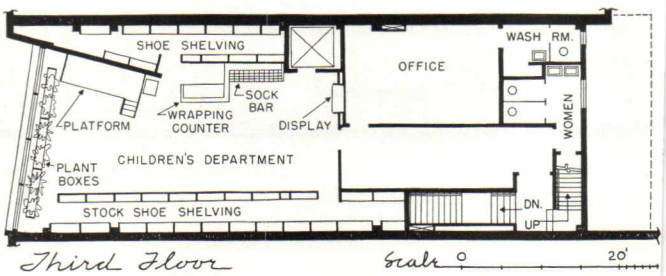
Below, left: better-grade shoes for women are handled in a separate department at the rear of the second floor; end wall case is used to display accessories.

Right: a serpentine leatherette settee dresses the front part of the second floor —the selling area for teen-agers. The huge window provides excellent daylighting.



critique: The principle of the design of the entire store as "one glittering display" is here carried to the extreme of including all three floors of the building. Not that the upper floors actually show the pedestrian the appearance of the upper floors or any detail of the merchandise, but the whole front acts as an eye-catcher. The arcade front, combined with the glass front at the entrance line, do about all one can imagine to facilitate the eye-caught prospective purchaser's path into the store. In black-and-white photographs, the flush ceiling light units seem a little distracting, but this is a hazard of judging from photographs. The high level of actual illumination, plus the colorful backgrounds and spot lighting, give the lie to this impression. While one principle of shoe-store design suggests that customers' chairs are best arranged in rows parallel to the street front (to screen stockinged feet from the eyes of passers-by), here the depth of the store makes this consideration unimportant. The wall alignment of most of the chairs further assists the viewing of the highlighted wall cases on the opposite walls.

3. WASHINGTON, D. C.



Above: a wrapping desk occurs at a central location on each floor; this one happens to be on the third (children's shoes) floor. Alongside, in each case, is an impulse-merchandise display element.

Right: beside the big front window on the third floor, a platform gives the young an importance they enjoy. The background wall is marble veneer, continued into the store from the outside recess.

4. Oakland, California

GRUEN & KRUMMECK ASSOCIATES, VICTOR GRUEN, ARCHITECT, R. L. BAUMFELD, ASSOCIATE IN CHARGE

e: an extraordinary example of archi-
ral *trompe l'oeil*—the mirror wall at
gives the appearance of twice the
l width; casework below avoids re-
ons at eye level and preserves the
n.
ow: a typical sales salon, toward
f the two street entrances; the en-
e, incidentally, shown in the photo-
above. *Photos: Philip Fein*

Left: cash-wrapping counter and accessory department of gray-brown walnut, near Broadway entrance.

Below: the three salons (rose, gray and turquoise) for women's shoes, looking toward Broadway.

program: To provide an atmosphere of subdued elegance for the sale of upper-medium-priced shoes for men and women.

site: Existing, mid-block building, approximately 125′ deep, with street frontages at both ends.

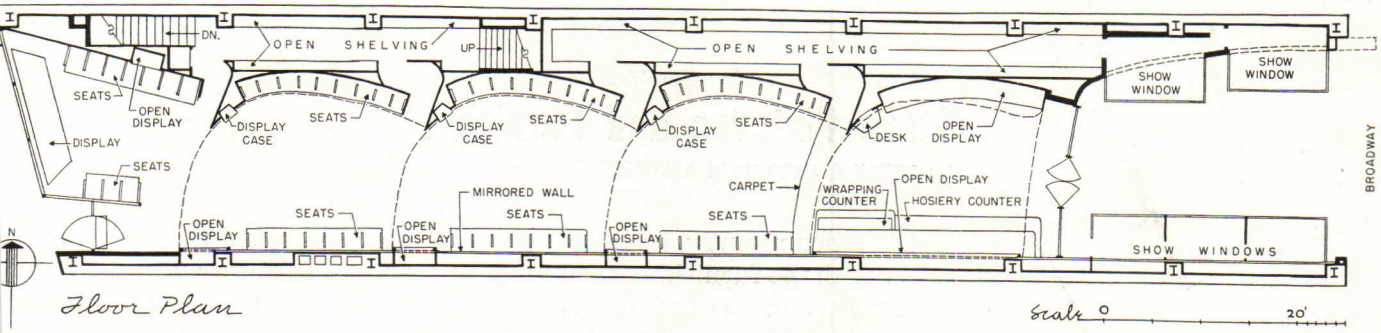
solution: Customer entrances developed at either end—the more important one (Broadway) treated as a recessed arcade with continuous glazing from floor to ceiling. Between these two end elements four sales salons have been created, partially set off from one another by one curved wall and a curved light-cove ceiling line that is progressively stepped down from the Broadway entrance toward Telegraph Avenue. The four salons nearest Broadway are for women's shoes; the lobby adjoining the Telegraph Avenue entrance, for men's. The mirror-wall device introduced at the Broadway arcade is carried throughout, making each salon (and the entire store) seem twice as spacious as it really is. Fixtures and furniture were designed by the architects (See Page 70)

materials and methods: CONSTRUCTION: existing building. *Walls:* exterior—marble, precast corrugated cement plaster; interior—painted plaster, wood veneer, wallpaper, mirror. *Flooring:* asphalt tile; carpet. *Fenestration:* aluminum frames; polished plate glass. *Entrance doors:* tempered plate glass.

EQUIPMENT: *Heating and air-conditioning:* city steam supply; convectors; controls; air-conditioning units. *Electrical:* both incandescent and tubular lamp sources.

the architects: See photos and biographical notes, Page 65, October 1949 **P/A.**

critique: This store approaches the class of shop where average standards do not apply. Witness, among other things, that there is much less stock in evidence than in the other stores shown. The silent-salesman technique is used, but with restraint. As in all the stores, however, the cash-wrapping counter is organized in conjunction with an alluring accessory-sales department. We feel that the architects deserve special credit for achieving an undeniable quality of elegance without imposing fragments from Versailles.

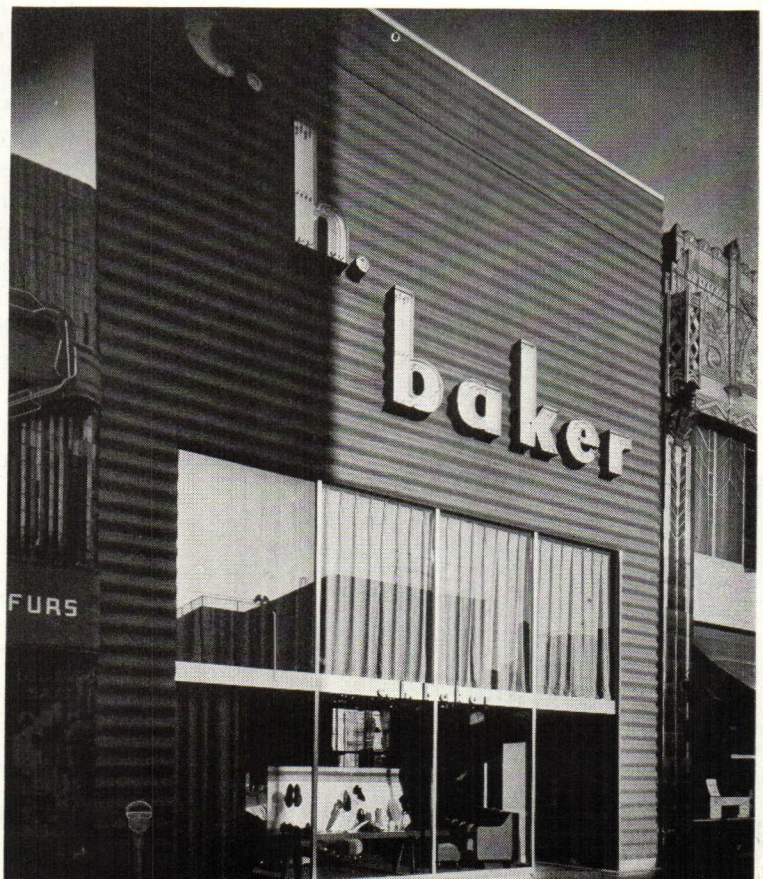


Floor Plan

Scale 0 20'

Right: looking from men's shoe department (lobby near Telegraph Avenue) back into the series of salons for women's shoes. Walnut veneer on left wall; marble on right; carpet and chair coverings, gray.

Below and at bottom corner of page: inside and outside of Telegraph Avenue entrance. Exterior wall surfacing is painted precast, corrugated cement-plaster.



, CALIFORNIA

Store Fixtures and Furniture

By GRUEN & KRUMMECK ASSOCIATES

Until rather recently, store architects were seldom asked to concern themselves with the furnishings and fixtures. Standard furniture was purchased as a rule, and the fixtures were designed and executed by store-fixture companies. If and when the architect was employed to work on store interiors, his commission was usually limited to the "decor."

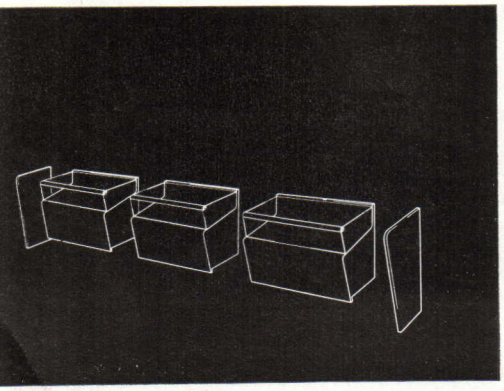
The new concepts of architecture, not to mention those of merchandising, have changed this situation radically. Over-all planning has come to be recognized as the only manner in which highest efficiency and the best economic and merchandising results can be achieved. The merchandising cases and furnishings form, along with the walls, ceilings, lighting, and color treatment, an integral unit. To plan and design one without the others is illogical and unsuccessful.

As to furnishings, the trend is clearly to design them for their special purpose and, by the shape, color, and materials of which they are made, bring them into harmony with the over-all design. Transplanting of stock home furniture into the store is rarely successful. Wear and tear, maintenance, and the specific requirements for store use make this impractical.

Fixtures present another interesting design problem. The name "fixtures" is misleading, however. Far from being "fixed," they should be as movable and changeable as possible. "Merchandising and display cases" might be a more precise description. They serve the purpose of displaying, storing, and protecting varied types of merchandise. In present merchandising trends, the display function becomes increasingly important.

The ideal store fixture is one which fulfills its function without making the shopper aware of its existence. It should present various types of merchandise in the most favorable position, at the best angle of visibility and in the most flattering light. It should further take into consideration that modern merchandising methods require changes in department locations, sizes and shapes, and the fixtures should be readily adaptable for different sizes and types of merchandise as well as changing merchandising and display methods. With the design of the "Flexi-case" (see drawing across bottom of page) which we developed over many years, we have tried to approach this ideal. The Flexi-case fixtures have been used for the first time on the second and third floors of the new Macy store in Kansas City. There the wall treatments are also of a completely flexible nature; they consist of a light metal furring and aluminum panels of varied surface treatments which are painted with a rough texture paint.

The times when one moved a bulky cabinet into a loft and called it a store are over. Fixturing today is an integral part of store design, and flexibility is an integral part of fixture design. VICTOR GRUEN



The drawings across page show the Flexi-case (developed by the Gruen firm) consisting of one s of curved steel, enameled in desired colors, which forms the back and top of the case. It is suppo by posts, resting on enameled metal feet. The posts carry concealed ratchet strips to which means of a cantilever-action bracket, shelves, sliding-door assemblies, or inserts (left) with drawe sliding doors are anchored. The same strips can support rod holders, which carry plastic-covered n rods, for hanging merchandise. The 8" space between the bottom of the case and the floor facili cleaning.

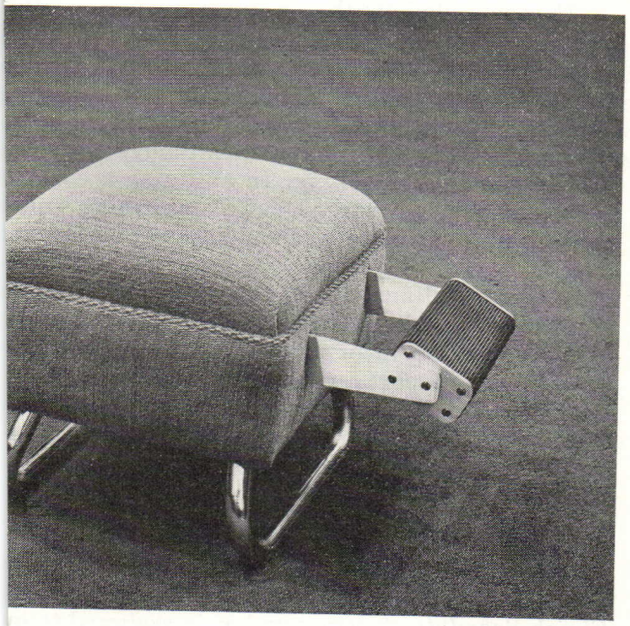
The cases, delivered knockdown, are installed on top of the finished floor covering with the of no other tool than a screw driver. The usual fitting to counteract uneven floors is taken care levelers in the foot of each column. Lighting consists of a continuous metal trough fastened by bra to the curved wall back. By introducing a concealed aluminum truss, up to four Flexi-cases ca installed without supports.

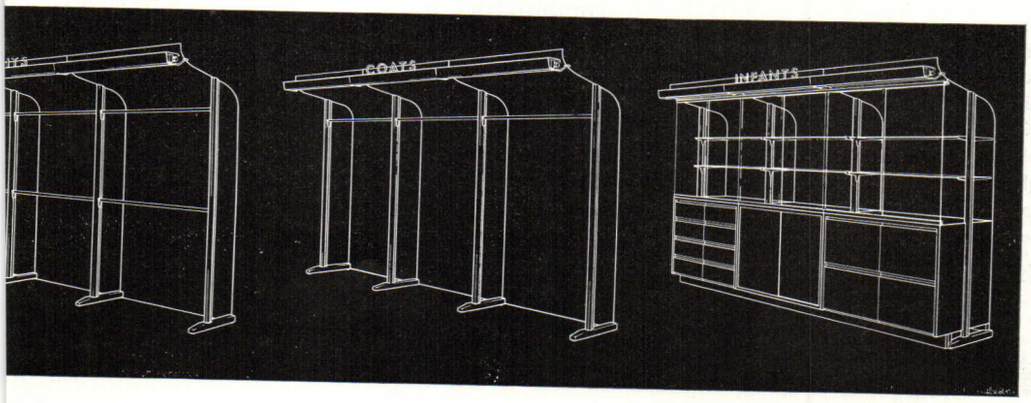
The three photographs on this page illustrate the shoe salesmen's stools and the smoking stands designed by Gruen & Krummeck for the store presented on Pages 67-69. They also illustrate the trend toward having architects design furnishings for the stores they are doing in harmony with the over-all design.

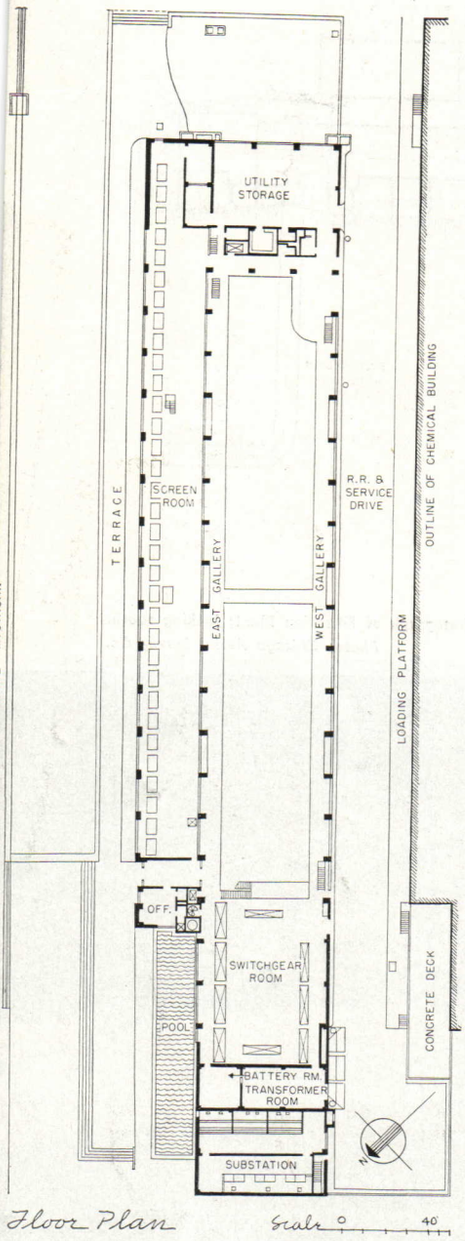
Photos: Philip Fein

Top and bottom, this column: two views of a shoe salesman's stool—chromium frame, upholstery of frieze, to match the customers' chairs that they serve. The base of the frame slides easily over the carpet.

Right: smoking stand designed by the architects—standard of clear lucite; top and base executed in wood and laminated plastic.







LOW-LIFT PUMPING STATION: the water-purification process starts in this building immediately on the lakefront. Water, whether from the direct lake ports or via the shaft from the Dunne Crib, is brought to the Intake Basin (24 ft. deep). A battery of eight horizontal-type pumps takes in the water at approximately 20 ft. below the surface. The pumps raise the water to the processing level and start it on its way through the Chemical Building (See Page 80).

The plan, as indicated from the single level shown here (pump-room gallery level, a few steps above grade) is simply a long rectangle, with a narrower wing at the north end for the electrical power station that serves the plant. The boiler room is in the basement beneath this wing.

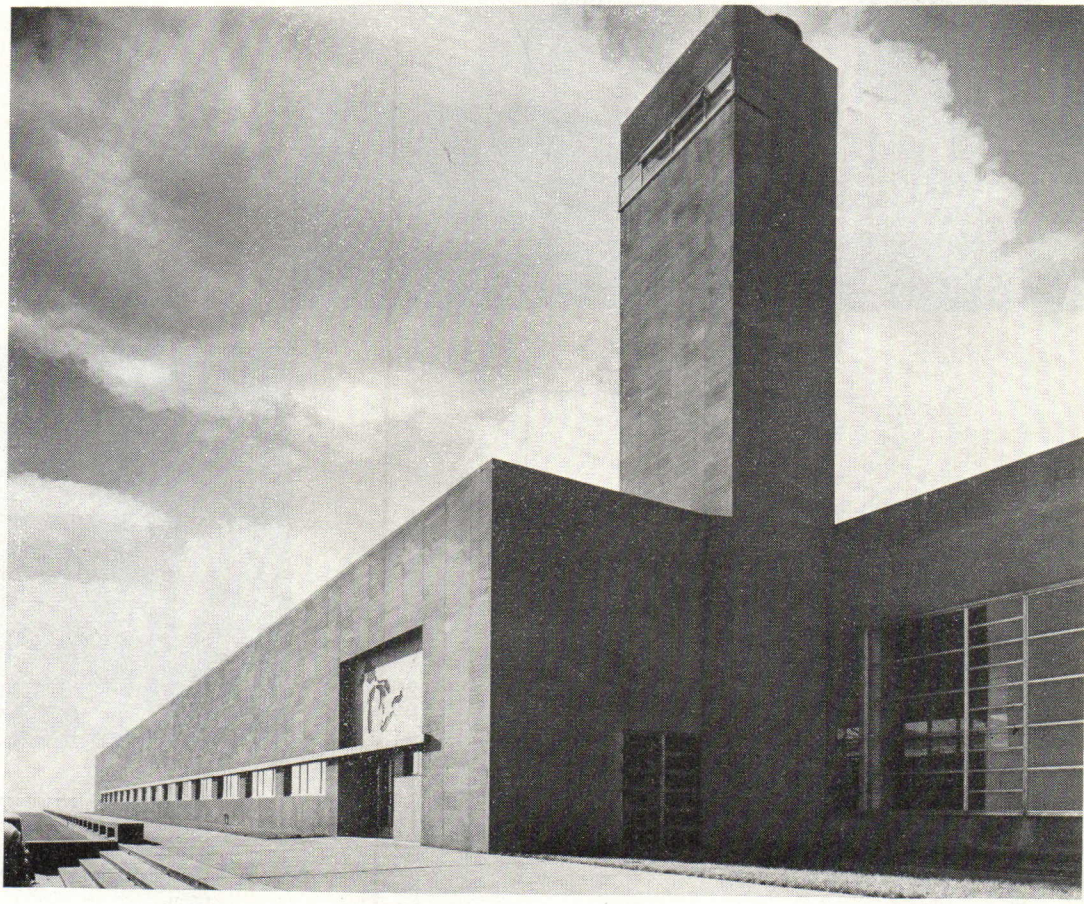
Built on a reinforced concrete substructure, the upper portions of the building are framed in structural steel, the great hall of the pump room being spanned by a series of rigid steel frames. Galleries run along both sides of the pump room some 22 ft. above the finished floor, which itself is about 9 ft. below lake level. A craneway for handling repair or replacement of the large pumps, pipes, or valves occurs 19 ft. above the galleries.

Exterior wall surfacing is oölitic limestone; the interior walls, suggesting the colors of water, are of terra cotta in marine blue and tones of green; flooring is red quarry tile. Window frames and sash are aluminum.

On the lake side of the building is a great paved terrace enclosed by a railing which is designed as a bench for visitors' comfort. Ornamentation is restrained, consisting chiefly of a greenstone map panel depicting the Great Lakes, above the door from the terrace, and a pool in the angle formed by the north wing. Above the long band of windows toward the lake, a projecting course of greenstone is the only other design accent in the handsomely proportioned block.

Below, top: lakeside view of the Low-Lift Pumping Station; trim and overdoor panel map of Great Lakes area is greenstone; wall surfaces, limestone ashlar. Large window at right of vertical element (smokestack, elevator, stair, ventilating equipment) opens to switchgear room, seen in far background of photograph of the pump room at bottom of page. Rigid steel frames span the width of the 60' x 300' room.

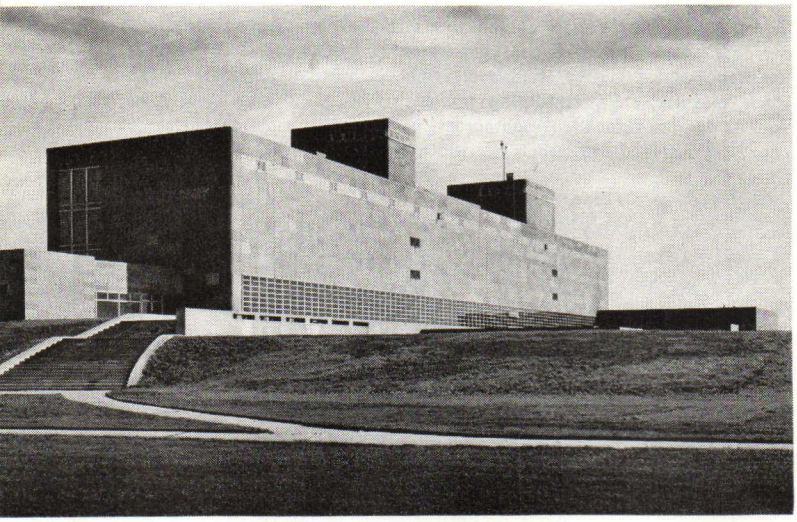
Photos: Hedrich-Blessing

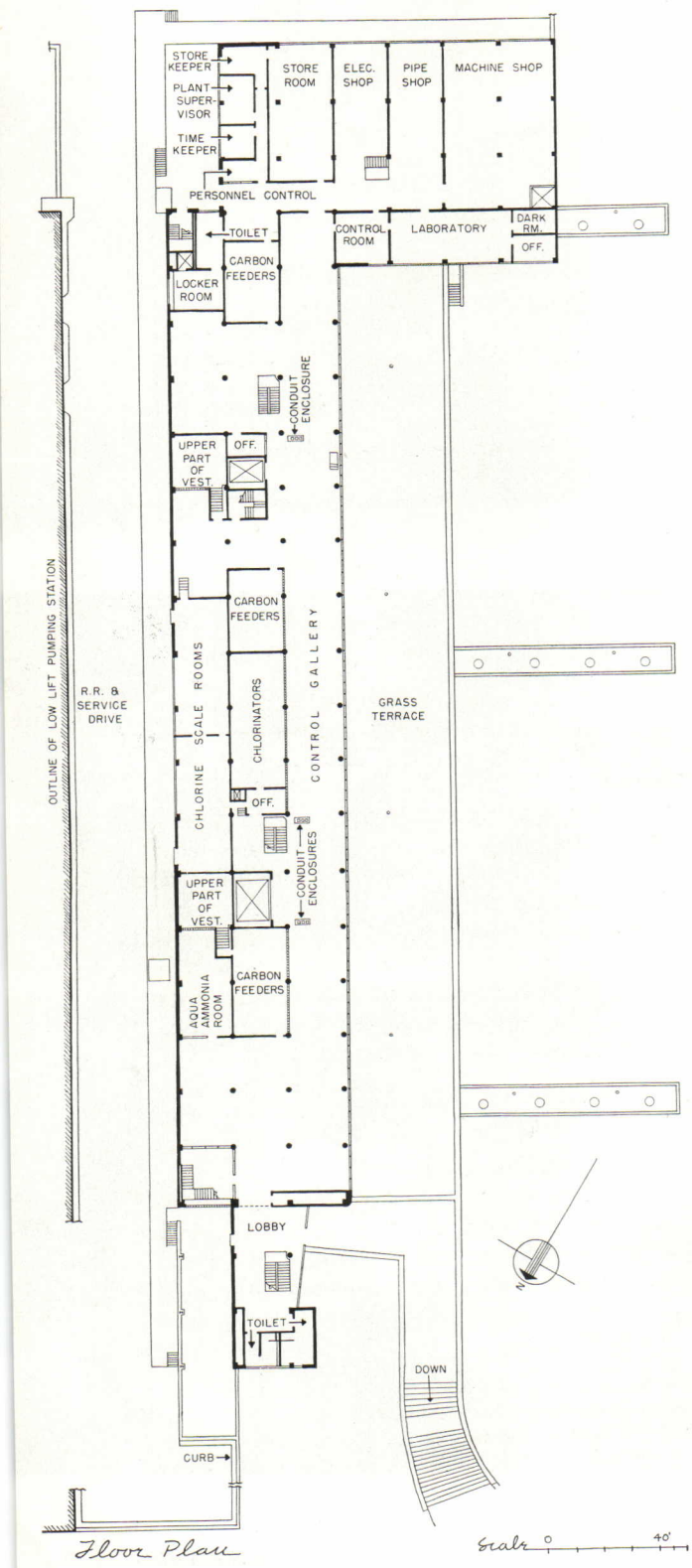


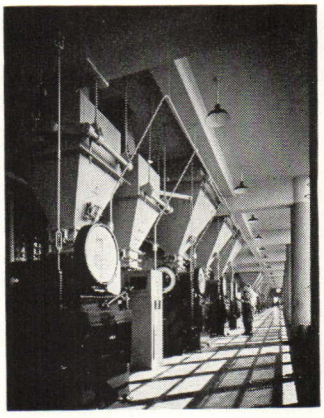
MATERIALS AND METHODS

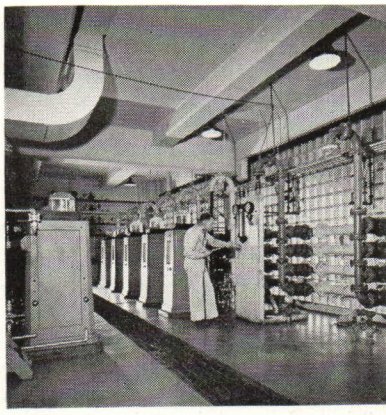
CONSTRUCTION: Foundations: concrete piers and walls direct on bedrock, anchored to rock with steel dowels to prevent flotation of plant when empty. **Structure:** substructure of reinforced concrete; superstructure (Chemical Building), reinforced concrete and (other buildings) skeleton steel frame with masonry walls, concrete floors and precast concrete roofs. **Wall surfaces:** exterior—shot-sawn-finish limestone ashlar; greenstone trim and entrance panel (Low-Lift Pumping Station); interiors—terra cotta, glazed tile, plaster, flexible plywood, marble. **Floors:** cement finish; wood block; terrazzo; ceramic tile; quarry tile; rubber tile; asphalt tile (wax finished). **Roofing:** composition, pitch, and gravel. **Insulation:** thermal—cork board; acoustical—tile. **Partitions:** glazed tile; hollow tile; plaster; marble toilet partitions. **Fenestration:** aluminum frames and sash; double-strength A, heat-absorbing, and tempered plate glass; glass block. **Doors:** aluminum; hollow metal; steel; overhead; elevator doors.

EQUIPMENT: Heating: three horizontal water tube boilers, two of which are oil-fired; the other, gas; hot water storage tank; automatic controls; unit heaters; convectors; booster pumps; vacuum pump. **Electrical:** duct system and all power installations—heavy-wall galvanized steel conduit; switch gear; load centers; circuit breakers. Turbine generator; storage battery—D. C. control and emergency lights; synchronous motors (for low-lift pumps); air-conditioning unit for condensation control. **Fixtures:** Chemical Building and Basin Galleries—incandescent reflector lamp units; Low-Lift Pumping Station and Filter Galleries—high bay units; Filter Bed—flood lamps; Corridors—directional lens, incandescent units; Office areas—fluorescent troffers.









Top of page, left: general view of Chemical Building from the northwest; entrance lobby and public toilet rooms in left wing.

Above, left: scale room, where amounts and weights of chemicals are carefully supervised. Right: chlorine treatment room.

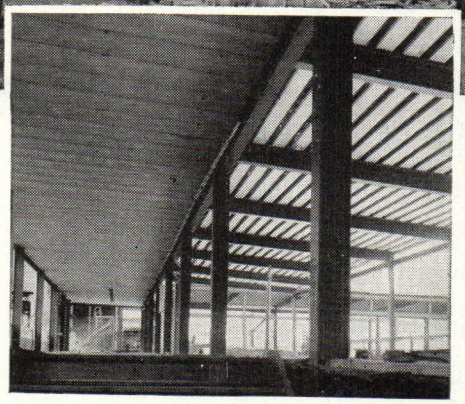
CHEMICAL BUILDING: immediately west of the Low-Lift Pumping Station (across a service drive and rail spur track that comes between the two buildings) is the Chemical Building shown on this page. Unlike the other buildings of the Plant, the Chemical Building is entirely of reinforced concrete, the interior finished in buff glazed tile and exposed concrete, with the chemical feeding equipment as the center of interest. The exterior, like those of the other buildings, is surfaced with limestone.

Below grade are the raw-water conduits, fed from the low-lift pumps, from which the water passes to the two-story mixing and settling basins and so, eventually, to the Filter Building. Most of the 95-foot height of the structure encloses an intricate series of chemical storage and feeder devices which, by gravity, feed chlorine and flocculation chemicals down into the raw water in proper proportions before the water flows to the underground mixers and settling basins.

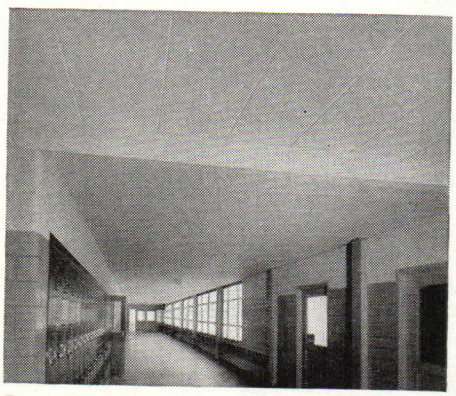
Right: the glass-walled stairwell in the northeast corner of the Chemical Building. Walls are finished in buff glazed tile.

Quality School Construction
...UNDER 60¢ PER CU. FT.

Fenestra insulated "C" Panels used as a spandrel between windows of first and second floors. Four panels high. 14′ long panels laid horizontally.



Exposed corridor roof shows Fenestra "D" Panels laid flat side down. Main roof area under panels at right was finished with suspended plaster ceiling. Roof was finished over a large area early in construction.



Exposed ceiling of structural Building Panels wall to wall. Factory prime-painted, Panels provide a smooth surface, economically finished by adding a coat of paint. Attractive, noncombustible. Note Fenestra Hollow Metal Doors, Fenestra Intermediate Windows.

How Fenestra Steel Panels, Windows and Doors contributed to economical construction in the Robert N. Mandeville High School at Flint, Michigan.

Architects Bennett & Straight of Dearborn, Michigan, faced a familiar set of requirements:

—Large size, with a layout involving considerable perimeter for good daylighting.
—To be ready for fall occupancy.
—Limited budget, calling for low cubic-foot cost.

Convinced of the speed of erecting with Fenestra* Building Panels, the architects checked costs . . . saw how on-the-site labor could be saved if the building was planned specifically to use standard units to minimize special work.

They decided on a 7′ module. Classrooms were established in a 28′ width, with partitions spaced at 14′, 21′, 28′ and 35′ intervals. The structural steel frame was designed in a bay size of 14′ x 28′, saving weight in steel. Saving in roof construction was achieved with standard Fenestra Type D Panels on the 14-foot span. Standard Type C Panels formed spandrels between floors and the window walls of Fenestra Intermediate Projected Windows.

For the roofs of the 100′ x 100′ gymnasium and the shop, Fenestra Acoustical Holorib Roof Deck was used. This provides a surface for application of roofing materials. The underside provides a sound-absorbing, perforated surface. It is noncombustible, and being steel, withstands impact. Holorib was used as the permanent reinforcing form for the seats in the spectator stands of the gymnasium.

Fenestra Panels—Fenestra Windows—Fenestra Doors—combined in this structure to help the architects and contractor achieve their triple goal of a sizable, sound structure, speedily erected, at low cost.

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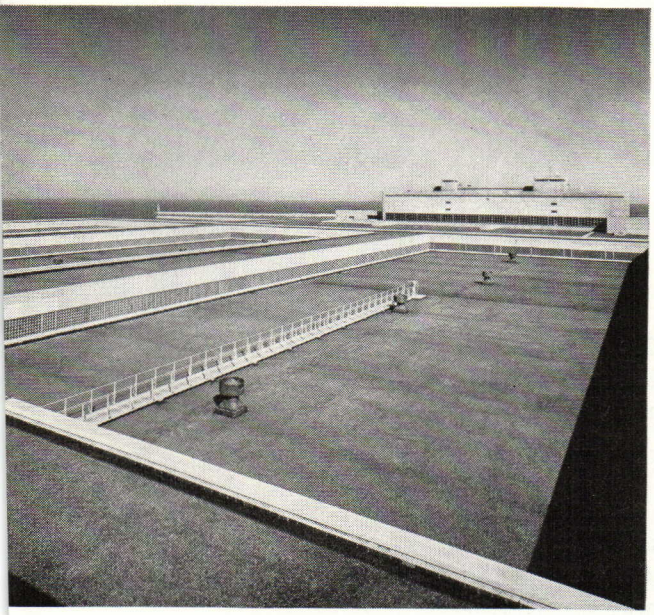
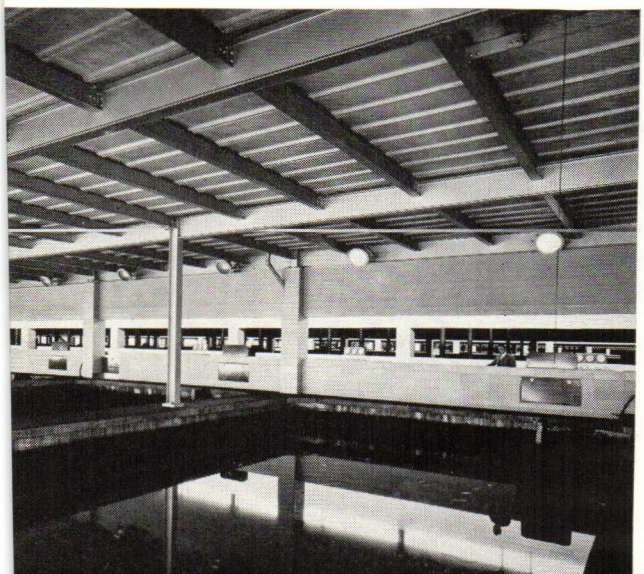
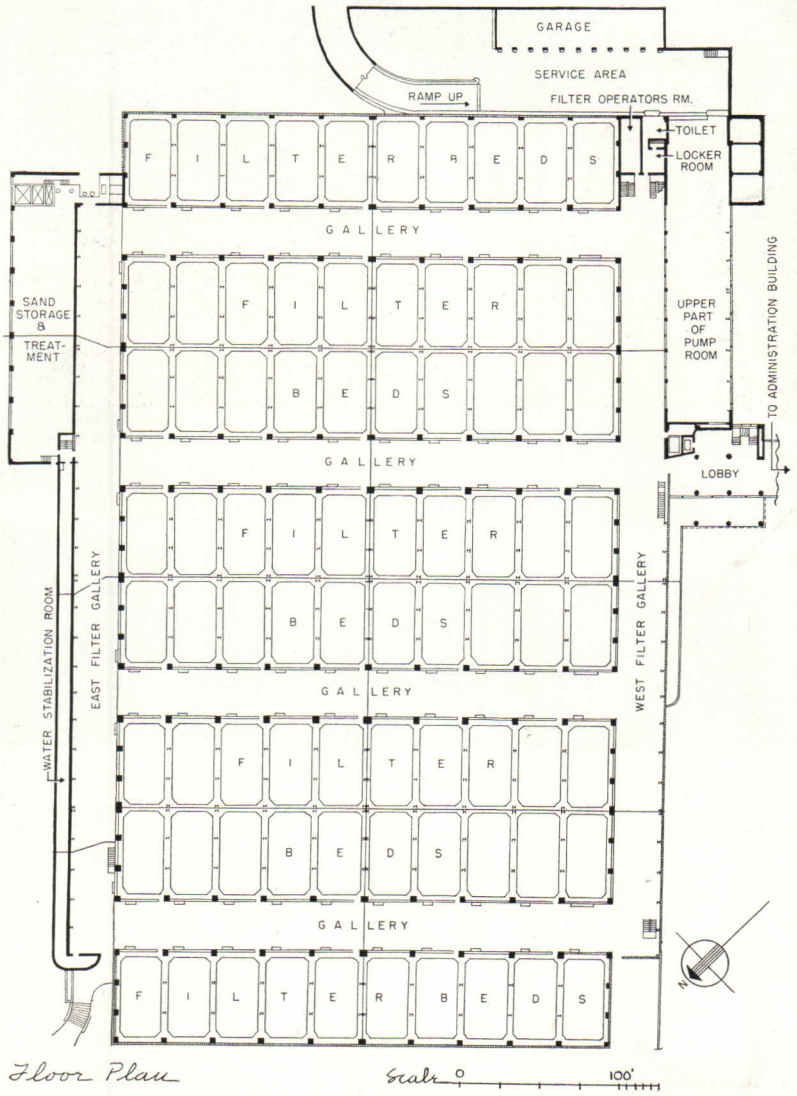






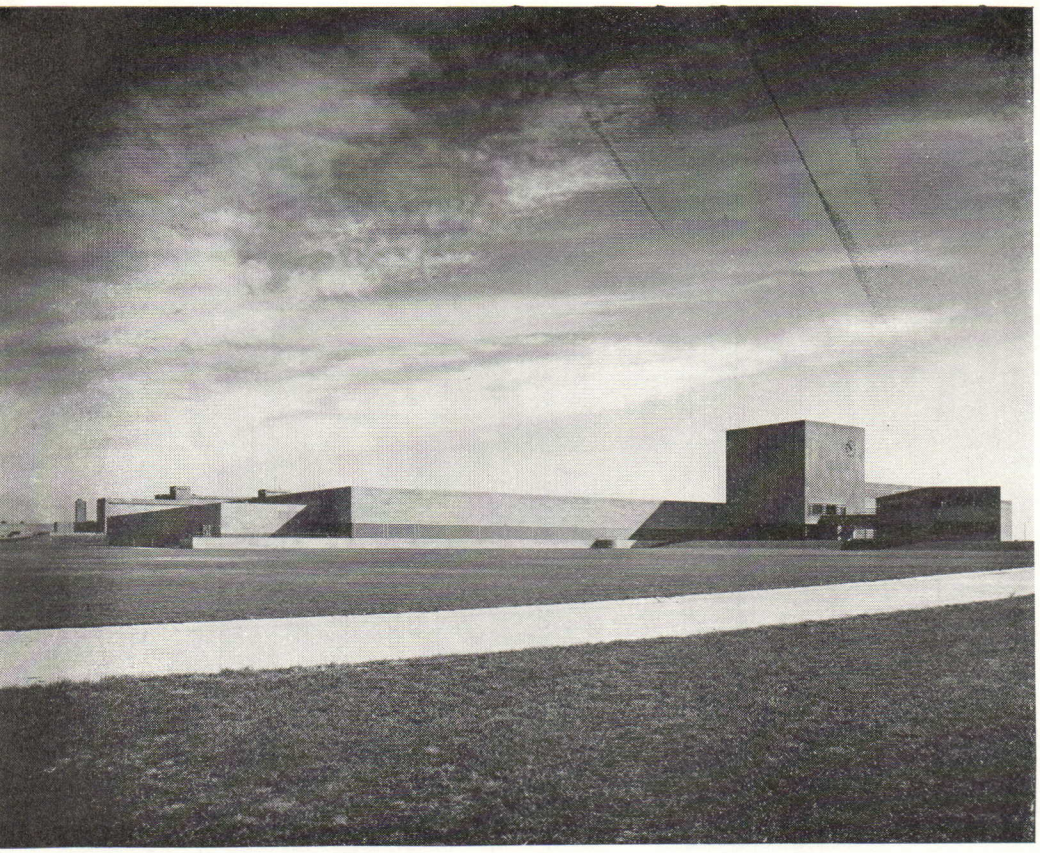
FILTER BUILDING: this vast structure, integral with the laboratories, connects by a passage to the Administration Building at the extreme western (landward) end of the plant. Eighty filter beds of the rapid-sand type are arranged in rows of ten each, with operating galleries along east and west ends of the building and between each pair of rows of filter beds. The intermediate, 30-foot-wide galleries extend above the roof line of the building and become glass-block clerestories. Beneath these galleries are the huge valves and controls for both the filtering process and for backwashing the filter beds.

The pump room at the southern corner of the building (with storage tank housed in the square tower above) contains four vertical-shaft washwater pumps (with a 7,000 gallon per minute capacity) used for backwashing the filters.

The building is steel framed and surfaced with limestone. Interior finishes consist of terra cotta in aqua-blue tones and terrazzo flooring in a contrasting green shade. The filters themselves are of structural concrete.

Above, left: view across roof of Filter Building, showing glass-block clerestories that mark the operating galleries; Chemical Building in distance.

Immediately at left: typical view of filter beds, with operating tables bordering gallery in background. Each filter bed is approximately 26′ x 54′ in area.



Left: general view of entire plant: Low-Lift Pumping Station at extreme left; Filter Building, water tower, and Administration Building right. This tremendous plant has a total staff of only 155, including laboratory technicians and office workers.

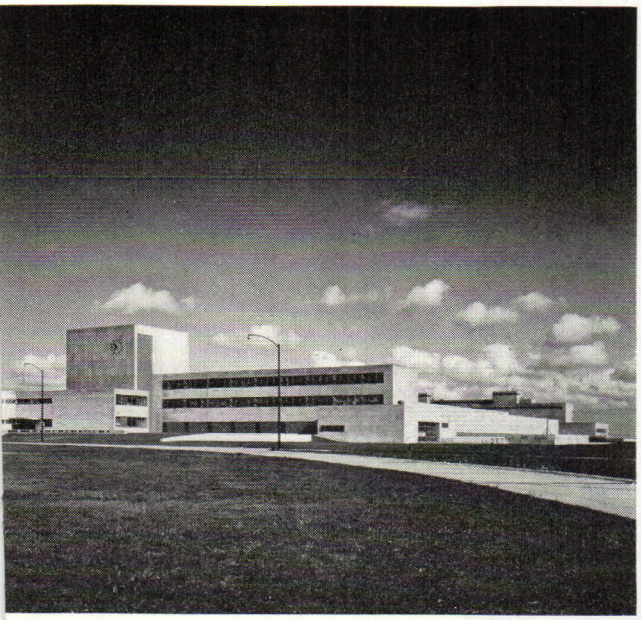
Below: detail of Administration Building (block at left) and stair and water tower. At right are the two floors of laboratories above the filter-washing pump room.

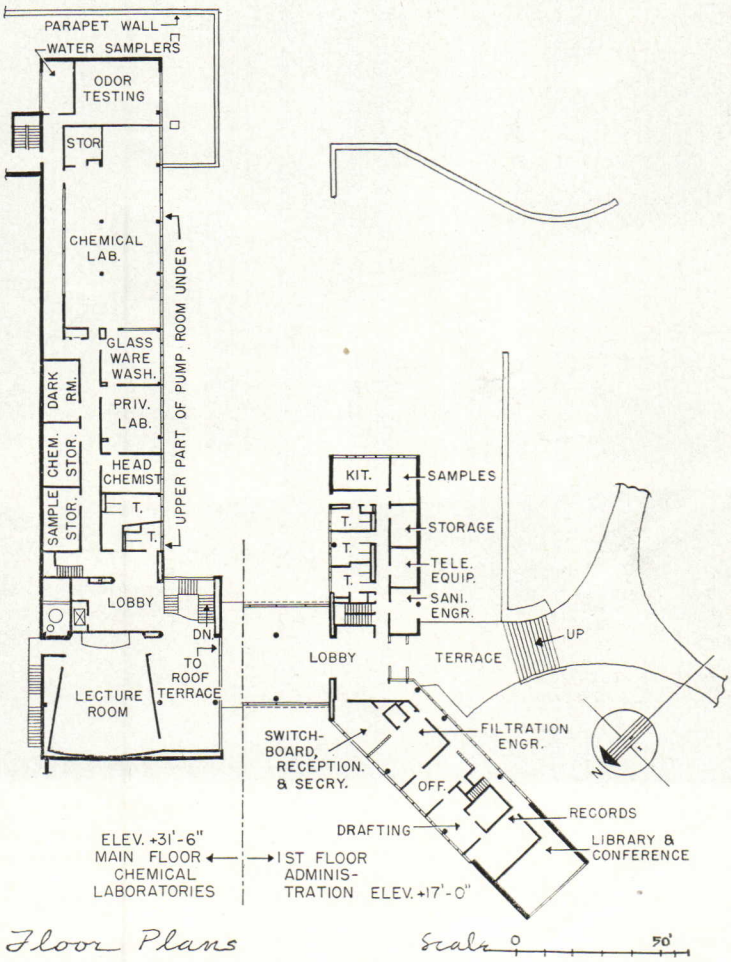
Top: across-page: general view from southwest approach.

ADMINISTRATION BUILDING AND LABORATORIES: at the landward end of the plant is the two-story Administration Building, arranged in two wings; one, parallel to the other buildings; the other (the wing to the north) angled on an exact east-west axis. The building is constructed above the filtered-water reservoirs.

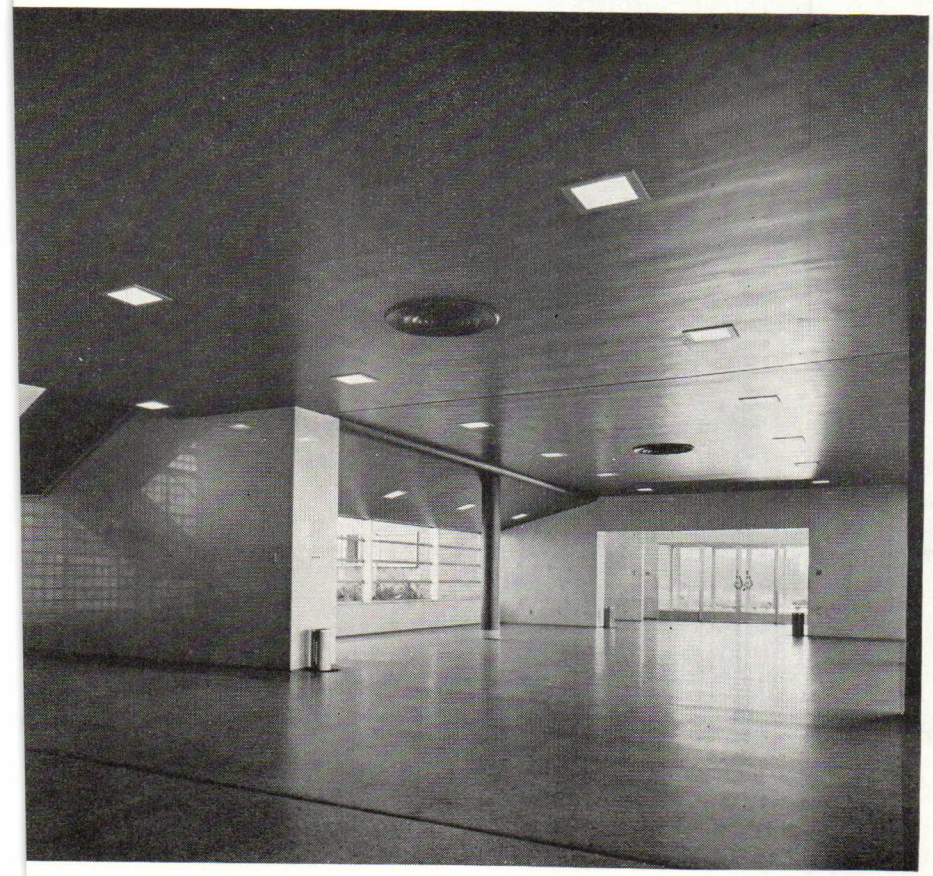
Housing the business offices, engineers' offices, and attendant services, it is joined by means of a glass-walled lobby to the Filter Building. This lobby also serves two floors of laboratories that occur (at the southwest corner of the Filter Building), above the pump room that is used for periodic washing of the filter beds. A stairway and an elevator lead up to the lower floor of laboratories from the middle of the lobby. The tall mass of the stair tower also encloses a storage tank for the filter-washing process.

Like all the other buildings, except the Chemical Building, the Administration Building is a steel-framed structure. The walls are outside the columns and have continuous bands of windows to light the offices. The entrance lobby walls are faced with marble; the floors are dark green terrazzo, and the ceilings chocolate-red-painted plaster. Office and laboratory areas have rubber-tile floors and plastered walls and ceilings.

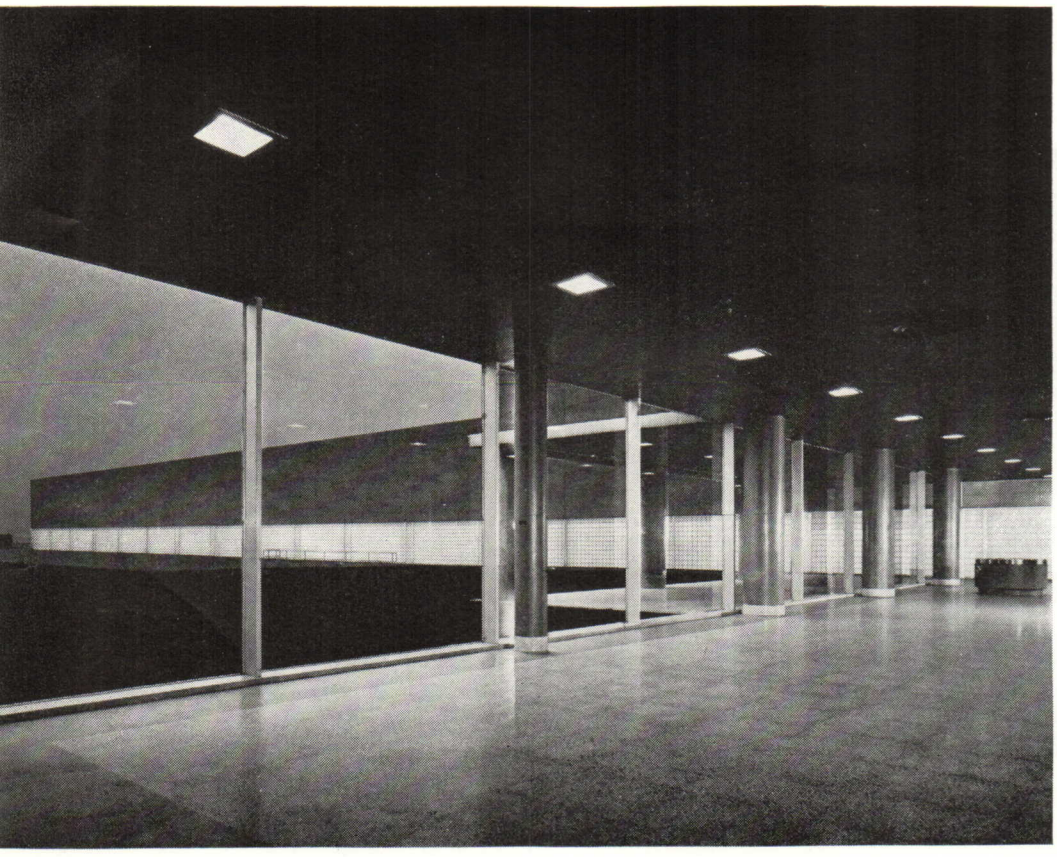




Floor Plans

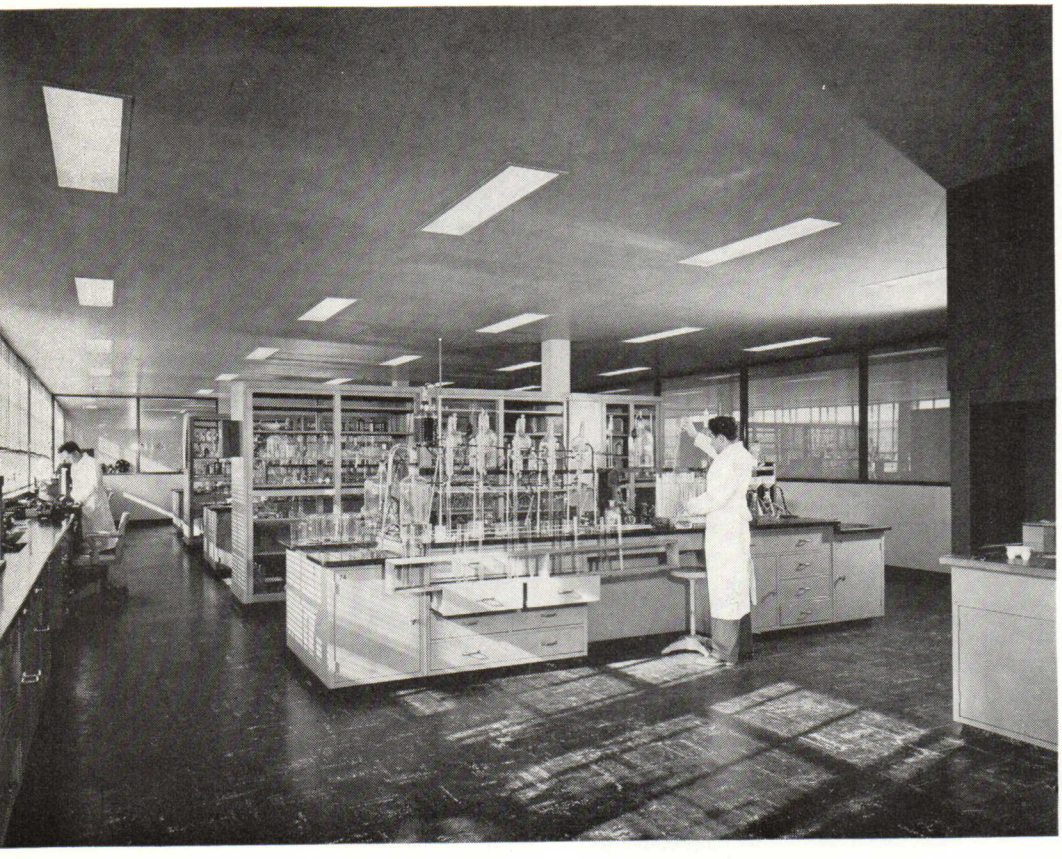


Left: the marble-walled lobby, looking back toward the Administration Building entrance. Stair (detail picture above) leads up to the lower of the two laboratory floors.



Top: looking through the north wall of the lobby behind the Administration Building at the glass-block band bordering the west gallery of the Filter Building. The circular object at the end of the lobby is an "observation well" for viewing filtered water.

Bottom: Chemical Laboratory in the building at the southwest corner of the Filter Building.



Water Sources and Treatment for Private Systems

By WILLIAM J. McGUINNESS*

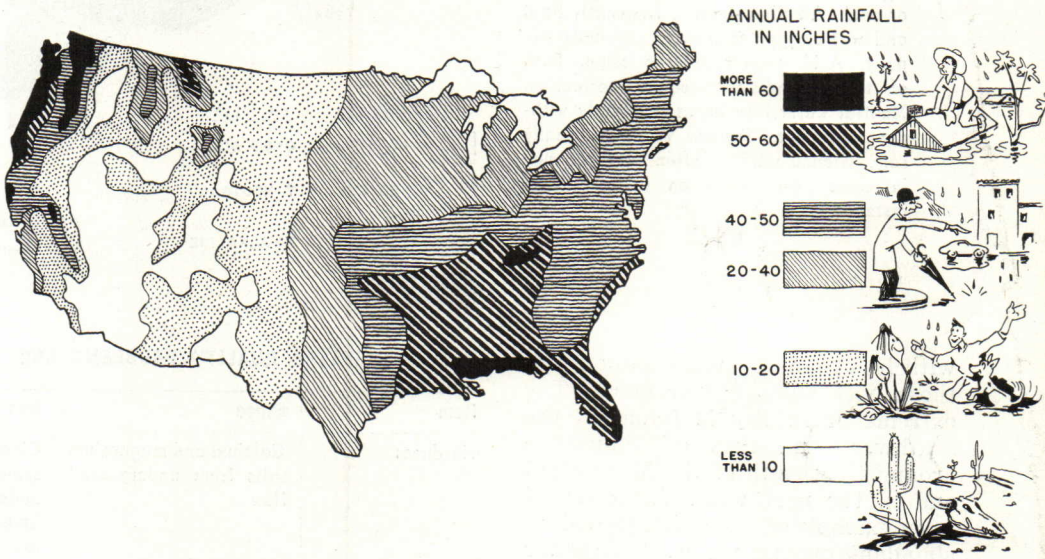


Figure 1: records of the United States Geological Survey are useful in finding the average annual rainfall in any part of the country. Surface water resulting from this precipitation may vary a great deal in any given location and in some cases will be undependable for use by a small, private consumer. Ground water reached by wells, while also dependent upon the rainfall, is somewhat more constant in level and yield. Easier treatment problems also generally recommend the use of ground water.

Role of the Architect

When a community or building is planned for an area where no municipal water supply exists, problems frequently arise in obtaining water of adequate quantity and acceptable quality. As the advisor of the owner, the architect often guides the investigations for the solution of such problems. The procedure includes the procuring of chemical and bacteriological analyses of the water, drilling to water-bearing strata that will assure a proper yield, the selection of suitable piping material, and the choice of proper pumps and treatment processes. In areas where conditions are doubtful, such studies should be initiated at the proposed location before site conditions are fixed. Following an approval of the site and the volume and nature of the supply, decisions must be made concerning the need for softening, purification, and the correction of other possible detrimental qualities for the benefit of occupants, equipment, and piping.

Recently a large number of architects were questioned about the extent of their practice beyond city water supply. Almost all of them had designed buildings (schools, hospitals, residences) in such areas since 1945, and a great majority of them had been called upon to recommend a well-driller, a pumping system, and apparatus for treatment. Many factors have served to increase the number of projects built away from city water supply. Industries have shown a tendency to move from urban to rural communities. For many owners this has resulted in lower taxes and happier labor relations; water problems, however, have increased. Fast growing communities, even in close proximity to established water companies, have found that their needs often exceeded the resources of the general public supply. A committee of the American Society of Civil Engineers, following two years of study, has stressed the difficulty faced by water works in meeting the greatly increased post-war demand. Equipment was unimproved during the war, and until recently, held back by the industrial lag following the war. The installation of air conditioning often calls for a private source of cool water even in buildings otherwise supplied from city mains. In these cases the need is for great quantities of water which will be used and then dispersed back into the ground. It is sometimes more economical to provide a private well for this purpose than to buy city water in the quantities required. Often this water must be treated in areas where the hardness of the water would result in the deposit of scale on the equipment. In the case of corrosive waters, treatment is equally necessary to save piping from destruction or clogging by rust. Occasionally the general needs of a building are such that a private supply may prove more economical than city water even though the city supply is directly available.

*Associate Professor of Architectural Engineering, Pratt Institute

Water Sources in General

Water may be taken from a number of sources; its quantity and quality vary accordingly. Rainfall may be caught on roofs or other specially prepared areas and then stored in cisterns. Bermuda uses this system because of the porosity of the coral below grade and the general proximity to the sea. Wells in this soil are brackish. Rain water is soft and pure but the process of collection and storage is difficult. Outcroppings such as artesian wells and springs may be utilized but their yield is sometimes undependable. Many large cities, New York for example, make use of normally abundant supplies from lakes and rivers. These waters are rendered pure and palatable by aeration, filtration, and chlorination. Under the control of a large city such treatment is entirely practicable, but for the use of an isolated building, well water is preferable. Its use minimizes the possibility of pollution and the unpleasantness of turbidity, odor, and color. The abundance of ground water is dependent upon the mean annual rainfall and the proximity of the site to the points at which such precipitation collects. Figure 1 shows the variation of rainfall in the United States, from areas

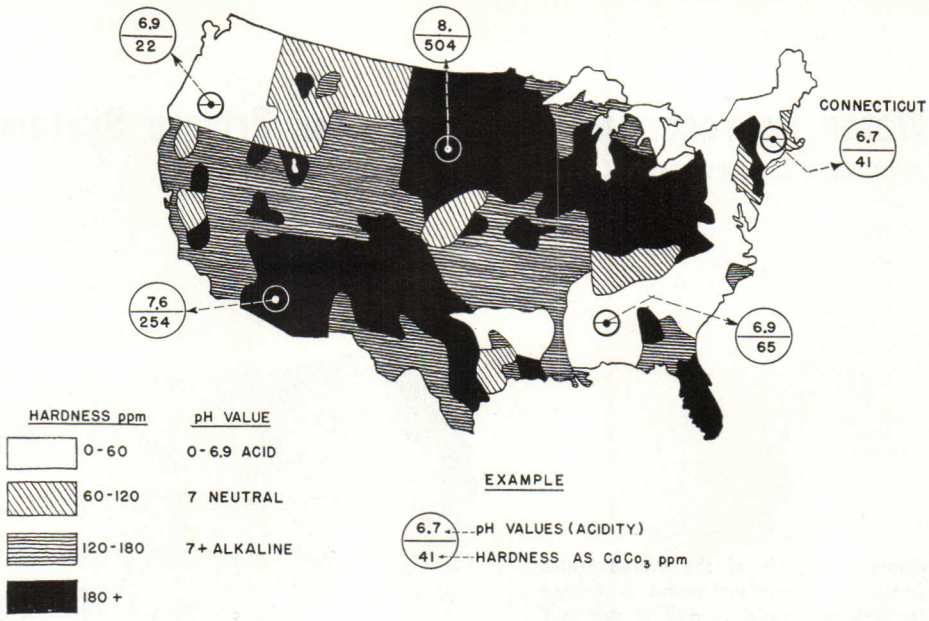


Figure 2: water is either alkaline, neutral, or acid. Alkaline water is frequently hard and will clog pipes with an insoluble deposit. Acid water causes corrosion. Both of these conditions require correction. Neutral water may be used directly without treatment. Surface water is usually soft. Ground water is often hard but may in some cases have an acid reaction instead.

with less than 10 inches annually to those with 60 inches or more. The extreme of aridity is found in the southwest and that of abundance around the mouth of the Mississippi and in the northwest. Long Island is an example of a location providing abundant ground water. The water table is encountered at depths varying from 5 to 30 feet. It is possible to pump water in almost any quantity. It is pure and requires little treatment. In the southwest water is difficult to find. In this region communities are likely to develop around acceptable sources. Ground water levels throughout the country remain quite stable. In spite of the drought which occurred in some parts of the country in 1947, there was no nation-wide decline in ground water level and many states maintained levels at or above their average position. As to fluctuations during the year, many locations maintain a water table with a variation of less than a foot; others vary as much as 20 feet. This is not considerable since it is usual to count on a well which taps a fairly deep stratum to guarantee quantity and purity. Underground conditions should be investigated from the experience of well-drillers long established in the vicinity. The records of the state and of the United States Geological Survey are also valuable for this purpose. In Figure 2 it will be noted that hard waters are usually found in areas where water is scarce (compare with Figure 1). Such waters are taken from deep levels after flow through minerals. Where water is abundant acidity is most common because of the entrainment of oxygen and carbon dioxide during flow at or near the ground surface level.

Investigation for Yield of Wells

The amount of water in gallons per minute that needs to be taken from a proposed well is set by the requirements of the building to be supplied. Usually a large storage tank is used to supplement the delivery of the pump during peak hours. The pump has a capacity sufficient for the "average" hour. It is logical that the pump should not run continuously and also that it should not fall behind in its job. A margin of safety and the possibility of expansion should be considered. In districts where there are numerous wells, the records of well-drillers are very informative. They may indicate the kind of strata to be encountered and the possible yield and quality of the water. Where such records do not exist it is necessary just to go ahead and drill. Upon reaching a trial level it is possible to make a test to determine whether the desired flow is obtainable. If it is not, the well may be "developed" or sunk to a lower level. Figure 3 indicates schematically the method of making a yield test. The orifice meter shown is a 6-inch diameter pipe with a 4-inch diameter orifice. A water-tube let into the side of the pipe measures the pressure in inches of water above the center of the pipe. This is referred to as a 6" x 4" orifice and it is one of many, varying from 4" x 2½" to 10" x 8" for various yields. The chart applying to the 6" x 4" orifice is shown in the same figure. On this curve may be read the yield for any pressure shown on the tube. Thus, for 9 inches of water the flow is 200 gallons per minute. The hook-up consists of a pump connected to the well and discharging water freely through the orifice a few feet above the ground. The orifice must flow full. This test may be run for 24 hours or more to give assurance of a sustained yield for the needs of the

TABLE 1: WATER QUALITY PROBLEMS AND THEIR CORRECTION IN PRIVATE SYSTEMS

item	cause	bad effect	correction
Hardness	Calcium and magnesium salts from underground flow	Clogging of pipes by scale, burning out of boilers, and impaired laundry and food preparation	Ion exchanger (Zeolite process)
Corrosion	Acidity, entrained oxygen and carbon dioxide, (low pH)	Closing of iron pipe by rust, destruction of brass pipe	Raising the alkaline content (Neutralizer)
Pollution	Contamination by organic matter or sewage	Disease	Chlorination by sodium hypochlorite or chlorine gas.
Color	Iron and manganese	Discoloration of fixtures and laundry	Precipitation by filtration through manganese zeolite (Oxidizing filter)
* Taste and Odor	Organic matter	Unpleasantness	Filtration through activated carbon (Purifier)
* Turbidity	Silt or suspended matter picked up in surface or near-surface flow	Unpleasantness	Filtration

* Note: These problems are not common in private systems using deep wells

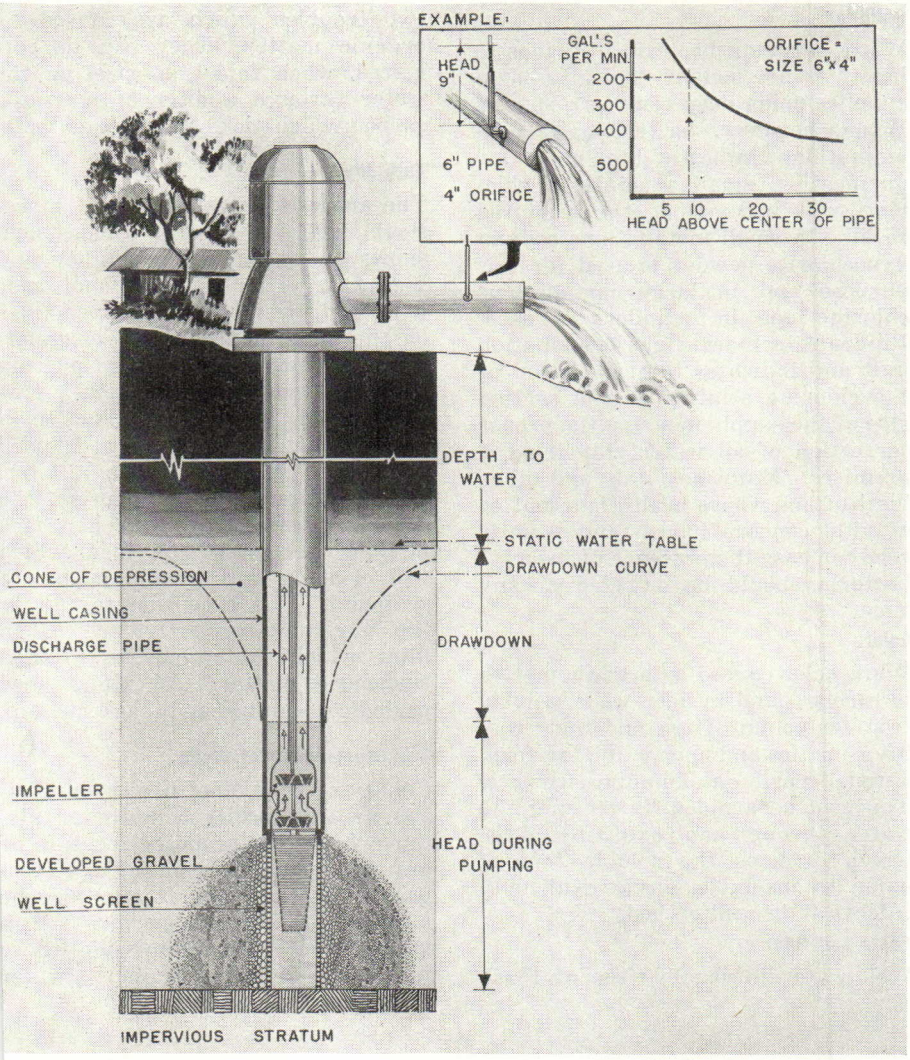


Figure 3: following the decision to drill a well and the discovery of the distance down to water, it is necessary to try the pump in operation. Sufficient water must be constantly available. The drawdown during operation must not be excessive. A small drawdown will call for less power and will give more assurance of constant flow.

roposed building. During the test is necessary to measure the depth the water level during pumping. 'rom this and the depth to the static ater level (previously determined), is possible to compute the "draw-own." It is desirable to have the ater level as high as possible while mping; it reduces the power eeded and guarantees the supply of ater to the well screen in the event fluctuation resulting in the drop-ng of the water table. A number methods are used for finding the epth to water, including the obser-ation of the wetted length of a eighted tape lowered into the well d pulled up for inspection.

vestigation and Correction for Quality

able 1 lists the difficulties that may encountered in private water sys-ms; it describes their bad effects d the methods of correction. Most of these items will be evident in a chemical analysis. For example, a report for a well at a large residence in Connecticut pointed to an acid reaction. The water is now being treated to correct this condition; hardness presented no problem. Both the pH indicating acidity and the total hardness in the report agreed substantially with the more general indication for the State of Connecticut given in the map shown in Figure 2. Notwithstanding the aid of such general guides, specific tests should be made at every proposed well and continued periodically. Water laboratories and treatment equipment manufacturers may be retained to make such tests. An equally important matter is polution, which is shown in a bacteriological test obtainable from the State Health Department. This too should be repeated periodically to guard against sudden change which might result in disease or epidemic.

Hardness

When alkalinity exists in the form of calcium and magnesium salts, as it usually does from flow in limestone and other mineral deposits, hard water results; this is probably the most common problem in water treatment. These salts deposit in pipes and equipment forming an insoluble scale which can close up pipes within a period of a few years. The action is accelerated by heat, so hot water pipes are most vulnerable. In boilers the scale changes the heat-transfer qualities of boiler tubes and causes them to burn through. Hardness is costly in every respect; it makes laundering difficult because soap will not lather properly and because there is an insoluble deposit on clothing. Similar difficulties occur in dishwashing and personal bathing. Vegetables prepared with hard water are often tough and unpalatable. Various degrees of hardness are encountered. The approximate low and high limits are 10 parts per million and 1800 parts per million. Waters containing over about 65 parts per million require treatment. Water for high-pressure boilers, however, should have even this small amount of hardness removed. Reference to Figure 2 will indicate that in many parts of the United States the use of water without treatment is almost impossible. The zeolite process is the one commonly used for softening water; its action is indicated in Figure 4. A zeolite softener contains a bed of ion exchange material which removes the calcium and magnesium from the water and replaces them with an equivalent amount of sodium. Periodically the softener is regenerated to restore its softening capacity. The ion exchange bed is first backwashed

to remove dirt and suspended matter caught on the top of the bed. A solution of common salt is then introduced to restore the sodium content of the ion exchanger and displace the calcium and magnesium which are flushed to waste in the rinsing step that follows.

Acidity

Soft waters are acid in reaction and will attack pipes and equipment. In some industrial communities acid wastes find their way into the water causing this condition. More frequently the dissolved carbon dioxide or oxygen are the causes of acidity. Iron pipes oxidize or rust on the inside when handling this kind of water. The oxide is 10 to 15 times the volume of the metal that formed it and so will quickly fill the pipe. Non-ferrous pipes are eaten away or "de-zincified." The acid attacks the zinc which is alloyed with copper to make brass. Although copper is the best material to use for pipes handling this kind of water, often enough the copper will dissolve in the water to cause green or blue stains on plumbing fixtures or on laundry. Treatment is the safest solution. It is accomplished by a neutralizing filter shown in Figure 4, the action being to change the acid condition to an alkaline one.

Pollution

Water-carrying bacteria injurious to health is not usually encountered in supplies using deep wells as a source. When, however, bacteriological examinations indicate the need for purification, small amounts of chlorine will accomplish the required result. In small installations sodium hypochlorite powder is used for this purpose and in large installations chlorine gas in cylinders is used. Figure 4 includes a gas chlorination unit and indicates the connection of the chlorine solution to the suction side of the supply insuring the proper correction of all water entering the premises. Many hospitals and other institutions where health is a matter of vital concern have standby units ready in case the presence of harmful bacteria should be detected at any time.

Color

While color caused by organic matter is rarely found in deep wells, soluble iron compounds often find their way into supplies and upon oxidizing form a red deposit on plumbing fixtures. This can be avoided by passing the water through an oxidizing filter which oxidizes the soluble ferrous oxide to insoluble ferric oxide and catches it in a filter bed.

Taste and Odor

Well water is usually free of these two troubles which are caused by organic matter. They can be corrected, when found, by passing the water through a filter of activated carbon which picks up odor and taste.

Turbidity

The analysis report for the Connecticut well, previously mentioned, shows an absence of turbidity and sediment. This is the usual case with well water. Surface supplies on the other hand require coagulating equipment and filters to pick up suspended matter, etc., which is carried in by the water. The small amount that may be carried by well water will seldom require a filter. Where a filter is used for any of the other processes described herein a filtering action is provided which will clear up any small amount of sediment. The exception to this is the purifying or activated carbon filter which is too porous to hold suspended matter. All filters need periodic cleaning and backwashing.

The Development of Wells

County or municipal health authorities usually specify a minimum distance from the proposed location of any well to the position of any cesspool or septic tank. It may also be necessary to obtain a permit from a state conservation commission whose interest it is to maintain the water

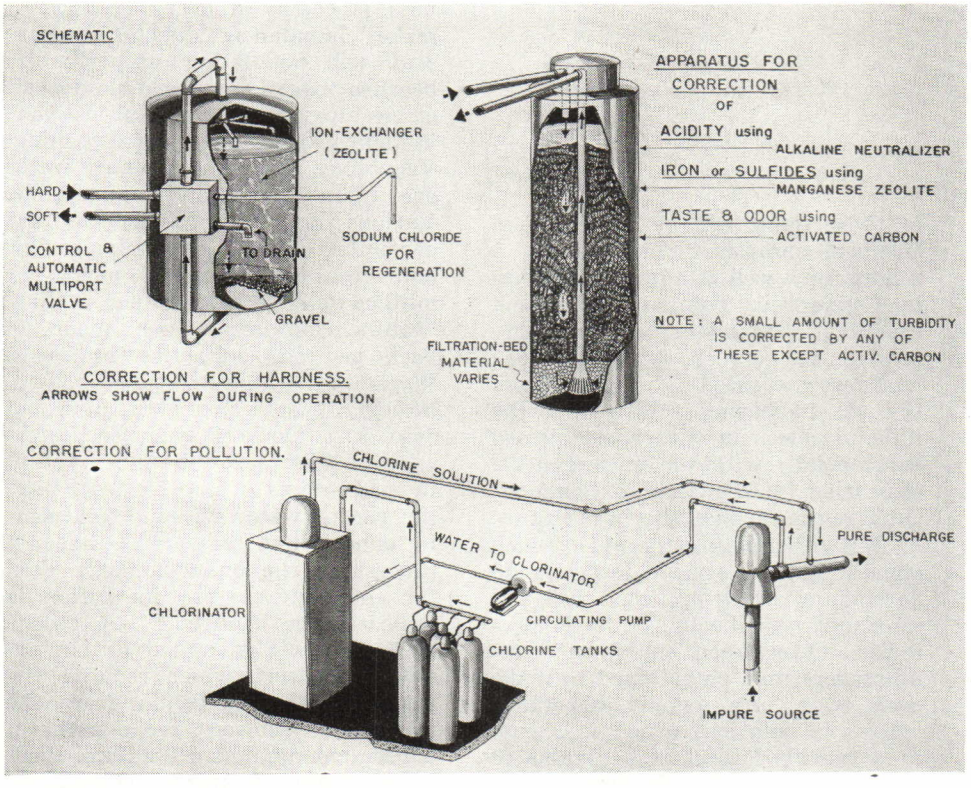


Figure 4: hardness yields to treatment in an ion-exchanger. Soft water results. The hardness is deposited in the filter. The exchanger may be back washed and regenerated. Iron and sulphides are removed by manganese zeolite. Acid may be neutralized. Taste and odor may be removed by activated carbon. Impure supply may be corrected by chlorine gas as shown or in smaller installations by hypochlorinator using a powder.

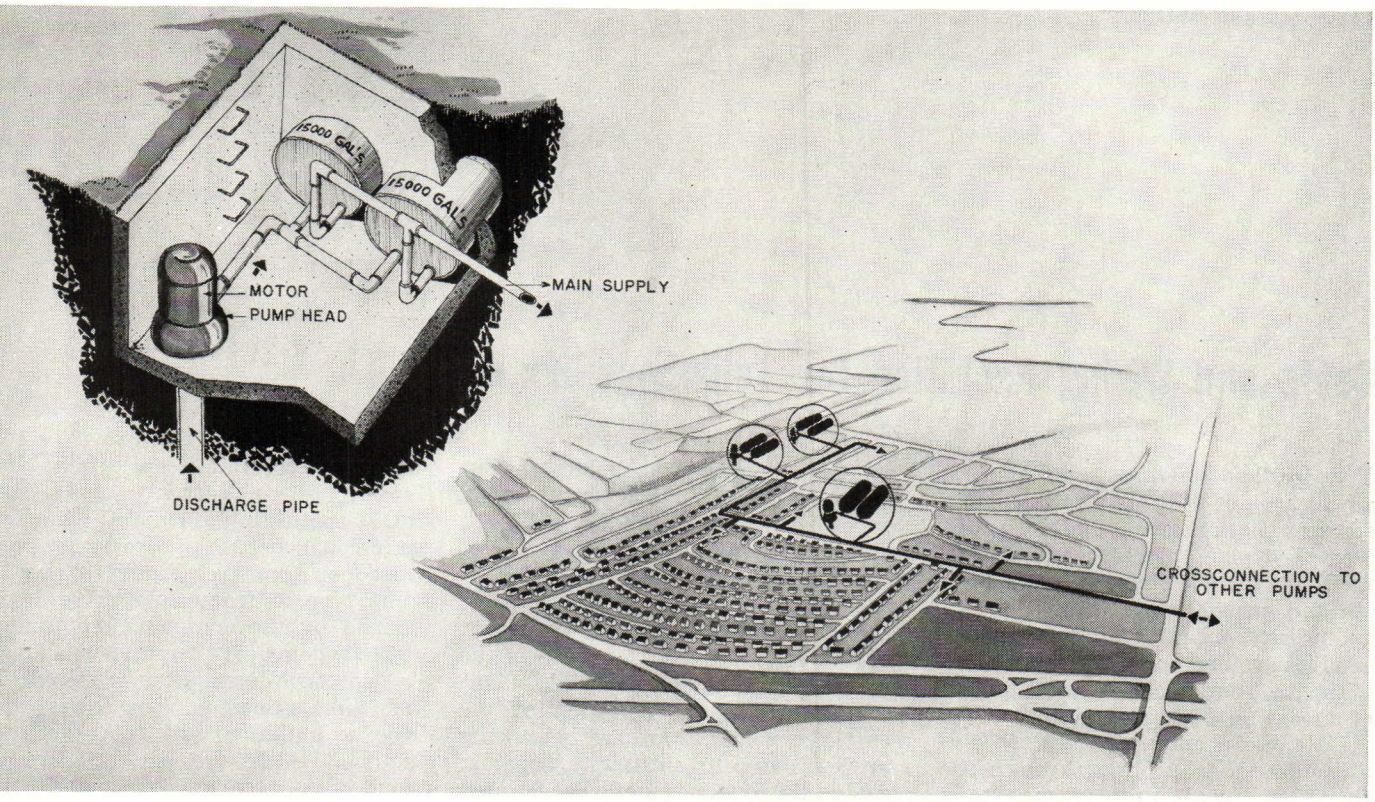


Figure 5: the speed of the construction of Levittown outstripped the resources of the general public supply. This illustration shows about one third of the development and three of the ten pumping stations and wells. All water is obtained within the area. Mains are cross connected.

ple and prevent its being lowered excessive pumping. All details of e installation must be given, inding the result of pumping tests, asurements to static water level, ount of drawdown, etc. Wells can developed or improved if they do have sufficient flow or if the drawwn is excessive. This is accomshed by removing the fine material the sand and gravel bed surround- the well screen. This fine material washed out by means of a surge nger which is moved up and down. means of this reverse flow, much d is dislodged and flows out of well. Special patented compressed processes are used to a similar . A certain amount of this develnent is always necessary to pret the well from supplying gritty er for a long period at the beging of operations. This gritty dition would result in unsatisfacwater and in serious damage to pump. Other things that affect flow and drawdown are the neter and the length of the well en.

al Installation

ure 5 shows a typical private r system installed to supply the ttown residential community on Island, New York. It represents about one-third of the development and shows three of the ten pumps and some of the water mains. Here conditions of drilling, yield, and quality of water are ideal. The development's 10,000 homes plus shopping and community facilities are supplied by 10 wells using 4- and 5-stage vertical turbine pumps similar in type to that shown in Figure 3. This is a type of pump almost universally used for deep wells having a large yield. The depth of the wells at Levittown varies from 95 to 350 feet and a typical well has the following general characteristics. The well casing is 12 inches in diameter and it houses an 8-inch multi-stage turbine pump. The delivery of the pump is about 1000 gallons per minute against a pressure of 80 pounds per square inch at the pump discharge, which insures an adequate pressure at the faucets. The pumps are electrically driven and some have breakdown power in the form of gasoline motors. These cut in upon electrical power failure or interruption. Each pump is called upon to supply about one million gallons per day. Static water level is found at a depth of about 20 feet. Well screens are 25 to 40 feet long and the wells are developed by means of surge plungers and backwashing as well as compressed air. Some of the wells are thus pumped and agitated for a week or more before putting them into service. Each pump delivers into two 15,000 gallon tanks. These discharge into 10-inch mains which are cross-connected to other pump-and-tank units. All tanks are steel and are below grade. They provide air cushions against the pumping operation. Pumps and tanks are housed in shelters together with control and record apparatus. There are no overhead tanks. Before accepting a well at a given depth, yield tests are run for 8 to 48 hours to give assurance of acceptable performance. Some of the wells are as close together as several hundred feet without appreciable effect of one on the drawdown or yield of the other. Conditions on Long Island consisting of high water table, water-bearing sand and gravel, and general purity of ground water make the problem of water supply an easy one. Water at Levittown is pumped directly to the mains without treatment. Unlike other Long Island wells, which used to supply Brooklyn, this water is not hard. The treatment of a slight acid condition is under consideration. Frequent tests are made to retain a constant check on these qualities and also on the sanitary condition of the supply.

Cable and Wiring Facilities for Telephone Service

In order that the owner may take full advantage of the many telephone services that are available, the architect must plan the cable and wiring facilities so that they are both flexible and adequate for future as well as present needs. To provide an efficient system, one must be familiar with the fundamental requirements of the cable distribution system.

Telephone **entrance cables** usually enter the building through the foundation wall and proceed to a cross-connecting terminal. (Figure 1 represents a typical cable distribution system for a large building.) From this terminal, **building cables** lead up to the various floors through riser shafts. At each level, **distribution cables** usually run through underfloor conduits to telephone wall cabinets located at several points on each floor. Wall cabinets in turn connect to an underfloor duct or conduit system which carries telephone wires or cables to individual telephones or equipment.

When determining the location of the cable entrance, the telephone company should be consulted because: 1) the availability of facilities in the underground telephone cable plant often controls the selection of the entrance point; 2) where basements are too damp or subject to flooding, cable terminals must be located higher in the building; 3) should the outside cable plant be above ground, the entrance point may be materially effected. A sufficient number of 3½" pipes or similar sleeves must be provided for the basement wall, in order to anticipate future needs as well as present requirements.

Technicians from the telephone company terminate each individu circuit of an entrance cable to cross-connecting terminal. The te minal will be one of two types: wa or floor frame (see Figures 2 and 3 The type of frame is usually dete mined by the contemplated numb of telephones; if the number is larg a floor type terminal is required. addition, a terminal room is desirab for a building with this type frame. Such a room (Figure houses the terminal frame and hel protect telephone facilities fro damage through careless handli of material or minor fires. To mi mize the amount of cable require the terminal room should be locat near the center of the distributi system; this location will also co serve riser shaft space and condu facilities. In hotels, departme stores, and other buildings that

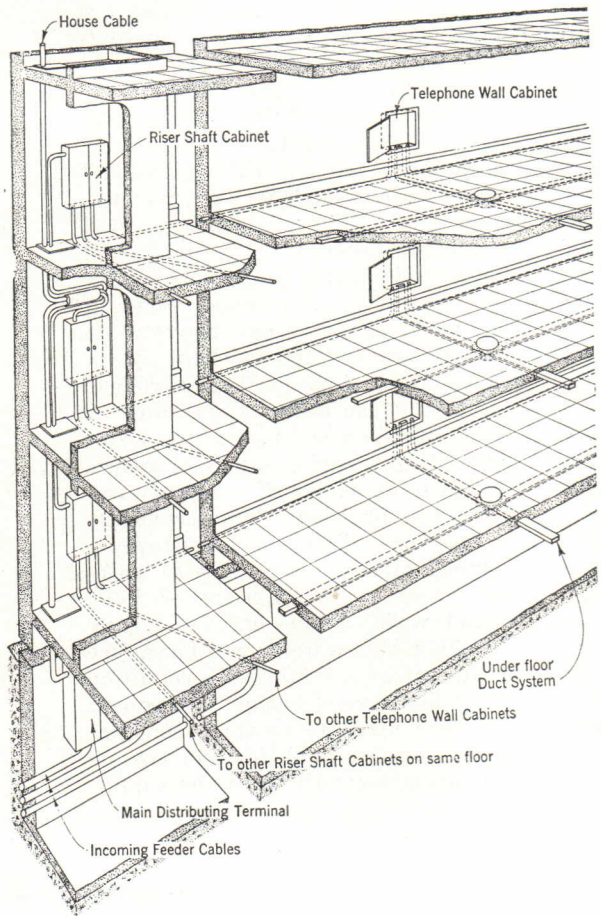


Figure 1, left: typical cable distribution system for large building.
All illustrations: courtesy of American Telephone and Telegraph Company.

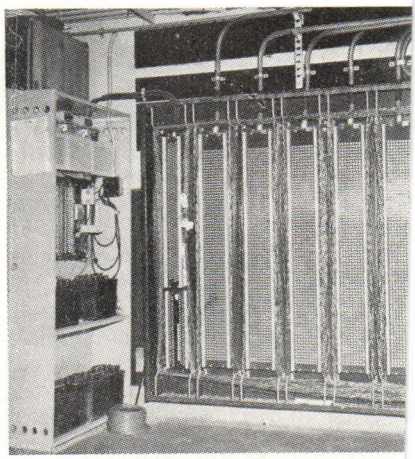


Figure 2, above right: wall frame type cross-connecting terminal.

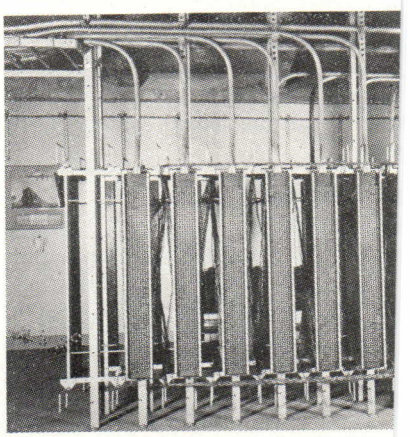


Figure 3, below right: floor frame type cross-connecting terminal.

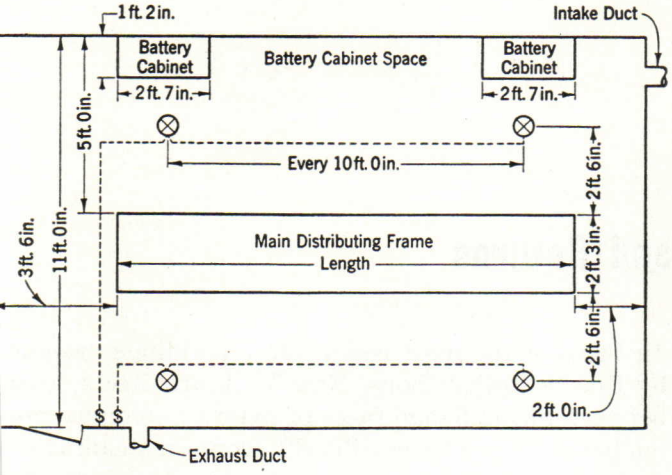
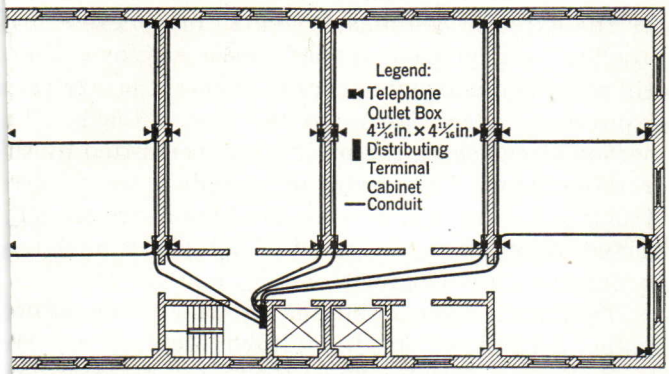


Figure 4, above: typical floor plan for a terminal room. Ceiling height should be about 9'-6".

Figure 5, below: layout of conduits employed as an underfloor distribution system.



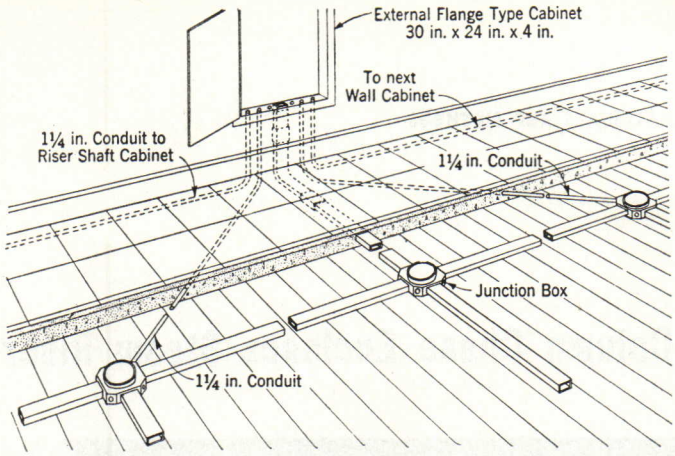
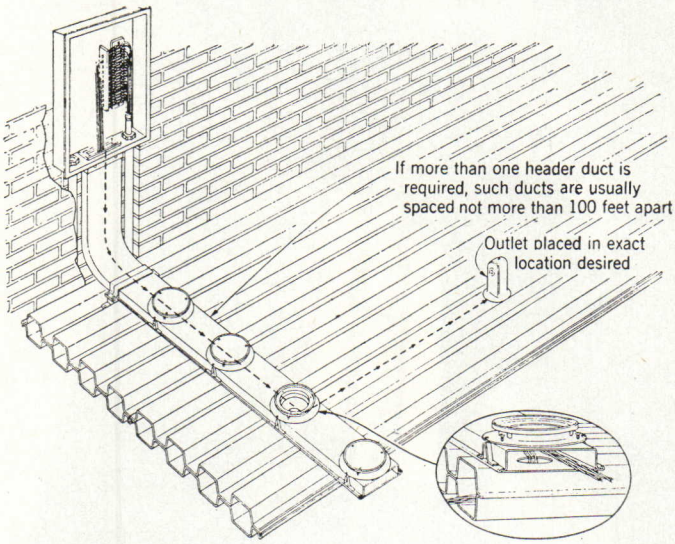


Figure 6, above: typical telephone cabinet and underfloor duct system. Figure 7, below: cellular steel floors and header ducts.



ire large private exchanges, the re center for the building is at e switch board location; therefore e terminal room should be near at point.

Riser conduits are not usually em-yed in buildings which exceed 12 ries in height nor in buildings at cover a large area. It is usually re practical to provide a separate er shaft for each section or wing a building; however, in buildings ving a relatively small area per or, one riser shaft is usually suf-ent. Riser shaft closets are most quently placed one above the other the full height of the building. well designed shaft provides an ning in the floor for the riser les; customary dimensions are wide and from 12" to 24" long. ee and one-half inch iron sleeves sometimes used instead of slots. building with adequate wiring ilities will always provide for ribution terminals at strategic nts on each floor. Built-in cabinets able for housing telephone type ninals are most desirable. A wall terminal cabinet about 24" e, 30" high, and 4" deep is ade-te for about 800 to 1000 sq. ft. of rentable floor area. Each wall cabinet should be connected to the nearest riser shaft, to adjacent wall cabinets, and to the underfloor distribution system with a 1¼-inch or larger pipe.

The logical permanent location for electrical wiring of all types is in the floors. In office space it is usually desirable to place raceways 5 or 6 feet apart to correspond with a desk length; telephone outlets should be 24 inches apart on each raceway to permit any desired spacing between desks.

If a sufficient number of conduits of adequate size are equipped with outlets at frequent intervals, an underfloor conduit system will furnish a suitable arrangement for relatively small buildings that do not require telephone circuits in open room spaces (Figure 5). In buildings having permanent partitions and walls, an underfloor raceway conduit system may be supplemented with a baseboard raceway system.

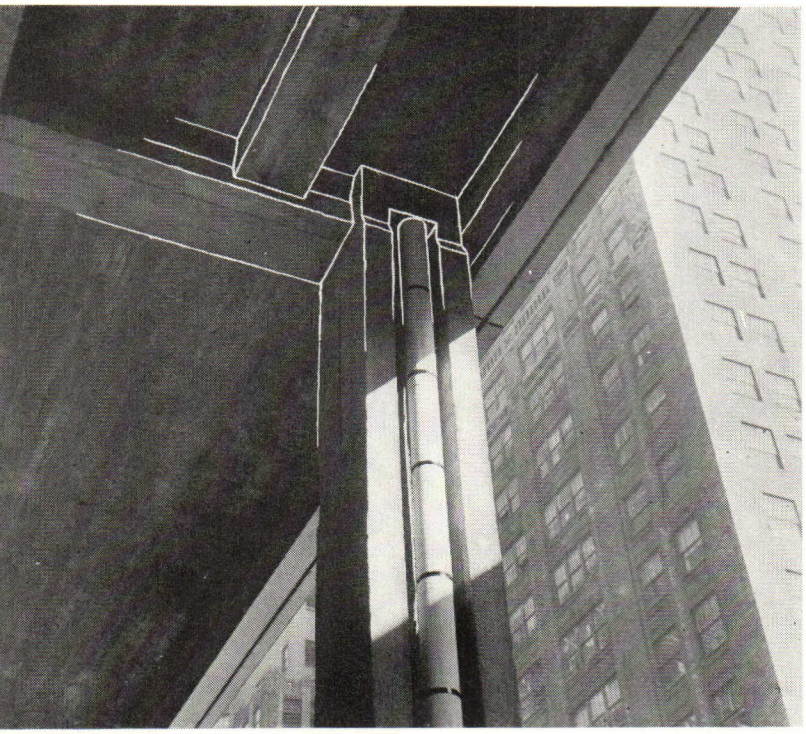
Underfloor duct systems are of two general types, either steel or fiber. (Figure 6 illustrates a typical underfloor duct system.) Single-duct systems are frequently used for telephone, telegraph, and other low-energy signal circuits. A double-duct system, however, is required if the underfloor system is to service lighting and power units.

Where a series of private offices are along an outside wall, as in a typical office building, a duct should be placed parallel to and about 3 feet away from the outside wall, and connected to the wall cabinets. Where there is open office space which requires communication circuits at various points on the floor grid, cross ducts are usually provided.

Cellular steel floors provide an excellent wire distribution system (Figure 7). Longitudinal cells are connected to wall cabinets by means of header ducts that cross the cells.

The associated companies of the Bell Telephone System maintain an architect's service to assist in the planning of telephone cable and wiring arrangements for all types of buildings and should always be consulted before final plans are adopted. More detailed information on the subject is also contained in *Interior Wiring Design for Commercial Buildings* published by The American Institute of Electrical Engineers.

Column Chase Encloses Steam Risers and Returns



In three of the most recent office buildings designe by Emery Roth & Sons, New York architects, area between inside flange faces of exterior columns, nor mally void, have been utilized to contain steam riser and returns. This design has two advantages fo preferred office space: 1) it eliminates the appear ance of exposed piping; 2) it avoids the necessity o using additional, valuable floor area which woul otherwise be required to conceal the risers.

The structural design demanded 14 WF shape for the exterior columns. After 2″ of concrete fire proofing was poured around these sections, ther still remained adequate space to enclose the size rise required to carry steam to the first setback. Thi method of enclosing the piping was permitted by th framing plan of the exterior spandrel beams (se structural drawing). The spandrel members are sup ported by brackets composed of ⅝″ plates anchore to the column flanges with angles and rivets.

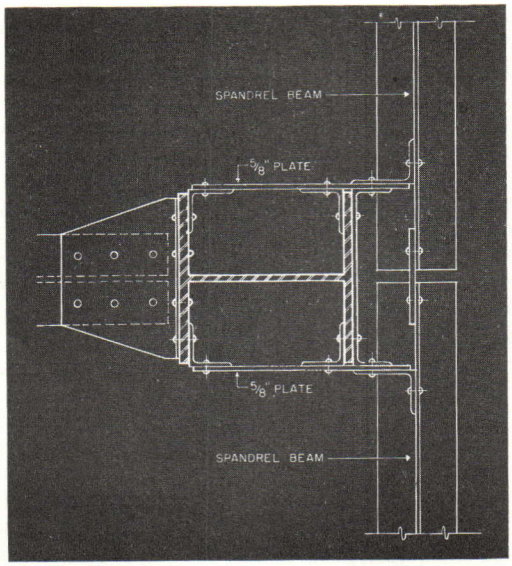
The three office buildings in which this pipin system is employed are in midtown Manhattan; the are being erected by Uris Brothers, builders an owners.

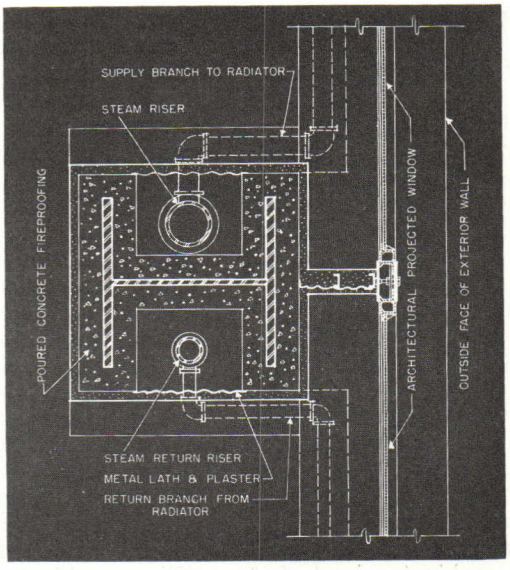
Above: construction photograph, taken from first floor level, shows steam riser protected by column chase.

Below: structural drawing, indicates detail of bracket which supports spandrel beams.

Below: architectural detail of column. Projected windows are hung from spandrel beams with angles in conventional manner. Metal lath and plaster cover chase.

Photo by Adolph Studly; courtesy of Uris Brothers





p/a products

air and temperature control

Venturi-Flo: two types of ceiling outlets for ventilating and air conditioning systems in institutional buildings. **Model J** supply outlet mixes room and supply air for rapid temperature equalization and draftless air distribution. **Model JC** operates as supply and exhaust unit. Gray prime coat or baked aluminum finish; wide range of sizes. Barber-Colman Co., Rockford, Ill.

Explosion-Proof Electric Radiator: inexpensive, self-contained heating units, approved by Underwriters' Laboratories, Inc. for use in Class I—Group D explosive industrial atmospheres. Thermostatically controlled heat output; all electrical switches and connections sealed in heavy cast iron housings strong enough to contain a flash if by chance explosive gases penetrate; other safety measures. Available in complete range of sizes. Burnham Corp., Electric Radiator Dept., Irvington, N. Y.

Gyra-Flo Exhauster: for applications requiring low operating noise levels (hospitals, churches, schools, etc.). Housing, motor, fan wheel easily removed without disturing rest of unit. Free air deliveries range from 680 to 38,000 cfm. Fully assembled shipment. Chicago Blower Corp., 558 W. Congress St., Chicago 24, Ill.

Fasco 10" Kitchen Ventilator: for ceiling or inside wall mounting. Can be installed for either single or 3-speed operation; fan unit equipped with 4-pole Fasco motor; delivers 150 cfm; minimum noise; no radio interference. Outside wall hood of aluminum, prevents entrance of rain, snow, cold, insects. Fasco Industries, Inc., 235 N. Union, Rochester 2, N. Y.

Heat-O-Meter: calculating dial for measuring radiation on steam and hot water heating systems; claimed to eliminate tedious figuring usually necessary to determine correct amount. Also contains sizes, capacities, minimum and maximum heights on old and new styles of radiators, mains, returns, risers, etc., giving correct answers to heating problems by simple turning of dial. Heat-O-Meter Co., 424 W. 42 St., New York 18, N. Y.

Model 2HW2 Hot Water Heating Plant: small unit especially designed for individual apartments. Gas-fired, cast-iron construction; can be suspended from ceiling or arranged on wall shelf. Measures 13" wide x 26" deep x 17" high. Input rating of 45,000 Btu, sufficient for 4 or 5-room apartment. Hook & Ackerman, Inc., 18 E. 41 St., New York 17, N. Y.

Vant Roof Ventilators: constructed of 16-oz. copper to go with copper gutter, flashing installations; flanged, baffled, and screened to provide weathertight and insect-proof units. Leslie Welding Co., 2943 Carroll Ave., Chicago 12, Ill.

3310 Residence Cooler: for air conditioning of average size house. Operates through duct work of blower type warm air furnace, saving cost of extensive remodeling and structural changes. Reciprocating, heavy duty 3 hp compressor; extra quietness assured by thick layer of insulation. Yates-American Machine Co., General Refrigeration Div., Beloit, Wis.

construction materials

Ty Kool Roofing: built-up roof surfacing, constructed of 17½-in. wide sheet of aluminum laminated to one side of 36-in. width of 15-lb. asphalt-saturated roofing felt. Each course laid as to provide double layer of felt protected by aluminum. Roof maintenance expense reduced; aluminum layer prevents drying out of oils and asphalts, keeps out light, moisture, ultra-violet rays. Roofing comes in 40 lb. rolls containing 72 linear ft. Reynolds Metals Co., Building Products Div., 2000 S. Ninth St., Louisville, Ky.

doors and windows

Alum Window: low-priced all-aluminum storm and screen window unit, complete with weatherstripping. Shift from storm to screen effected entirely indoors. No painting or repairing ever required. Alumatic Corp. of America, 2081 S. 1st St., Milwaukee 14, Wis.

Fenestra "Packaged" Basement Window: completely redesigned steel unit, including fully glazed window, screen and storm sash insert with screws and clips for installing. Open-in vent opens from top; positive locking device. Detroit Steel Products Co., 3209 Griffin St., Detroit 11, Mich.

No. 200 "Over-the-Top" Garage Door: sectional type, overhead door provided with rigid track-supporting framework; adjustable brakes prevent door slamming; offset, rabbeted joints seal out weather; hardware included. Available for residential garage openings 8' wide x 7' high, and 9' wide x 7' high. Frantz Mfg. Co., Sterling, Ill.

Leco-Latch: magnetic latch for use on cupboard doors; will keep warped or sagging doors closed. Consists of small magnet which will last indefinitely, steel plate, and necessary screws; no moving parts or springs. Laboratory Equipment Corp., P.O. Box 68, St. Joseph, Mich.

Residential Interior Steel Doors: new line includes swing-type door and frame for between-room use, and two-sliding panel closet door. Swing doors available in one height of 6'-8", in five widths from 1'-8" to 3'; sliding closet doors come in two standard sizes: 4' x 6'-8" and 5' x 6'-8". Truscon Steel Co., 1315 Albert St., Youngstown 1, Ohio

electrical equipment, lighting

Den-El Safety Fluorescent Lamp Guards: devices affording positive, permanent protection against hazard of falling fluorescent lamps in continuous run and end-to-end lighting installations. Made of resilient steel, making it possible for them to be sprung aside for relamping and cleaning. Den-El Equipment Co., 271 Conklin Ave., Hillside, N. J.

Visualier: line of fluorescent fixtures providing 90% illumination of fixture surface to produce uniformly low brightness; 45° shielding, both lengthwise and crosswise; large louver cells easily cleaned from floor with long handled brush or vacuum. Standard finish of baked white enamel. Fixtures may be run continuously or coupled in continuous runs. Garden City Plating & Mfg. Co., 1750 N. Ashland Ave., Chicago, Ill.

Grounding Outlet and Plug: for use wherever codes require grounding of 125v a-c single phase, or 115v d-c powered portable electrical equipment. Openings in outlet will accept new grounding plugs, standard 2-prong parallel plugs, and 2-prong polarized plugs. Available in brown or ivory plastic. General Electric Co., Construction Materials Dept., Bridgeport, Conn.

Combination Keyless Ceiling Lampholder: employs four large terminal screws, making through-circuit connections simple; eliminates wire nuts, soldered joints, or taping. Made in two sizes: #276 (4¼" diameter) and #277, oversize (5" diameter). Slater Electric & Mfg. Co., Inc., 56 St. & 37 Ave., Woodside, N. Y.

Sola "75" Fluorescent Ballast: moderately priced, specifically designed for two T12 96" slimline lamps. "Constant wattage" design will maintain constant light output with primary voltage range from 95v to 130v. Sola Electric Co., 4633 W. 16 St., Chicago 50, Ill.

Multi-Breaker: new line will handle from 1 to 42 lighting and appliance circuits; for installation in residences, commercial buildings, factories, etc. Simplified wiring. Square D Co., 6060 Rivard St., Detroit, Mich.

Fluorescent Bathroom Light: compact fixture for centering on each side of bathroom mirror. Each unit complete with switch, concealed starter, and convenience outlet for plugging in electric shavers, heat lamps, etc. White reflectors, heavily chromed end pieces. Uses single 14w fluorescent lamp. Sylvania Electric Products, Inc., 500 Fifth Ave., New York, N. Y.

interior furnishings

Slide Assembly Furniture: bookcases, desks, tables, and wardrobe units of solid core lumber faced with maple veneer, designed for assemblage at home. Double-dovetail construction makes assembling simple matter of sliding pieces together; no sawing, drilling, or hammering required. All pieces packed with directions, glue, glue-brush, sandpaper. Walter E. Blum, 230 Fifth Ave., New York 1, N. Y.

Ceramic Lamp Bases: wide selection of colors and patterns ranging from traditional to free form and sculptural abstractions. Shades designed to harmonize with lamp bases, available in variety of materials, including Polyplastex spun glass, Madagascar grass, woven reed, textured parchments. Design-Technics, 44 E. 23rd St., New York 10, N. Y.

E-Z-Way: easily installed curtain-rod unit with provisions for glass curtains, drapes, adjustable valance, and traverse. Unit can be lowered or raised from floor as little or as much as required for installation or removal of drapes; chair and stepladder climbing eliminated. E-Z-Way System, Inc., 1127 Atlantic Ave., Brooklyn 16, N. Y.

Fire-Resistance Drapery Material: tweed-like texture with handloomed appearance, woven of Fiberglass and wool yarns. Meets rigid fire-safety requirements for use in places of public assembly and institutions; sunlight, mildew, atmospheric changes do not affect fabric. Owens-Corning Fiberglas Corp., Nicholas Bldg., Toledo 1, Ohio

sanitary equipment water supply, drainage

Vandal Proof Floor Drain: for use in public buildings, hospitals, institutions, etc. Special lock allows only authorized personnel to have access to internal strainer and drainage line; tamper-proof cover eliminates possibility of vandalism clogging or damage. J. A. Zurn Mfg. Co., Erie, Pa.

specialized equipment

Hamilton Truck Loading Ramp: flexible platform for bridging differences in levels between loading dock and transport truck or trailer, enabling power or hand trucks to be run directly into truck body for loading or unloading of goods. Exclusive side weave feature allows ramp edge, when resting on truck floor, to dip on either side, following floor motion of truck that is unevenly loaded or has weak springs. Ramp may be operated hydraulically or mechanically. Arthur S. Hamilton, Jr., 154 East End Ave., Rochester 4, N. Y.

Automatic Sprinkler Head: flush type, fitting snugly against ceiling, easily installed in new or old sprinkler systems. Deflector and suspension mechanism completely concealed in special recess inside sprinkler body. Finished in satin chrome over bronze. Viking Sprinkler Corp., Hastings, Mich.

Westinghouse ADA-96 Refrigerator: 9.6 cu. ft. refrigerator-freezer combination unit, incorporating first fully automatic rapid defrost system ever devised for home unit. All frost removed before building up on freezer walls; defrost water automatically disposed of by quick evaporation. Full use of unit never curtailed during swift defrosting periods. Westinghouse Electric Corp., 306 Fourth Ave., Pittsburgh 30, Pa.

surfacing materials

Curtis Prespine: new process reproduces natural grain of Ponderosa pine on laminated plywood paneling used in doors and other woodwork. Surface may be lightly sanded before finishing without grain raising. Curtis Cos., Inc., Clinton, Iowa

Flor-Ever Tile: 9"-square plastic tile, nonporous, grease-proof, resistant to water, alkali, acid, fire; available in 15 patterns. Delaware Floor Products, Inc., 295 Fifth Ave., New York 16, N.Y.

Supplex Plastic Stair Treads: shallow ribs provide slip-proof surface even when wet; impervious to grease and water. Available in 6 satin-finish colors, in 18", 24", 36", and 72" lengths. Industrial Synthetics Corp., 225 North Ave., Garwood, N. J.

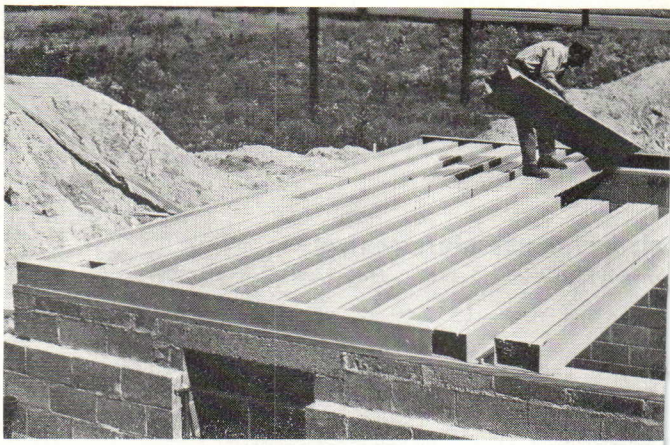
traffic equipment

Under-Counter Dumb Waiter: self-contained unit, designed for various capacities ranging up to 300 lbs. All-metal construction, completely fireproof; car fitted with removable shelf. Suitable for fountain service, back-bar, or other scant room conditions calling for compact equipment. Sedgwick Machine Works, 90 Eighth Ave., New York 11, N.Y.

this month's products

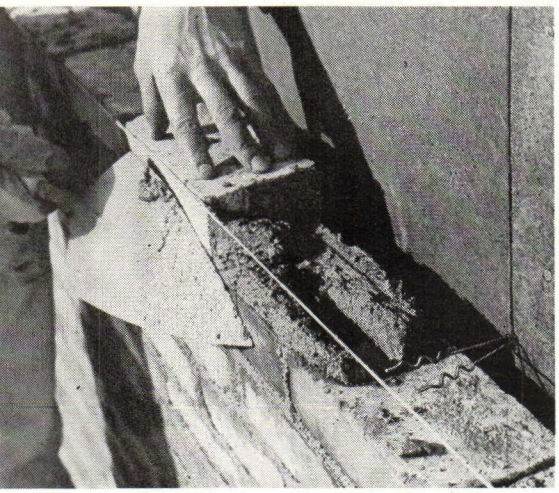
cellular steel panels serve as sub-floor and warm-air ducts

Fenestra steel cellular panels have been successfully used to provide a strong sub-floor and an important part of the heating system in many schools, hospitals, homes, and other types of buildings throughout the country. The panel cells serve as ducts for hot air distribution and for cold air return. As warm air travels through cells to registers located at baseboards, rooms above are heated by both radiation and convection; thus a more efficient use of fuel is permitted. The cellular steel floors also provide an excellent wire distribution system.



An easier and more rapid installation is possible, as sections can be laid from beam to beam and joists are eliminated. Concrete poured over the panels provides a fire-, vermin-, and squeakproof floor. Continuous ceilings, for basement recreation rooms, are unencumbered by ducts and do not require finishing. Detroit Steel Products, 2250 East Grand Avenue, Detroit, Mich.

Above: open ends of two panels show cellula construction that enables steel panels to serv as heating ducts.



announces new, non-rusting, strong tie for masonry veneered walls

A stronger, safer, and longer lasting tie for masonry veneered walls has been produced by the Copperweld Steel Company. The V-Loc Tie consists of a crimped, v-shaped prong and a nail—a non-rusting and economical combination of great strength. After driving the nail into studding, the tie bends easily to any required angle and anchors masonry facing to framing backing.

Left: tie in place; ready to receive mortar for next course of masonry.

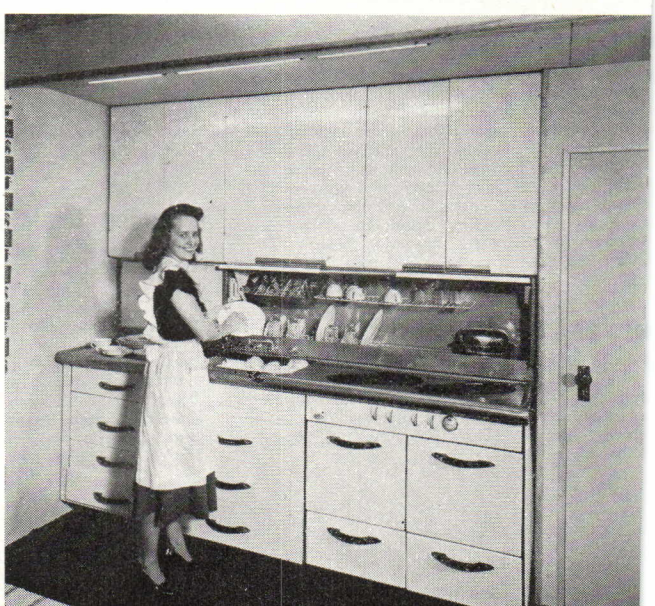
As the thick copper covering is welde to a strong alloy steel core, the tie wi not rust, corrode, or weather; it remair unaffected by the chemical action moisture, lime, or mortar.

Among several advantages are: 1 wider spread of prongs anchors greate surface area of brick to studding; 2 v-shape design spreads strains tv ways; 3) crimped prongs anchor t securely in mortar; 4) no sharp edg or metal snags cut or injure hands. A specifications set up by the Americ Standard Building Code Requiremer for Masonry are met. Copperweld Ste Company, Glassport, Pa.

"all-on-one-wall" kitchen unit

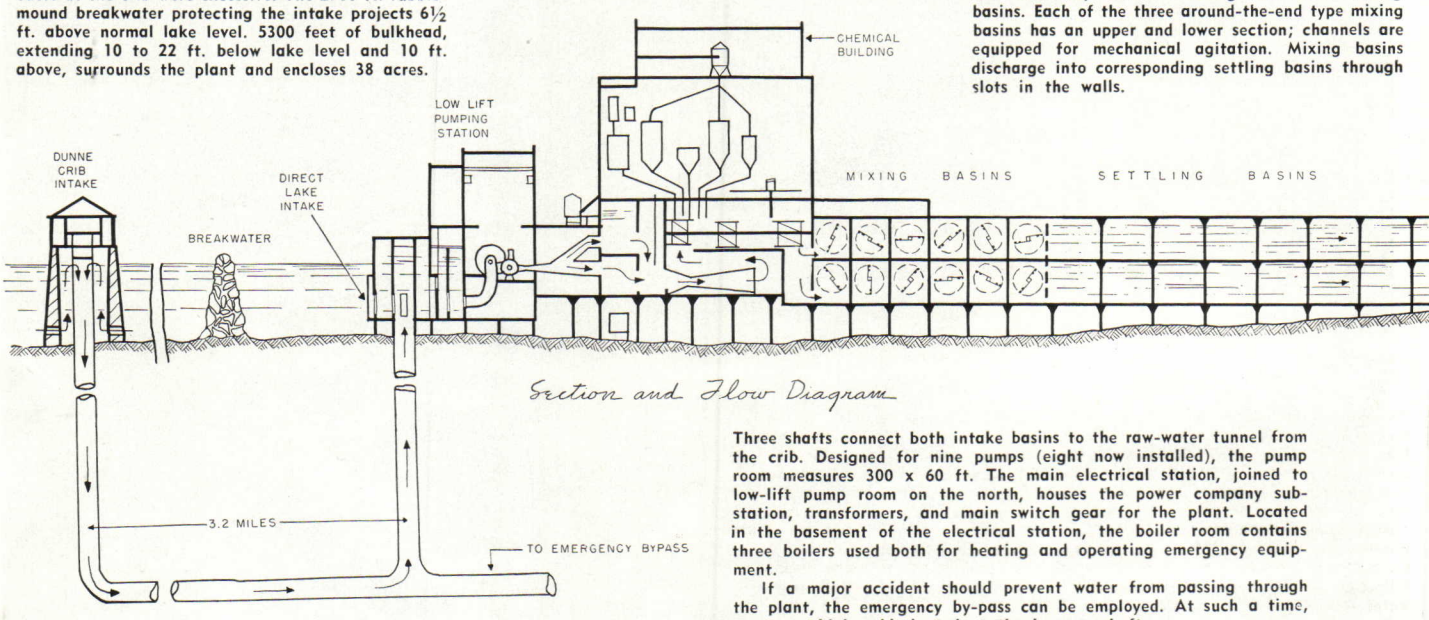
The "All-On-One-Wall" Earle Unit Kitchen eliminates wasted space of conventional designs and claims a saving of at least $100. A 9 cu. ft. "L" shaped refrigerator is said to hold more accessible cold foods than any rated 10 cu. ft. model; three storage drawers and shelves near freezing unit have a uniform temperature of 40F. The combined dish dryer and appliance storage cabinet easily contains the china, silver, glassware and appliances normally used by a family of five; no electric current is employed. 18-gage stainless steel sheeting covers the worktop which extends the 7'-6" width of the unit. An extra large sink and four burners, gas or electric, are set in the work area. The stove is 38" wide and contains standard oven, broiler, and utensil storage space. All cabinet shelves are adjustable in height and all drawers and doors have a lacquered, baked, and durable white finish. Drawer and shelf area exceeds 60 sq. ft. The over-all height of the kitchen unit is 7'-3". 90-day delivery promised by the manufacturer. Guy L. C. Earle, Inc., 200 East 52 Stre New York.

Right: pull-down panel conceals combined dryer and appliance storage cabinet after dishes are washed.



Most of the raw water is obtained from the Dunne Crib. During periods of high demand, some water enters through the plant intake and this intake also has been used occasionally when tastes and odors at the crib were excessive. The 2700 ft. rubble-mound breakwater protecting the intake projects 6½ ft. above normal lake level. 5300 feet of bulkhead, extending 10 to 22 ft. below lake level and 10 ft. above, surrounds the plant and encloses 38 acres.

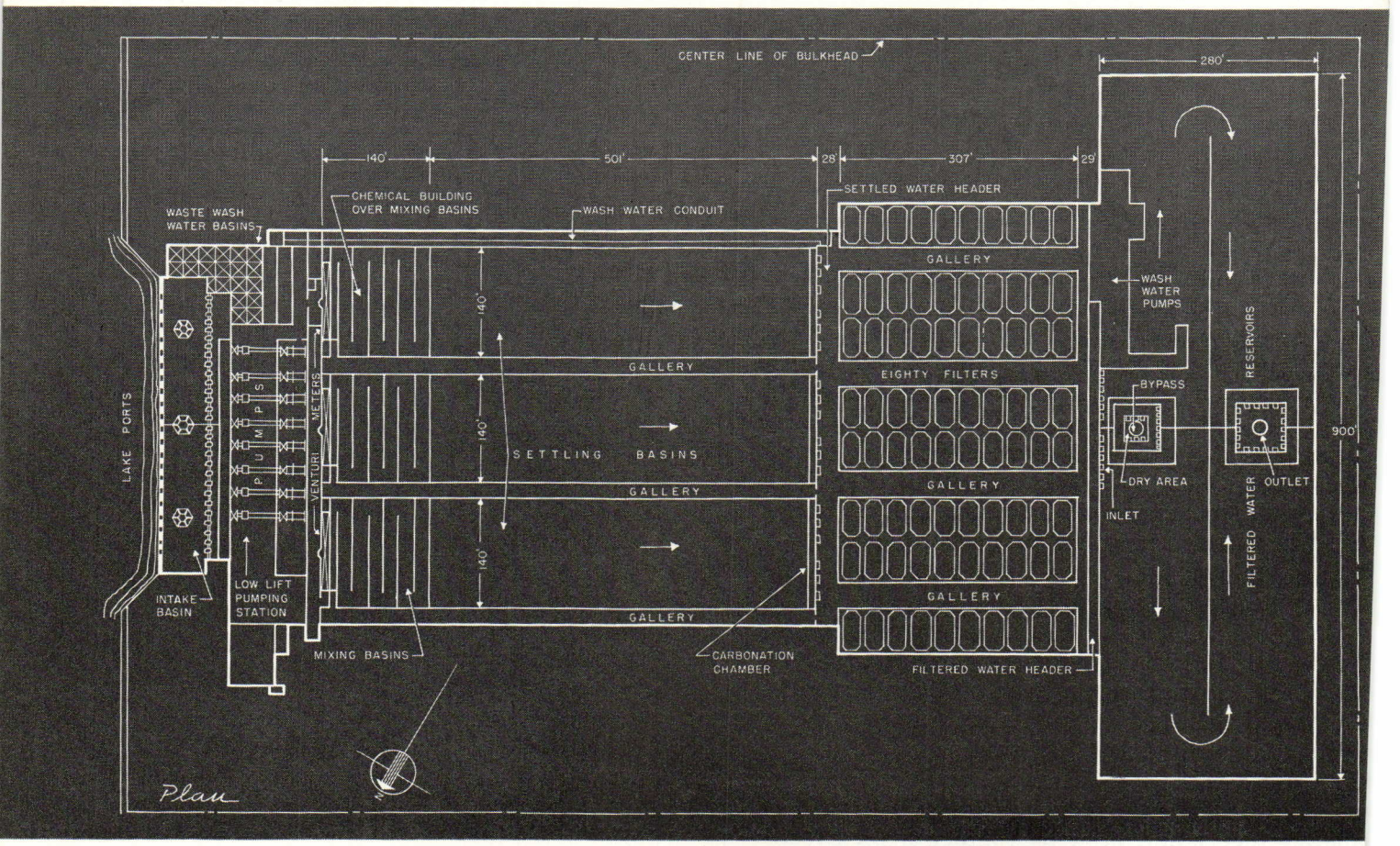
Venturi meters located between raw-water conduits and mixing basins (below Chemical Building) measure rate of flow. Water flows through three rapid-mix chemical application conduits and through baffled channels, before entering the main mixing basins. Each of the three around-the-end type mixing basins has an upper and lower section; channels are equipped for mechanical agitation. Mixing basins discharge into corresponding settling basins through slots in the walls.



Section and Flow Diagram

Three shafts connect both intake basins to the raw-water tunnel from the crib. Designed for nine pumps (eight now installed), the pump room measures 300 x 60 ft. The main electrical station, joined to low-lift pump room on the north, houses the power company sub-station, transformers, and main switch gear for the plant. Located in the basement of the electrical station, the boiler room contains three boilers used both for heating and operating emergency equipment.

If a major accident should prevent water from passing through the plant, the emergency by-pass can be employed. At such a time, water would be chlorinated at the by-pass shaft.



This aerial view of Chicago's South Shore shows the site before construction of the filtration plant was started. The superimposed plan above the old shoreline gives the layout of the plant itself, as well as the large park, playground, and beach (left) included in the completed design. The numbered areas are: (1) Low-Lift Pumping Station; (2) Chemical Building with Mixing Basins below; (3) Settling Basins which are underground with landscaping above; (4) Filter Building; and (5) Administration Building.

Photo: Chicago Department of Public Works

From the conduits, the water passes into mixing basins where it is vigorously agitated, then mixed with chemicals (from Chemical Building over basins—see plot plan) both to purify it and to speed coagulation of the silt. As the sediment settles, scrapers take away the sludge, which is pumped through two lines out into the lake on the southeast.

After passing through 501 feet of settling basins underground (see plot plan), the water arrives at the Filter Building, which contains 80 filters of gravel and sand, 46½″ in depth and ranging from gravel (in diameters of 3½″ to ⅛″) to sand (in diameters of 0.62 mm. to 0.70 mm.). These filter beds can be backwashed, to cleanse them of material removed during the processing of the water, in only three to four minutes. From the filter basins, the water passes into the Filtered-Water Reservoir (huge tanks partly under Administration Building—see plot plan) from which the South District's supply is drawn.

This process takes place in every city that uses a filtration plant—Pittsburgh, Baltimore, Buffalo, St. Louis, and many more. But in Chicago, the plant's contemporary structural expression has a beauty that draws the passer-by back to enjoy the architectural achievement. It demonstrates again (as in the case of TVA works and such suspension bridges as Golden Gate and Whitestone) the design satisfaction that results from intelligent engineering. In expression, the design as a whole rides triumphant, clean and fine, depending on its own integrity for effect.

Water Filtration Plant: Chicago, Illinois

CHICAGO DEPARTMENT OF PUBLIC WORKS

Oscar E. Hewitt, Commissioner
Paul Gerhardt, Jr., City Architect
W. W. DeBerard, City Engineer
John R. Baylis, Water Filtration Engineer

Water is a basic need of human beings. Lack of water has wiped out cities and civilizations. An adequate, potable supply is the first necessity of any community.

In America, many large cities depend upon water flowing in aqueducts from mountain reservoirs miles away. Others have deep artesian wells. In a number of cases—New York, for instance, which is now alerted for an emergency, or Los Angeles, which faces an obvious future emergency—short-sighted planning or dissipation of natural supplies have made such sources inadequate. More fortunate are the numerous communities which draw and purify water from fresh-water lakes and rivers nearby. New York, indeed, is now turning its attention to the Hudson River as an additional source from which some part of its water supply might be drawn. Such water must be not only chemically treated for bacterial purity, but also thoroughly filtered to remove silt and vegetable matter. This is simply a process by which, after removal of heavy sludge, water is let stand in great settling tanks and then is filtered through layers of rock and sand of increasing fineness until it emerges clear and chemically pure. Such a process requires a large area where great quantities of water can stand while passing through the various steps.

The largest plant of this type in the world is Chicago's South District Filtration Plant where more than 500 million gallons a day, from Lake Michigan, can be processed. With a population of one-and-a-half million to be served in the South District, as well as large industrial users, Chicago's Department of Public Works has guaranteed a water supply for a third of her citizens; has provided 110 acres of playground and Rainbow Bathing Beach (used by 225 million people in 1948); and in the plant itself, achieved a distinguished example of fine civic design.

At the start, the site consisted of a strip of park and a badly eroded beach along the lake front (see aerial photo). The land was filled, the new beach protected by a submerged dike offshore, and the plant constructed within what is, in essence, a huge cofferdam down to bedrock which encloses 38 acres. Actual structures cover 20 acres of this area although there are but eight acres of building above the finished ground level. The remainder of the 38 acres has been landscaped as an integral part of the park area. The enormous settling basins required are all located underground because sunlight would encourage the growth of both bacteria and vegetation in the water.

The raw water supply is taken from either the Edward F. Dunne Crib (two miles offshore and 3.2 miles from the plant) or via a direct intake within the breakwater off the shoreline of the plant itself. Selection of the source is determined by tests of the comparative purity at any particular time. The water (from either the 16-foot tunnel connecting with Dunne Crib or from within the breakwater) is sucked from intake basins by eight pumps (with a total capacity of 840 million gallons a day) located in the Low-Lift Pumping Station (see plot plan). These raise the water from 20 to 25 feet, to the two raw-water conduits—one above the other

tion that applies in each case. Some understandable method of identification, consistently carried through, can eliminate the time-wasting and inadequate crosshatching of partitions, which at best can show only one of the many conditions that may exist between floor and ceiling.

The system of numbering each partition type, which seems to be the obvious solution, has many disadvantages in practice—notably the possibility of errors and omissions. The author, in co-operation with Architect John A. Frank, has worked out a system which includes the identification of the partition type automatically with the room finish designation.

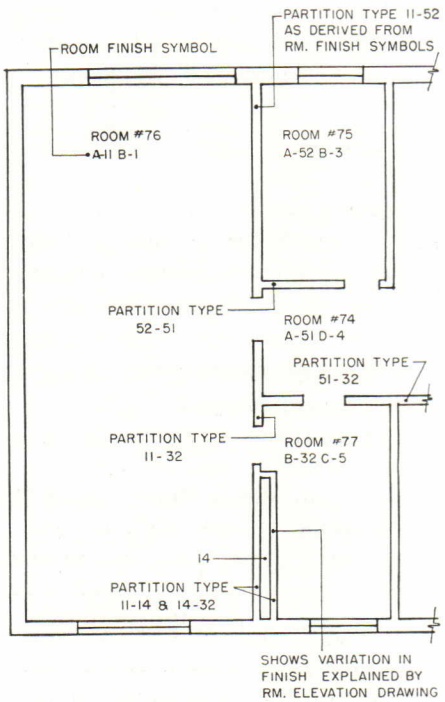
For example: a given space bears the room symbol A11B-1, in which

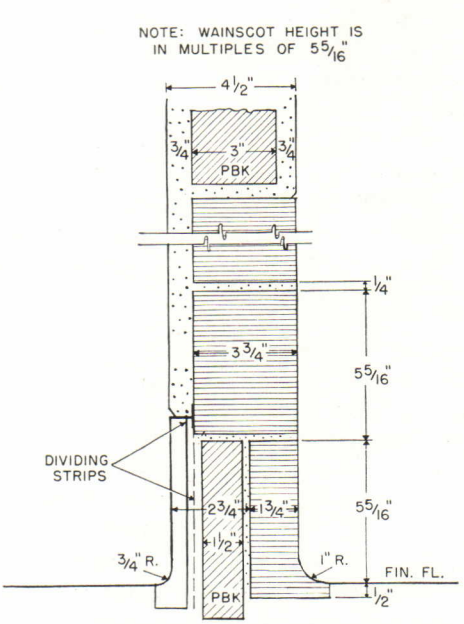
A = floor material
11 = base, wainscot, and wall materials
B = ceiling material
1 = combination of colors

An adjoining space might have the finish symbol A52B-3. The number 52 in this symbol would indicate the partition material—base, wainscot, and wall. The symbol for the *partition type* between these two spaces would then be formed by combining the numerals designating the finish materials on the two sides of the partition and, in this case, would be 11-52. The partition symbols would generally *not have to be shown on the plans* since they derive automatically from the finish symbols of adjacent spaces, as can be seen from the plan illustration. Thus any change in room finish designation would also automatically take care of the change in partition types and would not require checking to see that additional changes in symbols had been made.

If the system should be carried further, it is conceivable that the partition types detailed for one project (as in the section shown as an illustration here) might be organized in a card index, thereby becoming an office standard which could be referred to, to make selection of room finishes easier on subsequent jobs.

It is the hope of the author of these articles and of the editors of **P/A** that others who may have given some attention to the problem of working drawings in contemporary practice will come forward with additional suggestions and instances of successful application.





Partition Section

TYPE NUMBERS	FINISHES					
	BASE	WAIN-SCOT	WALL	BASE	WAIN-SCOT	WALL
11-51	T		P	GSU	GSU	P
11-52	T		P	GSU	GSU	KC
12-52	T		KC	GSU	GSU	KC
12-53	T		KC	GSU	GSU	KC

NOTE: THIS LIST MAY BE EXTENDED AS REQUIRED

p/a

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

★ **1-1. Anemostat Draftless Aspirating Air Diffusers,** 66-p. illus. manual on proper selection of nemostat diffusers for all requirements. Types, accessories, typical specifications, installation directions, special pplications, technical data, charts, tables, prices, photos. Contents table. nemostat Corp. of America.

2. Unitbilt Boiler-Stoker Combinations, AIA 30C-1 (SF-1), 8-p. illus. lletin describing steel boiler unit with terior stoker assembly and integral se. Construction, types, table of diensions and details, ratings. Brownell .

3. Vitroliner "Type E" Flue, 4-p. us. brochure describing vitreous ameled metal chimney designed to ke place of masonry chimney; comete with flue housing and roof flash-g. Construction, installation diagram, quirements. Condensation Engineer-g Corp.

4. Kno-Draft Adjustable Air Diffusers -20), 32-p. illus. booklet on diffusers use with all standard acoustical-e and rectangular ceiling units. vantages, air direction and volume trol, types, operation, selection and formance data, standard dimensions, ndard accessories, specifications, asnbly and erection, general data, typi- installations. W. B. Connor Engi-ring Corp.

lletin, including price list and heating alysis data sheet, on industrial elec- unit heaters. Advantages, types, per selection, control equipment, unting and wiring. Folder, with price enclosed, describing electric room ters for residential installations. scriptions of built-in and portable es, advantages, capacities, installa- directions. Electromode Corp.:

Electromode All-Electric Unit ters, AIA 31-K-3 (EC-62)

Electromode All-Electric Room ters, AIA 31-K-3 (EC-63)

Gas Boilers (PM 12-0002), 6-p. s. folder on gas boilers for steam, or, hot water, or radiant panel ting systems. Advantages, working ts, accessories, specifications and ensions. General Electric Co.

Marlo Air Conditioning Units, AIA (Bul. 409), 12-p. illus. catalog ring line of suspended and floor s of air conditioning units for winter and summer functions. Design basis, operation, capacities, ratings. Marlo Coil Co.

1-9. Thatcher Heating Equipment for Smaller Homes (Series C-174H), 4-p. folder describing coal-burning forced air furnace, designed compactly for installation in utility room or cellar. Construction, views of blower housing, specifications. Thatcher Furnace Co.

CONSTRUCTION

3-1. Standard Architectural Specifications for Aluminum, AIA 15J (AD-134), 12-p. booklet serving as guide in design and fabrication of aluminum alloy products. (Not intended to cover standard utilitarian items such as doors, windows, skylights, etc., as furnished by recognized manufacturers.) Contents table. Aluminum Co. of America.

3-2. Wolmanized Pressure-Treated Lumber, 24-p. illus. booklet on specially processed lumber, impregnated with preservative salts to kill fungus, termites, prevent mold, and stop leachning. Advantages, uses in farm, home, industrial construction, short-form specifications, species and grades. American Lumber & Treating Co.

3-3. New Product Data Sheets (Series I-C). Three loose sheets describing Flintkote Trowel Mastic, solvent type asphalt coating for water resistance on interior of masonry walls; Flintkote Semi-Mastic, similar material for brush application; and Flintkote Plastic Cement No. 232, heavy consistency asphalt cement for repairing roofs, leaks and cracks in masonry. Recommended uses and directions for application. Flintkote Co.

★ **3-4. Movable Metal Walls** (Cat. 50), 48-p. illus. catalog presenting features and advantages of all-welded steel panel partitions (or any required combination of steel and glass panels). Partition types, detailed construction, applications in commercial, industrial, and institutional structures, drawings, specifications, accessories, typical installation photos. The Mills Co.

★ **3-5. Master Specifications for Copper Roofing and Sheet Metal Work,** AIA 12 (100, revised), 23-p. detailed specification guide to sheet copper installation in institutional, commercial, and industrial building construction. Revere Copper & Brass, Inc.

Booklet and folder describing type of flat slab design based on elastic analysis, in which drop panels are omitted and flared column capitals replaced by steel grillages or frames to support floor slabs. General description, advantages and economies, design basis, typical details, comparative test data, typical applications, test loads. Smooth Ceilings System:

3-6. Examples in Application of the Smooth Ceilings System (49)
3-7. Flat Slab Construction

DOORS AND WINDOWS

4-1. Aluminum Windows Specifications, 16-p. booklet. Short form and master specifications for double-hung casement, and projected types of aluminum windows, representing minimum standards of manufacture for aluminum windows suitable for various types of buildings. Aluminum Window Mfrs. Assn.

4-2. Bayley Steel Windows and Doors, AIA 16-E (1950), 36-p. illus. catalog covering line of steel windows and doors. Types, details, sections, characteristic features, sizes, specifications, glazing, descriptions of hardware, mechanical operators. William Bayley Co.

4-3. Bilco Doors, 12-p. illus. catalog presenting various types of doors for special service, including roof scuttles, sidewalk elevator and ash hoist doors, transformer vault and pit doors, trench covers, and "Celladoors" for outside access to cellars. Features, types, construction, dimensions, details, sections, drawings. Bilco Co.

4-4. Precision Built Builders Hardware (Cat. 49), 14-p. illus. catalog. Describes line of tubular cylinder lock sets for interior and exterior doors, single- and double-spring latches, automatic locking latches, door knockers and knobs. Construction, installation directions, specifications, general information. Harloc Products Corp.

4-5. Lincoln Panic Exit Device, 1-p. circular illustrating two types of emergency exit devices designed especially for schools. Construction, operation, specifications, ordering directions. Lincoln Hardware Mfg. Co.

Booklet and portfolio of data sheets on automatic-locking, aluminum awning windows. Specifications, standard sizes (not including muntins), details, installation diagrams, hardware. Ludman Corp.:

4-6. Auto-Lok
4-7. Auto-Lok Awning Windows, AIA 16-E

4-8. The Overhead Door with the Miracle Wedge (R-49), 4-p. illus. folder describing residential overhead garage door mechanically designed for weathertight closure; wood construction, tracks and hardware of salt spray steel. Advantages, operation. Overhead Door Corp.

ELECTRICAL EQUIPMENT, LIGHTING

5-1. Litecontrol, AIA 31-F-23 (Cat. 49), 42-p. illus. catalog on fluorescent fix-

tures for classrooms, stores, offices, public buildings, and other areas; also examples of incandescent lens boxes, spotlights, accessories. Descriptions, utilization factors, specifications, test reports, assembly details, room index table, general information, methods of computing illumination. Litecontrol Corp.

5-2. National Electric Conduits (603), 32-p. catalog illustrating many types of electrical conduits, tubing, fittings, accessories. Selection, construction, dimensions and weights, engineering data, product and numerical indices. National Electric Products Corp.

Two booklets on light-dimming equipment for churches and lodges. Use of light control, various applications, types, proper selection, standard ratings and specifications. Superior Electric Co.:

5-3. Powerstat Light Dimming Equipment for Churches (9492)
5-4. Powerstat Light Dimming Equipment for Lodges (9492)

INSULATION (THERMAL, ACOUSTIC)

9-1. Celotex Insulating Sheathing (3043), circular on double-waterproofed insulating sheathing. Advantages, labor and material cost comparison chart. Celotex Corp.

9-2. Simplified Physics of Thermal Insulation, AIA 37-B-4 (3rd Edition), 44-p. illus. booklet describing advantages of multiple-sheet, reflective aluminum insulation. Types, uses, installation directions, comparisons with other insulating material, suggested specifications, advantages, technical data. Infra Insulation, Inc.

9-3. Fiberglas Thermal Insulation, AIA 37, 16-p. illus. booklet describing all forms of Fiberglas thermal insulations for industrial and building applications. General information, conductivity and sound absorption properties, application methods, typical applications, recommended uses, tables, photos, index. Owens-Corning Fiberglas Corp.

9-4. Zonolite Acoustical Plastic (PA-5), 4-p. illus. folder on low-cost, sound deadening material applicable to any type of flat or uneven surface that is clean, water resistant, and firm. Advantages, sound absorption test, mixing and application directions. Zonolite Co.

INTERIOR FURNISHINGS

9-5. Modern Desks, Tables, Cabinets (M-1 493), 4-p. folder illustrating various examples of office furniture in standard finishes of walnut, mahogany, or blond birch. Description and sizes. Blair Veneer Co.

9-6. FFM, burlap-covered portfolio containing 13 loose sheets and price list, presenting collection of modern residential furniture designed for medium-income bracket. Photos and descriptions of tables, beds, desks, chests, cabinets, upholstered seating, etc., general information, terms and conditions of sale. Functional Furniture Manufacturers.

9-7. Nye-Wait—Carpets for the Few (10150), 22-p. illus. catalog. Four-color presentation of entire line of both nylon and wool carpets, custom-woven to customer specifications, made to any size, style, or shape, and preshrunk to exact measure. Descriptions, manufacturing process, examples of border and all-over hand carving, colors, weaves, photos. Nye-Wait Co., Inc.

9-8. Aluminum Posture Chairs (FF 116), 22-p. illus. catalog containing full data on aluminum office chairs, adjustable five ways to conform to individual requirements. Advantages, adjustment features, dimensions, covering materials, color chart, photos. Remington Rand, Inc.

MATERIALS OF INSTALLATION

13-1. Fastening Specialties, 28-p. manual describing wide range of blind rivets, anchor nuts, panel fasteners, springs, other items, for use in fastening metal-to-metal, metal-to-plywood, and other combinations. Uses, engineering data, installation drawings. South Chester Corp.

SANITARY EQUIPMENT
WATER SUPPLY, DRAINAGE

19-1. Delany Flush Valves, AIA 29-H-21 (Cat. 49), 36-p. illus. catalog outlining wide application of flush valves for ordinary and special installations in sanitary plumbing. Descriptions, parts, installation diagrams and data, piping design and data, tables, repair parts and kits. Coyne & Delany Co.

19-2. Bladeless Sewage and Trash Pump (Bul. 5400K-1), 16-p. illus. booklet on single passage bladeless impeller, capable of handling fibrous trash 10 to 25 times the size of such material passable in conventional pumps. Models, construction details, drive modifications, dimensions, selection tables, performance, typical specifications. Fairbanks, Morse & Co.

19-3. Youngstown Food Waste Disposer Installation with Septic Tank (3321) 9-p. booklet. Requirements of septic tank system in conjunction with food waste disposer, recommendations of tank sizes, operation, selection of drainage field, schematic drawings, tables. Mullins Mfg. Corp.

SPECIALIZED EQUIPMENT

19-4. American Kitchens—Specifications, AIA 35-C-12, portfolio of five booklets giving specifications and roughing-in diagrams for kitchen cabinet sinks, wall and base cabinets, disposers, ventilators, and other accessories. Advantages. Avco Mfg. Corp. American Central Div.

19-5. Sound Powered (Cat. 400-A), 8-p. illus. bulletin on sound powered telephones for handset and headset instruments. Construction, applications, operation, interstation wiring data, specifications. U.S. Instrument Corp.

SURFACING MATERIALS

19-6. Industrial Floorings and Acid-proof Construction, 8-p. illus. brochure describing resilient asphalt mastic for use on industrial floors; other acid resisting flooring materials and protective coatings. Applications, advantages, specifications. Ralph V. Rulon, Inc.

TRAFFIC EQUIPMENT

20-1. Westinghouse Electric Stairway (B-4403), 46-p. illus. booklet. Advantages, typical installation photos, typical operating parts, maintenance, layout, design details, dimensions, table of contents. Westinghouse Electric Corp. Elevator Div.

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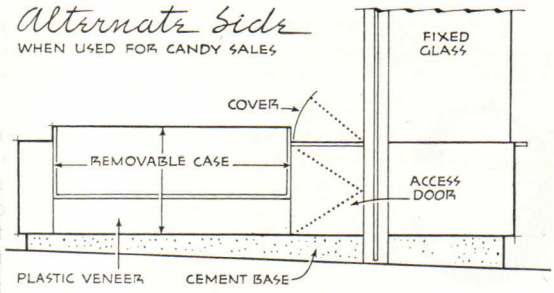

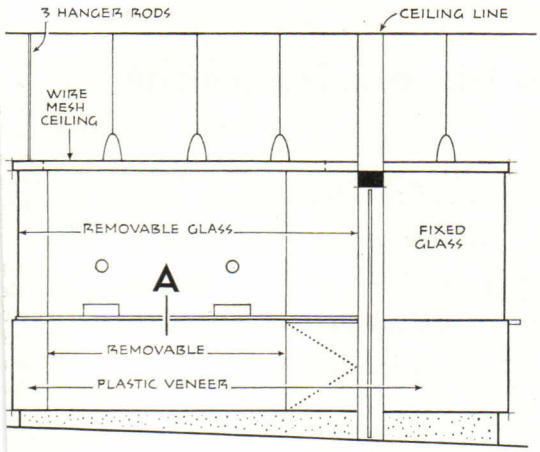

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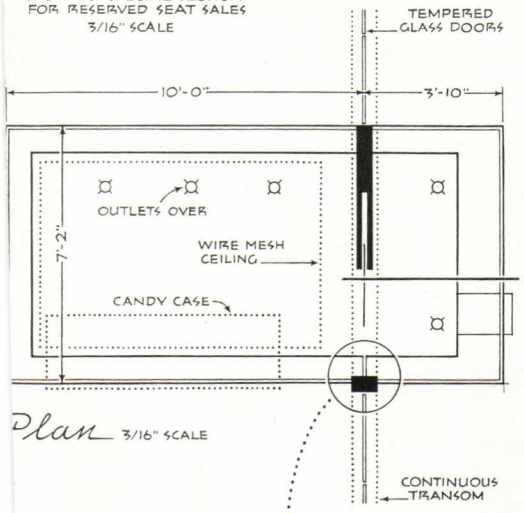

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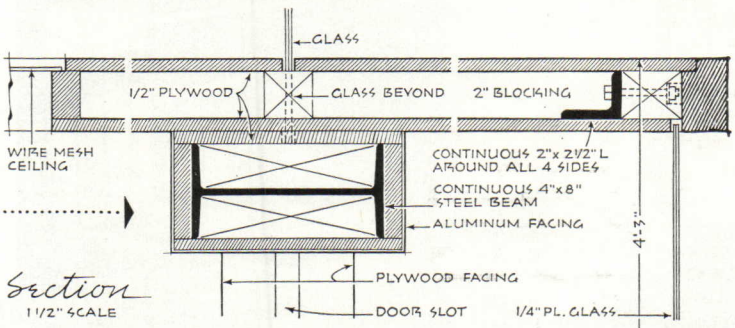

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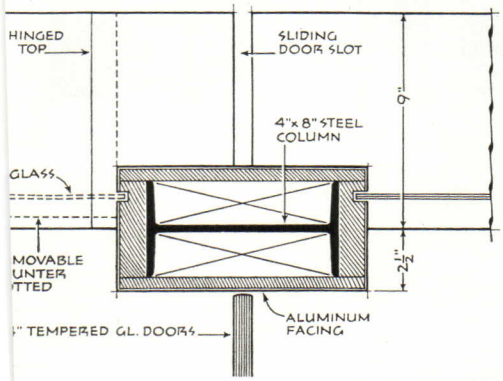
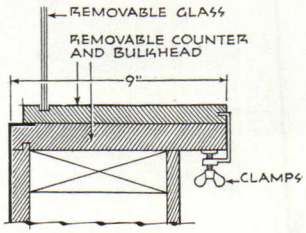
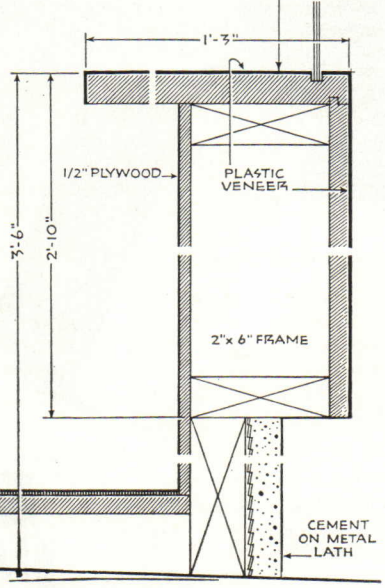


Plan thru Mullion 1 1/2" SCALE



Section A 1 1/2" SCALE



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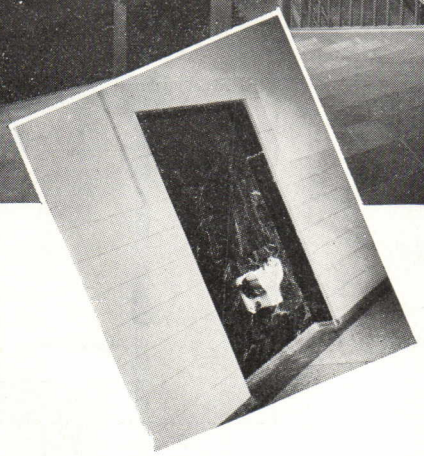
W. RISEMAN & ASSOCIATES ARCHITECTS

marble

protects the child while it beautifies his environment



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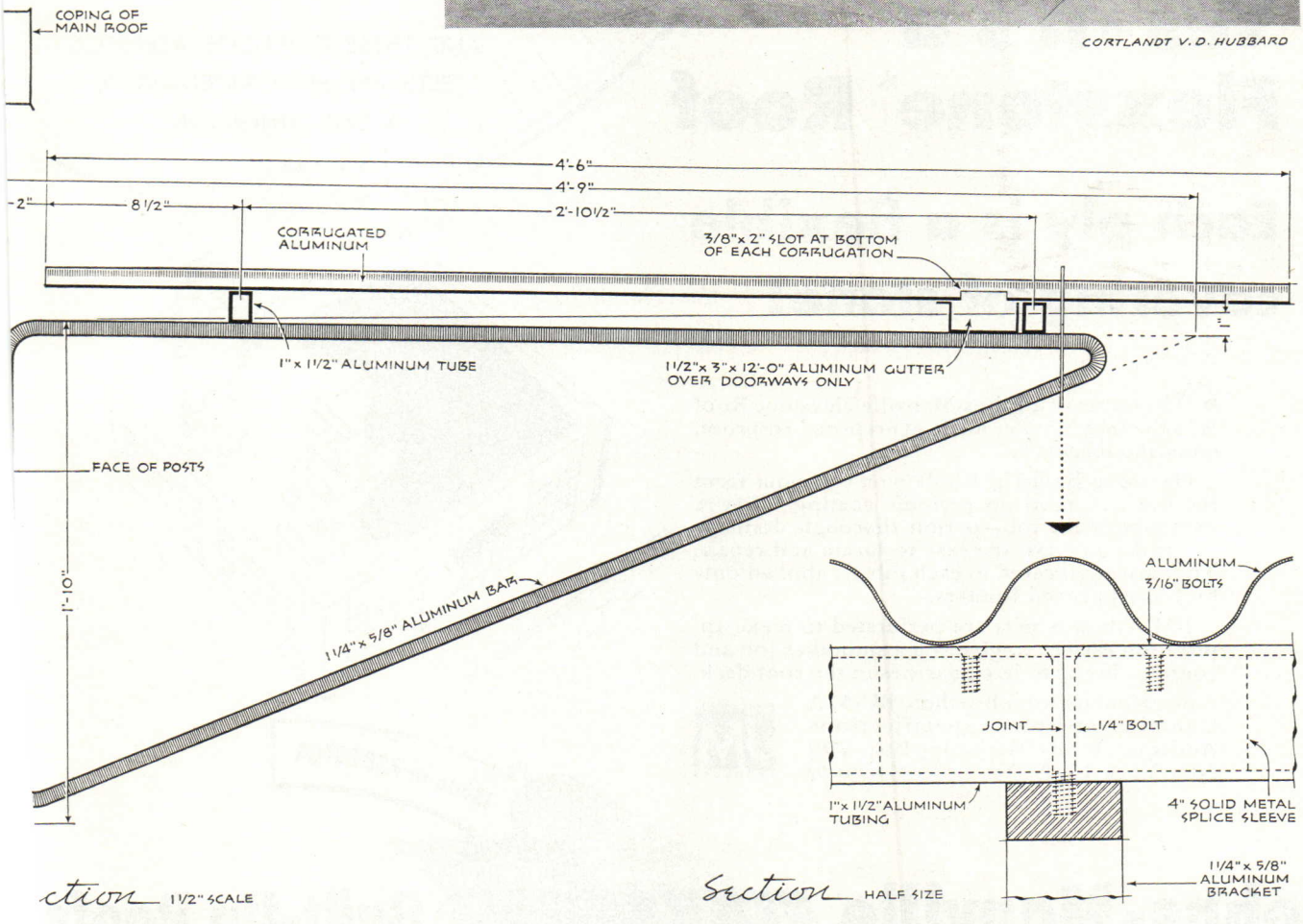

ction 1½" SCALE

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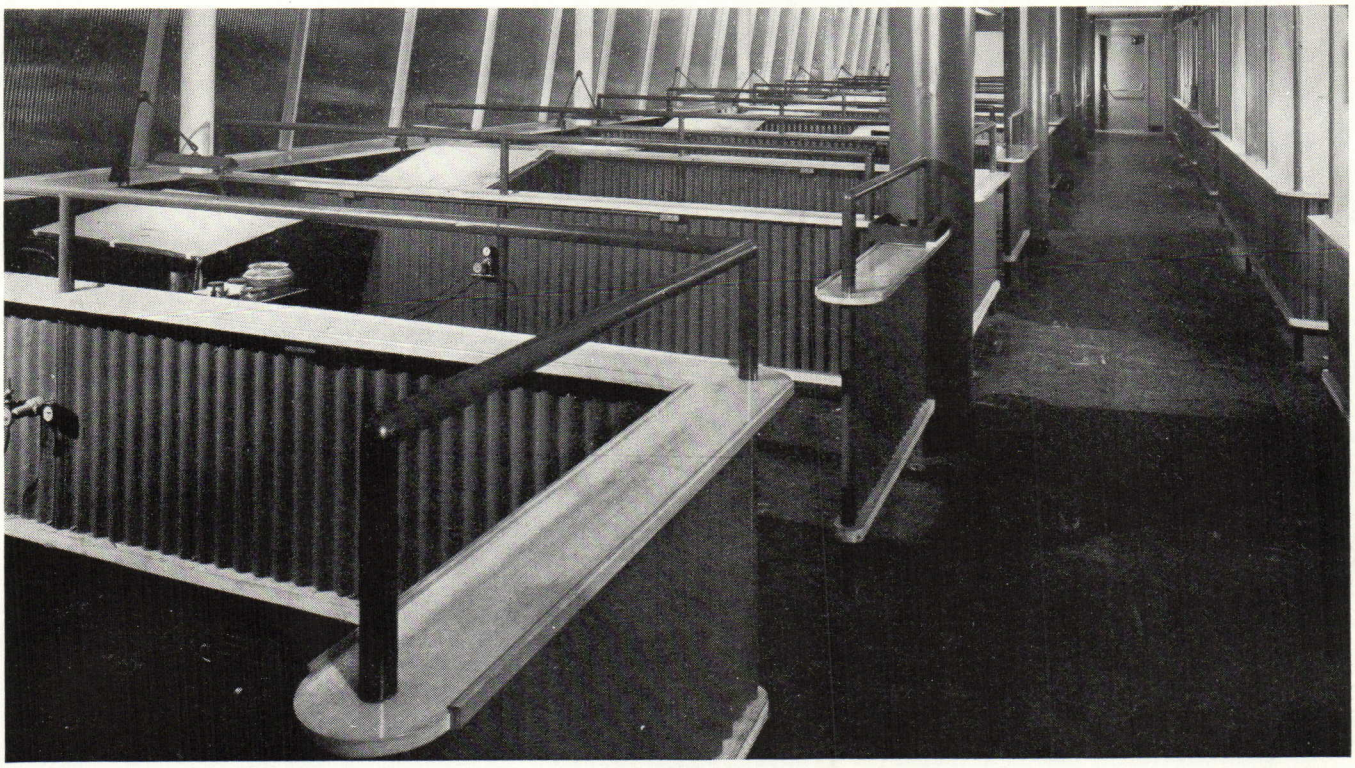
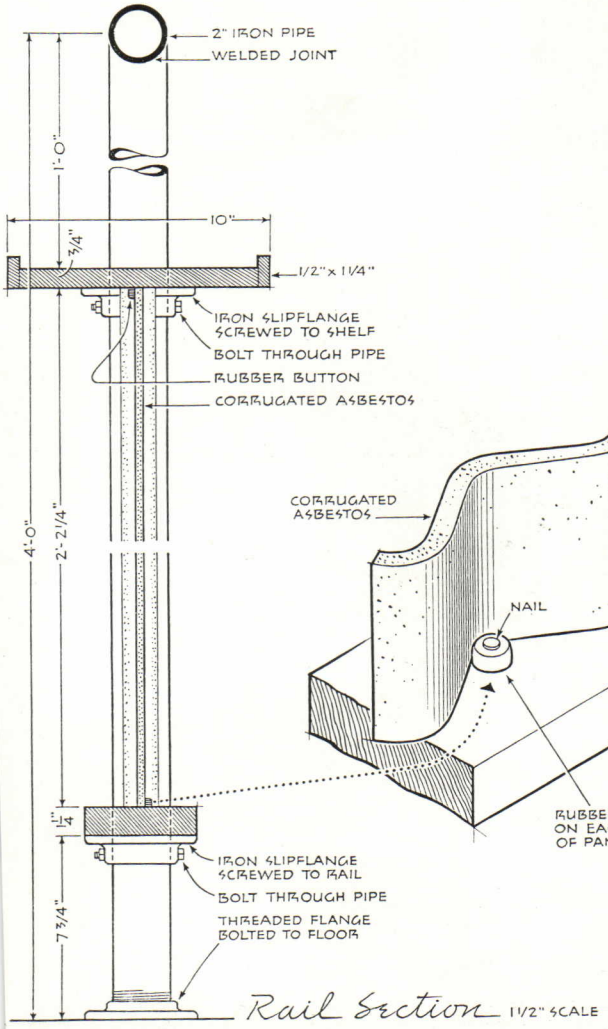
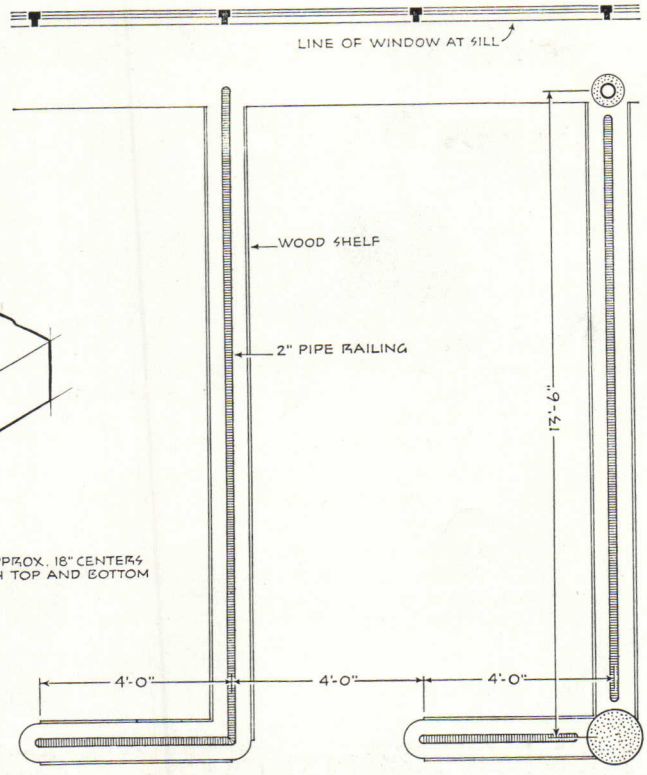


KLING STUDIOS



Rail Section 1 1/2" SCALE

Plan of Units 1/4" SCALE



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Kenneth E. Holmes, *Architect*

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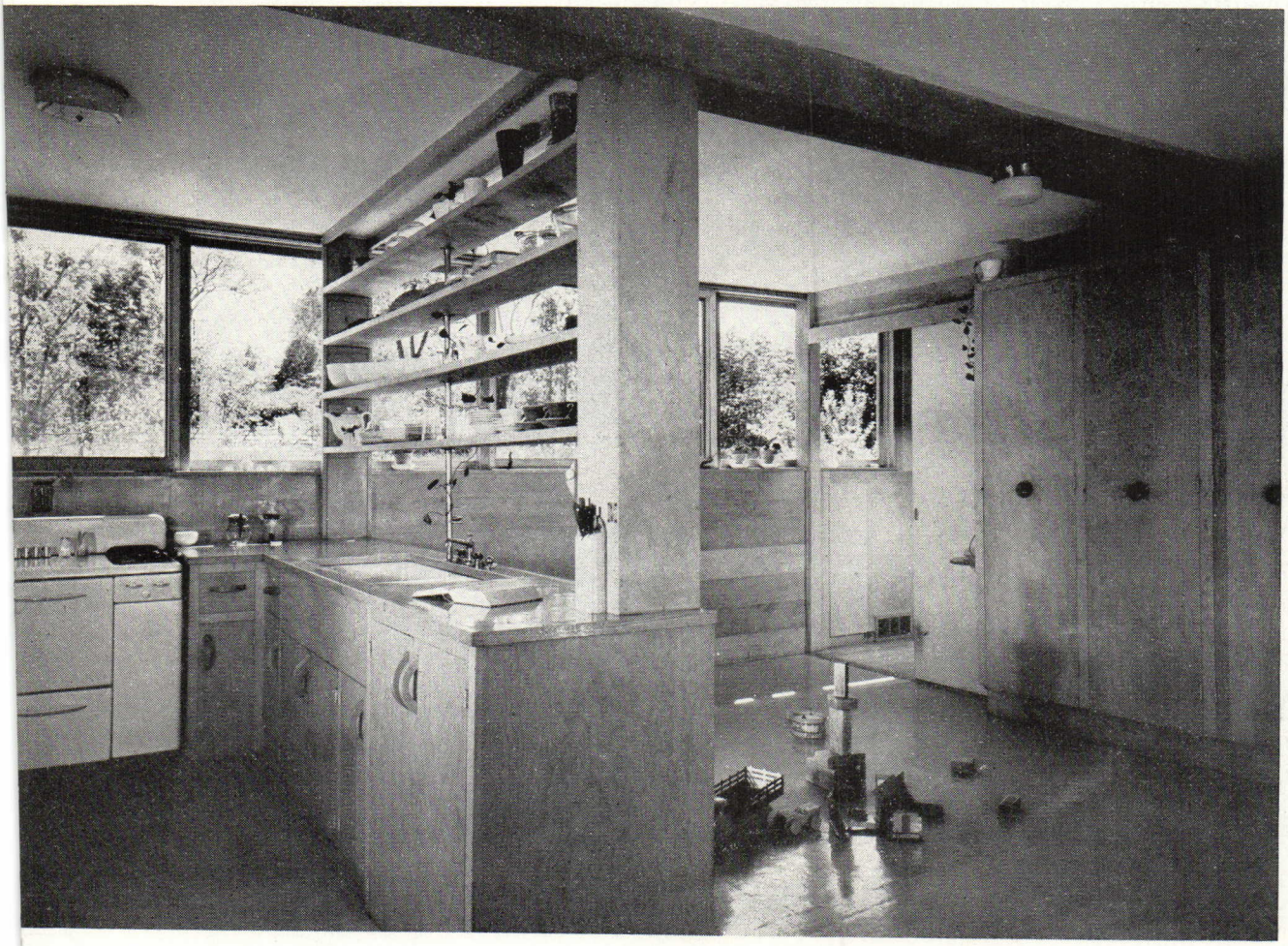
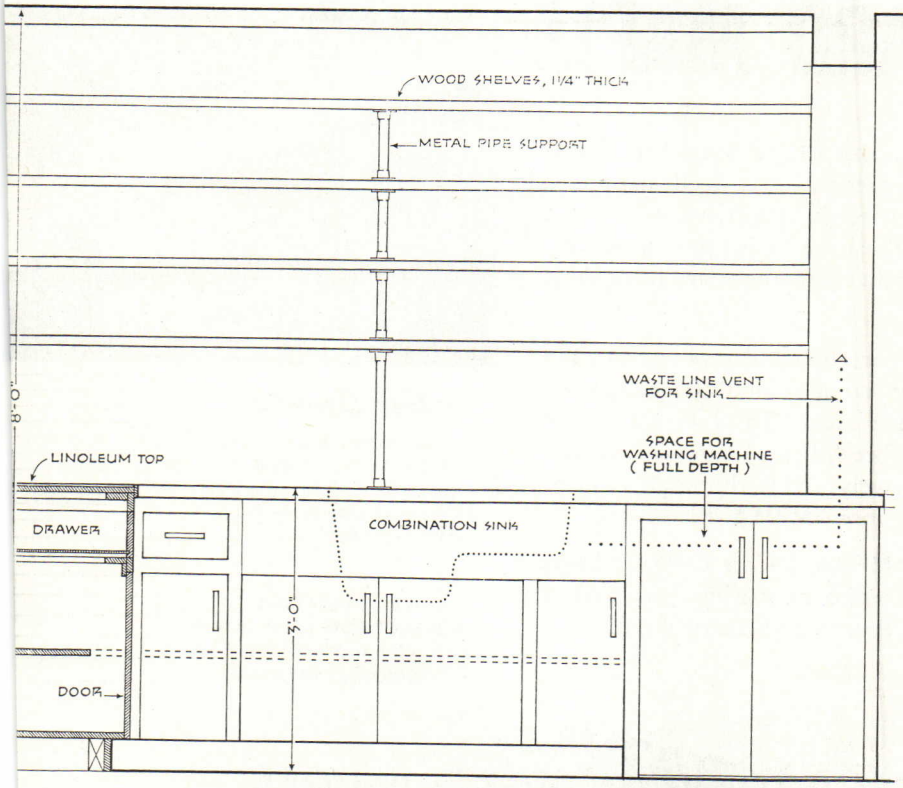
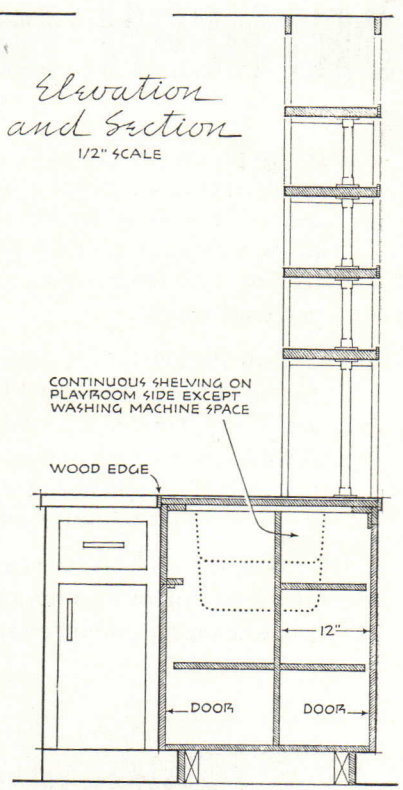


EZRA STOLLER





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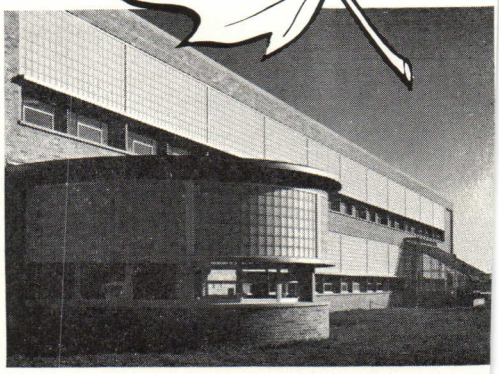
MODERN...as tomorrow

with floors of time-proved

NORTHERN HARD MAPLE

(Above) Kindergarten classroom, (below) exterior of Everett Elementary School, Detroit. Floored throughout in Northern Hard Maple. Photographs, courtesy of Griffels & Vallet, Inc., L. Rossetti, Associated Engineers and Architects.



● Bright, resilient, tough, Northern Hard Maple in schoolroom service, by happy coincidence, lends itself admirably to modern styling. Its light-reflecting qualities may be used to the fullest, or modified in finishing to any desired degree. Its easy maintenance and lifetime endurance are features of powerful appeal.

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Architectural 13g-7; Engineering 4j-21; contain full dimensional data, grading rules, and standard specification material.

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BEECH AND BIRCH

Furnishings by Chairmasters Inc, New York, N. Y.
Walter Hase, Decorator.
BOLTAFLEX material used throughout.

There's plenty cooking here ...for Architects!

Blends of rich color . . . seasoned with good taste . . . stocked with nourishing eye appeal . . . served up to satisfy everybody's appetite for quality plus economy! No wonder these rooms in Riccitello's Schenectady restaurant provide food for thought—with BOLTAFLEX all-plastic material, made of VINYLITE Resins, covering chairs, benches, and much of the walls. Of extreme interest are the historical murals, cut from various colored BOLTAFLEX sheeting and assembled on a backing.

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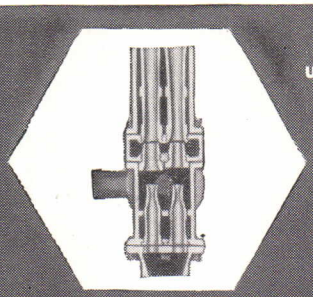
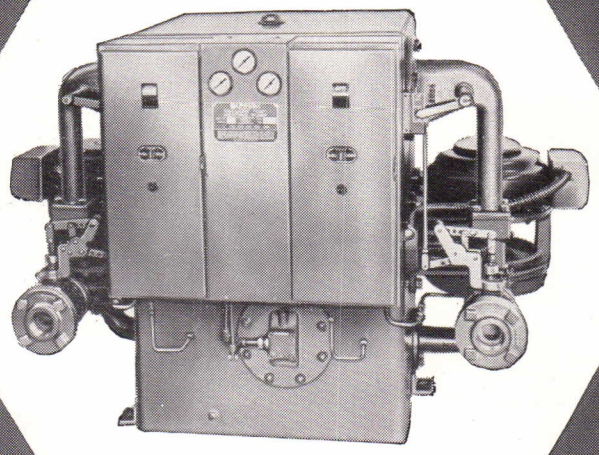
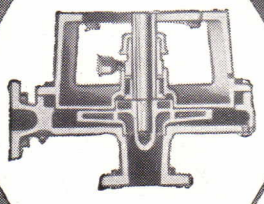


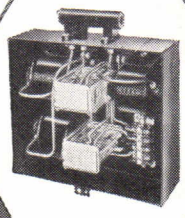
UNSURPASSED PERFORMANCE
—Brass jet exhausters create high vacuum.

first you see
the difference
...then
you pocket it!





LOWEST COST MAINTENANCE
—Simple water impeller eliminates all close tolerances.



UP TO 40% FUEL SAVING—Differential Controller varies vacuum up to 26 inches.

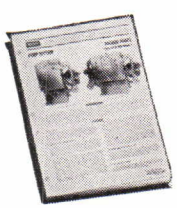
DUNHAM VACUUM PUMPS step up to steam circulation ... lower fuel costs. Your clients get more heat for their money when you specify a Dunham Vacuum Pump. *Designed to pull up to 26 inches of vacuum,* these pumps easily handle the requirements of any steam heating system. Provide better circulation and control of steam . . . shorten "heating up" periods.

Dunham Vacuum Pumps are extremely simple and compact in design. The only principal moving element is the water impeller. Flow of water through the exhauster jets creates a high vacuum... maintains positive pressure to discharge condensate direct to boiler. There are no moving parts under vacuum . . . no close tolerance parts to slip out of adjustment.

Available as single or duplex units—in a full range of capacities to meet most heating demands. Dunham Vacuum Pumps are ready for immediate operation on delivery.

These Pumps Help Dunham Differential Heating Cut Fuel Costs up to 40%
These pumps are the heart of the famous Dunham Vari-Vac* Heating System . . . the precision temperature control system that, for example, has enabled the Millard Fillmore Hospital, Buffalo, N. Y., to save 37.8% annually on steam consumed since 1935.

SEND FOR THIS FREE BULLETIN!



Write today for your free copy of File No. 4C-2-8, giving complete facts and figures about these cost-saving Vacuum Pumps and other Dunham Heating Products. C. A. Dunham Co., 400 W. Madison St., Chicago 6, Ill. *In Canada:* C. A. Dunham Co., Ltd., Toronto. *In England:* C. A. Dunham Co. Ltd., London. *Sales Engineers and Jobbers in All Principal Cities.*

**Variable Vacuum*

FROM A SINGLE TRAP . . . TO A COMPLETELY ENGINEERED SYSTEM . . .

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HEATING
MEANS BETTER HEATING

"Certified" ON A BALLAST . . .

IS MORE THAN A WORD!

. . . Measuring Certified Ballast temperatures while ballast is operating in an actual fluorescent fixture.

Hot Box! Certified Ballasts are tested and checked against *overheating.* Test oven determines temperature rise.

Certified Ballasts are checked and rechecked in actual service—an additional safeguard for high quality.

When fluorescent lighting fixtures are equipped with Certified Ballasts, you and your customers are protected

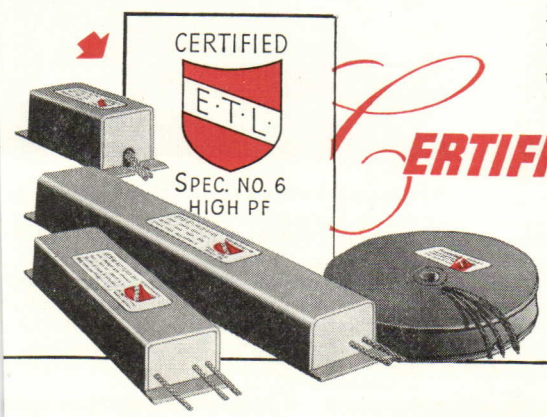
CERTIFIED FLEUR-O-LIER MANUFACTURERS, RLM STANDARDS INSTITUTE and CERTIFIED LAMP MAKERS have solved their ballast problems by writing CERTIFIED BALLASTS into their specifications.

YES, "CERTIFIED" on a ballast means that this ballast has been built to exacting specifications set up by lighting experts . . . that it has been *tested, checked* and *CERTIFIED* by impartial Electrical Testing Laboratories, Inc.

"Certified" further means ballasts that are *quiet* in operation . . . protected against overheating . . . and long lived.

Always specify CERTIFIED BALLASTS . . . and be sure!

CERTIFIED BALLASTS are being made by ten leading ballast manufacturers. Participation in the certification program is open to any manufacturer wishing to qualify.

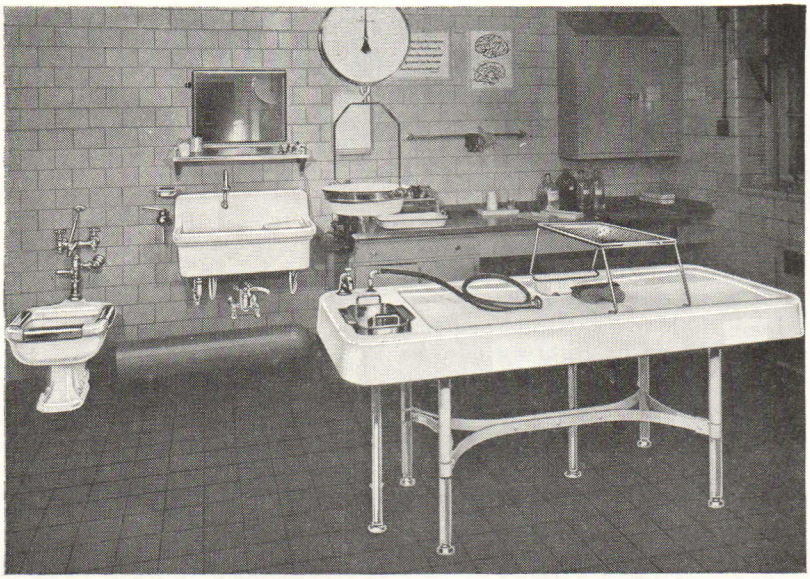


CERTIFIED BALLAST MANUFACTURERS

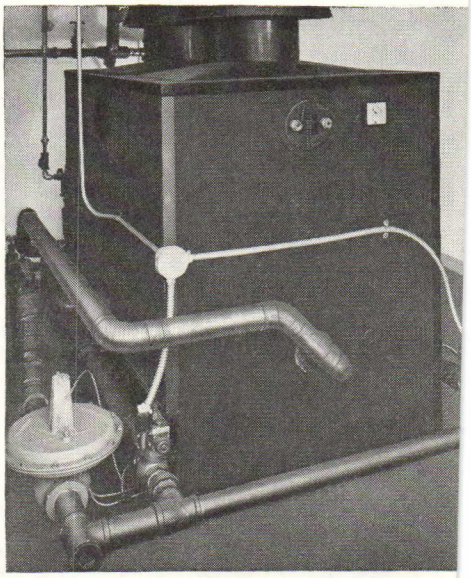
Makers of Certified Ballasts for Fluorescent Lighting

2116 KEITH BLDG., CLEVELAND 15, OHIO

THERE'S COMFORT, CONVENIENCE AND COLOR in this one room. There's cleverly concealed storage space and carefully contrived utility. Yet there's a provincial air that lends additional charm to an efficient bathroom plan. The unusual design of the **NEO-ANGLE** Bath permits a space-saving corner installation that is convenient and attractive. And the handsome **ROXBURY** Lavatory—with its gleaming non-tarnishing Chromard fittings—and the trim **MASTER ONE-PIECE** Water Closet are fitting complements to the modern decorative scheme. Whatever the color scheme, whatever the architectural plan of the bathroom, there are American-Standard Plumbing Fixtures that will enhance the beauty of the room while affording lasting, efficient service.



EVEN THE MOST SPECIALIZED NEEDS can be filled from the American-Standard line. This autopsy room in the Georgetown University Hospital includes genuine vitreous china **ALL-SERVICE SINK** with drain shelf and knee-action mixing valve. **AUTOPSY TABLE** is made of acid-resisting enameled cast iron and has two slab drains, integral sink basin. **CLINIC SERVICE SINK** of non-absorbent vitreous china features syphon jet flushing action. The **ARCO MULTIFIN CONVECTOR**, far right, heats air as it passes between the convector's light, non-ferrous fins. With an **AMERICAN ENCLOSURE** it makes an attractive, space-saving installation. Architects: Kaiser, Neal and Reid, Pittsburgh, Pa.



DEPENDABLE, AUTOMATIC HEATING is furnished Montecito Elementary School in Martinez, C fornia, by this **STANDARD** Gas Boiler. The heat surfaces, burners, controls and other essential tures are coordinated to assure maximum out with lowest operating and maintenance cost. tions are carefully machined for gas-tight joi Architects: Bamberger & Reid, San Francisco.

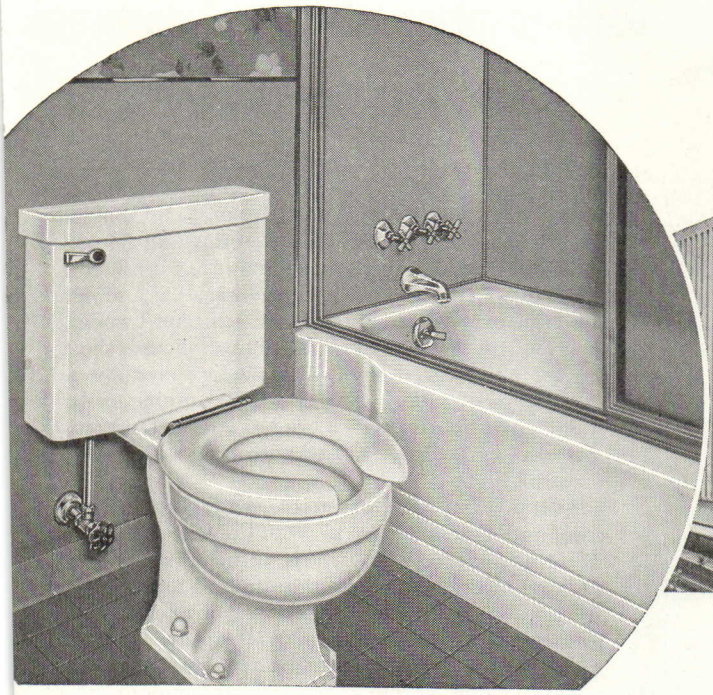
videst latitude in design

AMERICAN-Standard Heating Equipment and Plumbing Fixtures

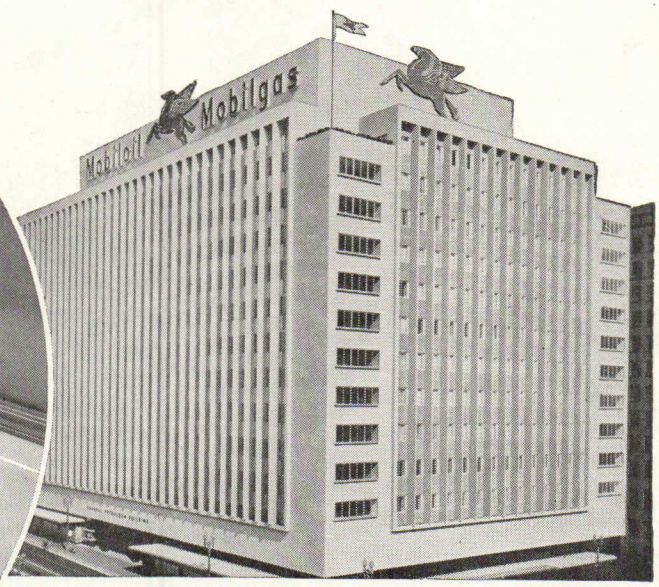
The American-Standard line of heating equipment d plumbing fixtures is the most complete in the in- stry. From the wide range of products available u can find just the size, style and color of plumbing ures you need to fit your particular architectural n or decorative scheme. And the equally extensive e of heating equipment includes radiator heating, rm air heating and winter air conditioning — for ry kind of fuel.

This completeness of line is one reason American- ndard Heating Equipment and Plumbing Fixtures are being used on more and more of today's finest construction jobs. And, too, American-Standard products are recognized for their engineering and construction advantages . . . for their long life and dependability in service.

Check with your Heating and Plumbing Contractor. He'll be glad to give you up-to-date information about the complete American-Standard line of heating equipment and plumbing fixtures. **American Radiator & Standard Sanitary Corporation,** P. O. Box 1226, Pittsburgh 30, Pennsylvania.



THE CONVENIENCES OF A RESIDENTIAL BATHROOM are in this pact bathroom of Eaton's Santa Anita Hotel on U.S. Highway ear Pasadena, California. The **MASTER PEMBROKE** Bath is made gid cast iron for durability, and finished with a heavy coating of nel for beauty and ease of cleaning. Lower sides, flatter bottom e bath and shower more convenient. The **CADET** Water Closet lose-coupled closet combination made of permanently non-absor- genuine vitreous china. Architect & Building Contractor: y Werner.



LARGEST OFFICE BUILDING in Southern California—the new $11,000,000 home of General Petroleum Corporation in Los Angeles. The building is distinguished by its hundreds of wall-supported plumbing fixtures . . . all American-Standard. These quality products are in keeping with the scores of engineering and architectural features that make this one of the nation's most modern structures. The wall-supported plumbing fixtures—which include **FENWICK** and **LUCERNE** Lavatories, **GLENCO** Water Closets and **WASHAL** Urinals —make for neater, cleaner rooms. Architects: Wurdeman & Becket, Los Angeles.

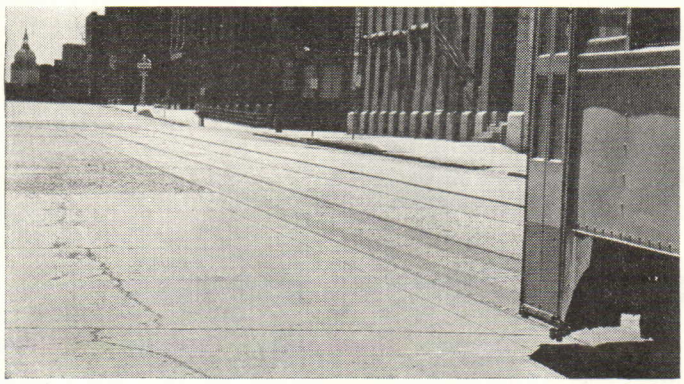
LOOK FOR THIS MARK OF MERIT

AMERICAN-Standard

First in heating . . . first in plumbing

Serving home and industry

MERICAN-STANDARD · AMERICAN BLOWER · CHURCH SEATS · DETROIT LUBRICATOR · KEWANEE BOILERS · ROSS HEATER · TONAWANDA IRON

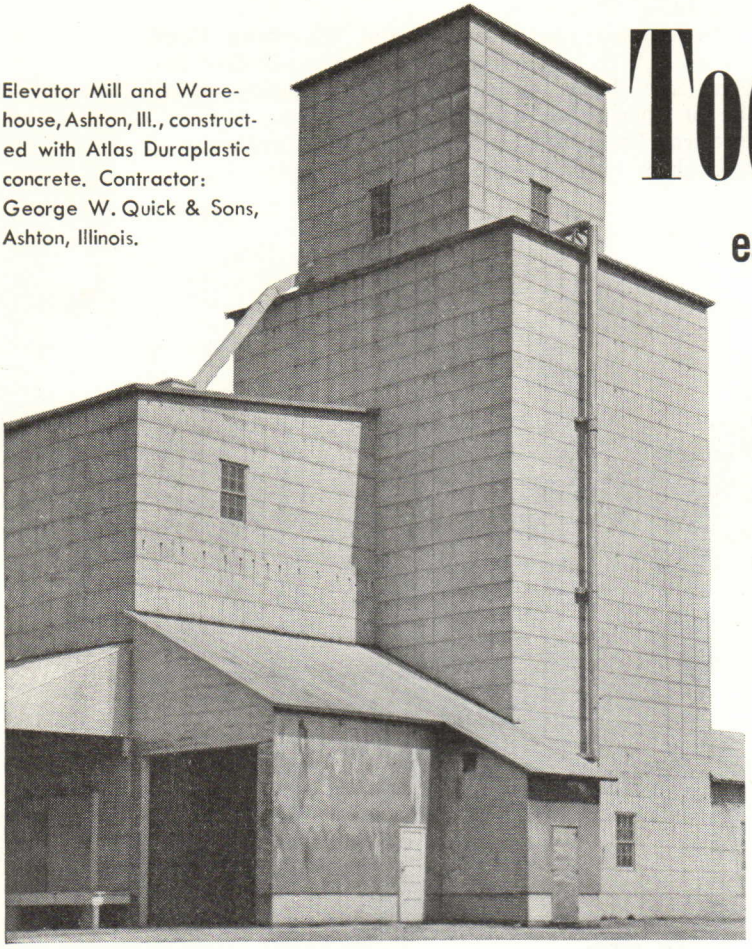


Ten Years Ago...

A Decade of ATLAS DURAPLASTIC AIR-ENTRAINING PORTLAND CEMENT

in August, 1939, this concrete test paving was laid in Second Avenue North, Minneapolis. The badly scaled section of roadway in the background was made with regular portland cement. The foreground section, *laid at the same time*, was made with Atlas Duraplastic—the first commercial use of the air-entraining portland cement originated and developed by Universal Atlas.

Both sections, subjected to the severity of ten Minneapolis winters and to heavy applications of de-icing salts, are shown just as they appeared in July, 1949—convincing proof of the characteristic durability of Duraplastic concrete, of its high resistance to freezing-thawing weather and the scaling action of de-icing salts. Longitudinal structural crack shows some ravelling. Note perfect transverse joint.



Elevator Mill and Warehouse, Ashton, Ill., constructed with Atlas Duraplastic concrete. Contractor: George W. Quick & Sons, Ashton, Illinois.

Today... more plastic, easy-to-place structural concrete with DURAPLASTIC*

During the past decade, the advantages of Atlas Duraplastic air-entraining cement for paving concrete have been increasingly applied to structural and mass concrete—for foundations, walls, columns and floors; for slip-form work, gunite, stucco and other uses.

Particularly, has the increased plasticity of Duraplastic concrete been of benefit in structural work. For example, on this elevator mill and warehouse, the contractor reported, "Use of Duraplastic saved about 12 man-hours of labor per day while running concrete walls. First job on which we have used Duraplastic, and were more than satisfied with the results. Will use it in the future."

As it does for paving concrete, Duraplastic for structural and mass concrete permits the use of less mixing water for a given slump. The resulting mix is more plastic, more workable, more uniform and more cohesive. It's easy to place and finish. Water-gain and segregation are reduced. Surface appearance is improved and exhibits higher resistance to the effects of weather-exposure.

Duraplastic provides the precise amount of air-entraining agent interground with the cement for satisfactory field performance. It complies with ASTM and Federal specifications, sells at the same price as regular cement and calls for no unusual changes in procedure.

OFFICES: Albany, Birmingham, Boston, Chicago, Dayton, Kansas City, Minneapolis, New York, Philadelphia, Pittsburgh, St. Louis, Waco.

***Send for new free booklet,** "A Decade of Duraplastic Air-Entraining Cement." Write to Universal Atlas Cement Company (United States Steel Corporation Subsidiary), Chrysler Bldg., New York 17, N. Y.*

"Duraplastic" is the registered trade mark of the air-entraining portland cement manufactured by Universal Atlas Cement Company.

PA-D-100

ATLAS DURAPLASTIC TRADE MARK REG. U. A. C. CO.

AIR-ENTRAINING PORTLAND CEMENT

MAKES BETTER CONCRETE AT NO EXTRA COST

A UNIVERSAL ATLAS PRODUCT

"THE THEATRE GUILD ON THE AIR" — *Sponsored by U. S. Steel Subsidiaries — Sunday Evenings — NBC Network*

fedders

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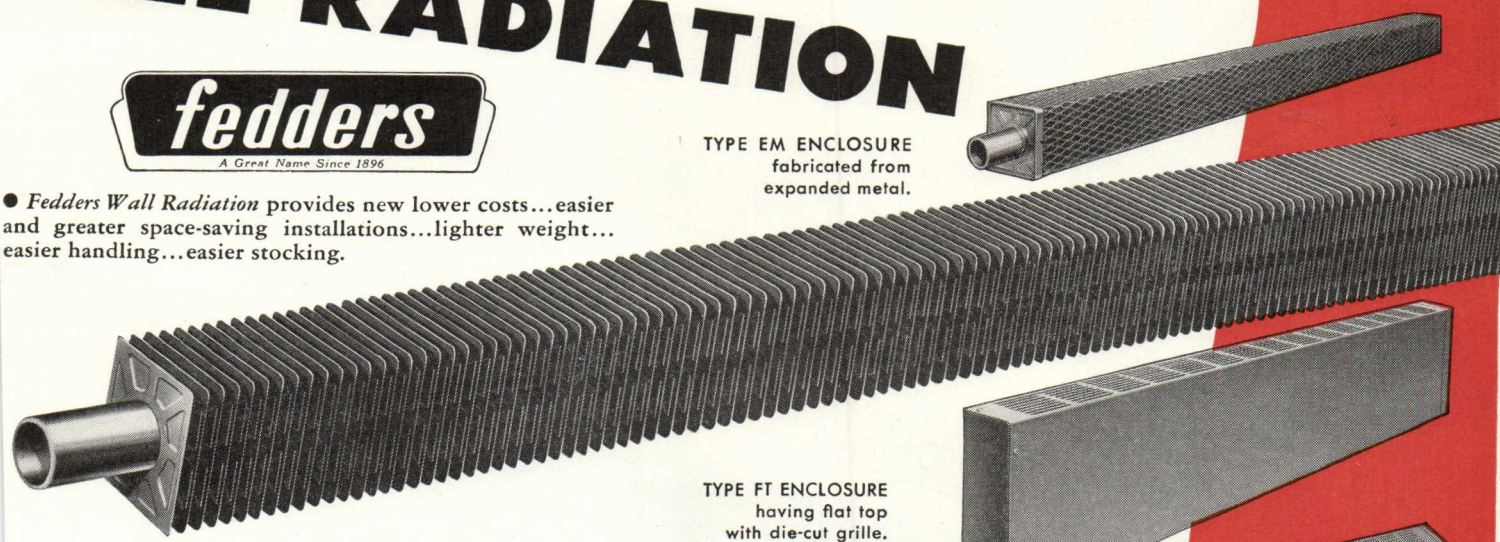
VALL RADIATION

fedders
A Great Name Since 1896



TYPE EM ENCLOSURE
fabricated from
expanded metal.

TYPE FT ENCLOSURE
having flat top
with die-cut grille.

TYPE ST ENCLOSURE
having sloping top
with die-formed
louvered grille.

● *Fedders Wall Radiation* provides new lower costs...easier and greater space-saving installations...lighter weight... easier handling...easier stocking.

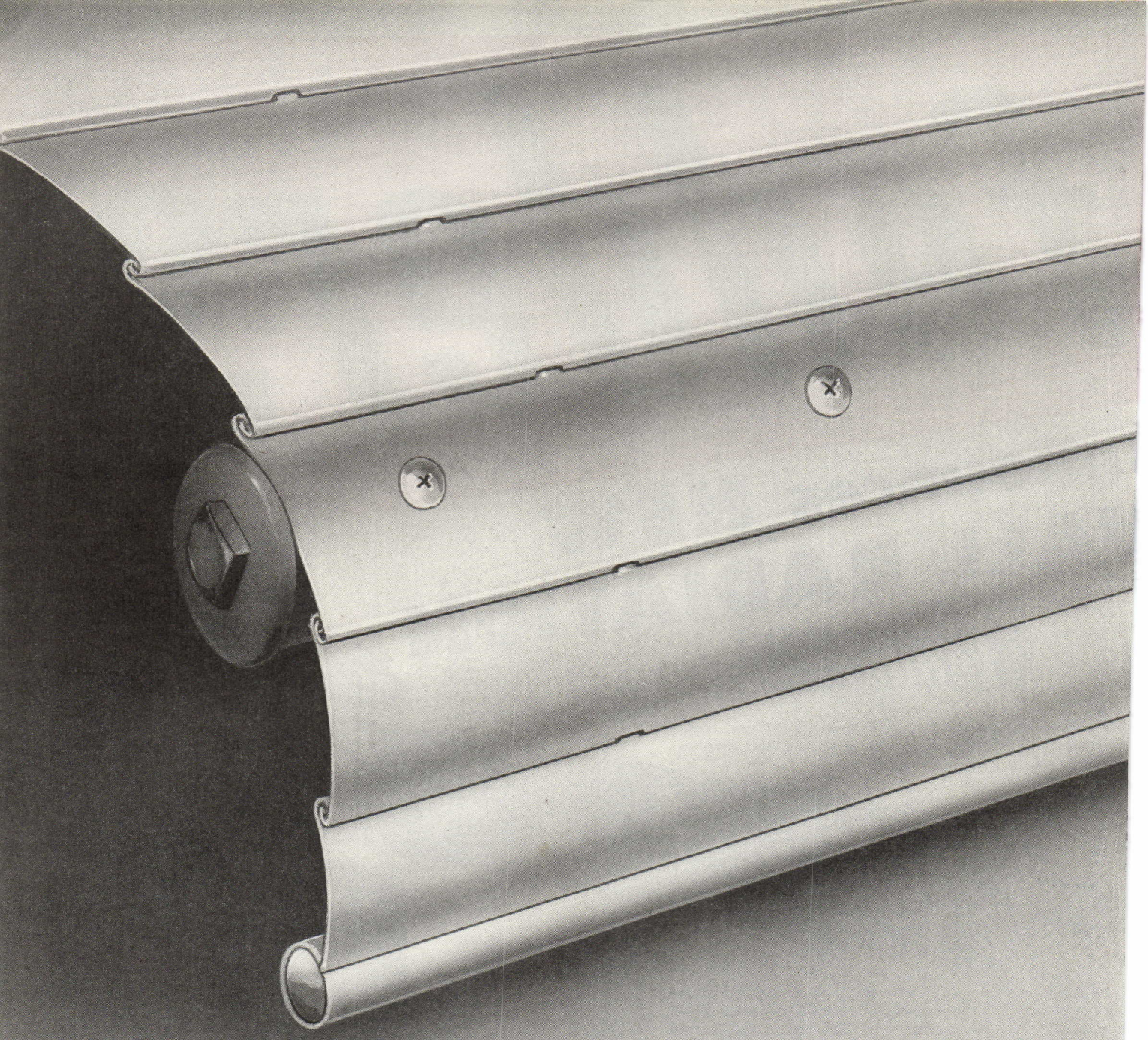
Increased efficiency of transferring heat is assured by the pattern stamped in the fins which creates a turbulent scrubbing action of airflow against fins. This die-formed pattern also produces greater fin strength.

Three styles of enclosures are available as illustrated.

Fedders Wall Radiation for steam and hot water lines is available in lengths from 2 to 12 feet in 6 inch increments. 38 and 50 fins per foot on 1¼ inch tube and 24 fins per foot on 2 inch tubes. Write for catalog WR-C1 TODAY.

DDERS-QUIGAN CORPORATION
BUFFALO 7, N. Y.

Quigan

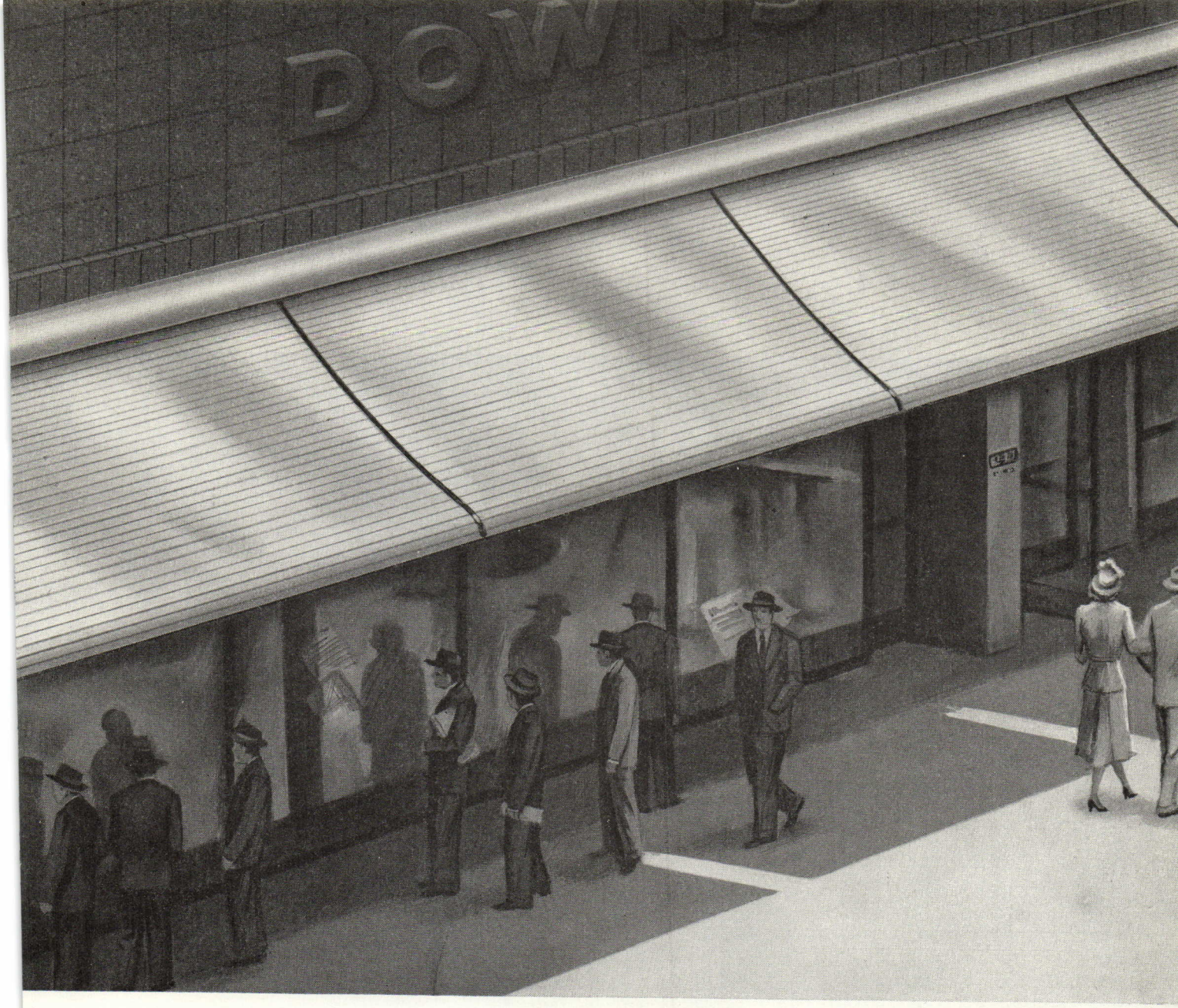


UNEQUALED IN

APPEARANCE...

PERFORMANCE...

REDUCED YEARLY COSTS...



By every standard, here is the ideal all-metal awning for commercial, institutional, and industrial buildings. Hundreds of installations have conclusively proved its durability, dependability, and economy.

Engineered for long life—precision-made for trouble-free performance—it operates smoothly year after year. By minimizing annual costs and fire hazards, the Kawneer Awning is an important investment in long-range economy and reduced replacement expenses.

Light weight is combined with the structural strength to withstand hard usage and severe climate. Hard surfaced aluminum slats are carefully formed, and positive locking prevents leakage. Easy extension is provided by lateral-hinged arms of sturdy pipe with heavy cast-iron elbows.

This handsome awning meets the highest standards of modern design. Its striking, rich appearance will add distinction to any facade, and its satiny lustrous finish reduces glare.

Furnished as completely assembled package units, Kawneer Awnings are ready for immediate erection. They can be obtained with concealed boxes or with hoods for surface application.

Widths up to 18 feet and roofs up to 8 feet are provided as individual units. When widths of more than 18 feet are required, multiple units are used. For detailed information, write 206 North Front St., Niles, Mich.; or 2566 8th St., Berkeley, Cal.

THE

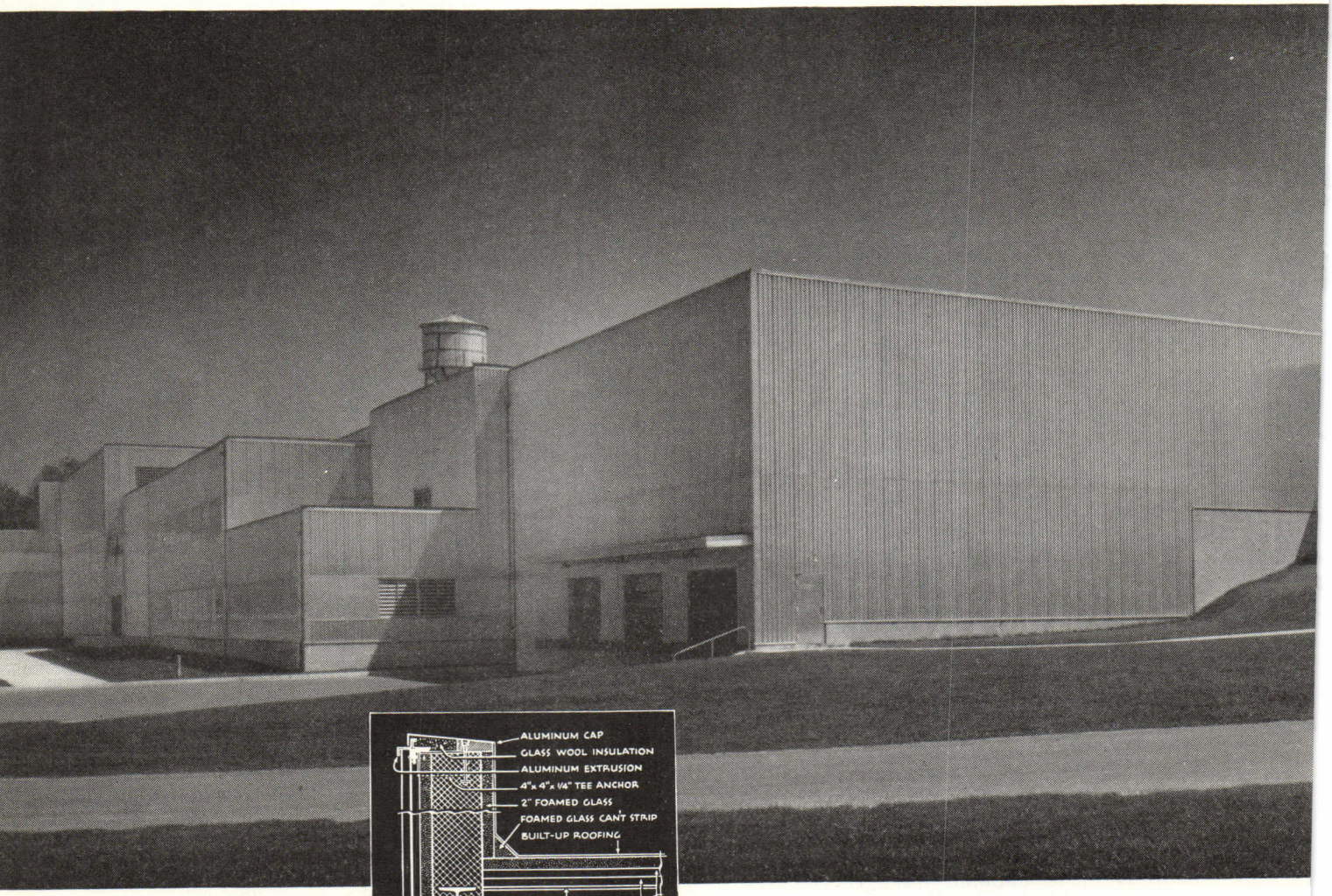
Kawneer

COMPANY

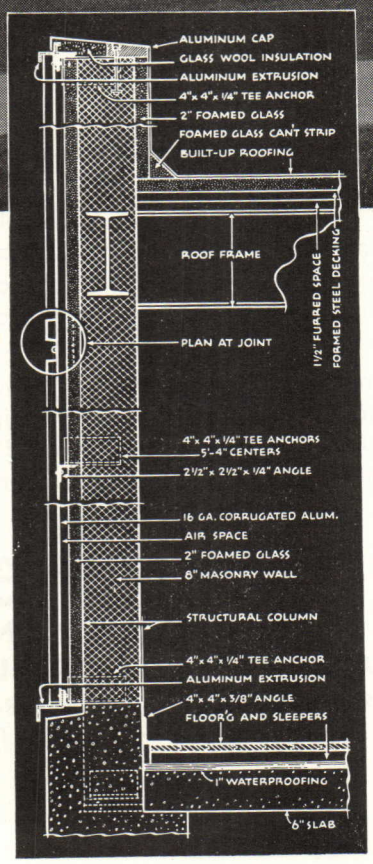
ARCHITECTURAL METAL PRODUCTS

Store Front Metals • Aluminum Roll-Type Awnings
Modern Entrances • Aluminum Facing Materials

THESE WALL

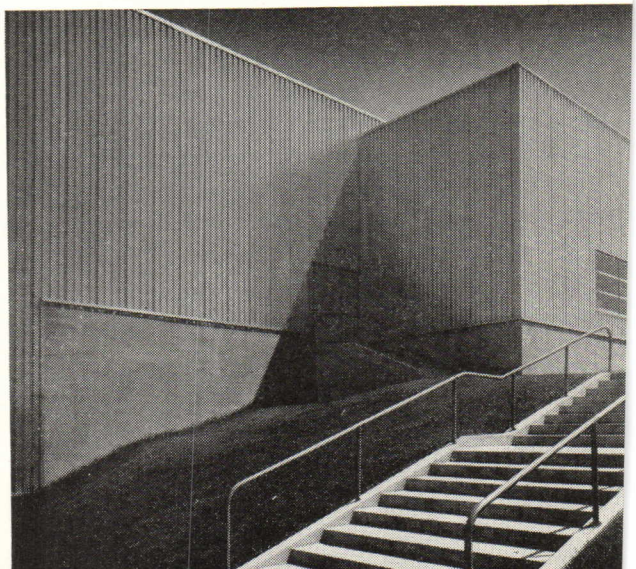


Nylon Throwing Mill, Duplan Corporation, Winston-Salem, North Carolina. Lacy, Atherton & Davis, Architects & Engineers. Alcoa Aluminum used for exterior walls, window sash, doors, copings and ventilation louvers.

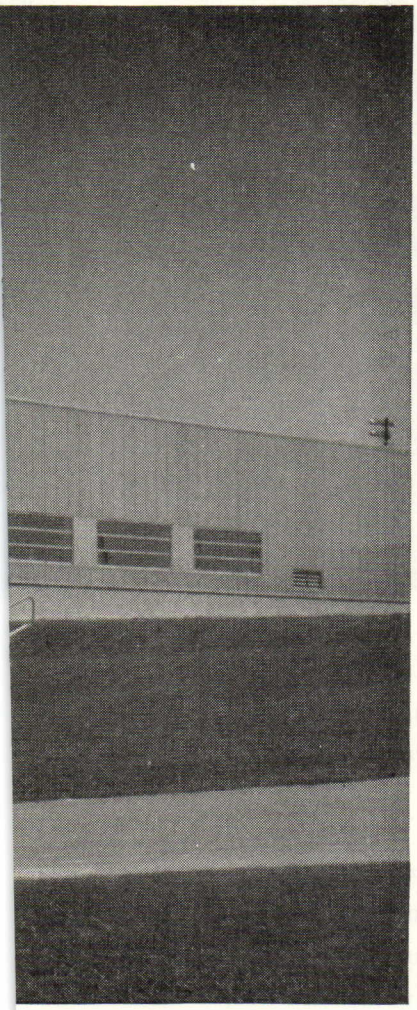


Typical wall section showing method of attaching wall panels in Duplan Corp. mill.

Insulated aluminum wall panels weigh approximately 7 lb per square foot, can be erected in fair or freezing weathe Insulation factor is equal to a foot of masonry wall.



REFLECT THE FUTURE...



Standing bright and clean in the hills of North Carolina is further proof of aluminum's place as a basic building material. This building functions as efficiently as it looks. Its walls, sheathed in rugged Alcoa Aluminum, help to maintain rigid temperature and humidity control for continuous-flow production of nylon. Use of Alcoa Aluminum helped to speed the construction; will further repay the owners by keeping maintenance costs at a minimum.

Today, in every part of the country, you will see gleaming, modern, aluminum-clad buildings. Aluminum has come of age as a building material, for it best combines workability, strength, weather resistance, lightness, economy and long life.

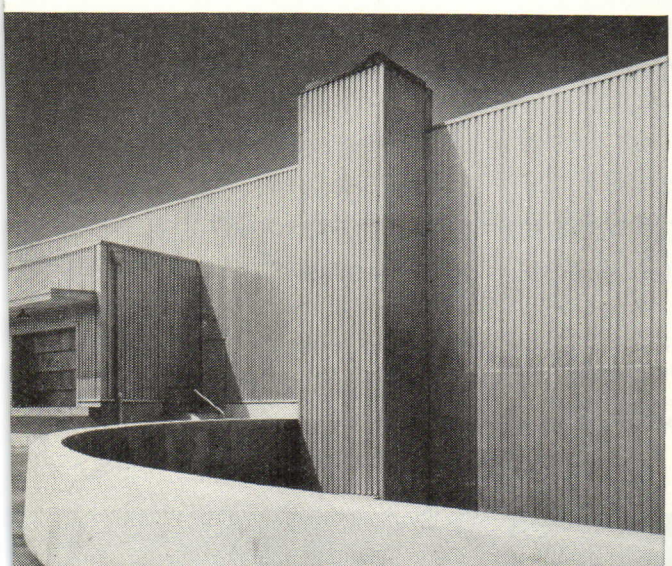
Alcoa offers building planners a fund of aluminum knowledge unmatched anywhere in the world. For a forward look at aluminum's place in the building world, ask to see the film or book, "The Davenport Story".

Call or write your nearby Alcoa Sales Office or ALUMINUM COMPANY OF AMERICA, 1892C Gulf Building, Pittsburgh 19, Pa.

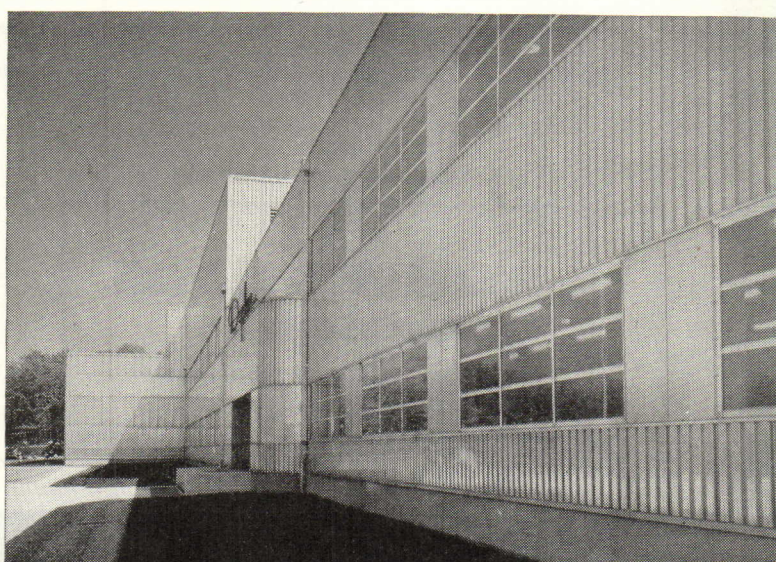
ALCOA

FIRST IN ALUMINUM

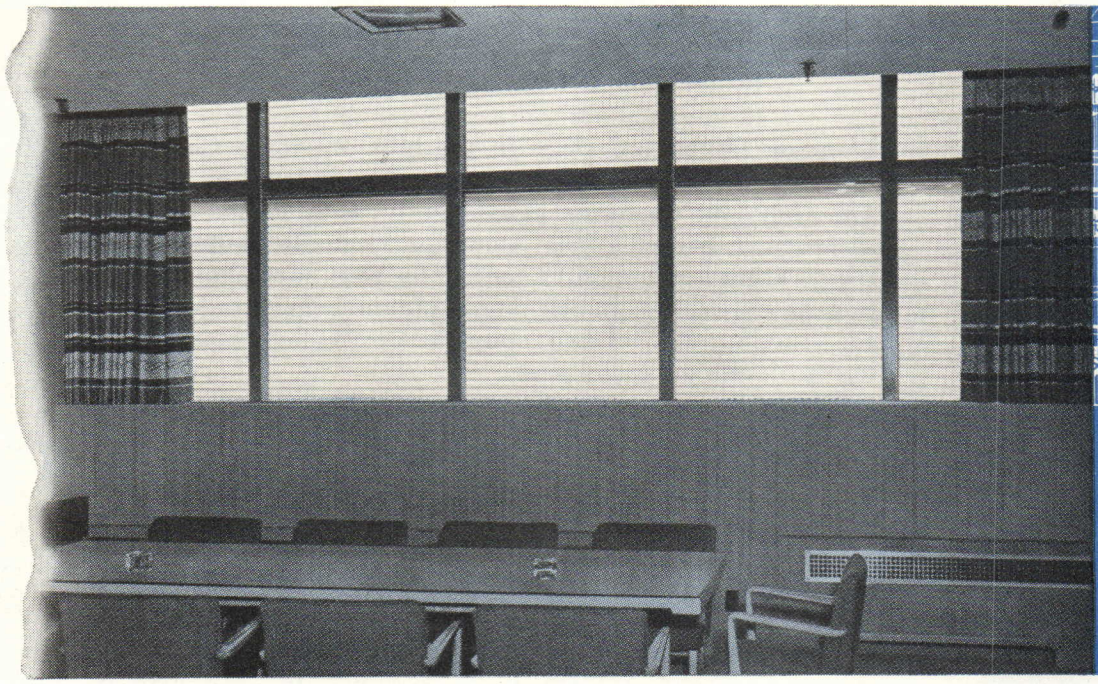
eld top and bottom by angle girts, aluminum-faced panels e quickly, easily installed. They combine good appearance ith freedom from painting and maintenance.

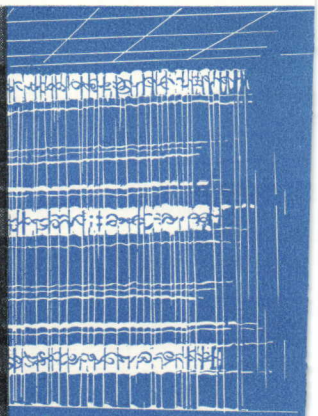


Aluminum-faced wall panels are supplied by several manufacturers. Standard widths. Lengths as specified. Lighter weight simplifies design, speeds construction.



PLEXIGLAS — Lets in the Light Keeps out the Glare





Corrugated white translucent PLEXIGLAS is used to glaze this room-length area in an executive office at the Croydon, Pa. plant of Seaboard Container Corporation. The photograph, taken directly into the afternoon sunlight, illustrates the soft diffusion of sun glare achieved with PLEXIGLAS. Architect: Silverman & Levy, Philadelphia.

Sun glare becomes soft, eye-easing light—pleasant to work or read by—when it's screened with translucent PLEXIGLAS glazing. PLEXIGLAS diffuses artificial or natural light perfectly —lets you see clearly without eyestrain.

In glazing, lighting and a score of other applications, architects are turning more and more to PLEXIGLAS. You'll find this adaptable acrylic plastic in weatherproof, translucent skylights and clerestory panels for daylight admission—in shatter-resistant glazing around curved corners—in wall-to-wall luminous ceilings—entire store fronts—translucent and transparent panels and screens of all kinds. And this is only the beginning of the list.

If you want to know the full range of PLEXIGLAS possibilities, send now for our newest booklet —PLEXIGLAS for Architecture. It gives complete technical data on this light, strong, workable *Outdoor Plastic*, shows actual installations, suggests uses. Write today on your business letterhead. Ask for samples of plain, corrugated or patterned PLEXIGLAS, clear or in colors.

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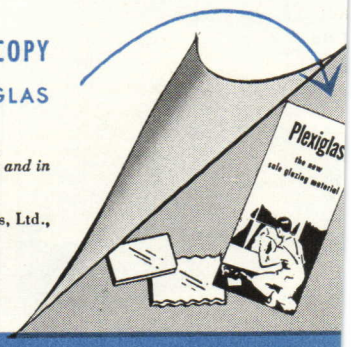


Canadian Distributor: Crystal Glass & Plastics, Ltd., 282 St. Helens Avenue, Toronto, Ont.

technical press

By JOHN RANNELLS

timber

Three phases of the architectural uses of wood are covered in three books of British origin: *Wood Specimens*[4] is a handsome big volume with 100 beautiful reproductions in color of decorative woods from all over the world. *A Concise Encyclopedia of World Timbers*[5] describes about 200 timbers, with macroscopic identification of most of them. *Design of Timber Structures*[6] is a very thorough text on the structural properties and design methods peculiar to wood.

All these books present a wealth of background material. The introduction to *Wood Specimens* covers the climates and trees of the forest regions of the world, illustrated by an authoritative world map by the Timber Development Association, and a sufficient smattering of botanical and structural growth information for those concerned with the use of timber. The introduction to the *Encyclopedia* is a quite thorough description of the physical properties of hardwoods and softwoods, leading to identification. The first couple of chapters of *Design of Timber Structures* goes most thoroughly into structure and composition and properties of wood with really clear illustrations. In all of the books the vexing subject of names is recognized, but by no means cleared up. The fact that "whitewood" in Britain means common spruce or "redwood" means Norway pine or "robinia" means black locust doesn't make for easy understanding by American readers, especially since there is scant cross-referencing. These small confusions do show the importance of the scientific botanical identifications, however. There seems to be no other way. The first two books give many examples where woods of similar appearance have very unlike properties, so that their proper uses can be determined only by a sound understanding of their structures and growth habits and botanical classification. The last two books have excellent bibliographies, referenced in ways that would aid greatly in the further study of any particular branch of the subject.

Wood Specimens is more than a picture book, although the pictures are what make it. They are extremely handsome, scarcely distinguishable from actual specimens. They have all appeared in the magazine *Wood* together with concise particulars of growth, properties, and uses, with illustrations of the tree and leaf. This collection is the first of its kind in book form and it makes a stimulating book for designers in wood. It would be better if the descriptions of some of the specimens had been more specific. There's one of sequoia burr for instance, but none of sequoia as we know it in the board, and the one of Douglas fir is ordinary rotary cut although the description doesn't say so—again the qualities of sawed boards are not even hinted at.

(Continued on page 118)

[4] *The Nema Press, London, England, 1949, 220 pp., 9½" x 11". Two guineas.*
[5] *The Philosophical Library, New York, N. Y., 1949, 360 pp., 5½" x 8½".*
[6] *By Phillip O. Reece, E. & F. N. Spon, Ltd., London, England, 1949, 235 pp., 5½" x 8½". Sixteen shillings.*

technical press

(Continued from page 117)

The *Encyclopedia* consists mostly in a description of each wood, with specific information for identifying them all by inspection with a hand lens. This is welcome material as this information is more to the point for wood users than botanical lore—which users of wood can't be concerned with in detail. The purely botanical literature with its long historic background is immense; the published works on structure of all the usable timbers is scant.

An Introduction to the Design of Timber Structures is the latest of Spon's handy little texts—the best of them yet in my opinion. The author is director of the Timber Development Association. It is presented so realistically, with such good balance between physical data and workable design theory, all so clearly written and illustrated that it should go far toward fuller and more economical utilization of our woods. It's a wonderfully thorough text, with full realization of the modifications in pure elastic theory that are necessary for structural design in wood. The use of statistical analysis for establishing safety factors, especially in laminated structures, is especially pat. The decimal arrangement of text paragraphs is perfect. The bibliography arranged by chapters, is as rich in references to American literature as it is to British. The design and printing of the book, especially the tables and line cuts, is excellent. The mature competence that pervades this book (it is a quality that pervades most of Spon's books) seems to me to be due to careful attention to the full subject at hand without special attention to its use as a text in a particular course of study in a particular school, or (what's more common in text book publication) inclusion of all sorts of related material to pack it out and make "talking points" for the salesmen whose job it is to keep their publishers goods on the approved lists of as many schools as possible.

Two more of the Western Pine Association's[7] excellent pamphlets have reached us: Idaho White Pine and Ponderosa Pine, uniform with Douglas Fir, reviewed in the June '49 **P/A.** A fairly close comparison of these two pamphlets fails to reveal any difference between the two woods in actual use. There is about ten times as much Ponderosa available, however, which may account for the fact that it is marketed in about 20 grades. Idaho pine boasts only 15 different grades but the names are fancier. For instance, the common grades of Ponderosa are 1, 2, 3, 4, and 5, while in Idaho pine they are Colonial, Sterling, Standard, Utility, and Industrial. Examination of the corresponding illustrations showing in detail the appearance of each grade (eight representative boards) shows no apparent difference. Idaho pine has long been the wood used in pattern making. That's about its only use not shared by Ponderosa, which is used for light framing in addition to all the uses common to both. Anyhow, these are mighty attractive pamphlets, with many illustrations of the woods in use and a full range of pictures with descriptions of each grade.

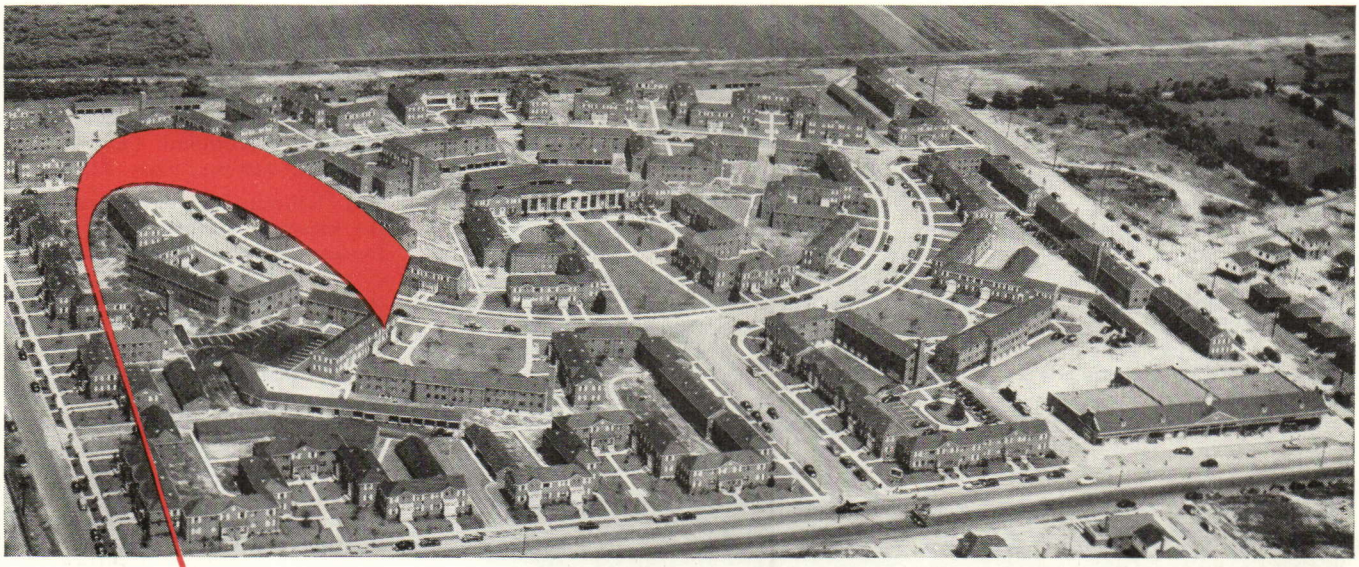
british texts

Two more of the Spon Architectural and Building series of pocket-size handbooks have reached us: **Heating and Ventilating,** *by Oscar Faber, and* **Acoustic Principles,** *by D. J. W. Cullum (1949 5¼" x 8½", 143 and 200 pp., 10/6s and 16s net, E. & F. N. Spon, Ltd., 57 Haymarket, London S. W. 1, England.*

They are authoritative and quite thorough without being technical—excellent guides to these subjects for the non-specialist, giving enough theoretical background for understanding the e

[7] *Western Pine Association, Portland, Oregon.*

(Continued on page 12



576 families live in this modern housing development in Queens, N. Y. The entire project is heated by a B & G Hydro-Flo System supplied by sixteen boilers in eight boiler rooms.

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B & G *Hydro-Flo* Heating is amazingly economical in operation—delivers years of trouble-free service—and provides the kind of comfort *obtainable only with controlled radiant heat. And B & G Hydro-Flo Heating is competitive in price with heating systems worthy of the name!*

The close temperature regulation possible with *forced hot water* means that fuel is never wasted in supplying unnecessary heat. Indoor temperature is maintained by accurate controls at the comfort level, regardless of how sharply the weather changes.

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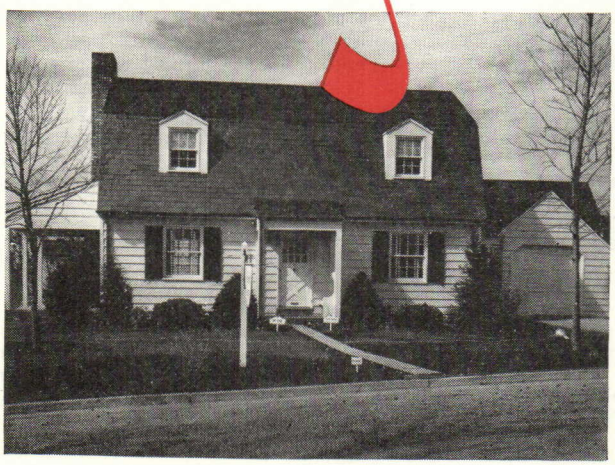
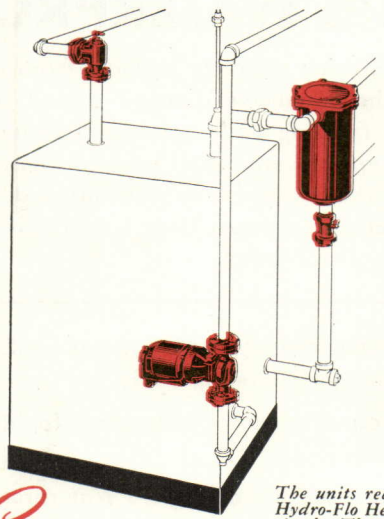


This modest residence enjoys the comforts of controlled radiant warmth from a B & G Hydro-Flo System.



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technical press

(Continued from page 118)

amples of practice which make up the bulk of the books.

British heating practice is notably different from ours, especially in the wide use of individual open fires, using about four times as much fuel as would be required with individual stoves. All sorts of heating systems and devices are described, with rather less attention to ventilation.

The acoustics book covers its field more in detail with more theory and a great many practical applications, from isolation of machinery to soundproofing of ventilation ducts. Sound absorbing materials (called "acoustical correction" in this country) are only a small part of the acoustics picture. The acoustics picture is a fascinatingly complex one. This book should be of great help in bringing more architects to a fuller understanding of it.

BOOKS

Music Rooms and Equipment. *Clarenc J. Best, Ph. D. Music Education Re search Council Bulletin No. 17; Musi Educators National Conference, Chi cago, Ill. 112 pp., illus. $1.50*

This bulletin has been prepared wit the intention of presenting helpful in formation and principles about the kin of rooms and equipment that facilitat the progress of musical study and per formance in schools. Information o direct value to school officials, schoo architects, teachers of music, and other concerned with the planning and con struction of the physical equipment o school buildings and auditoriums ha been included. The report covers th type, size, and location of music room with relation to classrooms; musi instrument, vestment, and uniforn storage; acoustics, lighting, heatin and ventilating; equipment; auditoriu stages and band shells. An exceller section on acoustics, prepared by D Richard H. Bolt, Head of the Acousti Laboratory of Massachusetts Institu of Technology, has been presented.

With counsel from many sources, th MENC and author have assemble much of the technical knowledge nece sary for the solution of these problen related to music room requirement However, successful integration of th information by the architect will n easily be accomplished; the proble becomes quite complex. As Coun Chairman William R. Sur stressed the introduction "in planning new f cilities or remodeling present faciliti for music instruction in schools, thoug should be given to the needs of both t school and the community." He furth emphasizes that successful housing a equipping of the school music depa ment can only be fully realized wh school authorities, capable school arc tects, school music teachers, and co munity leaders work together in pl ning present and future needs of b school and community music.

It is to be hoped that use of technical knowledge now available a a better understanding of good conte porary architectural design can res in more successful solutions than majority of those presented in the flo diagrams, and drawings section of t study. B.H

HOME BUILDING

The Business of Home Building. *Ed by B. Kenneth Johnstone, Head of Department of Architecture (on lea Carnegie Institute of Technology; Charles E. Joern, of Wm. Joern Sons, Chicago Realtor and Builder. Graw-Hill Book Company, Inc., 330 42 St., New York 18, N. Y. 286 index, $4.00*

Subtitled "A Manual for Contracto this book has been specifically prep to instruct and assist the small buil the editors pointing out that usuall percent of all U. S. housebuildin

(Continued on page

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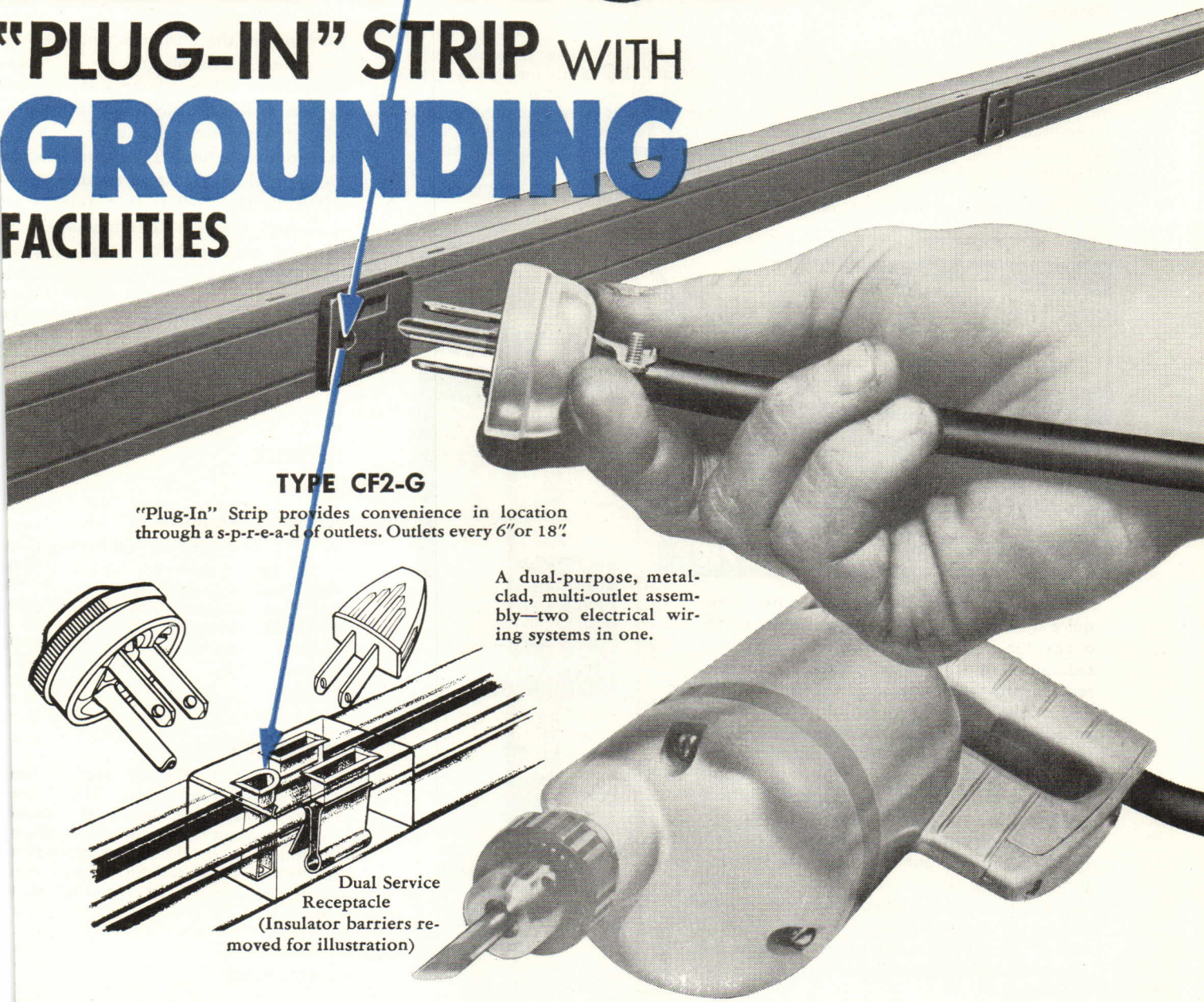

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p/a

REVIEWS

(Continued from page 120)

done by builders who each produce fewer than 10 houses a year. The volume consists of a dozen chapters on the various problems connected with the home-building enterprise, each written by an expert in his particular field. In compiling these discussions, the editors emphasize that the goal has been to give the reader sufficient business knowledge to make a profit with a minimum risk of his own money; practical knowledge of economic factors to give sufficient assurance that there is a market for his product, and the benefit of production knowledge based on the experience of other builders—"practical, usable facts, *not* theory."

G.A.S.

PLANNING RESEARCH

Community Organization and Planning
Arthur Hillman. The Macmillan Company, 60 Fifth Ave., New York 11 N. Y., 1950. 377 pp., diagrams, $4.0

This book puts together fairly recen thinking on the questions indicated b the title. It consists largely of quota tions from other writers, strung to gether with a connecting text which while it gives coherency to the subject is largely superficial. The author reache no conclusions of his own, and one i left with the feeling that this is a academic research unilluminated b personal experience or point of view The bibliographies, however, are excel lent.

HENRY S. CHURCHIL

NOTICES

MERGER ANNOUNCED

Merging of AMERICAN AIR FILTER COM PANY, INC., Louisville, Ky., and HER MAN NELSON CORPORATION, Moline, Ill has been announced by W. M. Ree president. Company offices will be i Louisville and the Herman Nelson D vision, A.A.F.C., Inc., will remain i Moline.

PHOTOS BY CLEVELAND

Pictures of A. Quincy Jones' "Lo Cost House, San Diego, Calif." pu lished in P/A last month (pp. 62-6 were erroneously credited to Juli Shulman but should have been credit to *Robert C. Cleveland*, architectur photographer of Pacific Palisade Calif.

SCHOLARSHIP

The Managing Committee of the JOH STEWARDSON MEMORIAL SCHOLARSH IN ARCHITECTURE announces a comp tition for a scholarship of the value $1300, the holder of which is to purs the study of architecture in this foreign countries as determined by t committee and under its direction.

This competition is open to citize of the United States who shall ha studied or practiced architecture in t State of Pennsylvania for the period at least one year immediately prec ing the scholarship award, and who not less than 21 or over 30 years of on March 15, 1950, the closing date applications. Further information requirements, as well as registrat blanks, may be obtained from the S retary, Henry D. Mirick, Room 8 12 S. 12 St., Philadelphia 7, Pa.

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it's the law

By BERNARD TOMSON

A current decision of the U. S. Supreme Court described by Tomson this month is of such immediate importance to architects and engineers that it was decided to give it precedence over the conclusion of his discussion of partnerships, started in February P/A *and intended to continue this month. The partnership discussion will be concluded in April* P/A.

In *U.S.* v. *Moorman* the U.S. Supreme Court has very recently decided a case of considerable importance to architects, engineers, and contractors. The precise question presented to the court was the effect of the "disputes" clause found in contracts with the federal government. This clause empowers the contracting officer to decide questions arising under the contract, with a right of appeal to the head of the department *whose decision is stated as being final.* In deciding that the clause was valid and that on questions of law, as well as fact the decision of the head of the department is final, the court incidentally discussed the familiar contractual provision found in building contracts that the amount, classification, sufficiency, completion, etc., of work done under a building or construction contract by the contractor shall be determined by an architect, engineer, superintendent, or other person. The Supreme Court stated that these provisions were valid in every state (except Indiana) and held that such provisions were valid and binding.

In this case the contractor, Moorman, had entered into the usual government contract to grade a plant site. The controversy arose as to whether the contract required the contractor to grade a particular portion of the site. Moorman did the grading and then filed a claim for extra compensation. It was rejected by the government engineer. An appeal was taken to the Secretary of War whose authorized representative also considered the facts and denied the claim. This was, under the specifications, "final and binding" upon the parties.[1] Moorman then brought an action in the Court of Claims contending that he had a right to challenge the findings of the Secretary of War as "questions of law" because one of the provisions of the contract stated that determinations on "questions of fact'

(Continued on page 126

[1] *"If the contractor considers any work demanded o him to be outside the requirements of the contract o if he considers any action or ruling of the con tracting officer or of the inspectors to be unfair, th contractor shall without undue delay, upon suc demand, action, or ruling, submit his protest theret in writing to the contracting officer, stating clearl and in detail the basis of his objections. The con tracting officer shall thereupon promptly investigat the complaint and furnish the contractor his decisio in writing thereon. If the contractor is not satisfie with the decision of the contracting officer, he may within thirty days, appear in writing to the Secretar of War, whose decision or that of his duly authorize representative shall be final and binding upon th parties to the contract. . . ." Paragraph 2-16 of th specifications.*

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it's the law

(Continued from page 124)

were final and conclusive on the parties.[2] The Court of Claims considered the facts, made new findings, overturned the Administration decision and entered a money judgment for Moorman. The U.S. Supreme Court reversed the Court of Claims and held:

"First. Contractual provisions such as these have long been used by the Government. No Congressional enactment condemns their creation or enforcement . . . In upholding the conclusions of the engineer the Court emphasized the duty of trial courts to recognize the right of parties to make and rely on such mutual agreements. Findings o such a contractually designated agent even where employed by one of th parties, were held 'conclusive, unles impeached on the ground of fraud, o such gross mistake as necessarily im plied bad faith.'

"The holdings of the foregoing case have never been departed from by thi Court. They stand for the principle tha parties competent to make contracts ar also competent to make such agree ments."

The Court then went on to discuss a case involving a contract provision tha "the decision of the Supervising Ar chitect as to the proper interpretatio of the drawings and specifications shal be final." About such a provision th court said:

"Similar agreements have been hel enforceable in almost every state. Se cases collected in Note, 54 A.L.R. 1255 et seq. In one state, Indiana, the court do seem to hold differently, on th ground that permitting engineers o other persons to make final determina tions of contractual disputes woul wrongfully deprive the parties of a right to have their controversies de cided in courts. See cases collected i Note, 54 A.L.R. 1270-1271. In the Mc Shain case we rejected a contentio that this Court should adopt a rul like Indiana's and we reject it now. I is true that the intention of parties t submit their contractual disputes t final determination outside the court should be made manifest by plain lan guage. Mercantile Trust Co. v. Hensey 205 U.S. 298, 309. But this does no mean that hostility to such provision can justify blindness to a plain inten of parties to adopt this method for set tlement of their disputes. Nor shoul such an agreement of parties be frus trated by judicial 'interpretation' o contracts. If parties competent to de cide for themselves are to be deprive of the privilege of making such antici patory provisions for settlement of dis putes, this deprivation should come fron the legislative branch of government."

The Supreme Court then determine that the contract did show an inten to authorize final determinations by th Secretary of War and stated that hi determination was final, whether it wa one of fact or of law. In conclusion th court stated:

"The oft-repeated conclusion of th Court of Claims that questions of 'in terpretation' are not questions of fac is ample reason why the parties to th contract should provide for final deter mination of such disputes by a metho wholly separate from the fact-limite provisions of Sec. 15. To hold that th parties did not so 'intend' would be distortion of the interpretative proces The language of Sec. 2-16 is clear. N ambiguities can be injected into it b supportable reasoning. It states in la guage as plain as draftsmen could u that findings of the Secretary of War disputes of the type here involved sha be 'final and binding.' In reconsiderin the questions decided by the designate agent of the parties, the Court of Clain was in error. Its judgment cann stand."

(Continued on page 12

[2] *"Disputes.—Except as otherwise specifically provided in this contract, all disputes concerning questions of fact arising under this contract shall be decided by the contracting officer subject to written appeal by the contractor within 30 days to the head of the department concerned or his duly authorized representative, whose decision shall be final and conclusive upon the parties thereto. In the meantime the contractor shall diligently proceed with the work as directed." Article 15 of the contract.*

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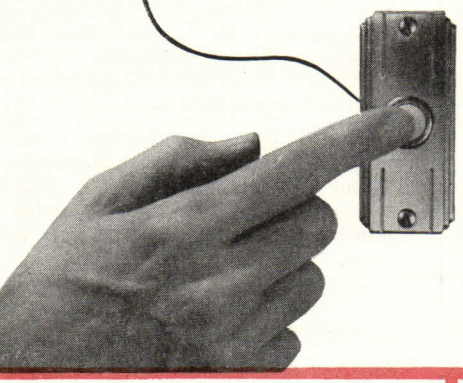

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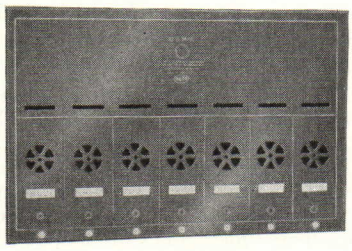

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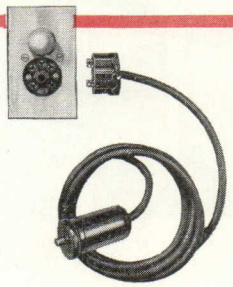

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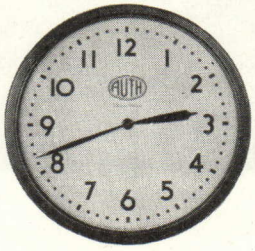

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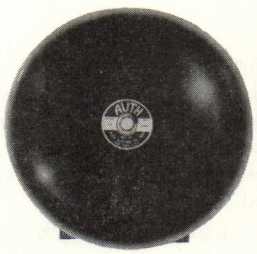

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it's the law

(Continued from page 126))

The importance of this case justifies the extensive quotations taken from the body of the opinion. The impact that it will have on prospective contracts with the government cannot be over-emphasized. In the future the Court of Claims will, in this type of situation, as a practical matter, be deprived of jurisdiction, unless the form of contract is changed to deny the power of determining questions of law to the contracting officer. In the absence of considerable pressure placed on the government it is doubtful whether this result can be accomplished. The problem should be squarely faced by those directly concerned and an appropriate course of conduct determined on.

No further discussion is necessary with respect to that portion of the decision which holds that contractual provisions relating to the finality of an architect's or engineer's certificate decision are valid, if the language plain in the contract and if no frau bad faith or dishonest judgment present. These clauses now can ther fore be properly said to have been su tained by the state courts everywhe (except in Indiana) and by the S preme Court of the United States.

NOTICES

CHANGES IN FIRM NAMES

FRED N. SEVERUD, 415 Lexington Av New York 17, N. Y., announces that l practice will be continued under t firm name of SEVERUD-ELSTAD-KRUEG Consulting Engineers.

FRANK HORTON has become a partı in the firm of ROBERT L. CLEMMER, 2 Grant Bldg., Hickory, N. C. The fi will continue its practice under name of CLEMMER & HORTON, Arc tects.

APPOINTMENTS

GORDON A. PHILLIPS has been appoin associate professor of architecture Montana State College; he will be charge of the design courses in the partment of Architecture.

Newly appointed members of the fac of University of Michigan College Architecture and Design are as lows: LYNDON WELCH, instructor architectural construction; ROGER G LEGRAND and KNUT LONBERG-HO visiting lecturers in architectu THOMAS F. MCCLURE, assistant fessor of sculpture.

The following appointments to the s of Pratt Institute have been announ CHARLES WARNER, critic in des PETER GRIPPE, to teach basic des STANLEY SALZMAN, to teach grap and design; PETER BLAKE, to teach troduction to architecture; SEYM HOWARD, to teach construction cou

TOM LAMB HONORED

Medal of the AMERICAN DESIGN INSTITUTE has been awarded to Lamb, New York designer, for his sign and development of the L Wedge-Lock Handle applicable to n needs and sculptured to fit the u hand.

ELECTED

RENE D'HARNONCOURT has been el director of The Museum of Modern The Museum's Co-ordination Comm will continue to function under d' noncourt's chairmanship, with Mo WHEELER as vice-chairman.

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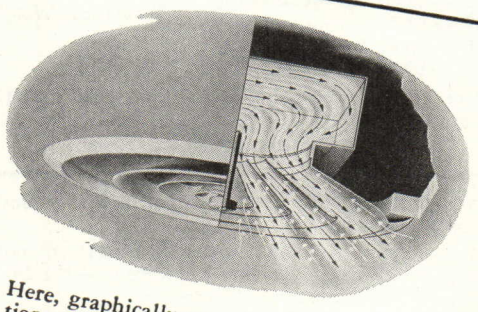

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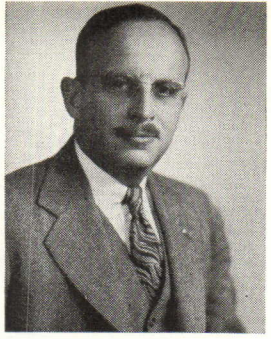


By CARL FEISS

In the letters to this column, I find one from Robert Henri Mutrux, architect, of Wilton, Connecticut, a letter which will form the key to this month's column. Be sure to read the letter first.

I like the fact that Mutrux is getting mad. I suggested to Tom Creighton at the very beginning that the title to this column should be "The Excitement to Violence". While the present title is undoubtedly preferable, it hides my hope that we will soon get more thought pouring in about what we are educating for and some really good arguments about it. Here is the key letter itself:

Dear Mr. Feiss: I wonder if columnists mean it when they say "I enjo receiving letters about my column . . even adverse criticism?" At any rat your column has been making me ma der by the month; so much so that b now it's the first section of P/A *I tur to.*

It started when you blandly informe us that you turn on your radio on to listen to the Philharmonic, Churchi and the weather. Your John Rannel was right when he said "the architec are indeed backward in their stu of . . . the community," a view whic paradoxically, you seem to share.

Rannells goes on, however (and aga you concur), "the crux of the proble of education lies in getting togeth with the schools." Can it be so simp as all that? It seems to suggest that practicing architects can only pass what they know—then everything w be alright. I feel that Rannells, a you too, have missed the crux (thou you touched on it once, in September remember?)

My suggestion, or rather, my cre is this: let us get together among ou selves, to find out what we know, a believe, as a body; and the "getting gether" will take care of itself!

Let the business law go (especia now that we've had it for two colu months!) What is there to prevent student from studying business law, Portuguese, or calligraphy (or ev "the community") as an elective, or night school, as we did? And flunki it, as we did calculus, a required su ject?

It is my firm belief that a broad ed cation is the first thing a man needs make him fit to practice architectu And by that I mean an education the needs, whims, trends, moods, p sions, and even vices of the world lives in, a world where Dizzy Gilles and Louis Armstrong are at least living as Mozart. And if you don't th Arthur Godfrey and Bob Hope and Burns and G. Allen have as much eff on architecture today as the last of Tories, then look around you!

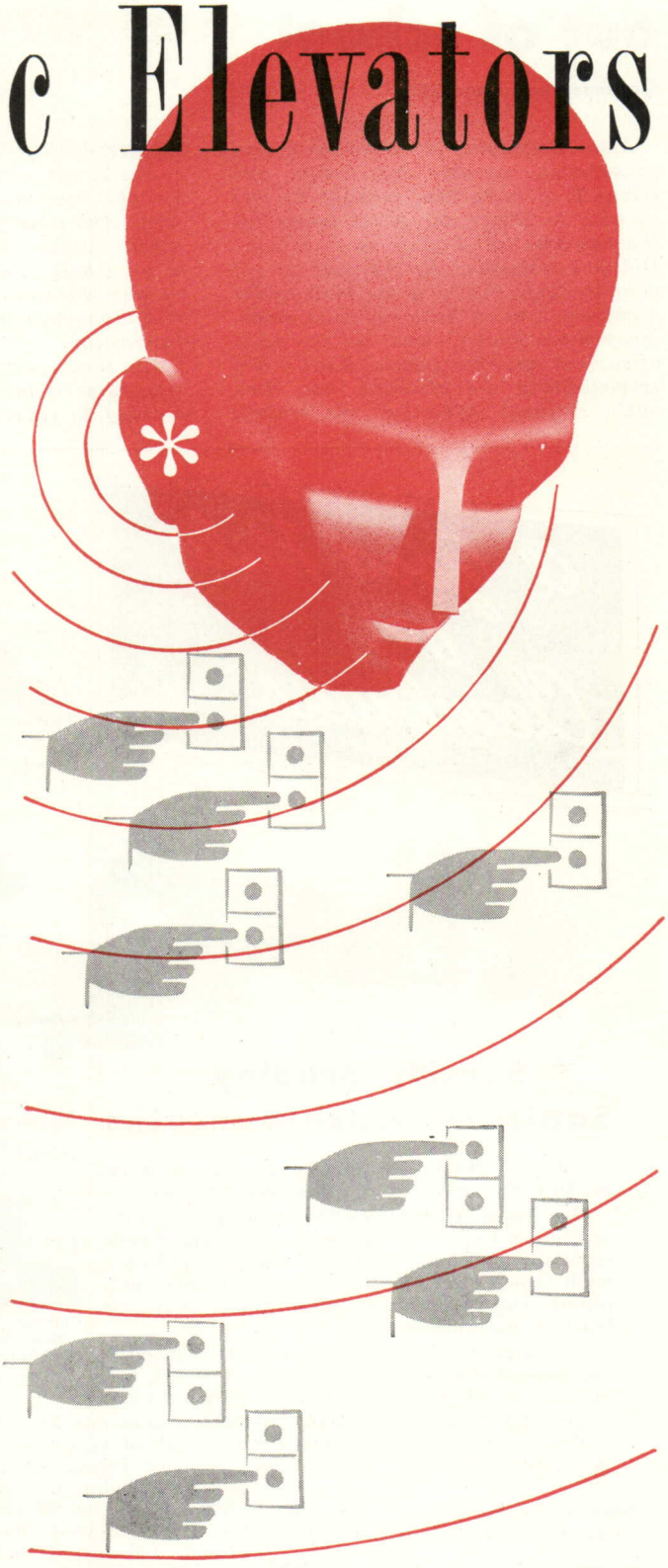
If academic life is so cloistered t weather only comes in via radio, t it's high time architects went out did some real hand-building, and bur the drawing boards to keep warm necessary!

Find the student who wants a br education, and he will give us the t of architecture we need, whether institution of his choice "fosters genius" or not. He will find time, he must, to study law and calculus, even design and breath-taking worl drawings.

(Continued on page

Selectomatic Elevators

HAVE AN "EAR" FOR HARMONIZING THE CARS WITH THE CALLS



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YOU CAN BE SURE...IF IT'S **Westinghouse**

J-98568

out of school

(Continued from page 130)

Also, in studying the community, and presumably knowing his design and strength of materials, perhaps he will be able to design the small house for the man who "can't afford an architect." Did you remember, by the way, to tell your students that it is the fault of the architects that we have no "good, small, inexpensive homes," and not the fault of current economic trends? That it is a responsibility the architect has obviously shirked? Who but the trained "Master-builder" can properly take care of the community's needs? Who, then, but the local builder, jerry- or otherwise. And if he fails, I'm sure the community would pitch in, as it did once at least before, and build its own, with its own bare hands. And I'm thinking that the results thereof would be mighty interesting.

In these art-hungry times, three months is a long time to spend with nothing to chew on. We don't need a monthly magazine to tell us things already know. As a professional bod we do badly need, however, some ce tralized discussion on what architectu is, what it means; with real, everyd examples, and what's good about it, a what's bad, and why, and how it can improved; and how fine or funny it w look 50 years from now.

When we can get together on th then let's get together with the studen although I warn you that the resu will be so brilliant that the studen will already be there, without bei called.

ROBERT H. MUTRU
Wilton, Con

The last two columns dealt not so mu with historical fact in architectu education as with attitudes. Attitud are not easily defined and when Mutru in the last part of his letter, asks something new and complains (wi others) of my prolixity, my only course is to write more—and hope th in the very process of combining wo some unforeseen combinations will cidentally produce a new idea. Mutr says that I am discussing what architect already knows. I am not sure that we know what he knows. we do, it may still be useful to find how he intends to put what he rea knows to constructive use.

I am reverting to the second colu 'way back in October, and the one wh Mutrux uses as the key to his opp tion to my precious isolation agai the vulgarities of the world—includ radio. Perhaps he hit the crux of architect's problem. If, in look around at the "Juke Box" architect of our towns, we see the effect of mechanical taste in mass entertainm —and mind you, Mutrux, I was be highbrow because I too like Gra Allen and have followed Li'l Abner years—then I reiterate, "What is architect going to do about it and do we educate him to do it?" Certai the rebuilding of our communities v our "own bare hands," as you sugg is the very antithesis of the metho meeting "the needs, whims, tre moods, passions, and even vices, of world we live in." It just can't be d that way for 150 million people, tho it was done that way, and very done too, 150 years ago in Wilton.

•

Remember that in the February col I was talking about "Comprehen Architecture." All along I have leading up to the concept of com hensibility—the new inclusiveness need today. Wright, Mumford, Gro Giedion, Fitch, and many other lea in contemporary building philos touch on the expansion of ideas ne to understand biotechnology and it sultant technical and art forms.

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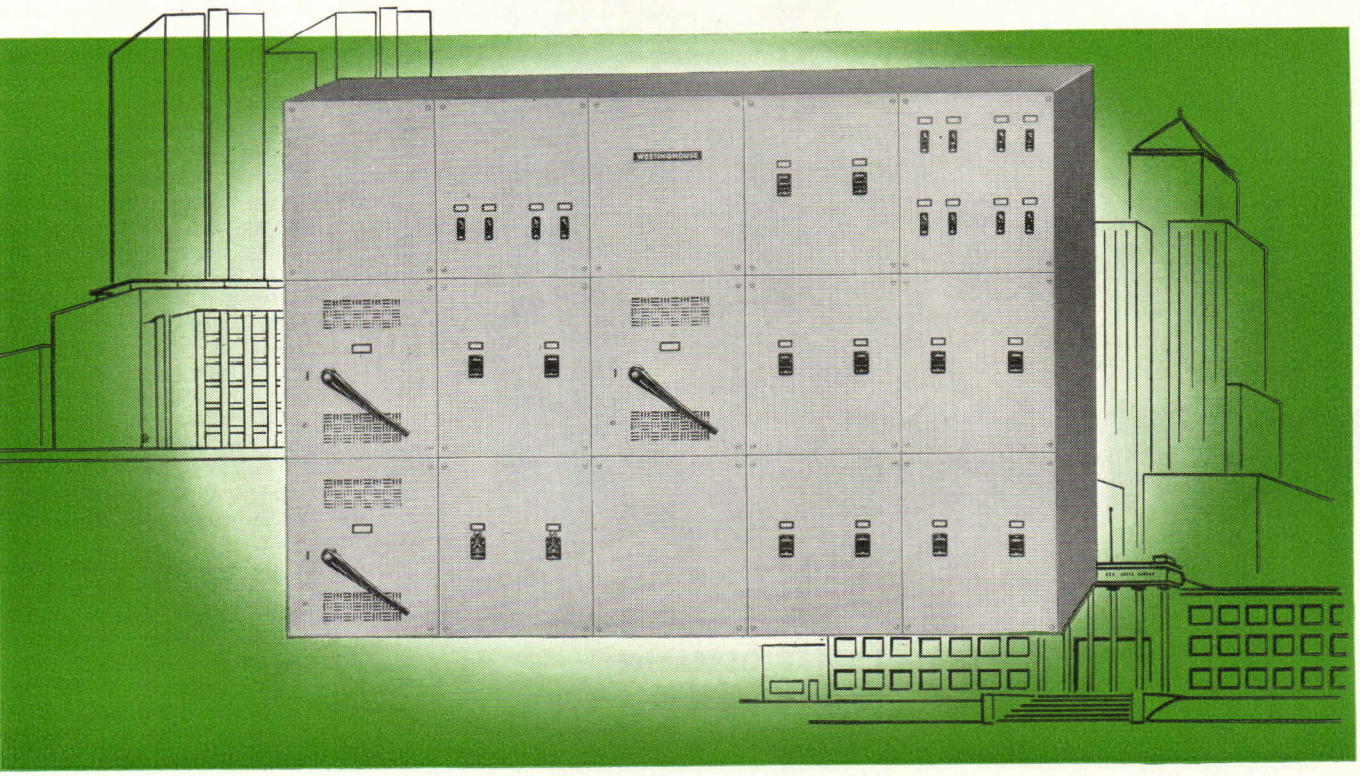

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SWITCHBOARDS

out of school

(Continued from page 132)

How do we resolve the above gobble de-gook into simple educational terms? Damned if I know. Let's take the problem of community planning as an example. Ralph Walker, President of the A.I.A., is doing a grand job around the country selling the need for city planning curricula in all architectural schools. Walter Blucher, Executive Director of the American Society of Planning Officials, told me recently that all over the country vital planning, urban redevelopment, and housing positions are going begging—and at good salaries too—because there are not enough well-trained technicians, including architects, being turned out. Actually, too few of us know the architectural responsibilities tossed to an inadequately trained profession by the Congress in the extraordinarily visionary Housing Act of 1949. (I will be happy to send any one of you *free* copies of the Act if you promise to read it. Write me care of PROGRESSIVE ARCHITECTURE.)

But how do you teach planning to architects? How do you do it in an out of school? It isn't just a question of whether it's a separate undergraduate and graduate curriculum, as at M.I.T.; or graduate, as at Columbia and Harvard; or integrated in the undergraduate, as at Denver. The main problems are *what* to teach and *how much of what* and *by whom*.

Let's take *by whom* first. After all you can't teach without teachers in or out of school. Having been in architectural education for nearly 15 years, I am convinced that the best teachers of *restricted* architecture (as against comprehensive) are those who are accomplished practitioners. Of course, there have been a good restricted architect does not mean that you are a good teacher. A really good teacher is as rare as a really good architect and even harder to find, because he should be both. So, what do you do in city planning education? There are too few good practitioners, too few with an architectural education, and *too few* with time to teach, even if they wanted to. This is still an unsolved problem which requires the concentrated effort of all of us.

In the meantime, teachers without comprehensive training in urban architecture are valiantly reading all the books and are trying to catch up with themselves, and at the same time keep ahead of the students who are also reading the same books. No book, yet, is the equivalent of personal experience and time alone will solve the tough problem of the lack of well taught teachers. In some schools—M.I.T. and Columbia, for instance—summer school

(Continued on page 1

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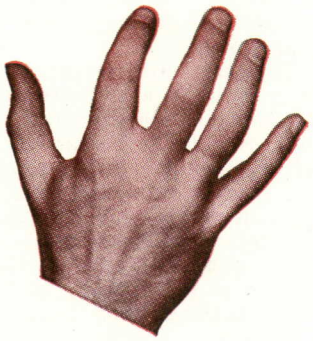

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out of school

(Continued from page 134)

and special seminars are in use for a kind of in-service training. Oklahoma Princeton, and others, have depended on the conference method. Not only President Walker and Director Blucher, but many other well-known and enthusiastic comprehensive thinkers are at work at these meetings trying to stimulate and inform students and educators alike of the new opportunities in the enlarged concept of architecture as a community enterprise.

•

Now *what* and *how much?* We have briefly covered some of *what* in previous issues; business methods among others. They are badly needed in city planning. We won't be able to cover all the subject matter needed in urban, metropolitan, and even regional planning for architects in this issue. Perhaps you aren't sold on the idea yet anyway, in spite of Ralph Walker and Henry Churchill and Clarence Stein and a lot of other comprehensively minded architects who have been drumming up trade. For the sake of this argument, open your mind to this problem.

Everybody lives, works, plays, and spends the predominant part of his life in buildings. Cities are made up of a mixture of these articles of commodity which may or may not be truly useful or beautiful or located properly or be of real value to the community or society. The architect heretofore has considered, for the most part, that the individual building, a few at a time and isolated, were his sole function.

Now the entire accumulation of them in and about a city are added to his professional training and responsibilities. He adds to his history and theory of architecture, *The Culture of Cities.* He studies urban sociology and public opinion surveys and vital statistics and politics. He learns of land-use mapping and building appraisal. He discovers (often to his dismay) that architects upon turning their buildings over to the clients, abandoned them to their fate for eternity. He therefore adds to his studies the local laws and regulations covering not only one building but all—zoning, subdivision control building codes, housing, and redevelopment laws. He adds to his design vocabulary site planning, civic design orientation, landscape design, traffic group building masses, topography multiple building types, shopping centers, and many other items. It gets to be big, doesn't it?

What else do we add? Political science and public administration? Some

(Continued on page 13

out of school

(Continued from page 136)

body has to write the program for the community for the city-planning architect to carry out. And the languages of the administrator and the architect have to be mutually understood or they come to immediate cross purposes. Then, there is public health, municipal finance including taxation, real estate practice, mortgage finance, investment banking, federal financing systems—shall I go on?

•

How much? There just isn't time. The old clichés in architectural training begin to shrink and dissolve. Each man in the school begins to make voluntary choices. He has to because he is no longer averaged off. He is forced to mature more readily—adolescence or the drafting board is incompatible with the magnitude of planning and housing. And group studies are added to design. The University of Washington in St. Louis has been working in the *slums* for several years and the architectural students are in the heat of local problems. Hugo Leipsiger-Pierce has been doing the same thing for his students with the small communities in Texas. The design labs at every major urban architectural school are now moving into the community and out of the cloister. It is an exciting change taking place before our eyes and the next generation of graduates will be very different indeed from those of the past.

That, Mutrux, is a step forward for the "Master-builder" you mention. But he is not being trained in the handicrafts of the past. He can't be—and keep ahead of the demands which your fine "needs, whims, trends, moods, passions, and even vices, of the world require.

Next month I am going to talk some about the architect as a public official and consultant, and the training of him for more than the career of a private practitioner.

NOTICES

NEW PRACTICES, PARTNERSHIPS

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(Continued on page 1

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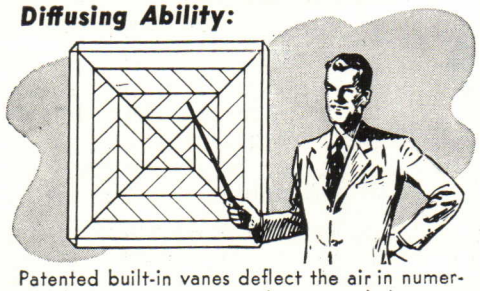

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p/a NOTICES

(Continued from page 142)

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CHANGES IN FIRMS

YORK & SAWYER, Architects, 101 Park Ave., New York, N. Y., and 1308 18 St. N.W., Washington, D. C., announce the admission of RUSSELL COLEAN and FREDERICK H. VOSS to General Partnership and EDWARD J. OLIVINE and HARRY R. ALLEN as Associates.

JOSEPH P. RICHARDSON has been admitted to partnership in the firm of COOLIDGE SHEPLEY BULFINCH & ABBOTT 122 Ames Bldg., Boston, Mass.

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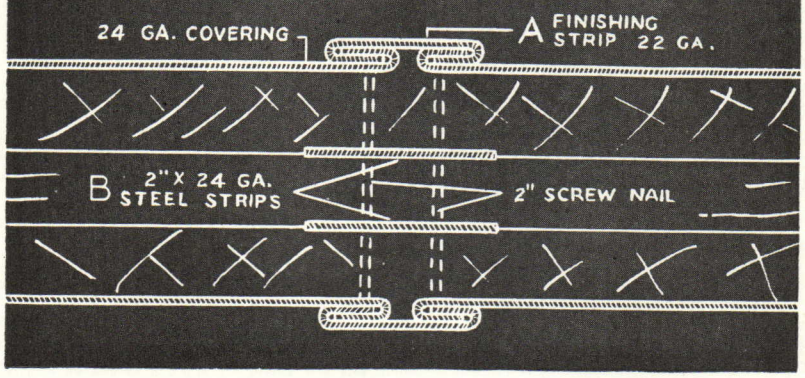

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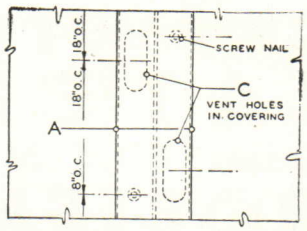

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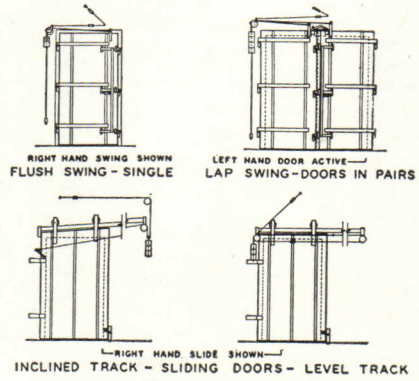

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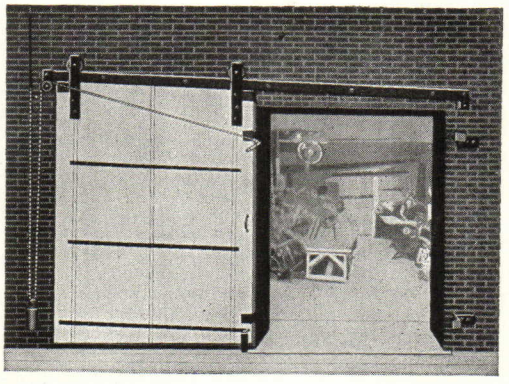

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p/a NOTICES

(Continued from page 144)

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AWARD

It has been announced that SIR PATRICK ABERCROMBIE, M. A. Fellow of the Royal Institute of British Architects, and an internationally known British architect and town planner, will be awarded the Gold Medal of the American Institute of Architects at the 82 A.I.A. Convention in Washington, D. C., in May.

LECTURE

It has been announced that FRANK LLOYD WRIGHT will deliver a public address at N.C. State College, Raleigh, N.C., on Tuesday, May 16. The lecture will be sponsored by the School of Design of the College.

ANNIVERSARY DINNER

RALPH T. WALKER, president of the A.I.A., will be awarded the Medal of Honor by the New York Chapter of the Institute at its 81st Anniversary Dinner on Tuesday, February 21. Presented annually, the medal (the chapter's highest award) is given for distinguished architectural work and high professional standing. Ralph Walker is the second member of his firm, Voorhees, Walker, Foley & Smith, to receive this award, Stephen F. Voorhees having been honored in 1944.

Education will be the theme of this year's annual affair and another highlight will be a talk given by George Howe, chairman of the Department of Architecture, Yale University, on "The Educator, The Educated and The Practitioner."

Another feature of the evening will be the presentation of the award of Honorary Associate Membership to Paul Windels, recently elected an Honorary Associate of the chapter (see page 142).

SCHOLARSHIP

Teams to compete for the 1950 LLOYD WARREN SCHOLARSHIP, 37th Paris Prize in Architecture, were selected from the following seven schools: GEORGIA INSTITUTE OF TECHNOLOGY, NORTH CAROLINA STATE COLLEGE, PRINCETON UNIVERSITY, PENN STATE COLLEGE, UNIVERSITY OF ILLINOIS, UNIVERSITY OF PENNSYLVANIA, AND VIRGINIA POLYTECHNIC INSTITUTE. The teams were selected by a jury composed of: L. Bancel LaFarge, Chairman; Philip G. Bartlett, Gordon Bunschaft, Walker O. Cain, Giorgio Cavaglieri, Alonzo W. Clark, III, Alfred Geiffert, Jr., Michael M. Harris, Alfred Easton Poor, Benjamin Lane Smith, and Robert D. Stott.

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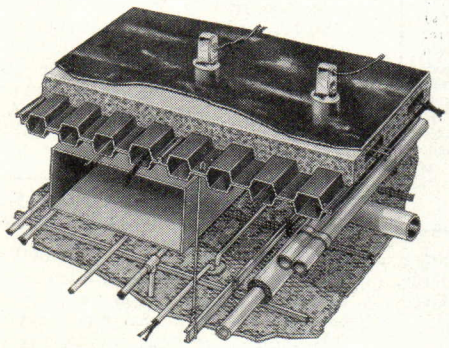

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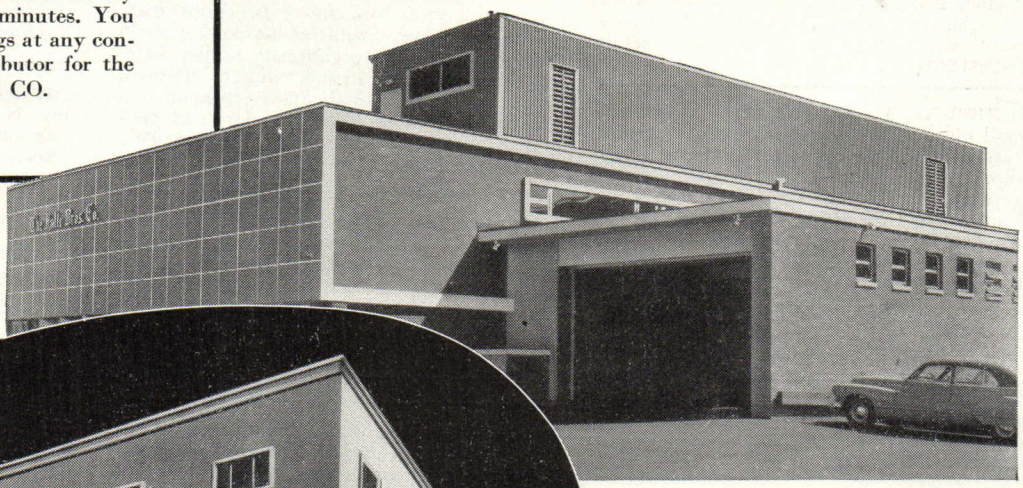

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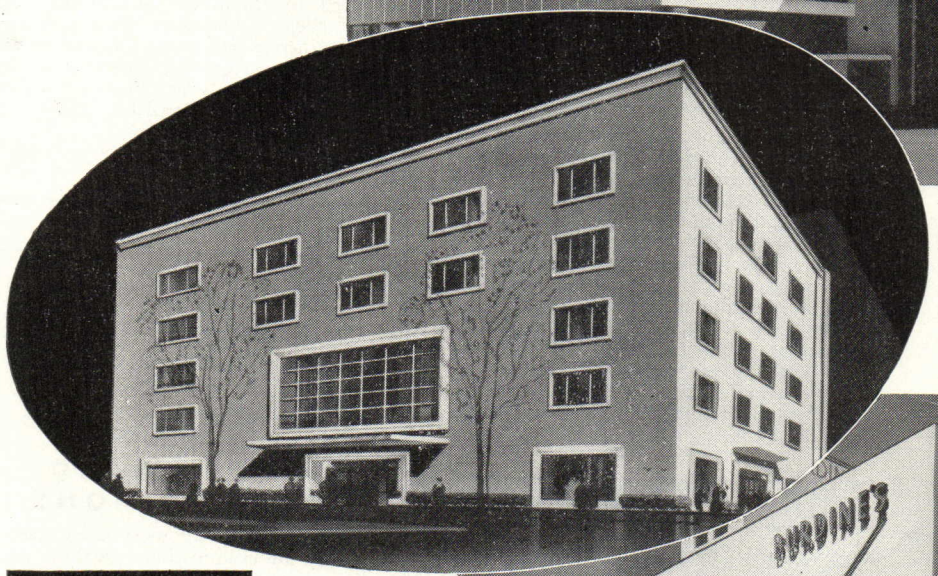
Halle Bros. Co.
architects—Conrad, Hays, Simpson & Ruth
contractor—Cleveland Construction Co.



CHICAGO, ILLINOIS

Bonwit-Teller Dept. Store
architects—Shaw, Metz & Dolio
contractor—George A. Fuller Co.

FT. LAUDERDALE, FLA.

Burdine's Dept. Store
architects—Abbott & Merkt
contractor—Caldwell & Scott

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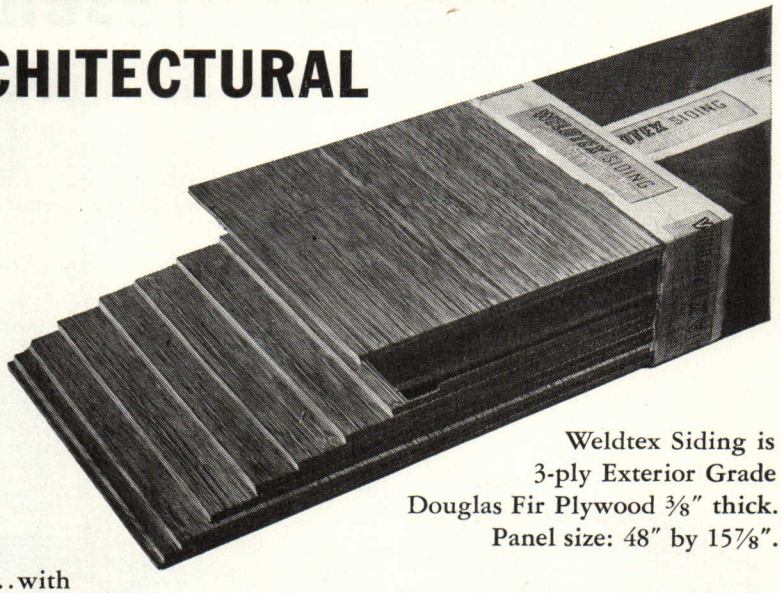

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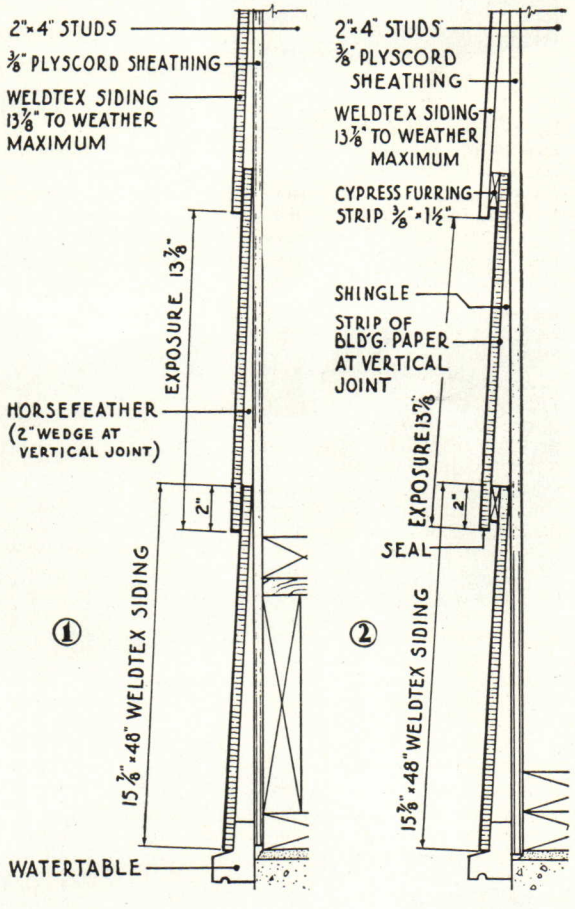

Detail 1 shows normal installation of Weldtex Siding. Detail 2 shows how simply and easily you can fair out the butt of the board to create a deeper shadow line, when desired.

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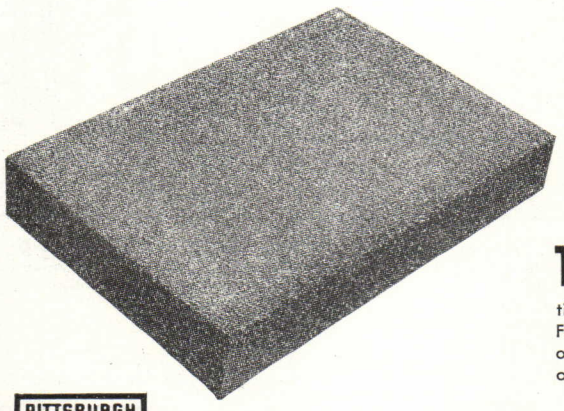
These representative buildings with PC FOAMGLAS—

The concrete roof deck of the new Sears, Roebuck store at Winston-Salem, North Carolina, used as a parking lot, is insulated with PC Foamglas. This prevents excessive heat travel into the salesrooms below, helps to keep customers cool and comfortable. The Foamglas blocks are laid on the roof deck, then covered by a five-inch concrete traffic slab. PC Foamglas carries heavy loads under the cover slab without fear of rotting, swelling or crushing. Architects: Armistead and Schutze, Atlanta, Georgia. General Contractor: Moorehead Construction Company, Durham, North Carolina.

Here you see PC Foamglas being installed on the concrete roof deck. Later, built-up felt roofing was applied and a poured concrete traffic slab completed the construction. When installed according to our specifications for recommended applications, PC Foamglas retains its original insulating effectiveness permanently.



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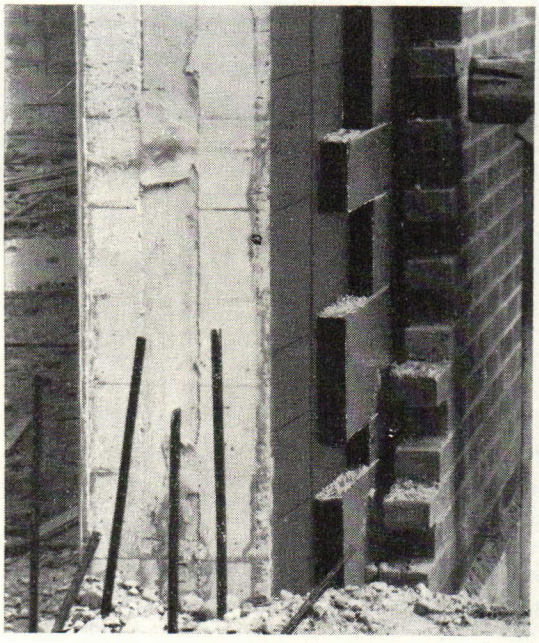
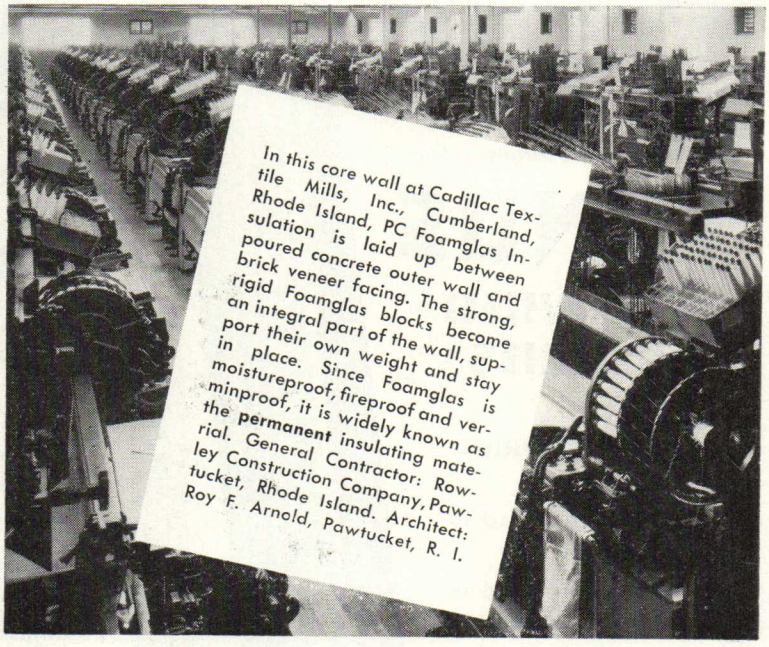
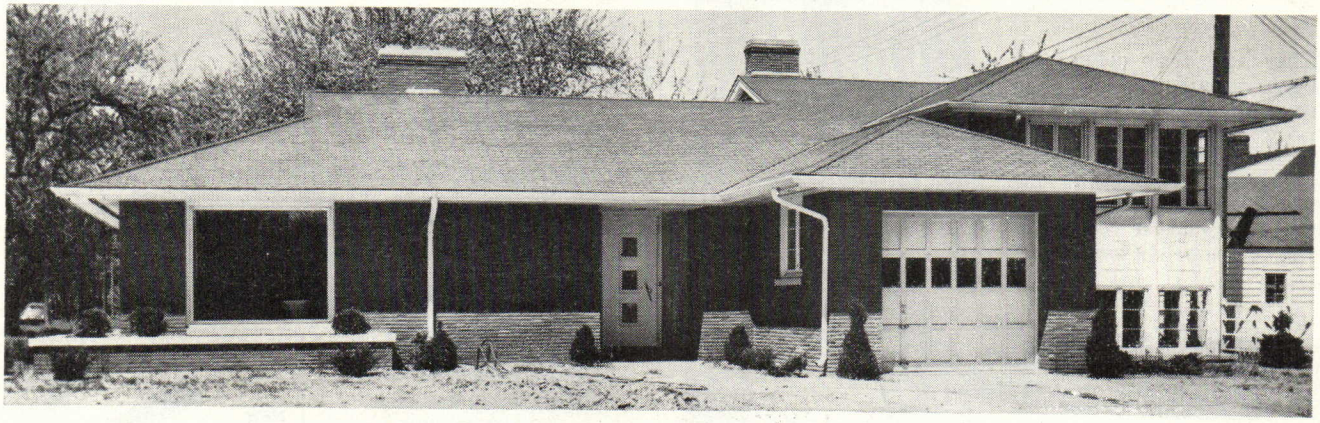




In this core wall at Cadillac Textile Mills, Inc., Cumberland, Rhode Island, PC Foamglas Insulation is laid up between poured concrete outer wall and brick veneer facing. The strong, rigid Foamglas blocks become an integral part of the wall, support their own weight and stay in place. Since Foamglas is moistureproof, fireproof and vermin-proof, it is widely known as the **permanent** insulating material. General Contractor: Rowley Construction Company, Pawtucket, Rhode Island. Architect: Roy F. Arnold, Pawtucket, R. I.



The concrete block foundation wall of this basementless model home at Flint, Michigan, is insulated with PC Foamglas. The insulation was applied to the inside of the wall, then a concrete floor slab was poured over radiant heating system. More and more home buyers and builders are insuring added value for their dwellings by using PC Foamglas—the permanent insulation. Architect: S. A. Nurmi, Flint, Michigan.

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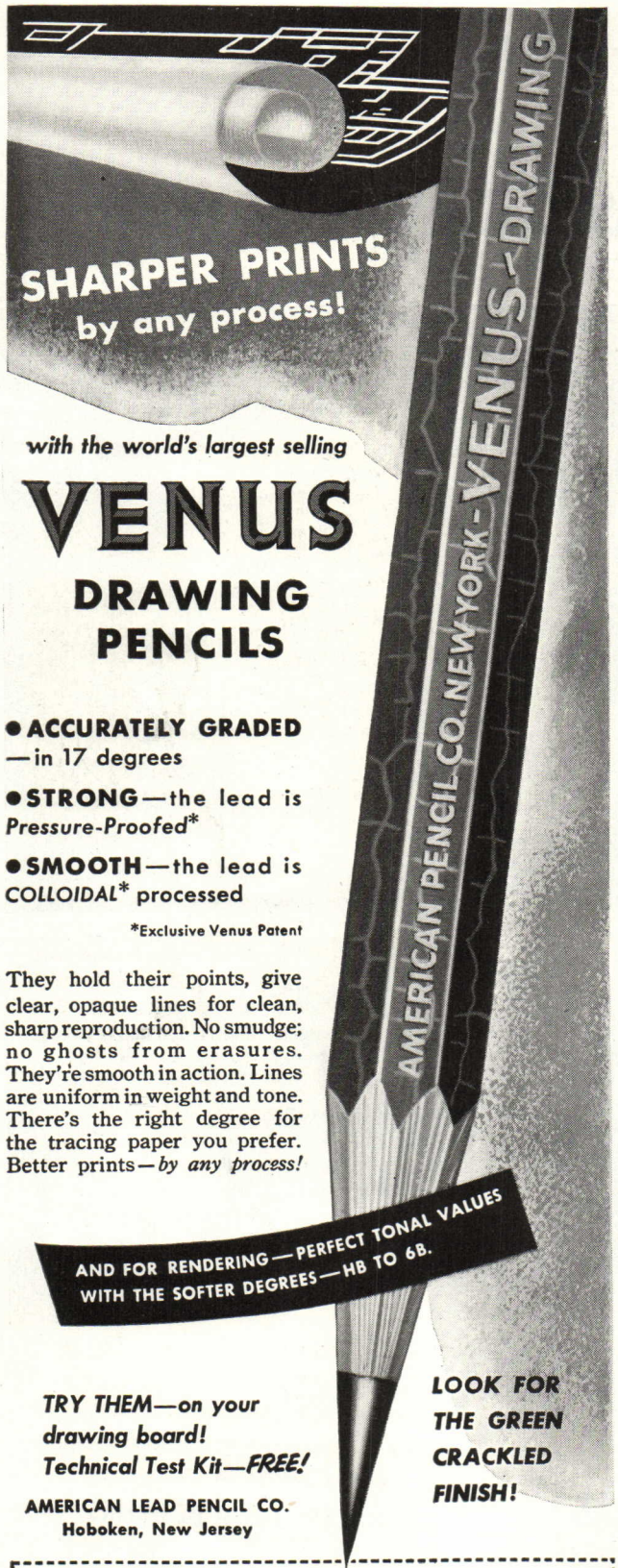

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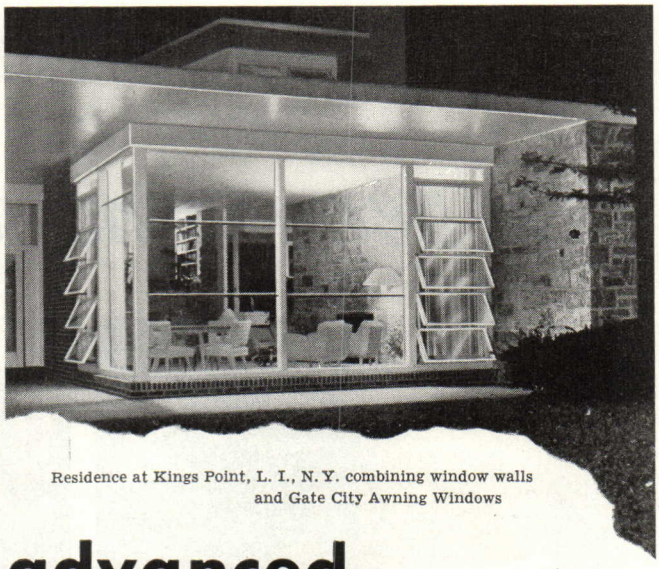

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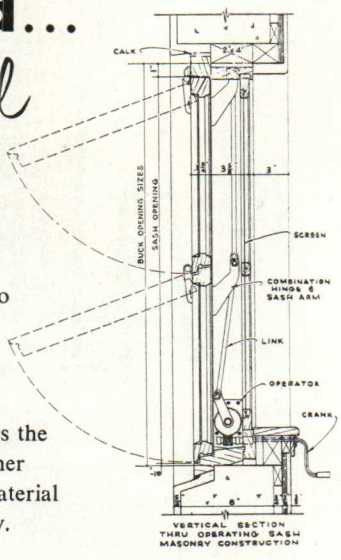

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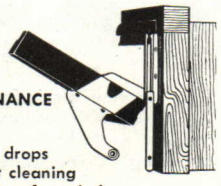

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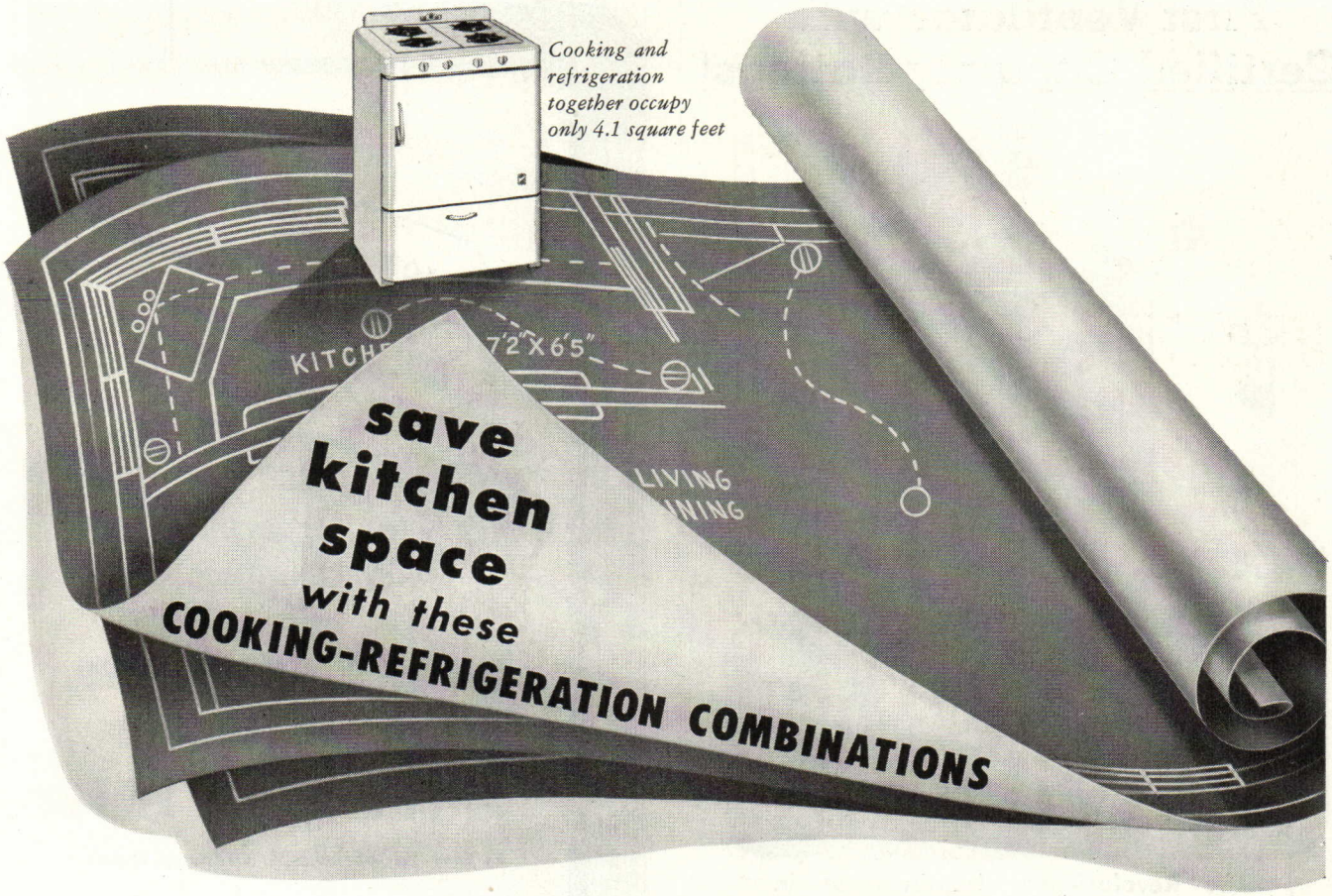

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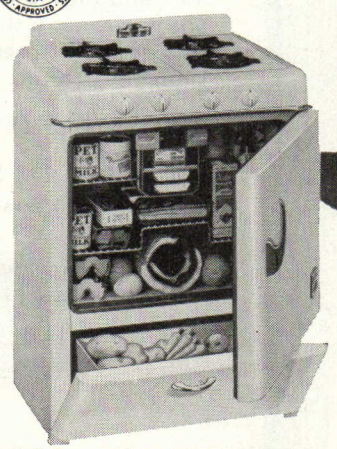

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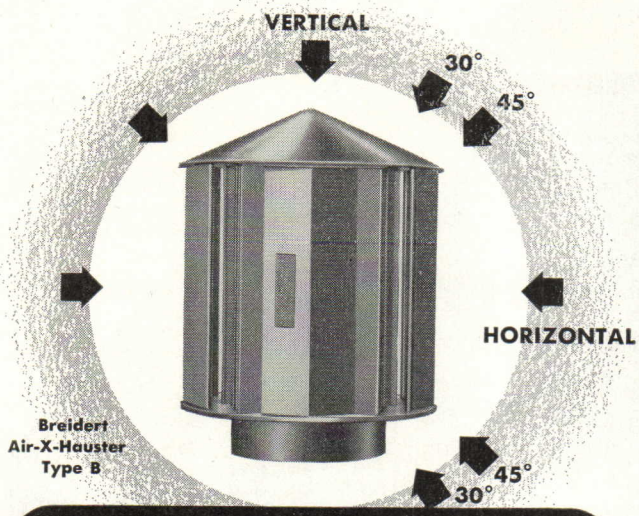

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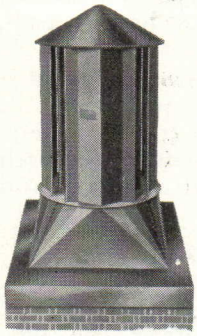

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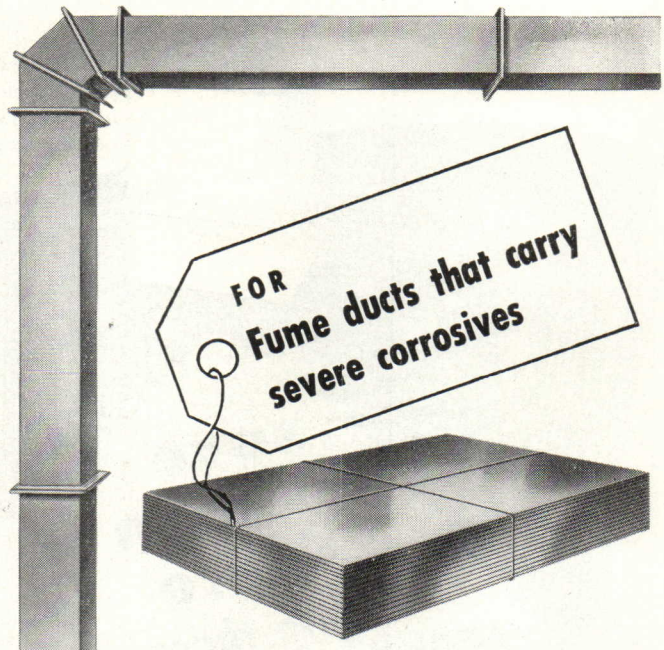

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To keep visual fronts visual

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To reduce condensation, architects are specifying *Thermopane** insulating glass for year-round visibility through storefronts. Its need is readily apparent in stores which produce or require high indoor humidity. Condensation resulting from such humidity in winter, blocks the view and presents an unattractive appearance to passers-by.

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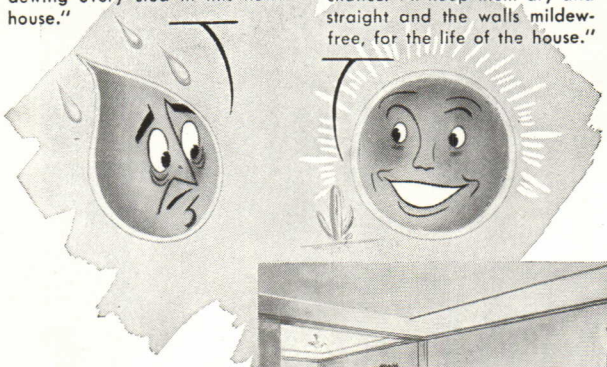

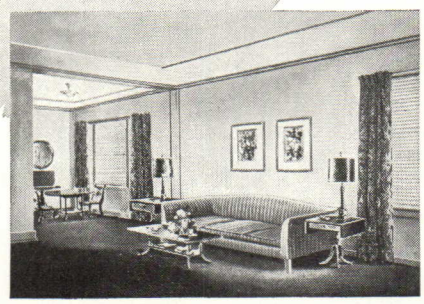

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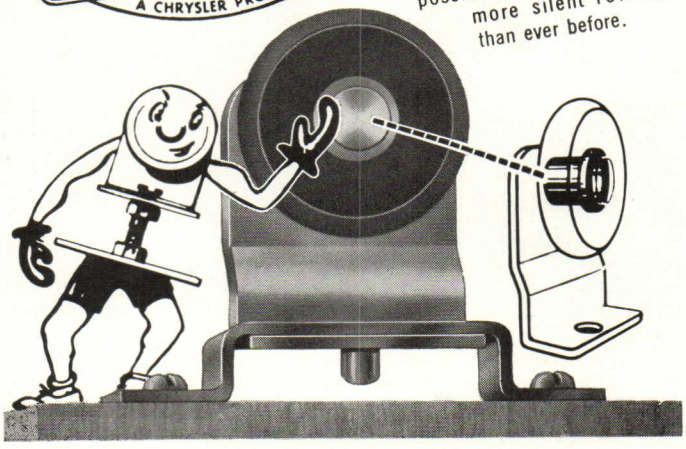

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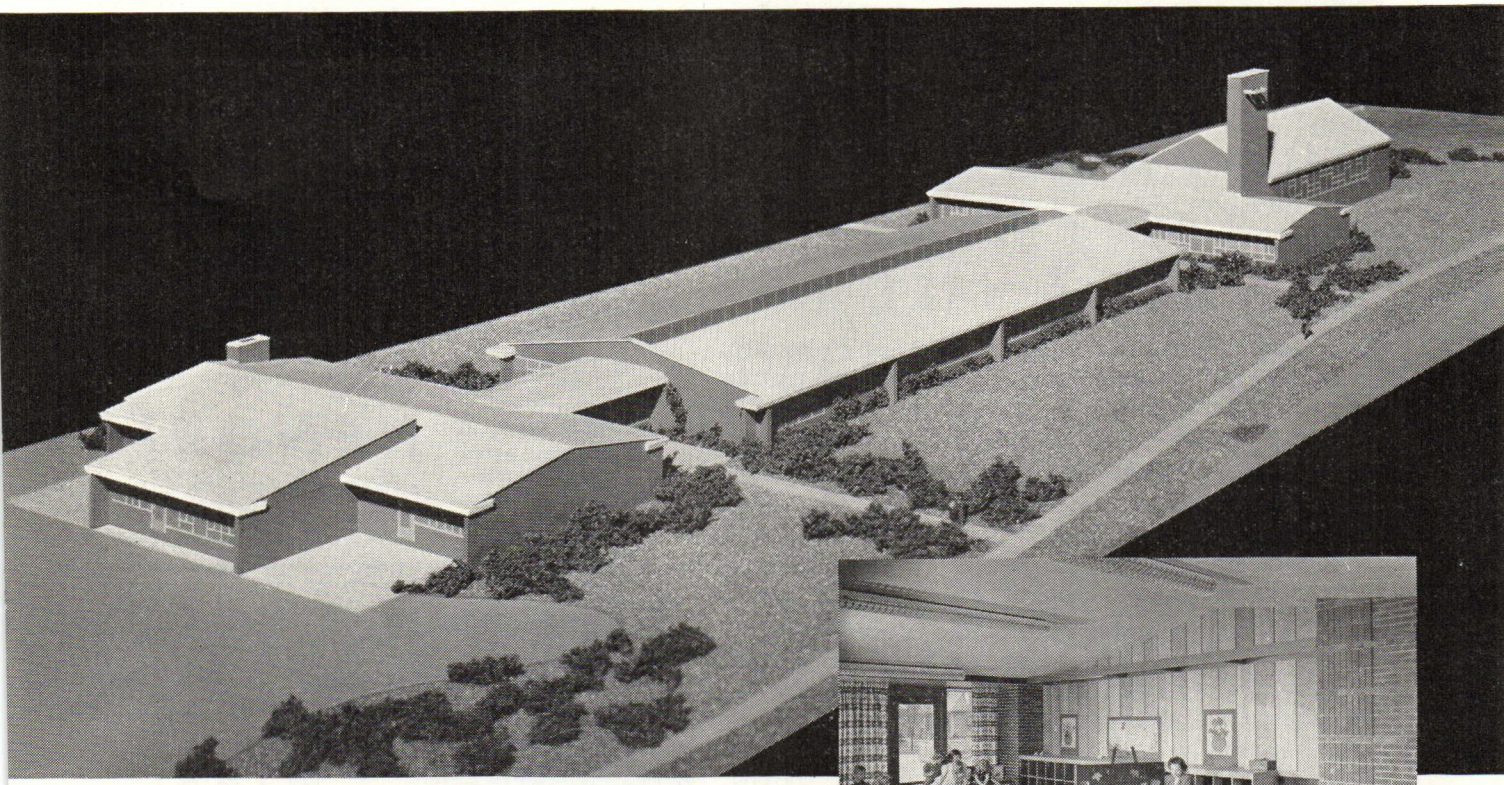
The *New* in Schools is the "Home-Like Look"

Perkins & Will, architects Hedrich-Blessing, photos



Ceco Steel Joist Construction *achieves* Informal Residential Design

One of the new concepts of school construction comes under the high sounding term of *"optimum psychological environment."* Actually, it is quite simple—it's just making the school seem less formidable, less like an institution, more like home. This informal residential character was achieved by Perkins & Will, Chicago architects, in designing the Blythe Park School, Riverside, Illinois. Here, Ceco steel joists were used to provide large square "flexible" classrooms (30 square feet per pupil). Wide span areas were obtained—also unobstructed floor space and neat trim ceilings, yet there was no sacrifice of strength and safety in construction. The result, a pleasant home-like structure—a child centered school—modern—functional, beautiful too. *Steel joists are light, easy to install, self centering. Ducts, wiring, piping are concealed. Cost is low.*

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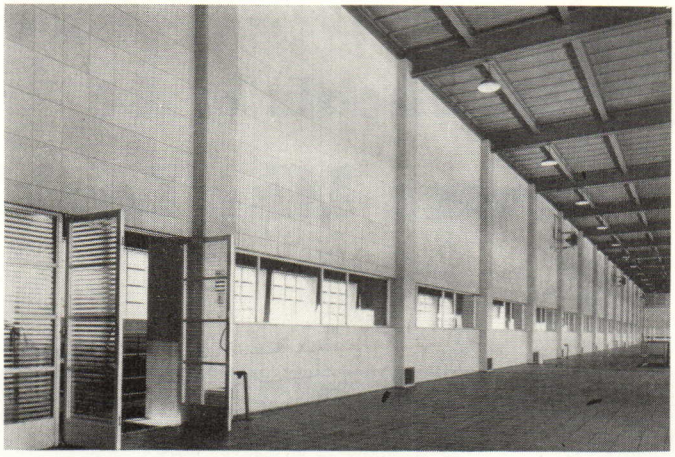

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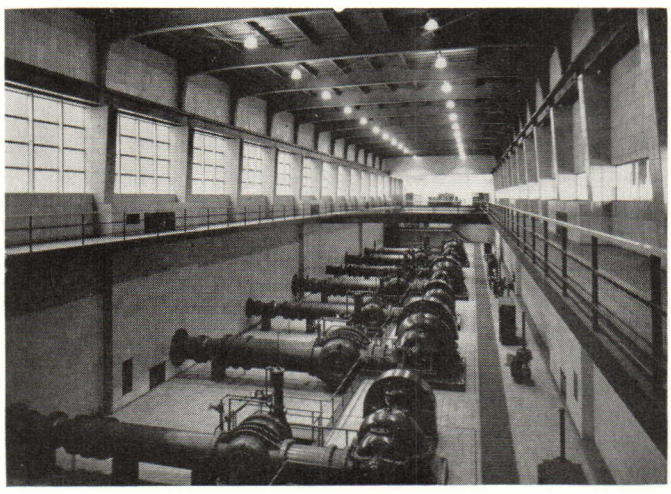

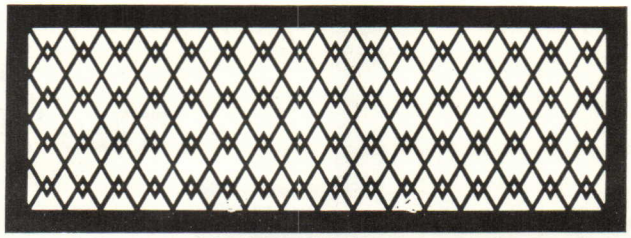

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Now you can secure all the advantages of an adjustable deflecting vane grille—*to control air flow*—and an ornamental grille—*to harmonize with the decorative scheme* —by specifying the new dual-unit Hendrick BULATOR.

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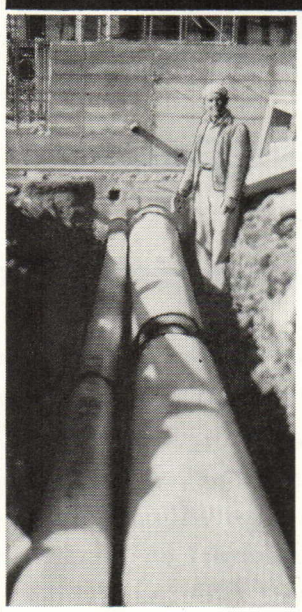

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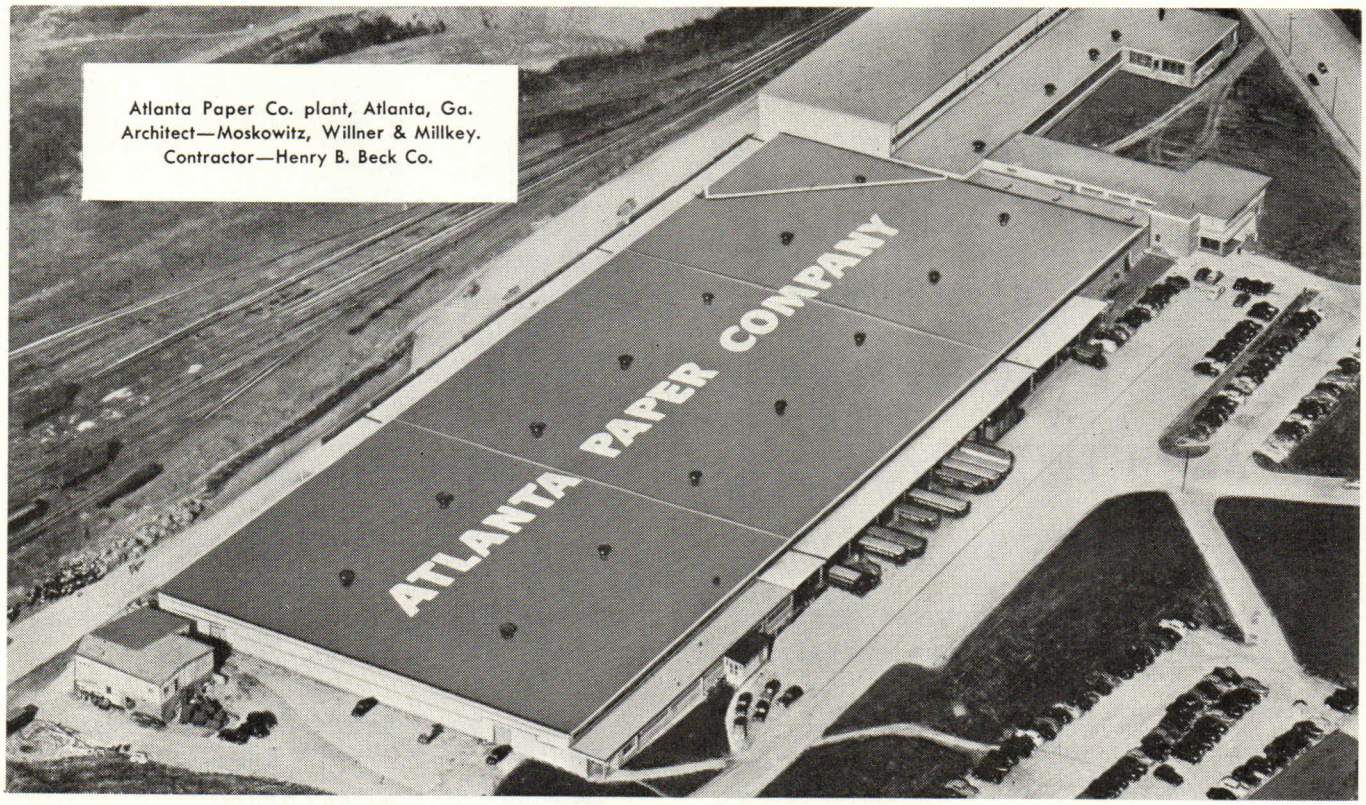

Atlanta Paper Co. plant, Atlanta, Ga.
Architect—Moskowitz, Willner & Millkey.
Contractor—Henry B. Beck Co.

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—ATLANTA PAPER CO.

The Atlanta Paper Company specified Kaylo Insulating Roof Tile for the 214,000-sq. ft. roof area of its new manufacturing plant. President Arthur L. Harris tells why:

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"Of primary importance to us is the fact that our Kaylo Roof Deck resists water and moisture damage under the high humidity conditions which accompany our manufacturing operations.

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Each 23-lb. tile is a dimensionally uniform 18"x36"—can be sawed, cut and nailed with standard tools.

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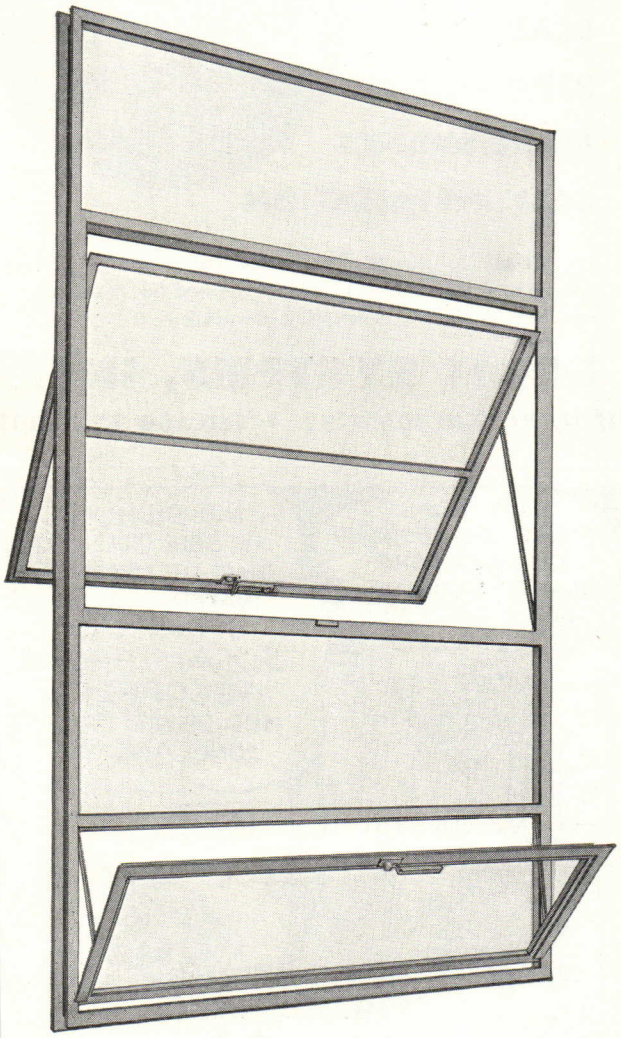

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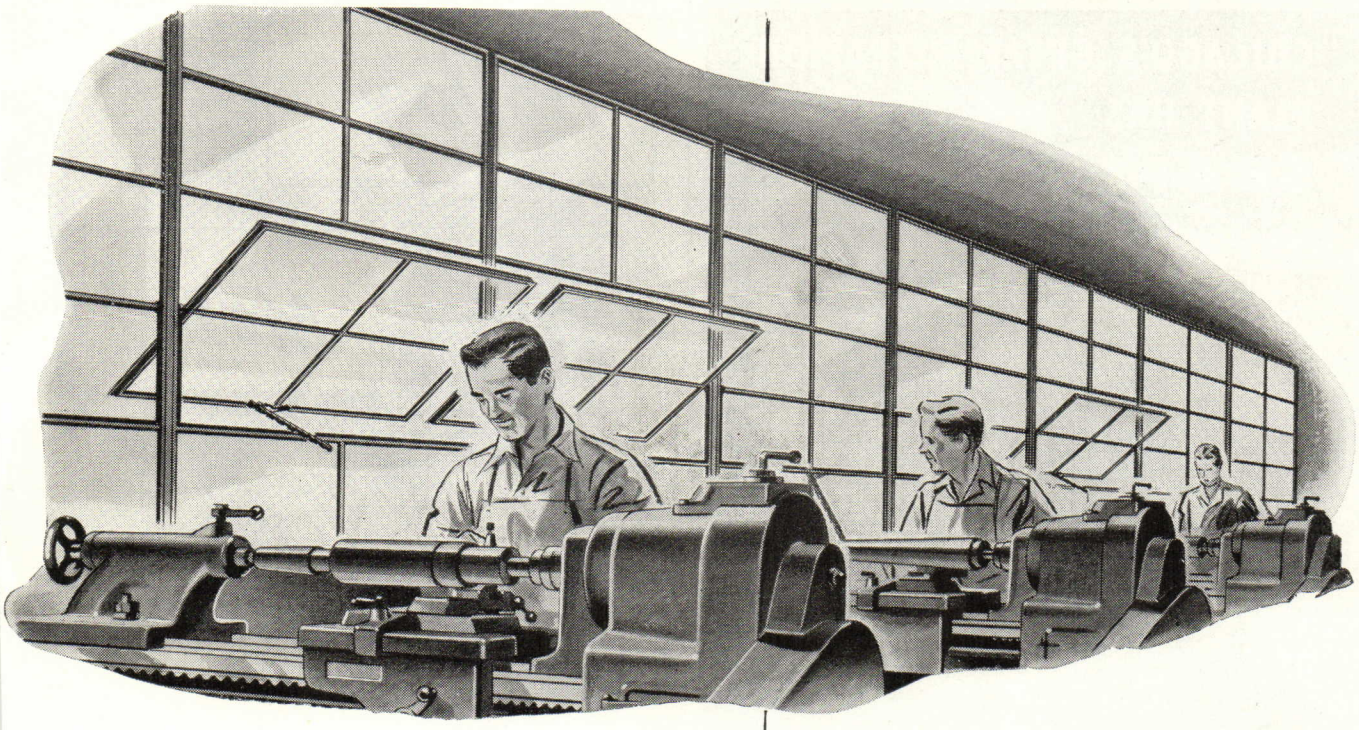

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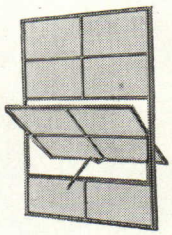

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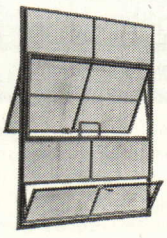

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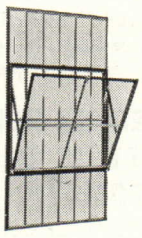
A steel window with integral steel grille to bar prowlers. Passage of material is checked, too. Ideal for first floors, windows bordering fire escapes and windows near roofs of adjoining buildings.



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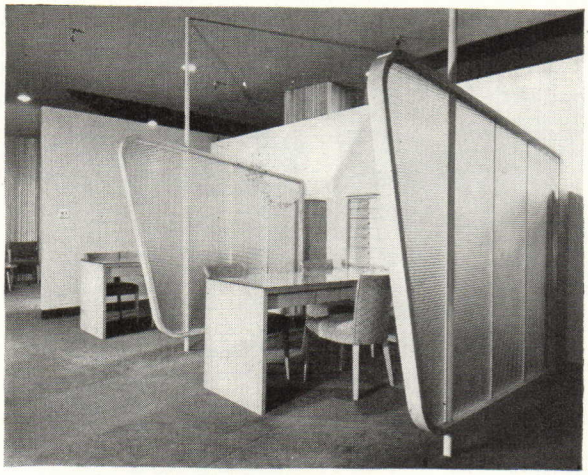

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SELECTED PRODUCERS' BULLETINS

● New York's new skyscraper, the Mutual Life Insurance Building, will be the first large office structure in that city to be lighted entirely by fluorescent equipment. All floors have metal-pan, T-bar, snap-in construction acoustical ceilings and will be lighted by three-lamp fluorescent troffers recessed in single units. The troffers, selected for all but a few special areas, are manufactured by the Frink Company, Long Island City, New York. This large-scale lighting installation is designed to deliver well diffused and evenly distributed illumination on the working plane, in accordance with the exact requirements of the owner and all tenants. The combination of snap-in type ceilings and fixtures also provides for future relocation of lighting to accommodate changes in office partitions or layouts without major construction alterations.

● A portable room heater which enables workmen to have comfortable working conditions in a few minutes' time has been invented by Robert Roberts, of Painesville, Ohio. As the heater weighs only 45 pounds, it can be carried by one man; the over-all height is 30 inches. The output is rated at 50,000 Btu and the inventor states that the temperature of a room can be raised from 30 to 80F in 20 minutes.

Although this unit was originally designed to aid linoleum workers, it will be of value to carpenters, plumbers, plasterers, electricians, and other construction workers. Now in production, the heater will be leased by the Portable Heater Company. Edward W. Daniels, 4100 St. Clair Avenue, Cleveland, Ohio, will be the distributor of the unit and the necessary fuel.

SELECTED PRODUCERS' BULLETINS

● Research work carried on by the National Warm Air Heating & Air Conditioning Association has proven that application of sheet asbestos paper to furnace pipes does *not* always improve their heat-carrying capacity. One test, applied to bright tin warm air leader pipes, showed that the heat loss is 62% greater with one thickness of 12-lb. asbestos paper than when the same pipe is left uncovered. Other tests were run in which the number of thicknesses of paper was increased until the heat loss became less than the loss through a bare bright tin specimen. Eight thicknesses of 12-lb. asbestos paper were applied before the desired result was obtained.

For the average, modern, gravity warm air furnace installation, the Association suggests that a more practical method is merely to seal the joints of all pipes with two-inch asbestos strips in order to make the system "closed" and dust-tight. Exposed leader pipes which are extremely long, or run through cold basement spaces, should be adequately insulated with a minimum of three layers of corrugated asbestos.

● A new type of storm window, giving three-way weather protection and designed to take all the work out of both storm windows and screens, has been put on the market by the Eagle-Picher Company, of Cincinnati, Ohio. Called a Triple Slide model, the combination storm and screen unit is made of aluminum (or aluminum and stainless steel), has two glass panes and a screen that move independently of one another.

● Egypt has sent an SOS to the Gas Appliance Manufacturers Association in the form of a letter from a native firm which asked for help in finding special gas ranges that would accommodate the Egyptian cooking pans. It seems that they are considerably larger than those used in the United States, and thus need larger spaced burners.

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Gives the ABC's of Group Planning!

YOU WANT TO BUILD A SCHOOL?

by Charles Wesley Bursch, Ed. D. Chief, Div. of Schoolhouse Planning, State of Calif., Dept. of Education, and John Lyon Reid, M. Arch. American Institute of Architects.

The emphasis of this book is on the group effort of the school planning-building program. Included is a discussion of everyone involved in the planning of a school from the pupil to the architect, even including the taxpayer. There are sections covering the following: Determining the Need for a New School; Master Planning for an Entire District; Preliminary Planning of a School Plant; and How to Use the School. This book is of equal importance to the architect as to the superintendent of schools, school boards, principals, engineers, and all others involved in schoolhouse planning.

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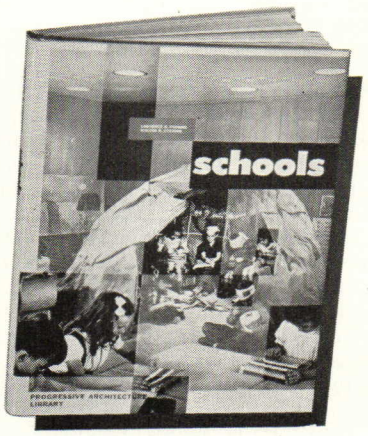

by Lawrence B. Perkins

Perkins & Will, Architects-Engineers

and Walter D. Cocking

Managing Editor, The School Executive.
Editor, American School & University

A new book crammed with invaluable suggestions for planning better schools to meet the needs of today and tomorrow.

The preparation of "Schools" brought together a prominent architect whose firm specializes in school buildings, and an educator-editor who has spent more than thirty years in solving school plant and educational problems.

The authors pick up an old-fashioned school by its period gee-gaws, to explain with quantities of illustrations why it is outdated. Then the architect and educator go to work on a school for today. They show you trends in design, schoolhouse architecture and cooperative planning. You read about methods of supervising construction for a fuller utilization of school buildings.

Comprehensive in treatment, informal in style, profusely illustrated, it promises to be the indispensable handbook for both architects and school administrators.

With the suggestions presented in "Schools," by co-authors Perkins and Cocking, you will be able to transfer the idea of a schoolhouse from "a pile of congealed community pride" to a modern educational plant in which present-day needs are adequately met. Truly, here is a new book you cannot afford to miss. Take advantage of Reinhold's 10-day free examination offer, and you will agree with Architectural Forum, which recently stated, "Here is the best general book so far on modern U.S. schools."

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P.S.

IN CHICAGO, I had a pleasant lunch with Dick Bennett, whose firm, Loebl, Schlossman & Bennett, has some mighty interesting work under way. Our conversation turned mostly on the architectural magazines, and Dick came up with some very hot suggestions. (At that point I realized that I would have to pay for the lunch.)

I enjoy good constructive criticism of the job we are trying to do, although I must say that I have even learned to evaluate blistering criticism from those who don't read any of the journals in their field. It is man's privilege, of course, to disagree with a point of view with which he is not familiar, although it always seems to me to weaken an argument when one has to say (as an architect said to me recently), "I don't agree with anything you stand for, and what's more, I have never read anything you've written." Another instance is a quote in the *Bay State Architect* from an architect who had written one of the publications (I don't remember receiving this particular objective commentary): "I read the *Journal of the A.I.A.* and it's the only architectural publication I do read. I may add that it is the only one I ever intend to read and this includes your own scurrilious (sic) sheet."

Maurice Feather, Associate Editor of the *Bay State Architect,* adds that these are words with which "we are inclined to agree." It is interesting to note further along in that particular issue a plaintive appeal saying that there is "total lack of interest in this paper on the part of our members," and an admission that "it may be that a completely different type of publication in younger and more vigorous hands would arouse the interest that has been so conspicuously lacking."

I might point out that a regional organization's organ need not have a disinterested audience. Without trying too hard I think of the Pittsburgh *Charette,* the *Empire State Architect,* the *Northwest Architect,* the Michigan *Bulletin,* among those which are interesting and readable and well-read publications.

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IN MINNEAPOLIS, I spent a pleasant evening at Roy Thorshov's home, where the discussion ranged from education of an architect to the excellent quality of Mrs. Thorshov's open-faced Norwegian sandwiches. I had a terrible feeling afterward that I had eaten too much and talked too much; there can be no question about the former, but unfortunately the latter is a matter of judgment. I certainly know that I was out-talked by the witty and urbane ex-professor Leon Arnal. As a matter of fact, all who were there had an unusual opportunity to be heard, since the voice of Bob Cerny had been quieted by a bad cold.

The Minneapolis Chapter, A.I.A., held a boisterously successful Christmas meeting in the North American Life & Casualty Building designed by Lang & Raugland. During the same stay, I had a chance to visit the architectural school at the University of Minnesota and help (?) Roy Jones and his faculty judge a group of theses. There were enough outstandingly good submissions to indicate that the school is doing a first-rate job. I'm sure there must be disagreements there, as there are elsewhere, but the youth and enthusiasm and ability of the faculty members I had a chance to talk to was more than encouraging, when bolstered by the actual results I saw.

While I was in Minneapolis I was called upon by a reporter for one of the local papers. It is, to me, always an embarrassing situation to try to hold forth on the subject of architecture for an interviewer with a poised pencil. I try very hard to express in simple terms what I think is happening in architecture and what can happen, and the reasons for all this, and so on. Pages get flipped over in the reporter's notebook and I begin to visualize the headlines next morning, and I become very self-conscious. And then before breakfast I get a copy of the paper and turn through page after page until I come to a story that says something like:

EDITOR APPLAUDS
RANCH HOUSE STYLE

Thomas H. Craven, editor of the magazine Progressive Agriculture, who is in town to address the local chapter of the American Association of Architecture, said yesterday that he sees much activity ahead in the building field next year. Mr. Clayton, when asked his opinion of local architectural work, said etaoin shrdlu shrdlu was killed in the basement of the house apparently by a blunt instrument.

This didn't quite happen in Minneapolis, but I did slightly resent the fact that what was left of the interview was published on the comic page. Oh well!

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IN HARRISBURG, I was shown around town by Robert Arnold, associate of William Lynch Murray, a firm which has done a great deal of work—and some of the best work—in the area. After we both tired of looking at the current architectural scene, we went into the State Capitol group and poked around. As we stood in the bathtub white marble rotunda and gaped at the grand escalier along with the other tourists who were there, I couldn't help thinking that this is what *architecture* means to much of the general populace. It is small wonder that understanding of the fundamentals of building construction and the elementary critical judgment which allows an innate distinction between what is basically bad and what is basically good—just that broad classification—have been lost to most of the American people. They have been surrounded for a long time by indefensibly banal design which, because of its prominence and its sponsorship by important people, has come to mean "right" to them.

And I am afraid that the alternative in Harrisburg, as in many other cities has been simply an equally banal design stripped even of the recognizable "architectural" hallmarks, with the only additions meaningless modernistic tricks, which can very readily be classed as "wrong." A sensitive designer working such a community, really working with modern technology in a modern manner has a double task of education, therefore to *explain in* the basis of good design and to *explain away* two types of structure which have become in the general opinion the only two alternatives. It seems to be "agin" everything.

Once again I mention the need for *popular* criticism of architecture. The profession must come to it, and the sooner the better. The greatest impetus architecture in this country could have would be critical comment in the daily press, on current work. The critic might not always be competent; hurt feelings, some hurt business, arguments and controversy would be certain. But the end result would be healthy. The general public—the client in the aggregate—would begin to think about architecture, to discuss it, to form more solid bases on which to evaluate it. And the architects would have an additional impulse to do the best possible work. But we all know, this is a completely idealistic and unrealistic wish, and will remain so until the profession itself insists on open criticism, because competent architectural criticism depends on the assistance of the designers and assurance that the critic will not be sued.

Thomas H. Creighton