

architectural **forum**

November 1953

Office building

What are the results of ALCOA's experiment in new aluminum uses?
How has the multimillion gamble paid off? (p. 124)

New thinking on shops

Trend toward self-selection helps the customer hurry, but he is far from happy.
Result: new problems for store owners and architects (p. 156)

Forum design standards and data

Graphic details for store planning and fixture design by Architect Harold R. Sleeper (p. 169)

Small buildings

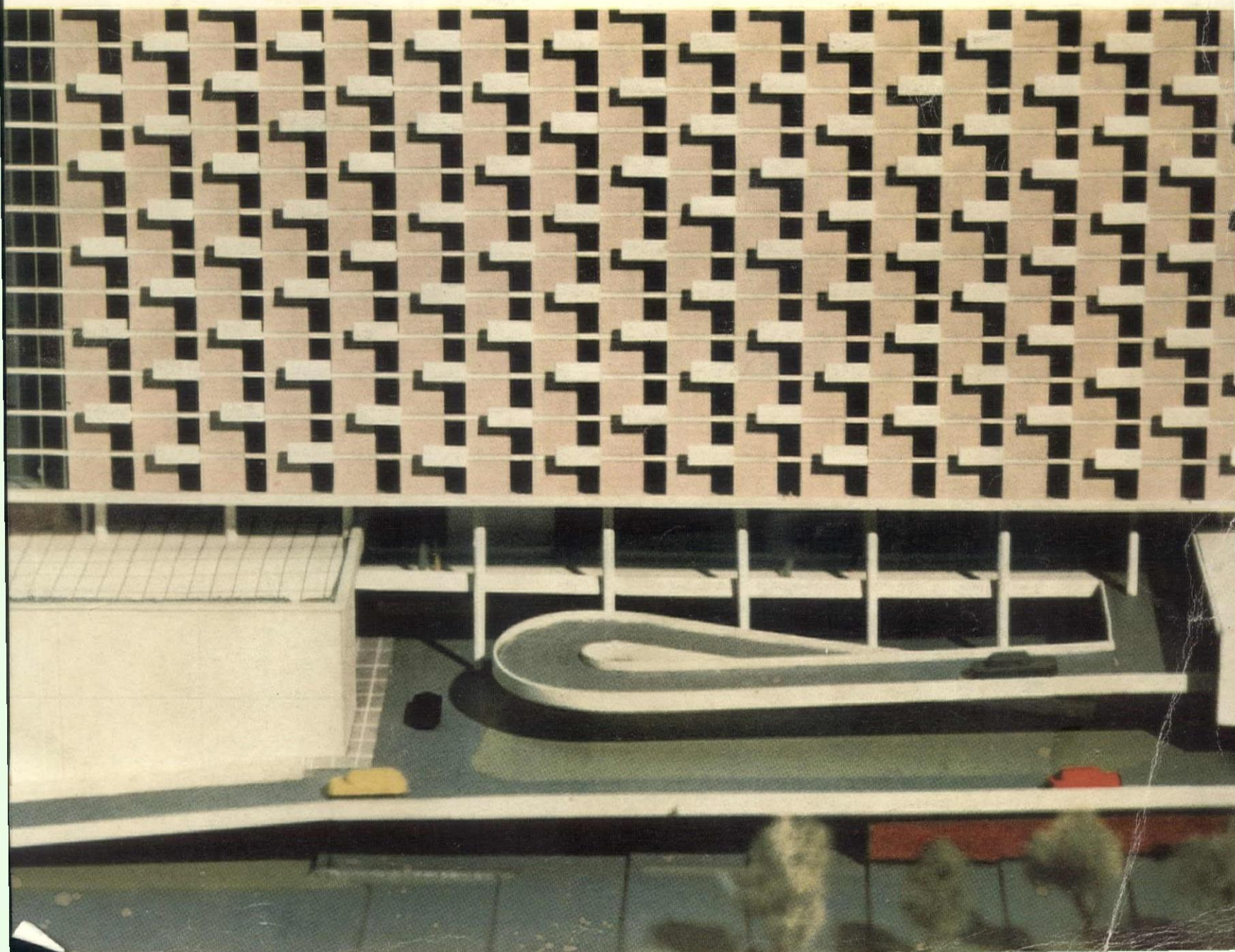
A bank of stone, a lobby remodeling in marble,
a band shell of steel, park buildings in wood, steel and concrete (p. 116)

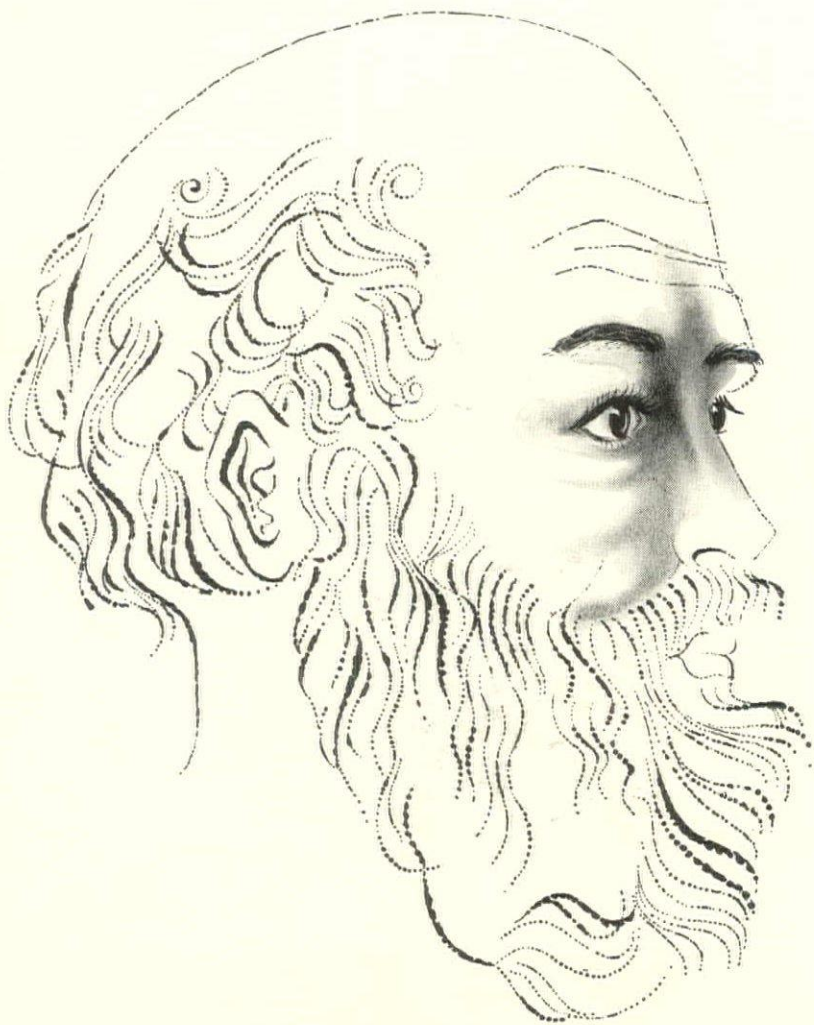
Building engineering

First comprehensive report on the work of Italy's master engineer, Pier Luigi Nervi,
with pictures of his 25 most interesting buildings (p. 140)

Redevelopment

Top architects and realty experts plan to put Downtown Boston back in business with fresh ideas
on traffic handling and building design (below and p. 103)





"A red plaster for wounds...a saffron ointment to help sleep and quiet the mind." These were ancient Greek prescriptions for healing with the aid of color.

Today, the grayed-down "functional colors" of real clay Suntile offer a far more effective cure for many ailments of modern industry.

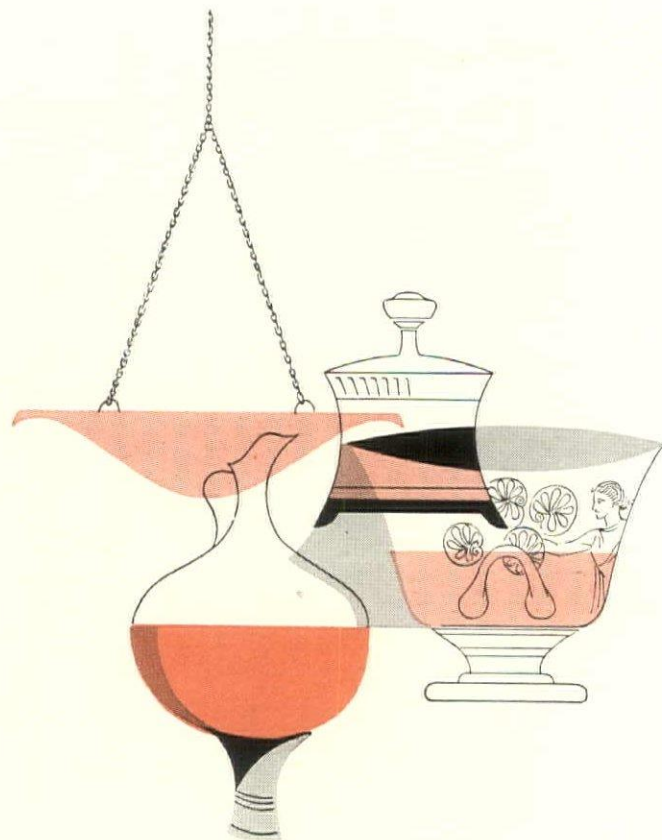
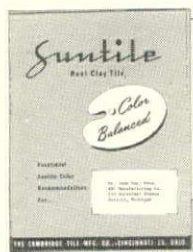
Developed by color authority Faber Birren, these colors range from relaxing blues and greens to invigorating tans and grays. Properly employed, they can be tools for increased production—a lift to morale, an aid to good seeing—a help in reducing accidents.

Wherever you use beautiful Suntile, your clients will profit, too, from the time-tested benefits of real clay tile—permanence, fire-safety, ease of cleaning, low maintenance costs.

Let your Suntile dealer give you full data—or write us direct on your letterhead.

SUNTILE LIGHT PEARL GRAY. Here is a gray that will reduce glare and effect a better, more diffuse reflection of light. This tone and finish are highly suitable in industrial buildings, schools, hospitals and commercial establishments...wherever exacting visual tasks are performed.

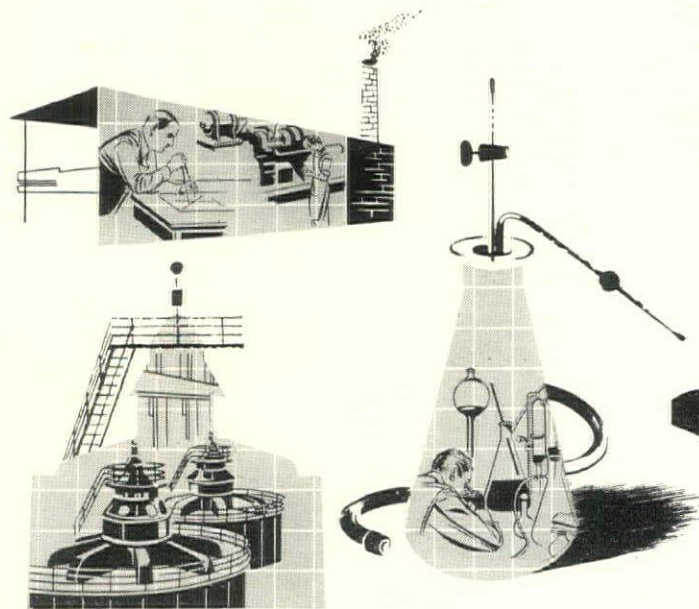
Write us, Desk AF-11, for new free book on Functional Color, describing how Suntile colors may be fitted to interior functions.



FUNCTIONAL COLOR

*Medicine for the
Ancient Greeks...*

**AN AID TO PRODUCTION
FOR MODERN INDUSTRY**



THE CAMBRIDGE TILE MFG. CO.
P. O. Box 71, Cincinnati 15, Ohio

WEST COAST OFFICES

The Cambridge Tile Mfg. Co., 470 Alabama St., San Francisco 10, Cal.
The Cambridge Tile Mfg. Co., 1335 South LaBrea, Los Angeles 19, Cal.



AT THOMAS J. LIPTON, INC.

Five Year Savings: \$22,754 WITH HAUSERMAN MOVABLE WALLS

Once again the record proves the savings . . . this time in the Hoboken, N. J. headquarters of Thomas J. Lipton, Inc., where Hauserman *Movable Walls* were installed in 1949.

To meet ever-changing floor space requirements, these modern walls have been rearranged on numerous occasions. As against comparable rearrangement of ordinary walls, savings have amounted to \$19,299.

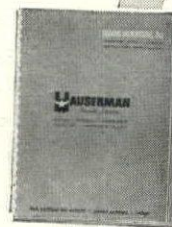
Additional savings of \$3,455 represent the difference between the cost of washing and the cost of repainting. Whereas ordinary walls and doors require repainting at least once every five years, ordinary soap and water have kept the Hauserman lifetime surface finish in like-new condition. Don't wait until you're ready to build or remodel . . . get the complete story about Hauserman *Movable Interior Walls* for offices, industrial plants, laboratories, schools and hospitals.

WRITE FOR DATA MANUAL 53!

This 92-page guide for architects contains complete technical details, stock sizes, general instructions and specifications on all types of Hauserman *Movable Interiors*. Write for your FREE copy of Data Manual 53 today. The E. F. Hauserman Company, 7138 Grant Avenue, Cleveland 5, Ohio.



OFFICES • SCHOOLS • LABORATORIES
HOSPITALS • INDUSTRIAL PLANTS



84 FLOORS concreted with 'INCOR' in 69 WORKING DAYS

*Tight Schedules and
Dependable 'Incor'
Performance
Save Time, Cut Costs
to the Bone*



MARCH 22, 1953



JUNE 30, 1953

ST. NICHOLAS HOUSES—SECTION 3
Owner: NEW YORK CITY HOUSING AUTHORITY

General Contractors:
C. E. YOUNGDAHL & COMPANY, INC., Long Island City
JAMES McHUGH CONSTRUCTION CO., Chicago, Ill.

Architects: YORK & SAWYER, New York

Structural Engineers:
SEVERUD, ELSTAD & KRUEGER, New York

Ready-Mix 'Incor' Concrete:
JAMES A. NORTON, INC., New York

● Emphasizing utmost value for the public's building dollar, the New York City Housing Authority has encouraged many advances in building techniques, outstanding among which is widespread use of reinforced-concrete-frame construction.

Recent example is Section III, St. Nicholas Houses—six 14-story-and-roof units . . . first pour, March 22, 1953, topped out June 30 . . . 84 floors concreted by C. E. YOUNGDAHL & COMPANY, INC., in 69 working days.

Maximum job speed and economy, due to tight schedules, based on dependable 'Incor'* 24-hour stripping strengths . . . engineered forms, built to closest tolerances for streamlined erection efficiency . . . expert utilization of skilled work force.

Further proof that sound planning and open-minded co-operation among Designer, Builder and Owner make it possible to obtain the fire-safety and structural soundness of concrete, at costs and erection speed which equal or beat any other type of construction.

*Reg. U. S. Pat. Off.



LONE STAR CEMENT CORPORATION

Offices: ABILENE, TEX. • ALBANY, N. Y. • BETHLEHEM, PA. • BIRMINGHAM
BOSTON • CHICAGO • DALLAS • HOUSTON • INDIANAPOLIS
KANSAS CITY, MO. • NEW ORLEANS • NEW YORK • NORFOLK
PHILADELPHIA • RICHMOND • ST. LOUIS • WASHINGTON, D. C.

LONE STAR CEMENT, WITH ITS SUBSIDIARIES, IS ONE OF THE WORLD'S LARGEST CEMENT PRODUCERS: 18 MODERN MILLS, 129,000,000 SACKS ANNUAL CAPACITY

architectural forum

NOVEMBER 1953

Published by TIME Incorporated

EDITOR-IN-CHIEF Henry R. Luce
PRESIDENT Roy E. Larsen
EDITORIAL DIRECTOR John Shaw Billings

THE MAGAZINE OF BUILDING ARCHITECTURAL FORUM

EDITOR AND PUBLISHER
P. I. Prentice

EDITORIAL CHAIRMAN
Douglas Haskell, AIA

EXECUTIVE EDITORS
Joseph C. Hazen Jr.
Suzanne Cleaves

ART DIRECTOR
Paul Grotz

ASSOCIATES: Edward Birkner, Peter Blake, Gurney Breckenfeld, James P. Gallagher, Marilyn Grayhoff, Jane Jacobs, Mary Jane Lightbown, Walter McQuade, Carl Norcross, Vernon Read, Richard Saunders (Washington), Ogden Tanner, Stephen G. Thompson, Arthur Watkins.

ASSISTANTS: Rosalind Klein Berlin, Gwen Hodges, Henry T. Martin, Eleanor Nadler, Alice O'Connor, Adam Ooms (Los Angeles), Dorothy Stone O'Shea, Olive Taylor.

ART STAFF: Associate Directors, ARCHITECTURAL FORUM: Amnon Rubinstein, Ray Komai; HOUSE & HOME: Madeline Thatcher, Nina Rittenberg. Assistants: Lily H. Benedict, Martha Blake, Salvatore T. Caltabiano, Mary Villarejo. (In military service, Jan V. White.)

MARKET RESEARCH DIRECTOR: Arthur S. Goldman.
CONSULTANTS: Miles L. Colean, Ruth Goodhue.

PRODUCTION MANAGER: Lawrence W. Mester.

GENERAL MANAGER
Robert W. Chastaney Jr.

ADVERTISING DIRECTOR
Herbert C. Bippart

ARCHITECTURAL FORUM is published monthly by TIME Inc., Time & Life Building, 9 Rockefeller Plaza, New York 20, N.Y. Yearly subscription payable in advance. To individuals or firms (and their employees) engaged in building—design, construction, finance, realty; material distribution, production or manufacture; government agencies and supervisory employees; commercial and industrial organizations with a building program and their executives; teachers and students of architecture and engineering; libraries, professional clubs, society and trade associations connected with the building industry; advertisers and publishers; USA, Possessions, Canada, Pan American Union and the Philippines, \$5.50; elsewhere, \$12.00. To those not connected with the Building Industry: USA, Possessions and Canada, \$7.00; elsewhere, \$17.50. Single copies, if available, \$2. All copies mailed flat. Copyright under International Copyright Convention. All rights reserved under the Pan American Copyright Convention. Re-entered as second class matter Oct. 1, 1952 at the Post Office at New York, N.Y., under the act of March 3, 1879. Copyright 1953 by TIME Inc.

TIME Inc. also publishes TIME, LIFE, FORTUNE and HOUSE & HOME. Chairman, Maurice T. Moore; President, Roy E. Larsen; Executive Vice-President for Publishing, Howard Black; Executive Vice-President and Treasurer, Charles L. Stillman; Vice-President and Secretary, D. W. Brumbaugh; Vice-Presidents, Bernard Barnes, Allen Grover, Andrew Heiskell, James A. Linen, Ralph D. Paine Jr., P. I. Prentice; Comptroller and Assistant Secretary, Arnold W. Carlson.

NEWS	37
LETTERS	64
EVENTS	92

BOSTON CENTER 103

A new commercial heart for Boston is planned by Real Estate Operator Roger L. Stevens and a group of top New England architects: Pietro Belluschi, Walter Gropius and The Architects Collaborative, Walter L. Bogner, Carl Koch & Associates and Hugh Stubbins Jr.

SMALL BUILDINGS

1. Bank in Honolulu by Wimberly & Cook.	116
2. Lobby remodeling in New York by Arnold Arbeit.	118
3. Band shell in St. Petersburg, Fla. by William B. Harvard.	119
4. Park buildings in San Rafael, Calif. by Joseph Esherick.	120

NEWS

ALCOA OFFICE BUILDING 122

A picture essay on the completed building and a factual report on experiences to date with its many new uses of aluminum. Harrison & Abramovitz, architects.

HOSPITAL CHAIN 132

Third of three articles on the United Mine Workers program of coordinated hospitals, featuring the details of five buildings by Architect Isadore Rosenfield and the Office of York & Sawyer.

ENGINEER PIER LUIGI NERVI 140

A review of 25 buildings by Italy's master of concrete construction and the three new construction techniques which made these spectacular buildings possible.

THE NEED FOR BETTER PLANNING 150

Report on the architect-client forum sponsored by the California Society of Architects.

FRANK LLOYD WRIGHT 152

A review of his first New York City buildings (temporary exhibit hall with a full-size house) and his 60 years of precedent-setting architecture.

NEW THINKING ON SHOPS 156

The trend toward self-selection puts the spotlight on new fixtures, floor plans and four case studies:

1. Hechinger Co. in Falls Church, Va. by TAC.
2. Mercury Shops in Newark by Meyer Kazman.
3. Harbor Hardware Store in Aberdeen, Wash. by Charles A. Baylon.
4. University Bookstore in Provo, Utah by Ken White Associates.

FORUM DESIGN STANDARDS AND DATA 169

Second in a new series of design details by the co-author of "Architectural Graphic Standards," Harold R. Sleeper. This month, store planning and fixtures.

BUILDING ENGINEERING 184

Prize-winning lighting designs.

REVIEWS 194

NEW PRODUCTS 198

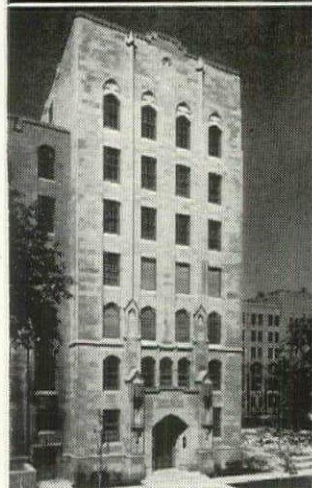
TECHNICAL PUBLICATIONS 220





Ceco-Meyer Steelform Service

cuts costs 11%...



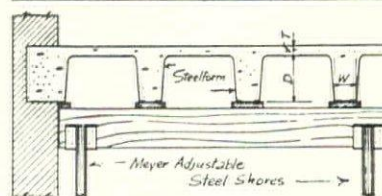
*Ceco-Meyer
Steelform Service
was used in
these 3 buildings*

*In construction products
CECO ENGINEERING
makes the big difference*

Economy in building is important, even to a great institution. So, when Schmidt, Garden and Erickson, Architects, designed three units of a medical center in Chicago, several methods of constructing floor systems were studied. Ceco-Meyer Steelform Service was selected because it offered definite savings. But let them tell the story.

"We made an analysis of several types of construction," say the architects, "including slab-beam-and-girder, solid slab and several others. When the figures were on paper, concrete joist construction showed a saving of 11% in the concrete frame. Ceco was selected to provide Meyer Steelform Service. J. W. Snyder Company, General Contractor, made the indicated savings realistic."

"To complete a major hospital job on time," says Constructor Victor Snyder, "there must be close cooperation between architect, constructor and a supplier who understands our joint problems. Such a firm is Ceco... their construction knowledge in the field, and ability to perform, got them the job."



cross section Less steel, concrete, lumber, labor with Ceco-Meyer Steelform Service.

CECO PRE-PLANNING CONSULTATION SERVICE

Ceco Product and Design Specialists will assist you in the application of Ceco building products at the pre-planning stage... Call Ceco office for overnight service.

CECO STEEL PRODUCTS CORPORATION

Offices, warehouses and fabricating plants in principal cities
General Offices: 5601 W. 26th St., Chicago 50, Illinois

**Better
working
conditions
with
COOLITE**



General Contractor—
Joseph Bucheit & Sons, Youngstown, Ohio
Glazing—Pittsburgh Plate Glass Company,
Youngstown, Ohio

There is no Substitute for GLASS!

It is non-combustible . . . won't burn . . . it is rigid . . . doesn't sag or warp. It has a permanently hard, impervious surface, not affected by time, abrasion, or exposure to the elements. It won't corrode or stain. It resists chemicals. It is easily installed, maintained and cleaned by conventional methods.

Employees of the General Fireproofing Co., modern office furniture and fixtures manufacturer in Youngstown, Ohio, see better, feel better, work better in areas flooded with conditioned daylight. Eye comfort is an important factor in improved working conditions; so approximately 29,000 sq. ft. of Coolite, Heat Absorbing and Glare Reducing Glass were installed to provide copious quantities of natural illumination at low cost. For Coolite removes the harmful elements of "raw" sunlight . . . cuts glare that causes eye fatigue and costly mistakes . . . absorbs up to 50% of solar heat to make interior more comfortable.

Rolled, Figured and Wired glass by Mississippi is "visioneered" for better daylight illumination. Available in a wide variety of surface finishes all scientifically designed to distribute light to best advantage. In your building or remodeling projects specify Mississippi Glass.



Send for
free catalog,
Coolite Heat
Absorbing and
Glare
Reducing
Glass.

MISSISSIPPI *Glass* **COMPANY**
88 ANGELICA ST. SAINT LOUIS 7, MO.
NEW YORK • CHICAGO • FULLERTON, CALIF.



see our catalog in
ARCHITECTURAL
FILE
or write for copy

WORLD'S LARGEST MANUFACTURER OF ROLLED, FIGURED AND WIRED GLASS

on the Alcoa Building.

ARCHITECTS:

Harrison & Abramovitz,
New York City

ASSOCIATE ARCHITECTS:

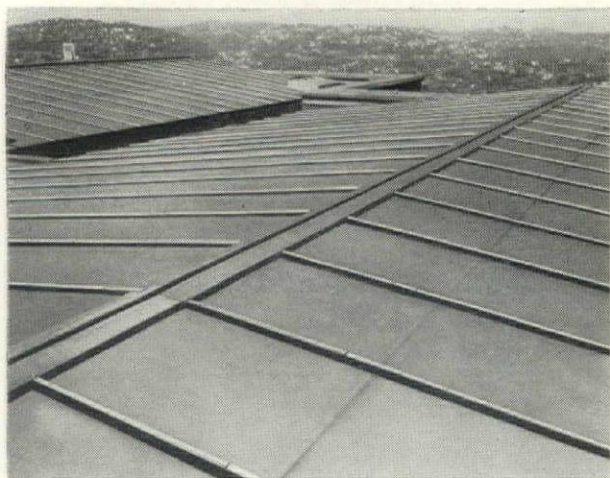
Mitchell & Ritchey,
Pittsburgh, Pennsylvania
Altenhof & Bown,
Pittsburgh, Pennsylvania

GENERAL CONTRACTORS:

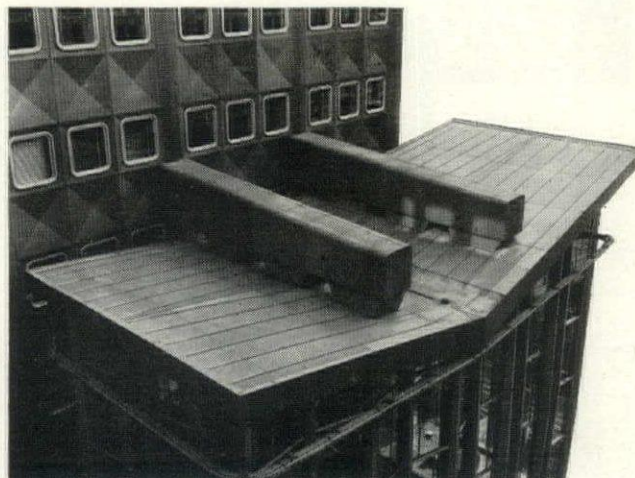
George A. Fuller Company,
New York City and Pittsburgh



Overly craftsmanship



Showing one part of the large roof atop the main building. Aluminum, it's the Overly-Goodwin batten type. Aluminum marquee roof over William Penn Way entrance is of the same construction.



Entire weight of the 4½-story, semi-detached main entrance is carried by cantilever beams. These have Alumilite finish aluminum covers by Overly. Roof is Overly-Goodwin batten type, Alrok finish aluminum. Facia beneath also fabricated by Overly of Alumilite finish aluminum.

Maximum weather protection of a valuable investment is exemplified by the new, 30-story Alcoa Building, Pittsburgh, Pennsylvania. Overly was chosen for the required high quality workmanship and the guaranteed performance of their products in connection with the aluminum roofing, flashing, coping, gutters, and covers for beams and

columns . . . all crafted and erected by Overly. Through the years, the names Overly and Alcoa have been synonymous for architectural sheet metal excellence in aluminum.

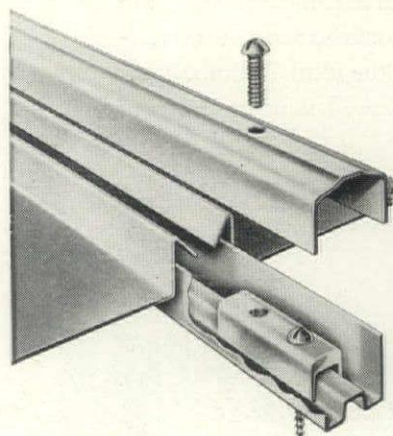
• • •

For details on Overly-Goodwin batten type roofing and Overly-Goodwin type coping, send for our Catalog 7-B.

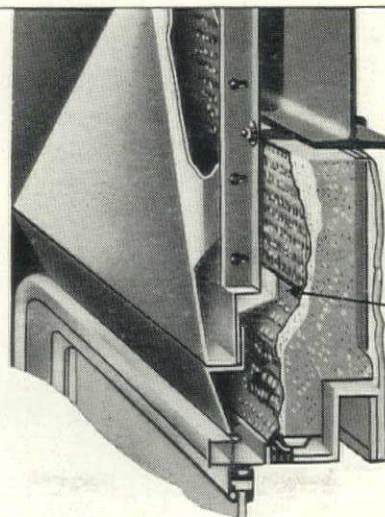
Overly Manufacturing Company

Greensburg, Pennsylvania

Los Angeles 39, California



Overly-Goodwin batten type interlocking mechanical joints, patented, are permanently water tight. They make ample provision for expansion and contraction. Alcoa Building's roofing and coping have this weather protection principle.



Arrow points to Overly aluminum flashing, shown in detail drawing. Overly fabricated about 25,000 linear feet of flashing and installed it in all horizontal panel joints to perform simultaneously as a secondary flashing and air baffle on 30 stories. Flashings were also furnished at other required locations throughout the building.

Growing in Popularity



a money-saving MFMA "gymnasium" grade of **NORTHERN HARD MAPLE**

"tailored from the tree"

especially to give you better average lengths, fewer end-joints, richer beauty, guaranteed soundness of wood.

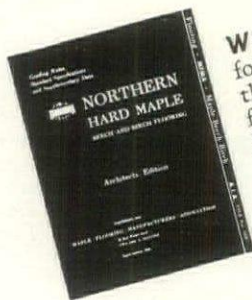


• Approved by architects and school authorities in leading cities for gymnasium floors, this fine (and relatively new) "combination grade," officially known as Second and Better, is fast becoming a favorite school specification. IT DESERVES THIS NEW POPULARITY. It matches MFMA First Grade in every performance attribute, yet costs less.

Held to rigid MFMA standards of accuracy and of soundness of wood, it actually gives you 50% or better of First Grade, blended with the Second Grade areas in Nature's own colorful combinations of interesting grain patterns. Specify Second and Better, the ideal "gymnasium" grade, with fullest confidence. It makes a splendid floor of enduring beauty. YOU'LL SAVE MONEY WISELY.

MAPLE FLOORING MANUFACTURERS ASSOCIATION

Suite 564, Pure Oil Bldg., 35 East Wacker Drive
CHICAGO 1, ILLINOIS



WRITE
for copy of
this new AIA
folder-style
Flooring Textbook

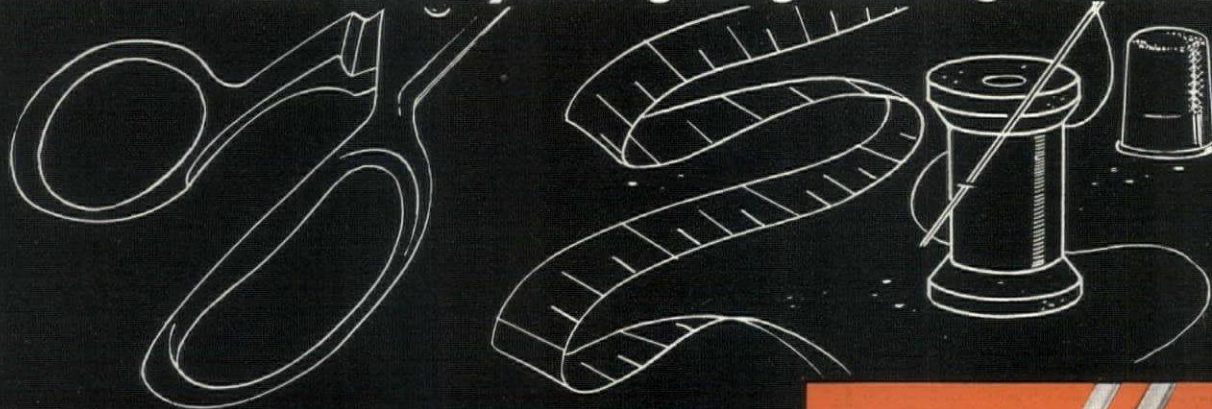
See Sweet's

(Arch. 12K-MA)
or write for grading
rules and new 1953
MFMA-approved
list of floor finishes.

FLOOR WITH ***NORTHERN*** **HARD MAPLE**
BEECH AND BIRCH

CBM Certified Ballasts are Tailored to the Tube

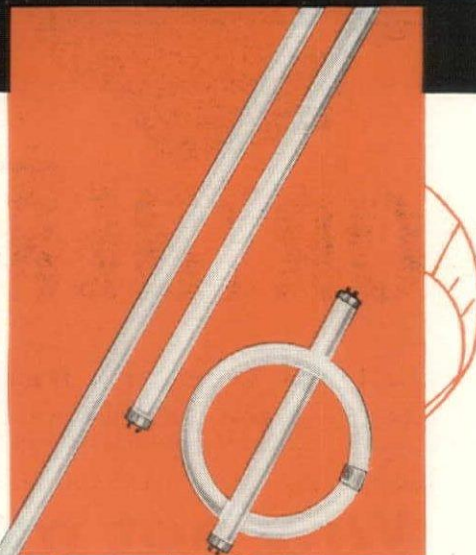
...to make your lighting dollar go farther



The heart of a fluorescent fixture is the Ballast.

Best lighting performance is assured by accurately matching ballasts to fluorescent tube requirements.

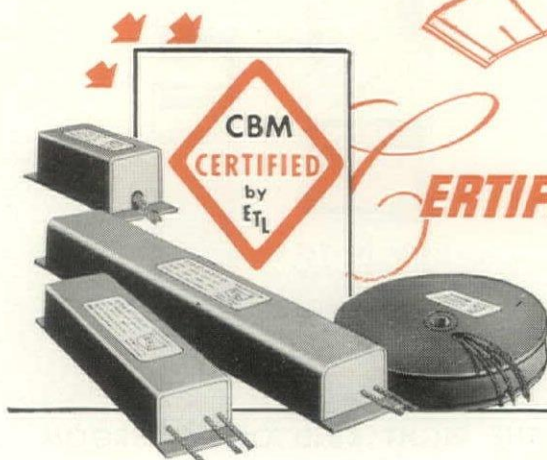
CERTIFIED BALLASTS are so matched. Built to exacting specifications designated by the Certified Ballast Manufacturers,* tested, checked and Certified by ETL, CERTIFIED BALLASTS truly are "Tailored to the Tube!"



That's why CERTIFIED BALLASTS assure:

LONG LAMP LIFE	FULL LIGHT OUTPUT
LONG BALLAST LIFE	FREEDOM FROM OVERHEATING
QUIET, TROUBLE-FREE OPERATION	

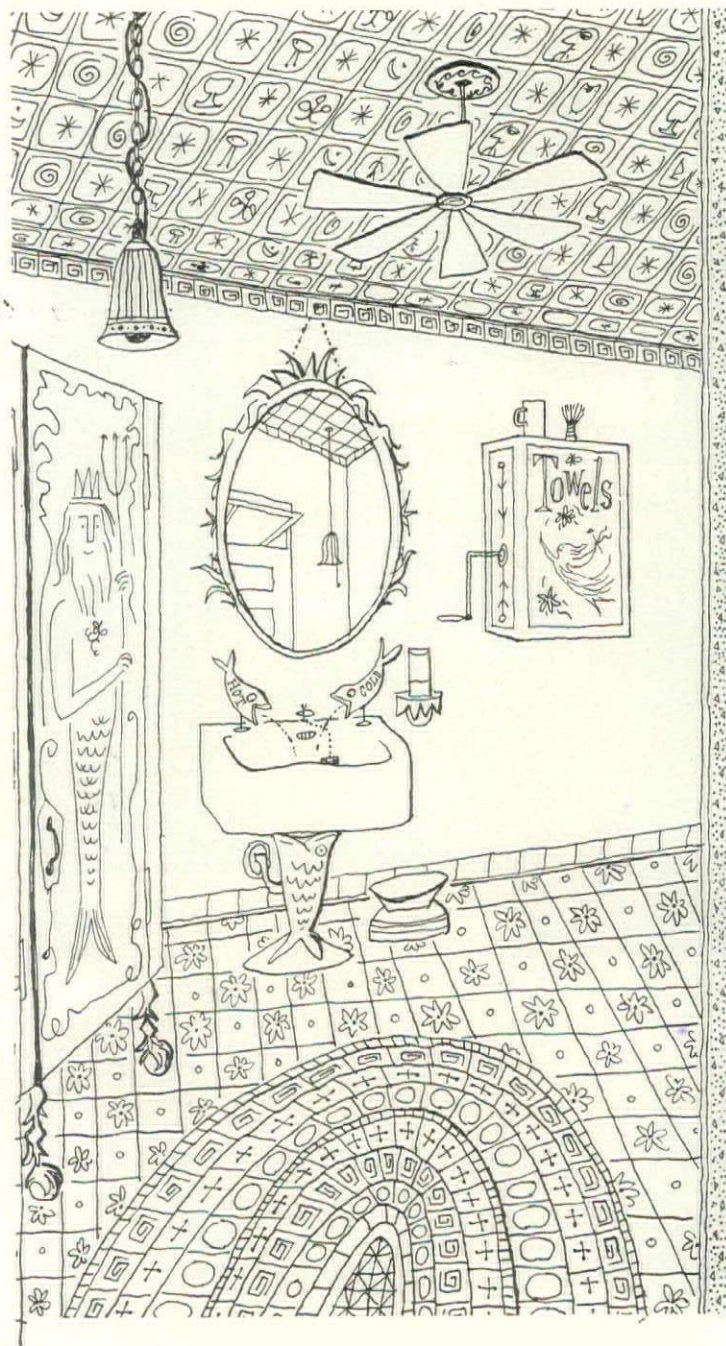
And that's why, today, the large majority of fluorescent fixtures for general lighting service are equipped with CBM Certified Ballasts.



CERTIFIED BALLAST MANUFACTURERS

**Nine leading manufacturers make CBM CERTIFIED BALLASTS.*

2116 KEITH BLDG., CLEVELAND 15, OHIO



Why not make it all modern?

—SPECIFY **SCOTT** RECESSED FIXTURES

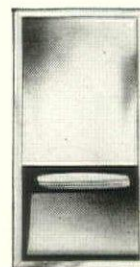
SOME old-fashioned washrooms may be quaint, but very few are practical. Seems to us that washrooms ought to be as modern as the rest of a building.

It has been our concern for a long time now to help you in planning functional washrooms. For example, we have a number of ScottTissue Towel fixtures—recessed and otherwise—that can make life a lot easier for everybody.

We've just printed a full-color booklet showing what we've learned over the years about washroom design. Send for your copy on your company's letterhead today.

Write Scott Paper Company, Dept. AF-1, Chester, Pa.

"ScottTissue," Reg. U. S. Pat. Off.



Scott No. 943 Recessed Towel Cabinet



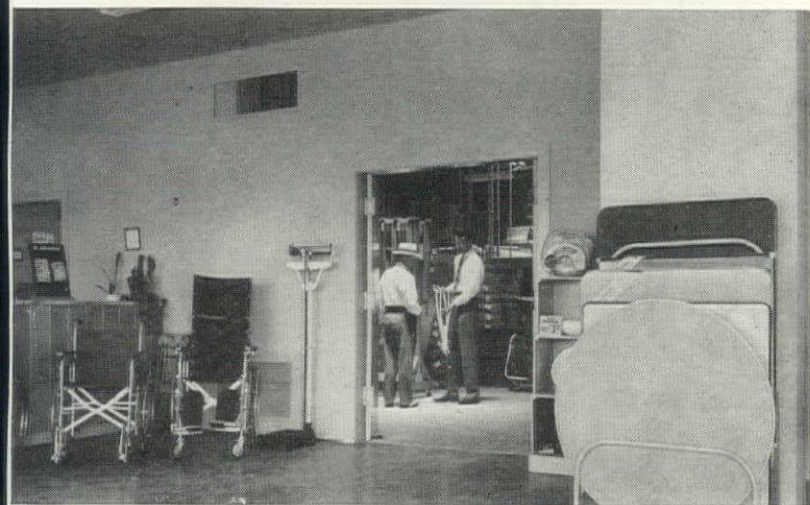
Scott No. 945 Recessed Towel Cabinet and Waste Receptacle



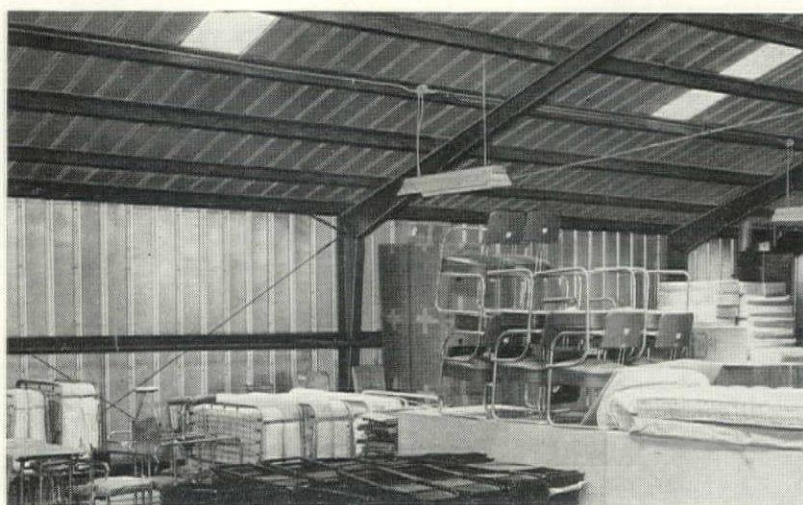
SCOTTISSUE TOWELS SYMBOL OF THE RIGHT KIND OF WASHROOM



Traffic stopper! Butler buildings combine easily, economically with other materials for functional beauty.



Sales builder! Attractive display space in this Butler building upped sales 20% in three weeks. Modern offices help keep employee morale high, encourage efficiency.



Utility! Butler clear-span furnishes floor-to-roof storage space. Translucent Lite*Panels flood the building with natural light. Aluminum sheets, bolted firmly, assure long life.

Architect-designed

This BUTLER building SELLS SERVICE

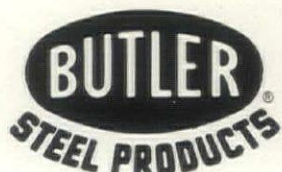
Planned by Golemon and Rolfe—well-known architects in Houston, Texas—for Best Rentals, Inc. in Houston, this Butler building began to produce more business the day the supply rental firm moved in!

New customers are attracted by the building's modern, attention-getting front. Larger, more effective equipment displays are at work in the roomy, well-lighted showroom. Deliveries are faster and customer service is improved with the convenience of the clear-span interiors. Employee efficiency stays high in the comfort and cheerfulness of the new Butler

building, too! Big doors and inside docks save time and work.

At the same time, the low-initial cost and complete adaptability of Butler buildings helped Golemon and Rolfe give their client a modern, long-lived building at moderate cost. Proving the sound economy of creative architecture teamed with Butler steel buildings with steel or aluminum sheeting.

See your local Butler dealer! Ask him for a copy of the new Butler Architect's Brochure—A.I.A. file number 14i. It will tell you more about the architectural adaptability of Butler buildings. Write for name of your dealer and more facts by mail.



BUTLER MANUFACTURING COMPANY

For prompt reply, address office nearest you:

7336 East 13th Street, Kansas City 26, Missouri
936A Sixth Avenue, S.E., Minneapolis 14, Minnesota
1036 Avenue W, Ensley, Birmingham 8, Alabama
Dept. 36A, Richmond, California

Manufacturers of Oil Equipment • Steel Buildings • Farm Equipment • Cleaners Equipment • Special Products

Factories located at Kansas City, Mo. • Galesburg, Ill. • Richmond, Calif. • Birmingham, Ala. • Minneapolis, Minn.

WORLD'S SMALLEST COMPLETE KITCHEN!

ONLY 27 1/2 INCHES WIDE!

Perfect For
MOTELS HOTELS
APARTMENTS
OFFICES FACTORIES
INSTITUTIONS
SMALL KITCHENS
TRAILERS
PATIOS

General Chef complete kitchen units fit in 5.4 square feet. The ideal solution wherever space and dollars are important.

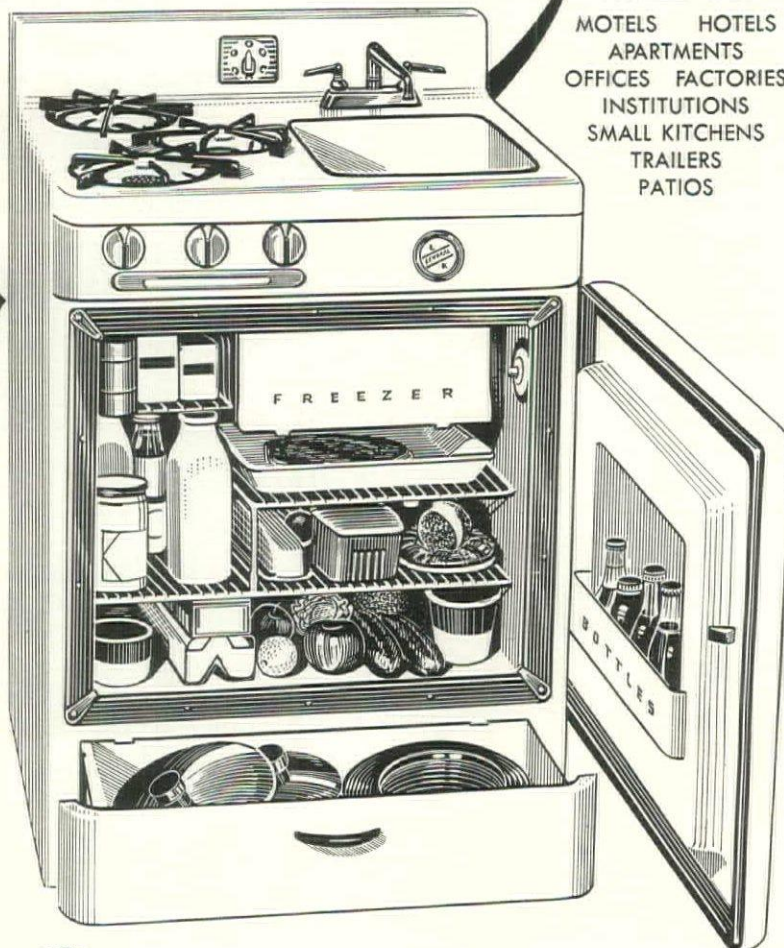
SINK One-piece porcelain top of heavy gauge steel. Faucets and all hardware triple-chrome plated. Units also available without sink.

BURNERS Units come with 3 gas burners (easily adjusted for bottled, natural or manufactured [L.P.] gas), or 3 electric burners (220 V.) or 2 (110 V.).

REFRIGERATOR Four cubic feet of space. Electric (sealed, self-oiling Tecumseh unit). Owens-Corning Fiberglas insulation. Convenient bottle shelf in door.

FREEZER Holds 9 ice cube trays, or 12 standard frozen food packages.

STORAGE DRAWER Ample storage space for pots and pans.



5 YEAR GUARANTEE

Every General Chef Unit is guaranteed in writing to give trouble-free service for 5 years!

General Chef

NATIONWIDE SALES AND SERVICE

NEW YORK: Dept. B, Suite 762, 11 W. 42nd St.; LOS ANGELES: Dept. B, 4536 E. Dunham St.

CHICAGO: Dept. B, Room 1108, Merchandise Mart

WRITE for complete information and specifications if you are building, remodeling, designing — you will be interested in the space and money you can save with General Chef units. Several models are available. Fully guaranteed. **WRITE TODAY** for complete information and specifications on all General Chef units. We will also send you name and address of distributor nearest you.



GENERAL CHEF, Dept. B, 4536 E. Dunham Street, Los Angeles 23, Calif.

Please send me complete information and specifications on General Chef units, and name of nearest distributor.

NAME _____

STREET & NUMBER _____

CITY _____

ZONE _____

STATE _____

You see all the floor in a rest room with a fixture-bare floor

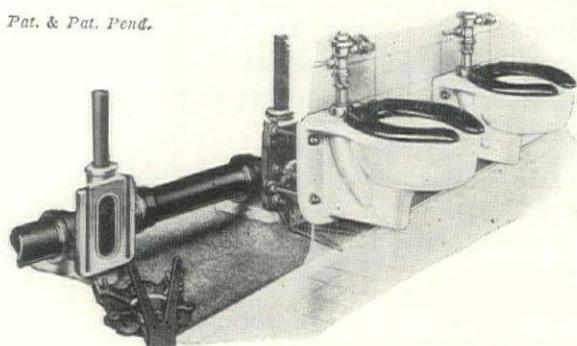


The Fort Worth National Bank Building, Fort Worth, Texas.
Architect-Engineers: Preston M. Geren; Consulting Architects: Shreve, Lamb and Harmon Association of New York; Mechanical Engineers: Yandell, Cowan and Love, Dallas; General Contractors: Thomas S. Byrne, Inc.; Plumbing Contractor: Schmidt Plumbing Company.



FIXTURE-BARE FLOORS give the effect of spaciousness to rest rooms

Pat. & Pat. Pend.



WALL-TYPE FIXTURES
Installed With the



Make Possible Fixture-Bare Floors

Over 500,000 Wall-Type Fixtures Now Installed With ZURN SYSTEMS in Buildings of Every Type From Coast to Coast. Write for list of buildings having rest rooms with fixture-bare floors.

Write For Booklet Entitled "You Can Build It and Maintain It For Less A NEW WAY". It contains up-to-date factual information for planning modern rest rooms.

Copyright 1953

...reduce the
over-all cost of building

An installation of off-the-floor plumbing fixtures effects many substantial savings in construction costs; permits lower ceilings and more flexibility in planning rest rooms; requires less space for walls; *permits use of any type wall and floor construction; leaves entire floor area intact thereby lifting sanitation to a new high and reducing maintenance of cleanliness to an all-time low, and simplifies piping layout.* Important savings in quantity of materials and in time costs can thus be obtained when rest rooms are specified to have fixture-bare floors. Insist on wall-type plumbing fixtures installed with and supported by Zurn Systems and you will protect your client's investment against untimely obsolescence.

J. A. ZURN MFG. CO. ERIE, PA., U. S. A.

PLUMBING DIVISION

Sales Offices in All Principal Cities

Pre-eminent Manufacturer of Sanitary Products for the Protection of Human Health and Modern Structures

In Canada: Canadian Zurn Engineering Ltd., Montreal, P. Q.



J. A. ZURN MFG. CO.
PLUMBING DIVISION—ERIE, PA., U. S. A.

I want to know more about the influence wall-type plumbing fixtures can have on the over-all cost of a building. Please send booklet entitled, "You Can Build It and Maintain It For Less A NEW WAY".

Name and Title.....

Company.....

Street.....

City and State..... Dept. AF

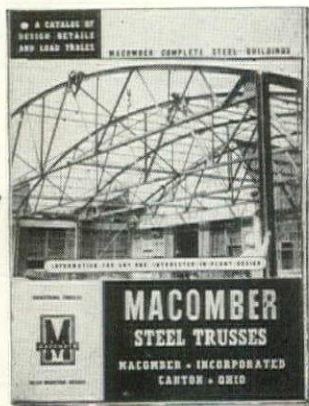
Please attach coupon to your business letterhead.

ONLY MACOMBER GIVES THE DESIGNER

HIS CHOICE OF THESE

2

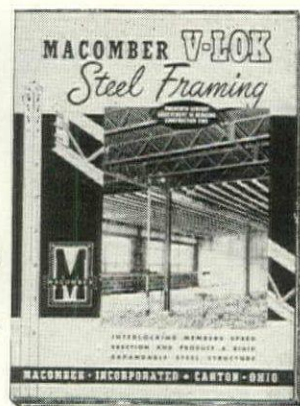
STANDARDIZED



BOWSTRING TRUSSES, JOIST PURLINS, STEEL COLUMNS AND ROOF DECK FOR YOUR MEDIUM HEAVY CONSTRUCTION

see our catalog in
ARCHITECTURAL
FILE
or write for copy

V-LOK STEEL FRAMING MADE IN STANDARD BAY SIZES OF INTERLOCKING MEMBERS FOR LIGHT OCCUPANCY NEEDS.



Steel Framing Methods

FOR WIDE SPANS—Macomber Bowstring Trusses are considered by engineers and estimators as the most economical steel member to span heavy occupancy structures—30 to 130 feet.

The Macomber Roof Truss Catalog gives you detailed drawings on eave conditions, column connections, crane runways, framing plans and bracing information and load tables.

FOR LIGHT OCCUPANCY—V-LOK Steel Framing catalogs standard structural members which interlock in a rigid frame for stores, shopping centers, ranch type homes, schools, warehouses, supply depots, storage sheds, parking garages and similar structures.

V-LOK reduces erection time to days, utilizes modern industrial framing for present requirements and future expansions.

Because Macomber solves ALL steel framing problems, send for these catalogs without obligation.

ORIGINATORS OF THE

OPEN WEB STEEL JOIST



STANDARDIZED STEEL
V BAR JOISTS • LONGSPANS

BUILDING PRODUCTS
STEEL TRUSSES • STEEL DECK

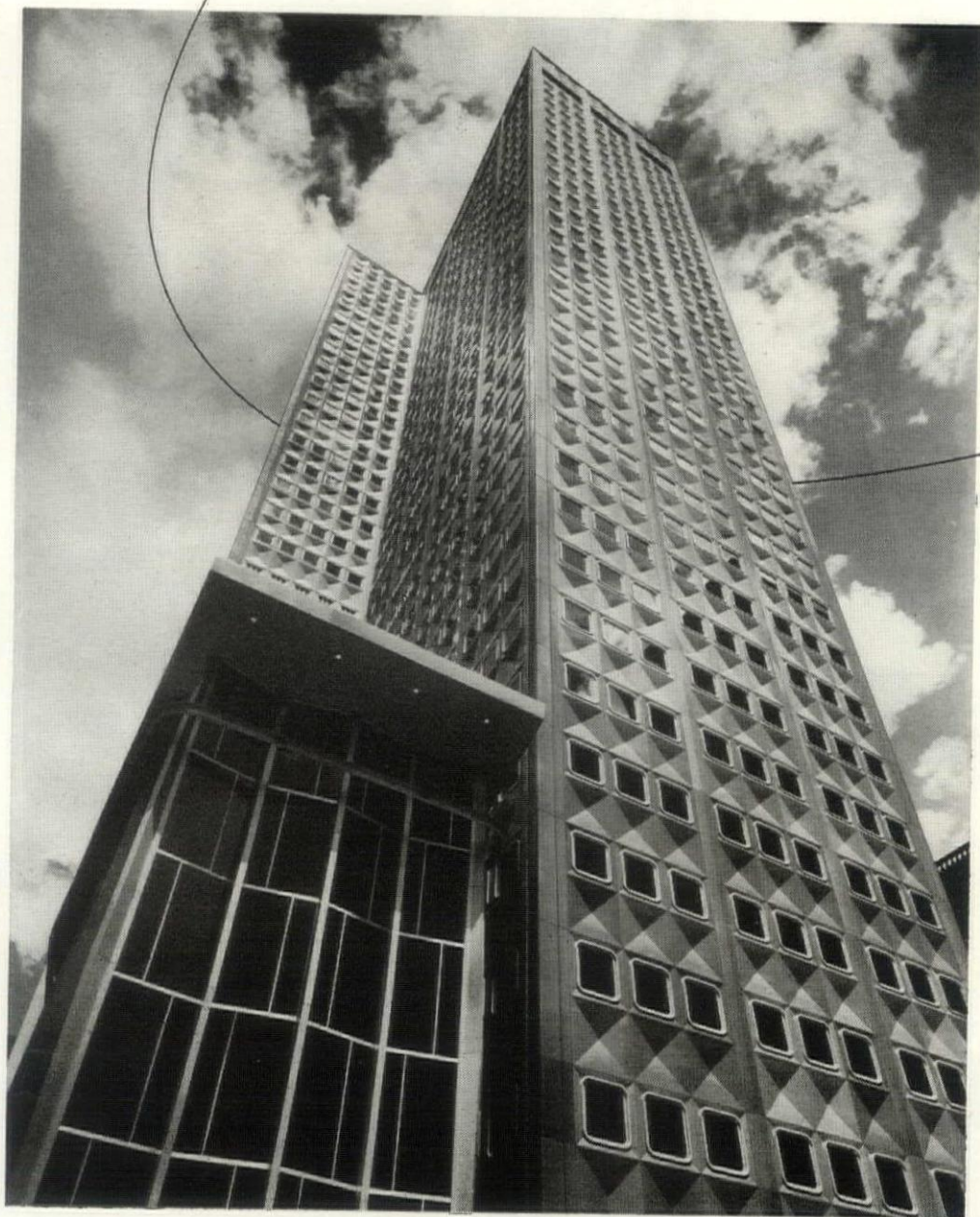
MACOMBER INCORPORATED

CANTON 1, OHIO

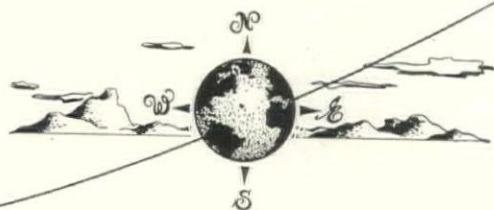
• ENGINEERING • FABRICATING AND ERECTING •

TRIONized* AIR

THROUGHOUT THE ENTIRE **ALCOA BUILDING!**



*And hundreds of other
Prominent Structures
all over the World
Including . . .*



EAST

Mellon Institute
U. S. Steel Building
Continental Can
McCormick (Spices)
Mass. Inst. Technology
Metropolitan Museum of Art
Mennen Co.
Eastman Kodak
Walter Reed Hospital
General Electric

SOUTH

Sperry-Farragut
Andrew Johnson Hotel
Tennessee-Eastman
Gastonia Mills
S. H. Kress Co.
Texas Company
Godchaux Sugars
Atomic Energy Commission
Family Reserve Insurance
Eastern Airlines

WEST

Hughes Aircraft
Shriners Hospital
Tacoma Power & Light
University of Washington
Farmers Insurance Group
Flamingo Hotel
Kaiser Aluminum
Cudahy Packing
Kennecott Copper
Univ. of California

CENTRAL

Union Electric Co.
Ford Motor Co.
The Dayton Store
St. Louis Municipal Airport
Cleveland Twist Drill
Sears Roebuck
Schlitz Brewing
General Motors
Pfeiffer Brewing
GMC—Ternstedt

FOREIGN

Fiat Automobile—Rome
Automatic Telephone Exchange—Calcutta
Telecommunications Hospital—Tokyo
Hospital of Grenchen—Zurich
Ipoh Telephone Exchange—Singapore

***TRIONized Air** is more than filtered air; it is electronically cleaned air. Dust, dirt, smoke, pollen, bacteria and virus are eliminated. Alcoa selected Trion for its ease of maintenance, lightness in weight, space saving features and high efficiency.



TRION, INC.

1000 ISLAND AVE. • McKEES ROCKS, PA.
IN METROPOLITAN PITTSBURGH

Trion, Inc.
1000 Island Avenue
McKees Rocks, Pennsylvania

Please send special application studies
on Trion installations in office buildings.

NAME _____
ADDRESS _____
CITY _____

AF-1

Photo above shows one of 4 Powers Temperature and Humidity control panels regulating 4 air conditioned rooms of varying size and temperature range for testing the following products: domestic refrigerators (ice and mechanical), freezer chests, milk coolers, walk in coolers, room coolers —and many other of the 110,000 items sold by Sears.

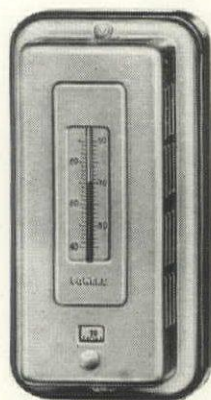
HEDRICH-BLESSING PHOTO

Typical Modern
AIR-CONDITIONED SEARS RETAIL STORE
at Harlem and North Ave., Chicago

Architects: CARR & WRIGHT, INC. • Consulting Engineer: NORMAN E. BUETER
Contractors: MEHRING & HANSON CO. • THE HAINES CO.

This and Over 50 Other SEARS Stores from Coast to Coast are POWERS Controlled

has used **POWERS** ^{PNEUMATIC} *Control Systems*
In Many of its Prominent Buildings



Powers Room Type Thermostat pneumatically regulates heating and air conditioning systems. Outstanding for accuracy and dependability.

After 40 to 47 Years of Service in Sears Chicago Administration and Merchandise buildings, Powers pneumatic systems of temperature control are still in operation.

Fuel savings and greater comfort obtained here by the prevention of OVER-heating have paid a profitable return on the investment in Powers control. With today's higher fuel costs savings are larger than ever before.

When you select a temperature control system, consider Powers. Users report lower maintenance cost and 30 to 50 years of dependable service.

THE POWERS REGULATOR CO.

Skokie, Ill. • Offices in Over 50 Cities in the U.S.A., Canada and Mexico

OVER 60 YEARS OF AUTOMATIC TEMPERATURE CONTROL

(b42)

Mail Order Plants SIMPSON-SEARS LTD., Canada—Also Regulated by POWERS



HALIFAX

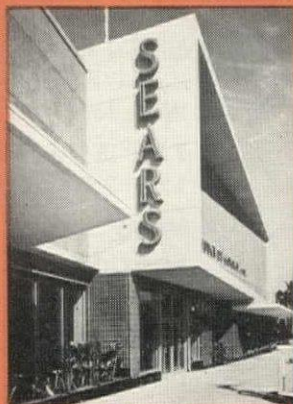


TORONTO



REGINA

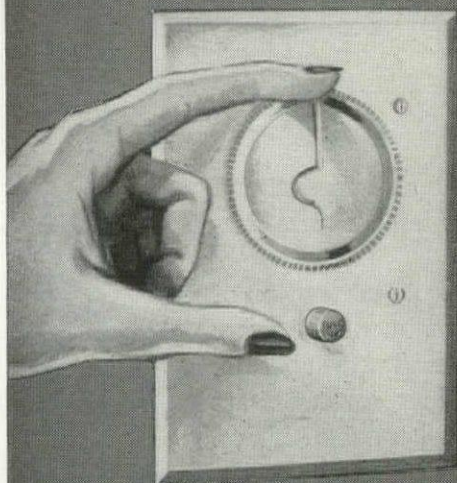
POWERS Controlled SEARS Stores in SAO PAULO, BRAZIL • BARRANQUILLA, COLOMBIA • RIO DE JANEIRO, BRAZIL



make
*Controlled
Light*



an integral part of your plans



with the
powerstat
Wallbox Dimmer

- Any amount of light from darkness to full brightness
- As easily installed as the ordinary wallswitch
- Economical, cool, silent operation
- Approved by the Underwriters' Laboratories

THE SUPERIOR ELECTRIC CO.
BRISTOL, CONNECTICUT

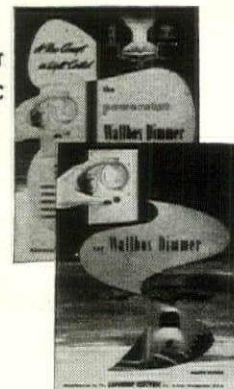


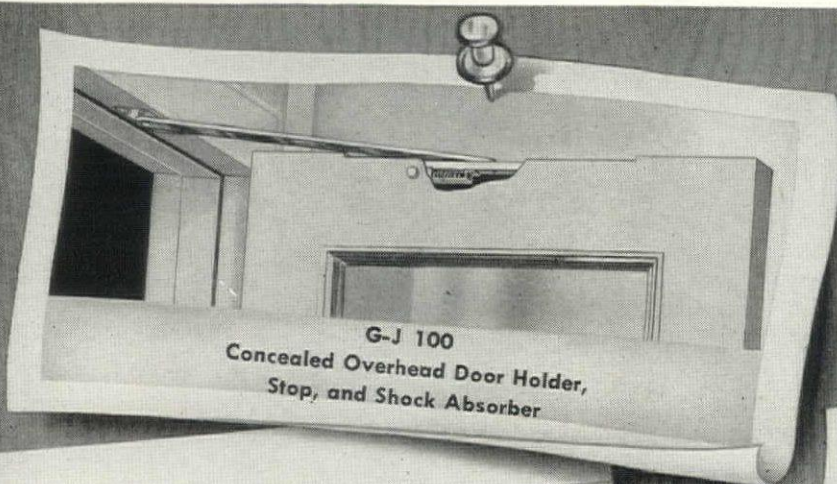
Now, home lighting keeps pace with the modern design of better living. No longer must lighting be the complete darkness or blinding brilliance offered by the ordinary "on-off" wallswitch. A new concept in light control, the **powerstat WALLBOX Dimmer** replaces the wallswitch to permit the selection of light just right for any occasion and activity. Simply by turning a knob, light is brightened or softened silently and smoothly to reflect every mood — to provide the right amount of light for every seeing task. Here is lighting as it should be — *controlled* from darkness to full brightness to suit the needs of modern living. Plan for the **powerstat WALLBOX Dimmer** in the home you build.

Complete technical information is offered in Bulletin D653WBT
And for your customers, a simple, non-technical Bulletin D253WBC
Write to:

THE SUPERIOR ELECTRIC CO.
12113 Demers Avenue, Bristol, Conn.

NAME _____
POSITION _____
COMPANY _____
CO. ADDRESS _____
CITY _____ ZONE _____ STATE _____





G-J 100
Concealed Overhead Door Holder,
Stop, and Shock Absorber

Bill -

*Don't overlook the
importance of specifying
the proper G-J Devices
for the various doors,
as their products are
the proven standard.*

P. E. S.



FB-13
Dome Bumper—
Loss Proof Rubber



G-J 1150
Plunger type
Door Holder



F-9
Heavy Duty
Semi-Automatic
Door Holder
and Plunger
Bumper



F-40
Combination
Stop, Holder,
and Bumper
—Push and
Pull Action



Glynn-Johnson Corporation

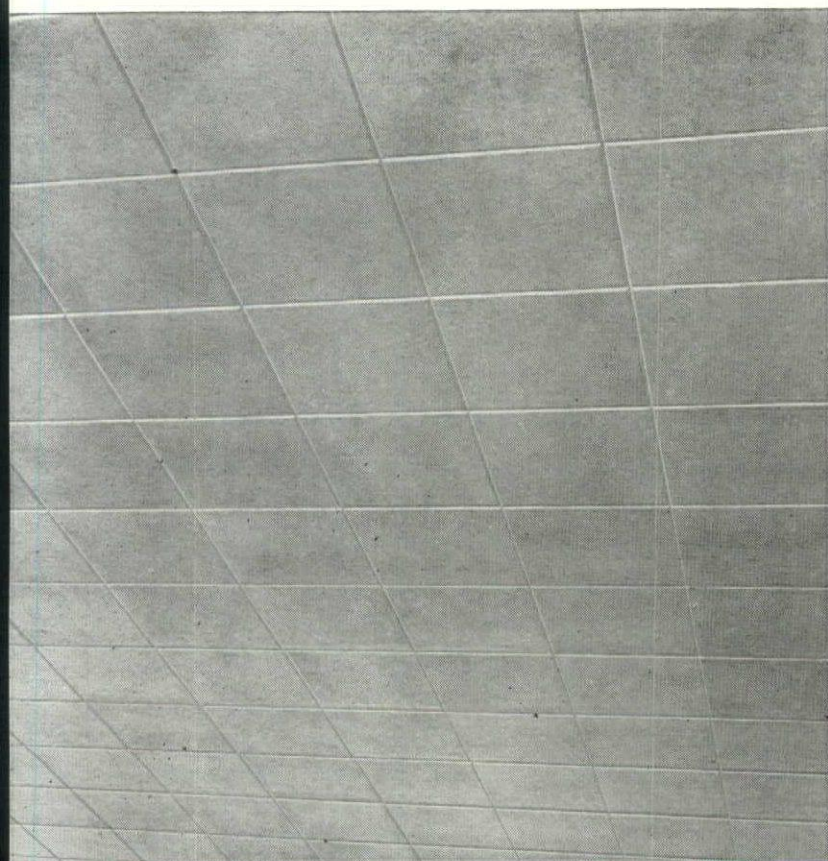
Builders' Hardware Specialties for Over 30 Years

4422 N. Ravenswood Ave.

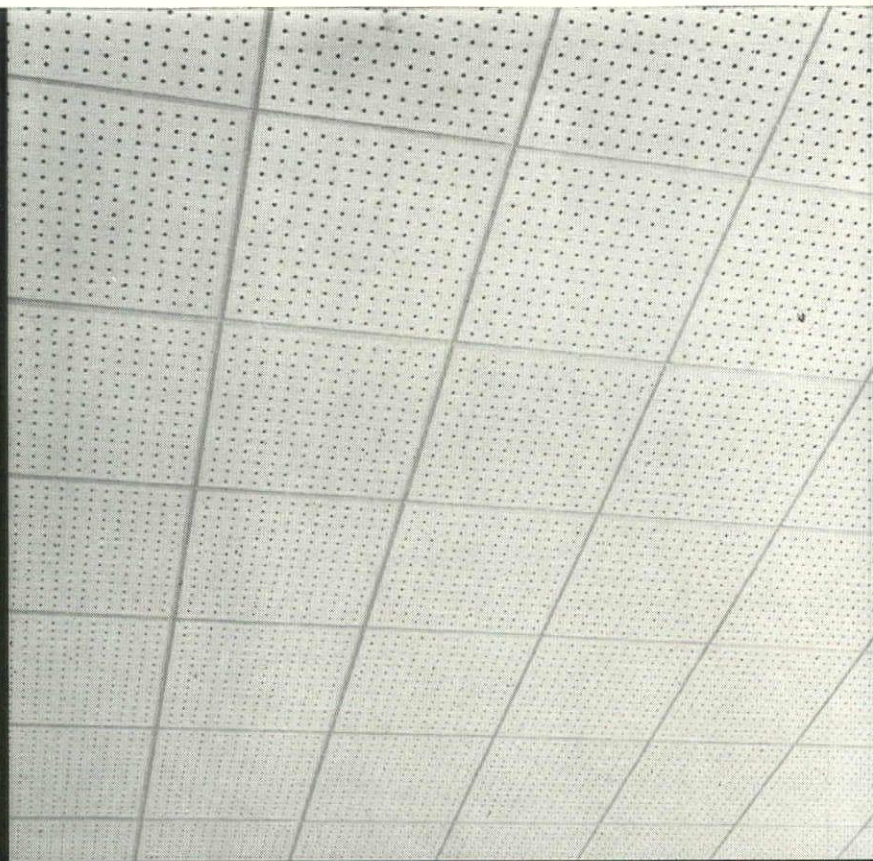
Chicago 40, Illinois

Refer to G-J Catalog for complete
line of door holders, bumpers, and
specialties . . . for all types of doors
in public and commercial buildings.

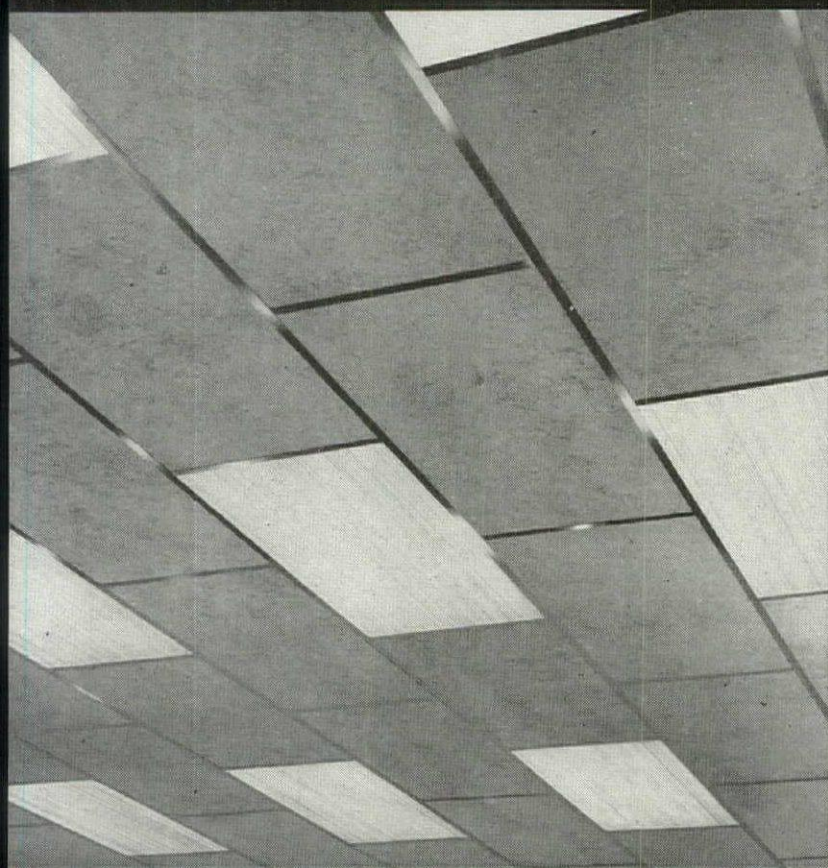
4301



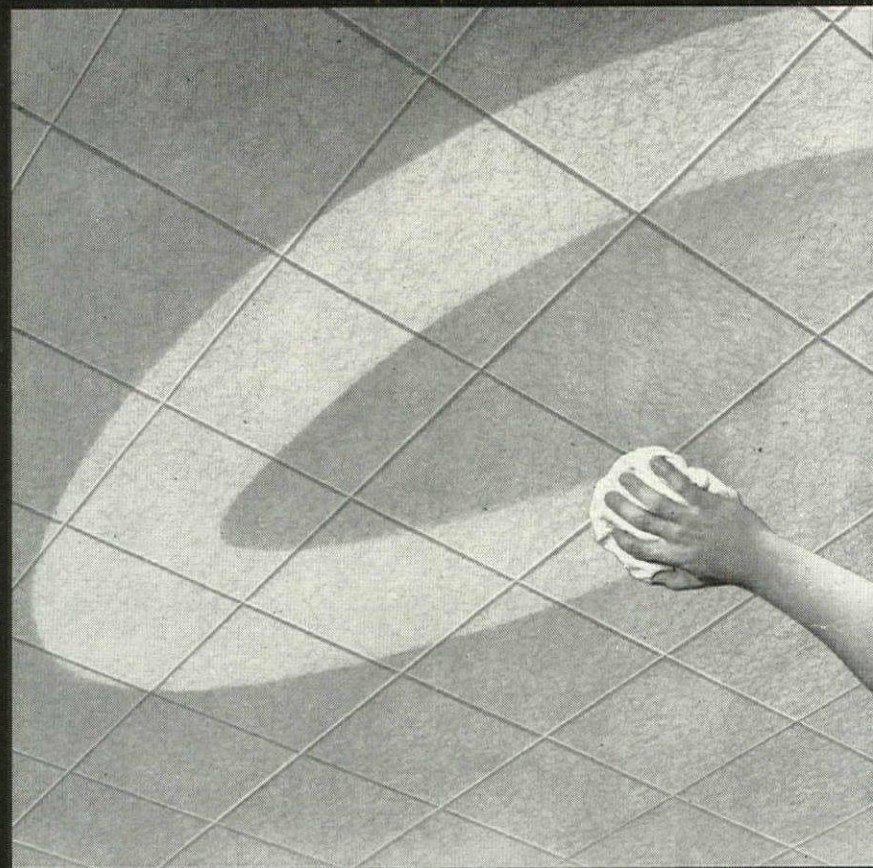
Fiberglas® Textured Acoustical Tile ... high acoustical value and decorative beauty.



Fiberglas Perforated Acoustical Tile ... functional beauty combined with top sound control.



Fiberglas Textured Ceiling Board ... low-cost suspended ceilings for large-area interiors.



Fiberglas Sonofaced® Acoustical Tile ... highly decorative in six standard colors ... washable!

All the sound control answers from one complete line

Send for latest design data now!



SOUND CONTROL PRODUCTS

FIBERGLAS TEXTURED, PERFORATED & SONOFACED ACOUSTICAL TILE
FIBERGLAS TEXTURED & SONOFACED CEILING BOARD • FIBERGLAS SONOCOR®
ACOUSTICAL PADS FOR METAL PANS • FIBERGLAS NOISE-STOP® BAFFLES

*Fiberglas, Sonofaced, (Reg. U.S. Pat. Off.) Sonocor and Noise-Stop are trade-marks of Owens-Corning Fiberglas Corporation.

lowest cost non-combustible acoustical materials available

*... the finest structures
rest on*

RAYMOND FOUNDATIONS

FACTORY OF FLORSHEIM SHOE CORPORATION
Chicago, Ill.

ARCHITECTS & ENGINEERS:
Shaw, Metz & Dolio, Chicago

CONTRACTOR FOR SUPERSTRUCTURE:
Campbell-Lowrie-Lautermilch Corp., Chicago



RAYMOND'S DOMESTIC SERVICES . . .
Soil Investigations • Foundation Construction
• Harbor and Waterfront Improvements
Prestressed Concrete Construction • Cement-
mortar Lining of Water, Oil and Gas Pipe-
lines, In Place.

RAYMOND'S SERVICES ABROAD . . .
In addition to the above, all types of General
Construction.



RAYMOND

CONCRETE PILE CO.

140 Cedar Street • New York 6, N. Y.

Branch Offices in Principal Cities of the United States,
Central and South America



Cheers FOR THIS GREAT, NEW STYLE
IN TILE!

MATICO *Confetti!*

HURRAHS — from America's value-wise home buyers. It's high-style flooring at low prices... easy to clean... lasts for years!

APPLAUSE—from leading decorators. They welcome the fresh, new styling that gives them wide freedom in creating exciting decorative schemes.

A ROUSING HAND—from architects everywhere. Confetti is ideal for every type of installation including on-grade, slab construction homes. Fortified with polystyrene plastic for bright, enduring colors... extra toughness and resiliency.

Confetti is available in 10 gay, festive colors, in 9" x 9" tiles of 1/8" thickness. Mail coupon today for complete details.

MASTIC TILE CORPORATION OF AMERICA
Dept. 6-11 P. O. Box 986
Newburgh, N. Y.

Please send me complete specification data and free samples of MATICO Confetti tile flooring.

Name

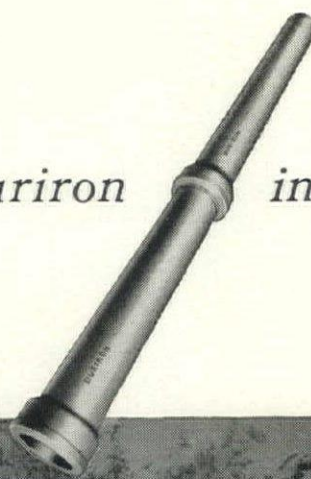
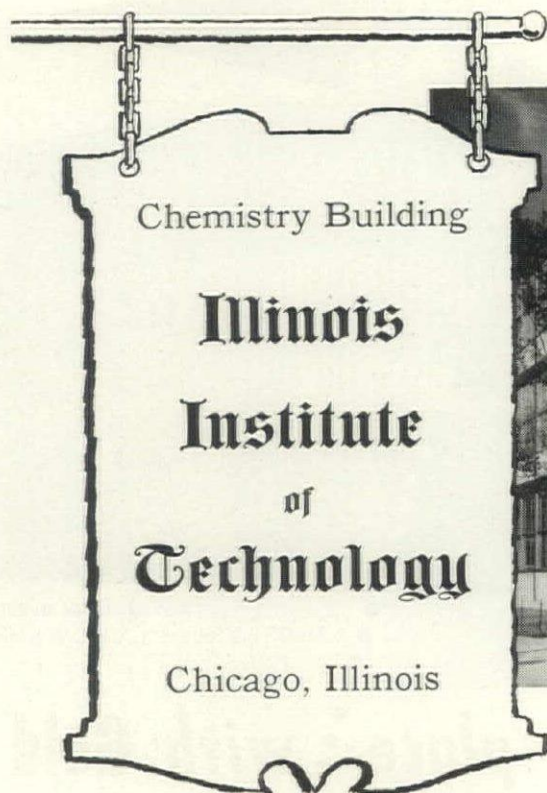
Address

City Zone State

MASTIC TILE CORPORATION OF AMERICA

Mfrs. of: Confetti • Aristoflex • Parquetry • Cork Tile • Asphalt Tile • Plastic Wall Tile
Joliet, Ill. • Long Beach, Calif. • Newburgh, N. Y.

Another important *Duriron* installation



ARCHITECT

Mies van der Rohe

ASSOCIATE ARCHITECTS

Friedman, Alschuler
& Sincere, Associated

CONTRACTOR

Dahl Stedman Co.

PLUMBING CONTRACTOR

Economy Plumbing & Heating Co.

The Chemistry Building at I.I.T. is one of more than a dozen new buildings already completed in a long-range program which will give the Institute one of the world's most modern campuses. *Duriron Acidproof pipe* was installed to handle drainage of corrosive liquids.

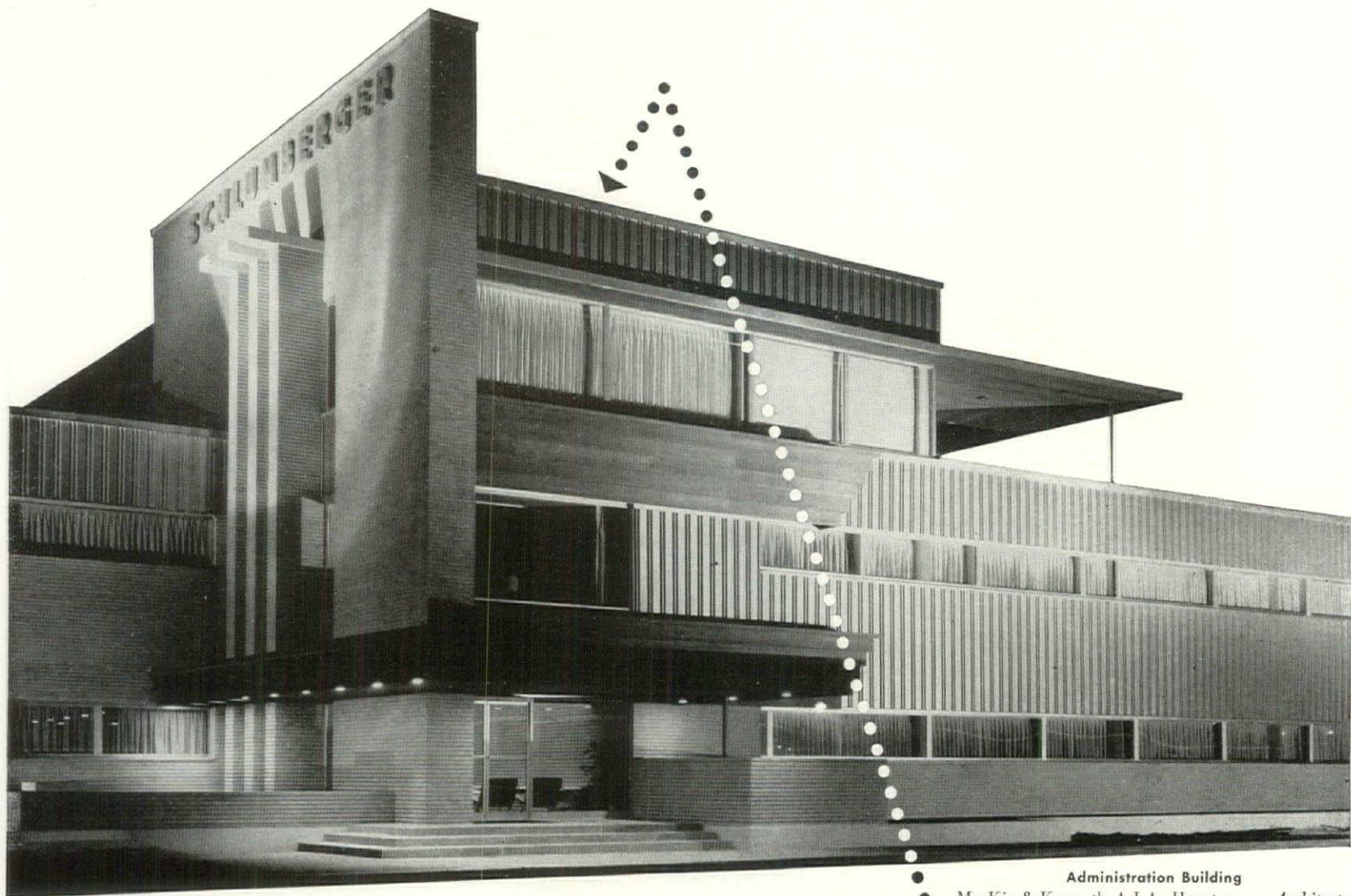
Sales records show more and more schools, hospitals and industrial buildings rely on Duriron. Duriron is a high silicon iron alloy resistant to corrosion, abrasion and erosion. It provides resistance throughout the thickness of the pipe wall. Duriron is installed by regular plumbing methods. Duriron will usually outlast the building in which it is installed.

Duriron pipe, as well as a complete line of standard fittings are available from stock in principal cities, and are described completely in free Bulletin PF/4.



DURIRON ACIDPROOF DRAIN PIPE

THE DURIRON COMPANY, Inc., 403 North Findlay Street, Dayton 1, Ohio



Administration Building
MacKie & Kamrath, A.I.A., Houston . . . Architects

Fire resistance . . . poured-in-place : with Gold Bond Gypsum Roof Deck !

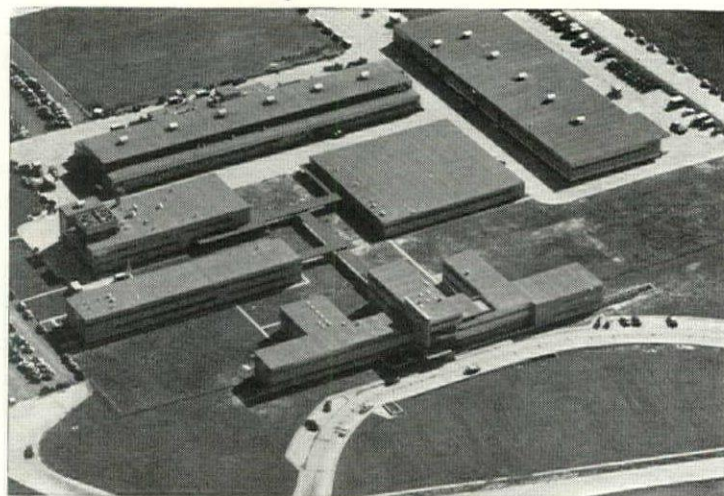
HERE'S another big installation of Gold Bond "Poured-in-Place" Gypsum Roof Deck. All six of the roofs shown below have a solid core of fireproof gypsum. Of advanced industrial design, the Administration Building (above) looks flat yet sheds water in all directions . . . a fine example of the *versatility* of Gold Bond Gypsum Roof Deck.

You can specify a Gold Bond "Poured-in-Place" Roof Deck for any design—pitched, barrelled, or flat. By varying the Gold Bond formboards, you can achieve fire protection, insulation, or a combination of insulation and sound-conditioning.

These strong, light, economical roofs are installed only by approved contractors. Write our Architect Service Department for detailed drawings and load tables.

**You'll build or
remodel better with**

Gold Bond®



Schlumberger Well Surveying Corp., Houston, Texas

Walter Kidde Engineers Southwest, Houston . . . *Architect and Engineer*
(except Administration Building)
Tellepsen Construction Co., Houston *General Contractor*
Lydick Roofing Co., Houston *Roof Deck Contractor*

NATIONAL GYPSUM COMPANY • BUFFALO 2, NEW YORK

*Lath . . . Plaster . . . Lime . . . Sheathing . . . Roofing . . . Sidings . . . Gypsum Roof Decks . . . Wall Paints . . . Textures
Rock Wool Insulation . . . Metal Lath . . . Sound Control Products . . . Fireproof Wallboards . . . Decorative Insulation Boards*

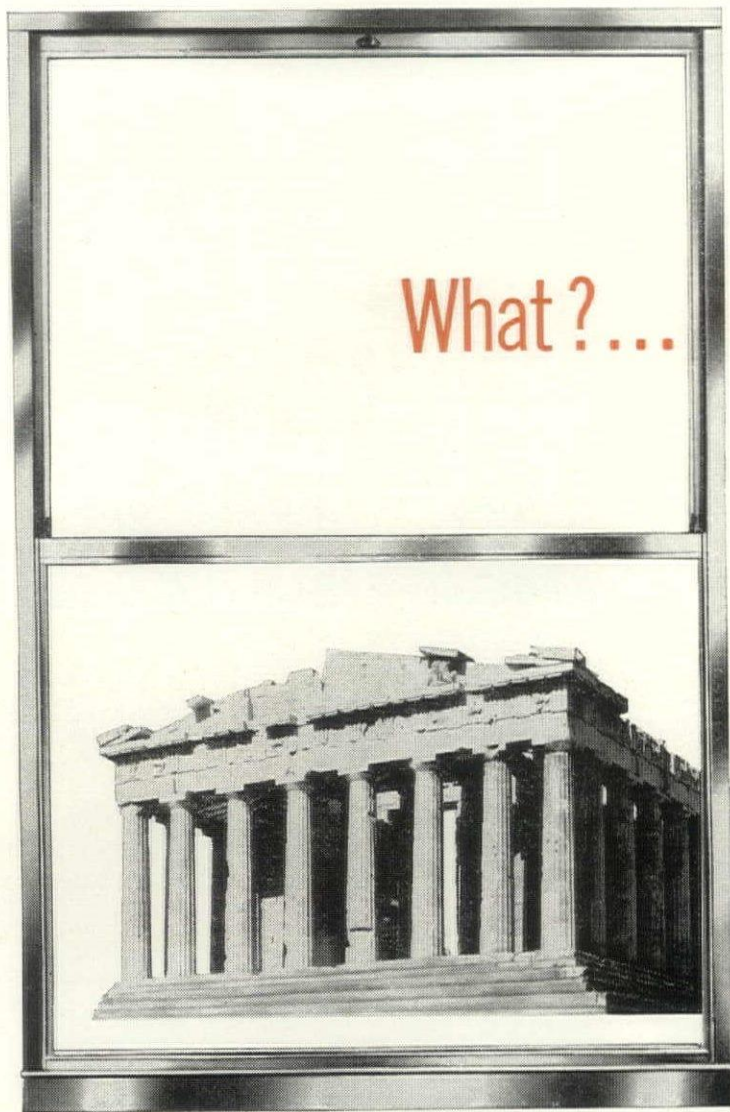
What?...

Adlake

windows

in the

Parthenon?



"ADLAKE" was *one* word the Greeks *didn't* have, when the Parthenon was begun in 447 B.C. But we believe that, *had* ADLAKE Windows been installed, they would be in operating condition today!

With no maintenance whatever,
ADLAKE ALUMINUM WINDOWS WILL LAST THE LIFE OF THE BUILDING!

Every ADLAKE Window gives these "PLUS" features

- Woven-pile weather stripping and exclusive patented serrated guides
- Minimum air infiltration
- Finger-tip control
- No painting or maintenance
- No warp, rot, rattle, stick, or swell



ADLAKE Windows pay for themselves by eliminating all maintenance costs except routine washing. Once installed, they'll keep their good looks and easy operation for the life of the building, with no painting or other maintenance whatever! What's more, their woven-pile weather stripping and patented serrated guides give an everlasting weather seal.

ADLAKE Aluminum Windows assure lifetime value, beauty, and efficiency. Write for full details ...you'll find ADLAKE representatives in most major cities.

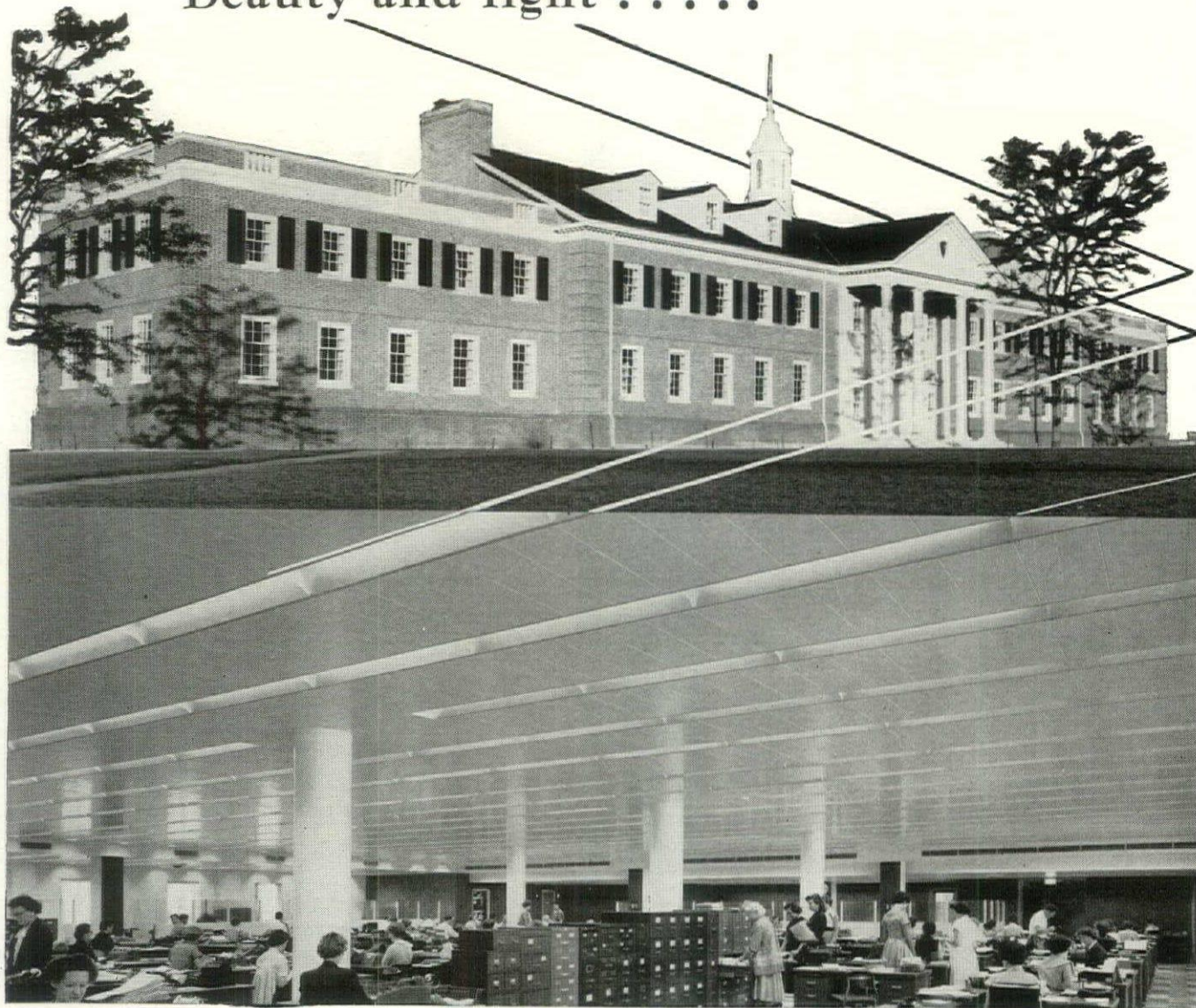


THE **Adams & Westlake** COMPANY

Established 1857 • ELKHART, INDIANA • New York • Chicago

Also Manufacturers of ADLAKE Mercury Relays
 and ADLAKE Equipment for the Transportation Industry

Beauty and light



Architect—Victor L. Charn

General Contractor—Ragnar Benson Inc.

Electrical Contractor—Hultgren Electric Corporation

Colonial tradition in architecture and Curtis tradition in lighting

The new western headquarters of Aetna Insurance Company is situated in Suburban Park Ridge, Illinois; 25 miles from Chicago's "hum-drum" loop. This outstanding structure, on spacious landscaped grounds was designed to blend with the general motif of this progressive residential area and is an asset to the entire community.

To provide the finest in "Eye-Comfort" illumination for Aetna employees, Curtis Recessed Low-Brightness Troffers were selected for the beautifully appointed private offices and Underwriting and Casualty departments; resulting in a glare-free lighting installation for 115,000 square feet of modern office interior. Once again, the marriage of Alzak Aluminum and the sixty-inch low brightness fluorescent lamp rivals nature's ultimate . . . the shade of a tree on a sunny day.

There is a Curtis Lighting Specialist in every major city in the United States and Canada, he will be pleased to show you three dimensional kodachrome transparencies of the Aetna Insurance Company installation.

If you are not acquainted with the Curtis specialist in your city, we'll be glad to provide his name and address on request.



6135 West 65th Street • Chicago 38, Illinois
NEW YORK • CHICAGO • TORONTO

Robinson's new Beverly Hills store chooses Crane Plumbing



Robinson's, Beverly Hills, California. Architects: Pereira & Luckman and Charles O. Matcham of Los Angeles. General Contractor: Wm. Simpson Construction Co., Los Angeles. Plumbing and Heating Contractor: Howe Bros., Los Angeles.

New standards in department store service and customer convenience are set by this brilliant new building, which has proved an instant success with the shopping public. Naturally Crane plumbing was specified... for its beauty, for its durability and for its ease in maintenance.

These qualities that made Crane the natural choice for Robinson's also make Crane the preferred plumbing for hospitals, schools and offices... as well as for homes.



Typical of the unexcelled quality found throughout the new Robinson's Store is Crane plumbing in soft pastel colors. Lavatories are Crane Norwich model 1-240-S, of vitreous china, with six-inch high backs, indirect-lift waste fittings. Dial-ese controls feature easy action, no dripping, and easy maintenance with the Dial-ese replaceable cartridge that contains all moving parts and fits all Crane faucets. Urinal is Crane Correcto model 7-87-C, of vitreous china, with integral extended shields, flushing rim, and flush valve with oscillating handle.

CRANE CO.

GENERAL OFFICES: 836 SOUTH MICHIGAN AVE., CHICAGO 5
VALVES • FITTINGS • PIPE
PLUMBING AND HEATING

aluminum **WINDOWS** *by* **GENERAL BRONZE**

North, south, east or west—wherever you go you'll find buildings of outstanding architectural design...buildings like the new **TEXACO** Office Building in New Orleans, Louisiana.

An unusually large percentage of these outstanding buildings feature "Windows by General Bronze."

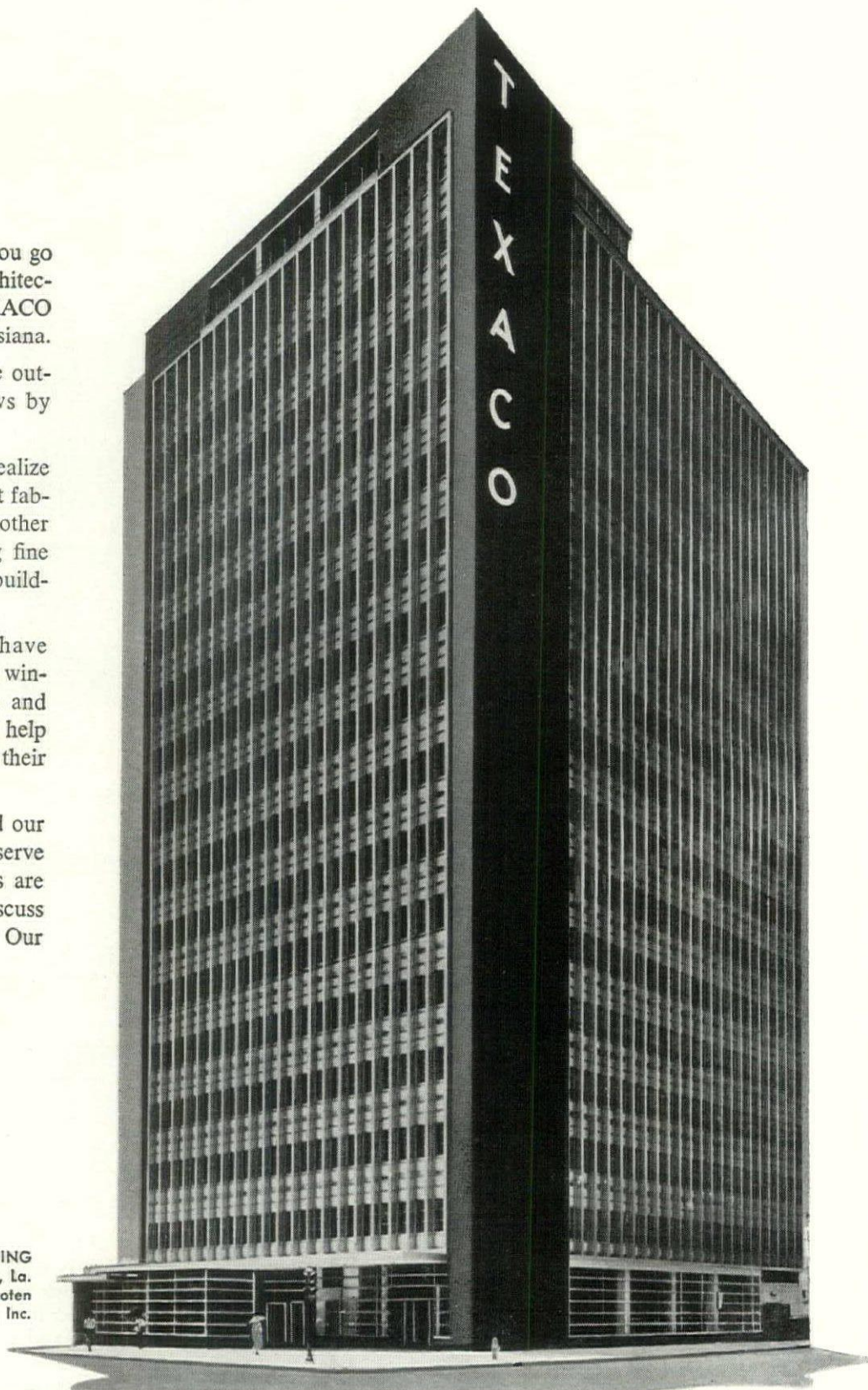
This is readily understood when you realize that General Bronze—the world's largest fabricator of architectural aluminum and other non-ferrous metals—has been making fine windows and metal work for prominent buildings for more than 40 years.

From this extensive experience, we have learned what features architects want in windows, spandrels, exterior curtain walls and architectural metal work—what kind of help architects appreciate most—what makes their job run easier and smoother.

Because of our unequalled facilities and our vast experience, we are well qualified to serve you, especially when your requirements are complex or unusual. We will be glad to discuss your problems with you at any time. Our Catalogs are filed in Sweet's.



TEXACO BUILDING
New Orleans, La.
Architect: Claude E. Hooten
Contractor: Haase Construction Co., Inc.



GENERAL BRONZE CORPORATION • GARDEN CITY, N. Y.

PERMATITE DIVISION—Custom-built Windows, Architectural Metal Work and Revolving Doors. **ALWINTITE DIVISION**—Residential Aluminum Windows.
BRACH MFG. CO. DIVISION—Multel, T. V., Radio and Electronic Equipment **STEEL WELDMENTS, INC. DIVISION**—Custom fabrication in steel and iron.

where there's— **WATER**
buildings need the **POSITIVE PROTECTION**

of **Josam** **PLUMBING DRAINAGE PRODUCTS**

Every building requires protection against the ravages of many types of water—rain water, waste water, backwater. The selection of the correct drainage products to handle all this water can be difficult and time-consuming ... unless you are an expert on drainage! Yet, the toughest drainage problem can be easily solved by submitting it to Josam, because Josam has been the leader in pioneering and producing drainage products for almost 40 years. In the Josam line are thousands of drainage items designed for practically every condition. Why take chances on substitutes, why order "specials"—when Josam can furnish your needs with recognized products of quality that cost not one cent more! On any project, first check with Josam on the plumbing drainage needs. Send coupon for free copy of new 208-page Catalog "K".



ROOF DRAINS to provide continuous drainage in spite of debris or torrential conditions.



FLOOR DRAINS in a wide range of standard and special designs for every floor drainage need.



SHOCK ABSORBERS to eliminate water hammer in pipe lines.



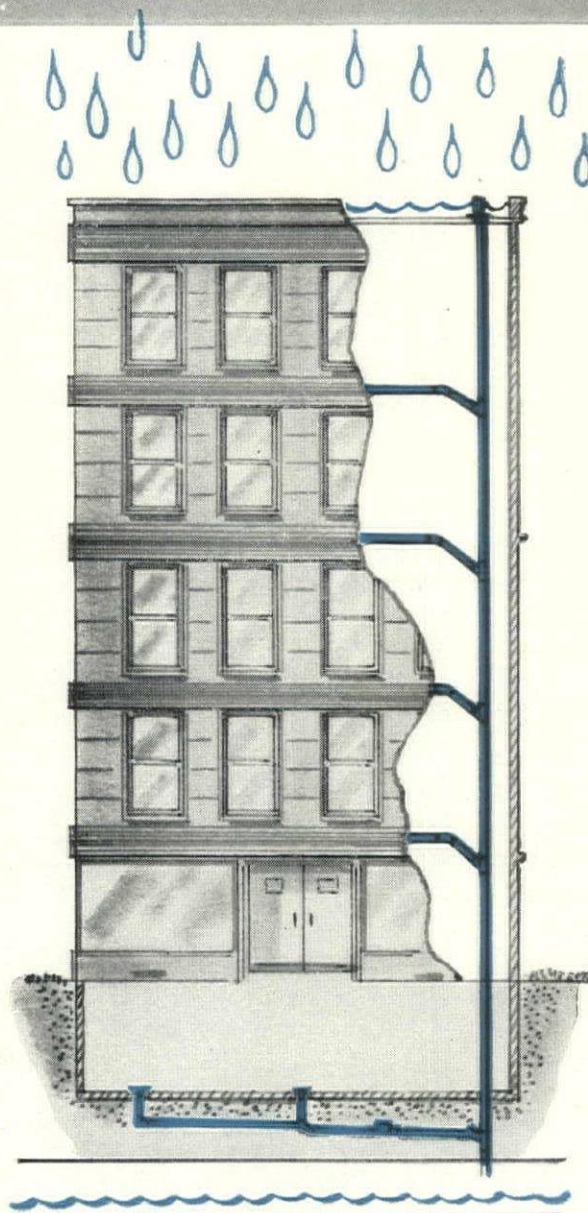
INTERCEPTORS for grease, oil, plaster, sediment and lint to keep drain lines free and clear.



SWIMMING POOL FITTINGS. Inlets, outlets, gutters, overflows to maintain highest standard in pool hygienic conditions.



BACKWATER VALVES to keep water and debris from sewer, backing up into basement floors.



JOSAM MANUFACTURING COMPANY

GENERAL OFFICES AND MANUFACTURING DIVISION
MICHIGAN CITY, INDIANA

Representatives In All Principal Cities

West Coast Distributor
JOSAM PACIFIC CO., San Francisco, Calif.

Canadian Manufacturers
JOSAM CANADA LIMITED, Toronto, Canada



JOSAM MANUFACTURING COMPANY
DEPT. AF • MICHIGAN CITY, INDIANA
Please send free copy of CATALOG "K"

NAME BUSINESS
FIRM
ADDRESS
CITY ZONE STATE





New Gold Seal Vinylbest!

combines the finest features of other tiles

This new kind of flexible, durable, inlaid tile is the closest thing to all purpose flooring ever manufactured for residential and commercial use. Vinylbest has all the true clean color characteristics of rubber tile. All the grease and alkali resistance of vinyl. All the easy maintenance features of inlaid linoleum. All the moisture resistance of asphalt tile.

Vinylbest is guaranteed* for installation on, above or below grade and it takes to concrete as readily as it takes to wood. It combines the highest grade vinyl resins with highest quality color pigments and asbestos. It will not support combus-

tion. It's easily and inexpensively installed, too, with asphalt tile adhesive.

Vinylbest's good, clear colors go all the way through and its unusual foam marbleization and color correlation make it easy to use for decorative effects. It offers distinctive patterns—12 in 1/16" gauge and 13 in 1/8" gauge. Available in 9" x 9" tile.

You'll want to specify Gold Seal Vinylbest for both residential and commercial floors. For free color folder and samples fill out coupon.

*The famous Gold Seal guarantee of satisfaction or your money back.

CONGOLEUM-NAIRN INC.

Kearny, N. J. © 1953



**GOLD SEAL
FLOORS AND WALLS**

Congoleum-Nairn Inc.
Architects' Service Dept.
Kearny, N. J.

Please send me the free color folder and samples of Gold Seal Vinylbest.

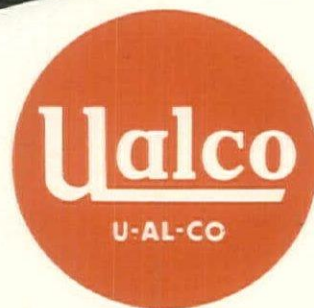
Name

Organization

Address

City Zone State

NO OTHER **AWNING WINDOW**
has this exclusive
Strip-proof
OPERATOR



A L U M I N U M

AWNING WINDOWS



With the turn of the operator handle . . . one operation . . . the exclusive built-in cam lock torsion bar unlocks, opens, closes and locks the ventilators which are actuated on each side. Completely eliminates the stripping of gear threads through failure to unlock window before opening.

This is but one of the many exclusive features that is helping to create over-all preference for Ualco Awning Windows. We've steadily expanded production facilities of these units to meet volume demand . . . will continue expansion to always meet it.

Ask About Our Engineering Planning Service
Specifically designed to assist Architects, Engineers and Contractors in making "take-offs" and solving their window problems.

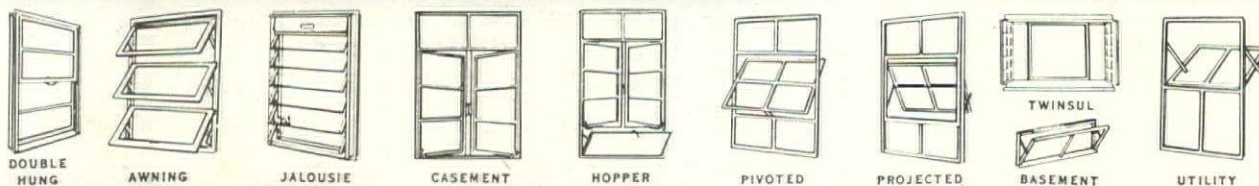
ALUMINUM WINDOWS . . .

*The Difference Between Dollars Wasted
And Dollars Saved!*

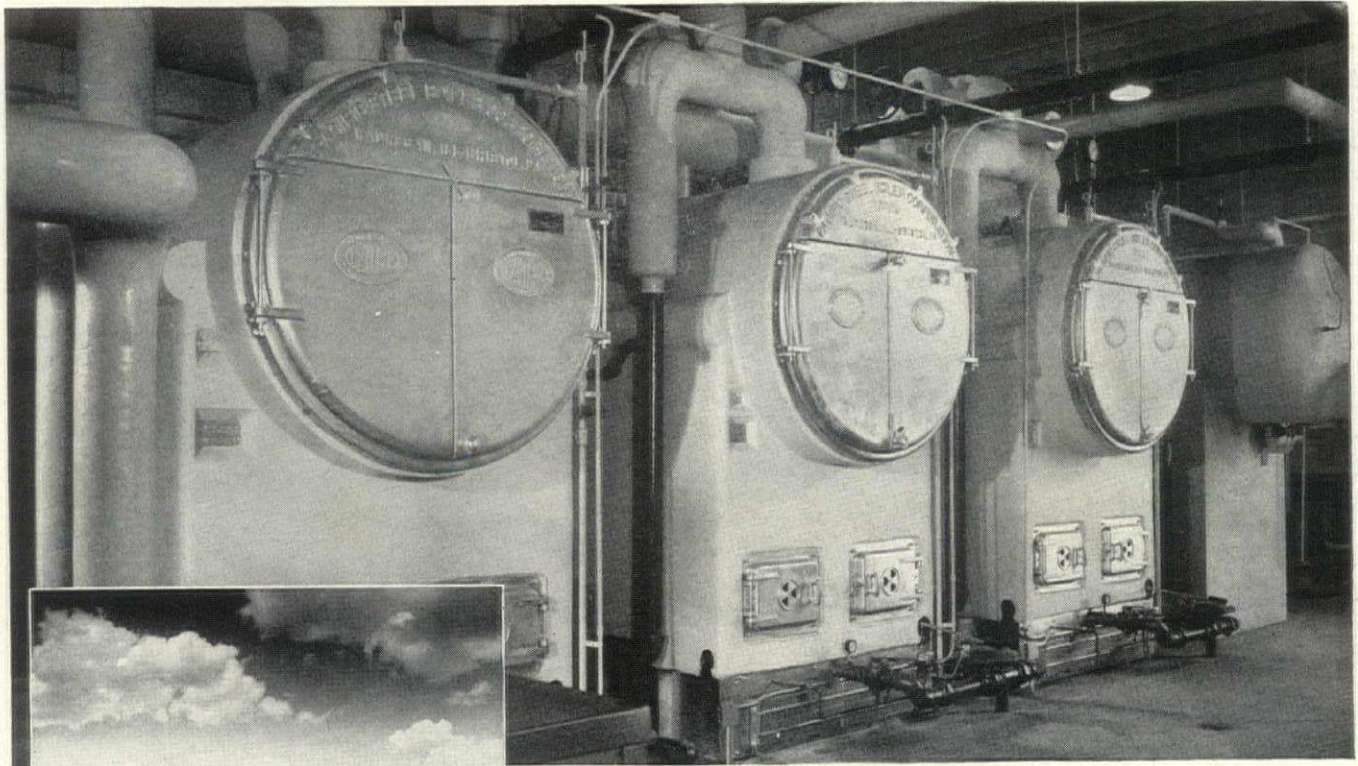
- **Never Rot • Never Rust**
- **Never Need Painting**
- **No Upkeep Expense Of Any Kind**

See Our Catalog In Sweet's Architectural File $\frac{16}{Un}$ Or Write Us For Complete Information

UNION ALUMINUM COMPANY, INC. • SOUTHERN SASH SALES & SUPPLY CO.
SHEFFIELD, ALABAMA



WORLD'S LARGEST MANUFACTURER OF ALUMINUM CASEMENT WINDOWS



The three Pacific Boilers with Forced Circulation installed in the Alexander Graham Bell Junior High School, Tulsa, Okla. Architects, Black & West; Consulting Engineers, Collins & Gould; General Contractor, W. R. Grimshaw & Co.; Mechanical Contractor, Bearden Plumbing & Heating Co.

Pacific Boilers with Forced Circulation are becoming standard equipment for schools

All over the country, the efficiency and economy possible with **Forced Circulation** are making **Pacific Boilers** first choice for schools.

Here's another of the many new schools built in the last few years in the Oil Capitol of the World, Tulsa, Oklahoma. Like most of the others, it uses Pacific Boilers with Forced Circulation for heating.

Forced Circulation is simply the action made possible by Pacific's ex-

clusive Circulating Connections. They channel the hot water and steam from the water leg and project them at high velocity across the heating tubes. This rapid action scrubs the insulating steam bubbles off the tubes and allows maximum heat transfer. That means greater efficiency, lower fuel bills.

Your Pacific representative can give you all the facts on Forced Circulation. He can also give you the data you need on the proper Pacific Boiler types and sizes for all your jobs. Why not call him today.



Torrey School, Birmingham, Mich.



Junior High School, Artesia, N.M.



St. Theresa's School, Marblehead, Mass.



Designed
Constructed
and Stamped in
Accordance with
ASME Code



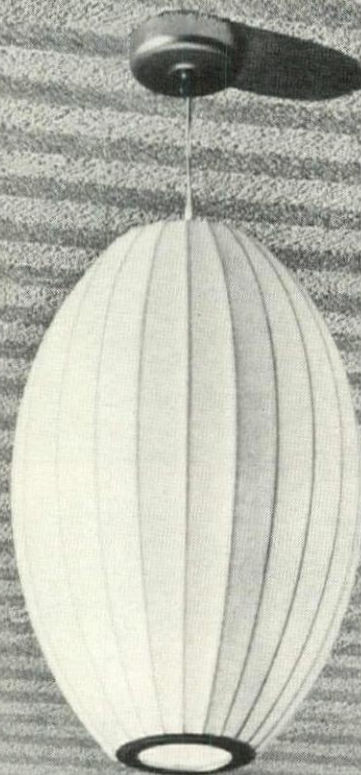
Reg. U. S. Pat. Off.



Pacific Steel Boiler

DIVISION • UNITED STATES RADIATOR CORPORATION

GENERAL OFFICES: DETROIT 31, MICHIGAN



introducing
Grosgrain

*sound control
is a job for experts*

For complete drafting room details, and other information and assistance, contact your nearby ACOUSTONE tile contractor or write United States Gypsum, Dept. 136, Chicago 6.

versatile new
design in

Motif'd®

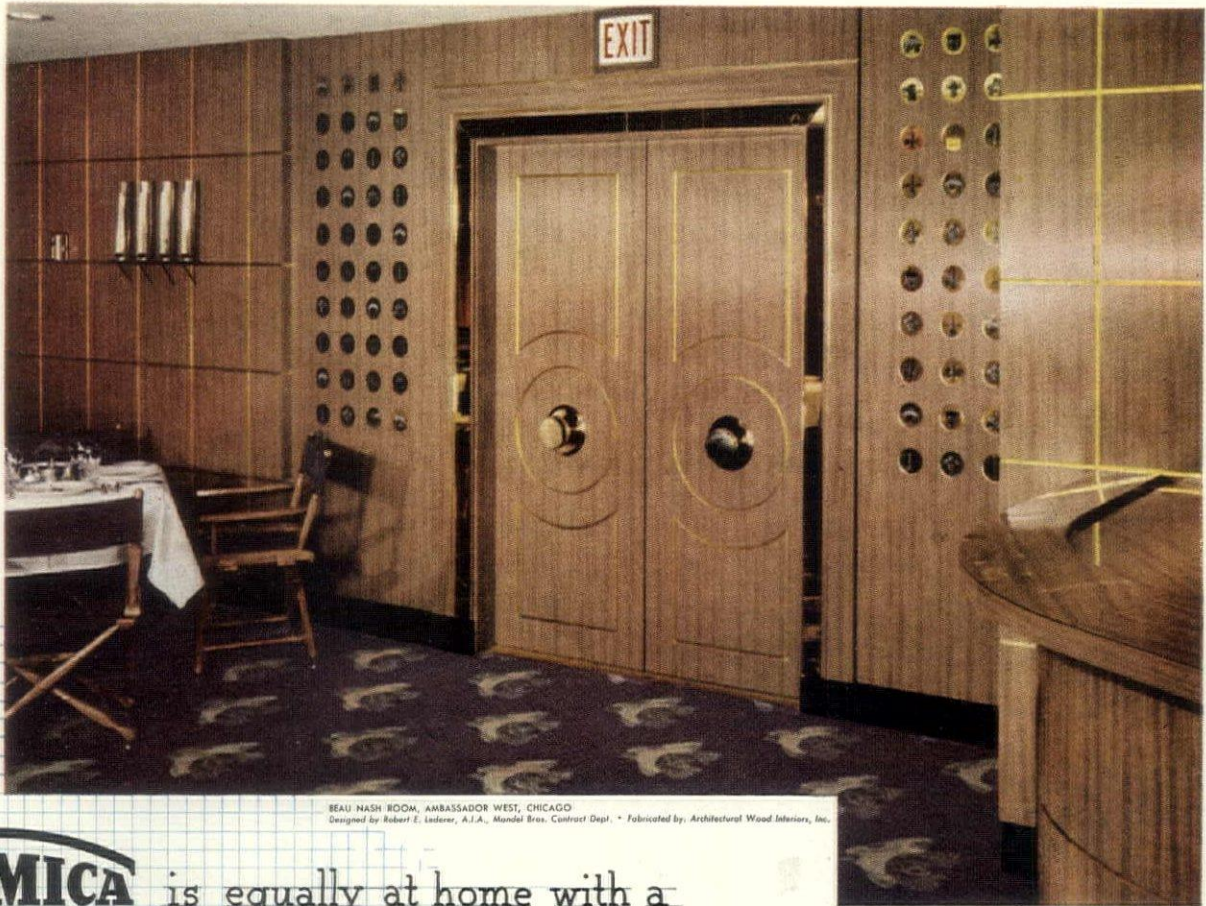
Acoustone®
MINERAL ACOUSTICAL TILE

The beautiful way to quiet a room, so versatile it allows you to create many unusual ceiling effects from just one pattern. Beautiful in design, rich in texture, highly efficient in sound absorption—Grosgrain has all these qualities and more. And it's just one of many MOTIF'D surface creations in ACOUSTONE—all made by a special patented process, exclusive with U.S.G.—originators of fissured acoustical tile. ACOUSTONE is incombustible, has high light reflection—truly the beautiful way to quiet a room.

UNITED STATES GYPSUM
the greatest name in building

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





BEAU NASH ROOM, AMBASSADOR WEST, CHICAGO
Designed by Robert E. Loderer, A.I.A., Mandal Bros. Contract Dept. • Fabricated by Architectural Wood Interiors, Inc.

FORMICA is equally at home with a
dinner jacket-
or with Tennessee serge-



Insist on the genuine. This wash-off marking on FORMICA is your assurance.

This mark certifies genuine

For complete information
see Sweets ^{13a}/_{FO} or write

FORMICA 4631 Spring Grove Ave.
Cincinnati 32, Ohio

Beauty Bonded
FORMICA
Reg. U.S. Pat. Off.

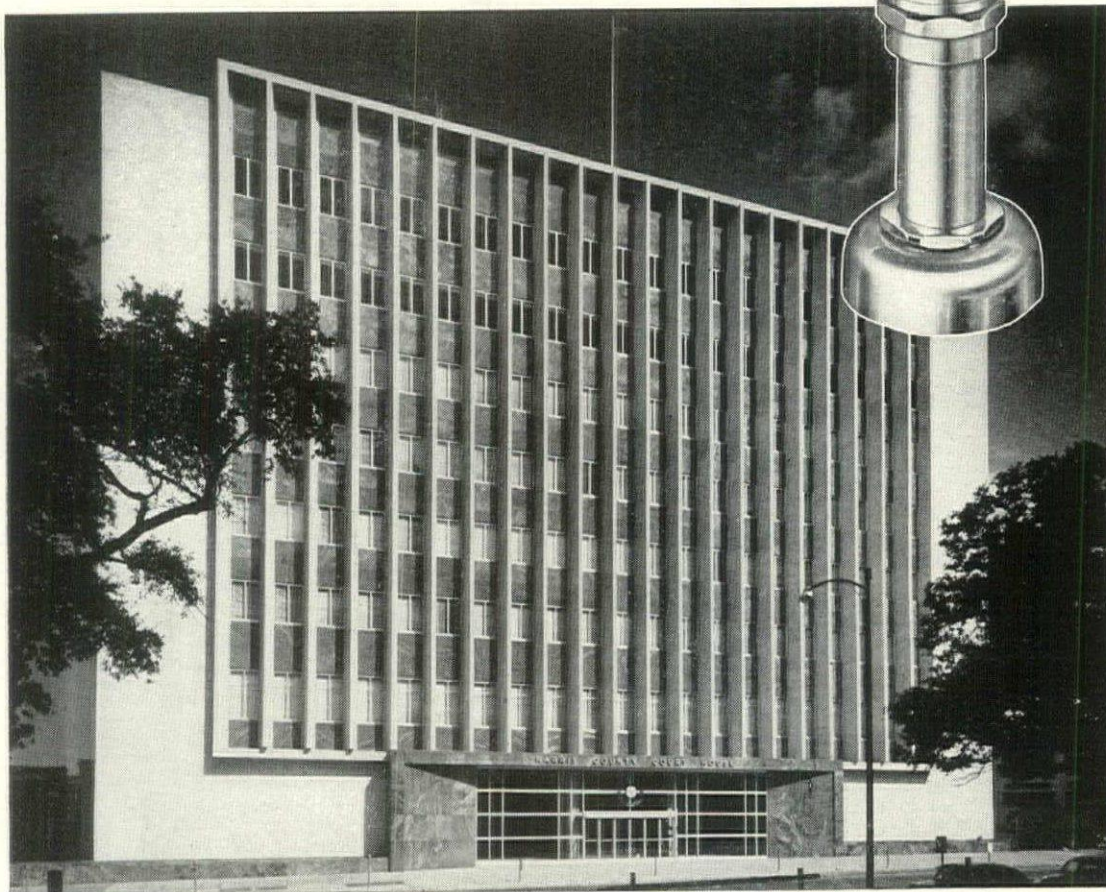
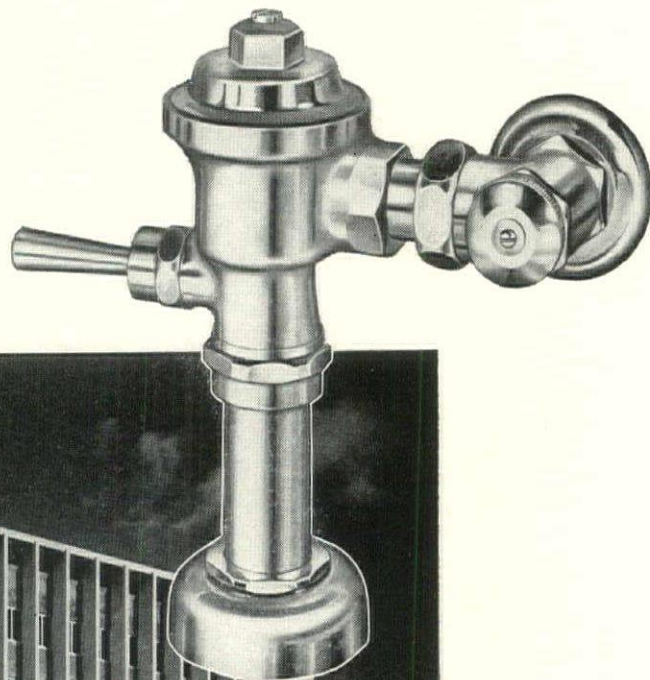
Guaranteed by
Good Housekeeping
IF NOT AS ADVERTISED THEREON

Pays in Performance



And in Houston - **A FUTURE OF FAULTLESS SERVICE**

HARRIS COUNTY COURT HOUSE
Houston, Texas
FINGER & RUSTAY
architects
I. A. NAMAN
mechanical engineer
CHARLES G. HEYNE
plumbing contractor
AMERICAN RADIATOR &
STANDARD SANITARY CORP.
plumbing fixtures, manufacturer & wholesale distributor



Cleanly dominating a city block, this sparkling new COYNE & DELANY installation is part of a notable civic construction program. A few minutes away rises another DELANY equipped landmark — the much praised Houston Law Enforcement Center... And across the street, the former courthouse is being updated with DELANY valves. In the neighborhood of Houston, one of our truly rapid growth areas, it is appropriate that so many buildings of recent vintage should contain DELANY — "the fastest growing name in flush valves!"



Another singular advance in flush valve design is the newly engineered "Rubberflex" sealed handle unit — now available on all DELANY models. Springless and packingless, and consisting of only four parts (as shown in exploded view at left), the "Rubberflex" provides a wall of impervious rubber to reduce the chronic annoyance of leaking and sticking handles.

COYNE & DELANY CO. • 834 KENT AVE. • BROOKLYN, NEW YORK

IN CANADA: THE JAMES ROBERTSON CO., LTD.

DELANY
Flush
VALVES

Since
1879

GOVERNMENT'S VIEW OF EXPENDITURES FOR NEW CONSTRUCTION

(Millions of dollars—continental US)

Type of construction	Last fall's estimate of 1953	Current estimate of 1953	Forecast for 1954	% change
Total new construction	\$33,500	\$34,720	\$34,000	—2
PRIVATE CONSTRUCTION	22,500	23,430	22,800	—3
Residential building (nonfarm)	11,450	11,715	11,225	—4
New dwelling units	10,200	10,345	9,650	—7
Additions and alterations	1,050	1,104	1,300	+18
Nonhousekeeping	200	266	275	+3
Nonresidential building (nonfarm)	4,600	5,689	5,575	—2
Industrial	1,650	2,263	1,950	—14
Commercial	1,400	1,775	1,950	+10
Warehouses, office and loft buildings	575	740	850	+15
Stores, restaurants and garages	825	1,035	1,100	+6
Other nonresidential building	1,550	1,651	1,675	+1
Religious	425	473	500	+6
Educational	375	423	450	+6
Social and recreational	150	161	175	+9
Hospital and institutional	350	313	300	—4
Miscellaneous	250	281	250	—11
Farm construction	1,700	1,475	1,300	—12
Public utilities	4,350	4,430	4,575	+3
Railroads	425	480	475	—1
Telephone and telegraph	575	600	625	+4
Other public utilities	3,350	3,350	3,475	+4
Local transit	—	30	25	—17
Pipe lines	—	270	300	+11
Electric light and power	—	1,825	1,900	+4
Gas	—	1,225	1,250	+2
All other private	100	121	125	+3
PUBLIC CONSTRUCTION	11,300	11,290	11,200	—1
Residential building	575	551	365	—34
Nonresidential building	4,250	4,339	4,275	—1
Industrial	1,700	1,786	1,600	—10
Educational	1,775	1,742	1,925	+11
Hospital and institutional	375	341	275	—19
Other nonresidential building	400	470	475	+1
Military and naval facilities	1,600	1,360	1,200	—12
Highways	3,000	3,145	3,450	+10
Sewer and water	725	761	825	+8
Miscellaneous public-service enterprises	200	196	200	+2
Conservation and development	875	833	750	—10
All other public	75	105	135	+29

Joint estimates by Depts. of Labor and Commerce.

How much building in '54?

► Joint forecast by Commerce and Labor Depts. sees \$34-billion outlay—a microscopic 2% drop from '53

► Architects note an 'undefined cautiousness' in planning. November bond issues total \$800 million

The more the prophets looked at 1954 construction prospects, the more the predictions sounded the same. With only minor shadings of hairsplitting, almost all building forecasters by this month had agreed that next year will be nearly as good as this one, which will set all-time records for dollar volume.

The latest and most authoritative opinion was the annual joint Commerce-Labor Dept. forecast (table above). It declared '54 dollar outlays for new construction would probably total \$34 billion—only 2% below the anticipated '53 level. A government economist interpreted: "That drop, if it takes place, will

be so small you'll have to use a microscope to see it."

Because the Commerce-Labor construction forecast has a good record for accuracy (see table for last fall's predictions), the building industry would give it close attention. The optimistic outlook of the two departments was based on three assumptions derived from government experts who were not construction specialists:

1. No significant change in the international situation. 2. Continuing high levels of employment and personal income. 3. A "slight easing in the general economy and some rise

in unemployment." If the US economy sags more than a little, officials conceded, new construction would probably shrink under \$34 billion. But with all the economy's built-in props, it was a rare expert who was predicting any such thing. Besides, the Eisenhower administration was tooling up a kit of antirecession weapons (including much public works construction). And friends were quoting the President's economic adviser, Dr. Arthur Burns, as fearing that these might be called into play too soon, rather than too late.

Boom in the suburbs. The Commerce-Labor forecast looked for a "mild contraction" in private construction. But it said declines in housing, industrial plant, farm and defense construction will be "largely offset" by big backlogs and pressures for more building "to serve the mobile and fast-growing population" and the spreading suburbs. That, said the departments, means churches, schools, utilities and highways should set all-time records both in terms of dollar outlays and in terms of actual physical building—adjusted for price changes. Commercial building should go up another 10%, but it will not touch the levels of the '20s, the government said.

For housing, the federal experts forecast 1 million starts (including 25,000 public)—a total that agreed precisely with FORUM's estimate by Economist Miles L. Colean (AF, Sept. '53).* The two departments predicted "mortgage funds will be adequate and . . . building costs will vary little." While the dip in starts should drive private spending for housing down about 7%, the federal forecasters said outlays for home improvements and remodeling may gain, surprisingly, "almost a fifth." Reasons: growing families will need more bedrooms, the drive to rehabilitate blighted neighborhoods being spearheaded by homebuilders and realtors.

Spotty regions. After comparing notes of its 12 regional directors at a Santa Fe, N.M. conference, AIA concluded that work in architects' offices—a fairly good barometer of building trends that show up on other indexes later—was little changed from a year ago. But the architects detected an "undefined cautiousness over the future" among some members. Reason: incoming work was dropping off slightly—but only slightly. In work already on drafting boards, the AIA found the sharpest drop from a year ago (15%) in the Northwest. In Massachusetts and New Hampshire, on the other hand, business was picking up. Across the nation, schools were architects' biggest customers.

Schools were also the leading item among buildings approved in November elections. Most of the \$800 million in bond issues voted would go for highways (\$500 million for highways in Ohio alone) and sewers. Among the approximately \$110 million in tax-exempt

*FORUM forecast \$33.3 billion in construction outlays next year. Biggest differences from Labor-Commerce views: FORUM anticipated \$150 million less for residential alterations, \$125 million more for stores, restaurants and garages, \$150 million less for highways.

bonds voted for buildings of all types, schools accounted for about \$81 million. The total of bonds offered for voter approval apparently was the smallest since World War II.

One oddity amid the boom: bid-sharpening by general and subcontractors. Sample: in Chicago, an official of the Association of Commerce & Industry said some industrial jobs had lately been bid at \$6.10 to \$6.25 a sq. ft. Six months ago, he figured the price would have been \$7 or \$7.25. Why were contractors fighting like Kilkenny cats for business in construction's biggest dollar-volume year ever? AGC offered one theory: homebuilders whose business was sliding were moving into light commercial construction.

Price vs. volume. Another explanation of the paradox was that construction was responding to the threat of even a small drop in volume by sensibly cutting prices to prevent it. A few other price cuts were to be found on the economic scene—appliances, TV sets, autos in dealers' hands—but most US businessmen apparently were turning to harder selling, pushing new products and new uses for old ones to keep their volume profitable.

As the nation woke up to the fact that it had been in a business dip since March (one New York economist called it a 5% drop and "nothing to worry about yet"), big reasons for the dip had vanished. The slow-down, if you want to call it that, came after the Federal Reserve and Treasury, fearful of inflation, tightened up the nation's money supply early last spring. The effect was long delayed. In mortgages, the pinch grew tightest in the third quarter. By then, the money policy had been thrown in reverse. The Fed was (and still is) feeding money into the economy. The prospect of a \$7 or \$8 billion budget deficit next fiscal year makes any tightening of credit unthinkable.

Public housing planning lid needless, says comptroller

When Congress limited public housing to 20,000 starts this fiscal year, it whetted speculation over the fate of the other 35,946 approved units in PHA's pipe line. Both public housers and men on Capitol Hill generally agreed the government could not back out of contracts covering the other units. The government had agreed in each case to pay annual contributions as soon as the housing was built and occupied. But since Congress had taken so firm a stand on whittling public housing to a token program, PHA Commissioner Charles Slusser on July 24 ordered all preliminary work halted.

Still unsure of their legal ground, Slusser and HHFA Administrator Albert M. Cole asked the Attorney General for advice. He passed the buck to the General Accounting Office, the agency set up by Congress to exact compliance with its fiscal orders. Last month, Comptroller General Lindsay Warren wrote Cole there was nothing in the law to halt preliminary work or stop PHA from advancing loans or technical aid. Warren held that

Congress sought to halt only "new" public housing contracts, did not intend to abandon the 35,000 left dangling by this year's 20,000 limit. Wrote Warren: "Not only is there absent from the language employed any direction in this respect, but discussions during the legislative proceedings as a whole indicate that the problem of meeting commitments already undertaken was recognized and left for future resolution."

Whether or not they were surprised by Warren's opinion, Cole and Slusser were left on a spot. If they rescinded the July 24 order,

they risked legislative anger. But meanwhile, local housing authorities with half-groomed projects were growing restive. Mixed with the grumbling were warnings that if projects were kept idling much longer, there would be lawsuits. Few things would be more apt to goad the big anti-public housing bloc in Congress to a finish fight to kill the program than lawsuits to compel the government to pay out more subsidies. Before making any loans from the limited funds at hand, Cole and Slusser decided to consult Congressional appropriations committee members.

Federal court upholds basis of redevelopment but invites a host of suits on its execution

A federal court decision pried open the lid on Pandora's box for redevelopment this month. Legal procedures being what they are, it would be some time before anybody could get the box shut tight again.

Involved was a suit by Mrs. Goldie Schneider, owner of a hardware store, and Max R. Morris, owner of a department store, challenging constitutionality of the Washington, D.C. redevelopment act on the ground that seizing private holdings for ultimate private reuse was improper. The suit was aimed against Washington's Southwest Area B redevelopment project. A three-judge federal court—in the most thorough analysis yet of judicial redevelopment—unanimously upheld the basic constitutionality of redevelopment and granted a government motion to dismiss the suit.

How to draw a line? But the court's 38-page decision then raised the lid on trouble with two observations.

1. It expressed grave doubt whether the District Redevelopment Land Agency had acted in "arbitrary and capricious" manner "in fixing the boundary lines of the . . . project to include the plaintiff's commercial properties, while excluding other commercial properties on the same street." The court noted regretfully that Morris and Mrs. Schneider had not raised the boundary-line question. The court said: "Should the pleadings be amended to include an issue as to whether or not the administrative agency had acted beyond the scope of the statute, as construed in this opinion, in including the plaintiff's properties within the project area, the case should be heard by one judge for determination of that question."

2. It agreed the redevelopment agency had power to seize slum property or land "upon which a slum may be foreseen," but doubted whether the government's condemnation powers are broad enough to permit redevelopment of areas that are only "blighted." Noting that the D.C. act (adopted in 1945) does not define blight except by describing what constitutes substandard housing, the court asked: "Suppose that (an area) is backward, stagnant, not properly laid out, economically eighteenth century—anything except detrimental to health, safety or morals. Suppose its owners and occupants like it that way.

Suppose they are old-fashioned, prefer single-family dwellings, like small flower gardens, prefer fresh to conditioned air, sun to fluorescent light. In many circles such views are considered 'backward and stagnant.' Are those who hold them 'therefore blighted'? Can they not, nevertheless, own property?" Answering its own question, the court held: "Congress in legislating for the District of Columbia has no power to authorize the seizure by eminent domain of property for the sole purpose of redeveloping the area according to its . . . judgment of what a well-developed, well-balanced neighborhood should be."

A national problem. The court's doubts about boundary lines of redevelopment projects could have repercussions not just in Washington (where attorneys for the two store owners indicated they would take the judicial hint, bring a new suit in US district court), but across the entire nation. A redevelopment project must have boundaries. Usually, it is not feasible to rebuild all the blighted area of a city at one crack. If the three judges' views became prevailing law, nearly every redevelopment project could be up to its neck in lawsuits. A business owner faced with dispossession could point to another store across the street and cry discrimination. Moreover, such a doctrine could make it harder for authorities to leave some still-pleasant old structures standing in a redeveloped area—as most experts now agree should be done.

Hairsplitting over the difference between slum and blight could also produce suits. And in an atmosphere of doubt, private investors might shy away from committing the big sums of money redevelopment takes.

Milestone or cold water? Among Washington experts, reaction to the decision varied. Executive Director John R. Searles Jr. of the Redevelopment Land Agency called it a "major milestone," announced he would resume land acquisition for project B at once. HHFA officials counseled moving slower, feared more legal snarls. Spokesmen for other redevelopment projects, while feeling the court "had gone out of its way to pour old water on the whole program," were confident such a narrow interpretation of the public seizure power would not be upheld in higher courts—if the question ever got there.

Realtors' convention

► Major changes in federal policy on public housing and redevelopment hinted at Los Angeles meeting

► A plan is aired to boost construction of co-ops in cities. Realtors think business looks good for '54

Major changes in public housing and urban redevelopment policies favored by the Eisenhower administration were guardedly disclosed in piecemeal fashion at the 46th annual convention of the National Association of Real Estate Boards in Los Angeles Nov. 8-13.

In deference to the President's advisory committee on housing, which will not write its report until next month, no one felt free to describe the proposals in plain language for the record 5,531 realtors at the meeting. If any one had, the story would have gone like this:

► The goal in public housing apparently will be to switch to locally administered but federally subsidized rent payments for low-income families who need housing assistance. Objective: to curtail funds spent on projects, divert and disperse tenants into privately owned, taxpaying housing. A small construction program will probably be retained in case the government wants to expand it to make more jobs in a recession.

► The Title I urban redevelopment and slum clearance program should be substantially revamped and converted into a redevelopment, rehabilitation and slum prevention program. Congress apparently will be asked to authorize use of Title I funds to help cities finance neighborhood conservation and rehabilitation programs as well as major re-

development projects. This plan contemplates a lot of little projects on many blocks instead of a few big ones in limited areas. It would help a city finance condemnation and demolition of small, cancerous "slum pockets"—perhaps two or three houses on one block, a few more on another—which would be replaced by small parks or amenities that would upgrade the area again.

► The government housing advisers were also likely to urge 1) liberalized FHA financing to facilitate major repairs and sales of existing homes in approved conservation areas in cities pushing vigorous rehabilitation programs, and 2) fast-depreciation tax incentives to encourage private reconstruction in conservation areas.

One tip-off on the new public housing policy



NEW PRESIDENT Ronald J. Chinnock (l) is congratulated by outgoing President Charles B. Shattuck. Chinnock, 50, is a partner in the big Chicago realty firm of Farr, Chinnock & Sampson, a past president of the Illinois Association of Real Estate Boards and the Chicago Real Estate Board. His specialty is commercial and industrial brokerage.

Son of a Grand Rapids boilermaker, Chinnock graduated from Northwestern University in 1927, joined Farr & Co. (forerunner of his present firm) the next year. He served as an apprentice seaman in World War I. Rejoining in 1942, he was the Navy's youngest non-Annapolis captain.

A poised, forceful speaker, Chinnock stands erect and impressive. His dark bushy hair has begun to recede; his face is beginning to be creased by the lines of his warm smile. He describes his home as "one of the oldest and largest" in suburban Evanston. He bought it a year ago at auction, overhauled it completely. Cracks Chinnock: "Rehabilitation begins at home."



INDUSTRIAL REALTORS gave "industrialist of the year" award to George W. Merck (r), chairman of Merck & Co., the chemical makers. Presenting statuette: former SIR President Walter S. Schmidt.



Photos: Bob Forester; King's Photo Service, Inc.

COOPERATIVE FINANCING plan outlined to a NAREB committee by Robert W. Dowling (see p. 41) would keep defaulting neighbors from engulfing other tenants. Lenders could avoid deterioration that besets vacant detached homes, get 5 to 5 1/4% ground rent besides. Herb Nelson, NAREB's veteran executive vice president (in right corner), called the proposal a brilliant idea.

RETIRING PRESIDENT of Society of Industrial Realtors, Frederic B. Martin of St. Louis (r) congratulates successor, E. Sanford Gregory of Denver.



POST OFFICE officials expect to lease at least \$70 million worth of new private office space in the next two years, Asst. Postmaster General Ormonde A. Kieb told convention. Kieb, former president of NAREB's Management Institute, noted the post office already pays over \$32 million a year in rent for 22,000 properties. Kieb said he hoped to get the lease ceiling raised from 20 to 50 years.



for Lightweight...

Fire Resistant...

Rigid, Economical...

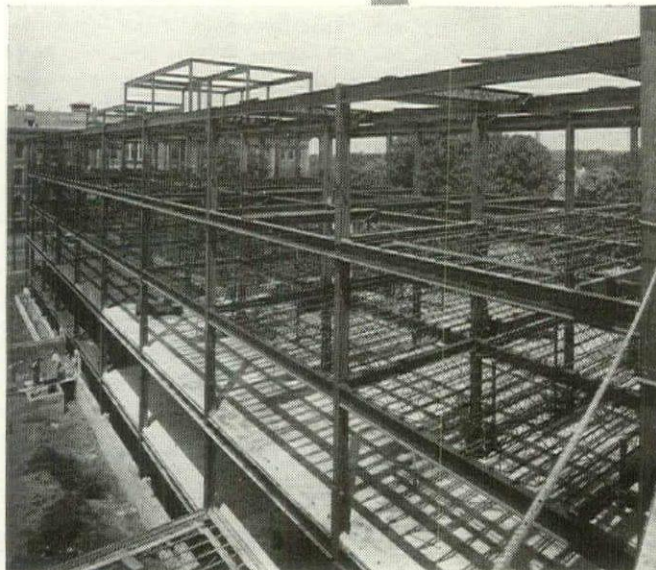
FLOOR CONSTRUCTION

TRUSCON

"OT"

**OPEN TRUSS®
STEEL JOISTS**

St. Elizabeth Hospital, Dayton, Ohio.
Architects: Schmidt, Garden and Erickson, Chicago.
Contractors: James McHugh Construction Co., Chicago.



● Get lower cost-per-square-foot construction. Achieve adequate strength and safety. Cut erection time. Specify Truscon "O-T" Open Truss Steel Joists for floor and roof supports.

The lighter weight of "O-T" Joists reduces erection time and labor. It saves materials in supporting framework and foundations.

Wide, specially formed top and bottom chord members add stiffness and keep joists true to line. Continuous steel web member is electrically welded to chords.

Only 3/4-inch of cement or gypsum ceiling plaster on metal lath protects Truscon "O-T" Steel Joist construction against high temperatures. Insurance rating bureaus give this method a first-class fireproof classification.

You'll find complete details and specifications covering Truscon "O-T" Steel Joists in Sweet's File; or, write Truscon for descriptive literature.

TRUSCON STEEL DIVISION

REPUBLIC STEEL CORPORATION

1102 ALBERT STREET • YOUNGSTOWN 1, OHIO
Export Department: Chrysler Building, New York 17, N. Y.



TRUSCON® a name you can build on

was NAREB's approval of rent assistance for families needing housing aid—a plan already backed by home-builders. The policy turned up without the customary advance discussion in the annual NAREB policy statement. Said the realtors: "We will encourage public policies which will help to provide safe and sanitary housing for families whose income is inadequate through support of programs of direct local welfare rental assistance. . . ." As for public housing, NAREB urged its "orderly disposal by sale to private taxpaying ownership, and in the interim . . . competent and efficient private management of the remaining projects."

A still better tip-off: HHFA Administrator Albert M. Cole admitted candidly that he was "dodging and ducking" when he refused to tell newsmen if he meant public housing when he told public housers in Milwaukee (AF, Oct. '53) and the realtors in Los Angeles that he favored "federal" assistance in the "low-income" housing field. This served to strengthen the belief that Cole still opposed the present type of public housing, probably leaned toward rent assistance.

On redevelopment-rehabilitation policy, the clues were more solid. At the convention's big Build America Better session, James W. Follin, director of HHFA's slum clearance and urban redevelopment, made these revealing remarks (though he twice declared they were only "personal opinions," because the advisory committee's studies were still under way):

"Fortunately not all blight and obsolescence needs surgery. Much will respond to medical treatment. Rehabilitation and conservation . . . must include improvements of the neighborhood to supply missing amenities. . . . If Title I is to be continued, and that is a \$64 question, your speaker personally

favors extending financial assistance to well-planned rehabilitation projects that conform to the general city plan and provide renovation both of the structures and the neighborhood."

Did Administrator Cole agree? His statement on rehabilitation to the convention hinted that he did. Said Cole: "I believe there is also an assisting role the federal government can properly play. One of the questions we are studying is how the instruments of government can be adapted, and new ones forged, if need be, to help explore and develop more effective measures for conserving and rehabilitating the homes we have that are worth saving."

Boost for co-ops. Another important program for central cities also began to take shape at the convention. New York Realtor Robert W. Dowling outlined his plan to encourage construction of more multistory cooperative apartments. His objective: to protect individuals in a cooperative against losses when other cooperators defaulted. His solution: sell individual apartments on separate deeds and mortgages, the same as row houses. Only maintenance and public area expenses would be shared cooperatively, so the individual owner could not be foreclosed except for defaulting on his own mortgage.

Dowling said he cleared one of the biggest hurdles by getting the Home Title Insurance Co. of New York to agree to issue title insurance on deeds for individual apartments. Clyde Powell, assistant FHA commissioner in charge of cooperatives, who attended the committee meeting where Dowling explained his plan, commented that approval by mortgage lenders might still be the biggest obsta-

cle to the plan. Next move: the committee, of which Dowling is chairman, will invite representatives of mortgage and title organizations to meet in Washington in January. There he hopes to enlist their support and begin drafting whatever federal and state legislation might be needed to get the plan into operation.

Rosy outlook. The realtors had no business fears for next year. Retiring President Charles B. Shattuck summarized the convention in these words: "On the whole it had an optimistic tone, with just a word of caution here and there. Business is likely to be good in '54." A report by the Society of Industrial Realtors noted "more selective" lending policies covering industrial construction loans, but observed: "This change is in line with the current shift in the business economy from boom to high normal."

Undersecretary of Commerce Walter Williams referred to the construction cycle (kin to the real estate cycle) and suggested that it was still subject to considerable swings. Said ex-Mortgage Banker Williams: "In the past, construction has been among the first to feel deflationary pressures and, because of the tremendous amount of money and credit involved, it has sometimes had a disproportionate effect in leading to precipitous and disastrous business declines. In other words, the historic cyclical swings of the construction industry must be flattened if a steadily increasing rate of economic activity is to be maintained. This must be brought about by the initiative, ingenuity and salesmanship of the realtors and the builders. Federal government can assist, but the job must be done by the private enterprise of our citizens."



King's

NAREB told need of 18' warehouse ceilings; O'Neil Ford reveals plan for lift-slab dome

One of the NAREB convention's liveliest sessions was a panel on new ideas in industrial building. Participants (l to r): Moderator James F. Bone of San Francisco, Architect John S. Bolles of San Francisco (standing), Architect-Engineer Albert Martin Jr. of Los Angeles, Architect O'Neil Ford of San Antonio. Said the speakers:

Bolles—new warehouses should

have at least 18' ceilings with lights and all utilities clearing that level. This may seem high today, but if present trends continue it will be only adequate in another few years. If the relatively negligible increase in costs is considered, it is "ridiculous" to erect more 14' ceilings. For plants on ground subject to settling, install asphalt floors that yield with settling and then can be brought back

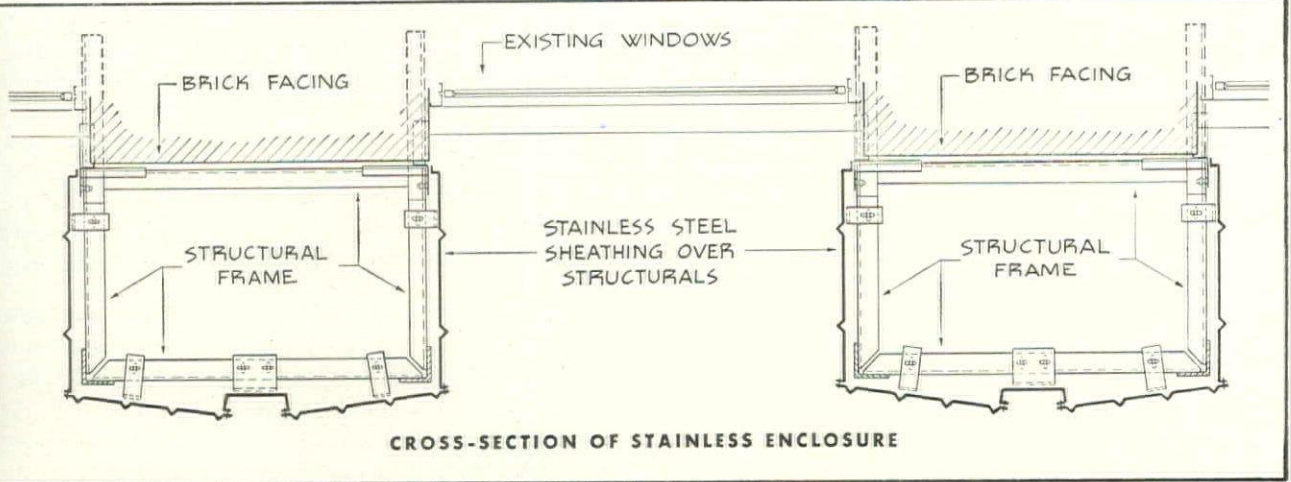
to grade by filling and leveling on top. Concrete would fracture and might require expensive grouting underneath several times. In some cases where fire would make a steel frame entirely useless and require complete replacement, slow-burning heavy timbers would only require strengthening. "Don't sell timber short."

Ford—lift-slab operations are developing great economies and many new techniques. On one industrial plant job, a slab was poured over glass fiber. When the slab was lifted the acoustic-treated ceiling was completely finished—to the dismay of applicators who normally would have put on the covering. Ford declined to divulge details yet, but said a 150'-diameter dome would be lifted soon. Bulldozers will make an earth mound, he explained. The dome will be poured, lifted, and then the bulldozers will clear away the earth again.

Ford said he could not understand why engineers get an inferiority complex and feel they must try to tack on architecture "to embellish a good clean engi-

neering job . . . put modernistic doodles on a perfectly honest, decent, respectable warehouse, for instance." He recalled seeing one warehouse with a black marble entrance, fancy stone front, brick sides and concrete block back. This he called Mickey Mouse design. He pleaded for plants and warehouses engineered and designed so their intrinsic features expressed naturally the power and dynamic force of the American economy and industry, and avoided "ragged individualism . . . diluted architecture . . . monumental nothingness."

Martin (discussing renovations of obsolete plants)—the walls and roof usually get the most attention when a plant is examined with a view to modernization, but these are relatively inexpensive parts. Most attention probably should be given to column spacing, because the average costs of component parts of industrial plants have this relation: columns and roof support, 35%; electrical system, 17%; plumbing and sprinklers, 14%; walls, 14%; roofing, 5%; floors, 13%; docks, 2%.



Stainless steel sheathing conceals exterior piping

Here is an interesting solution to the problem of air-conditioning an older office building. Chilled water risers are brought up the outside of the building. Yet they are well concealed by an architectural treatment in stainless steel that gives a strikingly modern appearance to the facade of the building.

Branch lines carry the chilled water from the risers into the corridors on each floor. Piping is hidden between the original 10-foot high ceiling and the new furred, 8-foot high ceiling. Conduits from the branch lines lead to the individual air-conditioning units.

This technique eliminates the cost of cutting through 25 floors to extend the chilled water risers. And there is no loss of rentable interior floor space.

Many architects also employ stainless steel to conceal in-

terior ventilating ducts through decorative treatment. Stainless is used in spandrels, window sash, sills and pilasters, column covering, balconies, marquees, protective grilles and a host of other architectural applications. For complete information on Armco Stainless Steels, write us at the address below.

ARMCO STEEL CORPORATION

4803 Curtis Street, Middletown, Ohio
Export: The Armco International Corporation



Architects: Kahn and Jacobs, New York, N. Y.



BUILDING STATISTICS:

Labor pay keeps rising, but not so fast as last year

Average union wages for construction workers (see table, right) continued to rise in the third quarter. But increases took place only in scattered areas, and thus far this year wages were climbing slower than in the corresponding 1952 period. The Bureau of Labor Statistics estimated the average wage on Oct. 1, '53 was \$2.71 an hour, 10¢ higher than the Jan. 2, '53 level. That was an increase of 4% so far this year, as against an increase of 6% in the first nine months of 1952. The Oct. 1 level was about one-third above the 1947-49 average.

Plumbers had won the largest increases this year, their average pay rising 3.5¢ an hour, or 1.2%. Carpenters and electricians advanced 2.1¢ and 2.2¢ an hour respectively. The smallest boosts went to building laborers, whose wages were up 1.3¢ an hour, or 0.7%.

West Coast mill prices for softwood plywood continued to recover from the postwar low of \$68.59 per M sq. ft. in mid-October. After rebounding to \$72.20 (\$76 list) at the end of the month, there was more or less general agreement by mid-November that the price had come back to \$76, or a list of \$80. List prices were somewhat theoretical. It would be early December before production caught up with orders that poured in when prices hit bottom. The industry was generally protecting itself on orders for delivery in December or January with a "price at time of shipment" proviso.

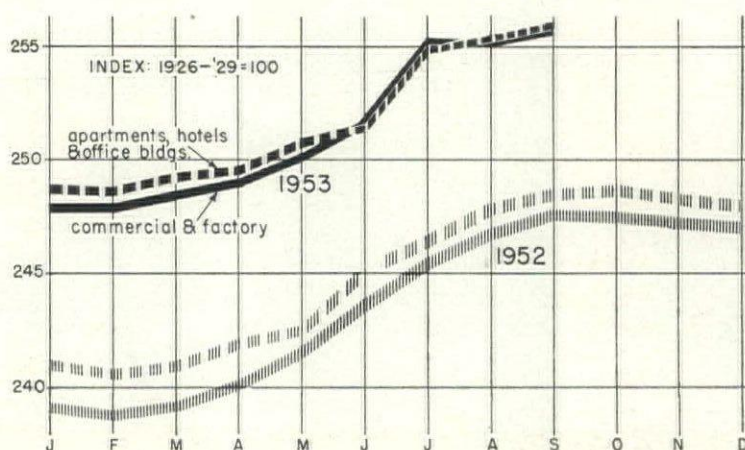
Building material prices, judging both by indexes and by contractors' comments, could well be moving onto a new plateau. Hardware, for instance, seemed to have completed the price boosts which followed June's increase in steel prices. Paint was up 3 to 5%, but some asphalt roofers were not too successful with recent price hikes because other manufacturers did not follow suit. Along the northern Atlantic seaboard, a heavy influx of southern brick, produced with cheaper labor and coal, was giving local brick a stiff fight.

UNION WAGE SCALES ON OCT. 1

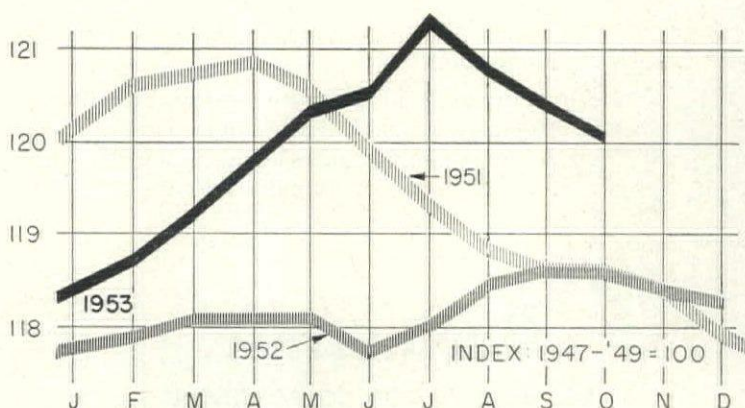
(selected from Bureau of Labor Statistics data)

	Brick-layers	Carpenters	Electricians	Paint-ers	Plaster-ers	Plumb-ers	Building laborers
Atlanta	\$3.100	\$2.500	\$2.750	\$2.500	\$2.750	\$2.900	\$1.280
Boston	3.085	2.750	3.000	2.475	3.050	3.000	1.930
Charleston, S.C. ...	*2.500	2.250	2.750	2.000	2.500	2.750	1.150
Charlotte, N.C. ...	2.750	*2.050	2.500	*1.750	*2.250	2.620	1.050
Chicago	3.325	3.050	3.180	3.000	3.300	3.000	2.275
Cleveland	3.175	3.200	3.200	2.825	3.200	3.100	2.450
Dallas	3.500	2.625	2.900	2.500	3.438	2.900	1.400
Denver	3.500	2.775	3.000	2.540	3.300	2.970	1.800
Detroit	3.250	3.000	3.150	2.750	3.190	3.000	2.250
Jacksonville	2.860	2.400	2.850	2.100	2.625	2.900	*.900
Kansas City	3.625	2.675	2.900	2.575	3.250	3.000	1.980
Los Angeles	3.175	2.700	3.100	2.660	3.438	3.125	2.050
Manchester, N.H. ...	3.000	2.375	2.375	2.000	3.000	*2.500	1.700
Newark	†3.650	†3.400	†3.500	3.000	†3.650	3.250	†2.590
New York	3.550	3.300	3.300	2.890	3.600	3.250	2.450
Philadelphia	3.350	3.100	†3.500	2.500	3.450	†3.400	1.875
Pittsburgh	3.550	3.125	3.350	†3.050	3.300	3.250	2.025
Portland, Me. ...	2.900	2.150	*2.300	*1.750	2.660	2.525	1.620
San Francisco ..	3.400	2.700	3.000	2.700	3.375	3.000	2.000
Seattle	3.300	2.580	2.925	2.580	3.150	2.750	2.180
Washington, D.C. ...	3.300	2.875	3.250	2.670	3.425	3.120	1.800
York, Pa.	2.750	2.300	2.750	2.000	2.625	*2.500	1.600
National average	\$3.30	\$2.83	\$3.03	\$2.70	\$3.23	\$3.01	\$1.88

* Low; † high.



BUILDING COSTS for apartments, hotel and office building, and commercial and factory structures as compiled by E. H. Boeckh & Associates, inched upward again during September. The apartment-hotel-office index rose from 255.5 in August to 255.9; the commercial-factory figure rose from 255.3 to 255.6. Smith, Hinchman & Grylls took this view of the outlook: "We are in a minor building cost decline which might continue for six or seven points more." (Their index, based on 1926 as 100, sank two points from September to 268 last month.)



MATERIALS PRICES reported by the Bureau of Labor Statistics fell for the third consecutive month in October. BLS' index dropped to 120.1 (from 120.4 in September and 120.8 in August). As in September, last month's decline was spearheaded by price cuts in lumber, particularly southern pine, Douglas fir and plywood. These more than offset a slight increase in paint products.

NEW CONSTRUCTION ACTIVITY

(expenditures in millions of dollars)

Type	October			1st ten months		
	'52	'53	% change	'52	'53	% change
PRIVATE						
Residential (nonfarm)	1,051	1,045	—0.6	9,134	9,836	+7.7
New dwelling units	935	920	—1.6	8,105	8,685	+7.2
Additions & alterations	98	100	+2.0	880	931	+5.8
Nonhousekeeping	18	25	+38.9	149	220	+47.7
Industrial	193	183	—5.2	1,933	1,894	—2.0
Commercial	105	179	+70.5	912	1,415	+55.2
Other nonresidential	143	154	+7.7	1,293	1,354	+4.7
Religious	39	46	+17.9	324	383	+18.2
Educational	33	40	+21.2	285	343	+20.4
Hospital	33	26	—21.2	336	262	—22.0
Public utilities	375	423	+12.8	3,342	3,689	+10.4
*TOTAL	2,007	2,113	+5.3	18,083	19,577	+8.3
PUBLIC						
Residential	51	45	—11.8	556	471	—15.3
Industrial	166	150	—9.6	1,371	1,504	+9.7
Educational	137	160	+16.8	1,349	1,429	+5.9
Hospital	40	23	—42.5	399	301	—24.6
Military	128	116	—9.4	1,156	1,148	—0.7
*TOTAL	1,087	1,110	+2.1	9,147	9,560	+4.5
GRAND TOTAL	3,094	3,223	+4.2	27,230	29,137	+7.0

* Minor components not shown, so total exceeds sum of parts. Data from Depts. of Commerce and Labor.

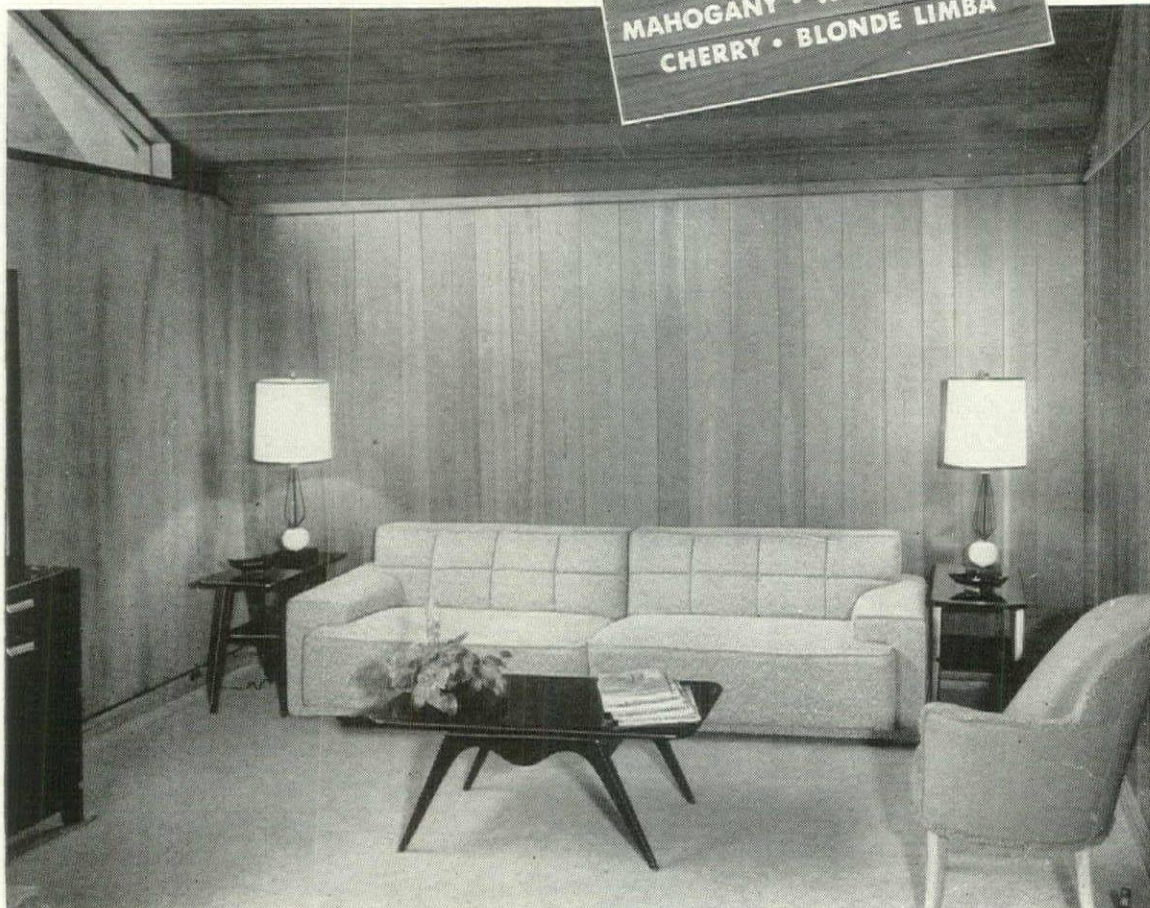
CONSTRUCTION EXPENDITURES continued a seasonal decline in October, although total outlays of \$3,223 million were barely 3% below September's all-time monthly record of \$3,310 million and more than 4% ahead of Oct. '52 expenditures. For the first time this year, private residential building fell behind the corresponding month of 1952. Commercial building continued to rise contraseasonally to a new peak, with a 71% increase over Oct. '52, and a lead of 55% for the year to date.

YOU CREATE INTERIORS OF OUTSTANDING BEAUTY WITH

Roddiscraft

PANAWALL

MAHOGANY • WALNUT • OAK
CHERRY • BLONDE LIMBA



For interiors that win acclaim —
use the best of today's hardwood paneling!

Now you can obtain the added beauty of wood interiors — at surprisingly low cost — by specifying Roddiscraft Panawall. This handsome new *hardwood* plywood paneling is making a tremendous hit with architects and interior designers . . . in both residential and commercial installations.

Panawall adds beauty — stays beautiful!

Panawall provides beauty that lasts. It ends costly repainting and redecorating for the owner . . . saves money through the years. And it's

so easy to install. Made of random-width veneers, V-grooved at the joints — no matching problem. Easy-to-handle 4' x 8' x 1/4" panels speed new construction — can be applied over existing walls in remodeling. Cuts installation time and labor costs, too.

Get all the facts on Panawall now. Ask your nearest Roddiscraft warehouse for complete information on Panawall and other Roddiscraft decorative paneling: Craftwall, Parquetwall, Cedrela and Plyweave. Samples are available.

Roddiscraft

RODDIS PLYWOOD CORPORATION

Marshfield, Wisconsin

NATIONWIDE Roddiscraft WAREHOUSE SERVICE

Cambridge 39, Mass.229 Vassar St.	Marshfield, Wis.115 S. Palmetto St.
Charlotte 6, N. C.123 E. 27th St.	Miami 38, Fla.255-315 N.E. 73rd St.
Chicago 32, Ill.3865 W. 41st St.	Milwaukee 8, Wis.4601 W. State St.
Cincinnati 4, Ohio836 Depot St.	New Hyde Park, L. I., N. Y.1756 Plaza Ave.
Cleveland 4, Ohio2717 E. 75th St.	New York 55, N. Y.920 E. 149th St.
Dallas 10, Texas2800 Medill St.	Port Newark 5, N. J.103 Marsh St.
Detroit 14, Mich.11855 E. Jefferson St.	Philadelphia 34, Pa.Richmond & Tioga St.
Houston 10, Texas2403 Sabine St.	San Antonio 6, Texas727 N. Cherry St.
Kansas City 3, Kan.35 Southwest Blvd.	St. Louis 16, Mo.3344 Morganford Road
Los Angeles 58, Cal.2620 E. Vernon Ave.	San Francisco 24, Cal.345 Williams Ave.
Louisville 10, Ky.1201-5 S. 15th St.	San Leandro, Cal.720 Williams St.

How long can a boom last?

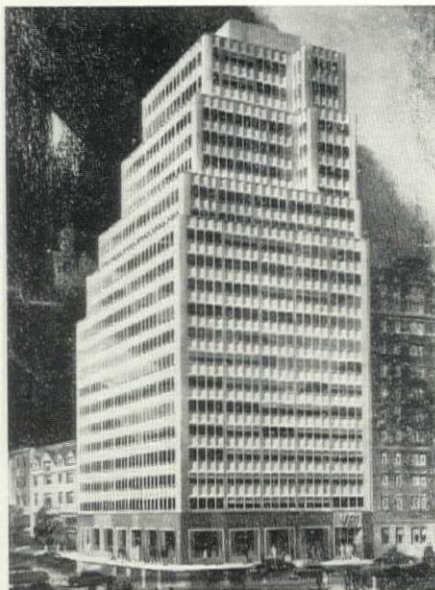
Manhattan's skyscraper spree, going on seven years, shows only the first faint signs of slowing down

For a city that some pessimists gave only 25 years to live, New York was showing a lot of life this month. Most notable was its continuing boom in office building. Since 1947, when office construction got going again after World War II, some 28 office skyscrapers (6 to 36 stories high) had gone up in Manhattan. Realty men could count another 23 abuilding, and plans had been announced for about a dozen more. That added up to 9 million sq. ft. of space built, 6 million more under way and another 9 million being planned.

Such a building spree, apparently untouched by this year's dip in business, sometimes surprises even Manhattanites who have watched it take place around them. A big underlying reason for it is the enormous growth of New York's white-collar population—the result both of the tendency of many corporations to consolidate clerical work at headquarters, and of business expansion caused by the postwar boom. The state labor department figures the city's office workers numbered about 1 million in 1940; today they are 1.5 million—an increase of 50%. But the structures built, abuilding and planned will add only 20% to the city's 1940 square footage of office space and showrooms (about 120 million).

Where is bottom? Only in the last few weeks have there been faint signs that the end of the fabulous postwar skyscraper crop may be in sight. Brokers were saying that though there was still big demand for space along the midtown spine between Central Park and Grand Central station (where the demand has been focused all along), space was not so easy to sell as a year ago. Said one: "There're more concessions to tenants, shorter leases, a little price cutting. For instance, a builder who wants \$5 will take \$4.75 now in an older building." Said another: "Some builders are finding the fast pay-offs they foresaw on new office buildings are vanishing." Rents remained high. In the new Socony-Vacuum tower (AF, Aug. '53, News), the city's biggest postwar office building definitely scheduled for construction, Galbreath Corp. was asking \$10 a sq. ft. for the 42nd floor.

Even admitting that some new buildings are experiencing vacancies, Vice President L'Huillier Sheaff of Cushman & Wakefield, one of Manhattan's big realty firms, insisted this month that office rentals were in "very good shape." He noted old space left behind by moving tenants was being "readily absorbed," too. "Of course," said Sheaff, "there's always a chance of overbuilding. But we haven't overbuilt as of today." Statistics backed him up. The Real Estate Board of New York's latest survey put the office space vacancy rate at 0.9%, an all but in-



SECOND ALUMINUM-FACED skyscraper was being built 17 blocks up Park Ave. from the first (AF, Aug. '53) by the same firm, Tishman Realty & Construction Co. The new, 22-story building was also designed by same architects: Emery Roth & Sons. It will use similar aluminum curtain walls, which may go on in five days.



TWIN AIR-CONDITIONED buildings (above) are 15-story 579 Fifth Ave. and 16-story 589 Fifth Ave., a U-shaped project designed by Emery Roth & Sons. 477 Madison (below) will be 23 stories and air conditioned. Architects: Kahn & Jacobs.



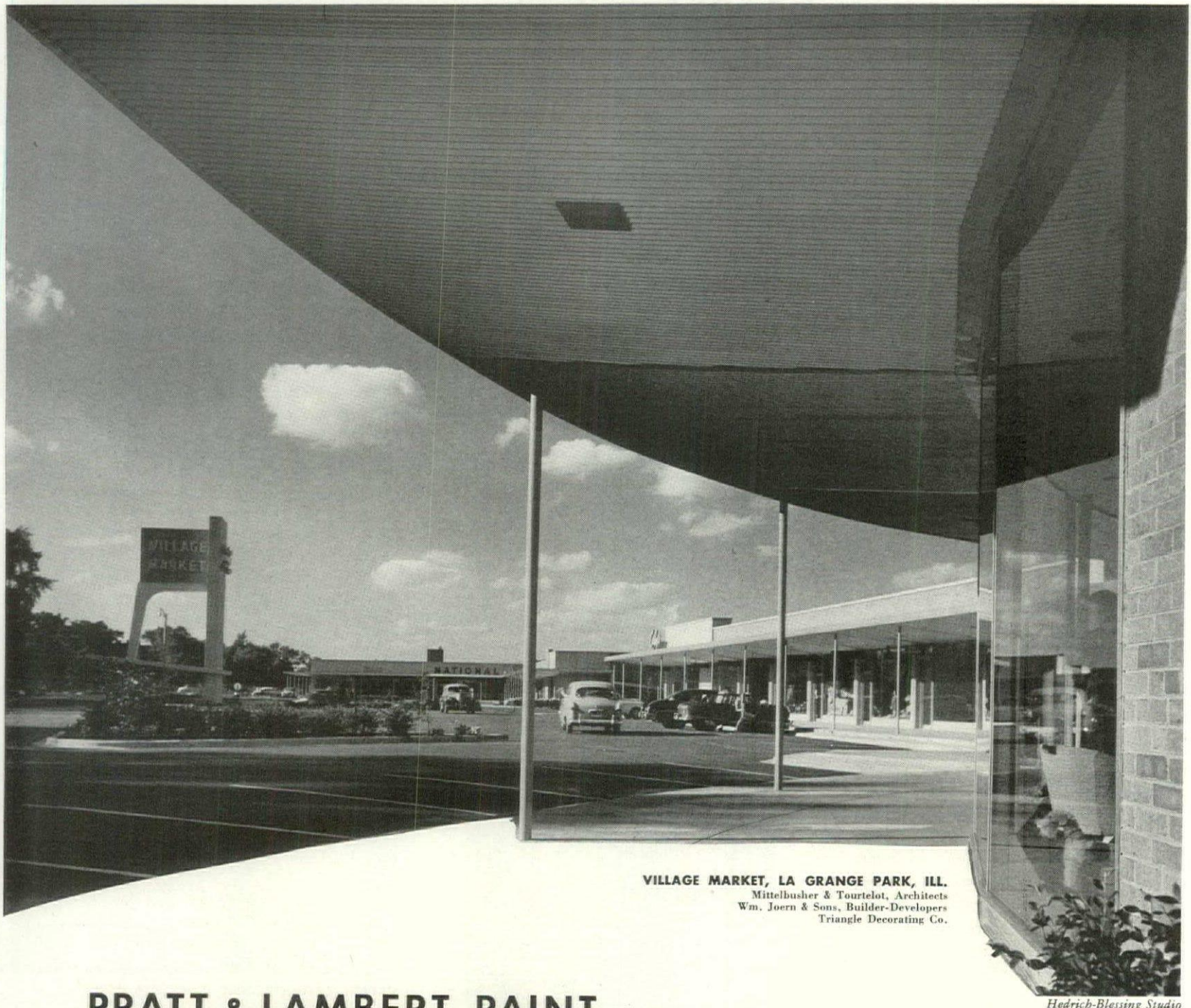
DEMAND FOR SPACE led Webb & Knapp, Inc. four times to expand this \$15 million office building, now under construction on W. 34th St. between Macy's and Gimbels. First it was to be a 4-story structure just for Woolworth's largest store, then 12, then 18 and finally 25. Most of the unexpected tenants were textile firms pulling out of older buildings farther downtown. Designers: Rudolf Boehler & Rene Brugnoli.



CARNEGIE ENDOWMENT International Center, by Architects Harrison & Abramovitz, was dedicated last month. It is 12-story, \$5-million reinforced concrete structure. Its east facade of glass faces glass-walled UN secretariat.

ROCKEFELLER CENTER will get \$11 million addition next year when the problem-child Center Theater, now a television studio for NBC, is replaced by an air-conditioned 19-story expansion (right) of the US Rubber Building (left). Architects: Harrison & Abramovitz.





VILLAGE MARKET, LA GRANGE PARK, ILL.
Mittelbush & Tourtelot, Architects
Wm. Joern & Sons, Builder-Developers
Triangle Decorating Co.

Hedrich-Blessing Studio

PRATT & LAMBERT PAINT for this modern shopping center

This new shopping center in La Grange Park, Ill., is unusual in that, unlike those on the fringes of new communities, it was planned for an irregular, divided tract — the only site available in an already-established, built-up residential area.

Less unusual was the fact that Pratt & Lambert Paints and Varnishes were used exclusively. Less unusual because leading architects everywhere find in the complete P&L line outstanding interior and exterior finishes to meet their every last

need in commercial, residential and institutional projects. And in their Pratt & Lambert Architectural Service Department they find competent assistance in specification writing and color planning whenever they have occasion to request it.

You, too, are invited to call upon P&L at any time, whether to help solve a troublesome problem or simply to relieve you of tedious detail in the color and quality selection of paints, varnishes, stains and enamels.



PRATT & LAMBERT-INC.

Paint and Varnish Makers

NEW YORK • BUFFALO • CHICAGO • FORT ERIE, ONTARIO

visible amount. Realtor Charles Noyes pointed out: "A great many companies still are badly cramped."

Another thing New York's realty men were not worrying about was the threat of executive offices moving to the suburbs. Vice President Robert H. Byrne of Cross & Brown called the migration mostly "sound and fury" this month. He added: "General Foods, I'm informed, has already softened on its move to Westchester and is going to have to offer inducements to its people forced to change residence."

Still the ziggurat. Perhaps the saddest aspect of the skyscraper binge was that New York's archaic zoning law was still forcing most of the offices into cake-mold patterns reminiscent of the Babylonian ziggurat and repulsive to esthetes. Politics had stalled adoption of a better zoning law (FORUM, May '51, News), even though few objected to its provisions designed to eliminate the cakemold. Complained Critic Arline Louchheim in the *New York Times*: "Our town is becoming a hideous mountain range of layer cakes, questionably proportioned, insensitively detailed, selfishly dominating their entire sites, content to repeat clichés of construction and unimaginative use of materials and, above all, indifferent to eloquent architectural expression." A *Times* reader added another barb: "... They seem to be functional only in that they are constructed around bigger and better air-conditioning systems."

Chas. L. Franck



A graceful pastel addition to the New Orleans skyline and winner last month of an *Office Management* "Office of the Year" merit award (see People) was this 17-story air-conditioned Texas Co. building designed by Architect Claude E. Hooton. The tallest in the US yet to use a porcelain-enameled skin-wall, and probably the largest and tallest all-welded steel building in the US, it has 23,760 sq. ft. of glass exposure with 63 tons of aluminum window sash and fins to keep out the Louisiana sun. The oil company is using 14 floors for regional headquarters; a branch bank and restaurant are on the ground floor.

PEOPLE: Gropius wins Sao Paulo award, Nobel prize of architecture; Blucher to retire as head of ASPO

Architect **Walter Gropius**, 70, founder of the famed Bauhaus, who retired last year as chairman of Harvard's graduate school of design, became the second man to win the biennial Sao Paulo prize, regarded as the Nobel prize of architecture. The award, worth about \$7,800, will be made by the Andrea and Virginia Mararazzo Foundation in January when Sao Paulo holds its second international exhibition of architecture. It is presented to the architect whose activity is deemed the most prominent and of the greatest importance at present. The first award, in 1951, went to **Le Corbusier**.

A new skipper will take the helm of the American Society of Planning Officials January 1. He is **Dennis O'Harrow**, 45-year-old Hoosier who has been understudying ASPO's Executive Director **Walter Blucher** for the past year. Blucher, 52, will remain as a special consultant to ASPO, expects to spend nearly half his time on its planning advisory service and editing *Zoning Digest*, a monthly report of legal decisions affecting zoning. Blucher, for 15 years a Detroit city planner, helped to organize ASPO in 1934 and has headed it since. His red-haired successor came to ASPO in 1948 from Indianapolis where he was, successively, a highway engineer, director of research for the Indiana State Planning Board and a planning consultant. In 1951 O'Harrow took a year's leave from ASPO to serve as director of the comprehensive city plan for Youngstown, Ohio.



BLUCHER

Stepping in where Edna Ferber and Mrs. Wendell Willkie left off, **Jacques Gerber**, 70-year-old French architect and town planner last month debarked from the *Ile de France* and called New York a "monster" that needs "almost an atom bomb" to eliminate its defects. Newsmen asked him what he would do to improve things. Said Gerber: "Let it die by itself."

CONGRATULATIONS: To **Walter Le Roy Huber**, just retired president of ASCE, for receiving San Francisco's Building Industry Conference Board honor award for his numerous engineering achievements, among them his work as structural engineer of San Francisco's underground Union Square garage and of two large buildings at the University of California medical center in San Francisco; to **June Wicker**, Atlanta architect whose career has included work on South American airport installations, on receiving the first annual Business Woman of the Year award (at a business women's convention in Ft. Worth);

to **Lou R. Crandall**, president of George A. Fuller Co. and **Robert Moses**, New York City construction coordinator, recipients of honorary degrees at the University of Michigan college of engineering centennial celebration.

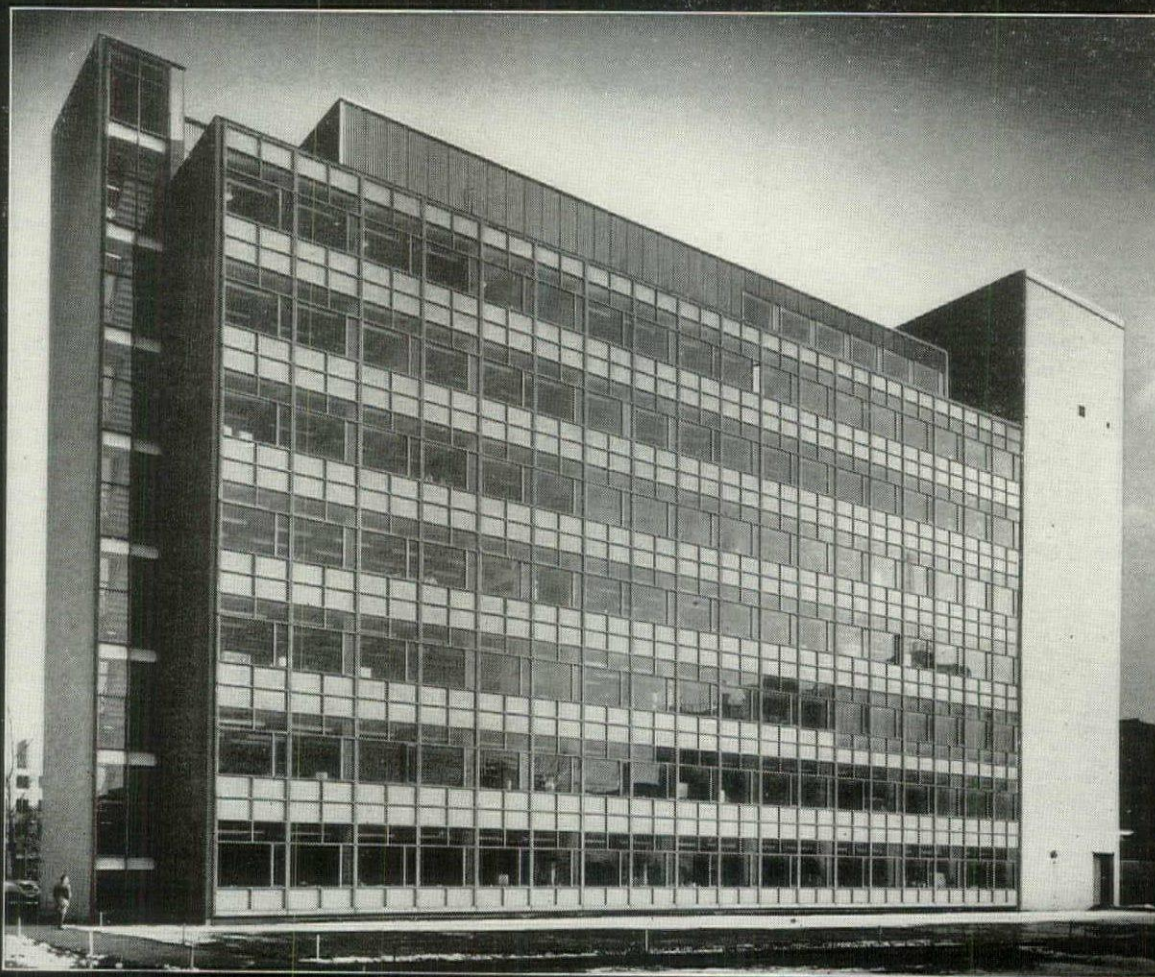
Barrett & Hilp, big San Francisco general contractors (1953 volume: \$20 million), decided to split into two firms next February. Reason: partners **John F. Barrett** and **Harry H. Hilp**, together 41 years, wanted to take it easy, turn their business over to their sons. The parting, said Hilp, was "entirely amicable."

NAMED: **James Mitchell**, construction labor expert, as Secretary of Labor, succeeding **Martin Durkin**; **Admiral Ben Moreell** (ret.), board chairman of Jones & Laughlin Steel, as chairman of 24-man task force to study federal water and power activities; **Harry W. Morrison**, president of Morrison-Knudsen, as a member of the task force; Architect **Charles Luckman**, partner in Pereira & Luckman, as coordinator of architectural designing for the new US bases in Spain; Arkansas Lumberman **James R. Bemis** as president of the National Lumber Manufacturers Assn., succeeding **Ralph R. Macartney**; California Registrar of Contractors **N. J. Morrissey**, as director of the state's department of professional and vocational standards.

The California State Board of Architectural Examiners elected **George P. Simonds** AIA of Oakland as president for 1954. **Ulysses Floyd Rible**, AIA, of Los Angeles was elected secretary. Other board members: Architects **Earl T. Heitschmidt** of Los Angeles, **C. J. Paderewski** of San Diego, **Norman K. Blanchard** of San Francisco.

DIED: **G. Louis Meyer**, 67, founder and chairman of the board of Chicago's Ceco Steel Products Corp., and inventor of a system of reinforced concrete joist construction, Oct. 5 in Lake Forest, Ill.; **Dr. Harry P. Hammond**, 68, dean emeritus of the School of Engineering at Pennsylvania State College, Oct. 21 in Bellefonte, Pa.; **William T. Backstrom**, 49, partner in San Francisco's B and R Construction Co., Bay Area building contractors which sponsored and operated the \$4.5 million Dugway Proving Grounds in Salt Lake City, Oct. 21 in San Francisco; **Elizabeth M. Herlihy**, 73, Boston Planning Board secretary, author of Boston's first zoning plan, 1924, and chairman of the Massachusetts State Planning Board, 1935-50, Oct. 28 in Everett, Mass.; **Mark Lansburgh**, 64, Washington D.C. department store executive and graduate, though nonpracticing architect, appointed by President Truman in 1947 as chairman of the

The Name **HOPE'S** *Guarantees*
WINDOW WALLS



John Thompson Dorrance Laboratory, M. I. T., Cambridge, Mass.

Anderson and Beckwith, Architects

Sawyer Construction Co., Contractors

This giant "window wall", 14,742 square feet and duplicated on the opposite elevation, is an excellent example of the flexibility of design made possible for the architect through the use of HOPE'S Pressed Steel Subframes.

The great strength and rigidity of these Pressed Steel Subframes were vital factors in the building photographed above. Strategic use of heavy gauge steel made possible the use of lighter intermediate

subframe members. This saved overall weight, and cost, without sacrificing strength, and each of the 250 units installed was hot-dip galvanized and bonderized at the factory — further assurance that these windows will last the life of the building.

For pleasing architectural effects and for overall economy, consult Hope's Engineering Service. In the meantime, for further details on Hope's Pressed Metal Subframes, write for Booklet 134.

HOPE'S WINDOWS, INC., Jamestown, N. Y.
THE FINEST BUILDINGS THROUGHOUT THE WORLD ARE FITTED WITH HOPE'S WINDOWS

District's Redevelopment Land Agency and reappointed last year for another five-year term, Oct. 29 in Washington D.C.; **Max Gerber**, 56, president of the large New York plumbing fixtures manufacturing company bearing his name, Nov. 1 in Chicago; **Jay R. Benton**, 68, president of the Boston Mutual Life Insurance Co., former attorney general of Massachusetts, first chairman of the Greater Boston Development Committee, Nov. 3 in Belmont, Mass.; **Newman H. Raymond**, 84, Alexandria, Va. contractor and builder who ran for mayor of New York on the Prohibition ticket soon after the turn of the century, Nov. 8 in Alexandria.

SIDELIGHTS

Dawn of atomic heating

For the first time in the US, waste heat from an atomic furnace will be put to work heating buildings. The buildings: windowless, concrete structures under construction at the AEC's Hanford, Wash. atom-bomb fuel plant. The heat system, already tried on a pilot basis by the British at Harwell, will cost \$614,000 to install—about \$440,000 more than an ordinary heating system. But it will save \$59,000 a year in fuel oil, according to General Electric Co., which operates the plant. So it may pay for itself in 7½ years.

The system has limited application: you have to own an atomic reactor first. So far, the thousands of gallons of water from the Columbia River used to cool reactors are just dumped back into the river boiling hot (this increases the river temperature "only a fraction" and scientists say radioactivity is "negligible"). Under the new setup, the hot water will heat water in a separate pipe system via a heat exchanger. The warm water in the second set of pipes will flow through a second heat exchanger to heat air which then will fan through the air-conditioning system. The Hanford system will produce enough heat for 1,000 homes. If home owners could tap it at the same cost, their annual heat bills would be \$2.20.

A lift for junior depositors

In its new building, the First National Bank of Geneva, Ill. installed a 20" circle of red linoleum in the gray tile floor in front of one teller's cage. When a child wants to make a deposit, he stands on the red circle and presses a button. A concealed hydraulic lift raises him to teller-window level. The lift, designed by Architects Frazier & Raferty, cost \$600, will hold 500 lbs.

Architects and advertising

AIA President Clair W. Ditchy warned his 9,500 members this month that AIA may discipline those who allow their pictures to be used in advertising. Wrote Ditchy in the *AIA Journal*: "If an architect's picture appears in an advertisement, with his recommendation, there is an implication, whether justified or not of something akin to bribery which renders his judgment suspect and may be detrimental,

CONDITIONED FOR COMFORT... with All-Aluminum Coils by BUSH

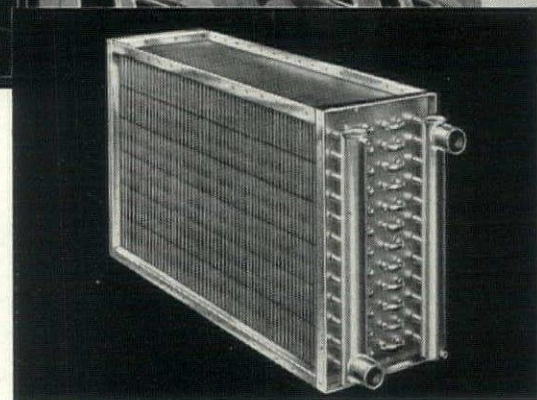


Comfort was a prime consideration in design of the new Alcoa Building, Pittsburgh. Obviously, air conditioning was a "must". And since the building was to exemplify the versatility of their product, the company wanted to use all-aluminum coils.

BUSH came up with the answer . . . a special type of water coil of all-aluminum construction for both cooling and heating. These special coils form the core of year 'round comfort in the Alcoa Building.

Next time one of your buildings poses a heating, cooling or air conditioning problem, why not call in the BUSH sales engineer in your area? You'll find him glad to help . . . pleasant to work with.

You'll find, too, that BUSH teamwork backs him up. What he promises, the BUSH plant will deliver.



The Alcoa Building's all-aluminum water coils are further proof that "solving the tough ones is a BUSH speciality".

Heat transfer products by heat transfer engineers.

Request Bulletin 705A, describing standard line of BUSH Direct Expansion, Steam and Water Coils.

And if you'd like our complete file of BUSH product literature, especially prepared for architects, please let us know.

BUSH MANUFACTURING COMPANY

WEST HARTFORD 10, CONNECTICUT





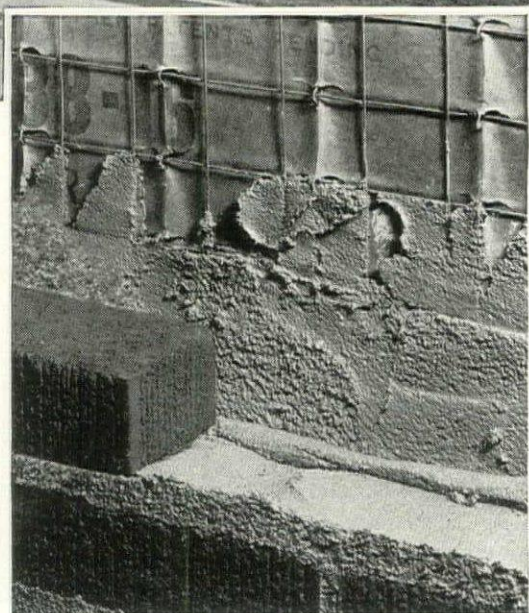
Here's an example of how **STEELTEX** saves maintenance costs on rental housing

When M. Lee Heath, owner of the Kensington Court Apartment Project in Charlotte, N. C., insisted two years ago upon Steeltex for brick-veneer and Steeltex for interior plaster, he did so because he wanted low maintenance cost in the years to come. This is what Mr. Heath had to say after 24 months:

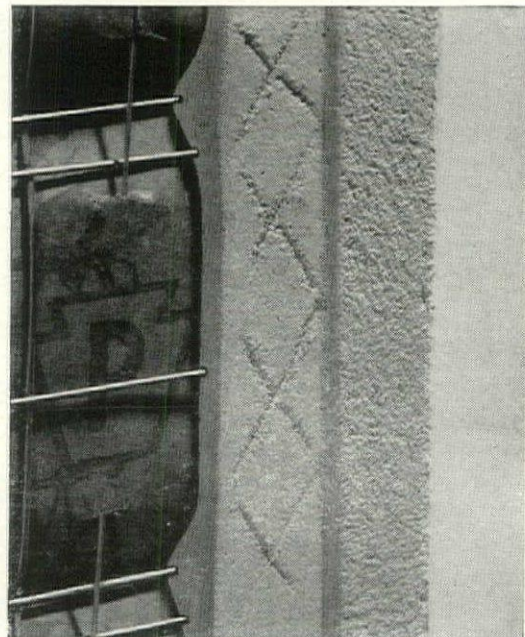
"I used Steeltex for sheathing because it completely bonded the masonry and stud walls together. It was my opinion that a solid steel-reinforced mortar section was better than a flue crossed with wall ties. I then used Steeltex for plaster, because of the completely rigid base it made. I found this type of construction to be surprisingly inexpensive at the time, and I can now say it has saved me a considerable amount in maintenance cost. After two years there simply have been no wall cracks at all. Certainly any owner of rental property can appreciate this feature."

Whether your projects involve rental housing or not, you'll find it will pay you to investigate the advantages that rigid, welded-wire Steeltex can bring. See our catalog data in Sweet's or write for Catalog DS 132 Dept. AF, Pittsburgh Steel Products Company, Grant Building, Pittsburgh 30, Pa.

Pittsburgh Steel Products Company
a subsidiary of Pittsburgh Steel Company



From the close-up photographs above and below, you can see some of the advantages of Steeltex. Notice above that a continuous steel-reinforced mortar bond is created between brick and stud walls. Below is shown the virtual truss construction created by Steeltex for plaster.



not only to him but to his advertiser as well. If an architect's picture appears in an advertisement, without any quoted comment from him, it is still in bad taste, and sets a precedent for more flagrant transgressions against the tenets of good professional taste."

Ditchy's ire was particularly aimed at product advertising. Would his antipublicity views apply to a picture of an architect in an ad for a building he designed when the building is for sale (like prefab houses)? Ditchy did not say.

The nonwhite market

In quarter-page newspaper ads, New York Life Insurance Co. this month announced leasing of the third and fourth 12-story apartments of its 102-acre redevelopment project on Chicago's south side. The ads reflected some lessons New York Life and its project manager, Col. William J. Reardon, had learned about a market slanted for the Chicago Negro (96% of tenants in Lake Meadows first two apartment buildings are Negro). Maximum rents for the 4½-room (2-bedroom) apartment were cut from \$143 to \$133. To keep building income the same, differentials for north and south exposures were ended and the differential between lower and upper floors was trimmed. Reardon called \$135 a month the highest practical rent for the Chicago Negro market, but noted he had a substantial waiting list for cheaper units. The new rent schedule: 2 rooms, \$74 to \$85; 3½ rooms, \$90 to \$100; 4½ rooms, \$120 to \$133.

White elephant apartments?

Far less successful, a full two years after their completion, were Metropolitan Life's 13-story Parkmerced apartments in the fog-bound southwest corner of San Francisco (AF, Jan. '52, et seq.) where the population is almost entirely white. A company spokesman said only 475 of the 1,683 units were occupied—about a quarter. Met has not even bothered to open 5 of the 11 white concrete towers. It cut rents 20 to 30% a year ago, but apartment-seekers can still find similar quarters cheaper in the adjoining new Stonestown apartments.

Dallas shrinks a skyscraper

Leo Corrigan's projected 50-story office building in downtown Dallas (AF, Aug. '53, News), which was to have been the tallest west of the Mississippi, was sliced to 30 stories. Explained Corrigan: "We are building space in relation to demand."

Satellite city for Baltimore

A satellite city of perhaps 30,000 people, midway between Washington and Baltimore, was being planned by a syndicate of Washington and nearby Maryland businessmen. So far, the group had bought or optioned nearly \$1 million of land—2,000 acres of gently rolling terrain along the route of the Baltimore-Washington freeway. Promoters, headed by Harry A. Boswell Inc., hope for a balance between housing and industry to make the city a good tax producer.

ADVANCE PERSONAL EDITION KEWANEE GENERAL CATALOG 80

NOW READY FOR YOU... .. NOW READY FOR YOU



+ There's a new copy of the Advance Personal Edition Kewanee General Catalog 80 waiting for you.

Here is the latest most authentic and complete data and dimensions on the entire Kewanee line.

You most likely need the material in this 32-page fully illustrated technical catalog now so there will be no delay in detailing new building and remodeling work you have in the planning stage.

The catalog is written especially for you and can be used as an authentic technical reference source. It is your own personal edition available

in advance of Sweets and Domestic Engineering catalogs for 1954.

The catalog will contain full description of such products as...

1. High and low pressure commercial and industrial boilers.
2. Residential Boilers
3. Water Heating Equipment
 - (a) Direct fired types
 - (b) Storage types
 - (c) Indirect water heating coils for Kewanee Boilers
4. Boiler support brackets and structural steel suspension for Kewanee Boilers.
5. Induced draft fans for Kewanee Boilers

Kewanee Catalog 80 will be sent only on request or distributed by Kewanee sales offices.

So use the handy coupon to order your personal advance edition today

KEWANEE-ROSS CORPORATION — KEWANEE, ILLINOIS
Division of American Radiator & Standard Sanitary Corporation

Serving home and industry

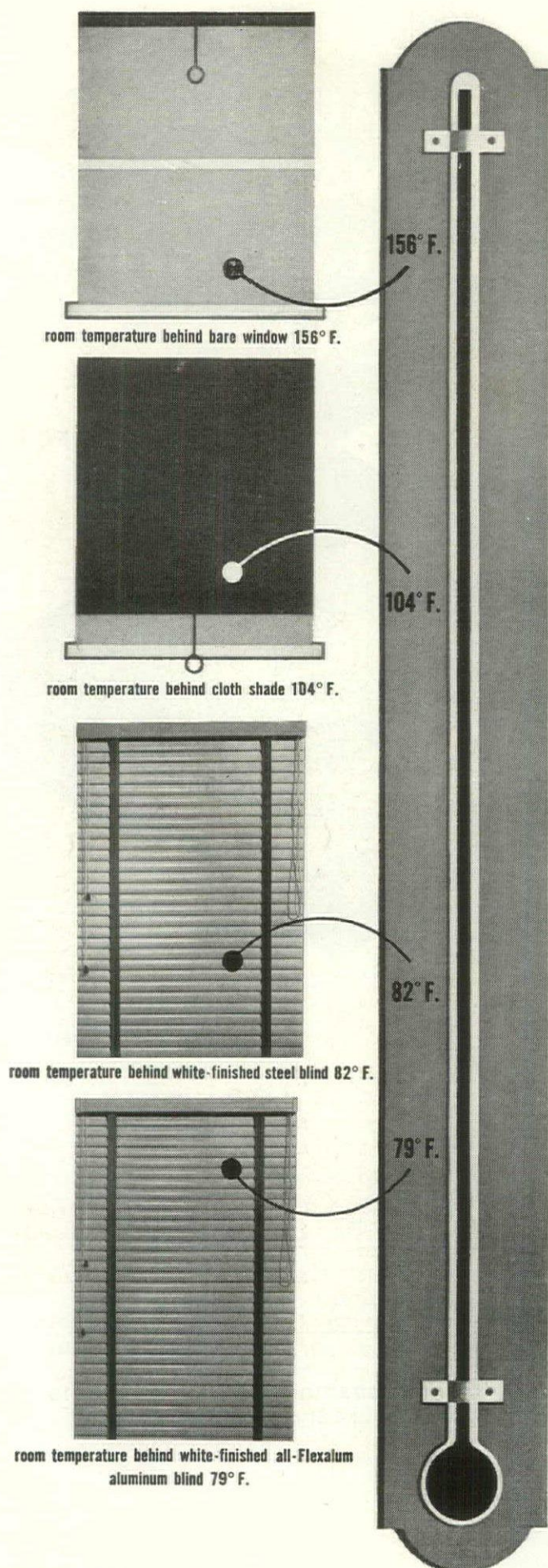
AMERICAN-STANDARD • AMERICAN BLOWER • CHURCH SEATS • ROSS HEATER
TONAWANDA IRON • DETROIT LUBRICATOR • KEWANEE BOILERS

GET YOUR
FREE CATALOG
MAIL COUPON
TODAY

KEWANEE-ROSS CORPORATION • KEWANEE, ILLINOIS

Please send me my free copy of the Advance Personal Edition Kewanee General Catalog 80

Name _____ Title _____
Company _____
Address _____
City _____ State _____



no window covering controls temperature like the all-*Flexalum*. blind

An objective study by the Faber Birren Company* shows: the all-FLEXALUM aluminum blind controls room air temperature more effectively than any other window covering—including venetian blinds made with other materials. An even more dramatic difference was obtained by measuring the surface temperatures of unfinished FLEXALUM aluminum and raw steel exposed to solar heat...the FLEXALUM reading was 19° F. lower. This study points to all-FLEXALUM blinds as an effective way to reduce heat.

only all-Flexalum blinds have all these long-life and low-maintenance advantages:



Wipe-Clean Plastic Tapes—Won't fade, fray, shrink or stretch.

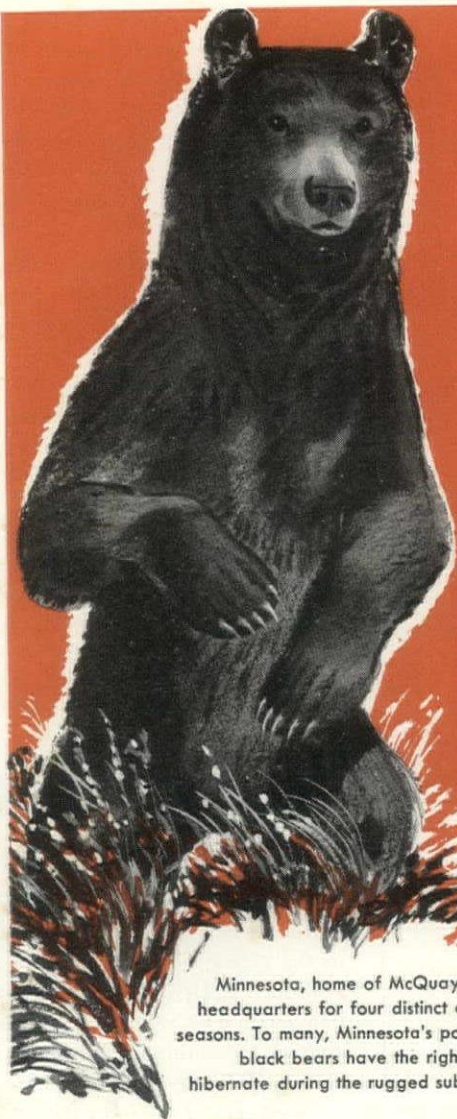


Spring-tempered aluminum slats—Snap back to perfect shape. Won't rust, chip, crack or peel.



Long-Wear Nylon Cords—Won't fade or fray. Tassels are noiseless, unbreakable plastic.

*Copies of this study available on request. Write for local Flexalum sources, free file of venetian blind information
HUNTER DOUGLAS CORP., 150 BROADWAY, NEW YORK 38, N. Y. • IN CANADA, HUNTER DOUGLAS LTD., MONTREAL 3, QUEBEC



McQuay Heating Coils bear up under severe conditions!

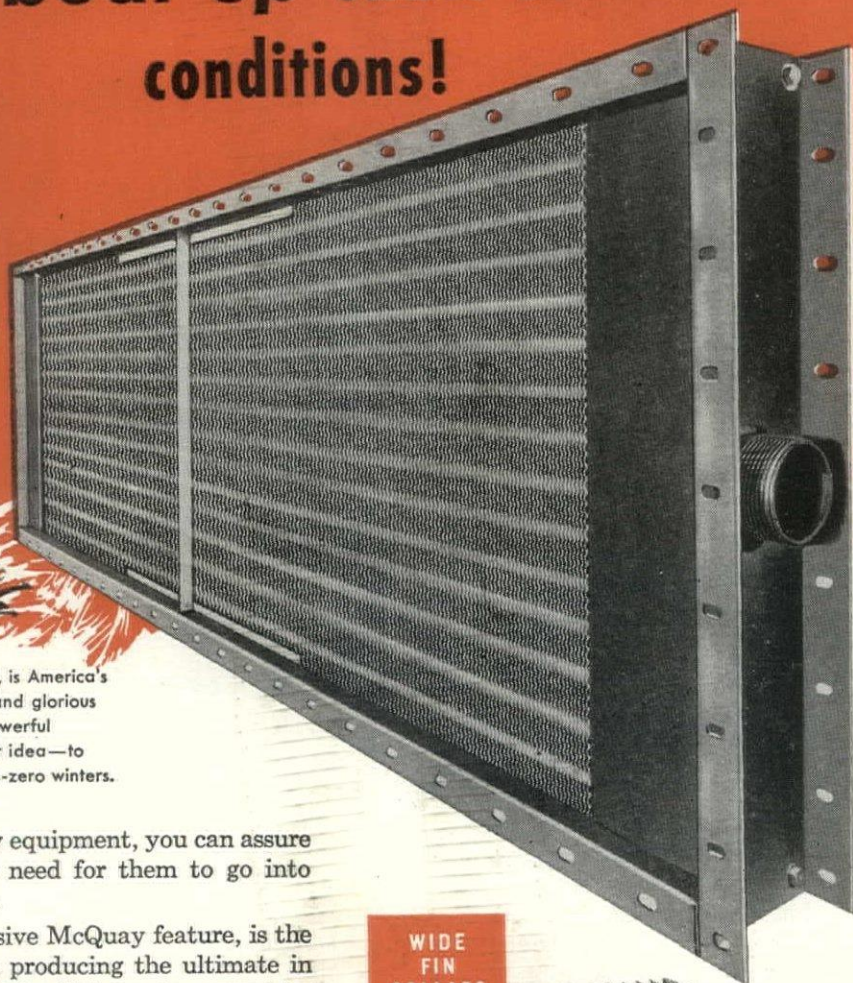
Minnesota, home of McQuay, is America's headquarters for four distinct and glorious seasons. To many, Minnesota's powerful black bears have the right idea—to hibernate during the rugged sub-zero winters.

By specifying McQuay equipment, you can assure your customers that there will be no need for them to go into hibernation or to migrate to the south.

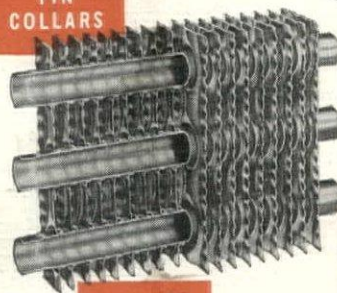
Ripple Fin coil construction, an exclusive McQuay feature, is the product of years of research aimed at producing the ultimate in heat transfer for any weight metal. High efficiency is assured by forcing the air to follow an ever-changing direction of flow in passing through the coil. Thus the air repeatedly contacts the coil surface to give maximum contact time, maximum contact velocity, and a resultant optimum heat transfer.

The staggered tube and rippled edge features also contribute greatly to the construction ruggedness of the famous McQuay line.

McQuay heating coils are available in a wide variety of styles and sizes. Hot water, cold water, brine, direct expansion, and refrigerant condensing coils are available for practically every type of application. Write McQuay Inc., 1609 Broadway St. N.E., Minneapolis 13, Minnesota. Representatives in principal cities.



WIDE
FIN
COLLARS



RIPPLE
FINS

HYDRAULIC
EXPANDED
TUBES

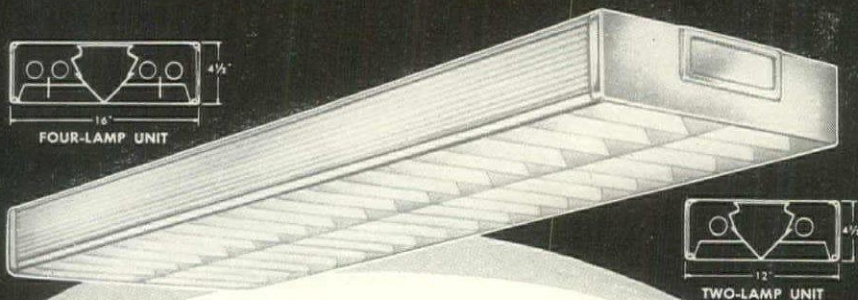
McQuay INC.

HEATING • AIR CONDITIONING



REFRIGERATION

SO MUCH MORE **UTILITY** THAN YOU'D EXPECT . . .



IN A LUMINAIRE
OF SUCH RADIANT

Beauty

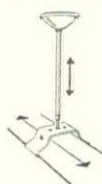
GARCY Starliner

OVER 80% EFFICIENCY • 30° x 40° Shielding
... yet only 4 1/2" Deep

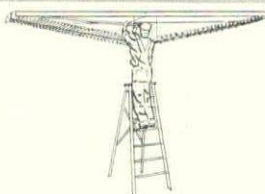
Slim, trim and functional in appearance, the Garcy Starliner lends itself beautifully to contemporary styling. When surface mounted, its shallow contour economically simulates built-in lighting.

Yet within its compact design, this luminaire embodies every wanted feature. Side panels of Corning's Alba-lite glass are attractively framed in protective metal rails . . . promote efficient light distribution while contributing to proper brightness control. Garcy's louver design provides 30° x 40° shielding.

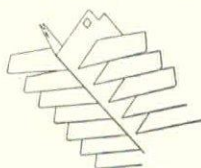
The Starliner is superbly made . . . note the round edges on end plates and side rails. Economically installed, easily maintained. Available as two-lamp or four-lamp units in 4 ft. or 8 ft. lengths for standard fluorescent, rapid start or slimline lamps. Write for Bulletin L-134.



FAST, LOW-COST INSTALLATION
with Garcy Sliding Clamp Hangers for easy alignment, both vertically and horizontally. Adjustable in height by simply turning stem.



ECONOMICAL MAINTENANCE
Single louver shield permits relamping two 8 ft. fixtures from one ladder position.



STURDY CONSTRUCTION
V-shaped backbone securely holds louver cross-fins under spring tension . . . prevents looseness, rattle or "sing."

GARCY

GARDEN CITY PLATING & MFG. CO.

1736 N. ASHLAND AVE., CHICAGO 22, ILLINOIS

IN CANADA: GARCY CO. OF CANADA LTD., 191 NIAGARA ST., TORONTO

Building industry is nipped by NY shakedown scandals

Ten years ago, Joseph S. Fay, business agent for New York Local 825 and fourth vice president of the AFL operating engineers, was indicted for conspiracy to extort \$725,000 from contractors building a New York City aqueduct. He was convicted in 1945, and after prolonged appeals began a sentence of 15 years in 1948.

Behind prison bars his influence diminished only slightly. Last month the list of his distinguished visitors—mostly politicians and labor chiefs—was published. Repercussions were immediate and widespread. By month's end, one offshoot of the case aired charges of a \$360,000 homebuilding shakedown on Long Island. Among those who called on Fay at Sing Sing:

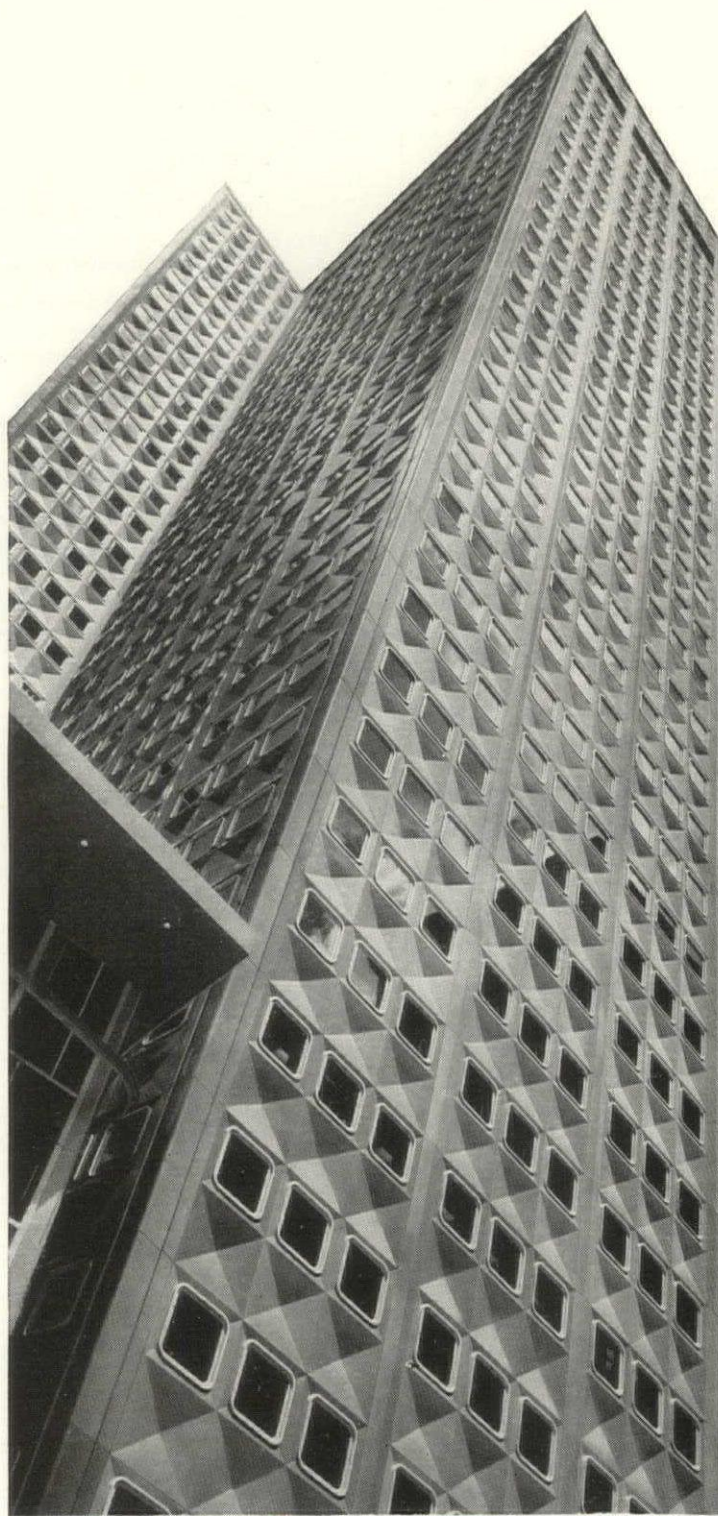
- ▶ **AFL President George Meany**, then (1949) president of the NY State Federation of Labor. Meany said he made two visits at Fay's request, and their talks dealt only with Fay's desire to obtain a pardon or commutation. Any inference that they discussed labor problems would be "complete bunk," said Meany.
- ▶ **President Richard J. Gray** and **Secretary-Treasurer Joseph S. Keenan** of the AFL building and construction trades department. Gray formerly was a vice president of the operating engineers. Departing for Europe, Gray said Fay was a friend, and "I won't turn my back on him now." Keenan said he made one visit to the prison—"purely a friendly one."
- ▶ **William C. DeKoning**, Long Island construction labor boss who retired in May as president of Operating Engineers Local 135, and his son William, Jr., who succeeded him.
- ▶ **State Senate President Arthur H. Wicks** and **Attorney William F. Bleakley**, unsuccessful Republican candidate for governor of New York in 1936. Gov. Dewey rejected Wicks' explanation that his several visits to Fay were made only "to avoid jurisdictional strikes in my senatorial district." The governor called a special session of the legislature in an effort to force his removal as Senate president and acting lieutenant governor.

Construction scandals. Paul L. Troast, head of a large construction firm, who was GOP candidate for governor of New Jersey, had written Gov. Dewey in 1951 urging clemency for Fay, but denied he did so because labor leaders threatened to shut down Troast construction jobs. After his letter writing was disclosed on Oct. 2, however, it became a leading campaign issue, and apparently was a decisive element in Troast's defeat. He lost, 959,669 to 805,750, giving New Jersey Democrats their first governorship since 1940.

Nassau County's grand jury, taking up the trail with a probe of harness race-track labor racketeering, indicted DeKoning Sr. on charges of exacting kickbacks from Roosevelt Raceway employees belonging to another union under his domination. The raceway investigation then delved into reports that DeKoning had extracted large sums from Long Island

(continued on p. 56)

ALCOA



SAVES WITH DOREX AIR RECOVERY

● For its new building in Pittsburgh, Aluminum Company of America uses an air conditioning system that is only about one-half the size of conventional ventilating systems. Dorex Air Recovery plays an important part in this saving.

Dorex Air Recovery is a simple method for "reconditioning" used air—making it completely odor-free and fresh for re-use. This sharply reduces the amount of outside air that has to be taken into the system and, as Alcoa knows, reduces the size and costs of heating and cooling equipment; and offers continuing savings in operating costs.

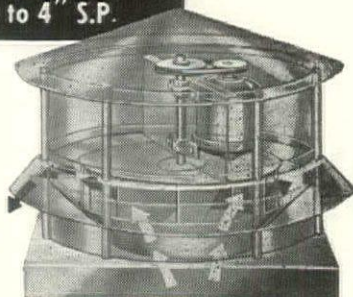
In fact, averages, drawn from more than twenty years' experience with over 10,000 Dorex installations, show that every \$100 invested in Dorex Air Recovery should return about a \$400 saving in original ventilating equipment...and every \$1 spent for Dorex maintenance should save some \$4 in operating costs.

Find out more about Dorex Air Recovery—what it has done for others, what it can do for you. A note on your letterhead will bring full information promptly. Connor Engineering Corporation, Danbury, Connecticut.



You Can Be Sure
GALLAHER CERTIFIED RATINGS
mean *Peak Performance*

NEW Belt Drive 4000
to 65,000 CFM
up to 4" S.P.



Direct Drive
100 to 11,000 CFM
up to 4.2" S.P.



Pat. No. 2526290
2188741
Pats pending

HERE'S WHY

Gallaher ratings are the result of actual physical tests of the entire unit—not a fan wheel alone or other component, not interpolations of free air data, but a true picture of the unit as it operates under actual conditions.

Any other method of rating a power roof exhauster will be inaccurate. Gallaher research has shown conclusively that the errors may run as high as 50% when ratings are mere theoretical calculations.

Gallaher units with patented, built-in scroll effect are the only power roof exhausters which can develop high static pressures. With this feature, thousands of industrial applications are well within the range of economical power roof exhausters. They have been rated in an independent laboratory under the direction of a nationally recognized authority under the conditions prescribed by NAFM and ASH&VE.

Before you buy power roof exhausters we think you'll agree that these three questions should be answered to your satisfaction. 1. How were the tests conducted? 2. Did it include the whole unit and not a component? 3. What impartial authority conducted the tests? We think that you'll buy Gallaher Air-Vans.

For full information write Dept. A-7

The GALLAHER Company
4108 DODGE STREET OMAHA, NEBRASKA

homebuilders and contractors for many years past. Homebuilder William J. Levitt, whose nonunion Long Island operations were remarkably free of labor troubles, was questioned by the district attorney for two hours and the next day issued a statement saying he had "never had any dealings whatsoever with Mr. DeKoning on any matter."

Ten days later, the district attorney said he had "evidence" that builders were forced to pay \$8 to the union's "defense and welfare fund" for each house built in Nassau County with union labor from 1947 to 1949 (about 45,000 houses). The DA said DeKoning ordered contractors to pay the \$8 or else hire an operating engineer for a cement mixer at about \$16 a day whenever foundation concrete was poured.

Fear of a union had seldom shoved the building industry into a more sordid light; even the 20 builders who could be persuaded to testify before the grand jury about the \$8 payments were hustled in and out by a rear elevator—their identities carefully shielded from union agents and newsmen alike. Some builders still were so fearful of union reprisals that the DA had to talk to them at their offices.

AIA Washington meeting belittles slum repairs

At its middle Atlantic regional conference in Washington, AIA delved last month into the problems of urban decay and the flight to the suburbs. To many listeners, Architect Nat Owings (of Skidmore, Owings & Merrill) struck the keynote. Said he: "Redevelopment has to be on broad strokes, not on picayune remodeling . . . major surgery and not just a patch-up job."

The architect's job, argued Owings, "is not to go in and force people to repair houses or to see that the building code is clamped down on offenders." Instead, he argued, architects should try to get their cities "excited to go in and start a nucleus redevelopment job."

Agreed Executive Director John Searles of Washington's District Redevelopment Land Agency: "Redevelopment must be bold, dramatic, clean." Going still further, Searles insisted that rehabilitation of rundown-but-not-hopelessly blighted areas—the darling of realtors, homebuilders and an influential layer of top government officials—must take a back seat if redevelopment is to be accomplished. But he warned that one of the worst possible mistakes in redevelopment is to let relocation of people contort the plan.

Many a speaker argued against too radical surgery in redevelopment—the kind that obliterates everything on the old landscape. So the city "can show respect for the past," they favored keeping well-designed though older



OWINGS

Reni



- ALABAMA**
Badham Insulation Co., Inc., Birmingham
Stokes Interiors, Inc., Mobile
- ARIZONA**
Fiberglas Engineering & Supply Co., Phoenix
Hall Insulation & Tile Co., Tucson
- ARKANSAS**
National Builders' Supply, Inc., Little Rock
- CALIFORNIA**
Coast Insulating Products, Los Angeles and San Diego
Cramer Acoustics, San Francisco and Fresno
- COLORADO**
Construction Specialties Co., Denver
- CONNECTICUT**
W. T. Roberts Construction Co., East Hartford
- DISTRICT OF COLUMBIA**
Kane Acoustical Co., Washington
- GEORGIA**
Dumas and Searl, Inc., Atlanta
- ILLINOIS**
General Acoustics Co., Chicago
- INDIANA**
The Baldus Co., Inc., Fort Wayne
E. F. Marburger & Son, Inc., Indianapolis
- IOWA**
Kelley Asbestos Products Co., Sioux City
- KANSAS**
Kelley Asbestos Products Co., Wichita
- KENTUCKY**
Atlas Plaster & Supply Co., Louisville
- MARYLAND**
Lloyd E. Mitchell, Inc., Baltimore
- MASSACHUSETTS**
W. T. Roberts Construction Co., Cambridge
- MINNESOTA**
Dale Tile Company, Minneapolis
- MISSISSIPPI**
Stokes Interiors, Inc., Jackson
- MISSOURI**
Kelley Asbestos Products Co., Kansas City
Hamilton Company, Inc., St. Louis
- NEBRASKA**
Kelley Asbestos Products Co., Omaha
- NEW JERSEY**
Kane Acoustical Co., Fairview
- NEW MEXICO**
Fiberglas Engineering & Supply Co., Albuquerque
- NEW YORK**
Robert J. Harder, Inc., Lynbrook, L. I.
James A. Phillips, Inc., New York
Davis-Fetch & Co., Inc., Buffalo, Rochester and Jamestown
Davis Acoustical Corp., Albany
- NORTH CAROLINA**
Bost Building Equipment Co., Charlotte
- OHIO**
The Mid-West Acoustical & Supply Co., Cleveland, Akron, Columbus, Dayton, Springfield and Toledo
- OKLAHOMA**
Harold C. Parker & Co., Inc., Oklahoma City
Kelley Asbestos Products Co., Tulsa
- OREGON**
Acoustics Northwest, Inc., Portland
R. L. Elfstrom Co., Salem
- PENNSYLVANIA**
General Interiors Corporation, Pittsburgh
Jones Sound Conditioning, Inc., Ardmore
- TENNESSEE**
John Beretta Tile Co., Inc., Knoxville
John A. Denie's Sons Co., Memphis
The Workman Co., Inc., Nashville
- TEXAS**
Blue Diamond Company, Dallas
Fiberglas Engineering & Supply Co., El Paso
Otis Massey Co., Ltd., Houston
Builder's Service Co., Fort Worth
- UTAH**
Utah Pioneer Corporation, Salt Lake City
- VIRGINIA**
Manson-Smith Co., Inc., Richmond
- WASHINGTON**
Elliott Bay Lumber Co., Seattle
- WISCONSIN**
Building Service, Inc., Milwaukee
- CANADA**
Albion Lumber & Millwork Co., Ltd. Vancouver, B. C.
Hancock Lumber Limited, Edmonton, Alberta

(continued on p. 58)

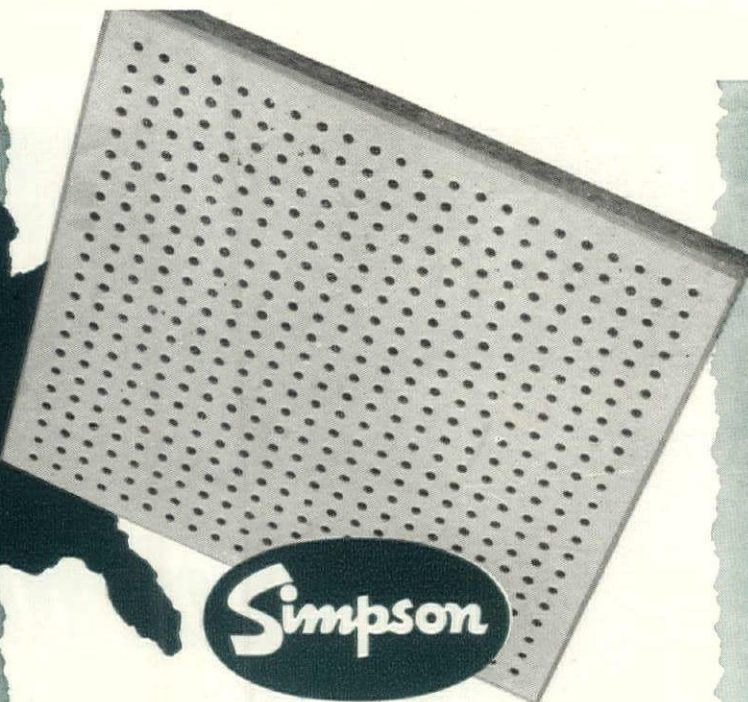
52 reasons why Simpson acoustical installations are superior

Simpson certifies the quality of its products and its contractors

The 52 firms listed at the left are Simpson Certified Acoustical Contractors, leaders in the field of acoustical engineering and installation . . . selected by Simpson and *certified* to be reliable, efficient and ethical. To maintain their high standards, these contractors are kept constantly abreast of new developments in the field of noise control by frequent contact with Simpson's acoustical experts and their fellow Certified Contractors.

Using genuine Simpson acoustical materials . . . unsurpassed in efficiency and appearance . . . these contractors offer you superior acoustical installations, because of superior materials and superior workmanship.

These Simpson Certified Acoustical Contractors have the equipment, experience and craftsmen necessary to insure an efficient and attractive acoustical installation in structures of any type, to your exact specification. For consultation and estimates, call the SCAC member nearest you.



ACOUSTICAL TILE ...HOLLOKORE DRILLED

This efficient, perforated woodfiber acoustical tile . . . made to exacting specifications by Simpson, one of the largest and oldest forest products organizations in the Pacific Northwest . . . has six features of superiority:

HOLLOKORE DRILLED PERFORATIONS. Simpson-developed *hollow* drills make clean holes, without fuzzy edges or burrs to collect dirt or encourage "bridging" when repainting.

WASHABLE FINISH. Simpson's bright-white finish is readily cleaned with soap and a damp cloth, and may be repainted repeatedly without loss of efficiency.

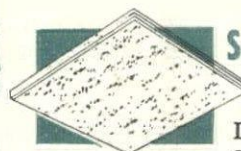
PAINTED BEVELS—finished in the same light-reflecting white.

HIGH SOUND ABSORPTION—unexcelled by any similar material.

THERMAL INSULATION. Millions of tiny air cells, in and between the fibers, provide effective thermal insulation.

BIOTOX PROTECTED, by a *safe* chemical process, against mold, mildew, termites, decay and dry rot.

NOW also available with *Scatter-Drilled* perforations, minimizing the mechanical pattern of the holes.



SIMPSON FISSURED TILE A MINERAL ACOUSTICAL MATERIAL

INCOMBUSTIBLE: Solid rock, melted and re-formed into mineral fiber. **DECORATIVE:** The *natural* fissures differ on every tile, and provide an interesting ceiling texture. **PERMANENT:** Cannot decay or deteriorate, easily cleaned with a vacuum cleaner, and may be repainted repeatedly without loss of acoustical effectiveness. **EFFICIENT:** The sound absorption coefficients of these attractive tiles are remarkably high, and the special finish has excellent light-reflecting qualities.

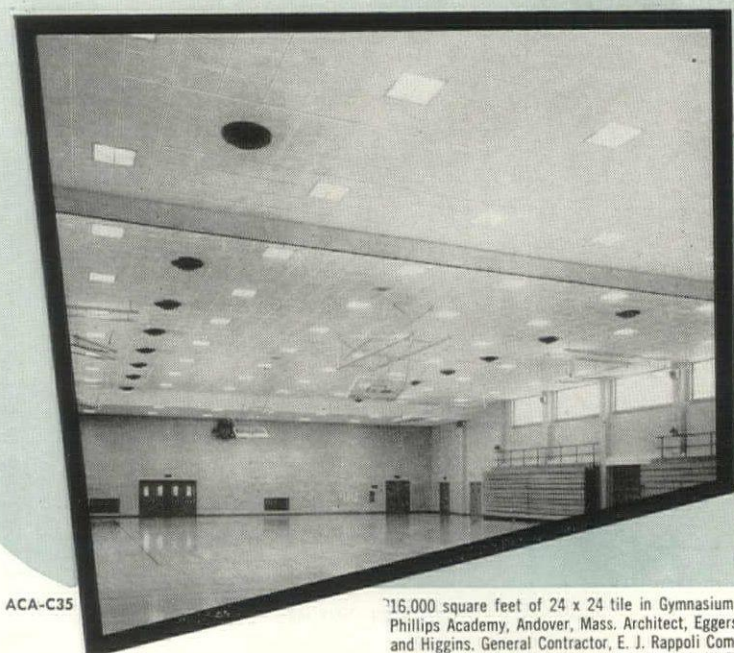
Available in beveled or square edge units

OTHER SIMPSON ACOUSTICAL PRODUCTS

METAL ACOUSTICAL UNITS ★ PERFORATED HARDBOARD
PERFORATED CEMENT ASBESTOS BOARD

SIMPSON LOGGING COMPANY • SEATTLE

ACOUSTICAL MATERIALS ★ ALLWOOD HARDBOARD ★ INSULATING BOARD PRODUCTS ★
PLYWOOD ★ DOORS ★ CALIFORNIA REDWOOD ★ FIR AND WEST COAST HEMLOCK LUMBER



ACA-C35

16,000 square feet of 24 x 24 tile in Gymnasium, Phillips Academy, Andover, Mass. Architect, Eggers and Higgins. General Contractor, E. J. Rappoli Company. Simpson Certified Acoustical Contractor, W. T. Roberts Construction Co., Cambridge.

"BIG STEEL"

NEEDED

Karnak®

WATERPROOFING PRODUCTS



Fairless Works of United States Steel Corporation's plant at Morrisville, Pa., on the Delaware River, is the country's largest single steel construction project undertaken at one time. Waterproofing done by Lewis and McDowell, Inc., New York City.



Karnak fabric is packed in a sturdy corrugated carton for protected shipping and storage. It keeps the fabric in perfect condition until used...cuts fabric loss.

When permanent waterproofing was wanted on the foundation of U. S. Steel's new "Fairless Works," Karnak was chosen by the contractor. This is the largest individually financed industrial project in the world and called for the best in all materials. That's why 750,000 yards of Karnak were used to protect against water, wherever there was a hydrostatic head.

Why Karnak? Because it has the Membrane System of waterproofing that holds secure against hydrostatic head or any water condition.

The secret to the extreme water resistance is the Karnak Membrane Fabric. Open Mesh Cloth, specially woven of long, fiber cotton is carefully saturated with highly refined asphalt so as to leave the mesh open. When this fabric is layered on the job with alternate moppings of liquid asphalt, it provides a tough, thoroughly waterproof membrane that resists cracks, abrasion and settling to maintain water resistance through the life of the structure.

The non-sticking fabric unrolls easily...to the very end. It "works" faster and with no waste. It saves labor costs on the job.

The Karnak system is also the best for roof patching, skylight flashing, window and door flashing, through-wall and cornice flashing, as well as waterproofing against a hydrostatic head in dams, swimming pools, viaducts and tunnels.

Send coupon for complete information.

LEWIS ASPHALT ENGINEERING CORP.
30 CHURCH ST., NEW YORK 7, N. Y.



OTHER KARNAK PRODUCTS

Roofing and
Waterproofing Fabric
Asphalt Roof Coatings
and Cements

Caulking Compounds
Asphalt Emulsions
Floor Mastic
Asphalt Paint

Aluminum Roof Coating
Wood Block Mastic
Tile Cement
Joint Filler

LEWIS ASPHALT ENGINEERING CORP.

30 Church St., New York 7, N. Y.

Please send me **FREE** information about
KARNAK Membrane System of Waterproofing

NAME

ADDRESS

CITY ZONE STATE

Other items I'd like to know about

public or institutional buildings to give redevelopment "character." In formulating public policies like redevelopment, said Director Richard Steiner of Baltimore's redevelopment commission architects have defaulted "more than they should" to mortgage holders, lawyers, economists, homebuilders and a "new breed of real estate philosophers."

George Howe, head of Yale University's architecture department, appealed for a "third dimension" in redevelopment planning (which he asserted only architects can supply). He regarded city planners, real estate men, and mortgage lenders as needed allies, but said they too often "get bogged down with details." The practical approach of the mortgage and real estate man, said Howe, "is not always as practical as it seems because it is based on the past and is devoid of creative thinking. Risky experiments based on vision are apt to prove better ventures."

Thumping on the same theme, Dean José Luis Sert of Harvard's graduate school of design lamented the tendency of architects "to go suburban." Said he: "It is in the heart of our cities that architecture can achieve its highest expression." City planners need help from architects, Sert said, because "the majority of city planners have taken refuge in figures."

Clients thwart architects, central states session told

Can an architect justify subordinating art to his client's wishes? At AIA's central states district conference last month (theme: "That Human Being Called the Client"), Philip C. Johnson of Manhattan's Museum of Modern Art answered that question with a ringing "no." Said Johnson, director of the museum's architecture and design department: "Too many times an architect takes the attitude that his client can call the tune because he's paying the piper. Often the client gets in the way of an architect's creative ability. . . . An architect's first duty is to his art. The real art of architecture is monumentality—something that will make you gasp. . . . This is what every architect has to think about when he picks up his pencil. . . . You can't get this artistic experience by simply following the client's wants. Your client is not an artist. If he were, he probably wouldn't have come to you for assistance."

Frank McNett of Grand Island, Neb. was picked as nominee to succeed Leonard H. Bailey of Oklahoma City as central states district director. The election will be at AIA's convention next June in Boston.

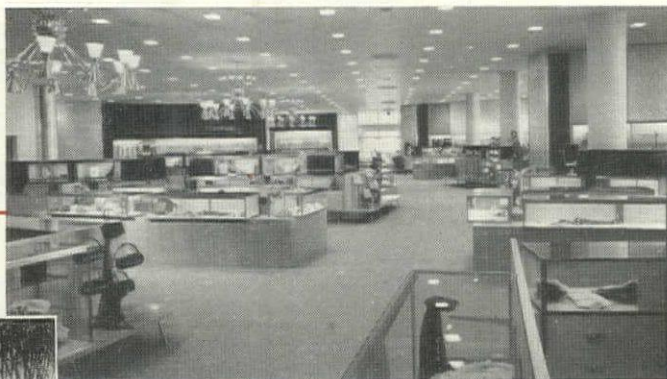


AT DES MOINES conference: AIA President Clair W. Ditchy, Second Vice Pres. Howard Eichenbaum, Regional Director Leonard Bailey.

here's the **AUTOMATIC**
ANSWER to
TEMPERATURE REGULATION PROBLEMS
IN STORES



Robinson's Beverly Hills, Beverly Hills, Calif.
Pereira & Luckman and Chas. O. Matcham,
architects; Samuel L. Kaye, mechanical engineer;
Kilpatrick and Co., air conditioning contractors,
all of Los Angeles.



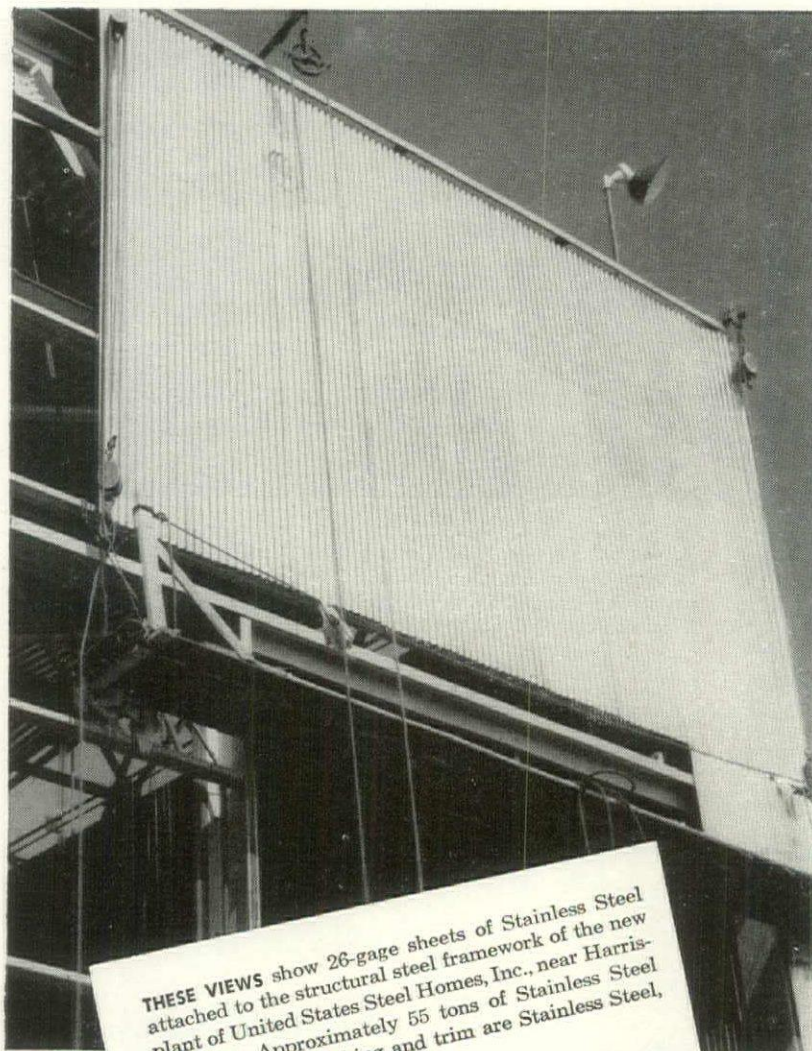
Robinson's Beverly Hills, a branch of the J. W. Robinson Co. in downtown Los Angeles, is Beverly Hills' first complete department store. Recognizing customer comfort as a key requirement in attracting maximum store traffic, this modern merchandising organization has provided Johnson Controlled year-'round air conditioning to assure the ultimate in shopping comfort.

With Johnson Control in command, the 12 central-fan air conditioning systems are under complete and precise control at all times. As patrons move from floor to floor or from section to section, uniform temperatures assure the best possible shopping atmosphere. Adequate, practical zoning, carefully planned, makes it perfectly possible to cool certain sections while other areas, even on the same floor, are being heated.

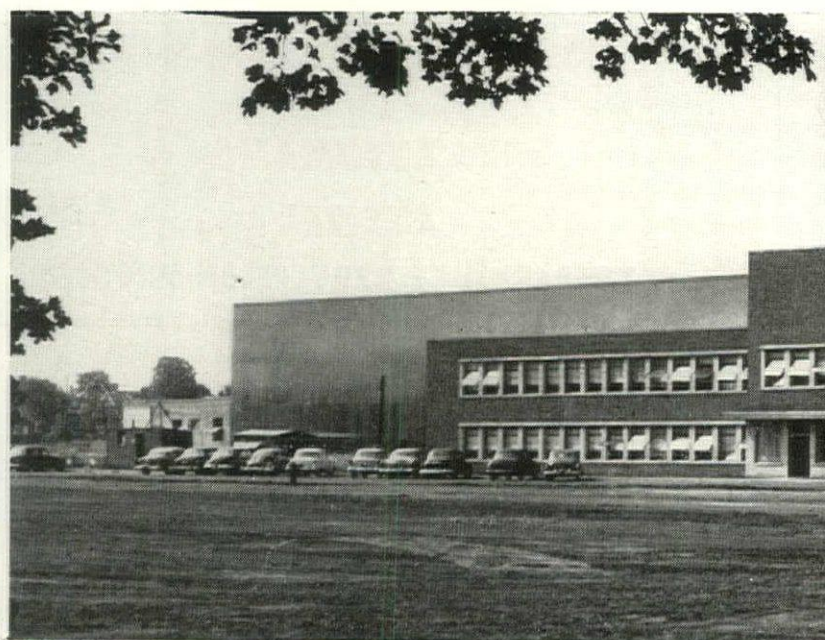
The accuracy and flexibility enjoyed at Robinson's Beverly Hills are typical of Johnson Control Systems, because each one is specifically designed and installed by Johnson to meet the needs of the individual control problem. That is why you will find Johnson "*Planned-for-the-Purpose*", "*Installed-for-the-Purpose*" control not only in leading department stores, but in every type of public, commercial, and industrial building.

The experience of the nationwide Johnson organization is at your disposal without obligation. Why not let a Johnson engineer, from a nearby branch office, solve your temperature control problems? JOHNSON SERVICE COMPANY, Milwaukee 2, Wisconsin. Direct Branch Offices in Principal Cities.

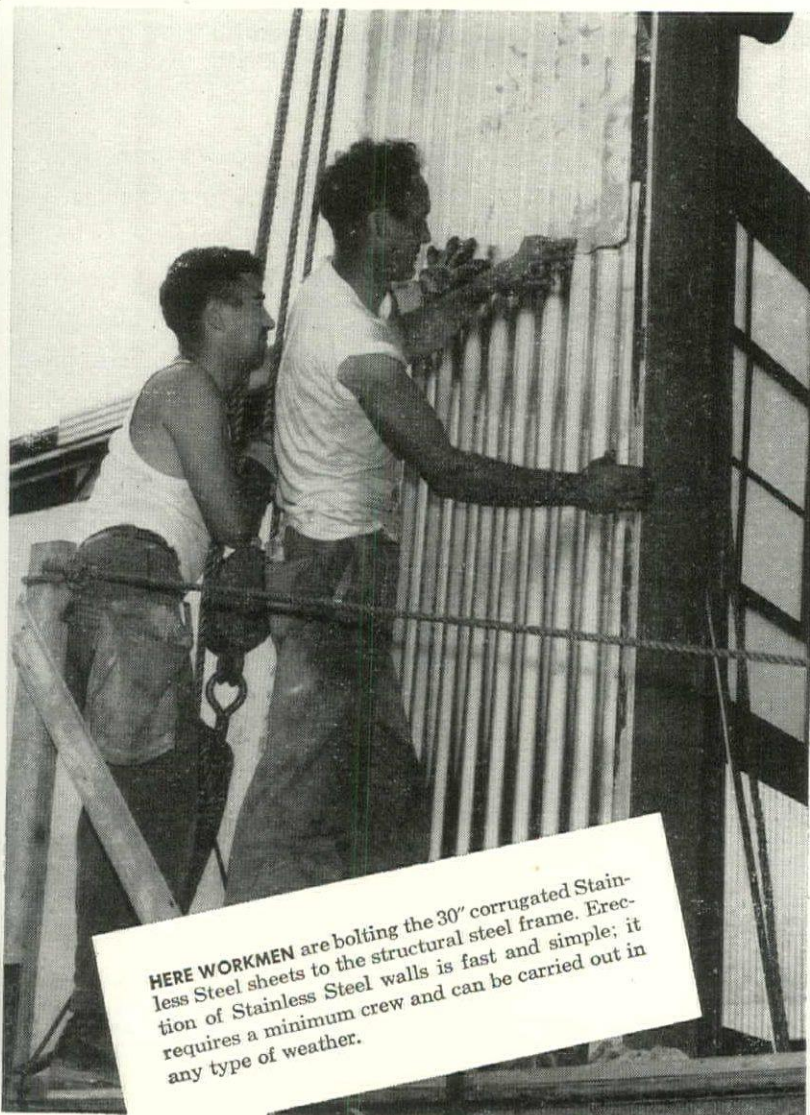
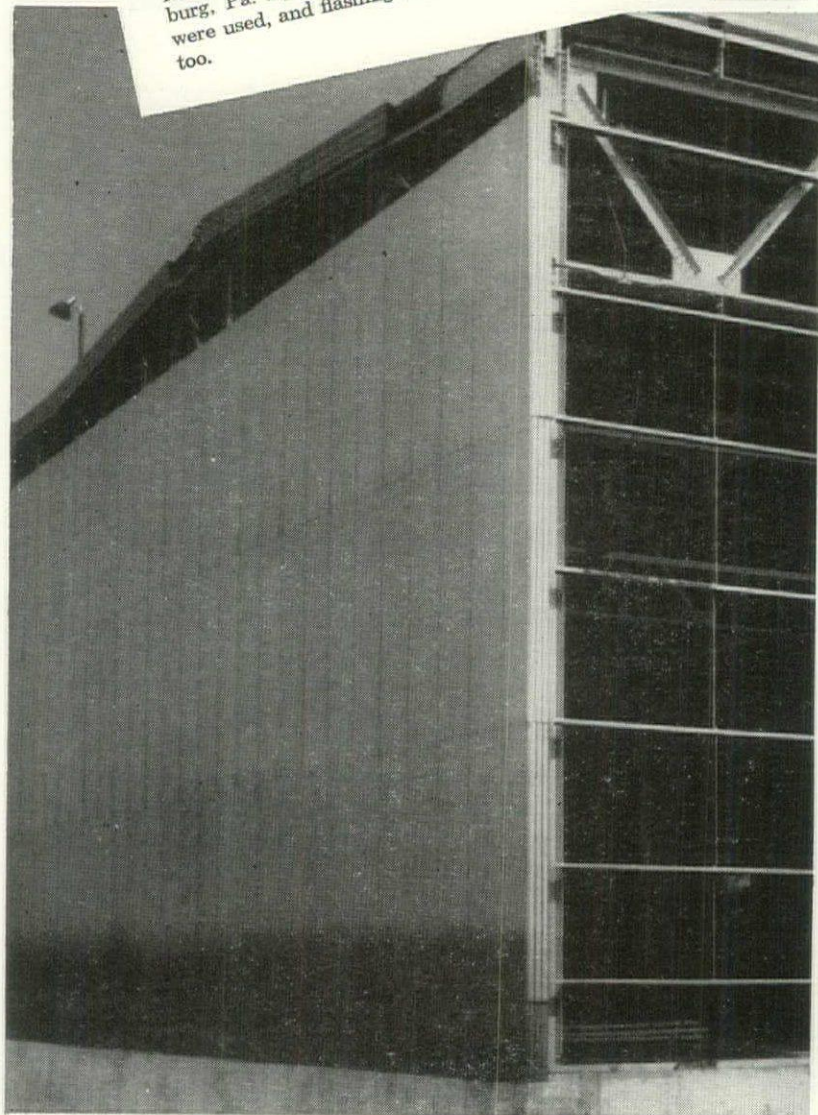
JOHNSON *Automatic Temperature and*
Air Conditioning **CONTROL**
MANUFACTURE • APPLICATION • INSTALLATION • SINCE 1885



THESE VIEWS show 26-gage sheets of Stainless Steel attached to the structural steel framework of the new plant of United States Steel Homes, Inc., near Harrisburg, Pa. Approximately 55 tons of Stainless Steel were used, and flashing and trim are Stainless Steel, too.



Walls of Stainless in this new plant

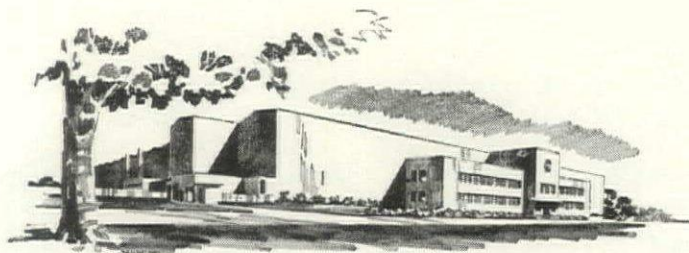


HERE WORKMEN are bolting the 30" corrugated Stainless Steel sheets to the structural steel frame. Erection of Stainless Steel walls is fast and simple; it requires a minimum crew and can be carried out in any type of weather.



SHEETS OF STAINLESS STEEL enclose the 34 to 36 foot walls of the new plant of United States Steel Homes, Inc. Stainless Sheets were fabricated and erected by American Bridge Division of United States Steel Corporation, and the general contractor was Ritter Brothers, Harrisburg.

Steel will keep maintenance costs low of United States Steel Homes, Inc.



HERE is one of the largest industrial structures to emerge from the growing trend toward the use of Stainless Steel for exterior walls. It's the new plant of United States Steel Homes, Inc.—formerly Gunnison Homes, Inc.—located near Harrisburg, Pa.

The plant is an "L"-shaped structure with approximately 310,000 square feet of floor space. The entire exterior is covered with sheets of 26-gage corrugated Stainless Steel, used in 30" widths. Approximately 55 tons of Stainless Steel were used.

Reduction of maintenance costs was the primary reason for selection of Stainless Steel sheets. The walls will not require painting and a long, trouble-free life is anticipated. And, in addition, Stainless Steel gives the plant an attractive over-all appearance.

Stainless Steel sheets and panels offer so many advantages both in construction and through the life of the

building that the cost-per-year is lower than almost any other material. They are considered outstanding developments in architectural circles today.

Panels are available uninsulated or with filler-type insulation between the exterior Stainless sheet and the interior sheet of carbon steel. This makes them suitable for the widest range of building types—plants, warehouses, power plants, office buildings and many others.

If you would like more information on Stainless Steel sheet and panel construction, mail the coupon below.

United States Steel Corporation
525 William Penn Place, Room 2819-K
Pittsburgh 30, Pa.

- ☐ Please send me your new booklet on U-S-S 17 Stainless Steel for industrial buildings.
- ☐ Please arrange to have fabricators of Stainless Steel wall panels send me literature on their particular type of construction.

Name Title

Address

City State

United States Steel produces only the Stainless Steel sheet and strip from which panels of this type are made; the panels themselves are fabricated by a number of our customers.

UNITED STATES STEEL CORPORATION, PITTSBURGH • AMERICAN STEEL & WIRE DIVISION, CLEVELAND • COLUMBIA-GENEVA STEEL DIVISION, SAN FRANCISCO
NATIONAL TUBE DIVISION, PITTSBURGH • TENNESSEE COAL & IRON DIVISION, FAIRFIELD, ALA. • UNITED STATES STEEL SUPPLY DIVISION, WAREHOUSE DISTRIBUTORS
UNITED STATES STEEL EXPORT COMPANY, NEW YORK

U·S·S STAINLESS STEEL

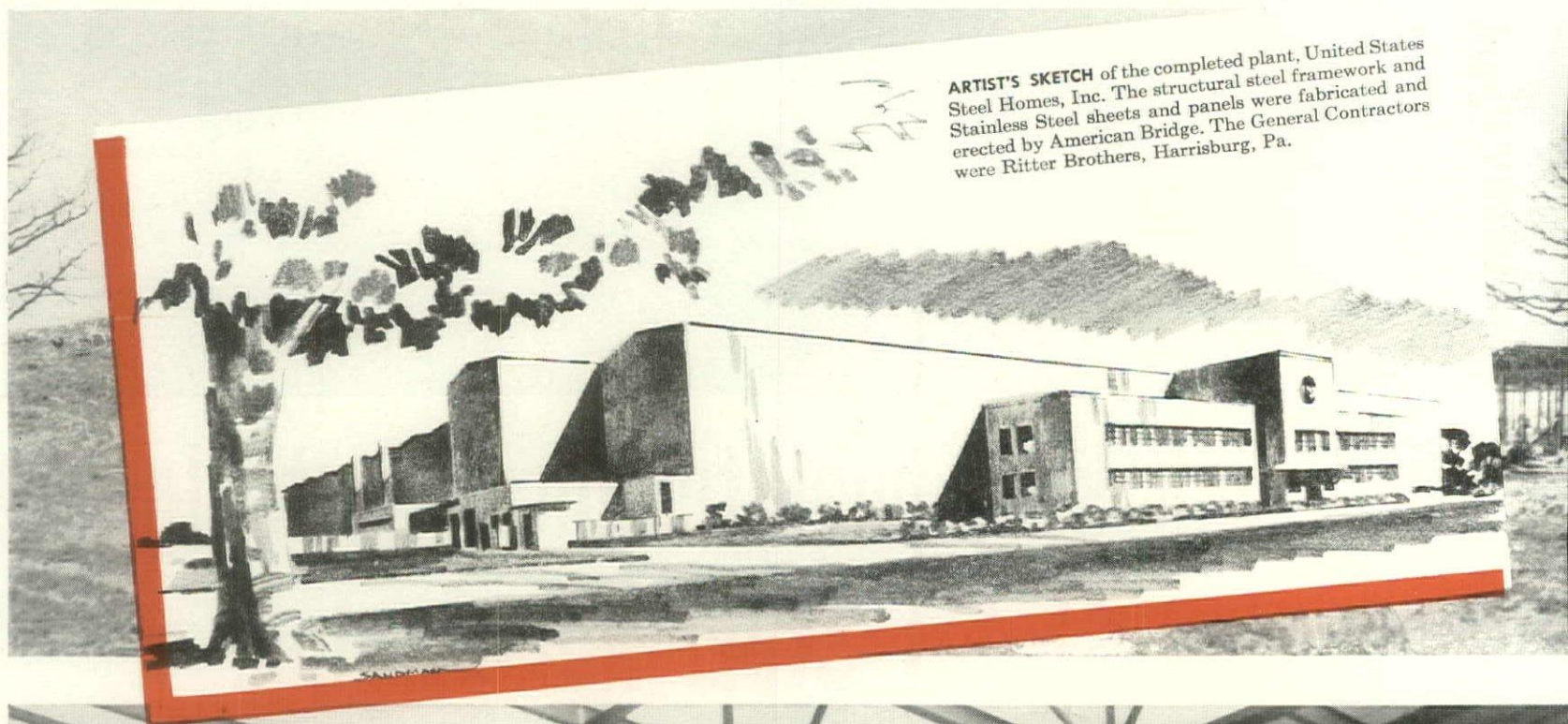
SHEETS • STRIP • PLATES • BARS • BILLETS • PIPE • TUBES • WIRE • SPECIAL SECTIONS

UNITED STATES STEEL



3-2083

Design for lasting economy—



ARTIST'S SKETCH of the completed plant, United States Steel Homes, Inc. The structural steel framework and Stainless Steel sheets and panels were fabricated and erected by American Bridge. The General Contractors were Ritter Brothers, Harrisburg, Pa.



A SECTION OF the 1900-ton U-S-S Structural Steel framework showing the wide spacing of the steel columns. The framework, consisting primarily of columns and trusses, now supports 55 tons of 26-gauge corrugated Stainless Steel sheets.

with lasting strength!



U·S·S Structural Steel

THE UNITED STATES STEEL HOMES plant during construction. The vast, "L"-shaped building covers a floor area of 310,000 square feet, the longest side being 780 feet. The walls vary from 34 to 36 feet in height.

THE structural steel framework of the new plant of United States Steel Homes, Incorporated—formerly Gunnison Homes, Inc.—near Harrisburg, Pennsylvania, is an excellent example of planned economy in permanent construction.

To provide as much unobstructed floor space as possible for the installation of plant machinery, the steel supporting columns were placed at unusually wide intervals—75 feet in one direction, 65 feet in the other. The application of U·S·S Structural Steel—the most economical of load-carrying materials—in such a cost-cutting method of construction, heaped economy upon economy, yet produced in the end an extremely strong, durable building.

And for good reason. Structural steel is tough. It will withstand more abuse than other structural

materials. It effectively resists tension, compression, torsion, and shear. Enclosed in buildings, it will last indefinitely—requiring no maintenance. Equally adaptable to riveting, welding, or bolting, structural steel can be erected in any weather in which men can work. And since steel members are fabricated indoors, weather can have no effect on the quality of workmanship.

For complete information on construction with steel, write today to the United States Steel Corporation, 525 William Penn Place, Room 2819-B, Pittsburgh 30, Pa.

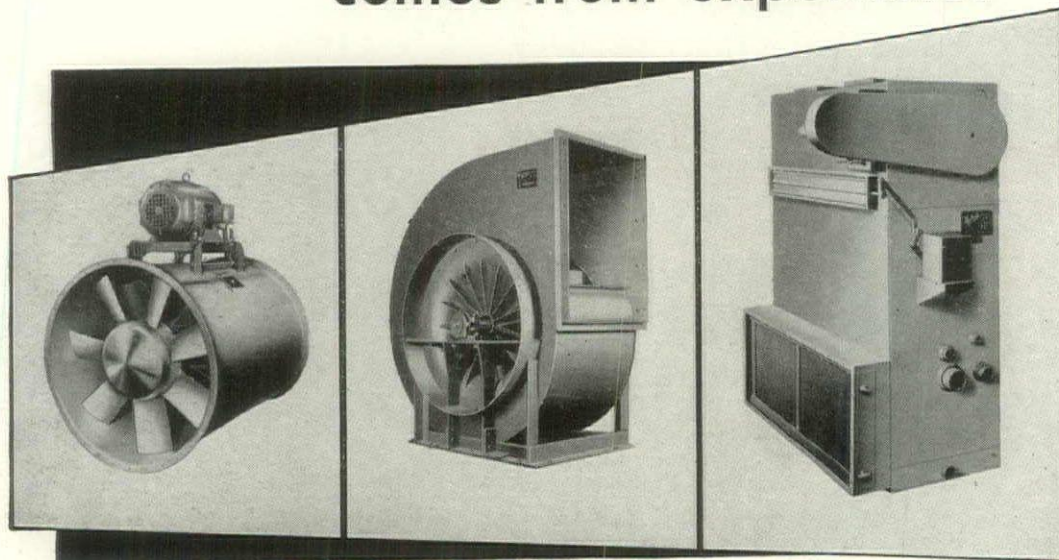
UNITED STATES STEEL CORPORATION, PITTSBURGH
COLUMBIA-GENEVA STEEL DIVISION, SAN FRANCISCO
TENNESSEE COAL & IRON DIVISION, FAIRFIELD, ALA.
UNITED STATES STEEL SUPPLY DIVISION, WAREHOUSE DISTRIBUTORS
UNITED STATES STEEL EXPORT COMPANY, NEW YORK

U·S·S STRUCTURAL STEEL



UNITED STATES STEEL

know-how comes from experience



"First for Fans" is the reputation earned by "Buffalo" for the past 76 years. Above is a "Buffalo" Axial Flow Fan.

The "Buffalo" "Limit-Load" Type BL Fan gives excellent performance on a wide range of ventilating and air conditioning jobs.

"Buffalo" Type VPC vertical comfort conditioning cabinet — a quality unit for large installations

— it's yours in a **"Buffalo"** product

It's easy to design an air handling unit to meet a particular set of conditions—if you have sufficient experience. Without that, even a good engineer would run into some difficulties. And that same experience must not only cover design, it must also embrace the manufacturing problems involved, and the actual operation of the fan or air conditioning unit on the job.

That's what determines the "Q" Factor*, of a fan, an air washer, or any other product, for that matter. In the case of a "Buffalo" Fan, behind it are seventy-six years of conscientious effort to produce the best product we

can build.

Buffalo engineers have long had "know-how"; they produced in 1914 the first edition of "Fan Engineering". They are responsible for the design of much of the major air moving, cleaning and conditioning equipment used in commerce and industry today.

They are ready to work with you to select from our present wide lines, or design specially, any equipment you need for air moving, cleaning or conditioning.

Engineering sales representatives in principal cities are at your service.

* The "Q" Factor—the built-in QUALITY which provides trouble-free satisfaction and long life.

"Buffalo" FIRST FOR FANS
BUFFALO FORGE COMPANY
142 MORTIMER ST. BUFFALO, NEW YORK
PUBLISHERS OF "FAN ENGINEERING" HANDBOOK
Canadian Blower & Forge Co., Ltd., Kitchener, Ont. Sales Representatives in all Principal Cities

VENTILATING AIR CLEANING AIR TEMPERING INDUCED DRAFT EXHAUSTING
FORCED DRAFT COOLING HEATING PRESSURE BLOWING

LETTERS

CORBU'S PARKING LOT

Forum:

As a house dweller who prefers to take a bath in a tub—round bottomed, sloping end, with a rim to hold onto—instead of in a rectangular or triangular box, it seems to me that all these funny modern buildings are based on one invention: the automobile.

These Frank Lloyd Wright buildings are merely garages, whether they are one story high, or 40. One desert dream house even used ramps from floor to floor. And in all the structures, whether yacht clubs, synagogues or apartments, one may park a car on any floor in perfect harmony with the *décor*—chromium trimmings, two-tone colors, streamlined efficiency, etc.

I don't worship the automobile, *à la Américain*, and find this architectural preoccupation with a single instrument as stultifying as it is tiresome. Some months ago you said: "Le Corbusier seeks a further dimension by exploring the sculptural and plastic qualities of architecture." Now, really!

Take a look at Le Corbusier's latest building (AF, Sept. '53) and you will discover it needs only a sign: "Auto Parking: \$1" to reveal the dimension sought.

RALPH P. AIKEN
New Orleans, La.

SAARINEN'S GREAT ARCHITECTS

Forum:

I congratulate you on Eero Saarinen's article (AF, July '53). He has done a very straightforward analysis of the personalities who are influencing the current trend in architectural development. However, through modesty, I think that he failed to mention the great contribution and influence which his father has had on planning and space relationship in large-scale architectural development.

CHARLES GRANGER, architect
Fehr & Granger
Austin, Tex.

Forum:

FORUM has been excellent lately. You seem to get better year after year. The series by Saarinen, etc., has been especially good. . .

WILLIAM METCALF
Dallas, Tex.

Forum:

Mr. Saarinen's thoughtful taking-of-stock was good; particularly good was his term form-giver. ("They are the form-givers. . .")

Beyond the problems of planning and beyond matters of construction and structure, there is ultimately the consideration of resultant form. Form beautiful as form, form beautifully expressive of building's purpose, or of building's structure, or of building's time or place, form debased by cheap formalism.

continued on p. 68

This church saved \$100,000!



Richard Stahl, Architect • Johnson Construction Co., Builder

FOLDOOR played an important part in the plans of Trinity Lutheran Church—plans that provide an excellent example of getting the most construction for the least money. Authorities estimate a more conventional church with equal facilities would have cost an additional \$100,000!

Among the many money-saving innovations are 30 fabric-covered folding doors in the basement. These FOLDOORS give complete flexibility to the entire space—form classrooms, conference rooms or fold to the side to accommodate large meetings. Every foot of floor space is accessible, usable, efficient.

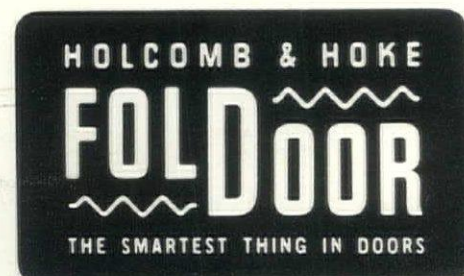
● FOLDOOR was chosen for Trinity Lutheran Church, Springfield, Mo., to give the best folding door appearance and performance. Savings on actual construction costs were considered, too—FOLDOOR saved on the cost of walls and partitions, the cost of painting, trimming and hardware.

FOLDOOR's ability to stack into a minimum of 1½" per foot of opening . . . its exclusive cornice that lends a "finished" look to installations . . . its choice of new quality fabrics, equalled by no other folding door manufacturer, its quiet, smooth folding action—are

other reasons why architects and builders everywhere are selecting FOLDOOR to solve their space problems.

Take a tip from others' experiences. Include FOLDOOR in *your* building plans. See Sweet's Catalog and consult your nearest FOLDOOR installing distributor—there's one in every principal city.

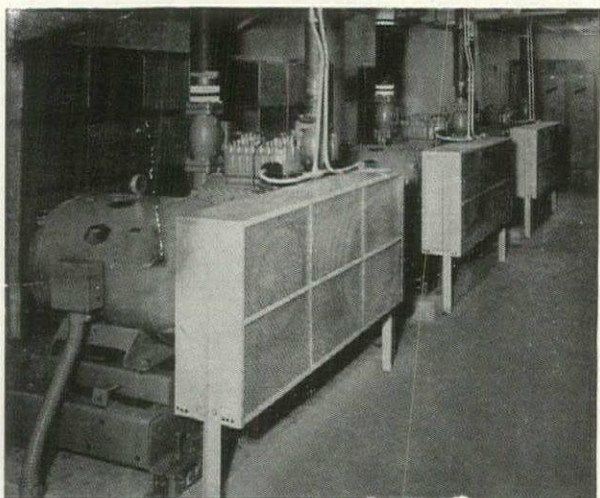
HOLCOMB & HOKE MANUFACTURING COMPANY
1545 VAN BUREN STREET, INDIANAPOLIS, INDIANA





MOVIE STARS SHOP IN COMFORT at the new Robinson's Beverly. Designed by architects Pereira and Luckman, and architect Charles O. Matcham, this modern department store is air conditioned all year-'round by a Worthington system. Installation by Kilpatrick & Co., Alhambra, Calif.

Year-'round air conditioning in Beverly Hills' first department store



HEART OF THE AIR-CONDITIONING SYSTEM at Robinson's Beverly is this Worthington Freon-12 compressor installation. The system circulates 360,000 cfm of heated or cooled air.

Featuring two-level parking and an outdoor garden lounge, Beverly Hills' first department store, the new Robinson's Beverly is completely air-conditioned every day of the year.

Fan and coil units throughout the store are used for both heating and cooling. Flow of steam or chilled water is controlled by change-over valves actuated by four thermostats on each floor.

Chilled water for the air-conditioning system is supplied by three Worthington 125-hp Freon-12 reciprocating compressor units. The Worthington system was chosen by architects Pereira and Luckman, and architect Charles O. Matcham. Said Pereira and Luckman: "All products and equipment were judged in terms of the contribution they make to a smoothly functioning facility for the distribution of merchandise. Ease and economy of maintenance were also major factors in the choice."

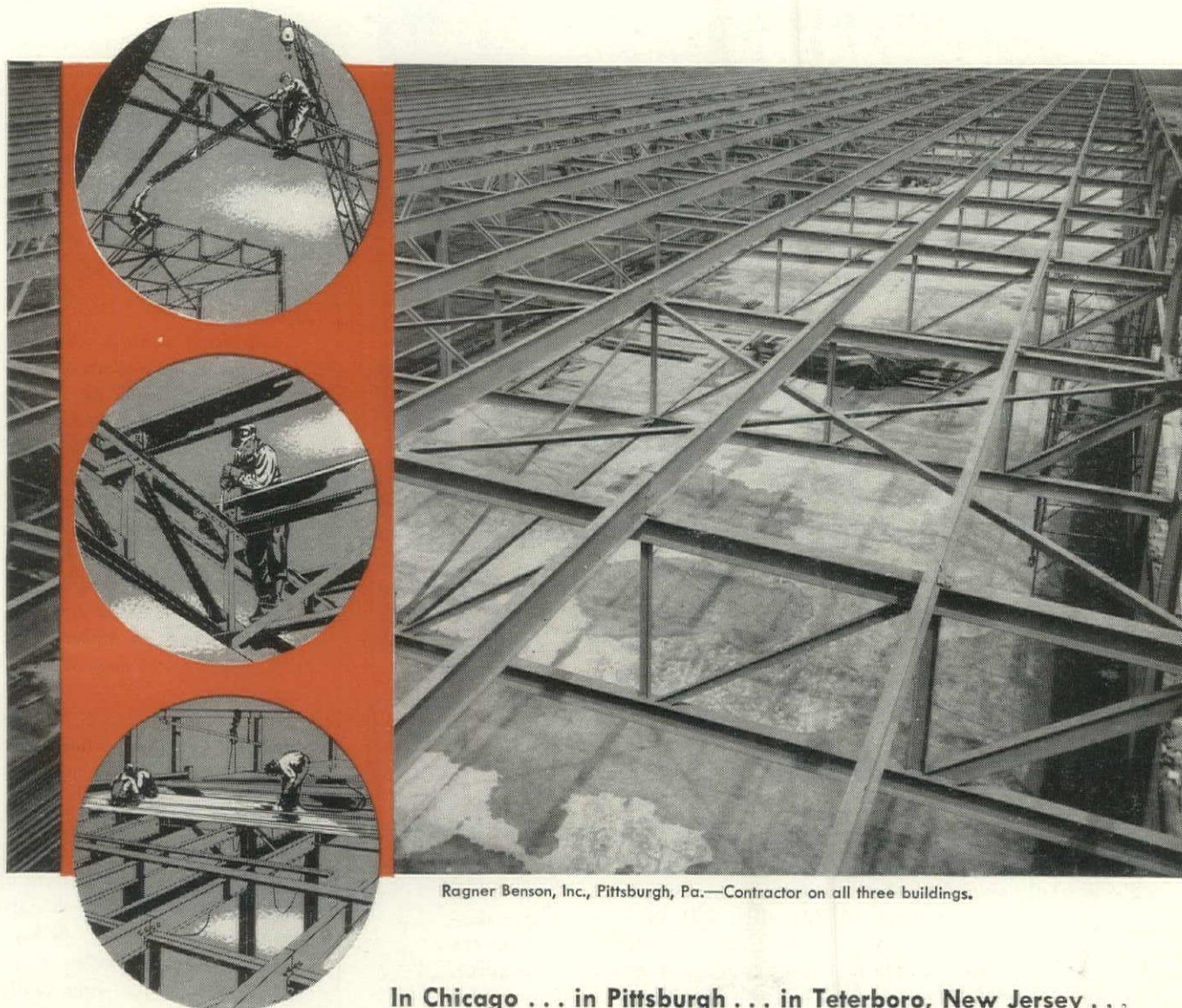
For over half a century, Worthington-engineered air conditioning installations have been serving business and industry. Today, the complete Worthington line is ready to meet any assignment, large or small. So when you think of air conditioning—think of Worthington. Get in touch with your nearest Worthington district office or write to Worthington Corporation, Air Conditioning and Refrigeration Division, Section A.3.55, Harrison, New Jersey.

A.3.55

WORTHINGTON



CLIMATE ENGINEERS TO INDUSTRY, BUSINESS AND THE HOME



Ragner Benson, Inc., Pittsburgh, Pa.—Contractor on all three buildings.

In Chicago . . . in Pittsburgh . . . in Teterboro, New Jersey . . .

the Ford Motor Company uses **J&L JUNIOR BEAMS**

Three new Parts Depots now being built for the Ford Motor Company illustrate the versatility and adaptability of J&L JUNIOR BEAMS for all types of building construction. More and more architects, builders and contractors are recommending lightweight J&L JUNIOR BEAMS to solve their design problems.

Besides fast, economical construction—JUNIOR BEAMS allow for maximum safety, permanence of construction, functionality of design—and, still maintain a low over-all cost.

You'll also be interested in these other important

features offered by J&L JUNIOR BEAMS. They are:

EASY TO INSTALL	SHRINK PROOF
RIGID	FIRE PROOF
VIBRATION RESISTANT	VERMIN PROOF

and have the **LOWEST DEFLECTION FACTOR OF ANY STRUCTURAL SECTION OF EQUIVALENT WEIGHT.**

Write today for our new booklet covering J&L JUNIOR BEAMS AND CHANNELS. It shows how JUNIOR BEAMS are used as floor joists and roof purlins, with loading and spacing tables for various spans.



**JONES & LAUGHLIN
STEEL CORPORATION**
PITTSBURGH

Jones & Laughlin Steel Corporation
491 Gateway Center, Pittsburgh 30, Pennsylvania

Please send me a copy of the booklet covering J&L JUNIOR BEAMS AND CHANNELS.

Name

Company

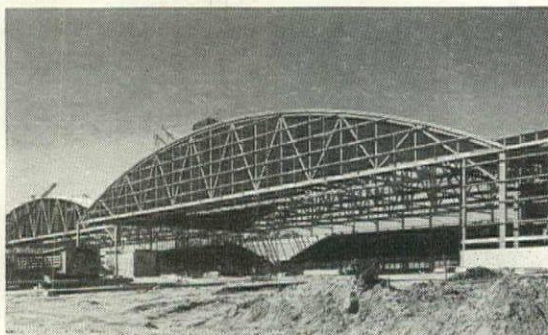
Address



WE'VE BEEN
GROUNDED! WE
CAN'T HANG AROUND
THIS MINALITH
FLAME-PROOFED
HANGAR...



Two views of Westchester County's new airport hangars. Fire can't spread to the roof structure because Minalith-treated wood in columns and braces won't carry flame.



How MINALITH* protects these record-spanning airport hangars

New York's Westchester County has some interesting new hangars in its airport. The clear span of each of the bays is 250 feet... the world's clear-span record for wooden structures. This figure exceeds by 12 feet a blimp hangar's previous record of a 238-foot clear span.

And equally interesting is the built-in method of fire protection for these immense wooden structures. As a sure means of preventing a possible fire from spreading upward to the roof, all wood below the bottom chord of the arches, including the laminated timber columns, was pressure-impregnated with fire-retarding Minalith.

Listed by Underwriters' Laboratories, Minalith also meets Federal specifications for fire re-

tardants. Wood treated with Minalith will not support combustion... it will char slowly where flame touches it, but will not ignite. During a fire, Minalith-treated lumber maintains its load-bearing strength without sudden collapse. As a plus-value, Minalith also protects wood from decay organisms and insect attack. And Minalith has no undesirable effects on lumber, keeping it clean for handling and completely paintable.

Minalith-treated lumber is a product of American Lumber and Treating Company, who also produces Wolmanized* preservative-treated lumber. There are Minalith and Wolman treatment plants in all parts of the country. For further information write:

American Lumber & Treating Company

General Offices: 1601 McCormick Building, Chicago 4, Illinois

Offices: Little Rock, Arkansas • Portland, Oregon • Boston • Los Angeles
San Francisco • Baltimore • New York • Jacksonville, Florida • Seattle



Producers of the Original

MINALITH
FLAME PROOFED
LUMBER

a companion product to
Wolmanized
PRESSURE TREATED
Lumber

* Reg. U. S. Pat. Off.

LETTERS *continued*

Be it successful or otherwise, it is this fundamental quality which speaks most directly to people, to everybody. It is through form that architecture may realize the fulfillment of itself as a creative human activity.

CHARLES B. LOOKER
*Assistant professor of architecture
University of Illinois
Urbana, Ill.*

Forum:

Saaren's considerations on the present and future of modern architecture are so interesting as well as important that I'm translating them to Spanish, doing my best to obtain a careful exposition of the beautiful and high ideas he has meant. I intend to read them in some special classes we are preparing at the Faculty of Architecture.

I congratulate you heartily for the idea of starting this series of discussions that will contribute to a better understanding of the different trends in modern architecture, and thus a better and more livable world will be built.

S. BERENSOHN
Buenos Aires, Argentina

KENNEDY'S ISMS

Forum:

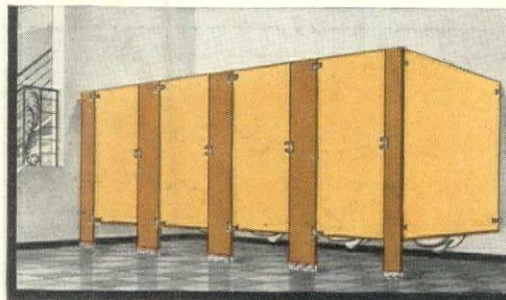
As an English visitor working in the San Francisco Bay Area, I should like to comment on Mr. Robert Woods Kennedy's article in the September FORUM.

Mr. Kennedy has some pertinent analyses to make: in particular, his analysis of the Empiricist movement is much to the point, but his proposals for a newer approach to design are singularly disappointing and shallow. They seem to consist primarily in classifying with a label a style which does not yet exist. This is not scholarship but question-begging, and he forgets, as so many "scholars" do, that architecture exists only in buildings. Architecture is realized form, and style is the characteristic of that form, characteristic of a time, a place or a personality. To coin the word Directivism and to define it as the fuller understanding of various social, esthetic and psychological platitudes helps little.

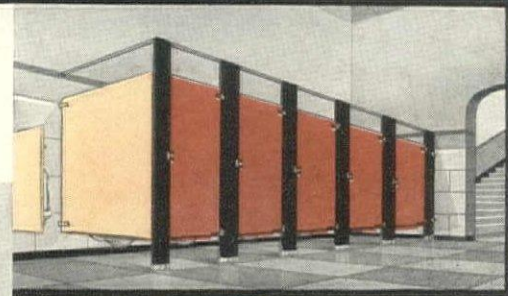
Mr. Kennedy, like almost everyone else nowadays, seems to accept the International Style as something established, understood and dying. This is nonsense. The International Style was a slogan coined by critics—not the architects—who wished to join in a war against the dead architecture of the early twentieth century. It was a rallying cry: in fact, the pioneer personalities who really fought the war, in their architecture, have gone on developing in a personal, not an international, style. The same September FORUM (p. 142) shows Le Corbusier responding as keenly to the problems of India as any

continued on p. 74

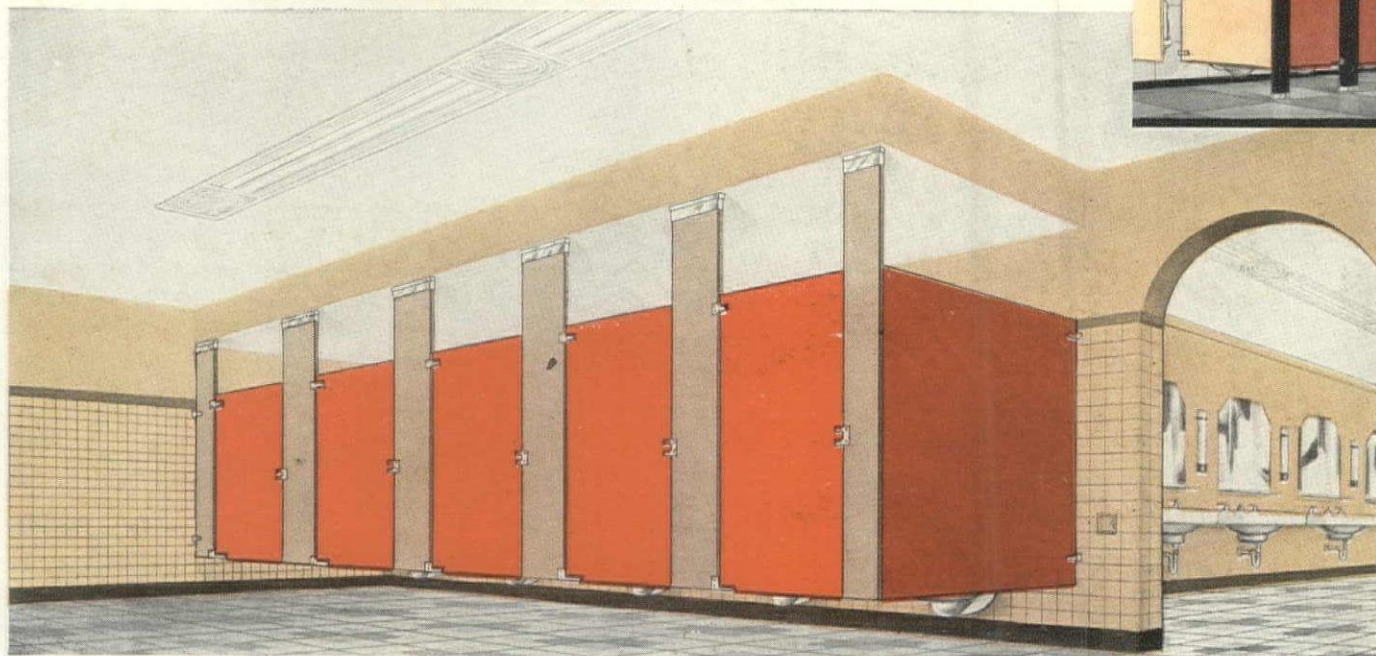
*Untimely obsolescence
of rest rooms usually
occurs when and
where it is invited...*



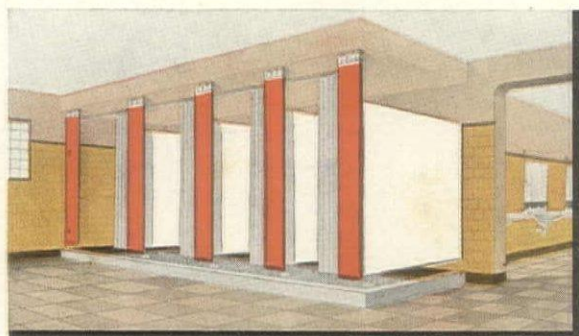
Sanymetal NORM-ANDIE Type Toilet Compartments endow a rest room environment with dignity and good taste.



Sanymetal ACADEMY Type Toilet Compartments are suitable for conservative but modern rest room environments.



Sanymetal CENTURY Type Ceiling Hung Toilet Compartments offer the utmost in sanitation and provide modern, distinctive rest room environments for schools, institutions, terminals and other public buildings.



Sanymetal CENTURY Type (Ceiling Hung) Shower Stalls of Sanymetal "Porcena" (Vitreous Porcelain on Steel) Partitions and Pilasters, as arranged for a typical club installation. Also available in Sanymetal "Tenac" (synthetic enamel baked-on over Galvanized, Bonderized* Steel).

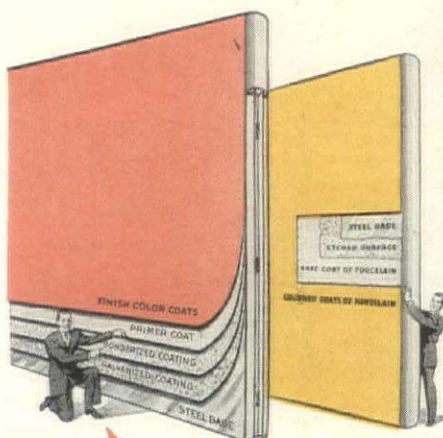
**This is Sanymetal
"PORCENA"**

(Vitreous Porcelain on Steel)
A metal base material that is impervious to moisture, odors, cleaning and uric acids, oils and grease. It is rust proof. Available in 21 glistening colors.

**This is Sanymetal
"TENAC"**

(Baked-On Paint Enamel over Galvanized, Bonderized* Steel)

A metal base material that is notable for the positive adhesion of the baked-on paint enamel to the metal and its resistance to corrosion. Its lustrous, protective finish assures long-lasting newness. Available in 21 gleaming colors.



The bare functional type of rest room is no longer adequate. It is obsolete before it is completed according to today's standards. To insure against untimely obsolescence consider the installation of wall-type plumbing fixtures and ceiling-hung toilet compartments. Such an installation provides a fixture free floor—a basic necessity for a high standard of sanitation and reducing maintenance costs to an all-time low.

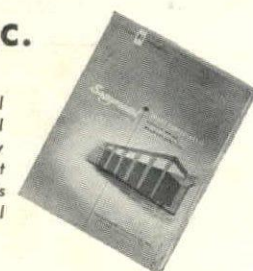
The rest room environment that stays new is the rest room in which the most suitable type of toilet compartment available has been installed. Sanymetal offers several different types of toilet compartments for creating the most suitable rest room environment for each type of building. Sanymetal also offers and recommends Two Full Purpose Metal Base Materials which combine colorful attractiveness with long years of service life and effect important day-after-day savings in cleaning and maintenance costs. These Two Full Purpose Metal Base Materials—Sanymetal "Tenac" (Galvanized, Bonderized* Steel), a highly corrosion-resistant material; and Sanymetal "Porcena" (Vitreous Porcelain on Steel), the ageless and fadeless, rustproof material—represent years of engineering research and skillful adaptation by Sanymetal engineers of corrosion-resistant steels to the fabrication of new and different types of toilet compartments. There is no other material that equals Sanymetal "Porcena" (Vitreous Porcelain on Steel). Sanymetal Toilet Compartments are also available in cold rolled steel.

Sanymetal Toilet Compartments and Shower Stalls embody the results of over 39 years of specialized skill and experience in making over 500,000 toilet compartment and shower stall installations. Ask the Sanymetal representative in your vicinity to demonstrate the worthiness of Sanymetal Toilet Compartments as protection against untimely obsolescence.

THE SANYMETAL PRODUCTS CO., INC.

1687 Urbana Road • Cleveland 12, Ohio

Sanymetal Toilet Compartments embody the results of specialized skill and experience in fabricating over 500,000 toilet compartments in all types of buildings. Ask the Sanymetal representative in your vicinity for information about planning suitable rest room environments that will always stay new. Refer to Sanymetal Catalog ^{21b}/_{Sa} in Sweet's Architectural File for 1953 and Catalog ^{13a}/_{Sa} in Sweet's Industrial File for 1953.



Sanymetal*

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

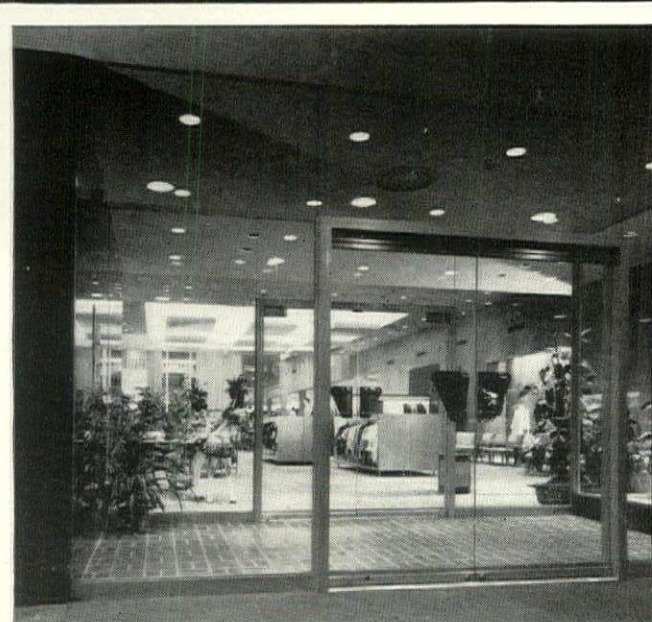
*Treated with "Bonderite", a product of Parker Rust Proof Company

**TOILET COMPARTMENTS
SHOWER STALLS AND
DRESSING ROOMS**

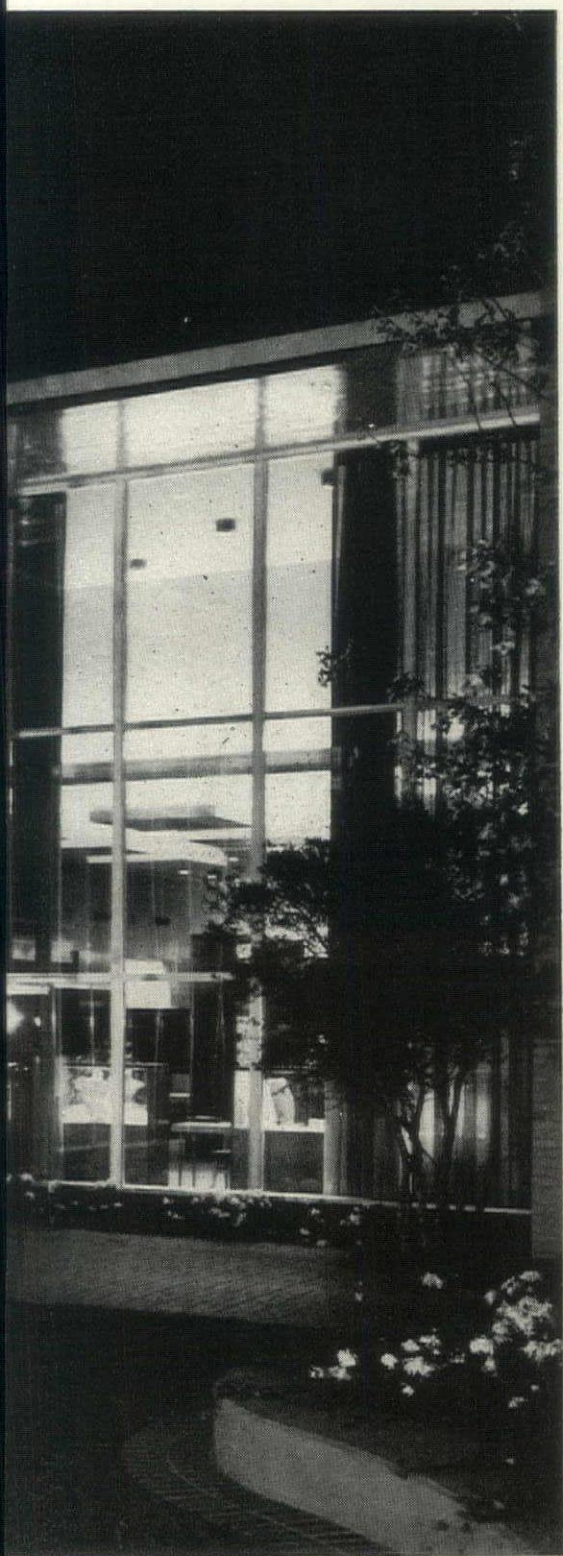
Typical applications of Pittsburgh Glass in recent



79 SOLEX-TWINDOW units make up this patio wall of the Neiman-Marcus Preston Center Store at Dallas, Texas. The result is a pleasant shopping environment, the best possible display of the merchandise, protection to fabrics and other materials against excessive fading and bleaching by intense sunlight. The inset shows a detail of one of the entrances in which Herculite Doors are utilized. Other Pittsburgh Glass products used here include Polished Plate Glass, Mirrors, and Heavy Rough Plate for the interior stair railing. Architects: De Witt and Swank, Dallas, Texas; Interior Designer: Eleanor LeMaire, New York City.



construction



THIS INTERESTING entrance at the Schmidt Provision Company, Toledo, Ohio, is completely walled with Pittsburgh Plate Glass (approximately 20 ft. wide and 20 ft. high—running from the floor to the ceiling). It is set in Pittco De Luxe Sash No. 12 C and divided with horizontal and vertical mullions of No. 24 CTC. The doorway itself is a standard Pittsburgh Doorway, Style No. 16. Architect: Karl B. Hoke, Toledo, Ohio.



SOLEX-TWINDOW gives all the advantages of Twindow—Pittsburgh's window with built-in insulation—plus the solar-heat-absorbing, sun-glare-reducing properties of Sorex. As shown by this cutaway view, these units consist of two panes. The outer is Sorex, the inner clear Plate Glass. In between is a sealed-in air space. A stainless steel frame protects the seal and glass edges, and it also makes handling safe, quick and easy.

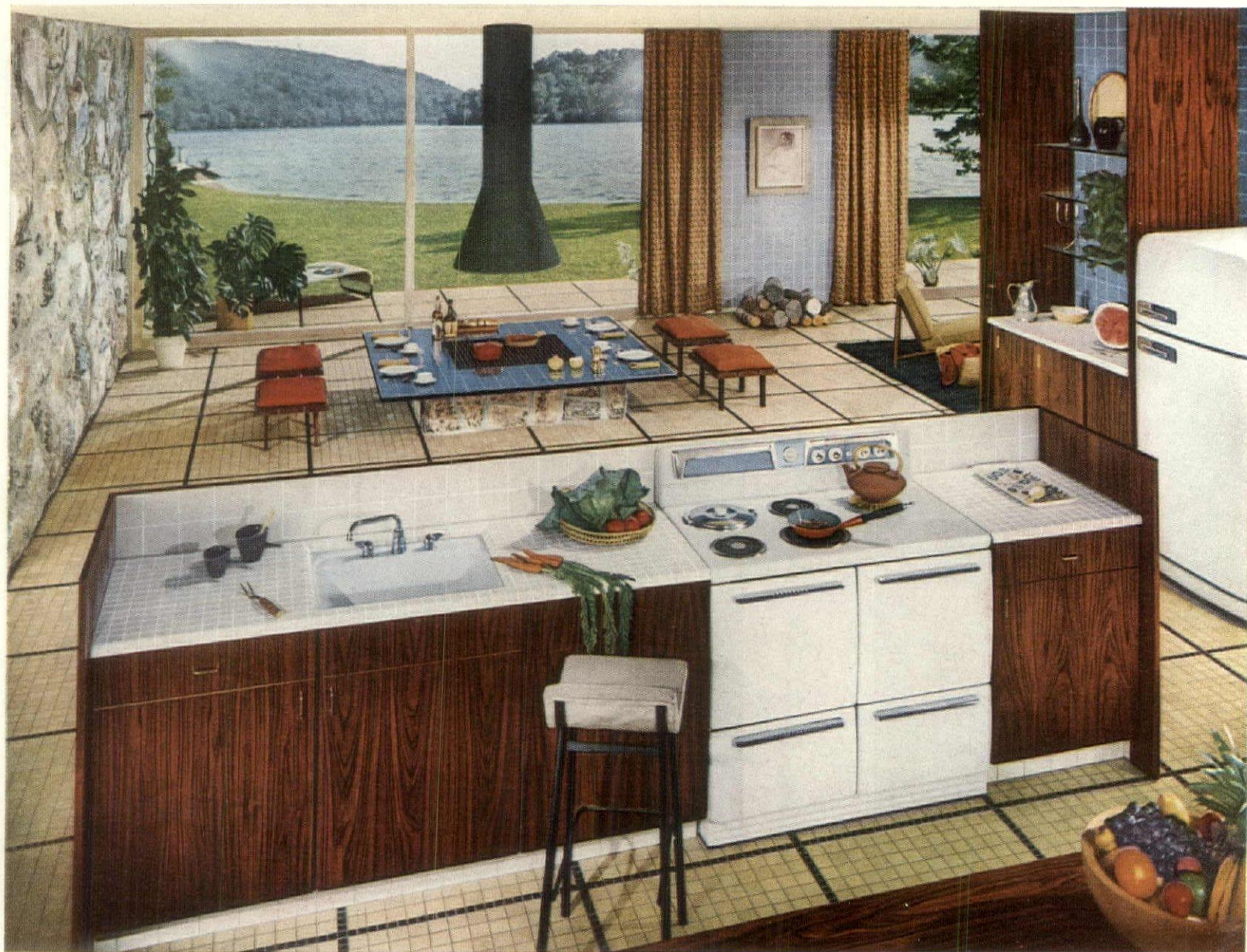
Design it better with **Pittsburgh Glass**



Your Sweet's Catalog File contains detailed information on all Pittsburgh Plate Glass Company products . . . Sections 7a, 13e, 15b, 16b, 21.
PAINTS • GLASS • CHEMICALS • BRUSHES • PLASTICS • FIBER GLASS

PITTSBURGH PLATE GLASS COMPANY

IN CANADA: CANADIAN PITTSBURGH INDUSTRIES LIMITED

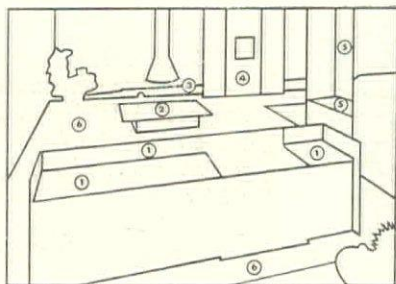


Design for a family-living kitchen by George Nemeny, A.I.A.

**"CLAY TILE...A WARM, COLORFUL MATERIAL...
FITS INTO MODERN FAMILY LIVING!"**

George Nemeny

key to
clay tile
service
areas:



1. Clay tile countertop and splash back. 2. Informal clay tile dining fireplace. 3. Clay tile patio area. 4. Decorative clay tile wall panel. 5. Clay tile cupboard-workspace. 6. Practical clay tile floors.

Tile Council of America, Room 3401, 10 East 40th Street, New York 16, N. Y. or Room 433, 727 West Seventh Street, Los Angeles, Calif.

Architect Nemeny's "family-living" kitchen shows you how colorful clay tile can spark new decorative and functional ideas for modern living. In new construction or in remodelling, clay tile will give your clients lifetime cleaning convenience and beauty, freedom from waxing and refinishing, and surfaces that resist heat, moisture, scratching and fading practically forever.

In your next project—residential, industrial or institutional—be sure to obtain comparative cost estimates. In some installations, clay tile actually costs less than substitute materials. When designing or building, consider clay tile's qualities and brilliant color range.

The Modern Style is

GENUINE CLAY

tile

PARTICIPATING COMPANIES: American Encaustic Tiling Co. • Architectural Tiling Co., Inc. • Atlantic Tile Mfg. Co. • B. Mifflin Hood Co. • Cambridge Tile Mfg. Co. • Carlyle Tile Co. • General Tile Corp. • Gladding, McBean & Co. • Mosaic Tile Company • Murray Tile Co., Inc. • National Tile & Mfg. Co. • Olean Tile Co. • Pacific Tile and Porcelain Co. • Pomona Tile Mfg. Co. • Robertson Mfg. Co. • Royal Tile Manufacturing Co. • Summitville Tiles, Inc. • United States Quarry Tile Co. • Winburn Tile Mfg. Co.

ANOTHER CASE OF

Copper
WHERE IT COUNTS

UNITED NATIONS GENERAL ASSEMBLY
BUILDING, NEW YORK, N. Y.



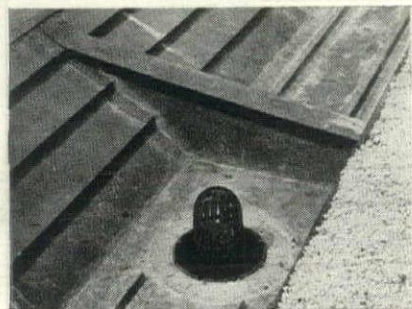
"COPPER SOLDERS TO PERFECTION," sheet metal contractor on this job, A. MUNDER & SONS, L. I. City, N. Y., will tell you. Because of the roof design, gutters had to be tremendous, measuring 2' wide at the bottom and 5' across the top, with runs on the long sides of the building of 350'.



U. N. GENERAL ASSEMBLY BUILDING. Architects—U. N. HEADQUARTERS PLANNING OFFICE. WALLACE K. HARRISON, Director of Planning.

HAVE you ever noticed in structures built to last, such as state capitols, libraries, churches, and schools, that invariably copper gets the call? There are valid reasons for this. The enduring qualities of copper, tested and proven by centuries of use, are indisputable. Copper cannot rust or rot, needs no painting, in fact improves with age by taking on a green patina that adds protection and beauty. And sheet metal contractors prefer it because it is readily worked and takes solder like no other metal. In fact, there is not another single metal or alloy that has all the desirable construction characteristics of copper.

It is for your protection and that of your clients to specify proven products such as copper. And now, with restrictions on the use of copper ended there isn't any reason why your next job can't have the many benefits of Revere Copper. See the Revere Distributor nearest you about Revere Sheet, Strip or Roll Copper for flashing. Be sure to ask him about the money-saving advantages of Revere Keystone Thru-Wall Flashing.*



DETAIL OF EXPANSION JOINT in box gutter atop the United Nations General Assembly Building. 47,000 lbs. of 20 oz. Revere Lead Coated Copper was used for gutters and flashing.



ENDURING LEAD COATED COPPER also covers the dome of this famous building. "Building to last" invariably means building with copper.

*Patented

REVERE

COPPER AND BRASS INCORPORATED

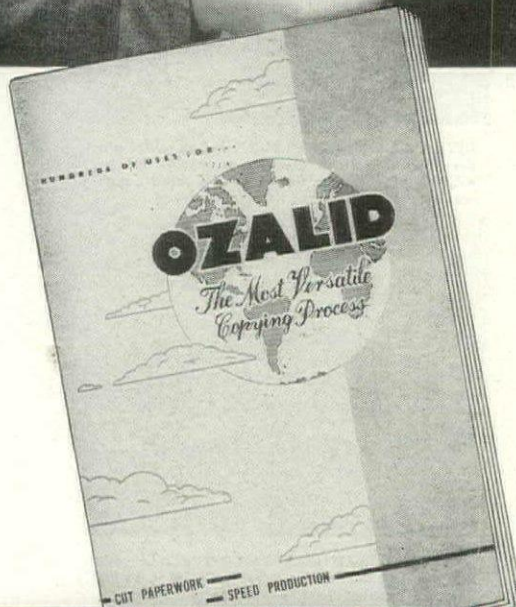
Founded by Paul Revere in 1801

230 Park Avenue, New York 17, N. Y.

Mills: Baltimore, Md.; Chicago and Clinton, Ill.; Detroit, Mich.; Los Angeles and Riverside, Calif.; New Bedford, Mass.; Rome, N. Y.—Sales Offices in Principal Cities, Distributors Everywhere

SEE "MEET THE PRESS" ON NBC TELEVISION, SUNDAYS

See How You Can Save With OZALID Copies!



Write Today for free, 48-page,
"100's of Uses" Booklet Showing
How Direct Copies with Ozalid
Speed Paperwork and Cut Costs
in All Departments.

OZALID, Dept. AF-5,
General Aniline and Film Corp.
Johnson City, N. Y.

Gentlemen:
Please send me "100's of Uses for
Ozalid."

Name.....

Company.....

Position.....

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

Or call the OZALID distributor listed in
your local classified telephone directory.

Cut Copying Costs use
OZALID

Johnson City, N. Y. A Division of General Aniline & Film Corporation.
"From Research to Reality."
Ozalid in Canada—Hughes Owens Co., Ltd., Montreal.

LETTERS *continued*

Bay Area Empiricist—without losing any of his highly individual style. The International Style has become a journalistic *cliché*—a convenient label to obviate the need for perceptive analysis.

The danger of articles such as Mr. Kennedy's is that they tend to codify into "styles" trends that are all small parts of the architectural revolution in which we are still embroiled. Greater sensitivity and depth in thought and analysis are needed at the moment: classification into stock tables of "ists" and "isms" inhibits this and contributes nothing. It is the scholarship of the child's history book of 50 years ago.

CHRISTOPHER ARNOLD
San Francisco, Calif.

Forum:

From what I could make out, Mr. Kennedy is against everything: "traditionalism," "internationalism"—their countermovement: "new empiricism." And what does Mr. Kennedy substitute? Why, his own private "ism" of course—"directivism": the "ordered and controllable" type architecture. What sort of gibberish is this? And who is Mr. Kennedy kidding?

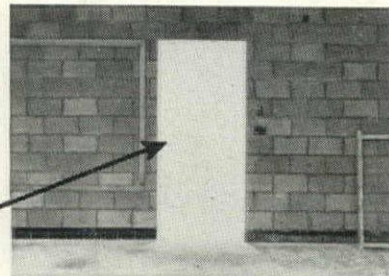
It seems to be the mode today among our current group of crew-cut intellectuals for long discourses on "what's wrong with modern architecture." I can't pick up a copy of the FORUM these days without being subjected to some smart-aleck letter—by an embryo architect (as they love to call themselves) debunking the work of one of the modern architectural masters (see Ernest Wright's letter, same issue). And their favorite target these days seems to be Mies van der Rohe. Always attack the original thinker. There is no criteria to judge him by. And you can use such clever terms as: "contemporaneity," "internationalists' race with dogma," "futuristic," "primitive magic."

I refer Mr. Kennedy, Mr. Ernest Wright and all the clever critics of my generation to this same issue of FORUM: p. 114—I. M. Pei's masterful Mile High Center; p. 124—Philip Johnson's fine office building; p. 134—Gordon Bunshaft's excellent project for a bank building. What greater tribute does Mies van der Rohe need? These buildings would never have been possible without the exploratory work of this "international traditionalist." Thanks to him, twentieth-century architecture has finally come of age. It's good, it's clean, it's machine-made, it's "modernistic"—and I'm glad to be practicing architecture today, notwithstanding the fuss and furor created by a bunch of Calamity Janes.

LEONARD BROOKS FREEMAN
Director of architecture
The American Museum of Natural History
New York, N. Y.

continued on p. 78

You can save \$100 here



... if you fill it with this

In fact you can save up to \$100 for *every* unfilled door opening in your new building. You'll save that much on installed cost by filling that opening with a Fenestra* Hollow Metal Door-Frame-Hardware Unit instead of some other kind of hollow metal door.

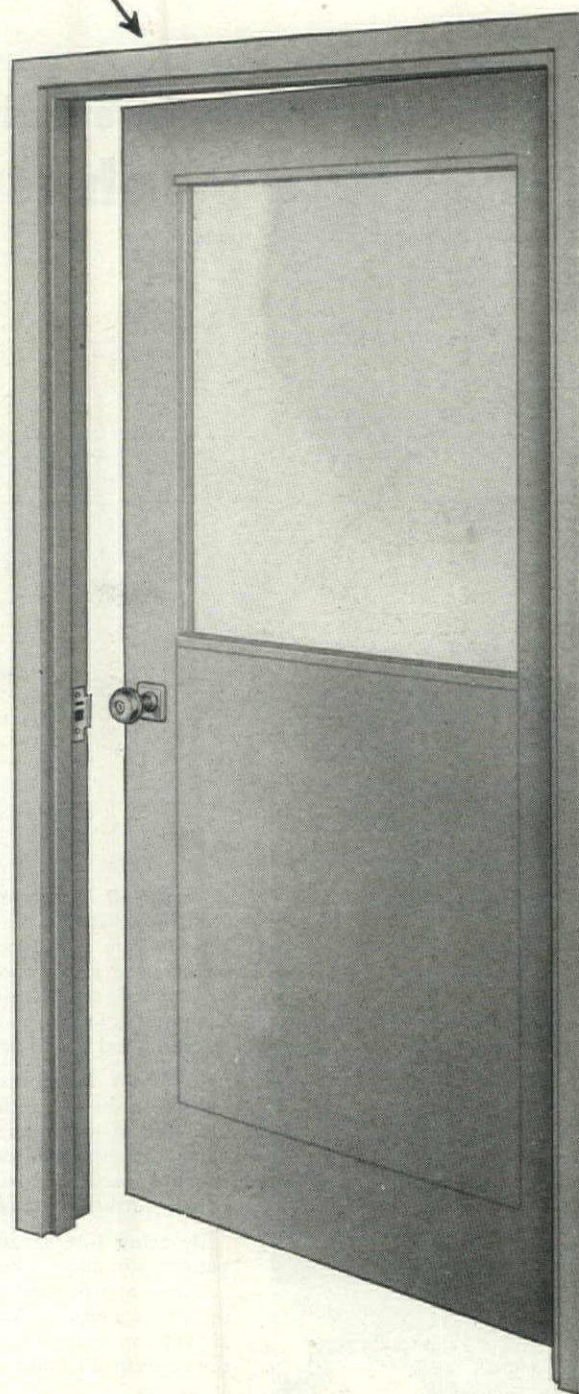
HERE'S WHY:

Fenestra Hollow Metal Flush Doors cost less to buy because they are mass produced on special jigs that cut out a lot of expensive time and labor. This system was born of Fenestra's years of metal fabricating experience.

You save on installation cost because these handsome doors come complete with strong, prefitted, prime-painted steel frames and shining hardware. Again time and labor are saved. There's no cutting or fitting—the door is in and in use a lot more quickly.

You save maintenance costs because Fenestra Hollow Metal Doors can't warp, swell, stick or splinter. They always open easily . . . smoothly. And they close quietly, because inside the panels is double insulation.

For strong, solid quality at unusually low cost, check on Fenestra Doors—there's a door for every purpose in the Fenestra line: Entrance Doors, Flush or Regular Interior Doors with glass or metal panels, Doors with the Underwriters' B Label. For pictures and details, write the Detroit Steel Products Company, Dept. AF-11, 2296 East Grand Blvd., Detroit 11, Michigan. *®



Fenestra

HOLLOW METAL DOOR—FRAME—HARDWARE UNITS

... save building time, labor, materials and money

For effective noise control on a low budget
Johns-Manville

*Sanacoustic** units
 in 50-50 pattern

Johns-Manville Sanacoustic in 50-50 pattern controls noise . . . creates a cheerful quiet atmosphere. The units are noncombustible, demountable, easy to clean.



The 50-50 Sanacoustic ceiling is a Johns-Manville development designed to provide the advantages of a standard Sanacoustic application at a substantial saving. It is acoustically efficient . . . and each unit is fireproof, demountable, easy to clean, and has high light reflectivity.

In 50-50 Sanacoustic, approximately half the units are perforated and the remainder of the units are unperforated. They can be installed alternately in a checkerboard design or arranged in other equally attractive patterns.

By using J-M Sanacoustic in a 50-50 pattern you effect a considerable saving . . . the unperforated units cost less than the perforated . . . the rock wool sound absorption pad is not required behind the unperforated unit . . . labor, transpor-

tation and material costs are substantially reduced.

The complete Sanacoustic Unit is manufactured by Johns-Manville. They are readily installed over new or existing ceilings . . . and may be applied directly, or by suspension for easy access to service.

Wherever noise control is desired . . . in hospitals, schools, offices, libraries, etc. . . J-M Sanacoustic in 50-50 pattern provides quiet comfort at modest cost. For complete information, send for the free brochure "Sound Control." Write Johns-Manville, Box 158, Dept. A, New York 16, N. Y. In Canada, write 199 Bay St., Toronto 1, Ont. *Reg. U. S. Pat. Off.



Johns-Manville

40 YEARS OF LEADERSHIP IN THE DEVELOPMENT OF ACOUSTICAL MATERIALS



Union Free High School, Kenosha, Wisc.
Architect: Lawrence Monberg Assoc.,
Milwaukee. Contractor: School District.

Fenestra's New Structural-Acoustical Ceiling Keeps Rooms Quiet . . . Cuts Building Costs

Here's a wonderful, economical way to hush the hubbub in corridors and rooms in the new building you're planning.

Fenestra* Acoustical "AD" Metal Building Panels form acoustical ceiling and structural subfloor or roof—all in one package . . . saving building time, labor, materials and money!

An "AD" Panel is a box beam with a flat surface top and bottom and open space between. The top surface forms the subfloor or roof deck. The perforated bottom surface forms the ceiling. In the open space is glass fiber insulation (see

illustration below).

You can see how a Fenestra combination Structural-Acoustical Ceiling cuts building costs. It is speedily and easily erected—the panels interlock. It is practically indestructible. Bumps and knocks can't hurt it. The acoustical efficiency is not affected by washing or painting. And these panels are noncombustible.

For further information call your Fenestra Representative. Or write Detroit Steel Products Company, Dept. AF-11, 2296 East Grand Blvd., Detroit 11, Michigan.

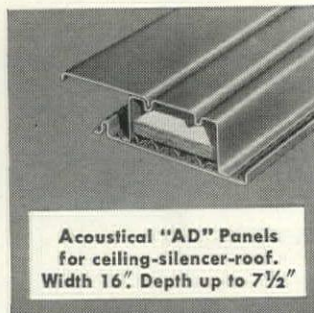
*Trademark

Fenestra

METAL BUILDING PANELS



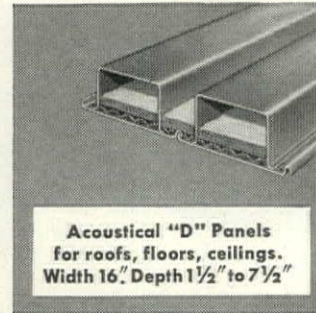
"C" Insulated Wall Panels.
Width 16" Depth is 3".
Steel or aluminum



Acoustical "AD" Panels
for ceiling-silencer-roof.
Width 16". Depth up to 7 1/2"



Acoustical Holorib
for acoustical-structural roof.
Width 18". Depth 1 1/2"



Acoustical "D" Panels
for roofs, floors, ceilings.
Width 16". Depth 1 1/2" to 7 1/2"

where noise
transmission
must be
controlled...let

RIVERBANK
SOUND
INSULATING **DOORS**

share your
responsibility

With RIVERBANK DOORS, there's no need for "guessing" how much noise or sound you can eliminate from doorway openings. These sound insulating doors are pre-measured for sound reduction so that you know in advance just what the final noise factor of the room will be. RIVERBANK DOORS come in 35, 40 and 43 decibel degrees of transmission loss — For example, the noise level from a stenographic room of 70 decibels can be reduced to 30 decibels, or made practically inaudible, by using a RIVERBANK "40" door. Specified by leading architects and acoustical engineers for TV and radio studios, music and band rooms, schools, hospitals, doctors' and private business offices. Write for details or consult ARCHITECTURAL FILE ^{16c} HA



WRITE DEPT. F

HARDWOOD PRODUCTS CORPORATION • NEENAH • WISCONSIN

New Folder
Especially
prepared to
acquaint your
clients with
RIVERBANK
Doors is now
ready — Write
for Free copy.

OFFICES IN
NEW YORK
BOSTON
CHICAGO

HARDWOOD
PRODUCTS
CORPORATION **DOORS**

TV-RADIO
STUDIOS



DOCTORS'
& PRIVATE
OFFICES



HOSPITALS
CLINICS



MUSIC &
BAND
ROOMS



FACTORY
JOB-OFFICES



STANDARD SOLID CORE DOORS, TOO!

In addition to RIVERBANK sound insulating Doors, we specialize in doors such as solid core flush doors, fire doors, X-ray and shielded doors for all types of private and public buildings. Most important to you — all HARDWOOD DOORS are made-to-order for your job!

LETTERS *continued*

PROGRESS OR POVERTY?

Forum:

In a century which saw such experimentalists as Hennebec, Eiffel, Perret and Roebeling soundly develop revolutionary structural systems, it seems at first illogical that the architectural treatment of contemporary building would show such little imagination. What was in effect a vital experimental century in the technical aspects of structure, mechanical equipment and plumbing was, in the treatment of facades, dull and tiresome and conservatively academic in the extreme. It is true that what is best in the last half of the nineteenth century comes from engineers or engineer-architects. The revolution in the outward appearance of architecture is a twentieth-century phenomenon. Let us not, however, praise today's architect for something more than he has done.

The moderns modestly lay claim to having revolutionized architecture and show as proof all the magnificent structures, as indeed they are, that have been built by Gropius and his followers, Le Corbusier and his followers, and the rest. What is it they have done that is so vastly different? When Richardson embraced a pristine style he was merely agreeing with and conforming to a puritanical resurgence which is recorded in the roll books of all the sects of the period. Skirts were long, men were men, and boxing became a popular sport. Sullivan and then Wright saw that there was an inherent economic advantage to these structural advances which were being made, and they planned to use them. Sullivan never forgot his Queen Anne or his Gaudiesque love of nature and Wright was there to lay foundations for his Art Nouveau style, with which he is still playing. What Sullivan and Wright did was begin to develop the possibilities inherent in exposing structure. To be sure, as cast-iron frames were replaced by structural steel, they were covered with period skins but the skeleton was there and *that was the great contribution.*

To the twentieth century came the glory. Her builders, her architects are now great because they removed the skin and let the bones show through. Through glass, through steel, through concrete the ossature now speaks frankly. Every major structural development with the possible exception of prestressed concrete, though even that had been done in France, had been experimented with and, to a measure, perfected in the nineteenth century. Why, then, all the praise to "our boys" for peeling a frame?

Brunelleschi receives his due praise because he achieved the first practical "space-frame." Michelangelo receives his, not because he exposed it, but because he brought a new dimension to architecture. What we moderns must do is bring a new dimension

continued on p. 82

A plumb-bob view from the ceiling of the Grand Central Terminal, New York City, showing the marble floor which has resisted 400 million scraping feet a year for over 40 years. Terminal completed by Warren and Wetmore, Architects.



The World's Greatest Proving Ground for marble

There is probably no other building in the world which could have provided so exacting a test for any interior finishing material as this great terminal, where marble is used in such profusion. And no other finishing material for floors or wall surfaces could have as effectively met that challenge. Today, after being subjected for 40 years to an annual traffic flow thirty percent greater than the entire population of the United States, the marble is still beautiful — proof of the effectiveness of simple, systematic maintenance.

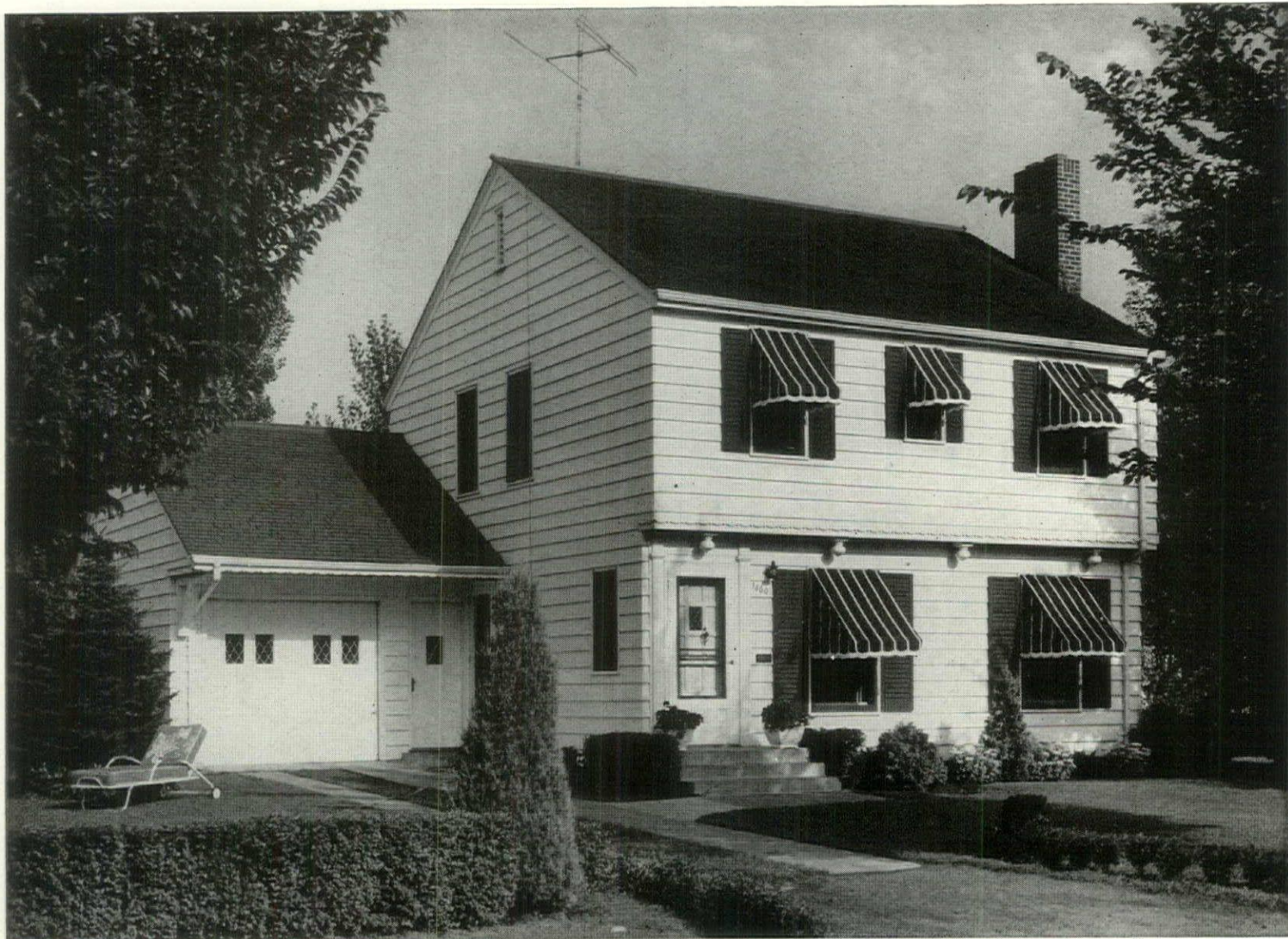
FREE brochures (new issues): Marble Forecast 1953-1954;
"Marble For The Home" in full color—write:

MARBLE



INSTITUTE OF AMERICA, INC.

108 FORSTER AVENUE, MOUNT VERNON, NEW YORK



Another practical use for West Coast Hemlock ...the beautiful "Ability Wood"

Here is a softwood with so many uses that it is often called the "Ability Wood"—Weyerhaeuser 4-Square West Coast Hemlock! As framing, siding, or flooring . . . as paneling, molding or ceiling . . . Hemlock's unique combination of characteristics offers extra value.

Take siding, for example. Bevel or bungalow siding of West Coast Hemlock takes and holds paint or natural

finishes remarkably well, even over knots. It is easy to apply, too, because it is light to handle, and easy to work. Best of all, Hemlock siding stays tightly in place for years and years because it resists splitting, and holds nails tenaciously.

For interior use, such as natural finish paneling or cabinets, Weyerhaeuser 4-Square West Coast Hemlock is a beautiful choice—and economical. Its light, warm color, straight grain and uniform texture add charm and distinction to homes or commercial buildings at modest cost.

It will pay you to acquaint yourself with West Coast Hemlock, the beautiful "Ability Wood." Your local Weyerhaeuser 4-Square Lumber Dealer will be glad to show you samples. Write Dept. H.A.F. for descriptive literature.

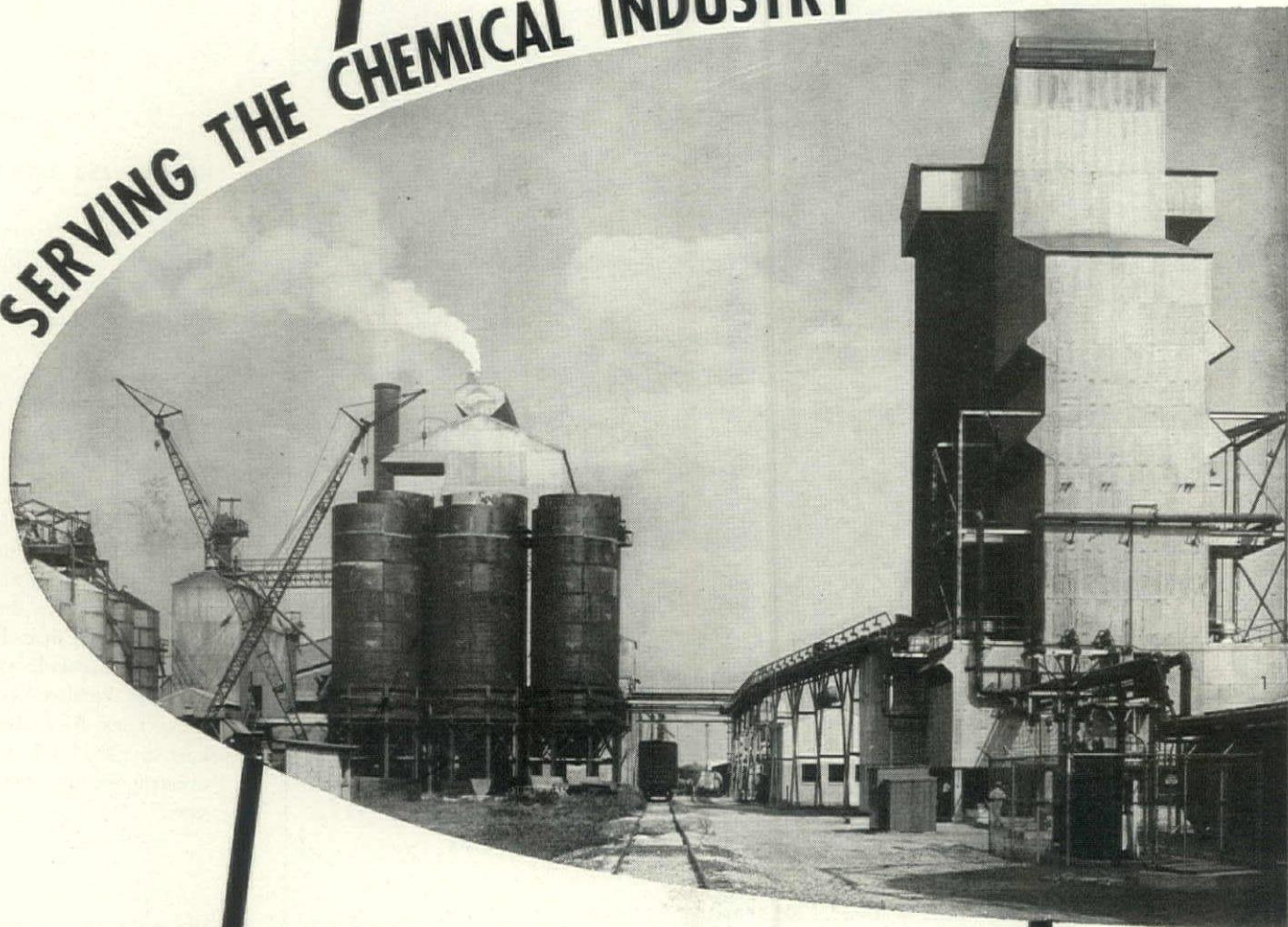
PROPER PROCESSING OF HEMLOCK

● Through scientific logging, accurate sawing, controlled kiln seasoning, precision surfacing, proper grading, careful handling and shipping, Weyerhaeuser provides this abundant "Ability Wood" in a wide range of 4-Square West Coast Hemlock lumber products.

Weyerhaeuser 4-Square Lumber

WEYERHAEUSER SALES CO. • ST. PAUL 1, MINN.

SERVING THE CHEMICAL INDUSTRY



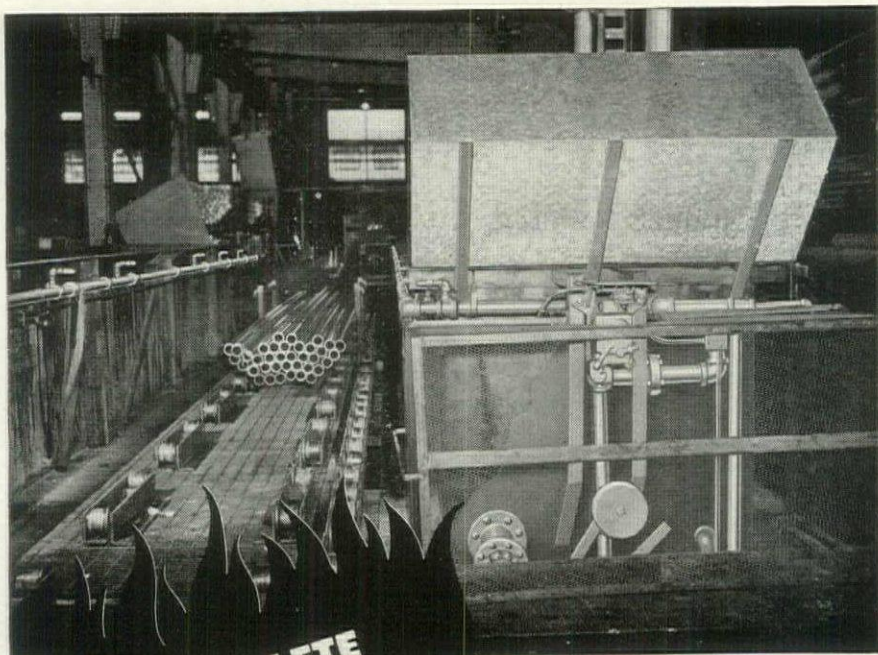
The steel for the Air Reduction Company's new calcium carbide plant at Calvert City, Kentucky, was fabricated and erected by Ingalls with United Engineers and Constructors, Inc. as the engineers.

Whatever fabricating problem is confronting you . . . if it's structural steel or plate work, Ingalls can fabricate it.

Fabricating Steel is Our Business

THE **INGALLS** **IRON WORKS COMPANY**
BIRMINGHAM, ALABAMA

Sales Offices: New York, Chicago, Pittsburgh and Houston
Plants: Birmingham, Ala., Verona, Pa., North Birmingham, Ala.,
Pascagoula, Miss., Decatur, Ala.



**COMPLETE
FIRE PROTECTION**

**FOR EVERY PLANT
INCLUDING YOURS!**

Illustrated here is a dip tank cleaning operation, a Hot Spot fire hazard area common to many types of metal working operations. But, although fire may start at this particular location — it cannot make headway, for ENGINEERED "Automatic" FIRE PROTECTION is "on the job" at all times.

At the first hint of flame, heat sensitive fire detectors operate controls that dump flammable liquids, stop conveyor systems and discharge fire-smothering "Automatic" FIRE-FOG and AIR FOAM throughout the danger area.

ENGINEERED "Automatic" FIRE PROTECTION starts with an analysis of your needs for complete sprinkler coverage. It includes study of manufacturing and processing operations, as well as machinery and equipment which may, in addition, demand special protection such as FIRE-FOG, AIR FOAM, CO₂ or a combination of these extinguishing mediums. The need is dictated by the degree of hazard, demand for personnel safety, high value of equipment, critical nature of certain processes or operations to entire plant production, continuity of business operations.

Want to learn how ENGINEERED "Automatic" FIRE PROTECTION can safeguard your plant — save you dollars while doing it? FREE descriptive literature is yours for the asking. Write for Bulletin 66.



Investigations and post mortems that look into the "causes" of a serious fire bring back nothing . . . are but mildly beneficial to anyone. The fire, discovered at its start, and extinguished in its infancy, cannot result disastrously.

"Automatic"
Sprinkler
CORPORATION OF AMERICA
YOUNGSTOWN, OHIO
Offices in principal cities of
North and South America

LETTERS *continued*

to our architecture and not merely substitute glass facades for Gothic.

HENRY ARMAND MILLON
*Graduate School of Arts & Sciences
Harvard University
Cambridge, Mass.*

MARTINIS AND ARCHITECTURE

Forum:

Talk about the commercial power of better architecture—look what happened this month to Architect Mario Gaidano's Roland's cocktail lounge. Just as FORUM's September display on this remodeled bar reached San Francisco, news spread in the local business marts and social circles that The Lower Montgomery Street Olive or Onion Society, after a year's patient and thorough research, had voted the dry Martini cocktail served at Roland's to be the best in town. This award rates as no small feat when one sizes up the competition in our hospitable city, birthplace of the dry Martini.

Obviously Client Roland Bacci, in designing his accolade-winning concoction, was heeding Architect Gaidano's words: "Everything must be scaled to his (the individual customer's) level, must enclose him in an atmosphere of comfort, ease and naturalness."

HAL CRUZAN
San Francisco, Calif.

INTERNATIONAL FORUM

Forum:

I plea for an international forum in your magazine in which architects and planners can exchange views. There is a great need for and much to be learned from such note swapping, and indications are that healthy relations in our free world depend on the fostering of mutual points of contact. Planning and architecture is such a vehicle, offering itself to a conscious build-up of mutual assistance in bettering our local democratic scenes.

Architects and planners in Britain are at the moment very perturbed about the shortcomings of new town building, which is giving to new garden cities the soul-less aspect of suburbs built during the interwar years. Our problem is that of Western civilization; it is mutual and fundamental and springs from the incidence of environmental frustration in our vast industrial populations.

There has been little effort to achieve successful living environments for our restless urban populations. Our investments in local democracy show in hard cash just how unconscious present systems are in intuitive desire for improvement: the cost of providing 4 million houses in Britain during the interwar years was about \$16 billion, and the result has been generally accepted as a failure—the mere provision of roofs over

continued on p. 86

BIG NEWS IN ALUMINUM!

48" Wide Embossed Industrial Corrugated

...For Lower Installed Cost, Improved Appearance!



DESCRIPTION:

METAL THICKNESS: 0.032 inch (22 U. S. Std. Ga.)

FINISH: Embossed.

LENGTHS: 5', 5' 6", 6', 6' 6", 7', 7' 6", 8', 8' 6", 9', 9' 6", 10', 10' 6", 11', 11' 6", 12'. (Special lengths cut to order subject to inquiry.)

WIDTH: Over all width 48½", nominal coverage 45⅓", 1½ corrugations side lap.

CORRUGATION: Pitch 2.667" center to center, depth ⅞", 18 crowns, 18 valleys, one edge up, opposite edge down.

WEIGHT: 56 pounds per 100 square feet of formed sheet.

Standard .032" mill finish Industrial Corrugated also available—35" width, same lengths as above.

All the advantages that have made Reynolds Aluminum Industrial Corrugated a sweeping success throughout industry...rustproof permanence, lowest maintenance, high insulation...now at even lower installed cost and with improved appearance! With these new 48" sheets, side laps take

30% less metal, 30% fewer fasteners...and there are 30% fewer sheets to handle. With the new stipple-embossed finish, the wider-spaced laps tend to disappear...making a handsome, uniform, textured effect. Call on Reynolds for literature, technical and application details.

Offices in principal cities. Check your classified phone book for our listing under "Building Materials." Or write Reynolds Metals Company, Building Products Division, 2020 South Ninth St., Louisville 1, Kentucky.

REYNOLDS *Lifetime* ALUMINUM INDUSTRIAL CORRUGATED

SEE "MISTER PEEPERS," starring Wally Cox, Sundays, NBC-TV Network.

How Honeywell Customized Temperature Control can help you

Give your clients a better indoor climate

Why Customized Temperature Control is becoming a must for all types of buildings

Just as you often have to guide client thinking when it comes to the sort of building he really needs, today it's also important to make sure he gets proper temperature control.

Many advances have been made in temperature control which may be news to your client.

Such an advance is Honeywell Customized Temperature Control.

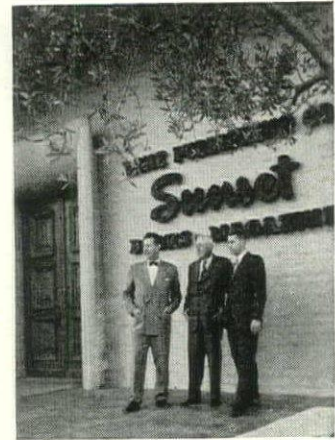
The key word here is "customized." It means that whatever your clients' control requirements, a Honeywell Customized Temperature Control installation *designed to fit the needs of the building* is your answer. This applies to heating and cooling, ventilation and humidity control, as well as industrial control.

Only Honeywell can provide true "customized" control.

Because only Honeywell manufactures all three types of controls — pneumatic, electric and electronic—which often must be integrated in a single building to give you the right performance.

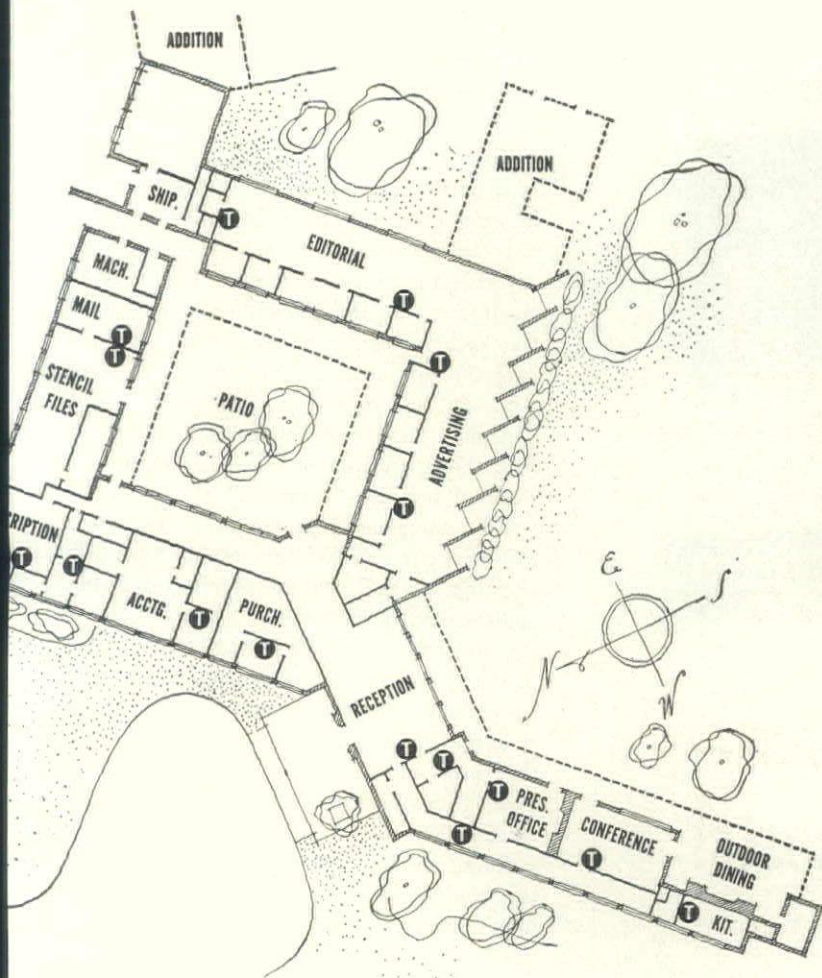
The story, in brief form, of how Honeywell Customized Temperature Control was used to solve specific occupancy, use and exposure problems in Sunset Magazine's "dream home" in Menlo Park, California, is told by the floor plan and the pictures and captions at right.

The *techniques* used, applied to your particular problems, can help you give clients a better indoor climate.



Sunset Magazine's Publishing Office as seen from the air. Architects: Higgins and Root, San Jose. Design consultant: Cliff May, Los Angeles. Heating contractor: Schlegel Plumbing Contractors, Inc., Menlo Park, California.





*For comfortable, even temperature
in new or existing buildings
—of any size—use Honeywell
Customized Temperature Control*

Whether it's an office, motel, airport, hospital, apartment, church, school, factory, store, garage—or any size building—new or existing, Honeywell Customized Temperature Control can help meet your clients' heating, ventilating, air conditioning and industrial control problems.

They'll not only enjoy more comfort and efficiency, they'll save fuel, too.

For full facts on Honeywell Customized Temperature Control, call your local Honeywell office. There are 104 Honeywell offices across the nation. Or mail the coupon today.

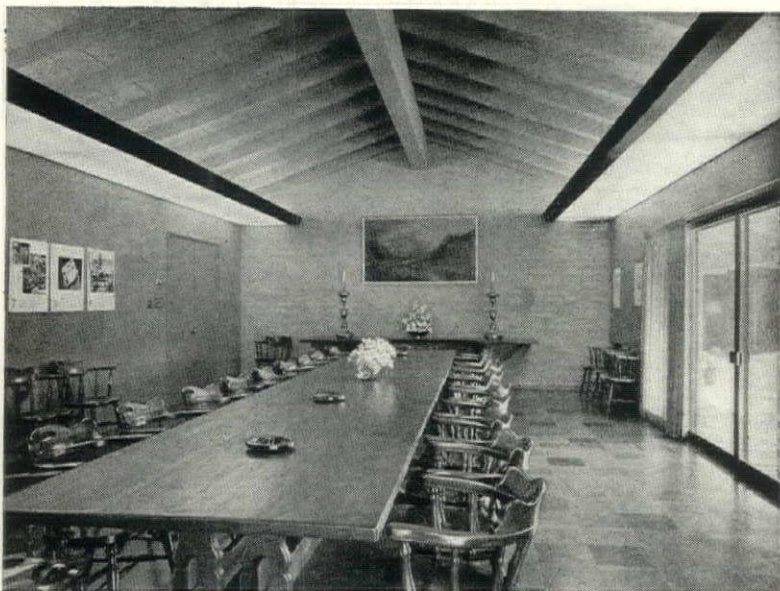


*L. W. Lane,
publisher of "Sunset" says,*

"What we wanted was a place where workers confined by four walls could still enjoy the feeling of outdoor living. By providing us with near-perfect indoor climate, Honeywell Customized Temperature Control has contributed much to that enjoyment."



Honeywell Thermostats are giving new meaning to comfort in the headquarters of Sunset Magazine. The view above, including the editorial and advertising offices, was taken from the northwest. Two thermostats are needed in this area to compensate for strong southern and western sun.



The thermostat installed in the conference room above compensates handily for chill that sometimes comes from the large window area, keeps the temperature just right if a conference includes five persons—or twenty-five.

MINNEAPOLIS
Honeywell



First in Controls

MINNEAPOLIS-HONEYWELL REGULATOR COMPANY
Dept. MB-11-218, Minneapolis 8, Minnesota

Gentlemen: I'm interested in learning more about Honeywell Customized Temperature Control.

Name _____

Firm Name _____

Address _____

City _____ Zone _____ State _____



FAIRLAWN JUNIOR HIGH SCHOOL, FAIRLAWN, N. J., ARTHUR RIGOLO, ARCHITECT—INSTALLED BY ATKINS & CO., INC.

Armorply* Chalkboard—without trim— saves up to 30% on installation costs!

**NEVER NEEDS REFINISHING—DOUBLES AS
BULLETIN BOARD—SMALL MAGNETS "PIN"
VISUAL AIDS TO PORCELAIN-ON-STEEL FACE**

Armorply Chalkboard requires no trim. Actual installations prove that this feature alone can save up to 30% on costs. Even more important are the long term savings. Unlike ordinary blackboard or chalkboard, Armorply Chalkboard will *never* need to be refinished or replaced. It's guaranteed to last as long as the building.

WHAT MAKES ARMORPLY CHALKBOARD SO DURABLE? Three coats of a special composition ceramic-porcelain are fired on 18-ga. steel base at high temperature and careful control. The surface is so tough it defies abrasions, scratching, chipping, cracking and won't shatter or break under impact. Can't buckle, warp or dent because the chalkboard is bonded to 1/4" Weldwood fir plywood, exterior grade, and backed with a .015 aluminum sheet.

EASY TO INSTALL. Mounts directly on plastered or unplastered wall with through-bolts or screws, without grounds or finish trim.

SPECIALLY DEVELOPED SURFACE takes chalk beautifully. Easy to erase and clean. Can be

silk-screened with diagrams, maps, etc. Scientifically selected green color has perfect reflectance factor.

SIMPLIFIES VISUAL INSTRUCTION. Small magnets are attached to its porcelain-on-steel face permitting quick posting of visual aids.

UNIFORM QUALITY. Strict quality control keeps all Armorply Chalkboards uniform in color and finish from face to base.

SAFE INVESTMENT—has been thoroughly tested in hundreds of installations. Here are just a few recent ones.

Lemon Township School, *Monroe, Ohio*
Saginaw High School, *Saginaw, Michigan*
Oak Park High School, *Oak Park, Illinois*
Coppin Teachers College, *Baltimore, Md.*

Plan on using Armorply Chalkboard for an installation that never needs resurfacing—one that is guaranteed to be as permanent as the building.

SIZES: Standard stock size panels:
Widths 36", 42", 48"
Lengths 72", 84", 96", 108", 120"
Non-stock standard sizes:
Widths 36", 42", 48"
Lengths 36", 48", 60"

*Trade Mark.

Weldwood®

United States Plywood Corporation
WORLD'S LARGEST PLYWOOD ORGANIZATION

Weldwood-Building, 55 West 44th St., New York 36, N. Y.



and
U. S.-Mengel Plywoods Inc.
Louisville, Kentucky
BRANCHES IN 60 PRINCIPAL CITIES

United States Plywood Corporation
55 West 44th Street
New York 36, N. Y.

AF-11-53

FREE: ☐ Please send me free booklet on
Armorply Chalkboard

NAME
ADDRESS
CITY STATE

LETTERS *continued*

countless families instead of the creation of integrated communities. Social science comes in only after the stage has been set, and only to the extent of rent collection or to mitigate the worst effects of ignorance or destitution. Of the \$16 billion, not a penny was spent upon the initial and executive cooperation of social or anthropological scientists. In face of the need for greater skill and more humility in approaching the problem, the operative word is still "static" instead of intuitive "dynamic."

This incipient repression is the direct cause of our new Western architecture—the bursting of the pent-up architectural dam against stifling convention. The success of the UN and UNESCO buildings lies chiefly in the symbolism of new beacons lighting the way toward needy change. The strength of the opposition can, however, be gauged from the protestations of the Anglo-American poet, T. S. Eliot, who has rushed to the aid of the Paris savants who hold the UNESCO building project to be a gross intrusion on the traditional Parisian scene. Those who have experienced the family life—the "chez nous"—behind the classical facades of Haussmann and Napoleon will realize that crumbling stucco is also a portent symbol. The conventional Paris of the artists is now definitely passé. Although we may agree with the poets that cleanliness is not quite so next-to-godliness that we need a bath every single day, it must be indicated to them that a glimpse under the ancient roofs of the Left Bank would reveal conditions that should, in all humanity, have passed with the general world approbation of the Public Health Acts of 1875.

If we are to give meaning to our championship of Western industrial life as the best of all possible worlds, we must cooperate toward a common expression of local democratic ideals. We need more, not less, Gropius and Corbusier symbols of art wedded to industry to guide us to enlightenment.

Less academic covetousness and greater technical teamwork will influence the passing of outmoded human processes, now unsuitable to 500 mph transportation and increasing interchangeability between nationalities. In such an atmosphere we can create livable cities for imminent atomic man.

JOHN RIGG
Assistant city planner
Pretoria, South Africa

• FORUM will be happy to reserve a portion of its Letters Dept. each month for Reader Rigg's suggested "international forum," invites other overseas readers to contribute to the discussion.—Ed.

KUDOS

Forum:

... Your magazine offers a postgraduate course on modern planning, architectural engineering, new materials. ...

CHARLES H. CHEVALLAZ
Forest Hills, N. Y.

Byrne Organization Chooses RUSCO Prime Windows for Detroit's "Town House"



Originally started in the late 1920's, the Pontchartrain Club stood unfinished for nearly 25 years. Now re-designed and completely remodeled by the Byrne Organization, it is the Town House Apartments. Containing 318 suites and penthouses, it is modern in every respect.

Owners: Bagley-First-State Corp.
Builders: Byrne Organization, Inc.

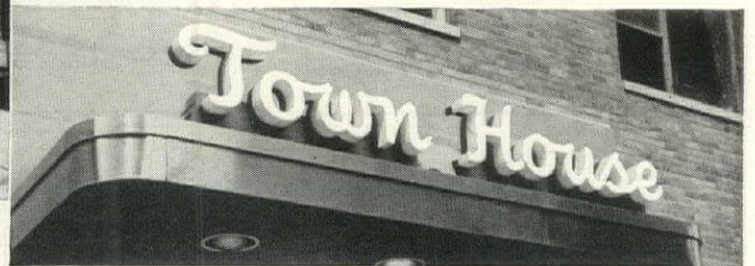
Landmark of the Great Depression is Converted into Modern Luxury Apartment

Today, thanks to the vision and enterprise of the Byrne Organization, the Pontchartrain "dream club" of the fabulous twenties has been brought to useful reality. Re-designed and completely reconditioned, the club is now Detroit's newest and most modern apartment building—Town House.

Town House features the finest and most efficient equipment and appointments, including Rusco "Fulvue" 3-panel Prime Windows.

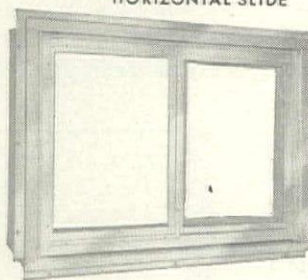
RUSCO WINDOWS CHOSEN FOR QUALITY AND EFFICIENCY

J. R. Braun, Vice-President of the Byrne Organization, says: "Our previous experience with Rusco galvanized steel Prime Windows, on such projects as the 205-suite Edgewater Towers apartment in Cleveland, Ohio, has convinced us of their many superior qualities. We find that Rusco Windows enable us to supply top quality on an economical basis because of their savings in installation time and maintenance, and the elimination of field painting."

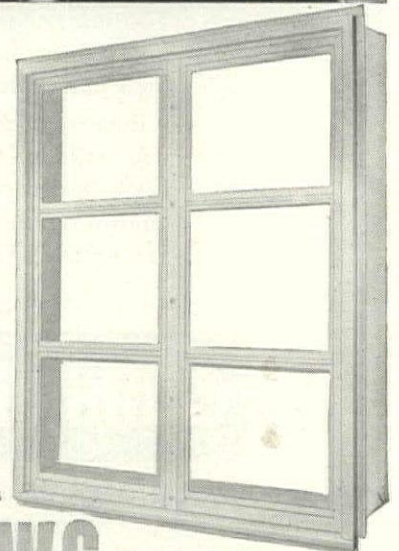
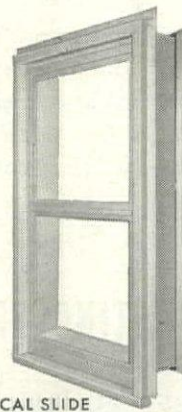


Glazed, Finish-Painted,
Ready-to-Install

HORIZONTAL SLIDE



VERTICAL SLIDE



FULVUE
(Vertical Slide)

RUSCO

Galvanized
Steel

PRIME WINDOWS

FOR COMPLETE SPECIFICATIONS AND
ILLUSTRATED CATALOG, WRITE

THE F. C. RUSSELL COMPANY

DEPARTMENT 7-AF-113, CLEVELAND 1, OHIO
IN CANADA: TORONTO 13, ONTARIO



Too many cooks do you know what

Too many cooks not only spoil the soup . . . they take a lot longer to make it. And if the customer finds fault, who's responsible? Nobody knows.

But *everybody* can pinpoint the responsibility when you make it a flat spec for Dunham—which you can easily do since Dunham makes a *complete line* of quality heating equipment. *One Catalog*, designed to help and speed your spec writing, contains every-

thing from the simplest radiator trap to fully automatic precision temperature control equipment.

So why gamble on divided responsibility for equipment performance? Why leaf through dozens of catalogs? Why not, instead, make it a flat spec for Dunham—to simplify *your* work and keep *your* customers happy.

DUNHAM

HEATING EQUIPMENT

RADIATION • UNIT HEATERS • PUMPS • SPECIALTIES

QUALITY FIRST FOR FIFTY YEARS

C. A. DUNHAM COMPANY • CHICAGO • TORONTO • LONDON

C. A. DUNHAM COMPANY
Dept. AF-11, 400 W. Madison St.
Chicago 6, Illinois

Please send bulletin on your complete line.

Name

Firm

Address

City Zone State



ENGINEERING REPORTS:



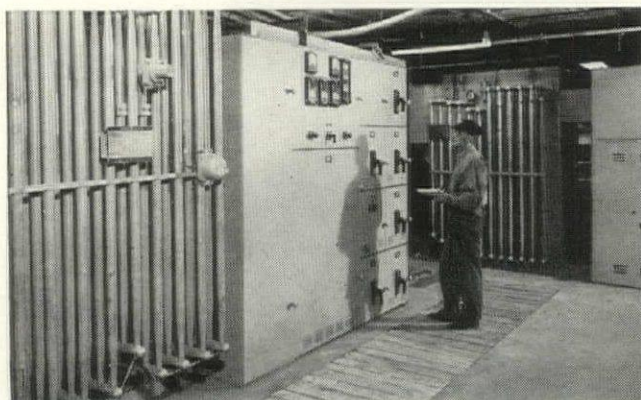
AT KAISER-FRAZER, G-E 480/277-volt electrical system serves both fluorescent lighting and machine load through

five load-center substations. Electrical system was installed by Koontz-Wagner, electrical contractors, South Bend.

How "packaged power" speeded expansion of two plants



AERIAL VIEW shows 103-acre Willys Motors plant at Toledo, Ohio, where five G-E 1500-kva load-center substations were added recently. Total plant capacity is now 26,000 kva.



NEW LOAD-CENTER UNITS at Willys Motors were added by Romanoff Electric Co. of Toledo, Ohio, to the old system when increased production demanded increased power flexibility.

Pre-engineered components meant fast, easy power system design for Kaiser-Frazer and Willys Motors

Demand for increased production, plus a recognized need by plant management for greater protection of personnel and equipment, dictated a new power distribution system for the Dowagiac, Mich., plant of Kaiser-Frazer. Similarly, at Willys Motors' Toledo plant, there was a need for flexible, reliable power distribution equipment to carry the load of increased Jeep production. These conditions made the planning, selection, and installation of the power distribution systems one of the most important steps in expansion for these two plants.

Their typical solution: A system made up of "packaged" G-E components, tailored to plant layout and production needs. Easy-to-specify, easy-to-install G-E equipment saved months of design and installation time.

You can save time and money on industrial plant electrification by specifying user-preferred G-E equipment. In addition to power distribution, our engineers are ready to help on outdoor lighting and electric drives for plant services systems. Contact your G-E Apparatus Sales Office early in the planning. General Electric Co., Schenectady 5, N. Y.



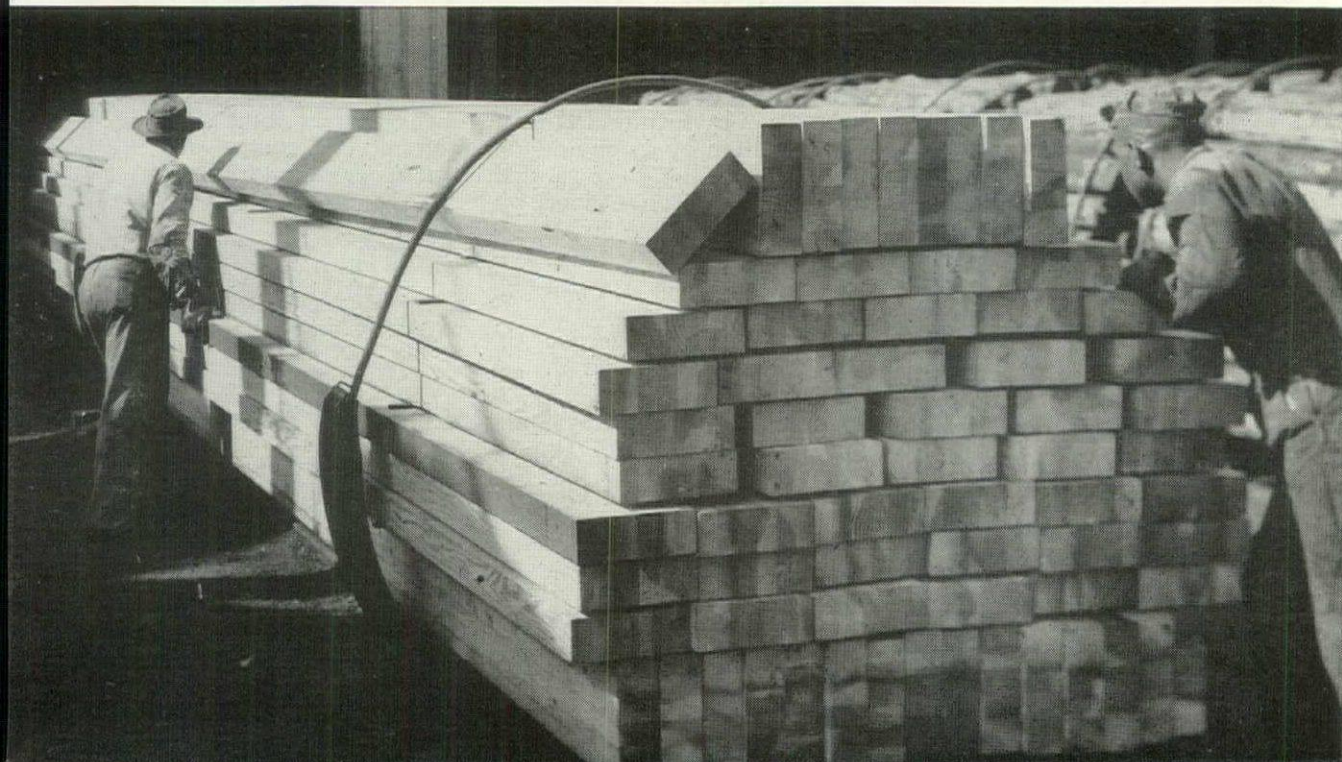
Engineered Electrical Systems for Industrial Plants

GENERAL  ELECTRIC

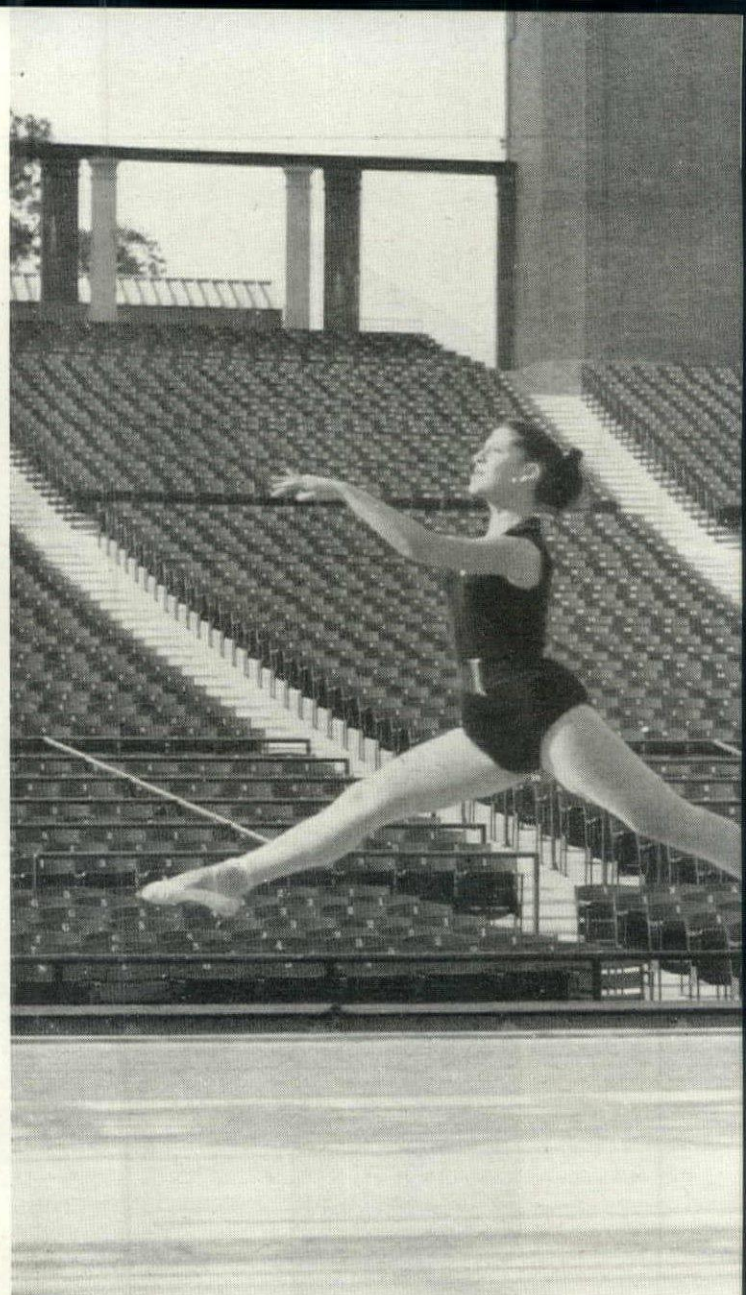


Built and financed as a civic enterprise, Kansas City's Starlight Theatre seats 7,200—one of the largest outdoor show places in the nation. Wood used for stage construction was penta-treated.

Lumber can be pressure-treated to your specifications at commercial treating plants throughout the country. Penta adds only a small percentage to the over-all cost of untreated wood, yet it pays off many times over in customer satisfaction and economy of upkeep.



A graded depression cups the theatre proper, with entrance to sloping seat ramps through ground-level arch.



MONSANTO PENTA PRESERVES WOOD IN OUTDOOR THEATRE

Stage Superstructure Resists Decay Despite All-Weather Exposure

Structural pine planking in Kansas City's impressive Starlight Theatre is as good as new after two years of outdoor exposure—and will last 3 to 5 times longer than untreated planking.

Also preserved with clean Monsanto Penta are 2 x 4, 2 x 6, 2 x 10, and 4 x 6 underpinnings beneath the stage. All the material was treated to a 6# retention per cubic foot of wood with a 5% penta-in-oil solution. To prevent warping, a water-repellent type solution was used.

The outward appearance of lumber pressure-treated with penta changes very little. The preservative is driven deep into the cells of the wood, where it stays to repel rot and insect attack. Rain or ground water will not wash the penta out. Properly formulated and applied, penta will leave your wood clean—paintable and dimensionally stable, if specified.

A simple requirement—*pressure-treat it with penta*—in the specifications for wood members of *any* structure will add permanence to your work and save money for your client.

Specify Penta to protect . . .

Sills and plates • Screeds and subflooring
Joists and girders • Studding and rafters
Roof planks, strips, shingles • Platforms and decking
Millwork • Posts and fences

. . . wherever wood is meant to last.

Ask us for this informative booklet, titled "Specify Penta." Complete details on properties and uses of this preservative. Upon request, we will also send you facts on Santobrite—sodium salt of pentachlorophenol—for preserving organic fibrous products such as insulating board. Address:



Monsanto Chemical
Company, Organic
Chemicals Division,
800 North Twelfth
Blvd., St. Louis 1,
Missouri.



Santobrite: Reg. U. S. Pat. Off.

**SERVING INDUSTRY...
WHICH SERVES MANKIND**

one
look and you know

a

FIAT

shower door
means more

MORE QUALITY built-in means
MORE SATISFACTION. Inspect a
FIAT door and you'll see why you
get more. The quality is evident—
the styling unsurpassed.

FIAT Doors fit standard 24" door
openings. Easy to install on new or
old stall showers of any type—steel,
tile, marble or glass.

Look to FIAT DOORS for added
beauty—more years of satisfactory
service. When you specify a shower
stall, include the vital, finishing
feature . . . a FIAT DOOR.



Simple design and attractive appearance at low cost—here's the fine quality and sound construction you would expect to find only at a much higher price. The Neptune measures 24 by 64 inches and is reversible for right, or left-hand hanging; one-piece satin-finished heavy aluminum frame with mitered corners and glass set in rubber channel. Extruded aluminum jambs, top and bottom suspension hinges. Bullet catch, offset handles and water deflector.



Here's unrivaled quality, finest construction! Standard 24 by 72-inch size—a full height door with grille; one-piece chrome plated frame of extruded brass with mitered corners; glass set in rubber channel. Chromium plated brass jambs and continuous piano hinge riveted to frame. (FIAT'S moderately priced Zephyr has the same appearance and features as the Dolphin but is made with satin-finished extruded aluminum frame).

FIAT

FIAT METAL MANUFACTURING COMPANY
THREE COMPLETE PLANTS—ECONOMY • CONVENIENCE • SERVICE

Long Island City 1
New York

Franklin Park, Ill.
(Chicago Suburb)

Los Angeles 63
California

In Canada: Porcelain and Metal Products, Ltd., Orillia, Ontario

EVENTS

American Institute of Steel Construction, annual convention, **Nov. 30-Dec. 4**, Boca Raton Hotel and Club, Boca Raton, Fla.

University of Houston lectures—Mies van der Rohe, **Jan. 7**; Buckminster Fuller, **Feb. 11**; Alfred Roth, **Apr. 1**; Eero Saarinen, **May 6**.

National Constructors Assn., annual convention, **Jan 12-14**, Hotel Commodore, New York City. Ambrose Machine 11 Nov 13—Setting AF 11

"Architects' Trek 'Round South America," latest of several tours open to architects and their families, will start on **Jan. 19** and in a month visit Panama, Peru, Chile, Argentina, Uruguay and Brazil. Trek Leader is Harold R. Sleeper AIA, of New York; those interested in joining the trip should address the U.S. Travel Agency, 807 15th St. N.Y., Washington 5, D.C.

Prestressed concrete conference, **Jan. 28-29**, University of Toronto. For details address Prof. C. F. Morrison, Civil Engineering Dept.

Mason Contractors Association of America, annual convention and exposition, **Jan. 24-27**, Sherman Hotel, Chicago.

Associated General Contractors, annual convention, **March 1-4**, Statler Hotel, Los Angeles.

Boston Institute of Contemporary Art, an architecture and design exhibition of the works of Gio Ponti and Gyorgy Kepes, **Mar. 4-Apr. 4** in Boston; will be available also for general circulation.

Air Pollution Control Assn., annual meeting, **May 3-5**, Chattanooga, Tenn.

National Savings & Loan League, annual convention, **May 9-14**, Jung Hotel, New Orleans, La.

American Planning and Civic Assn., conference, **May 18-21**, Columbus, Ohio.

British Architects' Conference, **May 26-29**, Torquay, England. Program can be obtained from Mr. C. D. Spragg, secretary, Royal Institute of British Architects, 66 Portland Place, London, W. 1, England.

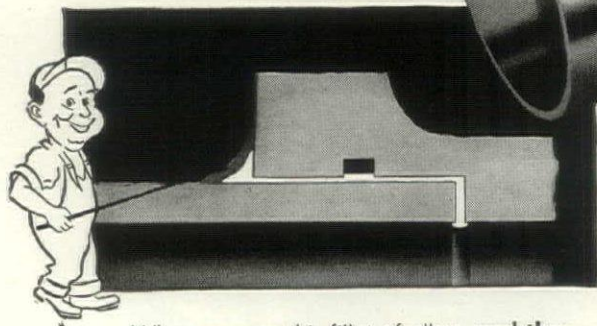
New Jersey Chapter, American Institute of Architects, convention, **June 10-12**, Asbury Park, N.J.

Architectural League—a series of evening conferences on "The Impact of Science and Materialism on Art Today," second Thursday each month through April. For program address: Architectural League of N. Y., 115 E. 40th St., New York City.

NOBODY GUESSES

WHEN YOU USE...

WALSEAL[®]



When you see this fillet of alloy, **and the fitting is Walseal** you know that you have full penetration because the alloy comes from the inside.



Cutaway view of a Walseal Tee showing: 1 — **factory-inserted ring** of silver brazing alloy; 2 — fillet of silver brazing alloy that appears upon completion of Walseal joint; 3 — cutaway view of the completed joint showing that silver brazing alloy has flowed in **both** directions from the factory inserted ring.

When you join brass, copper, or copper-nickel pipelines with Walseal Valves, Fittings, or Flanges you know you have the *right amount* of the *correct type* of silver brazing alloy. The ring of Sil-Fos brazing alloy is *factory-inserted* in the ports of Walseal products at the time of manufacture.

No lost time or motion in handling the alloy . . . no difficulty in getting *full penetration* of the alloy regardless of the position of the valve or fitting . . . no guessing whether the joint is made right . . . the fillet of silver brazing alloy that shows up when the Walseal joint is completed, *comes from the inside!* And, whether you've made the joint yourself, or are inspecting the work of another, you know that if the silver alloy fillet is visible, *and the valve or fitting is Walseal*, you have full penetration. That's why nobody guesses when you use Walseal!

Walseal products are backed by the reputation of the Walworth Company, manufacturers of valves and pipe fittings since 1842.

For full information regarding silver brazed joints made with Walseal products, write for Circular 115.



Make it "a one-piece pipe line" with WALSEAL

WALWORTH

valves and fittings

60 EAST 42nd STREET, NEW YORK 17, N. Y.

Recommended for

**Hot and Cold Water
Circulating Systems**

Boiler Feed Lines

Steam Return Lines

Condensate Lines

**Low and High Pressure
Air Systems**

**Lubricating Oil Circulat-
ing Systems**

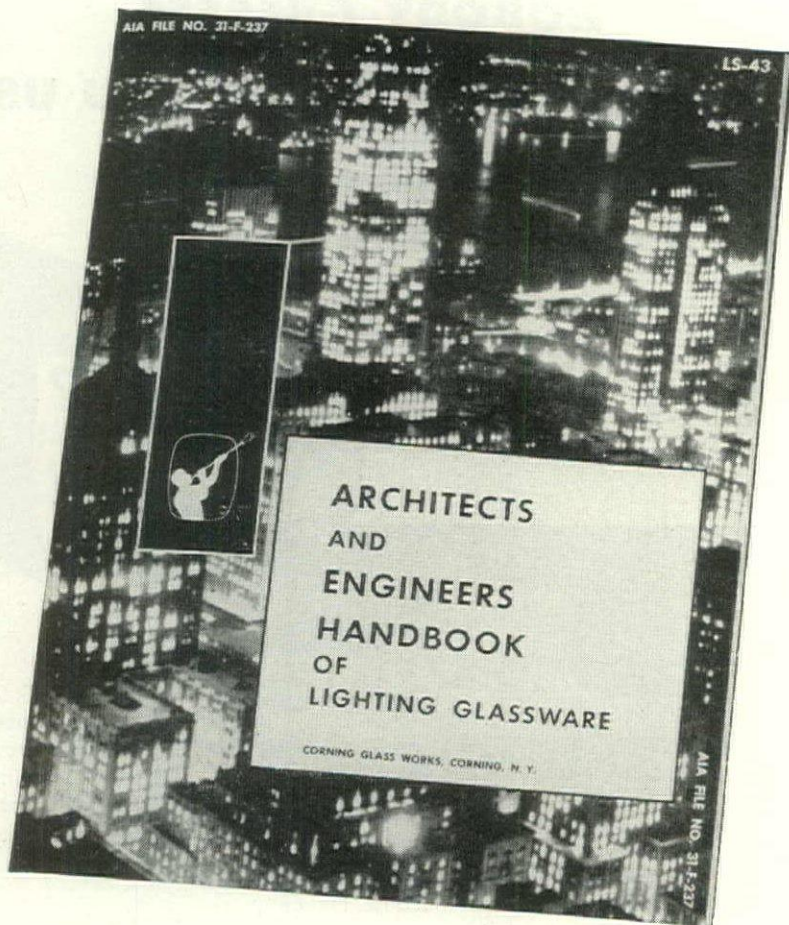
Industrial Gas Piping

**Solvent and Vacuum
Piping Systems**

DISTRIBUTORS IN PRINCIPAL CENTERS THROUGHOUT THE WORLD

It saves
planning time

It's FREE!



A New Lighting Handbook for architects and engineers

In planning lighting installations, you must consider many factors to achieve the effects you are seeking . . . accenting decor, improving working efficiency, providing better vision . . . to give your client the best lighting for stores, offices, schoolrooms or factories.

All of this takes time and as a means of helping you make the most of it, Corning lighting engineers have prepared this new handbook. It suggests the most effective uses for various types of lightingware. It contains simple formulas to help make illumination calculations.

There is a section on engineered lighting fundamentals and a discussion of the control of light by refraction, diffusion and reflection. Tables quickly give you room index and point-by-point foot-candle calculation. Note the table of contents, showing other interesting features.

It will take only a moment to write for this handbook and it will save lots of time whenever you are planning a lighting job. Write for it today.

Table of Contents:

- Lighting Glassware Basic Types
- Lighting with Large Area Luminous Elements
- Lighting with Fluorescent Troffers
- Lighting with Surface-Mounted and Suspended Luminaires
- Product Information Table, Fluorescent Lighting Glassware
- Lighting with Incandescent Lensed Fixtures
- Product Information Table, Incandescent Lighting Glassware
- Calculation Section



CORNING GLASS WORKS

Corning, N. Y.



Corning means research in Glass

CORNING GLASS WORKS, Dept. AF-11, Corning, N. Y.

As my work includes the design and specification of engineered lightingware, please send copy of the "Architects and Engineers Handbook of Lighting Glassware."

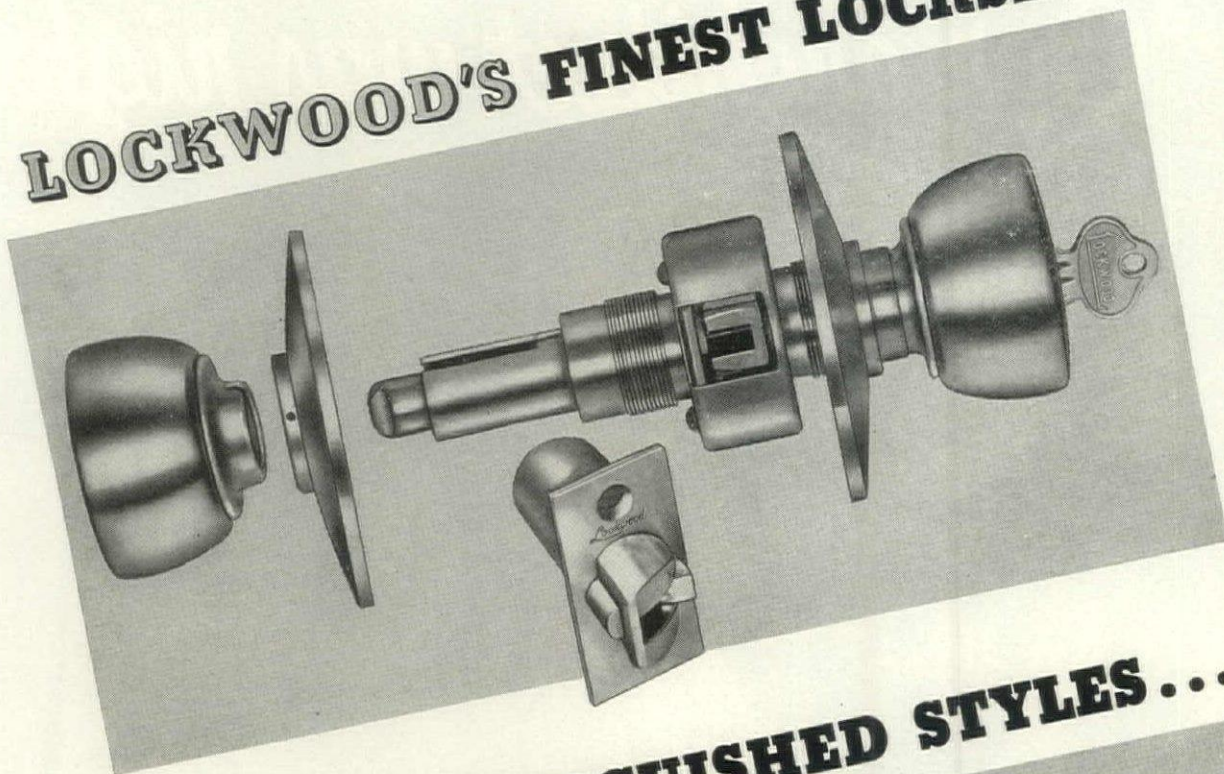
Name.....Title.....

Company.....

Address.....

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

LOCKWOOD'S FINEST LOCKSET



IN THREE DISTINGUISHED STYLES...



Lockwood adds beauty to efficiency in heavy-duty locksets worthy of the finest buildings. A choice of three distinctive styles . . . all available in brass, bronze or aluminum.

Extra Protection for the door finish is provided by the large rose used in the *Hatten* design. Graceful urn-shaped knob is easy to grasp. Trim is made from heavy castings.

Rugged Compactness is the keynote of the *Hartley* design. Its smaller, forged rose is somewhat flatter in profile than *Hatten*.

Lower Cost is made possible by using knobs and roses of wrought metal in the *Holbrooke* design. Its elliptical profile is handsome in a more traditional manner.



LOCKWOOD HARDWARE MANUFACTURING COMPANY
Fitchburg, Massachusetts



"Our architect was right..."



... PC Glass Blocks save on maintenance, give ideal daylighting,"

says **George S. Mennen**, Vice President, *The Mennen Company*.

• Mr. Mennen wrote us a wonderful letter. He said, "We are not new to PC Glass Blocks because we used them in our Newark plant in the early 1940's. They did such a good lighting job in the other plant that we wanted them in the new building.

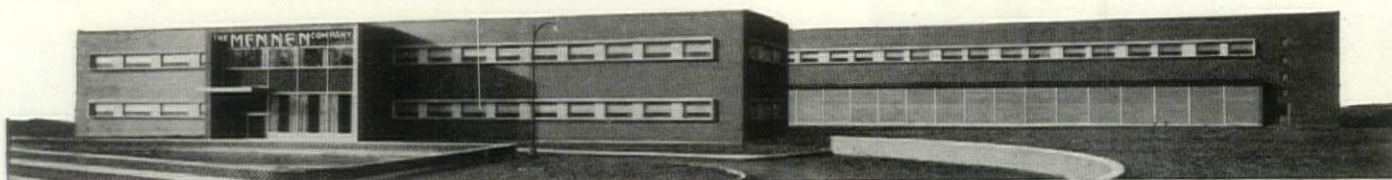
"We also like the PC Glass Blocks because they save so much on maintenance. They are cleaned every three months, compared to *once* a month for the regular glass. Also, they cost no more than standard windows because we save on venetian blinds, window shades and awnings."

If you design a new building or remodel an old one, remember that PC Glass Blocks will do three things for your client: they'll improve daylighting, they'll make the building look better, they'll save money. Clients will save not only by eliminating repainting, painting and washing but, they'll save on fuel and air conditioning bills too—because PC Glass Block panels have very high insulating efficiency—equal to an 8-inch masonry wall.

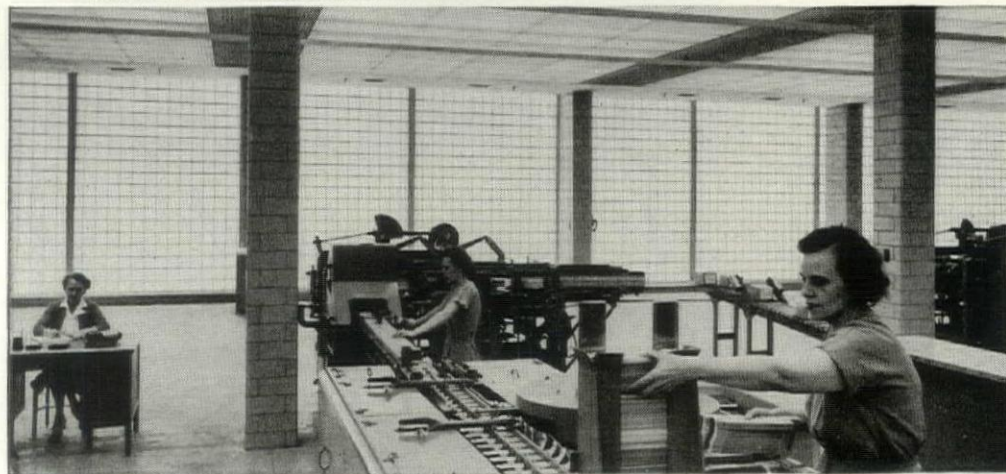
Send the coupon and learn all the facts about these low maintenance PC Glass Blocks.

Pittsburgh Corning Corporation

PITTSBURGH, PA.



Architect: A. M. Kinney, Inc., Cincinnati, Ohio General Contractor: Geo. A. Fuller Co., New York.



Here's what you get with PC Glass Blocks

BETTER DAYLIGHTING—Functional patterns direct daylight to reflective ceiling, or distribute it uniformly throughout the room. More light, less glare.

REDUCED HEATING & COOLING COSTS—Glass block panels have insulating efficiency of solid 8-inch masonry wall.

LOWER WINDOW MAINTENANCE COSTS—Glass block panels seldom have to be washed. Breakage is rare. There is nothing to paint.

NO "EXTRA" EXPENSE—Unlike conventional windows, panels of PC Functional Glass Blocks seldom if ever need expensive shades, blinds or louvers.

NO DIRT INFILTRATION—A glass block panel is an integral part of your building wall. Tight mortar joints seal out moisture, dirt.

LESS OUTSIDE NOISE—PC Glass Blocks are hollow. The internal dead air spaces reduce sound transmission.



Pittsburgh Corning Corporation
Dept. E-113, One Gateway Center
Pittsburgh 22, Pa.

Without obligation on my part, please send me your FREE booklet on the use of PC Glass Blocks in public, commercial and industrial structures.

Name Title

Firm

Address

City Zone State

what's new in construction?

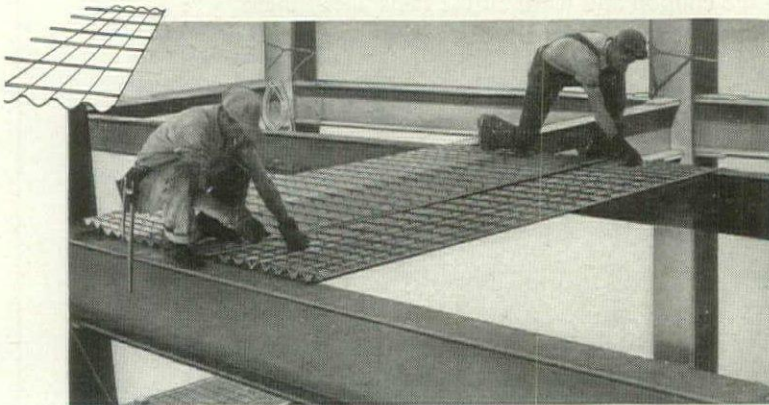
"TOUGH-TEMPER" STEEL AND A NEW FAMILY OF PRODUCTS HELP DESIGNERS AND INVESTORS, ALIKE

Here's How: "Tough-Temper" steel is the answer. Yes, a steel with extremely high strength is one of the reasons that the Granco family of four building products does a better job for architects, engineers, and new building owners.

The new material, known as "tough-temper" steel does not require critical alloying to gain high-tensile strength. Instead, controlled cold-rolling with strain hardening as the result, gives high and unusual physical properties. The finished product, containing this steel with an ultimate strength over 100,000 psi, results in simplified, economical construction, savings in material and labor.

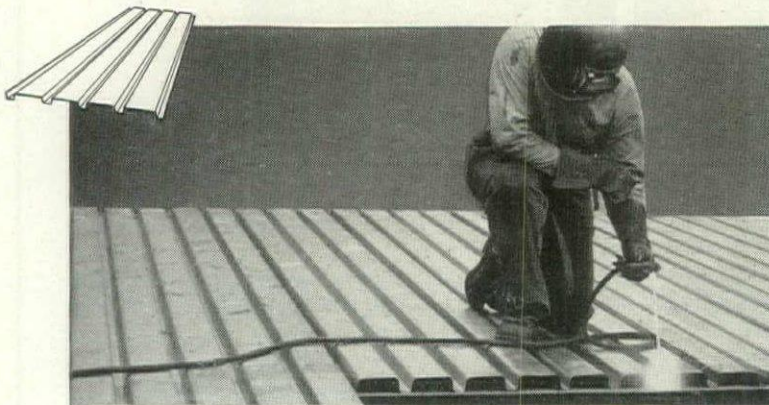
For additional information write Department AF-2, Granco Steel Products Co., Granite City, Illinois. Your request will receive prompt attention.

COFAR—combined form and reinforcement



Deep-corrugated steel, 100,000 psi and stronger (main reinforcement), and T-wires (temperature reinforcement) in one manufactured product... serves as both permanent form and reinforcement... completely eliminates wood forms... provides all the positive steel needed in the structural concrete slab... saves days and dollars in new building construction.

FLAT TOP ROOF DECK—rotary press formed



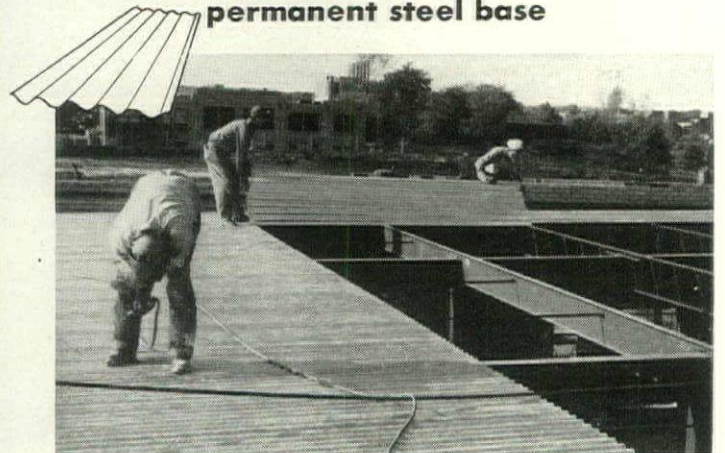
to insure uniform pattern. Wide cover width reduces handling and erection costs... fewer side laps cut welding time and offer greater support for concentrated loads. Ideal relationship between rib and flat provides maximum strength and cover per pound of steel. The characteristic pattern of Roof Deck precludes the use of "tough-temper" steel in forming but is manufactured from high-grade cold-rolled sheet steel.

CORRUFORM—light weight, permanent corrugated steel form



for concrete floors and roofs... stronger by far than conventional corrugated steel of same shape and weight... functions as a base for thin concrete slabs in steel joist floors and roofs... economies of construction are a result of thinner, stronger slabs... concrete saving through lack of sag, stretch, bend or leakage... speed and ease of placing Corruform also adds to construction economy.

TUFCOR—long span, deep corrugated, permanent steel base



for light-weight insulating concrete roofs for spans up to 7 feet... high-strength steel and ideal corrugation pattern give outstanding stiffness... "tough-temper" steel assures load-supporting capacity and safety beyond conventional limitations... ideal for roof and wall panels with wide purlin and girt spacings... exceptionally suited for welding.

GRANCO

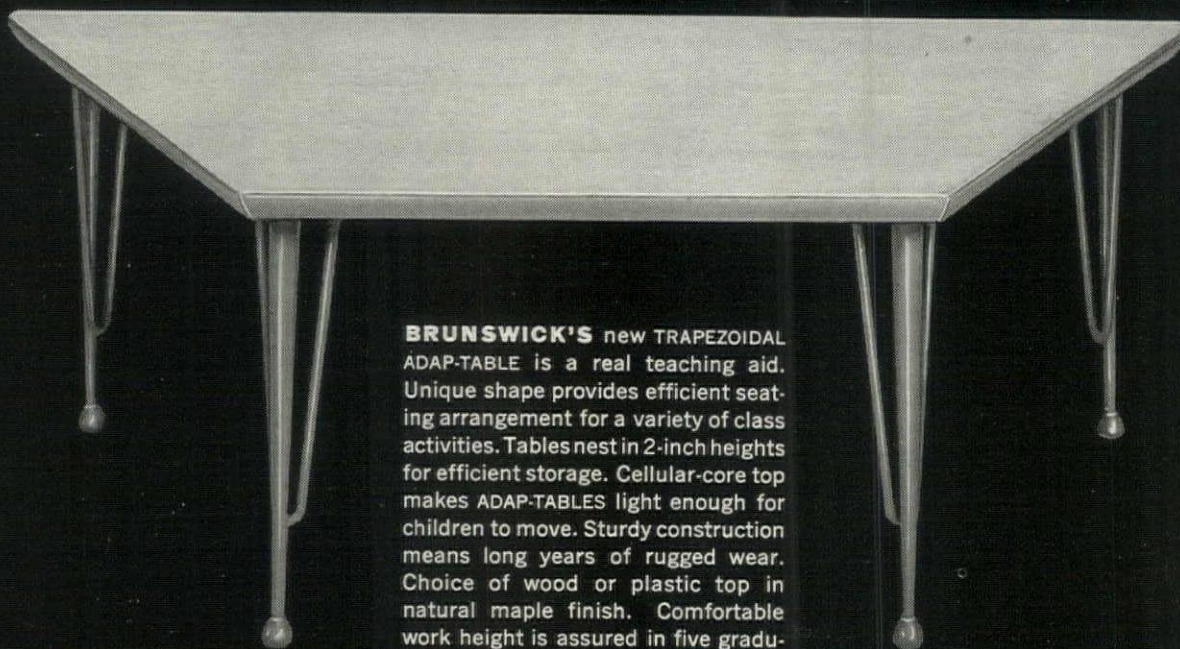
STEEL PRODUCTS CO.

(Subsidiary of Granite City Steel Co.)

GRANITE CITY, ILLINOIS



Brunswick's NEWEST ADAP-TABLE

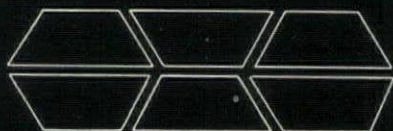
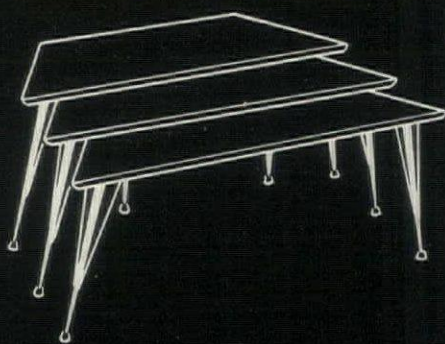


BRUNSWICK'S new TRAPEZOIDAL ADAP-TABLE is a real teaching aid. Unique shape provides efficient seating arrangement for a variety of class activities. Tables nest in 2-inch heights for efficient storage. Cellular-core top makes ADAP-TABLES light enough for children to move. Sturdy construction means long years of rugged wear. Choice of wood or plastic top in natural maple finish. Comfortable work height is assured in five graduated sizes.

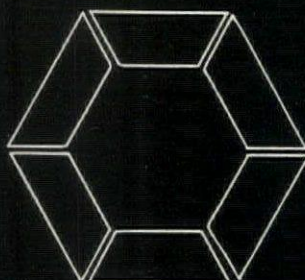
Brunswick ADAP-TABLES are also available in half-round, round and rectangular shapes.

For a unified classroom, specify Brunswick's completely new line of school furniture of advanced design.

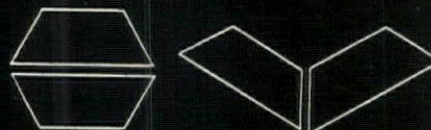
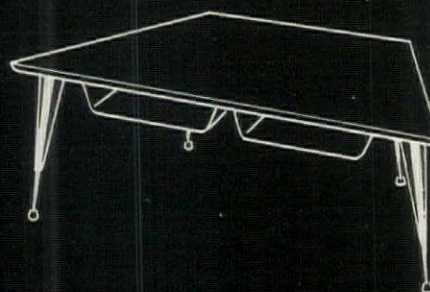
NEST OR STACK FOR STORAGE



**FLEXIBILITY
IN USE**



BOOK BOXES OPTIONAL



For full information write to:

THE BRUNSWICK-BALKE-COLLENDER COMPANY • 623 South Wabash, Chicago, Illinois

Brunswick

ACOUSTICAL MATERIALS AT WORK

CALIFORNIA STATE CAPITOL, Sacramento, California

Architects: California Division of Architecture

General Contractor: Swinerton & Walberg

Acoustical Contractor: Brookman Co.

The new, six-story annex of California's State Capitol building has a quiet dignity well suited to the legislative offices it contains. To maintain this atmosphere, the state architects needed an acoustical material that would both contribute beauty to the ceilings and effectively quiet noise.

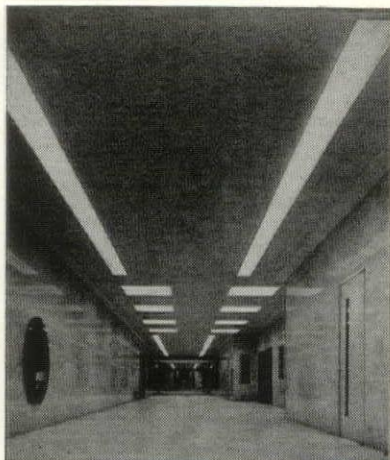
Armstrong's Travertone—an attractively fissured mineral wool tile—was used. Besides contributing to the building's décor, Travertone is a highly efficient sound absorber. Its mineral wool composition fully meets all fire codes. Maintenance is simple and economical.

In the assembly room lounge, Armstrong's Cushiontone was used. Highly efficient Cushiontone absorbs up to 75% of the noise that strikes its surface.

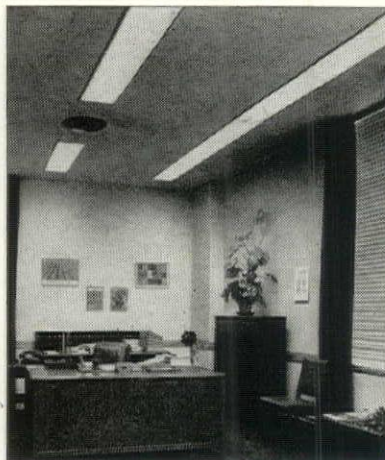
Travertone and Cushiontone are two of Armstrong's complete line of acoustical materials. For helpful advice in selecting sound-conditioning materials, see your Armstrong Acoustical Contractor. With a wide range of special features to choose from, there's a material that meets the needs of every job. For the free booklet, "How to Select an Acoustical Material," write to Armstrong Cork Company, 4211 Rooney Street, Lancaster, Pennsylvania.

The striking beauty of the Travertone noise-absorbing ceiling adds much to the smart, comfortable appearance as well as the quiet atmosphere of this reception room.





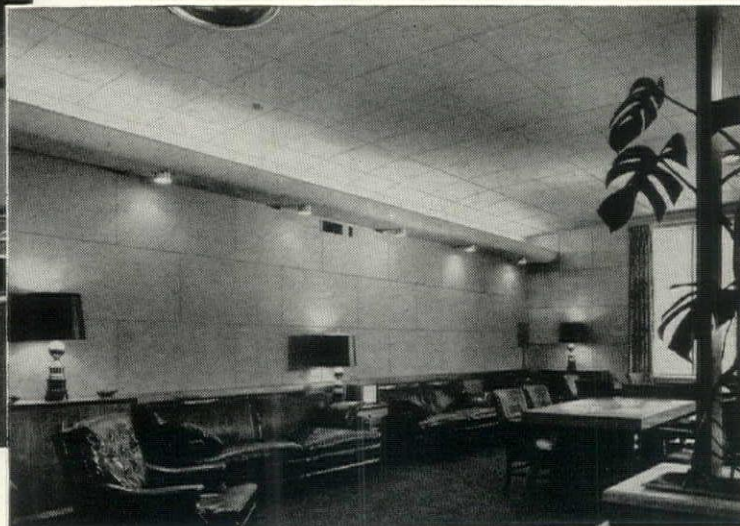
Sound waves, echoing off the hard surfaces in corridors could create a serious noise problem were it not for the sound-absorbing ceilings of Travertone.



Ease of installation with recessed lighting and air conditioning was another reason for the choice of Armstrong's Travertone in the private offices of this building.

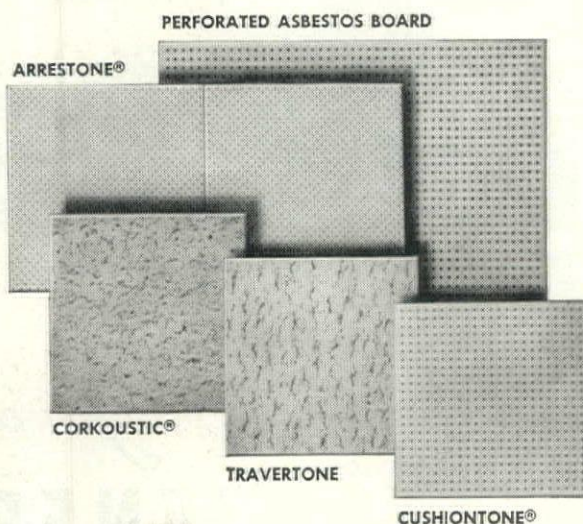


The State Legislature meets in comfortable quiet in this attractive assembly room treated with Travertone.



A ceiling of Armstrong's Cushiontone, a low-cost, highly efficient acoustical material, was specified for the assembly room lounge.

ARMSTRONG'S ACOUSTICAL MATERIALS

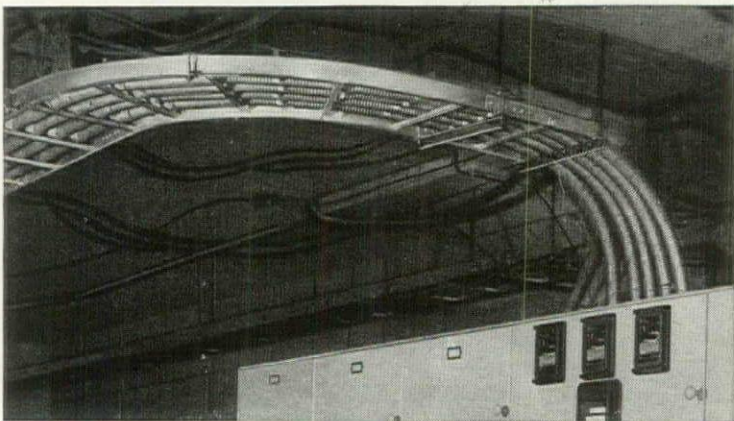


How to cut cable feeder costs in a multi-story building

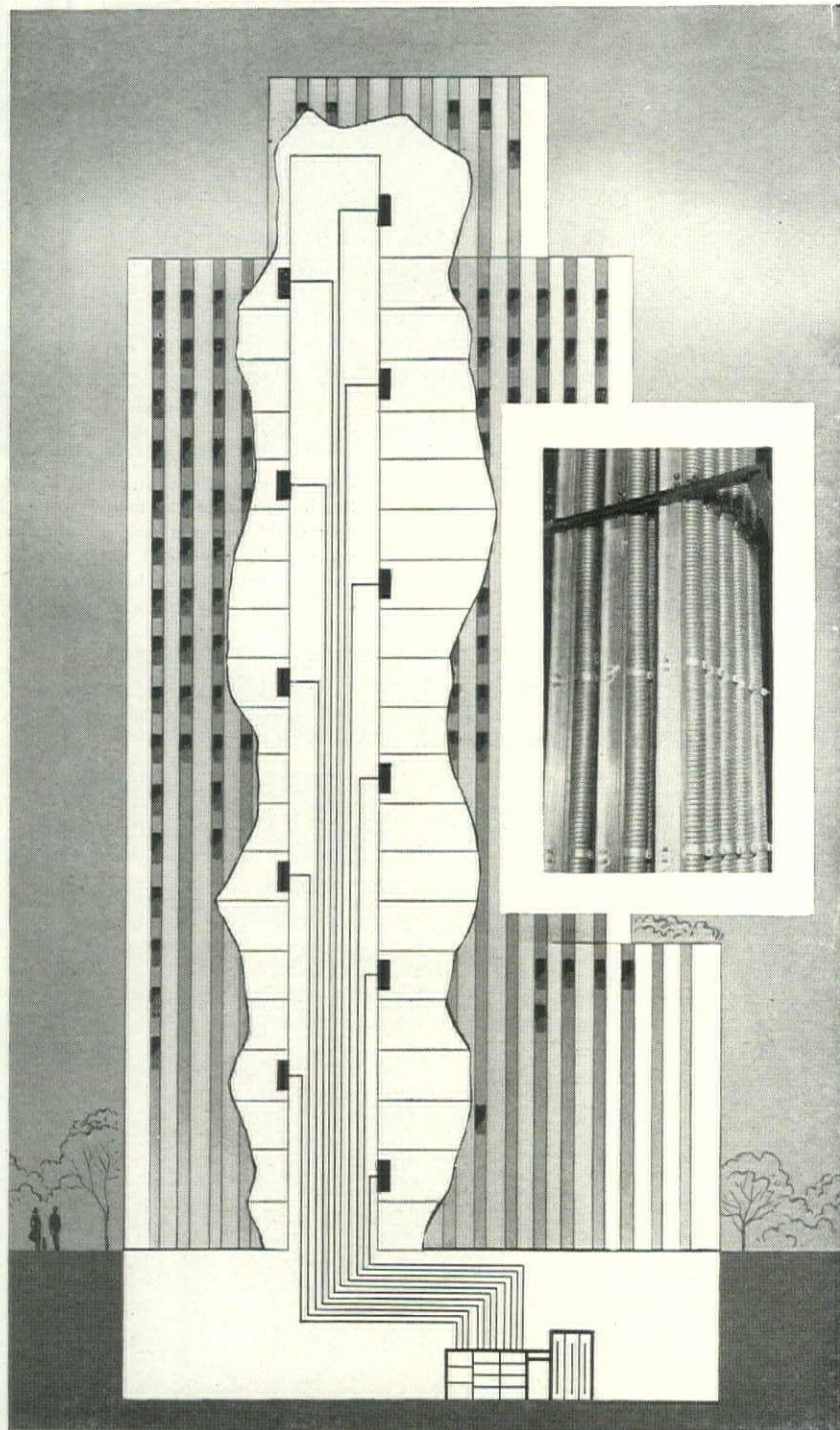
Whether you're planning new construction or modernizing an existing multi-story building, it is possible to cut the material costs of cable feeders as much as 20%—by using a General Electric V-c interlocked armor cable system for power distribution. In a typical 20-story office building these savings can amount to \$14,000, as shown in the tabulation below.

G-E interlocked armor cable saves both engineering and installation time on a tight building schedule, too. From basement load center units it can be run easily around corners, over beams, up the shaft, and off at floor levels. No conduit to thread, fit, or pre-bend. The cable is strung on low-cost aluminum racks and spliced with simple mechanical joints. Each rack is used to carry several feeder circuits. And the circuits are well protected by strong metal armor. To our knowledge, no installation has ever suffered mechanical damage sufficient to cause electrical failure.

For more information on the economies of interlocked armor cable, or any other G-E wiring system, write Section W98-114, Construction Materials Division, General Electric Company, Bridgeport 2, Connecticut.



THE CABLE, strung on aluminum racks, leads from the basement load center unit to a vertical shaft. Note the neat appearance. It bends easily, so corners and projections present no installation problem.



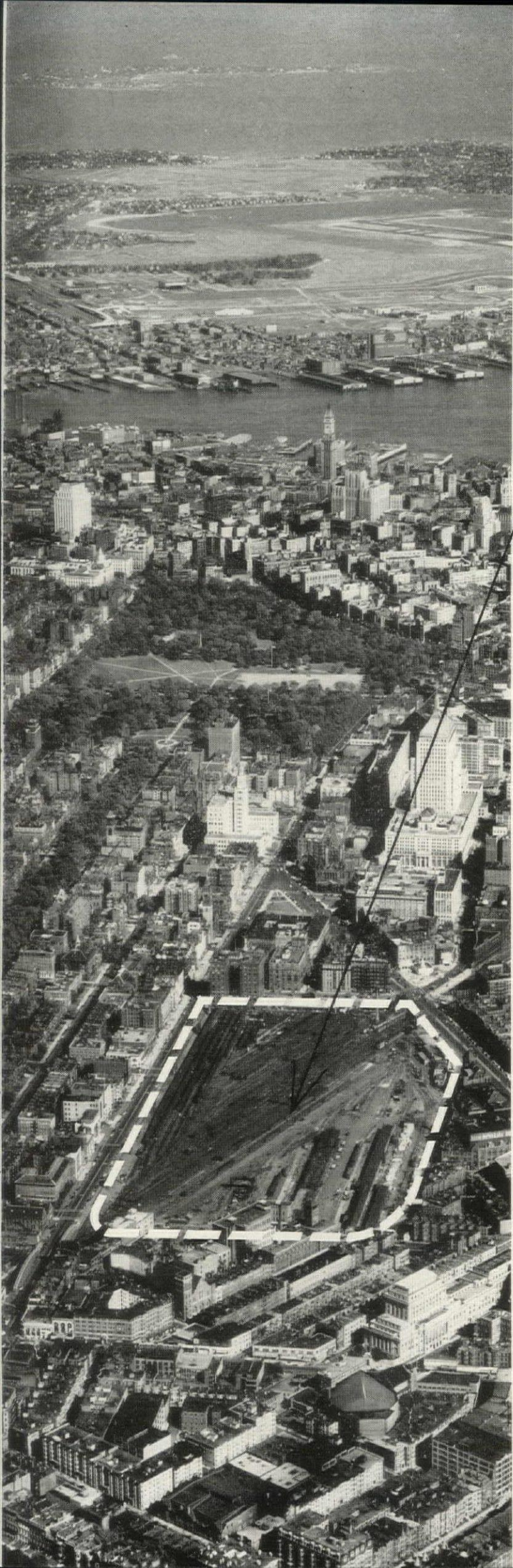
G-E V-C INTERLOCKED ARMOR CABLE is run up a shaft on racks to carry power to the upper floors. Sturdy armor construction protects the circuits. Simple installation saves both time and cost.

**ESTIMATED MATERIAL COSTS OF VCI ON RACKS VS. CABLE IN CONDUIT
AS CABLE FEEDERS IN TYPICAL 20-STORY BUILDING**

Item	Estimated Cost in Dollars		
	VCI on Racks	Type RH in Conduit	Type R in Conduit
Cable*	\$43,145	\$39,491	\$50,963
Racks or Conduit	5,462	10,951	10,951
Hardware and Fittings	3,458	4,515	4,515
TOTAL MATERIAL	\$52,065	\$54,957	\$66,429

*Conductors based on NEC ratings.

You can put your confidence in—
GENERAL  ELECTRIC



A cavity in Boston -to be filled with six ideas

1.

Attract the automobile back downtown from suburban shopping centers by providing super traffic and parking facilities.

2.

Once the traffic has arrived, store it in cellar parking. Above, float a 28-acre raft solely for pedestrians.

3.

Add big-city excitement and power to the rural-shopping-center concept by building not just a castle of stores (840,000 sq. ft.) but also office buildings (1,400,000 sq.ft.), a convention hall (seating 7,500) and a 750-room hotel.

4.

Arrange these buildings *municipally* around plazas and promenades. Instead of just letting the intervening spaces between buildings fall where they may, design the spaces first, then the buildings, and thus bring the Greek idea of the open central city core back to enrich urban life.

5.

Subdivide the big plot for development horizontally, not vertically. Slice it into strata, not into building lots.

6.

Do it all with private money (\$75,000,000 of it) aided not by federal support, but only by the cooperation of the city government.

Add these together and you get . . .



Model of new Boston project set into air view on old Boston & Albany R.R. track-yard site

... the Back Bay Center

The most vivid single ingredient in the amazing architectural complex proposed by a team of Boston's best architects for the site of a desolate railroad yard in the old Back Bay is this:

They would put a 116-room motel in the center of one of the most congested, most tax-groggy cities in the US.

With this daring piece of architectural economics, Pietro Beluschi, Walter Gropius and The Architect's Collaborative, Walter F. Bogner, Carl Koch & Associates, and Hugh Stubbins have epitomized in architecture a statement which may grow into a crucial municipal attack in the US cities' economic war against their suburbs. It is the statement of Roger L. Stevens, 43-year-old buyer of many million dollars in real estate in the last 20 years (including the Empire State Building): "The automobile runs on a two-way street . . . the motor that brings the city to the country can also bring the country to the city. By providing better facilities, our cities must bring back the patronage they have lost."

The Back Bay motel (page 113) is more than a spectacular fillip in this huge development; it fits soundly into the multimillion dollar scheme as a symbol of the thinking which this design represents. Like the motel, the rest of the Back Bay Center is a melange of city efficiency with suburban dash. The gigantic group has been called a new Rockefeller Center—as all big building projects inevitably are—but it actually represents a step beyond that national landmark. The key difference: circulation will not be by regular through-city streets, which make Rockefeller Center an extension of the horizontal traffic flow of the city around it. Instead, in Back Bay Center, people will enter at the base from a ring road and then move *up*. There will be three subsurface parking levels with a capacity of at least 5,000 cars, the world's largest enclosed parking garage, and there will be a subway station on either side of the site and a railroad station running diagonally

under it. While people enter *up* from underneath, goods and supplies will enter *down* from above. It is planned to ramp trucks up to the roofs of stores to drop their cargoes above the selling space. Another difference from Rockefeller Center: stores are not to be incidental to the office space but are to have a definite weight in a wider balance.

The entire Back Bay Center planning is based firmly on an economic and traffic analysis by expert consultants. Says Architect-Economist Ken Welch, who did the painstaking financial prospectus for stores in the center: "Conservatively the center can generate and handle \$80 million in sales a year. The city is still the dominant merchandizing element of our time. Just as the great stores of New York City actually have the whole nation as customers, so will the Back Bay Center have all of greater Boston."

Says Real Estate man George F. Oakes of R. M. Bradley Co., who is renting the space: "Where we got \$2.50 per sq. ft. guarantees for selling space at Framingham Shoppers World, we can get \$7.50 to \$10.50 a ft. in Back Bay Center. It's that good. And office space? . . . There hasn't been a general rental office building put up in Boston since 1932. It's a real air-conditioned crying need. We already have a buyer for one of three small office buildings and we know there are also single-use customers for the other two."

Says Mayor John B. Hynes of Boston: "This is the one time in our era that will enable the city of Boston to face forward again." To help it happen the mayor is offering significant municipal cooperation (see page 106).

Says Traffic Expert Wilbur Smith: "When they first showed me the site I didn't believe it could be done. Parking for 5,000 cars, I asked? But now we know it can be done. You will be able to bring a car in there, park, and be upstairs in ten minutes maximum."



Boston Center Architects

PIETRO BELLUSCHI
THE ARCHITECTS COLLABORATIVE
WALTER F. BOGNER
CARL KOCH AND ASSOCIATES
HUGH STUBBINS JR.

STONE & WEBSTER ENGINEERING CORP.
consulting engineers and construction managers

KENNETH C. WELCH: economic consultant

WILBUR SMITH & ASSOCIATES: traffic and parking consultants

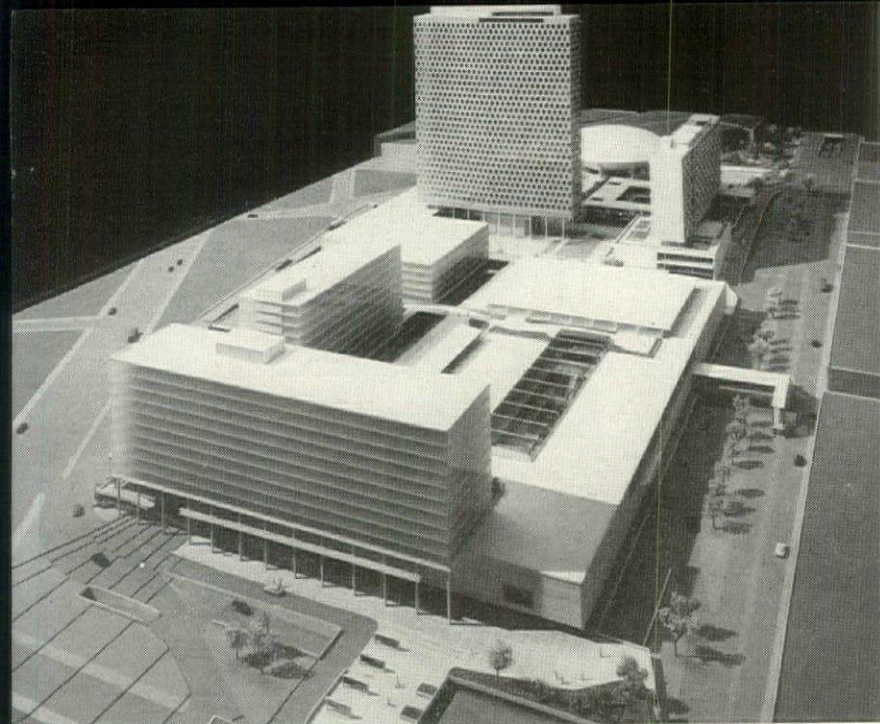
What will be in the Back Bay Center:

- ▶ Shopping center to serve 70,000 shoppers daily, including 13,900 office and hotel workers.
- ▶ Underground garage space for more than 5,000 cars.
- ▶ A 750-room combination hotel-motel.
- ▶ A 40-story building providing 670,000 sq. ft. of office space.
- ▶ Two exhibit buildings and a 30,000 sq. ft. supermarket.
- ▶ Three smaller office buildings, one 7 stories, and the others 12 and 13 stories; a 4-story department store; and a 3-story mercantile building.
- ▶ A new railroad station underground with direct access to all points of the Center.
- ▶ A convention hall to be built by the city, seating 7,500.

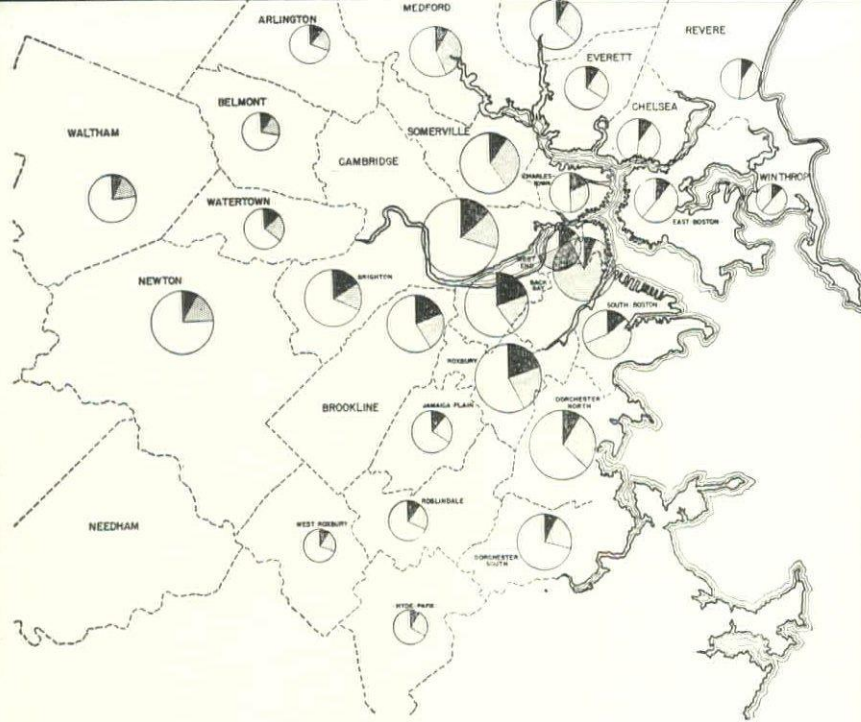
Tall structure is general office building; balconied building is hotel; domed building in foreground is convention hall

Hugh Stubbins Jr.





One-tenant office building, one of three, is at end of group in foreground



Expected patronage from Greater Boston neighborhoods

BACKGROUND TO ARCHITECTURE

Actual construction will be the last act of a play still being written

What is Boston? Like almost every other big city in the country it is an economic headache to its inheritors, the present generation. This is a symptom of most US cities, but old Boston is really sicker than most. One big trouble is geopolitics.

When an outsider thinks of Boston he thinks of a large metropolis, population about 2½ million. But this is true only to the degree that greater Boston does have a population of 2,364,986 (US Census 1950). Boston proper, the central hub of greater Boston, actually is only one of a series of communities in separate counties; its population is only 801,444, in terms of permanent residents, although it has had to carry the big-city economic burden of the whole area. The scores of counties surrounding Boston proper (see map), such as Brookline, Roxbury and Cambridge, should be as much a part of Boston as Brooklyn is of New York City, but in fiscal reality they are more as Westchester County is to New York—a family of entirely independent, noncontributing children of the infirm commercial giant. "In Boston proper," says Walter F. Bogner, "2% of the area of all Boston has been carrying the deficit of all Boston proper." The shrinkage of solvent taxable properties hurts, too. For instance, when the home field for the Boston Braves was sold to Boston University after the Braves shifted to Milwaukee recently, another big swatch of taxable real estate went off the rolls.

Realistically, no one knows what Boston is. None of the charts of the Boston park district, sewage district, etc., even agree in their inclusion of the surrounding counties. There has even been secession; in 1705, Brookline withdrew from Boston proper. It is now a rich, debtless, bedroom community which one must cross to get from one part of Boston proper to another, but which wisely stays out of Boston proper's financial dilemma.

Real estate facts: one of the results of this situation has been improperly high taxes on Boston-proper real estate. The current rate is \$70 per thousand, about twice as much as New York, enough to dismay even as intrepid a real estate operator as William Zeckendorf. He was offered the 28-acre parcel which Roger

Stevens plans to develop, the old yards of the Boston & Albany Railroad, but he said no emphatically.

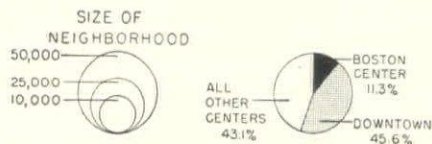
Stevens has deposited \$100,000 on the \$4½ million parcel of land and has until Feb. 12, '54 to conclude his deal or renew it. In terms of Boston real estate the land is cheap, less than \$4 per sq. ft.; today it is assessed at \$8 million. But even so, Mayor Hynes had to work overtime to lure a promoter to the site. When George Oakes (who himself ran unsuccessfully for mayor in 1949 on the Republican ticket) went to Detroit in 1952 to try to interest Stevens, he had to include other possibilities to hedge against the tax rate:

- ▶ The new assessment of the land would be its actual price, \$4½ million.
- ▶ The assessment for the improvements would only be about 55 or 60% of their cost, by no means unusual in Boston.
- ▶ The city would build a convention hall at one end of the site.

But the question remains today, how can Stevens be sure a new mayor will not hoist these assessments?

This question had not been answered officially by the middle of November but there seemed to be only one possible guaranty. If Stevens buys the site from the railroad, then sells the base levels to the city, retaining only the "air" rights, he will be shielded from land taxes because he will no longer hold the land, but only a lease on the columns which will be driven far down into the Back Bay fill. Under Massachusetts law the city as owner could then build an off-street parking garage on the lower levels of the site and lease it profitably to a commercial operator.

Stevens has never been eager to build anything himself, and probably still is not; but he could instead re-lease most of those columns, his "air" rights, in vertical strata for offices and stores, retaining design-quality control of the group and a heavy interest in the valuable intermediate shopping levels between garage and offices as his promotional reward. Stevens would thus be relatively safe from Boston's notorious tax rate.



Key to size of neighborhoods in chart, and to expected patronage split (example is also total for whole area).

Photo: (opp.) Robert D. Harvey

THE BIG MONEY. Ken Welch's analysis of future trade for the Back Bay Center's stores took in 28 economic areas in greater Boston, a city which economically is as fragmented as a cracked hearth. The potential customers within 30 minutes travel distance of the site include 500,000 "expending units," i.e., families or unrelated individuals who annually spend \$320 million in general merchandise, apparel and home furnishings. Of this it is estimated that Back Bay Center can slice \$63 million, split as shown in chart. Wares like jewelry, books, etc., will add \$7 million to the take. Shopping expenditures such as restaurant food, drugs, etc., add \$5 million more, and a big supermarket will take in another \$5 million. Welch makes a documented prediction in his report that of all the "expending units" in the area, 11.3% are potential customers for the Back Bay Center.

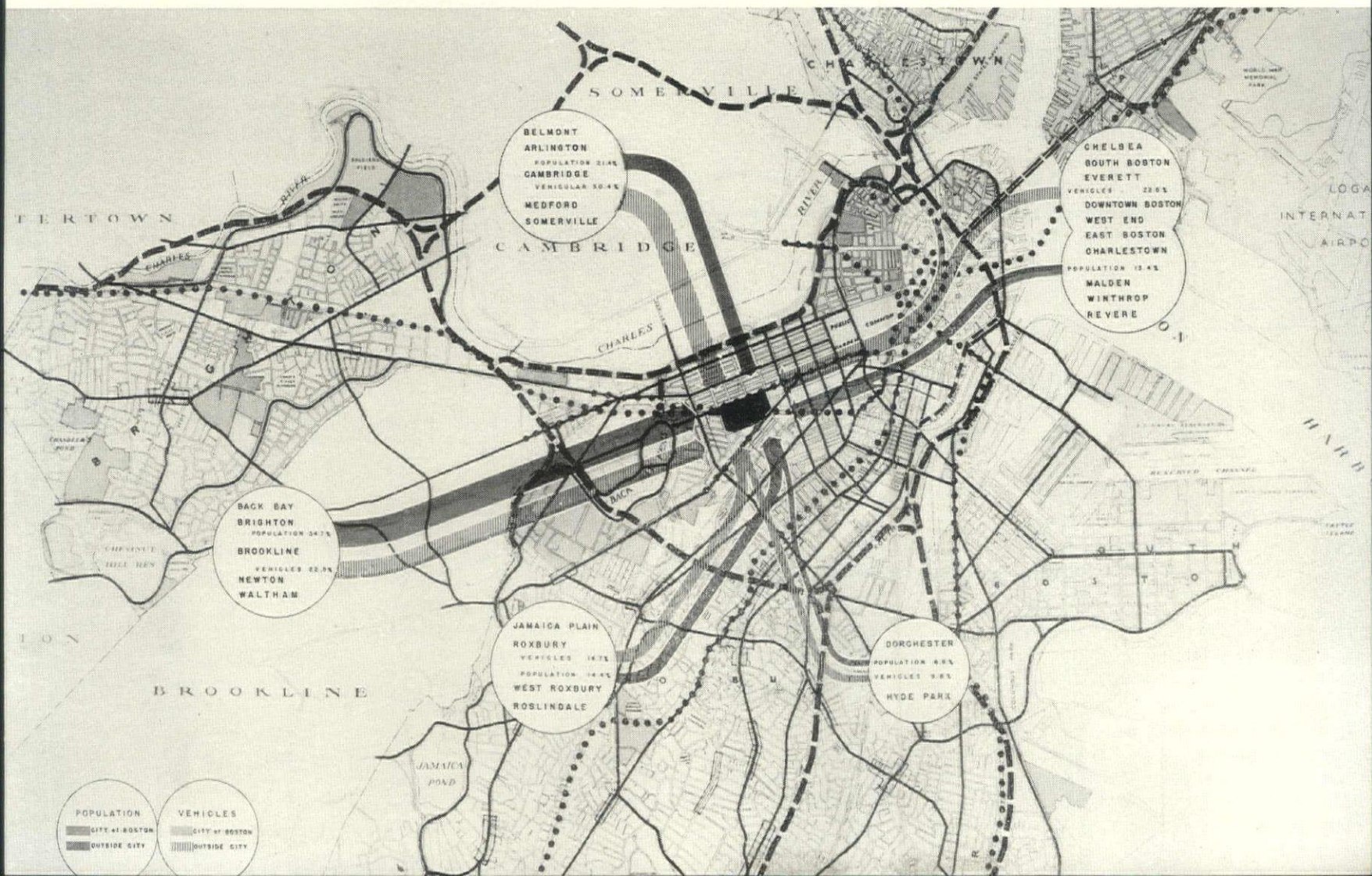
THE CASH REGISTER. Of the 70,000 people expected to flock to this new metropolitan hub every day, it is estimated that 25,000 will come by car, 40,000 by mass transit (trains, subways, etc.) and only 5,000 by foot, an astonishing situation for a part of a downtown business section. Boston's new and projected master road system will feed the cars neatly into the Back Bay Center, whose daily traffic will be in excess of that entering the business district of most cities of 80,000. But parking spaces will equal the number found in the central districts of most cities of 200,000.

Drivers will self-park their cars, guided by large electronic signboards, treadle-operated at entrances and exits to garage sections. They will pay to park. Larger chart shows sources and relative strength of traffic. A subway station will stand on each side of the Center; a railroad station will split the garages.

A PANORAMIC COLLABORATION. All the architects associated in this unique team effort collaborated in all the decisions; they say there was no slicing of the problem into parts. A separate "Boston Center Architects" office has been set up in Cambridge; the collaborators commute in and out from their own offices. Walter Bogner is the team's coordinator; he says: "The Back Bay Center is a cure for the ailing heart of Boston."

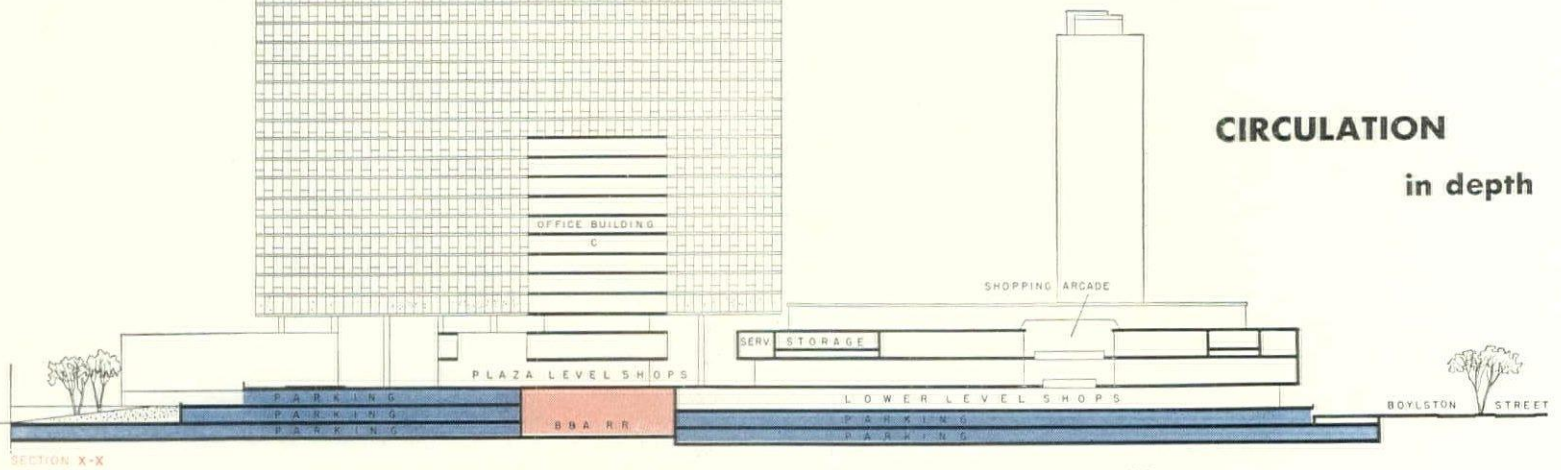
The design as shown was produced in amazingly short order, once the collaboration had been jelled. It took only three months to get it out, including time for building the big model. In addition to the principals named in the credits, Fritz Day of Carl Koch and Associates, and Norman Fletcher of TAC are particularly concerned in this project. Samuel Glaser & Associates are the convention hall architects. (See p. 114.)

Vehicular traffic and mass-transit traffic proportions expected are shown by lines (below). Heavy dashed lines are major feeder roads; dotted lines denote mass transit.

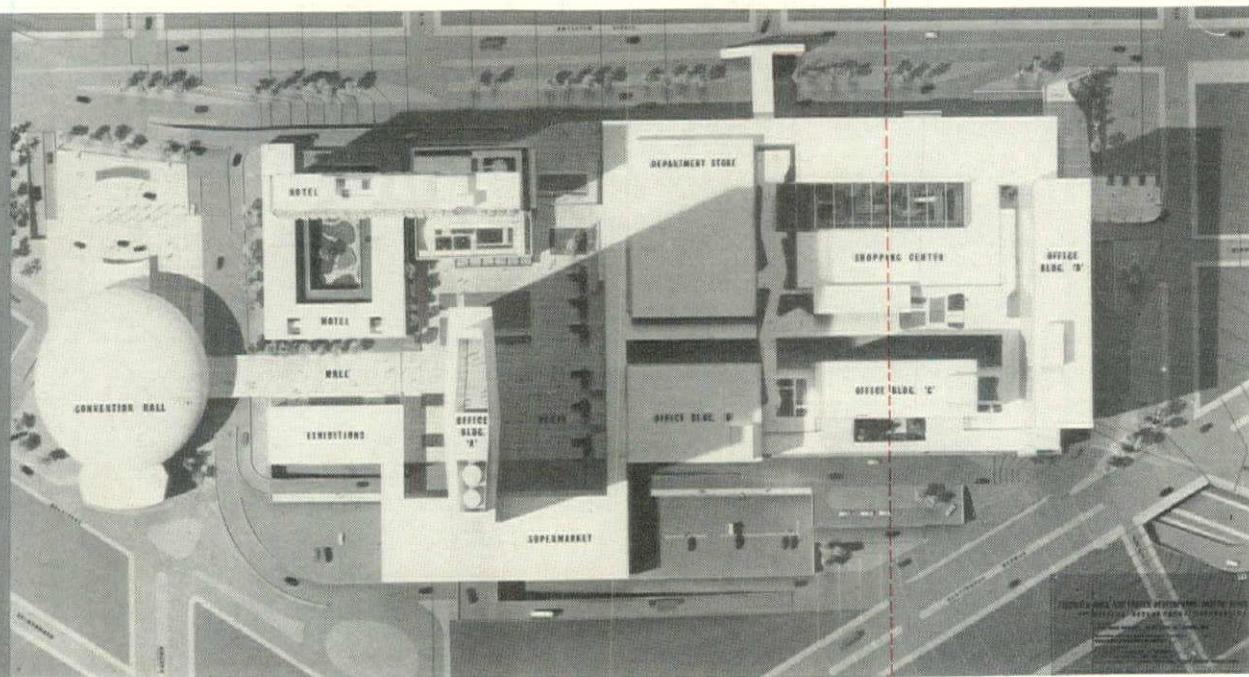


CIRCULATION

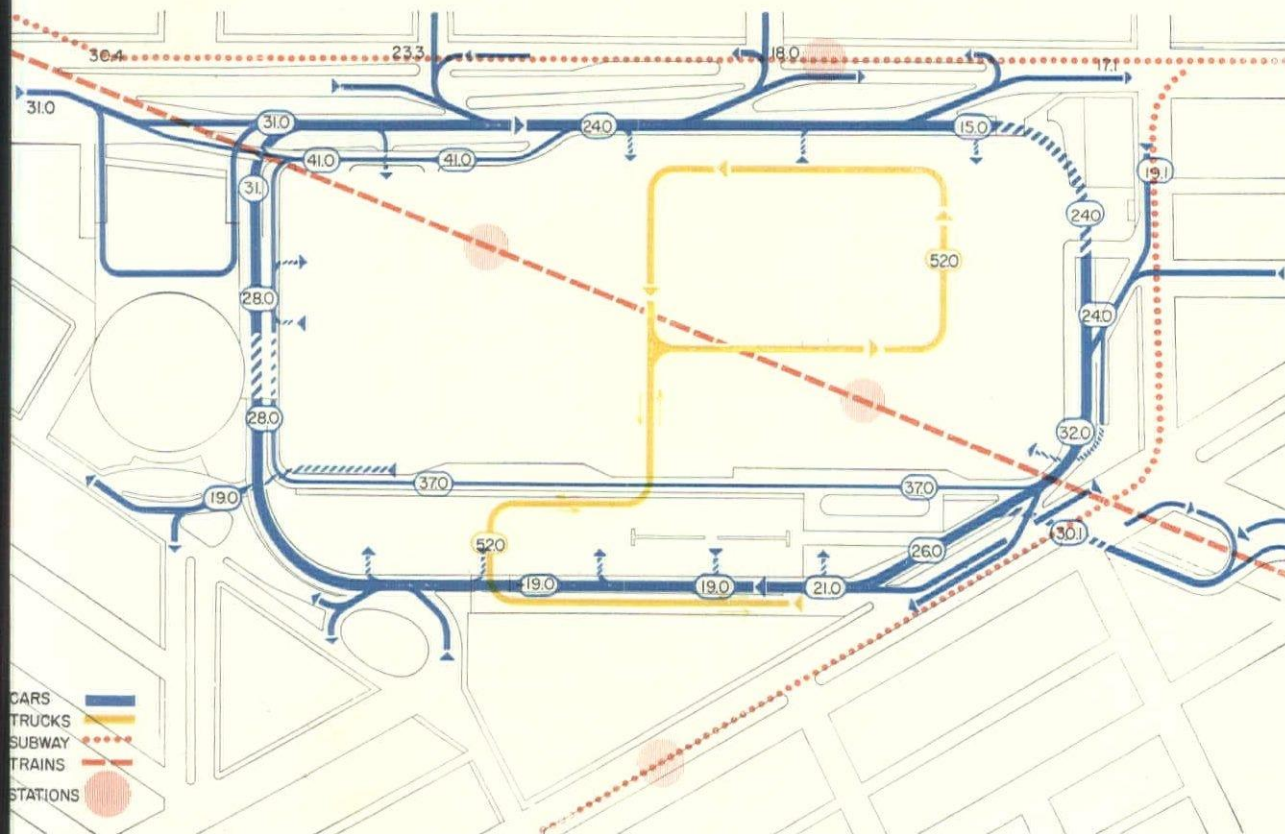
in depth



Cross section shows how railroad splits site. Lowest-level parking is reached by ramps from level above.



One-way ring road (blue, below) circles site, climbing up to bridge railroad. Numbers show feet above sea level.

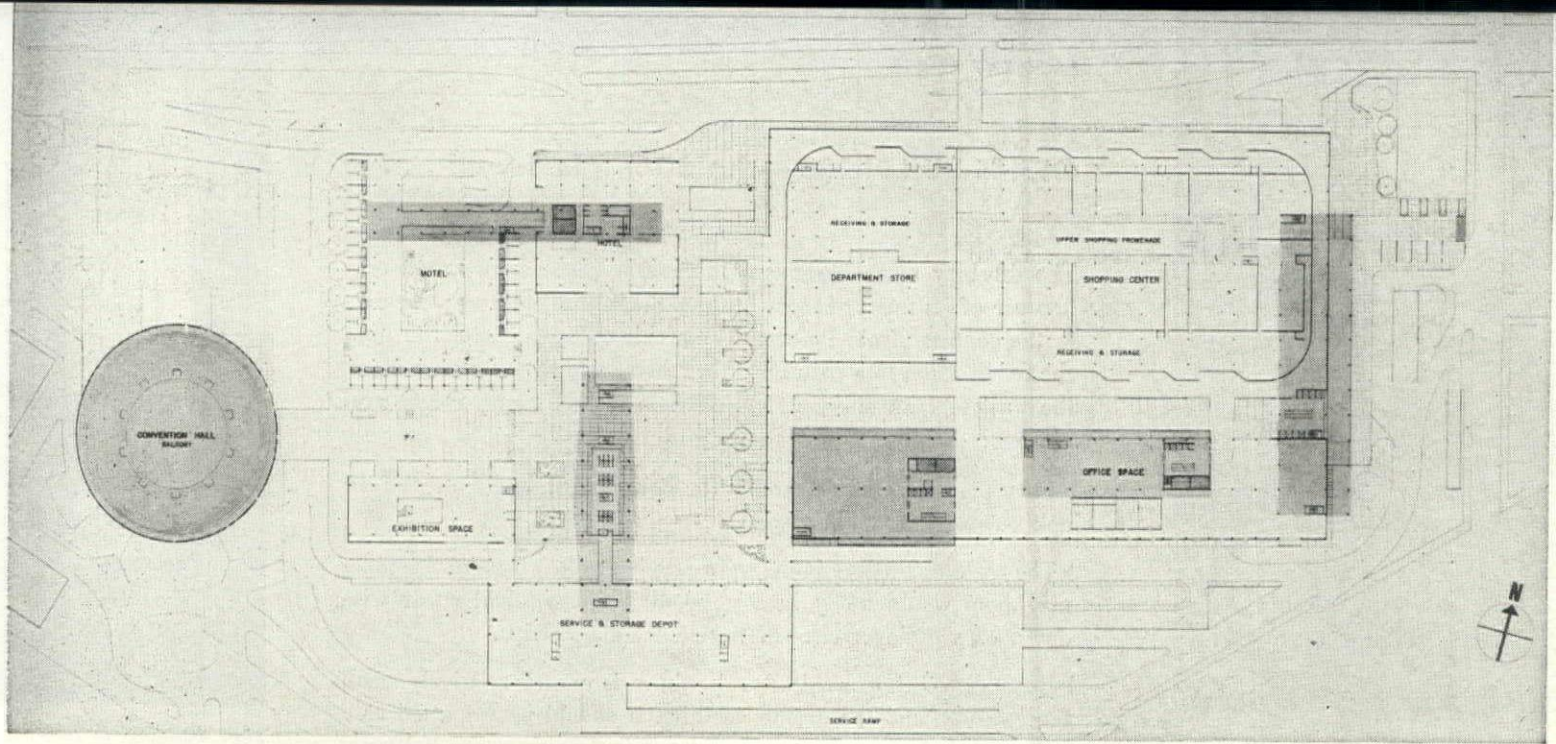


The traffic flow within Back Bay Center will be so complicated it is difficult to present in two dimensions. In three dimensions it may be very simple indeed, for traffic experts point out that any oversimplified plan solution usually leads also to oversimplified traffic jams.

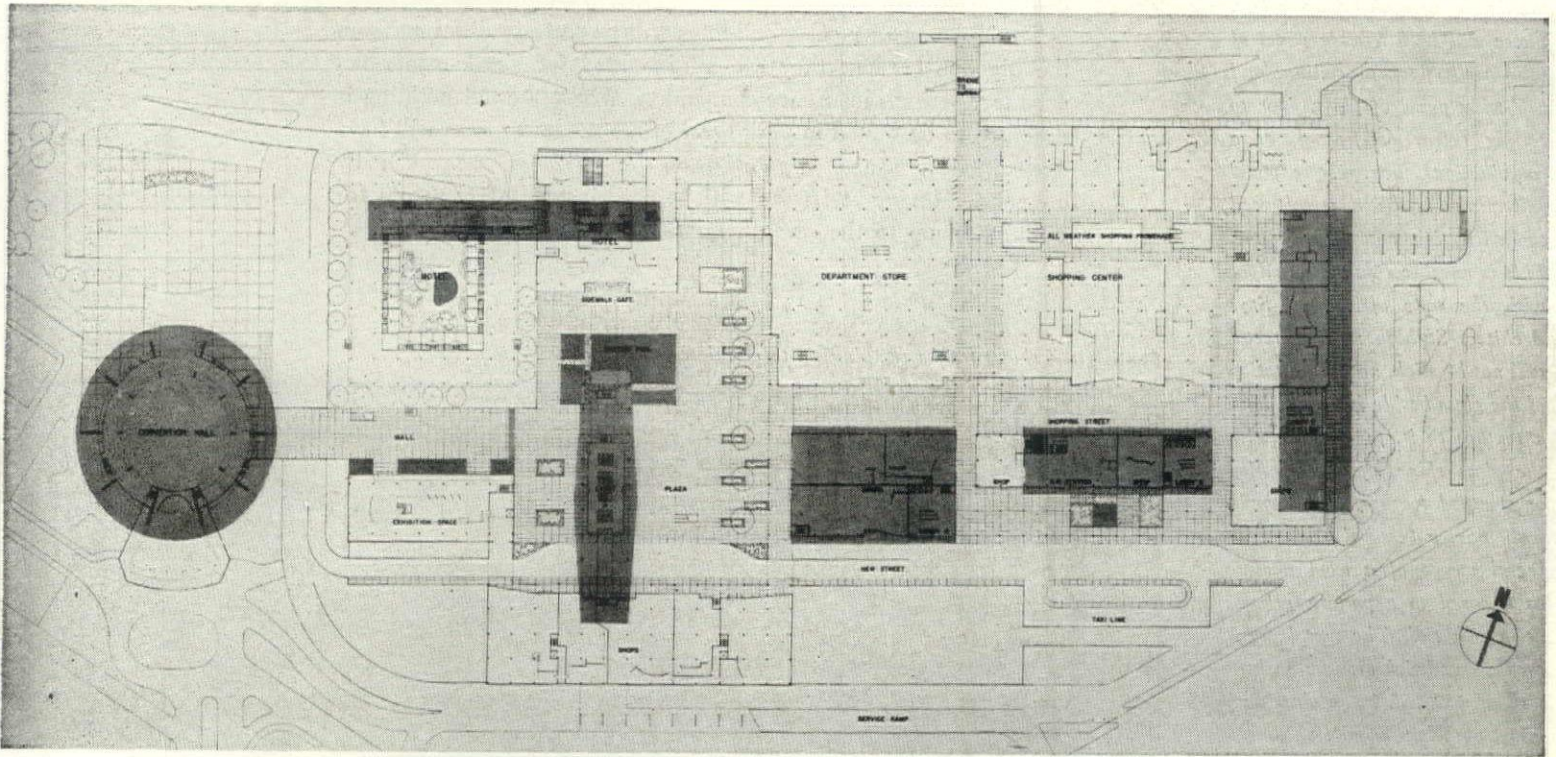
The first complication is a railroad tunnel (see section) which slashes diagonally through the site, bisecting it up to a 37' level above water level. This tunnel divides the subterranean parking into two wedge-shaped slices in plan. The site also has a slope; to fit it, the designers stacked two parking levels on one side of the railroad tracks, and three on the other. Automobiles will enter the parking spaces from the ring road, which flows clockwise around the periphery of the site. This road is designed to move traffic at a safe 35-mph speed, 15 mph faster than adjacent city streets, and there are seven entrances and seven exits to this ring road from city traffic. From the ring road there are ten entrances and exits to garages. The architects are considering a shuttle service for shoppers from parking places to the escalators.

In reading the traffic plan (below, left) the important thing is to remember that the ring road varies in level. Where it crosses over the railroad tunnel (red dashes) it has to rise. The difference in elevation is as much as 17', but grades do not exceed $4\frac{1}{2}\%$.

The advantage of this downstairs parking of automobiles is that it decreases to 500' the maximum path which shoppers must walk from parked cars. In flat parking the last arrival would probably have to walk 960'.



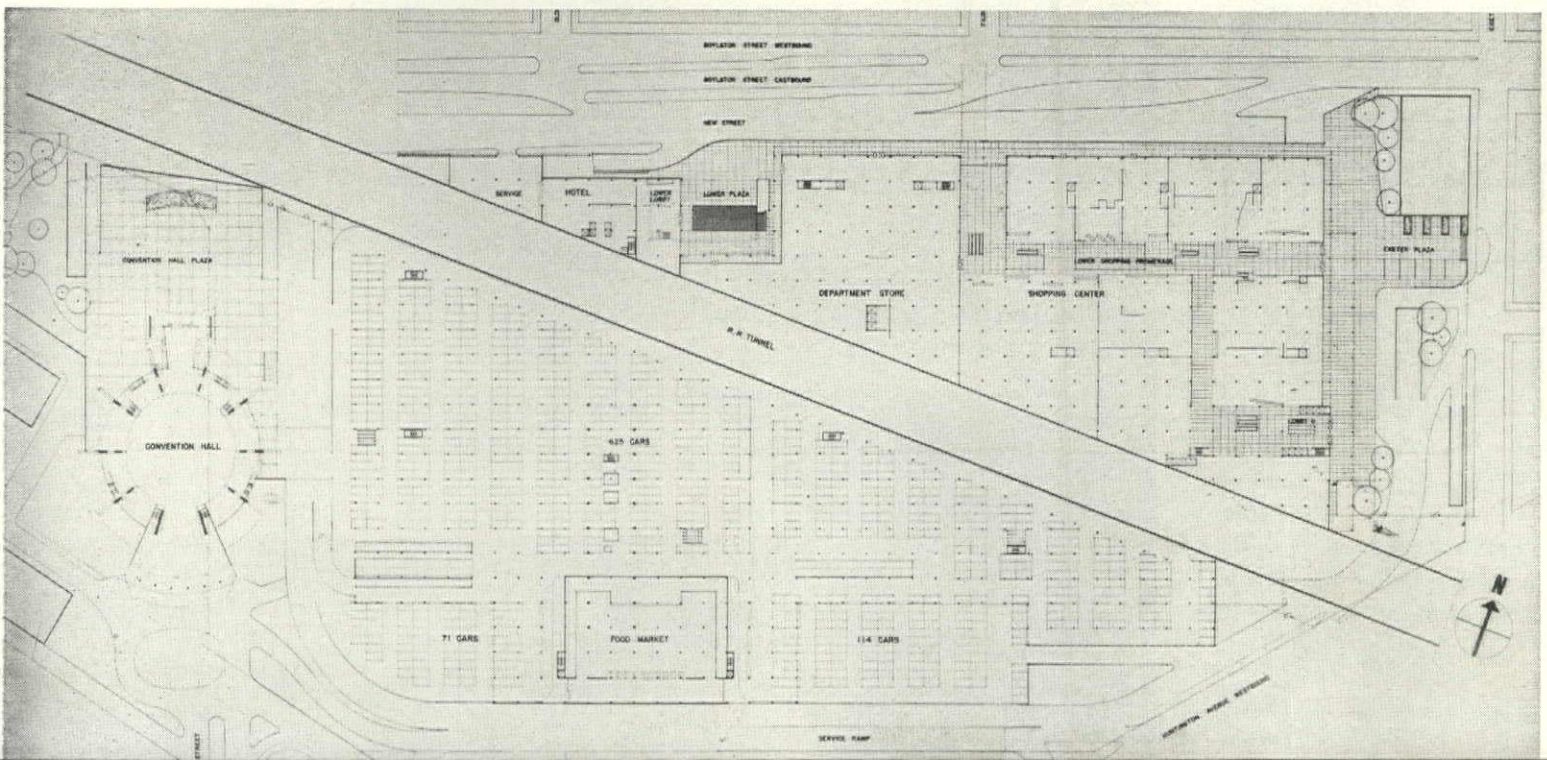
Upper shopping and trucking level (52' above sea level). Most stores are concentrated to northeast around galleried arcade (section, left)



Plaza level (37' above sea level) is the most open area, with necklace of courts and promenades entirely for pedestrians

Upper parking level uses only one side of railroad tracks, but on two levels below this the area is all for parking

0 50 100 200 300 400 FT.



OFFICE BUILDINGS—the 50% glass wall . . .

The 40-story office building will have a historic wall, not only because of its forward look, but also because of its firm placement in the context of old Boston. The architects have decided to limit the fenestration to a pattern, rather than go to the all-glass wall or the wall of long horizontal or vertical ribbon strips, for several reasons:

► Fifty per cent glass is enough for Boston's harsh climate and the upkeep problems it imposes.

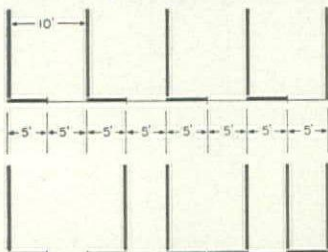
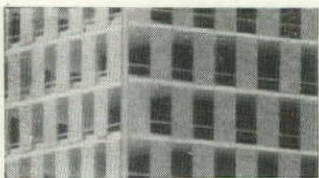
► The scale of this big building in relation to its plazas and smaller neighbors would likely be lost by 400'-high vertical spear windows, or a 40-layer cake of horizontal glass strips.

► Boston's existing architectural culture is one of relatively small fenestration, and the architects think it should be respected as a background for any such major municipal monument. Belluschi points to the background as a *part* of this design, and of any other honest architecture.

The three smaller office buildings will be entirely different from the big one because they are all intended for single-owner occupancy, perhaps insurance companies. Where the tall building is designed to be rented in peripheral offices the lower ones will have deep interior space, supported on long trusses, unbroken by columns. Moving stairways will be used instead of elevators for circulation up to the seventh floors.

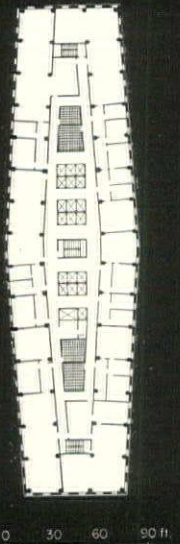
In the tall office building the wall will be split vertically down the middle of each 10' office bay. There will be a 5'-wide panel of solid wall, floor to ceiling, and a 5'-wide panel of glass, floor to ceiling (clear or frosted, or a combination). The opaque panel will probably be a metal-faced sandwich, but not a shiny one. This is another refusal to tamper with the tone of Boston. Says Architect Stubbins: "The metal will not be slick, not an imitation of the glass beside it. It will have a texture to it, to contrast with the glass shine, maybe a rolled or stamped texture, but a small-scale one, a texture like the integral weave of a wool necktie as opposed to a pattern printed on a silk tie." The metal finish on this sandwich may be dark as well as textured, in an aluminum alloy, porcelain enamel or steel.

From inside the office the vertical window has several advan-



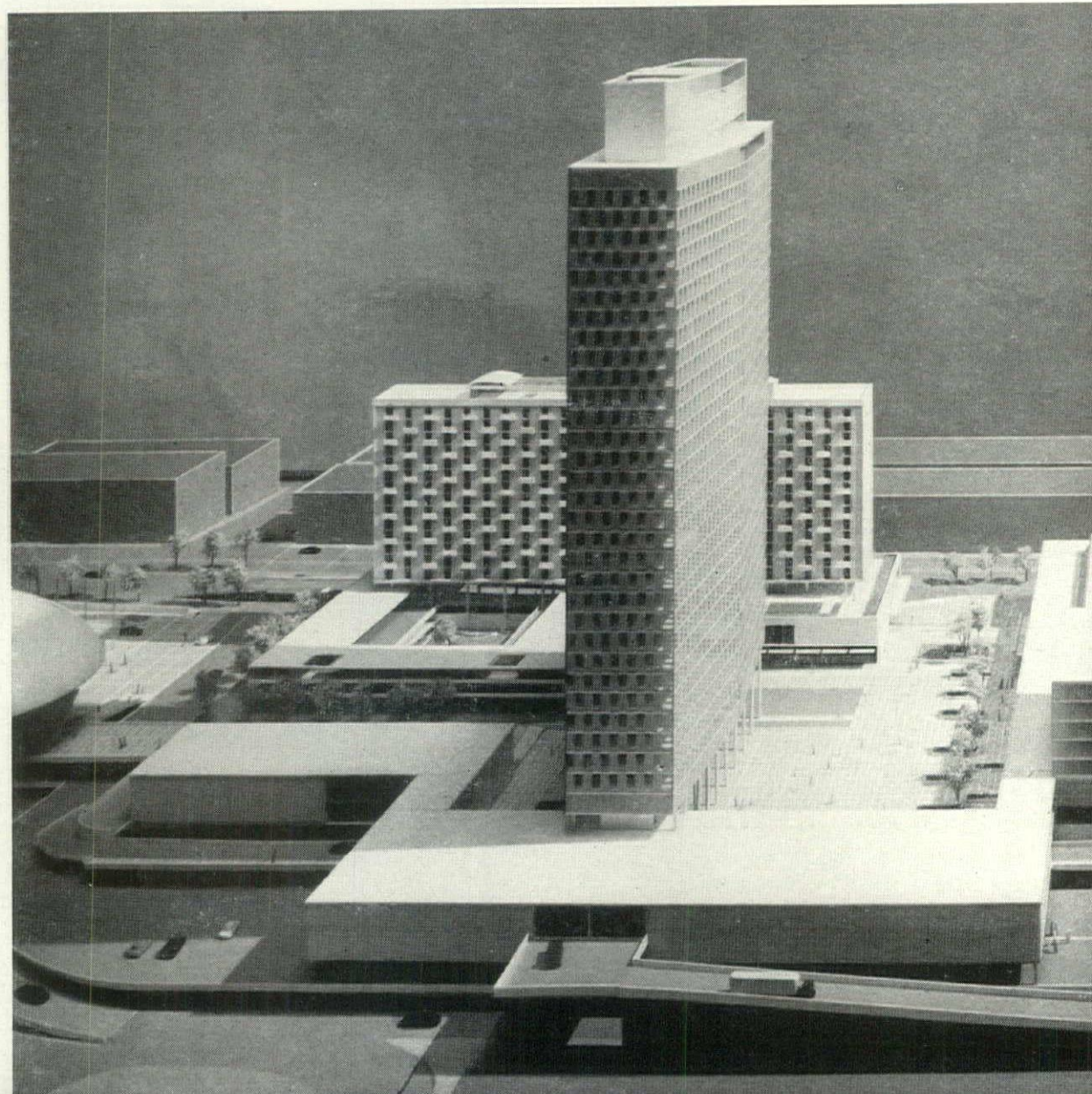
tages (see also hotel, p. 113): it bounces light off the partition which generally will adjoin it at a right angle; it allows unusually flexible furniture arrangement; it is very adaptable for partitioning.

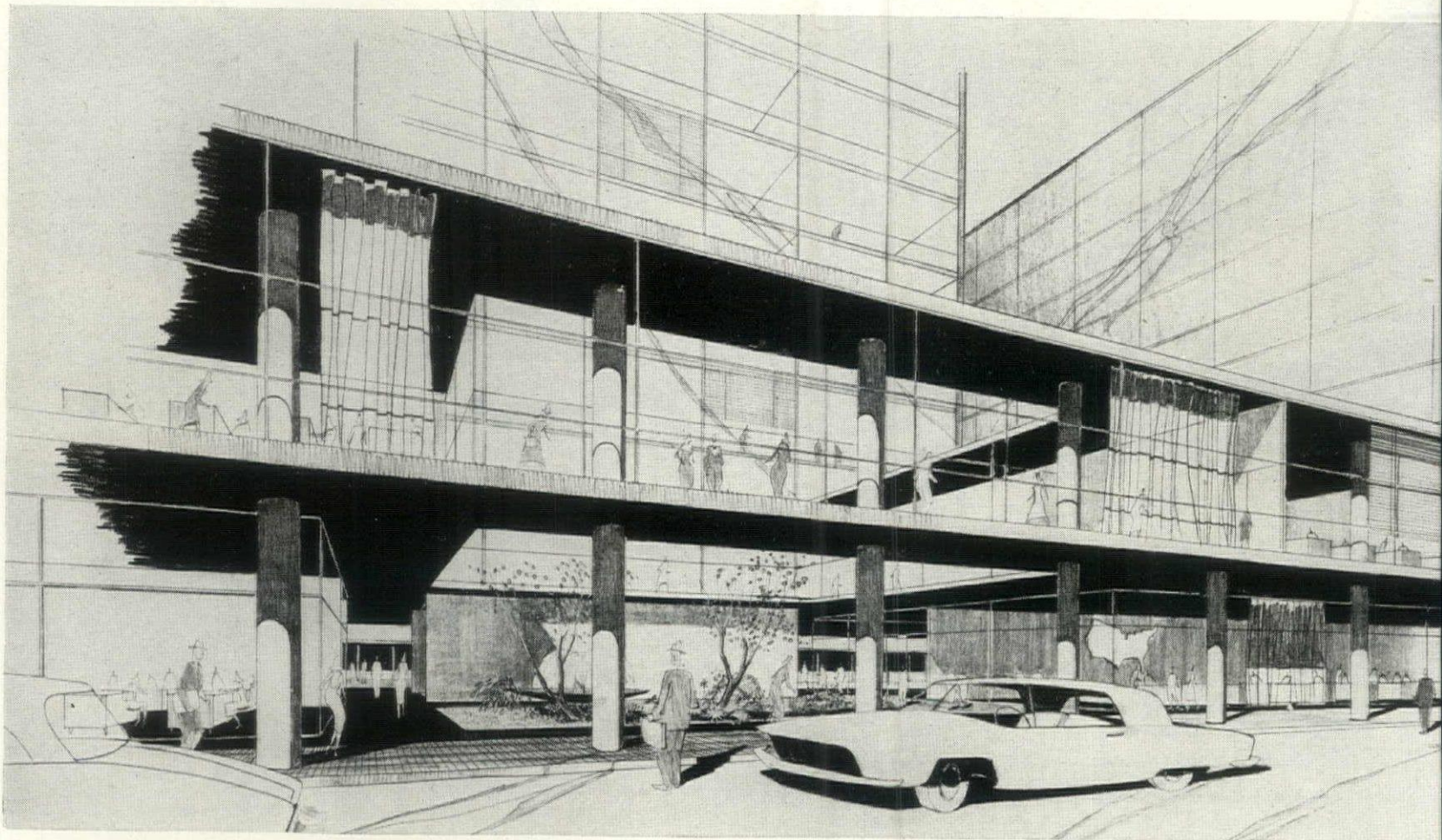
Robert D. Harvey Studio.



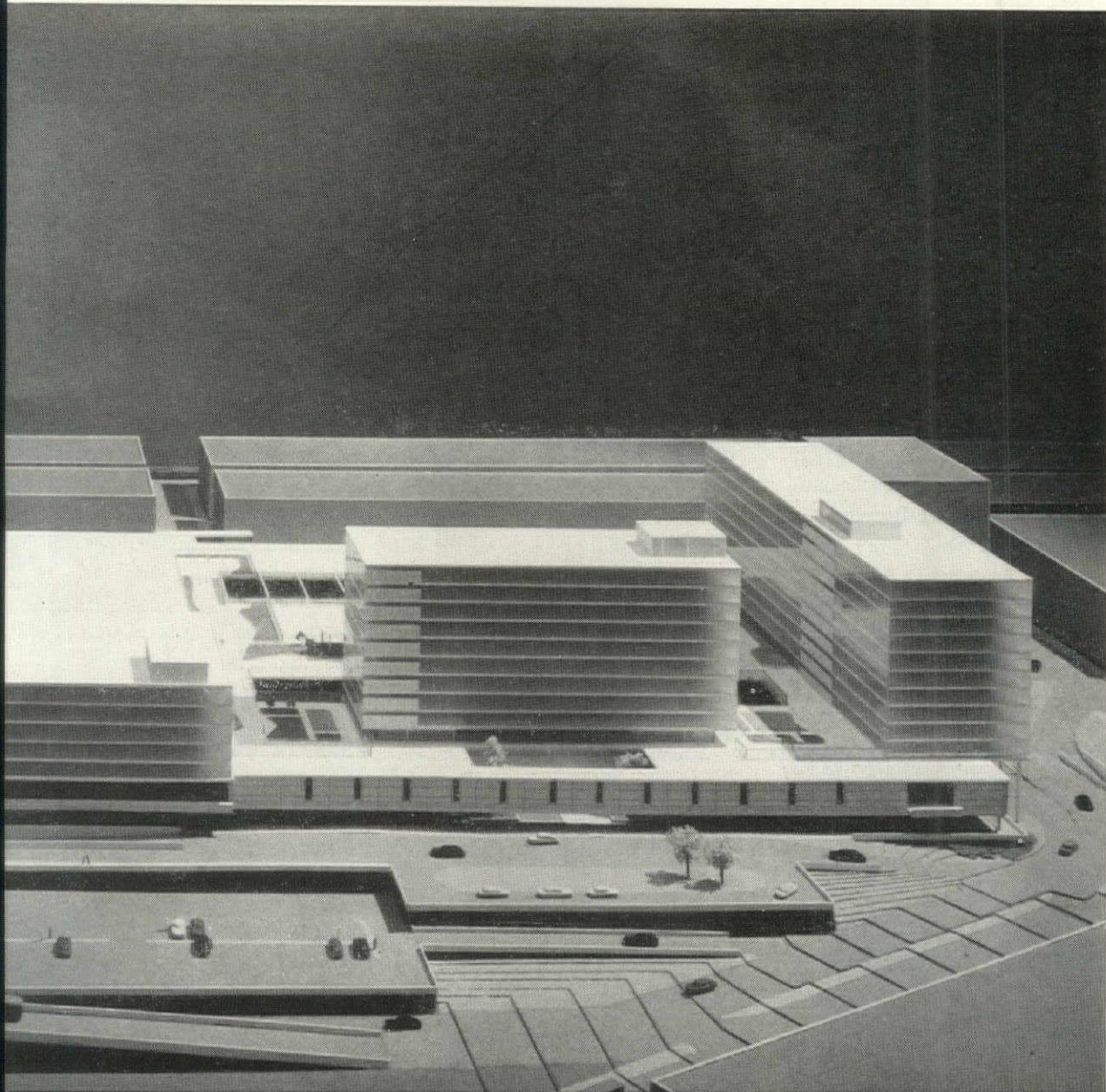
Slab building is widened for service core.

South view shows trucks ramping up to circulate on plaza stores' roof level . . .



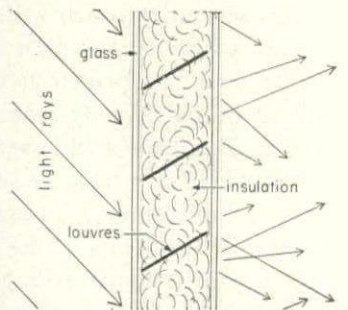


... also a 100% glass wall. Sketch above is entrance court seen below in model. See lower right for wall detail sketch.

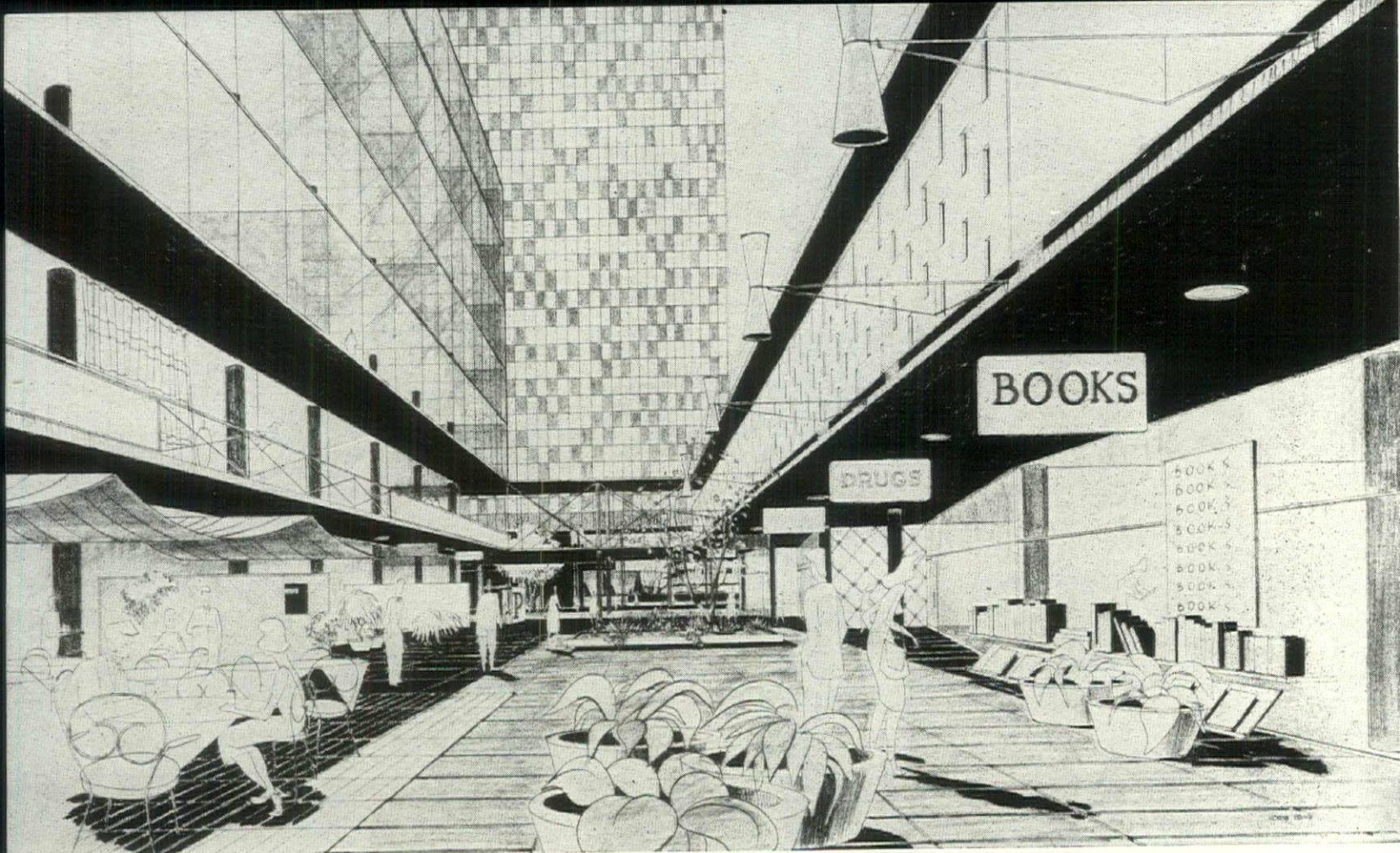


Stubbins points out how office sizes can be varied (see plan).

The over-all pattern of fenestration of this big building may not turn out to be the regular checkerboard of the model, according to Belluschi, but may instead be varied to fit the specific requirements of long-term tenants. Reasonably controlled irregularities might also create a more interesting facade, the MIT dean of architecture believes.



In the smaller office buildings, because the design is for large, open clerical areas, the architects may use a translucent, but not entirely transparent, exterior wall, floor to ceiling. Carl Koch is thinking of a sandwich made of two panes of glass with fibrous, light-passing insulation between. Louvers inside the sandwich would prevent glare.



Back Bay Center shopping promenade leads to big plaza around tall office building

STORES AND HOTEL—an oriental bazaar of shops and services for stern old Boston

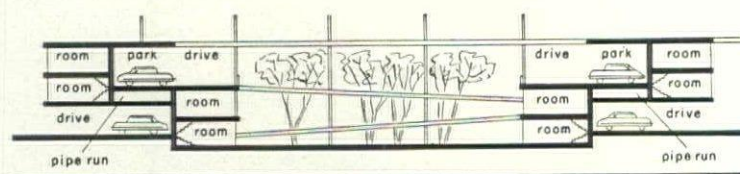
Stores: a sizable department store (250,000 sq. ft.) is anchor man on the merchandising squad, but there are also 100 other stores in the Center. Many of them line a three-tier, enclosed arcade (photo, below) which will have a translucent roof to admit daylight. It will be totally air conditioned, including traffic ways. Other stores will line the plazas and promenades (see plans, p. 109).

Nearly all the stores of Back Bay Center turn their faces inward for display. Only the supermarket makes much use of the periphery of the Center. (It, in line with latest shopping-center theories, has been relatively isolated from the other stores in the complex. It has a big market; 123,000 people within ½ mile.)

This separation which will exist between Back Bay Center and the rest of Boston has drawn criticism. Except for a very large "front porch" for pedestrian entry near Copley Square, the group will sit behind its ring road somewhat like a castle city behind a moat. But there is an inescapable answer to such criticism: how else could the auto traffic be so deftly handled?

In the vast parking garages, presently planned to hold about 5,000 cars, about 75% of the spaces will be reserved for shoppers, with a predicted turnover of three cars an average day. The offices will get 10%, or about 500 spaces. The rest of the spaces

will be for railroad-station, hotel and convention-hall parking. Studies indicate that 50% of a peak parking load of 5,000 cars could be cleared from the Center under normal traffic conditions in 20 minutes.



The hotel-motel: no less strong than the US surge from city stores to suburban shopping centers has been the new preference of travelers for motels and tourist courts over city hotels.

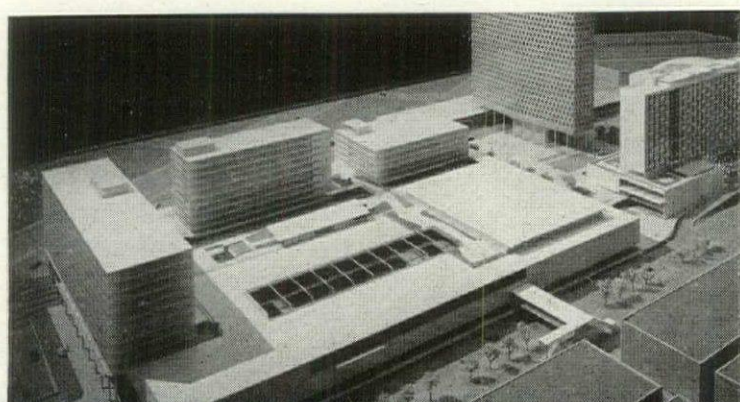
Back Bay Center's recognition of this sociological trek is the four-level motel to be operated in conjunction with a modern slab hotel. Even the motel has vertical circulation; you drive in from the ring road, check in at the hotel desk, then ramp up or down on roadways and park. Several steps up or down from your car (see section) is your room.

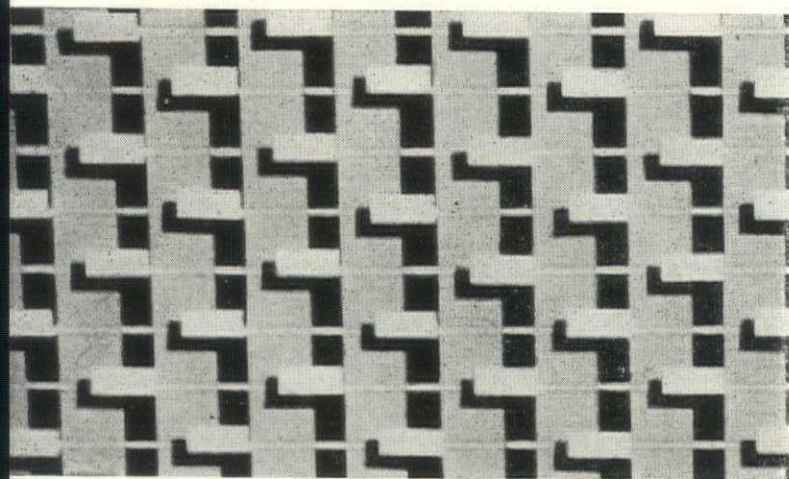
The motel's rates will be higher than the hotel's; even at that it may not make a lot of money on leases from the promoter of the Back Bay Center. But it will be an invaluable promotional keynote, well worth its substantial weight in auto ramps.

Rooms in both hotel and motel are to be 15' wide with interior baths. The 5' exterior wall module of the tall office building will be used, giving a room unmatched for arranging furniture. A bed can be put against any wall without subjecting the sleeper to the glare of early morning light.

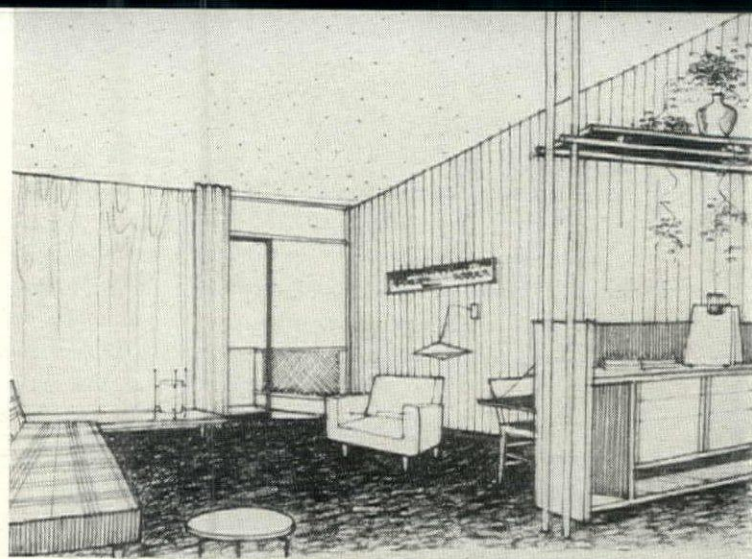
Half of the rooms in the tall hotel slab will have small balconies, good as a rental special, and good also to break the vertical window runs and preserve the building's scale.

Shopping gallery will be lit by immense skylight shown in model below

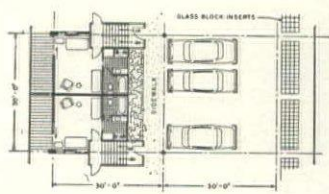




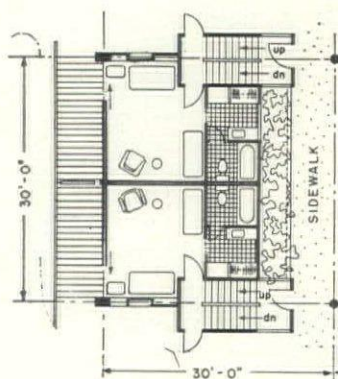
Hotel wall (see also color cover) uses same 5'-wide floor-to-ceiling window as tall office buildings, is decked with little balconies to scale down vertical bands of glass. Photo (right) shows how smaller complex of hotel and motel fit neatly into main plaza.



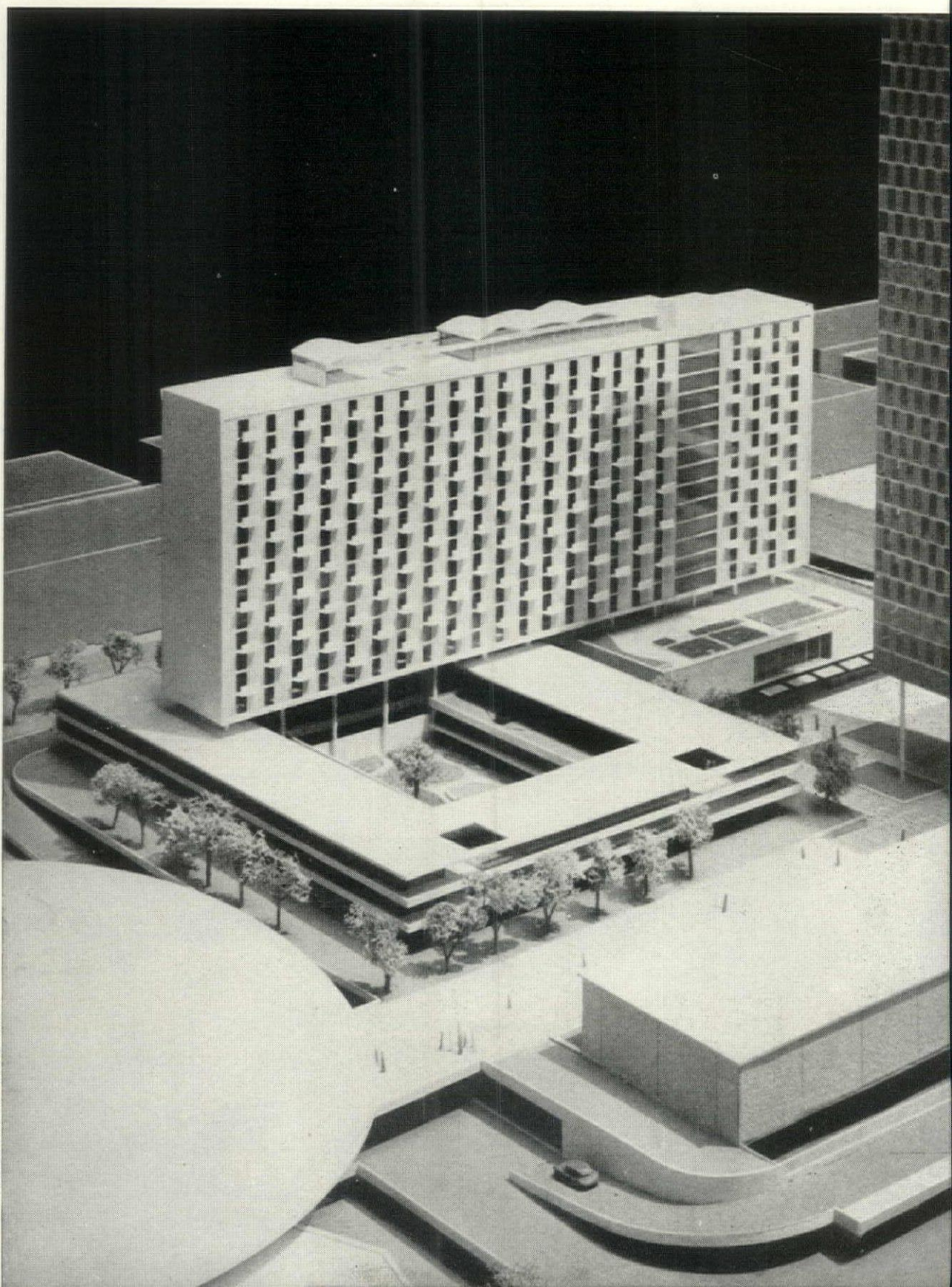
Hotel room looks out to balcony. Floor-to-ceiling window to one side of exterior wall allows plenty of daylight to enter, but does not dominate room.



Motel wings extend from hotel under wide-flat roofs. After you drive up ramp to park near room, a few steps up or down take you to your bed. Above, plan across wing. Below, detail of pair of rooms.



Photos: Robert D. Harvey Studio



"Architecture can come to life only through the mastery of space"

"A plaza should be just barely large enough to hold the peak-hour rush," says Walter Gropius, and this is the way the series of plazas and promenades are being planned for the Back Bay Center.

Why? "It has to do with our subconscious feeling of security in space," he replies. "Sensitive people feel lost in too big a space. Gigantic open spaces without subdivisions, without enough people in them, appear to be out of human scale. Our eye acts like radar. If the void of a great open space is interspersed

with walls, fences or shrubs, the eye finds support, the illusion of security returns and our uneasiness and forlornness disappears."

Gropius points out the little, long piazza in Vigevano near Milan as a perfect example of the charm a properly scaled plaza can have. "Milan's piazza di Duomo is too big," he says.

"The intricate problem of scale lies at the basis of architecture. If properly solved even discordant details can be absorbed.

"In the modern city a plaza for pedestrians may be more important than ever before. The

pedestrian has been pushed against the wall in our cities. We have a beautiful net of highways for automobiles, but in the city we also have to give back to the pedestrian his right of way." Back Bay Center will be an island in an ocean infested by automobile sharks.

The planners of the Back Bay Center have compared their own plans with: 1) St. Mark's Plaza, 2) the United Nations, 3) Rockefeller Center, and 4) Framingham Shopping Center outside Boston.

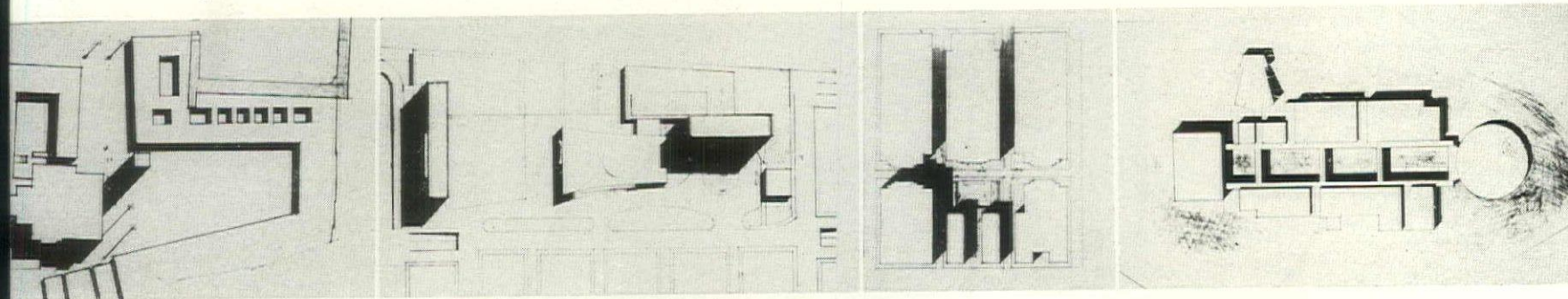
Gropius characterizes these spaces: "St. Marco has everything. It expressed the greatness of God by its cathedral, the power of the

1.

2.

3.

4.



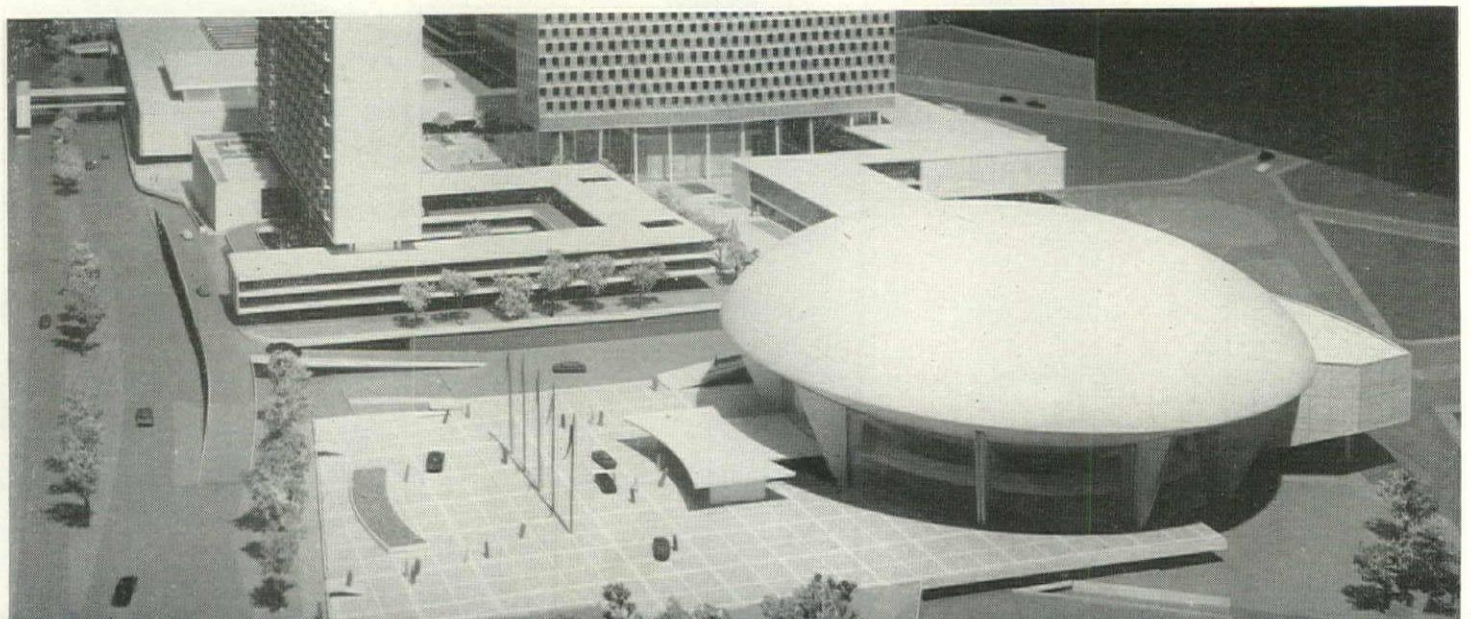
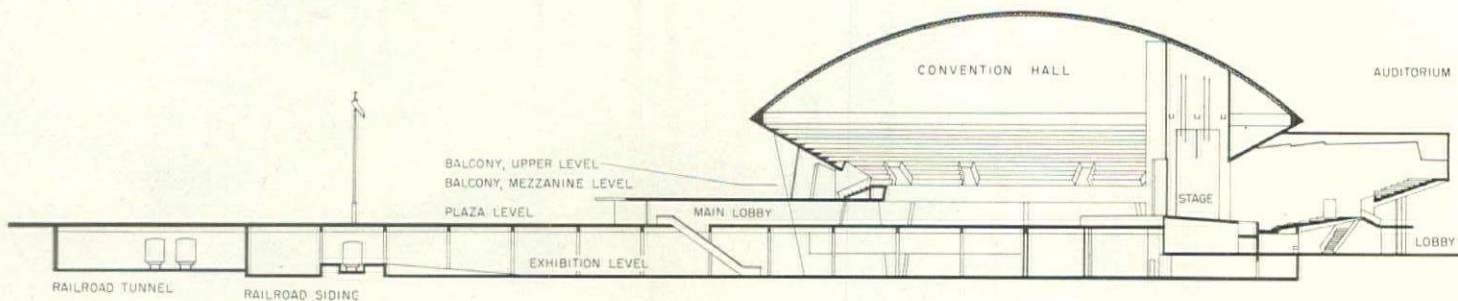
THE CONVENTION HALL—an emphatic statement of structure in architecture

Boston's own investment in the Back Bay Center will be a sorely needed arena to attract the visiting throngs of conventioners who are steadily becoming a more important part of the economy of the big cities.

In an extension of the collaboration, Architect Samuel Glaser worked with the Boston Center Architects on this design. Under its dome roof, which curves down to a ten-

sion ring rim, then slopes in as seating tiers, there actually will be two separate halls (see section). Partitioned by a two-faced stage, the two arenas can be used separately or combined by opening the stage, will cost \$8½ million.

Downstairs is ample exhibit space, another important service for conventions. Off season, this space can be thrown into the underground parking lot.

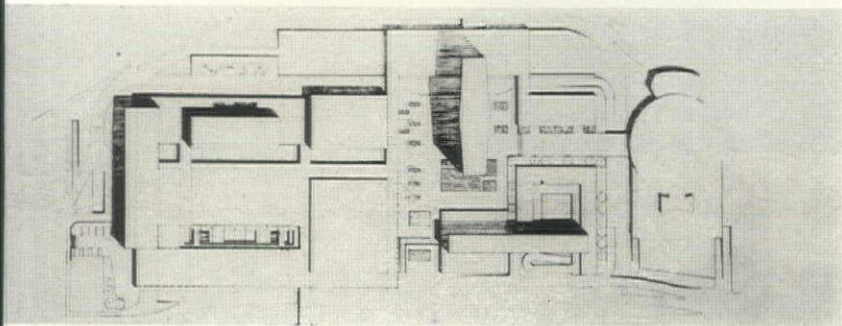


doge by its palace. The tower was a symbol the sailors could see from the sea. But most of all it was the big drawing room of the people, the public stage of the town for festivities, parades and religious ceremonies."

"The plaza at the UN buildings is not used as a community core; its value is more that of an esthetic symbol.

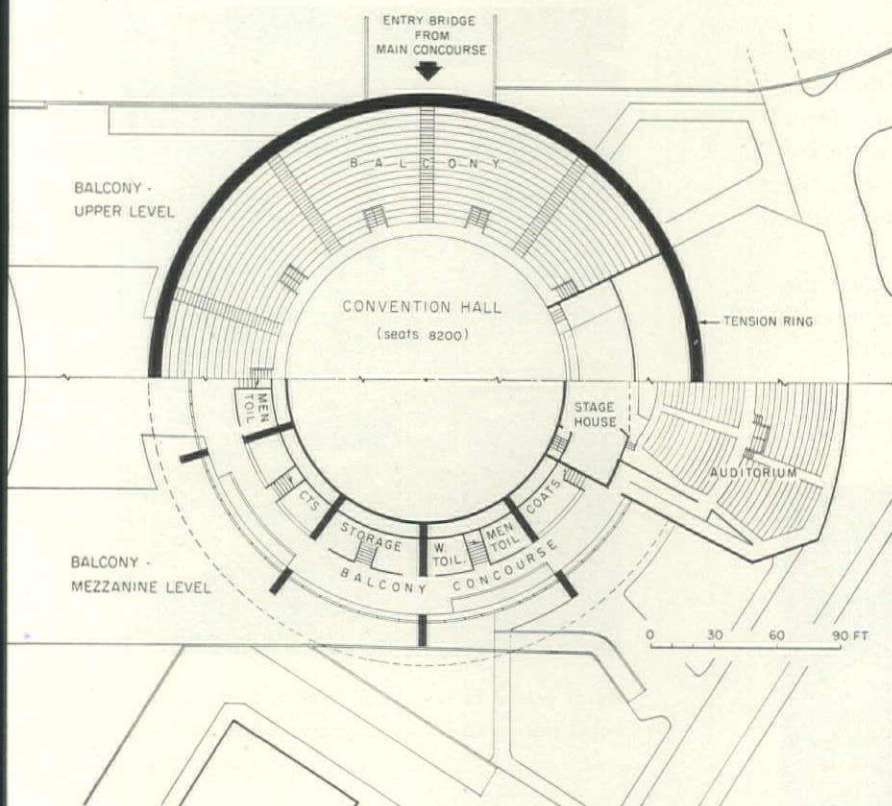
"Rockefeller Center is a kind of community center, bringing about some exchange among people. It is a by-water off Fifth Ave. where you can walk and stand around and watch or pretend to watch the ice skaters and yet not feel guiltily idle in the big city.

"Framingham Shoppers' World expresses the

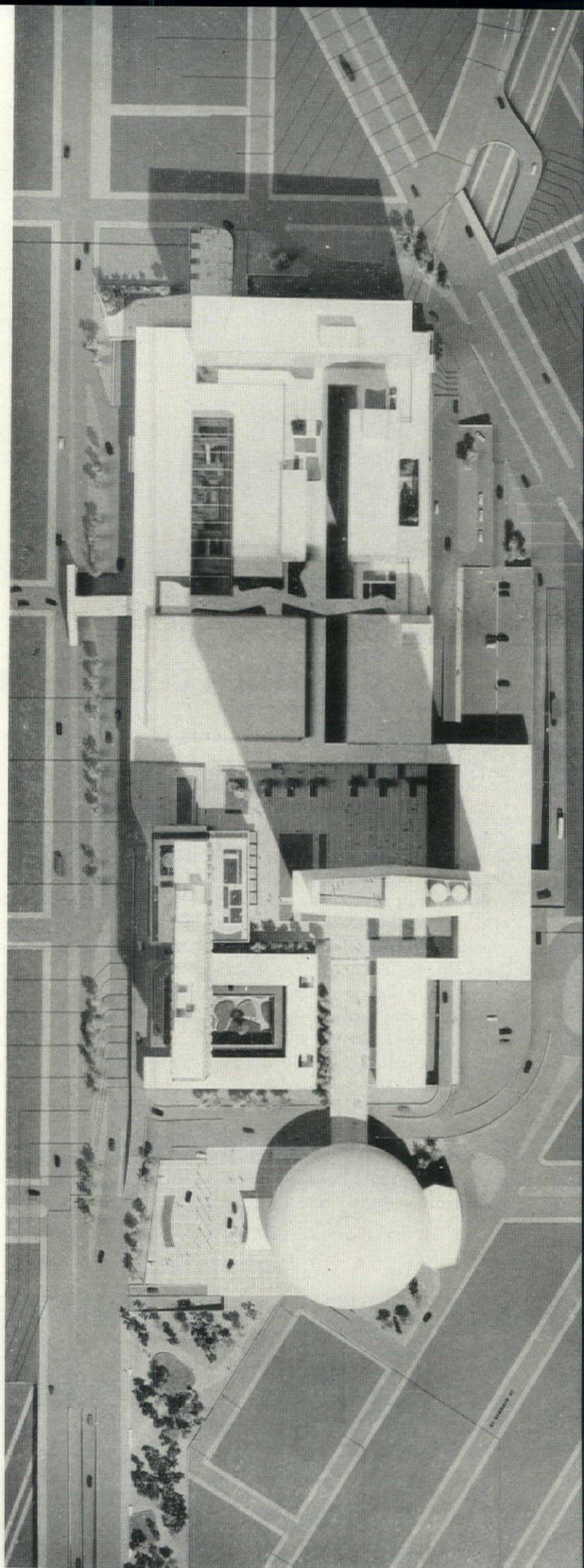


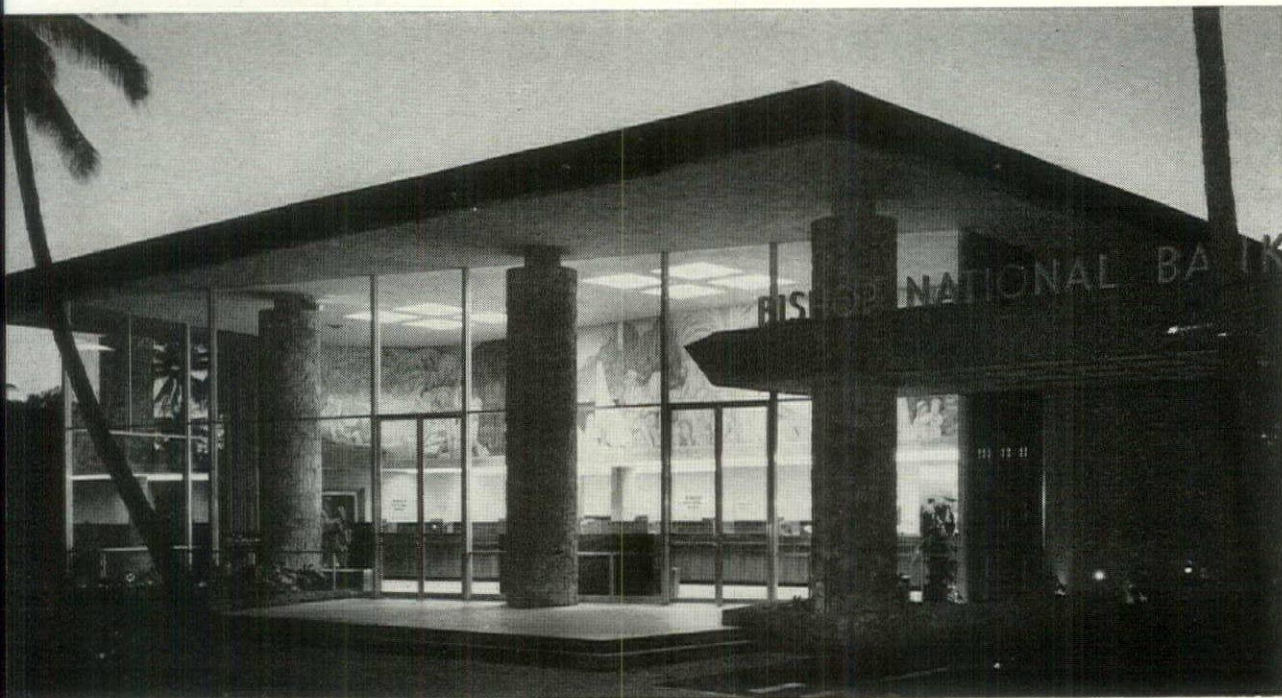
invention of the automobile. Large space is given to parking; it is a new solution for the market place of our time."

The Boston group's plan (above in same scale as others to left) will bear the impact of these ideas.



Convention hall is also a pedestrian entrance to the project. Ring road is bridged by wide walk leading to central plaza.





Street facade consists mainly of columns and mural

Showcase bank in Hawaii

A mural sets the plan and forms the elevations of a successful business structure

The 70' mural which stretches along the top of the tellers' wall is the seed of this rich regional design for a Hawaiian branch bank. Like a showcase for the painting, the bank's front is a 20'-high glass wall facing a side street near the heart of Waikiki. The architects wisely used golden-tinted glass in that large wall so that the morning glare would not blind the tellers and the muralist, Jean Charlot, reciprocated by using colors in his painting which carry through the tinted glass night and day.

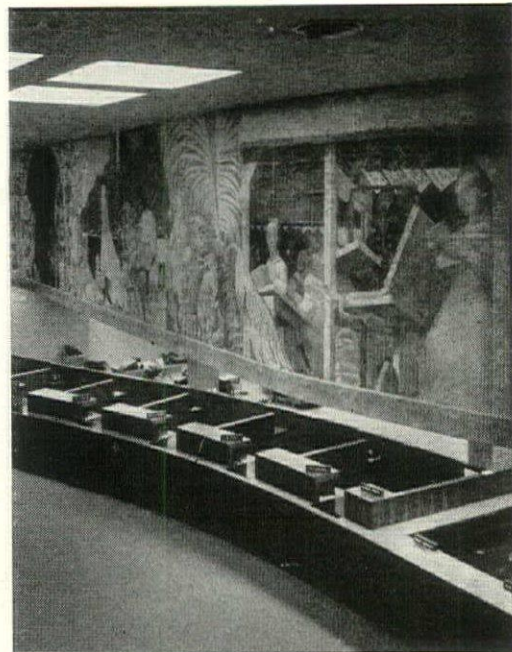
But the bankers wondered if the glass wall would connote security. Answer to this possible objection is the set of massive columns supporting the roof. The structure is steel, but chunks of local limestone ranging in color from creamy white to a deep rust red are built up around the steel almost to the ceiling line. Here too there was a complication: "It was found early in the construction that the stonemason, who was an excellent craftsman, unfortunately was color blind. This complicated the procedure. . . ."

An acoustical trick in the bank: to reduce the noise generated under the mezzanine by tellers' business machines, all the walls in this area are covered with floor-to-ceiling carpeting. Total contract building cost: \$117,784.87.

WIMBERLY & COOK, architects

JAMES W. GLOVER, LTD., general contractors

Photos: camera hawaii and R. Wenkam



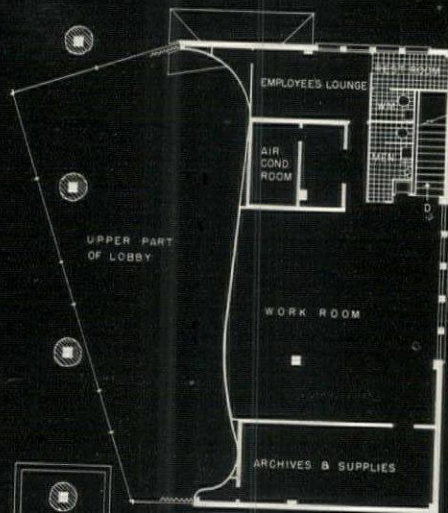
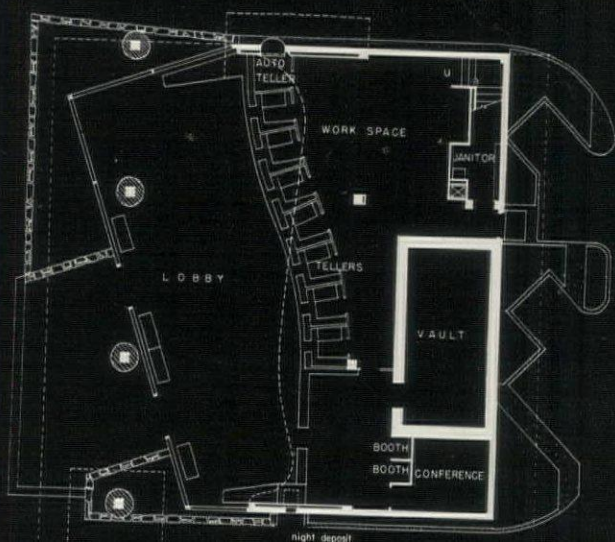
Mural behind tellers' booth (viewed from mezzanine level) was painted during banking hours.



Banking floor is shielded from glare not only by tinted glass and deep overhang, but also by trees. One column is inside lobby; three are outside glass wall.



*Banking space is dominated by mural and columns clad stoutly with variegated local limestone.
In plan the tellers' counter reverses curve of mezzanine above.*



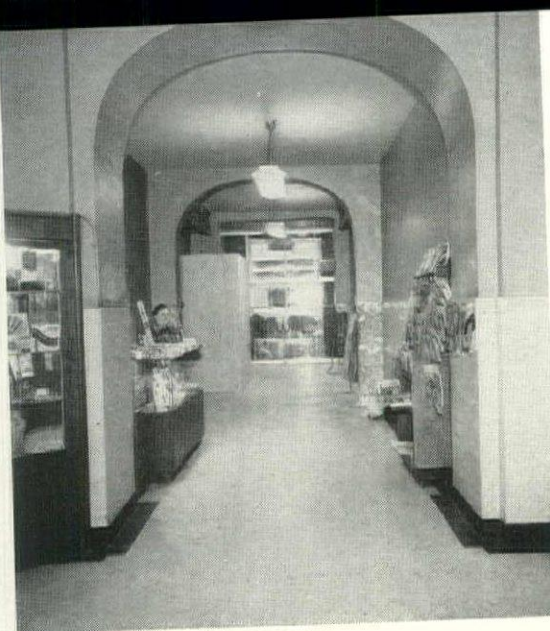
\$100,000 value for \$40,000

Simple lobby remodeling shows how a lavish material can be used to save money

A year ago the owner of the prosaic old office building at 92 Liberty St., New York City, was as uncomfortable as a girl in a wrap-around house dress who suddenly finds herself at a swank party. The reason: the building had suddenly become dowdy by comparison with the sleek young postwar office structures appearing in Manhattan, and the tenants were beginning to cast longing eyes at the sexy competition. Was the old girl through as a first-rate investment?

The answer produced was no. A quick surface remodeling—a skilled face lifting of the lobby—changed the situation, caught back the wandering eyes of the tenants, and more than paid for itself in increased occupancy and rents. Owner Aaron Levine says it was worth \$100,000; it cost only \$40,000.

The medium used was marble. Scraping off the 50-year accumulation of Palladian, Georgian, and Romanesque plus fluorescent, Architect Arbeit applied long rich planes of St. Florient Rose and French Rouge antique marble, recessed the lights and heating, and provided a focus for the space by designing a stainless-steel clock. So successful was the job that his client is going up from the lobby to invest \$200,000 more in other improvements.



Before remodeling, lobby was prosaic

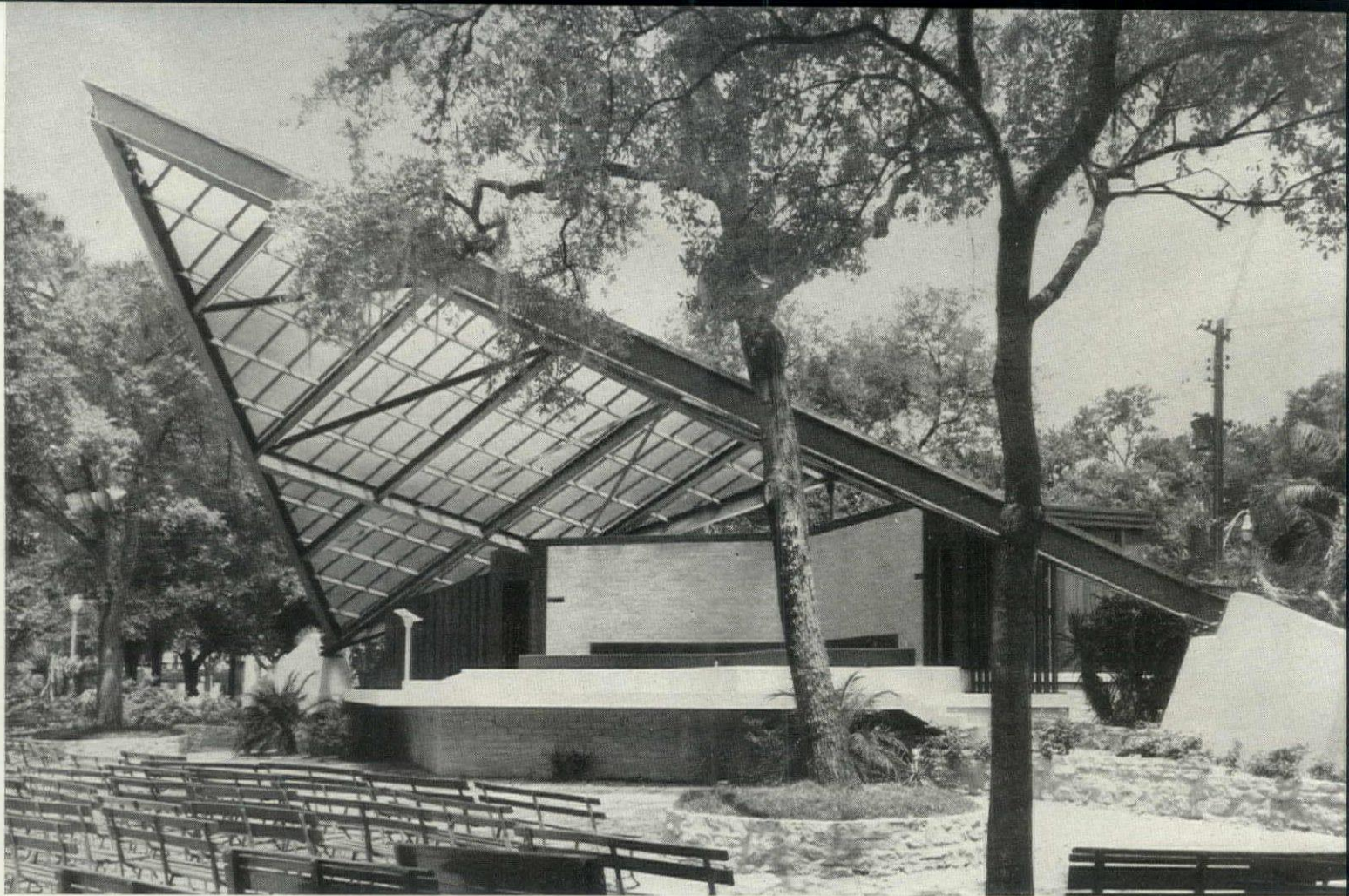
LOCATION: 92 Liberty St., New York City
ARNOLD A. ARBEIT, architect
CEDAR MANAGEMENT CORP., owner
A. J. COURTMEL, contractor

Cost breakdown

Demolition	\$700	Doors	1,200
Misc. metal	1,000	Marble	17,500
Terrazzo	1,750	Clock	500
Electric	2,100	Mailbox	750
Radiators	100	Stainless steel ...	4,000
Directory & misc.	4,000	Architect's fee ..	3,600
Lath & plaster...	3,000		
		Total	\$40,200

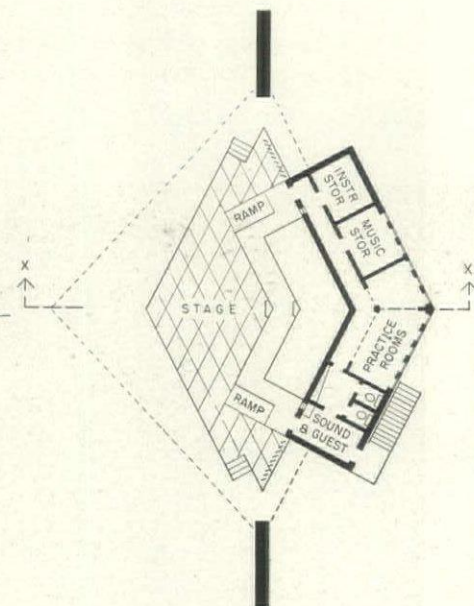
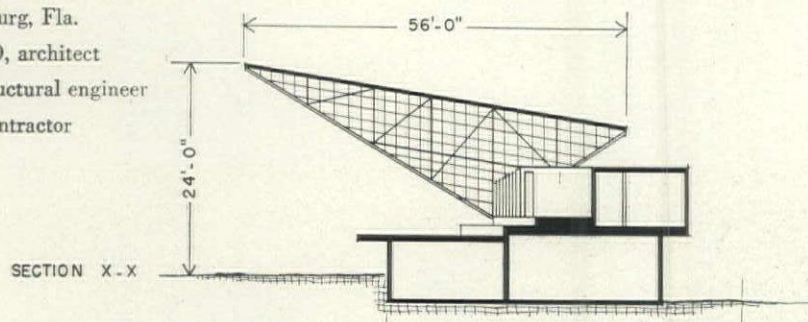
After remodeling, lobby has inviting, contemporary atmosphere thanks mainly to marble, terrazzo and good design





Steel frame is painted blue-green to harmonize with glass and contrast with concrete block and redwood siding

LOCATION: St. Petersburg, Fla.
WILLIAM B. HARVARD, architect
PAUL JORGENSEN, structural engineer
J. R. MOORE, general contractor



Band shell under a glass tent

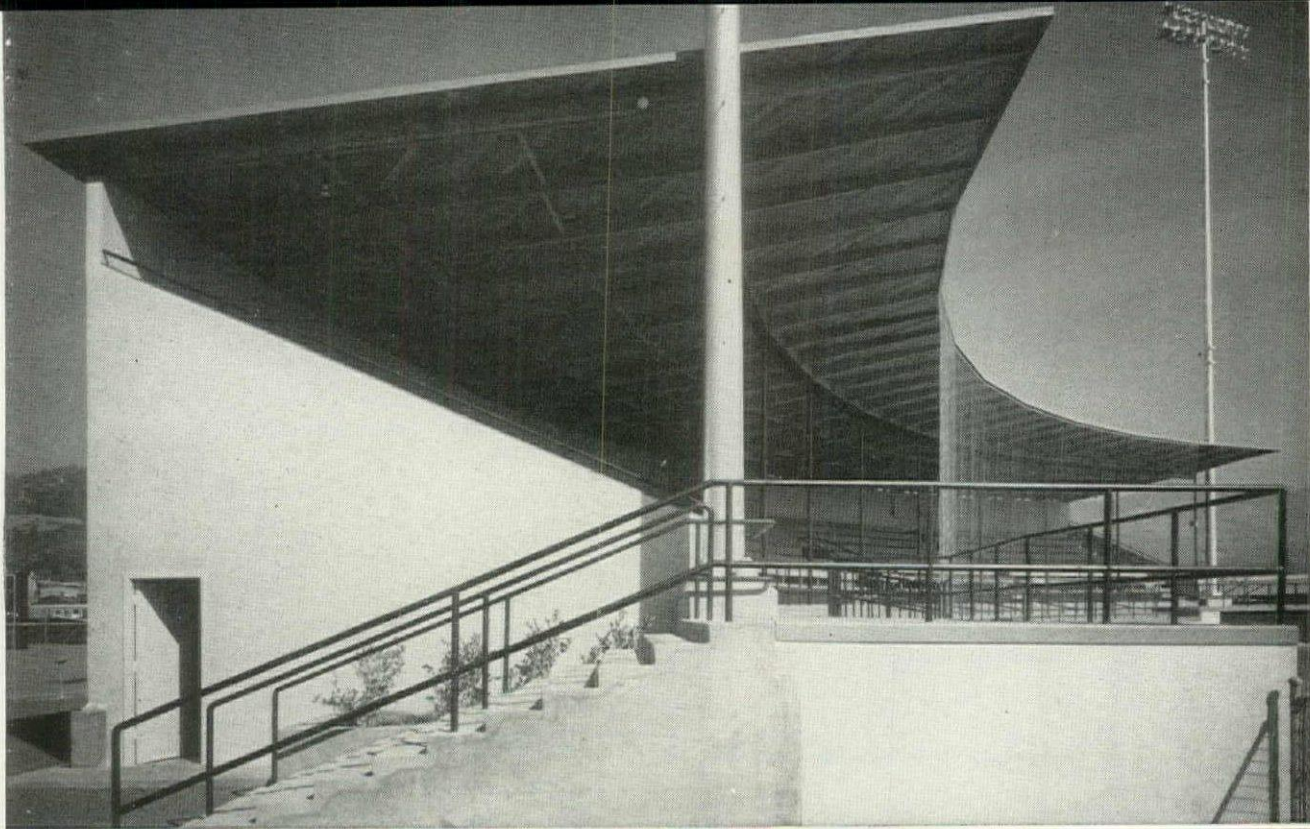
It keeps out sun and rain, produces optimum reverberation

Buttresses at east and west ends are reinforced concrete

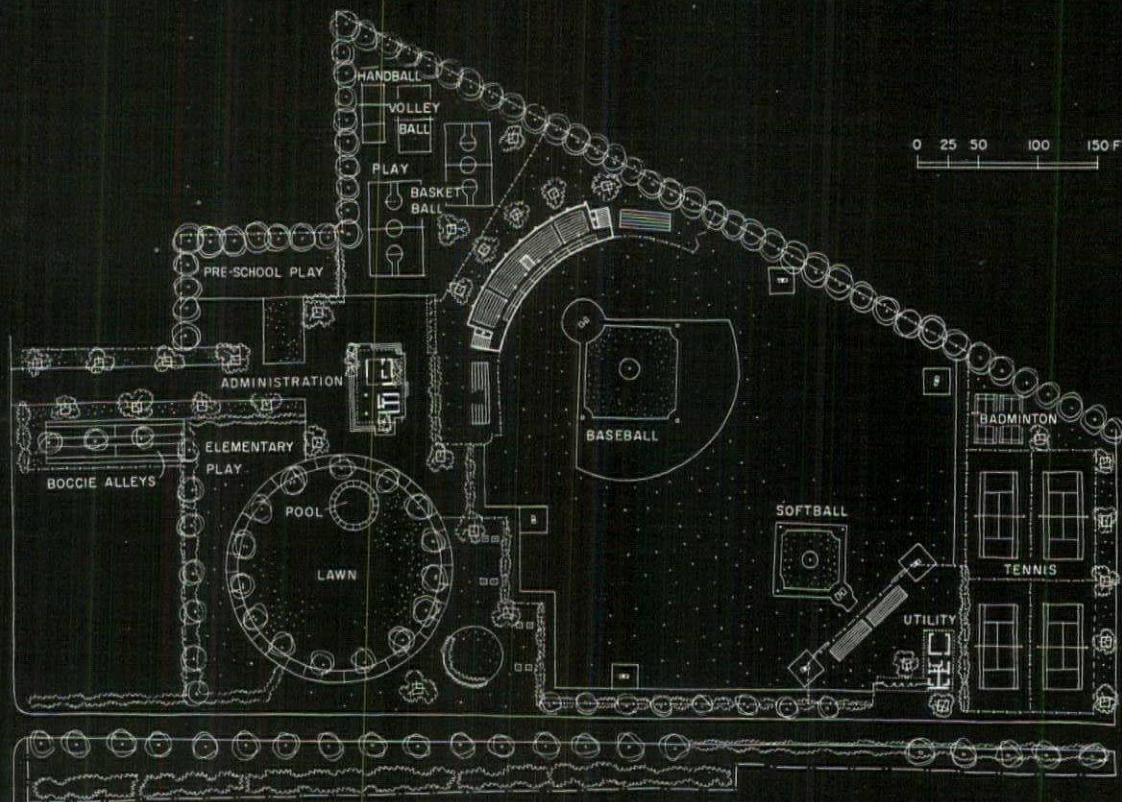


If you were commissioned to design a band shell that would not only work well but also attract a good deal of attention to itself and to your city, you could hardly do better than this. Nor could you do it for much less than the \$46,000 spent by Architect William Harvard to house this extreme wide-angle band platform, plus assorted storage and restroom facilities.

His solution is not nearly so eccentric as it may seem at first glance: the glass roof (on a steel frame) works because the glass is blue-green, heat-absorbing and reinforced with wire; the tent shape makes sense because the sun is very low in the winter (which meant pulling down the tips of the roof on the east and west sides), because the rain squalls are sudden (which meant a need for a real, sheltering cover), and because the acoustics demanded a raised roof toward the south. Musicians say, incidentally, that the band shell is fine. What seeming eccentricity remains is amply justified by the city's demand that the structure express the "sunshine" theme.



Grandstand is framed in steel, with steel plate decking, wood roof, concrete walls. Underside of roof is yellow, columns and seats are black, seat brackets are red.



Pattern of circles identifies elementary play area. Small, circular wading pool at left, spiral slide and swings at right



Patterns in a park

City recreation center is a collection of great big toys scattered around in a ten-acre park

Everybody involved in this project had a lot of fun doing it, so it is no surprise that children of all ages in the City of San Rafael, Calif. are having a lot of fun using it.

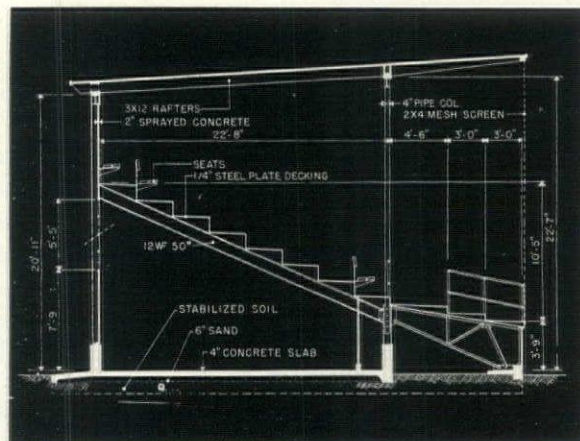
That in itself might be a good enough reason to take a close look at Architect Joseph Esherick's latest job—for municipal recreational facilities, more often than not, are so cheerless as to drive most kids back to the fascinations of the city dump. But this is also an interesting story of design collaboration among architects, landscape architects and engineers.

Here, briefly, was the program: almost a dozen very different functions (involving anybody from tots digging in sand piles to teen-aged baseball players and fans) had to be accommodated on the ten-acre site—without having everybody fall over everybody else. Each facility, such as tennis courts, bocce alleys, wading pool, etc., was to be more or less "autonomous," yet easily administered from the handsome, central pavilion.

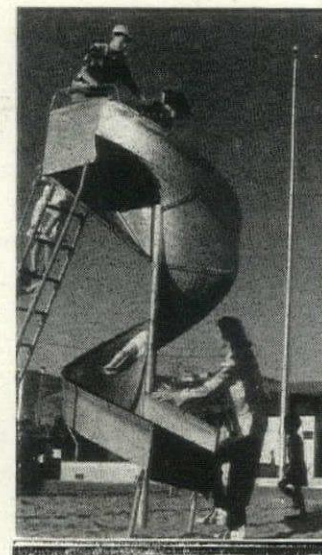
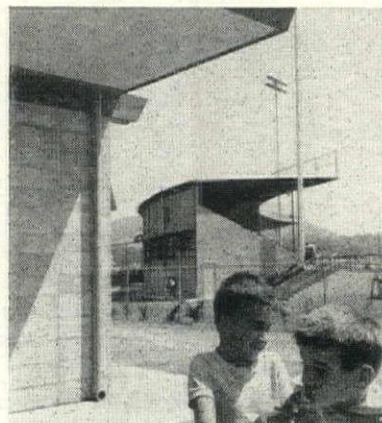
The answer worked out with Landscape Architect Douglas Baylis is a big outdoor playroom, "walled in" by rows of trees, accessible from several sides, lightly subdivided by stretches of lawn and a few fences. Each area is clearly marked by some striking, sculptural form—e.g. the corrugated metal spiral of the slide, the scythe-shape of the grandstand, the scattered circles in the "elementary" play area. Each of these shapes and forms looks like a big toy, easily visible from a distance.

Landscaping takes a long time to materialize, so only time will tell how effective this layout has been. But the basic idea is already visible and convincing. Says Esherick: "I like this job mostly because it is very gay and good humored and works very well." Best testimonial to Esherick's success: vandalism, which had been rampant in an old grandstand on the same site, has ceased to be a problem.

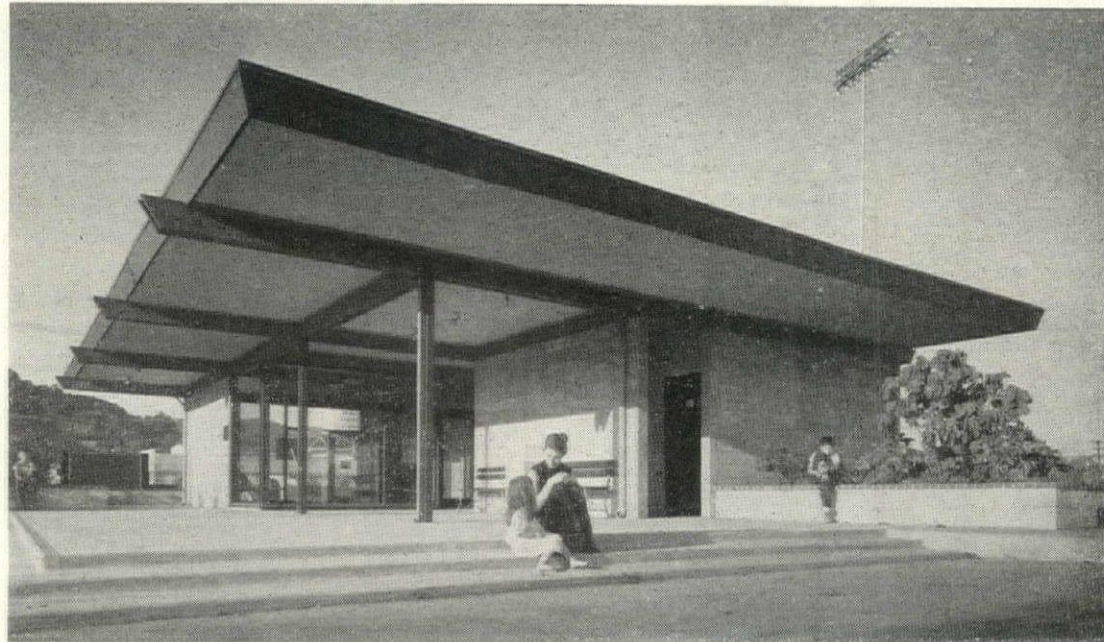
JOSEPH ESHERICK, architect
DOUGLAS BAYLIS, landscape architect
WALTER T. STEILBERG, consulting architect
(structural design)
CHARLES VON BERGEN, electrical engineer
A. B. CHARLES, mechanical engineer
NICK CERINO, civil engineer
ROBERT MCCARTHY & CO., general contractor



Varied activities provided for in park include baseball, rodeos, tennis, basketball, bocce, digging in sand and slithering down spiral slide. Swampy site was reclaimed with compacted soil and admixture of cement under buildings. Total cost was \$230,000.



Photos: (top left) Halberstadt; (others) Ernest Braun



Administration pavilion is post-and-beam structure with some concrete block walls

Political cures for city woes

- ▶ As the problems of cities become the building industry's Topic A, more and more solutions suggest urban integration
- ▶ The big problem: how to get people to vote for it. Short of annexation, experts call for regional planning, taxation

IN THIS MONTH'S NEWS

(see pp. 37 through 58)

Commerce and Labor Depts. predict \$34 billion building volume next year—only 2% below 1953's all-time record

Manhattan's fabulous skyscraper boom shows the first faint signs of slowing down

Major changes in redevelopment and public housing policy by federal government are hinted at NAREB convention in Los Angeles

A federal court decision lets redevelopment of Washington in for a peck of trouble

Comptroller general rules that the government can keep planning 35,000 public housing units stymied by 20,000 unit ceiling

How can US cities extricate themselves from their present plight: mounting municipal deficits, middle-class fleeing to the suburbs, traffic snarls, smog, slums growing faster than they are being wiped out? The question—as complex as the electronic-atomic age that spawned it—had become Topic A for the nation's building industry.

This month, as more and more intellectuals delved into the problem, a recurrent theme began emerging: some sort of political reorganization of urban areas, based on wide public understanding of the issues, seemed almost prerequisite to successful solutions.

Expectably, some of the loudest champions of political reorganization sounded off in New York, where city deficits, middle-class-suburban flight,* traffic tie-ups, smog and spreading slums looked as ominous as anywhere. Realtor William Zeckendorf, for instance, called a press conference to air his view: "I favor unilateral annexation of all communities of a satellite character." Zeckendorf would include even New Jersey and Connecticut suburbs "to the range of commutation," because, he said, commuter suburbs could not survive without the central city—so they "should be forced to pay their share of the load." Look at Nassau County on Long Island, Zeckendorf suggested. "People slip across the county line and avoid our 3% sales tax." The suburbs "are confiscating us; we ought to annex them and get it back." Besides, he said, "think of the economies of being able to fire 85 mayors, the heads of innumerable street-cleaning departments and fire chiefs and God knows how many other functionaries."

'Never provocative before.' "We're on the verge," Zeckendorf declared, "of drastic urban redevelopment and recentralization. It has never been provocative before. You couldn't get men to pay any attention to it." Of course, he agreed, his solution was "a thing of 50 years, not five." Reason: "It is a political proposition. You've got to get people to vote for it."

Realtor Zeckendorf propounded no new ideas, as city planners knew. The significance of his outburst seemed to lie in the fact that he made it, and in the fact that he lined up an imposing group of big names to stand with him as he spoke, lending somewhat tacit agreement. With the new owner of Manhattan's Chrysler building stood the owners of the Empire State building, headed by its chairman, Col. Henry Crown of Chicago, plus Detroit's Roger Stevens, Attorney Arnold M. Grant, who among other things headed RKO

Pictures Corp. for 1½ stormy months last year, following Howard Hughes' attempt to sell the company to a group headed by Punch Board Promoter Ralph Stolk. The fact that men of such power and stature were beginning to grapple with the basic problems of cities could speed up the solutions.

Needed: regional plans. Along the same lines, towering James Follin, HHFA's director of slum clearance and redevelopment, told the Building Industry Conference Board in San Francisco (see People): "Urban planning has failed to keep up with the tremendous growth of our urban centers. . . . Before good results can be obtained, there must be changes in state laws that will permit effective planning on a metropolitan or regional basis. That kind of legislation won't come until our urban communities are ready, and until the various political subdivisions within our metropolitan areas are prepared to recognize their common interest and act upon it."

Political integration of city and suburb also invited study for a way out of the dilemma posed by the threat of atomic bombing. As matters stood now, last month found such men as Architect Nat Owings and Realtor Robert W. Dowling arguing against dispersal of cities because of the contribution close contact makes to the flow of ideas and business, while Gen. Otto L. Nelson, vice president of New York Life Insurance Co., was warning that unless cities are dispersed, the fire storm hazard would threaten to make them untenable in war.

Addressing the American Society of Planning Officials at Detroit, Nelson warned: "Any collection of inflammable buildings with land coverage of 20% or higher extending over a square-mile area constitutes a potential fire-storm area. Herein the heat and blast of an atomic bomb will cause such a large number of primary and secondary fires through the locality that the inhabitants will perish by suffocation. Thus the slum areas that are such blights on our cities constitute an even greater threat to our national security."

Realty tax: bar to reform? To Nelson, it seemed "incredible that we have been so slow in attacking" the problem of regional organization and taxation as a solution for

* Dr. Fred E. Crossland, a political science instructor at New York University, predicted recently in his doctor's thesis that if present trends continue New York's suburbs will pass the city in population in a little over 20 years.

city woes. Recalling Project East River (FORUM, Jan. '53, News), he noted "the consensus of expert opinion was that there are many community services, such as police and fire, that could be provided in a much more efficient and economical manner on a regional basis. The claim was made that the only long-term solution for many of the financial difficulties besetting some of our municipalities is

consolidation, elimination of outmoded and overlapping municipal jurisdictions. . . ."

Nelson said the reliance of cities on real estate taxes as "such a main source of revenue" was one of the "major obstacles" to readjustment to the atomic age. Realty taxes, he charged, "contribute more than all other factors in forcing the utilization of the last square inch of available land."

Nation's costliest redevelopment project, New York Coliseum gets legal green light

Did New York City subvert the US Urban Redevelopment Act to tap the Treasury for \$6 million for a huge convention hall and sports arena masquerading as a residential project?

Last month Eisenhower HHFA officials said they were taking a "hard look" at the case (AF, Dec. '52 et seq., News). But they were squeamish about relating details. What was done was done, they hinted. They squirmed at direct questions whether HHFA had considered or was considering revoking the federal grant. Their answer: a contract was signed and in force; it was difficult to break a contract unilaterally.

Record subsidy. It took no hard look to see several features that made the New York project look like a \$6 million housing dog wagging a \$20 million Coliseum tail:

► More than half of the two-block, seven-acre redevelopment area at Columbus Circle would be devoted to an immense convention hall, a much needed improvement for the city.

► Supposedly blighted commercial property to be demolished on the Coliseum portion of the site included: 1) the 22-story Manufacturers Trust building, assessed for \$1.5 million, and 2) a theater from which NBC telecasts such shows as Paul Winchell and Jerry Mahoney, Ethel and Albert.

► Business and commercial uses account for 39% of the area, and parking lots another 34%. Considered solely as slum clearance, it would cost taxpayers an average of \$36,950 each to get rid of the 243 dwelling units on the remaining 27% of the site.

► The total city-federal subsidy would be \$8.8 million (US, \$5.9 million; New York City, \$2.9 million). This would average a colossal \$1,268,000 an acre—\$845,000 an acre billed to US taxpayers, \$423,000 an acre locally. Average US subsidies per acre for other Title I projects:

All projects except NYC	\$48,000
All projects including NYC	\$74,000
NY projects except Coliseum	\$259,810
NY projects including Coliseum..	\$298,000
Coliseum (Columbus Circle)	\$845,000

They call it residential. It was not so much the staggering subsidy cost that troubled HHFA officials. What had them

looking hard was how well the project conformed with a basic requirement of the 1949 Housing Act: to qualify for Title I money a project must improve a site that was 1) blighted or a slum, and 2) was either predominantly residential to start with or else would be redeveloped for predominantly residential re-use.

Was the Coliseum area really deteriorated or slums? Last month, the New York's highest court decided 5 to 2 that the city had a constitutional right to condemn the site. On the question of blight, it rejected a property owner's appeal for a trial to challenge the administrative rulings by which city agencies called it blighted.

The dissent, however, noted the exceptionally high per capita slum clearance expense, the site's large percentage of vacant and nonresidential use. It said: "This in itself presents a triable issue whether the main-spring of the project is really slum clearance." It cited testimony by William C. Vladeck, president of the Citizens Housing and Planning Council and former chief of planning for the New York City Housing Authority, who said only 10% of the tenements were substandard or insanitary and only 2% of the total site area was really slum.

The dissent said a trial also would provide an opportunity to determine whether "there is any rational basis" for tying the Coliseum and housing projects into one. It added: "The evidence in the record is the other way. . . . If existence of a few slum buildings within a particular area is enough to divest the courts of jurisdiction to require that the dominant purpose of the project shall be one the statute requires, the door is opened to possible evasion of this law upon a larger scale. . . . The facts before the court tend strongly to show . . . that redevelopment of the [Coliseum] location, which is not substandard or insanitary in character, is the dominant purpose of the project."

No federal inquiry. An HHFA spokesman revealed another noteworthy fact. HHFA "does not make independent examinations of areas selected by cities for clearance." Its own determination that a site is blighted is made solely on "review" and acceptance of information supplied by subsidy seekers.

HHFA confirmed that Columbus Circle

was unique in another respect. It was the only one of all the 142 Title I projects it approved through June 30 for which it made no official determination whether the present use was mainly residential or nonresidential. Its explanation: this was not important because Columbus Circle reuse would be predominantly housing; it would only be a vital factor if the redevelopment was going to be primarily nonresidential.

Whether the Columbus Circle's reuse really would be "predominantly residential" was the \$6 million question that Truman HHFA officials left behind them. The Coliseum project's main features:

	HOUSING	COLISEUM
Ground space, sq. ft. . .	129,874	145,482
Percentages	47.1	52.9
Land resale per sq. ft. . .	\$7.25	\$15
Total land resale	\$941,000	\$2,182,230
Percentages	30.1	69.9
Redevelopment cost ..	\$6,261,000	\$20,000,000
Percentages	23.8	76.2

Garage is housing. An official explanation was given by Nathaniel S. Keith, HHFA director of slum clearance and urban redevelopment in the Truman days when the New York grant was approved: "Value of land or costs of improvements do not enter into determination of predominant character or proposed reuse." The determination was made solely on the basis of area "devoted" to housing.

Keith figured housing predominated because New York would reserve for the housing tenants 18,000 sq. ft. of parking space in a garage of over 125,000 sq. ft. under the Coliseum. Counting this garage space (but not garage space under the actual housing planned) HHFA calculated 53.4% of the site was housing.

Thus, the \$20 million Coliseum on 52.9% of the site became the minor segment of the redevelopment, and by HHFA standards the \$6 million housing project on 47.1% of the surface became the predominant reuse.

No more such deals? Would Ikemen approve more projects tailored like the Coliseum? Indications were they would not. FORUM learned that HHFA redevelopment staffers were studying ways and means of halting a project in a big Midwestern city that bore much similarity to the approved Coliseum job. The difference was that the government had not signed a final contract covering the Midwestern project yet.

In New York, civic organizations rejoiced at the court decision, which cleared the way for an early start on the Coliseum. The New York press, which never reported the details of the way the city succeeded in calling the project "predominantly residential," gurgled happily, too. The *Herald Tribune* renewed its proposal to call the project the Robert Moses Coliseum, in honor of its principal sponsor.

If all went well, it would be built by autumn of 1956. Then, New York hoped to recapture the convention business it has lost for lack of a suitable auditorium.





Photos: Lionel Freedman

Executives' penthouse is elegantly furnished, with strong aluminum alloys used to support chairs, tables, sofas. Cost comparisons with other metals are so far unavailable since this was special job, but aluminum finishes have worn well.

In this \$2 million-plus gamble, ALCOA bought an aluminum guinea pig in a poke. Here is how the gamble paid off:

Curtain-wall gamble—the new, Oxford-gray, waffle-patterned aluminum skin has been a complete success, will look even better when its thin plastic coating dulls off (p. 128).

Plumbing gamble—the aluminum piping works well in the closed air-conditioning system (where the water can be chemically controlled) but may not work quite so well in the fresh water supply, although there has been little corrosion to date (p. 128).

Wiring gamble—the all-aluminum wiring is a success so far, but time will tell (AF, Aug. '52).

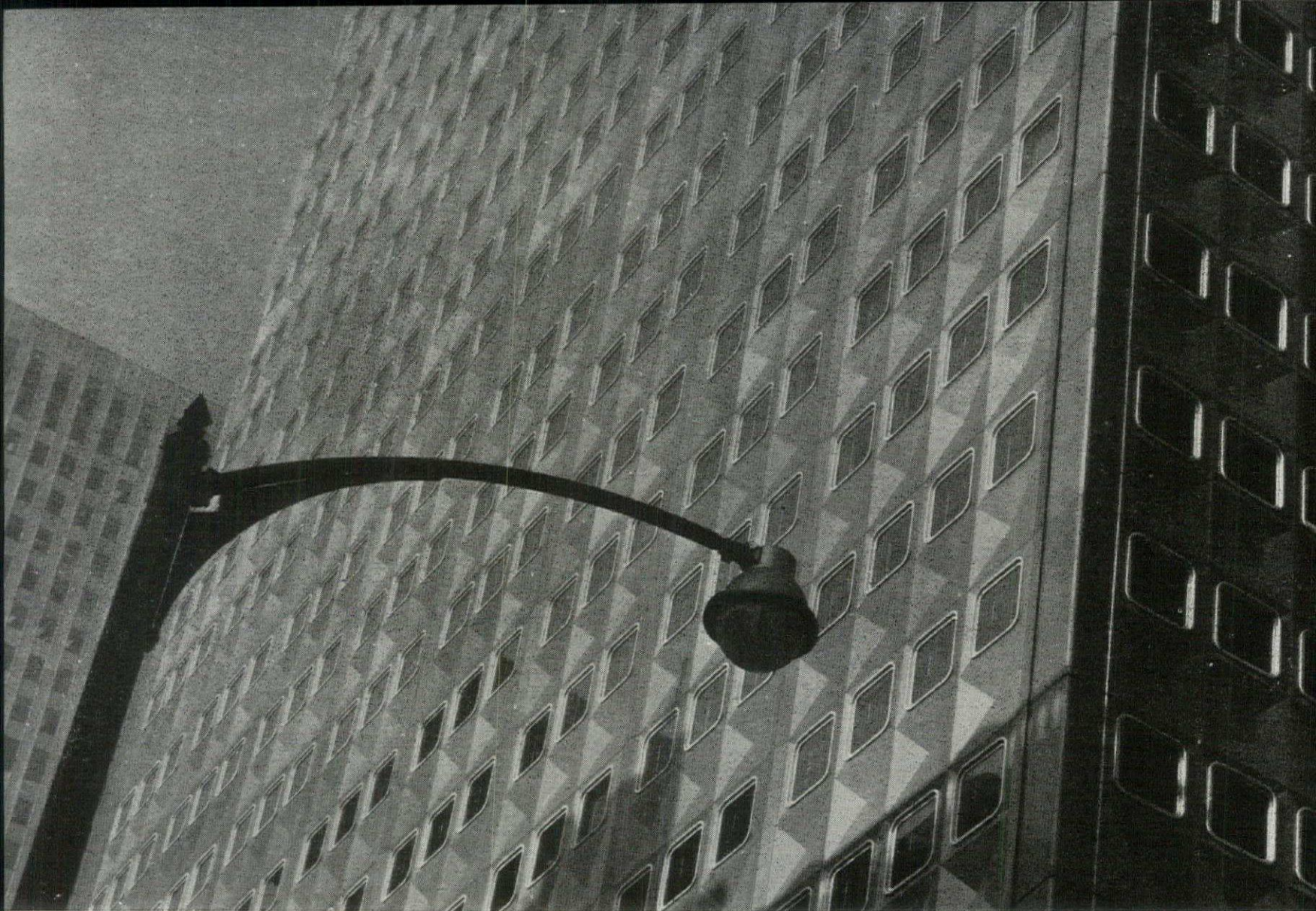
Air-conditioning gamble—after the normal trial-and-error adjustments, the radiant heating/cooling system seems to work well (p. 129).

Window gamble—ALCOA's smaller, pivoting, rubber-rimmed windows have been a huge maintenance success—but window-washing costs are still determined by union rates based upon old-fashioned washing from outside. Inflatable rubber rims around aluminum frames are wearing well (p. 128).

Furniture gamble—aluminum frames supporting the furniture offer better finishes than standard steel, wood or wrought iron (p. 130).

Modern design gamble—ALCOA's management and staff have perked up visibly in response to advanced architectural design (p. 131).

And many smaller gambles—new porcelain enamel on aluminum (excellent), new integral coloring and better surfaces (soon to be on the market in new ALCOA materials), new office-planning concepts (more efficient washrooms, elimination of too much flexibility, etc.)—all these will leave their marks on future office building.



Behind a sparkling new curtain wall, new aluminum products are being tested in actual use

Aluminum skin

—it is light, strong, well-finished, keeps the wall dry, makes an excellent sound barrier, and looks wonderful

CONSTRUCTION—0.125"-g. aluminum panels, precision-anodized to an Oxford-gray color, fabricated in one-story-high sections, were bolted to steel angles attached to building structure. Diamond pattern is self-cleaning, gives panels added strength, produces architectural variety and interest. Interlocking joints between panels in place of caulking. Back-up (behind air-space): 4" perlite sprayed on aluminum sheet lath. (AF, Aug. '52.)



Neuman-Schmidt Studios

PERFORMANCE—highly satisfactory. Possibly some heat loss to exterior through edges of floor slabs, but over-all heating costs were reduced because exterior walls are unusually dry. Note of caution to imitators: panels were coated with 0.007" clear, protective, liquid plastic. Reason: if perlite had oozed through joints, aluminum surface might have been scarred by chemical action. Perlite did drip over three panels during construction, did no damage at all because of protective plastic (this probably paid for the cost of the whole coating job). Plastic coating will wear off in about five years and will not be replaced. Panels will become matte (and more distinguished looking) as time goes on.

ARCHITECTURAL EFFECT—picture (above) suggests handsome changes in light, shade, depth, plasticity and modulation of aluminum skin.

IMPACT ON FUTURE BUILDING—ALCOA is very proud of this color job, plans to promote the manufacture of extruded gray, precision-anodized aluminum windows in place of current metallic-looking units, especially for residential market.

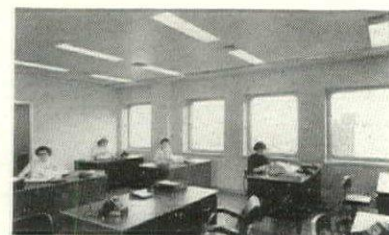
Reversible windows

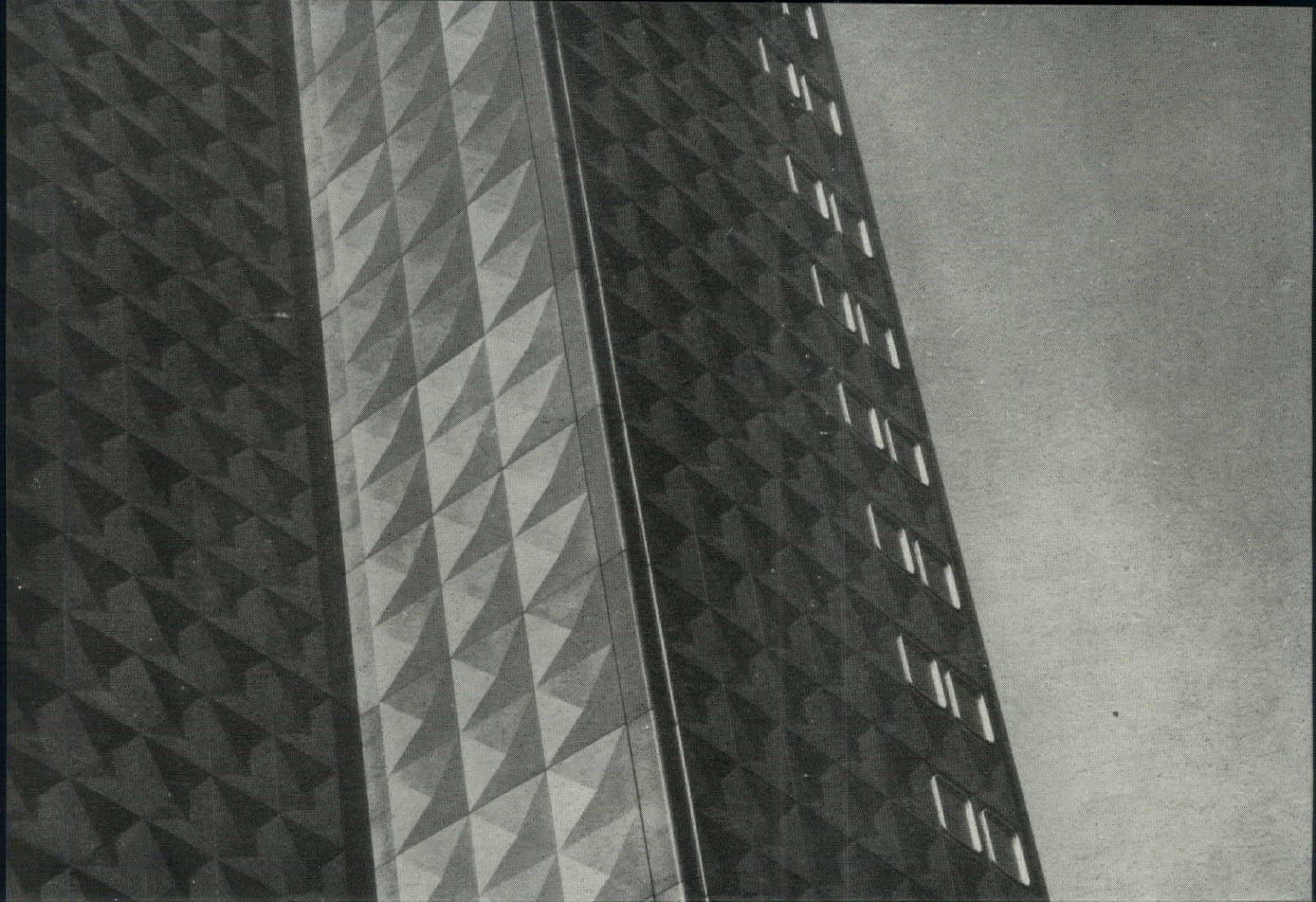
—they are somewhat costly and gadgety, but cheap to clean and expertly engineered

CONSTRUCTION—double-glazed, pivoting window is part of curtain-wall panel. Pneumatic gasket around sash (hence rounded corners). Rubber thermal break in inside sill. (AF, Aug. '52.)

PERFORMANCE—excellent. Pneumatic gasket has "zero infiltration" at up to 75 mph wind speeds. Windows cleaned every two weeks, from inside, by deflating pneumatic gasket, unlocking frame, pivoting sash. Present pay scale for window cleaners still based upon "human-fly" technique—hence no cost savings to date. "TV-screen" windows create decorating problems. ALCOA says pneumatic gasket will last 20 years at least.

IMPACT ON FUTURE BUILDING—ALCOA's special window is highly experimental. Cost: about 2½

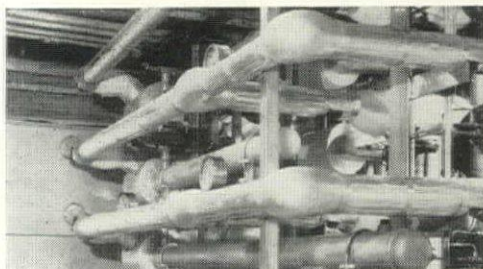




Wurts Brothers

Aluminum skin has excellent three-dimensional qualities which come to life in sunlight. To date, 52 aluminum-clad buildings have been built or planned as direct result of ALCOA. Note more conservative Mellon-US Steel facade in left distance.

times that of reversible window at Pittsburgh's Gateway Center (AF, Dec. '53)—but Gateway's windows are single-glazed (though bigger than ALCOA's). However, concept of reversible windows has been given a tremendous boost. ALCOA's maintenance experts believe that window-cleaning costs may eventually be cut 66%.



Aluminum plumbing

—it works well in closed systems, will have to be tested further for fresh water supply

DETAILS—almost all of ALCOA's pipes are aluminum, with short, "sacrificial" pipe lengths inserted next to dissimilar metals to attract galvanic action to themselves. (AF, Aug. '52.)

PERFORMANCE—only one "sacrificial" pipe had to be replaced in first year. In closed, radiant

heating-cooling system, water can be chemically treated with softener and salts to protect aluminum pipes. System must be back-flushed occasionally. In open, fresh water systems, use of aluminum pipes should await further tests. Says ALCOA's Fritz Close: "Supposing some dentist persuaded our cities to add copper to the fresh water supply. We'd really be in trouble then." For the present, ALCOA's maintenance men like the aluminum pipes fine.

Air conditioning

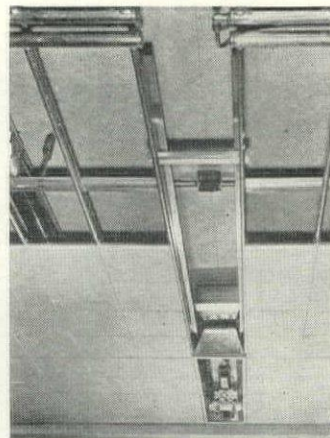
—the new radiant heating-cooling system has gone through a normal period of adjustment, now makes almost everybody happy

DETAILS—aluminum pipes suspended from ceiling carry chilled or heated water. Perforated aluminum panels, clipped to the underside of pipe grid, radiate temperature of water to rooms. Blanket of $\frac{3}{4}$ " glass-fiber insulation above grid for sound absorption (see cut). A few areas in building have conventional air conditioning.

PERFORMANCE—far superior to run-of-the-mill systems. Some winter problems, especially in corner offices, caused apparently by cold downdrafts under windows, somewhat cold floors. Some initial criticism (some people think it is too cold when others think it is too warm), but

ALCOA officials feel they have made all necessary adjustments now, and have their problems licked. Early difficulty: aluminum valves in system could not hold adjustment, had to be replaced by conventional needle valves.

IMPACT ON FUTURE BUILDING—similar future installations (and there will be many) might consider supplementary heat source along exterior walls to counteract downdrafts, and some prevention of heat loss to exterior through cellular steel floors. In addition, sound-absorbing insulation might be placed between radiant grid and perforated panels (rather than above grid) to permit more heat transmission to floor above.





Photos: Lionel Freedman; Neuman-Schmidt Studios

Receptionist faces elevators on each floor. Many interior finishes are beautifully contrasted: travertine, fluted aluminum (in silver and gold finishes), fine wood paneling. Pictures below show typical private office and aluminum finishes in main lobby.

More tests:

Aluminum furniture

—it comes in better finishes than you can find in almost any other metal

DETAILS—Knoll Associates, who designed much of the furniture and the textiles, made up their standard desks, tables, chairs with aluminum alloy supports. Even Mies van der Rohe's famed Barcelona chair was reproduced in an extremely strong aluminum alloy (see cut, p. 127).

PERFORMANCE—say the Knolls: "There are as many different kinds of aluminum as there are different kinds of cheese. We found there was an unexpected variety of finishes and colors, and we think these finishes are standing up as well or better than our standard jobs. Especially good are the 'natural alumilite,' the black and the Oxford-gray finishes, and we are considering some of these for use in the future." (Below: typical Knoll-furnished office.)

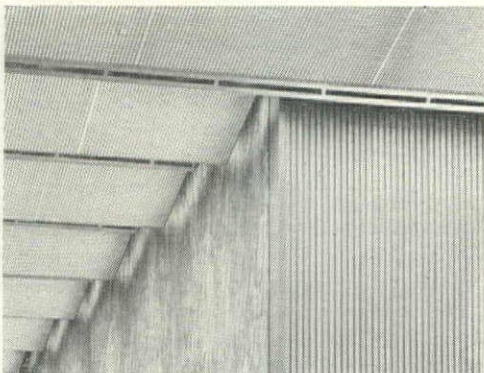


Aluminum finishes

—precision-anodizing and porcelain enamel got a tryout at ALCOA

DETAILS—porcelain-enameled aluminum panels in different colors were installed on the roof terraces. Wall panels in 15 to 20 varieties of "alumilite" (including a stunning gold and a silver that looks like fine chromium) were used throughout the building. Basket-weave screen of aluminum rods covers ceiling lights in lobbies and elevators (see cut).

PERFORMANCE—porcelain-enameled aluminum is more expensive than porcelain enamel on steel but seems to have two advantages: 1) it can be cut on job, without fear of rust developing along chipped edges; 2) low-firing pottery-glaze has coefficient of expansion similar to that of aluminum, resulting in excellent adhesion between the enamel and the aluminum.



IMPACT ON FUTURE BUILDING—experiments with colors now being carried on by ALCOA's 80 researchers at New Kensington, Pa. suggest new and more attractive anodized finishes for doors, wall panels, extruded aluminum sections. This means window and door frames (see above). Says ALCOA: "With what we know today, we could have made our windows the same color as the curtain wall."

Office planning

—novel ideas have worked out well

NO EXCESS FLEXIBILITY—unlike most postwar office buildings, ALCOA makes no fetish of flexible, movable partitions. Reason: ALCOA's space needs were just about fixed (or predictable), so department locations and spaces could be fixed, too. Each department was planned to be 35% expandable within its allocated space. Result: offices were much easier to decorate than if they had been flexibly divided. Fixed plaster partitions, or fixed, fluted glass screens in aluminum frames (between offices and secretarial ante-rooms) give sense of stability, form good sound barriers (ALCOA felt that movable partitions would not).

NEW WASHROOMS—as in the Harrison & Abramovitz project for the TIME & LIFE building, women's washrooms were planned in two sections—one room contains toilets and lavatories (but no mirrors), the other is a fully equipped "make-up" room with counter table, pink light, wall mirrors, scrap baskets, chairs. Result: much easier maintenance (there will be no hairpins, etc., to clog the plumbing).

Design and morale

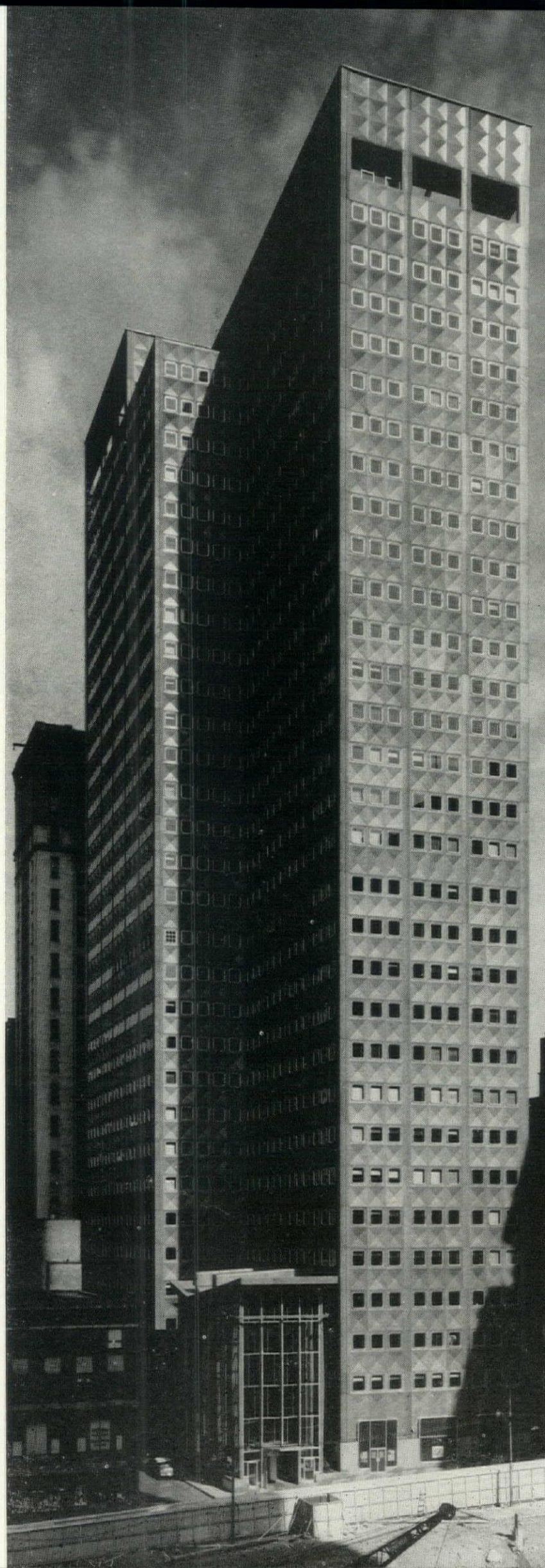
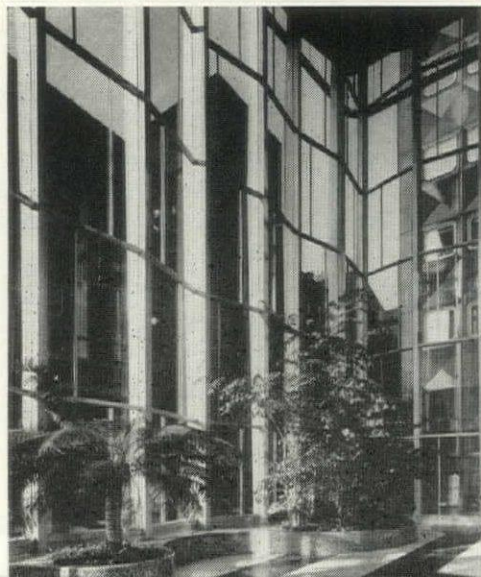
—ALCOA executives found modern architecture was just what the doctor ordered

"We used to think of ourselves as a staid, conservative sort of company," one of ALCOA's top executives told FORUM editors. "But you should look at us now! Working in the most experimental office building in the US suddenly put all of us into a really daring, youthful, experimental frame of mind. I think we all started to perk up. There's a new spirit around the company, and I think it's the building that produced it."

This kind of enthusiasm is not limited to executives, either; just about every stenographer in Pittsburgh would like to work for ALCOA—so ALCOA gets the best help available. (Some actually say they miss their offices during their vacations.) Other companies have come around for a look-see, to find out what makes ALCOA's offices so attractive. Thousands of Pittsburghers came to ALCOA's three "open-house evenings"—and the executives were so proud of their offices that they sat in them while the visitors tramped through. The executives' wives joined their husbands on the second and third days.) Modern furniture and paintings, supplied at first over the protests of some executives (and intended, in some cases, merely for show while the building was on exhibition) have somehow never been removed.

It all adds up to a convincing testimonial to good architecture. Pittsburgh has not had a very great share of that in the recent past—but it seems a safe bet that its citizens will be demanding more of it in days to come.

Main entrance lobby is "bird-cage" structure suspended from two cantilevered girders to demonstrate light weight of aluminum. Underground garage under construction in foreground will be topped by park area, so that ALCOA and US Steel buildings will face each other across handsome square. *Below:* interior of bird cage with high rail for window-washing apparatus.



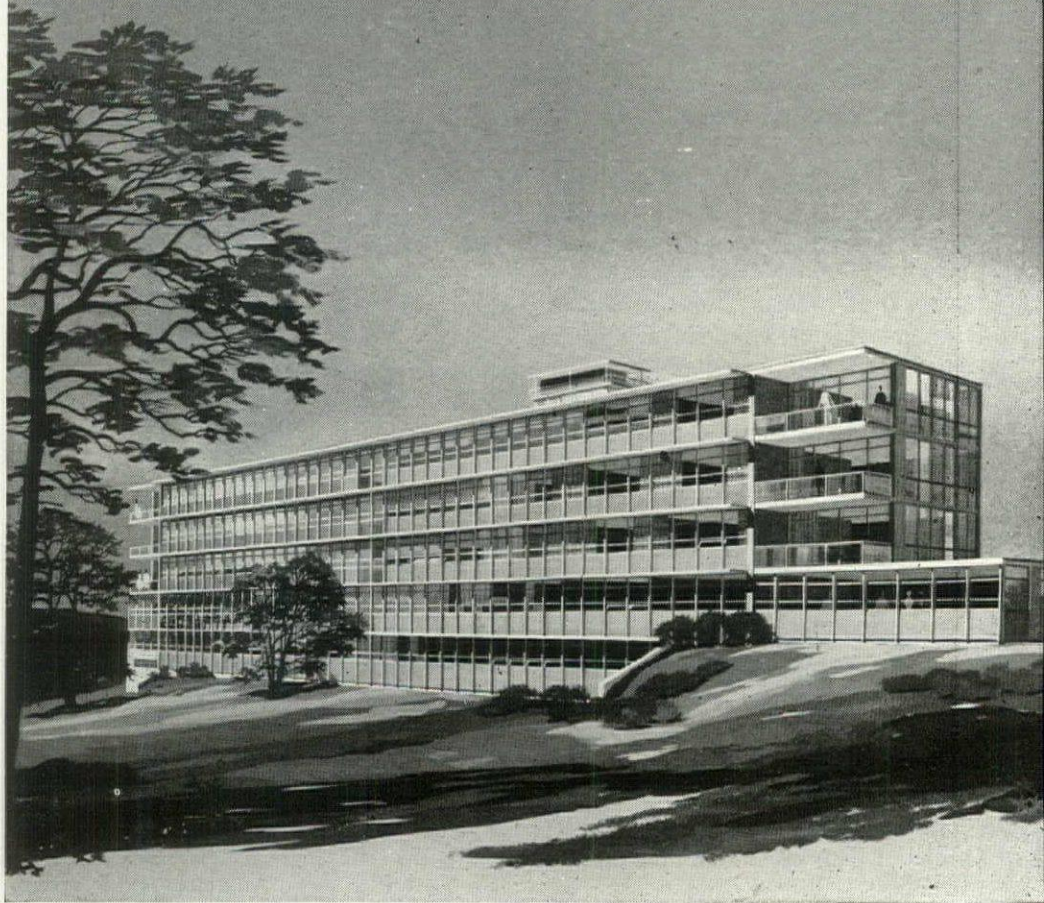
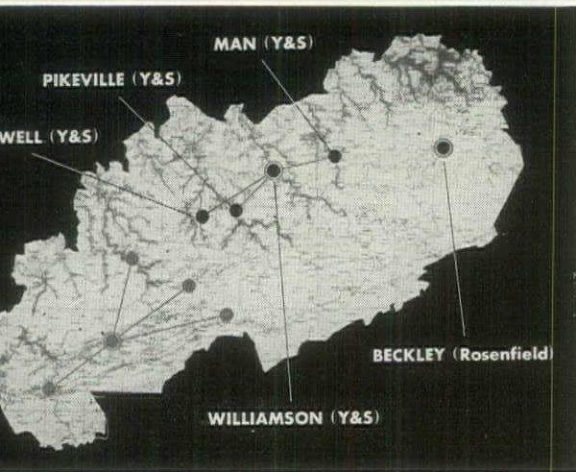
FIVE MORE HOSPITALS IN THE U. M. W. CHAIN
—third article of a series

What has gone before: the August FORUM described the over-all planning and techniques behind this remarkable regional hospital chain now under construction in the West Virginia-Kentucky mountain mining region for beneficiaries of the United Mine Workers' welfare fund. The same issue described construction and presented the centralized service center which will serve all ten hospitals in the chain.

The September FORUM presented five hospitals by Architects Sherlock, Smith & Adams and described the internal supply system used in all ten hospitals.

And to come: in January, the new radiant-ceiling heating-cooling system used at Beckley hospital will be described in detail. As soon as equipment designs are final, FORUM will present new features in the furnishing and equipping of these hospitals and features of staff housing and nurses' schools.

Estimated construction cost for all hospitals in the chain averages \$22.65 per sq. ft.; \$13,800 per bed.



MEMORIAL HOSPITAL ASSOCIATION OF KENTUCKY, owner
(F. D. Mott, M.D., medical administrator
John Newdorp, M.D., deputy medical administrator
Gordon A. Friesen, senior hospital administrator
E. Todd Wheeler, consultant)
J. A. JONES CONSTRUCTION CO., general contractor

These hospitals are designed for staffing

Every hospital today has to worry about staffing. There just are not enough registered nurses, top-grade practical nurses and A-1 supervisors and specialists to go around.

The problem—tough enough in New York or Chicago—is uncommonly hard in an area like the mountain mining region where these hospitals are going up. So clients and architects thought uncommonly hard about it.

Here is what their design for staffing includes:

Design for saving labor: this means not only such obvious aims as saving steps and extra handling; it also means ingenious planning for more efficient division of labor and for using supervisory skills to the maximum. Beckley's nursing station (at right), the lobby area (overleaf), the supply system (AF, Sept. '53) and the central service plant (AF, Aug. '53) are prime examples. On the following pages are many others.

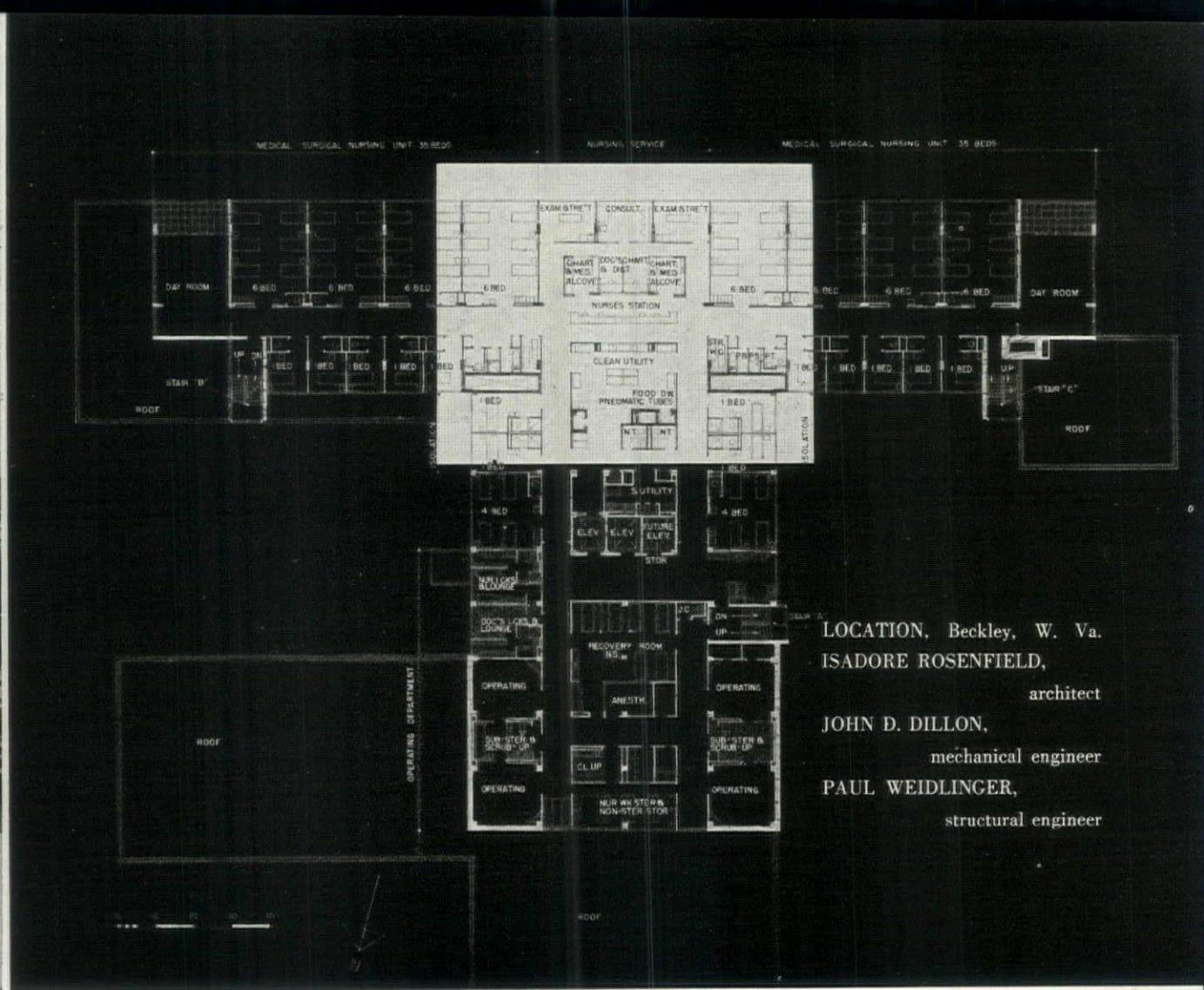
Design for training: this means not only formal schools for registered and practical nurses, but also provision for informal

classes and seminars for everyone. See the nursing-station description for one unusual training facility.

Design for amenities: these hospitals have no "Mary Ann" backs or gloomy, stepchild departments. They have good looks, inside and out. Housing—an important part of the staffing plan—will be discussed in a later issue of FORUM; meanwhile Beckley's suite for interns and residents (overleaf) is a good sample of amenity gained by thoughtful design, not by extravagance.

Design for human nature: from the start of their planning, the clients have shrewdly banked on a heartening fact about human nature—people find it exciting and rewarding to work in a place they feel is unique, is ahead of the crowd, is "tops." This is the big magnet counted on to pull—and hold—people with ability. This is the aim that has deliberately been built into the specific designs.

How powerful is this incentive—against the competition of other localities and against the competition of other jobs within



LOCATION, Beckley, W. Va.
ISADORE ROSENFELD,

architect

JOHN D. DILLON,

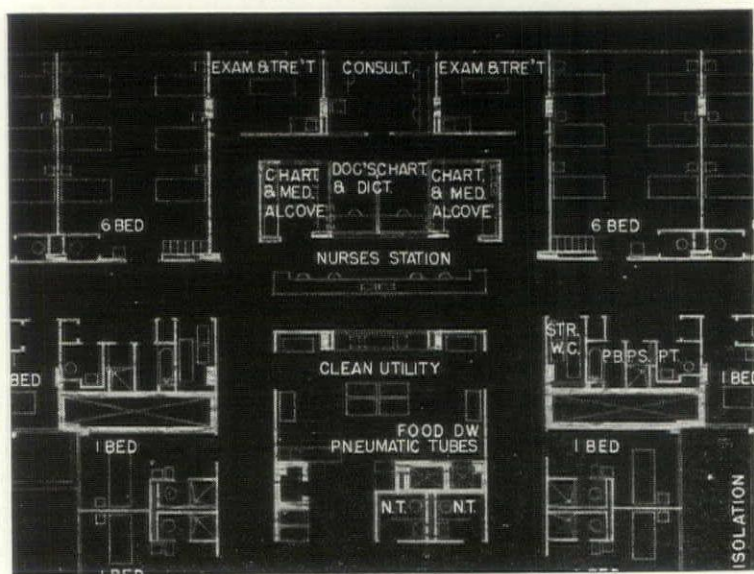
mechanical engineer

PAUL WEIDLINGER,

structural engineer

Beckley central hospital by Architect Isadore Rosenfield, from nursing-wing side

the locality? Nobody will know, of course, until the hospitals are running, beginning late next year. But there are omens. The management has had little trouble in skimming up key supervisory personnel from the cream of the country.



Beckley's nursing station serves 70 beds

How is one supervising nurse to manage a unit this size?

Answer: the team system of nursing, used for making the most of special skills (such as a practical nurse and an aide working as a team with each registered nurse), is carried right through

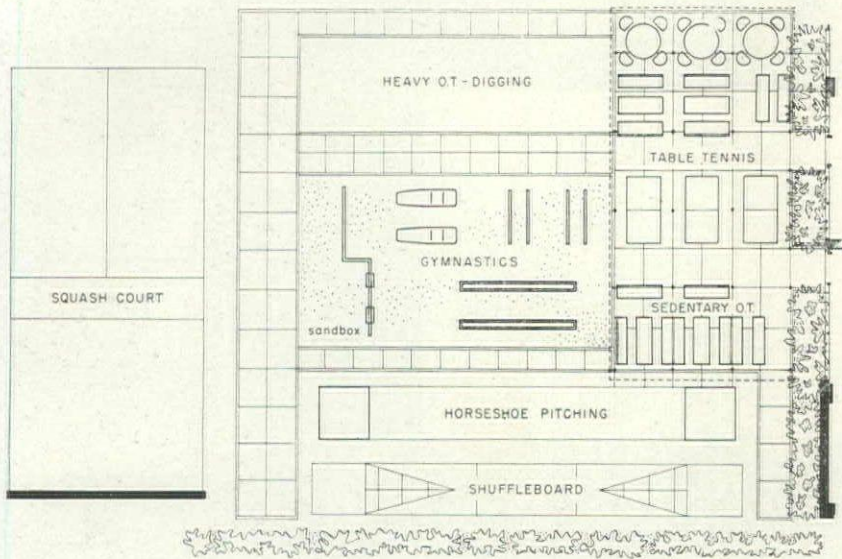
to supervision. Each station has a medical clerk to handle paper work and routine that normally burden a supervisor. The utility room—supply system (AF, Sept. '53) also cuts down paper work for everybody.

The station is divided into two sides, each taking half the floor; at the front desk are places for the medical clerk and a nurse from each side. In the unlikely event that supervisors of 70-bed caliber cannot be found or developed, the station could operate as two orthodox 35-bed units. Each side has its own charting and medication alcove, linked to a doctor's charting and dictating alcove by record shelving open to both. The two doctor's alcoves open into the floor examining and treatment suite.

The consulting room is a vital part of the station. Besides its obvious use for talks with patients or their families, it will serve as a conference room for the chief of service with interns and especially as an *informal training facility* for nurses and aides: the nursing-team concept includes frequent meetings just before or after shifts to explain new procedures, to discuss possible improvements and the like. The hospitals' management wants *every* member of each team to understand what goes on and to contribute her ideas as well as her elbow grease.

In the surgery, note the recovery suite. It is the kind anesthesiologists dream of.

Incidentally, six-bed rooms, besides reducing nurses' steps (the farthest bedroom is only 70' from the station), saved an estimated \$106,000 under the cost of four-bed rooms. Beckley has 199 beds on its three nursing floors, is vertically expandable to 380. Its area of 538 sq. ft. per bed is remarkably low for a district hospital with so complete an ambulant patient department.



Beckley has clarity—horizontally and vertically

This is a hospital that is easy to find your way around in. Its first floor—the acid test—is almost crystalline.

This is also a hospital that is easy to understand vertically because comparable functions fall neatly into their vertical stacks without fudging or blurring.

Architect Isadore Rosenfield prefers to put beds on the ground floor of the nursing wing, an arrangement undesirable here because the tightly knit vertical supply system puts a premium on compactness. With a similar problem for their hospitals in this chain, Architects Sherlock, Smith & Adams did not carry the nursing wing down to the ground, but set it as a tower on a base (AF, Sept. '53).

Rosenfield chose to extend the wing right down, which in the hands of many planners would have meant "stuffing" it. But take a look again at the first floor to see how neatly he has divided this wing into adjunct facilities and semipublic area (visitors are welcome in the cafeteria) and how straightforwardly each of these is linked to medical or visitors' corridor. Both the wing itself and its integration with the rest of the floor are so good that the fact of initial compromise is completely overcome.

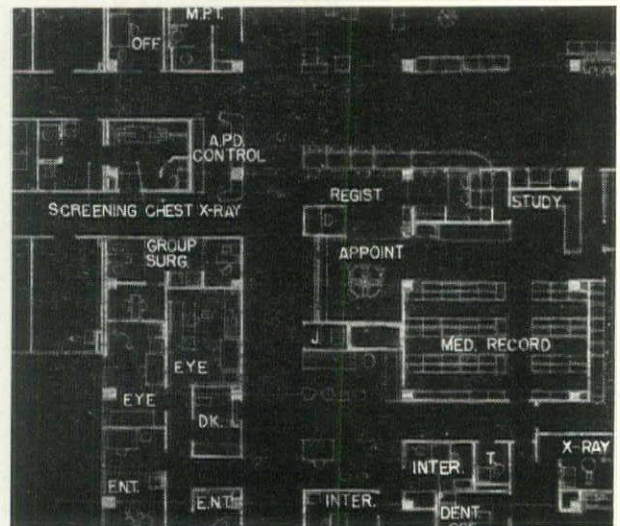
Hospital planning is largely a matter of coping with design compromises (inevitably, when so complex a collection of functions must be made visually coherent). The good hospital triumphs over its necessary compromises; the poor hospital does not. A notably triumphant example—like Beckley—is worth careful study and appreciation from this angle, as well as for its initial choice of a basic shape that proved to be "right," and for its very nice handling of planning details.

Beckley's clarity extends to its construction

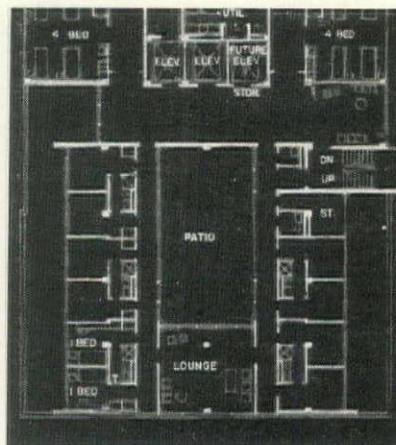
On nursing floors, the brick "end" wall is not literally at the end; it is "under glass" between dayroom and beds. The dayrooms' only exterior masonry walls are on the north. Rosenfield rejected the obvious choice—interior partition—for the inner wall in favor of unplastered brick to emphasize that the glazed dayrooms and balconies serve as exterior space, that patients there are liberated from indoors and beds.

Stairwell brick is also under glass. Reasoning that masonry stair walls are really intended only to separate stairs from building and that custom alone dictates enclosing the entire well, Rosenfield glazed the exterior. Stair and glass look like what they are: a separate structure. Supports are six posts, each of which is a pair of 2" x 6" channels welded together, then laced by the steel stairs which are welded to channels. Glass, in the same steel sash used throughout (AF, Aug. '53), is hung from the structure. These should be unusually dramatic and pleasant stairs.

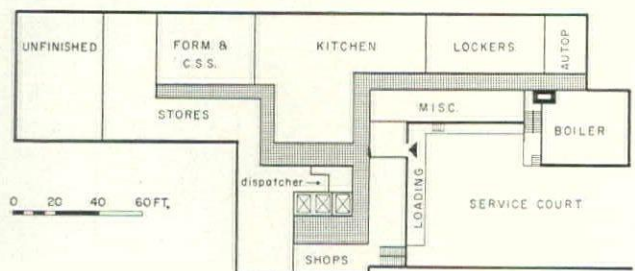
Plan of physical medicine department includes a notably fine outdoor rehabilitation and therapy area.



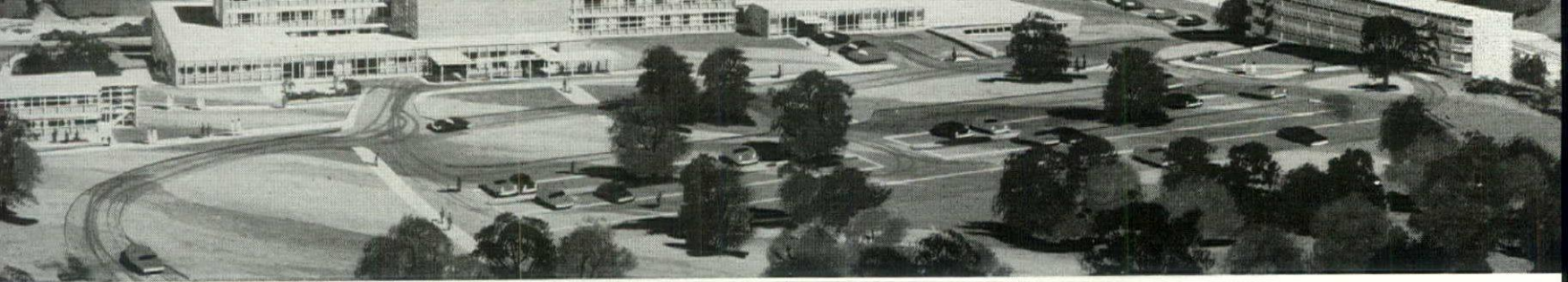
Registration (both out- and in-patient) and appointments are handled at the central reception desk. The appointments system is copied from the airlines; clinic schedules are filled as though they were "flights." Before each clinic session, patients' records are sent across to the ambulant patients' department control desk. Note also (full first-floor plan) the very nice feature of separate waiting room and play terrace for mothers and children at the pediatrics end of the clinic. Beckley, unlike other hospitals in the chain, separates emergency and main entrances, but the central desk controls both—important for night staffing.



Interns' rooms on top floor have their own roof terraces, also surround an open patio. They combine the convenience of location within the hospital with a feeling of separation from hospital atmosphere.



Basement is under the downhill portion of the building only, is light and pleasant. Supply circulation is very efficient.



Building group at Williamson includes service center for chain (backed by tall stack), housing at far left and right

Williamson Memorial Medical Center

This is a district hospital having three community satellite hospitals (see map, p. 132).

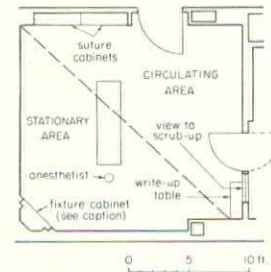
Attached to Williamson is the excellently worked out service center by the same architects, which supplies laundry, sterile packs, pharmaceutical goods and dental lab work to all hospitals in the chain, takes care of central purchasing, warehousing and shop work and is the seat of central administrative offices (AF, Aug. '53).

Laundry and sterile supply carts for Williamson are made up in the service center, go directly to points of consumption (see basement plan); other items are stored and assembled in the dispatcher's area, as in other hospitals of the chain.

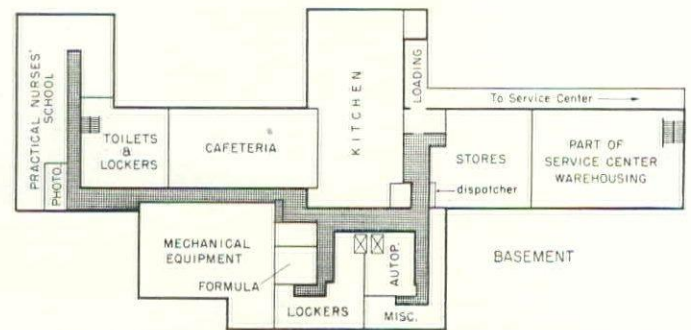
On Williamson's first-floor plan, note especially:

- ▶ the laboratories, with glass vision strips on interior walls, giving over-all view from the pathologist's office;
- ▶ the compact examination and treatment suite for radiology;
- ▶ the handy chest X-ray room, to which hospital visitors will be welcome.

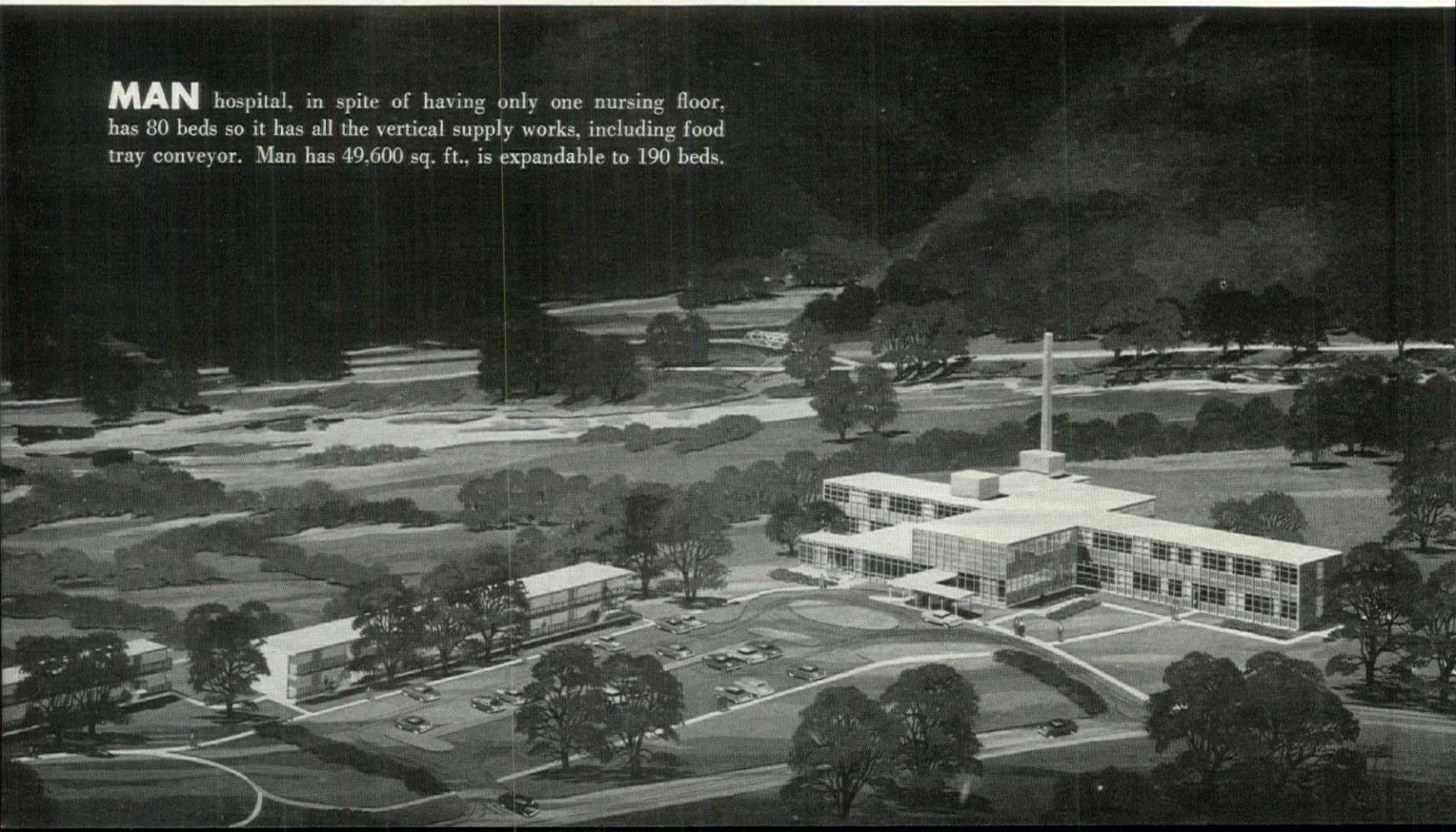
In its circulation planning, this hospital ran into some difficulties: for instance, the route from emergency to fracture; the elevators, which in order to be convenient for medical use, are out of sight of the lobby; and the placement of the cafeteria and its stairs, which will be used by visitors.

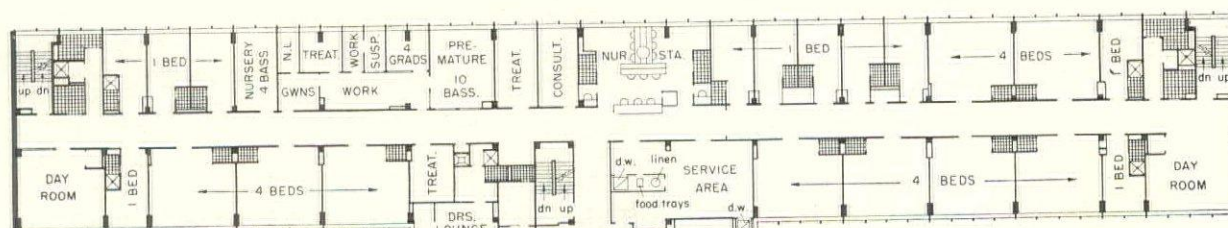


Operating rooms are divided by an imaginary diagonal line; on one side are personnel and equipment that are stationary during an operation; on the other are fluid personnel and equipment. The corner cabinet has suction and electrical connections, and X-ray viewing panel.



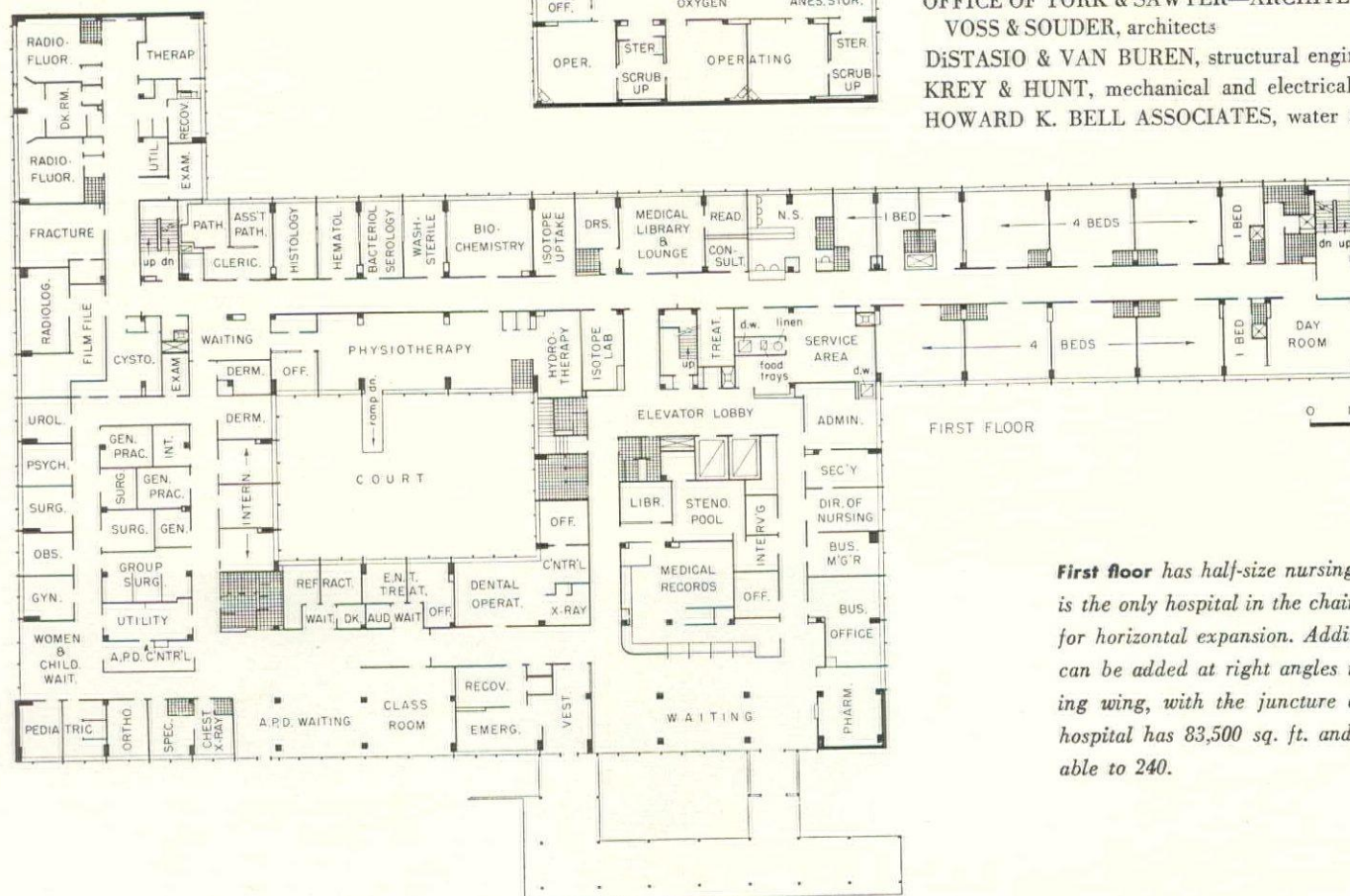
MAN hospital, in spite of having only one nursing floor, has 80 beds so it has all the vertical supply works, including food tray conveyor. Man has 49,600 sq. ft., is expandable to 190 beds.





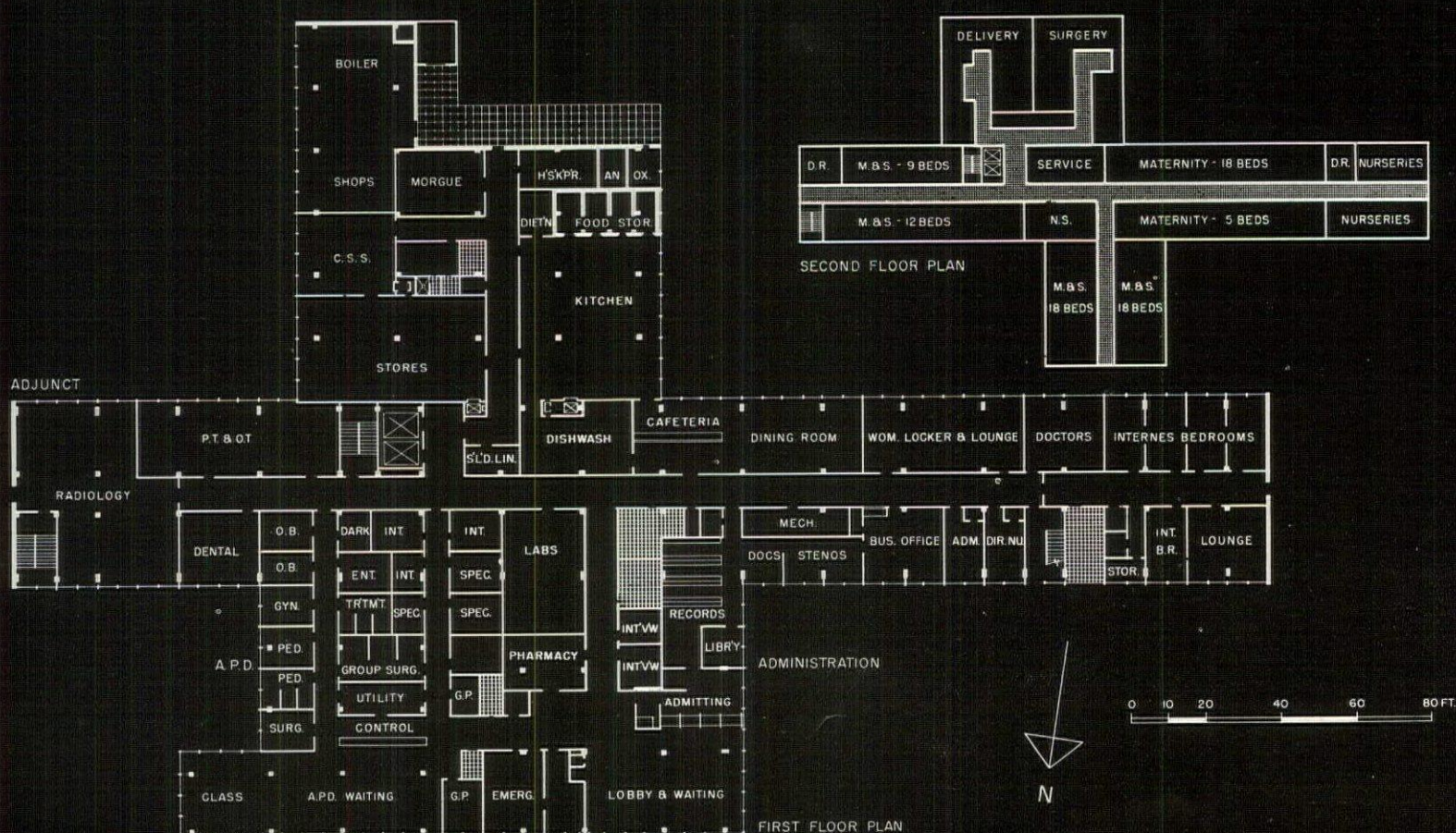
SECOND FLOOR

LOCATIONS: Williamson and Man, W. Va.; Pikeville and McDowell, Ky.
 OFFICE OF YORK & SAWYER—ARCHITECTS KIFF, COLEMAN,
 VOSS & SOUDER, architects
 DISTASIO & VAN BUREN, structural engineers
 KREY & HUNT, mechanical and electrical engineers
 HOWARD K. BELL ASSOCIATES, water and sewage engineering



FIRST FLOOR

First floor has half-size nursing wing. Williamson is the only hospital in the chain which is designed for horizontal expansion. Additional nursing wing can be added at right angles to the present nursing wing, with the juncture at the station. The hospital has 83,500 sq. ft. and 143 beds, expandable to 240.



SECOND FLOOR PLAN

FIRST FLOOR PLAN

Pikeville's and McDowell's nursing efficiency raises an architectural problem

These two community hospitals illustrate a problem that in the future is likely to bother many designers of small hospitals, if large nursing units become more common. A single nursing station for 50 beds (Pikeville) or 60 beds (McDowell) means a single big nursing floor that then may impose its shape on the first floor.

At Pikeville, this problem was not acute because of a curious circumstance: the site is so hemmed in by a mountain on one side and a stream on the other (see rendering) that it was necessary to run a driveway beneath the second floor; this cut first-floor length.

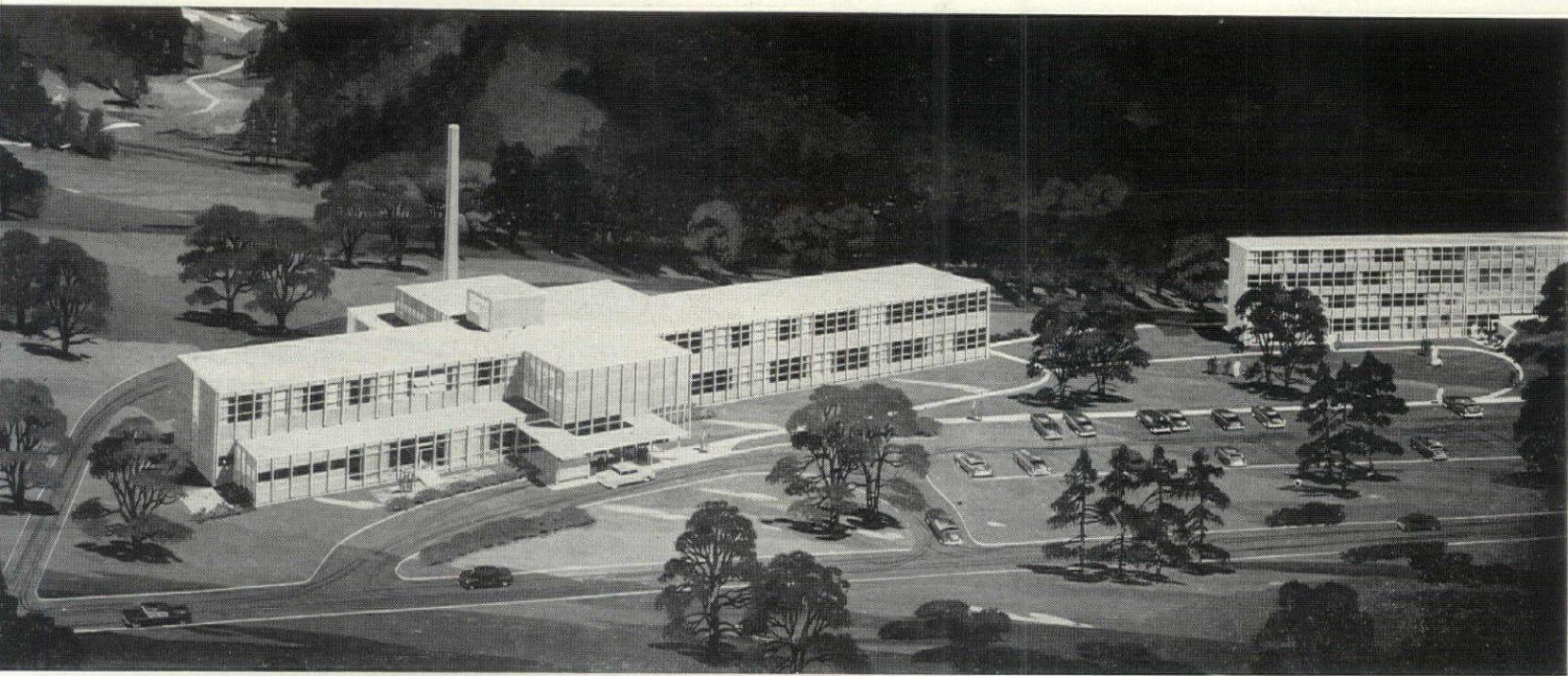
But at McDowell the designers ran head on into the need for filling out—on the first floor—the shape of the long, narrow nursing floor above. This forced removal of some elements, such as laboratory and dental clinic, away from kindred elements.

Architects Sherlock, Smith & Adams were subject to the same

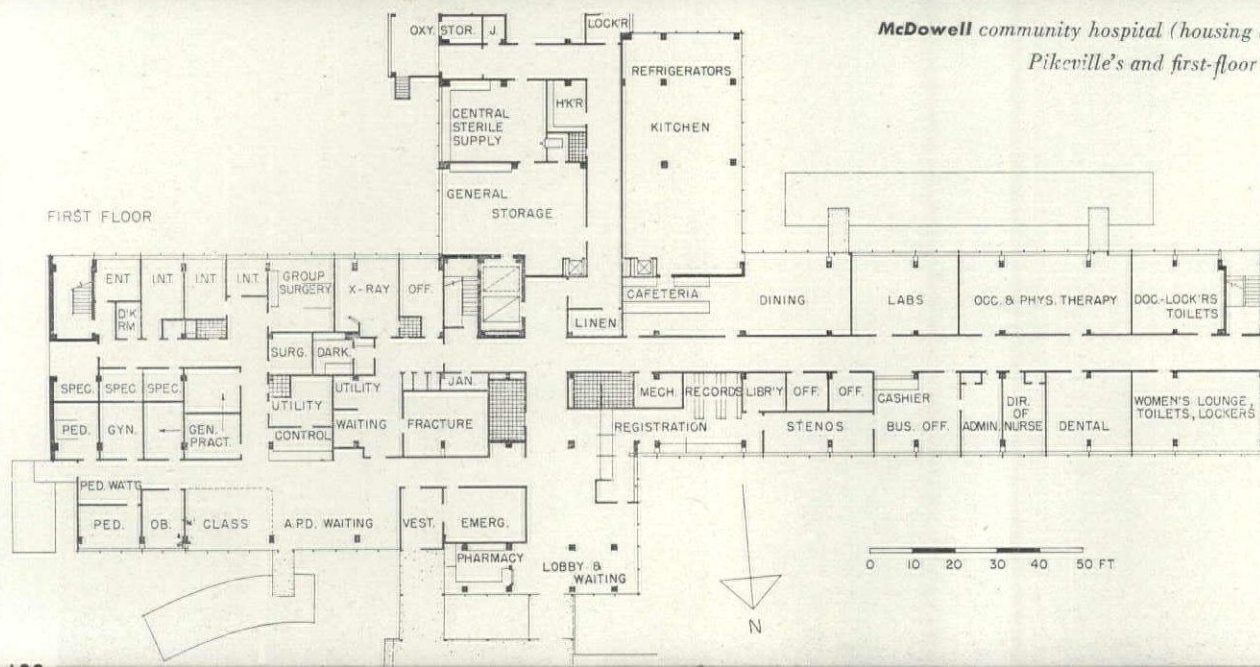
fundamental problem in two of their small hospitals, Wise and Middlesboro (AF, Sept. '53). They avoided it by putting surgery on the ground floor, thus reducing second-floor area and adding to first. In Wise they also used a double corridor, making a shorter, thicker nursing floor.

York & Sawyer, however, wanted to keep surgery and delivery together to make double use of common facilities and to put both near the beds. (Sherlock, Smith & Adams tied surgery closely to emergency and adjunct facilities.) An argument can be made for either approach, but the York & Sawyer approach does seem to raise additional problems of functional coherence among first-floor facilities.

Pikeville has 36,700 sq. ft.; its 50 beds are expandable to 115. McDowell has 40,000 sq. ft.; its 60 beds are expandable to 105. Neither of these small hospitals has the vertical food-tray conveyor system of the larger hospitals in the chain.

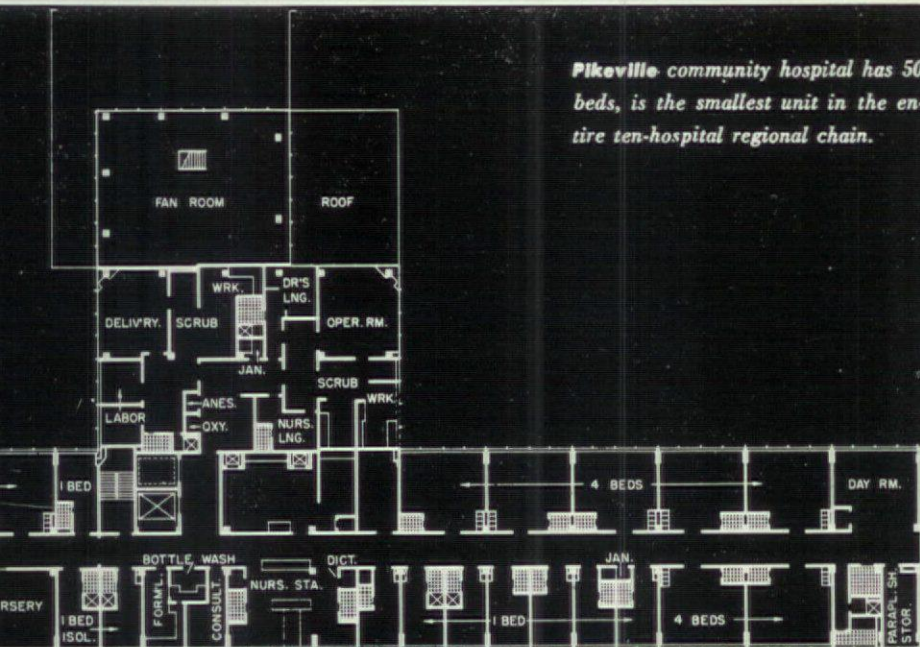


McDowell community hospital (housing at right) has second floor similar to Pikeville's and first-floor rear wing identical with Pikeville's.

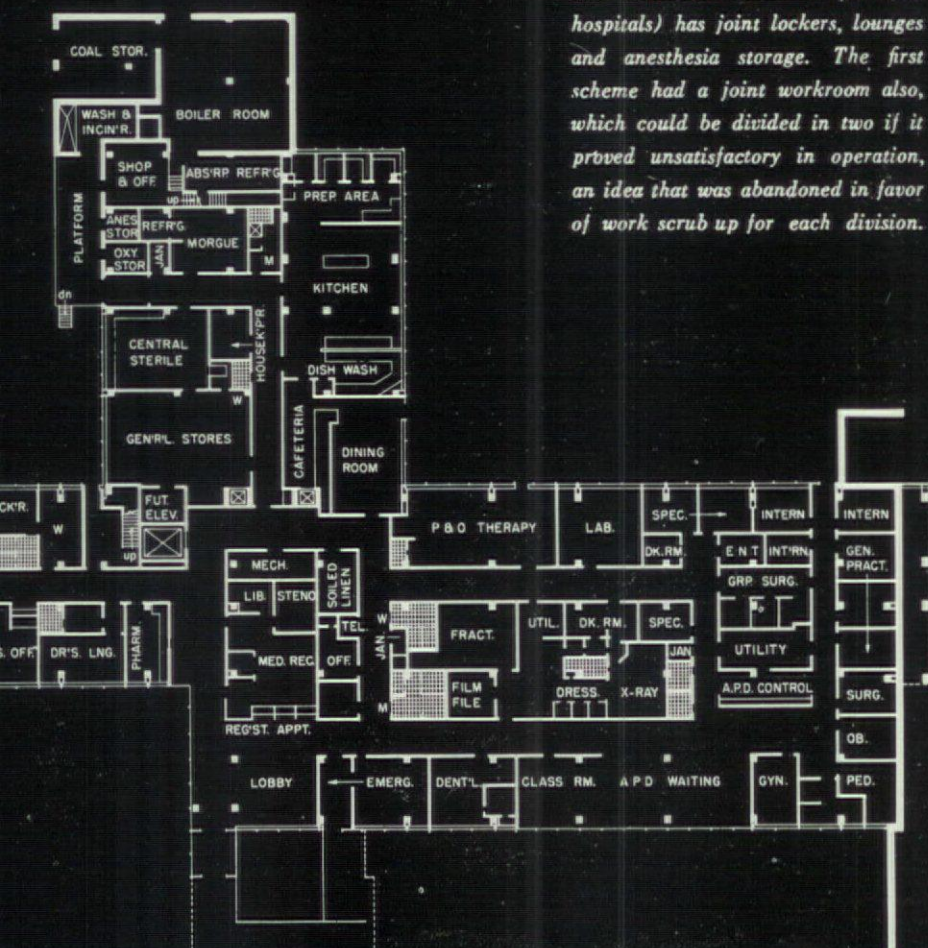




Pikeville community hospital has 50 beds, is the smallest unit in the entire ten-hospital regional chain.



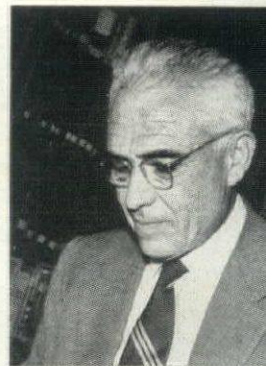
Operating-delivery suite at Pikeville and McDowell (identical for both hospitals) has joint lockers, lounges and anesthesia storage. The first scheme had a joint workroom also, which could be divided in two if it proved unsatisfactory in operation, an idea that was abandoned in favor of work scrub up for each division.





This month FORUM combines its Building Engineering and Building Abroad departments to make room for the first comprehensive presentation of the exciting work of one of the world's foremost engineers,

PIER LUIGI NERVI



This 62-year-old Italian engineer—perhaps more than any other man—has let reinforced concrete out of the box. He has liberated it from the rectangular wooden forms, which for decades have confined most concrete to uninteresting flat slabs, square columns and perpendicular walls. Witness the broad tilted arches of his exposition hall at Turin (left), the rhythmical undulations of the aisle roof, the curved tracery of the reticulated vault.

In letting concrete out of the box, Nervi and his partner Bartoli have developed a new concept of construction, a new amalgamation of structure and form and, perhaps, a new architecture. But these exciting achievements are only by-products of their search for something much more practical: an economical way to build with a minimum of steel and wood, both of which are scarce and expensive in Italy. This search led to prefabrication and the development of three precast parts which appear in various forms in practically all of their recent work:

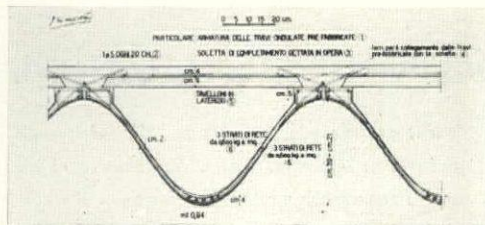
1. Precast corrugated beams, like those forming the aisle ceiling of the Turin exposition hall (left), are used in numerous ways for many purposes. Arched segments create a vault over another exposition hall (p. 143), tapered segments form a cantilevered bathhouse pavilion (p. 142), covered segments are used as air-conditioning ducts in the ceiling of a swimming pool (p. 143) and straight glazed segments are laid on beams to form a fac-

tory roof (p. 147). Precast in lumber forms (use of a low-slump mix makes an inside form unnecessary), the ceiling side of these round-bottom beams is smooth and needs no finish. Once hoisted into place, the beams are usually covered with precast flat slabs whose joints coincide with those of the beams. The units are then tied together by locking their projecting dowels and by grouting the joints (see section).

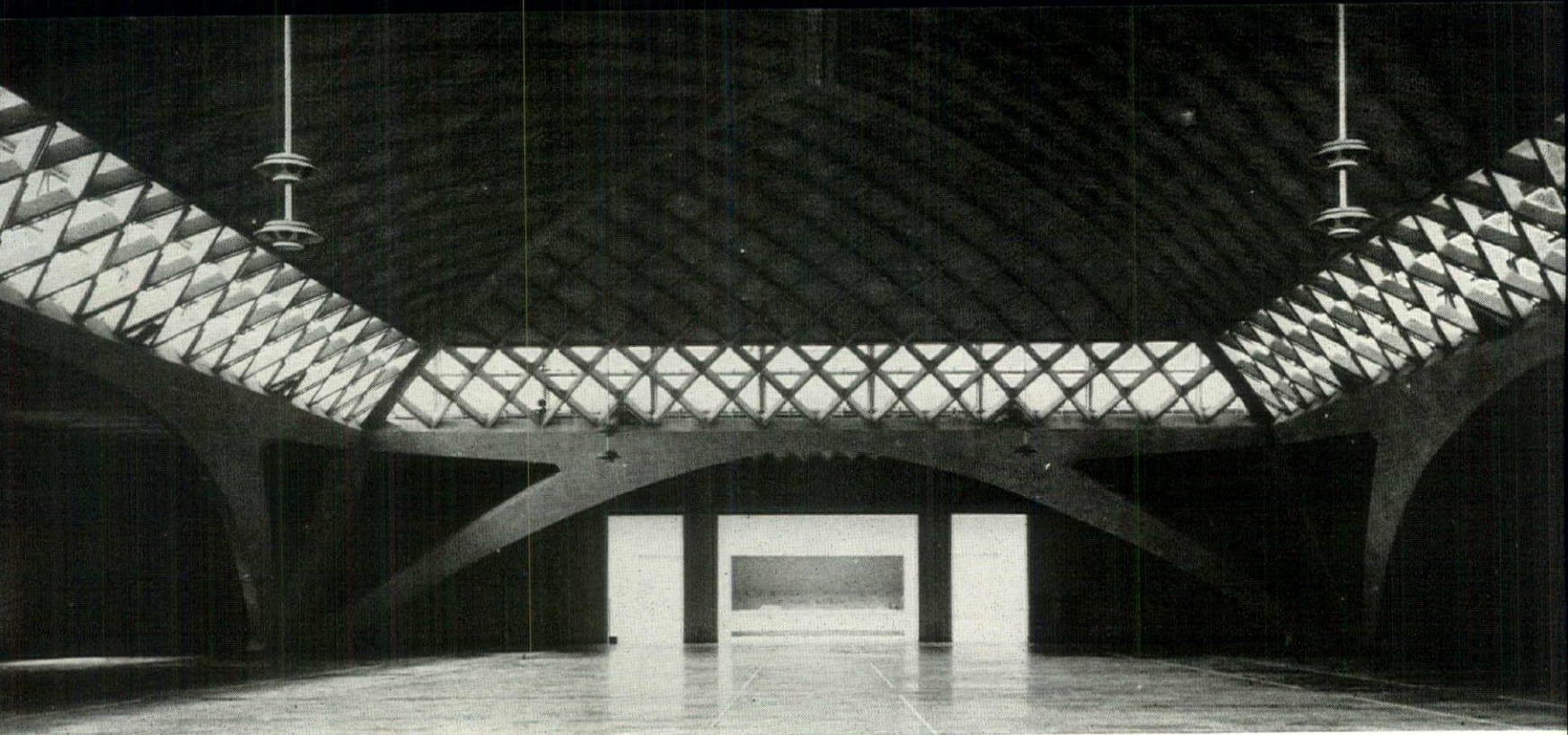
2. Precast ceiling coffers are used to shape the curved ribbed ceilings typical of much of Nervi's work—the vault shown at the left, for example. This structural pattern is created by setting thin precast concrete pans upside down on widely spaced falsework. The touching edges of adjacent pans create channels (the ribs) to receive reinforcing rods and poured concrete, which is spread over the entire structure to make it monolithic. These concrete coffers have created the beautiful structural patterns on the mushroom-column ceiling of Nervi's restaurant (p. 143), the sparkling dome of his dance hall (p. 148) and the businesslike vault of his salt warehouse (p. 149).

3. "Ferro-cement" forms—thin, strong and endlessly reusable—are the secret of the beautifully reticulated flat slabs which characterize the engineer's latest work (such as the factory and warehouse on pp. 144 and 145). A Nervi invention—"ferro-cement"—is a number of layers of soft steel mesh ($\frac{3}{8}$ " impregnated and finished on both sides with cement mortar (15 bags of cement per cu. yd.) without formwork.

With these three devices, Engineers Nervi and Bartoli have added to the basic economy of concrete the economy of prefabrication and, incidentally, have produced a whole catalogue of new building forms—26 varieties of which are shown on the following pages.



New exhibition hall in Turin (room C) demonstrates three of Nervi's favorite structural devices: 1) thin precast beams, which give corrugated appearance to ceiling of peripheral aisles; 2) giant arches, which span more than 100' in one direction and more than 150' in other; 3) lamella-type framing of central vault, which consists of precast pans and poured-in-place ribs.



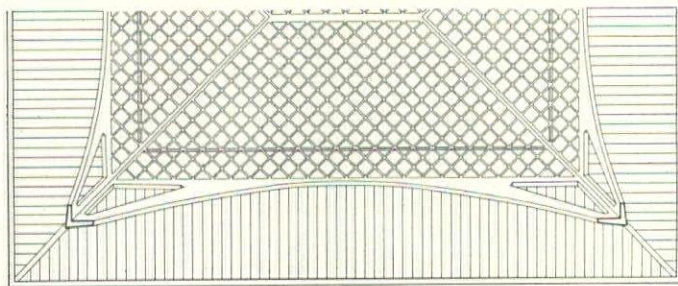
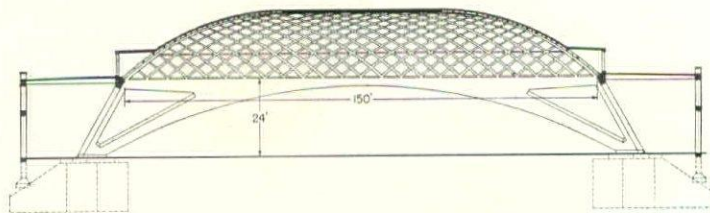
G. E. Kidder Smith

Room C, built in 1950, consists of 150' x 98' vaulted area surrounded by 33'-wide aisles. Vault structure is cast-in-place lamella-type framework formed by precast diamond-shaped panels which become part of roof.

1. Two kinds of vaulting create two huge showrooms for Turin exposition hall

Speed, economy and ease of construction were the major requirements in the competition for the design of this exhibition hall in Turin. Nervi won the commission by inventing ways to prefabricate most of the structure. Room B's corrugated, barrel vault (photo above, right) consists of precast segments 14½' long and 8'-21½" o.c., precast cross-stiffeners and high-strength cast-in-place ribs at the top and bottom of each corrugation. With the aid of pipe scaffolding (moved three times), a gantry on rails and a small car on crossrails, 30 of the 3,000-lb. precast units (about 3,000 sq. ft. of roof) were positioned each day.

For the rotunda at the end of room B and for the newer room C (photos above and right), Nervi used a different technique based on thin precast square pans. When the pans are placed upside-down on widely spaced falsework, their flanges create a form for the sides and bottom of small beams or ribs 9½" deep and 6" wide. Reinforcing steel is placed at the bottom and top of these crisscrossing beams and they are then filled with concrete. A 1½" topping is poured monolithically with the beams over mesh.

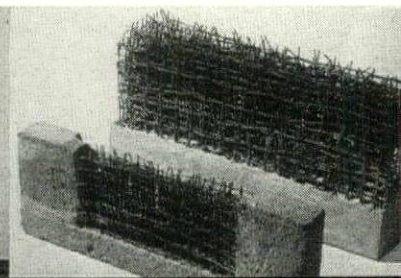
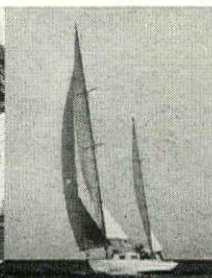
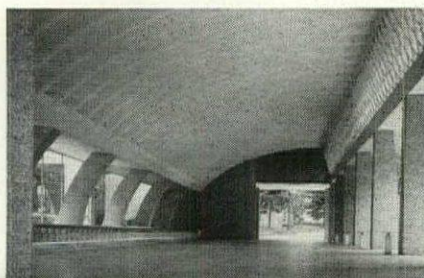


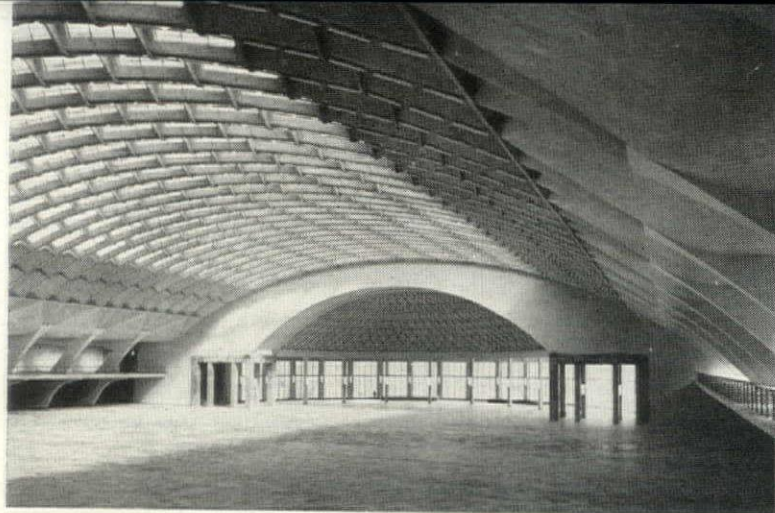
A quick look at 19 other engineering feats by Nervi, ranging from 1930 to 1953,

Open-air salon for bathhouse at Chianciano is roofed with curved, undulating, precast beams about 41' long, 3' wide and 2' deep at center. Concrete grille serves as truss. Architects: Loreti & Marchi.

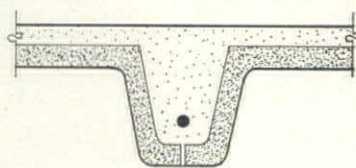
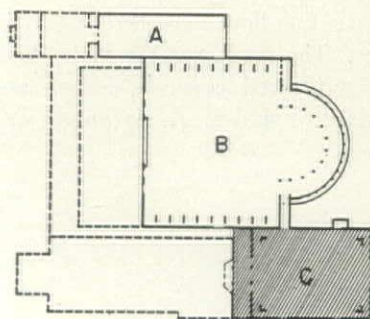
Yacht garage near beach was built for storage and repair of small boats, has showroom on top. Precast corrugated roof sections are carried on six huge concrete trusses about 100' long and 34' o.c.

Sailboat, built in 1948 of ferro-cement, is about 40' long, sleeps six, weighs same as wooden boat. Hull is only about ½" thick, consists of many layers of wire mesh impregnated and finished with cement.





Room B, built in 1947, is 320' wide, 246' long, covered with corrugated barrel vault made up of precast glazed segments (AF, July '51). Rotunda in background has 132' diameter, is built like room C (left and below).



Construction view of room C shows framework of vault in place: inverted pans between and over which concrete will be poured to form ribs and roof. In background are undulating beams over peripheral aisle, some of which have been covered by flat slabs and are ready for grouting.



2. Huge concrete mushroom shelters restaurant for beach resort



One thick central column supports main roof of restaurant at Ostia. Circular terrace roof is cantilevered outward from a circle of small concrete piers. Both roofs are formed with thin precast concrete pans like vault of room C at Turin (left). Mushroom roof of the dining room required 144 precast pans (detail left) of six different sizes and shapes. Architect: Attilio La Padula. Design was done in 1951.



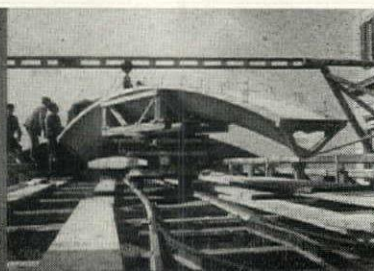
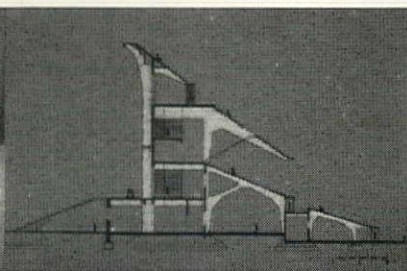
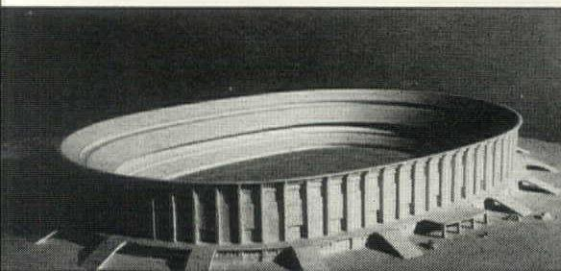
from a thin sailboat hull to a sports palace (p. 148)

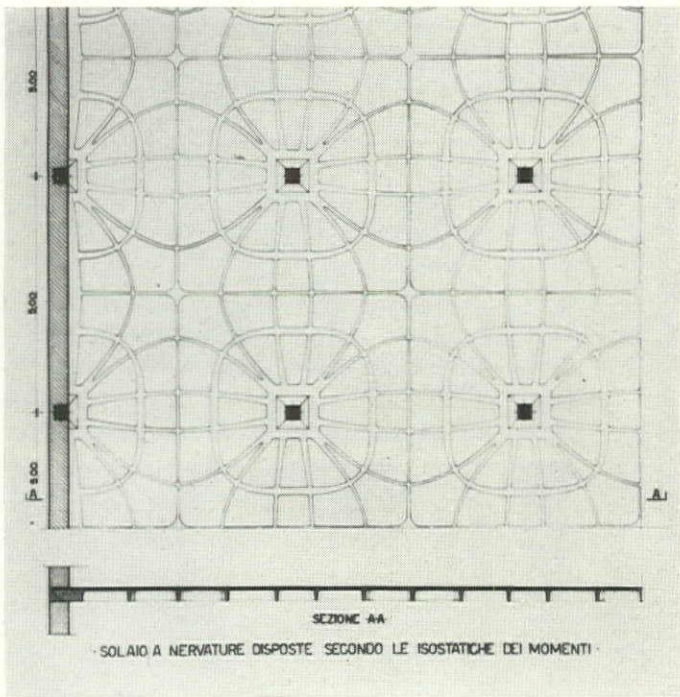
Rome stadium, projected in 1935 but never built, was designed to seat 130,000 spectators and to be evacuated in 12 minutes. Section shows double-decked structure with upper deck cantilevered

over lower deck. Access to 711' x 962' oval would be via long, easy stairway bridges around periphery. This is example of Nervi's work before he began to use prefabrication.

Swimming pool for naval academy at Livorno was built in 1947. Precast segments of semicircular arches, V-shaped in section, were carried over scaffolding by rail

carts, hoisted into position by "traveling cranes." Three segments comprise each 42' arch, which also serves as air-conditioning duct.



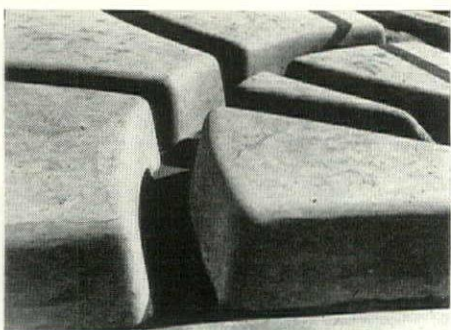
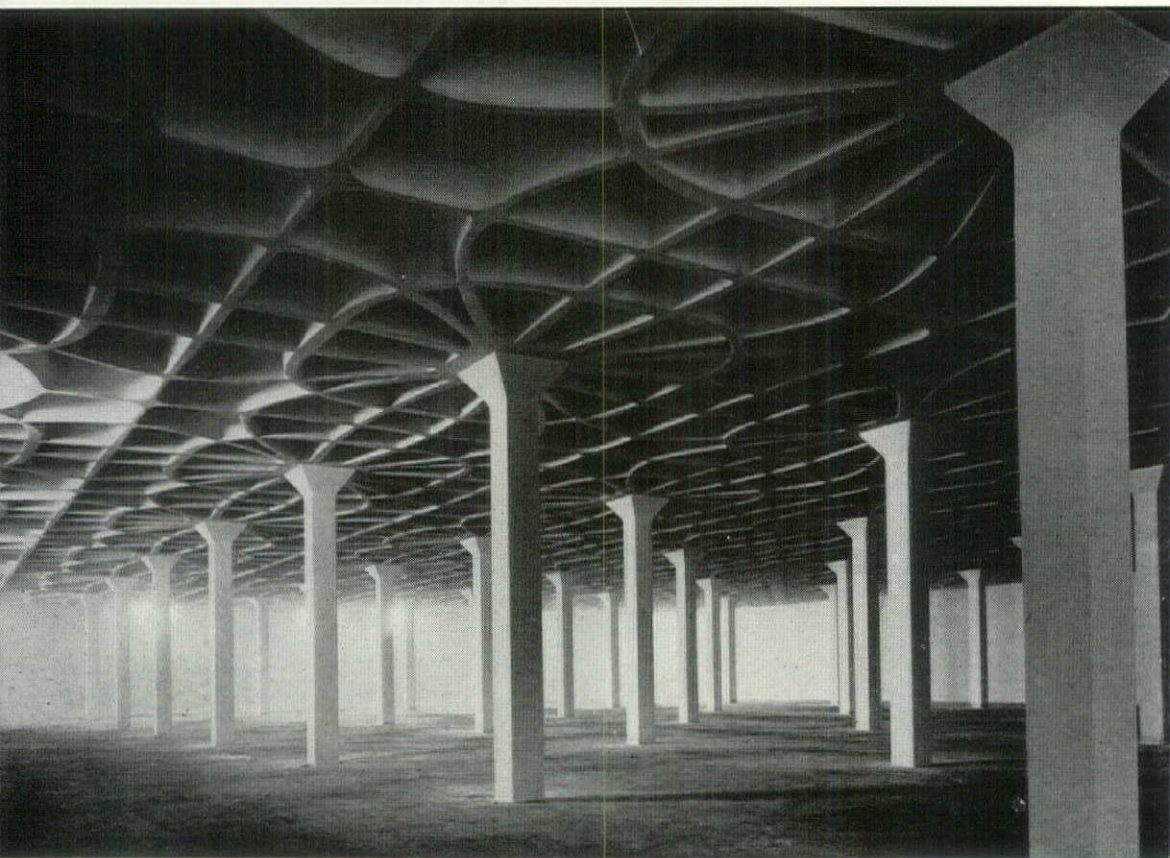


Functional ceiling pattern of wool-factory basement is divided into 16' squares with square mushroom column at center of each. Delicate tracery radiating out from columns of ribs follows isostatic lines of principal bending moments in cast-in-place floor.

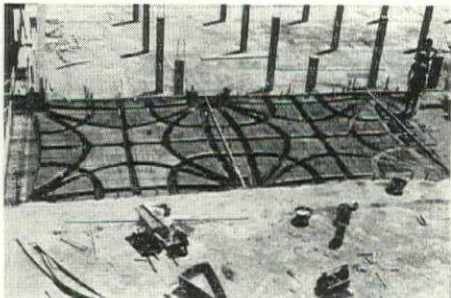
3. Handsome factory ceiling is by-product of refined concrete design

This is the basement of the Gatti woollens factory in Rome, but for all the beauty of its ceiling, it might be some public hall. Indeed, one of the halls of the new UNESCO headquarters in Paris will be graced overhead with a structure of similar pattern (AF, Oct. '52 and June '53). The pattern springs from engineering logic: "The ribs," Nervi points out, "are arranged in accordance with the isostatic lines of the principal bending moments." Thus, this ceiling pattern is functional as well as beautiful and shows that engineering deftly handled can contribute as much to architecture as to structure.

Unlike the earlier buildings shown on the preceding pages, this 1951 structure has no prefabricated parts; it was cast in place as explained by the construction pictures (below). Only the molds are made of Nervi's thin ferro-cement; the floor structure itself is reinforced concrete poured in place. The roof over the main floor of this factory is of a saw-tooth reinforced concrete design, not typical of Nervi's work and therefore not shown. A. Arcangeli was a consulting engineer on this building.



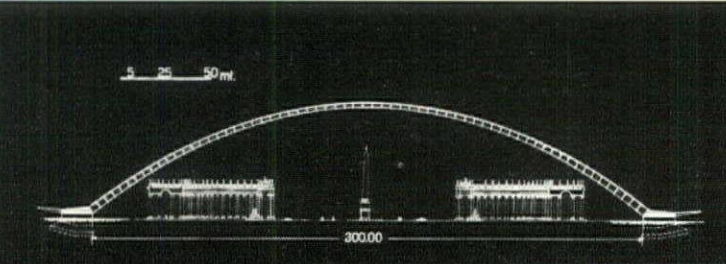
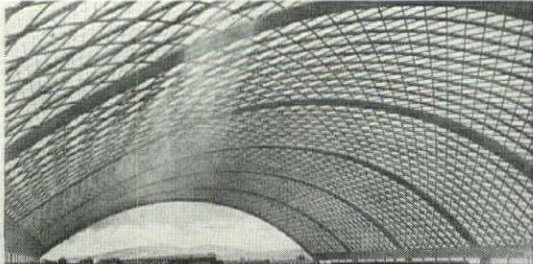
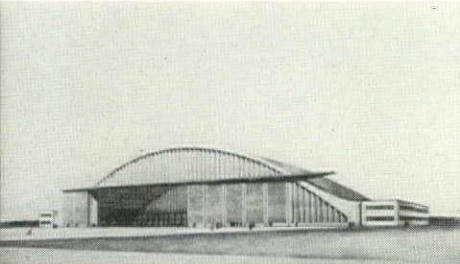
Forming for ceiling consists of inverted concrete pans (close-up above) which are raised on platform, laced with reinforcing steel (below), filled and covered with concrete and, after concrete has set, lowered and moved to next bay. Note extra pan in foreground below.



Hangar for Buenos Aires' airport is 590' wide, spanned by Nervi's corrugated roof system. Crown of hangar arch is 127' off floor; individual arch segments are 7' deep; door is 66' high.

Railroad station (projected) would span 656' with 151'-high vault. Corrugations are 16' o.c., 9' deep. Sides of each corrugation are glazed in diamond pattern similar to diamond-shaped "bridging" between ribs.

984' span, 213' high, is considered possible with corrugated concrete structure—big enough to cover St. Peter's Square in Rome, including central obelisk and flanking porticos of Bernini. Corrugations would be 23' o.c. Needless to say, this project will not be built.

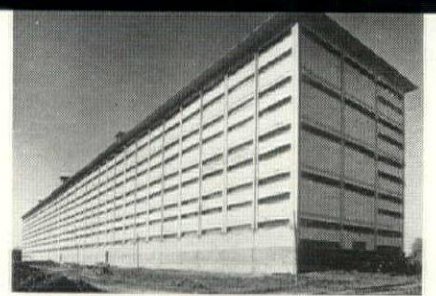




4. Moving forms help speed five-story tobacco warehouse

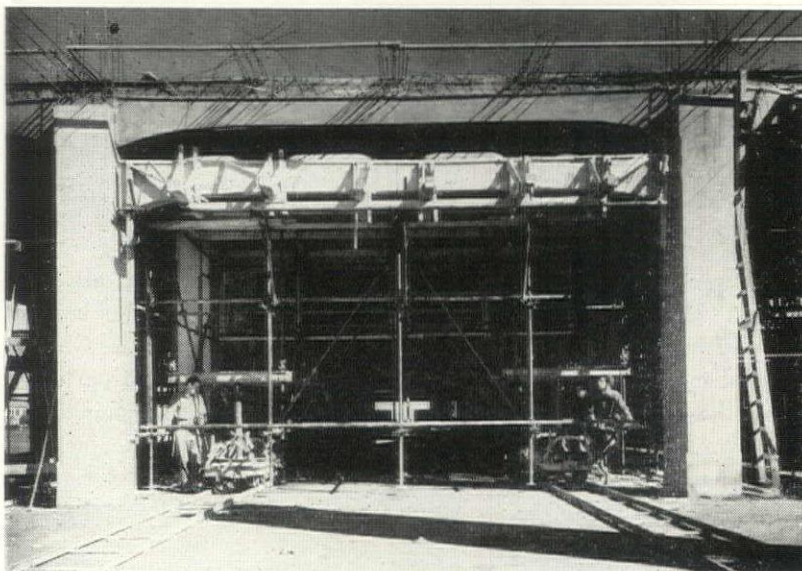
Movable ferro-cement forms were used by Nervi in this multistory tobacco warehouse at Bologna (1952). He mounted 108 concrete pans on wheeled platforms to form nine bays at a time, thus used each pan about 50 times. The long, narrow proportions of the building (37 bays, 704' long; 3 bays, 79' wide) simplified the forming operation (see photo below).

"It is good," suggests Nervi, "to treat the surface of the pans to obtain a very pronounced hardness and to prevent adherence with the concrete. By using sufficient pans and high-strength concrete to permit stripping after six days, it is possible to establish a continuity of work and to obtain a regular progression of work each day."

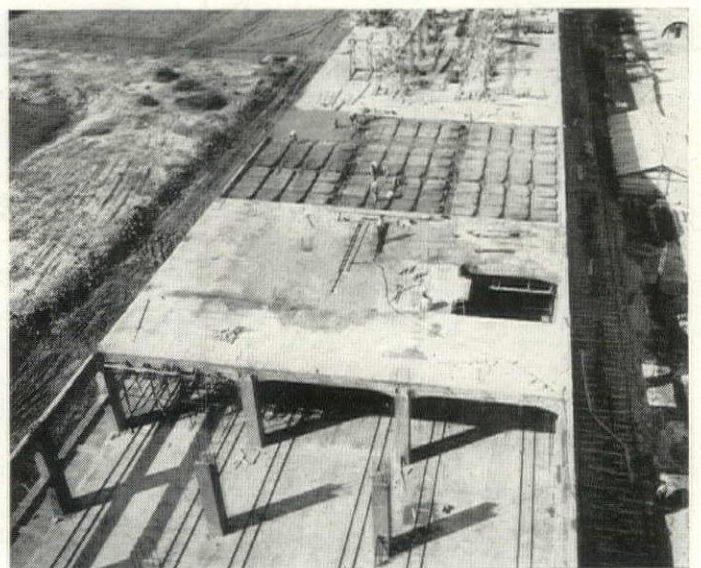


Finished concrete ceiling of tobacco warehouse is smooth and clean, requires no finish except paint. Twelve-coffer panel over each bay is carried on beams.

Formwork atop pipe framework can be moved laterally on small rail cars, vertically on jacks. Photo below shows it is being lowered for movement to next bay.



Stages of construction: in foreground, finished columns; next, nine bays of finished floor; then, forms in place for nine more bays.

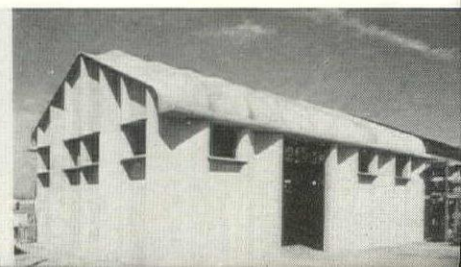
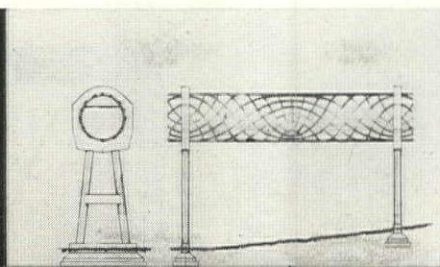
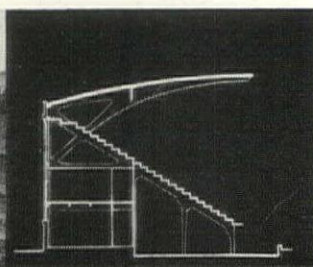
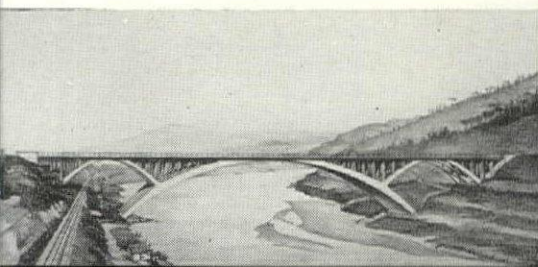


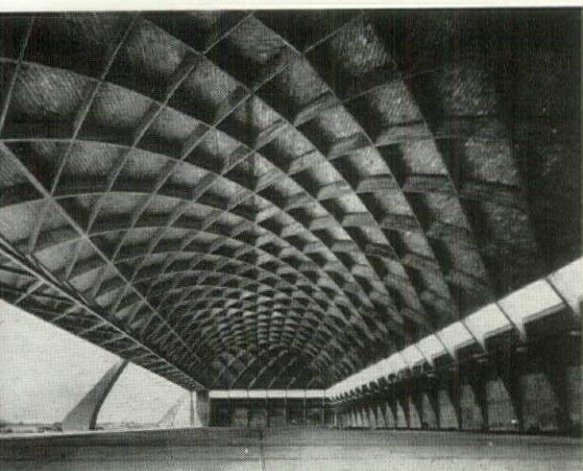
Bridge over the Reno River was designed by Nervi and Architect Astelli-Guioli as a competition entry in 1951. Large, central arch spans 426', carries smaller arches on either side.

Florence Stadium, Nervi's first big structure, was built in 1932 of cast-in-place concrete. Roof is gently curved slab, cantilevered 56' to cover all seats.

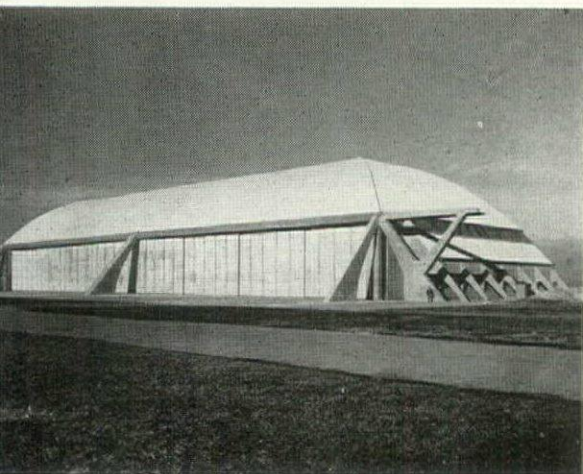
Aerial Aquaduct of ferro cement, 16' in diameter, is reinforced with intersecting ribs on static stress lines. Each section is 82' long. Built in 1948.

Storehouse is made of prefabricated corrugated wall and roof panels of 1 1/4" ferro-cement made like hull of sailboat (p. 142). Corrugations are 16" deep.





Lamella-type frame is covered with tiles and asbestos cement. Building has 21 buttresses at rear, three big ones at front. Exterior views show frame for carrying huge 29'-high doors. Note size of man at right of hangar, below.

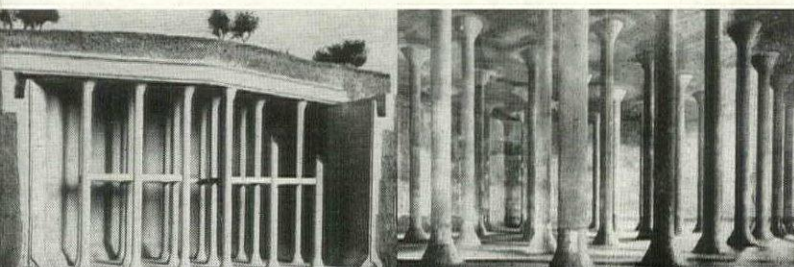


Early hangar (1938) needs massive buttresses to hold up heavy vault of poured-in-place ribs

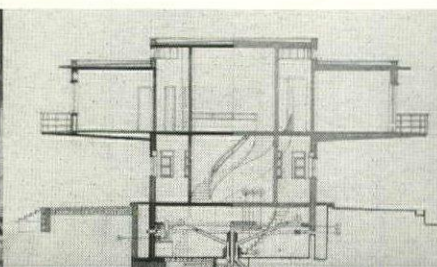
5. Economy of precasting is contrasted with poured-in-place construction

During the war Nervi designed and built many hangars like these, all about 121' x 336'. The first (1938), like the one above, was of poured-in-place lamella-type framing and required numerous supports. Later (1942), to conserve critical materials, he developed a similar hangar of precast parts like the one on the opposite page. It saved 30% on steel, 35% on concrete and 60% on form lumber. Although Nervi was concerned about the joints in this prefab hangar, his worries were dispelled when he examined eight of these huge structures which the retreating Germans destroyed by dynamiting

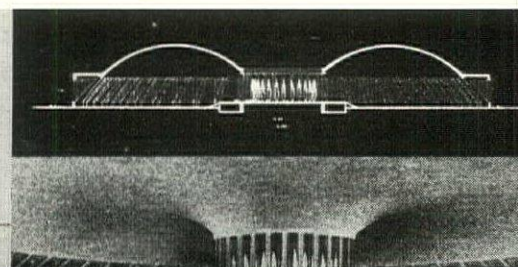
Underground reservoir for storage of gasoline has 32 huge concrete columns inside which give appearance of Egyptian temple. Capacity, 30,000 cubic meters. At left is model; right, inside actual reservoir. Many such installations were made during World War II.



Revolving house, called "sunflower," was designed in 1930 for Capri. It was to be turned by 10-hp motor to give desired exposure to any room. Stem contains stairs, halls and utilities.



Exhibition hall, proposed by Nervi in 1942, is a doughnut-shaped, vaulted building of shell concrete 827' in diameter. Hole in doughnut is an open-air patio and fountain display 164' across.





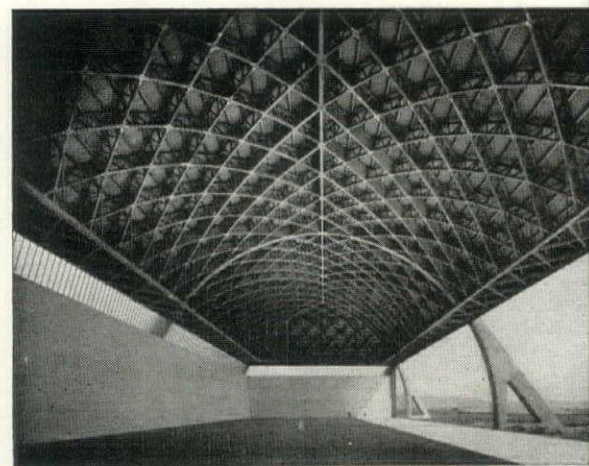
Later version of hangar (1942) uses prefab ribs with light, open quality of steelwork

in two spectacular airplane hangars

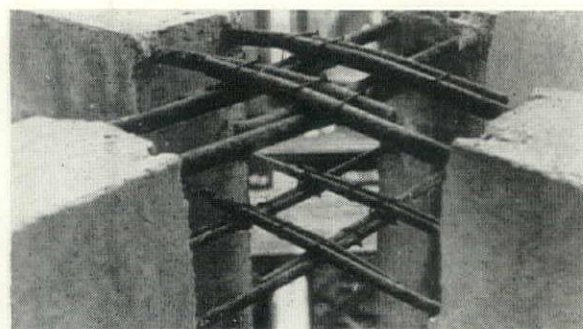
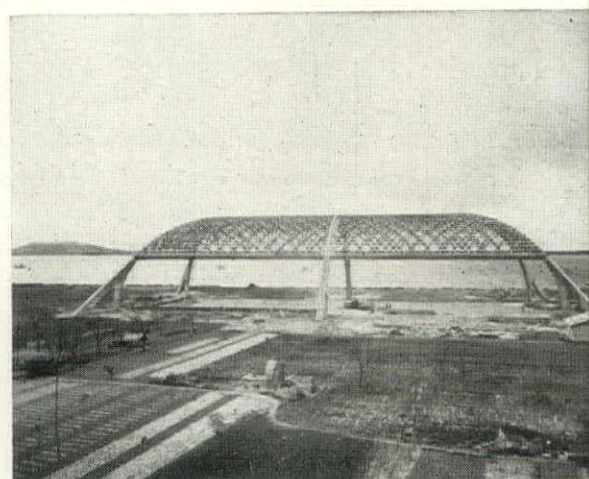
the supports. Observed Nervi: "When the whole structure slowly settled down on the ground like an enormous wire cage . . . these joints fared better than the single elements." However, since these joints have a limited ability to transmit tensile stresses (due to the difficulty of welding large reinforcing rods), the hangar's highly stressed ribs were poured in place (note solid ribs in photo above). In addition to building these hangars for the air force and navy, Nervi devoted the war years to designing underground gasoline storage tanks (opposite page) and to writing a book, *Construction, Science or Art?*

Exhibition hall also proposed for 1942 Italian exposition was to be framed with huge, flat scissor arches hinged above main entry and cantilevered for about 80% of their length. Neither this nor hall to left was built.

Steel mill project shows reinforced concrete trusses carrying shell concrete roof molded in gently curved sections to provide vertical windows like those in saw-tooth structure. This structure has not been built.

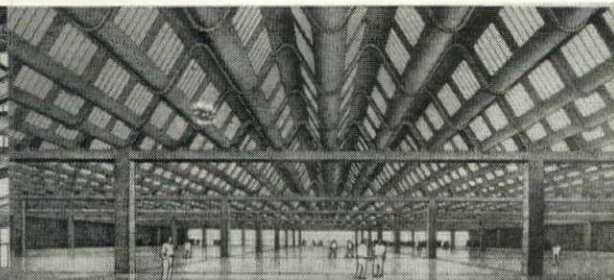
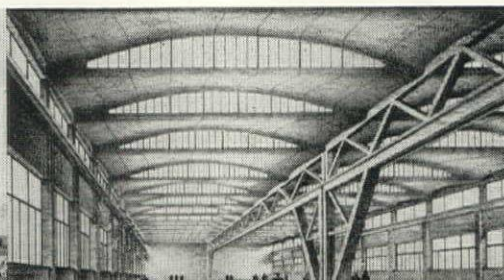
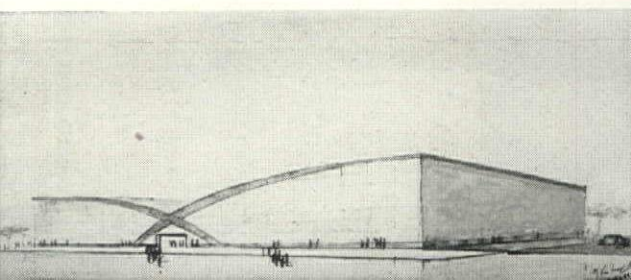


Finished vault measures 121' x 336', is supported by only six buttresses extending 36' beyond roof. Framework consists of 3' x 10' prefab parts joined by welding and grouting.

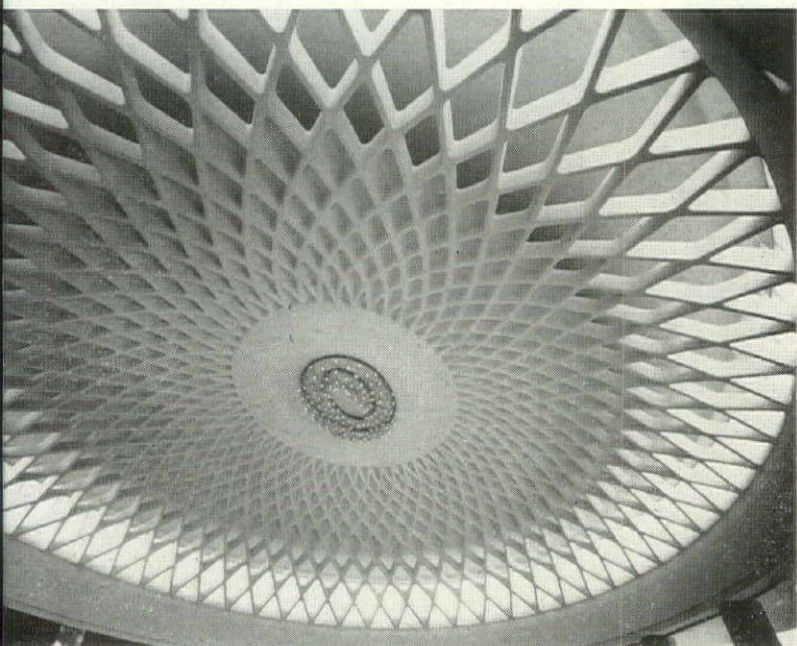
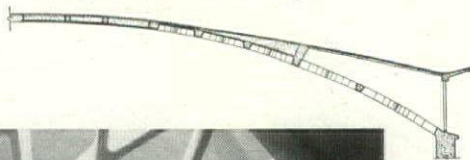


Joints are made by tying and welding protruding dowels, then concreting them with grout under pressure and vibration.

Factory proposed for Fiat shows horizontal use of V-shaped roof sections, like those used in vault of room B at Turin exposition hall (p. 143). Here prefabricated and glazed roof members are carried on ordinary concrete framework.



6. Jewel-like sparkle radiates from dance hall's elliptical ceiling

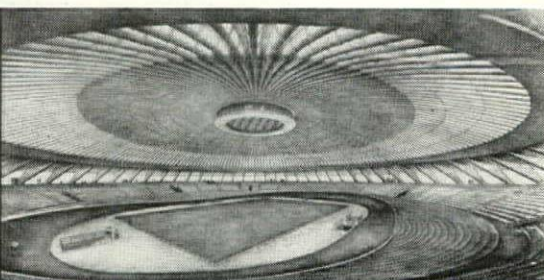
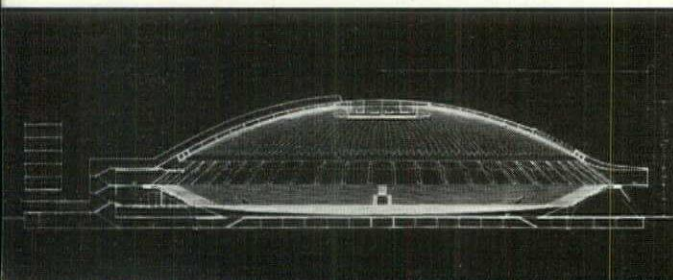


Tracery of concrete ribs in ceiling of 66' x 69' dance hall at Chianciano is lighted from clerestory above and from scores of lamps in central chandelier. Construction view shows inverted precast pans arranged on falsework to create network of intersecting channels which will be reinforced and filled with concrete to form ribs.

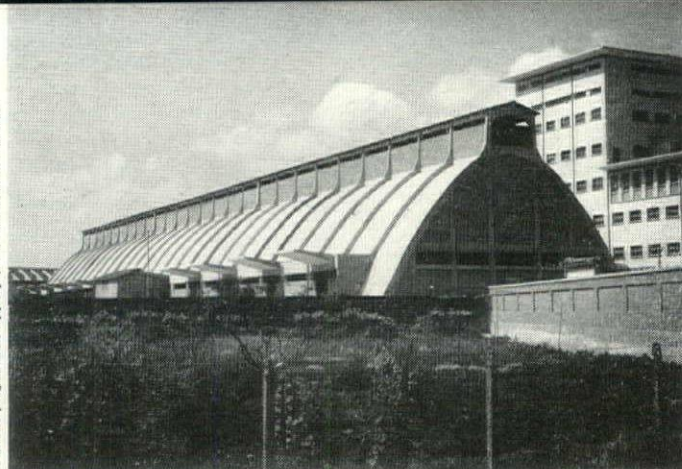


Sports palace for Vienna, Nervi's most recent project, features huge indoor stadium roofed with 358' diameter corrugated dome whose construction would be similar to vault of room B of Turin exhibition hall (p. 143). Six lower segments of each arched rib would be glazed, up-

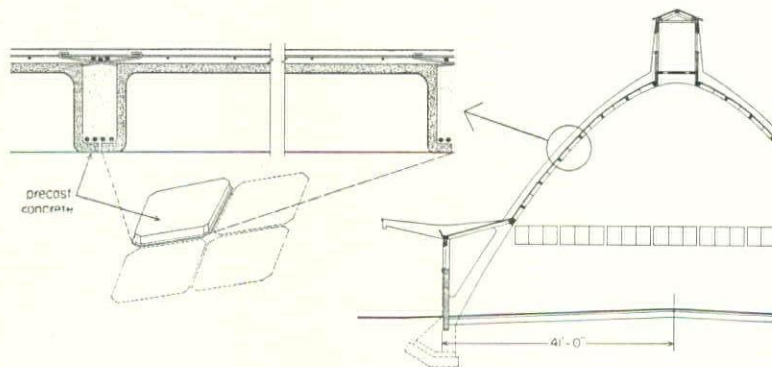
per seven would not. At center, 98' above the floor, is suspended circular platform for lighting equipment. (Note similarity to dance-hall ceiling, above.) Nervi's proposal was second to one by Finland's Architect Alvar Aalto—in a keenly contested design competition.



Photos (right and opp. p.): G. E. Kidder Smith



Salt warehouse is fed at top from building in background. Parabolic walls are formed with thin concrete pans about 3' square which form diagonal ribs on inside. Building is 426' long, 82' wide.



7. Parabolic vault of pans and ribs creates beautiful shelter for pile of salt

Economical in its use of materials, this warehouse is shaped like the pile of salt it shelters. The structure is a series of 27 parabolic reinforced concrete arches 16' o.c., which carry the intermediate vaults. These vaults are formed by inverted precast concrete pans about 3' square and $\frac{3}{4}$ " thick, which are arranged diagonally, reinforced and covered with concrete, to create the 6" x 10" ribs and the 21½" walls (see details above). The pans, of course, become part of the finished structure. This construction is a highly standardized version of the system used for the dance-hall ceiling (shown at left).

Pile of salt takes on parabolic shape of its 39'-high warehouse. Salt is dropped from holes in floor of penthouse, loaded in cart by portable bucket conveyor, carried to waiting railroad cars just outside.

Many of the photographs in this article were provided by Architect-Author-Photographer G. E. Kidder Smith from the collection which will appear in his forthcoming book, Italy Builds. Other photos by Bosio; A. Cartoni; Cresta; D'amico; Moncalvo; Oscar Savio; Vasari.



ARCHITECTS

Robert Alexander
Edward Fickett
Victor Gruen
William Koblik
Charles Luckman
George Vernon Russell

CLIENTS

Milton J. Brock
M. J. Brock & Sons, Inc.
Jackson Hicklin
First National Bank, San Diego
J. K. Hull
President, Lockheed Service Corp.
John J. Pike
President, Republic Supply Co.
David Slipper
Fritz Burns & Associates
Charles Wellman
Glendale Savings & Loan Assn.

ENGINEER

S. B. Barnes

CONTRACTOR

Ford Twatts

LANDSCAPE ARCHITECT

Garrett Eckbo

INTERIOR DESIGNER

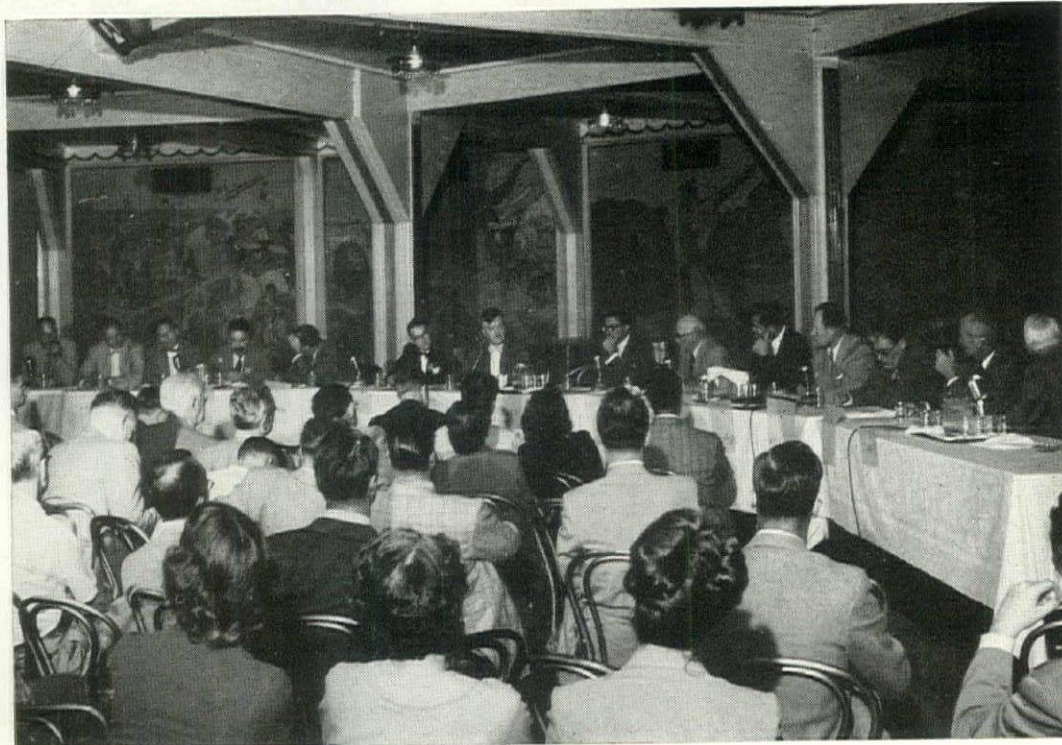
Paul Lowery

President, American Institute of Decorators

MODERATOR

Douglas Haskell

Editorial chairman
Architectural Forum/House & Home



The need for better planning

California architects and clients find building industry

**suffering from inadequate planning, urge better public relations
on architectural services and building costs**

Here is a joint statement on the need for better planning by California architects, clients, contractors, engineers and other representatives of all groups with a stake in better building. It is the consensus of these outstanding men who were assembled by the California Council of Architects at Coronado last month for a round table discussion of their mutual problems.

The report

The people of California have made the building industry their biggest industry. Counting its manufacturing, real estate, construction, mechanical equipment and furnishing operations, it is bigger than California's airplane industry, probably even bigger than her agriculture. And the forum agrees that the greatest single need of this big industry is for more planning and better planning.

Better planning can do more to assure the people of California the new built-in economy and efficiency of operation, more to give protection against obsolescence and blight than any other move the industry could make. Better planning can do more than any other factor to keep construction booming long after present shortages are met.

It is a problem in which all California has intense concern, whether as users of homes, schools, hospitals, shops and stores, or whether as workers in the industry itself.

Not only is every tenth US building dollar spent in this one state, and in the case

of houses one dollar in every five; not only did last year's construction activity in Los Angeles alone come second only to New York City, both in houses and in big construction; not only does the growth of Los Angeles, according to forum member Milton J. Brock, promise to make this the second city of the US by 1960, but architectural influence now flows eastward from the West Coast faster than it flows westward from the East. Leadership is expected of California in planning and design.

Biggest deficiency: lack of plans. California's building industry, despite its proud progress, despite its leadership, despite its close importance to the people, is the big industry which now spends probably the smallest share of its income on planning and development for the future.

Compare building with cars: though the ordinary citizen leaves homemade cars strictly to the hot-rodders, a great many try to build houses for themselves, and a great many other houses are built without benefit of an architect. Builder Slipper and Architect Fickett of the forum agreed that only one tract house in ten built today benefits from truly professional plans (though the proportion is rapidly rising).

Nobody today would entrust his life to a plane built without benefit of trained scientific skill, yet millions entrust their safety and comfort to homes and shops built in ignorance.

The airplane industry, said forum member Hull, puts about 33 1/3% of its total expenditure, at a conservative estimate, into development and planning of tomorrow's planes—engineering them, testing them, working ahead on planes not yet in production. Compared to this, forum member William Koblik testified that the top planning allowance for schools is 8%, and Victor Gruen said the mere mention of 33 1/3% for construction planning would cause a merchant to collapse—he would prefer to think in terms one-sixth of that or less.

Unplanned buildings rapidly become obsolete. Meanwhile, the building situation has changed so rapidly that lack of planning which at one time resulted only in tolerable inefficiency and inconvenience can today result in serious trouble or even catastrophe, physical or economic.

▶ Almost unnoticed, building costs have more than doubled, so every error or oversight in planning costs twice as much. Such errors can be stopped only on the drafting board before construction has begun.

▶ Almost unnoticed, buildings have become vastly more complex. Larger buildings, which once were thought of as walls and roof with a little mechanical equipment added, are now more likely to consist of elaborate mechanical equipment surrounded by a minimum structural shell. Construction cost used to be easily ten times as much as mechanical cost. Construction cost has not declined, but in the meantime mechanical cost has crept up until it can easily be one-third or even sometimes 45% of the total building cost.

▶ Almost unnoticed such advances as air conditioning have invaded even the house; and too few are aware that in a house even the difference between a plan and design meant for air conditioning, and a plan that ignores air conditioning, can mean either halving or doubling the expense both of installation and operation.

▶ Again almost unnoticed, standards of building performance have risen. In today's smaller house, the noisy, fun-seeking part of the family can no longer withdraw its disturbance of peace and quiet to some remote room: careful planning and knowing

insulation are needed to protect both sides of the same friendly family from one another.

And today's larger building is less and less a simple enclosure in which operations take place—it is more and more an instrument of the operation.

Today's school building, for example, is required by today's standards of health and of learning to provide six times as much light as the prewar school, and to distribute it several times as efficiently; today's hospital deals with the radioactive materials of radiotherapy; today's factory, no longer a huge shed, must care for intricate requirements of power, of materials handling, of circulation. Moreover, the needs of personnel are no longer confined to feeding and sanitation. An underplanned factory quickly loses its best workers to the plant planned to give employees decent comfort, some recreation and a quicker path to the car.

Homebuilding has been revolutionized. Said forum member David Slipper: "Back in 1910 only 20% of our houses were built for sale; 80% were built on contract for those intending to live in them. In 1952 the situation was reversed: 80% of the nation's housing was built for sale and only 20% on contract; in 1953 it's going to be close to 85% for sale and 15% on contract."

This means that homebuilding for most Californians has now become a "production" operation which must be professionally planned in all details.

Indeed the problem of homebuilding since World War II is so wholly new that the entire forum agrees with members Fickett and Brock that everybody connected with the tract operation has to "go back to school and learn the housebuilding problem all over again."

▶ For the first time in history the building of individual houses, in such quantity, demands the talents of first-rate engineers—not only process engineers but also structural and mechanical engineers.

▶ For the first time the modern tract cannot be site-planned without professional skill, and if this is not employed by the builder himself the FHA planner is certain to annex it for the bureaucrats.

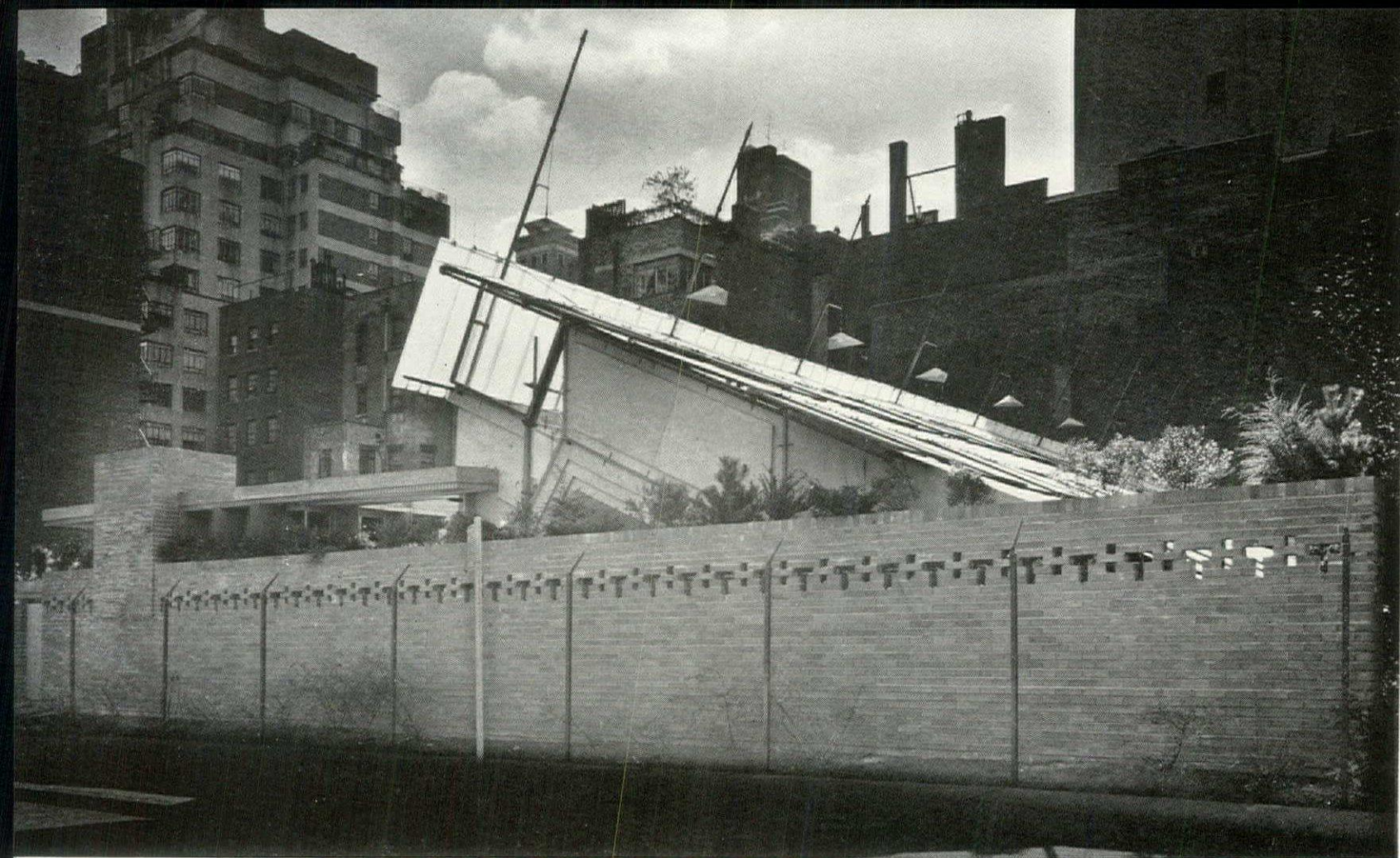
▶ For the first time at least 10% of total cost goes into plot planning and landscaping, so if a good landscape architect is not employed this only means that his work is done by an untrained substitute—it can neither be evaded nor satisfied with a few potted cedars.

▶ And for the first time the over-all design needs are so exacting that this forum, including bankers and builders, agrees that tract housing demands the architect. This employment of architects, in a field rarely dealt with by them in the past, is indeed progressing at high speed. Said forum member Gruen: "Three years ago I scanned 20 pages of the Los Angeles *Times* real estate section most carefully and found not one mention of the word 'architect.' Last Sunday I repeated the experiment and found the word 'architect' 39 times in the editorial part of the paper and 11 times in the ads of homebuilders—who always made it very clear that this was a better house because it was architect designed."

Recommendation No. 1: correct public misconceptions about planning

The first frequent error by the public relates to what the architect does: he is considered an embellisher of buildings or houses which

continued on p. 174



"SIXTY YEARS OF LIVING ARCHITECTURE"—



IN the great, glittering showcase of New York, "modern" architecture has so far been represented largely by such striking buildings as the United Nations and Lever House. Last month New Yorkers got two reminders that there is more than one kind of modern. They came from a man who should know.

Frank Lloyd Wright, whom many call the "world's greatest architect," ran up overnight a temporary prefab panel and glass pavilion on the Fifth Ave. site where he hopes soon to start building his Guggenheim Museum. In this tentlike shelter, framed and lighted with the usual Wright magic, he unfurled some 1,000 drawings and photographs—the exhibit which has been traveling around the capitals of Europe as "Sixty Years of Living Architecture"—a complete record of his work. Within three weeks, some 40,000 New Yorkers had paid 50¢ to file past the 8' x 8' panels of drawings and photographs and to walk right into a brick-and-plywood house (estimated cost on site, \$30,000) built large as life at the edge of the exhibit pavilion and furnished down to the toothbrush on the shelf of its three-compartment bathroom (HOUSE & HOME, Nov. '53).

At about the same time, Wright published a new book, *The Future of Architecture*,* a collection of essays and lectures now largely out of print. To Wright's disciples and many others the book is worth its price for the famous Hull House lecture (1903) alone, in which he called on twentieth-century architecture to lay down the jigsaw and pick up the welder's torch.

THE WORK OF FRANK LLOYD WRIGHT

Exhibit and book together are a deeply revealing documentary of this architect's life-long endeavor to hew out an American way of building.

So far as housebuilding is concerned, the 84-year-old architect could now lay claim to having reshaped the countenance of his country, for he has helped the American house strip off its attic, its basement, its dormer windows and shutters and burst through its boxlike walls to sunlight, view and out of doors. This is an old victory, well consolidated. The Spanish villas and the colonial cottages have all but disappeared from the suburban development, and now there is scarcely a house built anywhere in the US which does not in some way—whether by view window, indirect lighting, radiant heating, living-kitchen, carport or open plan—show the imprint, however blurred, of this man's hand.

For nonresidential building, the story was different. The big building owners have never become really interested in Wright's endeavor. The "world's greatest architect" could claim only one sizable commercial building still standing in the US (the Johnson Wax Co., AF, Jan. '48) and one just now getting under way (the Price Tower in Bartlesville, Okla., AF, May '53). But both his exhibit and his book show that his solutions for the architecture of commercial and public buildings are based on principles that the architectural profession and the building industry might ponder to their profit.

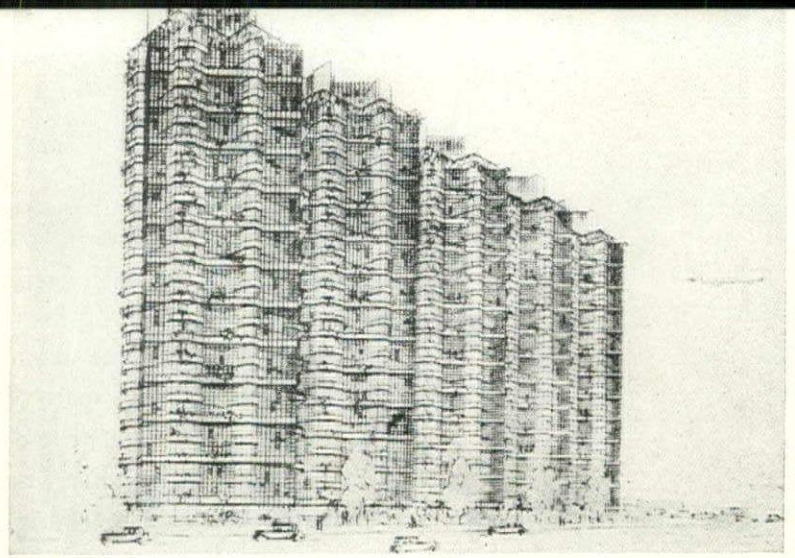
On the following pages, FORUM presents a thumbnail primer of these principles as they apply to nonresidential buildings. The photographs are drawn from the Wright exhibit; the captions are quotations from his new book.

* *THE FUTURE OF ARCHITECTURE*. By Frank Lloyd Wright.

Published by Horizon Press, 220 W. 42nd St., New York, N.Y. 326 pp. 8¼" x 10¼". Illus. \$7.50

"STEEL WAS THE MEANS TO DO AWAY WITH THE BOX"

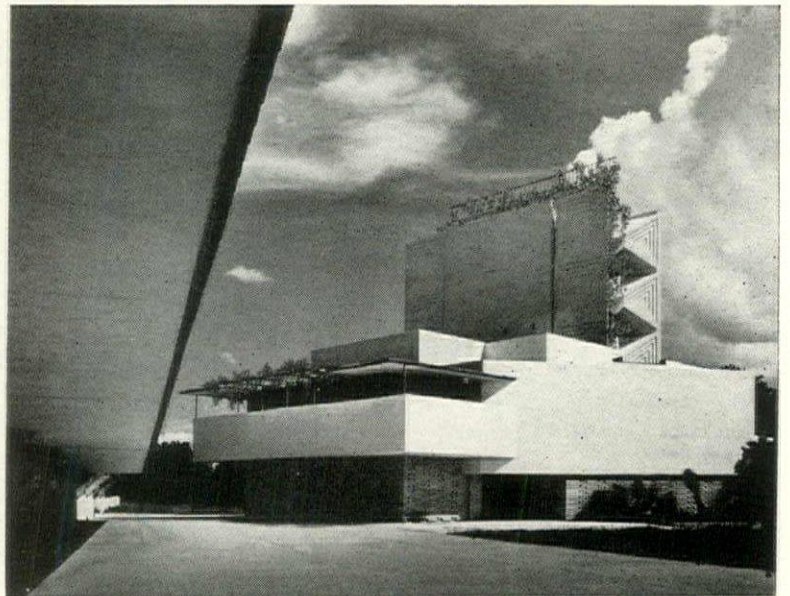
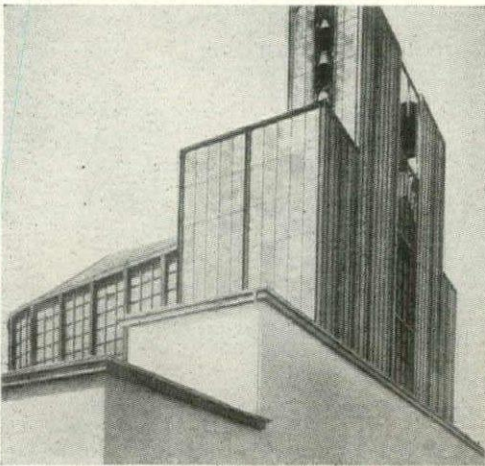
"In five years' time you may look upon any sham boxes with holes or slots cut in them for light and air as senile, undesirable. . . .



. . . Into structure by ways of steel came the element of continuity. . . . Tenuity and flexibility, instead of rigidity which could be broken, was its new strength. . . . The sense of surface and mass disappears in light."

"WE MUST NOT DRAMATIZE THE MACHINE BUT THE MAN"

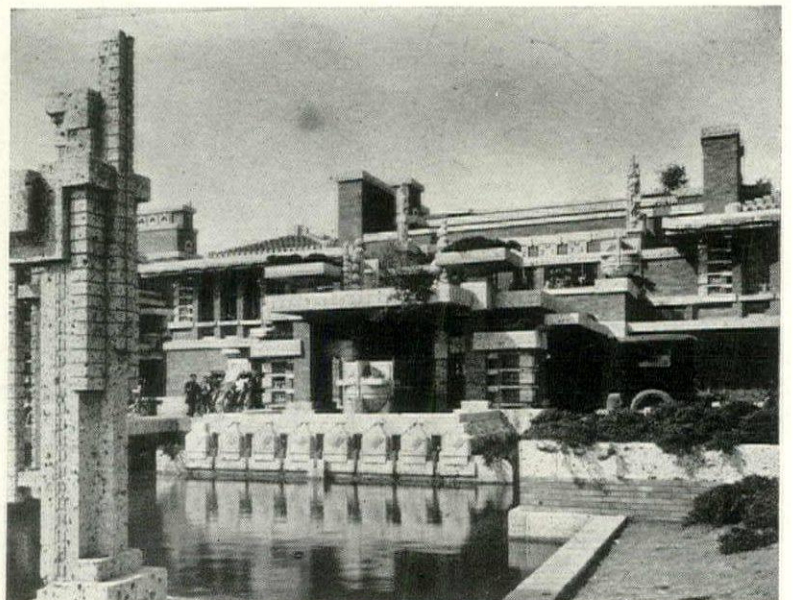
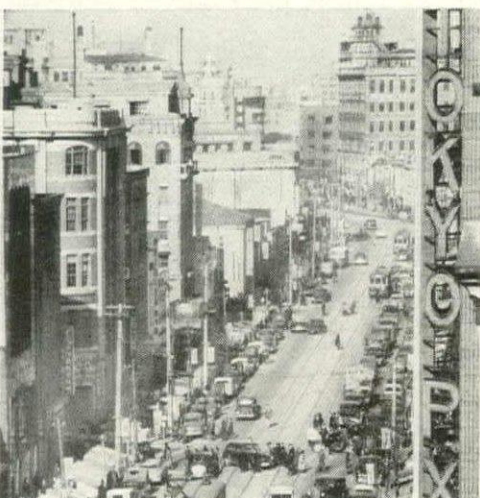
"Form follows function is a much-abused slogan. . . . The skeleton is not the finality of human form. . . . And rattling the bones is not architecture. . . .



. . . Poetry of form is as necessary to great architecture as foliage is to the tree, blossoms to the plant or flesh to the body."

"THE CHARACTER OF THE SITE IS THE BEGINNING OF THE BUILDING"

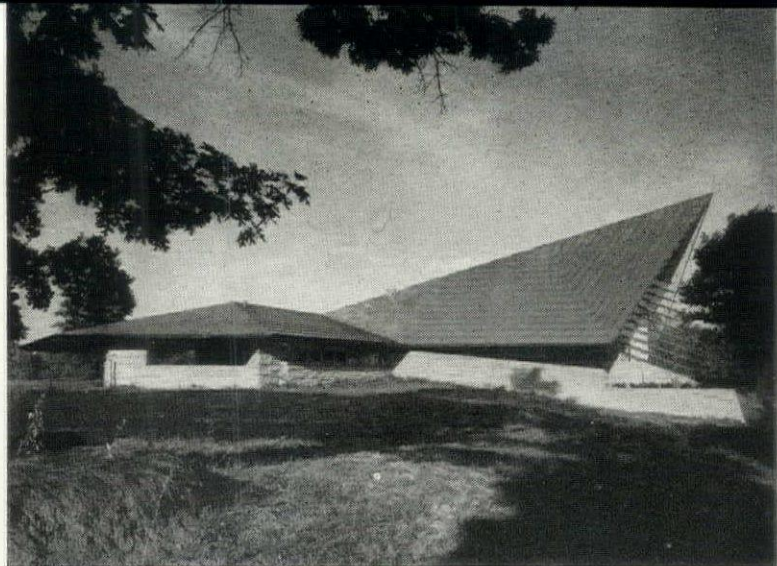
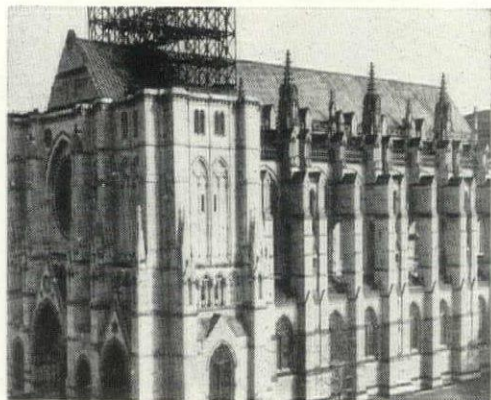
"The American construction companies were bringing to Tokyo ten-story steel buildings with such architecture as they had hung to the steel, setting the steel frames on long piles . . . driven down to hard pan. . . . I desired to help Japan make the transition from wood to masonry, and from her knees to her feet, without too great loss of her accomplishments in culture. . . .



. . . The answer was a building made flexible as two hands thrust together, fingers interlocked, yielding to movement. . . . I carried the floor and roof loads as a waiter carries his tray."

"ARCHITECTURAL CORPSES STILL ENCUMBER THE GROUND"

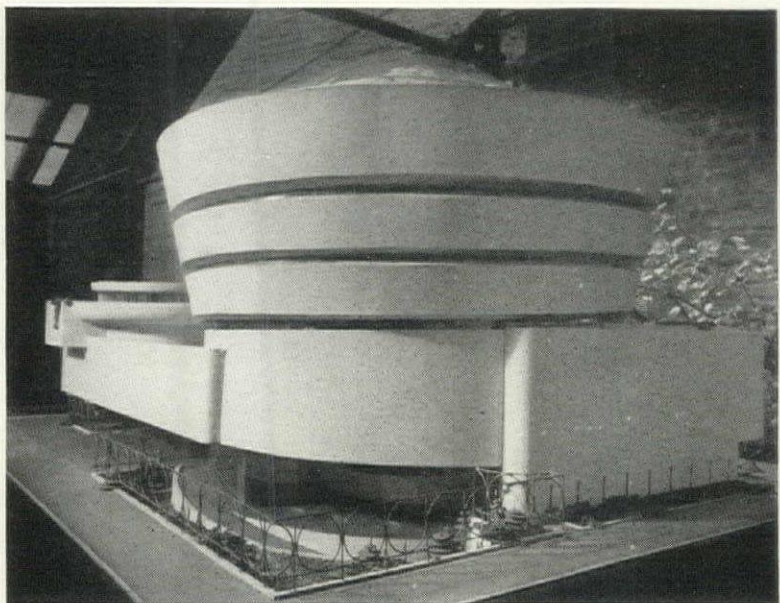
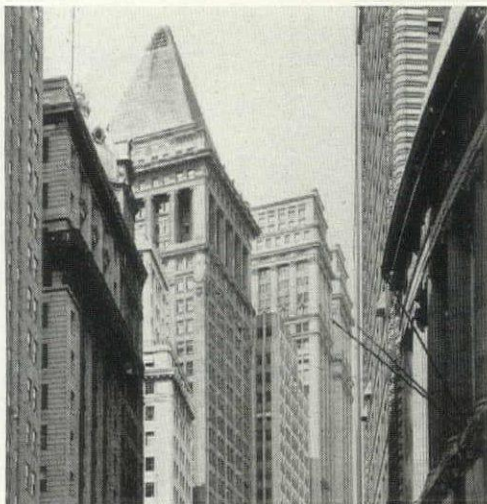
"Bogus sanctuaries to God stand propped against the sky by steel. . . . Architecture is a parasite, content with an imitation of an imitation. . . ."



. . . Shelter should be the essential look of any building. . . . The size of the human figure should fix every proportion of all buildings."

"WHY NOT THROW AWAY ENTIRELY THE IMPLICATIONS OF POST AND BEAM?"

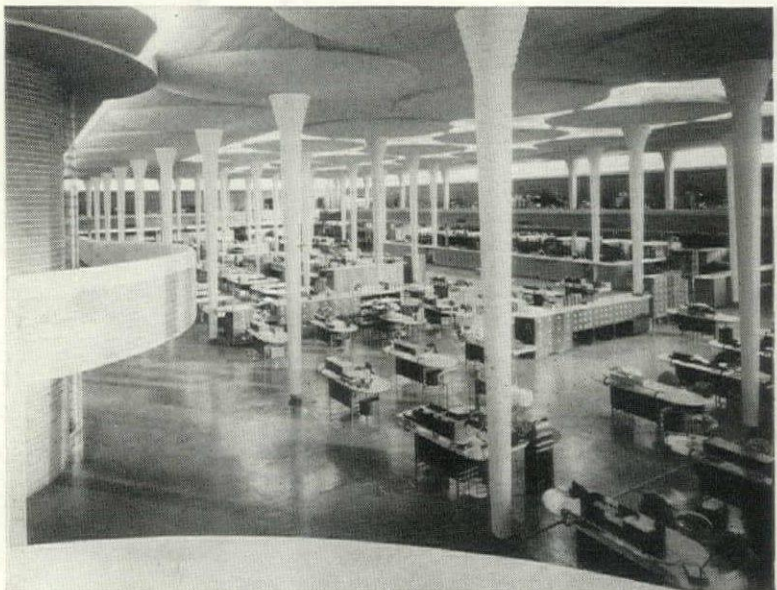
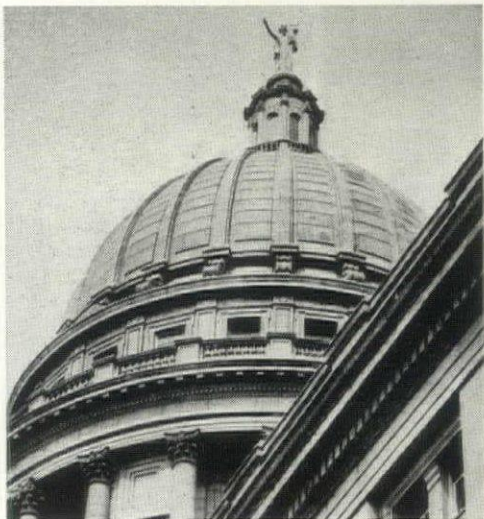
"The landlord knows to his dismay that to sell the first ten floors of New York City is his new problem. . . . The great machine-made machine is a forest of riveted steel posts, riveted girder-beams, riveted brackets and concrete slabs, closed in by heavy brick and stone walls, all carried by the steel framing itself—finally topped by water tanks, setbacks and spires. . . ."



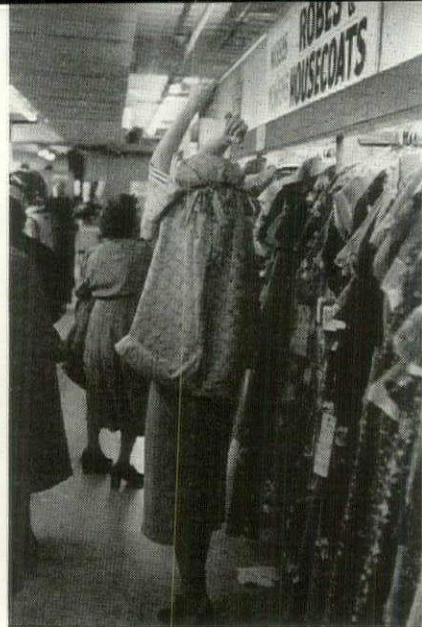
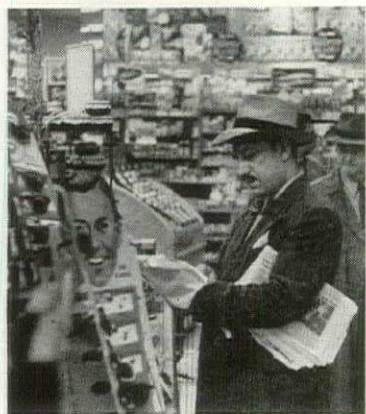
. . . 'Plastic' means that materials are seen 'flowing or growing' into a form instead of seen as built up out of cut and joined pieces. . . . Why not a larger application of this element of plasticity considered as continuity in the building itself? Let walls, ceilings, floors become part of each other, getting continuity out of it all."

"DOMED OR DAMNED IS THE STATUS OF OFFICIAL BUILDINGS IN ALL COUNTRIES"

"The great dome was just the sort of thing authority had been looking for as a symbol. . . . It has flourished as this symbol ever since . . ."



" . . . THE SPACE WITHIN IS THE REALITY OF THE BUILDING."



SELF-SELECTION

The old bazaars started it . . .

Photos: FORTUNE—Dan Weiner



the early dime stores dabbled with it . . .

the supermarkets dramatized it . . .

and now everybody is getting into the act



LIFE—Lisa Larson

Funny thing about customers and salesclerks. They seldom seem able to function at the same "time-scale," as the science-fiction people say.

And this of course is the basic reason why self-selection makes sense. It speeds things up for the fast-tempo customer and so increases turnover. It lets the dilly-dallier happily dilly-dally on his own. It gives the salesman a chance to concentrate on the power-tool or baby-carriage customer instead of the 25¢ screw-driver and dozen-diaper shoppers. And as pure gravy: when self-selection design is well thought out, experience shows it increases the volume of sale per customer.

But a funny thing about self-selection and self-service stores: in lots of them, the fast customers are *still* impatiently standing around in lines, and the people who long for personal assurance that pants will not shrink are worse off than before with no friendly face to turn to. The customers' and purveyor's time-scales are still out of whack.

The point is that self-selection and self-service devices must be used with great *discrimination* in most types of stores to get the results—more speed, more volume, more sales help when and where it is really needed—that add up to more productivity per employee and per square foot.

Self-selection is *primarily an expansion move*, a way to handle more business; the economy is a by-product. When it is approached as *primarily an economy move* it is apt to end in bottlenecks and ill-served customers. (And even a bottlenecked Saturday morning supermarket gets its economy as a result of turnover, not from saving the wages of another cashier.)

On the following pages are examples of the self-selection idea in nonfood shops. All are based on the sound first premise of satisfying the customer. All use the self-selection idea with discrimination. Here are some of the subtleties they take into account:

Character. Many merchants still resist self-selection and self-service because, quite rightly, they are dismayed at the idea of "supermarket character." Self-selection, as the examples following show, is adaptable to almost any design character and philosophy of intriguing the customer. A "supermarket character" comes of course from arraying fixtures in monotonous rows, displaying all the stock on heaped shelves and lighting the whole thing with a brilliant, uniform fluorescent blanket (horribly unflattering to most merchandise). For a clever avoidance, against odds, of the supermarket-shelf look, see Designer Norman Cherner's gift-shop fixture (p. 158).

Tempo. Everything about supermarket design says "Hurry, hurry!" But conversely, the oldest and most familiar form of

self-selection has a very slow tempo: the bookstore. Designer Ken White's self-service college store (p. 166) is an example of nice tempo discrimination. The textbook department, which customers enter with a cut-and-dried shopping list, is "hurry design"; the junior department store and trade-book shop are "linger design."

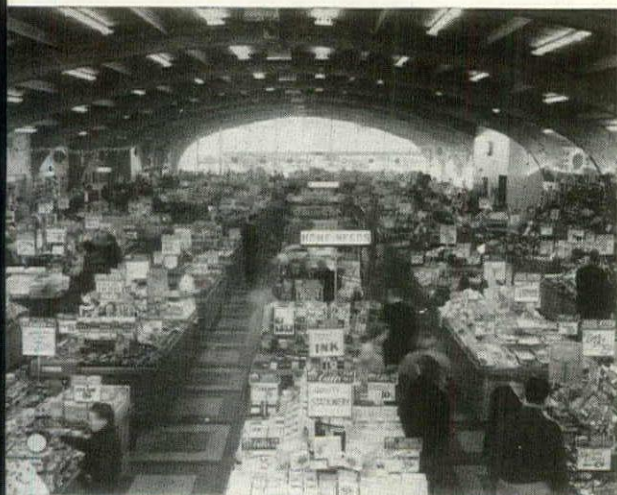
Display. Common or routine objects like safety pins and notebook fillers gain impressiveness with quantity—and few people seem able to resist buying two when they intended to get one. But luxury or odd items lose impressiveness with duplication. For a nice example of combining one-of-a-kind display with easy self-selection from open stock, see Macy's toy-department fixture (p. 158).

Systematizing. Naturally one idea in every self-selection store, fast or slow, routine or luxury, is to make the customer look at a lot of things he did not have on his mind. But this can be self-defeating if the customer has too much trouble finding what he came in for or making sense of what he sees. (Observe the common neighborhood hardware store—self-selection of a sort—where it usually takes a customer plus two clerks to find any given object.) One solution to the problem of systematizing is the gravity shelf, developed by supermarkets for quick back-loading of stock. Now it is being picked up by all kinds of stores as a way to bring order into a great variety of related objects—and at the same time make the customer's eye travel. Two department-store examples are shown on p. 160, one of them making clever use of the back-loading idea too.

Personnel stations. This means some careful predesign research on the number and location of wrappers and cashiers if these two tasks are centralized for a department or store. There are no rules of thumb because the wrapper ratio obviously is influenced by the proportion of prepackaged goods. (So is the number of stock arrangers; keeping stock in order can become awfully expensive in unpackaged self-selection soft goods.) White's college store (p. 166) has unusually well-thought-out wrapper-cashier stations and a device for double-manning stations that could be useful in almost any departmentalized store.

Personnel stationing in a self-selection store also means rethinking the salesclerk's work. The TAC-designed hardware and lumber store (p. 162) was calculated from the start to satisfy two different customer moods. "Semi-self-service for those in a hurry who know what they want," it advertises, "yet completely staffed to advise you on any house or garden problem you might have." Any store that can deliver these two kinds of service—with the impersonal service really fast and the personal service saved for where and when it is needed—is really exploiting self-selection.

Self-selection comes off the table tops . . .

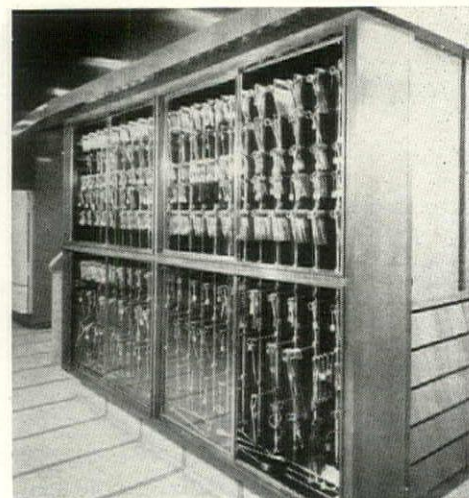


Katz Drug Co., Des Moines; Kivett & Myers, architects

**. . . for everything
from suitings to
surgical instruments**



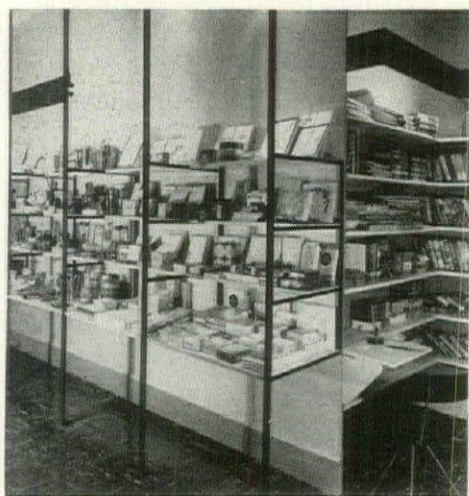
Self-selection for customers' delight turns up in plush places; for instance custom suitings at Kolmer-Marcus, New York. Architects Joseph & Vladeck fitted wood uprights with horizontal channels into which clip-tipped rods slip. The curved wall is for special displays. Note the combined sample rack-desk and angular spotlighting.



Architect Seymour Joseph reports this was an especially tough one to solve: surgical instrument self-selection case for William Radoff pharmacy, New York. Special hardware consists of adjustable pins on slotted uprights; lining is velvet. The case is built around an elevator shaft, has shallow storage cabinet on the side.

Character:

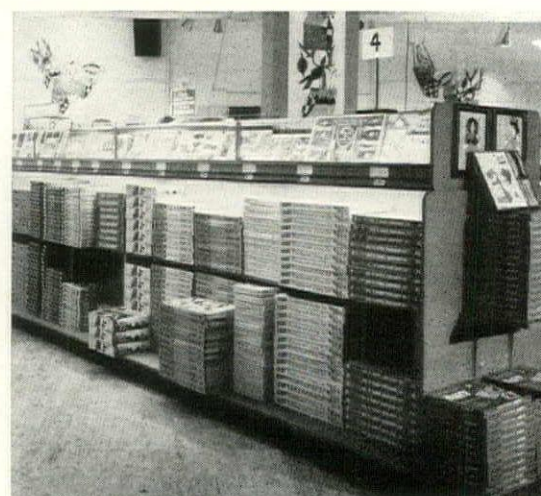
grace for a gift shop . . . neatness and opulence for suits . . . an eye-level frieze of toys



To "discipline" displays and counteract monotony, Designer Norman Cherner set merchandise for the Jeanette Ipp gift shop, New York into "frames" formed of two 1" x 1" L's fastened together, with 3/4" x 1" L's for shelf supports. Although shelves can be removed for wall display, location of shelving and uprights is fixed.



The same solid panel of veneer plywood that lines the stair well also forms the back of this curved slacks fixture. Hangers hook into metal tubing secured to the plywood. Carpeting carries under hangers. Note how the light, necessary for the stair, punctuates the curve. Kolmer-Marcus, New York; Joseph & Vladeck, architects.



Toy fixture for self-service at Macy's has one of each item displayed behind glass at eye level; below are corresponding items, boxed; the effect is both neat and gay. Macy has grouped the standard, staple toys—blocks, puzzles, poundboards, games and the like—in a completely self-service section.



Self-service enables Goody's record shop, New York, to handle 4,000 customers a day with only 12 salesmen-stockkeepers, eight part-timers and five cashiers! Among many nice touches: top-shelf edge tilts forward, low edge tilts back for label visibility. Arthur H. Rosenfeld, architect.

Round plate-glass fixtures at Carol Antell shop, New York, fill two chief functions of the eliminated clerk-counter: display and a surface for customers to lay things down on. Seymour R. Joseph of Joseph & Vladeck, architect.



**The clerk's counter goes
and customers are invited right up
to the wall stocks**

"Suggestive selling" is retained in this men's store, with tie display and stocks placed directly below self-selection wall case for white shirts. The glass ledge holds customers' packages, serves as salesmen's work space. Architect Herbert B. Beidler points out that customer aisles must be generous in self-selection stores because salespeople work in the aisles. Durkin & Durkin shop, Waukegan, Ill.



Removing the barrier of the clerk counter can give wonderful opportunities for decorative treatment of stock. Designer Eleanor LeMaire took full advantage of this opportunity in the hat department of Rich's store for men, Atlanta. Vertical structural angles also house lighting fixtures, giving equally good illumination to top and bottom of the case. Stevens & Wilkinson, architects.



*Photos: Des Moines Register & Tribune; Schnall;
Richard Meek; Dan Weiner; Chicago Archi-
tectural Photo Co.; © Ezra Stoller.*

Order from potential chaos with gravity shelf selectors



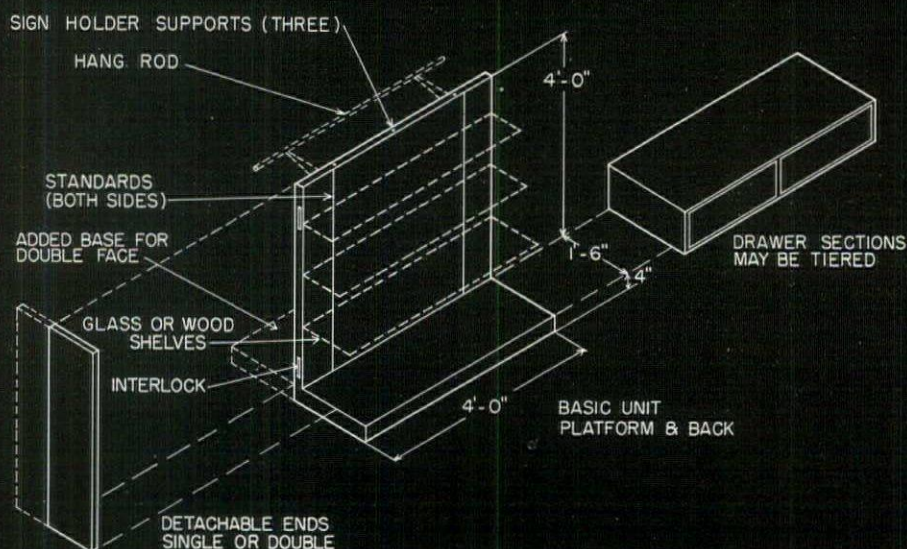
Prepackaged belt and suspender stocks are systematized for self-selection at Burdine's in Miami by use of slanting shelves first developed for fast refilling in supermarkets. Here fast refill is not important but a sense of order is. The installation was designed by Burdine's planning department and Food-O-Mat Corp.

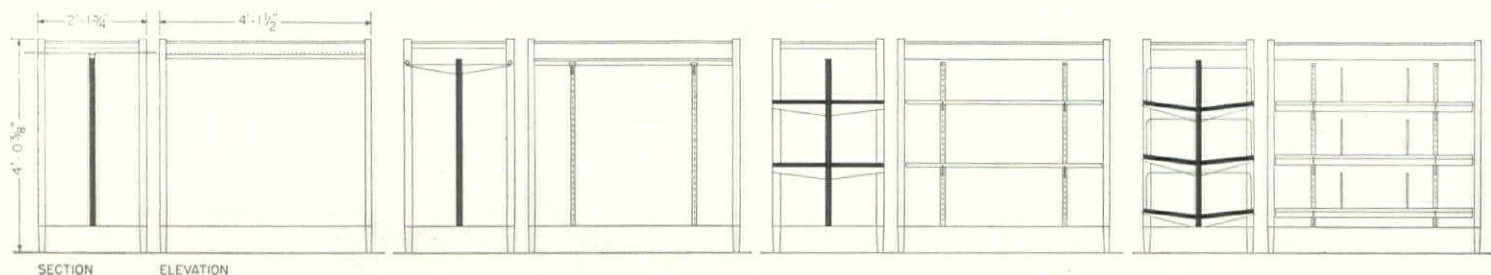


Toilet-goods gravity shelving at Carson-Pirie-Scott, Chicago, is noteworthy because instead of backing against a wall, it backs up to the clerk aisle of the perfume and cosmetics counter, and the sales-girl there also tends to back-filling toiletry stock. The whole scheme thus makes a distinction between personal and impersonal sales attention for two kinds of goods basically related.

Two flexible fixture systems

1. Fit-them-together stands, drawers and ends



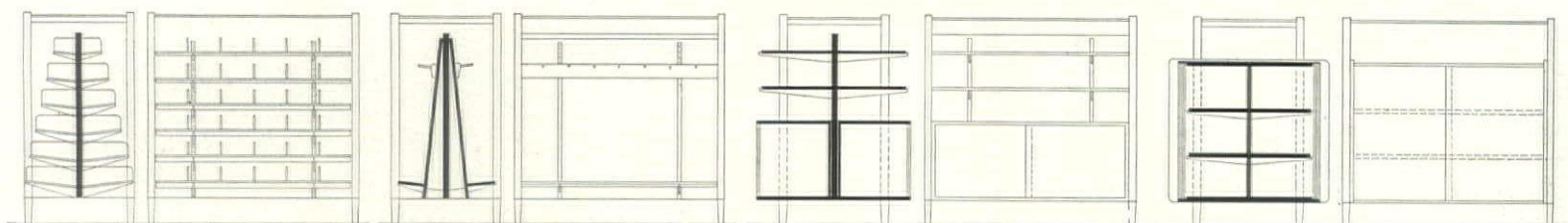


High hanging:
Slacks and skirts

Low-hanging:
Blouses, children's, etc.

Adjustable shelving:
Shirts, games, etc.

Pigeonholes:
Folded clothing



Pigeonholes:
Socks, flashlights, etc.

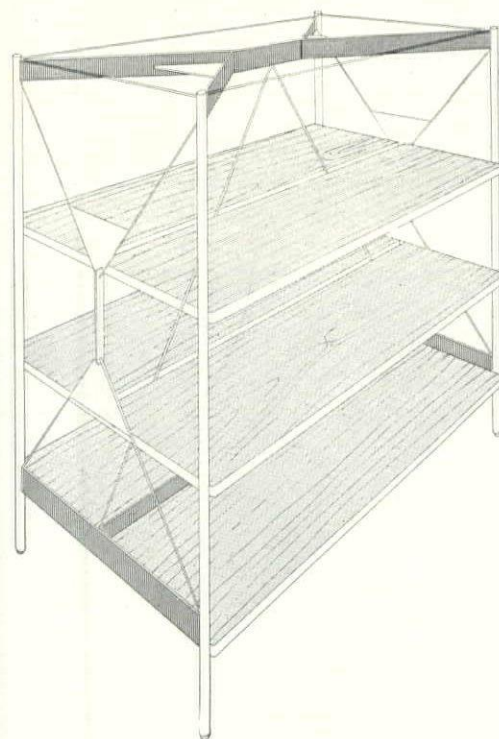
Sloping back:
Yard goods, umbrellas, etc.

Adjustable shelves with door insert:
Men's furn., housewares

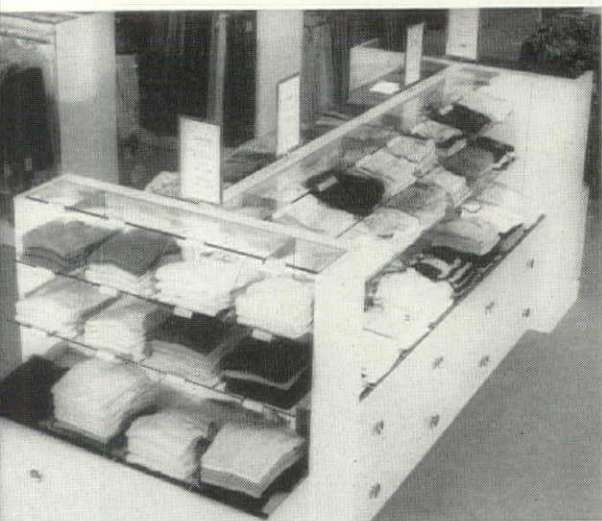
Side-sliding door insert:
Blankets, glassware, etc.

2. A single frame for all manner of inserts

Architect Victor Gruen's ingenious and handsome low-floor fixture for Dayton's in Rochester, Minn. is adaptable to almost all department-store goods (only suggestive examples of merchandise are listed above); the variations are thoughtfully calculated to keep stocks presentable in spite of self-selection rigors. Elevations and sections above are for wood fixtures. The metal version (right) is especially suitable for books, toys, sports items.



for open selling



This flexible fixture system was developed by Broadway-Hale Stores, Los Angeles, to meet a new "selective open selling" policy, which varies from merely displaying assort-



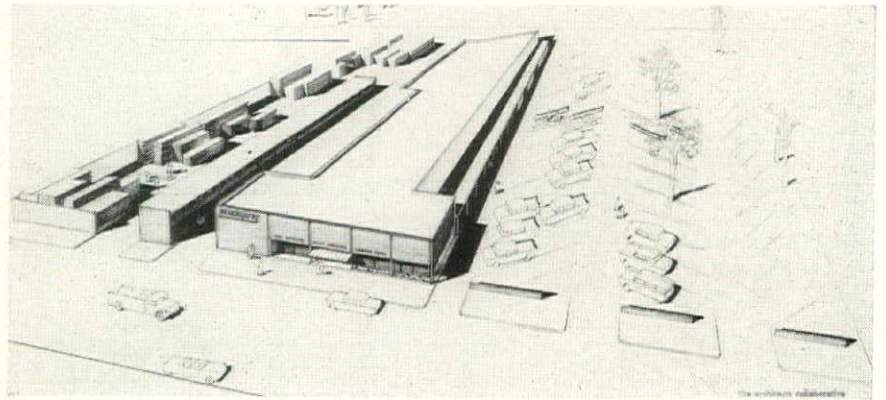
ments for customer inspection, to complete self-service, depending on the department and goods involved. Fixture design was aimed at a quality



rather than a cut-price appearance, at rearrangement devices easy to use in practice, and at simplicity in stock filling and stock selection or inspection.



Changing customs . . . changing customers: so this lumber-hardware-garden equipment store has been tailored to the home owner's growing custom of being his own painter-plumber-car-penter-handyman-gardener. An important part of the tailoring job is the new, brisk-looking front of exposed steel structure and blue brick. "The rest of Virginia is a vast sea of red brick, virtually the complementary to this blue," the architects note. The blue brick and white trim will eventually become the chief identifying mark of the company's five-store chain—a nice solution to the problem of combining instant identification with simplicity. Garden shop and lumber sheds at the side and rear were also added and the interior of the old structure remodeled.



A builders' supply outfit transforms itself into a

self-service do-it-yourself store

HECHINGER CO., owner, engineers and contractor

LOCATION: Falls Church, Va.

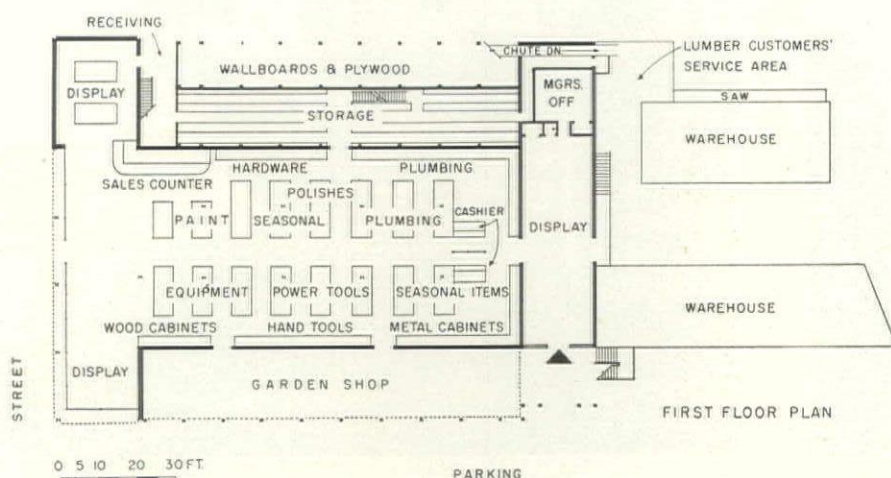
THE ARCHITECTS COLLABORATIVE, architects

Photos: Robert C. Lautman





and discovers an odd customer obstinacy about entrances



Principal entrance and only exit (with check-out stands) is toward the rear, off the parking lot because of the preponderantly automobile trade. A conventional front door was placed on the street side for pedestrian entrance. It turned out, however, that front-door customers resented being made to leave through the rear check-outs. Solution: the front door was closed off and now street customers must enter from the parking lot which, oddly enough, they do not seem to resent. Apparently the important thing is to be allowed to get out the way they came! The need for entrance direction signs (four on the parking side alone) points up another problem for the automobile-age shop: how to put an architecturally obvious entrance in an unconventional spot—in other words, how to make the front where the side or rear used to be. (TAC did not control design of this portion of the store.) Note the upstairs outdoor display space, used in summer for garden furniture and lawn equipment.

"Semi-self-service for those who know what they want . . . yet staffed to advise you"

Orthodox supermarket layout was adapted for wall and gondola self-selection displays (see plan); customers also use standard supermarket carts. But turnstiles were eliminated as a waste of space and an annoyance. Completely unaided self-selection is used only by exceptionally experienced home-handymen customers.

Information counter doubles as sales point for lumber, roofing and other heavy building materials. These are sold by sample, paid for at the check-out, then picked up from drive-in service points at the warehouses in the rear. A lot of customers need help from "floating" salesmen to choose even a 5¢ washer, the owner reports. Remodeling and additions cost \$100,000.



Genteel self-selection

These shops play down their open selling, play up their calm by using

1. Space dividers

Inside display fixtures (with stock in cabinets below) are calculated to break up monotonous stretches, point up the intimate scale. Braced uprights are steel with continuous angles for glass shelves; shelving is not adjustable. The drugstore proprietor, now more familiar with his island fixtures, does not pile stock so high as shown here. Cost of all interiors including air conditioning was \$65,200.



2. Domestic scale

Selling fixtures are only 28" high; the aim was small-scale elegance. All fixtures are basically identical aluminum frames, 2'-6" long by 20" deep into which glass shelves, stock cabinets or plastic finish sheets are slipped. Gift-shop jewelry island (below) is formed of four such units. Display cases simply substitute glass tops and wood or glass exterior panels. Basic similarity of fixtures is more than an economy; it contributes to quiet, uncluttered air.



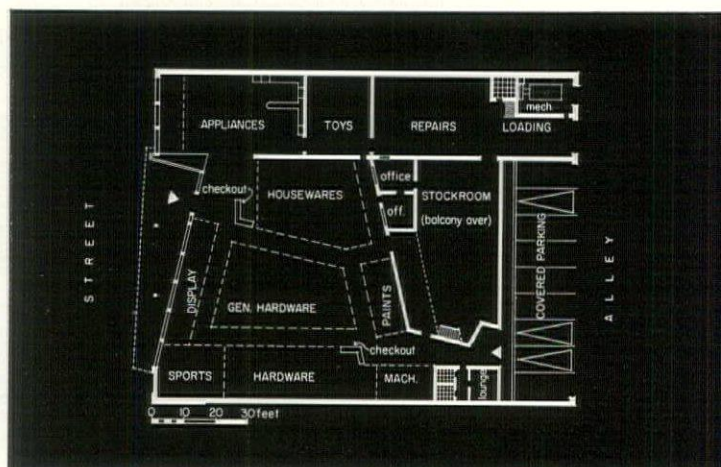
Departmentalized hardware store

dresses up a former warehouse . . .



The owner first decided on self-service as a way of increasing business without expanding staff. His downtown site added another reason: parking is so limited that speedy service is a must. The reinforced concrete shell is faced with green porcelain enamel. The masonry corner is 1½" x 16" red-sheared brick with the courses offset.

parks customers under cover in the rear . . .



Rear of the building takes nine cars. Check-out stands are well placed for controlling both entrances without waste of space. The interior wall from front to rear is structural, but in spite of this, central offices have good visibility of all departments.

MERCURY SHOPS

LOCATION: Newark Airport Terminal

MEYER KATZMAN, architect

FRANK CHASE CABINET MAKERS, fixture contractor



3. Discriminating cover-up

Atmosphere is that of fully clerk-served shops, but nearly all items are out where the customer can examine them, make a selection and carry it to a clerk or cash register. Means of keeping the open selling unobtrusive: instead of piling up quantities of identical items like scarves and stoles, one of each kind is out, others are in forward stock cabinets below (foreground). The few categories of merchandise apt to look untidy—lingerie, blouses, women's gloves—are clerk-served.



Photos: Alexandre Georges; Retail Reporting Bureau; Jones Photo Co.

4. A modular grid

Display and selling fixtures are all on a 2'-6" module. Window display units (view below is in drugstore) are 1" x 2" steel uprights with adjustable glass shelving on either side and plastic-finished or wood panels. Drugstore fixtures are white with birch; the gift shop's are natural-finish metal with walnut; the haberdashery's are black or white trim with mahogany.



or pulls them in with a tapered street entry

"During the rainy season people virtually walk into the store to keep out of the rain." The aluminum canopy is cantilevered 10' beyond the front of the building and tapers to 2'-6" at the entry, which sets 15' inside the building. The store draws its trade both from household shoppers and construction firms, one reason for the careful departmentalizing. Small standard hardware is prepackaged for speedy service; painting and decorating materials are not, nor are such items as sports goods, machine tools and appliances. The merchandising plan was based on the theory that 60% of sales could be completely self-service, 40% would require assistance, an assumption the owner reports has worked out well. Cost of the entire remodeling job was \$64,890.



HARBOR HARDWARE

LOCATION: Aberdeen, Wash.

CHARLES A. BAYLON, architect



Double-capacity check-out stands

This department store in microcosm could get just as badly bottlenecked as a big place; like many a specialty or miscellany store, 80% of its business is done in about 12 prime shopping hours per week. The chief potential bottleneck is wrapping, says Designer White. And one (high-wage) cashier can keep two (low-wage) wrappers busy. Both for payroll efficiency and quicker service, he put the cash register at the end of the check-out stand instead of in its usual place at the right, and set a wrapping counter and exit lane on each side. The inner end of the stand is backed with a self-selection candy rack. The staff ducks under the counter to get inside.

This store is a little **encyclopedia**

BRIGHAM YOUNG UNIVERSITY BOOK STORE

LOCATION: Provo, Utah

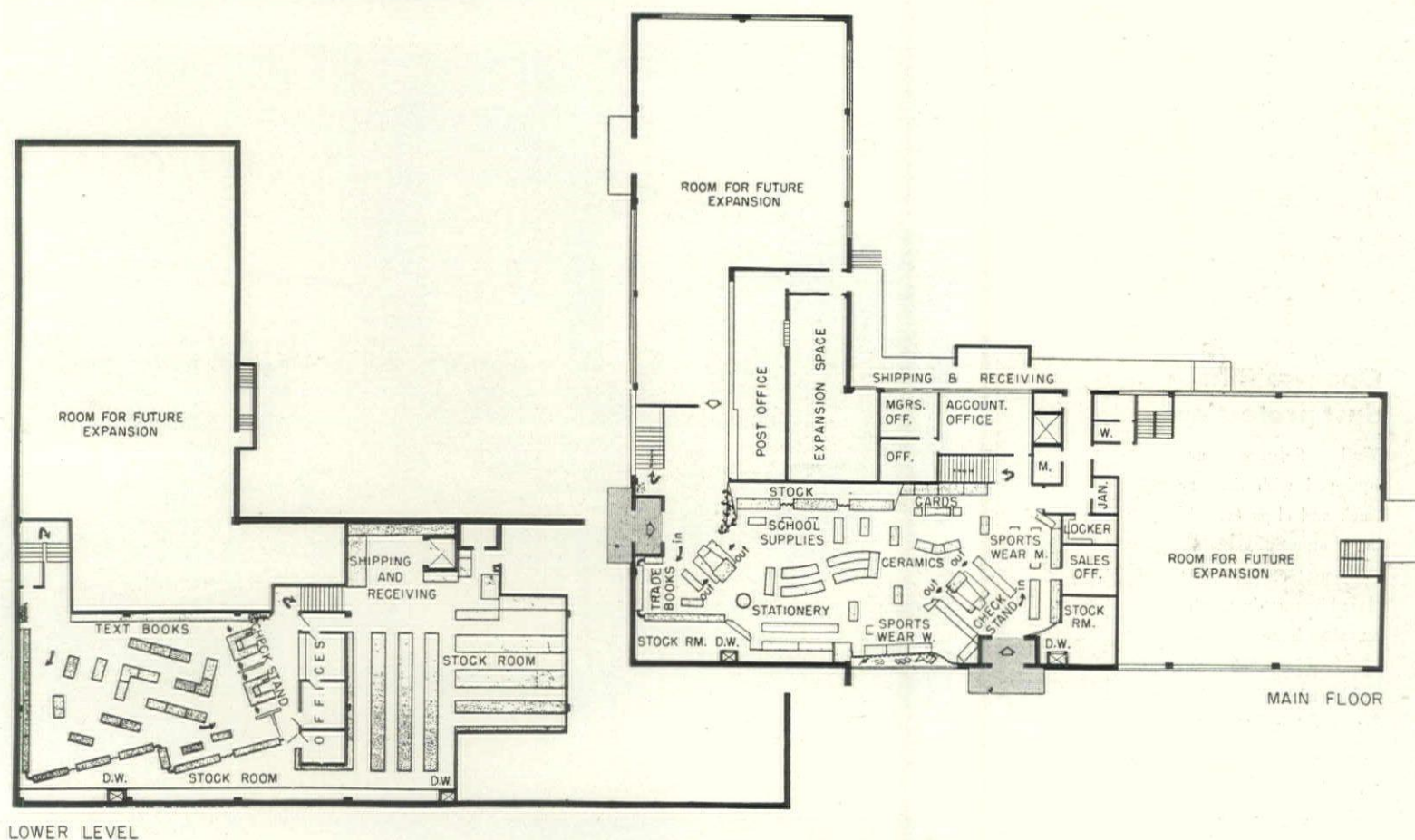
KEN WHITE ASSOCIATES, designer

SALT LAKE FIXTURE & CABINET CO., contractor



Portable cash registers for quadruple speed

When even the two-lane check-out gets clogged—at semester text buying time or during a sale—a portable cash register stand (foreground) is pulled in, set at the end opposite the permanent register, an additional wrapper is stationed at each side counter, and the traffic moves about four times as fast as with an orthodox one-wrapper, one-cashier setup. View here shows textbook department in basement; the selling floor takes 30,000 volumes! Island fixtures have lacquered metal-grid ends. Note the uninterrupted runs of 8' wall shelving, good for flexibility of categories; shelf fascia takes labels.



of self-service ideas

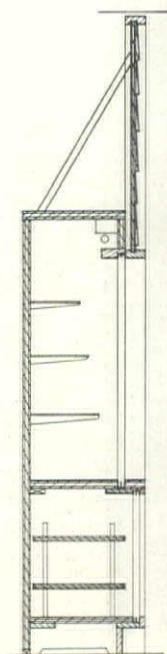
Display cases help direct traffic

Curved cases down the center of the main floor serve three purposes: 1) they protect relatively expensive, small items like fountain pens and jewelry; 2) they give a "value" atmosphere to some gift objects; and 3) and most important they give unobtrusive direction to the whole floor's traffic (see plan).



Interchangeable wall units

Every visible wall in the store—aside from exits—is part of a freestanding unit that plugs into the next unit, lights and all. Fixture-wall units (detail at right and below) are 8' long; door-wall units for access to stockrooms are 2'. Corners get narrow curved filler strips; odd dimensions are eked out with narrow straight fillers. The tackboard sports display fills an odd space. Units come just short of the ceiling, creating a top shadow line which White likes. The units can easily be shifted for rearrangement or when the store expands. Should the store move, walls and "built-ins" will move, too. Cost of the entire store, excluding building shell, was \$41,530.

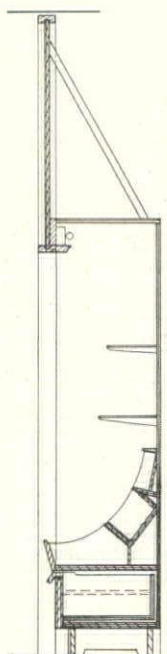


SECTION

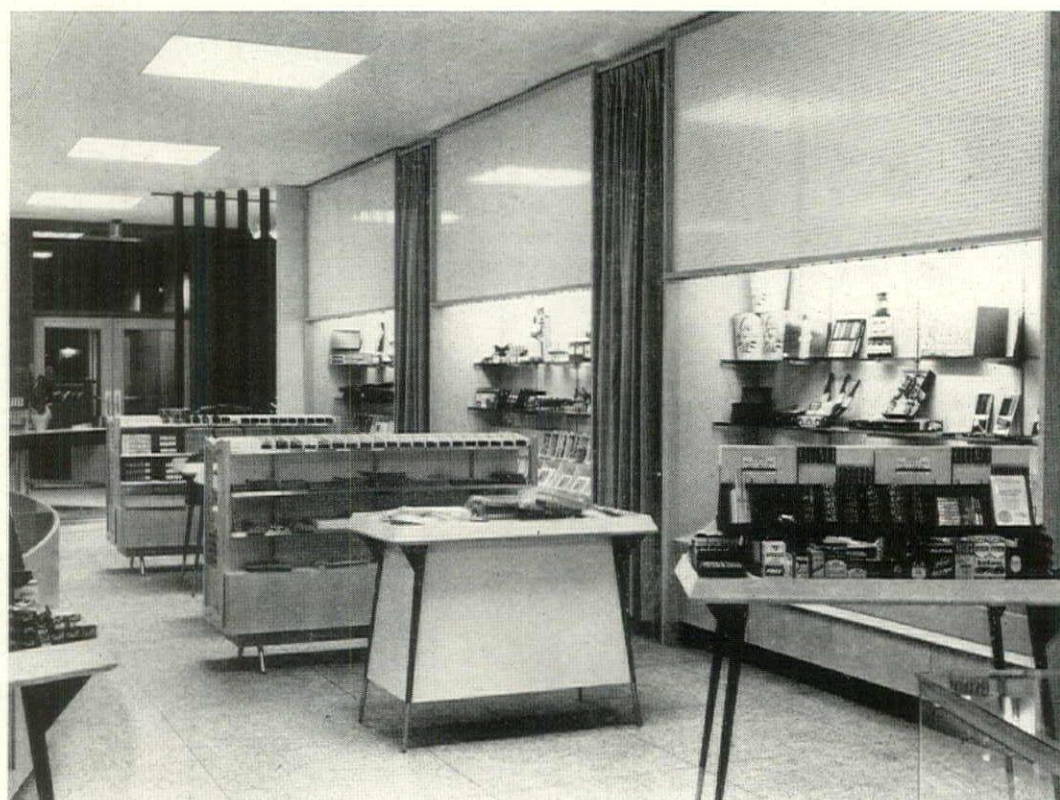


Open-selling dust protection

Wall fixtures are equipped with drapery track and clips (visible in photograph, right) to protect against closed-hours dust, the morning bane of much open selling. Note the tackboard walls, usable for display. Curtains cover stock entrances.



SECTION



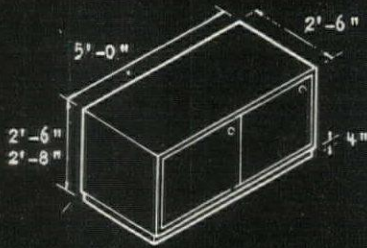
Fixture-back window display

Semi-open front uses rear of a self-selection fixture as a background for window-display items. Objects in the upper part of the window are decorative from both inside the store and out. This photograph shows the University of Kansas Bookstore, by the same designer; Brigham Young's display window (see plan) is similarly treated.

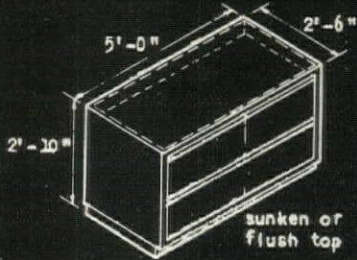


STORE FIXTURES

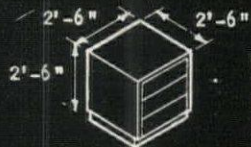
TABLES



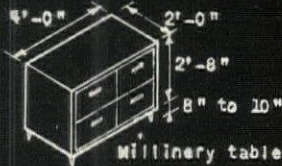
May be 3'-0" x 6'-0"
or 2'-0" x 4'-0"
china & glass



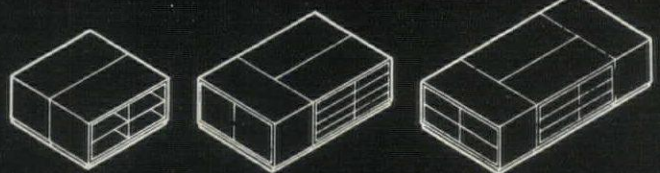
NOTE: 5'-0" tables are available with
2 drawers (millinery)
4-6-8-12 drawers
9 drawers (notions)
2 doors
trays
open shelves
tables may come with 8"-10"
legs instead of recessed base



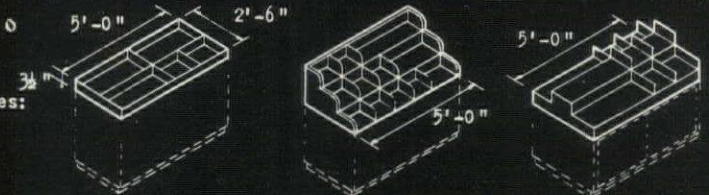
Rim Tops
Various sizes:
1 1/2", 2 1/2" or
3 1/2" high



Millinery table

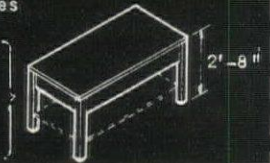


Arrangements of 5'-0" Tables

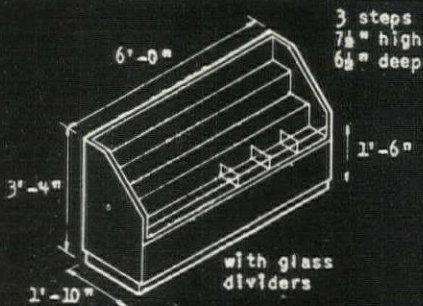


Superstructures for tables

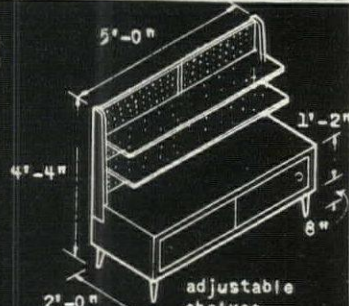
Rarely used except as decorative table or
throw table in women & men's clothing
2'-0" x 4'-0" 2'-6" x 5'-0"
2'-0" x 6'-0" 2'-2" x 6'-0"
Also with shelf 10" above floor



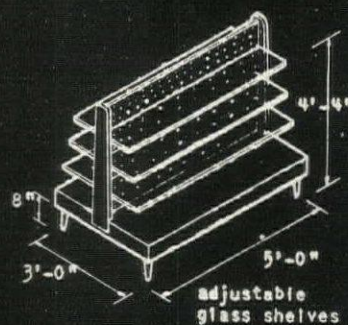
SELF-SELECTION UNITS



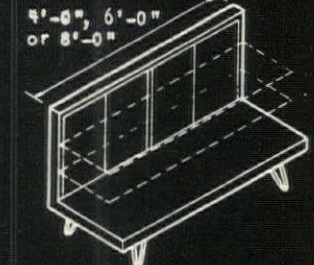
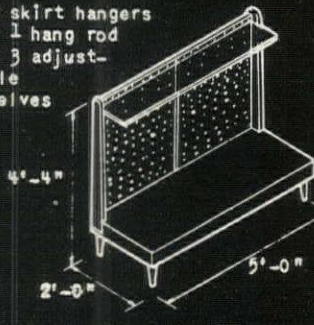
with glass dividers



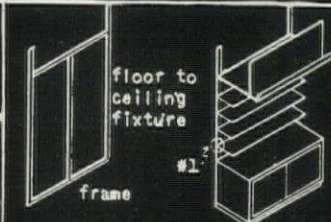
adjustable shelves



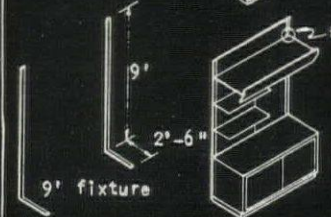
adjustable glass shelves



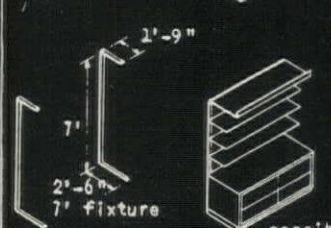
available with wood or wrought
iron legs or recessed base.
glass or wood shelves



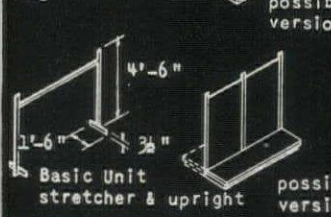
possible version



possible version



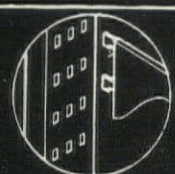
possible versions



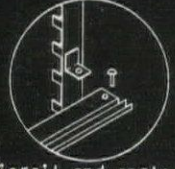
possible versions



possible versions



Support & Bracket
Detail #1



Tierail and angle
support on upright
Detail #2



Detail #3



Detail #4

PERFORATED BOARD Available in many sizes:
Width: 2'-0" to 4'-0" Height 3'-0" to 8'-0"
Thickness: 1/8" to 1/4": Thickness with frames
1-3/8", 1-7/8", 2", 2 1/4", 3"

Great variety of fixtures & accessories available

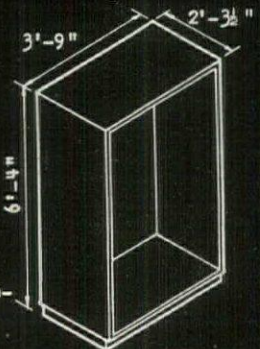
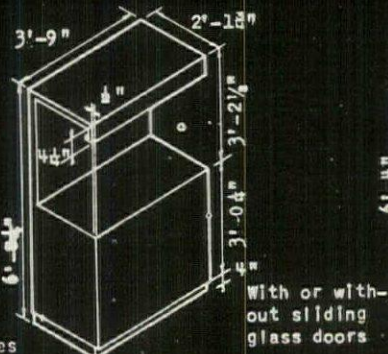
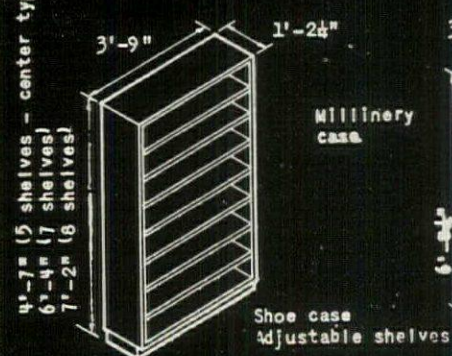
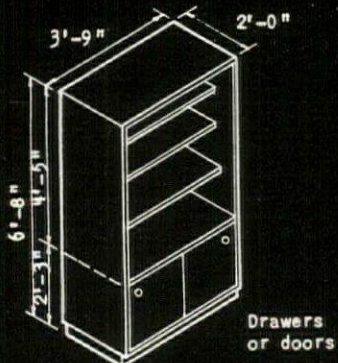
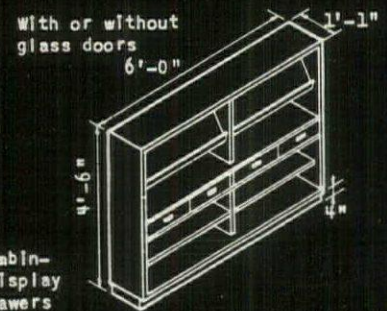
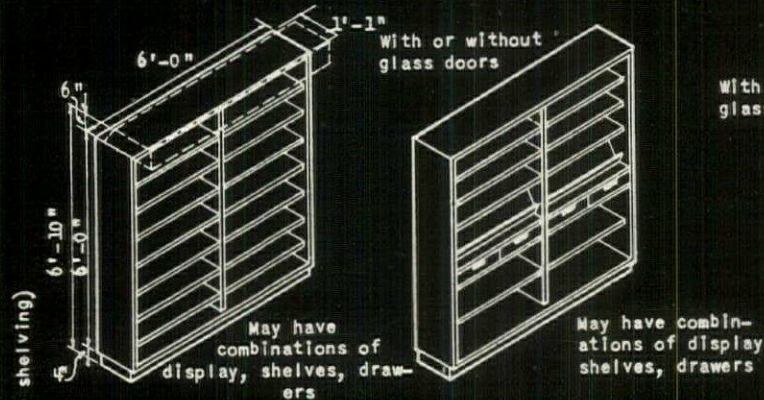
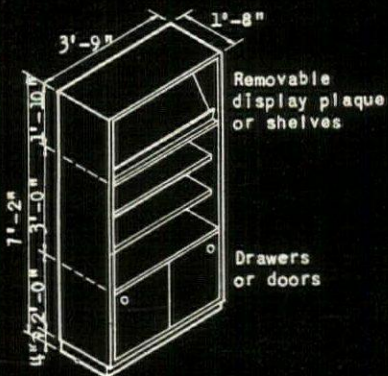
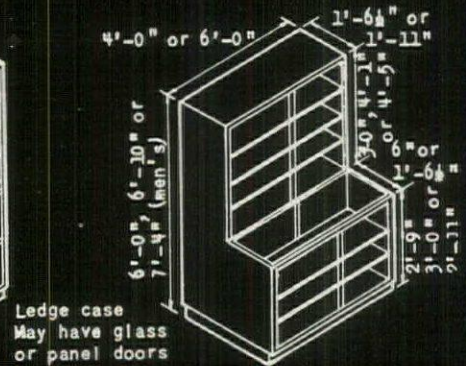
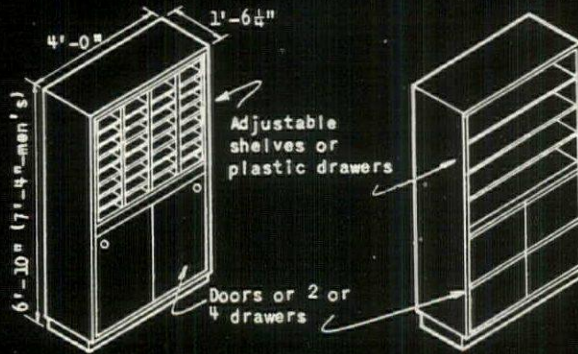
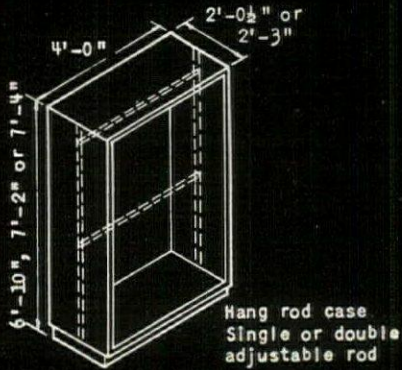
SHOP-BUILT UNITS

Self Selection Units come in two types:
1st is a standard shop built unit.

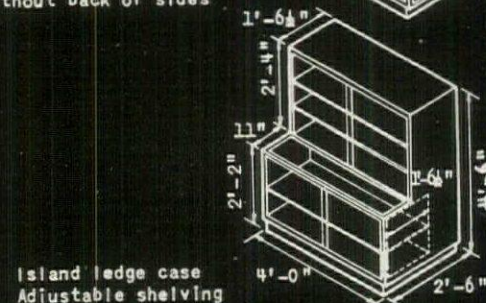
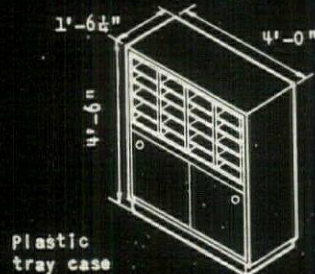
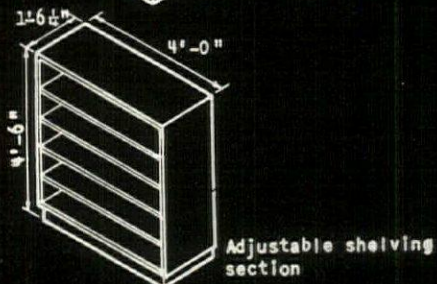
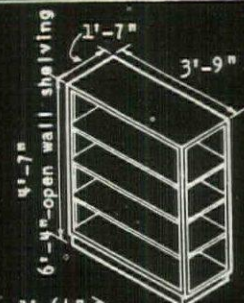
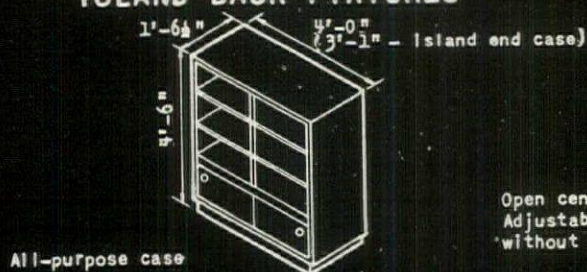
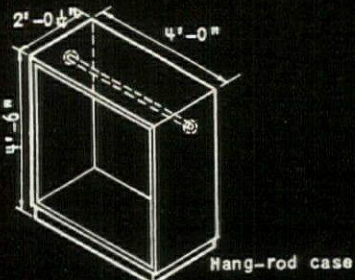
FLEXIBLE UNITS

2nd is a Unit composed of standard parts which afford greater flexibility as the
parts may be combined to provide a wide variety of fixtures.

BACK FIXTURES

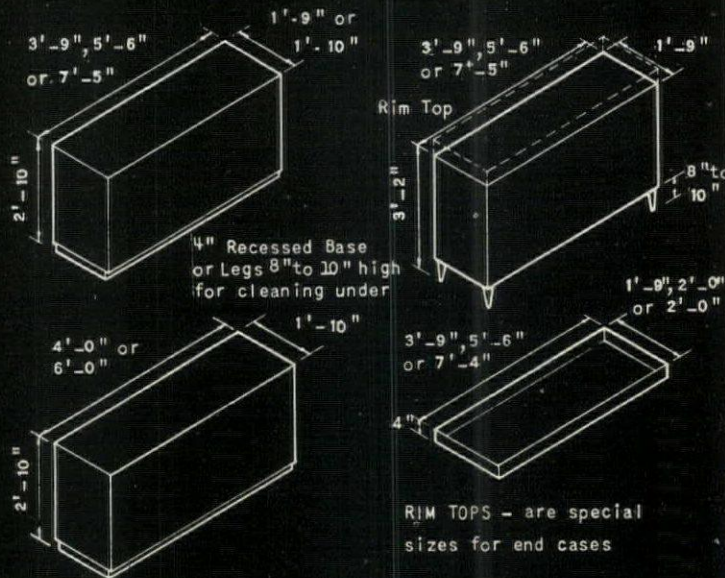


ISLAND BACK FIXTURES

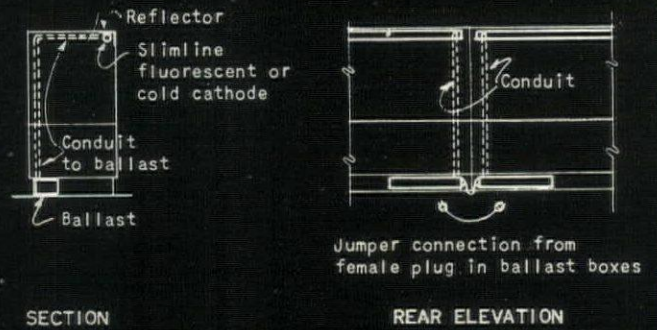


STORE FIXTURES 1.

COUNTERS

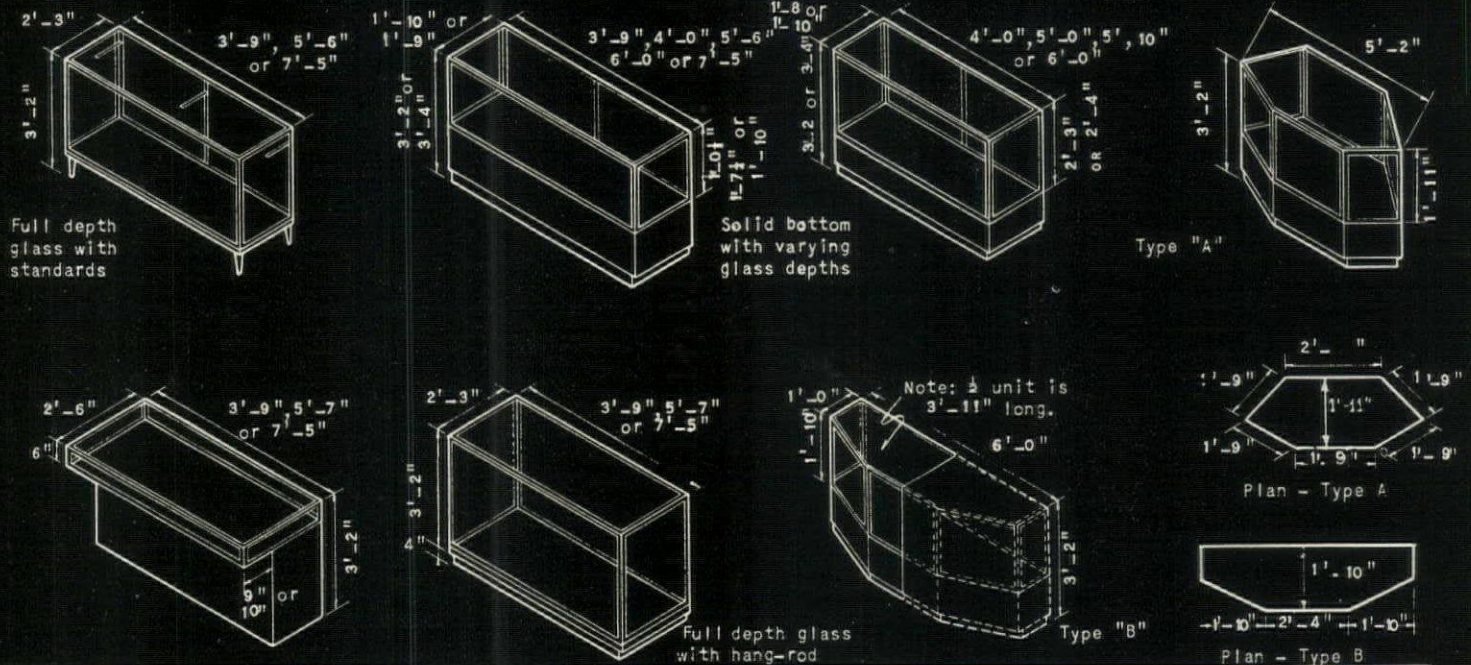


SHOWCASE LIGHTING

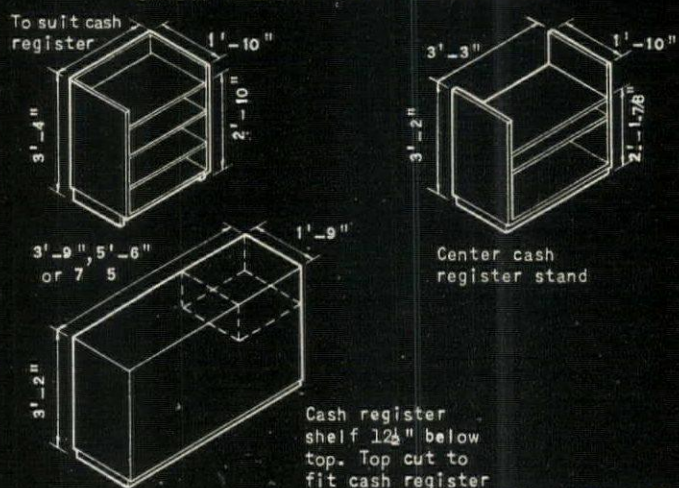


Lamp size usually determines length of showcase.
 With showcase:
 3'-9" Use slimline size:
 5'-7" 42"
 7'-4" 64"
 2 - 42" or
 1-64" and 1-18"

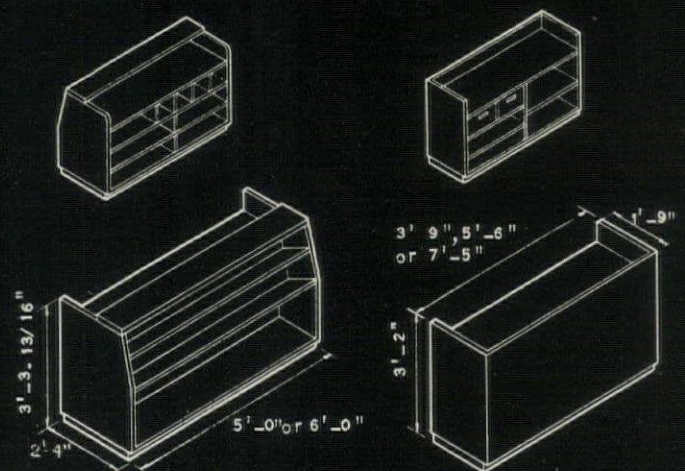
SHOWCASES



CASH REGISTER COUNTERS



WRAPPING COUNTERS



DANIEL SCHWARTZMAN, CONSULTING ARCHITECT

the part of the building that

MOVES EVERY DAY!

First it's up—then it's down. Up again, down again—*on the move every day*. That's the life of an overhead type door, and it all adds up to plenty of "mileage."

To be able to take it—with smooth, easy up-and-down operation year after year—the door's *got* to be better than good. In design, materials, construction and features.

Every Ro-Way overhead type door is designed, engineered and built for a *longer* life of owner satisfaction. Mortise and tenon joints are not only glued, but *steel* doweled as well. Muntins, rails and stiles are precision squared . . . sections rabbeted to assure weather-tight joints. Heavy gauge steel hardware is fabricated on special machines in the Ro-Way plant—Parkerized and painted *after* fabrication for extra protection.

What's more, Ro-Way *exclusive features* mean greater operating ease and efficiency: smooth-running, ball bearing Double-Thick Tread rollers—built to glide smoothly and quietly; Taper-Tite track and graduated Seal-A-Matic hinges that assure snug, weather-proof closing; famous Power-Metered springs individually matched to the weight of each door.

These are the reasons why Ro-Way doors *work better longer*—and keep on the move year after year.

ROWE MANUFACTURING COMPANY, 934 Holton St., Galesburg, Ill.



Nationwide sales and installation service. See your classified telephone directory for nearest Ro-Way distributor.



THERE'S A **RO-WAY** FOR EVERY DOORWAY!

COMMERCIAL • INDUSTRIAL • RESIDENTIAL

the public thinks could otherwise be built without him. The forum agrees he has these principal functions: a) to interpret in his plans not only the client's program but also the requirements brought in by the engineer and by the builder; b) to specify materials to be used; c) to correlate the efforts of a many-sided building team; d) to supervise construction seeing that standards have been maintained; and

e) to act as a professional agent advising and safeguarding the client who is often an amateur in an expensive undertaking.

The second frequent error concerns the architect's relationship to costs. Few realize clearly that, in the words of forum member Gruen: "The architect sells no products and therefore cannot be an architect and give a cost guarantee, though he must furnish the best possible guidance."

The third frequent error relates to the way the architect is paid. Because most architects have charged "fees"—usually a stated percentage of the construction cost—the public has unthinkingly concluded that the architect's fee is the last charge against the building, something above and beyond the building cost, perhaps a luxury. The plain fact is that plans and specifications are as necessary to a building as a roof is; and the draftsmen, specification men and others working for the architect are a payroll expense that must be met even before the pay of bricklayers and plasterers is met.

Recommendation No. 2: keep the public advised on costs

The forum recognizes that a public impression that "buildings can cost more than you expect" has done harm to the reputation of the industry and especially of the architect who bears the brunt of it. There is a moral obligation upon the industry to keep the public advised on costs, to anticipate costs, to do all possible to control them.

An important service of the forum was to bring out that costwise there are at least four general kinds of buildings, and a different cost picture in relation to each:

1. There is the type of building represented by public structures such as schools, and by other common kinds, where the general nature is known in advance, where budgets are carefully set and where there is every reason why deviations from the budget should be minor. The forum notes with approval the report of forum member Alexander that it was the architects themselves who proposed to the State of California the present arrangement on schools, whereby any plans by an architect that are bid at more than 15% beyond the budget are redrawn by the architect to meet the budget and at his own expense. (Any closer percentage would be unfair to the architect in view of price changes and varying conditions controlling bids, which are beyond his control.) The spirit shown by the profession in adhering cheerfully to this provision is to be commended.

2. There is the more experimental type of building such as the kind of industrial building needed by Mr. Hull or Mr. Pike, or shopping centers, where the problems are largely new, pioneering is being done and costs cannot be foretold. In such cases the forum noted with approval the different

continued on p. 176

McNary Lock & Dam
McNary, Oregon

From Dams
To Department Stores

**MONTGOMERY
ELEVATORS**

ASSURE DEPENDABLE
VERTICAL
TRANSPORTATION

J. C. Penney Co.
Corpus Christi, Texas

**PASSENGER
AND FREIGHT
ELEVATOR SERVICE**
Is Exclusively Our Business

For over sixty years it has been our exclusive business to design and manufacture precision elevator equipment. Montgomery features and manufactures all types of modern systems of control and operation including "attendant-free" operatorless service for use with any elevator design. Available are gearless and geared electric and hydroelectric passenger and freight elevators, self-contained electrics and dumbwaiter equipment.

Prominent Montgomery accessories include a patented Load Limitor, an exclusive Oil Cushion Safety and Lever Type Oil Buffer for shallow pits—features that assure modern and safe elevator service for any type of building.

For further information, consult MONTGOMERY ELEVATOR COMPANY, General Offices and Factory, Moline, Illinois.

BRANCH OFFICES
and
AUTHORIZED
REPRESENTATIVES
in key U. S. Cities and
23 Foreign Countries—
featuring new equipment,
modernization, changeovers,
repairs and Montgomery's
Preventive Maintenance
Service.



MONTGOMERY ELEVATOR COMPANY
GENERAL OFFICES AND FACTORY MOLINE, ILLINOIS

Exclusive Manufacturers of Quality Elevator Equipment—Since 1892

SKYTROL*

a product
of research
in toplighting

• The picture was taken at Pittsburgh Corning's Daylighting Research Center. Better than words, it shows the excellent daylighting made possible with SKYTROL Glass Blocks—the new toplighting medium developed by Pittsburgh Corning.

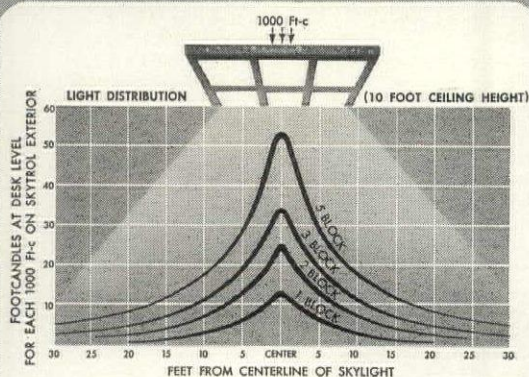
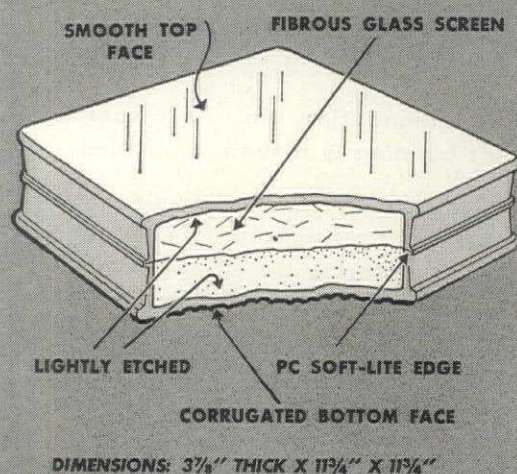
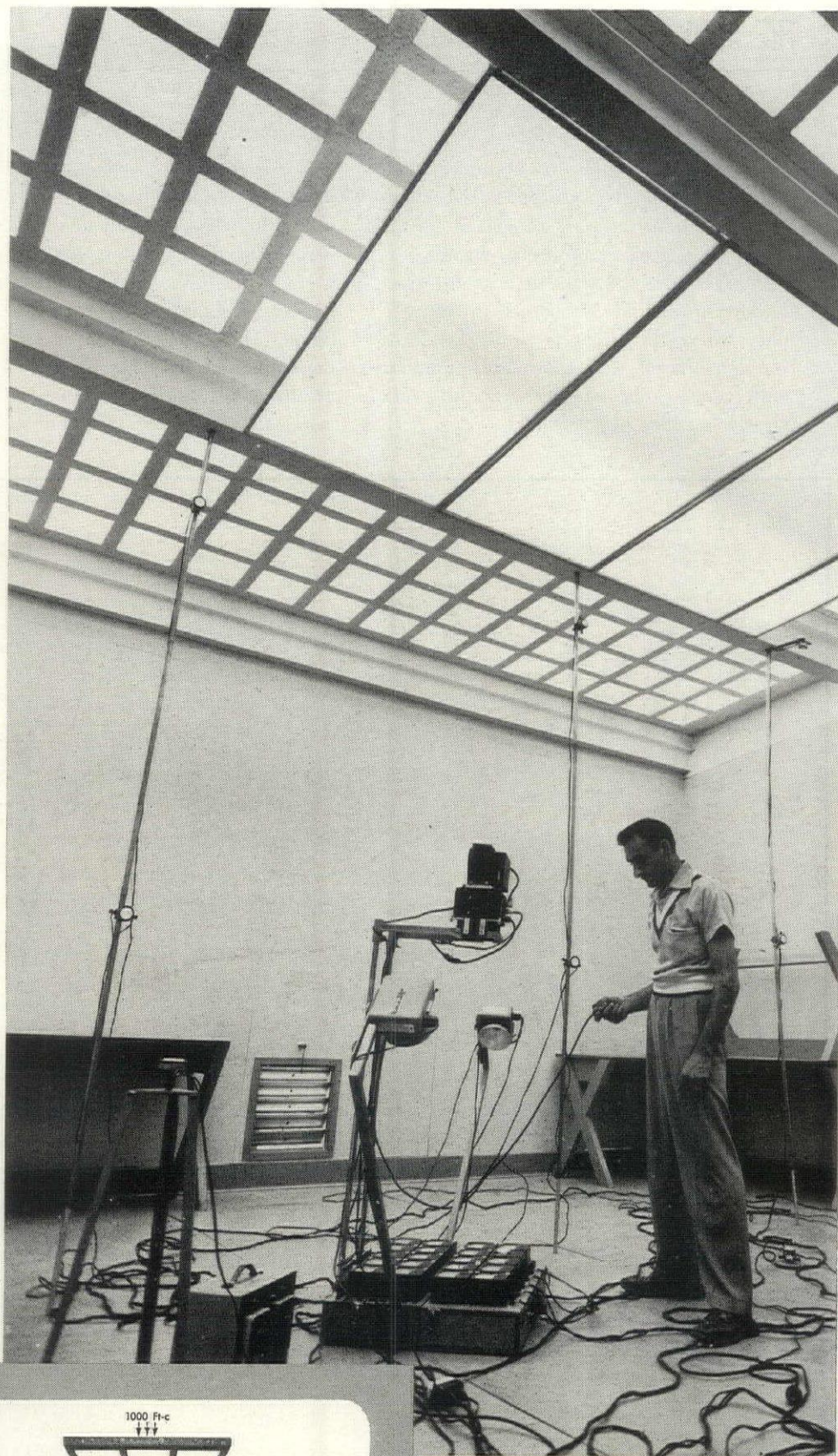
To prove the effectiveness of these blocks, PC engineers use a unique daylighting survey method employing 20 photocells and 20 light meters. Instantaneous readings are automatically recorded throughout the day. Thus a running record of SKYTROL performance in various parts of the room is prepared that takes into account the effect of sun angle and other exterior conditions.

The illumination level is very high in this room, but the light is so diffused that it is a delight to work here. The problems of condensation, heat loss and heat gain are practically eliminated, because SKYTROL blocks have *twice* the insulation value of an ordinary skylight.

Write today for more information about SKYTROL Blocks for toplighting. Just fill in the coupon.

Pittsburgh Corning Corporation
PITTSBURGH, PA.

*T. M. Reg. Applied For.



Light distribution—Even one small 5-block wide Skytrol panel puts 22 footcandles on a desk top 8 feet from the panel centerline on an average overcast day.

Pittsburgh Corning Corporation
Dept. E-113, One Gateway Center
Pittsburgh 22, Pa.



Please send me more information about
PC SKYTROL Blocks for toplighting.

Name.....

Title.....

Firm.....

Address.....

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

techniques reported by its architect members for promptly informing the client step by step, as the work progresses, of the probable cost effect of every change.

3. There is the type such as the tract house required by Mr. Brock or Mr. Slipper where the client is professionally a builder himself and thoroughly familiar with costs, so he and his architect work closely together day by day.

4. There is the custom-built house, the small store, and other building problems where the client is an amateur undertaking perhaps the first building enterprise of his life. It was this kind of project which Bankers Wellman and Hicklin, the former Banker Hull (long a loan officer with the Bank of America) humorously described as the kind where the practical builder used to like to have the plans as skimpy

as possible, "on wrapping paper if possible," because he wanted everything delegated to him. He made his biggest profit on changes—and "with women clients in particular it was easy to get a change of mind."

The forum commends the change in attitude described by its banker members in looking with increased disfavor upon such "practical plans" and with increasing favor upon fully detailed plans by registered architects and preferred also by all responsible contractors such as forum member Twaits.

Recommendation No. 3: teach the public how to minimize costs

The reason the public does not know its own share in cost reduction is that most clients are beginners—discussion revealed that the majority of clients, anywhere from 60 to 90%, undertake only one building operation in their lives.

The client can hold down costs by realizing that changes cost money. All clients on the forum were experienced in building, yet all confessed that they had been inclined to shift to architects, at one time or another, responsibility for added cost incurred by their own decision along the way to add new features or make changes.

The client can help hold down costs by paying what is needed to obtain accurate cost data. Making accurate cost estimates takes time and skill. If an architect does it in his own organization the work must be paid for, and if he asks a contractor who is not sure of getting the job (most jobs are bid only after drawings are complete) it is unfair to ask the contractor to spend the time and money needed. This is one reason why it is advisable, if possible, to have the contractor as well as the architect in on the job from the start.

Recommendation No. 4: recognize that building is a team operation

Building has become too complex to be handled by anything but a team. The team must be set up at the outset and all responsibilities must be made known.

The owner is head of the team, and there is no way he can escape ultimate executive responsibility. Final decisions, including cost decisions, are his.

A complete team includes the architect as the owner's agent and his representative,

continued on p. 178

it's

... Securitee for quality suspension systems. Careful engineering, and exacting uniformity in production give top quality to all Securitee Systems.

... Securitee Systems for a true and level ceiling. Component parts are made from proper gauge rust-resistant steel—ample width Tee bars and patented pressure flange on clips give durability to each installation.

... Securitee for all around versatility—it is equally adaptable to new or old construction.

For more complete information mail in the attached coupon today.

Securitee SYSTEMS

W. J. HAERTEL & CO.
832 W. Eastman Street
Chicago 22, Illinois

West Coast Distr.
FREY & HAERTEL
560 Ninth Street
San Francisco, Calif.

Please send me complete technical data on your Securitee Systems.

Name _____

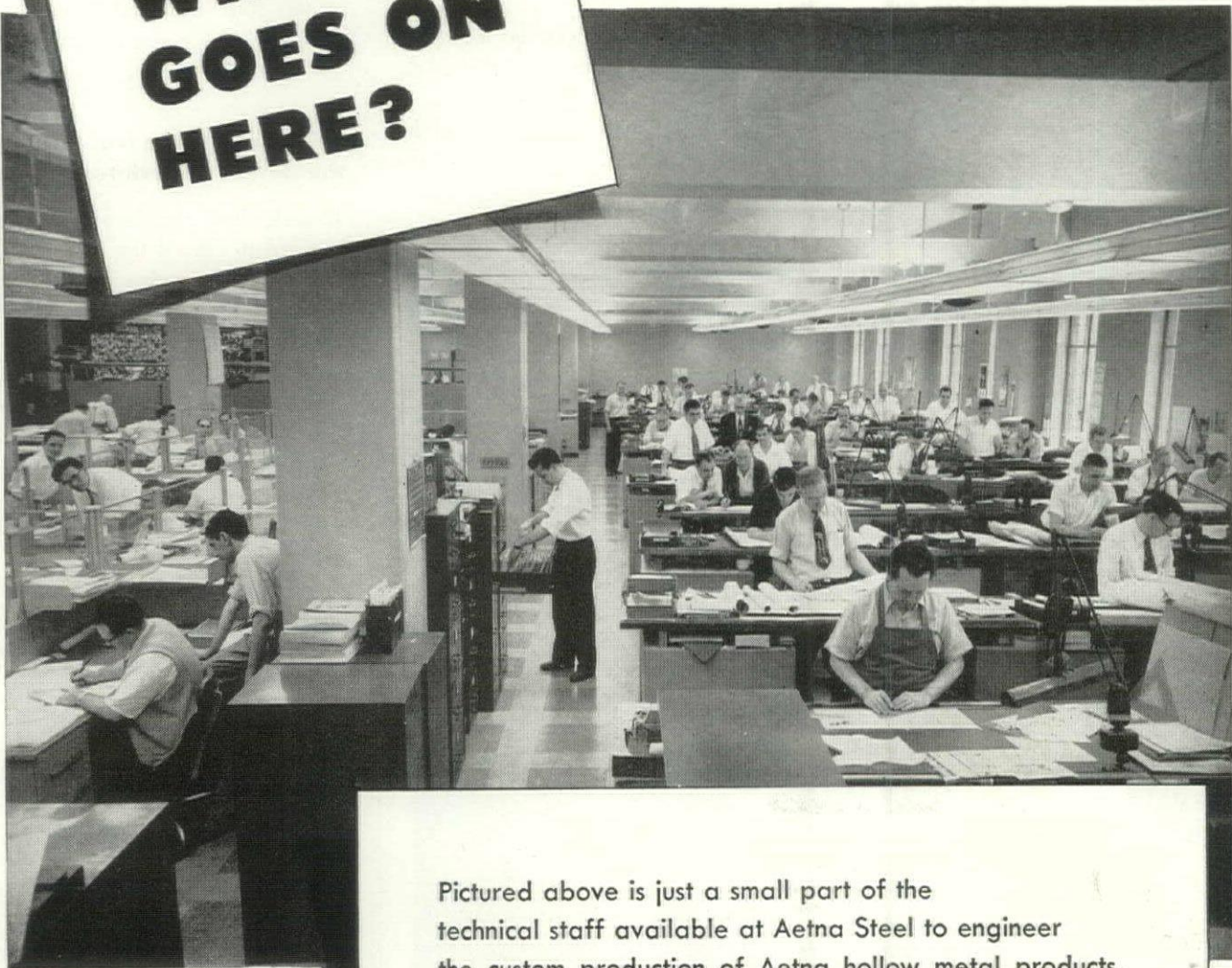
Company _____

Street _____

City _____ State _____

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

**WHAT
GOES ON
HERE?**

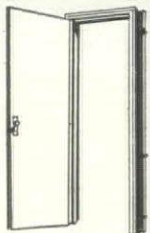


Pictured above is just a small part of the technical staff available at Aetna Steel to engineer the custom production of Aetna hollow metal products.

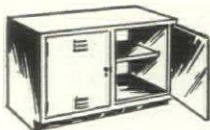
As every architect knows, engineering follow-through on specifications is high on the list of factors which determine the success of a job.

Aetna engineering and research is backed by fifty years' experience in the design and manufacture of hollow metal products.

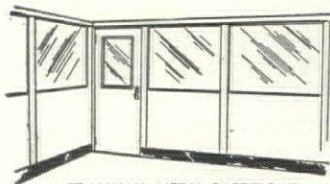
That's why architects know they can depend on Aetna for the kind of care and regard for detail which clear the way for quick and economical installation.



STEEL DOORS AND FRAMES



STEEL HOSPITAL CABINETS



AETNAWALL METAL PARTITIONS

AETNA STEEL PRODUCTS CORPORATION

730 FIFTH AVENUE, NEW YORK 19, NEW YORK

MANUFACTURERS OF STANDARDIZED STEEL DOORS AND FRAMES FOR HOUSING UNITS.

FABRICATORS OF QUALITY HOLLOW METAL PRODUCTS FOR SCHOOLS, HOSPITALS, OFFICE BUILDINGS, ETC.

the engineers, the builders, the real estate consultant and the many consultants (school, hospital, rental, financial, etc.) that the job may require.

The make-up of the team may vary and on some jobs one person may perform many of the functions (for example, an architect usually does the structural engineering on a house). Responsibility will vary from job to job (for example, on a

big apartment project the rental expert's word may be most important).

Each member of the team has dual responsibility—for his own part and for the way it has to fit with the rest; there can be only one coordinator (except where the owner is also the builder) and that is the architect.

The forum is unanimous that the architect must be in from the beginning of the

operation. And the responsible contractor should be brought in at the beginning too; more often than not the owner who has let his architect help him select a fine builder at the start will find himself benefitting from his advice and experience.

Recommendation No. 5: make known the nature of architectural service

Though client members of the forum were inclined to regard the architects as "suckers" for not engaging in more joint promotion in explaining "the architect" just as real estate men have established the status of the "realtor," and though suggestions ranged all the way to outright advertising by architects (this was not accepted), the consensus was that the architect can best establish his name "the way Toscanini does, by favorable mention of his performance in the papers."

And though agreement was not reached on details, it became evident there must be much further study of methods of payment to architects so the public is less confused. Said forum member Luckman: "When I told a board of doctors our contract, based on a percentage of construction cost, would compel us to take a lower fee because we had just thought of a new scheme which would make their building cost \$560,000 instead of the \$660,000 budgeted, I made them a sporting proposition. If I were to come in for an operation, and the doctor could get me back on my feet in two-thirds the usual time, I would pay him only two-thirds the stated fee." The story indicates that better devices are still needed to remunerate the architect for efficiencies and savings.

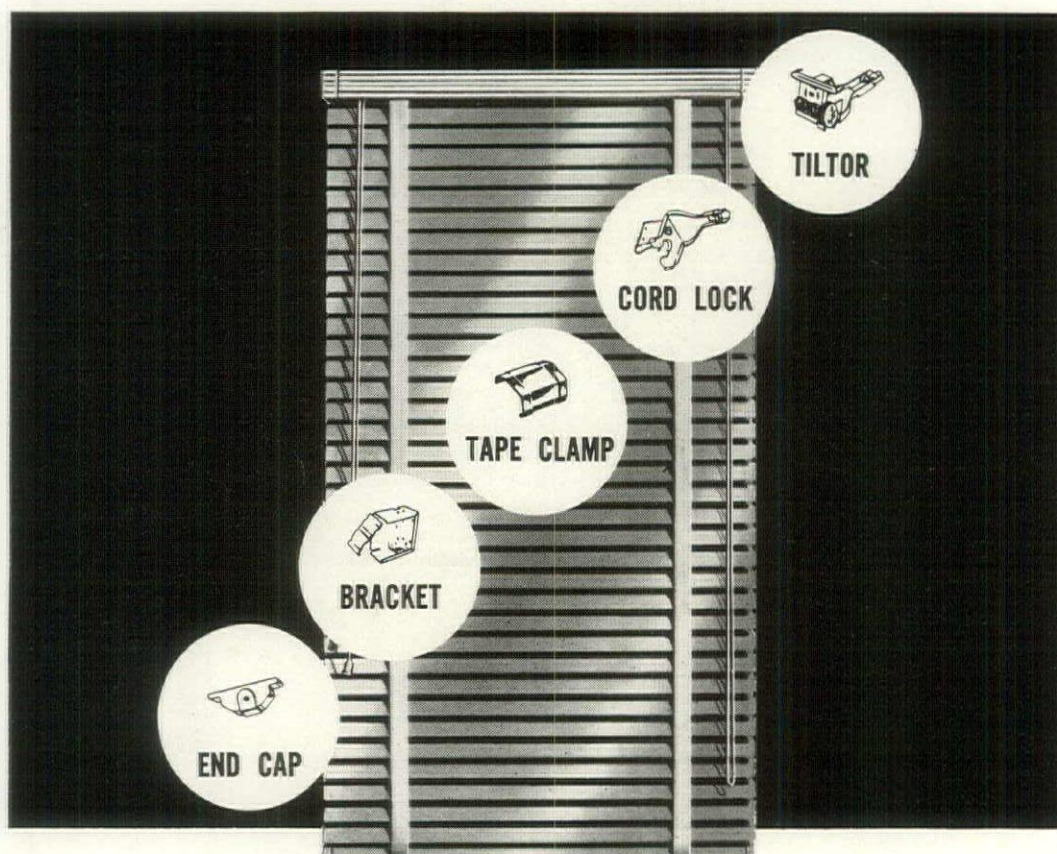
Recommendation No. 6: increase the planning budget

Most owners should see the wisdom of setting aside an adequate budget to meet the expenses of all members of the building team, in order that quality may not suffer by inadequate performance.

If the budget is inadequate for both architecture and engineering, then the client must fear either cut-rate architecture or cut-rate engineering.

The greater complexity of today's building, the greater complexity of today's building team, is reflected in a higher total planning cost. Failure to meet this creates no saving, it merely means lower per-

continued on p. 182

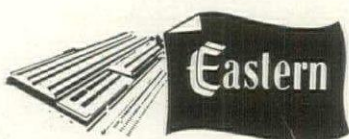


trouble free **ROLLA-HEAD VENETIAN BLINDS**

Commercial installations, hospitals, schools, hotels require low maintenance equipment. Rolla-Head blinds are engineered for a lifetime of trouble-free operation, designed for easy maintenance. Eastern's exclusive snap-in hardware cuts maintenance costs to a bare minimum — all operating hardware snaps in place without riveting or crimping.

These outstanding features are your best reasons for specifying Rolla-Head venetian blinds: all-metal, DuPont baked enamel finish in 14 decorator colors; removable slats for easy cleaning; brass geared tilting device; positive-action cord lock; enclosed operating mechanism. For full information see Eastern's 16-page catalog in Sweet's File.

Custom-made by Independent Venetian Blind manufacturers to factory specifications.

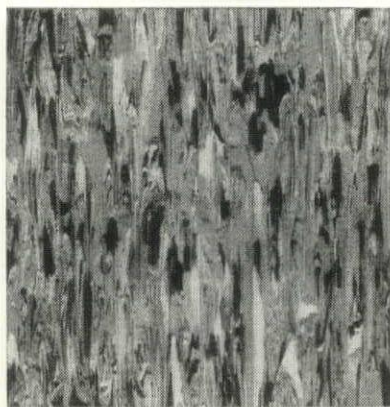


EASTERN Machine Products Co.

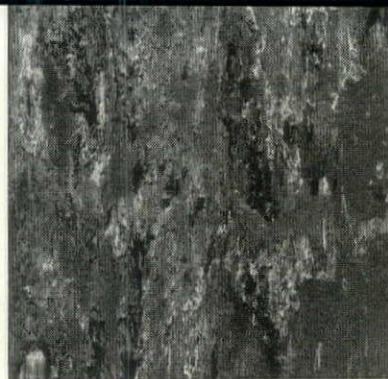
General Offices & Plant: 1601 Wicomico St., Baltimore 30, Md.

NEW YORK • ATLANTA • PITTSBURGH

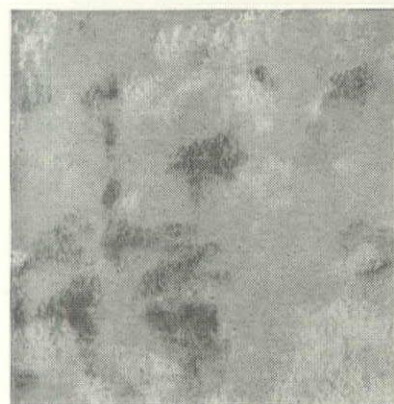
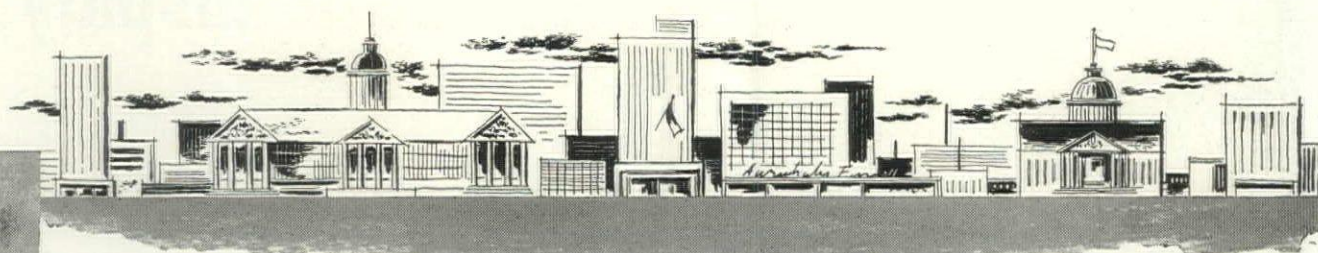
In Canada: Eastern Machine Products, Ltd., Toronto • Montreal • Vancouver



Armstrong's Custom Corlon® Tile is a new vinyl plastic tile, the ultimate in flooring luxury. It has outstanding resistance to grease, oils, alkali, and abrasion. Its distinctive directional burl graining, exceptionally smooth glossy surface and fresh colorings make it unsurpassed in beauty. Installed on grade with Armstrong's No. S-104 Chemical-Set Waterproof Cement.



Armstrong's Rubber Tile combines beauty with outstanding resilience and durability. Long famous for adding practical flooring luxury to fine interiors, it is distinguished for its rich colorings and clearly defined graining. This "Aristocrat of Floors" is installed on grade with Armstrong's No. S-104 Chemical-Set Waterproof Cement.



Armstrong's Excelon Tile is a new plastic-asbestos tile featuring Armstrong's exclusive swirl marbleization in a range of distinctive monochromatic pastel colorings. Its vinyl content gives Excelon* Tile excellent resistance to grease and oil. Tough, flexible, and fully alkali resistant, it can be installed over all types of subfloors.

* T.M. Reg. applied for.

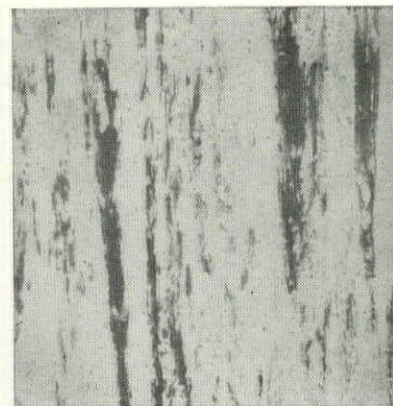
Now you can choose from **FIVE** different **ARMSTRONG FLOORS** **FOR ON-GRADE INSTALLATION**

Just a few years ago, asphalt tile was the only resilient flooring suitable for installation over grade-level concrete slabs. Now, however, new product and adhesive developments resulting from Armstrong research have broadened your choice greatly. Today, you can select from five different Armstrong Floors for basementless buildings.

Each of these Armstrong Floors has its own special advantages which make it particularly effective for certain installations. Each is unsurpassed in value within its own price class. Together, they offer a wide variety of colors, decorative effects, and physical characteristics to satisfy the design requirements of virtually any basementless building. For samples and specifications on any of these Armstrong Floors for on-grade installation, call the Armstrong District Office in your area or write direct to Armstrong Cork Company, 1511 Rooney St., Lancaster, Pa.



Armstrong's De Luxe Asphalt Tile offers the distinctive beauty of non-directional swirl marbleization at low cost. The same process that produces this exclusive decorative effect also interlocks the mineral fibers and binders in many directions, giving this flooring strength and flexibility unmatched by any other type of asphalt tile.



Armstrong's Standard Asphalt Tile provides Armstrong quality at minimum cost for use when price is the most important factor and for decorative effects requiring floors with directional graining. Colors are harmonized with those in De Luxe Asphalt Tile.

ARMSTRONG CORK COMPANY

FLOOR DIVISION
LANCASTER, PA.

Good lighting

becomes dramatic display

This entire office building in California makes a dramatic display out of construction features primarily planned for purely functional reasons. The lighting system is an outstanding example. Ten continuous miles of Westinghouse plastic luminaires are truly an ideal lighting system for daytime work . . . and become a strong merchandising device by night.

The number one requirement was quality illumination for detail office work. This called for semi-indirect lighting. A secondary consideration was to maintain the same high level of balanced design that existed throughout the building structure.

By taking advantage of the 10' ceilings, it was possible to suspend fixtures 2' and install a glareless

system of continuous semi-indirect lighting. After 3 years of service, this system still maintains a desk-top lighting level of over 40 foot-candles.

The Westinghouse CD-80 luminaire provides this lighting system. Its styling was right because the dominant horizontal lines of the building exterior are repeated and emphasized by the lighting system on the inside.

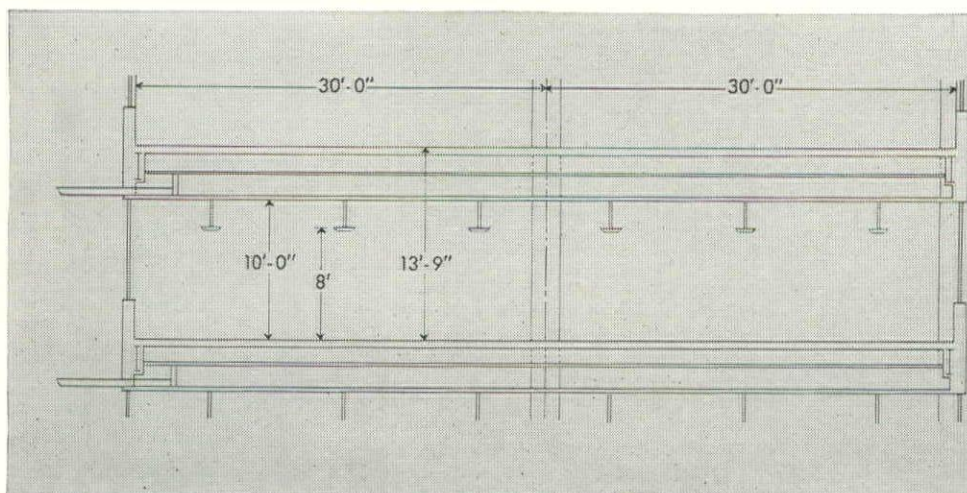
Lighting systems can be attractive as well as functional. That's why we maintain a complete and varied line of lighting systems and fixtures to meet the variety of modern lighting problems. Consult us on your next lighting installation. Westinghouse Electric Corporation, Edgewater Park, Cleveland, Ohio.

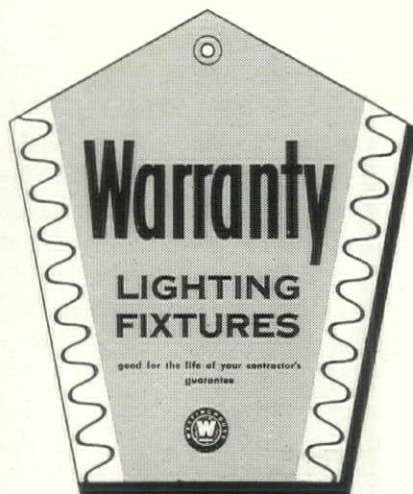
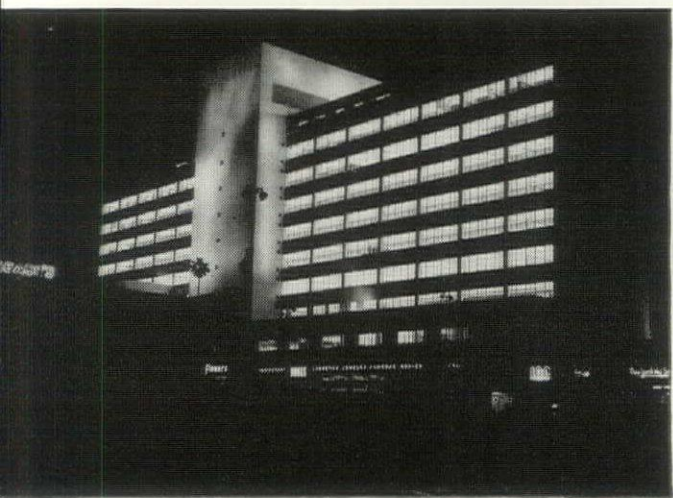
J-04331-A

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



Luminaires, spaced 10' apart, are suspended 2' below the ceiling and are never turned off during working hours. Outside rows of lights are kept burning until midnight for advertising purposes.





For complete details on this and other lighting fixtures, send for your copy of B-5254, "Lighting Sets the Stage". Meantime—look for this seal on your electrical contractor's guarantee. He installs them—we back him up. Westinghouse Electric Corp., Box 868, Pittsburgh 30, Pa.

T-CHORD LONGSPAN JOISTS

*The widest range of selections
in the longspan joist field!*



- ALL WELDED
- SPANS UP TO 125'
- STRENGTH
- PERMANENCE
- APPEARANCE
- ECONOMY

PLUS QUALITY

Write today for information on
T-Chord Longspan Joists for
your church, school, hospital,
or commercial and industrial
building. Simply drop a line to:

**H A V E N
B U S C H
C O M P A N Y**

501 FRONT AVENUE, N.W.
GRAND RAPIDS 4, MICHIGAN

THE NEED FOR BETTER PLANNING

(continued)

formance, higher cost of operation and maintenance for the building.

This situation is reflected quite immutably in figures. Most fees, reported forum member Gruen, were built up in less complicated ways. If mechanical costs rose from 20% of total building costs to 40%, and the architect were asked to pay the engineer each time, it would obviously cost the architect today twice as much. Yet the architect today has more work to do, not less, in view of the more complicated engineering. The architect's own job is more complicated in coordinating the engineering plans with his own, "so the ducts miss the beams." This caused both forum member Barnes, an engineer, and Eckbo, a landscape architect, to wish the architect higher fees so he could pay them if the engineer worked for him.

This forum recognizes there is no shortcut to genuine quality for the owner. No member of the planning team can be paid at the expense of another without risk to quality of the total performance. The more complicated operation, needing a more expert and numerous team, must be reflected in the owner's total budget.

Under the owner's direction the architect must be the captain of the building team, bringing the scope of the engineering within the budget and bringing engineering design into harmony with the architectural design and keeping both in line with today's best and most economical construction practice.

This forum agrees there is no hardship involved in proposing a higher planning budget for an industry which now stands far behind some others in the proportion of its expenditures devoted to planning and development.

California's building industry has served its people well. Yet the need for better planning has mounted so fast it is to be doubted whether even a fifth of all buildings erected in this greatest building boom have had the benefit of enough study and planning to reach full economy of construction, full economy of operation, full efficiency in use, or a full yield of pride and delight. Where blight and ugliness have marred the fair landscape, no single shortcoming has been so much at fault as inadequate provision for proper planning. Only in planning can so modest an added investment bring such a bounty of result.

Lifting loads for 60 years

SEDGWICK vertical transportation equipment has been specified by three generations of architects — to move loads from floor to floor — to make better use of space — to give one-floor convenience in dwellings. Sedgwick safety, dependability and economy are the result of six decades of technical improvement.

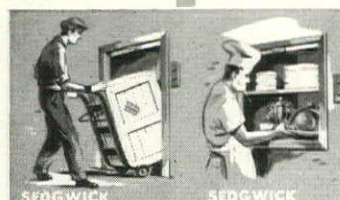


SEDGWICK

CORRESPONDENCE LIFTS
for high-speed transmission of letters, orders, other light loads. Also parcel lifts for heavier loads.

SEDGWICK

SIDEWALK ELEVATORS
dependable transportation of loads to and from basement. Standard capacity up to 2500 lbs.



SEDGWICK

FREIGHT WAITERS
for loads too heavy for dumb waiters, yet not heavy enough for expensive freight elevators.

SEDGWICK

DUMB WAITERS
for industry, hospitals, hotels, restaurants, schools, banks, stores, etc. Under-counter or regular.



SEDGWICK

RESIDENCE ELEVATORS
often recommended by physicians. A basic consideration in remodeling older dwellings.

SEDGWICK

STAIR-TRAVELORS
a safe, economical way to avoid stair climbing. Widely used in homes with straight stairways.

**when there's more
than one floor...**

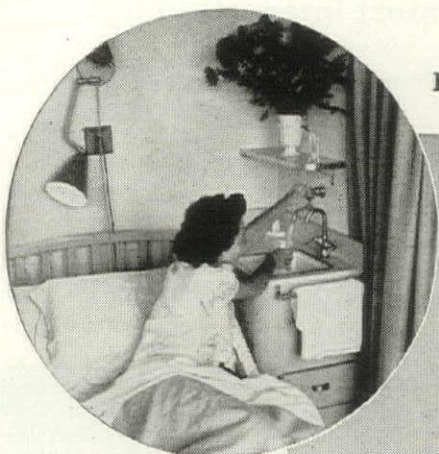
think of

Sedgwick

For free specification service and engineering recommendations, write:

SEDGWICK MACHINE WORKS

140 W. 15th St., New York 11, N. Y.



KAISER FOUNDATION MEDICAL CENTER • LOS ANGELES

WOLFF & PHILLIPS
architects

THOMAS TAYLOR
mechanical engineer

F. D. REED CO.
plumbing contractor

CRANE CO.
plumbing wholesaler



Photographs by WILLIAM CLINKSCALES



THE HOSPITAL OF MANY INNOVATIONS

• Climaxing 20 years of study of hospital problems relating to staff effectiveness and patient comfort, is the new Kaiser Foundation Medical Center. Sometimes termed "the hospital of innovations," all rooms face balconies from which visitors enter patients' rooms through sliding glass doors. The inner central corridor is restricted to staff traffic only. Other new ideas are beds that are raised and lowered electrically—a self-service lavatory at each

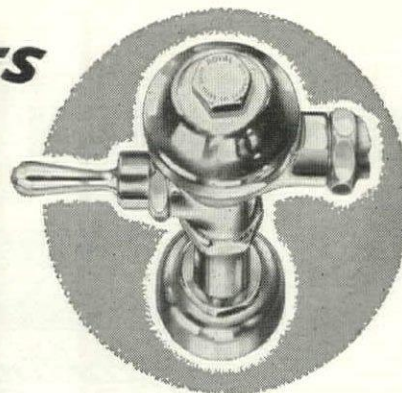
bedside—an individual toilet and clothes closet for each patient. There are no wards and no more than two persons to any room. In the maternity section a fully equipped nursery adjoins each group of four rooms. When a mother wants her baby she pulls out a steel drawer and there he is! When planning a hospital of such high merit it is significant that SLOAN *Quiet-Flush* VALVES were selected—more proof of preference that explains why...

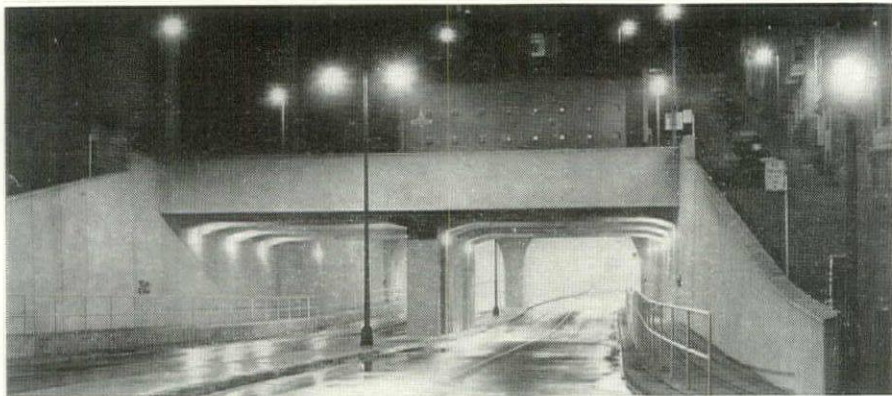
more **SLOAN** *Flush* **VALVES**
are sold than all other makes combined

SLOAN VALVE COMPANY • CHICAGO • ILLINOIS

Another achievement in efficiency, endurance and economy is the SLOAN *Act-O-Matic* SHOWER HEAD, which is automatically self-cleaning each time it is used! No clogging. No dripping. Architects specify, and Wholesalers and Master Plumbers recommend the *Act-O-Matic*—the better shower head for better bathing.

Write for completely descriptive folder

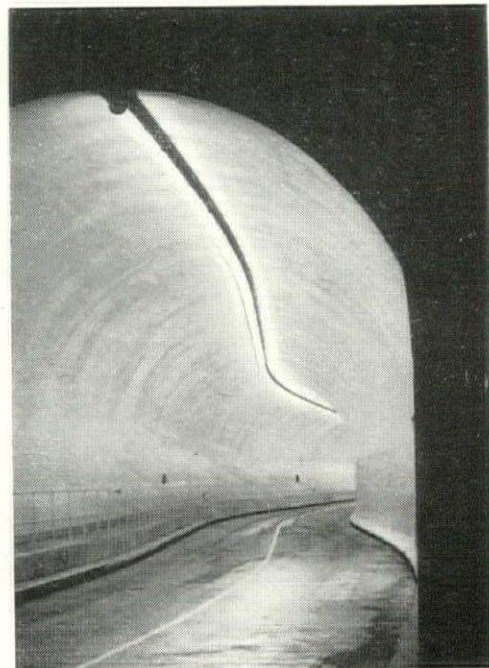




"My most interesting lighting job"

Top prize winners of nationwide lighting contest

Last month, at the Illuminating Engineering Society's National Conference in New York City, leading engineers voted the national awards for lighting installations from the winners of nine regional contests for "my most interesting lighting job."



FIRST PRIZE—lighting an automobile tunnel. By Lighting Engineer Merrill R. Humber

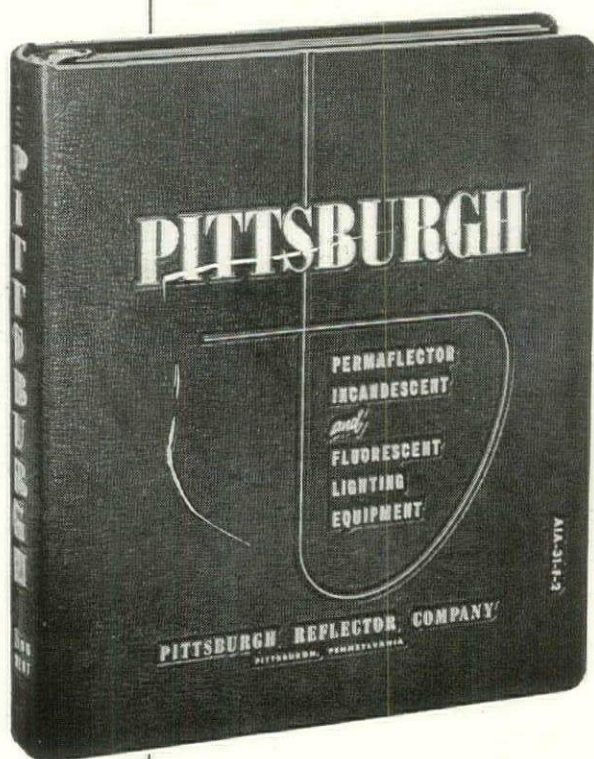
The Broadway Tunnel through Russian Hill in San Francisco is a twin bore tunnel 1,616' long lined with yellow glazed tile having a reflection factor of 75% (only 65% to a height of 8' on the side walls).

To minimize glaring contrast at entrances and exits lighting levels are reduced gradually with the help of 40'-long glass-block skylights at each end. By daytime, with 400 foot-candles at the entrance, there will be about 65 foot-candles under the skylight. First lighting fixtures provide 26 foot-candles at the start of the tiled section; this is cut to 13 foot-candles in the middle of the tunnel, increasing again to 22 foot-candles at the exit.

Lighting fixtures consist of three-tube fluorescent units with plastic diffusers set in series along the roof of the tunnel. For night operation the third tube on each lamp is switched off to give 13 foot-candles on the roadway throughout. Ballasts of the lamps are wired in series, which save 3,000 kw-h annually. Brightness ratios are kept to a maximum of 7-to-1.

continued on p. 188

the comprehensive handbook



for lighting

- Show Windows
- Store Interiors
- Office Buildings
- Schools
- Hospitals
- Banks
- Hotels
- Drafting Rooms
- Factories

and other interior and exterior applications

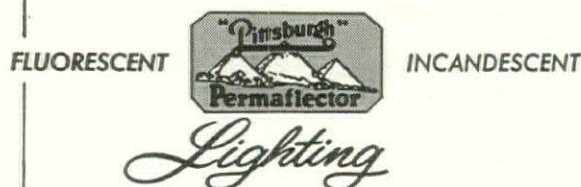
"Must Reading" for men engaged in lighting! The expanded Pittsburgh Lighting Catalog PLL is *all new* . . . contains over 1,000 photographs, drawings, tables . . . 116 pages of data covering fluorescent and incandescent lighting equipment and its scientific application in all types of installations.

Reserve Your Copy Now

on your letterhead

PITTSBURGH REFLECTOR COMPANY

401 OLIVER BUILDING, PITTSBURGH 22, PA.



REPRESENTATIVES IN PRINCIPAL CITIES • WHOLESALERS EVERYWHERE

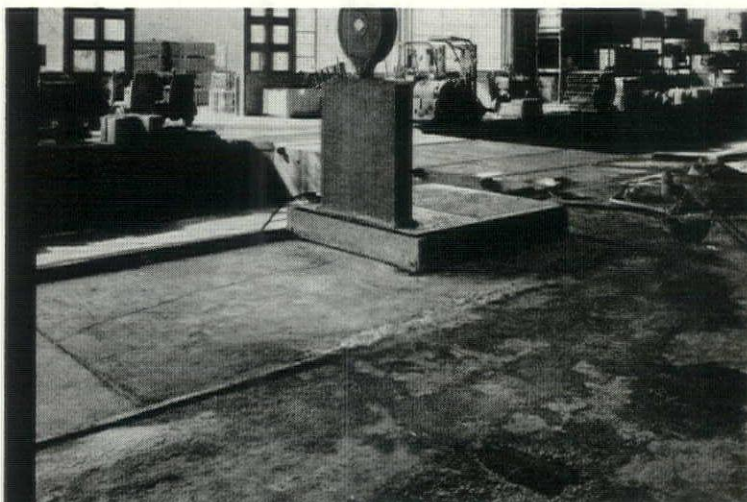
SURCO INDUSTRIAL FLOORS

Easy to Apply...

Hard to Wear Out!

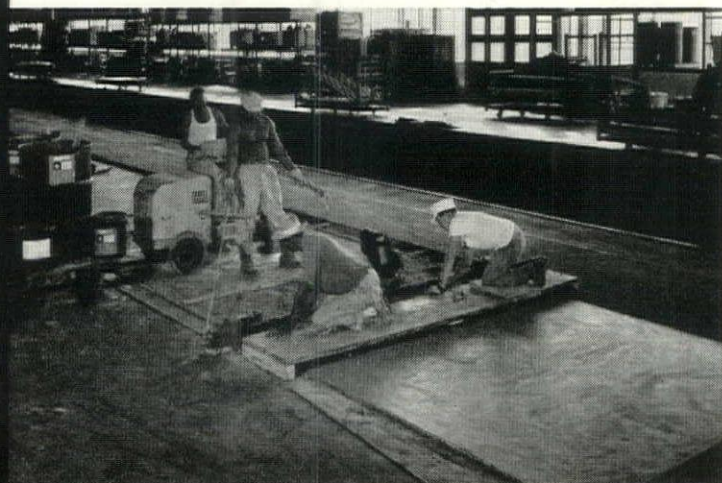
SURCO is a new latex-water emulsion binder which allows the mixing of rubber and cementitious materials. It is the only material which provides concrete, mortars and plasters with the combined qualities of adhesion, resilience, elasticity and durability. SURCO, in thickness of 1/32 inch or more, bonds permanently to old concrete, wood, metal, masonry, even glass. Usually no structural changes are necessary before its application. Because of such qualities, SURCO lends itself admirably to the permanent restoration of industrial flooring. These pictures show how easily SURCO Red Label mix was applied to stop deterioration of the concrete loading platform in a large automotive assembly plant.

SURCO has been rigidly tested in the laboratories of one of the nation's leading technological institutions, and has been proved by actual performance. SURCO supplies durability, comfort and beauty to industrial and terrazzo flooring, waterproof plasters and weatherproof mortars.



Easy Preparation

1. This loading platform had been badly pitted from constant traffic. Preparation for applying SURCO consisted merely of cleaning away grease and asphalt, down to original concrete floor. Since SURCO was applied in 1/4 inch thickness, it was not necessary to move heavy weighing scales and other equipment.



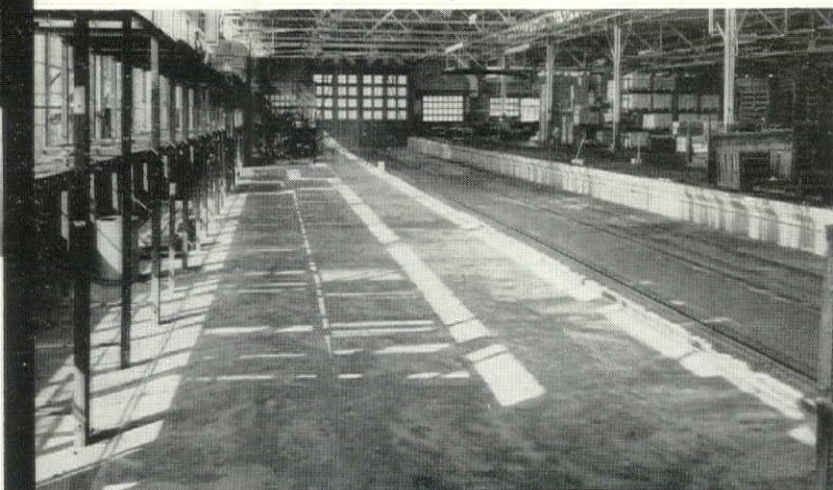
Easy Application

2. Mixing, screeding and floating are done simultaneously. In this plant 50,000 sq. ft. of SURCO were applied, a section at a time, without effecting its permanence. Thus, normal activity was disrupted to a minimum degree.



3. Easy Finishing

After setting for a short time, SURCO is given a smooth finish by simple trowelling.



Hard Wearing

4. Under ordinary conditions SURCO'S curing time is the same as concrete's. It may be released for light traffic in thirty-six hours and for very heavy traffic in seven days. Tests have shown that SURCO withstands heavy traffic better than concrete fortified with the best available hardeners.

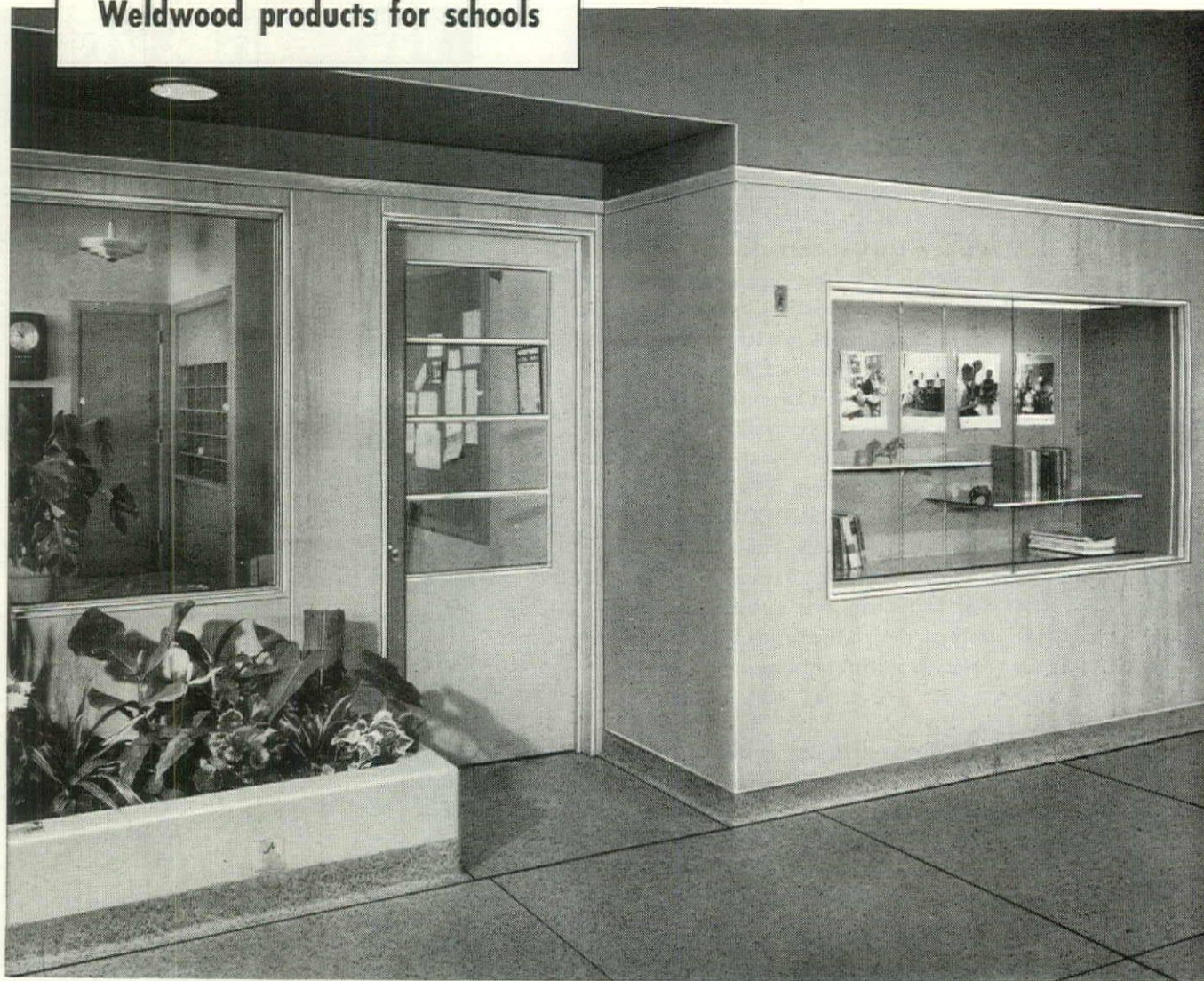


A copy of our catalog will be sent upon request. Write today.

SURFACE COATINGS, INC.
110 Pear Street, S.E.,
Atlanta, Georgia

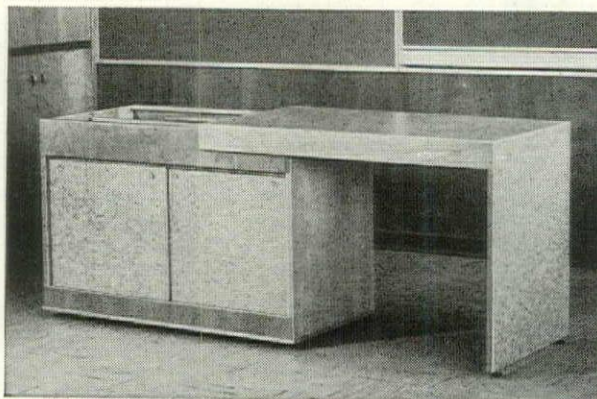


**Why architects specify
Weldwood products for schools**



RED OAK WELDWOOD paneling in the main entrance hall of new Midland School, Rye, New York. Architect: Emilio di Rienzo. Gen. Contr: Peter A. Camilli & Sons.

Low first cost, low maintenance,



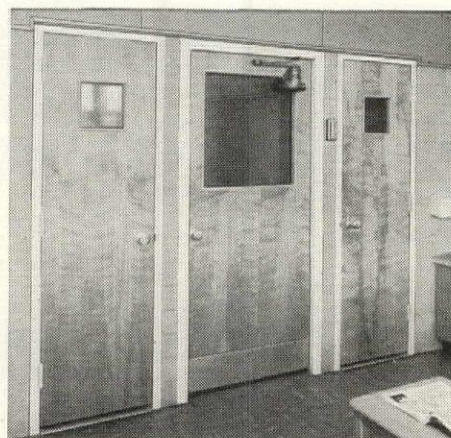
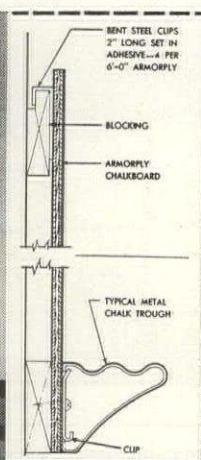
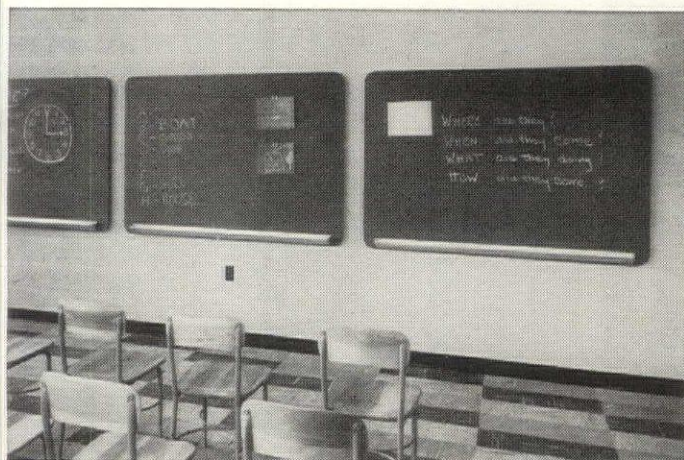
TEACHER'S DESK and movable storage cabinet in each classroom of the Foster A. Begg School in Manhattan Beach, California. Made of Novoply, this desk is a compact unit 3 feet and 11 inches long—can be telescoped an additional 2 feet 7 inches to provide working space 6½ feet long. Architects: Daniel, Mann, and Johnson & Mendenhall.

More imaginative and functional school designs are now possible with Weldwood products.

Designers of new schools and modernizers of older ones have discovered that lower building and maintenance costs need not be dependent on drab, institutional designs. A variety of Weldwood products now makes possible a fresh, functional approach designed to aid the pupil without increasing the burden of the taxpayer.

WELDWOOD HARDWOOD PANELING, for instance, adds the warmth and beauty of natural wood to every room in the school, yet it never needs to be painted and is guaranteed for the life of the building.

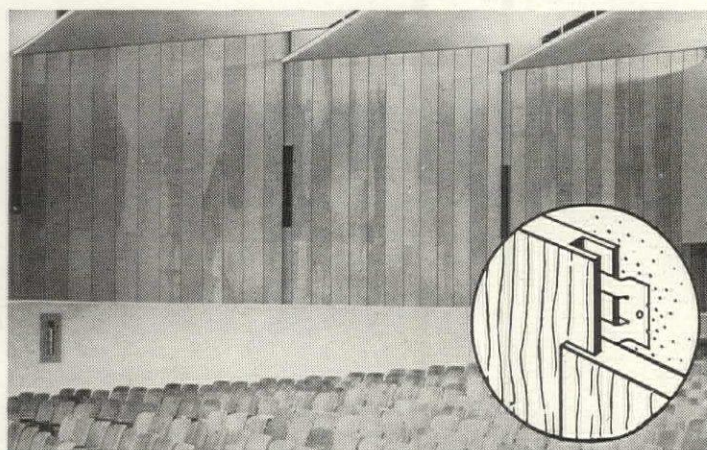
ARMORPLY† CHALKBOARD has many advantages over the old "blackboard." You can save up to 30% on installation because it requires no frame. Resists cracks and scratches, takes chalk beautifully, and its pleasing green surface is easier on young eyes. It leads a double life too! Armorply Chalkboard's porcelain-on-steel face* attracts magnets and becomes a visual educational aid.



LOOK WHAT'S HAPPENED to the old "blackboard"! It's now a pleasing, eye-easy, green. Porcelain-surfaced steel attracts magnets! Won't scratch, chip or crack. Saves up to 30% on installation because it needs no frame. Sketch shows how easily it attaches to wall. Guaranteed to last the life of the building. Fairlawn Junior High School, Fairlawn, New Jersey. Architect: Arthur Rigolo. Installed by: Atkins & Co.

THE LIGHT cut-outs will not weaken the rigidity of these birch Weldwood Stay-Strate Doors. The Weldwood Fire Door carries the U. L. label for class B and C openings. Lake Hiawatha School, Troy Hills, N. J. Architect: Emil A. Schmidlin. Gen. Contr: A. Lowe & Co.

DURABLE crack-free Novoply-walled corridor. Cuts maintenance costs. Novoply panels are quickly installed—speed up building time. Unqua School, Massapequa, L. I., New York. Architect: George J. Dippe. Gen. Contr: Schumacher & Forelle, Inc.



THE FUNCTIONAL beauty and adaptability of Weldwood products is the keynote here. Unique closets were made from sturdy Oak Weldwood. Holmes School, Darien, Conn. Architects: Ketchum, Gina and Sharp. Gen. Contr: Sam Grasso Co. Inc.

THIS RICH LOOKING auditorium wall was achieved with prefinished birch Plankweld®. Insert shows how simple it is to erect Plankweld. Metal clips hold narrow-width panels to wall; edges are grooved and overlap to conceal nails. Available in five handsome hardwoods; no painting or on-the-job finishing necessary. Attaches to any surface. Hillside School, Montclair, New Jersey. Architects: Starrett and Van Vleck and Reginald Marsh Associates. Gen. Contr: Frank W. Bogert.

lasting beauty

THEN THERE'S THE NEW WELDWOOD product—Novoply®. It's a new, beautiful, low-cost wood panel which can be quickly and easily installed. Most dimensionally stable wood panel ever produced—is practically warp-free. Wax it, stain it, or finish it natural. It thrives on rough treatment. Good two sides, it's perfect for wall paneling, sliding doors, partitions, built-ins and furniture.

WELDWOOD STAY-STRATE DOORS and Weldwood Fire Doors are renowned for the mineral core used in their construction. The Weldwood Fire Door carries the Underwriters' Laboratory label for class B and C openings. Both doors are available in a variety of beautiful woods and are guaranteed for the "life of the installation" against warping, shrinking or swelling even under the most adverse conditions.

Contemplating school modernization or new construction? Then look to Weldwood for materials that guarantee beauty as well as long life. 60 United States Plywood or U. S.-Mengel showrooms located from coast to coast will welcome your visit.

†Trademark

*Porcelain enamel surface by The Bettinger Corporation



Weldwood®

United States Plywood Corporation

WORLD'S LARGEST PLYWOOD ORGANIZATION

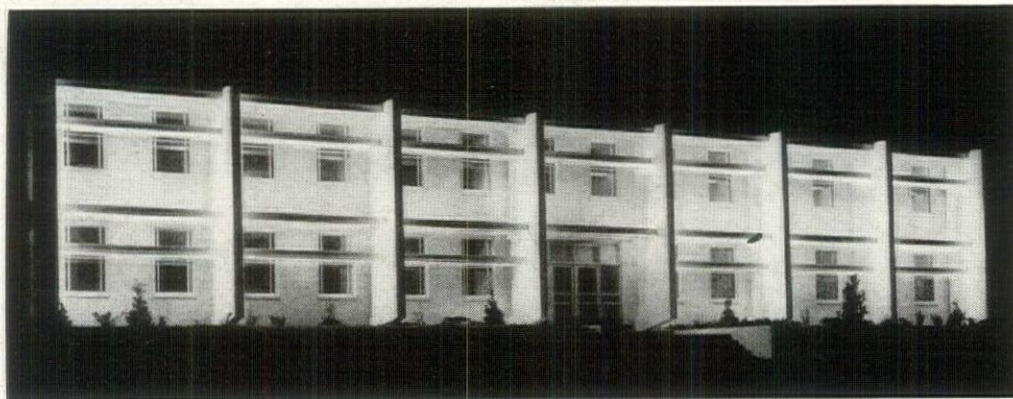
Weldwood Building, 55 West 44th Street, New York 36, N. Y.

and U.S.-Mengel Plywoods, Inc., Louisville, Kentucky

DISTRIBUTING UNITS IN 60 PRINCIPAL CITIES

Weldwood is a registered trademark

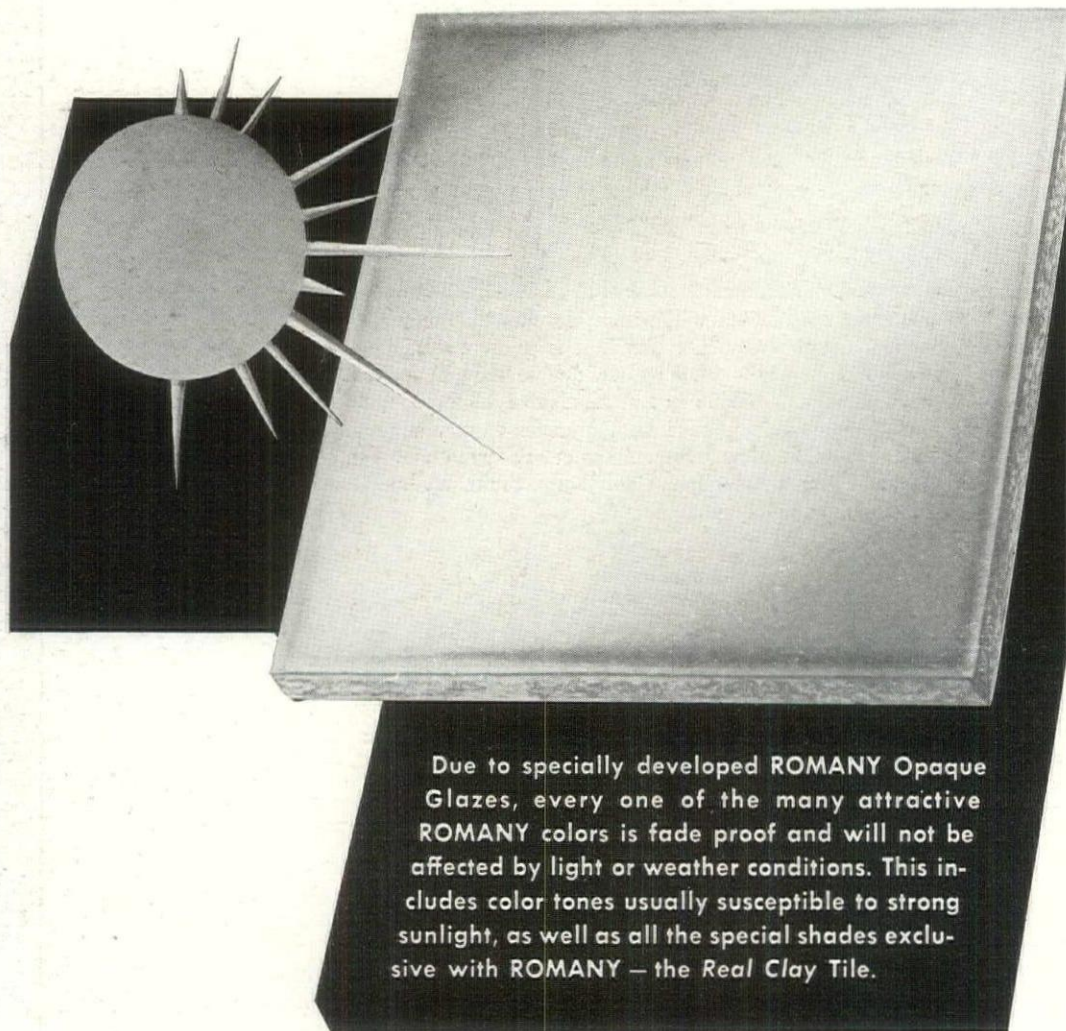
United States Plywood Corporation AF-11-53
Weldwood Building, 55 West 44th St., N. Y. 36, N.Y.
FREE: Please send me literature on:
Name
Position in school, schoolboard or other
Address
City State



Bob Crawford

ROMANY TILES
ARE REAL TILES

Won't Fade!



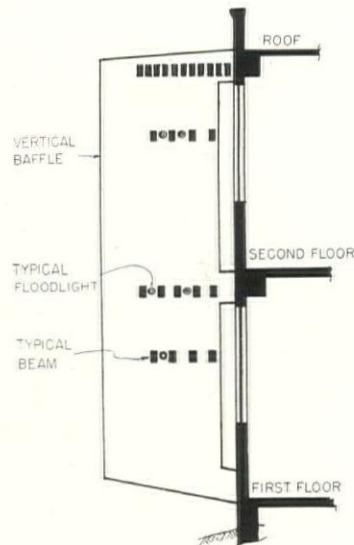
Due to specially developed ROMANY Opaque Glazes, every one of the many attractive ROMANY colors is fade proof and will not be affected by light or weather conditions. This includes color tones usually susceptible to strong sunlight, as well as all the special shades exclusive with ROMANY — the Real Clay Tile.

Every Architect should
have our Sample Tile
Chart No. 6. It's free.

UNITED STATES QUARRY TILE CO

Member: Tile Council of America and Producers' Council, Inc.

217-J FOURTH ST., N.E., CANTON 2, OHIO



THIRD PRIZE—economical floodlighting. By Engineer Mario G. Zervigon

This two-story laboratory building of the Mississippi State Highway Dept. at Batesville, Miss. is given a cell-like appearance by its vertical and horizontal louvers. In floodlighting the building the effect of depth is heightened by contrasting the dark outlines of the leading edges with the high brightness of the fins and the dark bricks of the building proper. Architects Johnstone & Jones designed the building.

Each vertical fin is lit with five 150-w. reflector lamps concealed behind horizontal beams spanning between fins. Lamps are directed onto the fin opposite so that no glare enters the windows of the building. Fixtures and wires cost only \$856 (5% of total electrical contract) while the power consumption is also low at 10.2 kw.



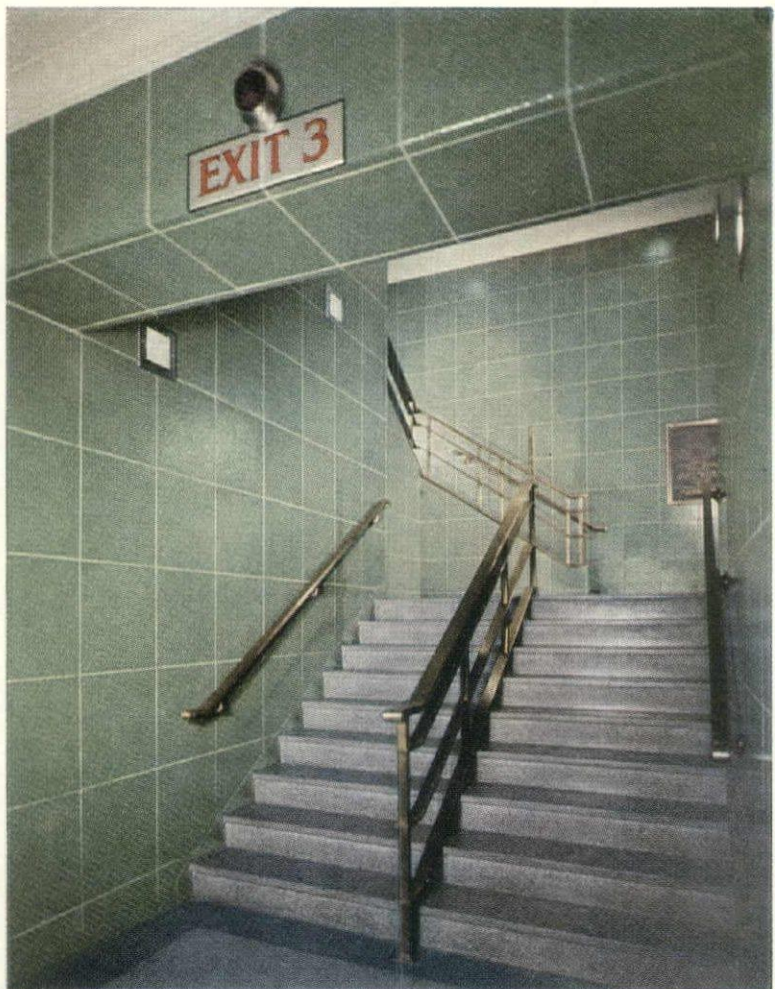
SECOND PRIZE—lighting an executive office. By Engineer Nick Stuffer

This dark-paneled 16' x 24' office for the Westinghouse Co. is on the 23rd floor of one of the new Gateway Center buildings in Pittsburgh. Conference space in one half of the room requires medium intensity lighting while the working desks in the other half require higher lighting levels. The problem is resolved by luminous plastic panels around the perimeter of the office to light the dark-paneled walls, plus general lighting by two 5' x 10' boxes one above each working area, shielded by 45° aluminum louvers.

Fixtures give 40, 75 or 100 foot-candles on the desks, 30 or 50 on conference tables.

Colorful architectural terra cotta challenges time & traffic!

PUBLIC SCHOOL NO. 93
New York, N. Y.
Board of Education of the
City of New York
Eric Kebbon—*Architect*
Caristo Constr. Corp.—*Builders*
Facing for vestibule of entrance,
lobby and entrance hall, is archi-
tectural terra cotta in units ap-
proximately 18" x 18".



LAKEVIEW ELEMENTARY SCHOOL
New Orleans, La.
Favrot, Reed, Mathes & Bergman
Architects
Farnsworth & Chambers Co., Inc.
Builders

Six pictorial polychrome panels of
Enduro-Ashlar Architectural Terra
Cotta are 4' square and give a
colorful, pleasing contrast to the
face brick.



FEDERAL SEABOARD TERRA COTTA CORPORATION

10 East 40th Street, New York 16, N. Y.
PLANTS AT PERTH AMBOY AND SOUTH AMBOY, N. J.

THE FIRE-HARDENED, glazed surface of architectural terra cotta is meeting the test of time in hundreds of educational institutions from elementary schools to universities. No other building material offers so much in quality, appearance, permanence and price. It is custom-made to your specifications, in an unlimited range of ceramic colors . . . in units large or small, for interiors or exteriors, plain surfaces or polychrome features. Even in the busiest of schools, the original richness of terra cotta can be retained indefinitely by simple soap and water washings. To add color to the buildings now on your boards, write for latest data today.

Construction detail, data, color samples, estimates, advice on preliminary sketches, will be furnished promptly without charge on Architectural Terra Cotta and Ceramic Veneer.



WHAT YOU DO **RIGHT NOW** IS MIGHTY IMPORTANT

That moment when he hits . . . if you don't set the hook hard and firm, you'll never see him in the boat. And *this* moment in business . . . now's the time to give yourself the competitive edge you're going to need, perhaps sooner than you think. • Allegheny Metal can reduce costs, add strength, increase service life, improve appearance, cut weight, overcome rust. How many of those properties of stainless steel can you use to advantage, and how can we help you to do so? *Allegheny Ludlum Steel Corporation, Oliver Bldg., Pittsburgh 22, Pennsylvania.*

You can make it **BETTER** with
Allegheny Metal

Warehouse stocks carried by all Ryerson plants

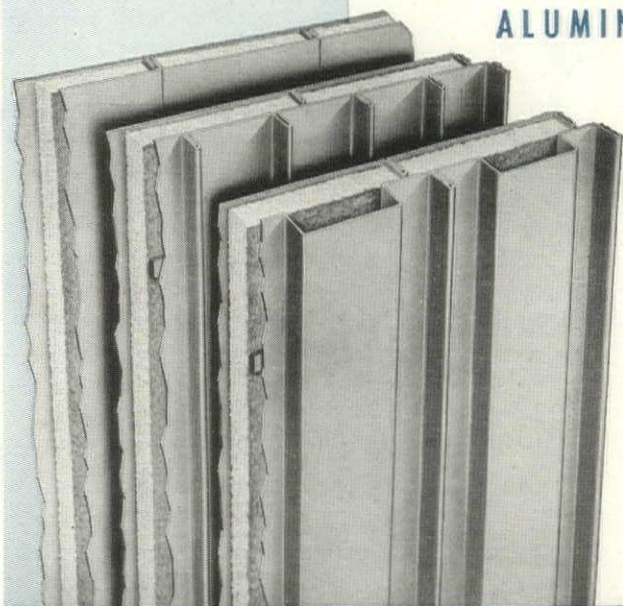


INSULATED

METAL WALLS

for INDUSTRIAL and COMMERCIAL BUILDINGS

ALUMINUM, STAINLESS or GALVANIZED STEEL



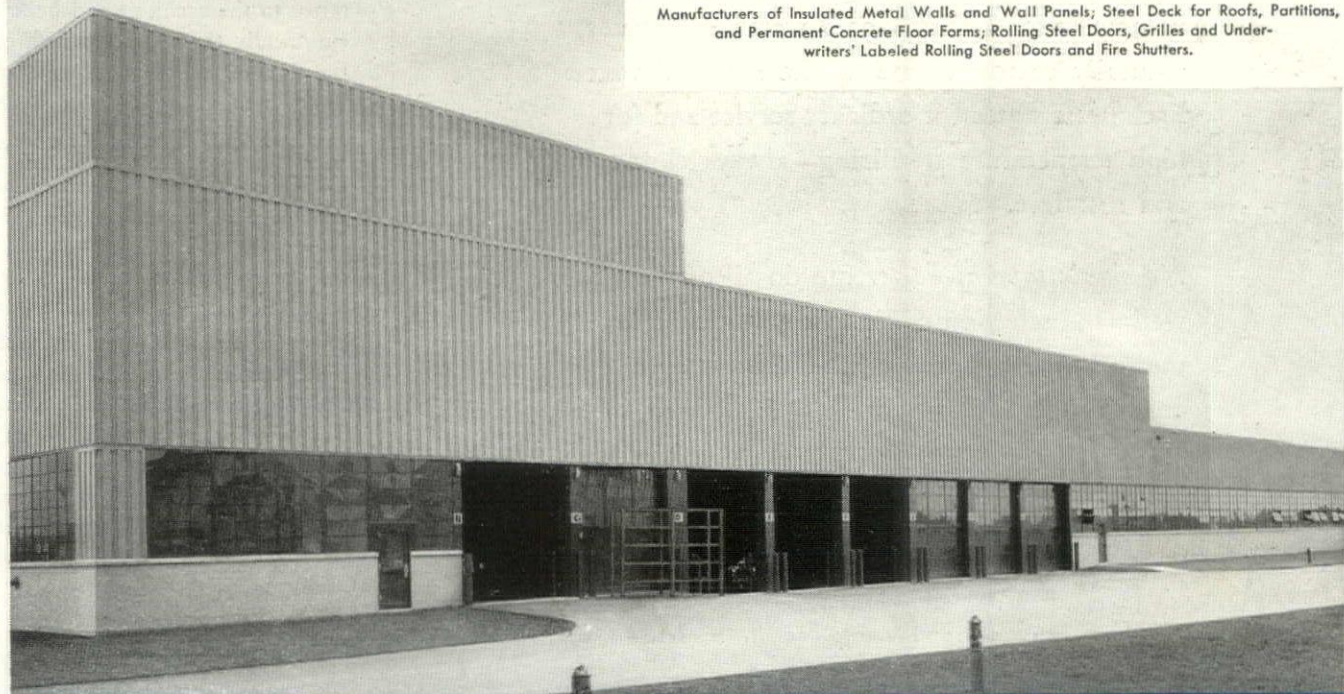
FLUSH, RIBBED, or FLUTED
Over-all "U" Factor of Various Types is Equivalent
to or Better than Conventional 16" Masonry Wall

New industrial and commercial buildings constructed with insulated metal walls are appearing in every section of the country. Bright Aluminum and Stainless Steel exterior surfaces in complete manufacturing plants, powerhouses and office buildings clearly indicate the trend in modern construction. Enthusiasm of architects and owners is not confined to design effects obtainable and the over-all appearance of such structures . . . important economies in lower material cost, lower labor cost, and the accumulative advantages of reduced construction time resulting from rapid erection—even in sub-zero weather—were quickly recognized. Buildings can be quickly enclosed with insulated metal walls under low temperature conditions which would preclude masonry construction. Mahon Insulated Metal Walls are available in the three exterior patterns shown at left. The Mahon "Field Constructed" Fluted or Ribbed Wall can be erected up to sixty feet in height without a horizontal joint—a feature of Mahon walls which is particularly desirable in powerhouses or other buildings where high expanses of unbroken wall surface are common. See Sweet's File for information, or write for Catalog No. B-54-B.

THE R. C. MAHON COMPANY

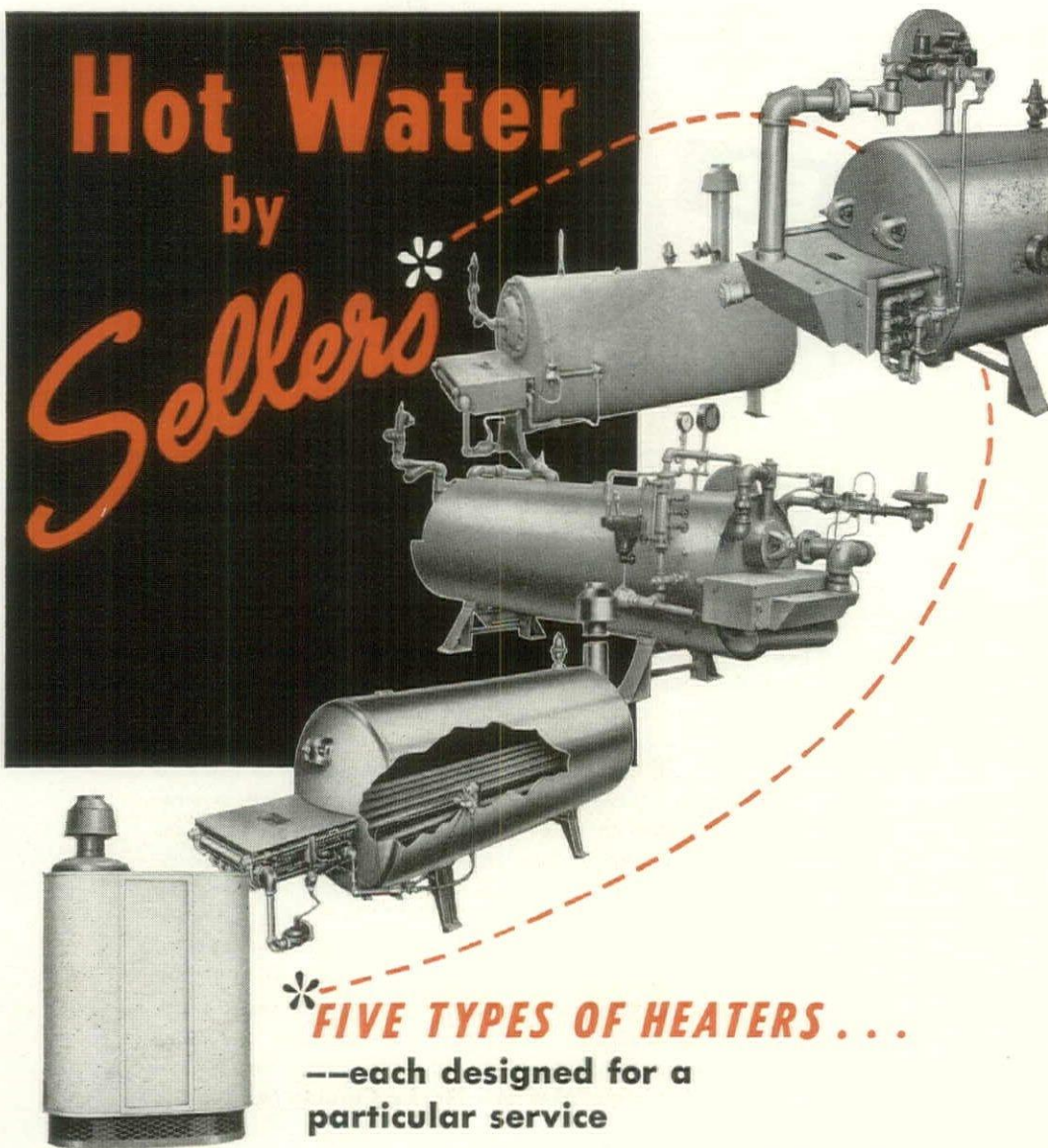
Detroit 34, Mich. • Chicago 4, Ill. • Representatives in All Principal Cities

Manufacturers of Insulated Metal Walls and Wall Panels; Steel Deck for Roofs, Partitions, and Permanent Concrete Floor Forms; Rolling Steel Doors, Grilles and Underwriters' Labeled Rolling Steel Doors and Fire Shutters.



In the new plant illustrated above, built for an Appliance Manufacturer, 71,000 sq. ft. of Mahon Insulated Metal Walls of the Fluted Pattern were employed. John B. Pike & Son, General Contractors.

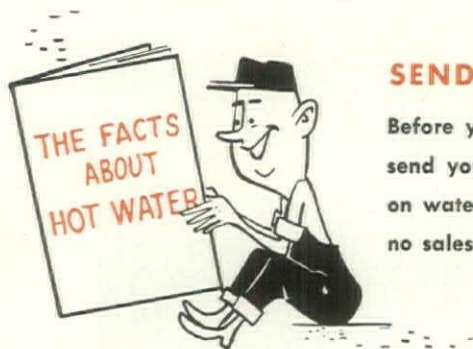
MAHON



*** FIVE TYPES OF HEATERS ...**
—each designed for a particular service

Together they cover the entire field of large volume water heating—hard water, soft water, naturally corrosive, and zeolite softened water. Each heats water for ordinary service and for high temperature sterilizing—always clean and rust free.

No single type of heater can do all of these jobs well—the selection of the correct type from the full Sellers' line and Sellers' experience are required.



SEND FOR YOUR FREE COPY!

Before you buy any water heater—
 send your letterhead for this informative story
 on water and how to heat it. It's free—
 no salesman will call. Address Dept. A-6.

Sellers ENGINEERING CO.

4876 N. CLARK STREET CHICAGO, ILL.

Blast Heaters • Immersion Automatic Water Heaters • Combustion Units • Industrial Gas Burners
 Vertical Steam Boilers • Immersion Tank Heaters • Gas Combustion Equipment

BOOK REVIEWS

PENCIL TECHNIQUES IN MODERN DESIGN. By William W. Atkin, Raniero Corbelletti and Vincent R. Fiore. Reinhold Publishing Corp., 330 W. 42nd St., New York 36, N.Y. 122 pp. 8½" x 11". Illus. \$8.25

New architecture means new rendering, and this book—the first in a series on various techniques—has many fine examples of the new techniques which have gradually appeared to delineate today's spare structures. The authors have put the book together for practitioners as well as students and have chosen their renderers well to show techniques from "scumbling," "pencil painting," etc., through to a chapter specifically on pencil rendering for printing processes.

Then they close with the problem of detailed advice on pencils, paper, strokes, composition, proportion, perspective, shades and shadows. It is a valuable book. The approach is clear and analytical and good specific comments are attached to the illustrations. The next in the series will be on models.

REVIEW OF ASTM RESEARCH. American Society for Testing Materials, 1016 Race St., Philadelphia 3, Pa. 20 pp. 8" x 11". No charge. This pamphlet, reprinted from the Dec. '52, Jan. and Feb. '53 ASTM Bulletins, summarizes the work of 52 technical committees of the Society as of May, '53.

Although most of the research is of a highly technical nature for the benefit of manufacturers, 12 committees are doing work of interest to the architect and building engineer, specifically those dealing with corrosion and fire tests of materials and construction.

RECOMMENDED PRACTICE FOR SUPPLEMENTARY LIGHTING. By the Lighting Study Projects Committee of the Illuminating Engineering Society. Available for the Publications Office of the Society at 1860 Broadway, New York 23, N.Y. 16 pp. 8" x 11". Illus. 50¢

This guide deals primarily with the many critical seeing tasks involved in fabrication and inspection for manufacturing processes. Designed for use with the recently published Industrial Lighting Standard, the new guide recommends lighting which is supplementary to the general lighting systems and gives the solution to many extraordinary lighting problems.

FAITH BUILDS A CHAPEL. By Winifred C. Boynton. Reinhold Publishing Corp., 330 W. 42nd St., New York 36, N.Y. 135 pp. 8¼" x 12¼". Illus. \$8.50

This beautiful book describes a stimulating adventure. It tells the story of how Mrs. Boynton and her husband, lacking any formal training in craftsmanship, conceived and built entirely by hand over a period of nine years, a fifteenth century Norwegian chapel on their summer estate in Door County, Wis.



It's Here!

**THE MOST
AMAZING PAINT
DEVELOPMENT
IN 100 YEARS**

M. & W. CO.
PLEXTONE[®]
SINCE 1876 (Mfd. under U. S. Pt. #2591904)

MAAS & WALDSTEIN CO.
Newark, N. J. • Chicago • Los Angeles

"Williams Green" color-flecked PLEXTONE styled by Beatrice West

The Most Amazing Paint Development

M. & W. CO.

**COLOR-
FLECKED**

PLEXTONE®

(Mfd. under U. S. Pat. #2591904)

SINCE 1876

TEXTURED

A REVOLUTIONARY NEW COLOR RESOURCE FOR ARCHITECTS

Color with brushed-on paint has been limited to solid tones or wipe-on coats. Multicolor effects have been achieved by time-consuming effort, or the use of expensive wall coverings.

Now, with color-flecked, textured PLEXTONE, you can create unlimited multicolor combinations of contrasting hues of solid colors and achieve the subtle beauty of textured wall-paper. The color flecks in PLEXTONE are "through-the-film." They are part of the film and cannot wash nor wear off.

Color-flecked PLEXTONE produces a lasting bond to any material commonly used in building interiors—plaster, gypsum wallboard, hard board, plywood, solid wood, concrete and metal—and makes possible dramatic color schemes no matter what the underlying surface. One easy-to-apply spray-coat completely covers primed dry wall seams and minor imperfections in interior finish.

A NEW VEHICLE FOR DECORATORS

Would you like to see in one spray coat . . .

- a textured painted surface with hiding power of the best stippling
- the dramatic effect of the most skillful spatter-dash painting
- the restrained beauty of high-grade textured wallpaper?

You can produce all three — color, texture and spatter-dash effect — in one easy-to-apply coat with color-flecked textured PLEXTONE. Subtle tones-on-tone, or a circus of brilliant colors can be sprayed at one time, from one gun, in one coat that covers COMPLETELY!

You can choose from twelve color-flecked PLEXTONE colors styled by Beatrice West, famous Color Consultant and Interior Designer, for modern or traditional interiors, or for large projects you can create your own palette of PLEXTONE. Color-flecked PLEXTONE is flat and gives a textured surface when applied. It adheres firmly to all commonly used interior structural materials.

AN EASY-TO-USE COST-CUTTER FOR BUILDERS

Color-flecked PLEXTONE is applied in one coat with ordinary spray equipment. It bonds tightly to all common building materials. One coat completely covers minor imperfections in primed taped wallboard joints, trim, plaster and other interior finish — eliminates costly preparation work on the paint job.

There is no spray dust! Result: A quick, easy job — no "do-overs" — no messy clean-up.

Color-flecked PLEXTONE can be applied to interior surfaces — in new construction or in building modernization — before plumbing and lighting fixtures are installed. Color-flecked PLEXTONE is amazingly resistant to chipping and abrasion — stands hard scrubbing, abuse — and touch-ups defy detection! Soil marks left by workmen are easily washed off. Minor damage can be covered with a quick touch-up that cannot be detected!

A BOON TO OWNERS AND MAINTENANCE MEN

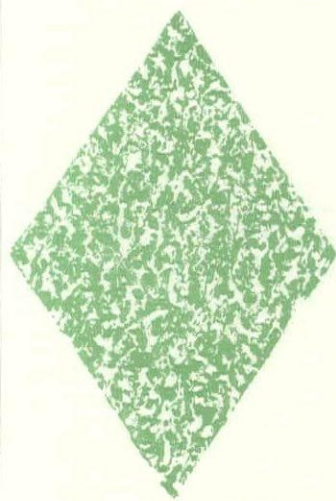
Maintenance men can now look on with steady nerves and normal blood pressure as children romp through school halls and smudge and smear them — as the careless delivery man bumps and scrapes his way into the building — as the doodlers mark and scrawl. With color-flecked PLEXTONE no real harm is done. Ink, mercurochrome, crayon, pencil, and other soil can be whisked away with common household solvents, detergents or soap and water. Or you can even sandpaper stubborn spots. And if some really rambunctious individual gives color-flecked PLEXTONE a workout, nicks and gouges can be covered up with a once-over spray so completely and perfectly that the touch-up job will defy detection.

Color-flecked PLEXTONE cuts maintenance cost way, way down. It can be cleaned thousands of times with soap and water — or scoured with abrasive kitchen cleansers — without affecting its original rich, textured color-flecked beauty.

In 100 Years

Can you imagine a one-coat flat interior enamel — integrally color-flecked with one or more harmonizing colors — that has the soft beauty of wallpaper — yet so rugged that it can be sandpapered without marring the surface? That's PLEXTONE — the NEW color-flecked miracle paint of the Century!

ENAMEL



COLOR-FLECKED PLEXTONE
"WILLIAMS GREEN"

One of twelve decorator color combinations styled by Beatrice West. Also available in twelve solid colors and in custom colors for large projects.

Thousands of homes, apartments, offices, schools, hospitals, housing projects, and other types of structures have already been painted with color-flecked PLEXTONE. Here are typical comments from recent letters:

"... we like it more as time goes on. Its toughness and washability have won it many friends."

"Your Plextone was a real 'conversation piece' among the crowds that saw the houses. There is no doubt Plextone helps promote sales."

"... five days after the opening of the sample house, forty homes were sold. Plextone has been a fine sales feature..."

*names on request

FACTS ABOUT AMAZING *COLOR-FLECKED* PLEXTONE

- one spray coat covers completely
- easy to apply with ordinary spray equipment and spray techniques
- no spray dust
- bonds firmly to all common interior building materials
- covers minor imperfections in interior finish
- comes ready-to-use
- finish is flat
- color flecks are "through-the-film" — will not wear off
- finished job has textured surface
- decorator colors styled by Beatrice West — twelve color-flecked, twelve solid
- custom colors for large projects
- cleans easily
- stands hard scrubbing and scouring
- stands abuse — resists wear, abrasion, chipping and cracking
- can be touched up without showing



Give color-flecked PLEXTONE the "3-way" test. Mark it with the Kiddie's favorite wall devastator — Wax Crayon! Then

1. Clean it with alcohol, gasoline or carbon tetrachloride
2. Wash with soap and water or a detergent and water
3. Sandpaper any faint traces of color left with 00 sandpaper — you'll not mar the surface.

Prove it yourself! Send for **FREE** jumbo color chips, PLEXTONE sample and complete application data today.

MAIL COUPON NOW!

Insurance and Mortgage Companies, Realty Operators, Government Officials, Institutions, Educational Groups please **NOTE!**

Color-flecked PLEXTONE cuts maintenance costs way, way, way down!

PLEXTONE is tough — That's why it stands up under the bumps and scrapes of daily use.

PLEXTONE is more durable — its film is harder and thicker than ordinary paint. Saves cost of frequent repainting.

PLEXTONE does not stain — Crayon marks, ink, candy stains, grease, dirt and other soil are removed quickly without surface damage.

PLEXTONE is scrubbable — Thousands of scrubblings with soap and water or detergents will not harm it.

GET THE FULL FACTS. MAIL COUPON TODAY.



MAAS & WALDSTEIN CO.

2123 McCARTER HIGHWAY, NEWARK 4, NEW JERSEY
Midwest Division: 1658 Carroll Ave., Chicago 12, Illinois
Pacific Coast Division:
Smith-Davis Co., 10751 Venice Blvd., Los Angeles 34, Calif.

Maas & Waldstein Co.
PLEXTONE Division
2125 McCarter Highway
Newark 4, New Jersey

COUPON

Gentlemen: I want to make the "3-way" test on PLEXTONE. Please rush **FREE** color chips, PLEXTONE sample and application data.

NAME _____

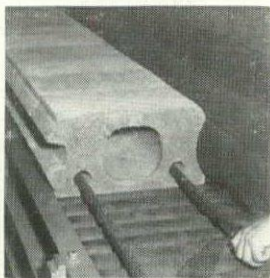
TITLE (or occupation) _____

COMPANY _____

ADDRESS _____

CITY _____ ZONE _____ STATE _____

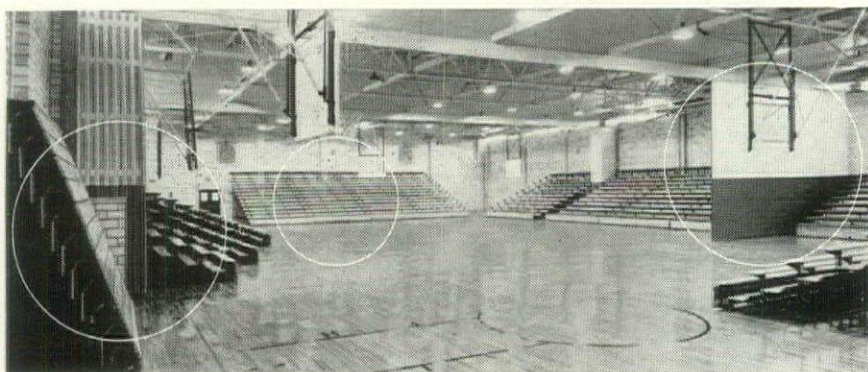
PRODUCT NEWS



Assembled from blocks of lightweight concrete, the beams are reinforced with steel rods.

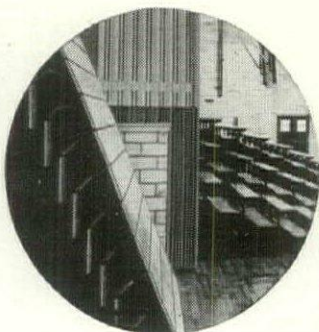


From truck to deck. Lifted by crane as they come from the factory, the concrete beams are set in place side by side to make up the structural roof or floor deck.

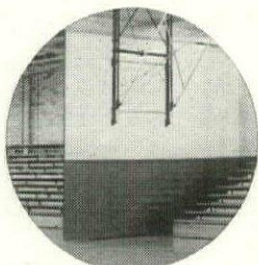
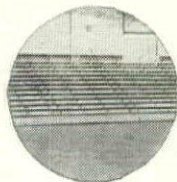


3 gyms in one make sense

HORN Seats—folded mean plenty of room for practice. A smooth safe surface protects players.



HORN Seats—extended mean plenty of room for the paying crowd. Comfortable, easy to clean.



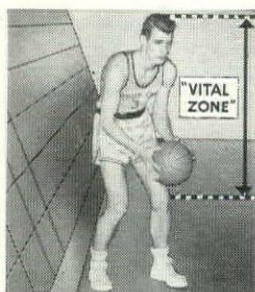
HORN Partitions—electrically operated, easily folded for exhibitions, or extended to provide practice gyms.

FOR SAFETY, plan with HORN! Horn folding gym seats provide a smooth, sloping surface when folded... real protection for the vital zone!

They'll pay for themselves in use! Horn planning and equipment give you maximum gym use—for exhibitions that pay—for efficient practice.

Your local Horn representative helps you plan. Horn factory crews supervise installation. Horn quality construction gives years of trouble-free service.

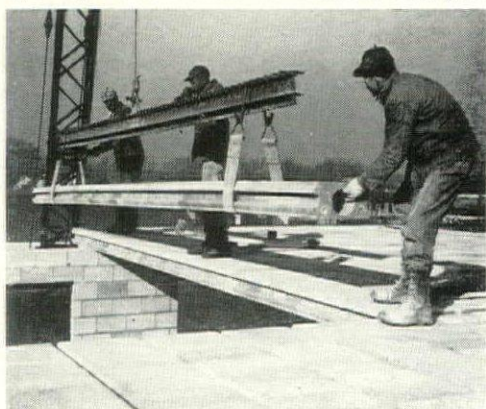
Write today for details on Horn folding gym seats and partitions—and the new folding stages.



Horn

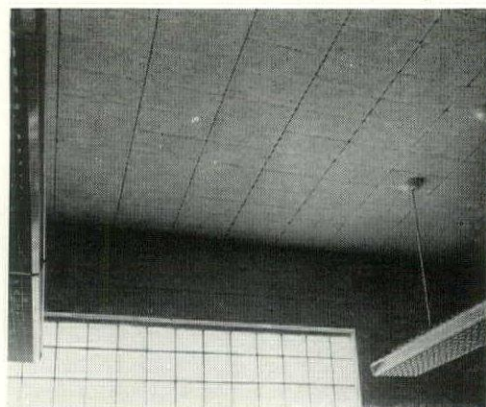
SCHOOL EQUIPMENT DIVISION OF
THE BRUNSWICK-BALKE-COLLENDER COMPANY
623 SOUTH WABASH AVENUE, CHICAGO 5, ILLINOIS

LIGHTWEIGHT CONCRETE BEAMS pre-arched to offset deflection; underside is finished ceiling. Blocks 8" x 16", cast of concrete and expanded shale and precision-ground, are assembled in widthwise runs to make *Rapidex*, a quick-construction floor and roof deck. The beams can span up to 29'-4" under a 30-lb. load, yet the 8"-deep unit weighs only 42 lbs. per sq. ft. and the 6", 30 lbs. Used as flooring, *Rapidex* will safely span 27' under a 75-lb. load. *Haydite*, the chemically inert material used as lightweight aggregate in the production of the block, provides thermal and acoustical insulation, a pleasing textural appearance, a nailable surface—and the high ratio of strength to weight. In the manufacturing process, steel reinforcing rods are centered through the two bottom cores of the beams and concrete is pumped around the rods under high pressure. Allowance for dead-load deflection is made by cambering each assembled beam at the plant. Cement grout poured between the sections during in-



stallation keys them together into a continuous, rigid slab. Having a noise reduction coefficient of .55 (about the same as 1/2" acoustical plaster or tile), *Rapidex* creates a handsome rectilinear grid on the ceiling surface.

continued on p. 204



**BUILT-IN
MAINTENANCE
SAVER ***



Quality Approved

ALUMINUM WINDOWS

Money saved each year on maintenance expense is money available for salaries, for new books, for new equipment, and for a hundred-and-one other purposes. That's why today more and more school authorities are insisting on "Quality-Approved" aluminum windows for all new school buildings.

"Quality-Approved" aluminum windows help reduce school operating budgets—save important maintenance dollars year after year. They cannot rust or rot—never need painting or costly repairs. They always operate without trouble and remain beautiful for the life of the building.

"Quality-Approved" aluminum windows are available through many manufacturers in sizes and styles (double-hung, casement, projected and awning) to fit any design treatment. Only those that carry the "Quality-Approved" Seal have been tested by the Pittsburgh Testing Laboratory and approved for quality of materials, construction, strength of sections and minimum air infiltration.

For copy of window specifications book and names of approved manufacturers, see Sweet's (16a/ALU) or write to Dept. AF-11.

Pictured above:
Saddle Rock Elementary School
Great Neck, N. Y.
Architects: Starrett & Van Vleck
Reginald E. Marsh
Contractor: Wm. A. Berbusse, Jr., Inc.

Aluminum Window Manufacturers Association


74 Trinity Place, New York 6, N. Y.

FOR YOUR PROTECTION INSIST ON QUALITY-APPROVED ALUMINUM WINDOWS



THERE IS a THORO System Product to prevent or correct every water problem.

THERE IS a distributor or dealer to service every type of construction throughout United States, Puerto Rico, Canada and Honolulu.



Get our pictorially-described literature, "HOW TO DO IT" and specification guide.

STANDARD DRY WALL PRODUCTS INC.
NEW EAGLE, PENNSYLVANIA

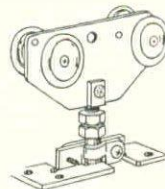
ANSWERS

that help you specify and detail the right type of SLIDING DOOR HARDWARE



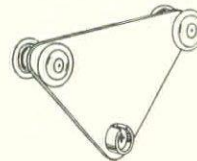
Q What are the advantages of center mounting and 8 wheels per door?

A Hangers that are center mounted support door weight in a true vertical position, relieving stress or pressure against door guides or frame. Hangers providing eight nylon wheels per door distribute weight more evenly over track, providing extremely quiet, effortless operation. Only custom Kennatrack offers these two highly desirable features.



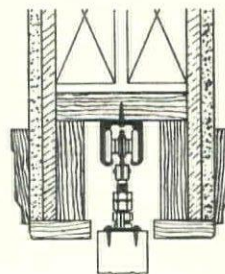
Q When should adjustable hangers be used?

A Whenever headroom is sufficient. Vertical adjustment permits easy alignment of door to jamb. Readjustments are easy to make if settling and other changes occur. Kennatrack also offers non-adjustable hangers of exclusive design for use where extra strength and neatness are desired, or where headroom is limited to one inch. This type is highly desirable where plywood doors are used.



Q Why should a steel frame be used for all pocket door installations?

A To avoid costly as well as frequent troubles caused by warping of wood frames. An exclusive development of Kennatrack Corporation, "Kennaframe" is the steel frame that completely eliminates this danger. Easy to install, and with center mounted 8-wheel hangers for smoothest performance, "Kennaframe" is widely used for 2 x 4 wall installations. Any type of wall material or trim may be applied. Doors can't possibly bind if this prefabricated steel frame is used.



Q Can millwork be eliminated?

A Using Kennatrack hardware, the need for millwork has been eliminated for practically all installations. Complete packaged sets include versatile molded nylon guides that eliminate need of saw kerfs for doors of all thicknesses.

Q How can I be sure the right track is used?

A Selection of the right track for a specific installation is highly important. Reference to the Kennatrack Buyer's Guide takes all the guesswork out of selecting the right hardware. An easy-to-follow index leads to complete descriptive information, scaled detail drawings and architects specifications for each series. Write today for your free copy.



KENNATRACK CORPORATION, ELKHART, IND.

In This Hospital for Children STRAN-STEEL® FRAMING

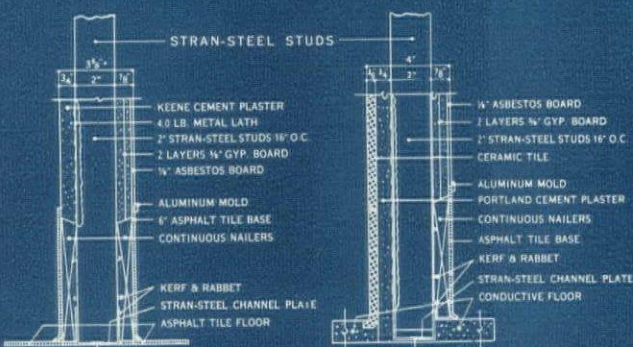
- Shortened construction time • Lessened construction costs • Assures lasting quality

The new two-million-dollar Le Bonheur Hospital for Children in Memphis, Tennessee (below), was chosen the hospital of the year in 1952. It has every modern hospital feature, including adjoining rooms for parents of sick children. Cutaway drawing shows Stran-Steel framing used throughout the corridor walls.

Stran-Steel Framing was specified by Le Bonheur Hospital's architect for its non-combustibility, straighter wall lines and its nailability feature which permits economical application of dry wall construction. Standard drawings furnished to the architect simplified, and in some cases eliminated, some of his work by doing away with the need for duplicating these drawings.

Architects and engineers for this building were J. Frazer Smith & Associates of Memphis, Tenn. Harmon Construction Co., Oklahoma City, Okla., was the general contractor.

Stran-Steel Framing is a complete system, designed for schools, hospitals, garden-type apartments, industrial, public and institutional buildings. Specified by architects across the country, it has resulted in increased economy, earlier completion, and greater client satisfaction. Write to us for general details or information pertaining to a specific problem.



GREAT LAKES STEEL CORPORATION
Stran-Steel Division • Ecorse, Detroit 29, Mich.

NATIONAL STEEL CORPORATION



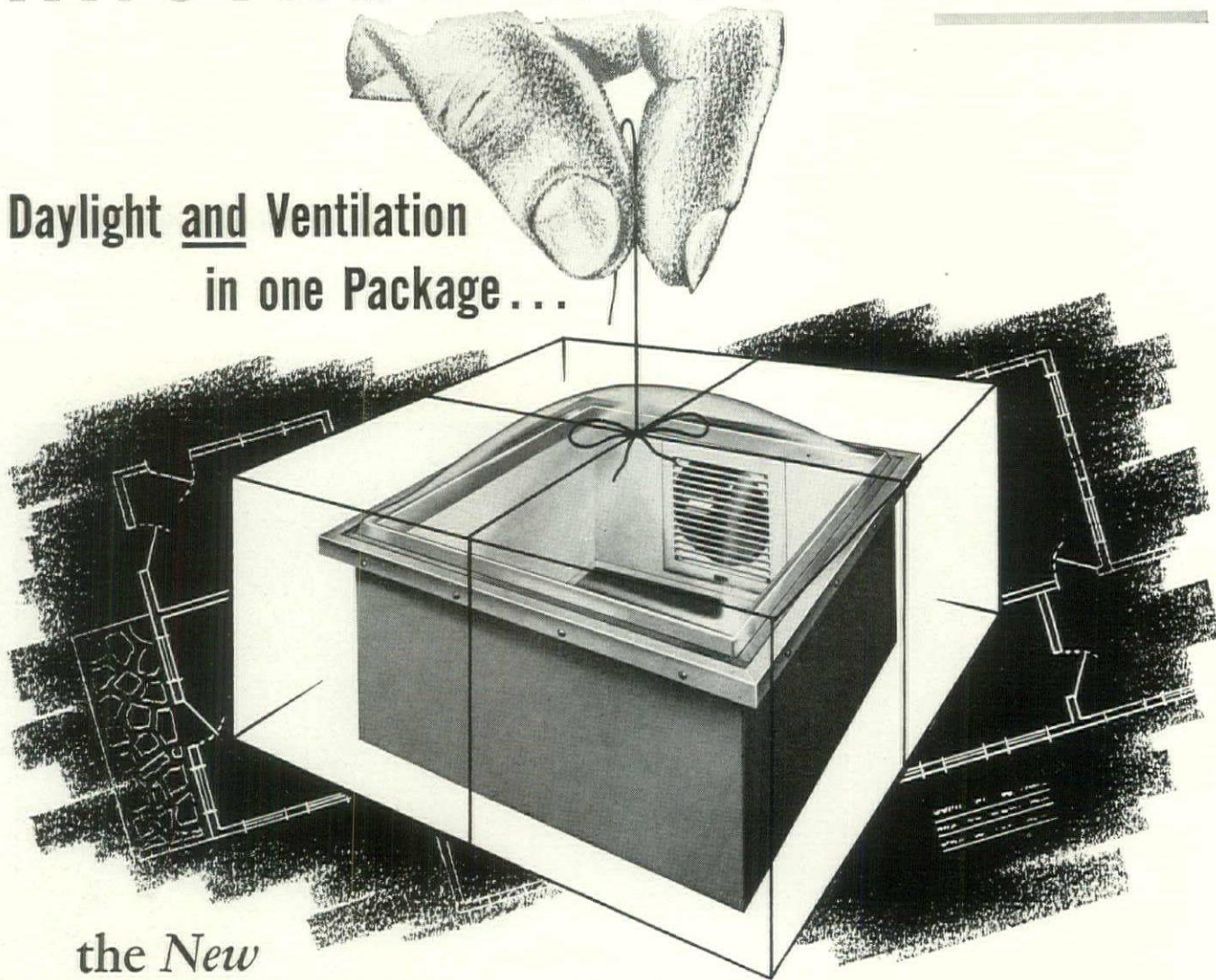
STRAN-STEEL DIVISION, Great Lakes Steel Corporation, Ecorse, Detroit 29, Michigan

Gentlemen: Please send us factual information on the advantages of lightweight Stran-Steel Framing for industrial and commercial building.

COMPANY NAME _____
INDIVIDUAL _____
ADDRESS _____
CITY _____ ZONE _____ STATE _____

ANOTHER WASCO FIRST

Daylight and Ventilation
in one Package...



the New

*Wascolite Ventdome**

put it anywhere in the plan—

Now, for the first time, the superior daylighting of Wascolite Skydomes — with ventilation added! You can revolutionize home, school and plant layouts — yet allow adequate daylighting and air circulation for all interior areas. And all of these radical changes can be planned without designing special roof, curb or flashing construction!

The Wascolite Ventdome — the first and only unit of its kind commercially available — is completely prefabricated. Easily installed over a simple roof opening. The Ventdome consists of an acrylic plastic dome and an insulated curb with built-in ventilating unit — power driven or with adjustable louvers. Available in aluminum, copper or galvanized iron, with domes of clear colorless or white translucent acrylic plastic. Nine standard sizes.

Wascolite Ventdomes are the product of the Wasco Flashing Company — makers of the famous Wascolite Skydome and pioneers in the field of toplighting.

*patent applied for

For further information see Sweet's Catalog or write:

WASCO FLASHING COMPANY

89 Fawcett St., Cambridge 38, Mass.

Robert Shaw Dormitory

MICHIGAN STATE COLLEGE

EAST LANSING, MICHIGAN



ARCHITECT: Ralph R. Calder*

ENGINEERS: Snyder & McLean*

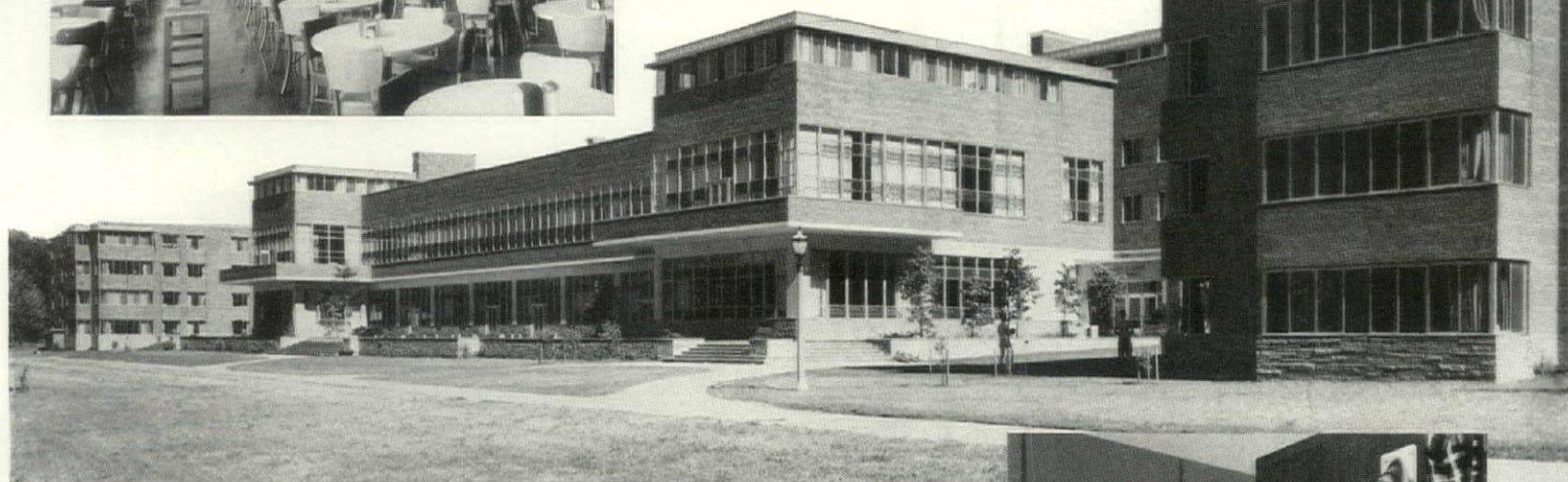
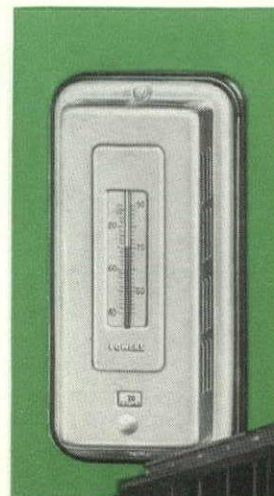
GENERAL CONTRACTOR

Christman Company†

MECHANICAL CONTRACTORS

Hickey, Shaw & Winkler*

*Detroit †Lansing



POWERS

TEMPERATURE CONTROL

No compromise with safety or comfort in showers here.

After thorough tests and comparison with other shower regulators, Powers thermostatic water mixers were installed in Shaw Dormitory. Here are some of the reasons why:

1. In a shower regulated by a Powers mixer — there's no danger of scalding nor slipping and falling while trying to dodge a "shot" of hot or cold water due to **pressure** or **temperature** changes in water supply lines.

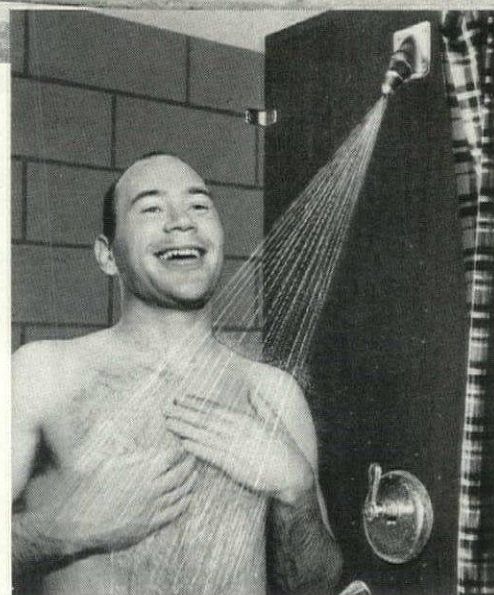
2. Failure of cold water supply to a Powers mixer instantly and **completely** shuts off the shower delivery.

Why risk shower accidents, unfavorable publicity and time consuming law suits? It's more economical to install Powers thermostatic mixers . . . They cost more. Their safety features make them worth more!

Selected For The
Heating And
Ventilating System
And 180 Individual
Shower Baths

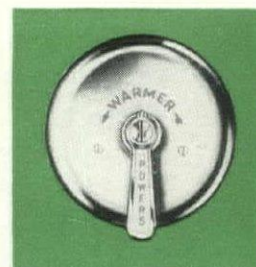
3. A sudden 100° F. rise in hot water supply is barely noticeable in a shower regulated by a Powers mixer. Being thermostatic it protects bathers from scalding caused by "dead ends" in hot water supply lines.

4. Temperature of shower is **thermostatically** limited to 115° F.



Don McAuliffe, football star on Michigan State's 1952 National Collegiate Champions, enjoying one of the 180 Powers regulated showers in the Shaw Dormitory.

POWERS THERMOSTATIC WATER MIXER complies fully with Veterans Hospital safety requirements in Federal Specifications WW-P541a.



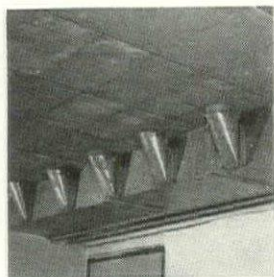
THE POWERS REGULATOR COMPANY

SKOKIE, ILLINOIS

OFFICES IN OVER 50 CITIES IN U.S.A., CANADA, AND MEXICO • SEE YOUR PHONE BOOK

(b43)

OVER 60 YEARS OF AUTOMATIC TEMPERATURE CONTROL



Cores running the length of the assembled beams can be hooked up to air-conditioning systems to serve as distribution ducts or returns.

PRODUCT NEWS

face. No finish treatment (aside from a coat of paint) or separate dropped ceiling is necessary. Nor is any supplementary insulation required since the deck, with standard built-up roofing materials, has a U factor of .34 for the 8" and .37 for the 6". Another material- and labor-saving feature of the product is that the hollow cores may be utilized as ducts in a heating system, as cold air returns, or to carry conduit. Installed costs (figured on

current Indiana labor rates) run 85¢ to \$1.15 per sq. ft. for the 6" beam and 95¢ to \$1.45 for 8"—reportedly far less than roof deck plus separate acoustical treatment.
Manufacturer: Spickelmier Co., Indianapolis 5, Ind.

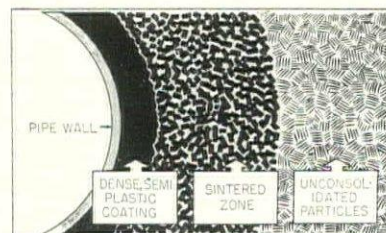
SOLIDIFIED PETROLEUM provides three-layer protection for hot underground pipes

An con-old material, *Gilsulate* is getting brand-new use as insulation for hot pipe lines run underground. A blend of specially sized solidified petroleum granulets, the unique material provides a triple zone insulation around the pipe lines, protecting them from corrosive effects of alkaline ground waters, roof attacks and bacterial action. The resinous hydrocar-



bon, which is similar to asphalt, is poured into shallow trenches dug around the pipes; the *Gilsulate* tamped and trench backfilled. Then hot fluid or steam is run through the lines to fuse the inner layer of *Gilsulate* to the pipe as a dense, semiplastic thermal and electrical insulator which expands and contracts with the pipe.

Around this is a sintered zone of particles with good thermal resistance under wet or dry conditions. The outer layer also adds thermal



insulation plus a high load-carrying capacity. No sleeves or sheaths are needed to protect the insulation and no complex concrete ducts have to be built around the pipe. Bends and multiple runs are insulated as simply as single straight lines. Because of the high insulating efficiency of the material, hot and cold lines can be run in the same ditch.

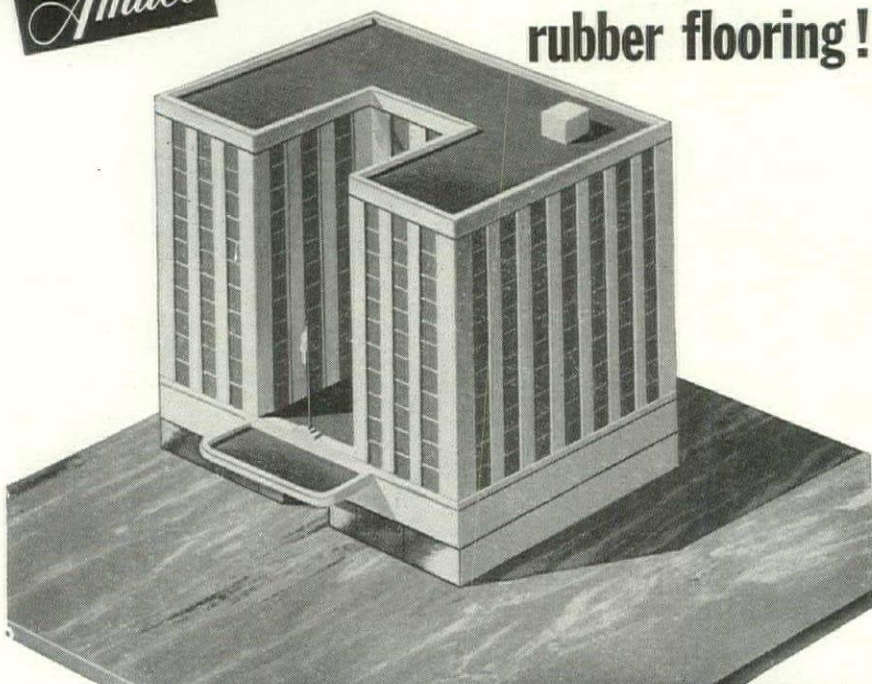
Costs, including all preparatory work and backfilling, run about \$30 per lin. ft. for double pipe lines compared, the manufacturer reports, to from \$35 to \$60 for other comparable materials available.

Manufacturer: American Gilsonite Co., 248 S. Main St., Salt Lake City, Utah.

continued on p. 208

Perfect for that new hotel...

Amtico America's most beautiful rubber flooring!



AMERICAN BILTRITE

RUBBER COMPANY
TRENTON 2, NEW JERSEY

Amtico
RUBBER FLOORING

In Canada—American Biltrite Rubber Co. (Canada) Ltd., Sherbrooke, Quebec

Affiliates... Biltrite Rubber Company, Chelsea 50, Mass. • American Tile & Rubber Co., Trenton 2, N. J. • Panther-Panco Rubber Co., Chelsea, Mass. • American Tile & Rubber Co. (Canada) Ltd., Sherbrooke, Quebec • Panther Rubber Co., Ltd., Sherbrooke, Quebec, Canada.

Also makers of Biltrite NURON for Shoe Soles, Luggage and Accessories—and Biltrite Rubber Heels

26 COLOR SAMPLE KIT...YOURS ON REQUEST



AMTICO, Dept. MB-17, Trenton 2, New Jersey

Gentlemen:

Please send me free box of 4" x 4" samples of Amtico Flooring in standard 1/8" gauge and all 26 stock colors—also illustrated literature.

NAME.....

FIRM.....

ADDRESS.....

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

(Please attach coupon to your business card or letterhead)

KIMBLE TOPLITE

*a new system
for daylighting
deep rooms*

New Kimble Toplite Panels solve the problem of how to provide daylight for deep interior areas too far removed from conventional, side-wall panels of prismatic Insulux Glass Block®.

This revolutionary new daylighting system lets you bring free daylight in from above through a simple framed, flat roof without monitor, saw tooth, or clerestory arrangements.

Only the Kimble Toplite offers these features:



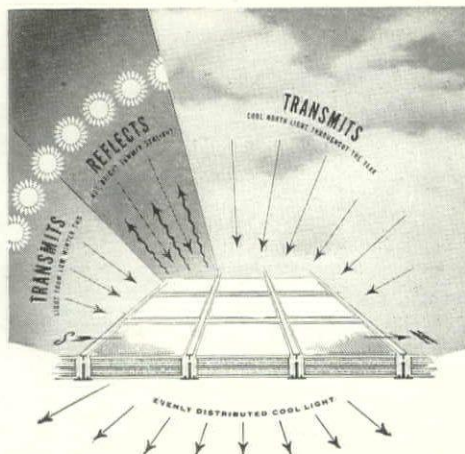
PREFABRICATION

Kimble Toplite panels are factory-fabricated for uniform quality, and low installation cost. They are made up of an insulated aluminum grid into which special hollow glass units are

set. The glass units themselves are 10⁵/₈" square by 3" thick, and are installed in the aluminum grid 12" on centers. Panels are weatherproof with no porous materials exposed to the weather.

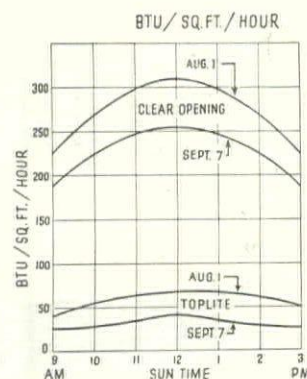
TESTED, TIME-PROVED CONSTRUCTION

Kimble Glass Company, in conjunction with a leading roof light manufacturer, and the Daylighting Laboratory at the University of Michigan have exhaustively tested Toplite in widely scattered locations under widely varied conditions.



SELECTIVE CONTROL OF DAYLIGHT

Kimble Toplite Panels are selective in their light transmission. They transmit a high percentage of the light from the low winter sun and from the north sky but reflect much of the direct light from the high summer sun. Light-controlling characteristics eliminate glare and



Calculated total heat gain through a Toplite Panel as compared to a clear opening in a horizontal roof for a building located at 37°N. Latitude.

distribute daylight throughout the room so that concentrations of light are eliminated.

SOLAR HEAT REDUCTION

Panels are designed to reflect hot summer sun and have unusual ability to reduce solar heat transmission. Toplite panels have high insulating value thus reducing troublesome condensation during winter. Loads on heating, air conditioning and artificial illumination systems are reduced.

More information

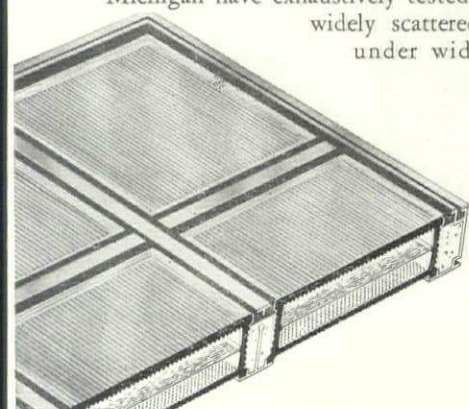
Want more information about this great advance in daylighting? Send for the new, free bulletin: "Kimble Toplite—a new system in daylighting." Address: Insulux Glass Block Division, Kimble Glass Company, Dept. MB-11, Box 1035, Toledo 1, Ohio.

MANUFACTURERS OF INSULUX GLASS BLOCK



KIMBLE GLASS COMPANY

Toledo 1, Ohio—Subsidiary of Owens-Illinois Glass Company

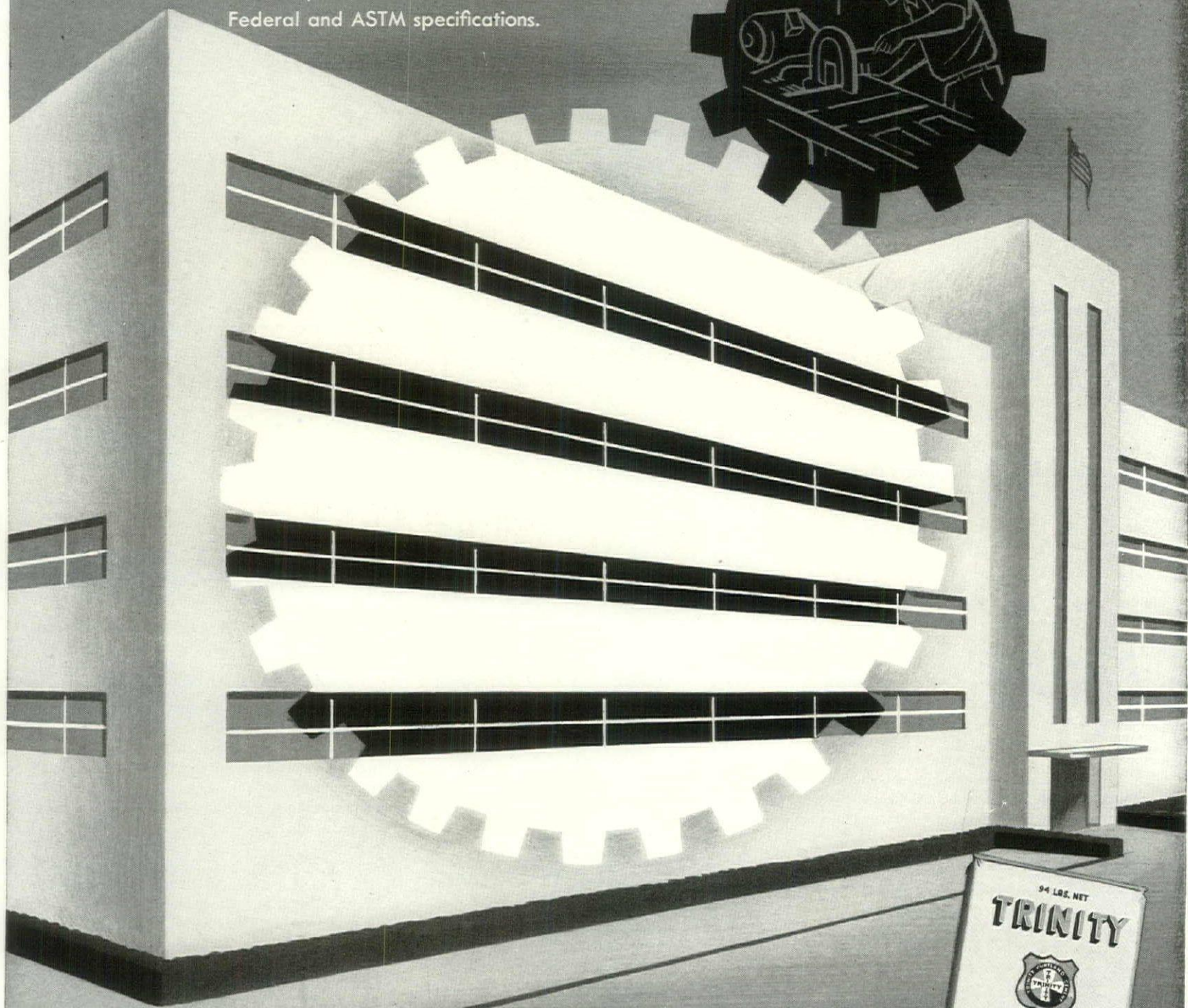
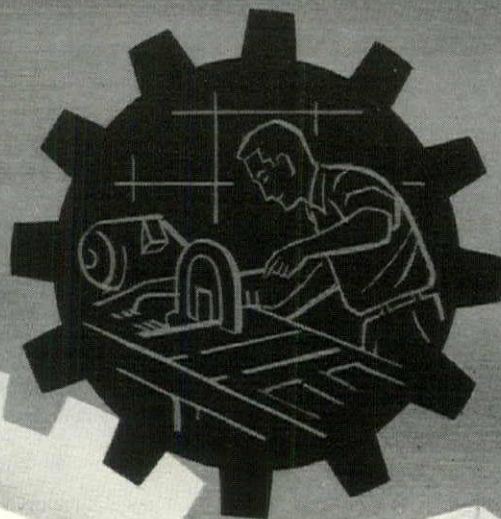


Trinity White

is a true portland cement

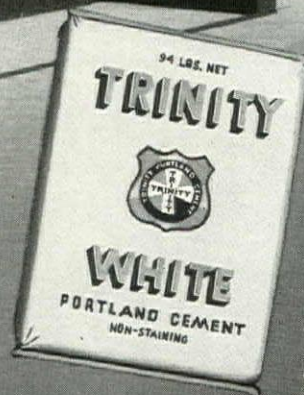
Use it for a brilliant sparkling white,
or with pigments added it gives the loveliest of colors!
Specify it for architectural concrete units . . .

terrazzo . . . stucco . . . and light reflecting
uses. It's a true portland . . . and it meets all
Federal and ASTM specifications.



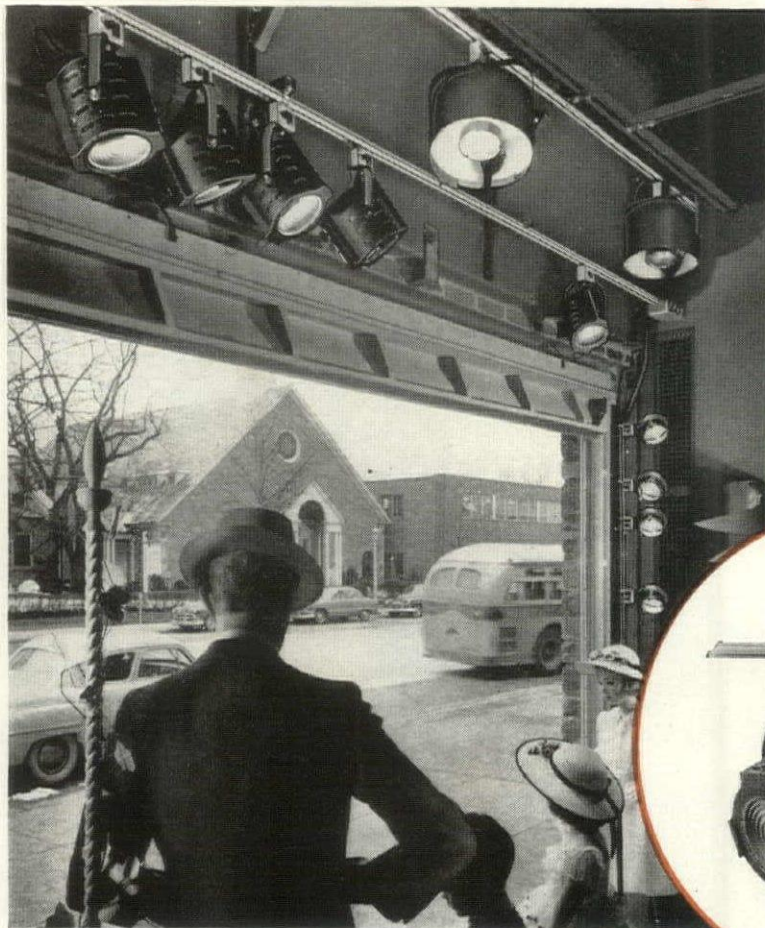
It's the whitest white cement

as white  as snow

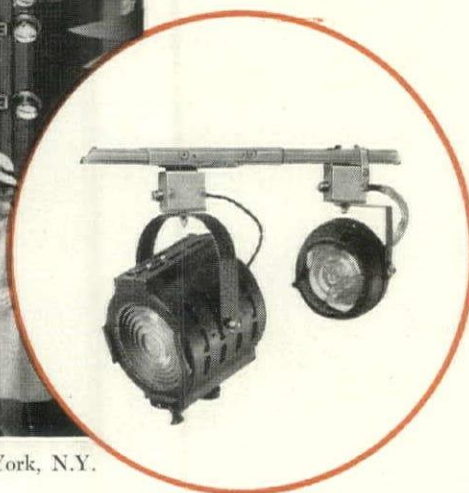


A Product of GENERAL PORTLAND CEMENT CO. • Chicago • Dallas • Chattanooga • Tampa • Los Angeles

BULLDOG UNIVERSAL *Trol-E-Duct*



Lighting consultant and lighting fixtures — Edison Price, New York, N.Y.



OUTLETS UNLIMITED!

To get an unlimited variety of window lighting effects with the absolute minimum of time and effort, lighting consultant Edison Price installed Bulldog Universal Trol-E-Duct in the new Abraham & Straus store in Hempstead, Long Island.

Each of four banks of lights is mounted in its own electrified track; individual lights — mounted horizontally on trolleys and vertically with "twist-out" plugs — move easily to any position along the con-

tinuous outlet. The prefabricated duct sections are simple and inexpensive to install . . . and completely reusable.

Universal Trol-E-Duct is another thoroughbred Bulldog product. It fulfills a wide range of commercial, industrial or home requirements for lighting and mobile power tools. Write today for free Bulletin UT-650 giving complete information. Bulldog Electric Products Company, Dept. AF-113, Detroit 32, Michigan.

© BEPCO

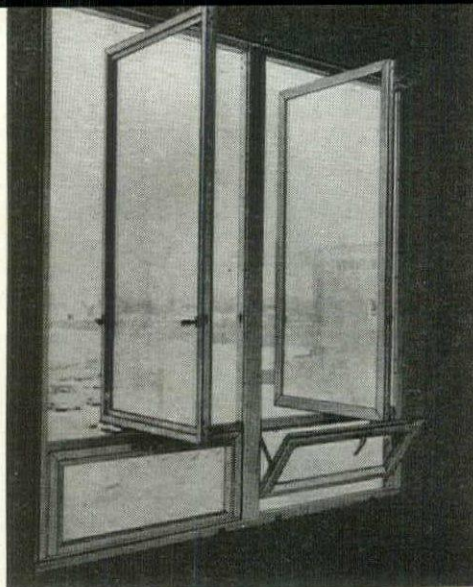


BULLDOG
ELECTRIC PRODUCTS COMPANY

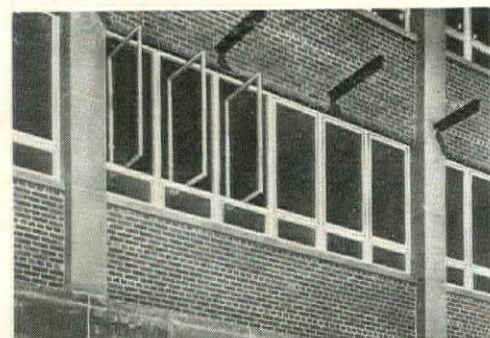
PRODUCT NEWS

TRIMLY TAILORED WINDOW turns inside out for washing

Window washing is an inside job with the *Adlake No. 1500* aluminum window. Completely reversible, the large but unbulky sash is held snug in its crisp frame until unlocked and by key, pivoted inside out. The key cannot be removed without relocking the window. Price, about \$150 per 4' x 6' unit, is said to be the same as for conventional windows



with the same vent arrangement. The new model should be a boon in the year-round air-conditioned buildings, where cooling and heating costs and efficient operation can be thrown out of whack by a supplemental fresh-air supply regulated by the hemoglobin count of a few employees within window reach. Also, cleaning costs and insurance rates should be lower because regular building maintenance personnel can wash both sides of

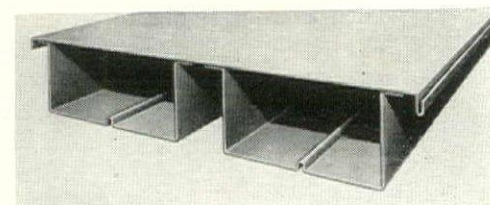


the window without putting a hand beyond the sash. A special wool and vulcanized rubber weather strip keeps out drafts in winter and locks in cool air in summer. Windows are obtainable that turn either on a horizontal or vertical axis.

Manufacturer: The Adams and Westlake Co., Elkhart, Ind.

TWO-HATTED PANEL spans up to 33'

Manufactured of light-gauge (18 to 13) steel, the *Fenestra Double-hat "D"* panels can, in many kinds of buildings, span bearing walls up to 33' apart to serve as structural plate as well as roof deck and finished ceiling. The economical building unit is made up of twin beam sections 9" wide and 1½" to 7½" deep with integral stiffening ribs rolled into the flange of each section, and a 24"-wide flat plate. Male and female joints formed into the plate speed interlocking assembly on the site. The flat side can be used on top (as in drawing below) to provide an unbroken surface for built-up roofing materials, or as the underside to create a smooth, striated ceiling



pattern. Where sound control is necessary, the panels are supplied with ⅛" holes punched on the flat face in 9" wide swaths running the length of each section with a 1"-thick glass-fiber blanket wired above the perforated face.

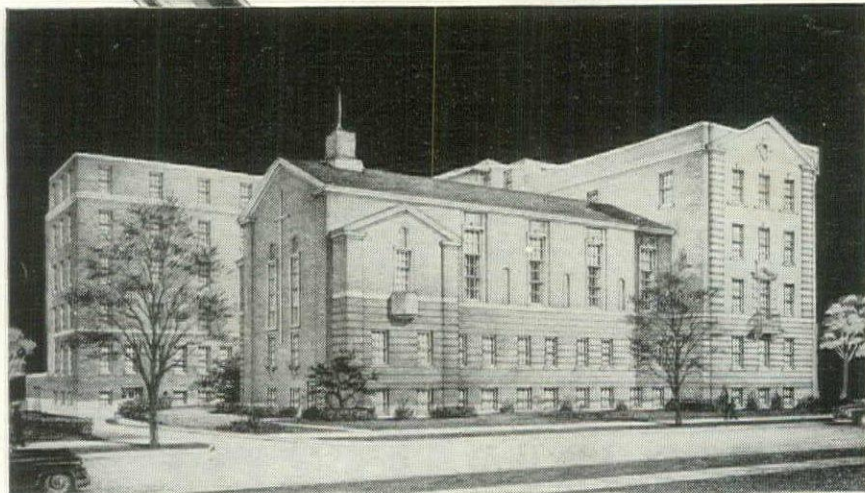
Double-hat "D" panels, in place, cost about \$1.15 per sq. ft. (approximately \$1 for material, 15¢ for labor). Acoustic treatment is 25¢ more per sq. ft.

Manufacturer: Detroit Steel Products Co., 2250 E. Grand Blvd., Detroit 11, Mich.

continued on p. 214



Hospitals are permanent... and they need piping that endures!



CLOW (THREADED) CAST IRON PIPE IS USED FOR ALL WASTES, VENTS AND DOWNSPOUTS IN THE NEW WINGS AND CHAPEL OF THE BEAUTIFUL OAK PARK HOSPITAL FOR THE SISTERS OF MISERICORDIA, OAK PARK, ILLINOIS. ARCHITECTS: SCHMIDT-GARDEN & ERIKSON. PLUMBING CONTRACTOR: W. T. MAHONEY & SONS.

Add permanence to all buildings with CLOW (threaded) Cast Iron Pipe

Modern hospitals are today's most urgent building need. Because our hospitals will be as vital tomorrow as they are today, they are being built for strength and permanence.

In plumbing, for example, more and more architects and contractors choose Clow (threaded) Cast Iron Pipe for all downspouts, vents, and waste lines. They know that Clow Cast Iron piping will last the life of the building because of its remarkable resistance to corrosion.

They know, too, that installation cost and yearly upkeep will be gratifyingly low.

We will be pleased to give detailed answers to inquiries at any time.

A COMPLETE LINE FOR ALL PIPING NEEDS

Clow (threaded) Cast Iron Pipe has same O.D. as steel pipe, is available with plain or threaded ends, in 3, 4, 5, 6, 8, and 10" sizes in 18' random lengths. Also available with integral calking hub on one end (other end plain) in 18' random lengths in 4, 6, and 8" sizes.

Clow Cast Iron Pipe
can
be...



on the job, with ordinary
tools of the piping trade.

JAMES B. CLOW & SONS

201-299 North Talman Avenue • Chicago 80, Illinois



WHOLESALE PLUMBING AND
HEATING SUPPLIES
Publishers of the Clow Bulletin



a plastic ceiling lights this room

The light in this room is diffused from one end to the other, into every corner. Glare and shadows are softened; sharp contrasts are gone. The whole room is so bright that desk lamps and other lighting fixtures are unnecessary.

Two kinds of ceiling—both made of BAKELITE Rigid Vinyl Sheets—are shown here. One is the louver type, transmitting more light while providing a shield against glare. The other is corrugated translucent sheeting, which diffuses light while concealing unsightly beams, ducts, and fixtures.

Both kinds rest on metal frames

suspended from the ceiling. Fluorescent lamps hang above them. Installation is easy—BAKELITE Rigid Vinyl Sheets can be cut to fit irregular room contours and dimensions. Each standard section is 3' x 3', removable for cleaning or for replacing burned-out lamps.

BAKELITE Rigid Vinyl Sheets are light in weight, highly resistant to the effects of light and moisture. They are resistant to warping and cracking. They come transparent, translucent, or opaque, in a wide range of colors. A damp cloth cleans them.

Other uses for BAKELITE Rigid Vinyl Sheets include lamp shades,

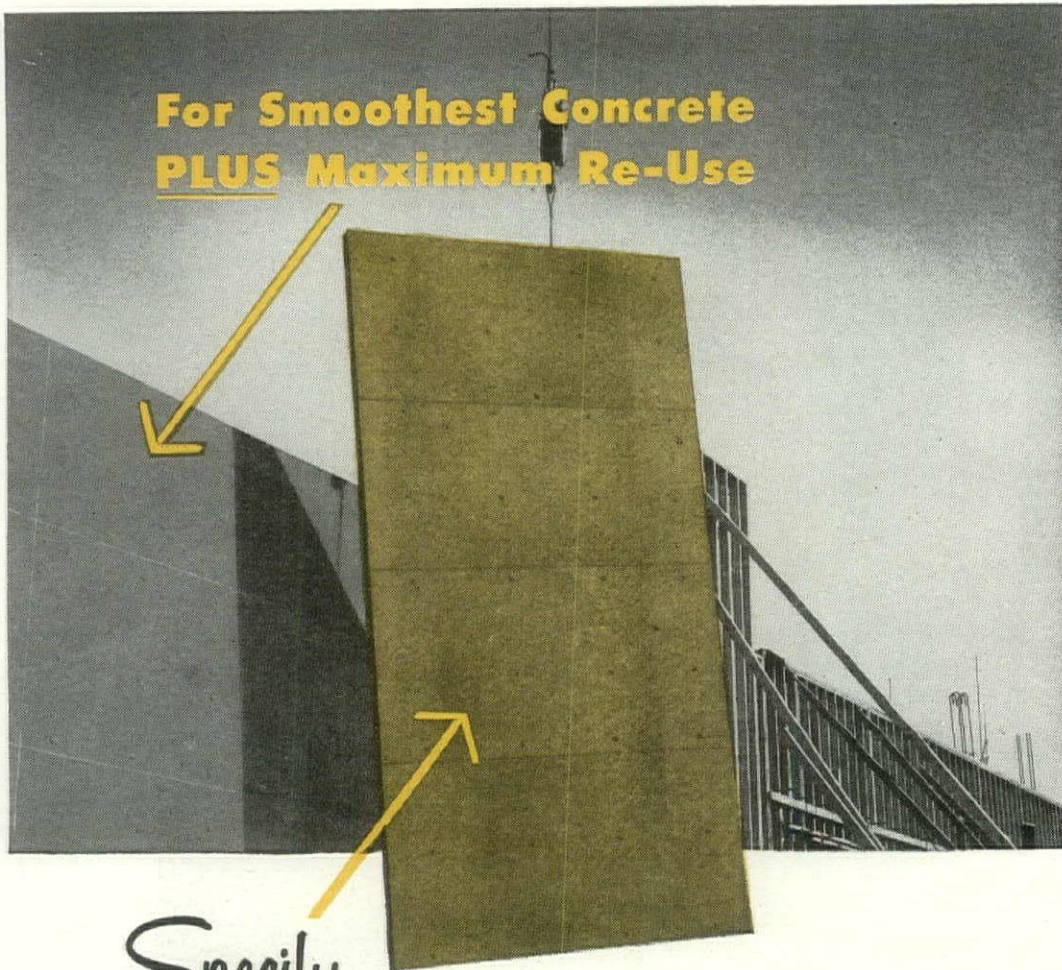
displays and decorative screens. They have the properties of familiar BAKELITE Vinyl Plastics used throughout defense and industry. Learn more about them by writing Dept. SN-14.

Data courtesy Benjamin Electric Mfg. Co.,
Des Plaines, Ill.

BAKELITE
TRADE-MARK
RIGID VINYL SHEETS

TRADE MARK
BAKELITE COMPANY
A Division of
Union Carbide and Carbon Corporation
30 East 42nd Street, New York 17, N. Y.

**For Smoothest Concrete
PLUS Maximum Re-Use**



Specify

PLYGLAZE® CONCRETE FORM PANELS

HERE'S a form material that gives you the size and strength of Exterior plywood—plus extra stamina supplied by glass-smooth, flint-hard fused resin-fiber surfaces. Plyglaze is a quality material. Its all around superiority and cost-cutting features have been proved on job after job—on the big ones like Parklabrea and the new Statler Hotel in Los Angeles . . . on homes and small commercial buildings . . . on dams, bridges and other construction projects.

SMOOTHER SURFACES EVERY TIME—Hard, non-absorbent, glossy surfaces give you really smooth concrete. *An absolute minimum of finishing is required.* You cut costs, get a far better job.

UP TO 200 RE-USES—Tough, virtually indestructible surfaces mean maximum re-use. Over 200 re-uses have been reported. Treat it with care, plan and build the forms for long service, and you, too, can get uses up in the hundreds. Comes in standard 4' x 8' panels; $\frac{1}{2}$ ", $\frac{5}{8}$ " and $\frac{3}{4}$ " thicknesses. Other sizes on special order.

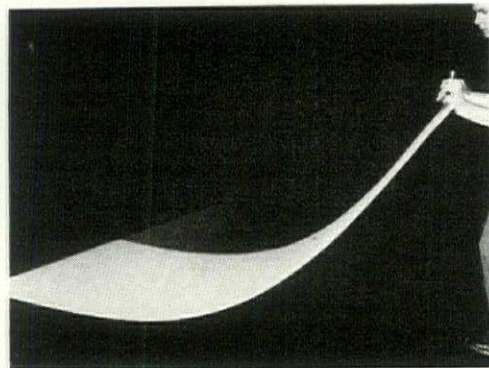


WRITE FOR DATA on Plyglaze Concrete Form Panels:
St. Paul & Tacoma Lumber Co.,
Dept. AF, Tacoma 2, Wash.



ANOTHER MEMBER OF THE FAMOUS TREE LIFE FOREST PRODUCTS FAMILY

PRODUCT NEWS



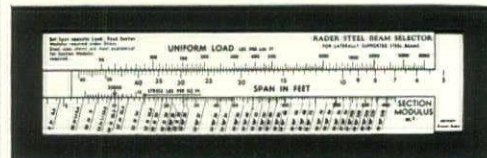
glass fibers in its *Weather Shield* gypsum sheathing and $\frac{5}{8}$ "-thick *Firestop Bestwall*, which carries a one-hour fire rating.)

Manufacturer: Certain-teed Products Corp., 120 E. Lancaster Ave., Ardmore, Pa.

SMOOTH, BLOND HARDBOARD cuts clean, holds screws in edge

Glossy smooth on both faces, the thick-resin and wood-fiber *Forall* panel is a workable, low-cost building material. Dent and warp resistant, the 4' x 8' homogeneous blond board comes in four thicknesses— $\frac{3}{8}$ ", $\frac{1}{2}$ ", $\frac{5}{8}$ " and $\frac{3}{4}$ "—suitable for such applications as shelving, sliding doors, partitions and built-in furniture. It can be sawed, rabbeted or routed easily and cleanly with ordinary wood-working tools. Grainless and uniform throughout, the material cannot splinter or split, and any slight fuzziness on cut edges can be removed by light sanding. No patching or molding is needed to dress or reinforce the edges which hold screws and nails as well as the faces. Processed from Douglas fir (no bark), *Forall* has a pale honey surface that can be stained, painted or left as is. Prices per M sq. ft. run \$212 for $\frac{3}{8}$ " thickness, \$223 for $\frac{1}{2}$ " and \$332 for $\frac{3}{4}$ " in eleven western states and about \$226, \$238 and \$356 for the same board in the eastern states.

Manufacturer: Forest Fiber Products Co., Box 68-P, Forest Grove, Ore.

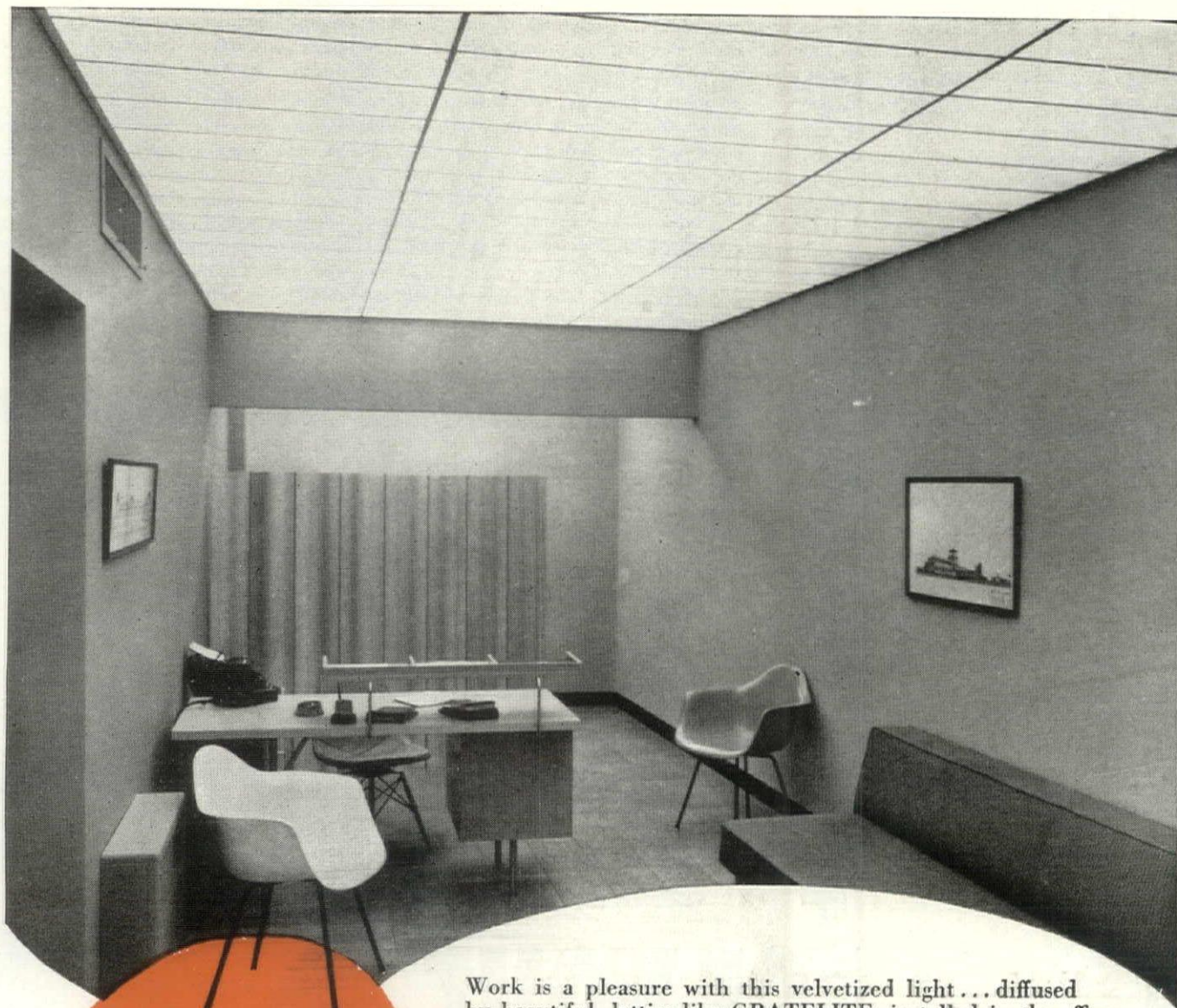


PLASTIC SLIDE RULE quickly picks right steel beams for light construction

Working with Engineer Everett Rader's new *Steel Beam Selector*, a designer can, by a push of the thumb, determine the most economical, laterally supported steel beams for a light construction job. He just sets *Span* required (movable strip) opposite the *Load* to be supported (top line) and reads the *Section Modulus* necessary (bottom of rule) under *Stress lbs. per sq. ft.* A companion computer to Rader's *Wood Beam and Girder Selector* (AF, Dec. '52), the new *Steel Beam Selector* sells for \$4, including a simulated leather case.

Manufacturer: Everett Rader Co., Box 122, AF, Bowling Green Station, New York 4, N.Y.

Technical Publications on p. 220



work-inspiring
lighting
created by
GUTH
GRATELITE
CEILINGS

* U. S. & Can. Pats. Pend.
Trademark Registered

Guth

Work is a pleasure with this velvetized light... diffused by beautiful, lattice-like GRATELITE, installed in the offices of MacKenzie, Knuth & Klein, Architects of Flint, Michigan.

data:

Room Size: 23'4" x 9'10" x 10'9"

Luminaires: Guth Super-Strips
12 96" T-12 Lamps, 4500° White
Mounted on 24" Centers, 10'6" high

GRATELITE Ceiling: Mounted 8'6" above floor

Foot-Candles: All Super-Strips on—86 F. C.
One-Half Super-Strips on—42 F. C.

BRIGHTNESS READINGS:	FOOT LAMBERTS	C.P./SQ. IN.
1. GRATELITE Ceiling at approx. 30° Angle	120	.260
2. East Wall (French Gray)	20	.046
Dado	13	.028
3. South Wall (Deep Coral)	9½	.021
4. Floor (Natural Cork Tile)	17½	.038
5. Desk (Chartreuse)	36	.080

Just think: 86 Foot-Candles—and yet only 120 Foot Lambert Brightness! Never before was such low brightness with such high illumination values thought possible. Make this dream come true for you. Write on your letterhead for Catalog 905-K and GrateLite layout guide.

THE EDWIN F. GUTH COMPANY ST. LOUIS 3, MO.

Leaders in Lighting Since 1902

More and more of the specifications for fine new buildings include Q-Floor for these very fundamental reasons:

Electrical Availability: This strong, steel, cellular sub-floor becomes a duct system which provides electrical availability every 6 inches over the entire exposed floor area. Wiring layouts need not be frozen in the drafting room. No building becomes obsolete in the face of electronics in modern business. Electrical engineering service on Q-Floor wiring is

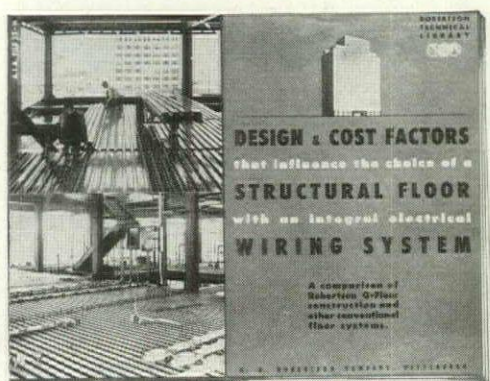
available through any of the General Electric Company's construction materials offices.

Economy: Because two men can lay fifty square feet in one minute, Q-Floor jobs go up fast and save money through earlier occupancy. Costly forms and shoring materials are eliminated along with the fire hazard they create. Each floor becomes an immediate safe platform for work and storage.

Light Weight: The design of Q-Floor combines great strength with light weight

thus following the trend of modern construction toward lighter weight materials and resultant savings in structural members and foundations.

Write For The New Cost Analysis Book Shown Here: The free technical data book shown here will allow you to readily compute the cost of all types of structural floors with integral electrical wiring systems and compare them with Q-Floor. To make this comprehensive analysis a part of your library, send in the coupon on the opposite page.



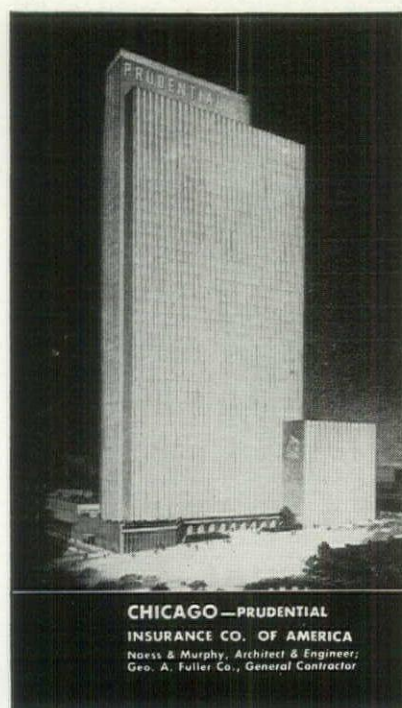
H. H. Robertson Company

Farmers Bank Building

Pittsburgh 22, Pa.

building

More for your



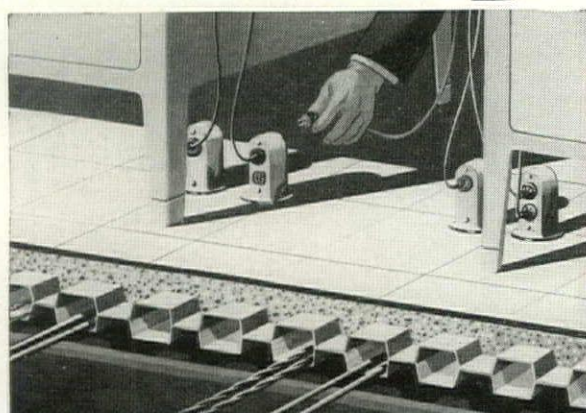
CHICAGO—PRUDENTIAL INSURANCE CO. OF AMERICA
Naess & Murphy, Architect & Engineer;
Geo. A. Fuller Co., General Contractor



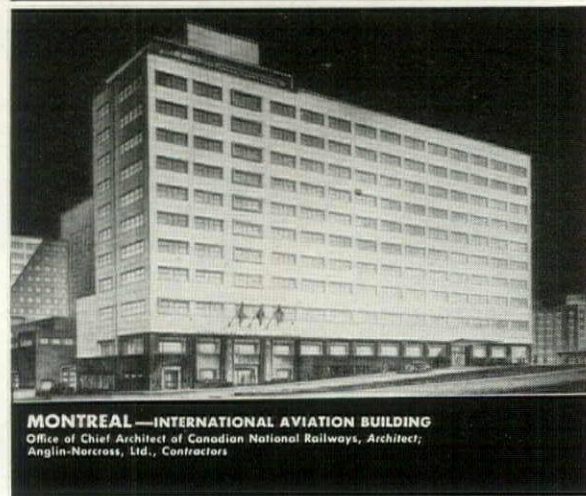
ROANOKE SHENANDOAH LIFE INSURANCE CO.
Smithey & Boynton, Arch.;
B. F. Parrot & Co., Contr.



NASHVILLE—TENNESSEE STATE OFFICE BUILDING
Hart & McBryde, Architects; A. Jessup, Structural Engineer;
Creighton & MacDonald, Builders



LIGHT-WEIGHT strong steel cellular Q-Floor with concrete fill for leveling purpose only. Electric outlets become available over every 6 inch area of the floor's exposed surface.



MONTREAL—INTERNATIONAL AVIATION BUILDING
Office of Chief Architect of Canadian National Railways, Architect;
Anglin-Norcross, Ltd., Contractors

dollar

with

Robertson Q-Floor



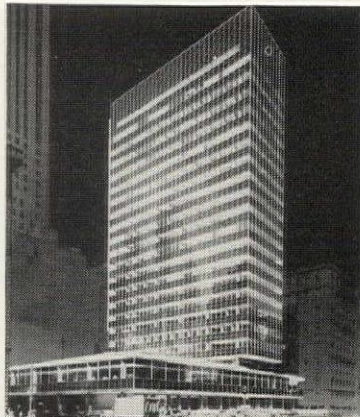
TWO MEN can lay fifty sq. feet of Q-Floor in one minute, providing an immediate safe platform for work and storage. Strength plus light weight allows savings in structural members and footings.



LOS ANGELES—3450 WILSHIRE BOULEVARD BUILDINGS
Cloud Bealman, Architect; Brandow & Johnston, Structural Engineers;
C. L. Peck, Contractor



SEATTLE—FEDERAL RESERVE BANK OF SAN FRANCISCO
Naramore, Bain, Brady & Johanson, Architects; W. H. Witt Co., Structural Engineers;
Kuney Johnson Co., Contractor



**NEW YORK
LEVER HOUSE**
Skidmore, Owings & Merrill, Architects;
Weiskopf & Pickworth, Structural Engineers;
Geo. A. Fuller Co., Contractor



**TORONTO
BANK OF NOVA SCOTIA**
Mathers & Haldenby, Architects;
Beck & Eadie, Associate Architects;
J. L. E. Price & Co., Ltd., Contractor



**PITTSBURGH
U. S. STEEL CORP.-MELLON BANK BLDG.**
Harrison & Abramovitz, Arch.; W. Y. Cocken, Asso.
Edwards & Hjorth, Structural Engineers
Turner Construction Co., Builder



HONOLULU—HAWAIIAN LIFE INSURANCE CO., LTD.
Vladimir Ossipoff, Architect;
E. E. Black, Ltd., Contractor



DES MOINES—IOWA STATE OFFICE BUILDING
Tinsley, Higgins & Lighter, Architects & Engineers;
Kucharo Construction Co. & Asso., Contractors



HOUSTON—SAKOWITZ BROS. STORE
A. C. Finn, Architect; R. J. Cummins, Engineer;
Tellepsen Construction Co., Contractor

H. H. Robertson Company
2403 Farmers Bank Building • Pittsburgh 22, Pa.

In Canada: Robertson-Irwin Ltd., Hamilton, Ontario
In England: Robertson Thain Ltd., Ellesmere Port, Cheshire
Offices in All Principal Cities World-Wide Building Service

Please send me a free copy of your
cost analysis of structural floors.

Name _____

Firm _____

Address _____



CONCRETE FORMS. Rubora Expandable Concrete Form. Kurt Orban Co., Inc., 205 E. 42nd St., New York 17, N.Y. 8 pp. 8½" x 11"

CERAMIC TILE. This Is Mosaic Tile. The Mosaic Tile Co., Zanesville, Ohio. 15 pp. 8½" x 11"

WIRING. Proposed Simplified Practice Recommendations for Steel Outlet Boxes (Zinc or Cadmium Coated). Commodity Standards Div., Office of Industry and Commerce, US Dept. of

Commerce, Washington 25, D.C. 46 pp. 8½" x 11"

SPACE HEATERS. Guide to the Selection and Use of Portable Space Heaters. Herman Nelson Div., American Air Filter Co., Inc., 1824 Third Ave., Moline, Ill. 36 pp. 5½" x 8½"

HEATING EQUIPMENT. Standard Code for Testing and Rating Hot Water Unit Heaters, Second Ed., Bul. 11. Industrial Unit Heater Assn., 2159 Guardian Bldg., Detroit 26, Mich. 20 pp. 8½" x 11"

PREFAB BUILDING UNITS. Standard Buildings, Steel or Aluminum by Soulé. Soulé Steel Co., 1750 Army St., San Francisco, Calif. 23 pp. 8½" x 11"

WOOD PRODUCTS. Directory—US Government Specifications for Wood Products, Bul. 733:53. Timber Engineering Co., 1319 18th St., N.W., Washington 6, D. C. 32 pp. 8½" x 11"

LIGHTING. Peerlite by Guth—Modern Air Cooled Fluorescent Fixture, Catalogue No. 911. Edwin F. Guth Co., 2615 Washington Blvd., St. Louis, Mo. 8 pp. 8½" x 11"

GLAZING. Solex Heat-Absorbing Glass. Glass Advertising Dept., Pittsburgh Plate Glass Co., 632 Fort Duquesne Blvd., Pittsburgh 22, Pa. 4 pp. 8½" x 11"

AIR EXHAUST. Jenn-Air Power Exhausters for Wall and Roof Applications, Bul. 53-B. Jenn-Air Products Co., Inc., Architects and Builders Bldg., Indianapolis 4, Ind. 6 pp. 8½" x 11"

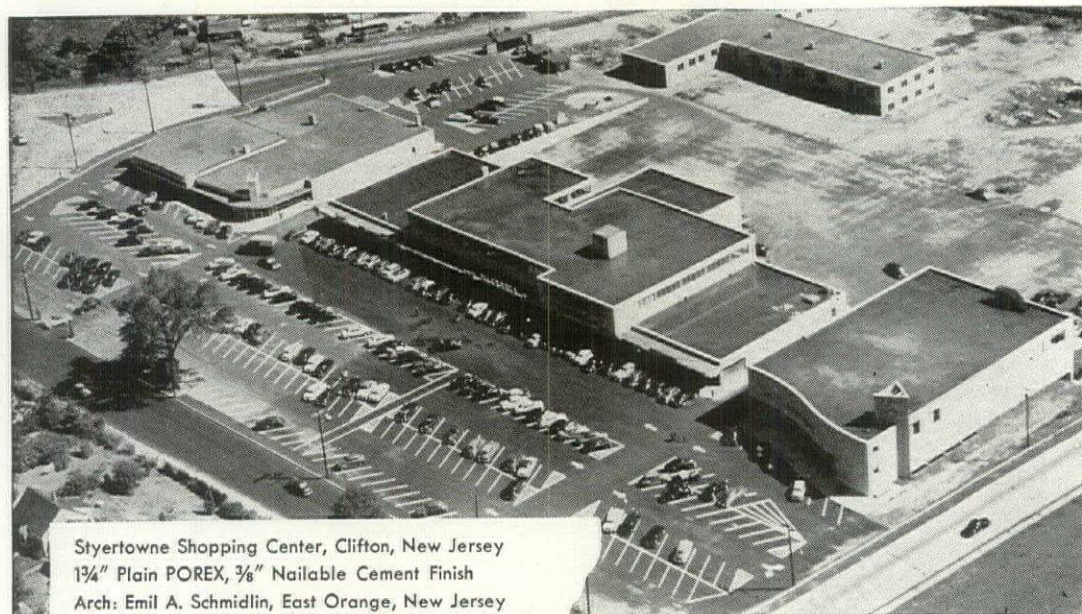
PUMPS. For Medium Pressures—CNTA Multi-stage Centrifugal Pumps, Form 7251. Ingersoll-Rand Co., 11 Broadway, New York 4, N.Y. 18 pp. 8½" x 11"

WATER CONDITIONING. Permutit Package Water Conditioning Plant, Bulletin 3869. The Permutit Co., 330 W. 42nd St., New York 36, N.Y. 8 pp. 8½" x 11"

INDUSTRIAL POWER SYSTEMS. Industrial Power Distribution Idea Book, GEA-5900. General Electric, Schenectady 5, N.Y. 28 pp. 8½" x 11"

CONDUIT AND TUBING. Rigid Steel Conduit and Electrical Metallic Tubing for Electrical Wiring Systems. National Electrical Manufacturers Assn., 155 E. 44th St., New York 17, N.Y. 24 pp. 8½" x 11"

INSULATION. Foamglas: Low Temperature Space Insulation for Walls, Ceilings, Floors. Pittsburgh Corning Corp., 1 Gateway Center, Pittsburgh 22, Pa. 22 pp. 8½" x 11"



Styertowne Shopping Center, Clifton, New Jersey
1¾" Plain POREX, ¾" Nailable Cement Finish
Arch: Emil A. Schmidlin, East Orange, New Jersey
Gen. Contr. Weny Bros. & Storms Co., Paterson, N. J.

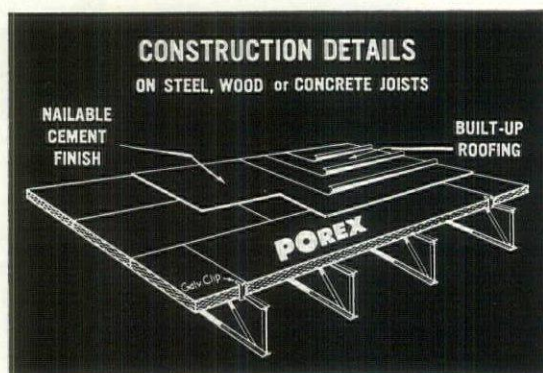
Why Shopping Centers profit by using

POREX ROOF DECKS

When roof decks must provide maximum quality at minimum cost, architect after architect chooses POREX... because POREX combines all these properties:

- STRUCTURAL STRENGTH
- LIGHT WEIGHT
- NAILABILITY
- INCOMBUSTIBILITY
- HEAT INSULATION
- SOUND CONTROL

Plain POREX for short spans and Composite POREX for long spans are also ideal for Auditoriums, Gymnasiums, Schools, Armories and many other uses. For floors, precast lightweight concrete channel slabs and plank are available.



SAFE UNIFORM LOADS

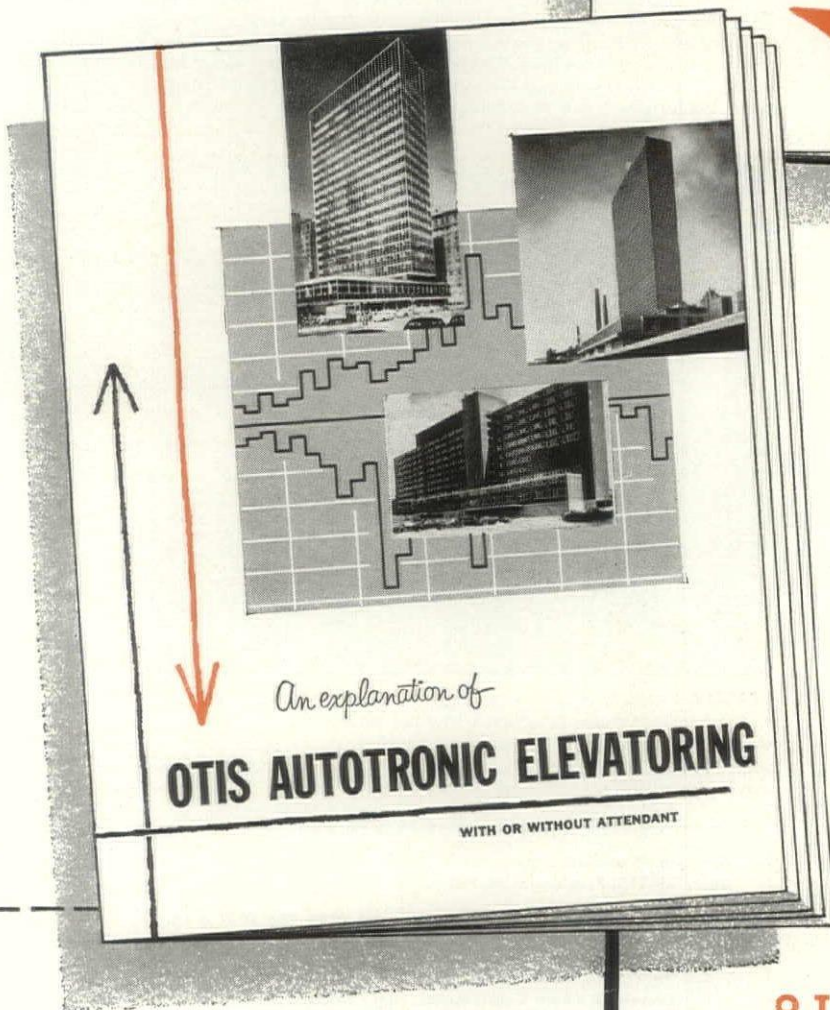
Type of POREX	Thickness		Weight lbs./sq. ft.	Safe loads lbs./sq. ft.				
	Slab	Finish		1'4"	2'0"	3'4"	6'	8'
Plain	1¾"	¾"	7	100	60	—	—	—
Plain	3"	¾"	10	—	100	50	—	—
Composite	3"	¾"	14	—	—	—	100	60

PORETE MANUFACTURING CO., North Arlington, N.J.
Precast lightweight concrete products since 1920

continued on p. 232

FIRST TIME OFFERED

a concise explanation of
completely automatic elevating
for busy office buildings,
hotels and hospitals



Please send me your two free booklets
explaining completely automatic . . .
Autotronic® elevating. (A-405, A-406)

An explanation of OTIS AUTOMATIC PROGRAM SELECTION



The increasing interest and widespread acceptance of completely automatic—without attendant—elevating, which saves up to \$7,000 in operating costs per elevator per year, can best be explained with these figures:

In 1950, 12.6% of the elevators sold for new office buildings or for modernizing existing office buildings were automatically operated and without attendants. In 1951, this percentage increased to 32.7%. In 1952, it reached 58%. In 1953, it is expected to exceed 80%.

Whatever your interest—as a building planner, financier, constructor, owner, manager, designer—you'll have a much clearer understanding of this fast growing trend after reading these two free booklets.

OTIS ELEVATOR COMPANY

Dept. J

260 11th Avenue, New York 1, N. Y.

Mr. _____

Company _____

Address _____

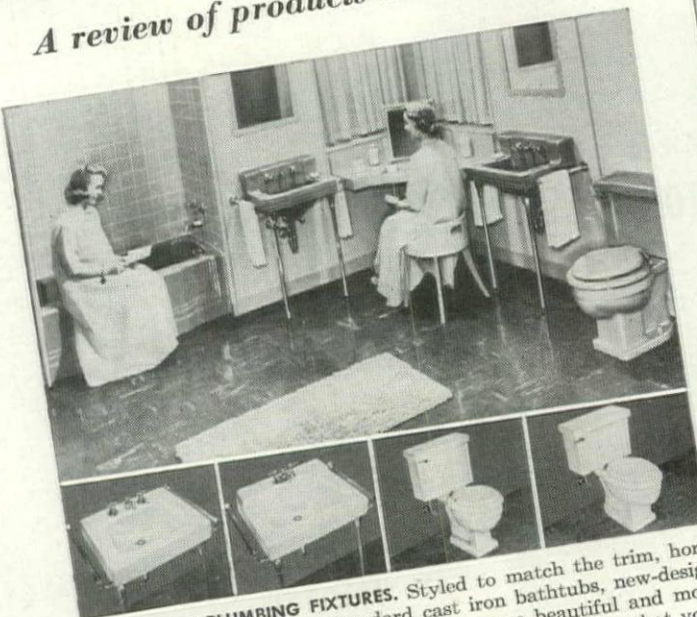
City _____

Zone _____

State _____

PRODUCT NEWS from AMERICAN-Standard

A review of products in the news and important features worth remembering



NEW-DESIGN PLUMBING FIXTURES. Styled to match the trim, horizontal lines of American-Standard cast iron bathtubs, new-design vitreous china lavatories and toilets are more beautiful and more convenient than ever. All embody the same top quality that your clients have come to expect from American-Standard.



RADIANTRIM PANELS. For use with hot water or steam systems, these baseboard heating panels provide all the advantages of both convected and radiant heat. Taking the place of regular wood baseboards, they leave wall and floor space completely usable... deliver clean, uniform warmth floor to ceiling.



REMOTAIRE ROOM CONDITIONER. This remote type unit for multi-room installations heats in winter, cools in summer, filters and circulates the air all year 'round! Individually controlled units use chilled or heated water supplied through a simple piping system from a central water chiller and heating plant... no unwieldy ductwork needed.



HEATRIM PANELS. Specifically designed for forced circulation hot water heating, these baseboard heating panels provide convected warmth throughout each room. The panels take the place of regular wood baseboards, allow use of virtually all the floor area. Panels can be installed free standing or recessed.

Member of the Producers' Council



AMERICAN-Standard

American Radiator & Standard Sanitary Corporation, Dept. AF-113, Pittsburgh 30, Pa.
Serving home and industry

AMERICAN-STANDARD • AMERICAN BLOWER • CHURCH SEATS & WALL TILE • DETROIT CONTROLS • KEWANEE BOILERS • ROSS EXCHANGERS • SUNBEAM AIR CONDITIONERS

American-Standard
Dept. AF-113, Pittsburgh 30, Pa.

Without obligation on my part, please send me your free literature on:

- ☐ New-Design Plumbing Fixtures ☐ Radiantrim Panels
☐ Remotaire Room Conditioner ☐ Heatrim Panels

Name.....

Address.....State.....

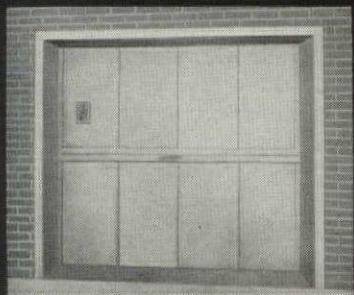
City.....

FOR 55 YEARS
Peelle Freight Elevator Doors
have been the accepted standard
throughout the world.

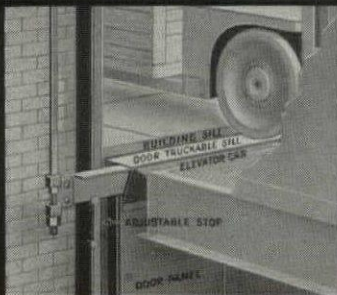
Peelle has maintained its leadership by
 constant development of its product and its guarantee
 of dependability and long, maintenance-free service.

Architects can assure their clients
 of the use of the best freight elevator door
 by specifying that the freight elevator doors
 shall be manufactured and installed by
 The Peelle Company, 47 Stewart Avenue,
 Brooklyn, New York. This will prevent
 down-grading of specifications
 by the use of "Peelle-type" doors.

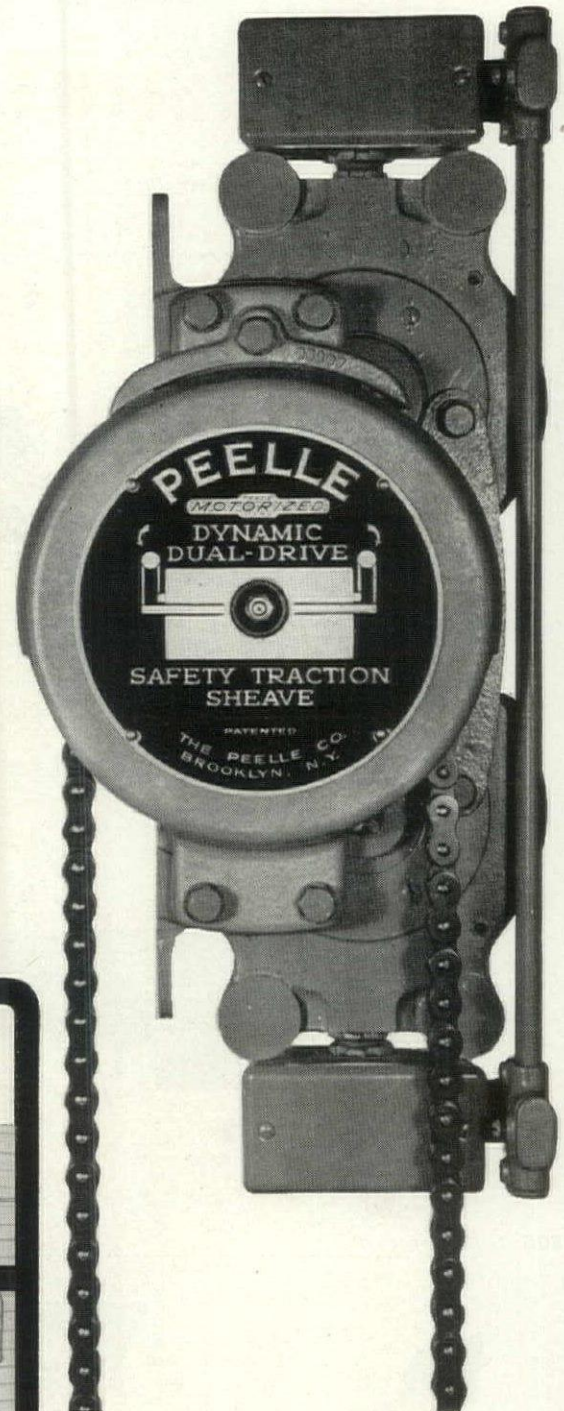
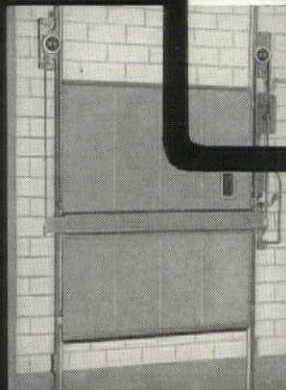
PEELLE STANDARD R10 DESIGN ▼



PEELLE TRUCKABLE SILL ▼



SHAFT VIEW, SHOWING DYNAMIC DUAL-DRIVE OPERATORS ▶



**ADVANTAGES
 OF PEELLE DYNAMIC DUAL-DRIVE OPERATORS**

1. All equipment entirely within shaft
2. No building work required
3. Each side of door equipped with Dynamic Dual-Drive Operator
 - Prevents canting
 - Eliminates adjustment of roping
 - Operating equipment cannot be damaged by electric trucks, etc., ramming door panels
4. Doors under positive electric control throughout travel
5. Simple inspection of motors possible through patented removal method

"it's **PEELLE** *engineered"*

THE PEELLE COMPANY

PEELLE MOTORSTAIRS • INDUSTRIAL DOORS • DUMBWAITER DOORS

**47 STEWART AVENUE,
 BROOKLYN 37, N. Y.**

OFFICES IN PRINCIPAL CITIES

see our catalog in
**ARCHITECTURAL
 FILE**
 or write for copy

A detail and specification sheet
 for manual and motorized doors
 will be mailed upon request.

the **bigger** the project ...
the **better** the reason ...

for choosing Herman Miller Furniture

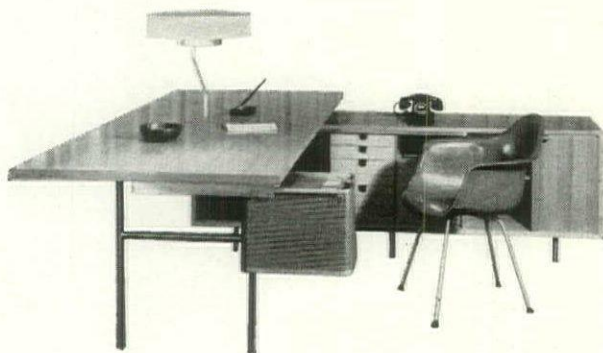
designed by George Nelson and Charles Eames



DSR: Plastic side chair



DKX-2: Upholstered wire chair

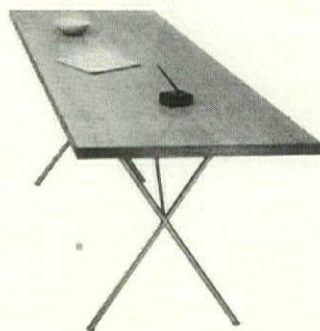


EOG: L-shaped office desk

DAX: Plastic armchair



DCM-R: Molded plywood chair with rack

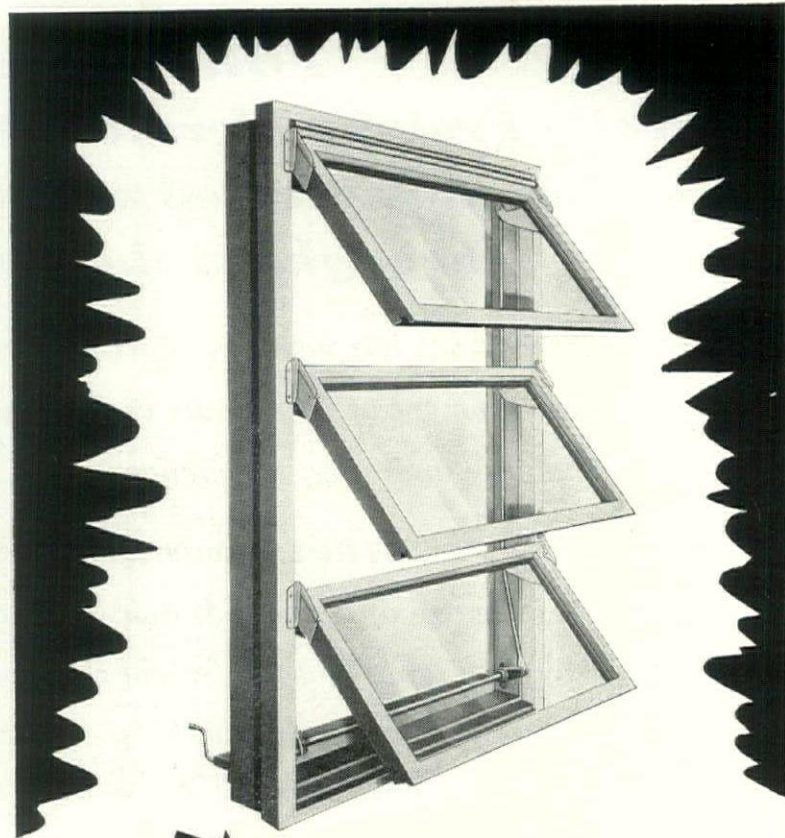


X-leg table, plastic top

The Herman Miller collection offers an extensive series of skillfully engineered designs especially adapted to use in public installations. Chairs, storage units, tables, benches, desks, upholstered pieces...all eminently logical solutions to special furniture needs...all conceived with an eye towards hard usage and ease of maintenance.

Write Dept. F-N for new illustrated brochure on contract furniture.

HERMAN MILLER, ZEELAND, MICHIGAN
Showrooms: New York, Chicago, Grand Rapids and Los Angeles



4 reasons why Gate City means assured satisfaction

◆ **DESIGN SUPERIORITY** With a few effortless turns of the crank, all sash in the Gate City Wood Awning Window adjust simultaneously, provide 100% ventilation control. Gate City's fixed hinge operation prevents rain from splashing or blowing over open top sash, making it the true awning window.

◆ **OPERATIONAL DEPENDABILITY** Sturdy, dual action hardware pulls sash in snug at both sides; assuring smooth, torsion-free operation and tight, positive closure. Weather-tight seal is made complete by Vinyl weatherstripping at head and side jambs and plowed-in spring bronze at meeting rails and sill.

◆ **MATERIAL ADVANTAGE** The insulating ability of wood is far superior to that of any other material; holds heat loss, cold transmittal and condensation to a minimum. When insulated glass is specified, this extra insulation of wood sash is an absolute necessity if full value is to be realized from the extra-cost glass.

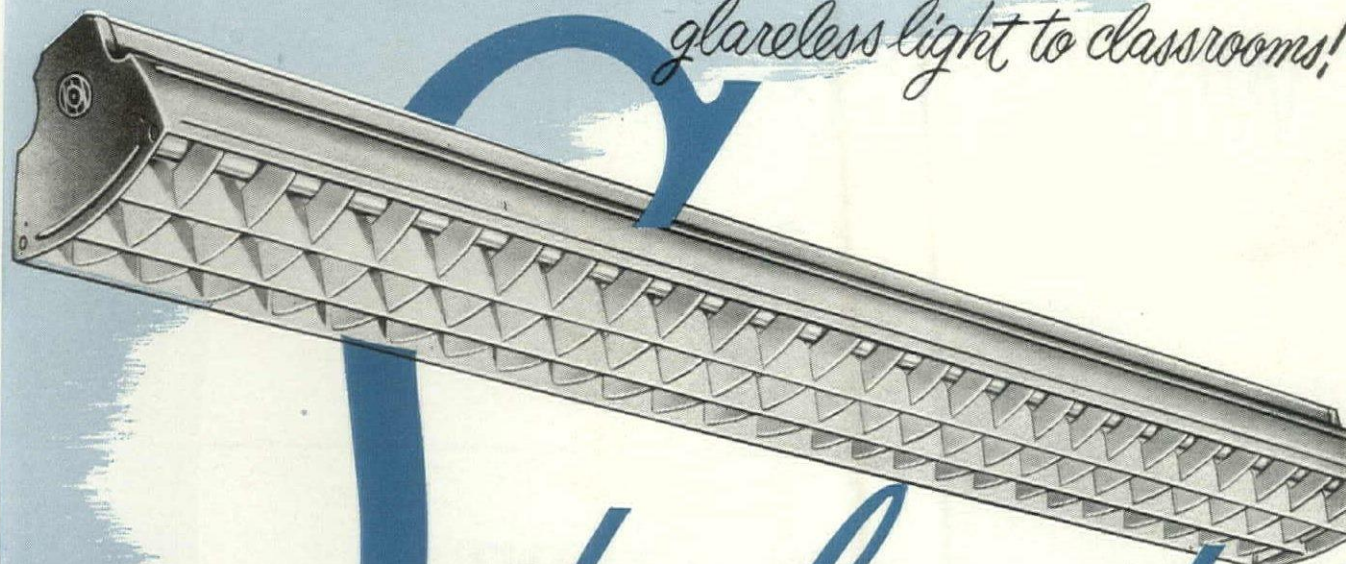
◆ **PERFORMANCE PROVEN** Gate City Wood Awning Windows are in use from South America to Canada, from the Philippines to Africa. In all types of structures, from small homes to some of the largest hospitals in the nation, Awning Windows by Gate City have established a thirteen year record of sterling performance.

"You can Specify **Gate City** with Confidence"

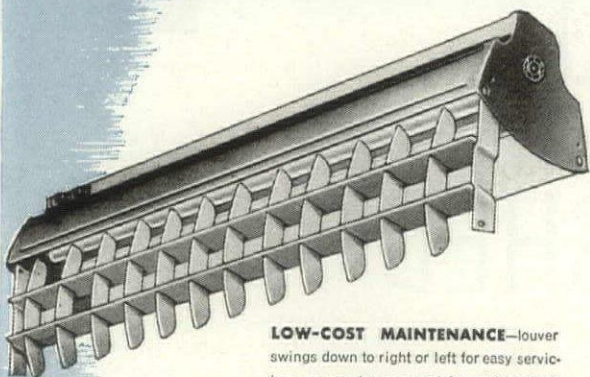
Gate City Perma-Treated
WOOD AWNING WINDOWS
Pioneered by GATE CITY SASH & DOOR CO.
"Wood Window Craftsmen Since 1910"

Write Dept. AF-11 for Full Information
P.O. BOX 901 • FORT LAUDERDALE, FLORIDA

*the Benjamin Leader Line brings economical,
glareless light to classrooms!*



Schoolmaster



LOW-COST MAINTENANCE—louvers swing down to right or left for easy servicing, or may be removed for maintenance

CHOICE OF MOUNTINGS:

individual units	direct to ceiling
continuous lines	suspended

Quality Light for Close Seeing

Now—scientifically designed lighting quality for classrooms, offices, libraries, etc. The "Schoolmaster" provides abundant light output, adequate shielding, ease and flexibility of installation, at low first cost and economical maintenance.

"Schoolmaster" utilizes 40-watt Bipin fluorescent lamps or instant-starting 48", 72" or 96" Slimlines. A choice of steel or transparent plastic side panels is available.

Whatever your school lighting problem, either in new construction or remodeling, you'll find the unit with the right solution in the Benjamin-Leader Line. Send for latest Data Bulletin on Benjamin-Leader Line Lighting Equipment.

BENJAMIN

Exclusive licensee of the Leader Line in Canada:
Robertson Irwin Limited, Hamilton, Ontario



Leader Line

Sold Exclusively through Electrical Distributors

Benjamin Electric Mfg. Co., Leader Division, Dept. YY, Des Plaines, Illinois, also makers of famous Benjamin lighting equipment and sound signals for Industry, Institutions and Commerce.

B274

Why settle
for less

than

L·O·F
POLISHED
PLATE GLASS

NO FINER GLASS THAN
LIBBEY · OWENS · FORD

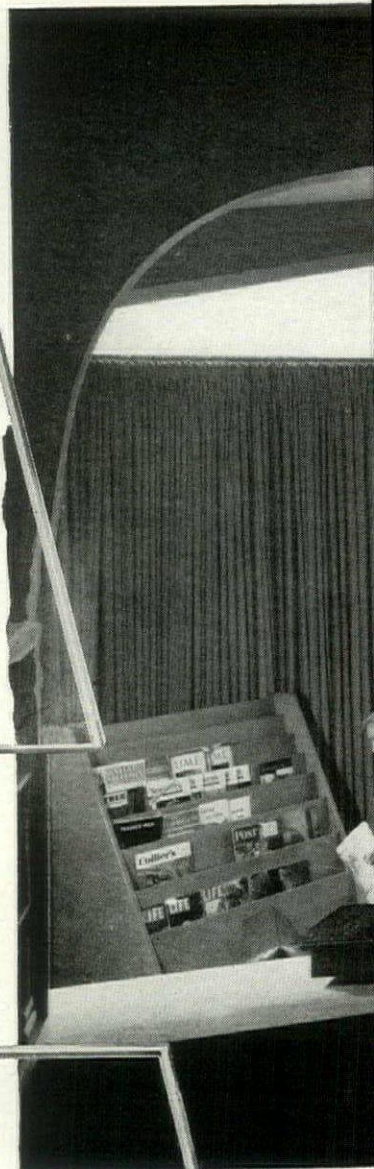


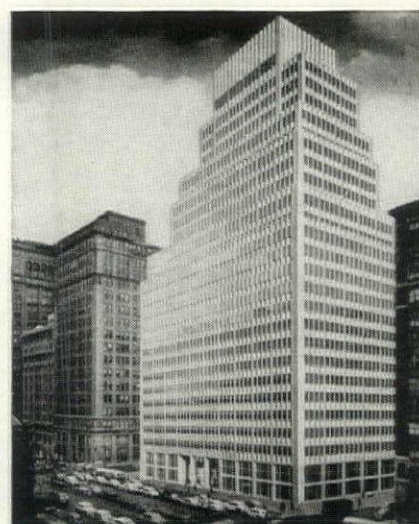


Plate Glass *Thermopane* in this library window assures full enjoyment of the view and year-round comfort. Consolidated High School, Barrington, Ill. Architects: Perkins & Will, Chicago.

Few things you can specify for a building will do more to add to the appearance and impression of quality than plate glass. This becomes increasingly important as glass areas are increased and rooms are opened more to light and view. No substitute, no alternate material can give the same true vision, luster and faithful reflection.

For assurance of unvarying high quality, always specify Libbey-Owens-Ford Polished Plate Glass. There is no finer glass. The incomparable qualities of L·O·F Plate Glass are available to you in many types and forms . . . *Thermopane** for insulation against heat, cold and sound; Heat Absorbing Plate for sun-exposed elevations; *Tuf-flex** tempered plate glass for resistance to shock and impact; and other types for special applications.

There is no standard glazing application for which we do not have a product, no special application which we will not be glad to discuss with you. Call your nearest L·O·F Distributor or Dealer, or write Libbey-Owens-Ford Glass Co., 88113 Nicholas Building, Toledo 3, Ohio: *

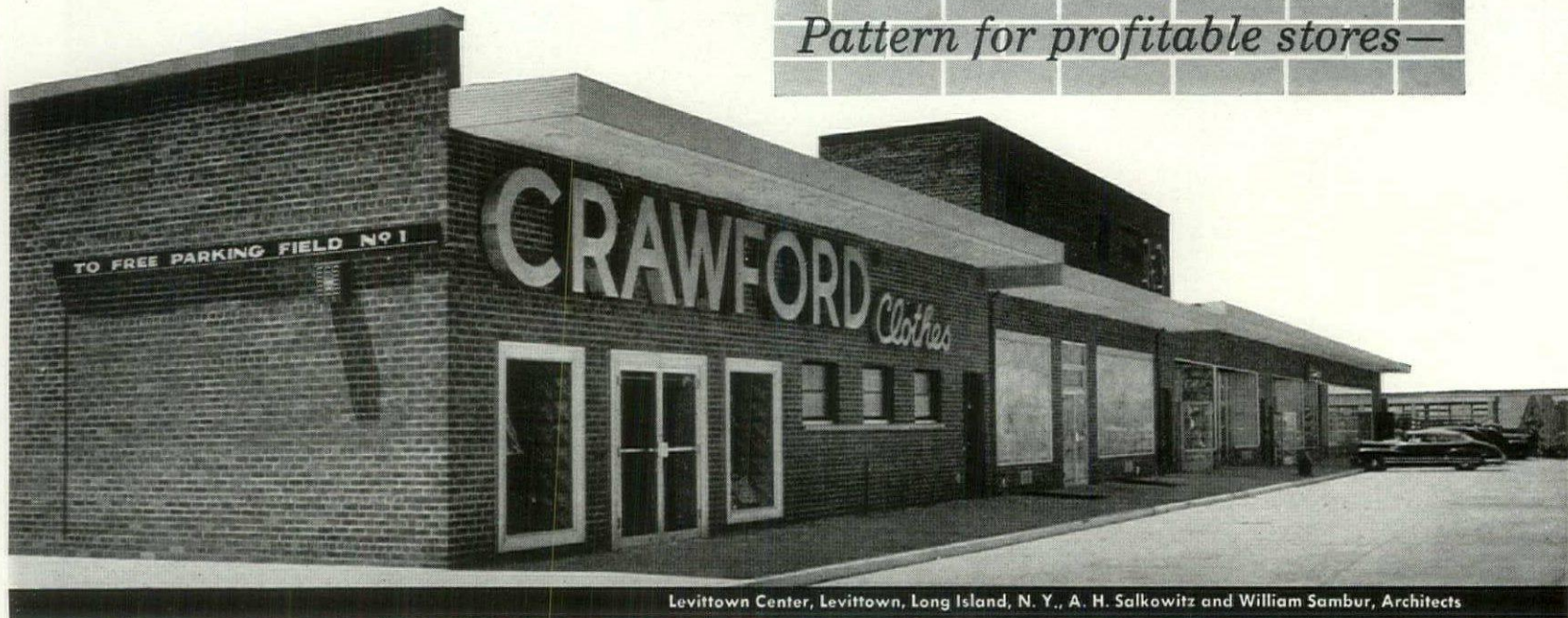


Air-conditioning costs will be down, summer comfort up, in new 99 Park Avenue Building, thanks to use of L·O·F Heat Absorbing Plate Glass. Owners, Tishman Realty & Construction Co. Architects: Emery Roth & Sons, New York.

POLISHED PLATE GLASS



Pattern for profitable stores—



Levittown Center, Levittown, Long Island, N. Y., A. H. Salkowitz and William Sambur, Architects

brick and tile help sales with good looks that last

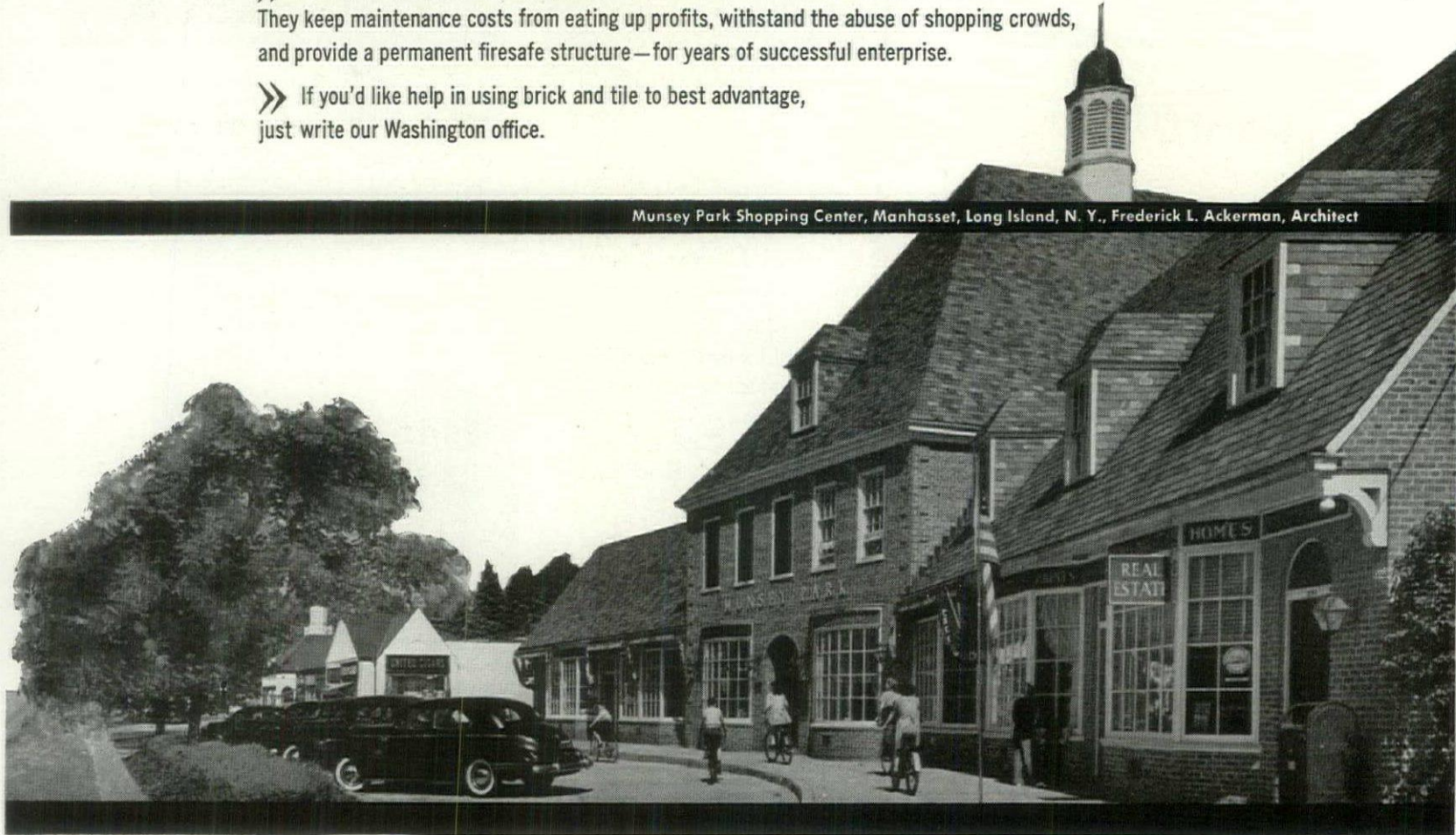
Every experienced store architect knows how important appearance is in merchandising. That's one reason why so many specify brick and tile for shopping centers and other commercial structures.

» People everywhere like the colors and textures of clay products—they're so familiar, warm and friendly. They make a shopping center "belong" in any community.

» And from the investors' viewpoint, brick and tile make good economic sense. They keep maintenance costs from eating up profits, withstand the abuse of shopping crowds, and provide a permanent firesafe structure—for years of successful enterprise.

» If you'd like help in using brick and tile to best advantage, just write our Washington office.

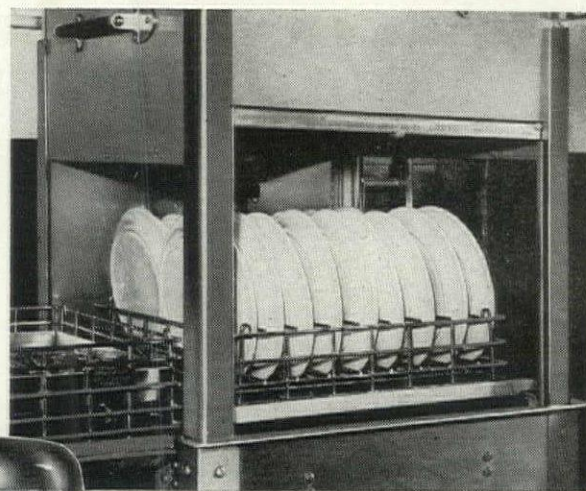
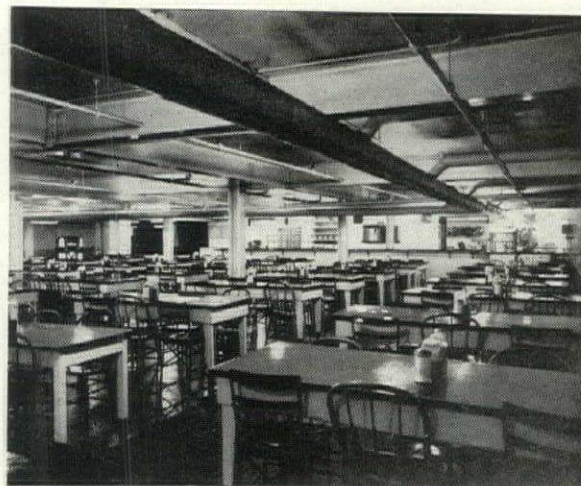
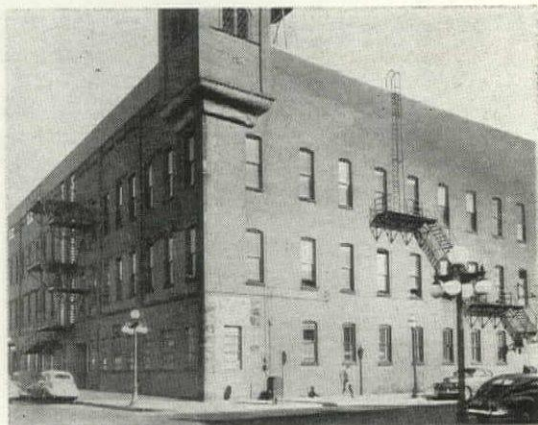
Munsey Park Shopping Center, Manhasset, Long Island, N. Y., Frederick L. Ackerman, Architect



STRUCTURAL CLAY PRODUCTS INSTITUTE

1520 18th Street, N. W., Washington 6, D. C.

New water heating method
simplifies
cafeteria operation
for H. W. Gossard Company

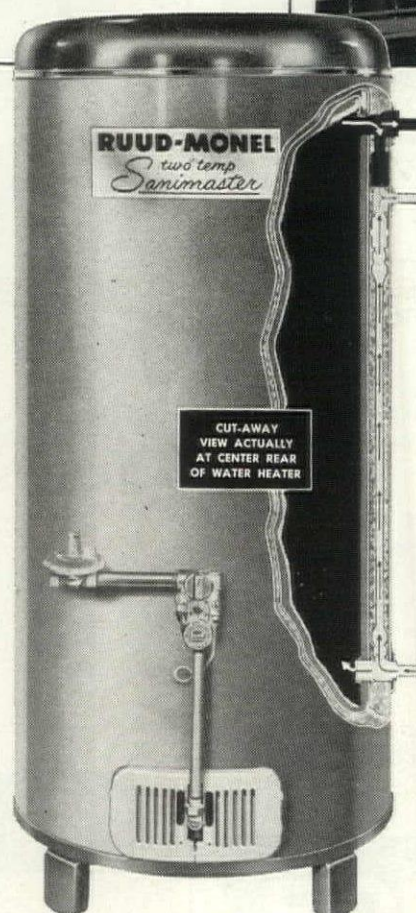


RUST PROOF

RUUD-MONEL
two temp
Sanimaster

It takes plenty of sanitizing 180° hot water to supply the automatic dishwasher in the employee cafeteria at the H. W. Gossard Company's Ishpeming, Michigan plant. This well-known maker of women's foundation garments provides 450 dinners to employees every day. Naturally, there's constant need for 140° water, too—for the kitchen sinks and for general use.

A new Ruud-Monel two-temp Sanimaster water heater solves *both* problems by delivering 180° water and 140° water from the same tank. It will do the same for *you*. The Ruud-Monel two-temp Sanimaster is the *only* water heater made that supplies both extra-hot and regular-hot water from the same tank at the same time.



180° SANITIZING HOT WATER
Piped directly into the Hobart AW-6 dishwasher . . . provides positive bacteria destruction, perfect sanitation.

140° GENERAL USE HOT WATER
Piped to kitchen and lavatory sinks to provide hot water at safe-to-touch temperature.

MONEL—THE WONDER METAL
—safely holds water at 180°. Won't rust, ever! Ruud-Monel Sanimaster, with its exclusive long-life Monel tank, provides hot water sparkling clean.

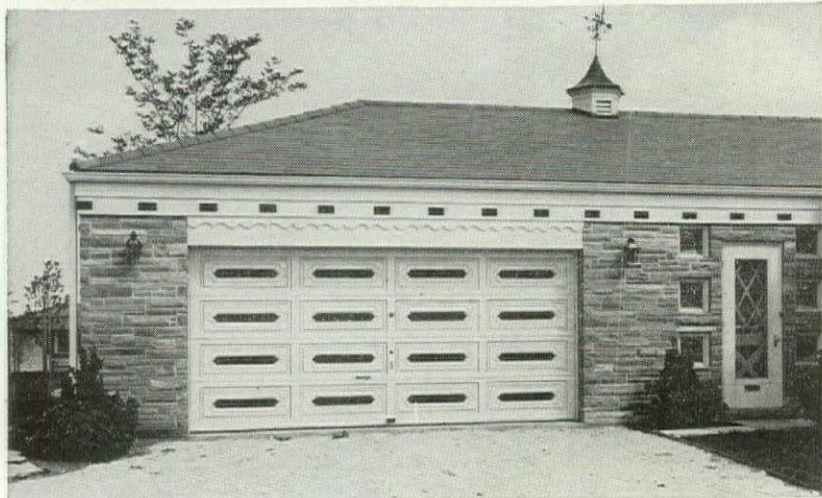
In addition to the Ruud-Monel two-temp Sanimaster, Ruud offers a complete line of water heaters for domestic, commercial and industrial applications.

For specifications, data and literature, write Dept. T-3.

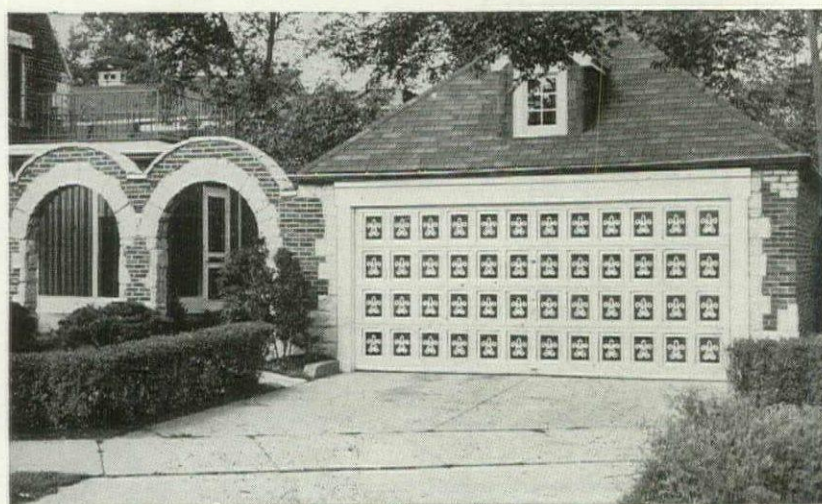
RUUD MANUFACTURING COMPANY

Pittsburgh 1, Pa. • General Offices • Toronto 14, Ontario

RAYNOR Carved Panel Wood Sectional Overhead DOORS



for Any Style of ARCHITECTURE



for Any Type of INSTALLATION

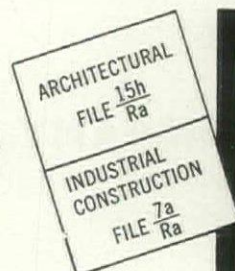
To you, Mr. Architect, we submit the above illustrations of the Raynor Carved Raised Panel Door as typical examples of the original door designing ability we boast of in our Raynor Engineering Department.

With the design carved in 1" thick panels, this beauty of all wood sectional overhead doors eliminates the costly and inconvenient practice of nailing extra pieces to the door when an original or individualistic effect is desired.

By combining this alert and creative door designing ability with the Raynor spacious and modern production facilities (hardware and woodwork built complete in the Raynor plant) we feel the Raynor line of residential, commercial and industrial doors, equipped with patented Graduated Seal, *standard or special construction*, is the door you can depend on, *the door you can specify with confidence.*

Consult your telephone directory or write direct and permit us the privilege of sending you our Sweets file catalog and a complete set of full color literature.

See Our
Catalog
in Sweets



RAYNOR

MANUFACTURING COMPANY

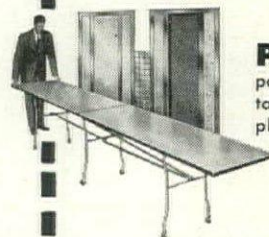
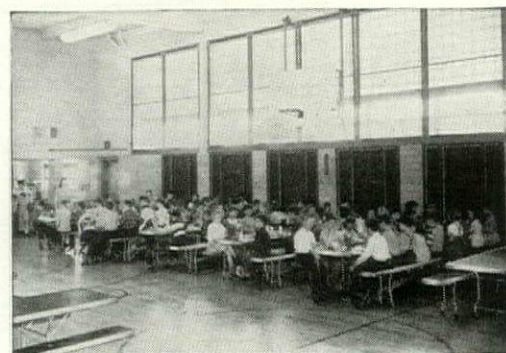
Builders of a complete line of
wood sectional overhead doors
East River Road, Dixon, Illinois

They Make Space Serve Double Duty...

and help you keep within
restricted budgets in
school & institution design



IN-WALL All-steel. Tops the line. Proven by 16 years service. Units remain rigidly attached to pockets at all times.



PORT-A-FOLD Wall pocket type. Units detach. Tops of tables and benches 3/4" reinforced plywood, heat-resistant plastic.

MOBIL-FOLD Tables and benches (Port-A-Fold type) fold into caster-equipped carrier that rolls to storage area.



Let us supply complete information

In-wall Port-a-Fold Mobil-Fold

Consult Sweet's or write

Schieber Sales Co.
Detroit 23, (Brightmoor Station) Mich.

In Sound Conditioning...

Dependability, Experience and Integrity are Vitally Important!

Whether in the drawing board stage, during construction, or in the finished building, the ability to make acoustical analyses and predetermine acoustical specifications can make a tremendous difference—a difference in sound conditioning effectiveness, a difference in appearance, a difference in cost.

That's why—whatever your acoustical requirements—you'll find the counsel of your Acousti-Celotex distributor invaluable. As a member of the *world's most experienced acoustical organization*, he has a diversified background that encompasses acoustical installations of every type and size ... a knowledge of every known application technique.

The World's Most Experienced Acoustical Organization!

	Total Years Member of Acousti-Celotex Organization		Total Years Member of Acousti-Celotex Organization
Acoustics & Specialties Co., New Orleans • Memphis • Little Rock	28	Insulation Sales Company, Inc., Minneapolis	28
Acousti Engineering Company, Atlanta • Birmingham	23	Jacobson & Co., Inc., New York City • Harrisburg • Philadelphia • Elizabeth	21
Acousti Engineering Co., of the Carolinas, Charlotte	25	Laing-Garrett Const. Specialties, Inc., Phoenix • Tucson	11
Acousti Engineering Co., of Florida, Jacksonville • Miami • Tampa	16	Leggette Michaels Co., Grand Rapids	20
C. A. Bader Co., Inc., Hartford	28	R. E. Leggette Co., Detroit	20
Baird-Hackett Sounds Control, San Diego	22	Earl S. Lewis & Co., Inc., Omaha	20
Hugh J. Baker & Co., Indianapolis • Decatur • Evansville • Ft. Wayne • Wabash	17	Geo. P. Little Co., Inc., Cleveland • Pittsburgh • Akron • Columbus	28
Lauren Burt, Inc., of Colorado, Denver	25	James L. Lyon Co., Chicago	27
Lauren Burt, Inc., Salt Lake City	26	S. W. Nichols Co., Inc., Dallas • Houston	28
Collum Acoustical Co., Inc., Syracuse • Albany • Rochester	20	Noise Control Companies, Seattle • Portland • Spokane • Tacoma	22
WNY Collum Acoustical Corp., Buffalo	20	Oklahoma Acoustical & Specialties Co., Inc., Tulsa • Oklahoma City	21
E. C. Decker & Co., Inc., Cincinnati • Huntington • Dayton	24	Perma-Stone Des Moines, Inc., Des Moines • Davenport	19
E. C. Decker & Co., of Kentucky, Inc., Louisville	24	Pitcher & Co., Inc., Cambridge • Providence • Rochester, N. H.	22
Dominion Sound Equipments, Ltd., Montreal • Toronto • Winnipeg • Calgary • Vancouver Edmonton • St. John • Sidney • Quebec • North Bay Halifax • Regina	16	The Harold E. Shugart Co., Inc., Los Angeles	22
Hale & Wallace, Inc., Chattanooga	2	Southwest Acoustical Co., El Paso	12
The Hampshire Corp., Baltimore • Richmond • Roanoke • Norfolk • Bladensburg	24	C. E. Top Co., Albuquerque	15
Henges Co., Inc., St. Louis • Kansas City • Wichita	16	Tri-State Roofing Co., Knoxville	1
Len Herndon Co., Nashville	16	Edward T. Ver Halen, Inc., Milwaukee • Green Bay • Madison	16
		Western Asbestos Co., San Francisco • Sacramento • Oakland • Fresno	22
		West Texas Brick & Tile Company Abilene, Texas	1



ACOUSTI-CELOTEX
TRADE MARKS REGISTERED U.S. PAT. OFF.
Sound Conditioning

Products for Every Sound Conditioning Problem

The Celotex Corporation, 120 S. LaSalle Street, Chicago 3, Illinois • In Canada: Dominion Sound Equipments, Ltd., Montreal 6, Quebec

TECHNICAL PUBLICATIONS

HEATING. Facts about Hot Water. Sellers Engineering Co., 4876 N. Clark St., Chicago 40, Ill. 20 pp. 8½" x 11"

A valuable reference for architects, heating engineers, contractors and building owners, this concise treatise touches upon all conceivable ramifications of water—its physical make-up, effects on plumbing systems, and efficient utilization. Various kinds of heaters are charted for use with "hard, very hard, soft, and very soft" water supplies.

EARTH-MOVING EQUIPMENT. A Good Business Deal, Form 30772. Caterpillar Tractor Co., Peoria, Ill. 8 pp. 8½" x 11"

TRACTOR. Caterpillar Diesel D6 Tractor, Form 30379. Caterpillar Tractor Co., Peoria, Ill. 32 pp. 8½" x 11"

TEXTURED WALL COVERINGS. Timbertone—A Permanent Structural Wall Installation on a Wallpaper Base. Timbertone Decorative Co.,

114 E. 32nd St., New York 16, N. Y. 11 pp. 8½" x 11"

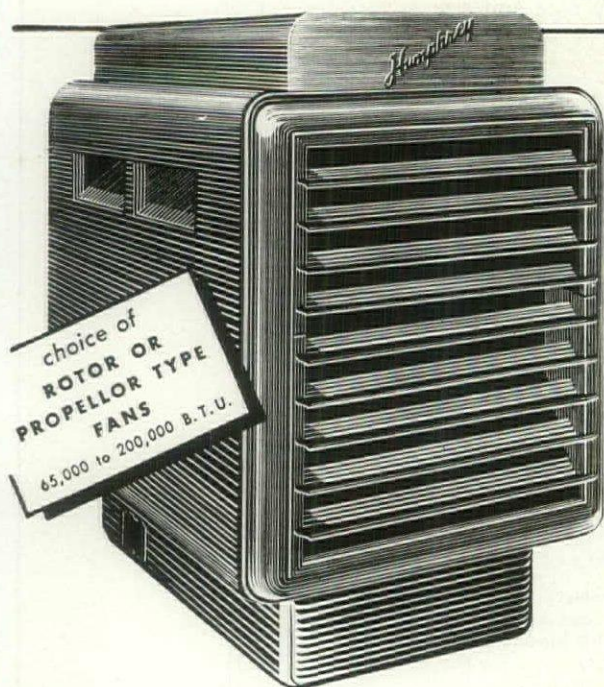
OFFICE EQUIPMENT. Stacor Lifetime Steel Drafting Room Furniture, Drawing, Tracing and X-ray Equipment, Catalogue No. 553. Stacor Equipment Co., 768-778 E. New York Ave., Brooklyn 3, N.Y. 22 pp. 8½" x 11"

MATERIALS HANDLING. St. Paul Hydraulic Heavy Duty Hoists & Bodies and Hi-Dumpers. St. Paul Hydraulic Hoist, 2207 University Ave. S.E., Minneapolis 14, Minn. 8 pp. 8½" x 11"

HEAT AND POWER. Titusville-Iron Fireman Boiler-Burner Unit for High or Low Pressure Heating, Power and Process Steam, Bul. B-3133. The Titusville Iron Works Co., Div. of Struthers Wells Corp., Titusville, Pa. or Iron Fireman Mfg. Co., 3170 W. 106th St., Cleveland 11, Ohio. 14 pp. 8½" x 11"

HARDWARE. Sliding Door Framing Details, Grant Pulley and Hardware Corp., 31-85 White-Stone Pkwy., Flushing 54, N.Y. 16 pp. 8½" x 11"

When you buy or specify Gas Unit Heaters LOOK FOR THESE 4 Features



The four features pictured at the right typify today's finest Gas Unit Heater Construction. When you buy or specify Unit Heaters that have these features, you can be sure that your customers are going to enjoy the best of automatic gas heating.

Humphrey engineers originated these design improvements and numerous others, in the course of their continuous program of research aimed at increasing Unit Heater dependability and economy.

Today, every one of these superior features is a Humphrey exclusive, available only on Unit Heaters made by General Gas Light Co.



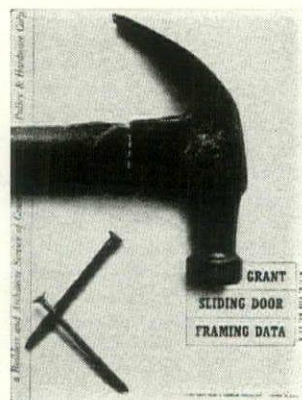
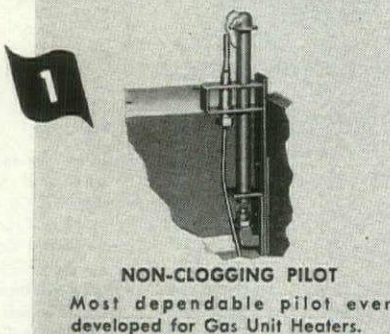
It is this kind of construction that has earned the Humphrey its reputation as the world's finest Gas Unit Heater.

GENERAL GAS LIGHT COMPANY
KALAMAZOO, MICHIGAN

Humphrey

**AUTOMATIC
GAS**

UNIT HEATERS



INSULATION. Foamglas, the Long-Life, All Temperature Pipe Insulation. Pittsburgh Corning Corp., 1 Gateway Center, Pittsburgh 22, Pa. 4 pp. 8½" x 11"

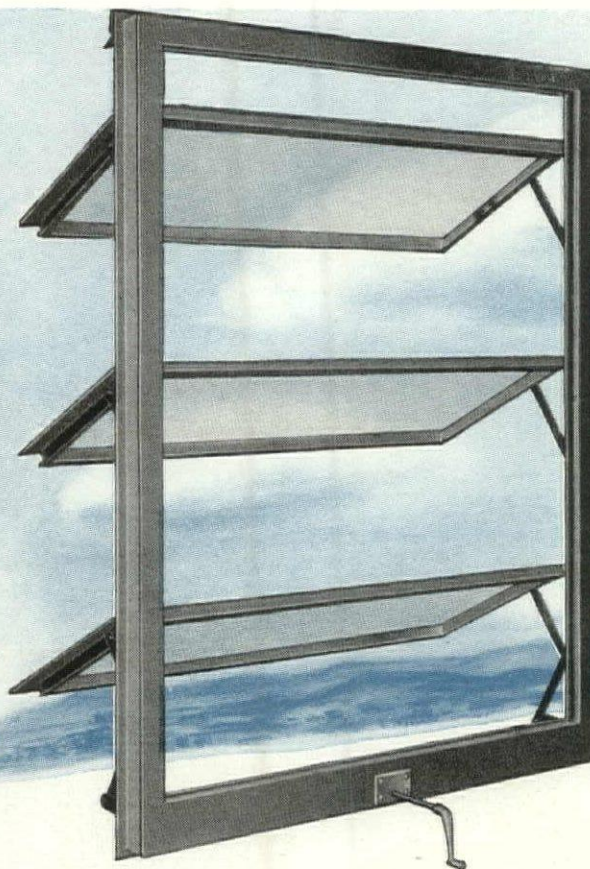
SOUND CONTROL. Ultralite, Ultrafine and Ultra-coustic Glass Fiber Acoustical Insulations. Gustin-Bacon Mfg. Co., 210 W. 10th St., Kansas City, Mo. 6 pp. 8½" x 11"

FLOOR COVERING INSTALLATIONS. The William Gold Story—Engineering Technique in the Selection and Installation of Carpet and Smooth Surface Floor Covering Materials. William Gold, Inc., 17 W. 17 St., New York 11, N.Y. 8 pp. 8½" x 11"

ARC WELDING. Arc Welding Machines—AC Transformer Welders, DC Generator Welders, Catalogue 1340. Air Reduction Sales Co., 60 E. 42nd St., New York 17, N.Y.

TOOLS. Modern Fastening Methods—A Handbook on Powder-Actuated Fastening. Ramset Fasteners, Inc., Ramset Div., Olin Industries, Inc. 12117 Berea Rd., Cleveland 11, Ohio. 30 pp. 8½" x 11"

Now
ready



The New Lupton Aluminum AWNING WINDOW

Before you make any decision regarding Awning Windows, you will want to see the quality and value in this newest development in the Lupton line — the new Lupton Aluminum *Awning* Window! . . . It is engineered to Lupton standards — developed out of our more than 40 years experience in the design and construction of metal windows — and is precision built in every detail. From every practical standpoint of installation and service, we believe you will find it the finest window of its type the building industry has ever known . . . It features a *centrally* operated control bar that delivers equal power

to both jambs. This perfect balancing of power means *easier* opening, *easier* closing and a perfect seal around each sash! . . . The new Lupton Aluminum Awning Window is now ready in Modular and Residence sizes for business buildings, hospitals, schools, residences. Let us tell you more about this new Lupton Aluminum Awning Window. Write today for specification, details and sizes.



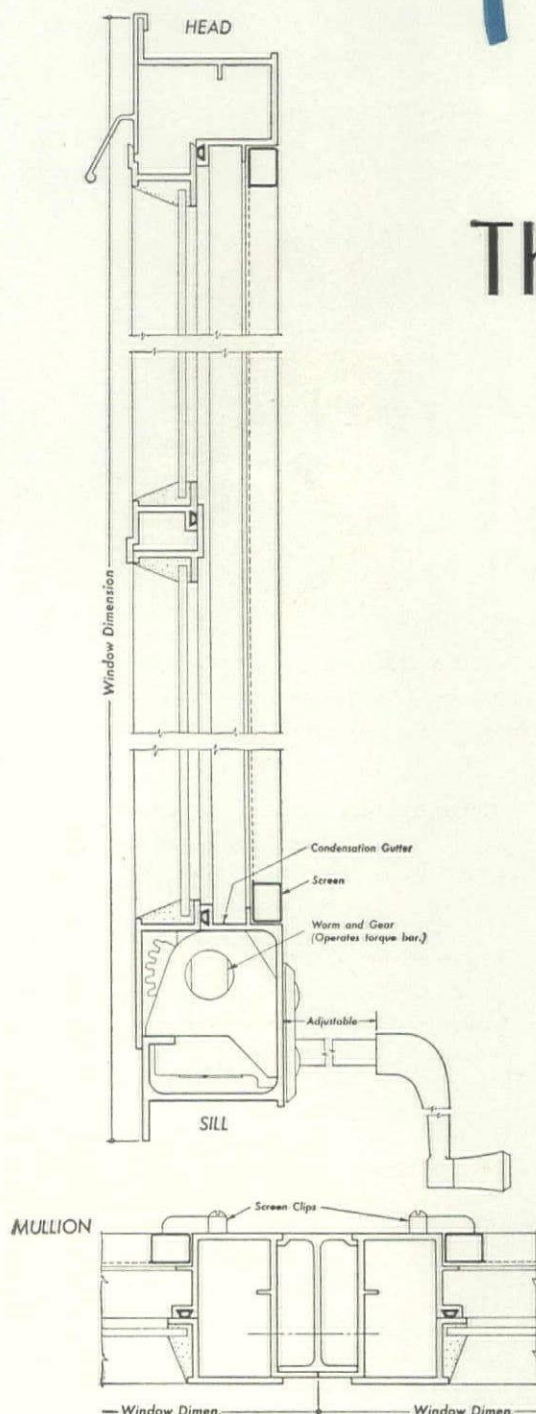
MICHAEL FLYNN MANUFACTURING COMPANY

700 East Godfrey Avenue, Philadelphia 24, Penna.

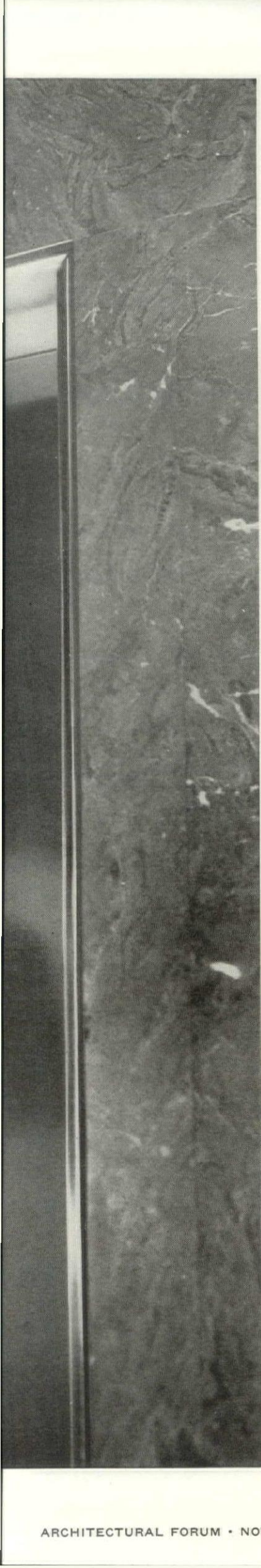
Member of the Steel Window Institute and Aluminum Window Manufacturers Association

LUPTON

METAL WINDOWS







Save \$7,000 A Car With New Elevator System

These guards could be rushing your savings to the nearest bank . . . up to \$7,000 per car a year. These savings are made possible by the new elevator team for heavy-traffic buildings—operatorless Selectomatic with Automatic Traffic Pattern Control.

This new elevator system completely eliminates the human element . . . does away with car attendants . . . turns starters into good-will ambassadors. Automatic Traffic Pattern Control is far more efficient than a manual starter. It operates itself, taking orders directly from your building's traffic.

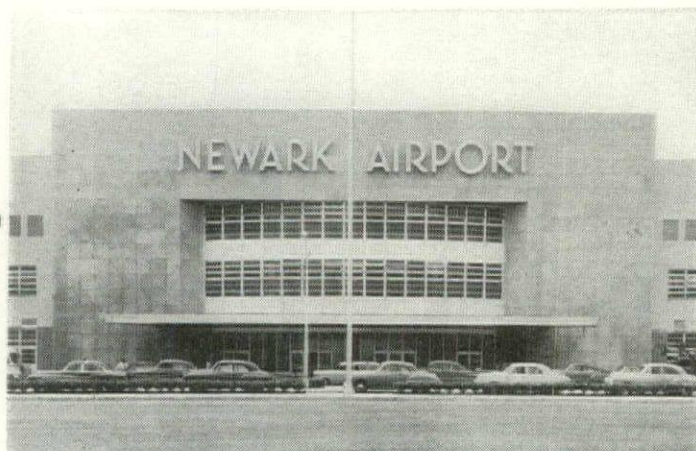
Regardless of the nature or frequency of the traffic changes, Automatic Traffic Pattern Control digests the facts and automatically switches the system to meet the existing demand. 24 hours a day, it electronically checks passenger flow, promptly adjusts itself to meet any change in traffic conditions.

Find out more about Automatic Traffic Pattern Control now. It's ideal for new installations. Added to *existing* systems, it makes any elevators ultra-modern. Our nearest office will give your call prompt attention.

Westinghouse Elevators

PASSENGER AND FREIGHT ELEVATORS • ELECTRIC STAIRWAYS
PROTECTIVE MAINTENANCE AND SERVICE

YOU CAN BE SURE...IF IT'S **Westinghouse**
J-98686



Main Entrance to Newark Airport, Newark, N. J. Port of New York Authority, Architects and Designers. Installed by New Jersey Bronze Co., Inc., Newark, N. J. Extrud-A-Line Alumilited Aluminum Entrances and Doors Used.

ALUMILINE

EXTRUDED ALUMILITED ALUMINUM PRODUCTS

Specified by Leading Architects for:

HOSPITALS • SCHOOLS • RELIGIOUS BUILDINGS • BANKS
STORE FRONTS • OFFICE BUILDINGS • INDUSTRIAL PLANTS
HOUSING PROJECTS • SHOPPING CENTERS

- Extruded Aluminum Store Front Construction
- Extruded Aluminum Factory Assembled Entrance Frames
- Narrow and Wide Stile Extruded Aluminum Doors
- Custom Built Extruded Aluminum Windows

Send for these new 1953 Catalogs. "Alumiline" Store Front Construction and "Extrud-A-Line" Entrances

see our catalog in

ARCHITECTURAL
FILE

THE ALUMILINE CORPORATION
DUNNELL LANE PAWTUCKET, R. I.

or write for copy

Make SAFE Buildings SAFER with *Big Beam*



AUTOMATIC EMERGENCY LIGHTS

for Commercial
Buildings
Institutions
Factories
... and other places
of public assembly.

No building is completely safe without protection from the hazards of sudden blackouts. Leading industries have adopted Big Beam for their emergency lighting needs.

When regular lights fail, Big Beam comes on *instantly* and provides hours of bright, safe illumination. Model 2ATW (shown here) is one of a variety of Big Beam models available. Whichever model you select, you are providing the utmost in dependability when you specify Big Beam.

4638

For complete information, write today to—

U-C LITE Mfg. Co. 1042 W. Hubbard St., Chicago 22, Ill.

In Canada: Bernard Marks & Co., Ltd., 459 Church St., Toronto 5, Ont.

the Safe Specification

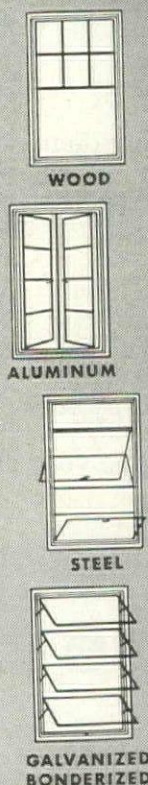
for Glazing
EVERY TYPE OF WINDOW

Specifying Tremglaze means a better job...a safer job...an economical job. Tremglaze requires no painting—comes in harmonizing colors, bonds tightly to metal, wood and glass. Over 20 years of experience makes Tremglaze the safe specification.

Paint First...Then Glaze
WITH

TREMGLAZE
MASTIC GLAZING COMPOUND

Recent Tremglaze Jobs:
Chrysler Bldg.—East, New York City
100 Park Avenue, New York City
Fafnir Bearing Co., New Britain
Phineas T. Barnum Apts., Bridgeport
Park Merced Housing Apts., San Francisco
Parklabea Housing Projects, Los Angeles



TREMCO

THE TREMCO MANUFACTURING COMPANY, Cleveland, Ohio

THE TREMCO MANUFACTURING COMPANY (Canada) LTD., Toronto, Ontario

Polychrome
terra cotta
panels and statues
enable you to
design greater
beauty, interest
and character
into
modern structures.



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

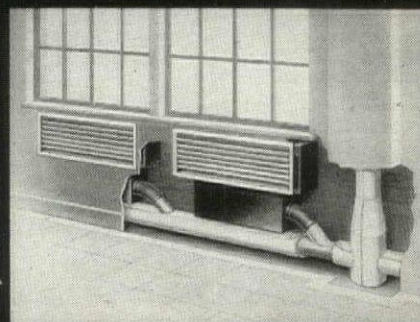
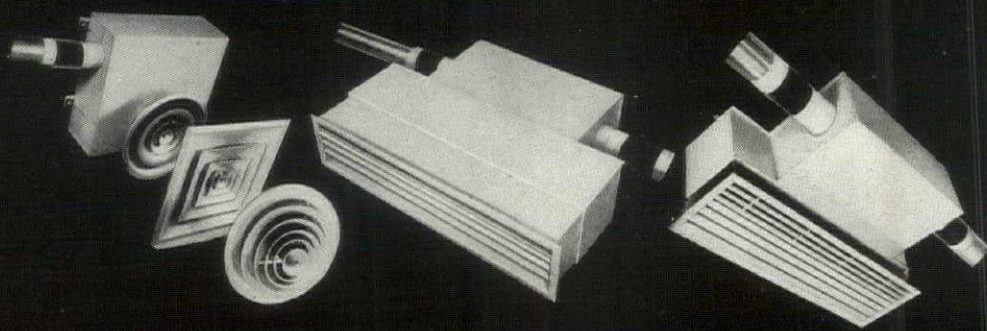
FEDERAL SEABOARD TERRA COTTA
CORPORATION



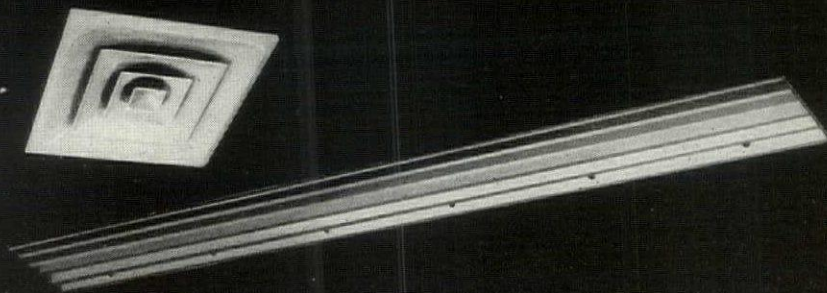
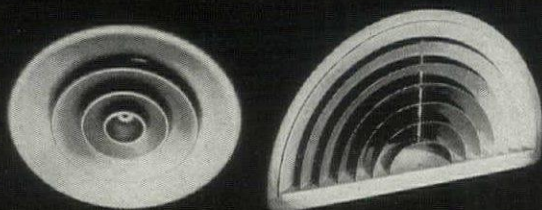
10 East 40th Street, New York 16, N. Y.
Plants at Perth Amboy & So. Amboy, N. J.

No matter *which*
air conditioning system you use...

HIGH VELOCITY



OR CONVENTIONAL



*when these
are in sight
the installation
is right*

ANEMOSTAT®

DRAFTLESS Aspirating AIR DIFFUSERS

ANEMOSTAT CORPORATION OF AMERICA

10 EAST 39th STREET, NEW YORK 16, N. Y.

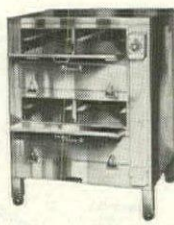
REPRESENTATIVES IN PRINCIPAL CITIES

"No Air Conditioning System Is Better Than Its Air Distribution"



Thermotainer Type CPT
Pass-through unit with doors on both sides for use between kitchen and service area.

4
of the
complete
line of
11



Thermotainer Type E
Four compartment unit with full width doors. Large capacity. Shelf supports for 12 x 20 pans.

Thermotainer ELECTRIC FOOD WARMERS

Ideal hot food storage for domestic, institutional and commercial use



Thermotainer Type UC
Small, one or two compartment unit for use under steam table or serving counter. Ideal where space is limited.

Thermotainers
made in
standard
types and
sizes, or
to your
specifications

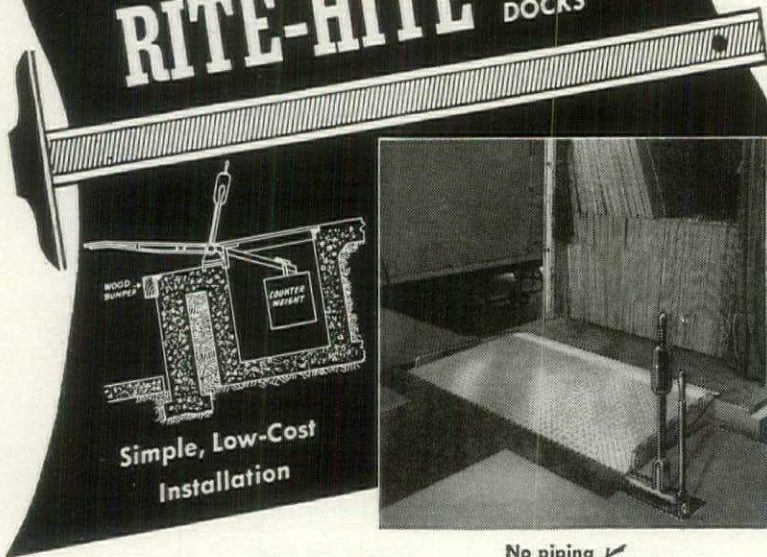


Thermotainer Type AA
Combination worktable and hot food storage unit. In 2, 3 or 4 section sizes. 34 inches high, 30 inches wide.

FRANKLIN PRODUCTS CORP.

2155 PERSHING ROAD • CHICAGO 9, ILLINOIS

You get top efficiency with...
RITE-HITE
ADJUSTABLE
LOADING
DOCKS



Simple, Low-Cost
Installation

Include RITE-HITE Adjustable Loading
Docks in your design. You'll get...

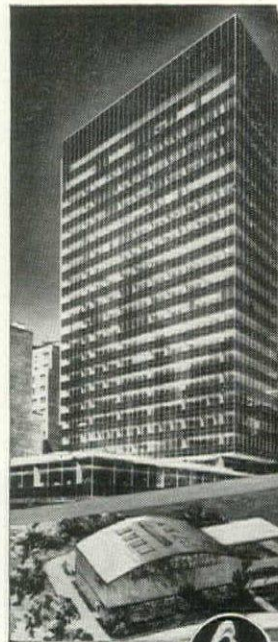
- Ease of Installation
- Trouble Free Maintenance
- Modern and Efficient Performance
- Speedy Cross-Dock Operation

- No piping ✓
- No compressors ✓
- No pumps ✓
- No motors ✓
- No lubrication ✓
- No machinery ✓
- No operation expense ✓
- Counter-balanced ✓
- Easy to operate ✓

For complete details, sizes, and specifications write to: Dept. 12

LOOMIS MACHINE CO. • CLARE, MICHIGAN
RITE-HITE DIVISION

*In city skyscrapers
OR
suburban schools*



Architects, whether they are planning a public building or a modern school, know the value of hygiene when it comes to choosing drinking water equipment. That's why they select Halsey Taylor Drinking Fountains, the fixtures that are as free from contamination as they are free from servicing annoyances. Variety of type and design, too! Write for latest literature.

The Halsey W. Taylor Co.
Warren, Ohio

A-28

Halsey Taylor
DRINKING FOUNTAINS



STATEMENT REQUIRED BY THE ACT OF AUGUST 24, 1912, AS AMENDED BY THE ACTS OF MARCH 3, 1933, AND JULY 2, 1946 (Title 39, United States Code, Section 233) showing the ownership, management, and circulation of Architectural Forum published monthly at New York, N. Y., for October 1, 1953.

1. The names and addresses of the publisher, editor, managing editor, and business managers are: Publisher, P. I. Prentice, 9 Rockefeller Plaza, New York, N. Y.; Editor, Henry R. Luce, 9 Rockefeller Plaza, New York, N. Y.; Executive Editor, Joseph C. Hazen, Jr., 9 Rockefeller Plaza, New York, N. Y.; General Manager, Robert W. Chastenev, Jr., 9 Rockefeller Plaza, New York, N. Y.

2. The owner is: Time Incorporated, Time & Life Building, New York 20, New York; the names and addresses of stockholders owning or holding one per cent or more of total amount of stock are: Henry P. Davison, c/o J. P. Morgan & Company, P. O. Box 1266, New York, N. Y.; William V. Griffin, 20 Exchange Place, New York 5, N. Y.; William Hale Harkness, c/o New York Trust Company, Income Collection Department, 100 Broadway, New York 5, N. Y.; Irving Trust Company, New York City, successor trustee under the will of Briton Hadden for the benefit of Elizabeth Busch Pool, c/o Irving Trust Company, Custodies Department, 1 Wall Street, New York 15, N. Y.; Margaret Zerbe Larsen, c/o Time Inc., Time & Life Building, Rockefeller Center, New York 20, N. Y.; Roy E. Larsen, c/o Time Inc., Time & Life Building, Rockefeller Center, New York 20, N. Y.; Henry R. Luce, c/o Time Inc., Time & Life Building, Rockefeller Center, New York 20, N. Y.; The Henry Luce Foundation, Inc., 9 Rockefeller Plaza, New York 20, N. Y.; Samuel W. Meek, c/o Greenwich Trust Company, Greenwich, Conn.

Stock to the extent of more than one per cent is registered in the names of the following companies, but in each case the company is a nominee for a number of stockholders, no one of whom is known to own more than one per cent: Brown Brothers, Harriman & Company, 59 Wall Street, New York 5, N. Y.; Cobb & Company, c/o New York Trust Company, 100 Broadway, New York 5, N. Y.

3. The known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: None.

4. Paragraphs 2 and 3 include, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting; also the statements in the two paragraphs show the affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner.

ROBERT W. CHASTENEY, JR.
General Manager.

Sworn to and subscribed before me this 17th day of September 1953

ANNE A. MASON

(My commission expires March 30, 1955)

[SEAL.]

In January you will attend the premiere of another outstanding forum editorial first

Beginning with the January issue, FORUM's regular news section will be expanded to include previews of new non-residential building activities—a monthly construction round-up that will give you a first, important look at . . .

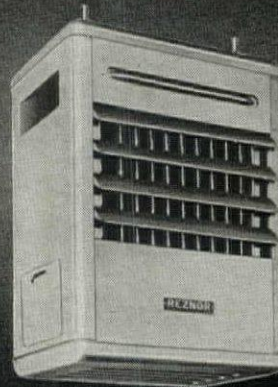
WHO is going to build WHAT they are going to build WHERE it will be built

This special news feature, to appear for the first time in the January issue of Architectural FORUM, will be in addition to FORUM's regular and intensive coverage of the best of the non-residential buildings being planned and completed across the country—still another reason why . . .

ARCHITECTURAL forum

is first with the men-of-decision
in the big business of big building

REZNOR GAS UNIT HEATER



See **S**weet's Catalog Files
or Mail the Coupon Today

the world's
largest-selling
GAS UNIT HEATER

*Invites Your
Consideration*

- ★ Low First Cost
- ★ Low Noise Level
- ★ High Efficiency
- ★ High Value

REZNOR MANUFACTURING COMPANY

40 UNION ST. • MERCER, PENNA.

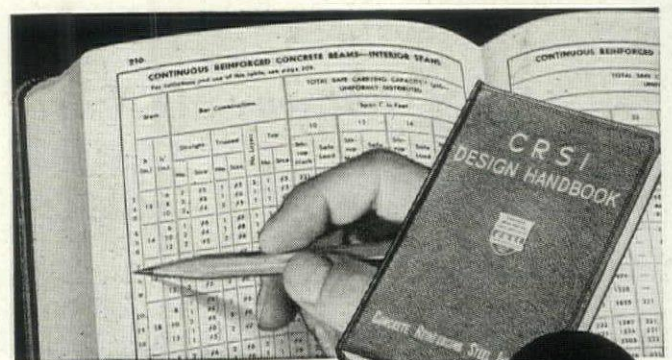
NAME _____

FIRM _____

ADDRESS _____

CITY _____ ZONE _____ STATE _____

I am an ☐ ARCHITECT ☐ BUILDER ☐ HEATING ENGINEER



**Now—FINISHED DESIGNS
FOR REINFORCED CONCRETE MEMBERS
ALREADY WORKED OUT!**

**412 PAGES
\$5.00**

No more algebraic formulas and calculations. The CRSI Design Handbook has the answer to any reinforced concrete finished design problem. Simply locate the table covering the member you are designing, apply span and load requirements, and then *read off directly* concrete dimensions and reinforcing steel data. Follows the latest codes and practices. Send check or money order for your copy, today!

Money Back Guarantee
If not completely satisfied, return book within 10 days for full refund. No C.O.D. ORDERS, PLEASE.

Prepared by The Committee on Engineering Practice
CONCRETE REINFORCING STEEL INSTITUTE
38 SOUTH DEARBORN ST., CHICAGO 3, ILL.



But why MEN over 45?

Our doctors still don't know *why*, but if you are a man over 45 you are six times as likely to develop lung cancer as a man of your age twenty years ago. They *do* know, however, that their chances of saving your life could be about *ten times* greater if they could only detect cancer long before you notice any symptom in yourself. (Only 1 in every 20 lung cancers is being cured today, largely because most cases progress too far before detected.) That's why we urge that you make a habit of hav-

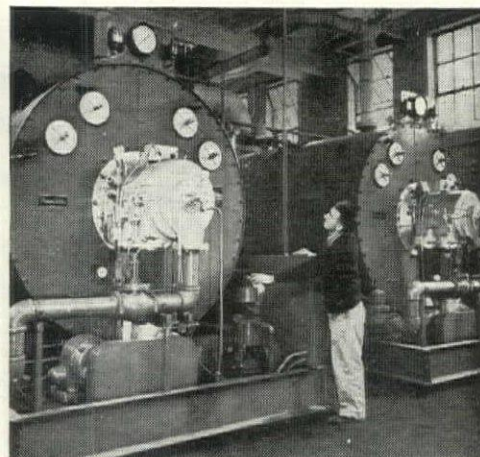
ing your chest X-rayed every six months, no matter how well you may *feel*. The alarming increase of lung cancer in men over 45 more than justifies such precautions. Far too many men die needlessly!

Our new film "The Warning Shadow" will tell you what every man should know about lung cancer. To see this film and to get life-saving facts about other forms of cancer, phone the American Cancer Society office nearest you or simply write to "Cancer"—in care of your local Post Office.

American Cancer Society

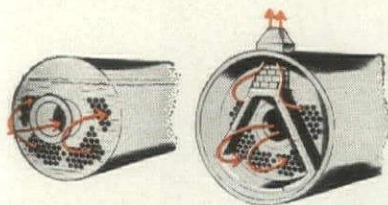


9 REASONS WHY STEAM COSTS GO DOWN

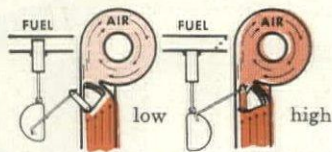


Completely Automatic Operation—Full complement of finest up-to-date operating and safety controls provides maximum operating dependability and protection with least possible attention from operator.

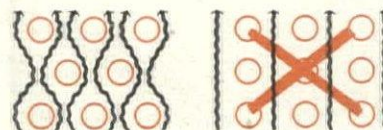
.....where *Powermasters* go in ...



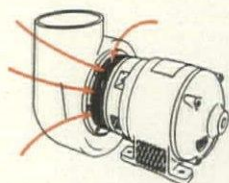
3-Pass Boiler with successive parallel paths and single gas flow reversal at each end assures most efficient flue gas velocity and heat transfer, provides maximum maintenance convenience, and requires no complex front end baffling.



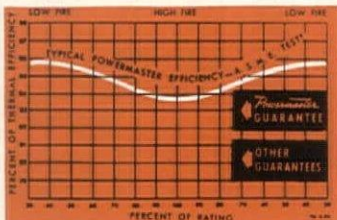
Infinitely Variable Combustion Modulation automatically maintains proper fuel-air ratio for most efficient firing at all loads. Instant response to load swings between 20% to 100% of firing rate saves fuel and assures constant steam pressure and temperature.



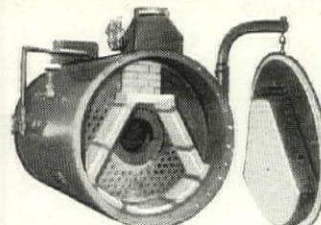
Staggered Tubes—Freedom from ineffectual boiler water eddies assures quicker heating, faster steaming, and high quality dry steam. Scrubbing action of rising water prevents corrosive gas deposits on tube surfaces.



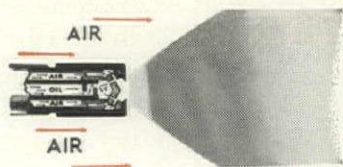
Forced Draft provides most accurate control of combustion air supply; permits use of smaller, low-cost stack, fan and motor; requires less fan maintenance because no hot products of combustion pass through the fan.



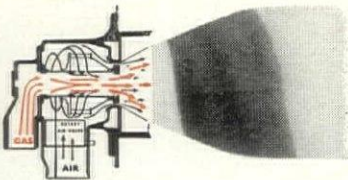
83% Guaranteed Minimum Efficiency with No. 6 oil. At less than full load, *Powermaster* efficiency actually increases! ASME field tests prove *Powermaster's* superior performance.



Easy Accessibility for tube cleaning and inspection is provided by swinging rear cover, and divided front cover that is readily removable without disturbing burner or accessories. Convenient handholes facilitate waterside inspection.



Variflow Burners keep fuel costs low and boiler efficiency high at all loads. Air-atomizing oil burner (left) and pre-mix gas burner (right)—designed by O&S expressly for *Powermaster*—provide complete, clean combustion over full firing range. Simple, sturdy construction with no moving parts, absence of vibration, and ease of cleaning minimize maintenance. Combination burner allows quick change from one fuel to another.



Compare *Powermaster*, feature by feature, with any other package boiler and you'll readily understand why it is so widely used in industrial plants, dairies, hospitals, laundries, schools, public buildings, housing projects, institutions, and many other applications... and adding new users at a rapid rate.



Send for this **NEW BULLETIN**

Describes and illustrates all cost-saving features of the modern, completely assembled, and factory fire-tested *Powermaster*. Ask for Bulletin 1219 on your company letterhead, stating your steam requirements and operating conditions.

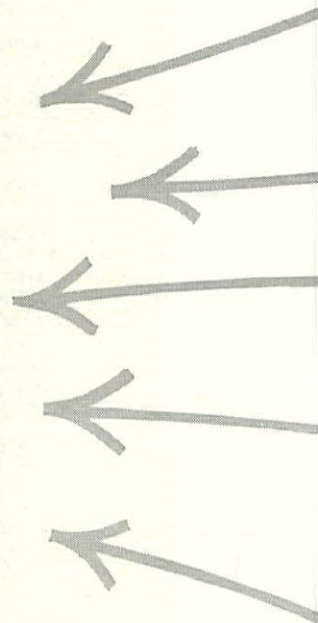
Powermaster®
PACKAGED AUTOMATIC BOILERS

In sizes to 500 HP; pressures to 250 psi.



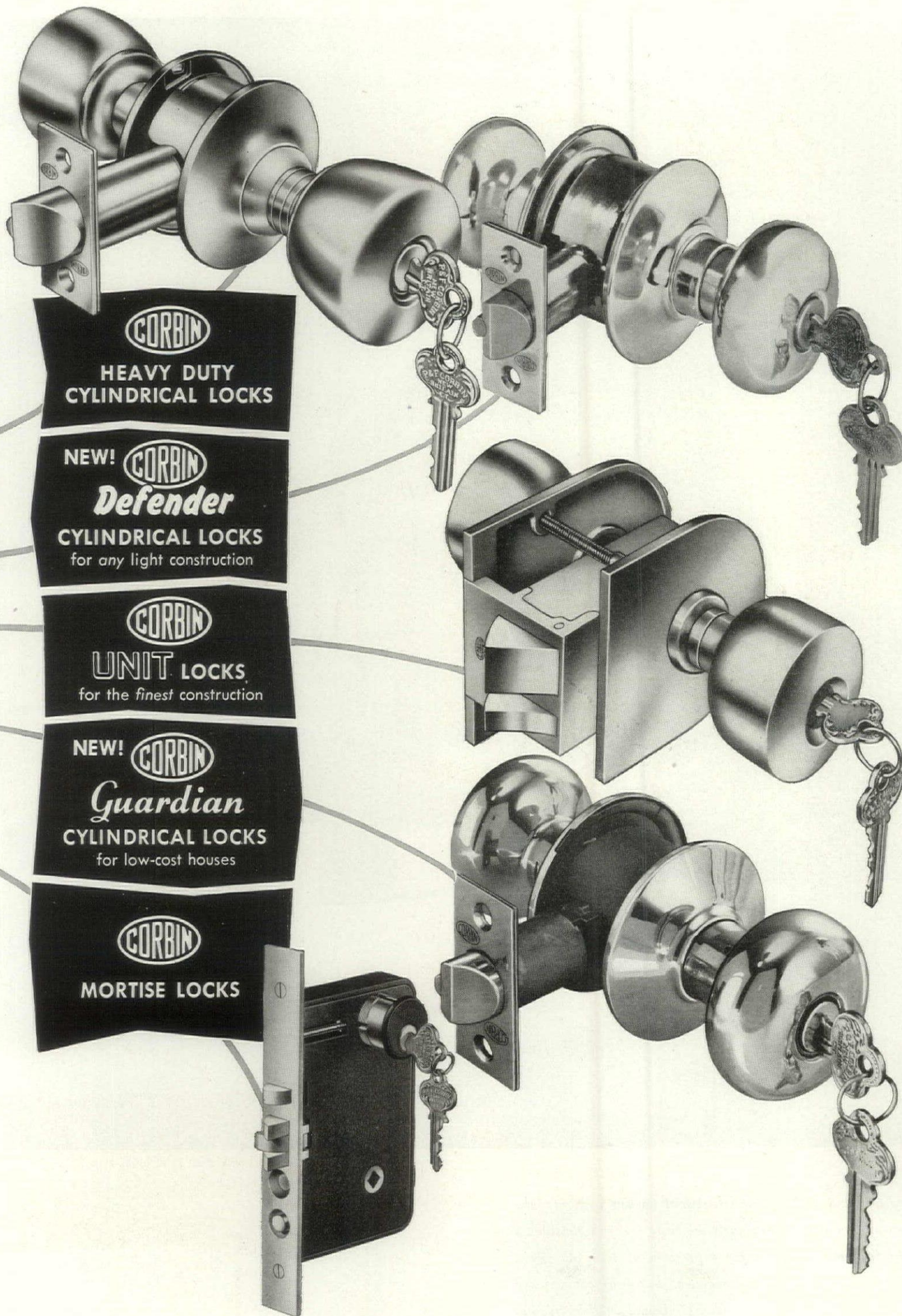
ORR & SEMBOWER, INC. • Established 1885 • 845 Morgantown Road, Reading, Penna.

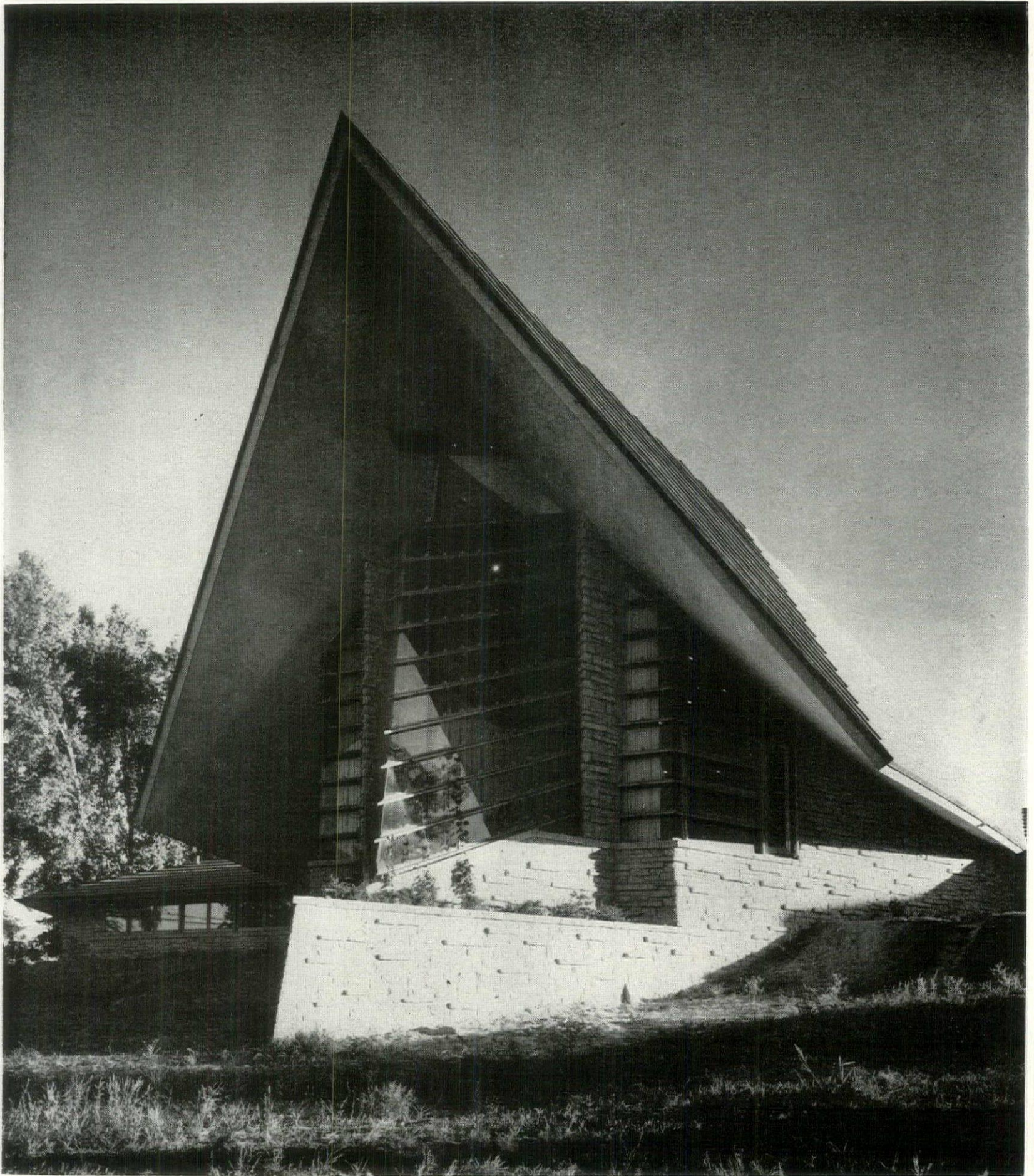
*ONE SOURCE
for ANY LOCK*



P. & F. CORBIN Division
THE AMERICAN HARDWARE CORPORATION
NEW BRITAIN, CONNECTICUT, U. S. A.

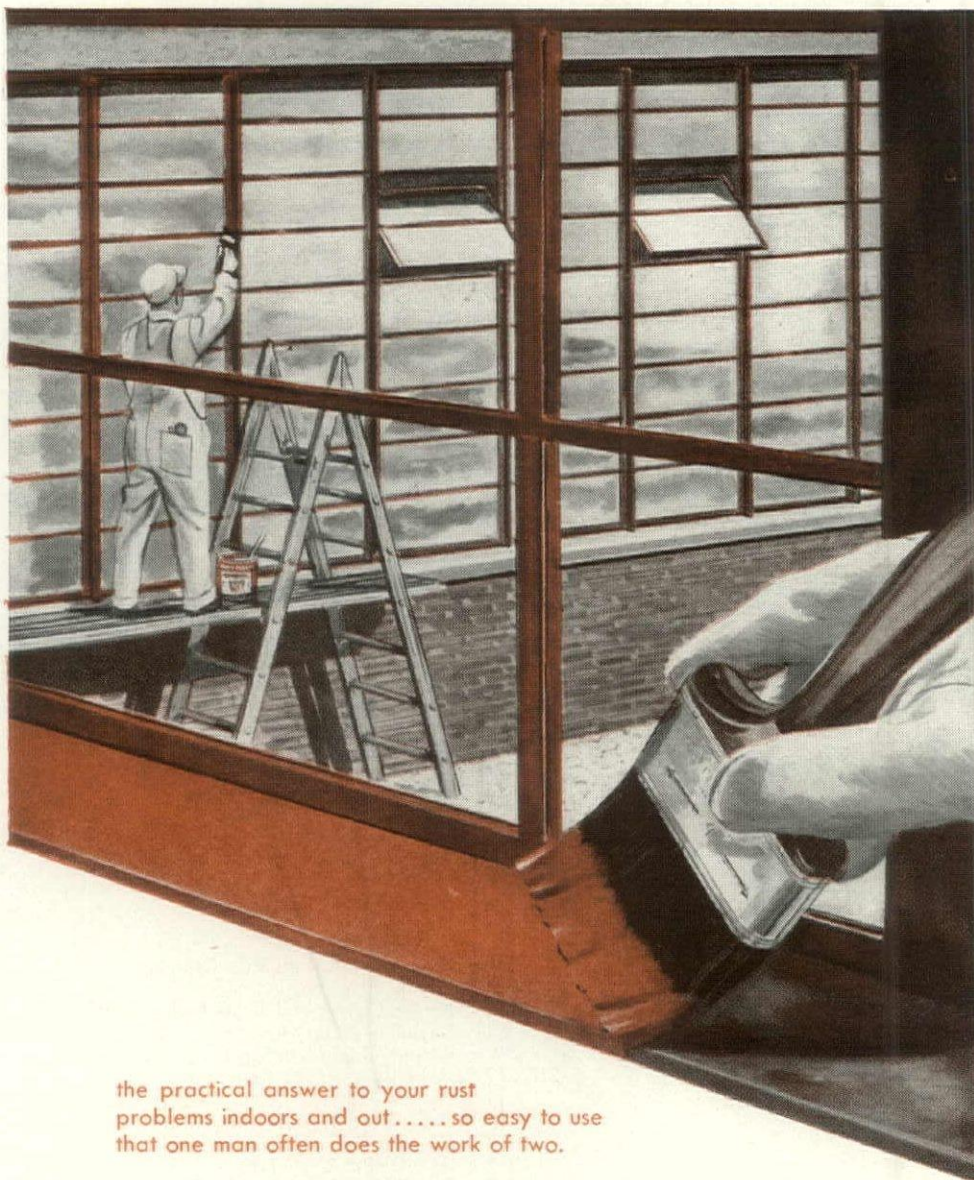
***COMPLETE LINE OF
BUILDERS' FINISHING
HARDWARE, TOO!***





First Unitarian Church, Madison Wisconsin, by Frank Lloyd Wright. Photo: © Ezra Stoller

*The editors and staff of **architectural forum** wish you the happiest of holiday seasons—and we hope you will consider a year of **forum** an appropriate expression of your own good wishes to friends, clients or associates. For your convenience a Christmas gift subscription form is bound in this volume.*



the practical answer to your rust problems indoors and out.....so easy to use that one man often does the work of two.

RUST-OLEUM®

STOPS RUST!

Resists Rain, Snow, Heat, Fumes, Weathering, Salt Water, etc.

Rust-Oleum cuts costly manhours! Just scrape and wirebrush to remove rust scale and loose rust... then brush Rust-Oleum 769 Damp-Proof Red Primer directly over the sound rusted surface. Rust-Oleum finish coatings available in many colors, aluminum, and white give you double protection. Sandblasting and other costly preparations are not usually required. Specify Rust-Oleum... prompt delivery from Industrial Distributor stocks in principal cities.

RUST-OLEUM CORPORATION

2501 Oakton Street, Evanston, Illinois

FREE SURVEY: Ask a Rust-Oleum specialist to conduct a survey including actual applications, tests, and recommendations. No cost or obligation. See Sweets for nearest Rust-Oleum distributor or write for literature today.



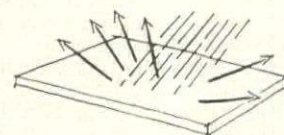
FACTS

prove the economy of Rust-Oleum

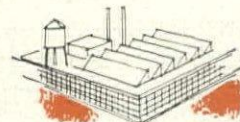
Apply Directly Over Sound Rusted Surfaces—Brush Rust-Oleum 769 Damp-Proof Red Primer directly over sound rusted surface after scraping and wire-brushing to remove rust scale and loose rust. Sand-blasting, chemical pre-cleaning and other costly preparation methods are not usually required.



Available In Many Colors, Aluminum, and White, Brush, Dip, or Spray—Get double protection. Beautify as you protect with Rust-Oleum finish coats in the color of your choice.



Practical, Economical Answer To Your Rust Problem—Rust-Oleum resists rain, heat, fumes, sun, salt air, salt spray, and many chemicals—as well as condensation indoors.



Proved Throughout Industry For Over 25 Years—On tanks, girders, pipes, machinery, roofs, buildings, fences, stacks, throughout industry — Rust-Oleum has proved its capacity to stop rust for over 25 years.

There is Only One Rust-Oleum

Distinctive as your fingerprint, Rust-Oleum is an exclusive formula developed by a Master Mariner during more than 20 years battling actual rust conditions at sea. It incorporates a specially-

processed fish oil vehicle that will dry, is odor-free, and is formulated in many colors. Be sure you specify genuine Rust-Oleum to assure satisfaction. Accept no substitute.



ATTACH TO YOUR LETTERHEAD—MAIL TODAY!
RUST-OLEUM CORPORATION

2501 Oakton St., Evanston, Illinois

- ☐ Have a Qualified Representative Call
- ☐ Free Survey
- ☐ Complete Literature
- ☐ Nearest Source of Supply

Advertisers index:

Page:		Page:	
25	Adams & Westlake Company, The	225	Leader Division (<i>Benjamin Electric Mfg. Co.</i>)
177	Aetna Steel Products Corporation	58	Lewis Asphalt Engineering Co.
192	Allegheny Ludlum Steel Corporation	226, 227	Libby-Owens-Ford Glass Company
236	Alumiline Corporation, The	95	Lockwood Hardware Manufacturing Company
199	Aluminum Window Manufacturers Association	2	Lone Star Cement Corporation
204	American Bilrite Rubber Co. (<i>Amtico Rubber Flooring</i>)	238	Loomis Machine Co.
210, 211	American Brass Company, The	190	Ludman Corp. (<i>Auto-Lok Aluminum, Awning Windows</i>)
240	American Cancer Society		
242, 243	American Hardware Corp., The (<i>P. and F. Corbin Div.</i>)	195, 196, 197	Maas & Waldstein Co.
68	American Lumber & Treating Co.	14	Macomber Incorporated
222	American Radiator & Standard Sanitary Corporation	193	Mahon, R. C., Company, The
237	Anemostat Corporation of America	8	Maple Flooring Manufacturers Association
238, 239	ARCHITECTURAL FORUM	79	Marble Institute of America, Inc.
42	Armco Steel Corporation	22	Mastic Tile Corporation of America
100, 101, 179	Armstrong Cork Company	53	McQuay, Inc.
189	Art Metal Company, The	224	Miller, Herman, Furniture Company
190	Auto-Lok Aluminum Awning Windows (<i>Ludman Corp.</i>)	84, 85	Minneapolis-Honeywell Regulator Company
82	Automatic Sprinkler Corp. of America	5	Mississippi Glass Company
		90, 91	Montanto Chemical Company
215	Bakelite Company, Division of Union Carbide and Carbon Corporation	174	Montgomery Elevator Company
225	Benjamin Electric Co. (<i>Leader Division</i>)	24	National Gypsum Company
99, 198	Brunswick-Balke-Collender Company, The		
64	Buffalo Forge Company	241	Orr & Sembower, Inc.
207	Bull Dog Electric Products Company	221	Otis Elevator Company
49	Bush Manufacturing Company	Cover IV	Overhead Door Corporation
11	Butler, B. B., Mfg. Co., Inc.	6, 7	Overly Manufacturing Company
Cover II	Cambridge Tile Manufacturing Company, The	20	Owens-Corning Fiberglas Corporation
4	Ceco Steel Products Corporation	205	Owens-Illinois Glass Co. (<i>Kimble Glass Company, Subsidiary</i>)
231	Celotex Corporation, The	74	Ozalid Division, General Aniline & Film Corporation
9	Certified Ballast Manufacturers (<i>Equipment</i>)		
208	Clow, Jams B., & Sons	33	Pacific Steel Boiler Division (<i>U. S. Radiator Corporation</i>)
239	Concrete Reinforcing Steel Institute	223	Peelle Company, The Richmond Fireproof Door Company
30, 31	Congoleum-Nairn, Inc.	96, 97, 175, 212	Pittsburgh Corning Corporation
55	Connor Engineering Corp.	70, 71	Pittsburgh Plate Glass Company
242, 243	Corbin Division, P.&F. (<i>The American Hardware Corp.</i>)	184	Pittsburgh Reflector Co.
94	Corning Glass Works	50	Pittsburgh Steel Products Company
36	Coyne & Delany Co.	220	Porete Mfg. Co.
27	Crane Co.	16, 17, 203	Powers Regulator Co., The
26	Curtis Lighting, Inc.	46	Pratt & Lambert, Inc.
214	Davidson Enamel Products, Inc.	21	Raymond Concrete Pile Company
75, 77	Detroit Steel Products Company	230	Raynor Mfg. Co.
88	Dunham, C. A., Company	73	Revere Copper and Brass Incorporated
23	Duriron Company, Inc., The	83	Reynolds Metals Company
		239	Reznor Manufacturing Co.
178	Eastern Machine Products Co., The	218, 219	Robertson, H. H., Company
Cover III	Eljer Co.	44	Roddis Plywood Corp.
191, 236	Federal Seaboard Terra Cotta Corporation	173	Rowe Manufacturing Co.
92	Fiat Metal Manufacturing Company	87	Russell, F. C., Company, The
233	Flynn, Michael, Manufacturing Company	245	Rust-Oleum Corporation
35	Formica Company, The	229	Ruud Manufacturing Company
238	Franklin Products Corp.		
		69	Sanymetal Products Co., Inc., The
56	Gallagher Company, The	230	Schieber Sales Company
54	Garden City Plating and Mfg. Company	10	Scott Paper Company
224	Gate City Sash & Door Co.	182	Sedgwick Machine Works, Inc.
12	General Air Conditioning Corp.	194	Sellers Engineering Co.
74	General Aniline & Film Corporation, Ozalid Division	56, 57	Simpson Logging Company
28	General Bronze Corp.	183	Sloan Valve Company
89, 102	General Electric Company	200	Standard Dry Wall Products, Inc.
232	General Gas Light Company	216	St. Paul and Tacoma Lumber Company
206	General Portland Cement Co. (<i>Trinity Division</i>)	201	Stran-Steel Division (<i>Great Lakes Steel Corp.</i>)
19	Glynn-Johnson Corporation	18	Superior Electric Co., The
98	Granco Steel Products Co. (<i>Subsidiary of Granite City Steel Co.</i>)	185	Surface Coatings, Inc.
201	Great Lakes Steel Corp. (<i>Stran-Steel Division</i>)	228	Structural Clay Products Institute
217	Guth Company, Edwin F., The		
		238	Taylor, Halsey W., Company, The
176	Haertel, W. J. & Co.	72	Tile Council of America
78	Hardwood Products Corporation	236	Tremco Manufacturing Co., The
1	Hauserman, E. F., Company, The	206	Trinity Division (<i>General Portland Cement Co.</i>)
182	Haven-Busch Company	15	Trion, Inc.
65	Holcomb & Hoke Mfg. Co., Inc.	40	Truscon Steel Company
48	Hope's Windows, Inc.		
52	Hunter Douglas Corporation	236	U-C Lite Mfg. Co.
		32	Union Aluminum Company
81	Ingalls Iron Works Company, The	215	Union Carbide and Carbon Corporation (<i>Bakelite Company, Division</i>)
248	Inland Steel Company	34	United States Gypsum
		86, 186, 187	United States Plywood Corporation
76	Johns-Manville	188	United States Quarry Tile Co.
59	Johnson Service Company	33	United States Radiator Corp. (<i>Pacific Steel Boiler Div.</i>)
67	Jones & Laughlin Steel Corporation	60, 61, 62, 63	United States Steel Corp.
29	Josam Mfg. Co.	213	United Wallpaper, Inc., (<i>Varlar Division</i>)
200	Kennatrack Corporation	93	Walworth Company
247	Kentile, Inc.	202	Wasco Flashing Company
51	Kewanee-Ross Corporation	180, 181, 234, 235	Westinghouse Electric Corporation
205	Kimble Glass Company (<i>Subsidiary of Owens-Illinois Glass Company</i>)	80	Weyerhaeuser Sales Company
209	Knoll Associates, Inc.	66	Worthington Corporation
		13	Zurn, J. A., Mfg. Co.

**Your clients'
money goes down
every time a floor
is installed**



You can realize why your clients should consider flooring such an important investment, when you consider how your choice of the *right* floor can cut maintenance costs...increase workers' morale...raise overall company profits.

That's why you can quickly see the many advantages of dealing with a Kentile, Inc. Flooring Contractor. He's an expert in his field...backed up by years of training and experience in recommending the proper floor for every type of residential, commercial and industrial installation. Call on him whenever you need the benefits of his advice...his business is to serve you.

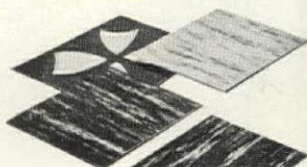
You can't afford to waste your valuable time

...and you don't have to if you consider the Kentile, Inc. Flooring Contractor as a member of your staff of experts.

- ★ KENTILE ASPHALT TILE
- ★ SPECIAL (greaseproof) KENTILE
- ★ KENCORK FLOORS AND WALLS
- ★ KENRUBBER TILE FLOORS
- ★ KENFLEX VINYL TILE

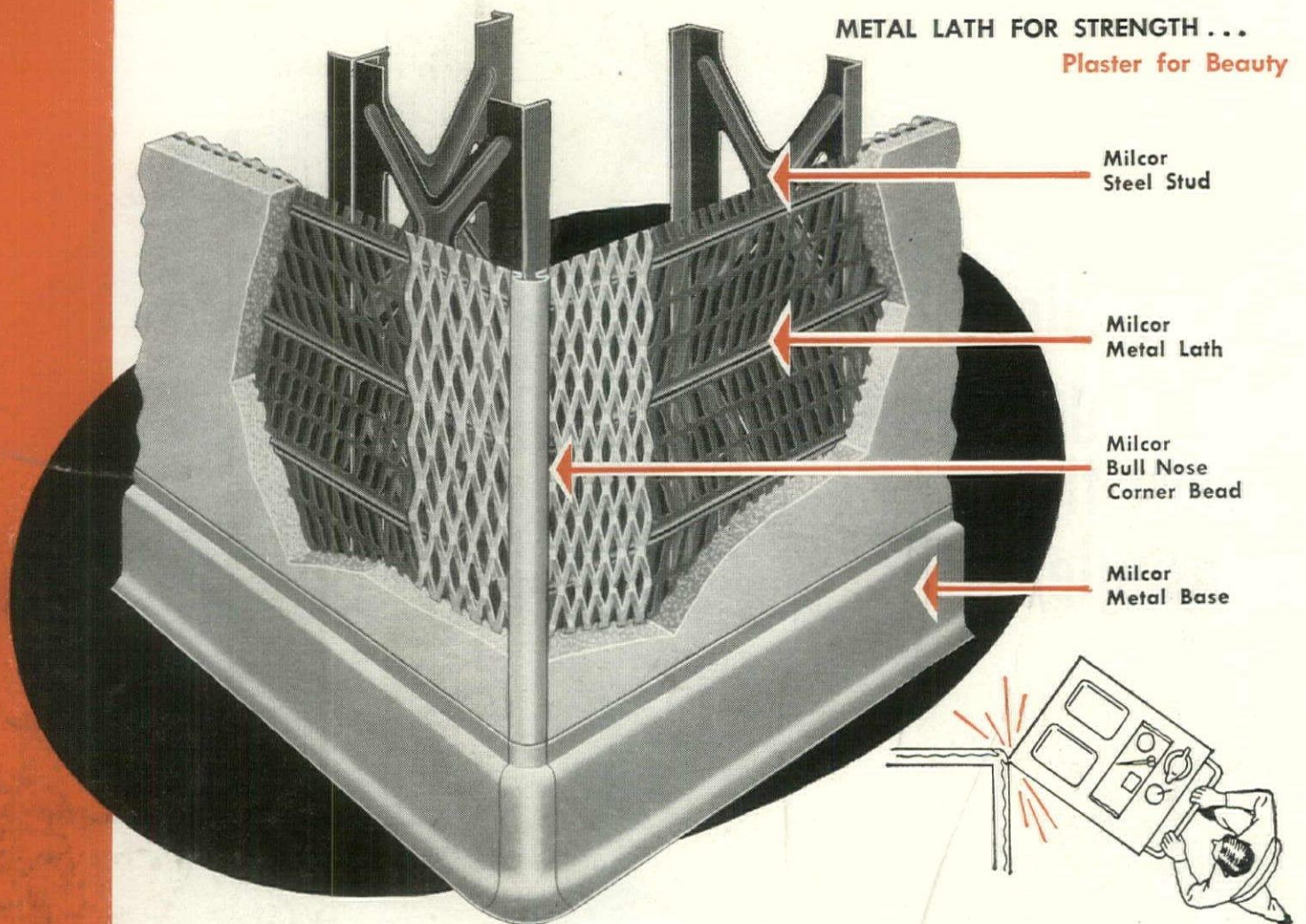
Consult the Kentile, Inc. Flooring Contractor for information on these Kentile, Inc. Floors. His name and address are listed under FLOORS in your Classified Directory...or write:

Contract Dept., Kentile, Inc.,
Brooklyn 15, N. Y.



KENTILE INC.

America's largest manufacturer of tile flooring



Use **MILCOR** Expansion Bull Nose Corner Bead

... for lasting corner-protection in hospitals, schools, and institutions

Wherever a job requires round corners — extra strong — to meet traffic conditions in rooms and corridors, Milcor Bull Nose Corner Bead is the bead to install.

Here's how Milcor Bull Nose Corner Bead gives straight-line beauty to broad, rounded corners: **Integral expansion wing** provides an effective plaster bond right up to the nose of the bead.

Broad face available in $\frac{3}{4}$ " radius, 1" face; $1\frac{1}{2}$ " radius, 2" face; 2" radius, $2\frac{1}{4}$ " face.

Strong, rigid design — made from TiCo galvanized steel — gives you straight-line beauty.

Milcor offers you the widest selection of corner beads, from the industry's most complete line of metal lath and accessories. For details, see the Milcor catalog in Sweet's.

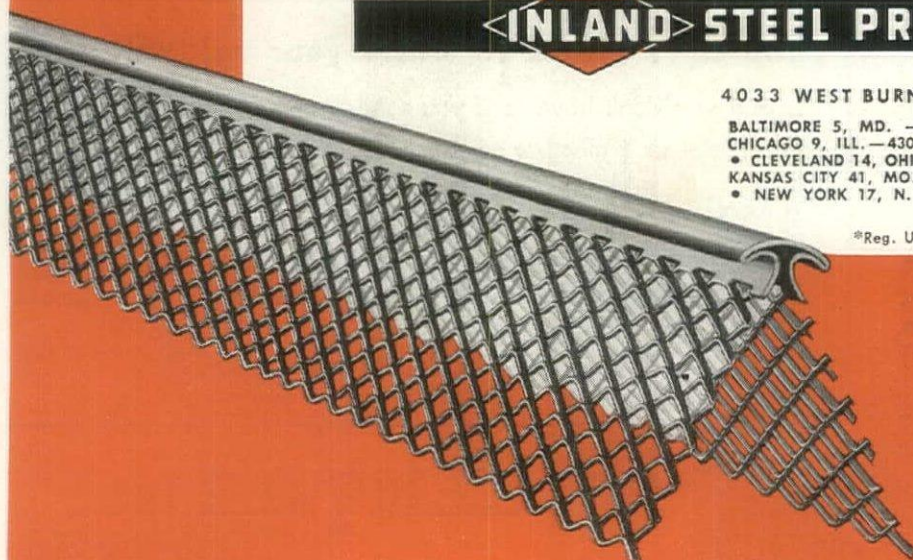
INLAND STEEL PRODUCTS COMPANY

4033 WEST BURNHAM STREET • MILWAUKEE 1, WISCONSIN

BALTIMORE 5, MD. — 5300 Pulaski Highway • BUFFALO 11, N. Y. — 64 Rapin St. •
CHICAGO 9, ILL. — 4301 S. Western Blvd. • CINCINNATI 25, OHIO — 3240 Spring Grove Ave.
• CLEVELAND 14, OHIO — 1541 E. 38th St. • DETROIT 2, MICH. — 690 Amsterdam Ave. •
KANSAS CITY 41, MO. — P. O. Box 918 • LOS ANGELES 58, CALIF. — 4807 E. 49th St.
• NEW YORK 17, N. Y. — 230 Park Ave. • ST. LOUIS 10, MO. — 4215 Clayton Ave.

*Reg. U. S. Pat. Off.

M-122 B

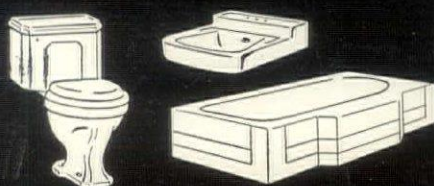


No. 10 Bull Nose Corner Bead, shown, is made of galvanized sheet steel and has expansion wings integral with the nose of the bead. No. 10 is just one in a complete line of Milcor Corner Bead for every construction condition—and designed for application with other items in the broad line of Milcor Metal Lath and accessories.

New ease in specifying quality plumbing fixtures!

Now Eljer offers all three plumbing fixture materials plus fittings—
all in one catalog*—for the widest, easiest choice available anywhere!

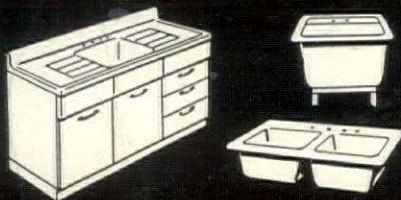
Complete line for bathrooms!



A full choice of steel, cast-iron and vitreous-china bathroom fixtures . . . perfectly matched in colors and style. You can mix cast-iron bathtub, steel lavatory, china toilet in one bathroom without color or style problems!

Available with Eljer quality brass

Kitchen and laundry!



A complete line of formed steel and enameled iron sinks, with highest quality steel undersink cabinets. Laundry trays, too, in steel or cast iron.

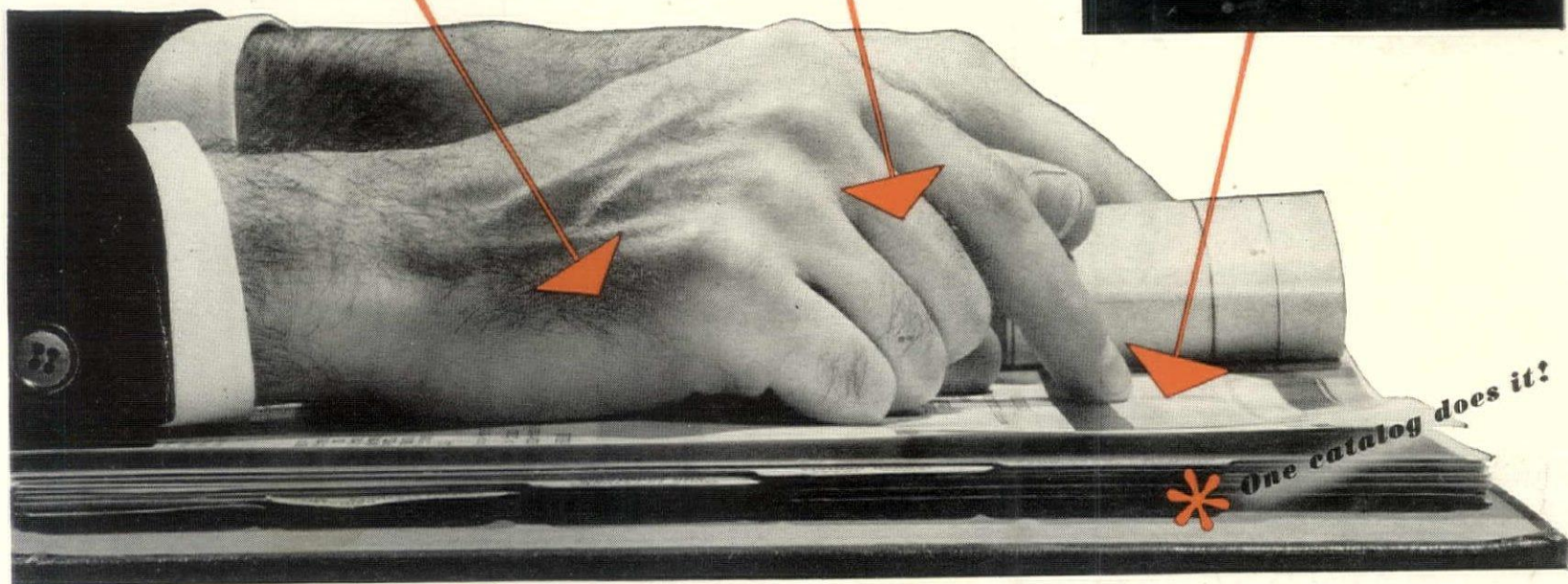
Available with Eljer quality brass

Institutional and commercial



Plumbing fixtures for schools, prisons, office buildings, hospitals, hotels. Including service sinks, drinking fountains, toilets, urinals, lavatories.

Available with Eljer quality brass



* One catalog does it!

NEVER BEFORE! You get this new, wide choice because Murray and Eljer Co. have joined forces—co-ordinated their complete lines for color and style. Send coupon now for details.

The only name you need to know in plumbing fixtures—

ELJER

A SUBSIDIARY OF THE **MURRAY** CORPORATION OF AMERICA

ELJER CO., Box 192, Ford City, Pa.

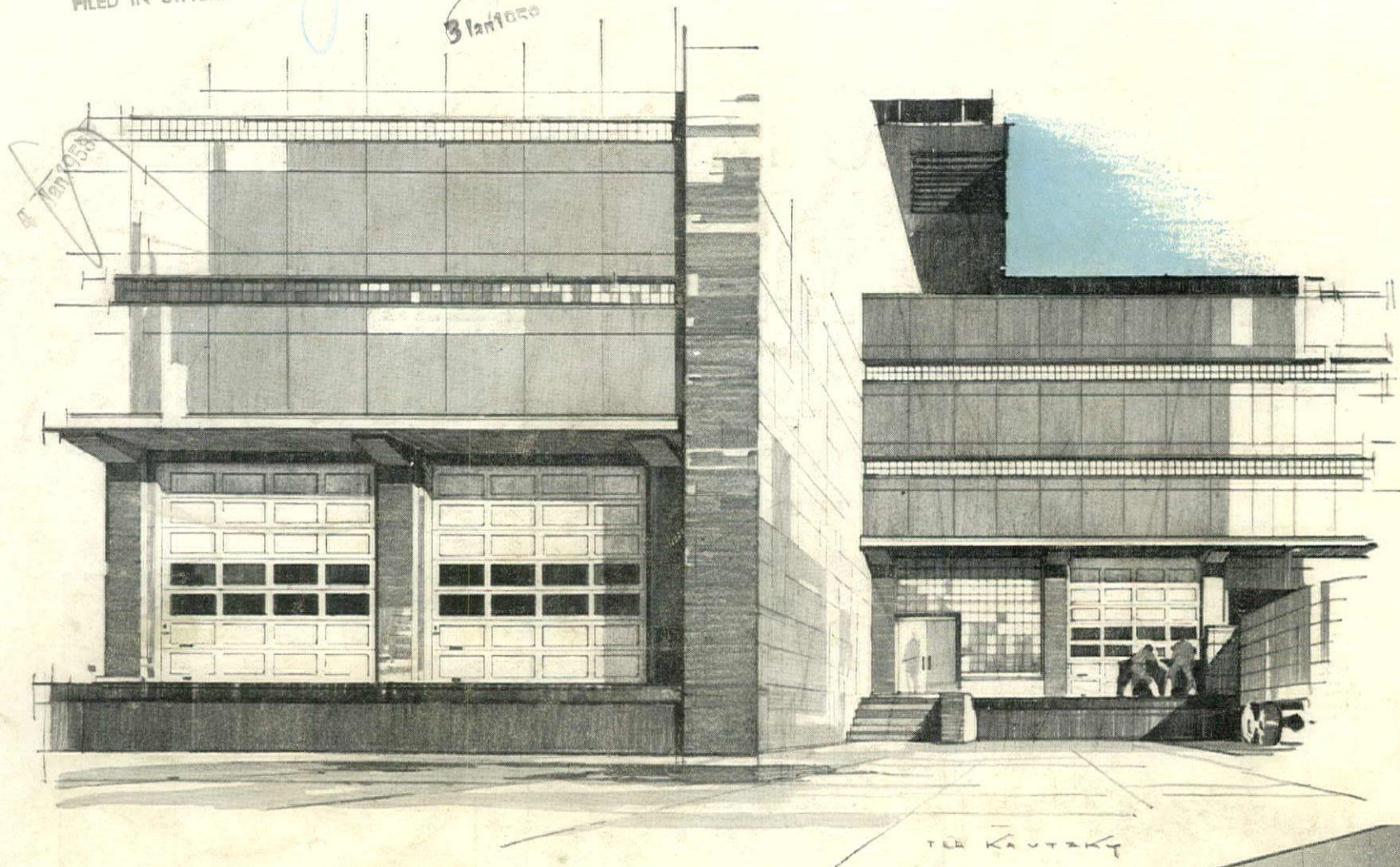
Gentlemen:

I'd like to know more about Eljer's new, comprehensive line. Please send me the facts.

Name _____

Address _____

City _____ Zone _____ State _____



The **DOOR** that takes *Hard Knocks...*

Strongest possible construction, heavy-duty hardware and expert engineering enable The "OVERHEAD DOOR" to take many hard knocks without damage. When the knock is too hard, fast delivery of parts and prompt local service quickly restore the door to full efficiency.

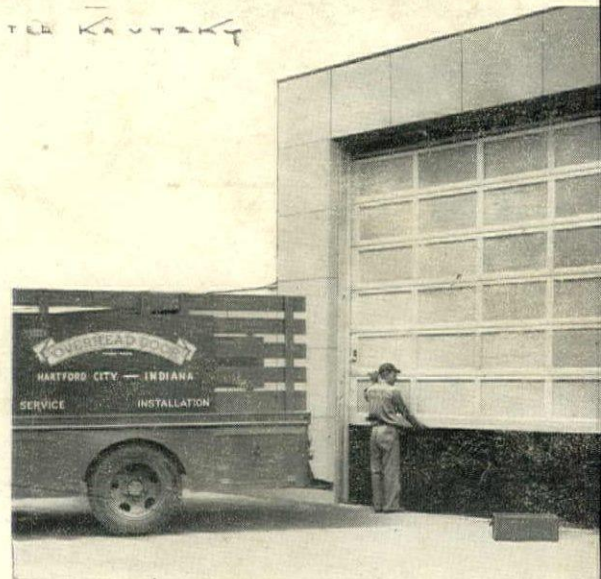
OVERHEAD DOOR CORPORATION, Hartford City, Ind.

Manufacturing Divisions

Hillside, N.J.	Cortland, N.Y.	Dallas, Tex.	Portland, Ore.
Nashua, N.H.	Lewistown, Pa.	Oklahoma City, Okla.	Glendale, Cal.

Look for the famous trade mark!
It stands for more than 30 years of
quality and leadership!

© 1953 O.D.C.



EXPERT INSTALLATION . . .
by trained men is a vital part of
The "OVERHEAD DOOR" National
Organization. It insures long years
of trouble-free operation.

America's Great Name in
QUALITY DOORS...

THE



TRADE MARK

RESIDENTIAL • COMMERCIAL • INDUSTRIAL

NATION-WIDE Sales • Installation • Service

