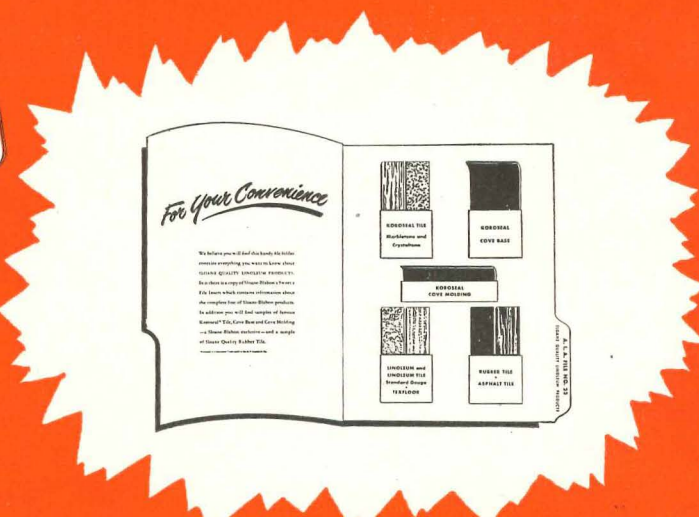
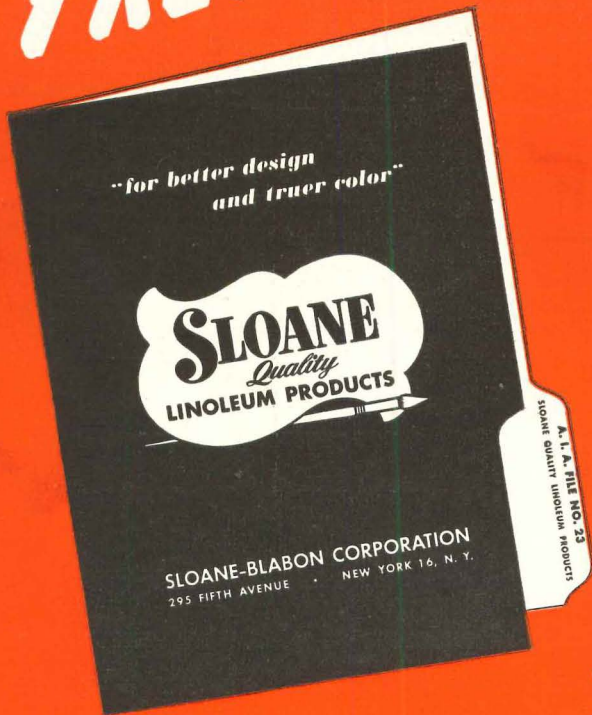


FREE! HANDY SPECIFICATION FOLDER!

Fits in your files for ready reference . . . is a Complete Source of Information on All Sloane Quality Linoleum Products.



FREE SAMPLES!

KOROSEAL® Marbletone[†] and Crystaltone[†] Tile, Cove Base and Cove Molding . . . Standard Gauge Linoleum, Linoleum Tile . . . Sloane Quality Rubber Tile and Asphalt Tile. These samples will help you plan interiors . . . draw up specifications . . . show clients the material you plan to use!

[†]Koroseal is a registered trade-mark of the B. F. Goodrich Company

[†]Trade Mark



AND A SWEET'S FILE REPRINT!

A full-color reproduction of Sloane-Blabon's 20 page Sweet's File Catalog. It contains color swatches, information and complete installation specifications on all Sloane Quality Linoleum Products.

SEND FOR YOUR FREE FOLDER NOW!
JUST MAIL THIS COUPON

Sloane-Blabon Corporation
295 Fifth Avenue, New York 16, N. Y.

R-2

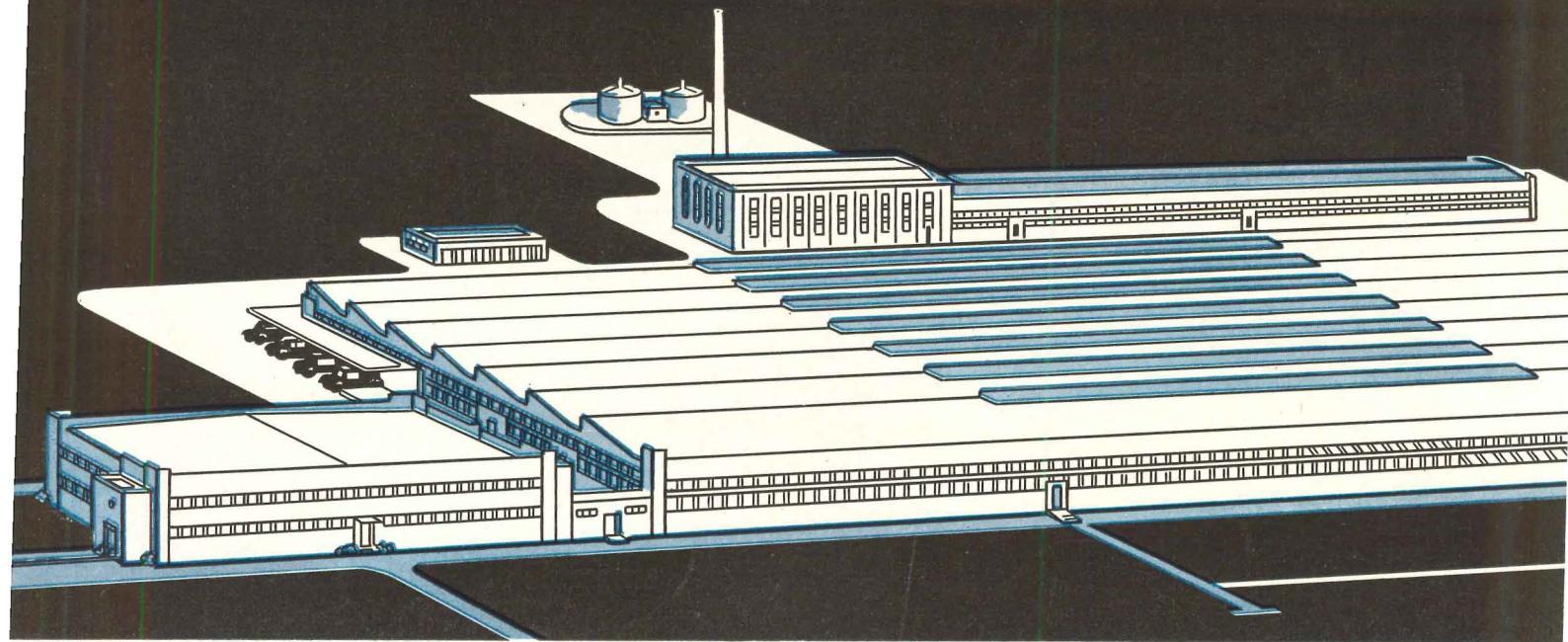
Please send me free file folder containing samples and information about Sloane Quality Linoleum Products.

Firm Name.....

Address.....

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

Ordered By.....



COMPLETED ON SCHEDULE FOR

When Goodyear Tire & Rubber Company needed substantial added production facilities *in a hurry*, the contract for the above modern plant at Topeka, Kansas, was awarded to John A. Johnson & Sons, Inc. Later, in the midst of high-speed construction, it was decided to approximately double the size of

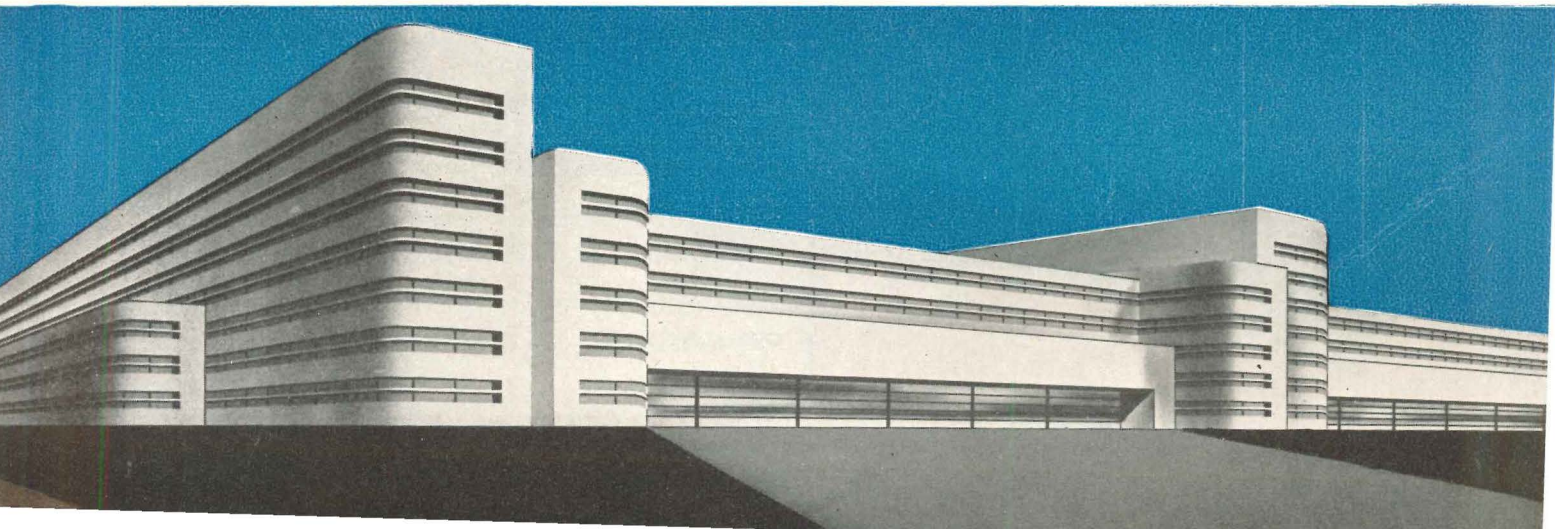
the plant — already moving rapidly toward completion. Revision of planning and construction schedules was undertaken and the program reorganized with redoubled efforts. The result was as expected — full tilt production on the new enlarged program with final completion on time.

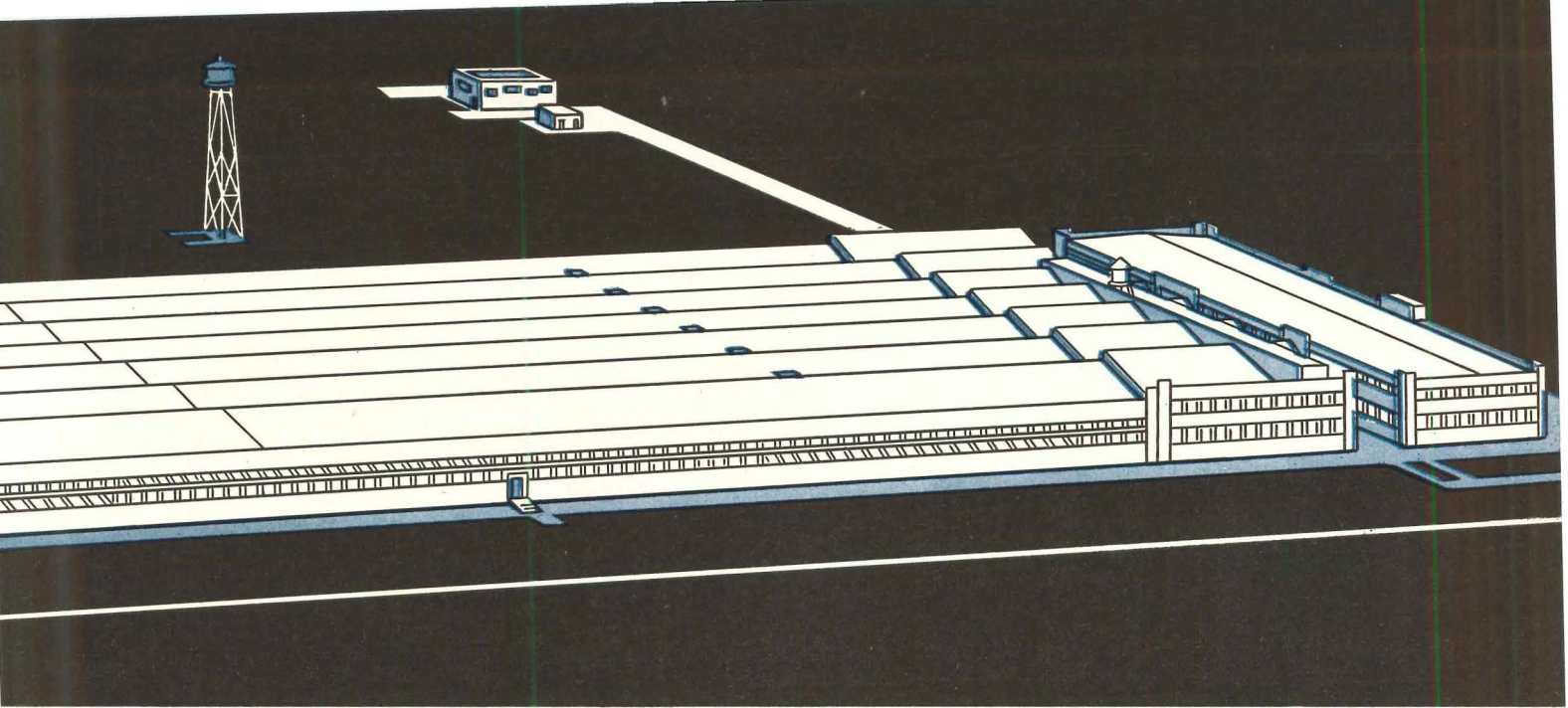
ADDITIONAL "ON TIME" EVIDENCE AND THE PRACTICAL "ON TIME" RESULTS

ON TIME — When a complete, functioning United States Postal Concentration Center — largest building of its type in the world — was required in 100 days, the Johnson organization completed this six-block long structure covering 14½ acres, for beneficial occupancy, in 72 days, and final completion (10 days ahead of schedule) in 90 days.

ON TIME — When the Tilton General Hospital — a 1000-bed emergency hospital — was needed on a 60-day contract during mid-winter blizzards, this difficult assignment of high-priority was rushed to conclusion, operating when required, and completed on schedule, under almost impossible weather conditions.

ON TIME — When a complete city for 50,000 persons was required, and became the world's second-largest Naval Training Station, at Sampson, N. Y., the first "trainees" moved in 3½ months later. The entire \$50,000,000 project, with over 450 buildings and all necessary utilities and facilities, was completed in 7 months.





GOODYEAR TIRE & RUBBER CO. TRUCK TIRE PLANT AT TOPEKA, KAN., J. GORDON TURNBULL INC., ARCHITECT-ENGINEER

GOODYEAR TOO... AT TOPEKA, KANSAS

Flexibility in organizing high-speed, line-production methods is often as important as speed itself. And "speed" is one of the key words of the Johnson organization. That is why Architects and Industrial Executives, faced with sudden calls for plant expansion, are turning more and more to Johnson. They recognize this record for building entire communities, including industrial structures, homes,

apartments, schools, hospitals, roads, water-work and sewerage disposal plants, on phenomenally short time-schedules. If you need additional plant production in a hurry, bring your problem to Johnson. We are signally equipped to meet completion dates, with a personnel accustomed to working under extreme pressure.

Send for illustrated descriptive brochure

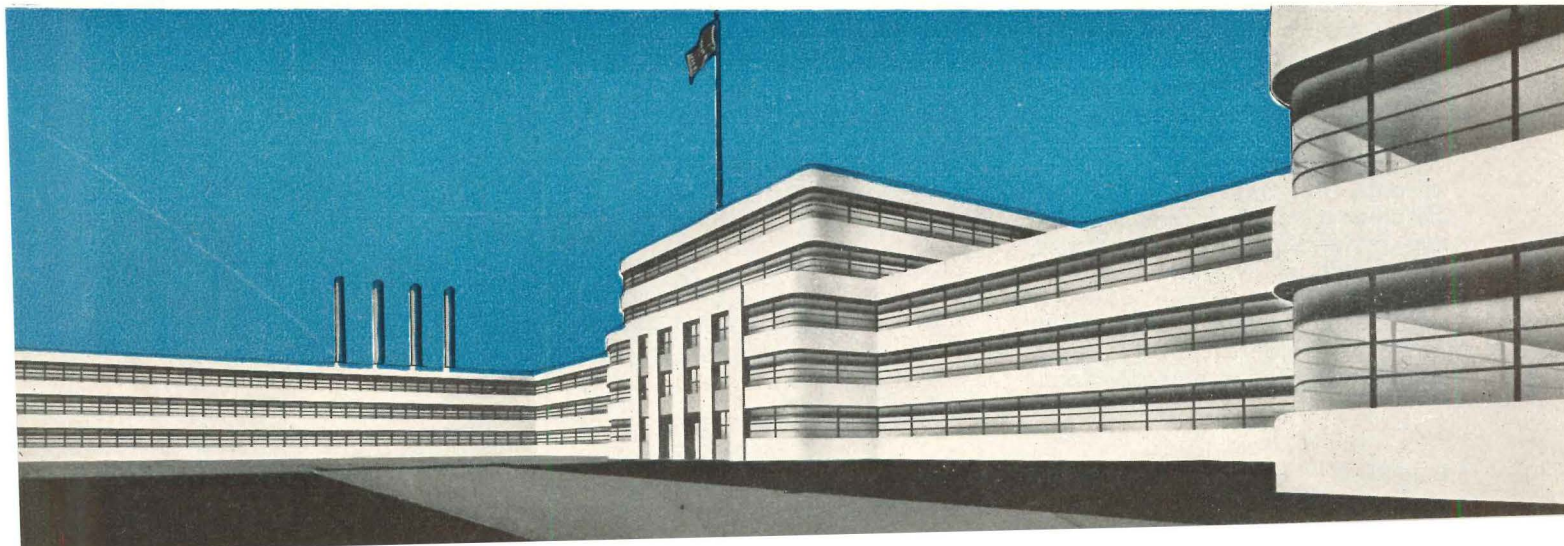
John A. Johnson

& Sons Inc.

• BROOKLYN • • • NEW YORK •

BUILDING CONSTRUCTION • "A FIRM FOUNDATION SINCE 1896"

NEW YORK • BROOKLYN • PEMBERTON • WASHINGTON • COLUMBUS • OAK RIDGE • ATLANTA

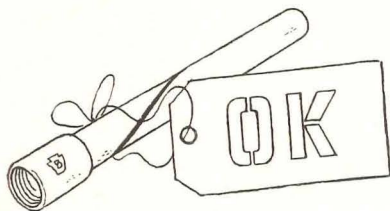


Here's a Good Tip for Everyone who wants to reduce Maintenance on Waste and Vent Lines

It's safe to say that every building with sanitary facilities has a corrosion problem . . . and that unless proper safeguards are used, you'll soon be paying for repairs, with replacement not far ahead.

Two of the worst trouble-makers are waste and vent lines. They are exposed to multiple attack from water . . . organic wastes . . . oxygen from the air . . . carbon dioxide . . . and sewer gases, which include ammonia and hydrogen sulfide. Any one of these is a dangerous enemy to pipe life. In combination, they represent a major hazard, and the only practical protection is through the use of a corrosion resistant material.

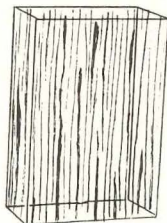
Wrought iron has been used in these severe services for long periods, and its superior durability



has been certified by service records of 50 years or more. In one study of a number of old buildings, wrought iron vents were still serving in one building after 49 years—in two after 48 years . . . and in three others after more than 45 years. In contrast, in a group of eleven buildings where low-first-cost materials had been used for vents, the life to failure averaged less than 23 years. In another study of a group of buildings over 20 years old, the engineer estimated the depreciation as 20% for the wrought iron vents, and 90% for the other material. Similar impressive performance figures support the choice of wrought iron for waste lines.

You'll find the reason for wrought iron's unusual durability in its unique composition and structure.

Tiny fibers of glass-like silicate slag, threaded through the body of high-purity iron, halt and disperse corrosive attack, and so discourage pitting. Furthermore, the fibers help



to anchor the initial protective scale, which shields the underlying metal.

Our bulletin, **WROUGHT IRON FOR PIPING SYSTEMS** discusses the corrosion problems encountered in sanitary lines, and gives the results of several engineering studies. You'll find this book a big help in selecting piping for maximum life and minimum cost in waste and vent lines, as well as in other services. Ask for a complimentary copy.



A. M. Byers Company, Pittsburgh, Pa. Established 1864. Boston, New York, Philadelphia, Washington, Atlanta, Chicago, St. Louis, Houston, Salt Lake City, San Francisco. Export Division: New York, N. Y.

**CORROSION COSTS YOU MORE
THAN WROUGHT IRON**



BYERS
GENUINE WROUGHT IRON
TUBULAR AND HOT ROLLED PRODUCTS
ELECTRIC FURNACE QUALITY ALLOY AND STAINLESS STEEL PRODUCTS

ARCHITECTURAL RECORD



Copyright 1950 by F. W. DODGE CORPORATION, with all rights reserved • Publishing Director, Magazine Division, H. Judd Payne • **EDITORS:** Editor-in-Chief: Harold D. Hauf, A.I.A., A.S.C.E.; Managing Editor, Emerson Goble; Senior Associate Editor, Frank G. Lopez, A.I.A.; Associate Editors, Robert E. Fischer (Engineering), Florence A. van Wyck; Washington News, Ernest Mickel; Contributing Editor, Frederic A. Pawley; Western Editor, Elisabeth Kendall Thompson; Special Editorial Representative, Western Section, William C. Rodd; Associate in South America, Edmund J. Whiting, A.I.A.; Editorial Assistants, Jeanne Davern, Herbert L. Smith, Jr. • **ART DEPARTMENT:** Myron S. Hall, 3rd, Director; Frances Torbert, Assistant; Sigman-Ward, Drafting • **CONSULTANTS:** Chairman, Editorial Board, Kenneth Kingsley Stowell, A.I.A.; Industry Relations Consultant, Thomas S. Holden; Statistical Consultant, Clyde Shute; Building Economics Consultant, Norbert Brown; Field Research Consultant, Clifford Dunnells, Jr.

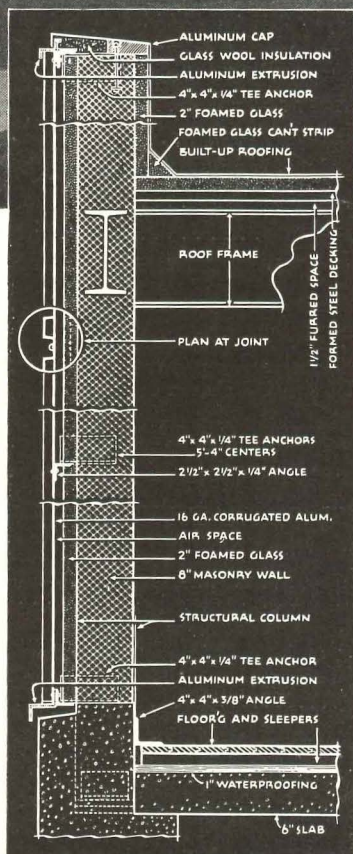
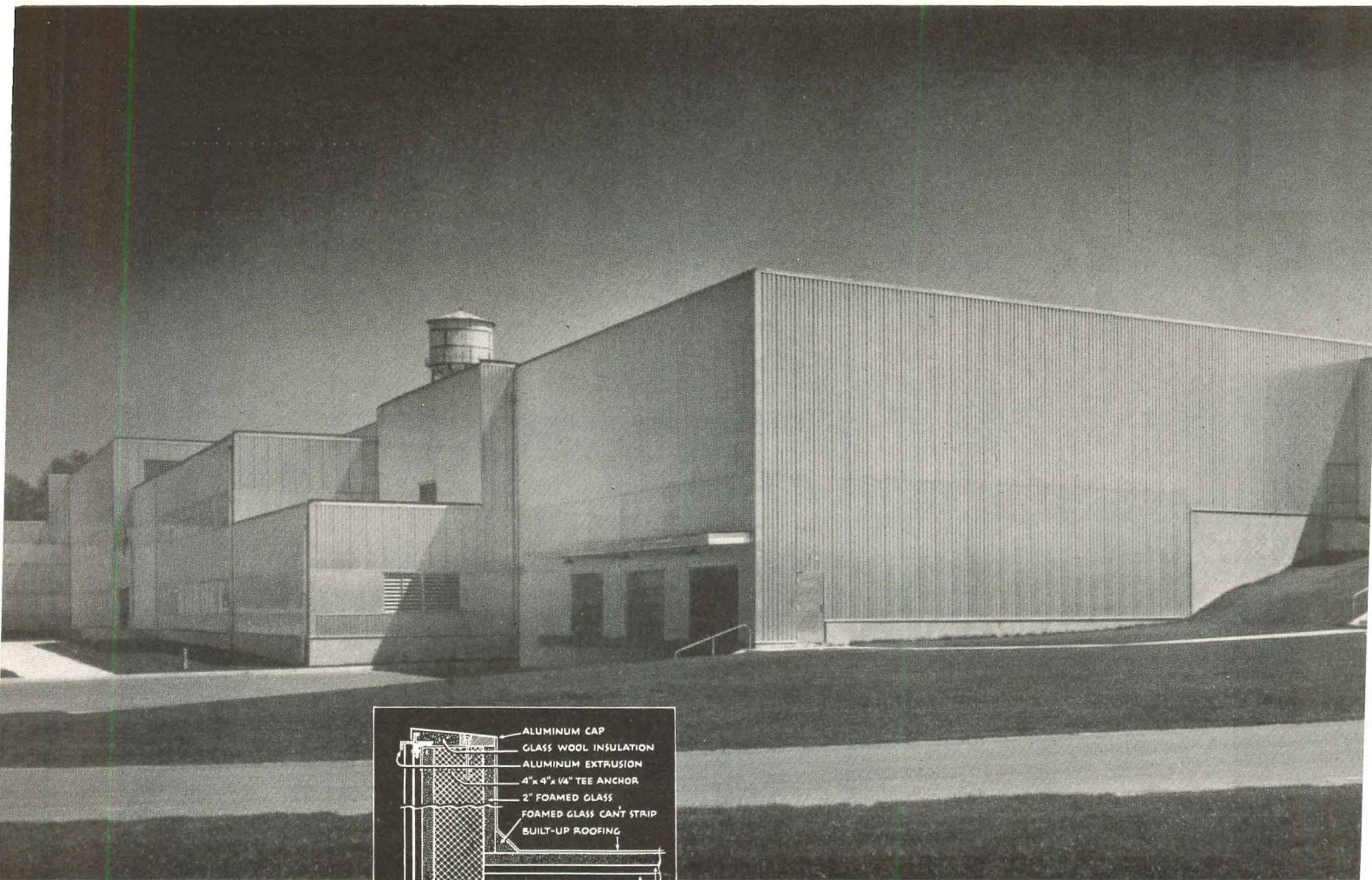
Architectural Record (combined with American Architect and Architecture) is published monthly by F. W. Dodge Corporation, 10 Ferry St., Concord, N. H., with Editorial and Executive Offices at 119 West 40th Street, New York, N. Y. Western Editorial Office, 2813 Channing Way, Berkeley, Calif. Thomas S. Holden, Pres.; Howard J. Barringer, Vice-Pres. and Treas.; Irving W. Hadsell, Vice-Pres.; Chauncy L. Williams, Vice-Pres.; Sanford D. Stockton, Jr., Secy.; Walter F. De Saix, Asst. Treas.; Edwin H. Freed, Asst. Treas.; Irving B. Satin, Asst. Treas. Member Audit Bureau of Circulation and Associated Business Papers, Inc. Architectural Record is indexed in Reader's Guide, Art Index, Industrial Arts Index and Engineering Index. Subscription rates: United States and Possessions, Canada, Cuba, Mexico, Central and South America, and Spain, \$4.50 the year, \$7.50 for two years, \$9 for three years; elsewhere, \$6.50 the year, \$11.50 for two years, \$15 for three years. Single copy \$1. Circulation Manager: Marshall T. Ginn. Every effort will be made to return material submitted for possible publication (if accompanied by stamped, addressed envelope), but the editors and the corporation will not be responsible for loss or damage. Other Dodge Services: Real Estate Record & Builders' Guide, Sweet's Files, Home Owners' Catalogs, Dodge Reports & Dodge Statistical Research Service.

COVER:

The motel shown on the cover is the Tucson Biltmore, Tucson, Ariz.; Arthur T. Brown, Architect; photo by Maynard Parker. Map, courtesy Esso Standard Oil Co., copyright by General Drafting Co., Inc. Composition photograph by David Dewhurst.

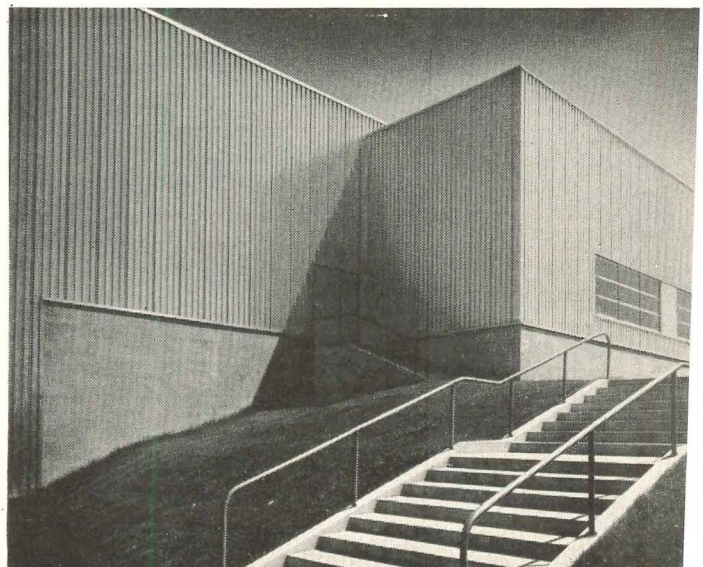
THE RECORD REPORTS	9
News from Washington. By Ernest Mickel.....	15
News from Canada. By John Caulfield Smith.....	16
Construction Cost Indexes.....	26
REQUIRED READING	28
SCHOOL OF BUSINESS ADMINISTRATION	87
University of Michigan, Ann Arbor. Lee Black & Kenneth G. Black, Architects. Lynn W. Fry, Architect, Supervising Architect, University of Michigan	
CUSTOMER LURE FOR SHOE CHAIN	94
Simco Shoe Store, Jamaica, N. Y. Gibbons & Heidtmann, Architects	
A SITE FULLY EXPLOITED	97
House for H. W. Eldredge, Norwich, Vt. E. H. & M. K. Hunter, Architects	
ARCHITECT'S HOUSE COMBINES PRIVACY WITH A SWEEPING VIEW	102
Residence of Mr. and Mrs. Louis F. Southerland, Austin, Texas. Page, Southerland and Page, Architects	
MICHIGAN BELL TELEPHONE BUILDING	106
Birmingham, Mich. Smith, Hinchman & Grylls, Inc., Architects and Engineers. Joseph W. Leinweber, Project Director; Minoru Yamasaki, Project Designer	
BUILDING TYPES STUDY NO. 159 . . . MOTELS	
Prepared by Frederic Arden Pawley, Architect, under the joint editorial direction of <i>Hotel Management</i> and <i>ARCHITECTURAL RECORD</i>	
INTRODUCTION	110
LOCATION, SITE, PLOT PLAN	114
GENERAL PLANNING	116
MAIN BUILDING, RENTAL OPERATIONS	118
HOUSEKEEPING, MAINTENANCE	119
RENTAL UNITS	120
MATERIALS, EQUIPMENT	124
CONSTRUCTION NOTES, WEATHER CONSIDERATIONS	126
PROMOTIONAL FEATURES	127
FOOD OPERATIONS	128
ASSOCIATIONS, BIBLIOGRAPHY	130
ARCHITECTURAL ENGINEERING	
Technical News and Research	
POTENTIALITIES OF PLASTICS IN BUILDING	132
By Albert G. H. Dietz	
PREVENTING OPERATING ROOM EXPLOSIONS	138
By Roy Hudenburg	
TIME-SAVER STANDARDS	141
Heating Systems for Houses. Convector Baseboard Heating Systems: Part 2. By William J. McGuinness.....	141
Condensation Control for Houses. Vapor Barriers, Part 4, Ceilings.....	144
PRODUCTS . . . for Better Building	145
MANUFACTURERS' LITERATURE	146

THESE WALLS



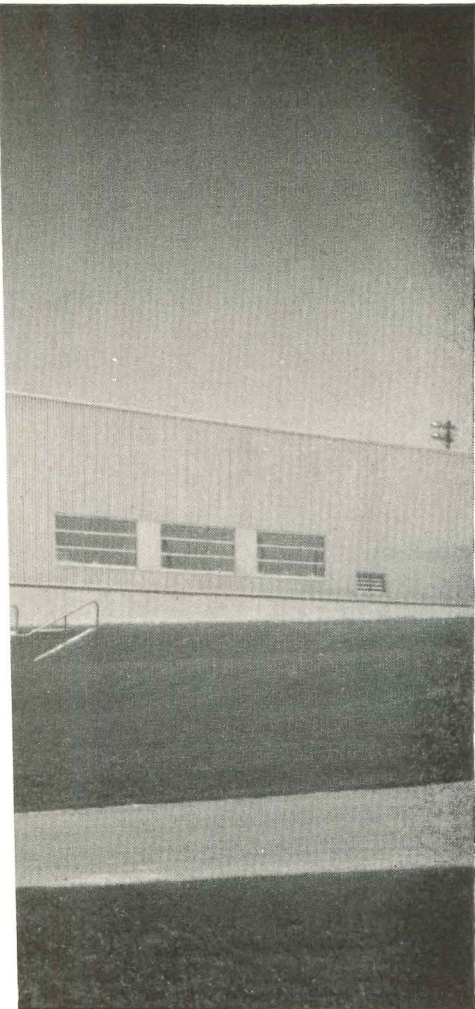
Nylon Throwing Mill, Duplan Corporation, Winston-Salem, North Carolina. Lacy, Atherton & Davis, Architects & Engineers. Alcoa Aluminum used for exterior walls, window sash, doors, copings and ventilation louvers.

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



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

REFLECT THE FUTURE ...



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

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

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

Call or write your nearby Alcoa Sales Office or ALUMINUM COMPANY OF AMERICA, 1888C Gulf Building, Pittsburgh 19, Pa.

ALCOA

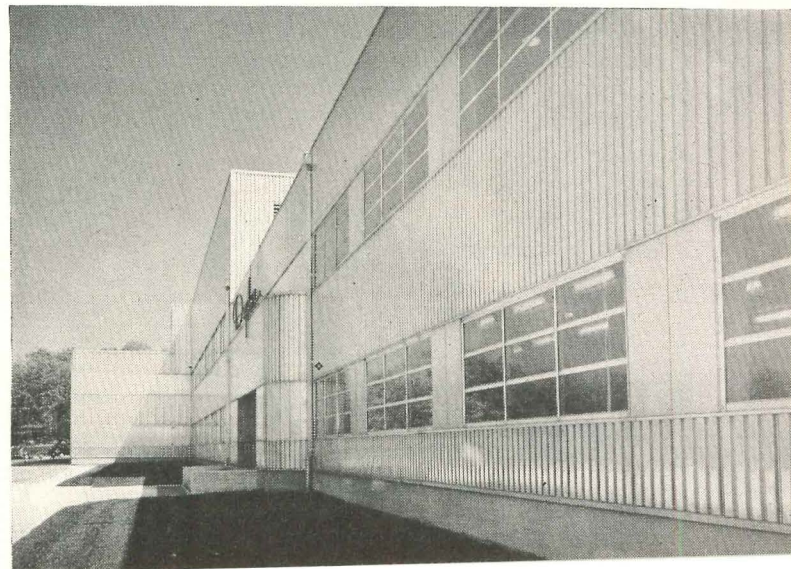
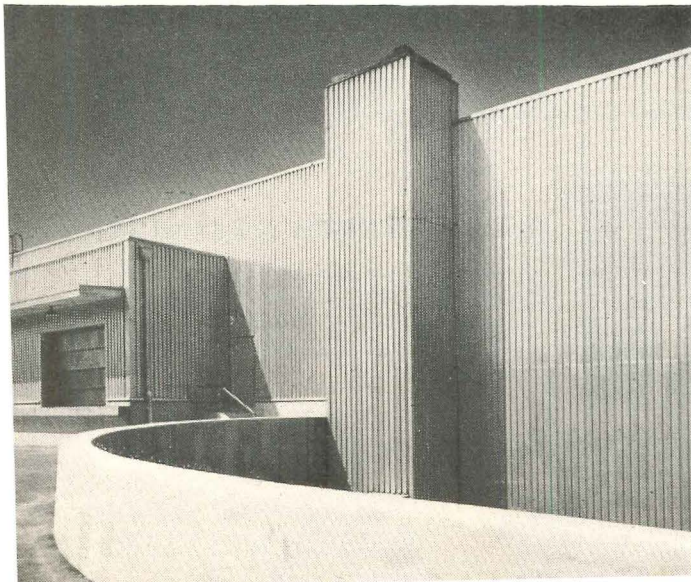


FIRST IN

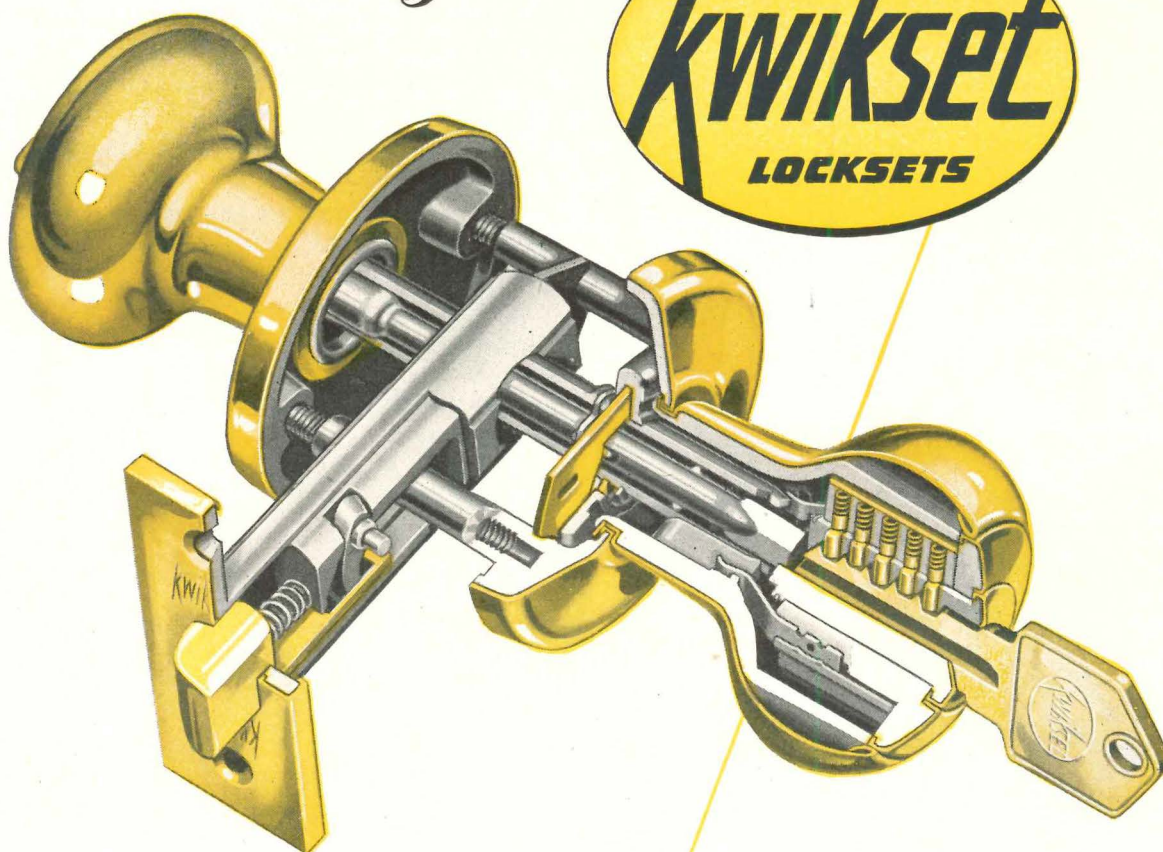
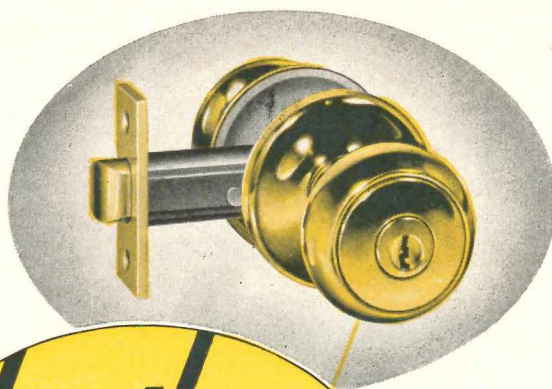
ALUMINUM

Held top and bottom by angle girts, aluminum-faced panels are quickly, easily installed. They combine good appearance with freedom from painting and maintenance.

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



*There's more than
meets the eye in...*



Look inside a KWIKSET lock. See the advanced design, the simplicity of operation, the rugged, precision-built construction . . . the *built-in* features that make KWIKSET locks *first choice* with architects and builders across the nation. KWIKSET's unique cam action locking device provides positive knob locking. The ingenious half-round spindle reduces number of working parts. And fewer parts mean faster, more economical manufacturing operations . . . *lower unit costs!*

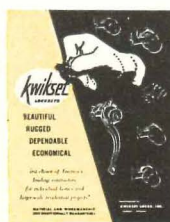
But mechanical design isn't the whole story. KWIKSET locks are exceptionally clean and attractive in appearance

. . . beautifully hand-finished in satin or polished chrome or brass, or satin bronze.

Architects find that KWIKSET's clean design and striking beauty enhance the appearance of both modern and traditional residences. Add to this KWIKSET's high quality, low price and ease of installation and there is little wonder why leading architects are specifying KWIKSET locks for every door on every house.

MATERIAL AND WORKMANSHIP UNCONDITIONALLY GUARANTEED

MANUFACTURED BY



NEW CATALOG AVAILABLE

A new full color catalog describes KWIKSET's pin-tumbler, cylindrical locks. Write for your copy today! Address inquiries to: KWIKSET LOCKS, INC., Dept. AR, Anaheim, California.

SOLD BY LEADING HARDWARE WHOLESALERS, JOBBERS AND DEALERS FROM COAST TO COAST

THE RECORD REPORTS

Zarembka Studio



Photo at left (from left to right): Louis Justement, Kenneth Wischmeyer, Frederick Gutheim, P. C. Smith, Ernest Kump

MEMBERS OF 34 A.I.A. CHAPTERS MEET AT ST. LOUIS TO CONSIDER "THE ARCHITECT AND PUBLIC HOUSING"

Twenty-four states and the District of Columbia were represented at last month's St. Louis conference on "The Architect and Public Housing," sponsored by the Committee on Urban Planning and Housing of the American Institute of Architects.

Members of 34 A.I.A. chapters met at the Hotel Jefferson Feb. 2 and 3 with local and federal housing officials and representatives of six other professional societies for discussions planned to clarify the extent of the architect's responsibility for success of the new public housing program.

Speakers and discussions of the first

day's session centered on the intent of the 1949 housing legislation; the history and development of public housing; the effect on communities of large-scale constructions; and the communities' responsibilities for facilities beyond the scope of the federal legislation.

Perry Coke Smith of New York, chairman of the sponsoring committee, opened the conference. A.I.A. President Ralph Walker, who introduced the speakers, stressed the importance of getting the profession as a whole to appreciate the seriousness of the job to be done in implementing the housing program. Not just planning of buildings but

community planning must be the approach urged by architects, Mr. Walker said.

Commissioner John T. Egan of the Public Housing Administration provided the conference keynote with his plea for practical cooperation among all interested groups to make the program a reality. "Now we've got the money, let's go!" was the theme.

Louis Justement, architect, author and consultant, outlined the intent and scope of the 1949 housing legislation.

Kenneth E. Wischmeyer, A.I.A. second vice president, presided at the luncheon session on the opening day, when Frederick Gutheim, *New York Herald Tribune* writer and critic, analyzed public attitudes toward public housing. More information along this line is needed for a successful housing program, Mr. Gutheim said, and he outlined various methods of taking opinion polls.

"Public Housing from the Inside" was the initial topic of the afternoon session, with Elizabeth Coit, architect and principal project planner for the New York City Housing Authority, as the speaker. Two other local housing officials were on the afternoon's program — Richard W. E. Perrin, A.I.A., director of the Milwaukee Housing Authority, and Howard L. Holtzendorff, director of the Los Angeles Housing Authority.

Charles L. Farris, chief of the Housing and Home Finance Agency's Field Operations Branch, Division of Slum Clearance and Urban Redevelopment, wound up the afternoon's program with a talk on the relationship of slum clearance and redevelopment to public housing.

Planning techniques, the general theme of the second day's sessions, was developed in morning speeches by George

(Continued on page 10)

ELIEL SAARINEN CHOSEN FOR BRITISH AWARD

Newest honor for Eliel Saarinen comes from Great Britain — the 1950 Gold Medal of the Royal Institute of British Architects.

The 77-year-old Finnish-born architect has been asked to go from his Bloomfield Hills, Mich., home to London for the presentation on April 4.

An Institute spokesman has said Mr. Saarinen was selected to receive the medal after judges had surveyed his work, beginning as early as the Finnish pavilion at the Paris World's Fair of 1900 and Helsinki's railway station.

Mr. Saarinen, who came to this country in 1923, has been an American citizen since 1945. He will be the fifth American to receive the award,

instituted by Queen Victoria in 1848 and given in every succeeding year except 1901 and 1924. Mr. Saarinen's will therefore be the 100th award.

The medal was last awarded to an American in 1921, when Frank Lloyd Wright was the recipient.



THE RECORD REPORTS

(Continued from page 9)



Zarembka Studio

At the St. Louis conference (above): Ralph Walker, Elizabeth Coit, Ernest Kump, Glenn Stanton and Arthur Holden

Bain Cummings of Binghamton, N. Y.; Fred Lewis Markham of Provo, Utah, who gave the case history of a vigorous planning project in a small town; and A. Whitney Murphy of Butler, Pa.

At the luncheon session, with Mr. Walker presiding, Planning Consultant Harland Bartholomew of the St. Louis Planning Commission described city planning techniques, and on the basis of his St. Louis Plan pointed out the best areas for immediate reclamation.

The final session of the conference was devoted to discussions led by panels of conference participants; and these evoked serious and practical talk on the problems architects face as participants in the housing program.

Public Relations in Action: Arkansas Pointing the Way

Something new was added to the perennial matter of public relations for architects, when the Arkansas Chapter of the A.I.A. convened in January. The annual meeting was combined with a school building and planning conference, co-sponsored by the State Department of Education, and attendance totaled around 700.

Point was that the 700 were not all architects, talking about public relations; along with architects there were state school authorities, general contractors, materials manufacturers and dealers, the mayor, the governor, school board members, school superintendents. The program became a pooling of information and talents of all groups toward better school design and construction, so that public relations were both automatic and effective.

Some 400 school officials — superintendents, Board members, and county supervisors — attended the school conference.

Dr. Walter D. Cocking, chairman of

the Board of Editors of the American School Publishing Corp., made an address which impressed his hearers with the impact of emerging school programming on school building planning. A speech by Harold D. Hauf, editor-in-chief of ARCHITECTURAL RECORD, emphasized the important part the architect plays in school planning as coordinator and professional advisor. The conference also heard a report from Kenneth Wischmeyer on the activities of the A.I.A. Committee on School Planning, and its attempts to bring about nationwide acceptance of recommended procedure in the school planning field.

Building problems and solutions were considered in a panel discussion which climaxed the conference.

Highlighting the annual dinner on the preceding evening were addresses by Kenneth Wischmeyer, A.I.A. second vice president, who discussed the work of the Institute's Board and its national committees and their programs, and Mr. Hauf, whose topic was "The Architect and the Building Team"

Besides architects and their office associates, guests at the dinner included Governor McMath, Mayor Sam Wassell of Little Rock, general contractors, materials and manufacturers' representatives, and officials of the State Department of Education and the Hospital



Construction Pictures



Pictured above: Howard Eichenbaum, J. R. Mahnker, Jr., E. Chester Nelson (standing), Yandell Johnson, Uzzell Branson and Charles Carter (seated); top, Branson and Eichenbaum, Kenneth Wischmeyer, Harold Hauf, U. of Ark. Pres. Jones, N. Y. Architect Edward D. Stone



Rothschild Photo

This 1000-room hotel, largest ever built in Orient, is planned for grounds of Imperial Palace in Tokyo as part of \$100,000,000 building program to increase Japan's tourist and commercial facilities. Welton Becket heads the entire project, including trade and cultural centers in Tokyo and Osaka, trade centers in Yokohama and Kobe, and 13 more hotels in resort areas

Facilities Office of the State Board of Health.

Besides an architectural exhibit arranged by members of the chapter and the department of architecture of the University of Arkansas, there were exhibits by materials dealers, school equipment dealers and members of the Arkansas chapter of the National Electrical Contractors Association.

Officers for 1950 elected at the annual meeting are: Uzzell Branson, Blytheville, president; Charles Carter, Little Rock, vice president; Yandell Johnson, Little Rock, secretary; Julian Davidson, Little Rock, treasurer; J. R. Mahnker Jr., Little Rock, and E. Chester Nelson, Fort Smith, directors.

Retiring Chapter President Howard Eichenbaum summarizes the significance of the two days of meetings:

"We are confident that the impact of the meeting on public relations of the architectural profession with the construction industry and the school profession will be felt; that the situation will continue to improve.

"This is not conjecture; for as presiding officer I personally received hundreds of expressions of commendation on all the activities of the two-day meeting from members of all the groups. We hope that this is a beginning, that future meetings can be arranged to cover other fields, such as hospitals, industrial buildings, urban redevelopment.

"Our entire membership expressed pride in this achievement and we are taking this opportunity to pass it on as an example for other chapters to consider as a possible medium for better public relations."



Akron Art Institute's new building: above, a second-floor gallery seen across foyer; left, view into gallery from main staircase



Akron Art Institute Completes \$275,000 Remodeling Project

After four years in temporary quarters, the Akron Art Institute has moved to its permanent home in a building given to the Institute by the city of Akron and remodeled at a cost of \$275,000. Funds for remodeling were contributed by the people of Akron.

The new quarters are planned to permit continued expansion of the program developed during the past four years under the leadership of President Walter P. Keith, Charles Val Clear, director until last summer, when he resigned to take charge of the Florida Gulf Coast Art Center in Clearwater, and the present director, George D. Culler. This development, which attracted the support of an active membership of 1500, has included launching of a progressive exhibition program and establishment of a 4-year professional school of advertising and industrial design.

Studios and shops on the top floor serve the professional school and children's classes; and a large plaster and ceramics shop on the ground floor are also used by these groups. Works of art owned by the Institute are displayed in two galleries on the second floor, where library facilities are located. One gallery

is allocated for display of "art in use," with adjacent space for consultation and study. A lounge and a small auditorium are provided on the ground floor.

Visual Aids Program Gets Good Initial Response

Schools of architecture and members of the Producers Council alike are enthusiastic in their reaction to the Visual Aids Program for architectural students sponsored jointly by the Council and the Association of Collegiate Schools of Architecture.

More than 40 manufacturers of building products and associations representing manufacturers are now in on the program — preparing visual aids to contribute to a visual library to aid in teaching students in 67 collegiate schools of architecture.

The series of slides is designed to explain the properties and uses of building materials and equipment and to illustrate approved methods used in modern construction. More easily revised than textbooks, slides are an important aid in keeping students abreast of new building developments as they occur.

Juvenile Detention Center Projected in Philadelphia

The first new structure in 15 years on Philadelphia's Benjamin Franklin Parkway will provide temporary shelter for juveniles detained by the courts until final disposition of their cases.

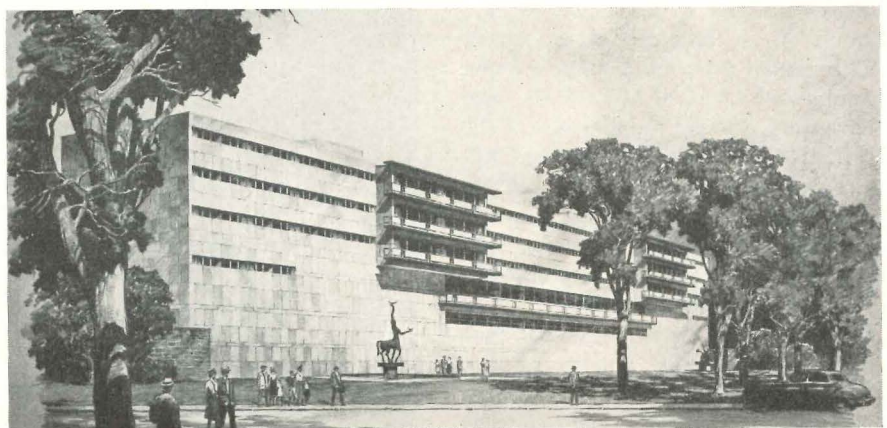
Average stay of juveniles in detention areas has been three and a half days; but in the new Center, some of the children will now be detained two weeks so that they can be more thoroughly studied. Facilities therefore include classrooms, shop and craft rooms and recreation rooms as well as kitchens, dining rooms, doctors' suites, isolation wards, examination rooms, administration rooms, locker rooms and washrooms and living quarters. Plans call for 150 rooms for the children.

Carroll, Grisdale and Van Alen are architects for the "Youth Study Center" to be erected for the County Commissioners of Philadelphia at a cost of \$2,069,514. Fred N. Severud is structural engineer. Consulting engineer (mechanical and electrical) is A. E. D'Ambly.

The Center will consist of a six-story limestone-faced unit at 20th St. on the Parkway (photo of rendering below) and a three-story brick-faced unit on Pennsylvania Ave. Two bridges will connect the buildings.

Both buildings will be of reinforced concrete, single span, flat beam construction, with one-way slab and all columns and all beams the same size throughout. The Parkway building will have a foundation of piles, the Pennsylvania Ave. building spread footings.

Callowhill Street, which cuts diagonally across the Parkway between 20th and 21st streets, was closed and taken off the city plan to provide a suitable site.



THE RECORD REPORTS

Contracts Awarded in January 51 Per Cent Over January '49

F. W. Dodge Corp. figures for contracts awarded during January for building and heavy engineering works in the 37 states east of the Rockies showed an increase of 51 per cent over January of last year.

The \$730,855,000 in contracts awarded represented a drop of 21 per cent from December.

Nonresidential awards of \$235,294,000 in January reflected a decline of 22 per cent from December and an increase of 6 per cent over January a year ago. All major nonresidential classifications except social and recreational building were off from December's total. Compared with January of last year, educational and science building awards were up 67 per cent, and slight gains were reported for religious building; but other classifications were off, the sharpest decline being shown for commercial buildings.

Residential contract volume amounting to \$343,501,000 last month showed an 18 per cent decline from December and a gain of 116 per cent over January a year ago. Both apartment house and single-family house construction showed a substantial rise over January 1949.

Heavy engineering awards amounted to \$152,060,000 in January, or 27 per cent less than in December and 49 per cent more than the figure for January of last year.

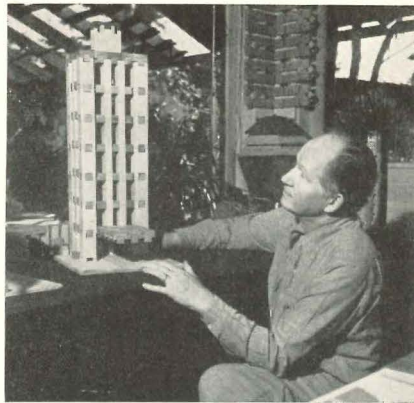
VA Hospital at Little Rock Slated for June Occupancy

A 500-bed general medical hospital at Little Rock, Ark., is nearing completion and will be turned over to the Veterans Administration for occupancy in June, according to present plans.

Architect-Engineers for the hospital, one of the first to be completed of a group of VA hospitals, were Erhart, Eichenbaum & Rauch and Brueggman, Swaim and Allen, of Little Rock, who have worked under the direction of the Little Rock District of the Corps of Engineers in planning and in construction supervision.

The firm of E. M. Freeman of Shreveport, La., and Werner Knoop of Little Rock were structural engineers; and Landauer & Guerrero of Dallas were mechanical engineers.

The main building, 60 ft above Roosevelt Highway on a site that dominates



"Wright Blocks" and their creator

Emblem Design Competition Is Sponsored by Engineers

Design of an emblem which will be a "worthy graphic expression related to the work of the association" is the subject of a competition announced by the New York Association of Consulting Engineers.

The contest, which carries a first prize of \$100, is open to architects, architectural draftsmen and architectural students, and has been approved as a secondary competition by the American Institute of Architects.

Drawings must be submitted to Room 1012, 101 Park Avenue, before 5 p.m. March 15, or postmarked before that time. Second prize will be \$25 and there will be 10 honorable mentions of \$10 each.

The association said it is inviting designs from the architectural profession "in the spirit of effective coordination and cooperation between architects and engineers in the building profession."

the metropolitan area, was designed in a Y shape to take advantage of the high point of the site and to so orient the building that a maximum number of rooms would have eastern and southern exposures. The two upper floors, where rooms and facilities for neuropsychiatric

"Wright Blocks" Developed by Designer of "Lincoln Logs"

Architect John Lloyd Wright, whose "Lincoln Logs" have been standard toy box equipment since they appeared on the market in 1918, has developed a new building set that he says offers more incentive to the imagination.

"Wright Blocks," made of unfinished wood to encourage through sight and touch an appreciation of the fine quality of natural wood, are cross-grooved forms specially machined to allow stability through an interlocking system. Towers and trestles stand firm, for the cross-grooved beams and connectors fit snugly into the larger building blocks.

Unlike Lincoln Logs, Mr. Wright says, Wright Blocks won't confine a child to predetermined designs, and thus they are really creative toys.

Ralph T. Walker Is Honored by New York A.I.A. Chapter Award

President Ralph T. Walker of the American Institute of Architects received the Medal of Honor of the New York Chapter of the Institute at the chapter's 81st anniversary dinner, held at the Town Hall Club in New York City on February 21.

The medal, which is the chapter's highest award, is presented annually for distinguished architectural work and high professional standing.

Chairman George Howe of Yale's Department of Architecture, guest speaker, urged increased attention to the *average* student, adding that more good young architects graduate now than ever before.

patients are located, have screened sun decks.

Exterior walls are of grayish-buff brick, with Alabama buff limestone trim. Aluminum heavy section awning-type windows were chosen to provide both maximum and controlled ventilation.



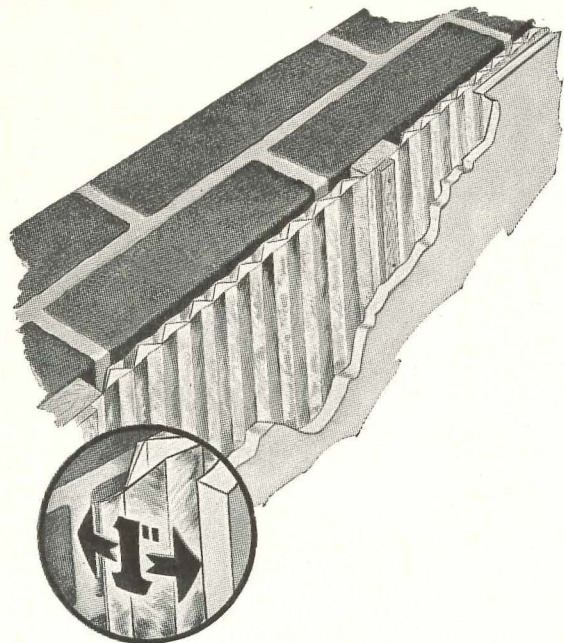
Earl Saunders Photograph

THAT BRICK, CONCRETE, OR BLOCK WALL—

Give 1" Space 2" DRY Insulation Value!

**FOR LESS THAN *8c SQ. FT.,
MATERIAL PLUS LABOR**

**In new construction between furring strips.*



Use 2 Aluminum sheets 1/2" apart...

Permanently separated, with 4 reflective surfaces, and 4 reflective accordion spaces; they have zero permeability, are non-condensation forming, non-moisture retaining, will force out fortuitous vapor.

Invaluable under cement floors or floor radiant heating panels—1" space is so economically created. R factor for Down-Heat Flow is 10.30, equal to 3 2/5" dry rockwool. A must for shallow spaces around air ducts and for pre-fabricated buildings, trucks, trailers, railroad cars, ships and planes. Heat flow through air spaces in walls is 65% to 80% radiation. Two such aluminum sheets absorb only 3% of heat rays, and radiate only 3%. They are impenetrable by convection; conduction is insignificant. This construction is technically called Type 4 Jr. Infra.

INFRA INSULATION TYPE 4 JR. Thermal Factors in 1" Space

Down Heat C.097, R10.30, equals 3 2/5" Dry Rockwool
Wall Heat C.150, R 6.66 equals 2 1/5" Dry Rockwool
Up Heat C.194, R 5.15 equals 1 3/4" Dry Rockwool

Vapor Permeability Equals ZERO

FREE: Send coupon for FREE COPY of 44-page, just-printed, Third Edition of "Simplified Physics of Thermal Insulation", a simple, clear and concise handbook on Heat Transfer, Vapor Flow, Condensation, Radiant Heating, etc., with famous complete and documented MASTER CHART of k, C, R and U factors of all insulations of all weights, thicknesses, densities, etc. Describes and tells how to install various kinds of multiple aluminum and also mass insulations.

Check to get samples and price lists.

**Multiple Accordion Aluminum and
Triangular Reflective Air Cells**

INFRA INSULATION, INC.

**10 Murray Street New York, N. Y.
Telephone: COrtlandt 7-3833**

INFRA INSULATION, INC.
10 Murray Street, New York, N. Y.

Dept. R-3

Please send "Simplified Physics of Thermal Insulation."

Name _____

Firm _____

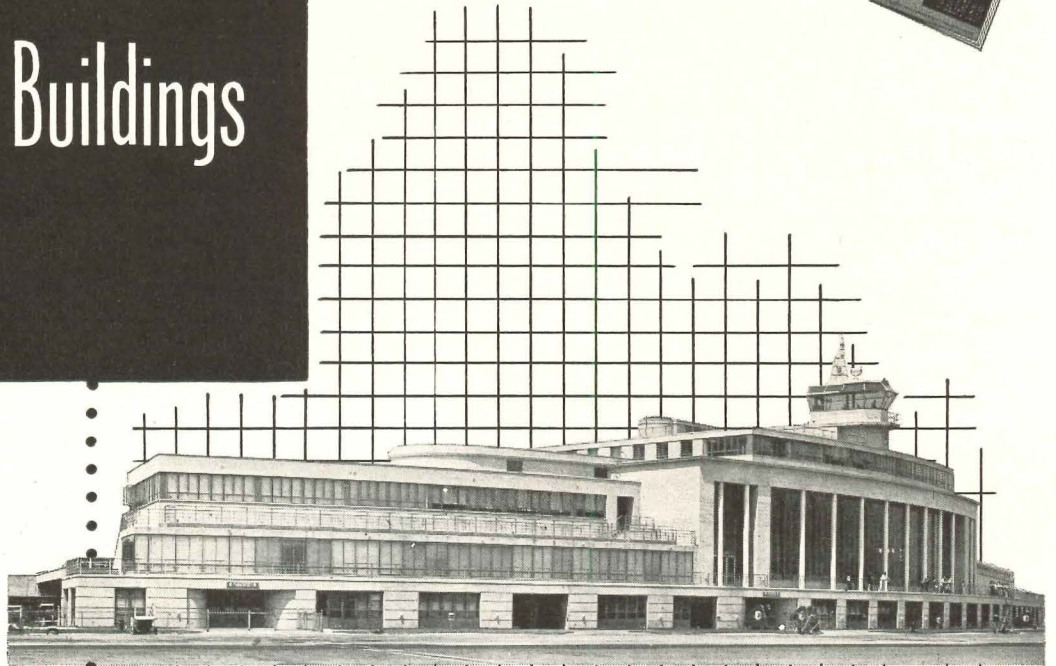
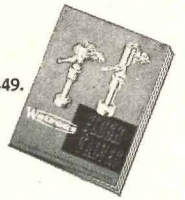
Address _____

Send Price Lists of Insulations

Send Free Sample

Fine Flush Valves for Fine Buildings

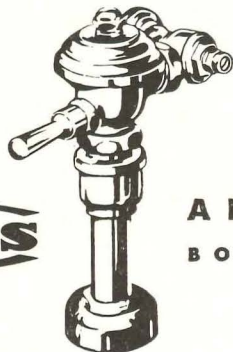
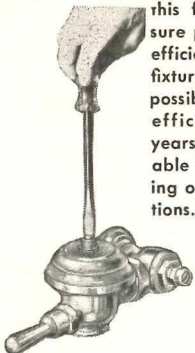
For complete information on Watrous Flush Valves write for Catalog No. 449.



Among Watrous Fine Features

Water-Saver Adjustment

All Watrous Flush Valves, both diaphragm and piston types, have an external adjustment for length of flush. Besides providing maximum water-savings, this feature can insure peak operating efficiency from every fixture, and makes it possible to maintain efficiency over the years despite inevitable wear or changing operating conditions.



Watrous

WASHINGTON NATIONAL AIRPORT

Washington, D. C., one of the many fine buildings equipped with Watrous Flush Valves.

LOUIS A. SIMON

Supervising Architect

HOWARD LOVEWELL CHANEY

Consulting Architect

MEHRING & HANSON CO.

Plumbing Contractors

ADJUSTABLE FLUSH VALVES
BOTH DIAPHRAGM AND PISTON TYPES

THE IMPERIAL BRASS MANUFACTURING COMPANY

1240 W. Harrison Street • Chicago 7, Illinois

WASHINGTON NEWS by Ernest Mickel

A.I.A. Enters Debate on Middle-Income Housing with Query on Need for Providing Additional Lending Facilities

All the early talk in Washington on the cooperative housing bill (better known as the middle-income bill) and the bill to revamp financing aspects of the National Housing Act was directed at the ultimate goal of less costly and larger home units for more families with incomes from \$2400 to \$4000 per year. More of the emphasis in committee hearings on these measures could well have been directed to the specific function of the architect, particularly as the arguments applied to size and planning of living units. But the major lines of difference were drawn on more tenuous issues embracing definitions of the middle-income brackets and whether or not private industry was supplying these wage earners with the houses they should have.

The Senate's banking subcommittee, under Chairman John J. Sparkman (D-Ala.), spent a week on these matters and the full House banking committee, chaired by Rep. Brent Spence (D-Ky.), scheduled two weeks for hearings on H. R. 6618 (the proposed amendment on cooperative housing) and H. R. 6742 (the bill to modify terms of the old Sec. 608 rental housing insurance program under Title VI and make other phases of the National Housing Act more permanent).

The American Institute of Architects, speaking for the 8400 architects in its 94 chapters, took a mild stand on the new cooperative housing proposal, opposing in general terms the financial arrangements and objecting to the vesting of discretionary power on home design criteria in the hands of the Housing and Home Finance administrator. The A.I.A. expression took the form of a statement filed with the Senate committee via the Institute's Committee on Urban Planning and Housing.

This was in a sense a reversal of official architectural opinion on federal housing legislation. Heretofore, the organized architects have supported, in the main, the tenets of federal aid to housing as expressed in the Wagner-Ellender-Taft and later liberal housing measures.

Speaking to the Maybank amendment, or the cooperative housing bill, the Institute questioned whether ample financing facilities do not now exist; facilities which, if given reasonable opportunity, will essentially provide the needed housing for the so-called middle-income group. A.I.A. asked: "Is the measure necessary?"

The Maybank amendment dealt with an entirely new plan whereby the federal government would underwrite some interest losses in housing developments built as cooperative ventures with the financing originating with the U. S. Treasury in the form of debentures sold.

The A.I.A. Stand

There is no conclusive argument, said the A.I.A. report, that the government needs to establish additional federally-financed lending facilities to provide middle-income housing. The great bulk of over four million new dwelling units provided since the end of the war has been in fact occupied by those families having up to \$4000 annual income in smaller communities and \$4900 in the larger cities.

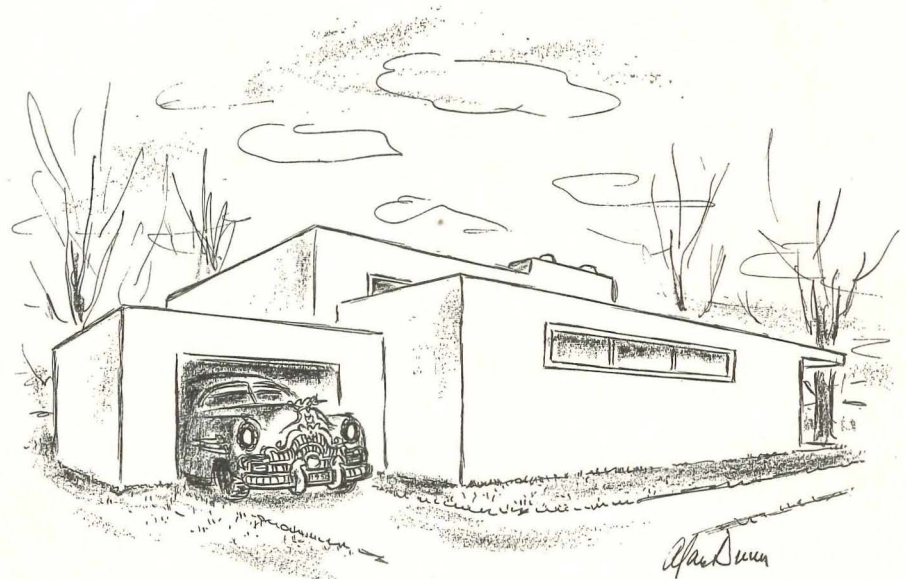
A.I.A. then expanded its argument thus: "We feel that the present outlook

is clearly for an even greater market interest in lower- and middle-income housing than in the past. The trend to the production emphasis on lower-priced housing is continuing from last year; and, with interest rates generally as low as they have been at any time since 1946 and 1947, there is no factor that does not presage a steady enlargement of the market. A constant improvement in the quality of design could likewise be obtained even under existing legislation if discretionary power in the matters of design decision were to be placed in the hands of professionals in private practice."

If, indeed, the bill was to be enacted, the architects wanted reserved to themselves the jurisdiction of design criteria for the units to be constructed. This was expressed in the statements filed with congressional committees objecting to the wording of the proposed amendments. Issue was whether or not the housing administrator was being given too much discretionary power on establishing design standards. On this point, A.I.A. said:

"We feel . . . that the determination of technical criteria and advice, and the standards of design and liveability by the administrator may not allow the architect sufficient professional discretion to enable the architect to attain designs to insure maximum economy and liveability. The language of the bill stipulates that the administrator will furnish technical advice and determine what are standards of design, construction, livability and size of dwellings for adequate family life."

(Continued on page 16)



— Drawn for the RECORD by Alan Dunn

THE RECORD REPORTS

WASHINGTON

(Continued from page 15)

Here, the Institute held that such technical advice and problems are properly within the province of the practitioner to evaluate and to solve in order to insure adequate amenities and economies in construction and operation, as well as in future salability. It proposed that Congress give the housing administrator power to set a figure for each dwelling unit cost. This would leave to the professional architect's discretion the drawing of "a proper design" to meet this figure.

A.I.A. expressed confidence that the architects in this country could meet such a challenge.

HHFA Wants Larger Houses

Throughout the testimony of housing officials before the banking committees ran references to inadequate space in new housing as well as the charge that it is over-priced. In trying to break down arguments of the private home builders that they are satisfying the housing demands of middle-income families, Housing Administrator Raymond M. Foley made the point that many of the houses and apartments coming onto the market, especially those selling or renting at charges low enough to be within the means of middle-income families, are not large enough for families with children. In the rental category too many of them have been efficiency or one-bedroom apartments, in his opinion.

Foley observed: "There has been a growing tendency for an increasing proportion of new rentals to be small units not suited to the needs of families with children. Hence, the plight of middle-income families who have children is even more pronounced than the rental figures themselves would indicate."

He cited figures showing that 49 per cent of Sec. 608 rental units for which Federal Housing Administration issued loan insurance commitments in the first half of 1949 had three and one-half rooms or less, that 19 per cent had four rooms. The other 32 per cent had four and one-half rooms or more. Of the total, only seven per cent had five rooms or more.

At least it cannot be said that the federal officials refuse to practice their own recommendations in this respect.

Public Housing Administration, an HHFA constituent agency, is working with architects right now establishing new criteria for the 810,000 low-rent public housing units to be constructed in the six-year program authorized by Congress in 1949. Old standards for the 200,000 or so units constructed under the earlier public housing program no longer are adequate guides. The new units, says PHA, must be planned for more children.

Thus, on the average, apartment space and individual unit space in the new low-rent developments will be larger. PHA officials indicate that each bedroom planned in the new program must accommodate at least two persons. Under the old plan, some bedrooms were designed to accommodate only one.

On the basis of a survey of many occupants of this type of housing constructed under the earlier effort, PHA found that 90 per cent of the occupants preferred dining room space combined

with the kitchen rather than with the living room. The new low-rent public housing units will be planned with this in mind.

Again, criteria under the former system dictated a relative amount of space for two, three, four adults, etc. The planning now will be on a different basis, with emphasis on larger rooms and better arrangement of these rooms, more storage area and good construction for health and safety. Where the former public housing averaged 4.5 rooms per unit, including 2.5 bedrooms, the new will contain approximately 5.5 rooms per unit with 3.5 bedrooms. PHA already has issued its minimum standards governing the building of these 810,000 units. They fluctuate depending on size of unit, expected occupancy, location, etc., but agree on this: the first bedroom in each unit must have at least 125 sq ft and the second unit must have a minimum of 110.

(Continued on page 18)

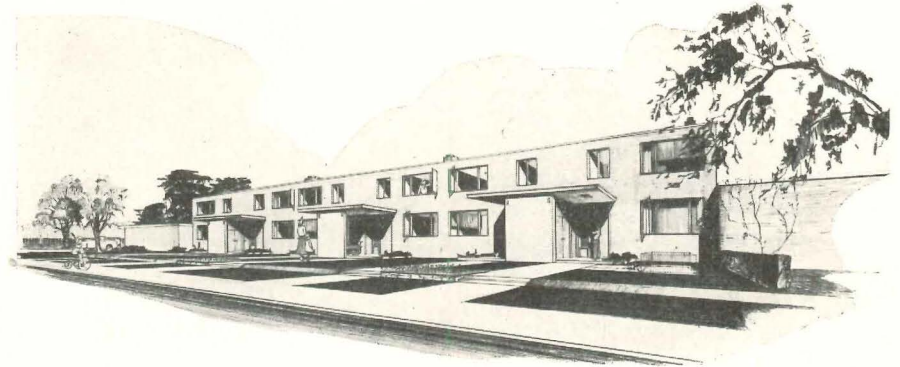
NEWS FROM CANADA by John Caulfield Smith

NEW ROW HOUSE SCHEME DESIGNED AS MANUFACTURERS LIFE PROJECT

A row house scheme which incorporates some radical departures from the customary plan for this type of dwelling has been designed for the Manufacturers Life Insurance Co. by John B. Parkin Assocs. Firm estimates have been received by the architect to build the individual house for \$8000 complete.

units for baby carriages and bicycles and trash receptacles off the entrance porch, laundry chute from second floor to basement laundry tubs, and a fireplace in each living room are among the notable features of this plan.

The kitchen is located off the central hall at the front of the house; and the



This is the second row house plan sponsored by the housing research section of Manufacturers Life. Success of the first, developed in collaboration with Architects Marani & Morris and demonstrated in actual construction and operation by the company, encouraged the staff to further research in the field.

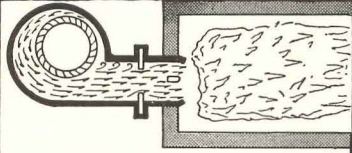
Larger-than-usual room areas, storage

living room, 20 ft 10 in. by 12 ft 1 in., overlooks the back garden, opening onto another porch which has a storage cupboard for lawn mower, garden tools and children's toys.

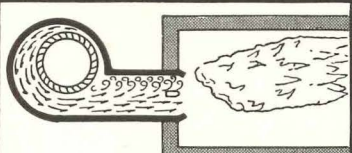
Three bedrooms and bath are on the second floor. Closets, including linen cupboard, have floor-to-ceiling sliding doors.

(Continued on page 176)

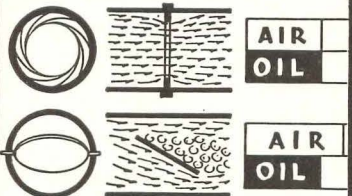
**WITH Iris Shutter
WATCH DOG OF
BOILER EFFICIENCY**



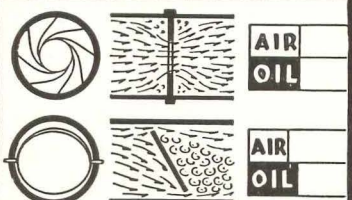
Above is pictured a typical burner WITH Iris Shutter control. Graph and flame illustration show the even flame and practically perfect control of air through your entire range.



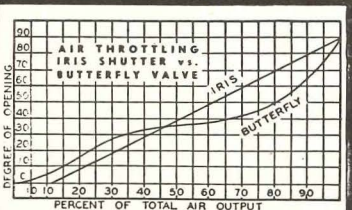
Burner without Iris Shutter shows air turbulence and uneven flame with fluctuating air volume indicating poor control.



Control of air volume through Iris Shutter versus butterfly valve at 60% angle of opening.



Control of air volume through Iris Shutter versus butterfly valve at 30% angle of opening. Note difference in volume control of air and oil.



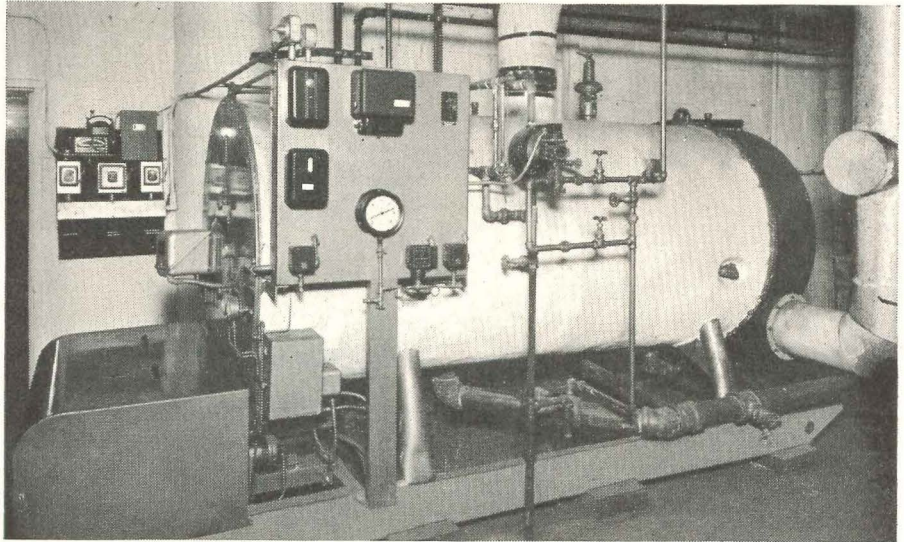
Above graph shows comparison between Iris Shutter and butterfly valves normally used in oil or gas burners. Note the perfect control with Iris Shutter.

STEAM-PAK

YORK *YS* POWER

GENERATOR

A PRODUCT OF YORK-SHIPLEY



FUEL AND LABOR SAVINGS . . . "We consider the installation of the York Steam-Pak Generator one of the finest improvements ever made to our building. The saving in fuel and the saving in cost of labor is very noticeable. It is by a large margin more efficient than our coal stoker unit that we operated for several years and which we were always pleased with." Jonas Shure, Treasurer, Wm. H. Bradford Co., Boston.

SUBSTANTIAL SAVINGS

result from

- "Steam-Pak" efficient three-pass boiler construction.
- "Steam-Pak" automatic operation with varying loads.
- "Steam-Pak" rapid steam production.

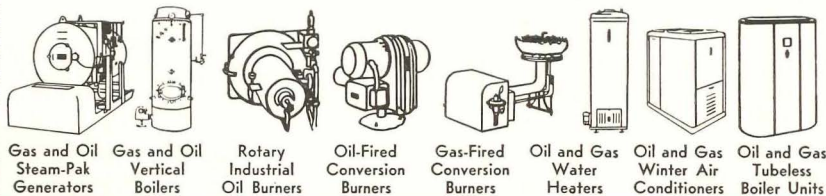
PLUS iris shutter precise metering and rapid mixing of air and fuel in "Steam-Pak" burners — see Iris Shutter explanation at left.

"Steam-Pak" Generators are built in capacities from 15 h.p. up, for low or high pressure steam or hot water, for light or heavy oil, combination gas and oil, or straight gas. Ask for Bulletin No. 37-43. See your nearest York-Shipley dealer, or write, 'phone or wire

YORK-SHIPLEY

INDUSTRIAL DIVISION

319 Jessop Place, York, Pennsylvania — 'Phone 7861



Gas and Oil Steam-Pak Generators Gas and Oil Vertical Boilers Rotary Industrial Oil Burners Oil-Fired Conversion Burners Gas-Fired Conversion Burners Oil and Gas Water Heaters Oil and Gas Winter Air Conditioners Oil and Gas Tubeless Boiler Units

YORK *YS* POWER INDUSTRIAL DIVISION

YORK *YR* HEAT RESIDENTIAL DIVISION

THE RECORD REPORTS

DESIGN FOR ATOM-BLAST RESISTANCE IS STUDIED

Tentative recommendations on construction of buildings and bridges to resist or reduce the effects of an atomic blast are contained in a mobilization planning report available from the National Security Resources Board, Washington 25, D.C.

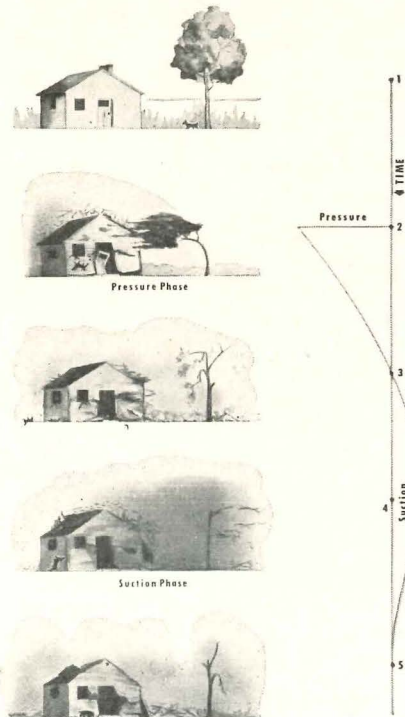
Submitted by the Atomic Energy Commission, the study, "Damage from Atomic Explosion and Design of Protective Structures," was prepared jointly by the AEC and the Department of Defense.

Suggestions for Designers

For new buildings, the report declares, "considerable study is being given to the problem of blast resistance design by the Department of Defense and educational institutions. There remains, however, a great deal to be done before satisfactory design procedures can be established."

These tentative recommendations are made for the present:

"Multi-story reinforced concrete or steel-frame building: it is suggested that the designer assume a horizontal wind component of 90 lb per sq ft and a vertical component of 70 lb per sq ft for protection against structural collapse from



Effect of blast wave striking structure. First effect of blast is followed by reverse wave as pressures equalize themselves

an atomic bomb releasing energy equivalent to 20,000 tons of TNT, exploding at a horizontal distance of one-half mile and a height of approximately 2000 ft. It is also suggested that buildings and their component parts be designed employing the methods, allowable stresses and details employed in wind- or earthquake-resistant design."

A table of proportionately reduced pressures is provided for buildings to be erected at greater distances from probable target centers.

The report gives suggestions for smaller reinforced-concrete buildings, steel-mill buildings and bridges. It also has recommendations for strengthening existing structures and reducing hazards, which the experts point out is "a much more difficult problem than that of incorporating necessary measures in a design." For such buildings, principles to be followed in providing shelter areas are outlined.

The study on atomic explosion damage is the second in a series based on material gathered for a book by a board of editors working at the AEC's Los Alamos Scientific Laboratory. The first report was on "Medical Aspects of Atomic Weapons." The next such report, soon to be submitted, will be on detection and measurement of radioactive contamination.



Carl L. Feiss, HHFA's new chief of community planning and development, was formerly director of the School of Architecture and Planning at the University of Denver. From 1942 to 1945, he was planning director for the Denver Planning Commission; 1937 to 1942, director of Housing and Planning Div., Columbia University

WASHINGTON

(Continued from page 16)

It is expected that approximately half of the housing to go up in the new program will be of the row house type, the other half of the garden type. No free-standing units are scheduled under present programming. The agency has stated its experience indicates that the row-type home is most economical to maintain. Furthermore, row houses will permit occupants to have their own lawn and garden space, a benefit not easily provided in the garden-type apartments.

The garden apartments will have playground areas and all the housing will be adequately landscaped in an effort to make the public units neighborhood assets.

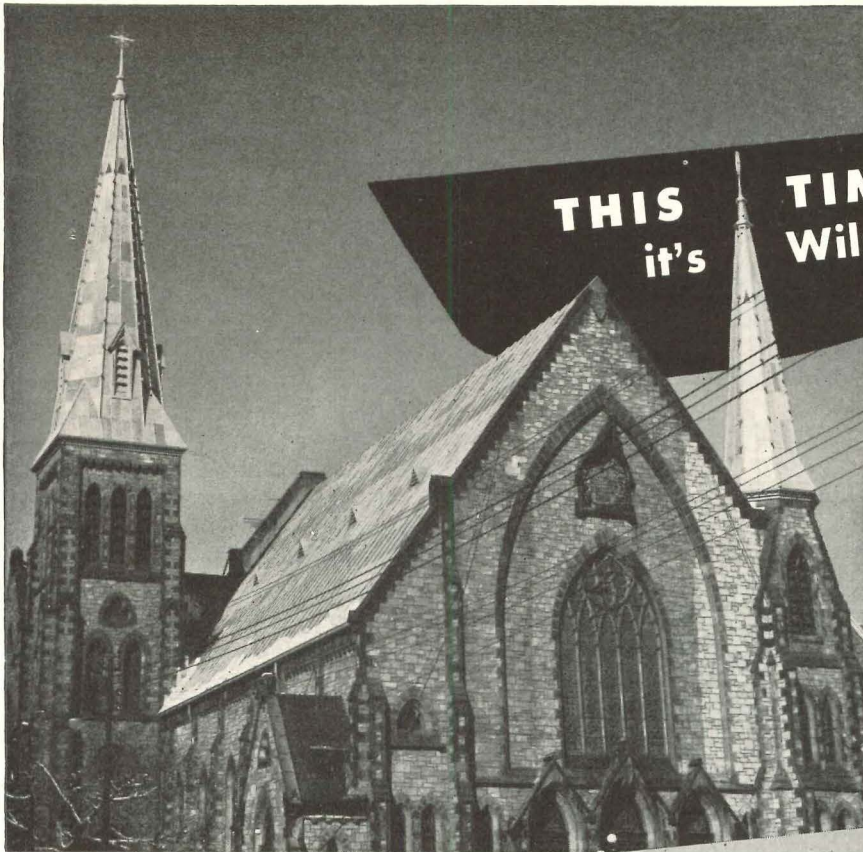
Interest Rate Disparity

The private home builders, meanwhile, through their National Association of Home Builders, presented their arguments before both banking committees. These contended that middle-income family housing needs are being met with homes of adequate size. The N.A.H.B. spokesmen used Federal Housing Administration commitment figures, as did Foley, in presenting their case to Congressmen.

There was a note of urgency in all these proceedings due to the fact that the Title VI program expired March 1, 1950, under the last continuance enacted by Congress last fall. No objections were raised in the committee hearings to the Administration plan to let Sec. 608, Title VI, insurance die out on grounds it had served its emergency purpose. There appeared to be general agreement that a modification of this benefit to the building industry should be incorporated in Sec. 207 of Title II, and the program made permanent on this basis. The plan also projected making modernization and repair loan insurance, under Title I, a permanent system. Idea was to get away from the confusion generated by the repeated expiration and renewal of these programs by Congress.

At the same time, more attention in both government and industry quarters began to center on the old problem of two separate interest rates on government-backed home loans. The builders long have called for an equalization of the four per cent rate on Veterans Administration-guaranteed mortgages and

(Continued on page 20)



THIS TIME
it's **Wilmington, Del.**

In city after city, *Overly* is getting the call when it comes to replacing old roofs on notable structures. The Grace Church, erected in 1866, is a good example. The architects—Robinson, Stanhope & Manning of Wilmington—designed new dormers, louver housings and crosses. *Overly* shop-fabricated and erected these complete aluminum units . . . also constructed and installed the Goodwin Batten Type Aluminum Roofing and the drainage system.

Famous old Church gets **Overly METAL ROOF**

... good for 100 YEARS
(estimated)

The approximate life of the above work is 100 years. Total square feet of roofing applied: 29,800 sq. ft. Weight of aluminum roofing: 37,250 pounds (compare this weight with any other type of roofing construction!). Weight of gutters and conductors: 1,160 pounds. Weight of ornamental work: 2,640 pounds.

Architects: Write OVERLY for detailed information and engineering advice on your roofing problems.



Speedy Erection! Actual installation time only three months, in winter.

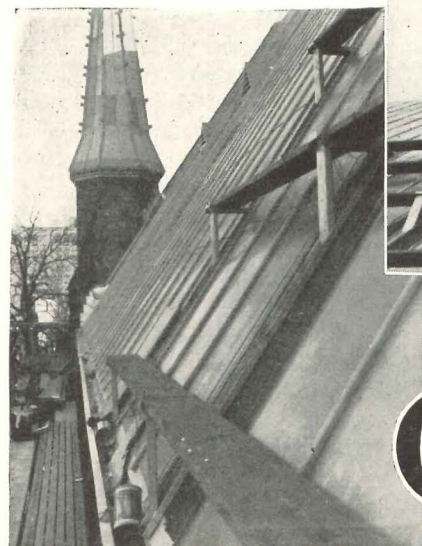
ADVANTAGES

- Lifetime Protection
- Lightweight Design
- Applied over any Roof Deck
- Speedy Erection
- No Maintenance
- Watertight Mechanical Joints
- Performed at Shop
- No Design Problems



OVERLY MANUFACTURING COMPANY
Dept. AR, Greensburg, Pa.
Specialists in
Architectural Sheet Metal Work

Overly GOODWIN BATTEN TYPE
METAL ROOFS
(Described in Sweet's File)



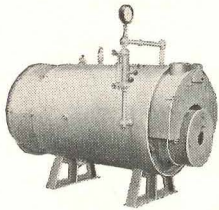
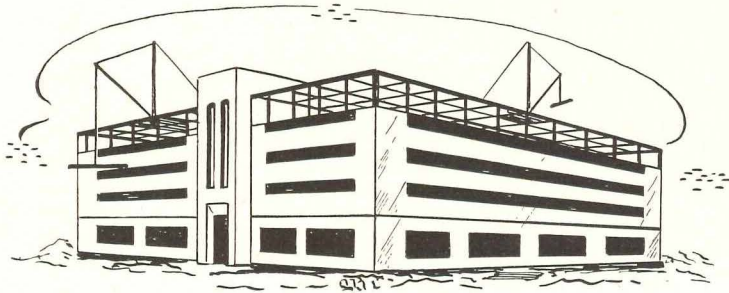
MAKERS OF METAL DOOR FRAMES • KALAMEIN & TIN CLAD DOORS • SKYLIGHTS • VENTILATORS • COPING

SINCE 1860

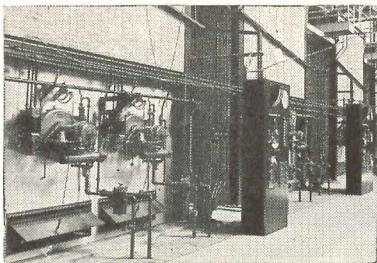
TITUSVILLE

ALL-WELDED BOILERS

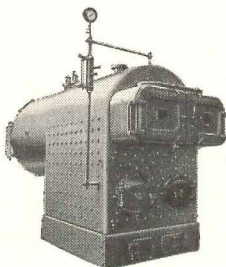
accepted as the standard for **DEPENDABILITY**
and **ECONOMY**



Titusville Scotch Marine High Pressure Boilers built with heating surfaces of 97 to 2993 square feet.

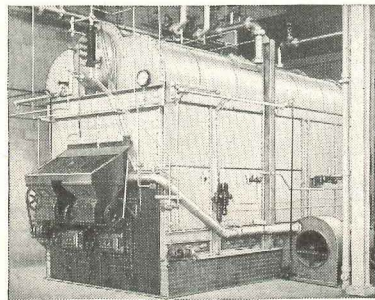


Titusville Bent Tube Water Tube Pressure Boilers built in sizes ranging from 729 square feet heating surface to 8316 square feet heating surface, in required pressures.

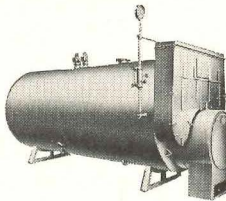


Titusville Portable High Pressure All-Welded Firebox-Firetube Boilers built in 13 sizes ranging from 250 square feet to 2500 square feet heating surface.

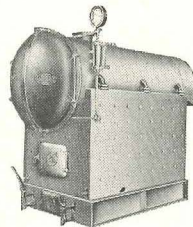
Titusville Ticotherm Steam Generators built in sizes ranging from 1000 square feet heating surface, and upwards.



Titusville Scotch Marine Heating Boilers built in 19 sizes from 129 square feet to 2500 square feet heating surface, with 2190 to 42,500 square feet of steam radiation.



Three Pass Compact Type Welded Heating Boilers built in 19 sizes, from 129 to 2500 square feet heating surface, with 2190 to 42,500 square feet of steam radiation.



Write today for the complete series of new bulletins on TITUSVILLE Boilers—the most complete, factual bulletins in the industry.



division of

STRUTHERS WELLS CORPORATION

THE TITUSVILLE IRON WORKS CO.

TITUSVILLE, PENNA.

THE RECORD REPORTS

WASHINGTON
(Continued from page 18)

the four and one-half per cent rate applying to loans insured by FHA.

Sen. Sparkman said he thought the time had come to stabilize these rates at the VA 4 per cent figure. And he said he would recommend this to both agencies. It can be done without action by Congress and most industry people think such a move is long overdue.

The private home contractors hold this disparity in interest rates to be the indisputable cause of the current mortgage finance problems; but they don't want to see an equalizing move bring a new standard rate down as low as Sen. Sparkman and the veterans want it. To peg it at 4 per cent would deal a "most serious blow to veterans' housing," N.A.H.B. said.

Fully aware of the veterans' desire to make the rate as low as possible, Sen. Sparkman suggested the 4 per cent figure with the program being established on a sliding scale so the President could automatically raise the rate if the money market went up. In no event, however, does the Senator believe the figure should go above 4.25 per cent.

There is no doubt that recommendations from the veterans' groups will, in the end, dictate to a large extent what moves will be made along these lines.

Labor Wants Larger Houses

The powerful backing of organized labor was thrown behind the cooperative housing plan by spokesmen for C.I.O. and A. F. of L. Their statements to Congress had undertones of complaint on size of housing now being built. Walter Reuther, chairman of the C.I.O. housing committee, referred to new housing variously as being "glorified chicken coops," "crackerboxes," and "cheeseboxes." These small homes are being purchased only because people can't find any larger shelter, he argued, pointing out to the Senate subcommittee that the model homes displayed by N.A.H.B. are only 700 sq ft in size, with one minimum house measuring 672 sq ft.

Reuther revived the C.I.O. plea that the federal government go into the mass production of homes, using former plane production plants now in mothballs. He supported the coop bill on grounds it would begin to create groups

(Continued on page 21)

WASHINGTON
(Continued from page 20)

with eventual assurance of mass markets for industrialized homes.

Federal Construction

The program for site acquisition and comprehensive planning of public buildings — mostly post offices — moved ahead with General Services Administration issuing a new list of 150 projects outside the District of Columbia. On top of the 313 projects carried in the first list put out in January, this brought to 463 the number of post offices and federal buildings scheduled under Public Law 105 passed by the 81st Congress last year. This measure contemplates eventual construction of some 575 such buildings, one at least for each Congressional district in the country.

This leaves roughly 112 other projects in the program to be announced by the Public Buildings Administration, part of GSA. Among the 313 buildings in the original listing, 190 were deferred projects now up for revision of plans in the light of changes in construction cost since last they were considered. But that is all on the old list, and the balance of projects concern contemplated new construction.

There were no construction funds provided in P. L. 105, but it did launch again the planning and site acquisition part of the public buildings program virtually halted during the war.

The House committee report on P. L. 105 when it was just a bill points up the government attitude on the architectural phases: "Sec. 401 authorizes the Commissioner of Public Buildings to employ by contract or otherwise, temporary architectural and other professional and technical services by negotiation and without regard to the Classification Act of 1923 or the civil service laws, rules and regulations. Procurement of professional or technical services through solicitation of competitive bids is impractical. The restrictions and salary limitations imposed by the Classification Act of 1923 and the civil service rules and regulations make it almost impossible to hire individuals to perform the necessary temporary services as government employees. Frequently it is an advantage to have an architect or engineer who is entirely familiar with

(Continued on page 22)

ACTUAL CHECK PROVES

No other Copying Process offers you the ECONOMY of OZALID!

HERE'S PROOF!

Check the money-saving versatility of Ozalid against the four other most popular copying methods—compare yourself, point for point:

	OZALID	METHOD A	METHOD B	METHOD C	METHOD D
Prints ready for immediate use	✓	✓	✓	✓	✓
No size restrictions	✓			✓	
No special plates, stencils, or inks	✓	✓	✓		✓
No need to make negative	✓				
Additional copies immediately available	✓				
Easily makes duplicate masters	✓				

WHAT IS OZALID?

• Ozalid is a *speedy copying process* that uses sensitized paper to reproduce anything typed, drawn or written. You get perfect copies of letters, records, reports, photographs, index files, drawings—anything.*

WHAT ARE THE ADVANTAGES OF THE OZALID PROCESS?

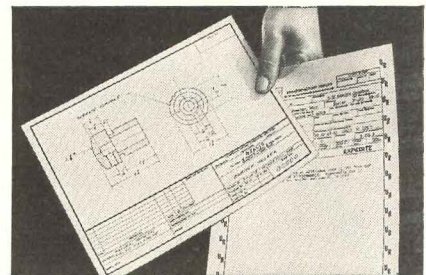
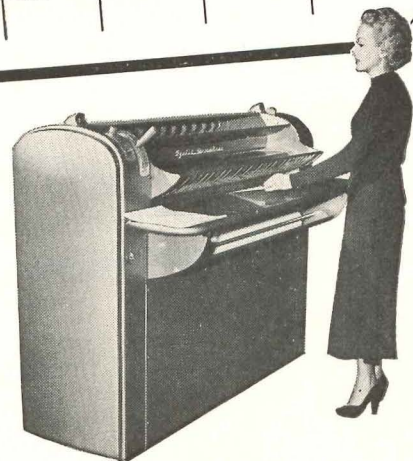
- **No size restrictions**—Ozalid copies can be made in *any* size, in sheets or continuous rolls.
- Copying errors are eliminated. There's no *check-back* to the original.
- Changes easily made. Add new material to create a "composite master". No need to re-create an entire piece.

OZALID PAPER IS UNEQUALLED FOR QUALITY, TOO!

- For years, Ozalid has been established as the "Standard of Quality" among sensitized papers.
- Ozalid's "speed" is the same, month in and month out—stepping up production.
- Controlled product quality gives more prints at lower labor cost.
- Longer shelf-life—means less waste.

Cut Copying Costs...Use **OZALID!**

A DIVISION OF GENERAL ANILINE & FILM CORPORATION. "FROM RESEARCH TO REALITY"



You get dry, positive, exact duplicates in a fraction of a minute and at a fraction of your usual cost.

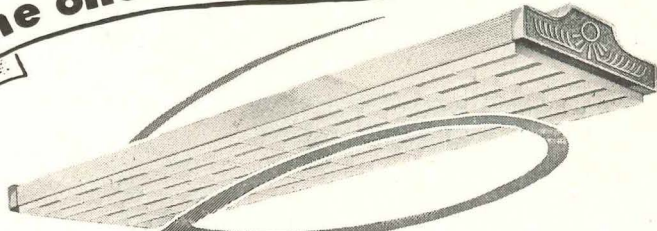
*If light won't shine through, an inexpensive intermediary step is taken.

OZALID, Dept. E1
Johnson City, New York
Gentlemen: Please send free illustrated booklet that fully explains the Ozalid process.

Name.....
Company.....
Address.....

KAYLINE

the one source lighting line



for
dependability

and
price

Write for the Kayline 64-page Catalogue No. 50. Because, when you buy a lighting fixture, you buy more than just light! ... You're buying installation, maintenance, relamping. All of these are part of the price of the fixture. You can buy a cheaper fixture than Kayline, but with it you buy higher replacement costs, less dependability, and higher upkeep. Get the catalogue that is your key to better lighting today!

See our catalogue in Sweet's
Architectural File for 1950,
Sec. 31A
12



THE KAYLINE CO.
2480 East 22nd St.
Cleveland, Ohio

KAYLINE
the one source lighting line

THE RECORD REPORTS

WASHINGTON
(Continued from page 21)

the local climate, labor, materials and other conditions affecting the work. This section will prevent building up a large technical organization in Washington when the work can be given to private individuals or firms in the locality where the work is to be performed."

This part of the measure was welcomed by architects and engineers alike.

In the matter of the advance planning program, also administered by GSA, Administrator Jess Larson was finally pinned down by the American Municipal Association as to hearings provided for in the new law — P. L. 352. As now revived, the advance loans-for-planning law provides the GSA head shall hold hearings in those instances where he suspects insincerity on the part of the borrowing agent. In other words, if a city borrows the interest-free funds from the Bureau of Community Facilities, does not start its non-federal public works project at the end of three years after the final installment on the federal loan has been paid, and the Administrator suspects the city was not sincere in making plans, he then shall hold public hearings on the specific case.

But in answer to A.M.A., Larson said he did not think many of these hearings would be held — that they would be exception rather than rule.

Larson points out that the hearing clause applies only to projects where bad faith is suspected and not to every project where the advance is not repaid within three years. Accordingly, he explained, municipalities need have no hesitancy in applying for and accepting advances for design of needed public works projects with any thought that they will be possibly subject to embarrassment by any action on the part of the Administrator of General Services.

The Bureau now has under consideration a proposed survey of 16,000 public bodies. Purpose would be to learn what local public works are being planned without any intention of asking for federal aid. It would list the communities where public works plans have been completed, where plans are in the design stage, and others where there are presently no plans for designing non-federal projects.

(Continued on page 23)

THE RECORD REPORTS

WASHINGTON
(Continued from page 22)

GSA continues to place the need for local public works at \$100 billion in terms of 1948 prices.

Shorts

- An extensive \$1,250,000 research program in clay products, their manufacture and use, was launched formally by the Structural Clay Products Institute. Its members have subscribed that amount to be spent in five years on learning how more clay products can be used to lower construction costs without sacrificing quality. R. B. Taylor, formerly with Owens-Corning Fiberglas Corp., heads the S.C.P.I. effort and says the program may discover new sizes in structural clay items. The researchers are thinking in terms of clay products that may run up to two or three feet in length.

- The Associated General Contractors said the industry might record its greatest one-year volume in history in 1950, that both dollar-wise and physically, a \$29 billion to \$30 billion business is possible. Two-thirds would be in new construction, about one-third in maintenance and repairs. There were some "ifs," such as adverse international developments, major strikes at home, and general pessimism. But the A.G.A. estimate, based on its own studies, was an encouraging one.

- General and subcontractors for the most part got what they were seeking from the National Labor Relations Board when General Counsel Robert Denham agreed not to prosecute certain construction cases under the Taft-Hartley labor law. This tied the hands of NLRB because it can act only on those cases Denham decides to bring to it. Employers liked this arrangement; organized construction trades in the A. F. of L. said it didn't solve anything.

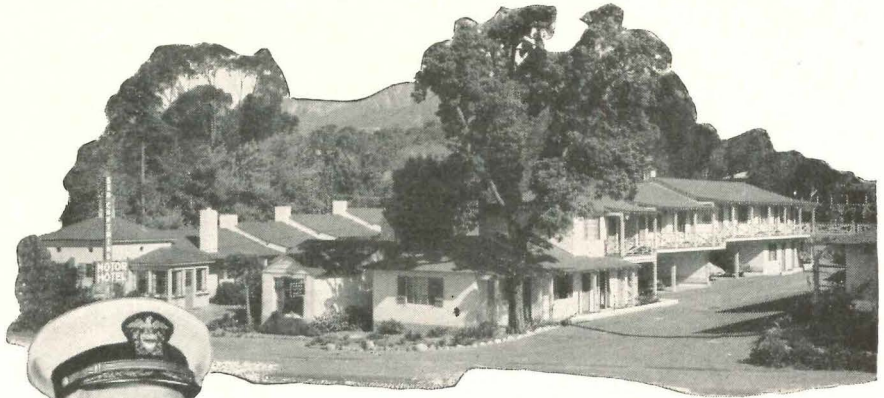
- Appointment of Leonard G. Haeger as assistant director for program coordination and of A. C. Shire as head of the Housing Technology Branch of the new HHFA Division of Housing Research has been announced by Dr. Richard U. Ratcliff, director of the division.

(Continued on page 24)

MAKE SURE YOUR PLANS SPECIFY

The *Safest, Cleanest* Gas-Burning Wall Furnace Ever Developed

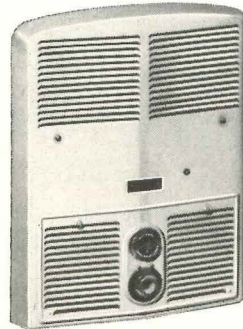
FOR MOTELS, TOURIST COURTS, COTTAGES AND CABINS



This satisfied owner writes . . .

"... Stewart-Warner's new 'Safety-Sealed' Saf-Aire means exactly what it says, *safe air!* It gives instant, clean, dry heat without any odor. I have never experienced such a satisfactory heater."

CAPTAIN C. JOKSTAD, Owner and Manager of The Sea Captain's Motor Motel, Montecito, California



SAF-AIRE wastes no floor or closet space. The all-aluminum interior panel extends only 4 inches from wall surface. Connects directly to the small Lundstrum Vent on the exterior wall. Simple, modern design suits any interior. Both 14,000 and 20,000 BTU capacity models are available in 4 attractive finishes.

Model 991-14-18" x 24"
Model 992-20-18" x 38 1/2"



Only *Saf-Aire* has the patented new Lundstrum Vent that draws all combustion air from outdoors, then vents all combustion products outside—without a single moving part!

No wonder more and more architects, builders and owners of modern motels *specify* Stewart-Warner "Safety-Sealed" Heating!

Especially designed for motels, tourist courts and cabins, this "Safety-Sealed" *Saf-Aire* model is a completely independent, automatic gas heating system—*unaffected by power failure* or high-wind conditions. Easily installed in any exterior wall, it needs no chimney, ducts or electricity. Operates on natural, manufactured or LP gas.

All combustion products are completely sealed from contact with room air by the famous Stewart-Warner "Safety-Sealed" heating principle. Silent as sunlight in operation, *Saf-Aire* has *no moving parts* to maintain, wear out or replace. Heats each guest unit to its individual requirements by either manual or thermostat control.

Write now for complete *free* information and model specifications.



Approved by American Gas Association

STEWART *Safety Sealed* **WARNER**
DOMESTIC HEATING

STEWART-WARNER CORPORATION
South Wind Division • 1516 Drover Street
Indianapolis 7, Indiana

ON THE CALENDAR

- Mar. 28-31: 1950 National Plastics Exposition, Navy Pier, Chicago, Ill.
- Apr. 4-8: National Production Exposition, sponsored by Chicago Technical Societies Council, Stevens Hotel, Chicago, Ill.
- Apr. 10-16: VII Congress of Pan-American Architects, Havana, Cuba.
- Apr. 19-21: Spring meeting, American

- Society of Civil Engineers, Los Angeles, Calif.
- Apr. 11-May 7: Exhibition of photographs and drawings of recently completed school buildings, The Art Alliance, 251 S. 18th St., Philadelphia.
- May 6-8: Meeting of the Board of Directors, The American Institute of Architects, Washington, D. C.
- May 8-9: 36th Annual Meeting of the Association of Collegiate Schools of Ar-

- chitecture, Mayflower Hotel, Washington, D. C.
- May 8-9: Meeting of the National Council of Registration Boards, Washington, D. C.
- May 9: Meeting of the Producers' Council, Washington, D. C.
- May 10-13: 82nd annual convention, American Institute of Architects, Washington, D. C.

WITH THE A.I.A.

Boston — From the Society of Architects comes the following comment (author anonymous) on the public housing fee schedule agreement reached by A.I.A. and P.H.A.:

A.I.A., P.H.A. have been working night and day,
 And produced a recipe that is arousing;
 Payroll costs and elevators,
 Should prove potent generators
 Of a new look in design of low-rent housing.
 What with Options 1 and 2,
 (They're a cinch to misconstrue,
 Though presented with a stern but nebulous injunction)
 With 2.5 times payroll cost, of plans technically bossed,
 (We propound a question here without compunction)
 Then with columns 1 to 4 (just to bog-
 gle up the score),
 Will we get a smarter form to follow function?

Chicago — The city's new building code was the topic of the February meeting, arranged by the chapter, the Western Society of Engineers and the Building Construction Employers Association of Chicago, with the cooperation of the Chicago Association of Commerce and Industry and the city Building Department. An outline of the new code was presented by John O. Merrill, Architect, of Skidmore, Owings & Merrill; Roy T. Christiansen, city Department of Buildings; and Paul Gerhardt Jr., city architect.

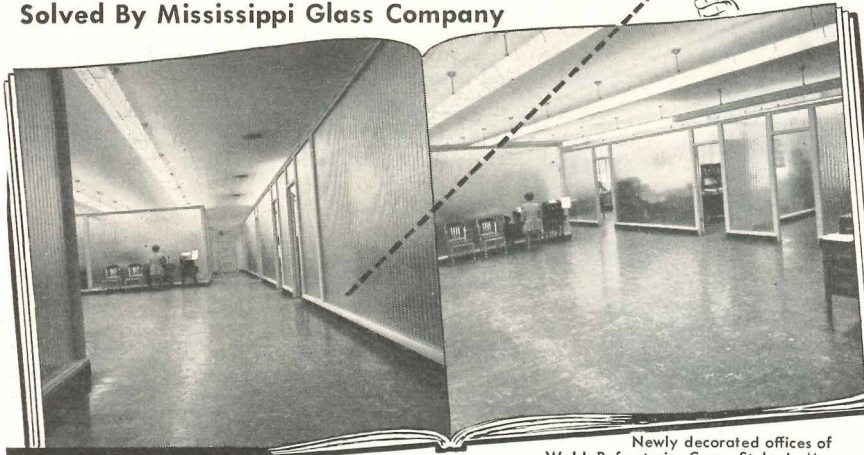
The revised code which was drafted by Mr. Merrill, was passed by the City Council in December. Mr. Christiansen and Mr. Gerhardt served as advisers to the Mayor during code deliberations.

East Bay, San Francisco — Recognizing that "the future of the architectural profession depends on ethical

(Continued on page 152)

The case of the
DIVIDED OFFICE

Solved By Mississippi Glass Company



Newly decorated offices of Walsh Refractories Corp., St. Louis, Mo.

THE CASE:

How to achieve the privacy of partitioned offices without loss of appearance or brightness derived from borrowed light.

THE SOLUTION:

Mississippi Glass Company's STRUCTURAL CORRUGATED GLASS (Maximum sheet size, 50 inches x 144 inches)

RESULT:

Modern design combined with luxurious simplicity. A friendly atmosphere for visitors and employees alike . . . privacy without that "closed-in" feeling. Truly, a shining example of the prominent place which glass has attained in modern office interiors.

This is just one of many cases solved by STRUCTURAL CORRUGATED GLASS. Write for catalog, "Structural Corrugated and Structuralite Glass by Mississippi." Contains suggested applications, photographs, architectural conceptions and installation details.

Structural Corrugated Glass and its companion product, Structuralite, are just two of over 30 outstanding patterns by Mississippi with varying degrees of obscurity and surface finishes to meet every industrial, commercial and residential requirement.

For further data, see Sweets' File or contact your nearby distributor of quality glass. Samples gladly furnished on request.

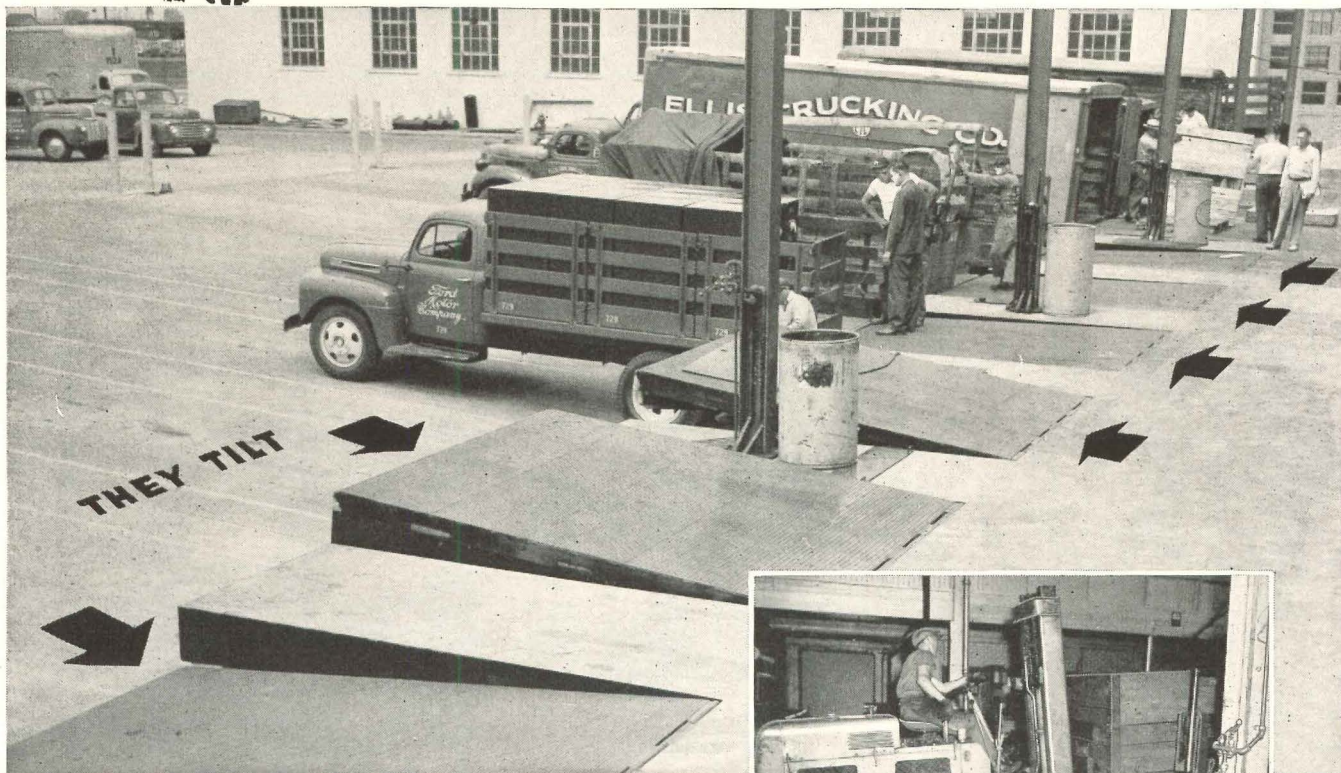
MISSISSIPPI Glass COMPANY
 SAINT LOUIS 7, MO.
 NEW YORK • CHICAGO • FULLERTON, CAL.



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



"LOADING TIME CUT IN HALF"



**WAYNE TILTING
LOADING DOCK RAMPS**

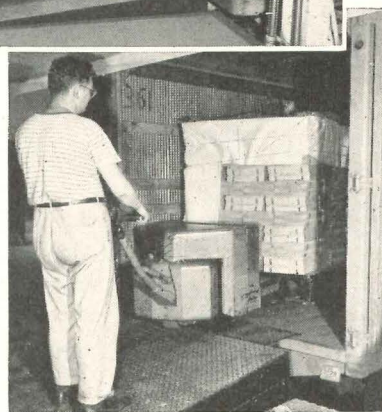
Cut Handling Costs

"**BETTER MATERIAL HANDLING** offers industry its biggest opportunity to cut production costs and to increase productivity," says *Factory Management and Maintenance*, which devoted forty-seven pages to this subject recently. Investigate what it can do for your clients! Let Wayne engineers help you develop the proper equipment to assure better handling of material in plants you design. There's a Wayne Hydraulic Lift for every requirement. Write for more information.

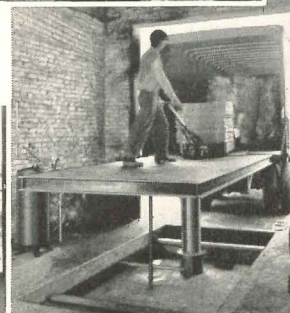
THE WAYNE PUMP COMPANY
FORT WAYNE 4, INDIANA



**NATIONWIDE
SERVICE**



Ramps with Hinged Leveling
Fingers and Throw-over Plate



Straight Platform Lift, with-
out Skirt (Air/Oil Operated)

Straight Platform Lift—Full
Skirt (Electric Pump Operated)

Write **FOR ILLUSTRATED
FOLDER AND COMPLETE INFORMATION**

CONSTRUCTION COST INDEXES

Labor and Materials

United States average 1926-1929 = 100

Presented by Clyde Shute, manager, Statistical and Research Division, F. W. Dodge Corp., from data compiled by E. H. Boeckh & Assocs., Inc.

NEW YORK

ATLANTA

Period	Residential		Apts., Hotels Office Bldgs. Brick and Concr.	Commercial and Factory Bldgs. Brick and Concr.		Brick and Steel	Residential		Apts., Hotels Office Bldgs. Brick and Concr.	Commercial and Factory Bldgs. Brick and Steel	
	Brick	Frame		Brick	Steel		Brick	Frame		Brick	Steel
1925	121.5	122.8	111.4	113.3	110.3	86.4	85.0	88.6	92.5	83.4	
1930	127.0	126.7	124.1	128.0	123.6	82.1	80.9	84.5	86.1	83.6	
1935	93.8	91.3	104.7	108.5	105.5	72.3	67.9	84.0	87.1	85.1	
1939	123.5	122.4	130.7	133.4	130.1	86.3	83.1	95.1	97.4	94.7	
1940	126.3	125.1	132.2	135.1	131.4	91.0	89.0	96.9	98.5	97.5	
1945	160.5	161.7	156.3	158.0	155.4	132.1	133.9	123.2	122.8	123.3	
1946	181.8	182.4	177.2	179.0	174.8	148.1	149.2	136.8	136.4	135.1	
1947	219.3	222.0	207.6	207.5	203.8	180.4	184.0	158.1	157.1	158.0	
1948	250.1	251.6	239.4	242.2	235.6	199.2	202.5	178.8	178.8	178.8	
Oct. 1949	242.7	239.4	241.0	244.2	237.6	184.3	184.7	177.9	177.6	174.7	
Nov. 1949	242.7	239.4	241.0	244.2	237.6	184.8	186.0	178.2	177.8	175.1	
Dec. 1949	242.4	238.9	241.4	244.5	237.8	184.5	185.5	178.6	178.1	175.3	
Dec. 1949	% increase over 1939		84.7	83.3	82.8	% increase over 1939		87.8	82.9	85.1	

ST. LOUIS

SAN FRANCISCO

1925	118.6	118.4	116.3	118.1	114.4	91.0	86.5	99.5	102.1	98.0
1930	108.9	108.3	112.4	115.3	111.3	90.8	86.8	100.4	104.9	100.4
1935	95.1	90.1	104.1	108.3	105.4	89.5	84.5	96.4	103.7	99.7
1939	110.2	107.0	118.7	119.8	119.0	105.6	99.3	117.4	121.9	116.5
1940	112.6	110.1	119.3	120.3	119.4	106.4	101.2	116.3	120.1	115.5
1945	152.8	152.3	146.2	148.5	145.6	146.2	144.3	144.5	146.8	147.9
1946	167.1	167.4	159.1	161.1	158.1	159.7	157.5	157.9	159.3	160.0
1947	202.4	203.8	183.9	184.2	184.0	193.1	191.6	183.7	186.8	186.9
1948	227.9	231.2	207.7	210.0	208.1	218.9	216.6	208.3	214.7	211.1
Oct. 1949	218.9	217.1	213.1	216.2	214.5	212.2	205.8	214.9	219.8	215.0
Nov. 1949	220.9	219.2	214.2	217.9	215.4	213.6	207.6	215.2	220.0	215.4
Dec. 1949	220.7	218.9	214.6	218.2	215.7	214.0	208.0	215.7	220.4	215.8
Dec. 1949	% increase over 1939		80.8	82.1	81.3	% increase over 1939		83.7	80.8	85.2

The index numbers shown are for combined material and labor costs. The indexes for each separate type of construction relate to the United States average for 1926-29 for that particular type — considered 100.

Cost comparisons, as percentage differences for any particular type of construction, are possible between localities, or periods of time within the same city, by dividing the difference between the two index numbers by one of them; i.e.:

index for city A = 110
index for city B = 95

(both indexes must be for the same type of construction).

Then: costs in A are approximately 16 per cent higher than in B.

$$\frac{110-95}{95} = 0.158$$

Conversely: costs in B are approximately 14 per cent lower than in A.

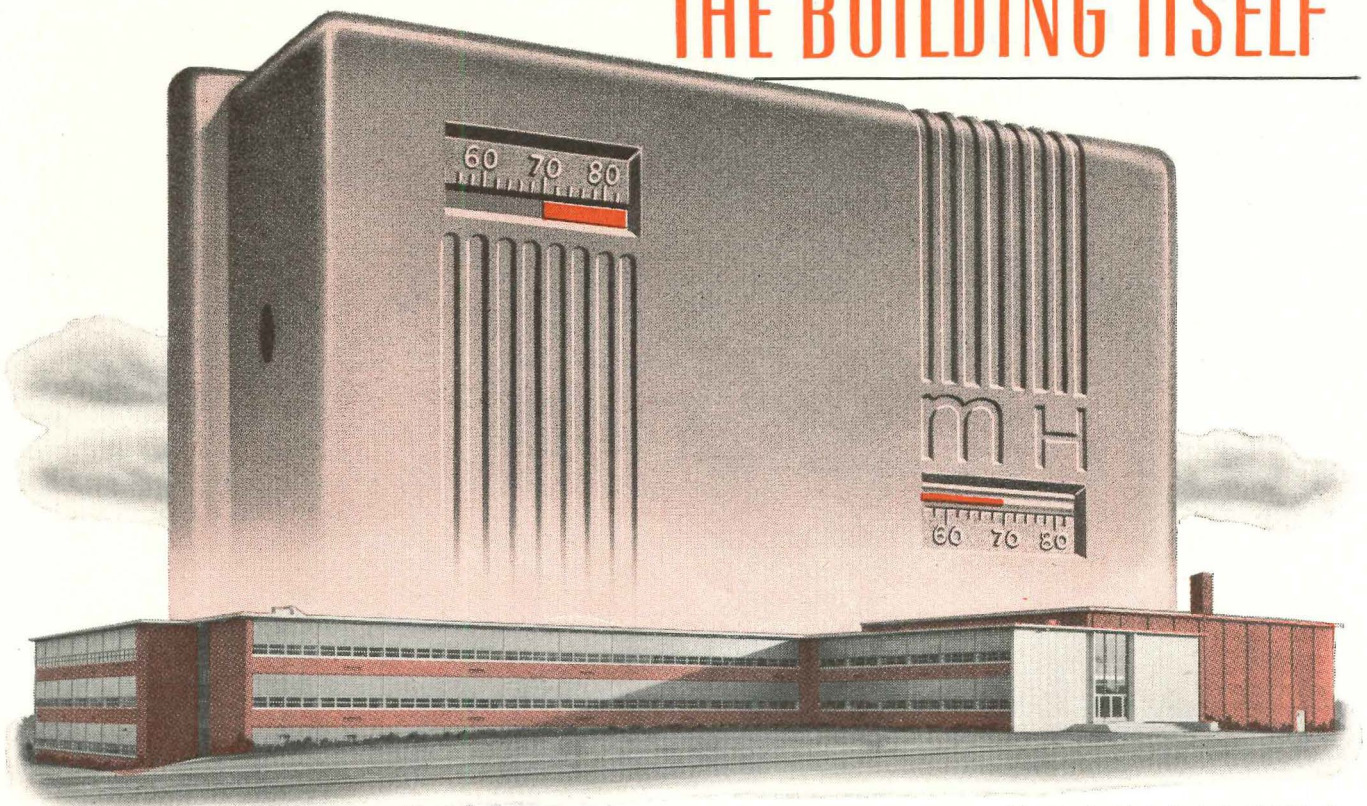
$$\frac{110-95}{110} = 0.136$$

Cost comparisons cannot be made between different types of construction because the index numbers for each type relate to a different U. S. average for 1926-29.

Material prices and wage rates used in the current indexes make no allowance for payments in excess of published list prices, thus indexes reflect minimum costs and not necessarily actual costs.

These index numbers will appear whenever changes are significant.

AS IMPORTANT AS THE BUILDING ITSELF



Edina-Morningside Junior-Senior High School
Lang & Raugland, Architects and Engineers
J. McClure Kelly & Co., Heating Contractors
Minneapolis, Minnesota

THE CONTROLS THAT INSURE STUDENT COMFORT

WE have exaggerated the size of this room thermostat to indicate its importance. Because nowhere is personal comfort more important than in the school room. Today school administrators throughout America are insuring the health and working efficiency of teachers and students by installing advanced Honeywell controls in their modern schools.

Whether you are interested in schools, business establishments or homes, make sure that your heating, ventilating and air conditioning systems are *controlled by Honeywell*. Contact the Honeywell branch office in your city or mail the coupon for free booklet—"Automatic Controls for the Modern School"—A.I.A. file No. 30E.



ROOM THERMOSTAT
The Symbol of Modern
Temperature Control

MINNEAPOLIS - HONEYWELL REGULATOR COMPANY
2600 Fourth Avenue South Minneapolis 8, Minnesota

Please send free copy of "Automatic Controls for the Modern School."

Name _____ Title _____

Name of Co. _____

Address _____

City _____ Zone _____ State _____

MINNEAPOLIS Honeywell

FIRST IN CONTROLS

77 BRANCHES FROM COAST TO COAST WITH SUBSIDIARY COMPANIES IN: TORONTO • LONDON • STOCKHOLM • AMSTERDAM • BRUSSELS • ZURICH • MEXICO CITY

REQUIRED READING

HELP FOR BUILDERS

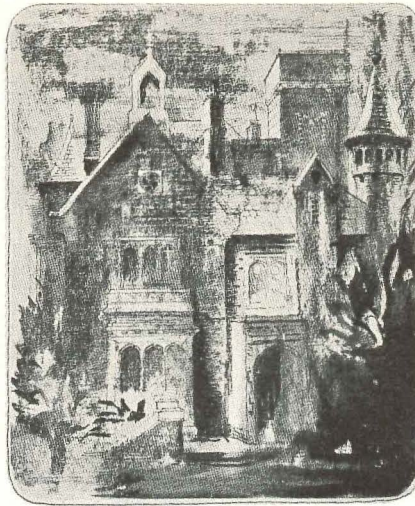
The Business of Home Building: A Manual for Contractors. Edited by B. Kenneth Johnstone and Charles E. Joern. McGraw-Hill Book Co., Inc. (330 W. 42nd St., New York 18), 1950. 5½ by 8 in. x + 290 pp. \$4.00.

The neophyte home builder a few years ago, before the postwar home building boom, was apt to fall by the wayside in his very first venture. The only way he could get the business back-ground he needed was by trial and error — and that frequently proved too costly for his survival.

Now, however, Architect Johnstone and Realtor Joern have given him this manual which contains just the sort of vital knowledge he must acquire sooner or later if he is to stay in business. With this as a guide he should be able to avoid most of the pitfalls which so plagued his predecessor.

Here is no text-book theory. The dozen chapters are down-to-earth, fact-crammed, Dutch-uncle talks by experts in the building field. Edward G. Gavin, editor of *American Builder*, describes the building industry; H. Evert Kincaid, partner in the Chicago firm of Community Planners, explains the value of land; Seward H. Mott and Max S. Wehrly, director and assistant director respectively of Urban Land Institute, discuss land development; David D. Bohannon, president of the flourishing David D. Bohannon Organization, past president of the National Association of Home Builders, and past vice president of the National Association of Real Estate Boards, is the lecturer on job organization; and Bert V. Tornborgh, certified public accountant and tax commentator for *Barron's Financial Weekly*, is the expert called in on cost control. That's just a sampling; the other seven chapters are in equally competent hands.

Messrs. Johnstone and Joern have done the building field a very real service in the editing of this book. Between them they knew just what the home builder required in the way of business information. Between them they contrived to supply exactly that information, and to supply it in clear and authoritative fashion. Not only the contractor, but the community planner, the realtor, and the architect as well will find these twelve chapters of absorbing interest and lasting help.



Entrance, St. Marie's Grange. Drawing by John Piper from "Buildings and Prospects"

BUILDINGS REFLECT PEOPLE

Buildings and Prospects. By John Piper. The Architectural Press, Ltd. (9-13 Queen Anne's Gate, Westminster, S.W. 1, England), 1949. 7½ by 10 in. 146 pp., illus. 18s.

A thing of beauty, said Keats, is a joy forever. And so, indirectly, says British painter John Piper, who has given us this unique volume which is in and of itself a thing of beauty.

Buildings and Prospects is a collection of Mr. Piper's essays on English architecture and topography as they express and influence English character. It is, as the author says, first of all a picture book: "The text is intended to elucidate the pictures, not the other way about, and the whole represents part of a painter's background." But the text elucidates extremely well, stealing quite a bit of punch from the many illustrations.

Mr. Piper looks at things not only as *things* (and an inspiration for the artist) but as explanatory notes to a way of life. His observations are specific and poignant, whether he is pointing out the merits of a simple, functional architecture such as that of a lighthouse, or whether he is pleading for a recognition of the qualities of a Victorian pub. Or whether — as in the chapter on "Pleasing Decay" — he presents arguments pro and con in the eternal problem of decay vs. restoration. Let a building fall to pieces — the picturesque approach? Restore it? Or conserve it by arresting its decay? Debatable questions, those!

Perform the act with sensibility, says Mr. Piper. Ignore fashion. Consider individual merits.

Anyone who ever has been in England will cherish this book. Mr. Piper is an excellent guide in whose company the reader may meander all about the country, garnering in impressions which only such a guide could impart. The forthright nautical style of coastal England, where "beauty is hardly ever the conscious intention." Middlesbrough: "the background of Victorian compassion and cruelty, of aspiration fogged by commercialism that belong to this over-developed, half-decayed place." And Norwich, so heavily bombed in the recent war: "another proof of the curious fact that bombing intensifies the character of a town. . . . Before the war it was sick to death with commercialism, preservation, rejuvenation, and tourism; now, in spite of . . . bad damage it is healthy enough, and ready to fight its own city councillors again. Better a war-veteran than a museum-piece."

Yes, Mr. Piper's text elucidates almost too well. The interest of the printed word lessens the impact of the author's many fine photographs and his exquisite paintings and drawings. Text and illustration combine to make this a memorable small volume.

HOW TO DRAW

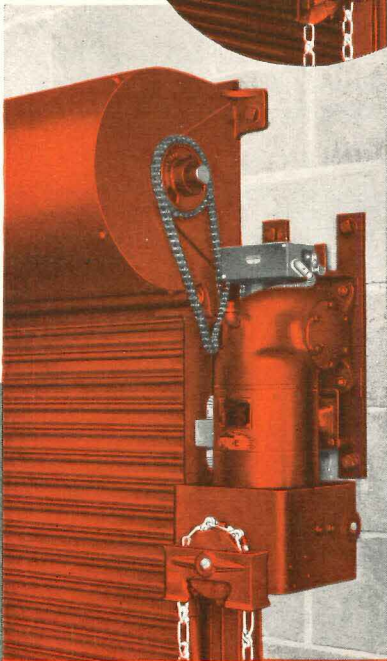
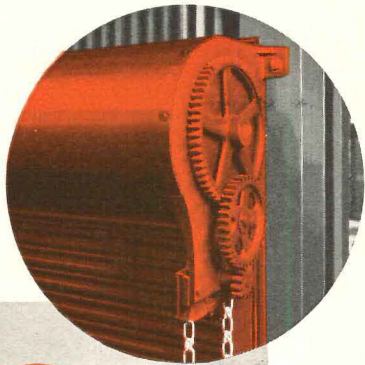
Pencil Drawing Step by Step. By Arthur L. Gup-till. Reinhold Publishing Corp. (330 W. 42nd St., New York 18, N. Y.), 1949. 9 by 12 in. 220 pp., illus. \$7.50.

The several books by Arthur L. Gup-till on drawing and rendering in pencil, pen-and-ink, and color are familiar to most American architectural men, particularly those whose period of training and apprenticeship occurred in the Twenties and Thirties when such volumes were at the height of their popularity. This latest addition to the series, while intended to replace the now obsolete SKETCHING AND RENDERING IN PENCIL, originally published in 1922, is apparently designed to appeal less to the architectural draftsman of today than to the lay student of freehand drawing who may be either taking "art" courses in school or studying by himself at home.

(Continued on page 30)

Rolling Steel

DOORS



MAHON STANDARD
POWER OPERATOR 920-P

Manually, Mechanically, or Power Operated

Modern, permanent industrial or commercial buildings today merit the permanence of good, all metal rolling steel doors. No other type of door offers as many desirable features as the vertically acting, quick opening, quick closing, power operated rolling steel door. Open or closed, it occupies no usable space inside or outside the opening . . . its roll-up action requires a minimum of space, provides 100% clear opening, and eliminates door damage . . . its all metal construction assures permanence and a lifetime of trouble-free service — and, most important, it provides maximum protection against intrusion and fire. If you select Mahon Rolling Steel Doors, regardless of the type of opening, you can rest assured that you will get the latest developments in doors of this type . . . more compact and more practical operating devices, curtain slats of Aluminum, Stainless Steel, or Galvanized Steel which is scientifically cleaned, rust proofed, and coated with high temperature oven-baked rust inhibiting enamel prior to roll-forming. These, and many other desirable features that characterize Mahon Rolling Steel Doors, are worthy of your consideration. See Sweet's Files for complete information, specifications and details, or write for Catalog G-49.

THE R. C. MAHON COMPANY

Detroit 11, Michigan • Western Sales Division, Chicago 4, Illinois

Representatives in all Principal Cities

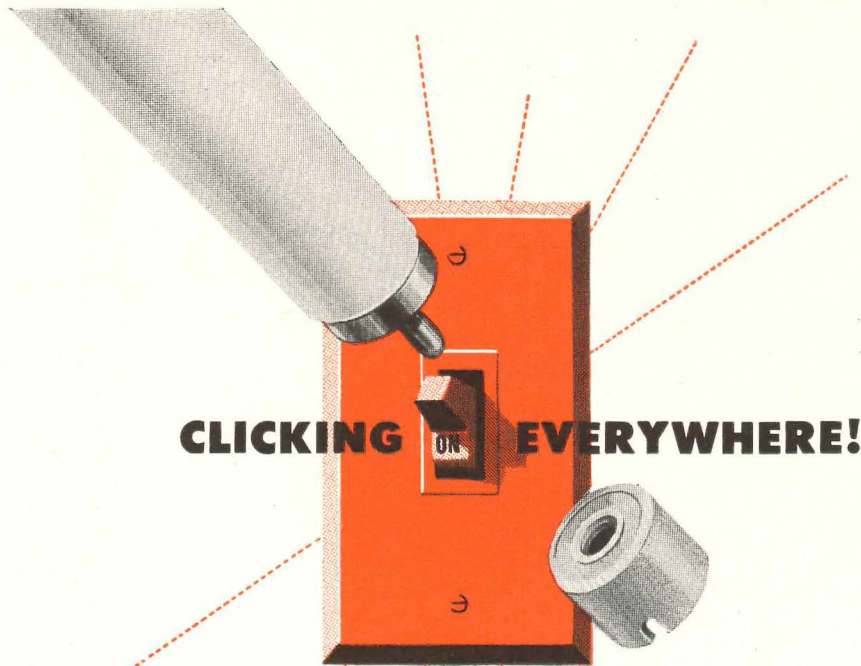
Manufacturers of Rolling Steel Doors, Grilles, and Automatic Closing Underwriters' Labeled Rolling Steel Doors and Fire Shutters; Insulated Metal Walls, Steel Deck for Roofs, Partitions, Acoustical Ceilings, and Permanent Concrete Floor Forms.



ROLLING STEEL DOORS, SHUTTERS AND GRILLES TO MEET EVERY REQUIREMENT

Three Mahon Power Operated Rolling Steel Doors recently installed in a new addition to a large Midwest Automobile plant. These openings are 37'-0" x 14'-9", 33'-0" x 14'-9" and 11'-0" x 15'-1". A total of seventy-six Mahon Rolling Steel Doors are now installed in this one plant

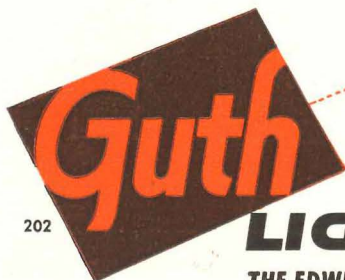
MAHON



GUTH 4 foot SLIMLINE

+ light-at-the-click-of-the-switch!

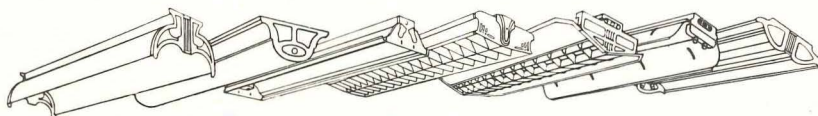
- + No waiting
- + No starters or starter troubles
- + Lowest maintenance in fluorescent history
- + Easy-to-handle—one man can get it through a door
- + Available in every two and four 40W fluorescent fixture in the entire GUTH line!



FOR FULL DETAILS, CALL YOUR NEAREST GUTH
RESIDENT ENGINEER OR WRITE:

LIGHTING

THE EDWIN F. GUTH COMPANY / ST. LOUIS 3, MISSOURI



Leaders in Lighting Since 1902

REQUIRED READING

(Continued from page 28)

The contemporary professional will find most of the illustrative material corny.

Nevertheless, there is some meat to be found in Mr. Guptill's observations on the technical applications of a large variety of pencils and pencil-like media available today. The average student-draftsman can learn from his pages many useful tricks of the trade which can be employed in more modern types of graphic expression. The pencil is still probably the architect's most useful tool and it's worth something to know about all of its technical potentialities. As a teacher of long and varied experience, Guptill knows how to acquaint you with most of them, and does it with commendable clarity and brevity.

ESSAYS ON ARCHITECTURE

Heavenly Mansions and Other Essays on Architecture. By John Summerson. Charles Scribner's Sons (597 Fifth Ave., New York, N. Y.), 1948. 5½ by 8½ in., illus. x + 253 pp. \$5.00.

Architects who remember John Summerson's *GEORGIAN LONDON* (*ARCHITECTURAL RECORD*, Feb., 1947) will welcome this collection of essays by the same author. It is not often that a reader can find assembled in one volume such an all-embracing group of essays on the whole field of architecture, ranging from study through history and criticism.

Here is a new interpretation of the Gothic. Here also is a discussion of an 18th century town planning venture—that of John Wood for the city of Bath, England. And here is still another analysis of the enduring problem of restoration or decay. Mr. Summerson is essentially in accord with Mr. Piper on the latter subject (see above). "In its worst form," he says, "the preservation may be a resentful fumbling, a refusal to understand the living shape of things, or to give things shape. In its best form, it is a mark of civilization such as few nations have aspired to show."

One of the most interesting of Mr. Summerson's essays undoubtedly is that on "Architecture, Painting and Le Corbusier." The title alone is intriguing; what the author does with it is more so. Far be it from the mind of this reviewer to quote therefrom and spoil a reader's pleasure!

A number of line drawings and 32 pages of plates elucidate the text. On this point Messrs. Summerson and Piper are on opposite sides of the fence.



**TEN YEARS FROM NOW... the layout will have
changed four times... the walls will be the same**

OVER AND OVER AND OVER AGAIN—that's the way Mills Metal Walls are used. They're made to keep pace with the constantly changing space requirements of modern business. They're as permanent and solid and beautiful as any walls you'd ever want around you but they can be moved—*quickly, easily and at very low cost*—to fit any new arrangement of space that progress dictates. The entire job can often be done overnight without interrupting business routine.

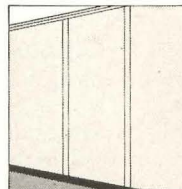
Dignified and refined in architectural design, they're available in a wide variety of attractive colors in baked-on finishes that keep their fresh new look with a minimum of maintenance. Exclusive features like all-welded panel construction, special treatment that eliminates harsh light reflection, and scientific soundproofing and insulation make Mills Movable Metal Walls *the demonstrably superior system for flexible division of interior space.*

© The Mills Company

THE MILLS COMPANY • 961 Wayside Road • Cleveland 10, Ohio

SPECIFY "MILLS" FOR:

**All-Welded Panels • Glareless Finishes
Scientific Insulation and Soundproofing
Easy Erection • Maximum Mobility
*Superior Architectural Design**



***A CASE IN POINT**

Mills Walls, because of all-welded panel construction, need only a minimum of lines at panel joints to assure maximum mobility, precision erection.

For all the facts see Sweet's Architectural File or write for Mills Movable Metal Walls Catalog No. 50.

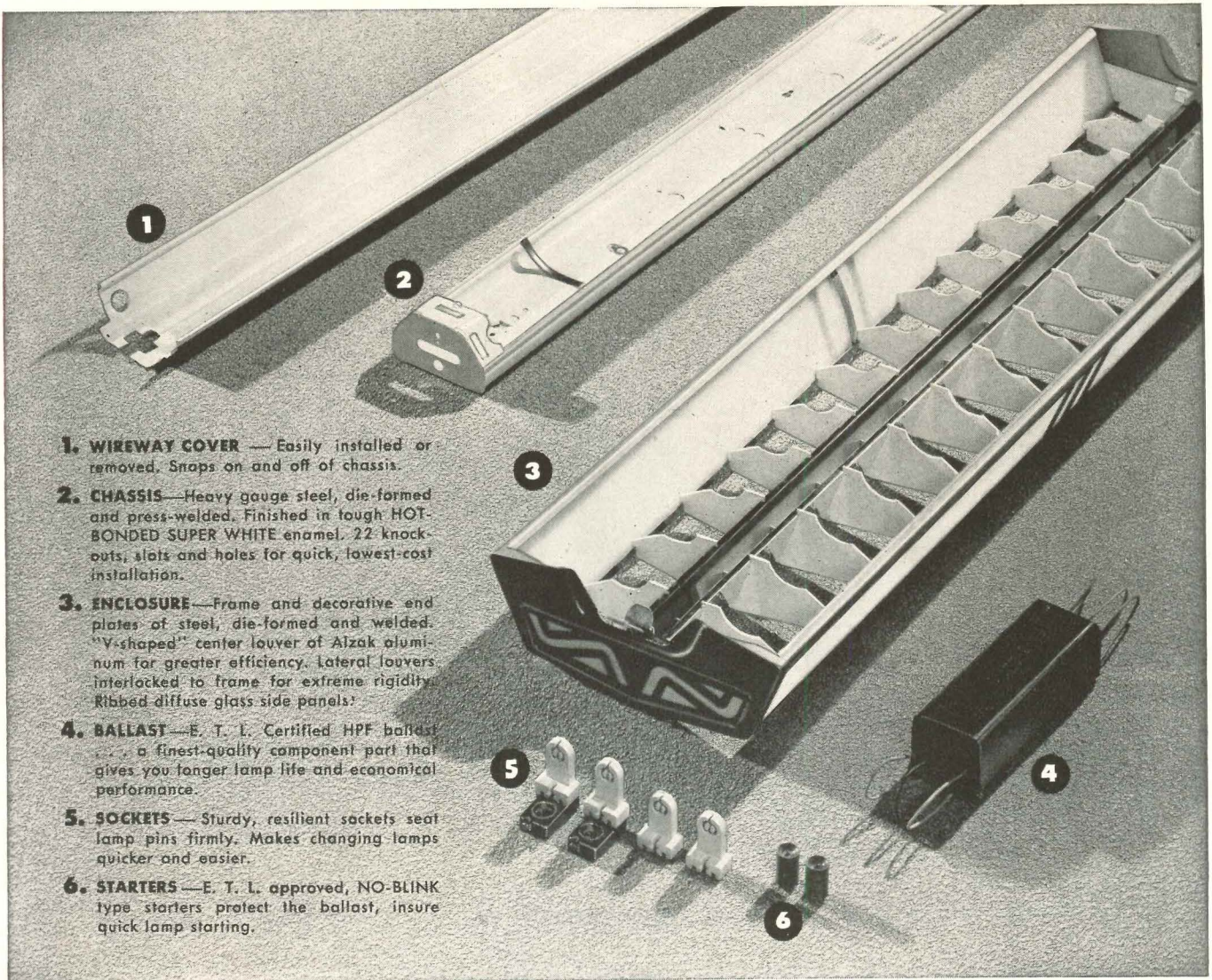


MILLS



METAL WALLS





1. WIREWAY COVER — Easily installed or removed. Snaps on and off of chassis.

2. CHASSIS — Heavy gauge steel, die-formed and press-welded. Finished in tough HOT-BONDED SUPER WHITE enamel. 22 knock-outs, slots and holes for quick, lowest-cost installation.

3. ENCLOSURE — Frame and decorative end plates of steel, die-formed and welded. "V-shaped" center louver of Alzak aluminum for greater efficiency. Lateral louvers interlocked to frame for extreme rigidity. Ribbed diffuse glass side panels.

4. BALLAST — E. T. L. Certified HPF ballast... a finest-quality component part that gives you longer lamp life and economical performance.

5. SOCKETS — Sturdy, resilient sockets seal lamp pins firmly. Makes changing lamps quicker and easier.

6. STARTERS — E. T. L. approved, NO-BLINK type starters protect the ballast, insure quick lamp starting.

THE DAY-BRITE "VIZ-AID"

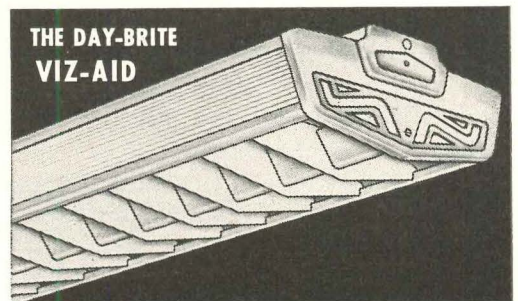
PUTS ITS PARTS ON THE TABLE

Judge a book by its cover? Judge a lighting fixture by its appearance alone? No! Not if you want to be sure — *dead sure* — that the fixture you select will give you years of trouble-free, economical performance.

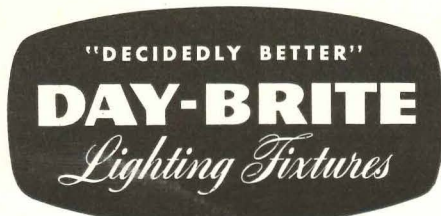
It's insides — *quality insides* — plus expert engineering, sturdy construction, durable finish and low-cost maintenance features that make the "Viz-Aid" such an outstanding value. Compare

the "Viz-Aid" with any other fixture in your own "take-it-apart" test. Be sure! See for yourself how every inch of the "Viz-Aid" is quality built — *inside and outside* — to give you *real* economy through long, efficient service.

Day-Brite Lighting, Inc., 5465 Bulwer Ave., St. Louis 7, Missouri. In Canada: Amalgamated Electric Corp., Ltd., Toronto 6, Ontario. Distributed nationally by leading electrical wholesalers.



The Day-Brite "VIZ-AID"—available for two 40-watt lamps, two 85-watt lamps and four 40-watt lamps.



ONLY QUALITY IS ECONOMICAL

... those heavenly carpets by **LEES**

Just looking around? Or are you ready *now* to buy your family's rugs of the future? Either way, let your dealer show you today what wonderful weaves Lees has loomed for you.

See how you can save money on Lees popular-priced yet lovely room-size rugs—ready-cut and bound to fit almost any floor space. In a wide selection—including handsome hard-twists, florals, textures, or two-tone embossed effects. Don't miss the exciting new 1950 carpet fashions. Examine the rich resilience of Lees imported wools.

Best of all—imagine the beauty of this warm welcoming Virginian weave in 18th Century Floral Chintz—in *your* home. A perfect background for your family, *your* way of life!



JAMES LEES AND SONS COMPANY, BRIDGEPORT, PA., MAKERS OF LEES CARPETS AND RUGS, MINERVA AND COLUMBIA HAND-KNITTING YARNS

James M. Osborne OF HERMAN NELSON

The groundwork for James M. Osborne's career in the heating and ventilating industry was laid at Lafayette College, where he was a student of engineering. After college, Osborne became a design engineer with the Army Air Forces, and later with Curtiss Aeroplane and Motor Company. When he joined the Herman Nelson organization 11 years ago, his experience already included seven years in solving heating and ventilating problems. Today, he is manager of Herman Nelson's Washington, D. C. Branch Office. The name, James M. Osborne, can be found among members of the American Society of Heating and Ventilating Engineers, the Washington Board of Trade and the Capitol Yacht Club.



WHETHER your heating or ventilating problem calls for unit heaters, unit ventilators, propeller fans or centrifugal fans, you can be certain the Herman Nelson Product Application Engineer nearest you will handle your problem efficiently and economically. More than 75 of these experienced representatives like James M. Osborne of Washington, D. C., have earned the respect of architects, contractors and school authorities throughout the nation.

Herman Nelson Product Application Engineers look upon your customers as their customers. They leave no stone unturned to see that Herman Nelson products are installed properly. These Product Application Engineers are thoroughly qualified to make recommendations, give advice and furnish concise, easy-to-use engineering data and specifications.

More than 200 carefully selected Distributors and Stocking Jobbers supplement the services of Herman Nelson Branch Offices and Product Application Engineers. This group has built up a reputation for service that goes hand in hand with the superiority of Herman Nelson heating and ventilating products.



HERMAN NELSON

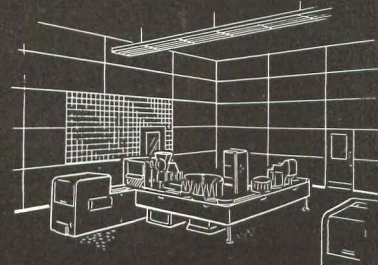
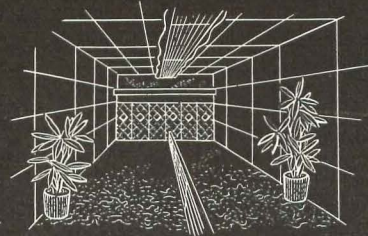
DIVISION OF AMERICAN AIR FILTER COMPANY, INC.

SINCE 1906 MANUFACTURERS OF QUALITY HEATING AND VENTILATING PRODUCTS

DIVISION OFFICE: MOLINE, ILLINOIS

mirawal

Genuine Porcelain-on-Steel Facing
for Interior and Exterior Applications



A NEW NAME ... A NEW PRODUCT

With major advantages in a wide variety of applications!

WHAT IS MIRAWAL?

Mirawal is a surface finishing material with a genuine porcelain-on-steel facing, designed for both interior and exterior use. The desirable qualities of glass are combined with the structural strength of steel to produce facings that are easy and economical to keep clean . . . facings that are durable, highly scratch resistant, with a colorful, fireproof, lifetime finish.

The vitreous porcelain surface of Mirawal is fused to specially prepared steel at temperatures up to 1600° F. The porcelain-on-steel sheet is then laminated to 1/8" Masonite Hardboard backing—producing a sturdy material with an inseparable facing.

Exterior Mirawal is manufactured to the same careful specifications as the interior facing material. It is

then reinforced and waterproofed with rigid sheets of 28-gauge galvanized steel inseparably laminated to the back of the Masonite core.

CHARACTERISTICS OF MIRAWAL:

Mirawal will not fade, depreciate, peel or discolor. The surface is impervious to moisture, odors, ordinary household acids, oils, grease and solvents. There are no cleaning problems whatsoever connected with Mirawal. Stains or chemicals that might splash onto the surface are easily removed with a damp cloth, with no defacing stains remaining on the surface.

Wherever permanent, eye-catching beauty is desired, with low-cost maintenance, Mirawal offers many advantages at a reasonable cost. If you would like a sample of Interior and/or Exterior Mirawal with folder giving complete specifications, write us. We will be glad to send them to you.



*Mirawal is Ideal for Exterior and Interior Application of Super Markets • Restaurants
Theaters • Dairies • Meat Markets • Candy Shops • Bakeries • Hospitals • Food
Processing Plants • Schools • Railway and Bus Stations.*

BALTIMORE PORCELAIN STEEL CORPORATION

P. O. BOX 928

BALTIMORE 3, MD.



WIRING NEWS

A PERIODICAL DIGEST OF WIRING IDEAS FROM THE GENERAL ELECTRIC CONSTRUCTION MATERIALS DEPARTMENT



Dream-home Lighting at Budget-home Cost

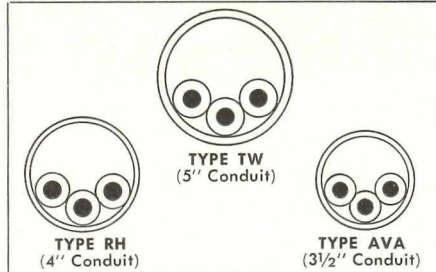
Today's prospective home buyers are harder to "sell." They insist on modern planning and conveniences . . . they look for extras . . . they demand proof of quality before they buy. That's why architects and builders recognize the value of the General Electric remote-control wiring system as a spur to added home sales.

This step-saving, new wiring system at last makes dream-home electrical control a reality. Simple and economical to install, it is easily demonstrated to the prospect. Unobtrusive flush switches at convenient locations give instant, positive ON and OFF control of any light or electrical apparatus. And, while you're demonstrating remote control, you'll have the added "sell" of the General Electric monogram.

For Low-Cost Homes

General Electric remote-control system is practical for even budget-price housing. Designed to fit in with existing techniques, remote control requires the same tools and methods needed to install present power circuits. Small relay snaps into knockout of outlet box. Inexpensive wire can then be run from relay to centrally-located transformer and conveniently-placed switches.

For further information why not contact your General Electric Construction Materials distributor, or check item (A) in the coupon below.



Here's How You Can Get 49% More Current Per Raceway

Now, there's a really easy way to increase circuit capacity *without* increasing raceway size — just rewire with General Electric Deltabeston® asbestos-varnished cambric cables!

Insulated with heat-defying asbestos, Deltabeston AVA cables meet the requirements for small-diameter cables in heavy-load jobs involving high temperatures. That's why at normal ambient temperatures (in dry locations, as specified by National Electrical Code) AVA cables can deliver up to 49%* more current per raceway than ordinary types of building wires.

Saves on New Work

In new construction, too, because of their heat-resisting asbestos insulation, AVA cables often permit smaller conductors, reduced raceway sizes, and over-all savings on weight.

If you have not considered asbestos-varnished cambric cables for space and materials savings, you'll do well to figure them in on your next heavy-load job. It may amaze you to discover what real savings Deltabeston AVA cables can offer.

For further information, consult your local General Electric distributor, or check box (B) in the coupon below.

* (This figure was worked out for AVA cables at 1000 MCM. Other sizes offer similar savings.)

You Know You're Right With "G-E White"

There's no question about it. You get top wiring protection when you use General Electric white rigid conduit.

Years of Protection

Carefully controlled in manufacture from raw material to final inspection, G-E White offers the advantages of a uniform, high-quality product. Top-quality steel, *hot-dip-galvanized*, inside and outside, means years of protection from atmospheric corrosion. Smooth Glyptal® finish adds *plus* protection, makes wire pulling easy and fast.

Installation Features

During installation you'll appreciate the uniformity of G-E White. You'll like the way it cuts waste by eliminating flat bends. The electrical contractor will like its sharp, clean threads, too.

For top protection specify General Electric white rigid conduit. And remember General Electric also supplies a complete line of fittings and accessories. For information on conduit, check box (C) in coupon.

Light Weight Makes Light Work Of Residential Wiring

Light weight . . . small diameter . . . easy stripping. These features make General Electric PVX® nonmetallic-sheathed cable a real time saver in all types of residential work.

Built to Last

Glass-and-cotton braid resists both moisture and flame. Individual conductors are insulated with a Type T thermoplastic compound and spiral-wrapped with impregnated crushed-paper armor to provide maximum dielectric and mechanical strength. Check PVX at your local G-E distributor's, or check box (D) in the coupon.

Silence Makes Sales

In homes, stores, plants, offices, and hospitals, the silent General Electric mercury switch is a selling feature hard to beat.

Demonstrate it. Show customers how smooth—how quiet it is. Tell them it stays on the job for more than a million ON-OFF cycles. Yes, you'll find extra "sell," extra quality in General Electric mercury switches. Check box (E) in coupon for complete information.

Section K1-35
Construction Materials Department
General Electric Company
Bridgeport 2, Connecticut

Please send me free information on:

- A Remote Control
- B AVA Cables
- C White Rigid Conduit
- D PVX Cable
- E Mercury Switch

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

GENERAL ELECTRIC



MIL • RIC-WIL • RIC-WIL • RIC
 WIL • RIC-WIL • RIC-WIL • RI
 IC-WIL • RIC-WIL • RIC-WIL •
 RIC-WIL • RIC-WIL • RIC-WIL
 L • RIC-WIL • RIC-WIL • RIC-V
 MIL • RIC-WIL • RIC-WIL • RIC
 WIL • RIC-WIL • RIC-WIL • RI
 IC-WIL • RIC-WIL • RIC-WIL •
 RIC-WIL • RIC-WIL • RIC-WIL
 L • RIC-WIL • RIC-WIL • RIC-V
 MIL • RIC-WIL • RIC-WIL • RIC
 WIL • RIC-WIL • RIC-WIL • RI
 IC-WIL • RIC-WIL • RIC-WIL •
 RIC-WIL • RIC-WIL • RIC-WIL
 RIC-WIL • RIC-WIL • RIC-WIL

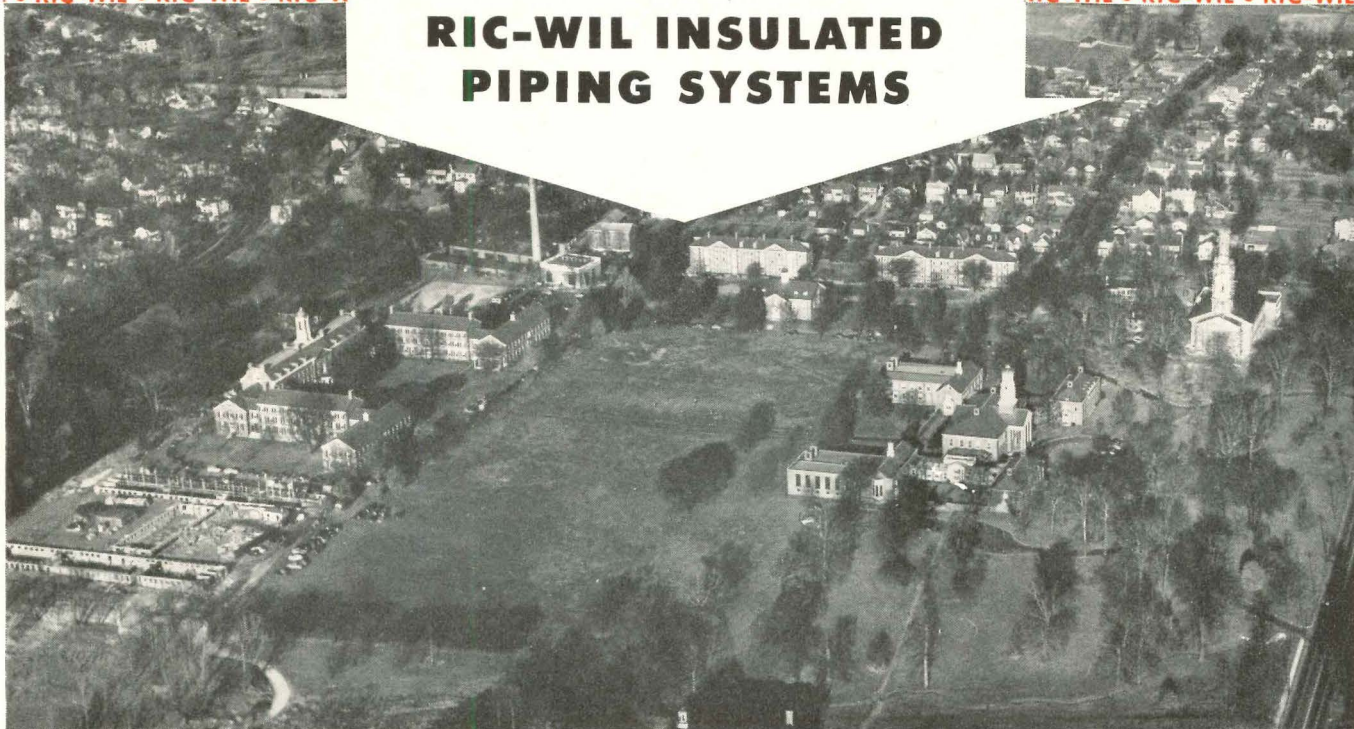
"Built-in"

EFFICIENCY AND DEPENDABILITY

with

RIC-WIL INSULATED PIPING SYSTEMS

• RIC-WIL • RIC-WIL • RIC-W
 • RIC-WIL • RIC-WIL • RIC-V
 MIL • RIC-WIL • RIC-WIL • RIC
 C-WIL • RIC-WIL • RIC-WIL • I
 RIC-WIL • RIC-WIL • RIC-WIL
 • RIC-WIL • RIC-WIL • RIC-W
 • RIC-WIL • RIC-WIL • RIC-V
 MIL • RIC-WIL • RIC-WIL • RIC
 C-WIL • RIC-WIL • RIC-WIL • I
 RIC-WIL • RIC-WIL • RIC-WIL
 • RIC-WIL • RIC-WIL • RIC-W
 • RIC-WIL • RIC-WIL • RIC-V
 MIL • RIC-WIL • RIC-WIL • RIC
 C-WIL • RIC-WIL • RIC-WIL • I
 RIC-WIL • RIC-WIL • RIC-WIL



Southern Baptist Theological Seminary, St. Matthews, Kentucky

Economy-minded officials and others responsible for the operation of educational and other institutional plants recognize the advantages of central heating and Ric-Wil Prefabricated Insulated Heating Systems.

Custom designed by Ric-Wil engineers before construction and installation, Ric-Wil systems make possible maximum economies in installation and operation.

The finest materials plus careful design go into

the production of Ric-Wil units. They are produced by skilled workmen in modern plants under favorable shop conditions. Prefabrication of "straight-run", tee, elbow, or other accessory units minimizes costly field fabrication work and provides uniform durability to the entire system.

Our representative will be glad to give you detailed Ric-Wil technical information as related to your specific problems.

For full technical information on Ric-Wil Insulated Piping Systems, call or write the Ric-Wil office nearest you or Dept. 9-D in Cleveland, O.



RIC-WIL

INSULATED PIPING SYSTEMS

THE RIC-WIL COMPANY • CLEVELAND, O.

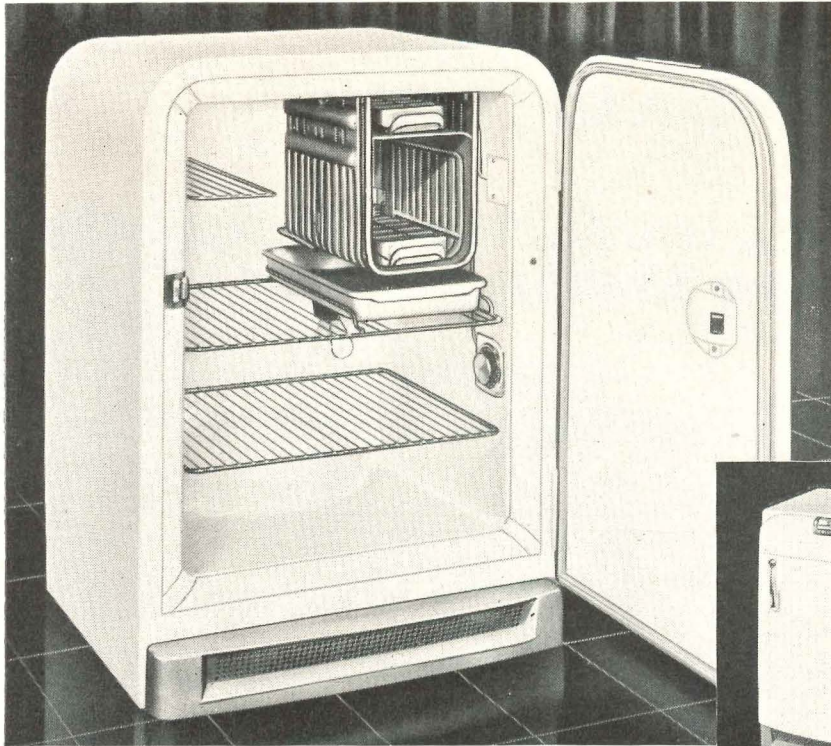
OVERHEAD

UNDERGROUND

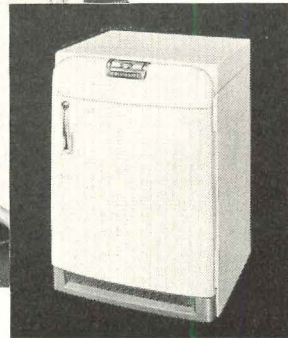
FOR FORTY YEARS THE GREATEST NAME IN INSULATED PIPING SYSTEMS

Proof that high quality can be low-priced!

New FRIGIDAIRE Apartment Refrigerator



Model AM-43 (left) has standard top



Model AM-43F (at right) with flat top design has over 3 sq. ft. of table-top working space. Also available for under-sink installation

This compact new Frigidaire is really low in price. Yet it offers all the unbeatable quality features that made Frigidaire America's No. 1 Refrigerator. It's specially designed for today's small kitchens—requires little more than 4 sq. ft. of floor space, is less than 3 feet high. And it has a full 4.3 cu. ft. of usable storage capacity with 8 square feet of shelf area—provides space for 16 pounds of frozen foods!

Styled by Raymond Loewy, the smart cabinet is of all-steel construction. It has Lifetime Porcelain surfaces inside with acid-resisting porcelain on bottom—exterior is durable Dulux. And in addition to the exclusive features shown below, this refrigerator has a 10-position Cold-Control—aluminum

Multi-Purpose Tray for meats and extra ice cubes—automatic interior light—rust-proofed shelves—Freon refrigerant.

For complete, quick facts about this and other fine Frigidaire products for apartment kitchens and laundries, call your Frigidaire Distributor or Dealer. Find his name in Classified Phone Directory. Or write Frigidaire Division of General Motors, Dayton 1, Ohio. In Canada, Leaside 12, Ontario.

FRIGIDAIRE



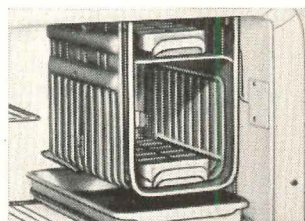
America's No. 1 Refrigerator



Simplest refrigerating mechanism ever built—Meter-Miser is famous for trouble-free operation. 5-Year Protection Plan.



Quickube Ice Trays slide out instantly and release cubes quickly with no tugging, no melting. All aluminum construction.



Super-Freezer is one-piece, all-brass construction for quick freezing. Has room for up to 16 pounds of frozen foods.

Ask For Facts On These Other Apartment Products By Frigidaire

Complete, quick facts about the compact, low-cost Frigidaire products shown below are yours for the asking. Get in touch with your Frigidaire Dealer.

Model AL-60 Refrigerator. Low-priced, compact. 6 cu. ft. cap., 11.6 sq. ft. of shelf area.



Model RK-3 Electric Range is 21 inches wide—yet has all basic cooking facilities.



Model R-15 Electric Range is 40" wide, has many deluxe features—yet costs little.



Frigidaire Water Heaters. 30- to 80-gallon capacity. Round and table-top models.



Frigidaire Kitchen Cabinets. Variety of types and sizes. Provide custom-built look.



Frigidaire Kitchen Sinks. Single, double sink styles. Plenty of organized storage space.




Frigidaire Electric Dehumidifier. Removes moisture from air automatically. Powered by Meter-Miser.



Automatic Washer has exclusive Live-Water Action. Frigidaire Ironer and Electric Clothes Dryer also available.





DON'T WORRY...IT'S



Wet umbrella or forgetful puppy . . . there's no staining or fade mark to worry about when floors are surfaced with Genuine Clay Tile. Show your clients how the rich fired-in decorator colors will lend warmth to foyer, kitchen, utility room . . . eliminate the drudgery of scrubbing, waxing and refinishing that is necessary for old-fashioned floor and wall surfaces. Moreover, you have a strong selling point in the long-range economies of Genuine Clay Tile. Available *now* in a wide variety of colors, sizes and patterns.

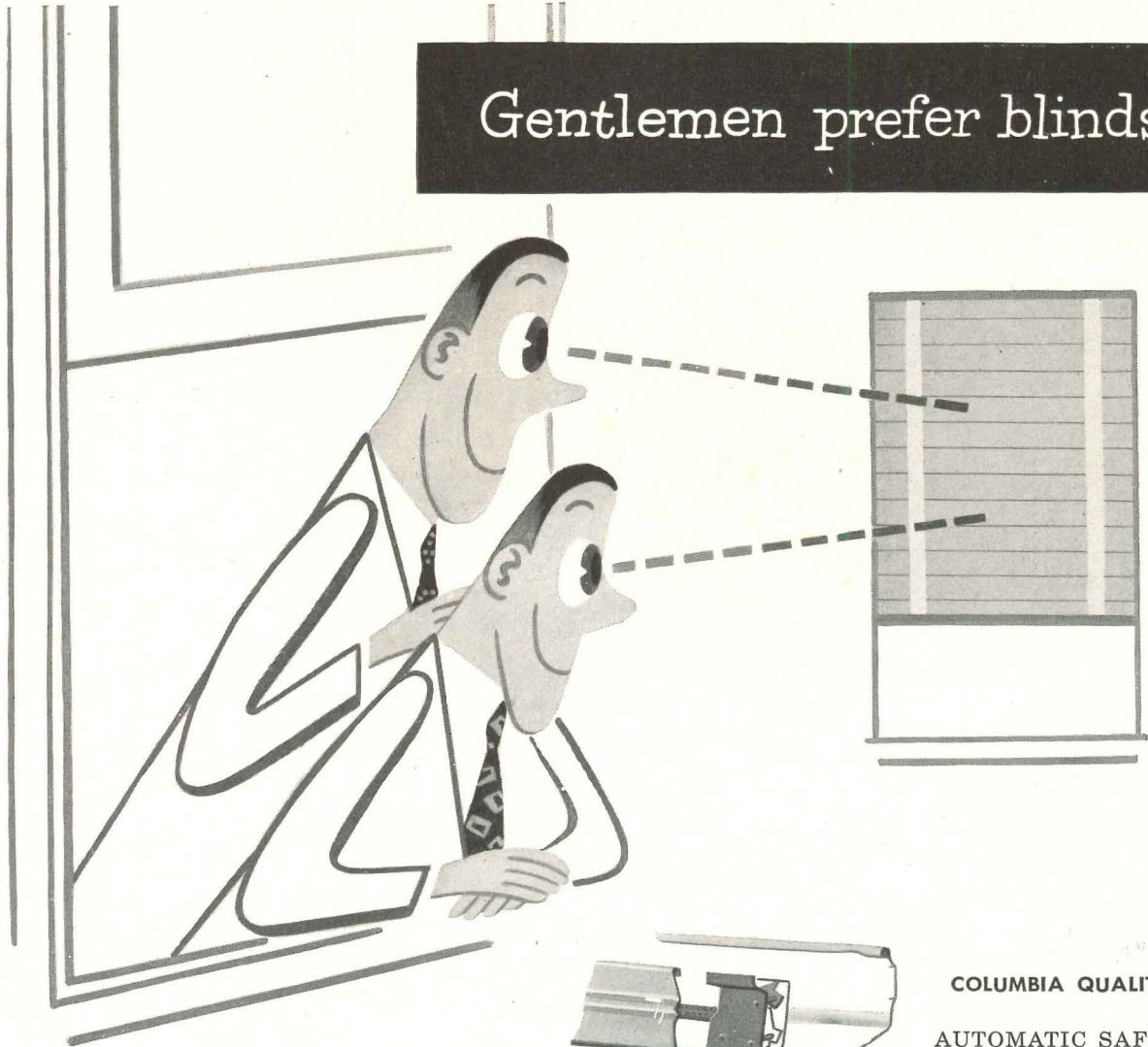
The Tile Council of America, Room 3401: 10 East 40th Street, New York 16, New York. Room 433: 727 West Seventh Street, Los Angeles, California.

**PARTICIPATING
COMPANIES:**

American Encaustic Tiling Co.
Angeleno Tile Co.
Architectural Tiling Company, Inc.
Atlantic Tile Manufacturing Co.
B. Mifflin Hood Co.
Cambridge Tile Manufacturing Co.
Carlyle Tile Company
General Tile Corporation
Gladding, McBean & Co.
Mosaic Tile Company
Murray Tile Company, Inc.
National Tile & Manufacturing Co.
Olean Tile Company
Pacific Clay Products
Pacific Tile and Porcelain Co.
Pomona Tile Manufacturing Co.
Robertson Manufacturing Co.
Summitville Face Brick Co.
United States Quarry Tile Co.

THE MODERN STYLE IS CLAY TILE

Gentlemen prefer blinds...



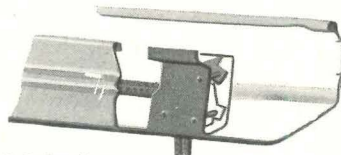
not just any blinds—**Columbia Venetian Blinds!** Men are notoriously impatient with jerky, slipshod Venetians. At home and in their office, they want blinds that work with honey-smooth precision so characteristic of Columbia.

If you're responsible for the Venetian Blind installation in any building—large or small—Columbia is a name that probably rings a familiar note to you. Columbia represents first quality to decorators—institutional users—builders.

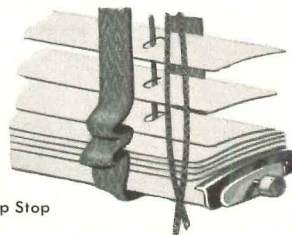
Regardless of the complications involved, your Columbia Authorized Dealer can solve your Venetian Blind problems expertly. He's familiar with all sizes and types of installations. Naturally, the bigger the job, the better the price, per blind. Get in touch with him right away.

Columbia
VENETIAN BLINDS
AND WINDOW SHADES

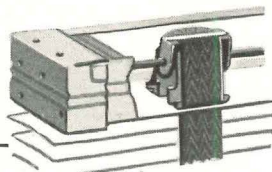
THE COLUMBIA MILLS, INC. • 428 SOUTH WARREN STREET, SYRACUSE 2, N. Y.



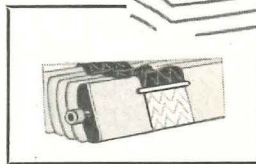
1. Safety Stop



2. Snap Stop



3. Clip Grip



COLUMBIA QUALITY POINTS

AUTOMATIC SAFETY STOP holds blind where you want it—no slipping. (See figure 1.)

Columbia's exclusive **SNAP-STOP** keeps blinds from rattling and banging when window is open. (See figure 2.)

Choice of enamel-coated aluminum or steel slats, galvanized to prevent rust. Easy to clean.

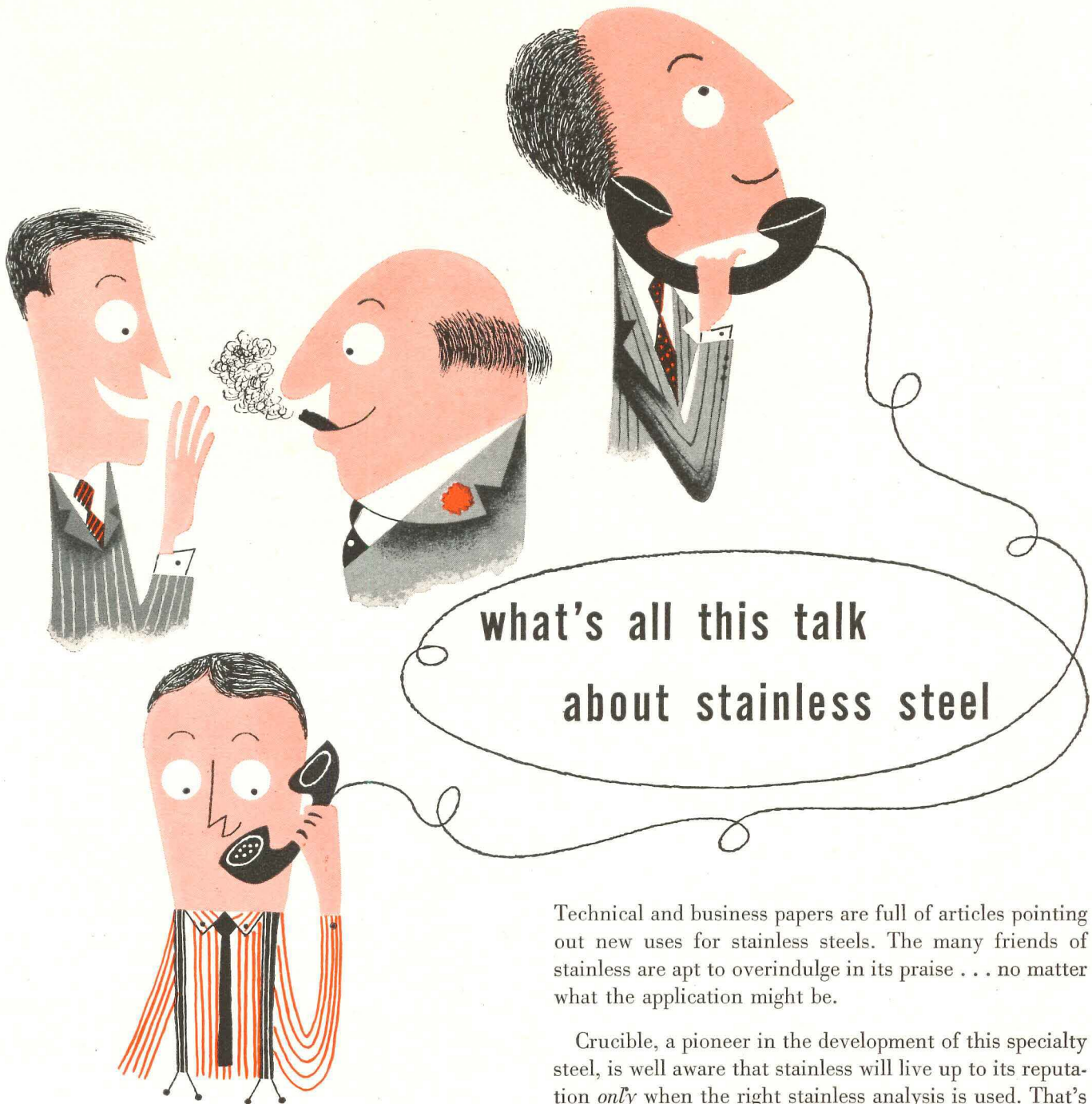
All-metal headbox completely encloses satin-smooth working parts.

CLIP-GRIP at top and bottom of blind makes tape removal quick and easy. (See figure 3.)

ROLLER-LIFT, special Columbia mechanical feature for extra large blinds, means easy operation. A child can raise and lower the biggest blind.

We will gladly submit specifications for Venetian Blinds that can become a part of the General Contractor's bid. This includes a recommendation for correct type of slats and tape; mechanism; method of manufacture and proper installation. Let us call on you and discuss your particular problems.

Columbia Venetian Blinds and Window Shades are sold only in leading department and furniture stores and shade shops designated as Columbia Authorized Dealers.



what's all this talk
about stainless steel

Technical and business papers are full of articles pointing out new uses for stainless steels. The many friends of stainless are apt to overindulge in its praise . . . no matter what the application might be.

Crucible, a pioneer in the development of this specialty steel, is well aware that stainless will live up to its reputation *only* when the right stainless analysis is used. That's why Crucible offers the services of a staff of metallurgists to help you apply stainless to your application.

These engineers and metallurgists are freely available to you. One word from you puts a background of fifty years of specialty steel leadership at your service. CRUCIBLE STEEL COMPANY OF AMERICA, Chrysler Building, New York 17, N. Y.

CRUCIBLE

first name in special purpose steels

hot and cold rolled

STAINLESS SHEET AND STRIP

— STAINLESS • HIGH SPEED • TOOL • ALLOY • MACHINERY • SPECIAL PURPOSE • STEELS —

Macy's

San Francisco



gets

extreme flexibility

to handle load changes and future load growth

low installation cost

everything was shipped complete—as a unit—and easily installed

safety to personnel

no exposed circuits; metal encloses all current-carrying parts

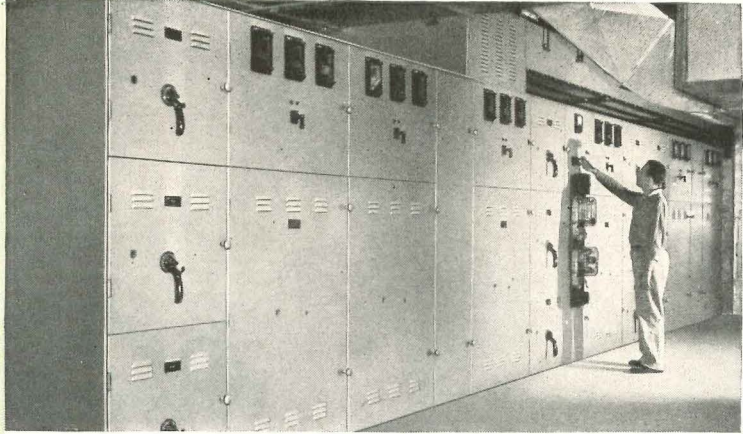
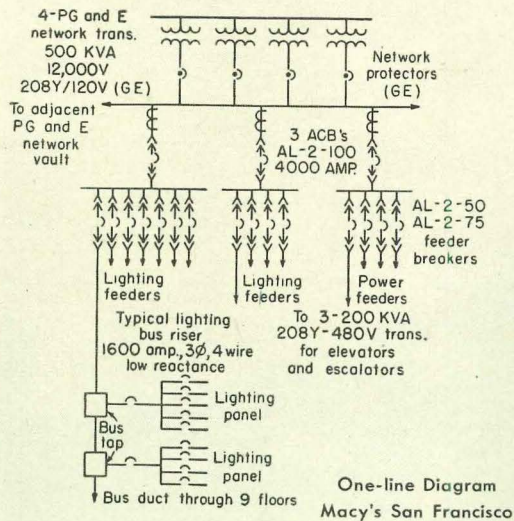
plenty of "IC"....with

100,000 amperes interrupting capacity, adequate to handle all short circuits

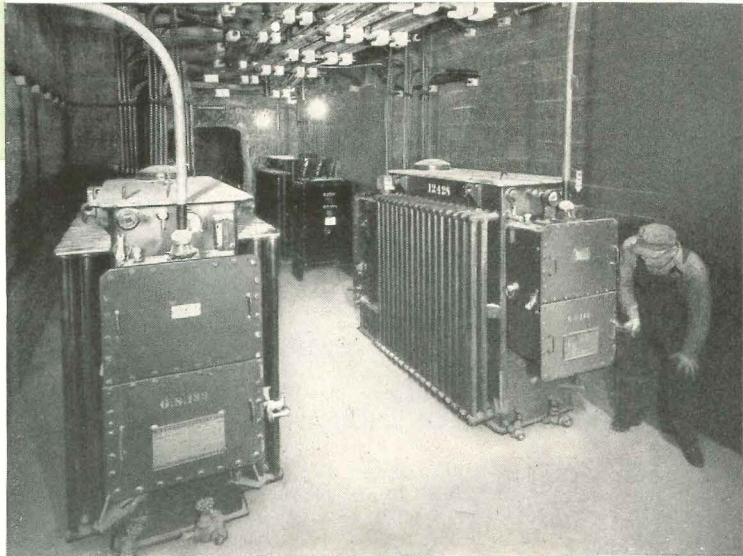
GENERAL ELECTRIC

HERE'S WHY . . . "In the department store business we cannot take any chances with power outages or potential fire hazards. We must also plan for expansion. That's why we wanted our power distribution system to be safe, to have adequate feeder and branch-circuit capacity, plus flexibility. General Electric switchgear gave us all these requirements."

E. L. MOLLOY, VICE PRESIDENT
MACY'S, SAN FRANCISCO



G-E metal-enclosed switchgear handles the incoming 120/208-volt power. The equipment is divided into three sections, two for lighting, one for power. Breakers (cascaded) are of the drawout type for ease of inspection and maintenance.



Four G-E network units, rated 500 kva, 12,000-120/208 volts in a Pacific Gas and Electric Company vault serve the building. Macy's 2500-kva load represents one of the largest loads added to PG&E's downtown network in recent years.

This, the largest switchgear installation to date in any San Francisco commercial building, adequately handles the power requirements that average four watts per square foot (nearly 500,000 square feet). Flexibility of the feeder system permits load changes without increasing the load on the switchgear. The 4000-ampere breakers have induction relay tripping.

Macy's installation is a complete General Electric project—switchgear, three 200-kva transformers for elevators and escalators, power and lighting panels, motors, and control for ventilating and boiler-room auxiliaries. One source of responsibility plus the very best in co-ordinated planning, engineering, manufacturing, and service facilities to give maximum savings and efficiency to the customer.

low-voltage SWITCHGEAR

Modern industrial power distribution systems using G-E switchgear are applicable to any industrial plant or commercial building where you want proper voltage for top performance of equipment, an extremely flexible setup to take care of expanding or changing loads, adequate short circuit protection, safety to personnel, and low installation and maintenance costs.

Be sure to see the "More Power to America" full-color sound slidefilm "Modern Industrial Power Distribution." Ask your G-E sales representative to arrange a showing for your organization.

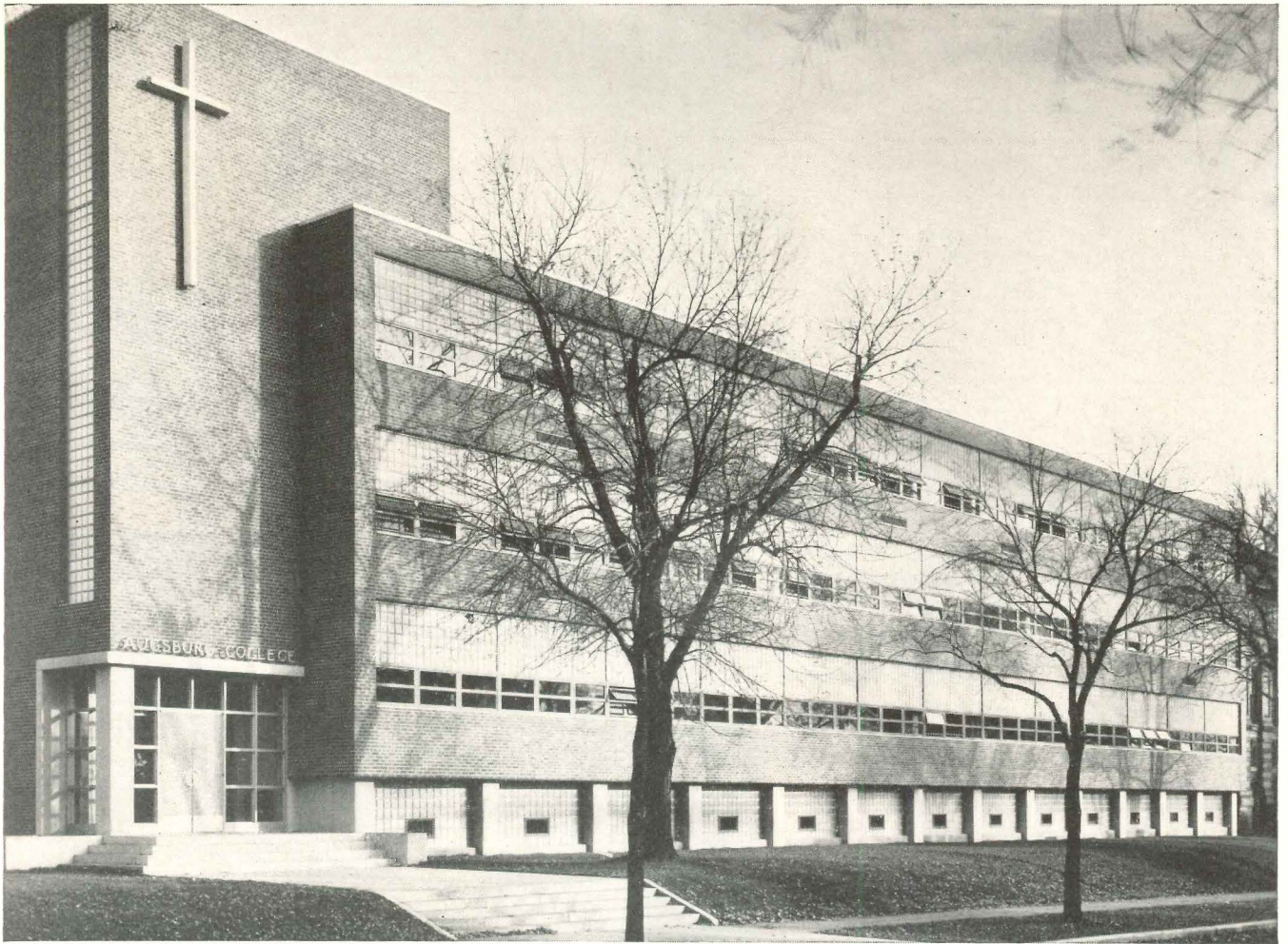
Investigate today the many advantages of using General Electric switchgear in your plant for efficient, flexible power distribution. Contact your G-E sales representative for further information—and write for the helpful bulletins listed below. Apparatus Department, General Electric Company, Schenectady 5, N. Y.

- | | |
|---------------------------------|-----------------------------------|
| GEA-4966 Low-voltage Switchgear | GEA-3083 Metal-clad Switchgear |
| GEA-3642 Air Circuit Breakers | GEA-3592 Load-center Substations |
| GEA-2017 Network Protectors | GEA-3758 Load-center Distribution |

GENERAL ELECTRIC



860-39



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

important facts about Insulux Fenestration*

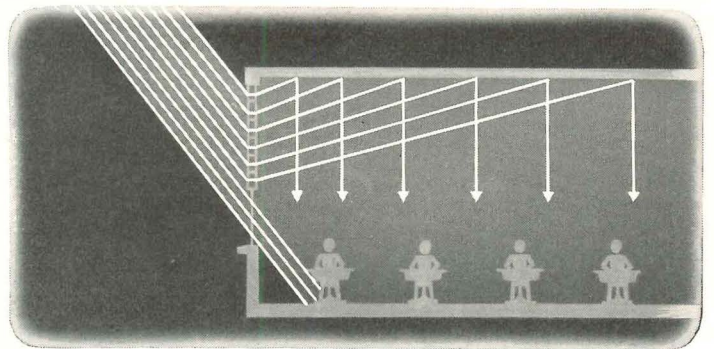
*Insulux Fenestration: Light-directing glass block above a clear glass vision strip.

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

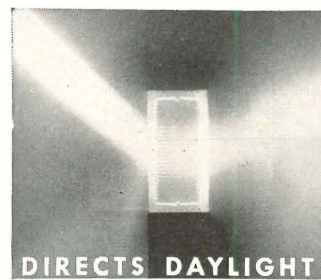
- a. Prisms inside light-directing glass block bend the daylight up to the classroom ceiling which reflects it down onto the working surfaces.
- b. Because glass block directs the major portion of the light above the horizontal, its surface brightness is low, and shades over the panel are unnecessary.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

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

ADDRESS: American Structural Products Company
Dept. G-114, P.O. Box 1035, Toledo 1, Ohio

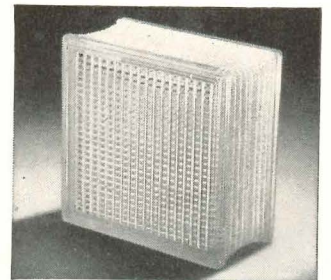


Drawing shows how Insulux light-directing glass block bends incoming daylight to ceiling from where it is reflected to children's work surfaces. Daylight distribution is more uniform; contrasts throughout the room are lowered. Since most of the daylight is directed upward, the panel has a low surface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



DIRECTS DAYLIGHT

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



**INSULUX
GLASS BLOCK®**

"Certified" ON A BALLAST...

IS MORE THAN A WORD!

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

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

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

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

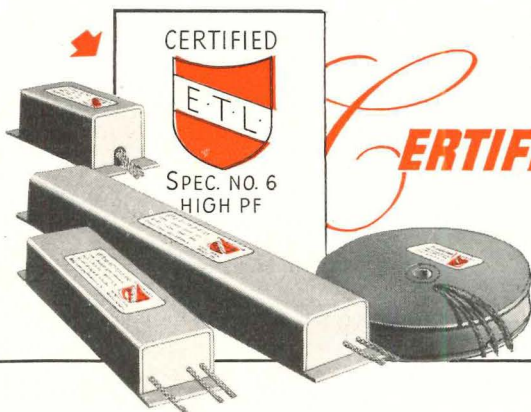
CERTIFIED FLEUR-O-LIER MANUFACTURERS, RLM STANDARDS INSTITUTE and CERTIFIED LAMP MAKERS have solved their ballast problems by writing CERTIFIED BALLASTS into their specifications.

YES, "CERTIFIED" on a ballast means that this ballast has been built to exacting specifications set up by lighting experts... that it has been tested, checked and CERTIFIED by impartial Electrical Testing Laboratories, Inc. "Certified" further means ballasts that are quiet in operation...

protected against overheating... and long lived.

Always specify CERTIFIED BALLASTS... and be sure!

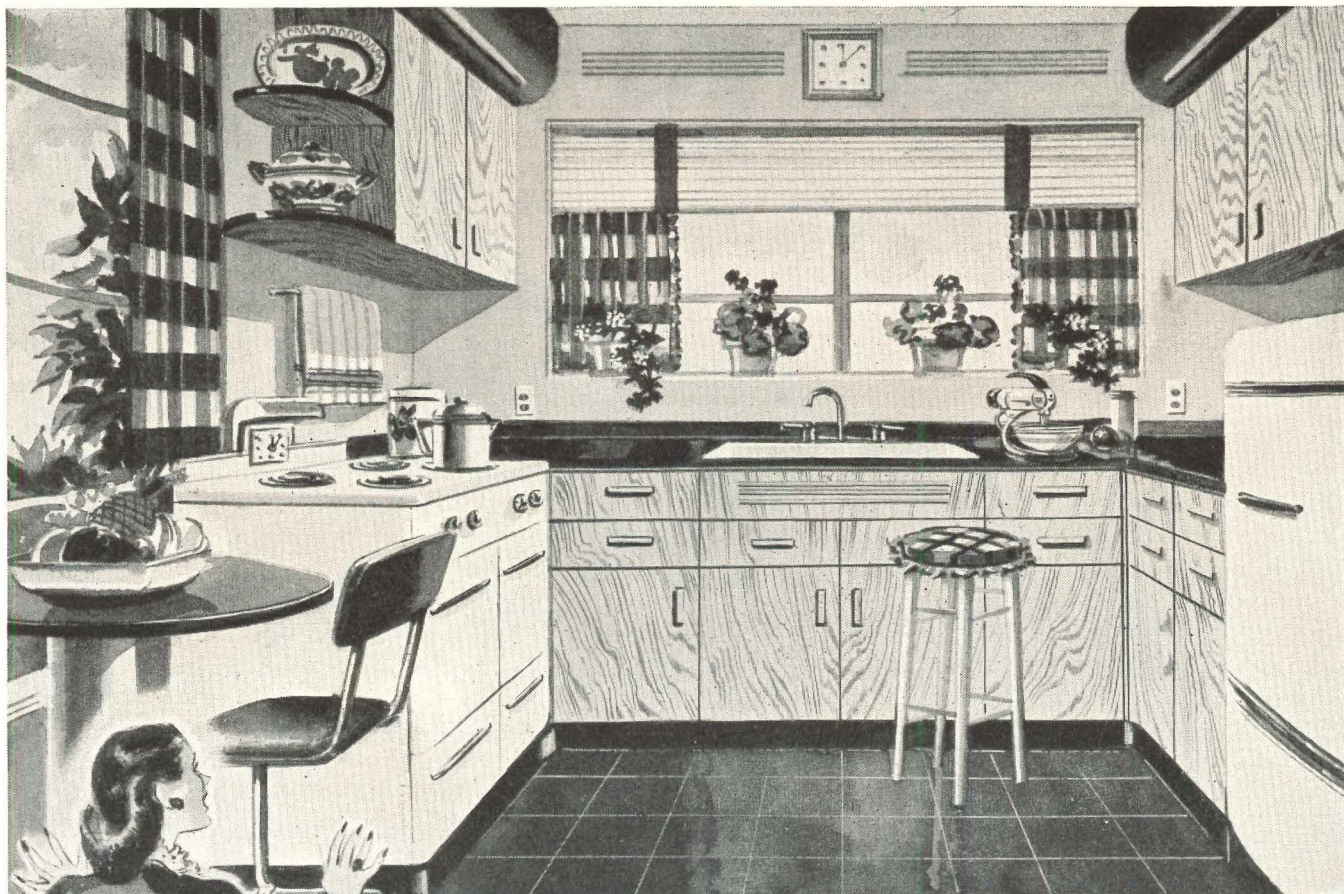
CERTIFIED BALLASTS are being made by ten leading ballast manufacturers. Participation in the certification program is open to any manufacturer wishing to qualify.



CERTIFIED BALLAST MANUFACTURERS

Makers of Certified Ballasts for Fluorescent Lighting

2116 KEITH BLDG., CLEVELAND 15, OHIO



The Housewife's Work Shop Can Be Attractive

*With Roddiscraft Birch Cupboard Door Stock and
GE Textolite* Plastic Surfaces*

You've heard women say it — "I want my kitchen to look like a home, not a hospital." Yes — today the modern woman wants the convenience of a modern kitchen, but she also wants it to be decorative — pretty and practical.

Roddiscraft Birch Cupboard Door Stock will appeal to your clients. It helps make the kitchen really a part of the home — gives it warmth and charm as well as utility.

And when you specify GE Textolite for all work surfaces you can be sure of satisfaction. GE Textolite is the new decorative laminate backed by two great names — Roddiscraft and General Electric. Made in a wide variety of beautiful patterns and solid colors to suit every taste. Write for a color chart and a technical bulletin describing best bonding techniques.

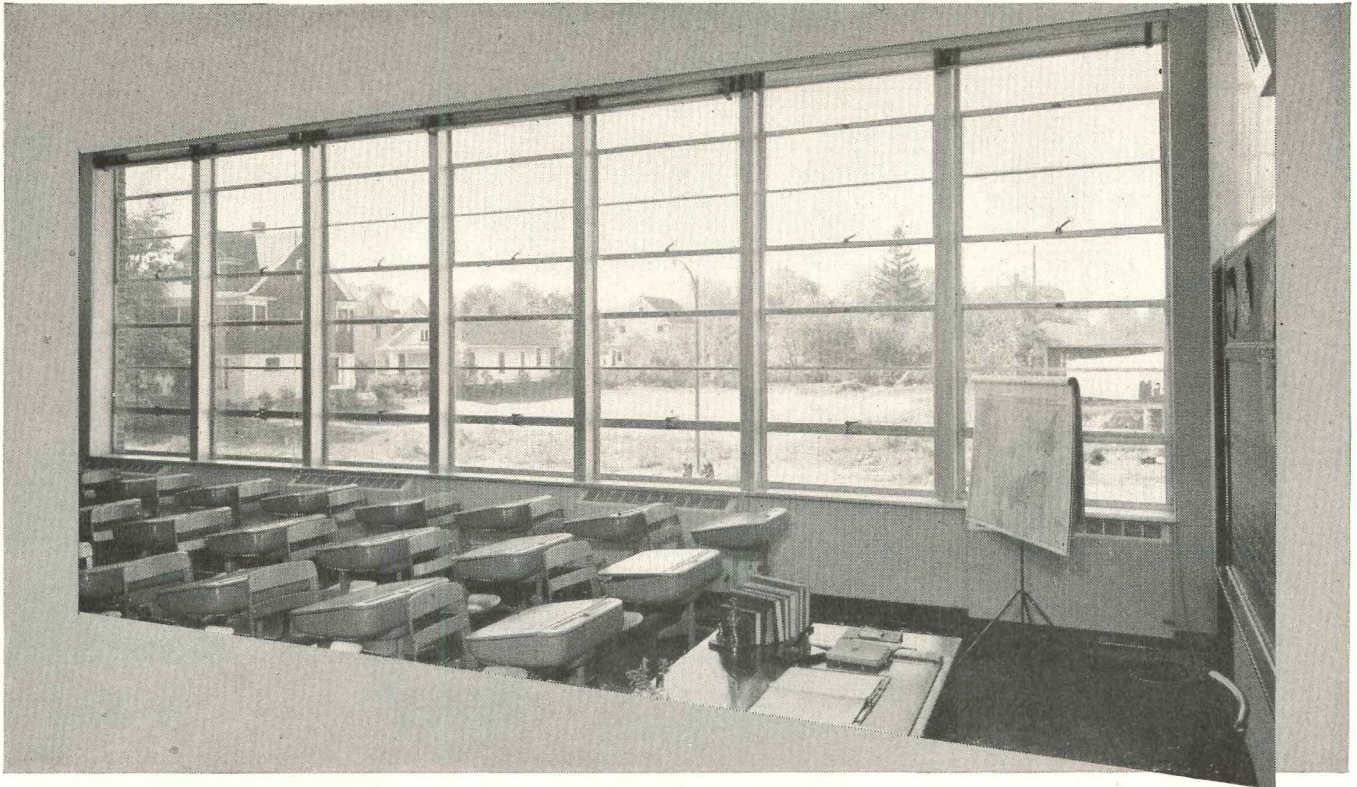
**Reg. U. S. Pat. Off.*

Roddiscraft

RODDIS PLYWOOD CORPORATION
MARSHFIELD, WISCONSIN

NATIONWIDE Roddiscraft WAREHOUSE SERVICE

Cambridge 39, Mass. 229 Vassar St.	Los Angeles 11, Calif. 2860 E. 54th St.
Charlotte, N. C. 123 E. 27th St.	Louisville 10, Ky. 1201-5 S. 15th St.
Chicago 32, Ill. 3865 W. 41st St.	Marshfield, Wis. 115 S. Palmetto St.
Cincinnati 2, Ohio. 457 E. Sixth St.	Milwaukee 8, Wis. 4601 W. State St.
Dallas 10, Texas. 2800 Medill St.	New York 55, N. Y. 920 E. 149th St.
Detroit 14, Mich. 11855 E. Jefferson St.	Port Newark 5, N. J. 103 Marsh St.
Houston 10, Texas. 2425 Sabine St.	Philadelphia, Pa., Pier 5, N. Delaware Ave.
Kansas City 3, Kan. 35-53 Southwest Blvd.	St. Louis, Mo. 4453 Duncan Ave.
L. I. City, N. Y. Review & Greenpoint Ave.	San Antonio, Texas 727 N. Cherry St.
San Francisco 24, Cal. 345 Williams Ave.	



Architects Firestone and Lorscheider economically provided abundant daylight in St. Monica's School at Rochester, New York, with ceiling-high Fenestra Intermediate Projected Windows, light-colored Venetian blinds for light control, light-colored walls and ceilings to spread daylight.

See Fenestra *BEFORE* window layouts are made if *THESE* are your school window objectives

1. *Large areas for more daylight*—Fenestra's Standard Intermediate Steel Windows combine to form window walls. Their slim frames, muntins, mullions allow more glass per opening—permit more daylight to spread throughout the room.

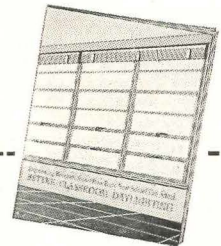
2. *Controllable fresh air ventilation*—Select ventilator arrangements desired (note Fenestra* Projected-Type Intermediate Windows above). Open-in vents deflect air upward, shed rain outside; open-out vents shield openings from the weather.

3. *Quality appearance*—These windows are of rolled casement sections of advanced design and distinctive hardware is used throughout. Workmanship is by skilled craftsmen in the plants of America's oldest and largest steel window manufacturer.

4. *Low cost*—Low first cost results from standardized types and sizes . . . produced in volume. Low installation cost . . . modular sizes co-ordinate with wall materials. Low maintenance results from precise fabrication of high-quality materials. See Sweet's Architectural File, Section 17b/7.

Mail the coupon for

FREE AUTHORITATIVE BOOK ON CLASSROOM DAYLIGHTING
Proved methods of window treatment, seating arrangement, decoration, etc., recommended by Professor R. L. Biesele, Jr., Chairman of Daylighting Committee, Illuminating Engineering Society.



Fenestra
WINDOWS • DOORS • PANELS

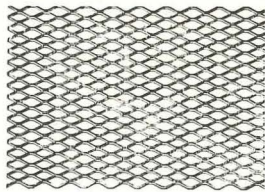
DETROIT STEEL PRODUCTS CO.
Dept. AR-3,
2252 E. Grand Blvd.
Detroit 11, Michigan

Please send immediately your free new booklet on
Better Classroom Daylighting.

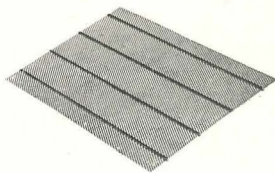
Name _____
Company _____
Address _____

IN NEW YORK...
as elsewhere

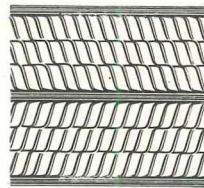
Wheeling is



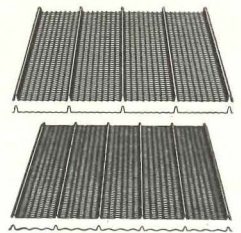
Wheeling Diamond Lath
Standard and Bantam Mesh



Wheeling Bar-X-Lath
With solid steel ribs



Wheeling Flat Rib
Metal Lath



Wheeling $\frac{3}{8}$ " and
 $\frac{3}{4}$ " Rib Lath

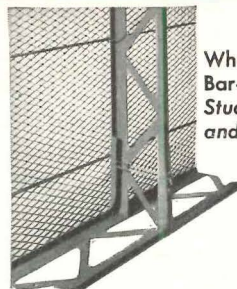
WHEELING OFFERS THE ARCHITECT A COMPLETE LINE OF QUALITY STEEL BUILDING PRODUCTS



Wheeling Corner Lath
An improved cornerite



Wheeling Strip Lath
For strengthening joints

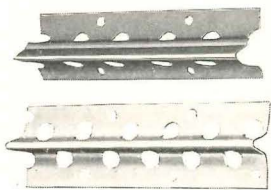


Wheeling
Bar-Z-Partitions
Studs, track,
and Shoes

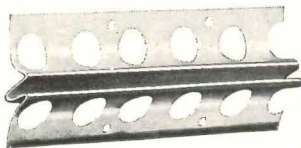


Wheeling Cold
Rolled Channels

WHEELING PRODUCTS ARE QUICKLY AVAILABLE FROM 15 CONVENIENT



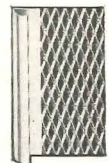
Wheeling Straight and
Curved Point Base Screed



Wheeling Metal
Picture Mould



Wheeling Bull
Nose Bead



Wheeling Casings
and Corner Grounds

WRITE FOR DESCRIPTIVE LITERATURE COVERING PRODUCTS,



Wheeling Flattened
Expanded Metal

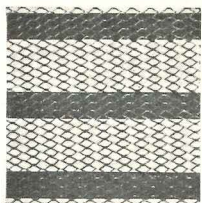


Wheeling Anti-Skid,
Expanded Metal

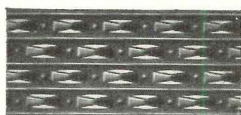


part of the skyline

DURING the past 60 years leading architects and builders have learned that it pays to back up good design and good workmanship with products bearing the famous Wheeling Red Label. That is why, today, Wheeling is part of the skyline in thousands of cities, towns, villages and across the country. For quality products—turn to Wheeling.

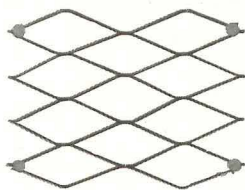


Wheeling Combination Lath, Diamond or Bar-X-Lath

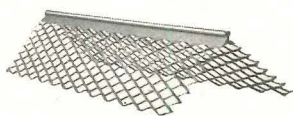


Wheeling Arch Lath For extra fire resistance

EACH HAS BEEN SOUNDLY DESIGNED ON THE BASIS OF YEARS OF RESEARCH AND EXPERIENCE



Wheeling Stucco Binder Mesh



Wheeling Expansion Corner Bead

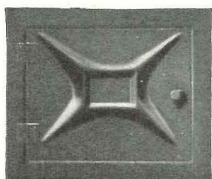


Wheeling Flat Apron Corner Bead



Wheeling Scallop Edge Corner Bead

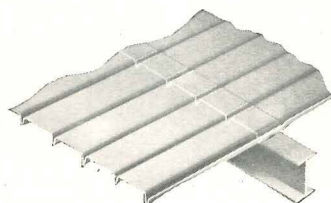
WAREHOUSE POINTS AND LEADING BUILDING MATERIAL DEALERS EVERYWHERE



Wheeling Ashpit and Clean-out Doors



Wheeling Coal Doors



Wheeling Tri-Rib Roof Deck



Wheeling Expanded Metal

SPECIAL INFORMATION . . . FOR SATISFACTION TURN TO WHEELING . . .

WHEELING CORRUGATING COMPANY

BUILDING MATERIAL DIVISION
WHEELING, WEST VIRGINIA

ATLANTA BOSTON BUFFALO CHICAGO CLEVELAND COLUMBUS DETROIT KANSAS CITY
LOUISVILLE MINNEAPOLIS NEW ORLEANS NEW YORK PHILADELPHIA RICHMOND ST. LOUIS

CARIBE HILTON HOTEL, San Juan, Puerto Rico • Supervising architects—Toro, Ferrer, and Torregroso, San Juan • Interiors and decorations—Warner-Leeds, New York • General contractors—George A. Fuller Company of Puerto Rico • Consulting mechanical engineer—Zumwalt & Vinther, Dallas • Consultants on operational layout—Horwath & Horwath; Harris, Kerr, Forster & Co.



The "showcase" of the Caribbean is air conditioned by Carrier

This is the new Caribe Hilton. Located in San Juan, Puerto Rico, this new luxury hotel plays an important part in the over-all development of the island's economy. It was designed to be the "showcase" of the Caribbean. Significantly, it is completely air conditioned by Carrier.



EVERY GUEST in each of the more than 300 rooms and suites may dial the weather he prefers. The Carrier Conduit Weathermaster System with its individual temperature control fills the order from the central air conditioning plant.



FOR DINING or dancing in the Caribar, Salon de Castillo and Club Caribe, comfort is made-to-order by Carrier Weathermakers. The refrigerating and ventilating equipment, too, is supplied by Carrier.



AIR CONDITIONING • REFRIGERATION • INDUSTRIAL HEATING



*They're all
Armstrong's Floors*

This is Armstrong's Linotile. Linotile is a resilient floor exclusive with Armstrong. Its reputation for long wear has been gained in busy corridors and lobbies of schools, hospitals, and office buildings. This floor has long been favored by architects and building owners for heavy traffic areas. Linotile's tough composition is highly resistant to indentation, yet its resilience makes it comfortable underfoot. Easy to clean, Linotile minimizes maintenance costs. A variety of sizes, 1/8" thick; fifteen marbled colors for endless design possibilities.



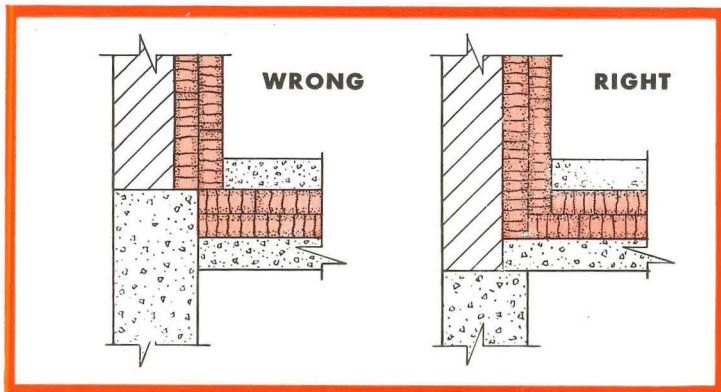
This is Armstrong's Asphalt Tile

An economy floor with unusual beauty and durability; gives good service even under heavy traffic. This floor is not affected by alkaline moisture; can be used in basements and on concrete slabs in direct contact with the ground. Armstrong's Asphalt Tile can be styled to fit in with any decorative effect. Countless designs can be created from the variety of plain and marbled colors. Available in Standard and Greaseproof types; two thicknesses — 1/8" and 3/16".

For additional data on Armstrong's Resilient Floors for business and industrial uses—Linotile®, Asphalt Tile, Linoleum, Rubber Tile, Arlon Tile, and Cork Tile—consult Sweet's Architectural File, section number 13e, catalog number 2. For samples and specifications for the various types of Armstrong's Resilient Floors, or help in solving any unusual flooring problems, architects are invited to get in touch with the nearest Armstrong District Office or write directly to the Armstrong Cork Company, Floor Division, 2403 State Street, Lancaster, Penna.

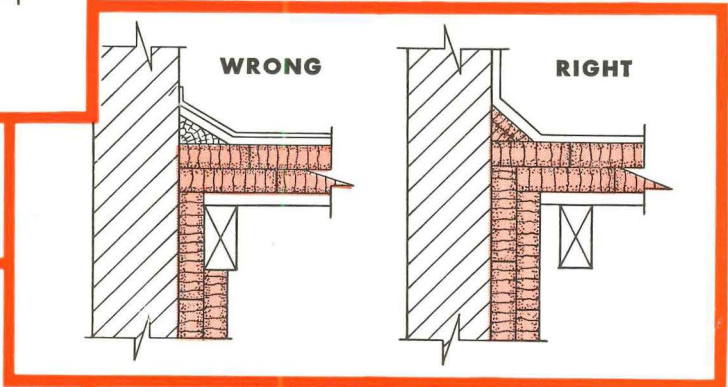
This is Armstrong's Linoleum

Linoleum is the most widely used resilient flooring. Moderate in cost, it offers the greatest choice of colors and designs. Armstrong's Linoleum is made in six types—Plain, Jaspé, Marbelle®, Spatter, Embossed, and Straight Line Inlaid. Available in three thicknesses for various needs. Linoleum's cushioning quality makes it quiet and comfortable to walk on. Recent improvements make Armstrong's Linoleum more durable, easier to clean than ever.

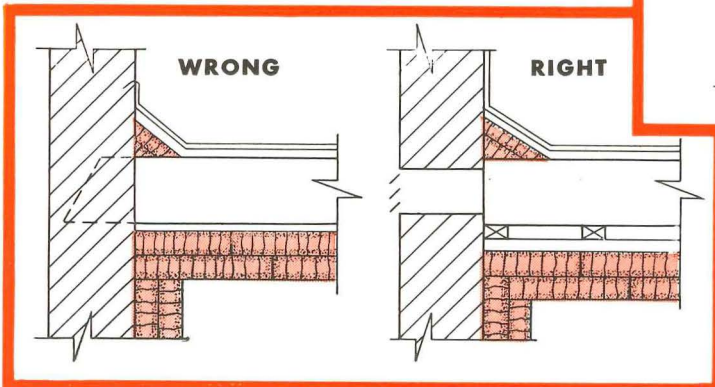


Foundation wall should be poured short to allow for full insulation thickness where the floor and wall meet.

The first ceiling joist, or the concrete floor slab, should be spaced far enough short of the building wall to allow room for full insulation thickness on the wall.



Louvers in building wall and stringers between joists and the sheathing to which insulation is applied allow for free air circulation, prevent condensation.



How to improve cold room construction

Many common construction practices are unsatisfactory for insulated buildings. The sketches above show how slight changes from normal design, made while plans are still on the drawing board, can improve the performance of insulated construction.

These alterations cost little or nothing when made at the planning stage. After building starts, any change is costly. But going ahead with construction that omits provisions for good insulation practice will result in loss of insulating efficiency and possible failure of the job.

In designing any insulated building, two important facts must be remembered. First, space must be allowed for full insulation thickness at all points. Second, ways must be found to prevent damaging moisture and frost collection. Whether or not these factors are taken into consideration

can mean the difference between good or poor performance from low-temperature construction.

In addition to those shown here, there are many other places where careful planning will improve the performance of low-temperature construction. Armstrong engineers are familiar with those places. They will be glad to make recommendations, without obligation, while your plans are on the drawing board. Their advice can save you time, trouble, and money.

In addition to this skilled engineering advice, Armstrong's Contract Service offers you a complete line of top-quality insulation materials for all temperatures and trained mechanics to apply them. For full details, call the Armstrong office nearest you or write today to Armstrong Cork Company, 2403 Concord Street, Lancaster, Pennsylvania.



ARMSTRONG'S INDUSTRIAL INSULATIONS

MATERIALS



INSTALLATION

FOR ALL TEMPERATURES FROM 300° F. BELOW ZERO TO 2800° F.

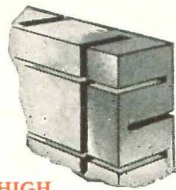
Want the facts about a
REALLY STABLE
SOLID-CORE DOOR?

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

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

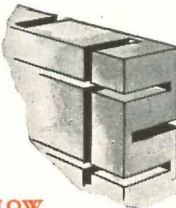
All Mengel solid hardwood core members are deeply slotted at frequent intervals both with and across the grain. *These slots effectively absorb expansion and contraction.* Thus the solid wood between the slots can expand and contract as the weather changes, without in any way affecting the stability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

Get all the facts about Mengel Solid-Core Flush Doors—the really *stable* doors that co-operate with nature on the *inside*, ignore it on the *outside*! The coupon will bring you full information and specifications.



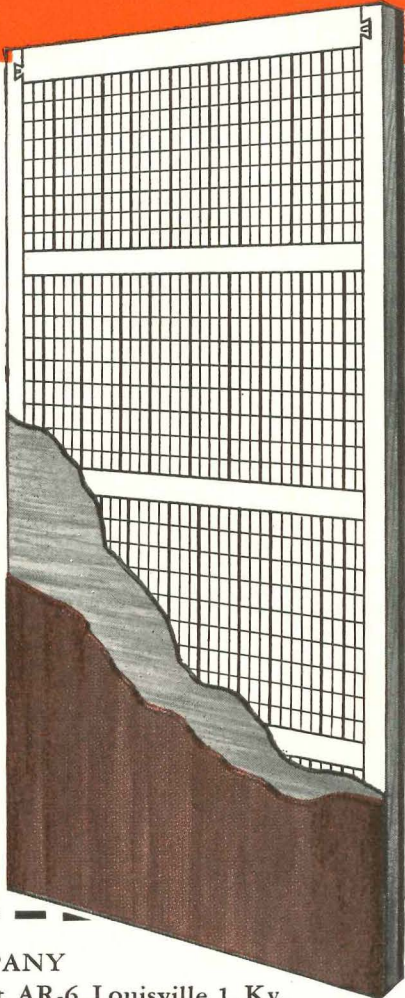
HIGH HUMIDITY

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



LOW HUMIDITY

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

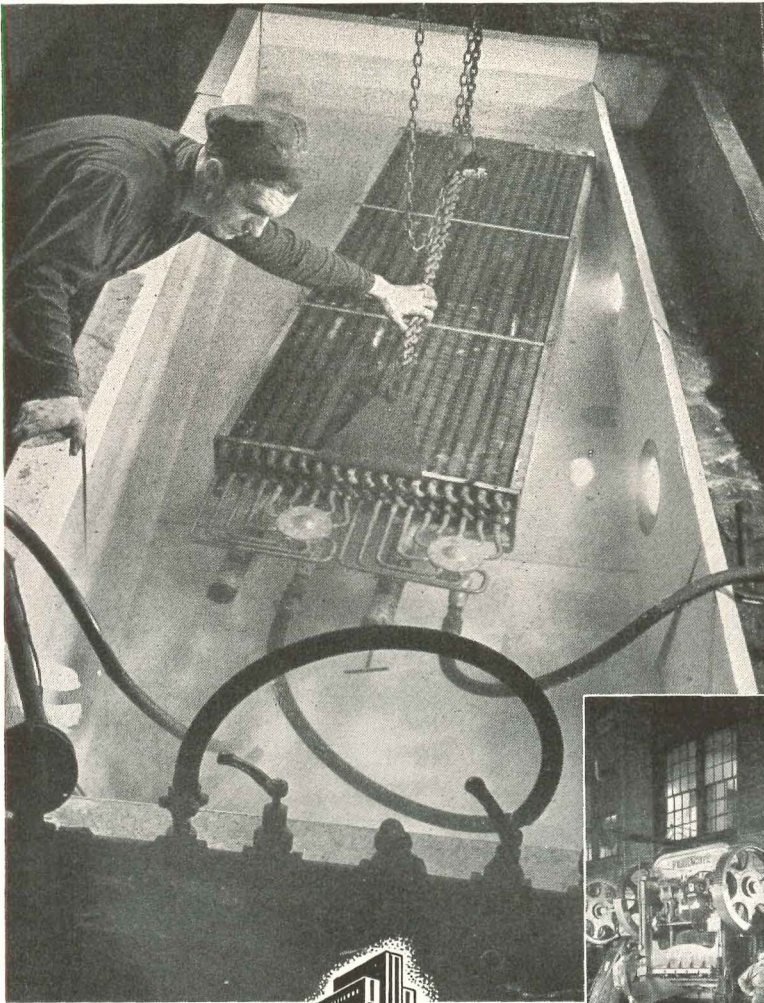


THE MENGEL COMPANY
 Plywood Division, Dept. AR-6, Louisville 1, Ky.

Gentlemen: Please send me complete information, including specifications, on Mengel Solid-Core Flush Doors.

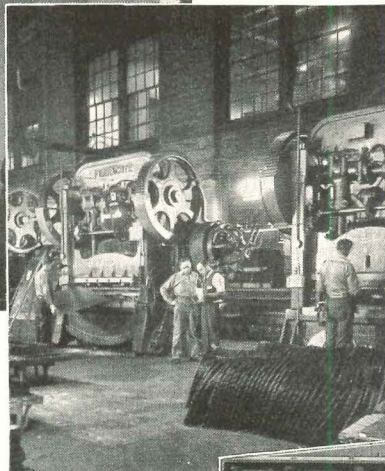
Name _____
 Firm _____
 Street _____
 City _____ State _____

Here's the Story ON AEROFIN...



This man is completing one of the many tests used to control the quality of Aero-fin finned heat-transfer surface. He is looking for air bubbles in a specially illuminated tank. If there are no bubbles, it means the immersed Aero-fin unit has withstood the terrific strains of steam and hydrostatic pressure tests and is ready to give you long, efficient service.

Such rigid specifications and inspection, backed up with over 25 years of experience in manufacturing finned heat-transfer surface, assures you of Aero-fin dependability, durability and maximum efficiency.



Aero-fin is devoted exclusively to the production of finned heat-transfer surface. This specialization enables Aero-fin engineers to select just the right surface and materials for the job, enables expert workmen to assemble these materials into a highly efficient unit.



The end result of Aero-fin research, engineering and specialized production is the Aero-fin Finned Heat-Transfer Unit. Day after day, thousands of units like this one demonstrate their superiority under the most severe conditions. Complete research and accurate ratings allow you to install Aero-fin at full rating with confidence. You can depend on Aero-fin to give you long, efficient service.

*Throughout the
Air Conditioning Industry—*
Aero-fin units do the job Better, Faster, Cheaper

AEROFIN CORPORATION

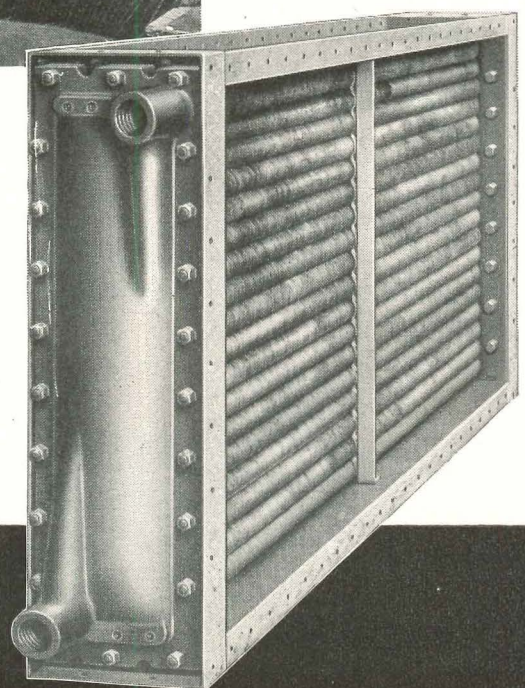
410 South Geddes St., Syracuse 1, N. Y.

NEW YORK
PHILADELPHIA

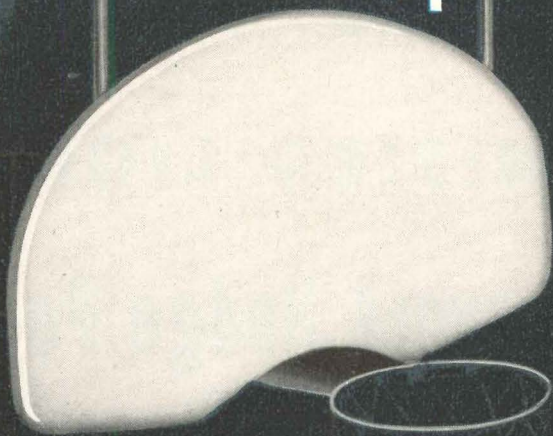
CHICAGO
DALLAS

CLEVELAND
MONTREAL

DETROIT



Blueprint or basketball backstop



...which comes first?

Medart *"Tailored-to-the-Job"* basketball backstops

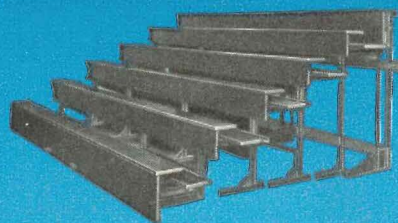
Yes! Tailored-to-the-job because Medart starts ... with a blueprint. The structural conditions of your gymnasium will determine the most-economical-best-results-in-the-long-run, type of backstop assembly you will need. Strength, rigidity and elimination of backboard vibration are not the properties of backstops seen in a catalog ... unless it is the RIGHT ONE FOR YOUR GYM! We at Medart feel that it is our job, through consultation and structural analysis ... in short "blue-printing," to see that you get the right one!

Once that is determined you may select from the Medart complete line of backboards the kind best suited to your needs ... and your budget. For instance, the popular new HERCULITE TRANSPARENT BACKBOARD (rectangular only)! Of extra-strong tempered glass, with an extruded non-rust, non-corrosive heavy and rigid metal frame, plus other safety factors, it has been scientifically designed to withstand the long vigorous test of actual play. Approved by the National Basketball Association! Other regulation backboards, fan-shaped or rectangular, available in wood and steel. Write for descriptive literature today. Feel free to consult our engineering department ... it costs no more and results are sure with ... Medart!

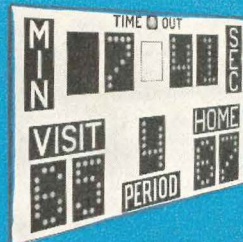
FM50-2

Write for descriptive literature : : : send your plans for suggestions:

SWEET'S FILE (ARCHITECTURAL) NO. 23g-3a and 23c-8a



Medart Telescopic Gym Seats in both Wall Attached and Movable types. High Row (up to 20 rows) and Recessed types. Write for descriptive literature. Send your plans for suggestions.



The very latest design in Basketball and Football Scoreboards for spectator visibility. Over 4000 in use! Write for descriptive literature.

FRED MEDART PRODUCTS, INC.

3540 DE KALB ST.

ST. LOUIS 18, MO.

Leadership for over 75 years in School Equipment

Now you, too, can specify

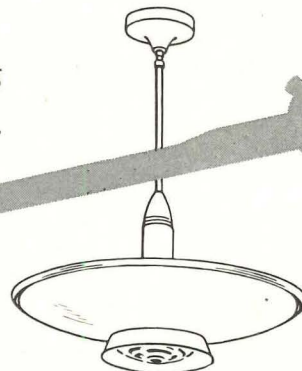
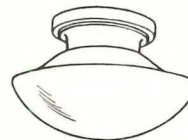
UNIFIED LIGHTING

to avoid Hodge Podge Design

You, like hundreds of other architects and engineers, may now select and specify all the lighting equipment for every area of a building from one maker . . . yet easily maintain a pleasing harmony of design and finish throughout.

UNIFIED LIGHTING by Art Metal makes this easy and practical. Regardless of the varying illuminating needs, there is equipment in the UNIFIED LIGHTING line to fulfill all applications.

Send today for your Art Metal Catalog containing concise and pertinent engineering information.



Manufacturers of Unified Lighting Equipment for Office, Store, School, Hospital and Hotel

WHAT UNIFIED LIGHTING IS

It's a complete line of fluorescent and incandescent lighting equipment, the symmetry of style and finish relating each harmoniously with the other.



The Original Structural Insulating Board

Asphalt Treated Throughout Every Fiber Protected

36 YEARS EXPERIENCE. Not only is INSULITE the original structural insulating board, but it is also the original *waterproofed* structural insulating board.

As far back as 1915 (long before similar products were ever produced), INSULITE was being specified for double duty service in important building projects. (See old historic photo above and note that even at that early date, the unretouched banner in the photo emphasizes the moisture-resisting qualities of INSULITE.)

INSULITE Graylite products are asphalt treated *throughout* — not merely a surface coating. Every fibre in the board — inside and outside — is thoroughly - safely - adequately protected. That's why INSULITE resists moisture so amazingly well. If a storm wets INSULITE Sheathing (Bildrite or Graylite) before the job is finished — don't worry. No permanent harm is done.

Waterproofed Bildrite Sheathing and Sealed Graylite Lok-Joint Lath also combine to control another serious moisture problem . . . vapor condensation in walls. The double asphalt coating of the sealed Lath on the warm side of the wall retards vapor travel, while the vapor breathing characteristics of Bildrite on the cold side permits escape towards the outside. Send for new leaflet describing approved construction methods that control frost and moisture damage in walls.

*Reg. U. S. T. M.

**Double-Duty
INSULITE**

BUILDS INSULATES

MANDO
MINNESOTA AND ONTARIO
PAPER COMPANY
FOREST PRODUCTS

INSULITE DIVISION
PAPER COMPANY
MINNEAPOLIS 2, MINNESOTA

Refer to Sweet's File, Architectural Section 10a/8

HOW TO CONTROL MOISTURE CONDENSATION IN WALLS

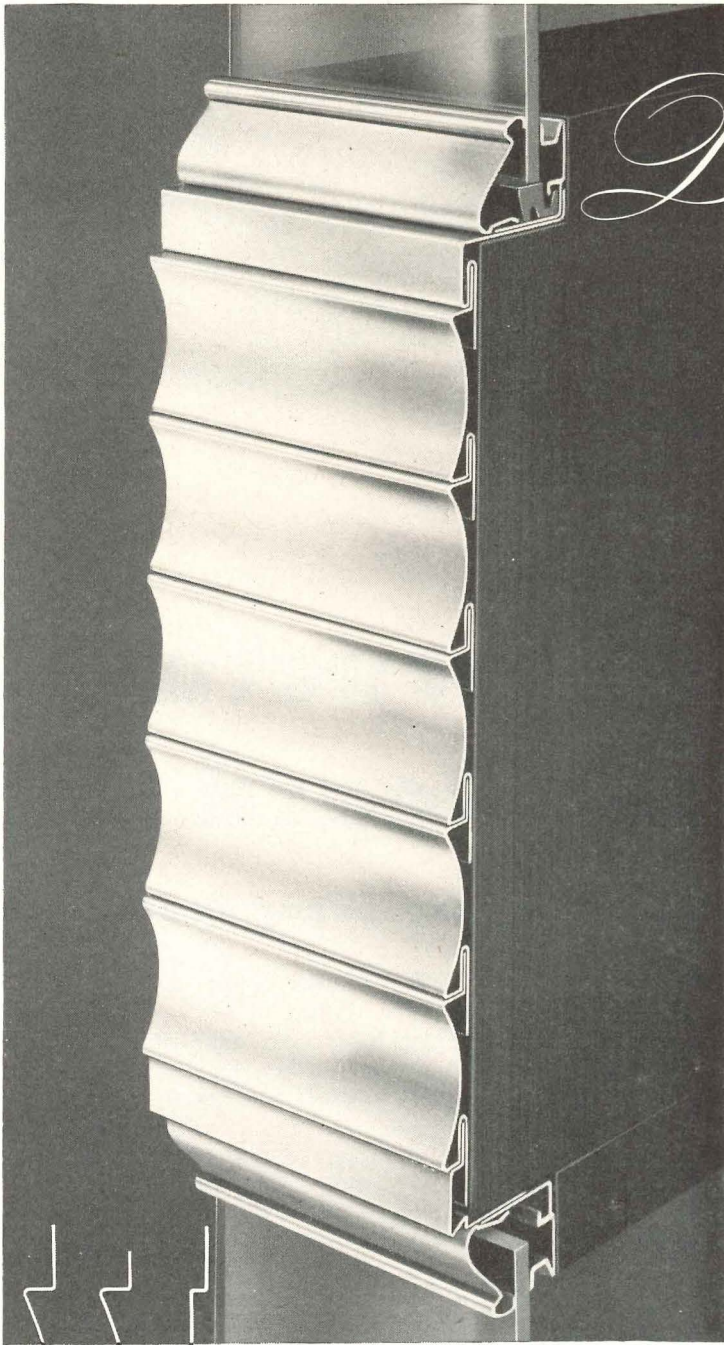
INSULITE DIVISION, MINNESOTA AND ONTARIO PAPER COMPANY
Dept. AR-350, Baker Arcade Bldg. Minneapolis 2, Minn.

Send me that easy-to-understand leaflet showing how the approved INSULITE WALL OF PROTECTION controls moisture condensation in walls.

Name _____

Address _____

City _____ State _____ 2-50



Distinctive Design

WITH THE NEW

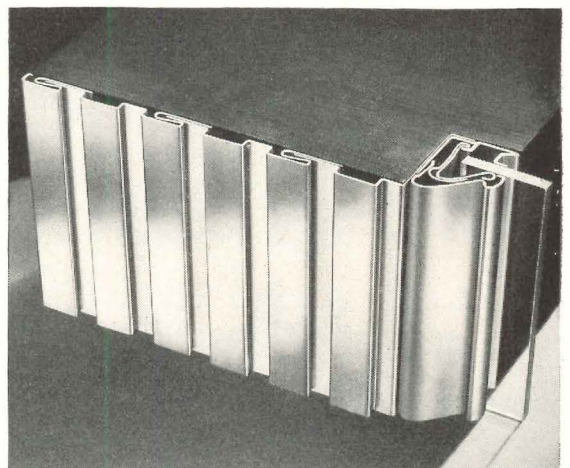
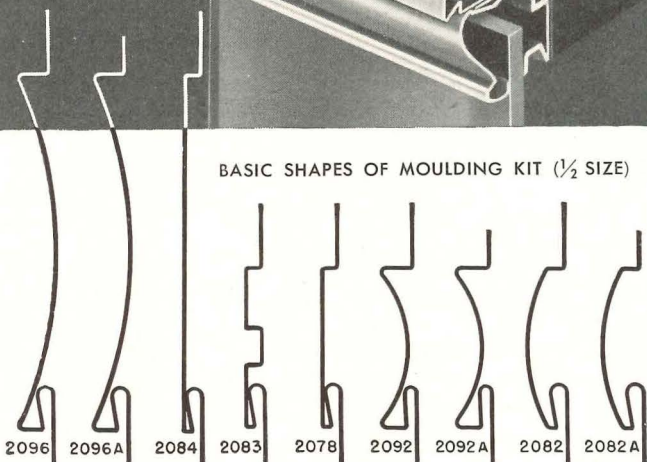
Pittco Premier Moulding Kit

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

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

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

BASIC SHAPES OF MOULDING KIT (1/2 SIZE)



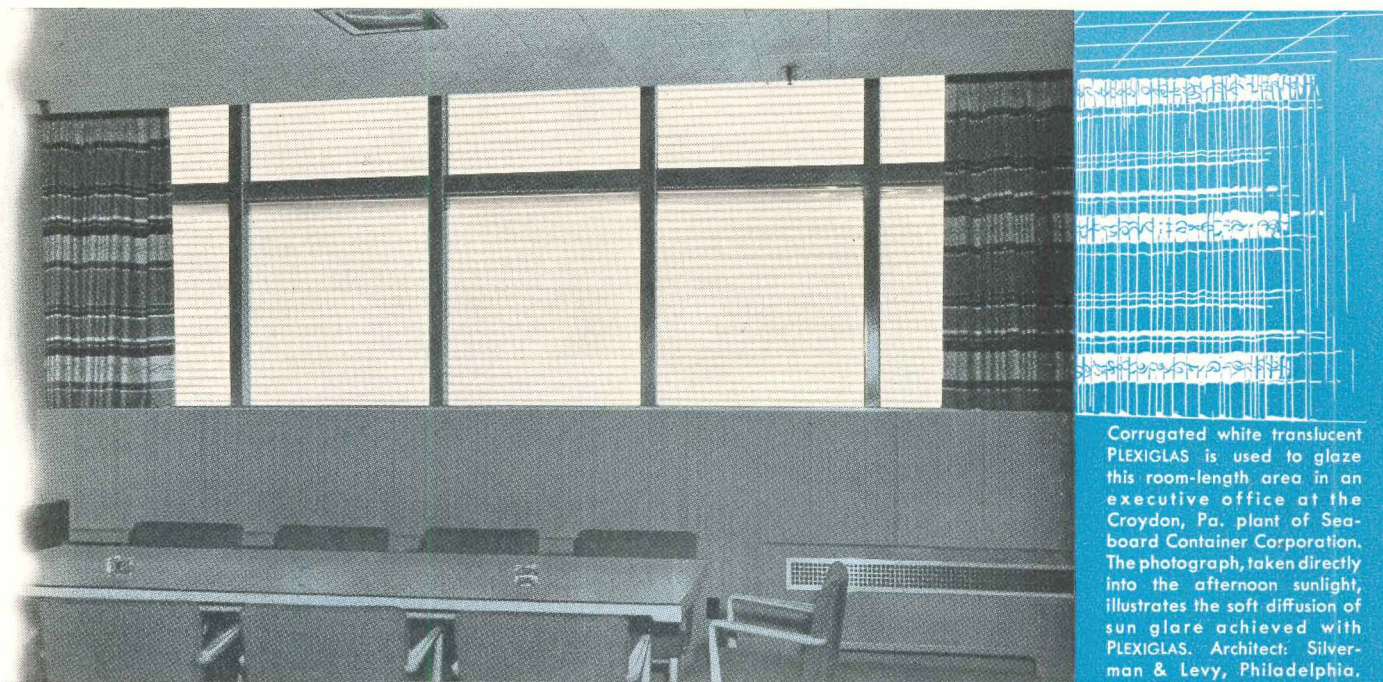
PITTCO STORE FRONT METAL

PAINTS • GLASS • CHEMICALS • BRUSHES • PLASTICS



PITTSBURGH PLATE GLASS COMPANY

PLEXIGLAS — Lets in the Light Keeps out the Glare



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

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

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

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

CHEMICALS FOR INDUSTRY

**ROHM & HAAS
COMPANY**

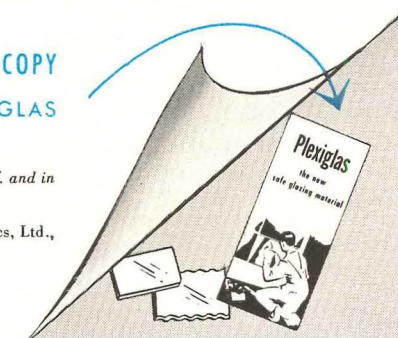
WASHINGTON SQUARE, PHILADELPHIA 5, PA.

Representatives in principal foreign countries

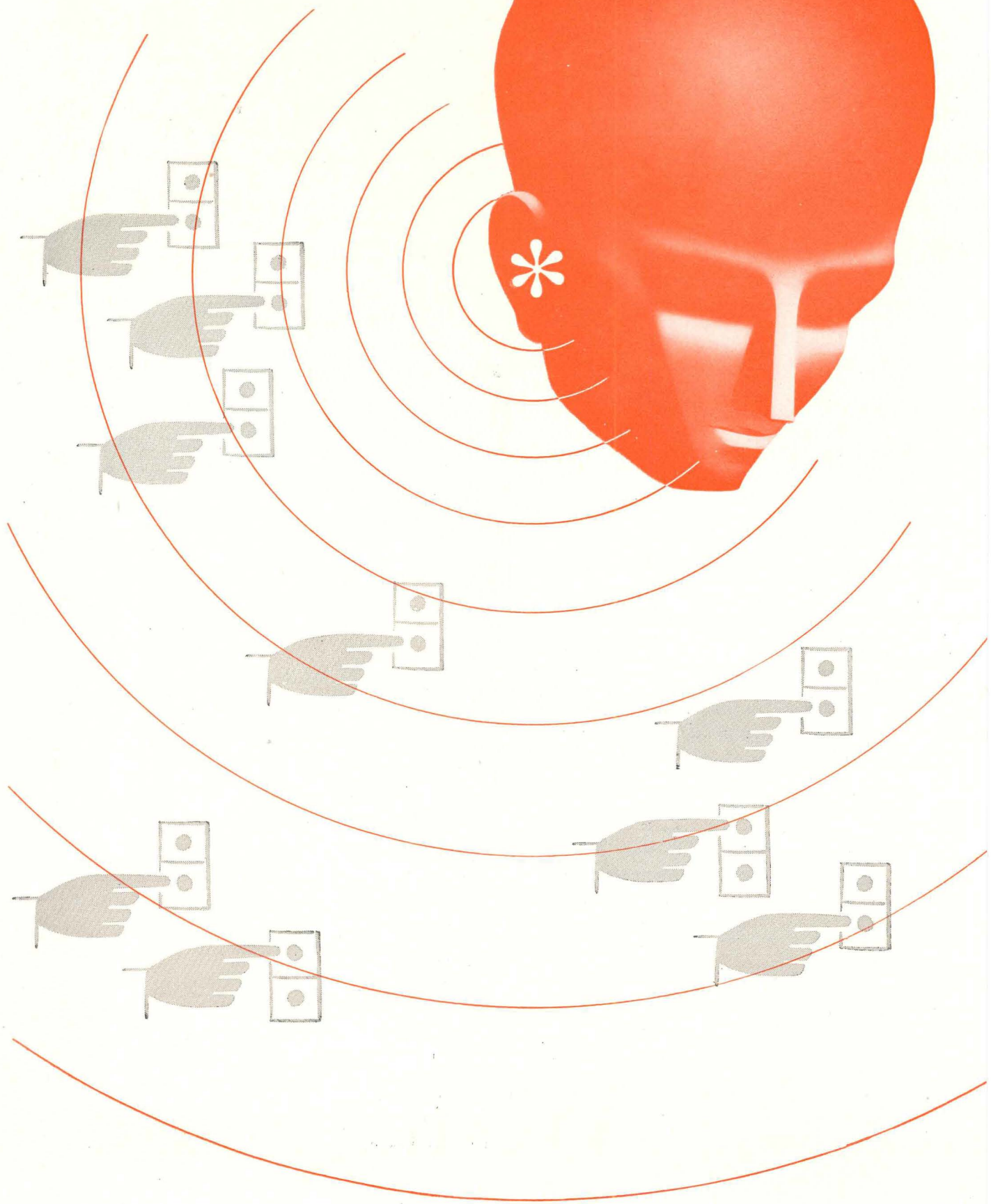
SEND TODAY FOR YOUR FREE COPY
plus samples of PLEXIGLAS

PLEXIGLAS is a trade-mark, Reg. U.S. Pat. Off. and in principal foreign countries.

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



Selectomatic Elevators



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

Selectomatic can turn a loud clamor for up cars, a soft request for down cars or any of their various combinations into the kind of close harmony that building managers love. Selectomatic's unique electrical brain records what it hears and matches the tone of the elevator service to the tone of the tenant's demand—instantly and automatically.

In the new era for elevators a tenant's call for a car never falls among the "deaf." Selectomatic continuously listens for each call . . . instantly answers each call . . . and automatically regulates the entire elevator bank so that it gives the most efficient service possible every minute of the day.

Your "starter" will no longer have to pace the lobby, in silent desperation, trying to figure out when to send which cars where. With Westinghouse Selectomatic Elevators, he can smile and take it easy at his most important job . . . directing traffic.

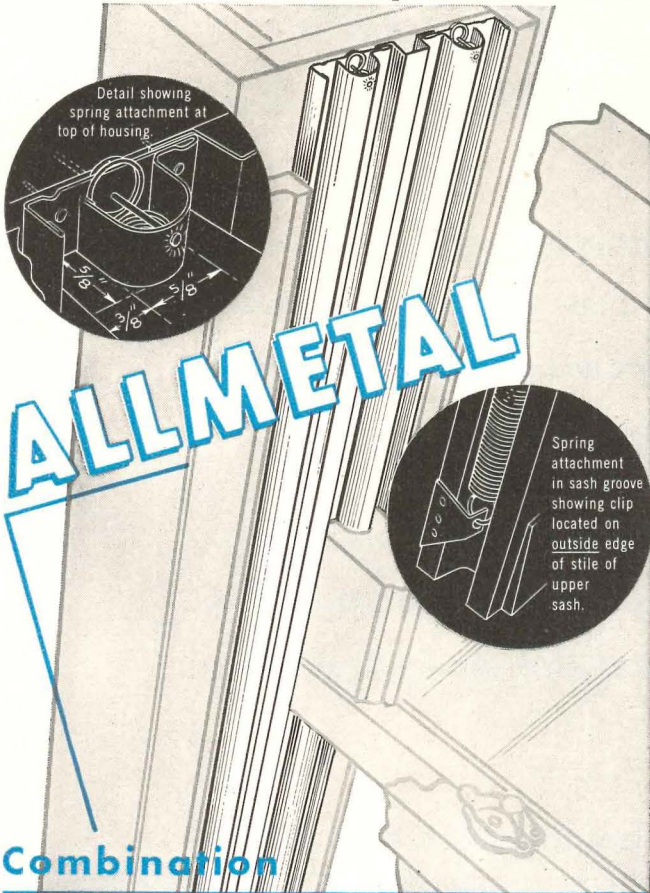
◀ Selectomatic, an exclusive Westinghouse development, completely supersedes the previous accepted elevator standard—signal control.

See and hear the complete story of Westinghouse Selectomatic—science's greatest achievement in elevator transportation. Write on your letterhead and we'll gladly arrange a showing at no cost of our sound motion picture "Speeding Vertical Transportation With Selectomatic Elevators," Elevator Division, Dept. D-1, Westinghouse Electric Corp., Jersey City, N. J.

J-98568

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

This is the way to
balance windows . . . and
weatherstrip them too!



ALLMETAL

Combination

SASH BALANCE AND WEATHERSTRIP UNIT

Do two jobs at once on any double-hung window. Here is an installation on an economy frame giving an all metal sash run. Or simply "cap" old or new wood parting beads. Allmetal Sash Balance give stable sash — provides finger-tip control — cuts labor and material costs and provides better windows by weatherstripping as well as balancing. Send for complete information now.

See Our Catalog in
Sweet's File 18A
Architectural 1

ALLMETAL WEATHERSTRIP CO.

2239 North Knox Avenue, Chicago 39, Illinois

Gentlemen: Please send me complete information and prices.

Name _____
Address _____
City _____ Zone _____ State _____

There are a lot of good cars . . .



but there

is only one **CADILLAC**

There are a lot of good violins . . .



but there is only

one **STRADIVARIUS**

There are a lot of good drawing pencils

but there
is only
one

CASTELL

with the *Genuine*
IMPORTED
CASTELL
lead

So smooth,
so free-flowing—it's an in-
spiration for genius. Yes, it costs a few
pennies more, but it lasts so much longer
than ordinary pencils—it's more eco-
nomical in the long run. 18 exact tones
of black—7B to 9H.

NOTE: CASTELL does away with the
irritation of point breaking. It takes
needlepoint sharpening without snap-
ping. Order from your Dealer today—
and don't allow yourself to be talked
into a substitute.

AW FABER-CASTELL
PENCIL COMPANY INC., NEWARK 4, N.J.



DAUPHIN COUNTY COURT HOUSE SHOWS CONTEMPORARY INFLUENCE



Arch.: Lawrie & Green, Harrisburg, Pa. Gen. Cont.: Wm. A. Berbusse, Jr., Inc., New York, N. Y. Roof. Cont.: LeRoy Roofing Co., Harrisburg, Pa.

MODERN LINES and classic dignity are blended in this new court house in Harrisburg, Pennsylvania. Like thousands of other fine public buildings, it is Barrett-roofed. Barrett Specification* roofs carry Fire Underwriters' Class "A" rating, and are the longest-lasting, best-value roofs that can be built—usually outlasting their 20-year guarantee by many years.



THE BARRETT DIVISION

ALLIED CHEMICAL & DYE CORPORATION
40 Rector Street, New York 6, N. Y.

36th St. & Gray's Ferry Ave., Philadelphia 46, Pa.
205 W. Wacker Drive, Chicago 6, Ill.
1327 Erie Street, Birmingham 8, Alabama

In Canada: The Barrett Company, Ltd., 5551 St. Hubert St., Montreal, P. Q.

SEE BARRETT'S CATALOG IN "SWEET'S"

1 Barrett Specification* roofs are applied by Barrett Approved Roofers according to rigid Barrett specifications developed through years of successful roofing experience.

2 They are built up of alternate layers of finest grade coal-tar pitch and felt. Pitch, the *life-blood* of the roof, is impervious to water and unexcelled as a waterproofing agent.

3 Top quality felt of Barrett's own manufacture holds the pitch in place and permits the use of greater quantities of this waterproofing than would otherwise be possible.

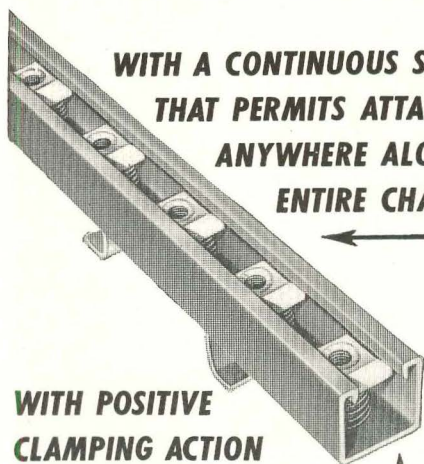
4 Final steps are a triple-thick coating of pitch—*poured*, not mopped—plus an armored surface of gravel or slag. Result is a roof that takes Fire Underwriters' Class "A" rating.



*Trade-mark Reg. U. S. Pat. Off.

Announcing an Entirely New, Improved, Lower Cost

UNISTRUT CONCRETE INSERT



WITH A CONTINUOUS SLOT
THAT PERMITS ATTACHMENT
ANYWHERE ALONG
ENTIRE CHANNEL

WITH POSITIVE
CLAMPING ACTION
PROVIDED BY THE SLIDING
EASILY-INSERTED UNISTRUT SPRING NUT

A CHALLENGE—We believe this to be the greatest development in concrete insert design and manufacture since concrete inserts were first introduced . . . with advantages that are obtainable only and exclusively with Unistrut. Attachments are easily and quickly made by inserting Unistrut spring nut when and where you wish without disturbing other attachments. Bolting of fitting secures the nut tight to "double track" formed by inturned edges of channel, provides positive clamping action, prevents slippage. Standard lengths up to 20 feet make these the longest concrete inserts ever offered!

Write for your Free Sample of Unistrut and new Concrete Insert Bulletin today!

UNISTRUT PRODUCTS COMPANY

1013 W. Washington Blvd., Chicago 7, Ill., Dept. R3

Please send free sample of Unistrut and Bulletin CI-2.

Bulletin CI-2 Unistrut Sample

Name _____

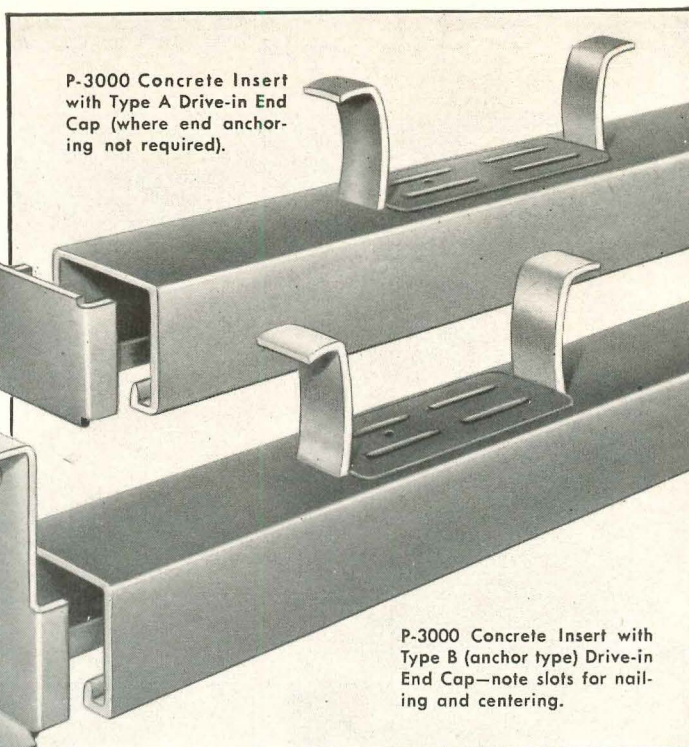
Company _____

Address _____

City _____ Zone _____ State _____



The World's Most Flexible
All-Purpose Metal Framing



P-3000 Concrete Insert with Type A Drive-in End Cap (where end anchoring not required).

P-3000 Concrete Insert with Type B (anchor type) Drive-in End Cap—note slots for nailing and centering.

Unistrut Concrete Inserts in stock lengths from 3 inches to 20 feet. Channel is 1 5/8" wide by 1 3/8" high outside dimensions, of 12-gauge cold rolled steel. Load capacity 2000 lbs. per foot with a safety factor of 3.

CONCRETE INSERTS PART OF UNISTRUT FRAMING SYSTEM

The concrete inserts shown in this folder are part of Unistrut—a completely adjustable metal framing system that provides a new and more flexible type of mechanical support for every kind of piping, conduit, cable, and for every conceivable kind of equipment used in industry today. Unistrut is metal channel with a continuous slot. You simply insert the Unistrut spring nut into the channel at approximate point where attachment of another framing member is desired, slide to exact location and bolt to Unistrut fitting. Unistrut includes concrete inserts, roller pipe supports, brackets, clamps, hangers and many other standard parts which in combination provide the world's most flexible system of support or suspension. Unistrut does the complete job—you need no other parts or materials. No drilling, no welding—100% adjustable and reusable.

THE 3 QUICK UNISTRUT STEPS



1. Insert Nut into Channel

2. Locate Fitting and Nut

3. Tighten Bolt —it's done

Prompt Delivery from Warehouse Stocks in Principal Cities, Consult your Telephone Directories

UNISTRUT PRODUCTS COMPANY

1013 W. Washington Blvd. • Chicago 7, Illinois

At the University of Michigan . . .

Administration Building,
University of Michigan
Harley, Ellington & Day,
Architects—Bryant &
Dettweiler, General
Contractor



Adlake SCORES AN "A" FOR BEAUTY AND ECONOMY!

The Adlake Aluminum Windows in the Administration and Business Administration Buildings at Ann Arbor will ultimately *pay for themselves* by eliminating maintenance costs! For they will require no painting, no maintenance whatever other than routine washing. And their handsome good looks and efficient operation *will last as long as the buildings themselves!*

Only Adlake Windows have the combination of woven-pile weatherstripping and patented serrated guides that assures minimum air infiltration and absolute finger-tip control. And Adlake Windows never warp, rot, rattle, stick or swell.

For full information on how Adlake Aluminum Windows can give you worry-free, no-maintenance service, drop a post card today to The Adams & Westlake Company, 1102 North Michigan Avenue, Elkhart, Indiana. No obligation, of course.

ADLAKE ALUMINUM WINDOWS Have these "PLUS" Features

- Minimum Air Infiltration
- Finger-tip Control
- No Warp, Rot, Rattle, Stick
- No Painting or Maintenance
- Ease of Installation

THE
Adams & Westlake
COMPANY



Established 1857 • ELKHART, INDIANA • New York • Chicago



The ideal metal in any kitchen
is **ALLEGHENY METAL**

PROFIT BY THE BRIGHT LASTING
BEAUTY OF STAINLESS STEEL

Write for your copy of
"Allegheny Metal in the
Food Processing Industry."

ADDRESS DEPT. AR-3



No other metal answers the demands of domestic or commercial kitchen service so perfectly as stainless steel.

That's because no other metal possesses stainless steel's combination of qualities to the same degree: its great strength, high resistance to heat, wear and corrosion, long-lasting beauty and easy sanitation. Modern kitchen ranges shine with Allegheny Metal—and everything else in the kitchen, too: work surfaces and cabinets, refrigerator trays and trim, sinks and utensils.

Both to the fabricator and user of kitchen equipment, the name "Allegheny Metal" means the pioneer stainless steel—backed by years of known quality and dependable uniformity. • *Specify it for best results.*

**ALLEGHENY
ALUDLUM**
STEEL CORPORATION
Pittsburgh, Pa.

*Nation's Leading Producer
of Stainless Steels
in All Forms*



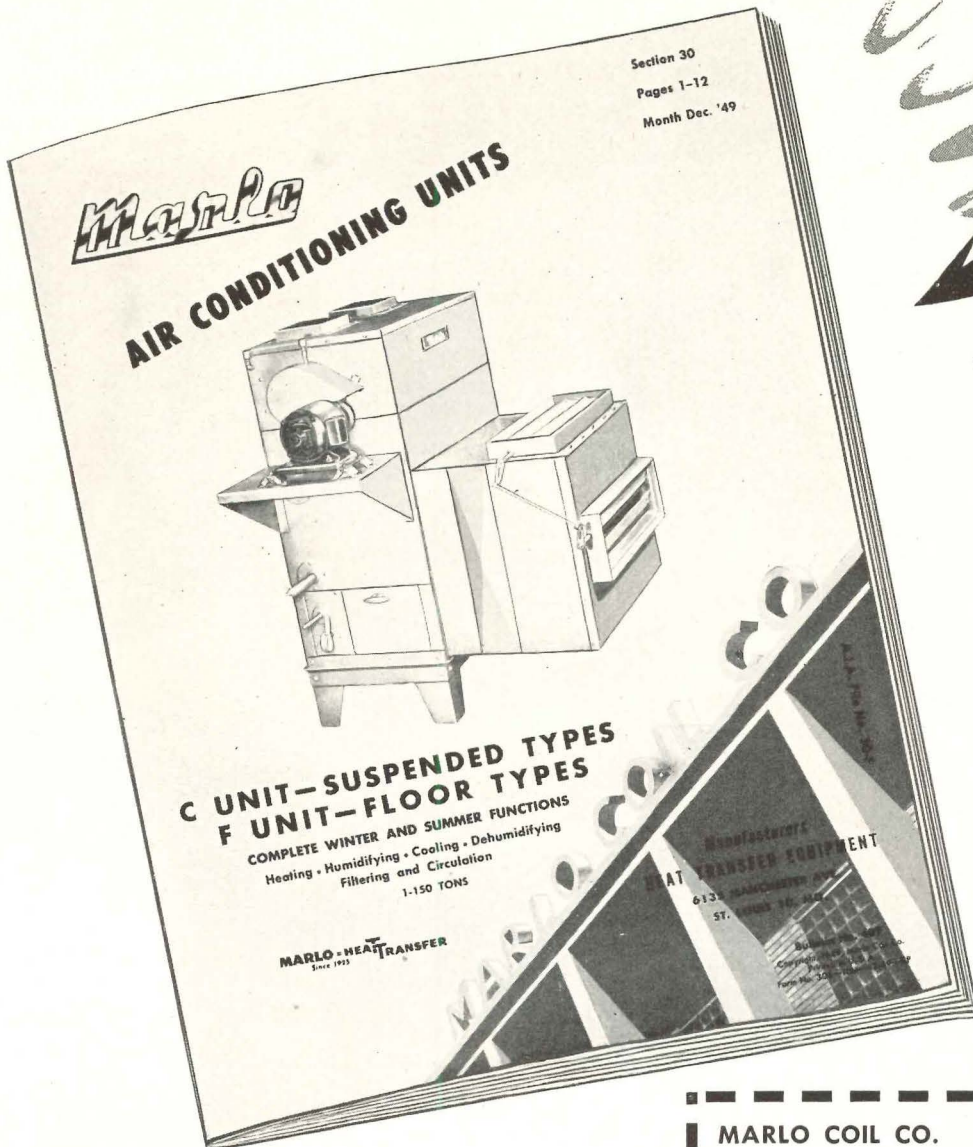
W&D 2727

ALLEGHENY METAL is stocked by all
Joseph T. Ryerson & Son, Inc. warehouses

IT'S READY!

Thanks for Waiting

A comprehensive new bulletin on the complete Marlo line of air conditioning units, with many new illustrations and simple explanations of many new designs.



Send for your free copy!

MARLO COIL CO.

6141 Manchester Road, St. Louis 10, Mo.

Gentlemen: Please send your new "Air Conditioning Units" bulletin to

Name

Company Name

Address

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

***Marlo* COIL COMPANY • SAINT LOUIS 10, MISSOURI**

CRANE

the preferred plumbing



Crane Marcia Lavatory,
24" x 21", for counter-top installation.

Install the Marcia in tile, linoleum, glass, or composition.

Two Marcias in one counter double usefulness of the bathroom.

White and 8 Crane colors. Consult your Crane Branch or Crane Wholesaler.

CRANE

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



Something New in Oak Floors

A pegged oak floor that's moderately priced and easily installed

This new floor has been developed by Bruce to bring the charm and individuality of pegged oak floors to homes in all price ranges . . . even those under \$10,000.

With alternate 2¼" and 3¼" widths, beveled edges, and walnut pegs, the Ranch Plank Floor looks very much like an expensive, custom-built random-width plank floor. It has informal beauty and enduring style.

Yet this floor is moderate in cost and has none of the installation complications of a wide plank floor; it is installed by blind nailing . . . just like regular strip flooring. It is pegged and completely finished and waxed at the factory.

Architects and interior designers praise Bruce Ranch Plank Floor for modern and traditional interiors, and say the new "Decorator" Finish is perfect for all color schemes. Owners vote it one of the most admired features of their homes.

See our catalog in Sweet's 1950 File. For new booklet in color, write E. L. BRUCE CO., MEMPHIS 1, TENNESSEE.



It's pegged and finished at the factory

BRUCE
Ranch Plank
FLOOR

TRANE



UNITRANE—Skyscraper Air Conditioning without Ducts

Ductwork—once the “necessary evil” of skyscraper air conditioning—may still be “evil,” but no longer is necessary. Revolutionary new UniTrane air conditioning eliminates entirely the need for ducts.

UniTrane is designed for the largest skyscraper, and it fits small multiroom buildings, too.

It is a unit system, but there is no compressor or other complicated apparatus in the unit. Simple piping, similar to hot water heating carries warm water to the unit for winter heating and chilled water for summer cooling.

UniTrane may be used for either new or remodeling work. It is so simple and so flexible that it can be installed a bit at a time if desired. It is practical and economical to make the original UniTrane installation for straight heating only, with cooling to be added later. Or units may be installed and operated in a wing, a floor, or a zone without disturbing other existing equipment.

Type MC UniTrane provides individual room control of temperature, moisture, and ventilation. All air is filtered. There is no mixture of air between rooms or corridors.

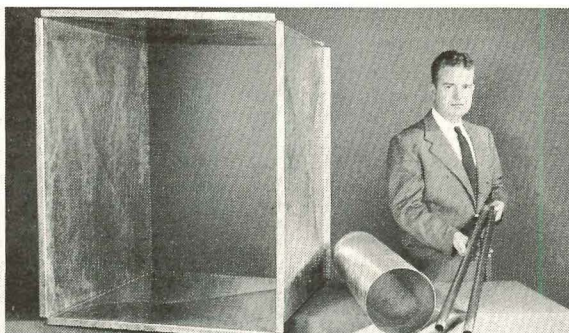
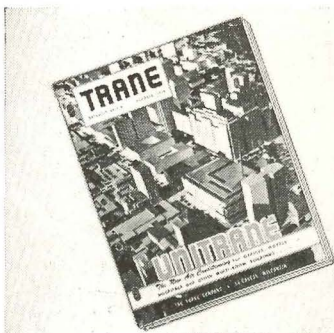
Each room has its own year-around air conditioning system, all contained in a compact package that fits under the window.

Ask the Trane sales office in your area for a copy of “Merely a Matter of Air,” which covers the ABC’s of skyscraper air conditioning in general, from bulky central systems to ductless UniTrane.

THE TRANE COMPANY... LA CROSSE, WIS.
EASTERN MANUFACTURING DIVISION, SCRANTON, PA.

Manufacturing Engineers of Heating, Ventilating and Air Conditioning Equipment—Unit Heaters, Convector-radiators, Heating and Cooling Coils, Fans, Compressors, Air Conditioners, Unit Ventilators, Special Heat Exchange Equipment, Steam and Hot Water Heating Specialties ... IN CANADA, TRANE COMPANY OF CANADA, LTD., TORONTO.

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



Important!

Insist on
this seal...
when you
specify



ALUMINUM WINDOWS

Make this your "safety rule" when you specify aluminum windows—*insist on the "Quality-Approved" seal.*

It's your protection against windows of inferior materials or construction.

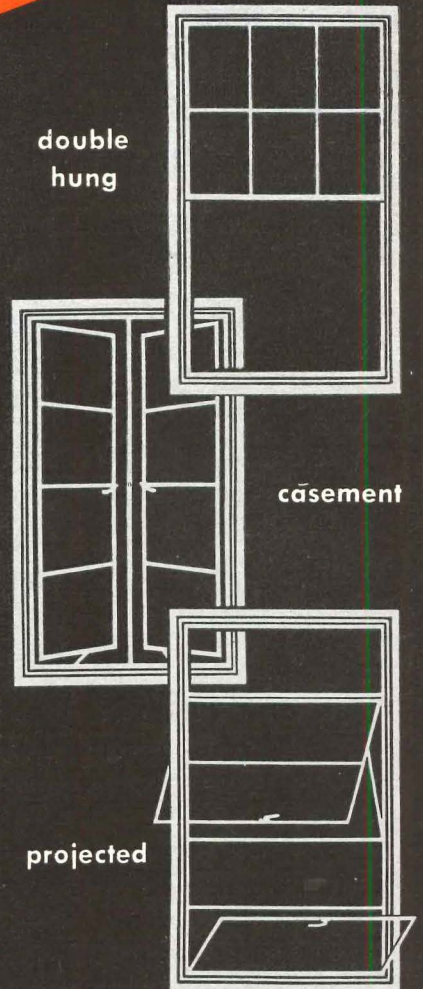
It's your assurance of complete satisfaction, for you and your client.

When you see this bright red seal *you know* you're getting windows that have been tested against rigid standards, and

approved! *You can be sure* of all the advantages of aluminum windows at their best — good looks, freedom from painting, ease of operation, low maintenance and long, long life.

You can get "Quality-Approved" aluminum windows for any type of building. Consult any Association member, see Sweet's (Section 17a/4a) or write for complete information to Dept. AR-3.

Aluminum Window Manufacturers Association
209 Cedar Avenue • Takoma Park • Washington 12, D. C.



members : A. B. C. Steel Equipment Co., Inc., Tampa, Fla. ★ The Adams & Westlake Company, Elkhart, Ind.
The William Bayley Company, Springfield, Ohio ★ Cupples Products Corporation, St. Louis, Missouri
General Bronze Corporation (and its subsidiary The Aluminum Window Corporation), Garden City, New York
Sterling Windows, Inc. New York City, N. Y. ★ Windalume Corporation, West New York, New Jersey

YOU CAN BE SURE.. IF IT'S Westinghouse



Heating, Cooling, Ventilating Equipment



Precipitron*



Unitaire*
Room Coolers



Home
Coolers



Ventilating
Fans



Portable
Fans



Portable
Heaters

Kitchen Equipment



Refrigerators



Electric
Ranges



Roasters



Mixers



Home
Freezers



Toasters



Waste-Aways*

Laundry Equipment



Laundromats*



Clothes
Dryers



Irons



Water
Heaters



Hot
Plates



Vacuum
Cleaners



Fixtures
and Lamps



Electric
Comforters



Passenger
Elevators



Freight
Elevators

Power Distribution Equipment



Wire and
cable



Wiring
devices



Meters



Load
Centers



Power
Centers



Transformers



Panel-
boards

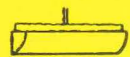
Other Electrical Equipment



Radios



Television
Receivers



Sterilamps*



ONE SOURCE

for ALL electrical needs

For residential construction—both apartment buildings and housing projects—Westinghouse offers one source . . . one responsibility for *everything* electrical. You can benefit from this fact, whatever your part in the project may be.

Architects and engineers: We can help you develop the most efficient ways to distribute, control and utilize electric power. Our engineering specialists have broad experience covering all types of applications.

Contractors and builders: Simplify your buying procedures by ordering all electrical equipment and supplies from Westinghouse. Our organization is geared to give you prompt delivery for integrated installation.

Owners and operators: You get top performance from your electrical equipment because we co-ordinate the design and manufacture of related apparatus. And our nationwide chain of Renewal Parts Warehouses and Manufacturing Repair Plants provides unmatched maintenance service. If electrical appliances are included in the original project, you have the added assurance of ready acceptance by prospective buyers, or tenants. As the maker of nearly 40,000,000 electric home appliances, Westinghouse has won millions of loyal friends.

When you have CONSTRUCTION AHEAD . . . whether residential, commercial or industrial . . . call your nearest Westinghouse District Office or Distributor for full information. Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Pa.

J-94783

Practical, Easy-to-Use Buying Data

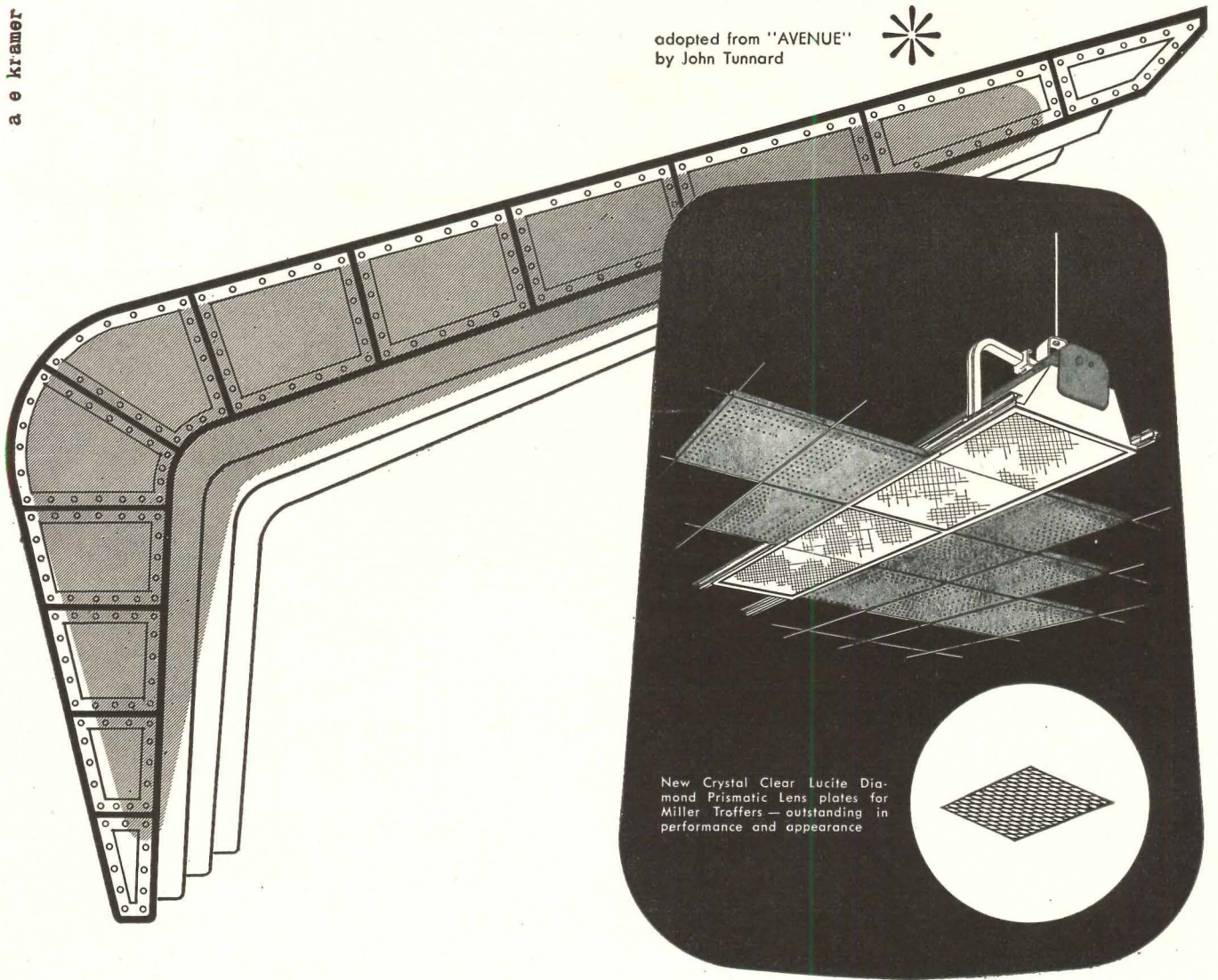
This 362-page book contains detailed information on Westinghouse products for the construction industry. It was designed specifically to meet the requirements outlined by Architects and Engineers.

Industry-wide distribution has already been made. If you do not already have your copy, ask your nearest Westinghouse District Office to send you B-2161-D.



Westinghouse

adopted from "AVENUE"
by John Tunnard



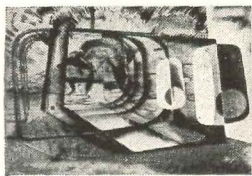
New Crystal Clear Lucite Diamond Prismatic Lens plates for Miller Troffers — outstanding in performance and appearance

Lighting becomes a structural element

MILLER FLUORESCENT TROFFER LIGHTING SYSTEMS not only provide GOOD LIGHT — they are A STRUCTURAL AID. Interiors can be planned around them. They can be installed to form ceiling patterns as desired... CEILINGS UNLIMITED.*

Their wide range of reflector enclosures in metal, glass, and plastic meet the requirements of varied interiors. Reflectors and channels are BONDERIZED for rust resistance. The patented Miller Hanger simplifies installation. Continuous wireway cuts wiring and fitting costs. Easy cleaning and relamping cut maintenance costs. These are all factors which make for LOW OVERALL COST. Write for our 116 page brochure "CEILINGS UNLIMITED."

Miller Lighting Service is all inclusive. Miller field engineers and distributors, conveniently located, are at your call.



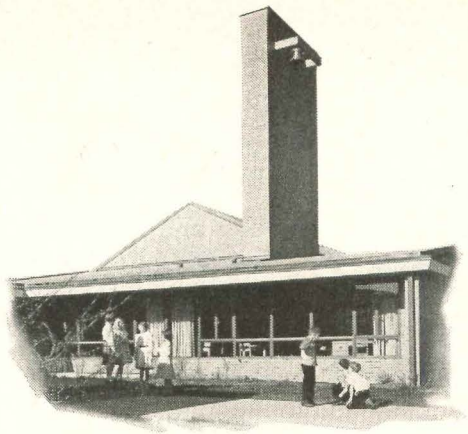
A painting illustrated in "PAINTING TOWARD ARCHITECTURE" the book about THE MILLER COMPANY'S collection of abstract paintings related to Architecture. Available at leading book stores.

*Reg. U. S. Pat. Off.

THE miller COMPANY
SINCE 1844

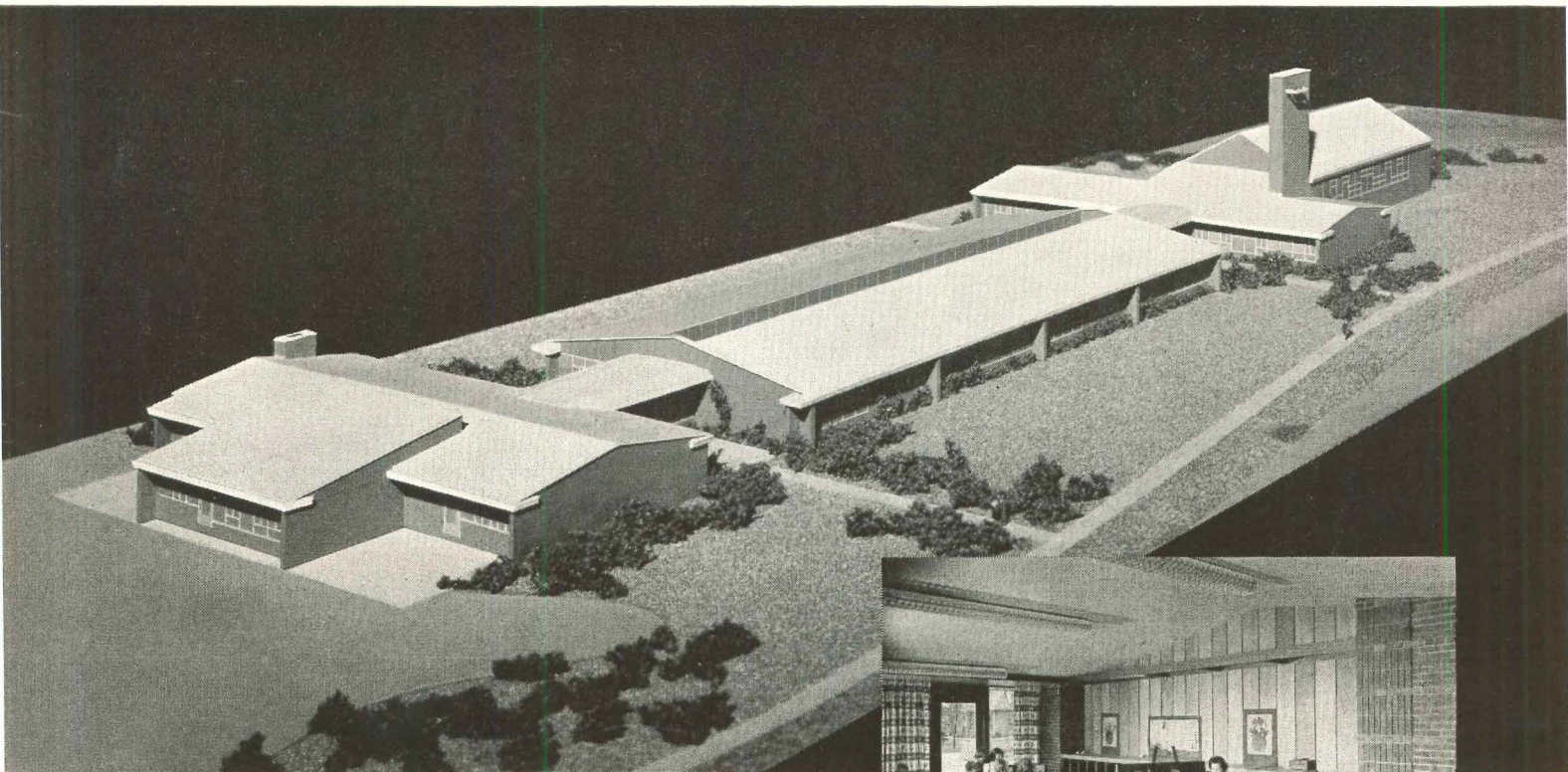
ILLUMINATING DIVISION, MERIDEN, CONNECTICUT

ILLUMINATING DIVISION: Fluorescent, Incandescent, Mercury Lighting Equipment; HEATING PRODUCTS DIVISION: Domestic Oil Burners and Liquid Fuel Devices; ROLLING MILL DIVISION: Phosphor Bronze and Brass in Sheets, Strips and Rolls



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

Perkins & Will, architects Hedrich-Blessing, photos



Ceco Steel Joist Construction *achieves* **Informal Residential Design**

One of the new concepts of school construction comes under the high sounding term of "*optimum psychological environment.*" Actually, it is quite simple—it's just making the school seem less formidable, less like an institution, more like home. This informal residential character was achieved by Perkins & Will, Chicago architects, in designing the Blythe Park School, Riverside, Illinois. Here, Ceco steel joists were used to

provide large square "flexible" classrooms (30 square feet per pupil). Wide span areas were obtained—also unobstructed floor space and neat trim ceilings, yet there was no sacrifice of strength and safety in construction. The result, a pleasant home-like structure—a child centered school—modern—functional, beautiful too. *Steel joists are light, easy to install, self centering. Ducts, wiring, piping are concealed. Cost is low.*

CECO STEEL PRODUCTS CORPORATION

General Offices: 5601 West 26th Street, Chicago 50, Illinois

Offices, warehouses and fabricating plants in principal cities

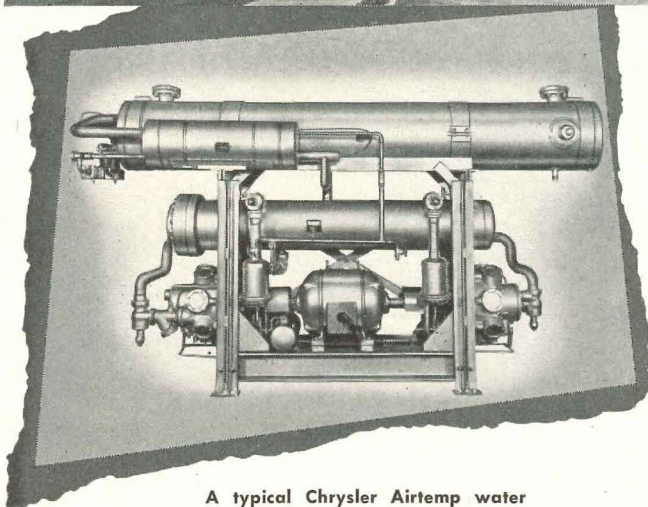


In construction products **CECO ENGINEERING** *makes the big difference*

TO BE TRULY MODERN A BUILDING MUST BE AIR CONDITIONED

Chrysler Airtemp chosen for MAGIC CHEF'S NEW HOME

Architect: Harris Armstrong
—Builder: Gamble Construction Co.—Air Conditioning
Design: Ferris & Hamig—Installing Contractor: Sodemann Heat & Power Co.



A typical Chrysler Airtemp water cooling unit . . . Automatic capacity control . . . compact . . . vibrationless . . . direct connected . . . no foundations required . . . dynamically balanced . . . can be shipped completely assembled.

THREE 50-TON CHRYSLER AIRTEMP RADIAL COMPRESSORS CONDITION THE AIR IN THIS FUNCTIONAL OFFICE BUILDING

Modern architecture—with its keynote of sleek beauty combined with efficiency and personal comfort—demands a specialized approach to construction problems. That's why so many architects and builders rely on Chrysler Airtemp equipment and services when planning heating and cooling installations.

Since Chrysler Airtemp builds *three* basic air conditioning systems, we can provide the *best* type to fit each job . . . And, through regional offices, contractors and dealers, Chrysler Airtemp offers the counsel of highly trained engineers. These air conditioning specialists can guide you in selecting the most efficient system for your requirements.

When desired, *Airtemp Construction Corporation*—wholly owned subsidiary of Chrysler Corporation—will assume entire responsibility and follow your project through from specification to completed installation. Mail coupon today for further information.



AIRTEMP DIVISION OF CHRYSLER CORPORATION, Dayton 1, Ohio
We would like the complete story of Chrysler Airtemp service and products.

A-3-50

Name _____

Address _____

City _____ Zone _____ State _____

Chrysler Airtemp

AIR CONDITIONING • HEATING • COMMERCIAL REFRIGERATION

3 BASIC SYSTEMS TO MEET EVERY AIR CONDITIONING NEED —
CENTRAL SYSTEMS • INDIVIDUAL ROOM UNITS • "UNITEMP"

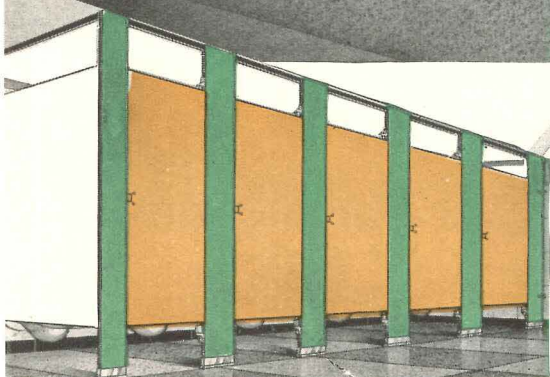
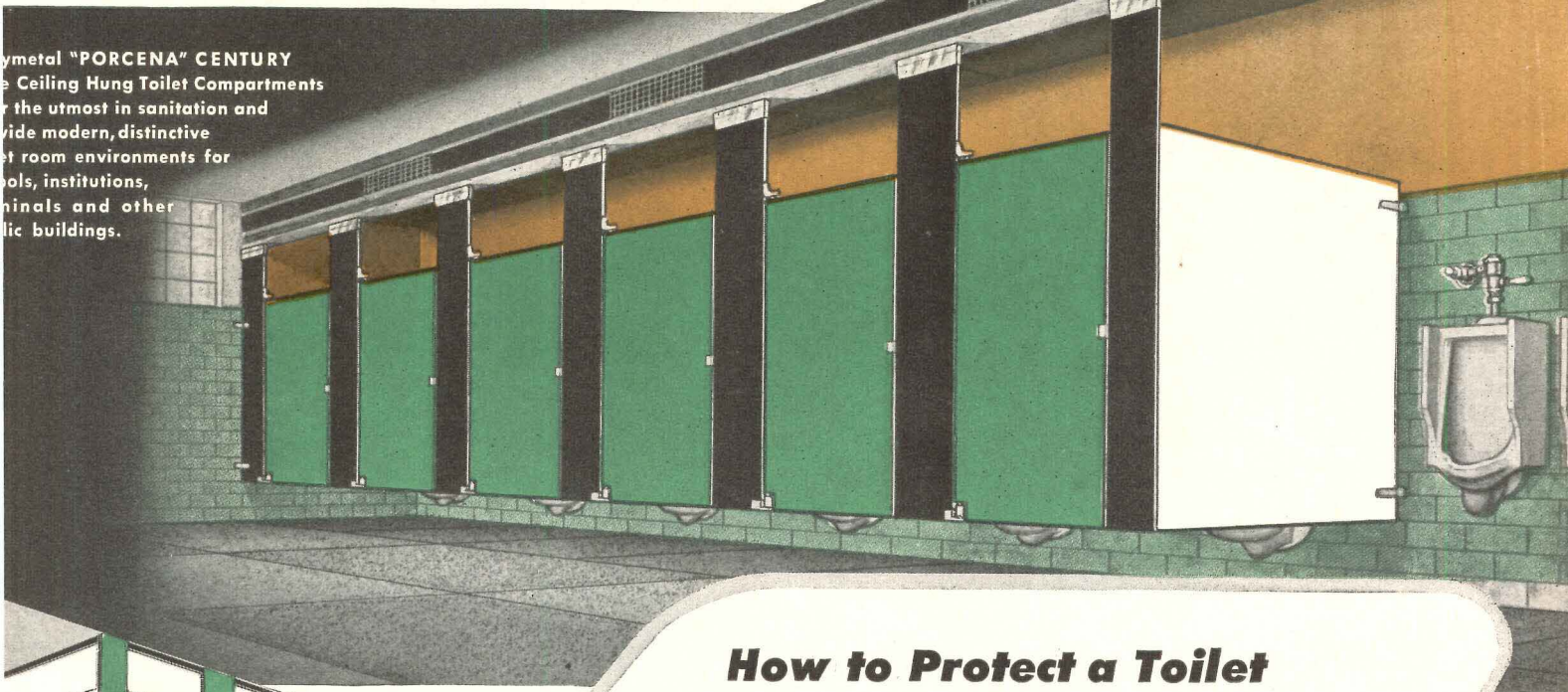
Sanymetal* "PORCENA"

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

(Porcelain on Steel)

TOILET COMPARTMENTS

Sanymetal "PORCENA" CENTURY
Ceiling Hung Toilet Compartments
provide the utmost in sanitation and
offer a wide modern, distinctive
toilet room environment for
schools, institutions,
hotels, terminals and other
public buildings.



Sanymetal "PORCENA"
CENTURY Type Toilet Com-
partments are suitable
for conservative but modern
toilet room environments.

How to Protect a Toilet Room Environment Against Premature Obsolescence

● There is one environment you can protect against premature obsolescence—the toilet room environment.

Toilet room compartments usually dominate a toilet room, influencing the toilet room environment. Sanymetal "PORCENA" (Porcelain on Steel) Toilet Compartments provide a generous measure of protection because of these features. Sanymetal "PORCENA"

(Porcelain on Steel) Toilet Compartments always look new, do not absorb odors, are moisture and rust proof and resist the corrosion of ordinary acids. The glistening, glass-hard, "PORCENA" (Porcelain on Steel) finish can be wiped clean as easily as a porcelain table top, and greatly reduces sanitation and maintenance costs.

Sanymetal "PORCENA" (Porcelain on Steel) Toilet Compartments combine the results of over 36 years of specialized skill and experience in making over 110,000 toilet room installations. Ask the Sanymetal Representative in your vicinity (see "Partitions" in your phone book for local representative) for helpful suggestions about planning suitable toilet room environments . . . Refer to Sanymetal Catalog 22b in Sweet's Architectural File for 1950.

THE SANYMETAL PRODUCTS CO., INC.
1689 URBANA ROAD • CLEVELAND 12, OHIO

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

Sanymetal*

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

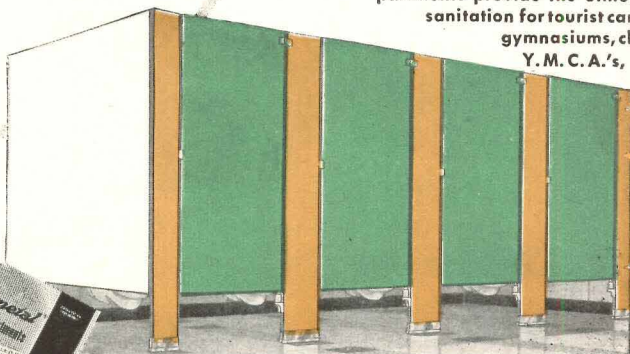
"PORCENA" (Porcelain on Steel)

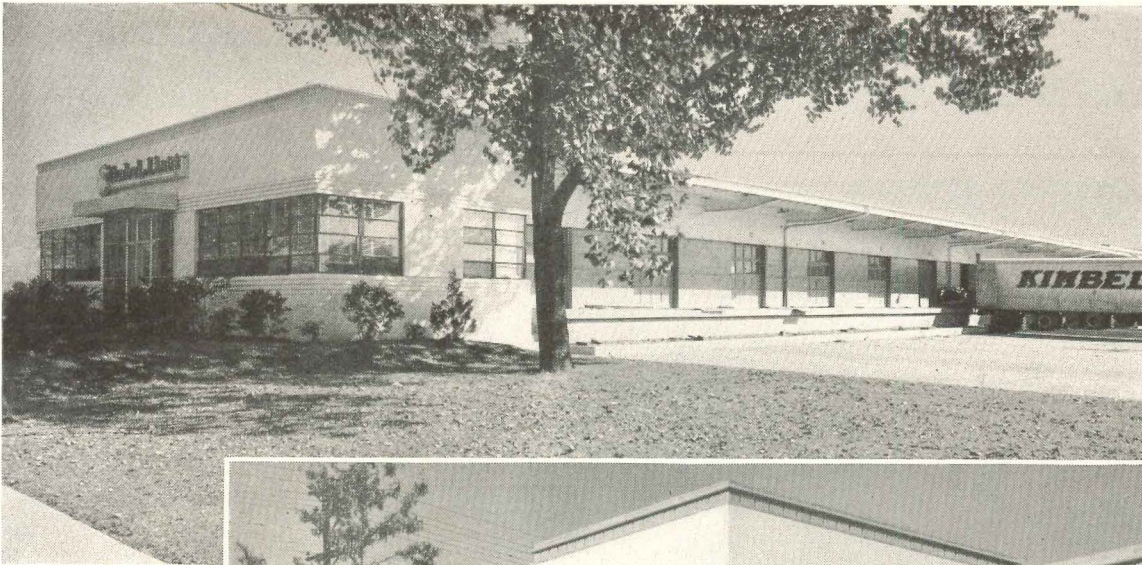
TOILET COMPARTMENTS, SHOWER STALLS AND DRESSING ROOMS



Write for Sanymetal Catalog 87 which illustrates modern toilet room environments suitable for all types of buildings. Several attractive designs in a wide range of colors available. This catalog is also contained in Sweet's 22b Architectural File for 1950.

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





Two truck terminals in Memphis. Hulsey and Hall, architects; H. B. Hunter, structural engineer.

Upper photo: Office and warehouse, Kimbel Lines; Building Constructors, Inc., contractor.

Lower photo: Office and maintenance shops of Dealers Transport Company. B. E. Buffalo, contractor.



Architectural Concrete

Adds Distinction to Commercial Structures

The two truck terminals illustrated above are excellent examples of the distinction and beauty of modern architectural concrete when used in commercial structures. These buildings demonstrate the individuality and versatility that is possible with architectural concrete.

Architectural concrete is the ideal construction material for buildings of any kind, size or style. Schools, hospitals, apartments, factories or office buildings can be imposing as well as functional when designed in architectural concrete.

Architectural concrete has great strength and durability, yet can be molded economically into delicate ornamentation of any period or design.

Architectural concrete also meets every other essential structural requirement. It's firesafe. Its maintenance cost is low. It has long life. This results in dependable service and **low annual cost**.

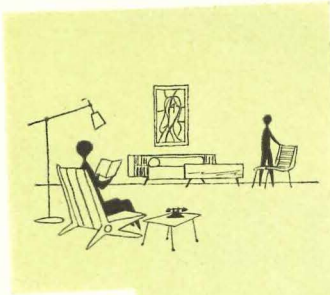
When architects apply the time-tested principles of quality concrete construction, they can design architectural concrete buildings with every assurance of lasting satisfaction to client and designer alike.

Write today for free, illustrated 70-page booklet, "Design and Control of Concrete Mixtures." This manual will be especially helpful in obtaining quality concrete structures. Distribution is made only in the United States and Canada.

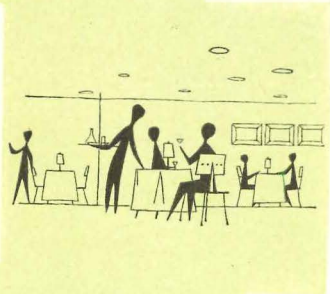
P O R T L A N D C E M E N T A S S O C I A T I O N

DEPT. 3-8, 33 WEST GRAND AVENUE, CHICAGO 10, ILLINOIS

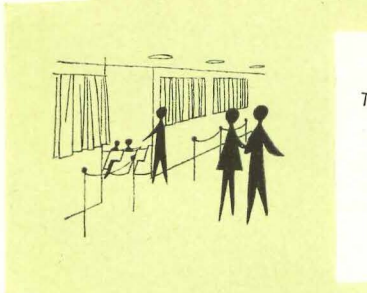
A national organization to improve and extend the uses of portland cement and concrete through scientific research and engineering field work



Apartments



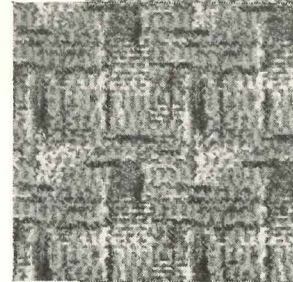
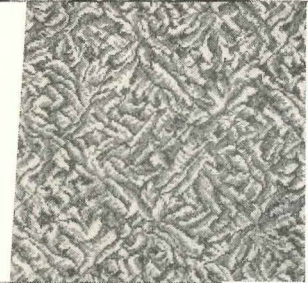
Restaurants



The Theatre



Terminals



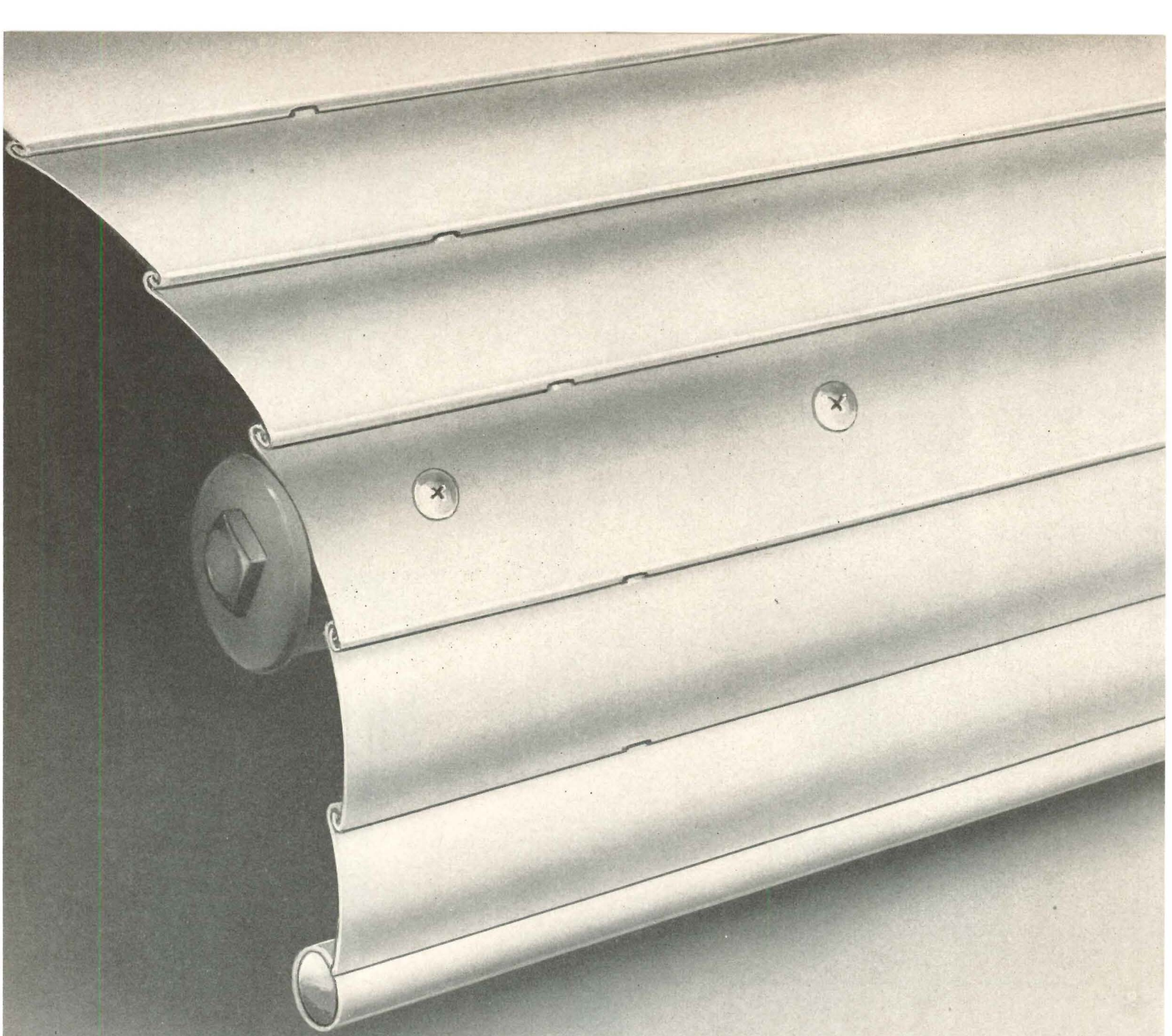
Business is on the carpet, and carpet is our business

You want to give your clients the carpet best suited to their needs, at the price best suited to their budgets. The man to help you do so is the Alexander Smith-Masland carpet contractor in your city. This carpet specialist will show you the newest colors and patterns. He will tell you what wear your client can expect from different qualities and weaves. He will estimate the cost of any type of commercial installation. Let him help you. Better call him, today.

**Alexander Smith
and
C.H.Masland**

CONTRACT CARPETS

295 FIFTH AVENUE, N. Y. 16, N. Y.

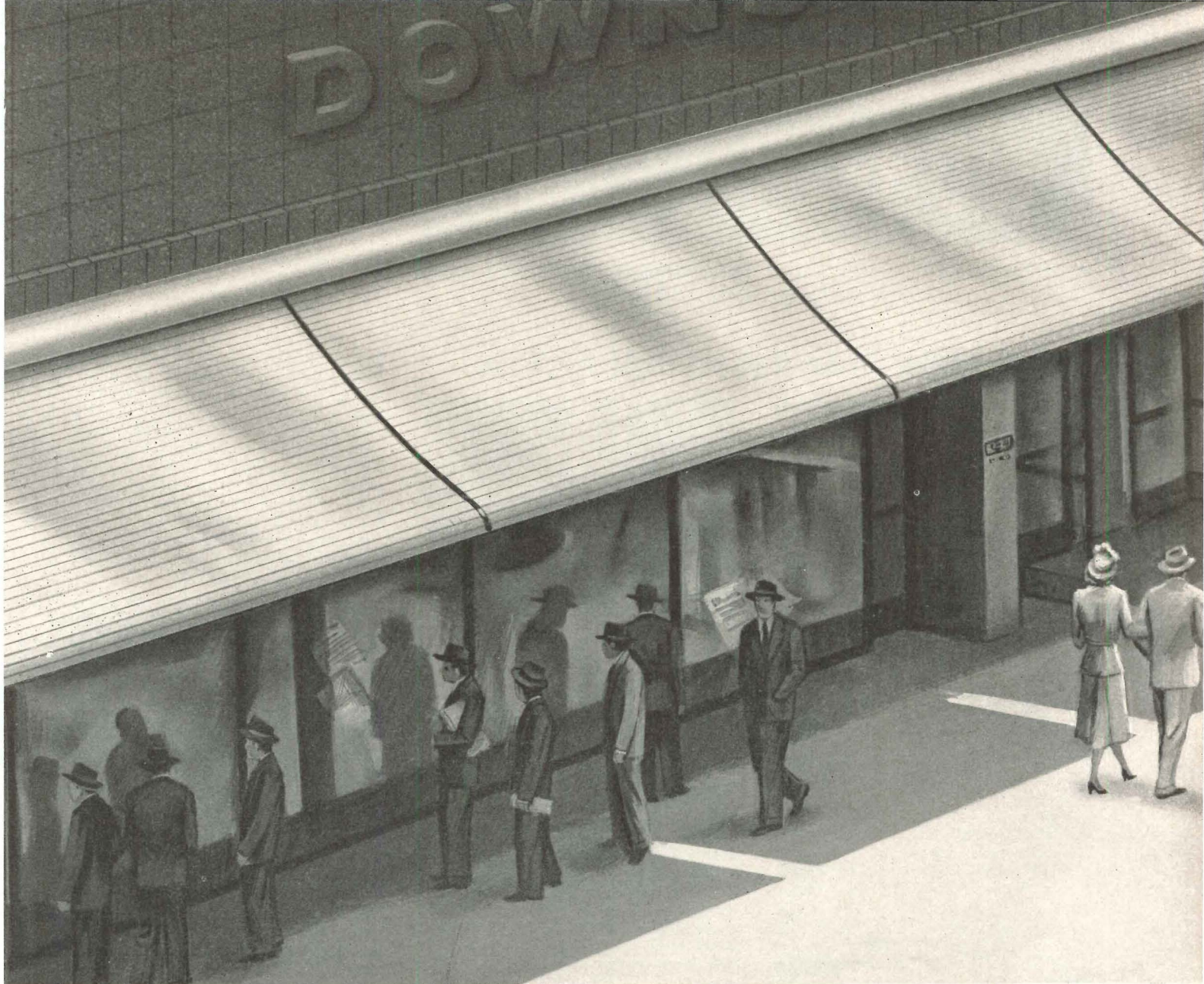


UNEQUALED IN

APPEARANCE...

PERFORMANCE...

REDUCED YEARLY COSTS...



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

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

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

This handsome awning meets the highest standards of modern design. Its striking, rich appearance

will add distinction to any facade, and its satiny lustrous finish reduces glare.

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

Widths up to 18 feet and roofs up to 8 feet are provided as individual units. When widths of more than 18 feet are required, multiple units are used. For detailed information, write 205 North Front St., Niles, Mich.; or 2565 8th St., Berkeley, Cal.

THE
Kawneer
COMPANY
ARCHITECTURAL METAL PRODUCTS
Store Front Metals • Aluminum Roll-Type Awnings
Modern Entrances • Aluminum Facing Materials

WORTHINGTON

WORTHINGTON PUMP AND MACHINERY CORPORATION
HARRISON, NEW JERSEY

AIR CONDITIONING REPORT

Specialists in air conditioning
and refrigeration
for more than 50 years

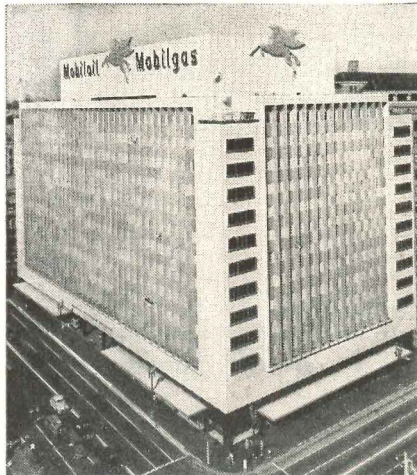
New Weather-Making Plant Has Finger-Tip Control

*Thermostats Each 14 Feet, Four Fan Rooms
On Each Floor, Assure Flexibility*

A weather factory huge enough to turn out a ton of ice every day for every office in the new General Petroleum building, but sensitive enough to supply a different temperature every fourteen feet throughout the entire half-million square foot structure . . . that's the heating and air conditioning plant in General Petroleum Corp.'s new building in Los Angeles.

Basic approach in design of the equipment, which was done by the office of Ralph E. Phillips, consulting mechanical and electrical engineers, was determined by Southern California weather which may require the building to be heated and cooled simultaneously. One duct brings cooled air and the other heated air to all portions of the building.

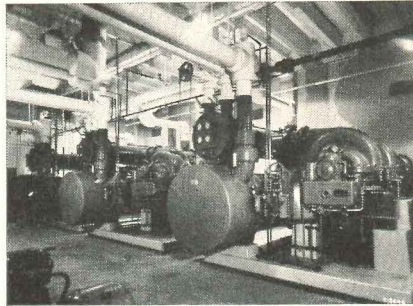
The outlets are spaced to fit the modular design of the building which is on a 14 and 7 foot plan. Outlets are located each 14 feet on most floors; a few floors, where smaller offices



may be used, have outlets every 7 feet.

Each outlet has its own thermostatic control—more than a thousand controls altogether. Since most offices are 14 feet in width, that means each office can choose its own weather.

The controls operate dampers



which automatically mix the hot and cold air to provide the desired temperature. A minimum of six and an average of eight complete air changes hourly are provided.

Feeding the air to the twin-duct system are 48 fan rooms. Four are located on each floor from the second to the top floor of the 13-story building. Each fan room contains heating and cooling coils and a 3 horsepower electrically driven fan flowing 7500 cfm.

The refrigeration plant consists of three Worthington 300-hp centrifugal compressors, using "Freon 11", with a capacity of 333 tons each. Chilled water from the refrigeration plant is circulated to the cooling coils in the fan rooms, from where the cooled and conditioned air is distributed throughout the building. Cooling towers are located on the roof.

W. S. Kilpatrick & Company, Los Angeles, contractors. Wurdeman & Becket, Los Angeles, Architects.

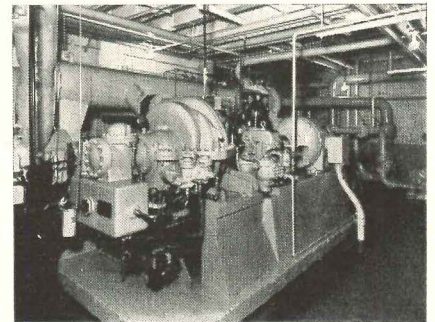
Hot News Gets Cooled Off

The Nashville Tennessean and the Nashville Banner are published in Newspaper Printing Corp.'s air conditioned building.

The entire building, with the exception of the press room with its large printing roll presses, is air conditioned with Worthington equipment. Executive offices have individual temperature control. Multiple zone control for the building is provided by using face and by-pass dampers plus hot water reheat.

Air conditioning is provided by a Worthington centrifugal refrigeration system with a 150 ton refrigeration capacity. Chilled water is distributed to nine AVY and AHY type central plant air conditioning units which have chilled water cooling coils. A Worthington chilled water pump and two tower pumps complete the equipment for the system.

Architects and Engineers: Marr & Holman, Nashville. Contractors: J. M. Gallagher Co., Nashville.



Looks . . . and Feels Different

The Kaufman Department Store in Colorado Springs, Colorado, starts its 54th year in business with a new look and a different climate. All three floors of the store are air conditioned with Worthington equipment, which includes a 6HF4 Freon-12 condensing unit and a 4HF4 Freon-12 condensing unit. The latter controls temperature of basement and first floor, the 6HF4 unit controls second floor. Zone control is used by both. Consulting engineer: Douglas Jardine, Colorado Springs, Colorado.

A9-21



WORTHINGTON

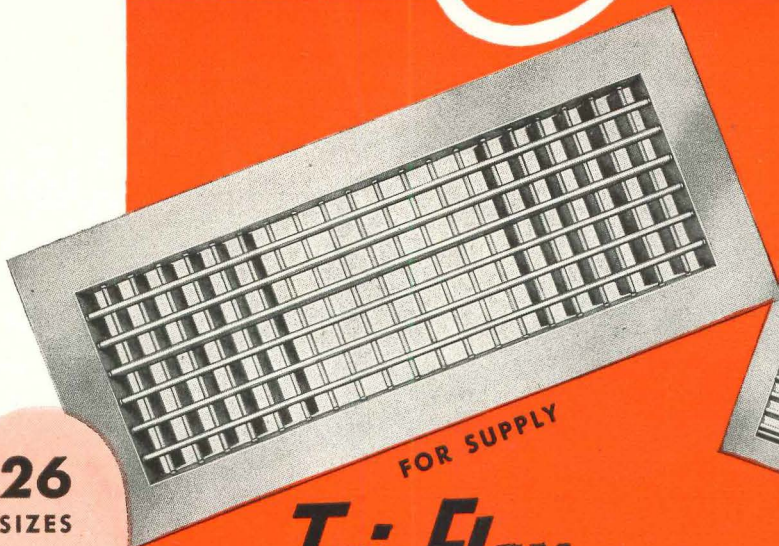


AIR CONDITIONING AND REFRIGERATION

A complete line . . . in which all the vital components are made, not just assembled by Worthington. For more worth with Worthington, see your nearby Worthington distributor (consult Classified Telephone Directory).

26
20

FOR ECONOMY
FOR QUICK SELECTION
FOR PROMPT DELIVERY



FOR SUPPLY



FOR RETURN

Tri-Flex

Aerovane

26

SIZES

- 8 x 4
- 10 x 4
- 10 x 6
- 12 x 4
- 12 x 5
- 12 x 6
- 14 x 4
- 14 x 5
- 14 x 6
- 16 x 5
- 16 x 6
- 20 x 5
- 20 x 6
- 20 x 8
- 24 x 5
- 24 x 6
- 24 x 8
- 24 x 10
- 24 x 12
- 30 x 6
- 30 x 8
- 30 x 10
- 30 x 12
- 36 x 8
- 36 x 10
- 36 x 12

20

SIZES

- 10 x 6
- 10 x 8
- 12 x 6
- 12 x 8
- 12 x 12
- 18 x 6
- 18 x 12
- 18 x 18
- 24 x 12
- 24 x 18
- 24 x 24
- 30 x 12
- 30 x 18
- 30 x 24
- 36 x 18
- 36 x 24
- 36 x 30
- 48 x 24
- 48 x 30
- 48 x 36

FOR ECONOMY . . .

size standardization of Tri-Flex and Aerovane Grilles and Registers has resulted in efficient mass production methods that mean real savings.

FOR QUICK SELECTION . . .

size standardization has simplified the specification of grilles and registers to meet normal job requirements.

FOR PROMPT DELIVERY . . .

size standardization means on-the-shelf stock . . . job completion without costly delays.

And, all standard items are individually packaged in sturdy cartons for protection . . . for handling convenience. Easy-to-read labels facilitate sorting and locating.

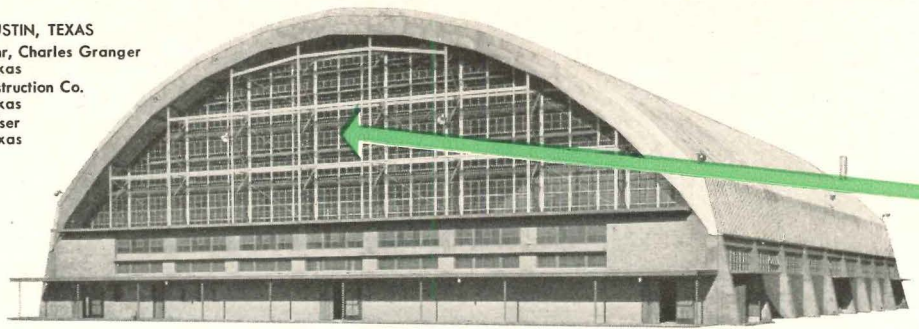
For complete details and engineering data, write for a copy of Catalog 48S.

TUTTLE & BAILEY inc



NEW BRITAIN, CONNECTICUT

AUSTIN MUNICIPAL COLISEUM, AUSTIN, TEXAS
 Architects: Arthur Fehr, Charles Granger
 Austin, Texas
 Contractor: Ricks Construction Co.
 Austin, Texas
 Mesker Sales Engineer: Eric L. Kaiser
 Austin, Texas



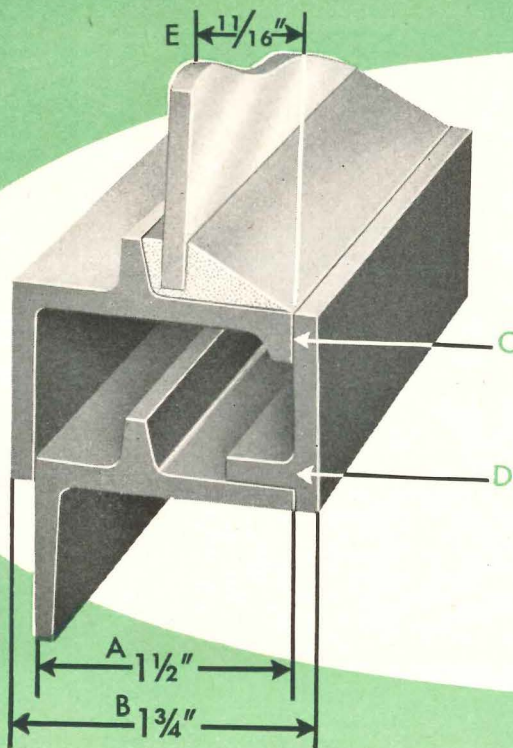
For maximum freedom of design . . . Mesker "window walls"

... and we mean WALLS OF WINDOWS! This application of the *strongest* windows made is typical of how architects are now getting striking effects with Mesker STEEL Windows. This "window wall" has more than 3,000 square feet of undivided window area . . . supporting almost three tons of glass and putty alone! Plenty of natural daylight carries *clear to the center* of this huge auditorium . . . saves thousands of dollars each year in electricity. This window opening, although 140 feet long and 36 feet high, will safely withstand the greatest of pressure exerted by the high winds off the Plains of Texas.

The extra margin of safety, as a matter of fact, is why so many architects tell us they prefer Mesker Steel Windows. Their big 1¾-inch sections, *the deepest in the industry*, are reassuring when you're striving for effects like those illustrated here. This extra strength also means maximum resistance to wind, weather and shock, often the cause of excessive maintenance. Most important . . . the initial cost of Mesker Steel Windows will challenge that of any other window on the market. Specify Mesker STEEL Windows . . . *known for their strength*.

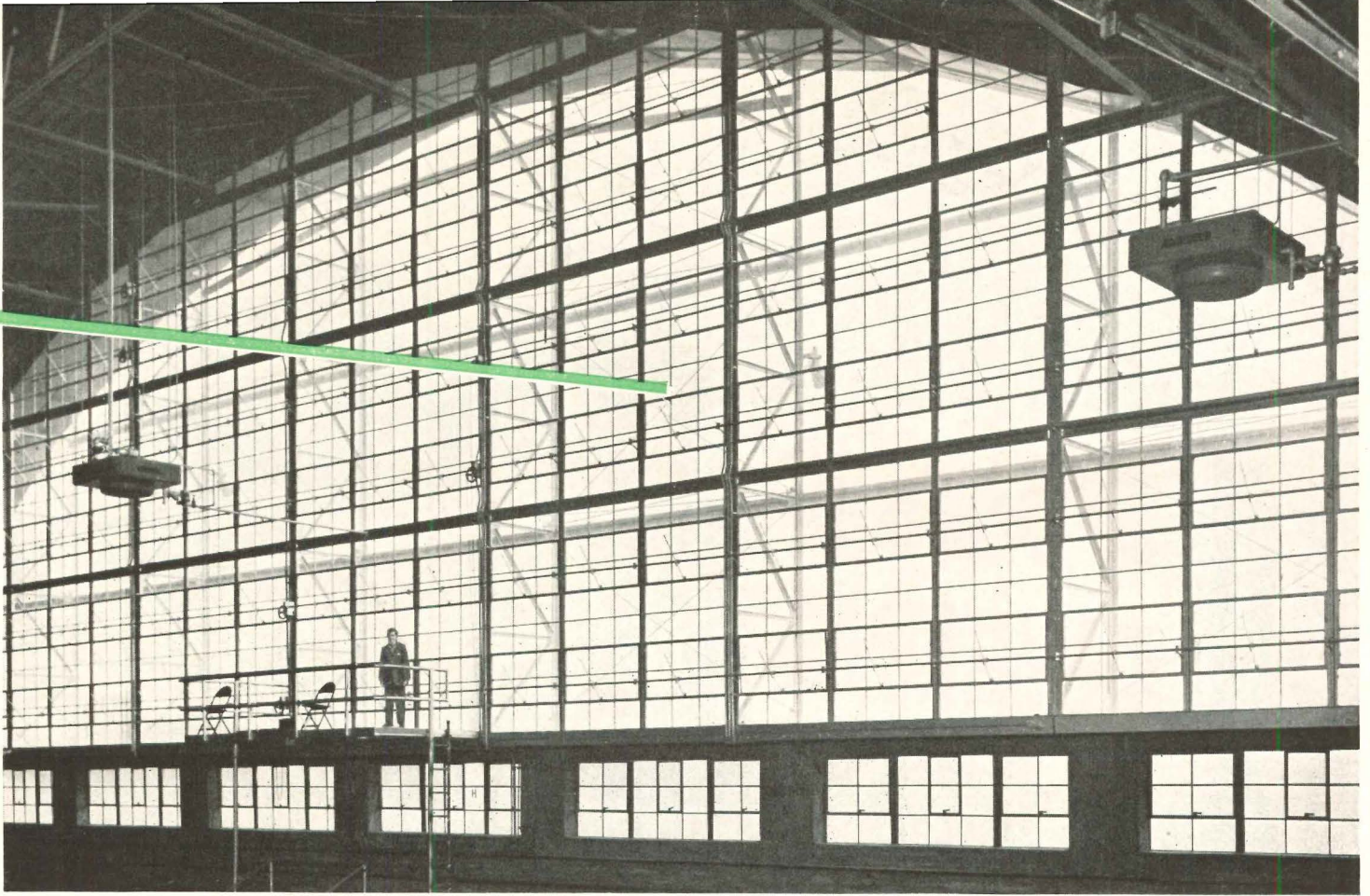
Mesker

STEEL WINDOWS . . .

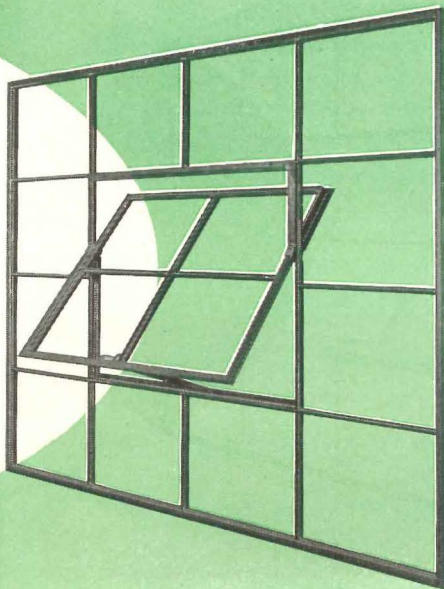


NO OTHER WINDOW HAS IT!

Mesker Horizontal Pivoted Windows, like those used above, have combined vent, frame and weathering members (B), 1¾-inches deep! Frame members alone (A), are a full 1½-inch deep. Note, too, the wider contact on ventilator bars (C), assuring better weather-tightness. Hot rolled special shape weather angle (D), cannot be bent, insures original factory fit. Minimum putty rebate (E), eliminates unsightly putty appearance, reduces glazing labor!



KNOWN FOR THEIR
Strength



Mesker
BROTHERS

Available now and FREE to architects

It's here—new 1950 Catalog of Mesker "Heavy Duty" Windows! An organized reference book that covers every aspect of steel window designing, engineering and specifying. Order your copy today by mailing the coupon below!



4338 GERALDINE • ST. LOUIS 15, MO.

Gentlemen: I want to know more about the added advantages of Mesker Heavy Duty Steel Windows. Please send me (free) your 1950 Catalog.

Name _____

Address _____

City and State _____

AR30

FOR COMMERCIAL BUILDINGS, FOR HOSPITALS



The Fred Jones Lincoln Building, Oklahoma City
 Architect: Sorey, Hill & Sorey
 General Contractor: W. E. Price Construction Co.
 Roofing Contractor: Standard Roofing & Material Co.

...courtesy of a **TRAFFIC-CONSCIOUS** architect

No—we don't believe that the mighty traffic-jams in our towns and cities will be wholly solved by roof parking areas. However, those comparatively few commercial establishments who *are* equipped for roof parking are pointing the way toward some relief and a very welcome service for their customers. Department stores, large chain stores and the like, are taking a good hard look at roof-parking as a sales-increasing potential.

Ruberoid has long pioneered the idea of complete utilization of valuable roof areas...and at the same time made it fully practical with a series of carefully engineered and job-tested Ruberoid Built-Up Roof

Specifications. These include Garden Roofs for apartments and hotels... Promenade Roofs for schools, hospitals and office buildings... Heavy Traffic Roofs for industrial buildings... and Parking Areas for store buildings. Their performance has been carefully watched and fully proved over long periods of time.

If you're not acquainted with these unusual Ruberoid Roof Specifications, you can get copies from the nearest Ruberoid Sales Office or your local Ruberoid Approved Roofer. You're bound to find them helpful in planning more efficient roofs no matter what type of building is on the boards.

The **RUBEROID** Co. built-up roofings

Building Materials for Industry, Home and Farm • Executive Offices: 500 Fifth Avenue, New York 18, N. Y.

The right roof for any job—from ONE source!

Ruberoid makes every type of built-up roof—Smooth Surfaced Asbestos, Coal Tar Pitch with gravel or slag surfacing, or smooth or gravel-and-slag surfaced asphalt... in specifications to meet any need. Ruberoid Approved

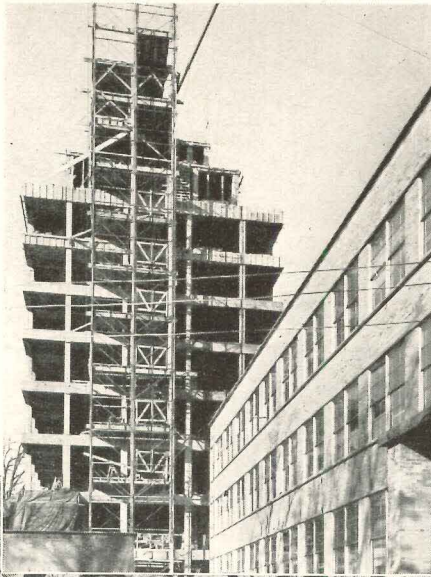
Roofers are not prejudiced in favor of any one type. You are assured of one source for all materials, centralized responsibility, smoother operation, uniform quality.

Sales Offices: Baltimore, Md., Chicago, Ill., Dallas, Tex., Erie, Pa., Millis, Mass., Minneapolis, Minn., Mobile, Ala., New York, N. Y.

SCHOOL OF BUSINESS ADMINISTRATION

University of Michigan

Ann Arbor

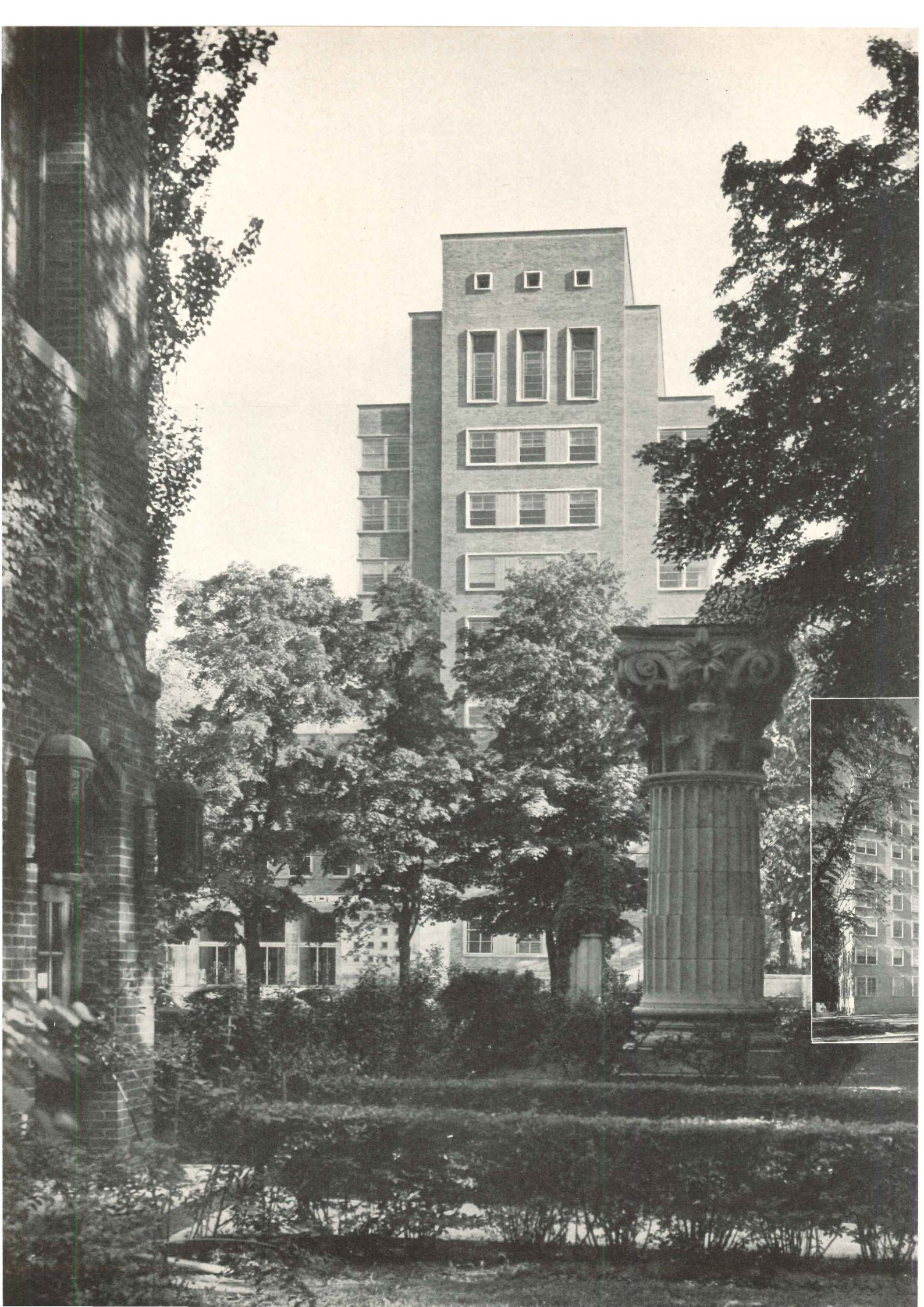


Lee Black & Kenneth C. Black, Architects

*Lynn W. Fry, Architect,
Supervising Architect, Univ. of Michigan*

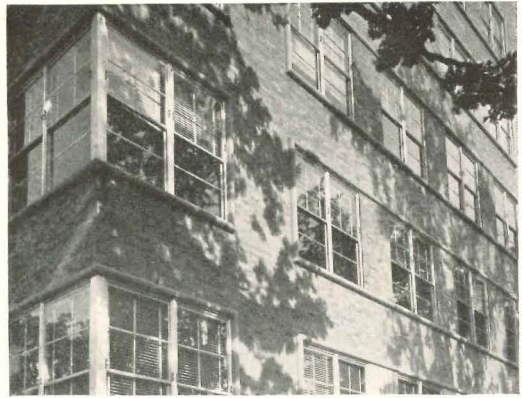
*Russell A. Stevenson, Dean,
School of Business Administration*

Walter M. Roth, Plant Superintendent

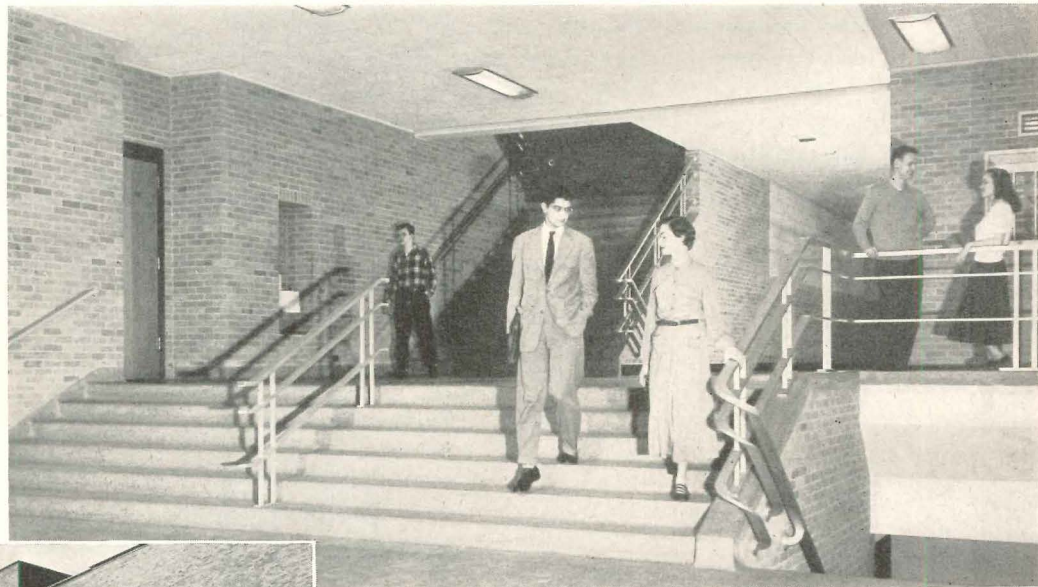
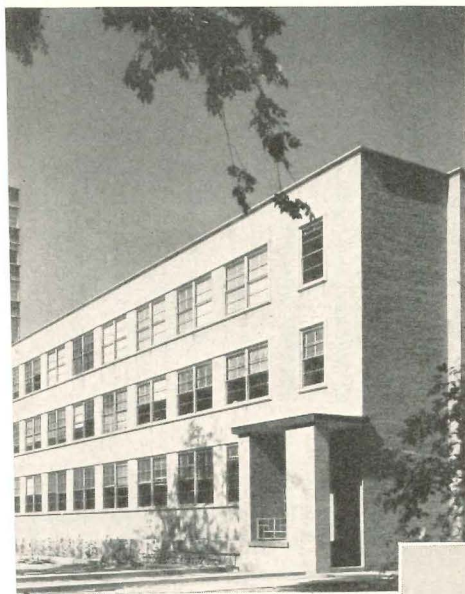


IN the new building for Michigan's School of Business Administration, harmony with the diversity of architectural styles on the University's campus was sought in such matters as facilitating student traffic from other campus areas to ultimate destinations within the new structure. Early in the design process it was decided that the School should have, in part at least, something of the flavor of a commercial office building, to accustom students to the environment in which they would eventually apply the training received here.

Next were considered, in sequence, the relationship of the various functions of the School to each other, circulation within the building, detailed planning of the several departments, and interior and exterior treatment, including selection of materials, finishes, colors, and study of the problems of acoustics, lighting, heating, ventilating, etc. The refinements of design were by no means neglected — note window detail at right — but there is little ornament for ornament's sake. If a certain flatness of aspect results despite the projecting window surrounds, that is as characteristic of the average contemporary office building as the Corinthian capital is of lush Rome. (The facing photograph was taken from the garden of the College of Architecture.)



Lower tower stories have same floor-to-ceiling height as 3-story classroom wing; fourth and fifth stories, an intermediate height; remainder, normal office height. Aluminum double-hung windows are four lights high throughout tower's height but are gradually reduced from 8 ft high on first floor to 5 ft 4 in. on the eighth, to accentuate natural foreshortening when viewed from the ground

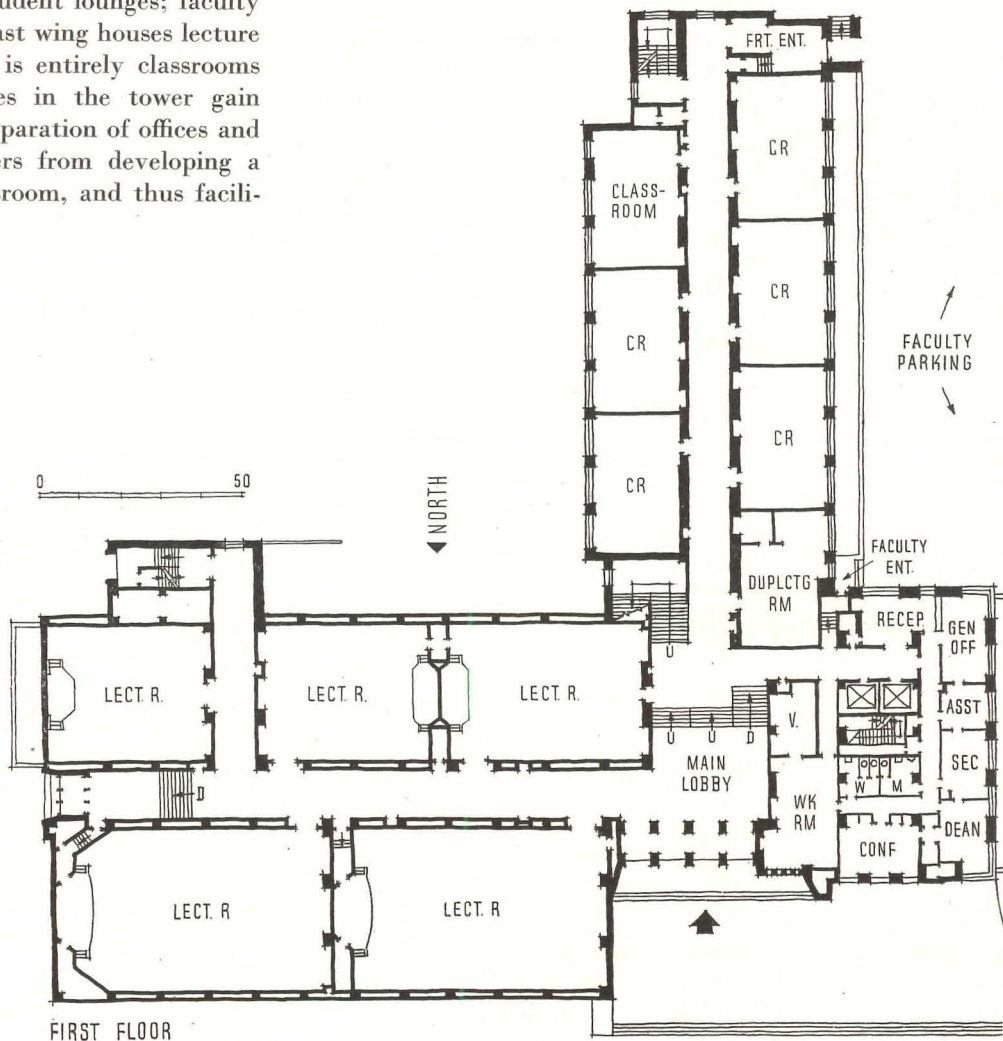


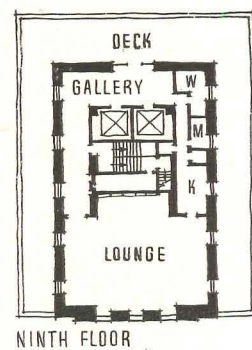
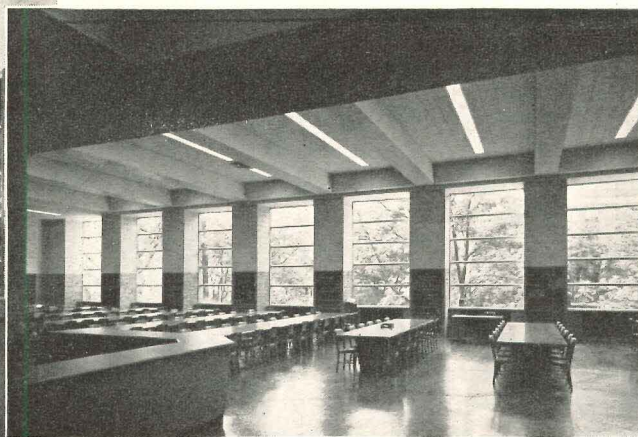
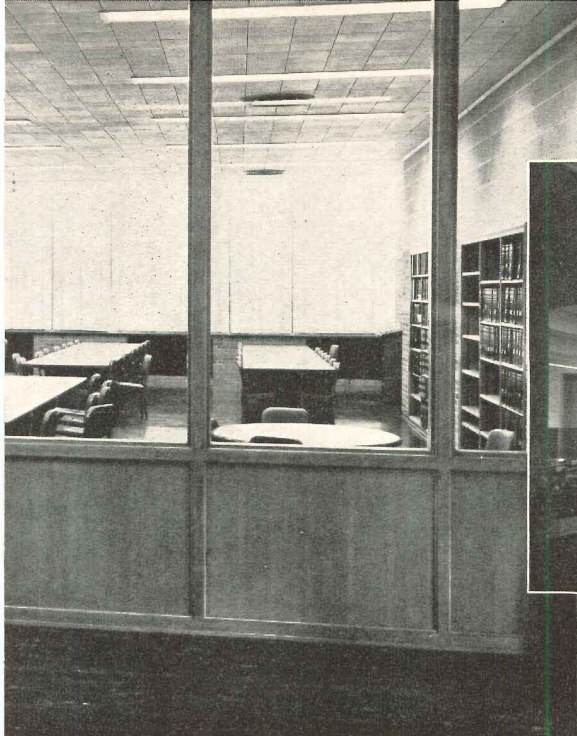
Entrance location was determined by campus traffic. Through the principal entrance near the northwest corner (interior above; exterior on page 87) passes 85 per cent of student traffic from the campus. East entrance (lower left) accommodates above 10 per cent, small southwest entrance (upper left) takes remainder



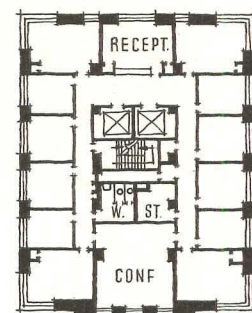
Michigan's School of Business Administration required lecture rooms to seat 750; 100,000-volume library for 400; 27 classrooms (including laboratories); private offices for 80 faculty members; administrative offices; special facilities for two Bureaus (Industrial Relations and Business Research); two student lounges; faculty lounge; usual accessory areas. East wing houses lecture rooms and library. South wing is entirely classrooms and laboratories. Faculty offices in the tower gain privacy, business atmosphere; separation of offices and classes prevents faculty members from developing a proprietary interest in any classroom, and thus facilitates multiple use of classrooms.

Basement (not shown): 9 class or seminar rooms, office equipment exhibition room, student lounge with kitchenette, record vault, extensive mechanical and electrical equipment space. Note direct, non-crossing circulation: from main entrance students go up or down to classes or library, left to lectures, right to offices by elevator. Faculty enters directly from parking space to office elevators



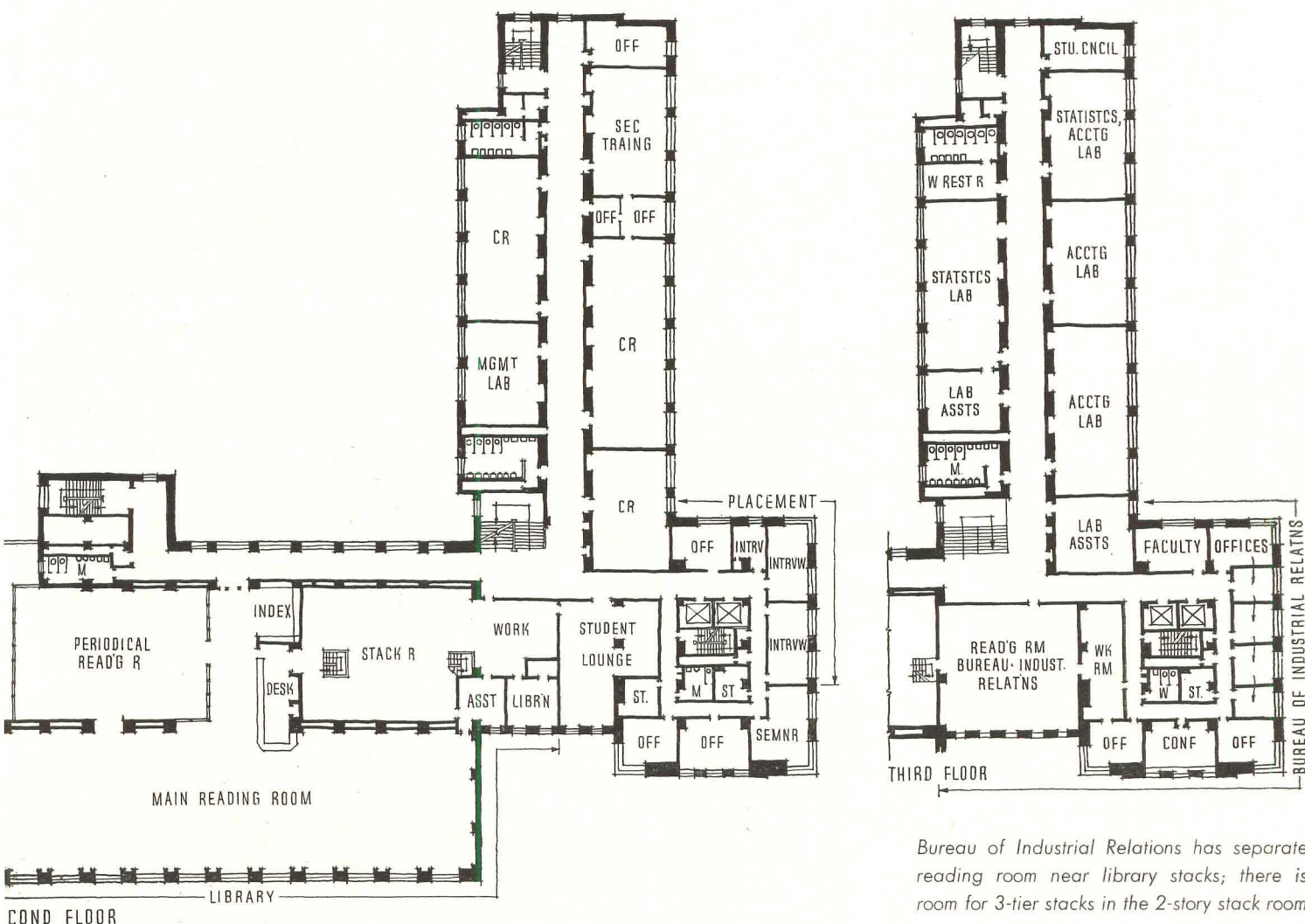


NINTH FLOOR



FIFTH FLOOR

Photos: left and right, main library reading room; center, periodical room. Library is primarily for majors in business administration. Plans: fourth floor (not shown) has typical offices, for Bureau of Business Research. Sixth, seventh, eighth floors, like fifth, are faculty offices. Ninth floor: alumni and faculty lounge. Tenth: elevator machinery, water tank, fan room



Bureau of Industrial Relations has separate reading room near library stacks; there is room for 3-tier stacks in the 2-story stack room

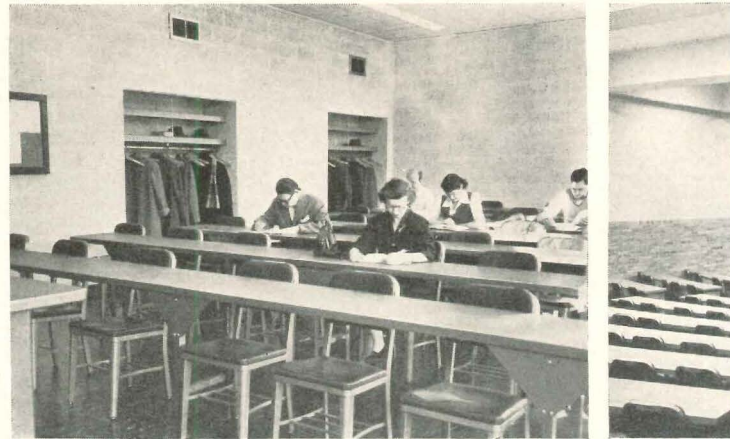
The School of Business Administration's three largest lecture rooms have sloping floors, with benches and chairs on terraces and ramped aisles. Windows are omitted entirely in order to increase the acoustical effectiveness of the room, to avoid the expense of installing and maintaining automatic curtains to darken the room for visual education programs, and to focus attention on the speaker's platform. Each speaker's platform is equipped with a sliding blackboard and a projection screen. Small storage areas are provided in each lecture room for equipment and lecture material.

The library (see preceding page) is arranged with the card catalogue reference section for students adjacent to its main entrance, with the charging desk immediately next; from here there is access to stack space, which will ultimately be three tiers high and accommodate 100,000 volumes; the first two tiers were installed as a part of the original building contract. Of the two principal reading rooms, the large general reading room with windows to the north seats approximately 295 people; a smaller periodical reading room seating 85 faces east. A small doorway at one end of the main reading room leads to the librarian's office.

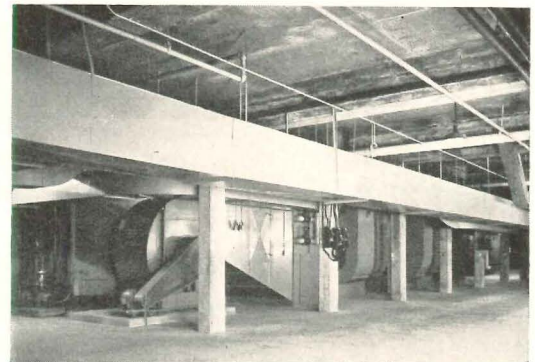
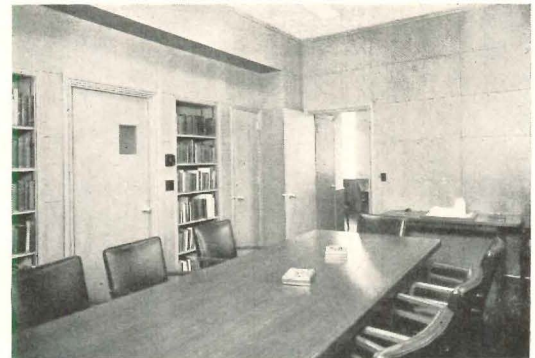
The standard classroom in this building, designed for 50 students, measures approximately 22 by 36 ft. The classroom wing is designed in 12-ft bays, each of which operates as a unit so far as heating, ventilating and lighting are concerned. It is, therefore, possible to increase or decrease the standard classroom unit in intervals of 12 ft at any time. Special laboratories are housed in the classroom wing, and have been provided with underfloor ducts for electric services so that automatic business machines can be used anywhere.

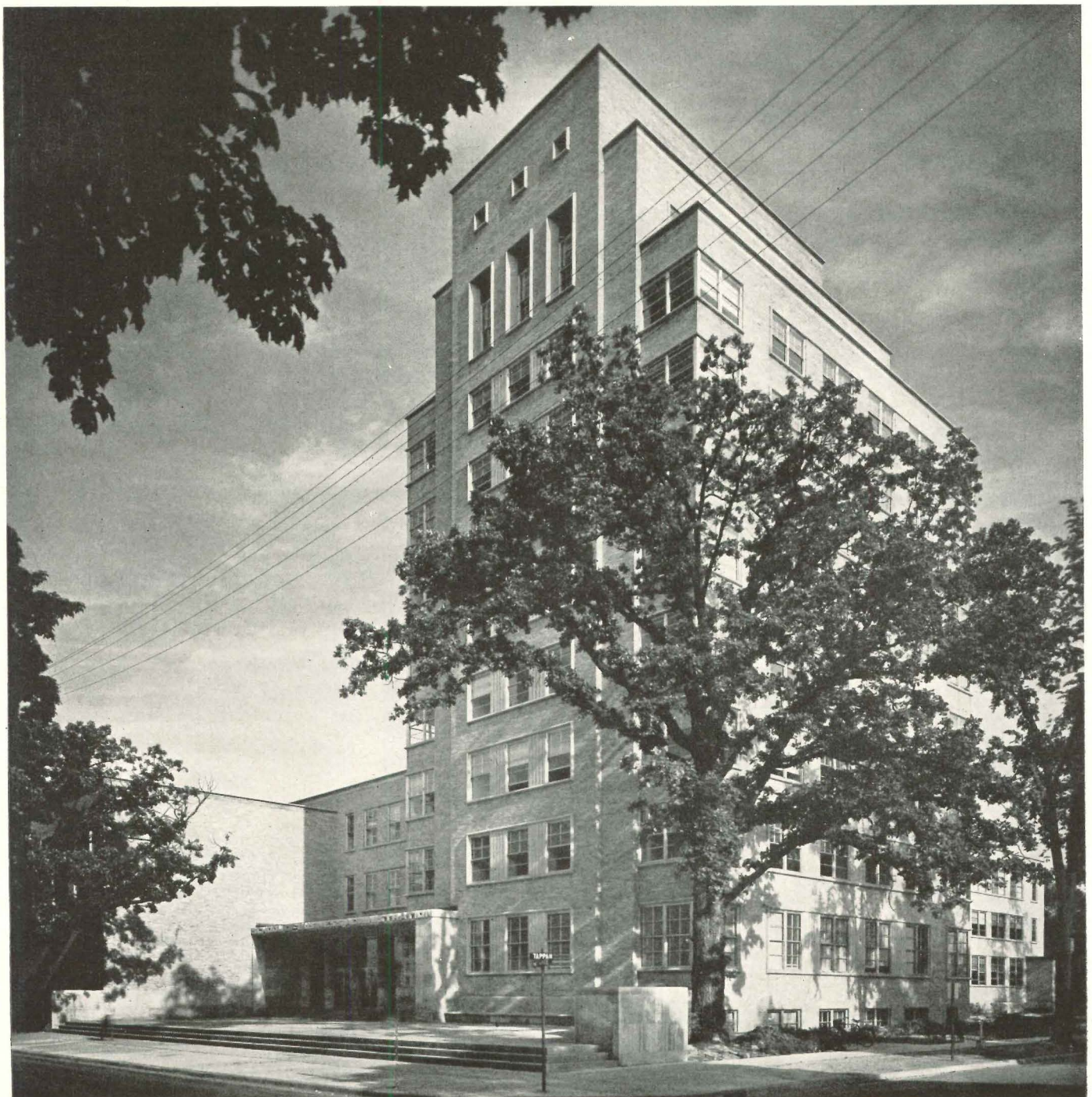
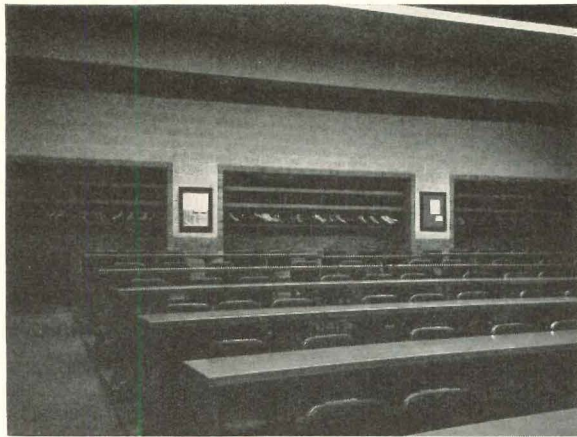
The structural frame of the building is reinforced concrete up to fourth floor level; the faculty office tower above the fourth floor has structural steel framing. The entire building is faced with warm buff brick; trim is Indiana limestone. Artificial lighting throughout is provided by recessed fluorescent fixtures with egg-crate louvers set flush with the ceilings. Ceilings themselves are of acoustic material cemented on mineral lath. All finished masonry walls throughout the interior are painted cinder block, except that in corridors, lecture rooms and library reading room wainscots, a brick similar to the warm buff exterior face brick has been used. Sheet rubber flooring was used in the library reading rooms, cork flooring on the ramps of the lecture rooms, and asphalt tile in all other areas. Most windows are double-hung aluminum. The same metal is used for all other exposed metal work throughout the building. Interior doors are of wood with metal frame. Toilet stalls are of metal.

Heating is by steam from the University's central plant, through recessed convectors underneath the windows, controlled by thermostats in each room. Some supplemental heat is provided through a fan and blower system. The fans are located in the basement and supply ducts are contained in corridor ceilings. Separate fans are provided for lecture rooms, library, and classroom sections.



Classrooms and laboratories (above left) have wall recesses for coats and hats; there are no lockers in corridors. Lecture rooms (above, center and right) are windowless to improve acoustics and visual education and to concentrate attention on podium. Below, conference room in tower; bottom, mechanical equipment





Simco
SHOES





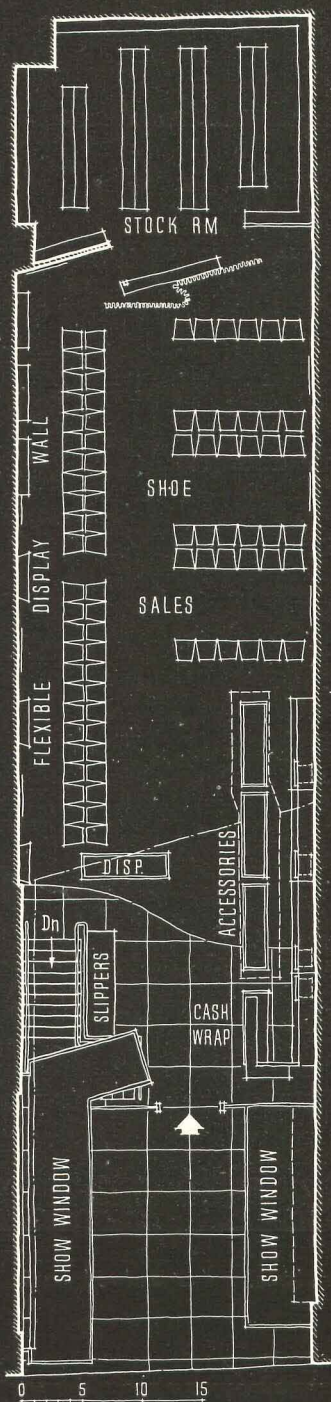
CUSTOMER LURE FOR SHOE CHAIN

Jamaica, New York

Gibbons & Heidtmann, Architects

PRIME requisite for this new Simco Shoe store was customer appeal and plenty of it: there are four competitive women's chain shoe stores close by, on the same side of the street.

The owners' requirement of 200 to 250 sq ft of window display area necessitated an arcade entrance. For front interest, the two windows were treated differently in height, support and lighting. The larger of them was cantilevered off the side wall, carried through the glass front and angled over the stairs to the selling basement. The large sign panel is carried on a structural



Lionel Freedman: Pictor

free-standing awning box; its dark brown vertical porcelain members are separated by white rubber stripping; frame is white porcelain, letters are white.

Flexibility keynotes display provision in the selling area. The display wall shown here has a finish of cemented-on fabric in a 3-ft square pattern. Over the pattern joints wall bracket standards are applied horizontally and vertically, permitting a series of display boxes and mirrors to be located anywhere on the wall. Above the accessory bar, shadow boxes in a continuous wall-hung back bar fixture, complete with lighting, may be grouped in any position. Flexible spotlighting for the displays is provided above the louvered ceiling.



Lionel Freedman: Pictor



Display wall is red, carpeting gray; seats are alternately white and gray; fixtures are birch, walnut and red plastic

A SITE FULLY EXPLOITED

House for H. W. Eldredge, Norwich, Vt.

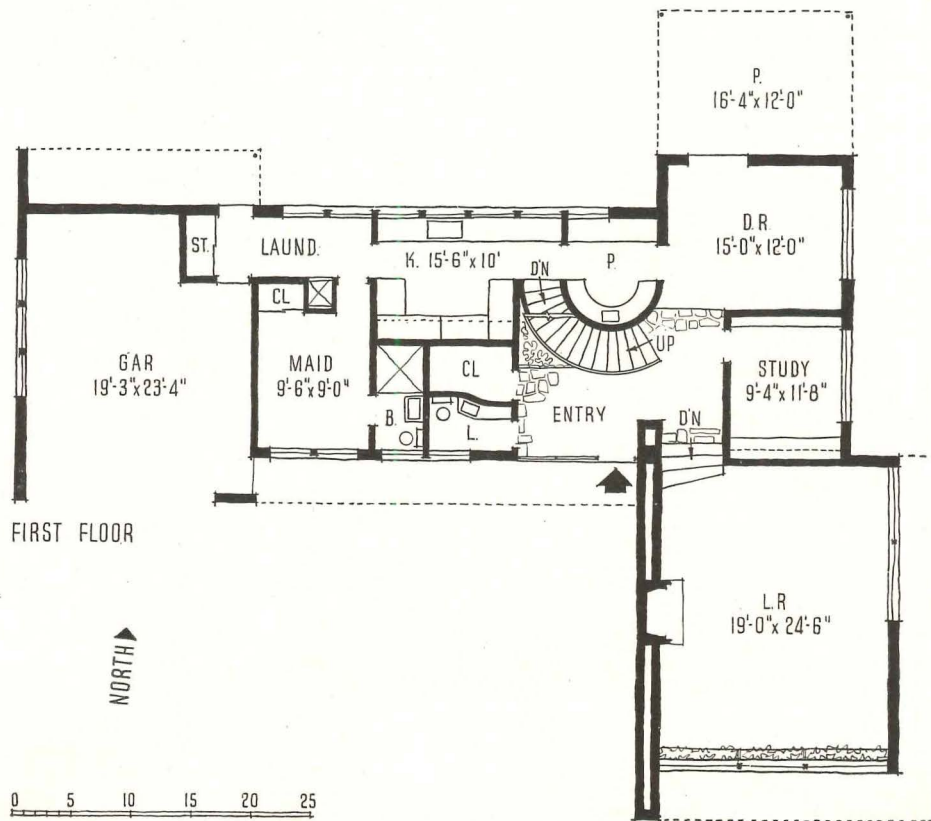
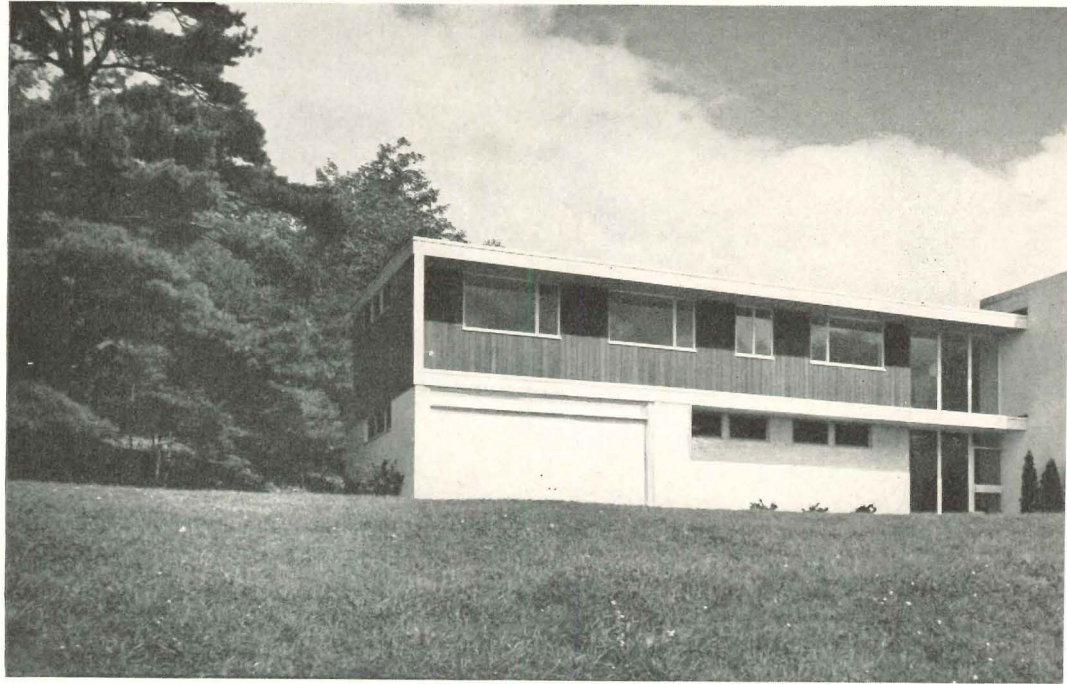
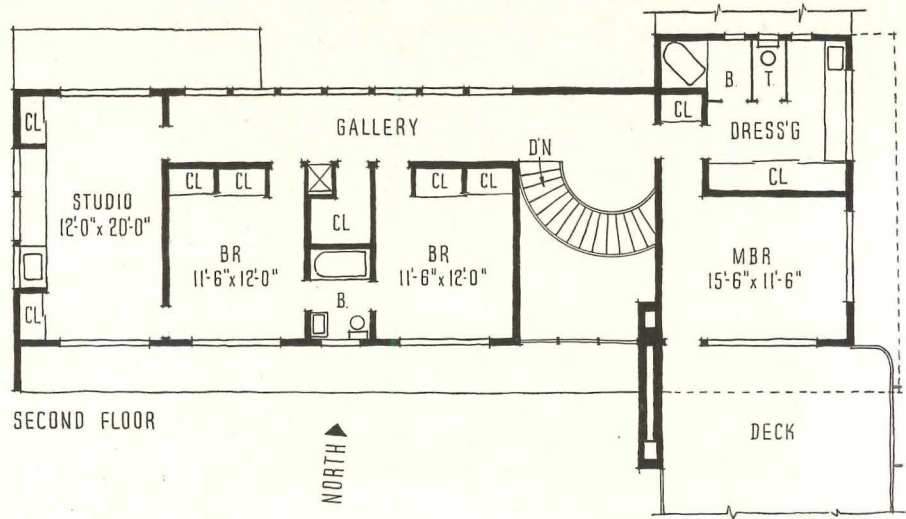


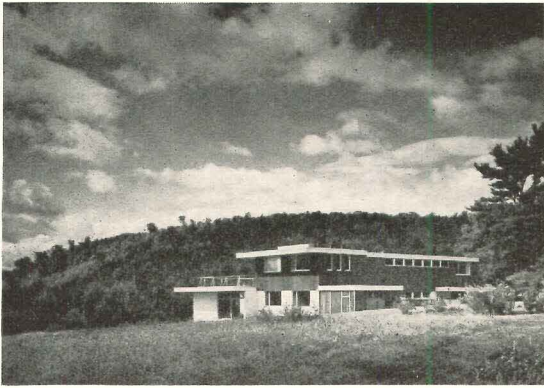
Ezra Stoller: Pictor

E. H. & M. K. Hunter, Architects

MR. ELDREDGE, a Dartmouth professor of sociology and planning — at Hanover, N. H., just across the Connecticut River — chose this site during his student days. Mrs. Eldredge, an Englishwoman, saw the house plans in England prior to their marriage. The architects, whose office is in Hanover, knew the 8-acre hill-top site and were able to exploit fully its extensive view of river valley to the south, and the mountains of New Hampshire and Vermont to east and west.

Eldredge House

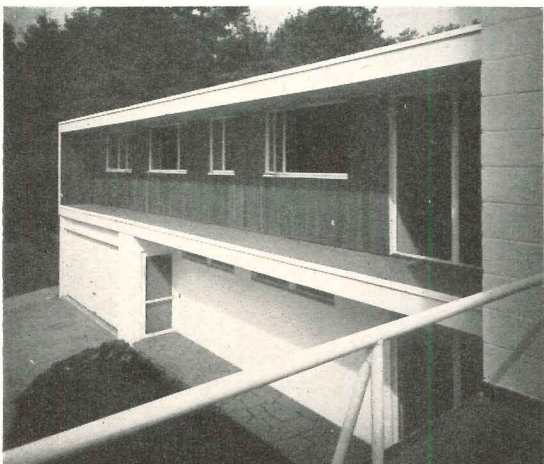




Sitting in a 5-acre open field — the rest of the site is wooded—the house is reached by two dirt roads leading up from the valley; a Jeep negotiates the climb in snowy weather. The menage is planned for a pair of servants whose first-floor quarters together with kitchen and laundry are completely separated from family living areas, a requirement expressed visually by the heavy masonry chimney-wall which, on the exterior, is the dominant vertical. To it the horizontal of roof and sunshade projections are deliberately, strongly opposed. This is a conscious composition; it has a definite idea to convey: the house is a setting for urbane people who entertain handsomely, on a rural site but with no hint of rusticity even in the cypress siding



Ezra Stoller: Pictor



Eldredge House



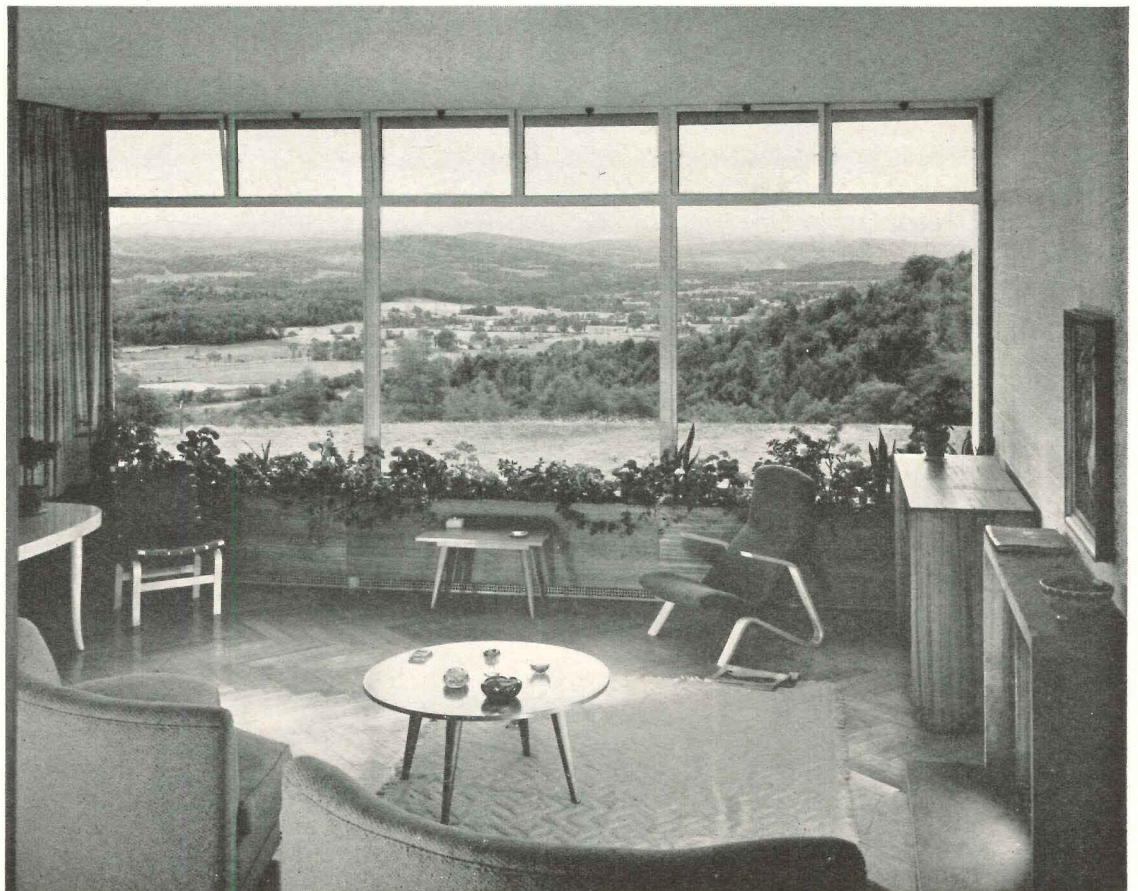
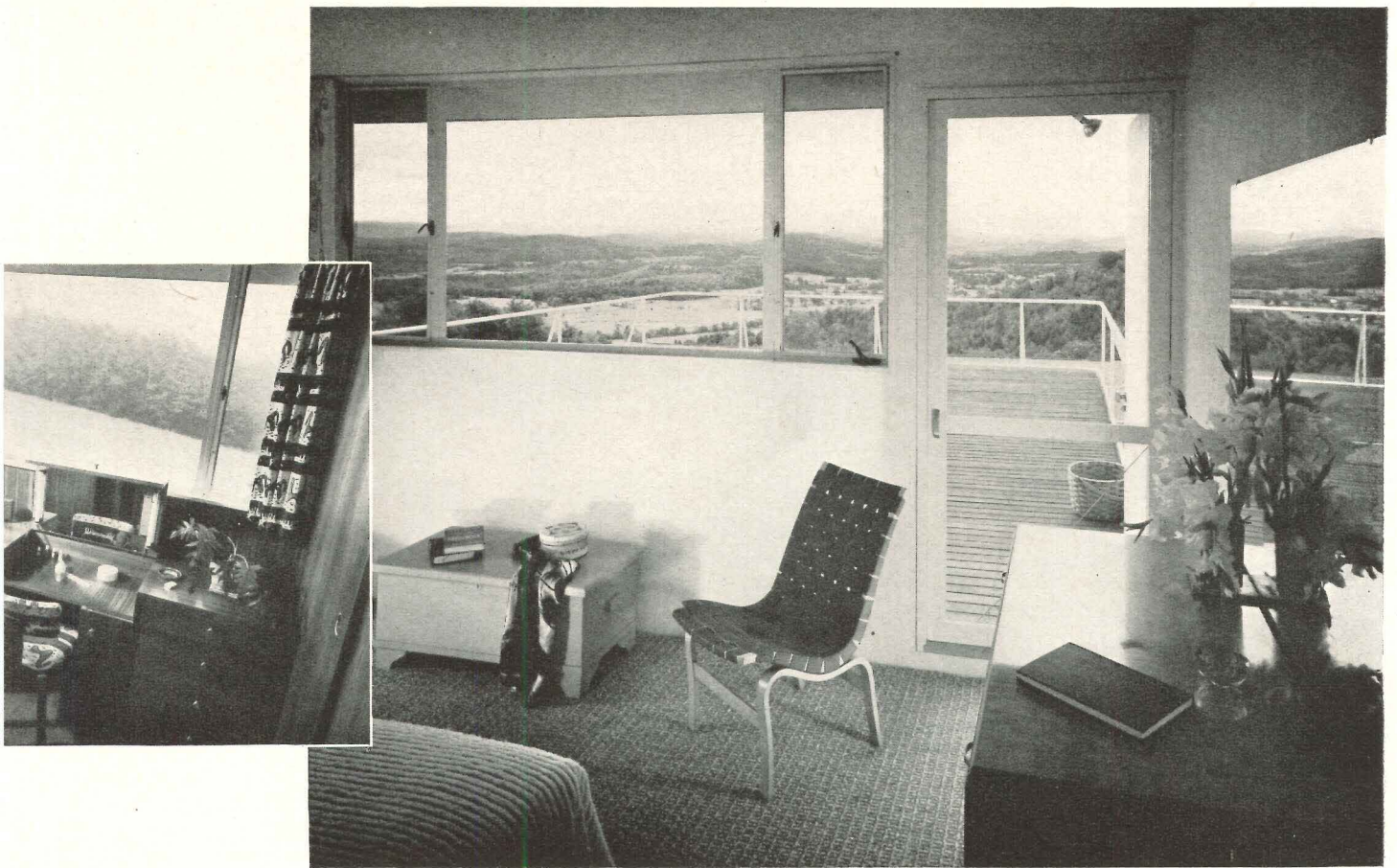
Mrs. Eldredge has a great interest in painting; hence the studio and wide, northlighted corridor for exhibiting pictures. At right, master bedroom, bath-dressing-room and deck. Below, right, living room; imagine the reaction of a guest standing in the entrance hall, four steps above the living room, seeing through the opposite glass wall fifty miles or more of the Connecticut valley



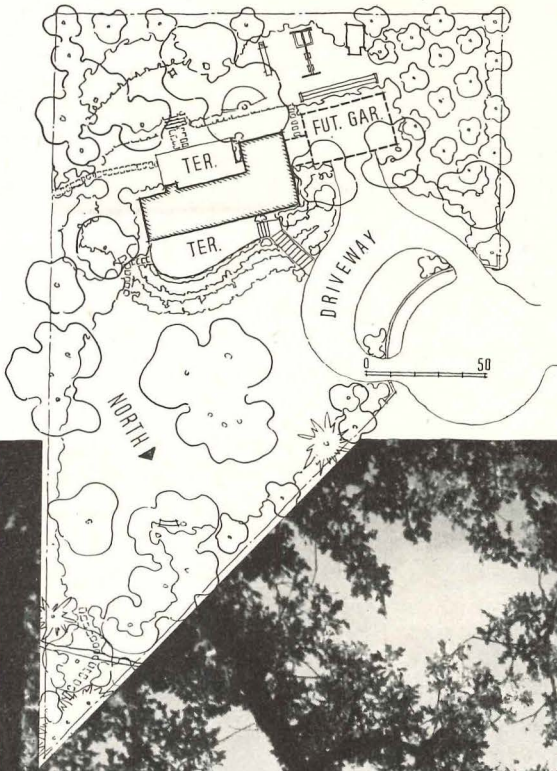
Ezra Stoller: Pictor



Kitchen: full electrical equipment, including garbage disposer. Visible beyond is pantry, constantly used in preparing refreshments

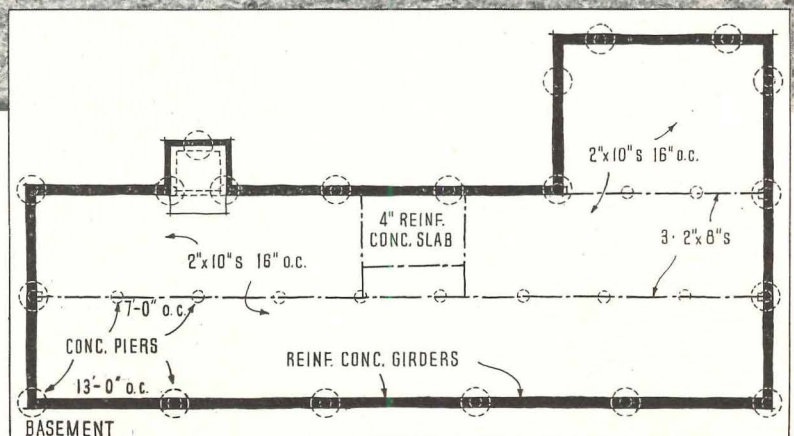
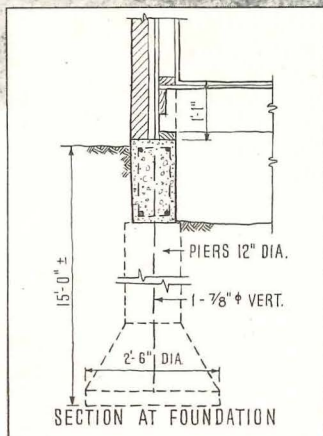
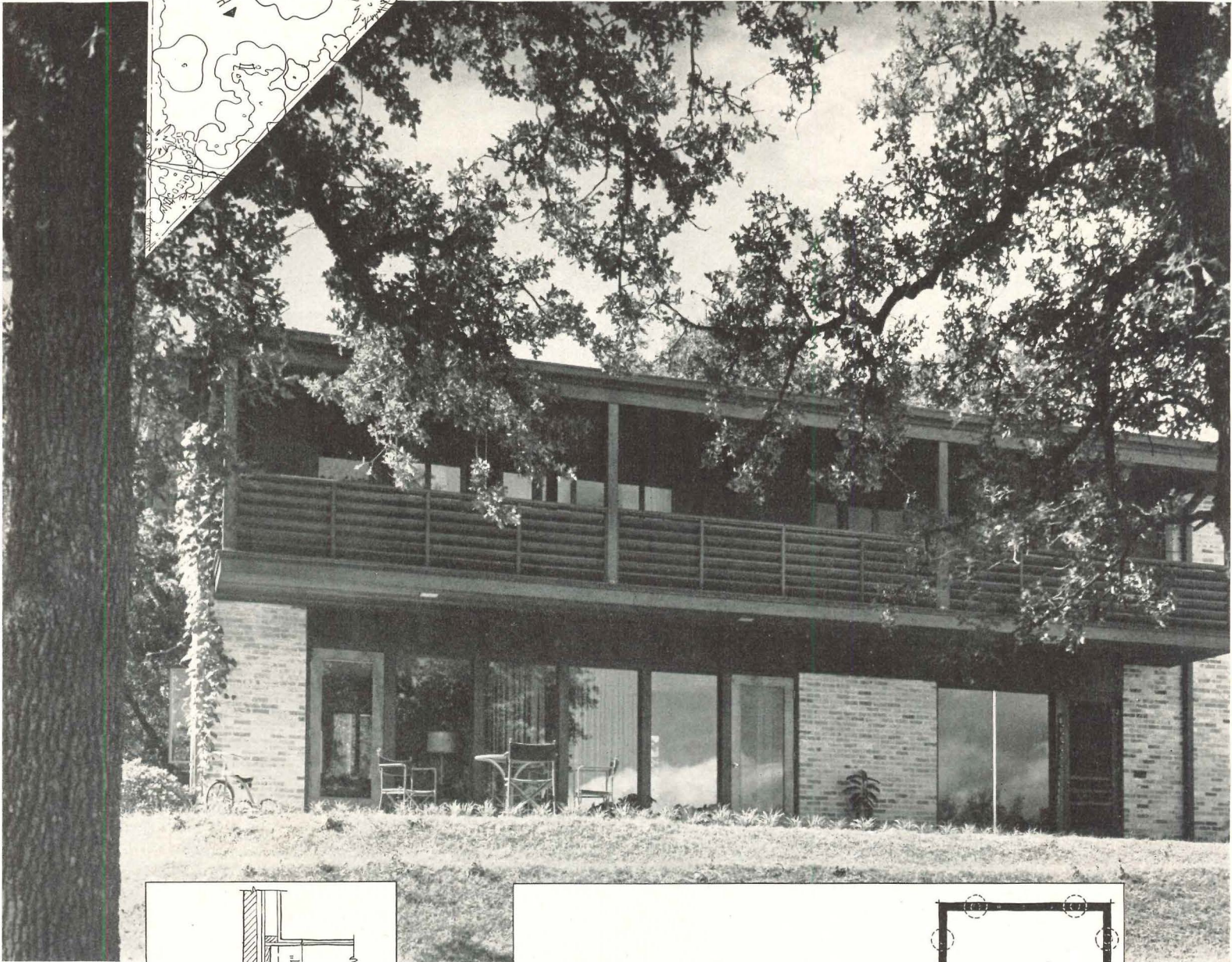


ARCHITECT'S HOUSE



Location of the house at the end of a cul-de-sac helped secure privacy despite large glass areas. Angling took care of view and breeze

Studman Photo Service



COMBINES PRIVACY WITH A SWEEPING VIEW

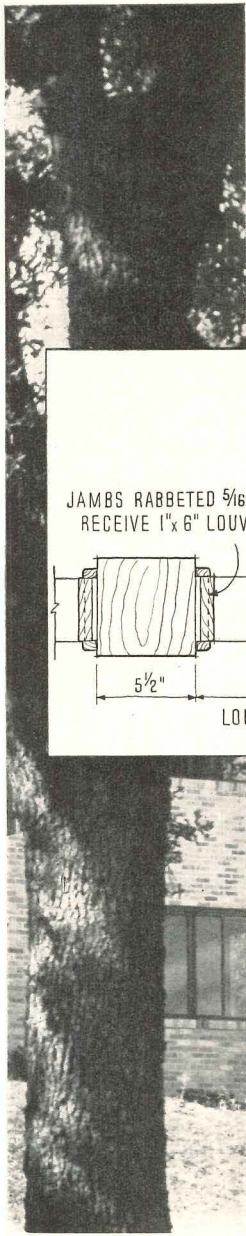
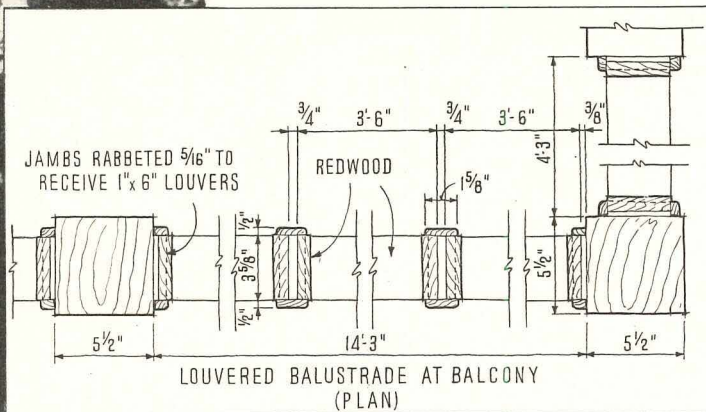
Residence of Mr. and Mrs. Louis F. Southerland, Austin, Texas

Page, Southerland and Page, Architects

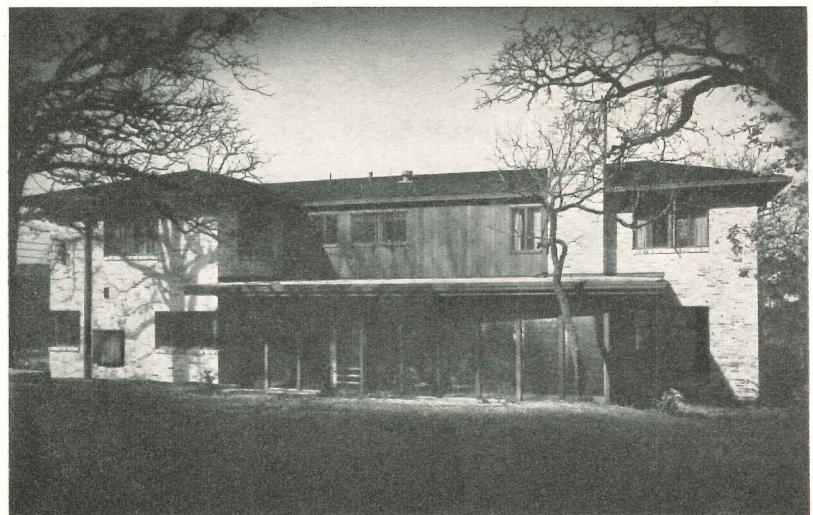
SITE conditions, a view to the northwest, and a prevailing breeze from the southeast gave this house its shape, says its architect-owner. "We wanted to spread it out and see the view of the low mountains and hills from each room. This also worked well with the site contours — a long house parallel with the contours."

Implicit in the plan, of course, is a consideration of the Texas climate. Glass was used lavishly on the north side for the view, sparingly on the south for protection from the hot summer sun. Careful angling on the site not only shields the house from the road but also opens every room except the guest room to the prevailing south and east summer breezes. Every room has cross ventilation. There are two terraces, a screened porch, a generous balcony, frequent access to the outdoors. Eventually there will be air conditioning (the ducts of the forced warm air heating system were sized to permit it), and a carport with a game or hobby room above it.

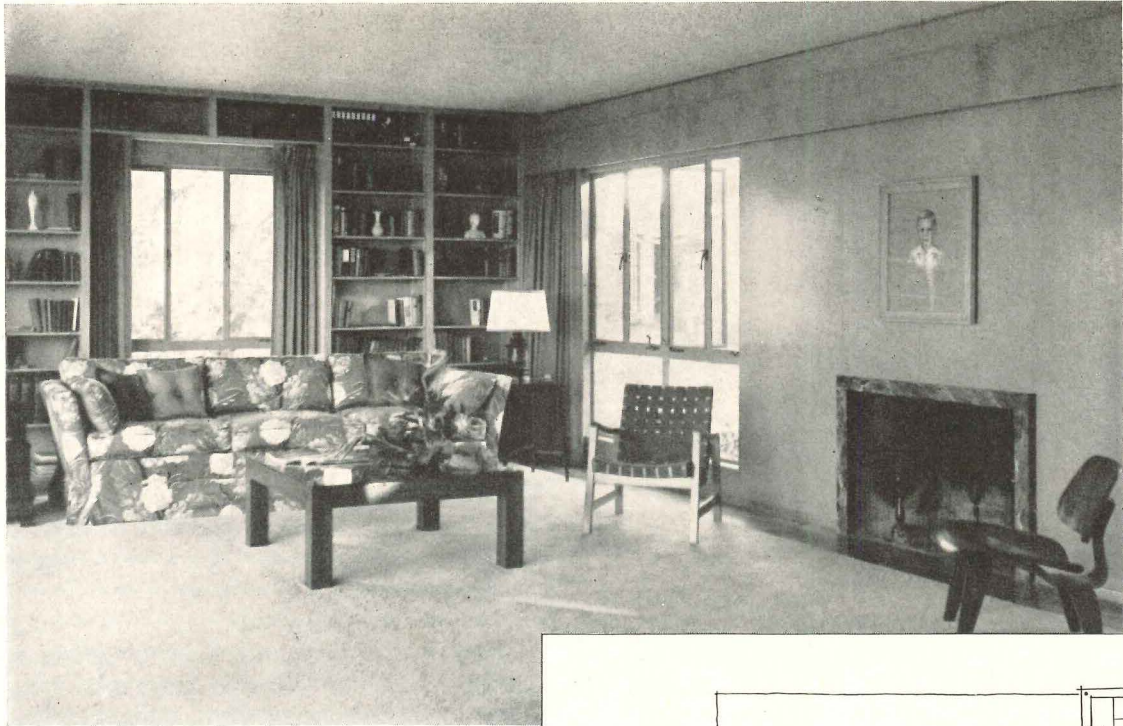
The house appeals to many people who usually dislike the non-traditional, Mr. Southerland says, and is, he believes, "contributing a little to the cause of modern residential design locally." Construction is wood frame, veneered with old brick salvaged from the demolition of an old brick kiln. Terraces and front steps are of the same brick, laid dry on sand. Siding is redwood, windows are steel casement. Floors are pecan wood, waxed, except in baths and kitchen.



Mears Studio Photo Service

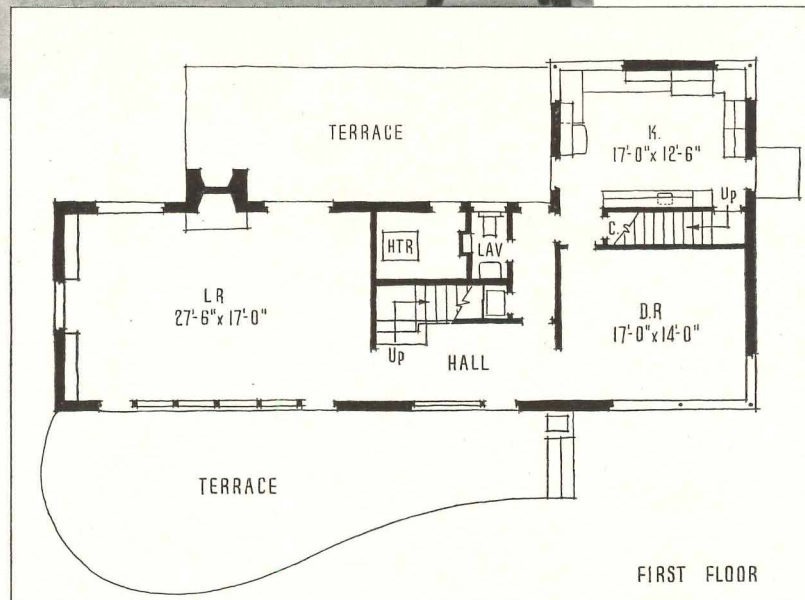


Foundation plan (left) fits local soil conditions: concrete piers supporting reinforced concrete grade beams replace foundation wall

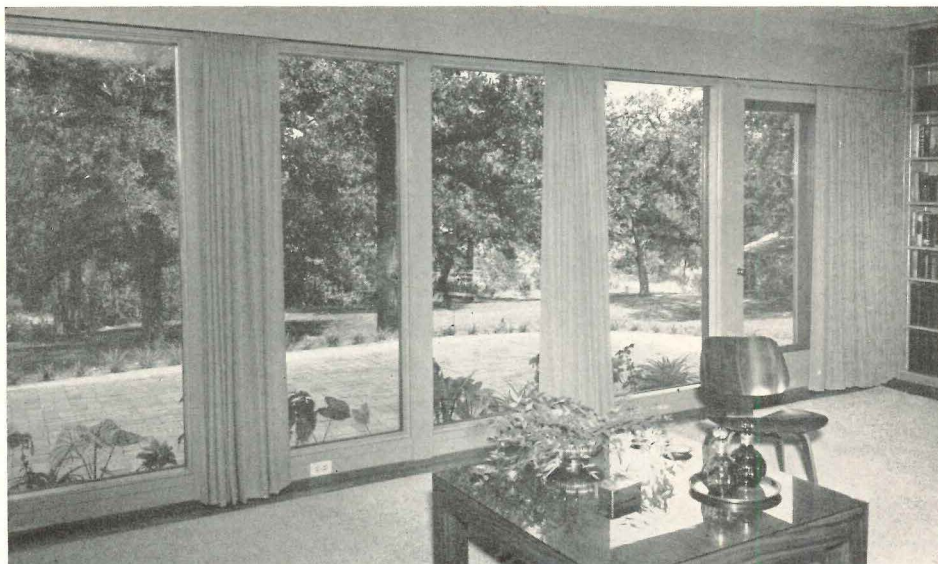


Studtman Photo Service

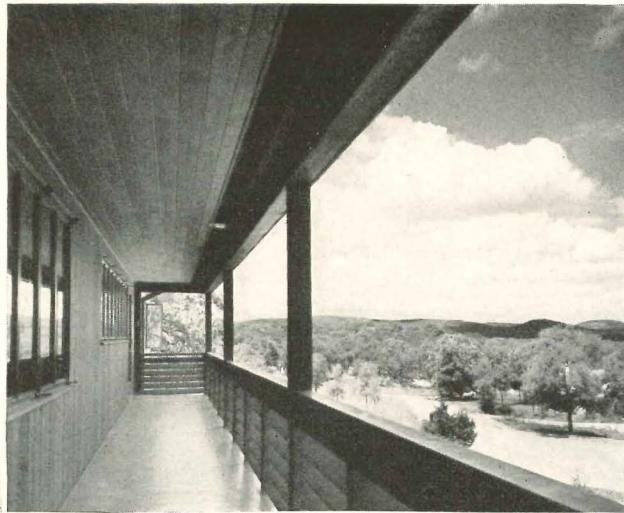
Interior walls are gypsum board to which plywood has been glued in living room and entry hall. Living room has two views — one of oak grove and creek (from windows in photo above), one of the hills to the north (below)



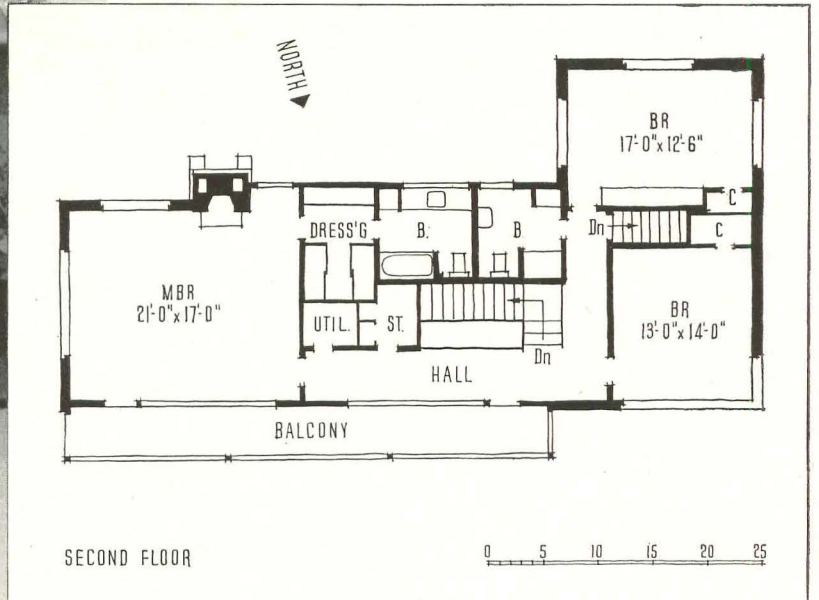
University Studio



Best view in the house is from the balcony, to which master bedroom opens directly. Balcony overhang protects living room's "glass wall" and permits opening of some windows even in the rain. Louvered balustrade affords privacy to bedroom without cutting down ventilation



Studman Photo Service



Mexican handmade tile was used for fireplace and hearth in master bedroom (right), Italian marble of deep green for living room fireplace (opposite page). Lighting generally is recessed incandescent, but living room has cove fluorescent. Ceilings in kitchen and bath are acoustic tile



MICHIGAN



Elmer L. Astleford



BELL TELEPHONE BUILDING

Birmingham, Mich.

SMITH, HINCHMAN
& GRYLLS, INC.

Architects and Engineers

Joseph W. Leinweber

Project Director

Minoru Yamasaki

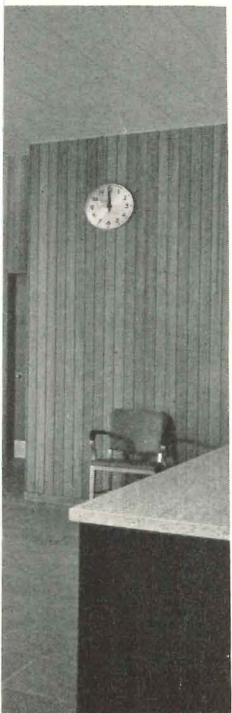
Project Designer

WHILE it might seem that this little building could expect almost universal approbation, it was the subject of considerable controversy. Early publication of the drawings in the local paper brought out a citizens' committee which urged a return to more conventional styling. The committee sought to preserve a civic center concept in the "Tudor Gothic Revival" style of the City Hall across the street. The newspaper, and many other citizens, however, sided with the designers, and protested the thought of "horse and buggy architecture." The little story closes like many another episode in the advancement of architecture — now that the building is finished it enjoys virtually universal acclaim.

The area of the equipment room, second floor, set the size of the building on its site. First floor requirements were smaller, so it was possible to set the building back at this level to give a feeling of spaciousness next to the sidewalk and increase the planting area, which, more than anything else, fits the building into its civic surroundings.



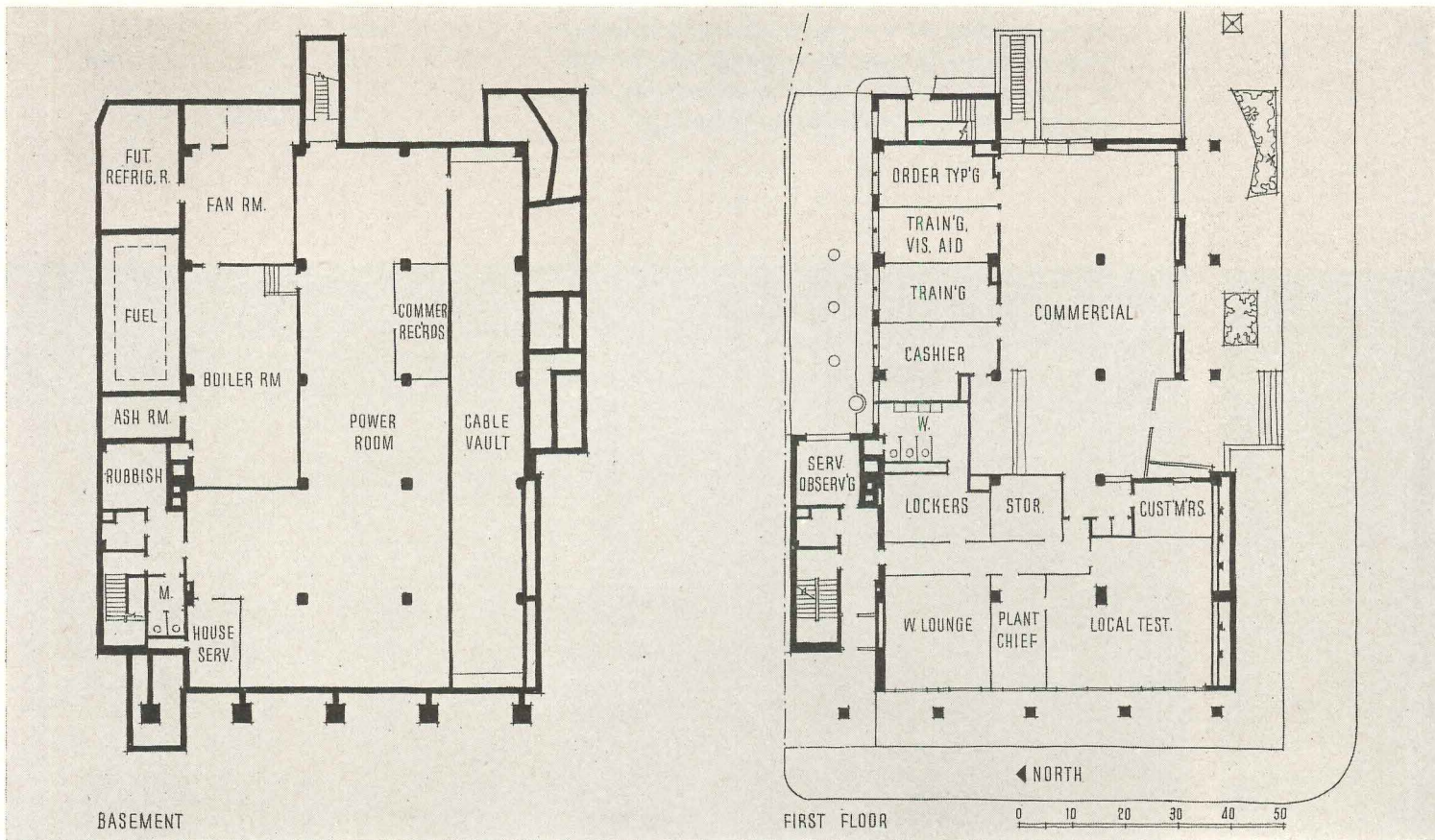
First floor areas are finished to create an architectural separation between public offices and desk areas; for the public areas, slate floor, cypress board walls, indirect lighting; for the desk area, linoleum floor, plastered walls and indirect lighting

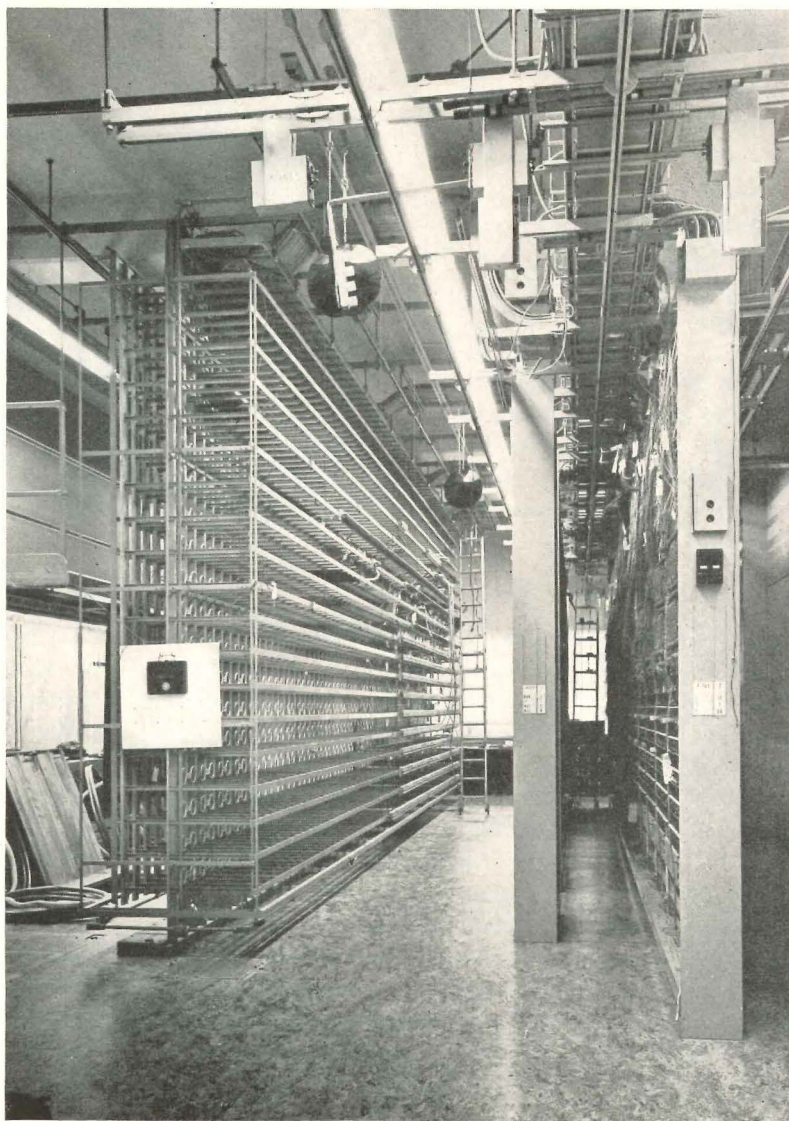
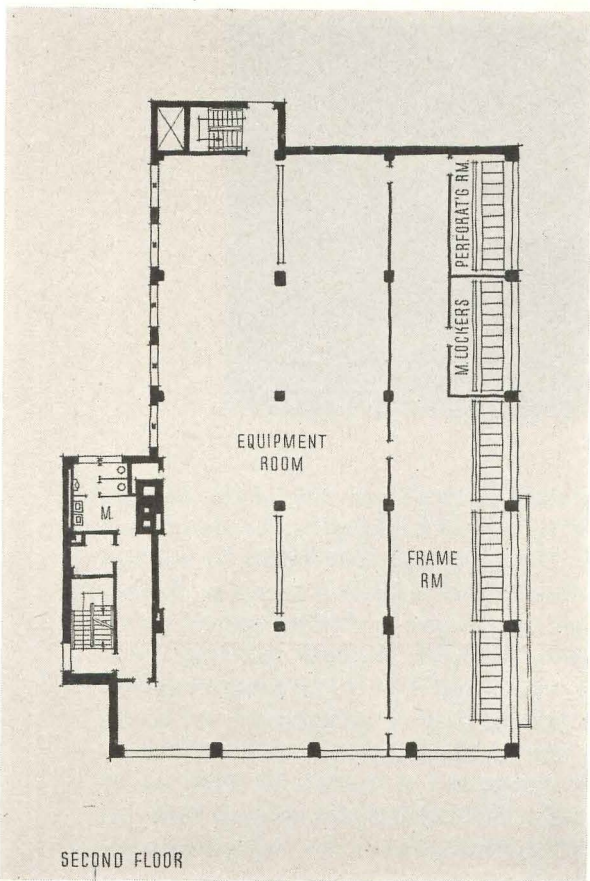
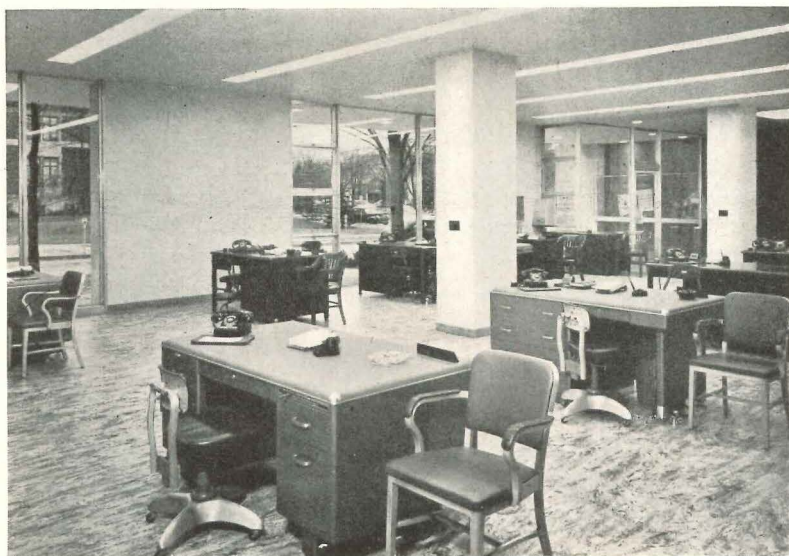
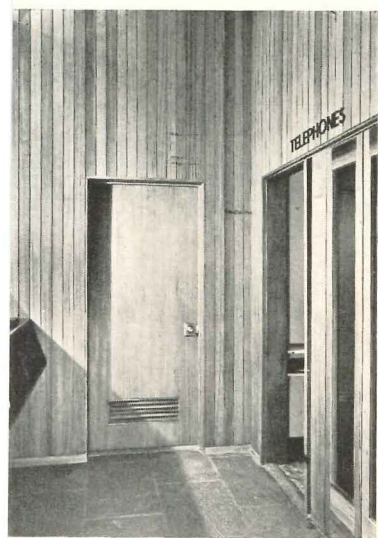


For this building with its large glass area, a heating system was chosen which would not require either direct radiation or elaborate split systems. It is a pressurized supply system with high velocity air. Small ducts are used with air velocities of 3000 fpm, with air control nozzles directing air into the room air mass at perhaps 2000 fpm. This produces a "non-directional boiling action," and quite uniform temperature diffusion. This system also keeps the building under positive air pressure, to reduce infiltration of cold air and dirt at doors and windows. It makes possible too the later installation of refrigeration, the same ducts being usable for cold air distribution. It is also said to give increased freedom of design around a public entrance, since a jet of warm air can be used instead of a vestibule.

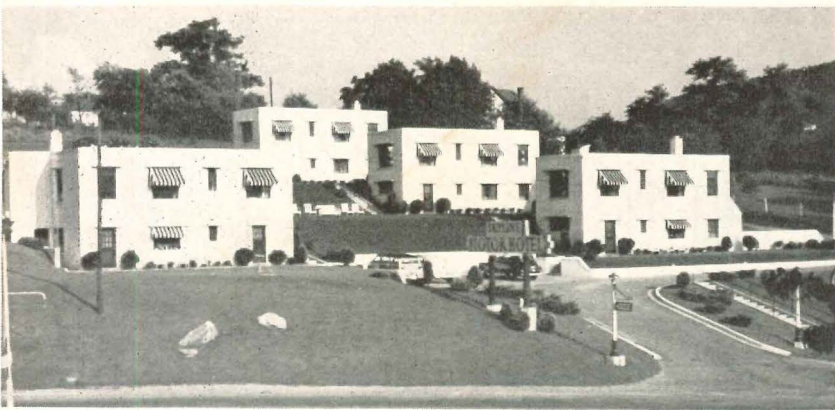


Elmer L. Astleford





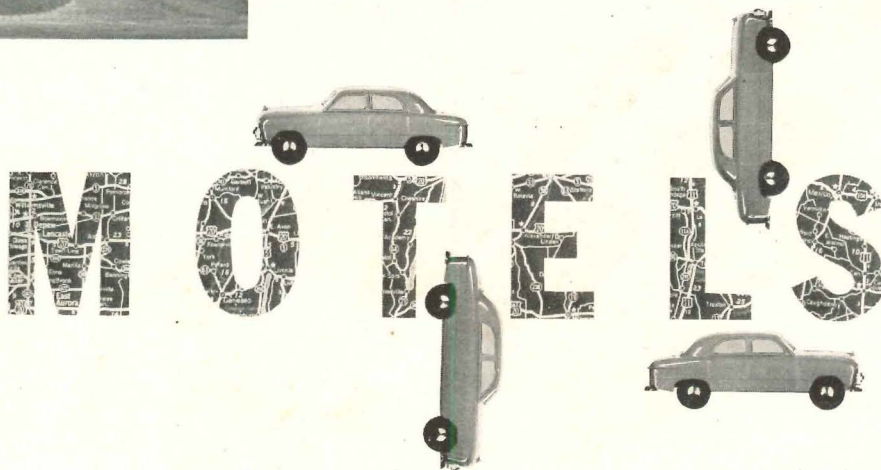
Pawley



prepared by
Frederic Arden Pawley, Architect

ARCHITECTURAL RECORD'S BUILDING TYPES STUDY NUMBER 159

This comprehensive study of the architectural requirements of a multi-million-dollar industry was undertaken by Mr. Pawley at the joint request of Architectural Record and Hotel Management, in which it also appears. This editorial collaboration has made it possible to assemble in one place information from a diversity of sources. Unifying the data obtained from both architects and motel operators should help each to appreciate the value of the other's training and experience



Julius Shulman

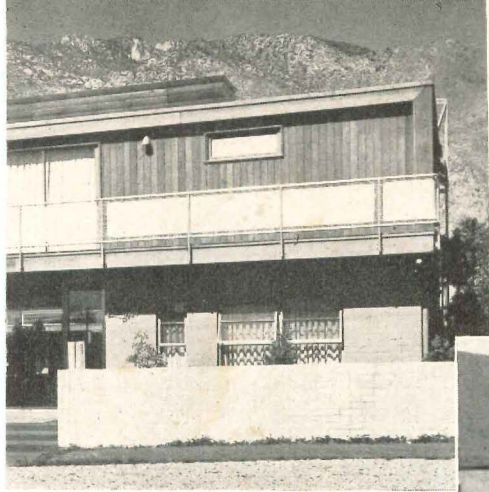
INTRODUCTION

Someone has said that the motor court was sired by the tourist cabin and dammed by the hotel. The offspring is now considered a legitimate get of an economic trend and the transportation-accommodation preference of the American public. These tendencies are here examined in detail as a basis for architectural planning and as promotional background for architects interested in this \$750,000,000 business (estimate copyright *Tourist Court Journal*). Recognition of needs of motorists and of the automobile as a planning unit are basic appeals of the motor court. As in colonial days, today's roadside inns, spaced at convenient day's journeys from each other, provide lodging, food and protection.

The hotel, a result of urban and resort concentrations, of development of railroad and elevator, and of the concept of superior service to guests, became a vertical structure for many urban reasons. It fell into a deep financial hole after the overbuilding boom of

1922-29 from which over 80 per cent of the nation's hotels emerged by way of bankruptcy, foreclosure and reorganization. Ten years later New York City still had many empty hotel rooms despite a two-year World's Fair. An occupancy of 70 per cent room capacity meant a going business, however, because operating costs were still depressed. World War II sent hotel occupancy to 93 per cent and raised operation expenses; the break-even point is now as high as 85 per cent occupancy. Occupancy for the country as a whole for 1948 was 86 per cent, for half of 1949, 84 per cent. Average "sale per occupied room" (room revenue or rate) is higher than it has ever been, reflecting increased costs of hotel operation. Charts on next two pages show these trends, growth of motor hotel idea and important underlying travel statistics.

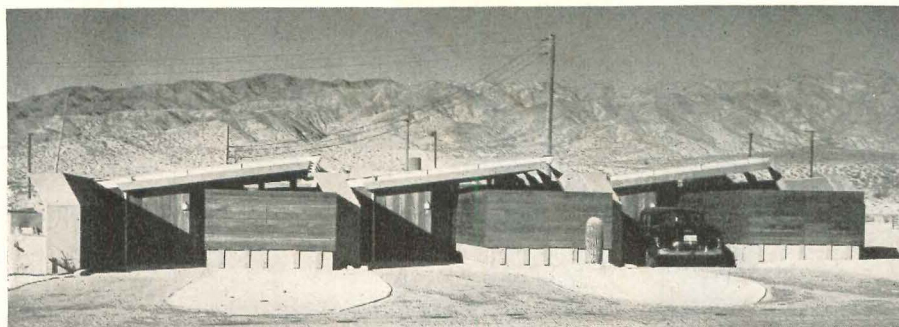
Motor courts, a depression-sown industry, sprang up in abundance in the 30's as tourist cabins. Many are the euphemisms for their most profitable kind of busi-



Julius Shulman

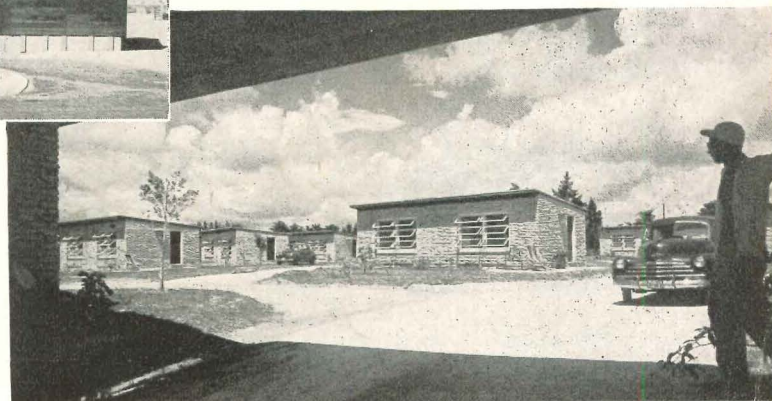


Pawley



Julius Shulman

Bottom left, Palm Springs Biltmore, Palm Springs, Calif., Frederick Monhoff, Archt.; center, Contentment House, Desert Hot Springs, Calif., John Lautner, Archt.; right, Adobe Villas, Miami, Fla., Alfred Parker, Archt.



Rodney McCay Morgan

Examples abound all over the U. S.: top row left, Skyline Motor Hotel, Front Royal, Va.; center, Pepper Tree Inn, Palm Springs, Calif., Stewart Williams, Archt.; right, Return Motor Court, New Market, Va., Clarence W. Wenger, Archt.

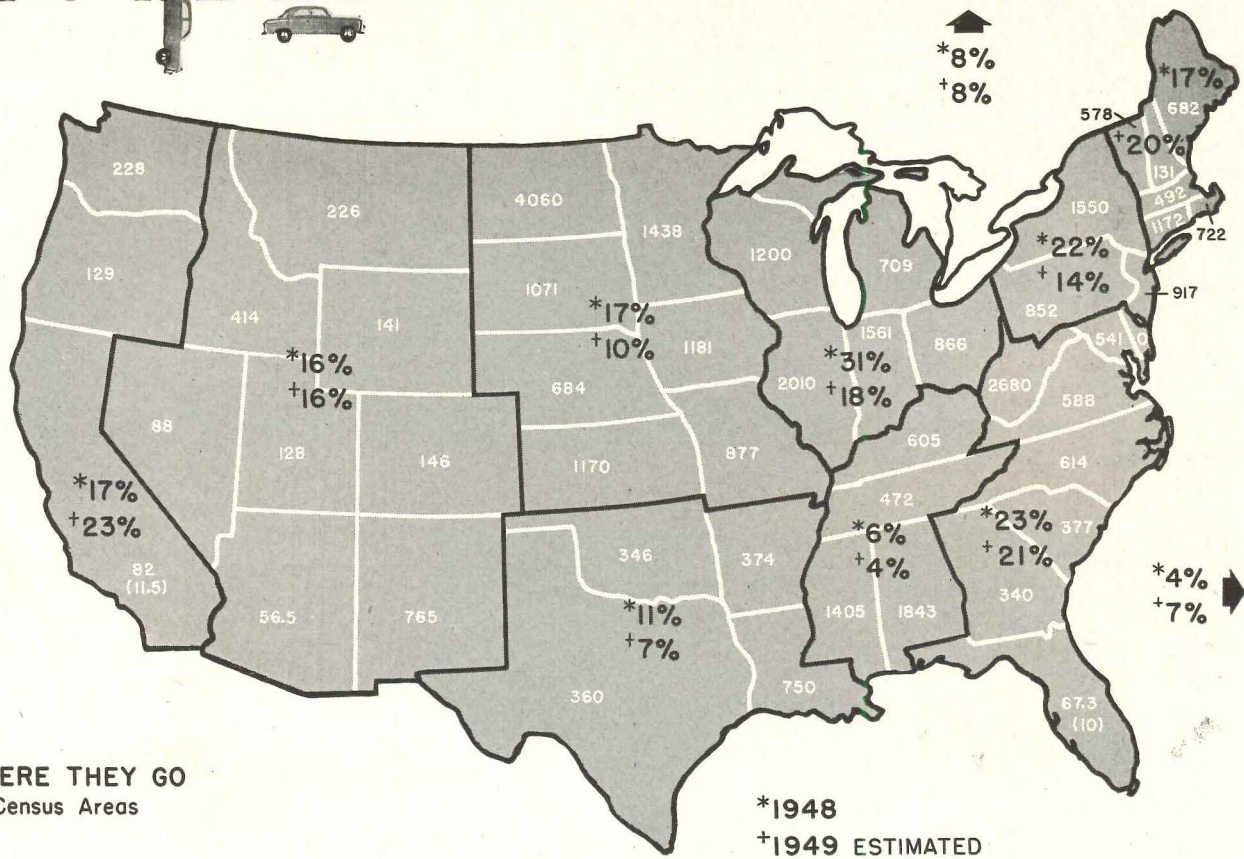
ness. We hear of one which turned away any travelers with luggage on Saturdays and Sundays. Conditions were so bad that in 1940 the Chief of the FBI published a popular magazine article tracing a number of crimes in lurid detail to tourist camps. (14) This blast forced a better element of operators to associate and in self-protection to develop standards of management policy, equipment, specifications and sanctions against offending members. Inspection and listing by Duncan Hines and the A.A.A. have also come to indicate acceptability. Elmer Jenkins, A.A.A. National Touring Director, states that of approximately 30,000 motor courts in the country their Accommodations Directory (131) lists only 3522 (about 1 in 12) and that only about 1 in 30 is recommended without qualifications. From a quick check it would appear that about 1 in 100 has architectural interest or planned efficiency.

The reason for this is not only Topsy-growth, but also development of planning, construction and finish

specifications by lay associations of operators. A 1946 survey indicated that 18 per cent of courts reporting employed architects. Investments in motor court construction are by no means beneath an architect's notice. *Tourist Court Journal* (128) recommended in 1940 that no new court be built for less than \$50,000. In 1948 the average investment, for the country as a whole, including land and equipment, was about \$70,000 (average 20 rental units). The U. S. Department of Commerce Small Business Manual on motor courts (9) recommended (1945) a size of 35 to 50 rental units, with 10 units an absolute minimum. Costs per unit, completely furnished, are now between \$3500 and \$5000, but horizontal construction is estimated at $\frac{1}{3}$ of vertical. City hotel costs per room are \$12,000 to \$24,000, including full hotel facilities.

The industry sells a fugitive product. "At the end of a day's operation, any room not sold is a piece of merchandise that has perished . . . revenue . . . has

MOTELS

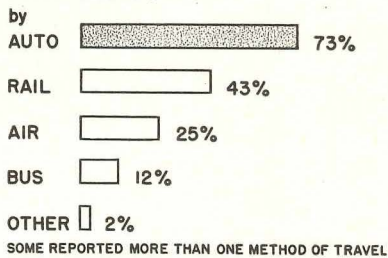


Small figures show motel density ratio, total rural surfaced highway mileage to number motels listed by A.A.A. — and for Fla. and Calif., total courts. Large figures: where vacation travelers go

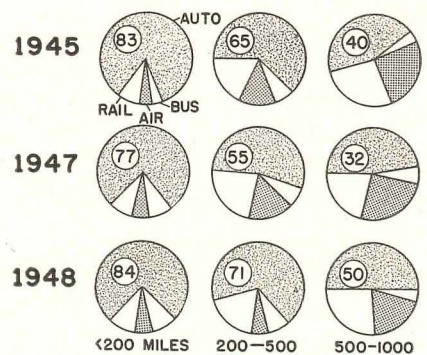
TRIP DISTANCE	ACTUAL 1948	ESTIMATE 1949
<500 MILES	20%	13%
500-1000	22	17
1000-1500	16	13
1500-2500	19	23
> 2500	23	34

VACATION TRAVEL

43% OF MEN REPLYING TOOK OVER-NIGHT BUSINESS TRIPS (AV. 9 TRIPS EACH IN 1948)



BUSINESS TRIPS



TRANSPORTATION PREFERENCE

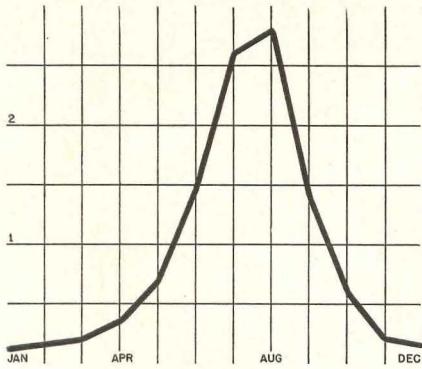
been lost forever." (9) Every effort must be made to keep occupancy high. The architect can help in this by providing the sales appeal of good design and planning, which the operator has approached only in a tentative, inexperienced fashion.

Extravagant claims concerning the number of chain motor court operations already planned and ready for construction have not materialized. Motor hotel profits are high for a hard-working husband-and-wife team of owner-managers (nationwide average net profit 29 per cent for 1948, equal to 9.6 per cent on investment). Mr. Louis Toth of Horwath & Horwath, Hotel Accountants, reports, on the basis of a number of studies, that chain operation will not work — that the owner must be present daily. Long hours, temptation to relax stand-

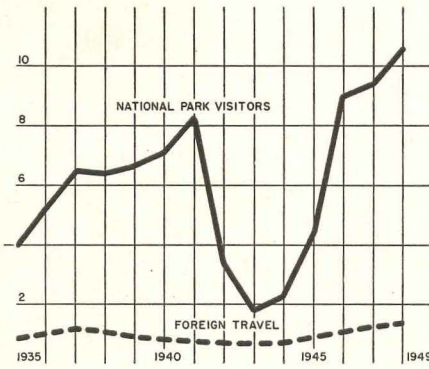
ards, possibility of organized 3-shift labor, militate against a chain, non-resident-owner operation. The obvious answer would appear to be Howard Johnson or oil-company-filling-station franchise type of organization with profit-sharing owners-managers associated for mass buying, advertising, financing, etc. As far as can be ascertained such an operation of any considerable size does not yet exist in this field.

Proposals have been made to create a series of satellite motor hotels around a main city hotel, tied in with switchboard and other services. Intent was for outlying units to feed guests to the central hotel and take overflow. Result in one case tried was reversed flow! Guests too late to stay in motor hotel went reluctantly to big hotel, where they had to buck all the vexatious prob-

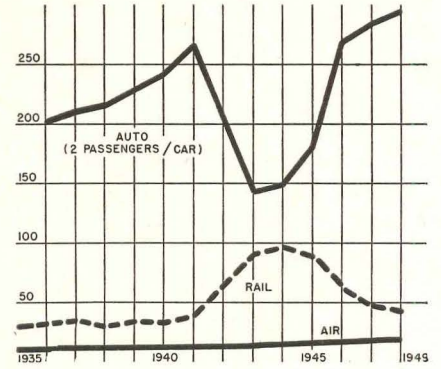
Travel data on this page from American Magazine, "1948 Travelogue".



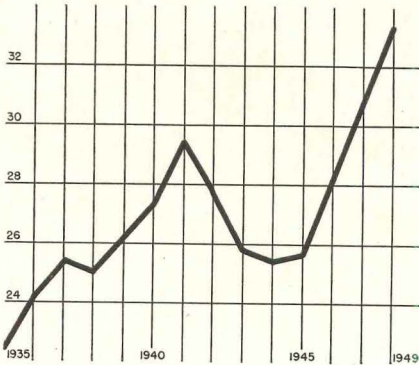
MILLIONS OF VISITORS, NATIONAL PARKS



RATIO, DOMESTIC TO FOREIGN TRAVEL

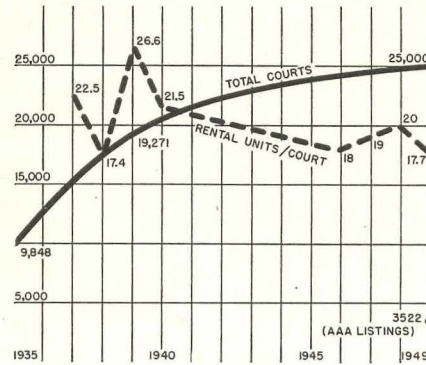


BILLIONS OF PASSENGER-MILES



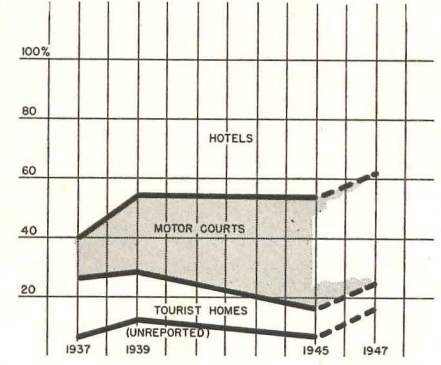
PASSENGER CAR REGISTRATIONS, MILLIONS

Source: A.M.A. "Facts and Figures" (PRA)



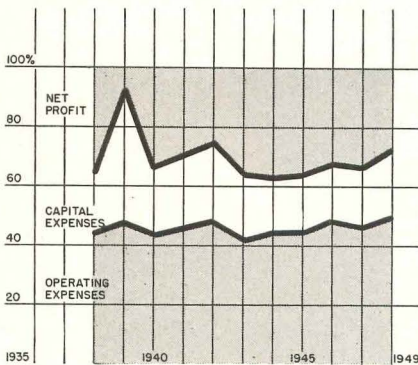
NUMBER OF MOTELS IN U.S.A.

Source: Tourist Court Journal



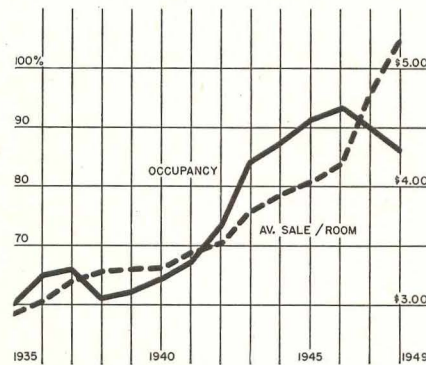
MOTORISTS' PREFERENCES

Source: Am. Automobile Ass'n.



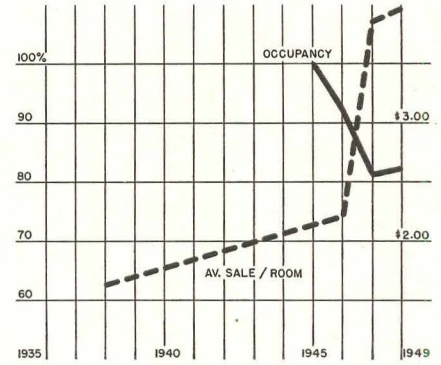
MOTEL OPERATIONS (% R'M. SALES)

Source: Tourist Court Journal



HOTEL OCCUPANCY, AVG. SALE PER R'M.

Source: Survey of Current Business



MOTEL OCCUPANCY, AVG. SALE PER R'M.

Source: Tourist Court Journal

lems which the motor hotel solves: heavy traffic, parking trouble, car storage charges, the luggage dilemma, tips in and out, the parade of tired and wrinkled family through a busy, critical lobby, city noise and city atmosphere. (36) A hotel accountant executive on a trip to Florida with suites available to him without cost at leading hotels found his tips and other expenses made paying his way in motor courts (with newer furniture) less expensive than accepting the free hotel accommodations.

A year ago the American Hotel Association made an extensive survey of roadside housing, parts of which were condensed into a booklet, "How to Sell the Motor Traveler" (1). Many constructive suggestions were made and a number of hotels have now recognized the

automobile by providing motor lobbies and special services. A feud of considerable heat has been waged by the motor court trade papers. The recommendation, based on this survey, that the hotels should get into the motor court business, and publication of a number of motor courts in architectural and hotel periodicals, resulted in a flamboyant headline, "Lo, How Have the Mighty Fallen!" (32) in one motor court magazine. Apparently its editors were not aware that, some years earlier, architects had advocated a building type combining some hotel facilities with special motorists' accommodations. These Highway Hotels, Outpost Inns or Motor Hotels are a more impressive expression of the idea, which is as old as the early Federal hotels and later resort centers. A danger is latent: if the operation takes

Sources, this row, "Survey of Current Business"

MOTELS

on too many of the hotel's traditional services, functions and maintenance problems, operating costs mount and the situation becomes circular and vicious.

Restaurant service is not agreed upon in the motor court industry (18.3 per cent have coffee rooms; *Tourist Court Journal*, 1946). One deluxe Western court in a suitable location reports food and drink revenue three times that from rentals. It is agreed that no one should start a food operation in connection with a motor court without experienced management. Filling stations are also not considered desirable unless isolation demands them (25 per cent; *Tourist Court Journal*, 1946). National statistics show a very gradual growth of motor court income from these other sources of revenue except in the North Central states, where they gained in 1948 at the expense of room rentals.

The following program notes can be used as a check list by an architect designing a motor court or motor hotel and will be found to contain suggestions for all parts of the project. They are based on recommendations of a number of architects, experienced operators, travel executives and travelers. Certain operational items (not requiring architectural provisions) have been included to indicate the scope of services and conveniences offered by some installations.

LOCATION, SITE, PLOT PLAN

Since all business comes from the highway, selection of location and site is of first importance. Site treatment is no less important, because the basic appeal of the motor court is its recognition of the automobile as a controlling factor. Plot plans therefore deserve careful study.

Relation to automobile travel: Location must consider loci of average day's rides (200-400 miles) from other stops on natural touring routes to national parks, resort areas and other vacation regions.

Relation to town or city: Availability of: employees, fuel, water, electricity, gas, sewer, laundry service.

Proximity to restaurants & service stations (if not provided).

Traveling salesmen visiting town or city are often important year-round, repeating source of business.

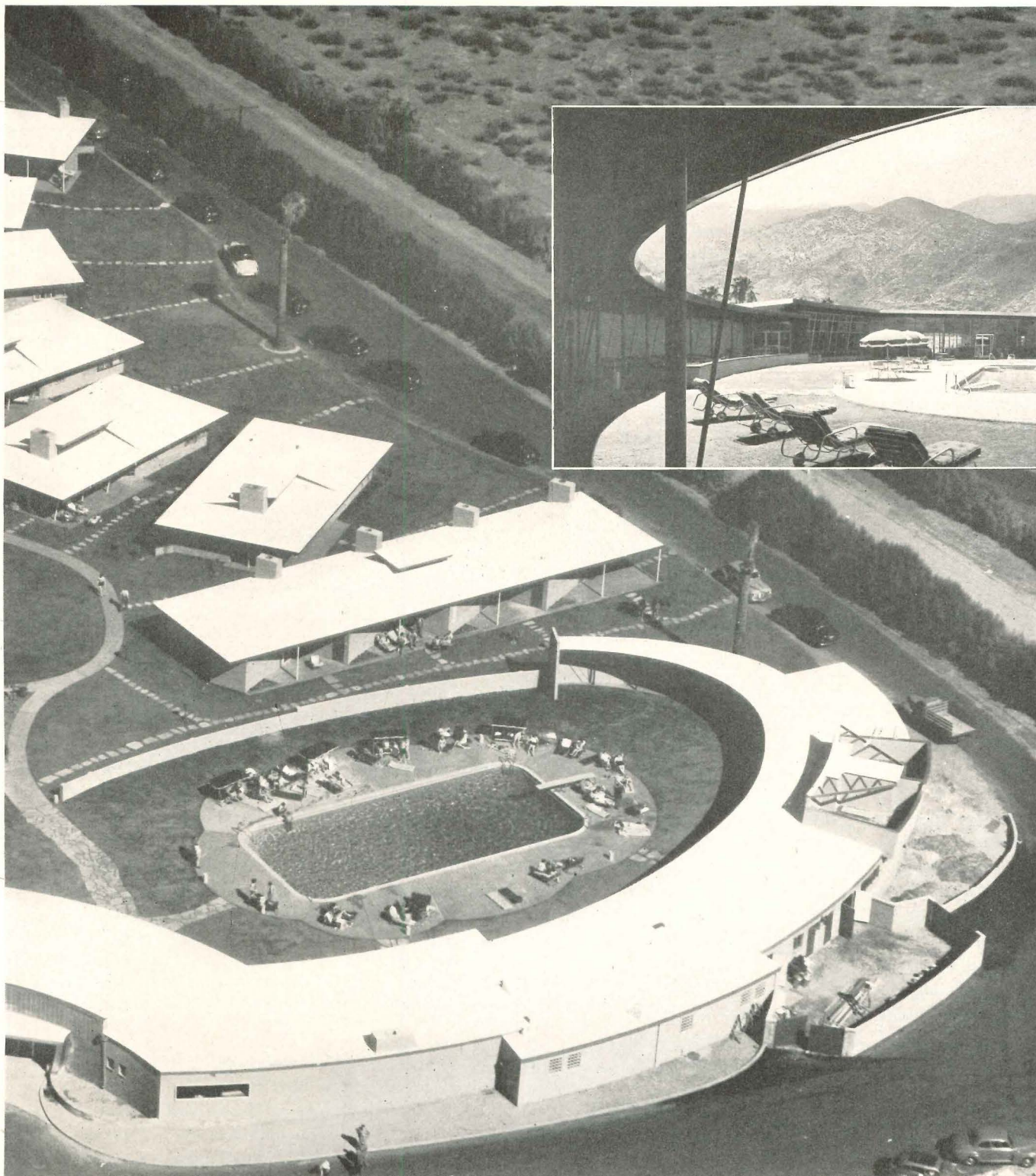
If a restaurant is provided, the nearby town or city must also be considered as a source of food, supplies, waste disposal and local business.

Availability of taxicabs may affect local business.

Relation to highway: First step in considering locations is to study current federal, state, local highway and traffic planning programs.

Secure passenger-traffic car counts.





Site plan of Palm Springs Biltmore, Palm Springs, Calif. (Frederick Monhoff, Archt.) is evident in air view. This type of facility, with swimming pool, restaurant, lounges, etc., and in resort country, is increasingly used for stops longer than overnight. Indeed, many motels are built for exactly this purpose

MOTELS

Site should be on righthand side of highway going toward city unless on bypass.

Frontage on highway and sight distance for motorist are important factors in stopping cars. Minimum frontage should be 500 ft; 800 to 1000 ft is preferred. Car going 60 mph will stop comfortably in about 400 ft (40 mph, 200 ft).

Access driveway must be easy from either side of highway.

If a dual road exists or is planned, proper authorities must be consulted to make certain of island crossovers.

Rake of highway headlights across site must be considered.

Avoid sites near hills. Grades create stopping and noise problems (up or down).

Site: Select fairly level ground to avoid expensive grading, foundation, driveway construction.

Good natural drainage is highly desirable.

Natural features are valuable: trees, water, views.

Consider orientation, microclimatology: sunlight, prevailing winds, lay of land.

Avoid location near other motor courts. Check zoning, ownership, availability, plans of owners of adjacent property. Motor courts do not thrive on competition. Consider acquisition of land to prevent competition and undesirable neighbors.

Driveways, parking: Stabilized or hard-surfaced driveways and parking areas minimize noise, dust (affects room maintenance).

Blacktop decreases sunlight glare and bad appearance of oil drippings.

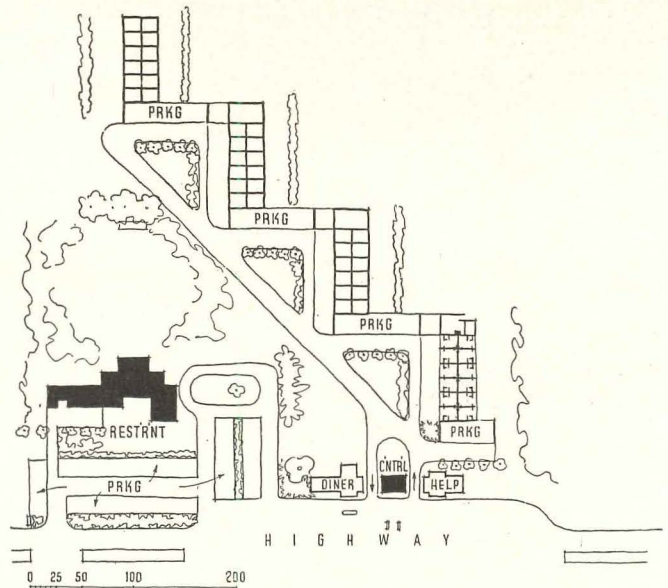
Plan driveways and parking for: operation, appearance. (1) Route first to office (local temporary parking), then to parking, carports or garages related to rental units, finally to exit. (2) Curved alignments, staggered setbacks, angular placement of buildings can be planned to increase privacy and improve building orientation as well as to break up rigidity of traditional rectangular "tourist court" plot plan.

Check access to, curvature, grades of all driveways by driving over them before final construction. Plan driveways to avoid rake of car headlights across bedroom windows.

Decision on type of parking is basic: (1) outdoor (acceptable unless extreme climate); (2) carports; (3) garages.

Locate parking as near rental unit as possible.

Landscaping: Project must appeal to motorist from highway. Trees, shrubs, flowers, lawns, a stream or pond, every natural feature, should be exploited for its attraction value and made easy and economical to maintain in good condition. Landscaping can also afford



Two examples of site planning for multiple-unit motels (David Fried, Archt.): above, 12-unit buildings each with utility room; common parking for each building, not usually considered as satisfactory as individual car parking at each unit. Opposite page: four-unit buildings each with central utility core, parking at each unit's door. In both examples, "front office" control is at highway entrance. Restaurant, gas station, etc., are independent of motel proper, though somewhat related. Photos: top, attractive landscaping, Motel Robert, Christiansburg, Va. (Stone & Thompson, Archts.); below, light paving reflects glare, heat, shows dirt

windbreaks, some degree of noise screening, shade, backgrounds, and can cut off undesirable views.

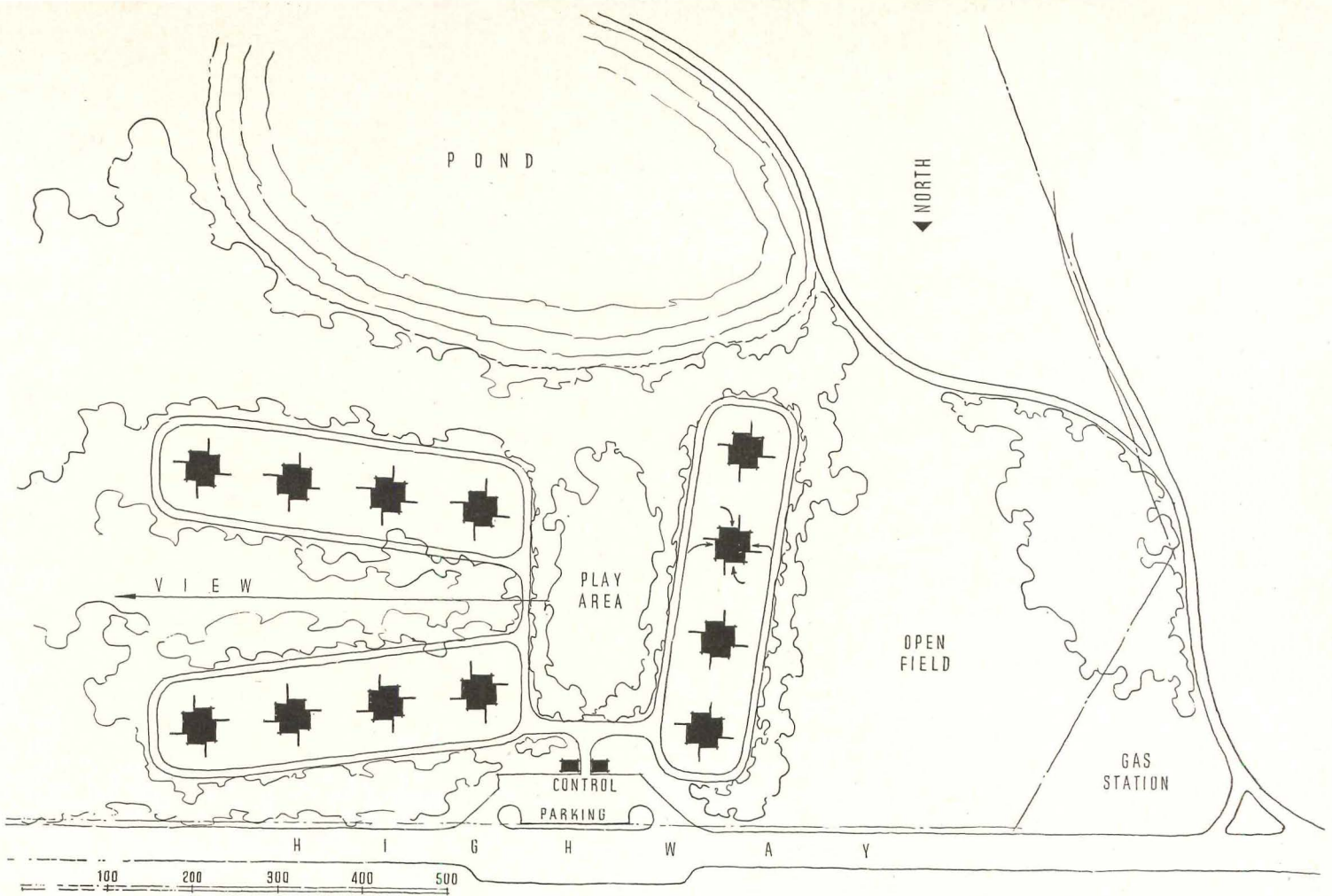
Local and regional planting varieties and schedules, required amount and availability of water for use on grounds, help for maintenance, planning and details to facilitate maintenance are all factors which in a larger-scale project indicate desirability of retaining a landscape architect, at least as a consultant.

Garden furniture should be chosen for durability and resistance to exposure. It should be painted light colors if used in evening. Steps, railings and lights may be required. Paved walks will reduce dirt carried into rooms.

GENERAL PLANNING; BASIC FACTORS

Number of rental units, employees: Usual initial motor court construction is 10-20 rental units. Husband-and-wife team can handle not more than about 12 units without extra help. Latest national average (*Tourist Court Journal*) is 17.7 units. Usual allowance is one maid to 10 rooms.

Provision for expansion: Many motor courts are built with expansion in mind and it is undoubtedly wise to underbuild (but not less than 10 units). Expansion is almost invariably horizontal, by additional structures rather than by additions to existing buildings, except

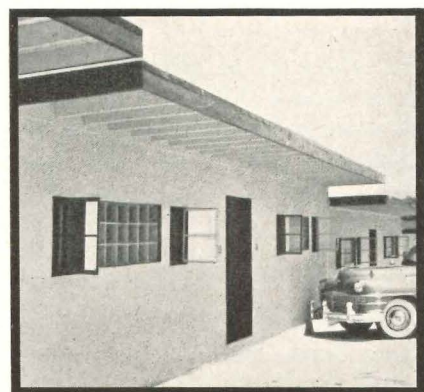
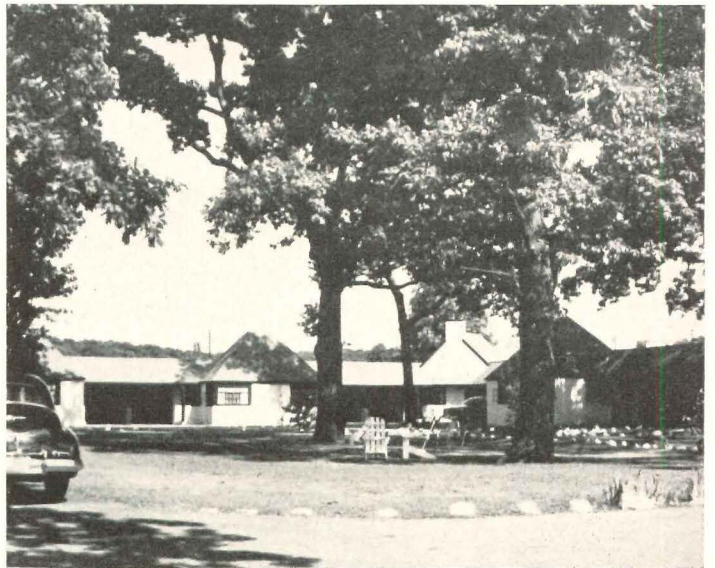


Pawley

restaurants. There are few two-story courts in spite of possible construction and maintenance economies. Unfortunately, an ultimate plan is rarely visualized at the start, and final results are often crowded, with poor access or other bad relationships. Some of the older installations show a great variety of rental unit types; improvements were made when newer units were built.

Flexibility, Variety: Flexibility of the rental unit plan is important and will be discussed later. In general, one may provide for alternate expansion areas and multiple uses of common facilities such as lounges, recreation or dining spaces. Another type of flexibility is involved in off-season closing of certain units — a good argument, where seasonal volume varies, for dividing total number of rental units into groups of 4, 6 or 8 to a building with separate utilities or cut-offs for each building. (Even-numbered groups preferred for backing up adjacent plumbing.) Variety will occur automatically in any adequately landscaped site. Attempts to achieve it by "architectural" or stylistic methods are soon dated and lose interest. In addition, the maintenance burden is increased in direct proportion to embellishment.

Combined or Separate Structures: Often the owner-manager's quarters are in a typical rental unit in the first stage of a small operation. A more developed type will provide an apartment with cooking and dining



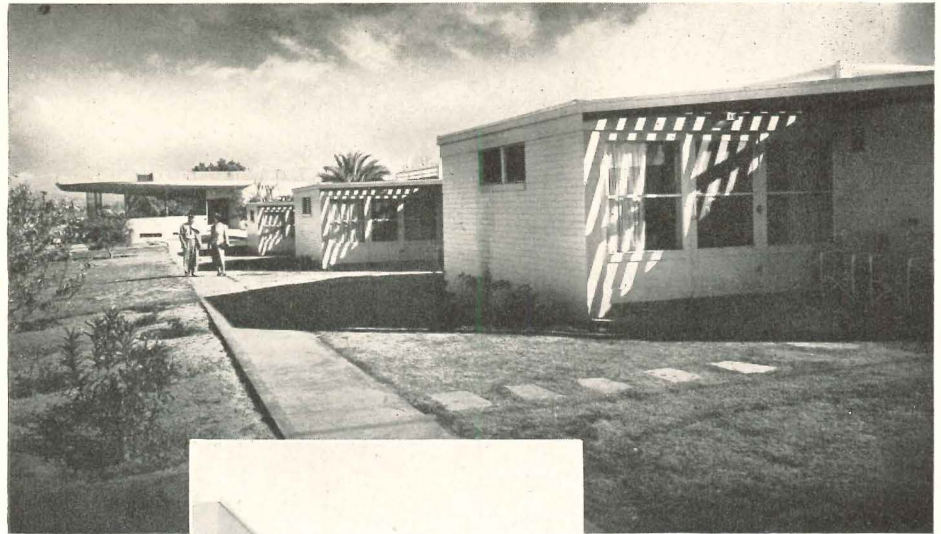
MOTELS



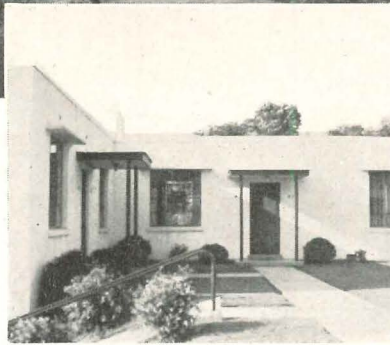
Pawley



Pawley



Julius Shulman



Pawley

Typical rental units: top, Princess Anne Motor Lodge, Williamsburg, Va.; left, El Rancho Motel, St. Albans, W. Va. (Robert Martens, Archt.); center, Tucson Biltmore, Tucson, Ariz.; right, Skyline Motor Hotel, Front Royal, Va.

facilities and private garage. This may be buffered from rental units by service spaces such as linen and utility rooms.

Individual cottages are more expensive to build than rows (unless terrain is uneven) and may give an unsubstantial appearance compared with 4, 6 or 8 unit buildings which provide more imposing architectural masses.

Circulation: Seasonal or weather considerations will affect planning of circulation. Covered access to rooms is desirable for guests and maids. Avoid changes in levels, if possible, to facilitate servicing and guest access. Some plans have covered circulation on one side and private covered terraces on the other.

Carports, Garages or Outdoor Parking; Dining Facilities; Service Station: All these basic factors should be considered in the preliminary general planning and provided for or discarded at the outset, unless the site is large enough to permit later decisions.

MAIN BUILDING; RENTAL OPERATIONS

Covered drive at office: For protection of guests; for discouraging trucks (low marquees used for same purpose by some service stations).

Lobby: For guest registration, rent payment, information, waiting, convenience sales. "Front desk" may be a small writing surface or can be dispensed with entirely if someone is always available to take care of guests at their cars. Registration card can be filled out and rent payment made in rental unit.

Office: For key-rack, safety deposit box, bookkeeping, purchasing, publicity, etc. Keys are best kept in locked cabinet (one standard visible key control system has considerable variety and capacity of equipment: wall cabinets, file drawers and hinged panels).

Supervision: Careful planning can make manager's locations oversee many functions of operation and save considerable time and effort in supervision.

Lounge: Newer courts are providing some common space where guests may gather, if they wish (particularly in bad weather), for social purposes, reading, letter-writing, waiting. It should have comfortable, durable furnishings, good lighting, homelike character; may have radio, television, bridge tables, desks, gift shop and wall maps.

Public toilets: For larger projects, highway hotels, inns.



Robert Cleveland

Front offices: top, Santa Ynez Inn, Los Angeles, Calif. (Alfred Gilman, Archt.); left, Tucson Biltmore; center, Palm Springs Biltmore; right, Return Motor Court, New Market, Va.



Julius Shulman



Maynard Parker



Pawley

Telephone booth(s): Particularly important if bid is being made for traveling salesmen (considered very desirable by some because of off-season and repeating volume).

Booth(s) should be oversize, have comfortable chair, large writing space, good light, fan, local and regional maps under glass, convenient telephone books.

Telephone switchboard: Complete telephone service throughout rental units is too expensive for many courts to consider. Some have intercommunication wall units which can be used two-way between main desk and guest room. This requires a switchboard and operator. Guests feel safer with communication service.

Service quarters: If project is isolated some employees may live on job. If not, locker rooms and toilets will be required. Check state labor laws for other requirements.

HOUSEKEEPING OPERATIONS, MAINTENANCE

Procedure and operation of housekeeping department varies from one installation to another; quantities, etc., (from which architect can develop room areas and equipment) must be decided upon by owner. Following notes give general data.

Linen: Operators are agreed on desirability of a central linen storage room under strict supervision. Four "turns" of linen are not enough to carry over a holiday weekend unless laundry service is better than average. This means shelf storage provision for *three* sets of everything changed daily: 1 set in room in use; 3 on shelf; 1 in laundry. In projects requiring several maids provide local, locked linen and room supplies closets for each maid. These may require spaces for:

sheets	bath mats	writing materials
pillow cases	soap	postcards
face towels	tissues	paper cups
bath towels	matches	sterilized glasses

Housekeeping storage: Cots or rolling utility beds (latter are about 18 by 40 by 46 in. high; mattresses; pillows.

Service closets, etc.: For cleaning equipment and supplies; floor maintenance appliances; slop sinks. For larger projects consider specially designed maids' carts with shelves and racks for: linen and room supplies, cleaning supplies, equipment.

Maintenance shops: For minor repairs and maintenance: Electrical; plumbing and heating; painting and

MOTELS

glazing. In extensive projects a Jeep or small truck can be equipped as a mobile repair unit.

Storage: For grounds equipment (mowers, hand tools, ladders, snow plow(s), shovels); garden furniture (winter storage); recreational equipment.

Fire protection: Insurance rates can be improved by careful consideration of fire protective measures throughout the project.

RENTAL UNITS

Identification of unit: Since motorists may arrive late, or may return to room late, building and unit identification should be provided. Buildings may be designated by letters, which should be prominently displayed, and rooms numbered as usual in hotels. Self-luminous letters and numbers may avoid necessity for insect-attracting, neighbor-annoying porch lights.

General planning and flexibility: Current trend is to make all rooms large enough for two double beds whether furnished that way or not. If traveling salesmen are an important part of the business, single rooms may be provided; but if so, they should be large enough for refurnishing as doubles.

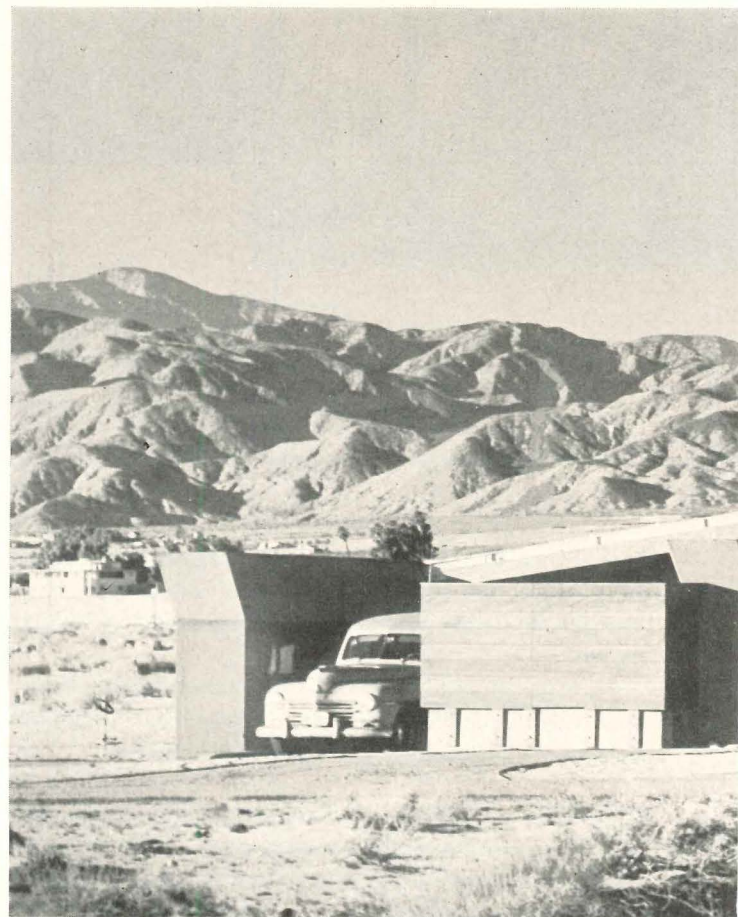
Corner rooms may be made large, provided with double interconnecting doors for use *en suite* with adjacent room and rented at a premium. Suites may also be arranged with an entry shared by two rental units which becomes a private hall when they are rented together. Door-swings, including screen doors, must be considered to permit access for utility beds. One motor hotel is so planned that adjacent rental units, with such a joint entry, may be converted to three-room housekeeping apartments in times of changing business (due to depression or housing shortage).

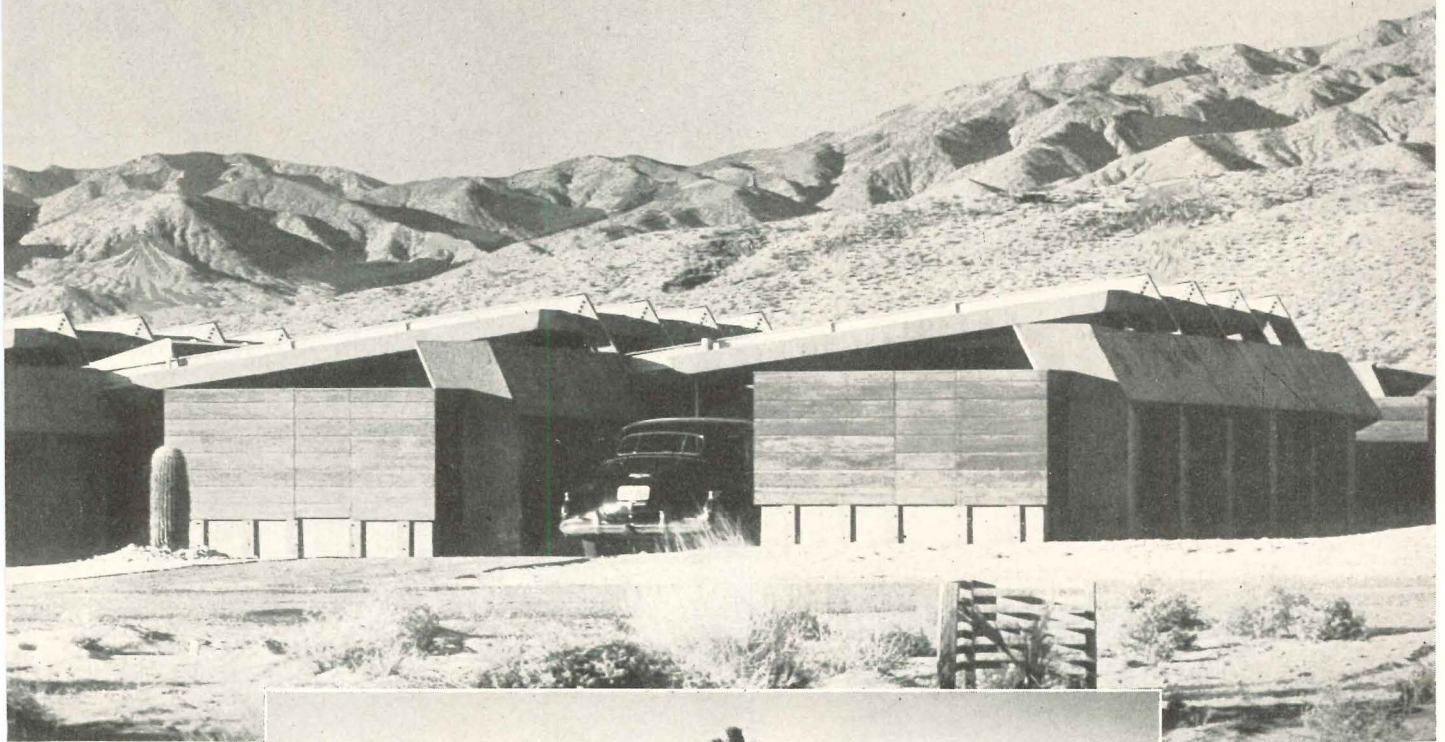
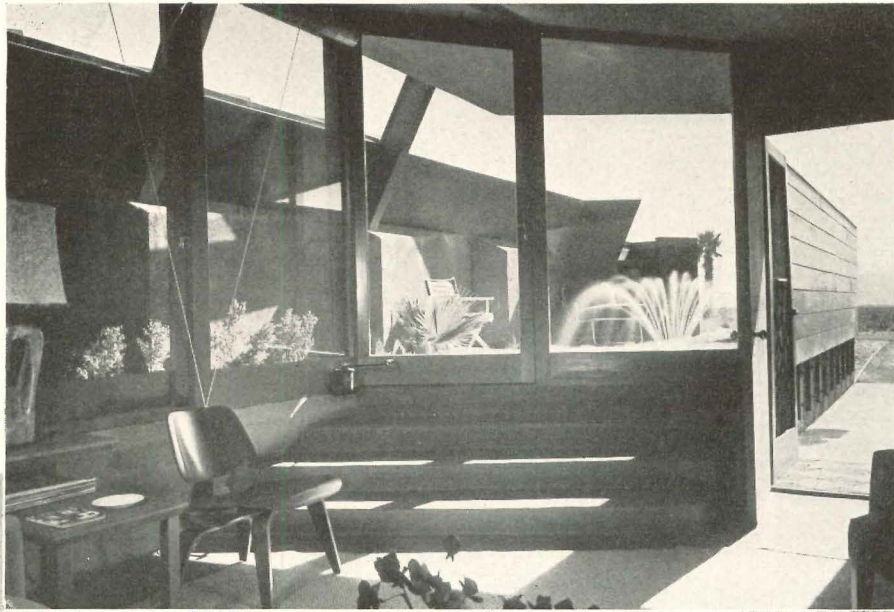
Acceptable double-room sizes range from 14 by 14 to 16 by 18 ft. These are considerably larger than city hotel double rooms and give the motor court another selling point.

Housekeeping is easier and quicker if beds touch walls at heads only and if radiation is recessed.

Closets: Since 90-95 per cent of business is one-night, some new courts are installing inconspicuous hookstrips and dispensing with closets, or leaving off closet doors, not only to save money but to minimize tendency to leave articles in closed closets. Standard carpenter construction of closets with full door frame, door and trim begins to look more and more ridiculous. Very simple and inexpensive metal sliding doors are available which make full closet width accessible (half at a time). "Storagewall" treatment between rental units will not be satisfactory from sound reduction standpoint.

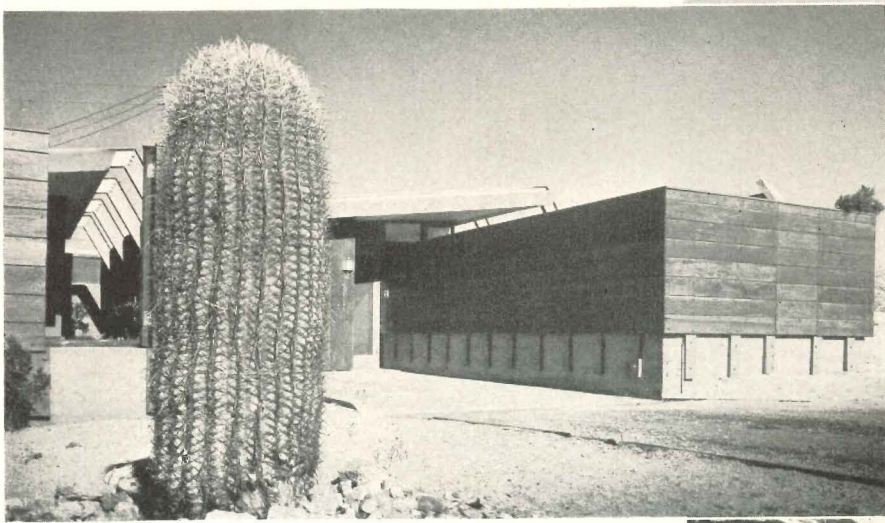
Contentment House, at Bubbling Well, Desert Hot Springs, Calif. (John Lautner, Archt.), is another motel-resort-cottage group. Each motor-apartment has a private garden, is protected from the surrounding desert, and has a complete kitchen. For relaxation there are hot and cold mineral baths; Palm Springs is six miles away





Julius Shulman

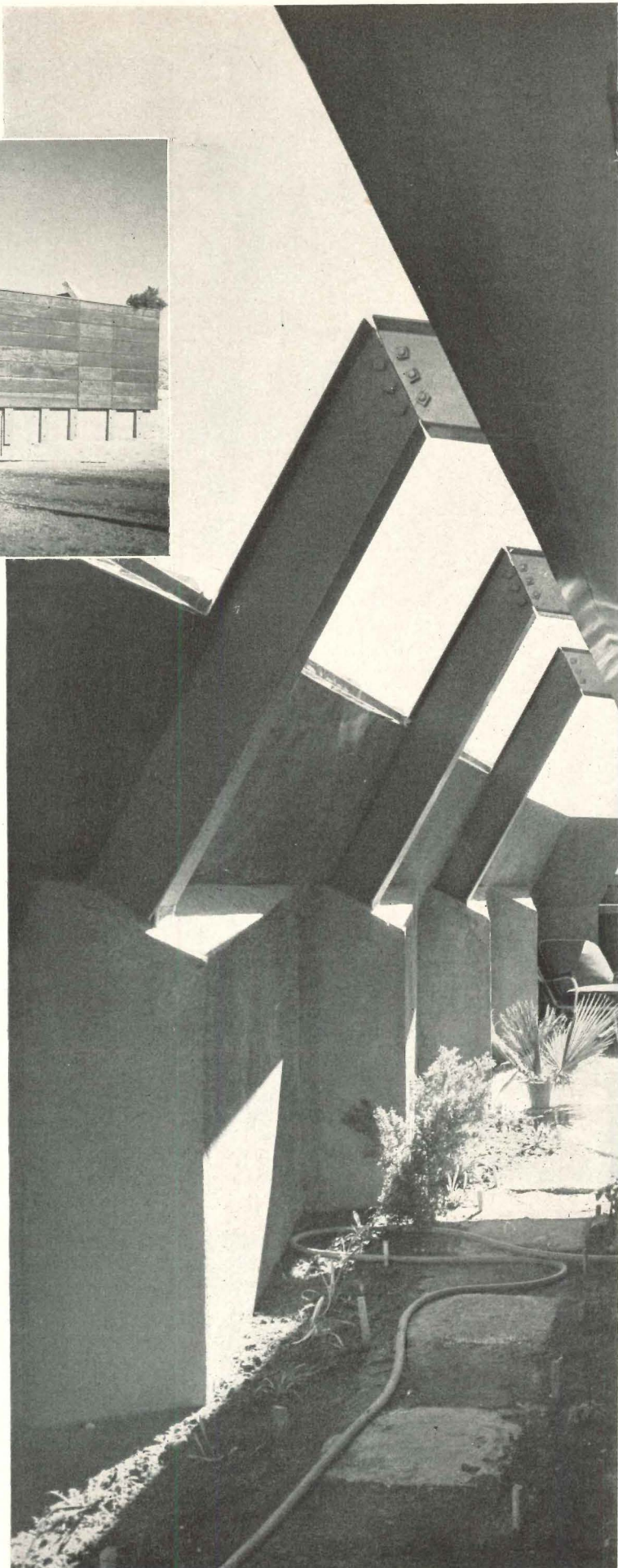
MOTELS

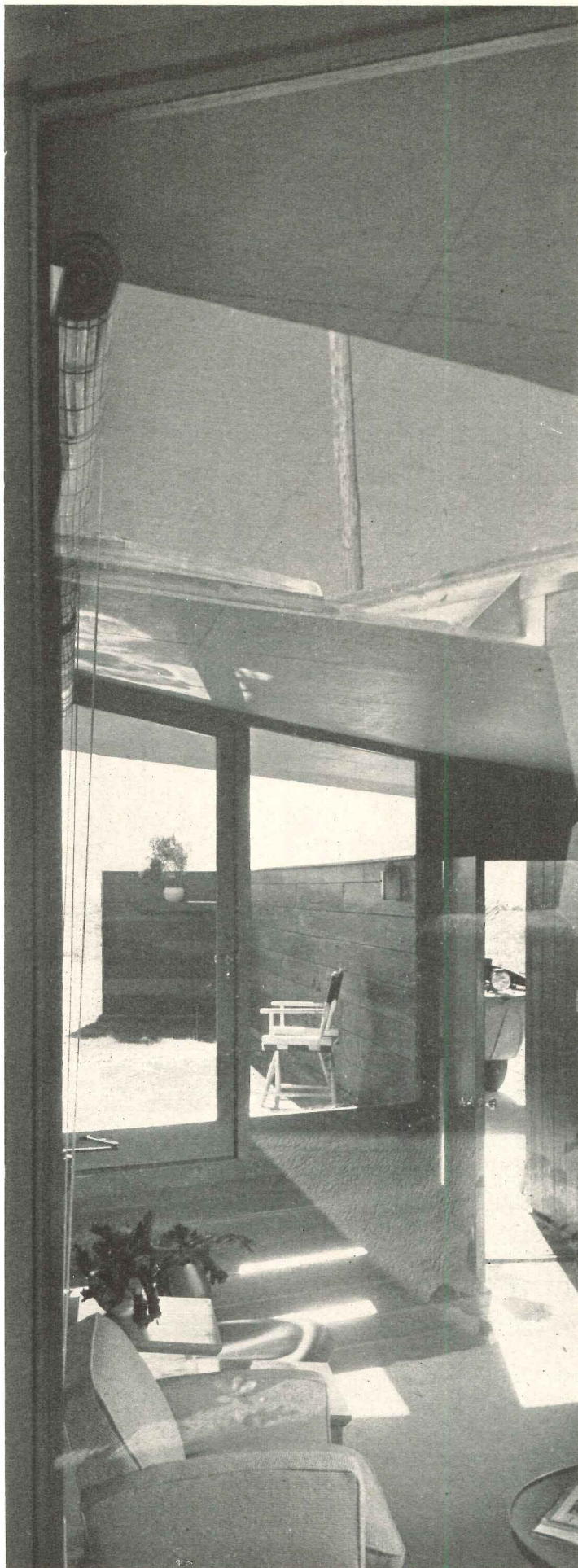


Contentment House: above, exterior of typical apartment, completely furnished, with car parking space alongside; below, interior, kitchen at far end; right, looking toward an apartment's private terrace



Julius Shulman





Windows: Metal casements seem to be preferred, with aluminum recommended to save painting (avoid flimsy sections). Projected sash and glass block panels with casement vents have also been used. Projected sash may give protection from weather and prowlers. Glass block affords protection, privacy, insulation, light distribution and reduces dust infiltration. Fixed glass (double-glazed where required), with screened louvers which can be shut, make a good arrangement where glass is accessible for washing outside. At least one set of louvers in each room should be easily opened from inside for fire escape hatchway.

One motor court problem when there is insufficient shelter from eaves, window hoods or porches, is the closing of rental unit windows in event of a sudden storm. Some method of closing from outside is desirable to avoid having to run in and out of every room.

Slate window stools make an attractive, easily cleaned, alcohol- and cigarette-proof detail. Screens are a must. Aluminum or other non-ferrous metal will save painting. Venetian blinds, with or without draperies, are considered essential for privacy and maximum ventilation; most recent courts have metal blinds. Venetian blinds are always difficult to clean and absorb and re-radiate solar heat inside the room, but there is at present no inexpensive substitute for the light control, privacy and ventilation they provide.

Awnings of light metal, with overlapping members spaced to permit better ventilation, are found in some courts. There is a tendency to paint alternate strips contrasting colors which makes a pattern of stripes too bold for many facade designs.

Doors: Screen doors may also be aluminum to save painting.

Keying of locks for various classes of entry is important:

- Manager:** Grand Master Key
- Maintenance:** Master key for all storage, shops, padlocks, slop sink closets.
- Maids:** Master key for all rental units (keyed different from closets and garage doors) in each one-maid area with local linen closet subject to that master key and manager's Grand Master only. Maids' keys to be turned in each day.
- Guests:** Rental units, closets and garage doors keyed alike.
- Restaurant and Service Station:** On individual keys subject to manager's Grand Master only. (May be run as concessions.)

Oversize key tags should have post office box number rather than name and address.

When garages are provided, a door directly into the bedroom is convenient for luggage handling. Check insurance regulations. Some plans have door near rear of car, or to entrance porch or terrace. Overhead doors are found in most motor court garages.

MOTELS

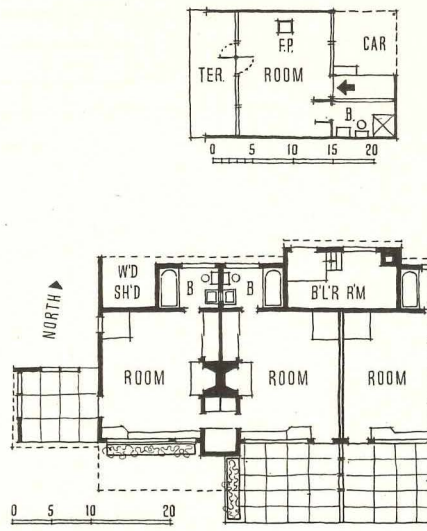
Porches, terraces: Some place to sit outdoors, with or without privacy, is appreciated by average motor-tourist. The building often has a continuous porch which affords circulation protected from weather for guests and maids. Some of the quite old examples link buildings by covered passages as well. Porches need not be wide. Six feet will permit passing behind furniture. Avoid wooden porch floors. Wear and repainting will make them more expensive eventually than more durable terrace materials.

Ceilings: Some examples have acoustic board ceilings which add somewhat to thermal insulation. Reduction of sound at source by acoustic absorption is first line of defense against noise.

Trim: Asphalt tile cove base is neat, durable and requires no paint. Narrow, flush metal door and window trim reduces maintenance and gives desirable simplicity. Door jamb trim should project far enough to receive molded base.

Colors: Variegated floors will show wear and dust less than plain colors. Tesselated patterns of quietly contrasting colors are found most practical. Wall colors should be selected to balance daylight effects. Rooms without sun may be made more cheerful by using

Plan types: top, single unit, prefabricated, The Inn, Bethlehem, N. H. (Dan Kiley, Archt.); below, double unit for use alone or as part of a 4-unit, Lovett's Cottages, Franconia, N. H.; right, 4 rooms around central core, Saltboxes, Yarmouth, Mass. (David Fried, architect for both)



MATERIALS, FINISHES, COLORS

Floors: Asphalt tile is a favorite in newer installations. Some installations with radiant heat in floor slabs have had difficulty with indentation when temperatures overrun desirable limits. Vibrated concrete tiles about 18 in. square with integral color make a handsome, durable floor. Project floor area must be large to justify fabrication. Many recent motor courts and motor hotels use wall-to-wall carpet, often with small overall pattern to minimize accidental spotting. Wall-to-wall carpets are much easier to maintain and less hazardous than rugs. Finish floor beneath may be less expensive. Preferred installation of carpet shows narrow peripheral strip of floor and carpet is not tacked down.

Walls: Rough plaster, painted with a non-gloss washable paint, is most practical and inexpensive. Attempts to simulate paneling or board walls always look cheap and are out of scale in these necessarily small rooms.

warmer hues which would be too hot for sunny rooms.

Doors and trim in hotels and courts are often stained quite dark to avoid showing hand marks. This makes them "jump out" of a light wall and clutters up the room visually. Wood grain in itself (even if light) will reduce effect of hand marks more than paint. To avoid disappointments, room color schemes should not be established until available stock furniture and venetian blind finishes are reviewed and a selection is made.

EQUIPMENT

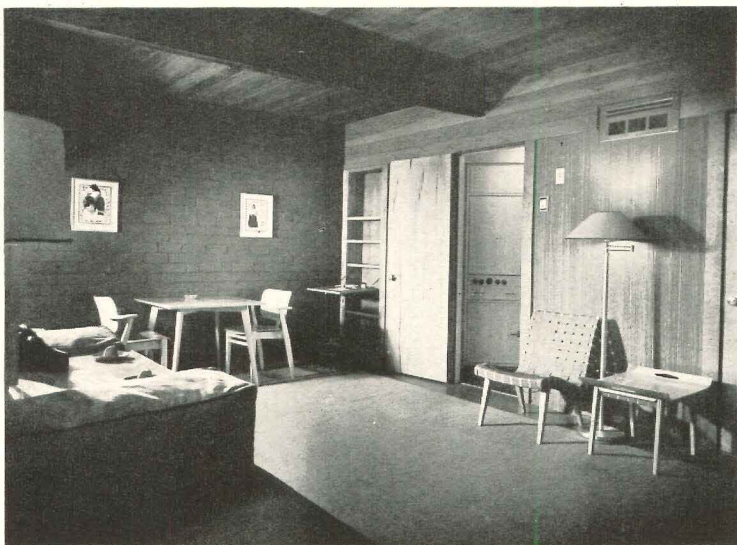
Furniture and furnishings: The majority of new and recently decorated courts have standard flush-metal hotel furniture of excellent quality with best grade mattresses and springs. This kind of equipment, complete, will cost approximately \$600.00 per double room, including carpet. Some courts are using the dolly or Hollywood type of bed with no footboard. These have large casters to facilitate housekeeping. All furniture should have rustproof glides.

Extra bed capacity may be provided by sofa beds or

by folding utility beds (Rollaways) which jack-knife the mattress vertically and can be rolled around easily on 3-in. rubber casters. Frames take regular twin-bed size mattresses 3 ft 3 in. and are usually supplied with a less expensive grade since use is not so continuous and durability is not critical.

Many courts furnish full size dressers with several drawers which are never opened by guests who stay only one night. There is some feeling that a psychologically homelike effect is achieved in this way. A combination vanity-desk with two drawers just large enough to hold an extra pair of blankets makes much more sense. The same functions may be provided by simple built-in vanity-desk shelf and cabinet or open shelves (easily checked by maid). Some operators prefer not to leave extra blankets in rooms.

Maynard Parker



be sufficient. If there are two arm chairs add one floor lamp.

Bathrooms: All-tile bathrooms (about \$400 for tile-work) are required for top grading by the better associations because of superior maintenance. Large stall-type showers with built-in wing wall obviating need for curtain are also preferred. This could be provided by carefully detailed screen of obscure corrugated glass. Points to watch: support, free edge, transition from corrugations to base. A veteran traveler commented recently on need for some method of quickly heating shower stall floors in winter-time in rental units. The dense shower floor never heats up unless a wasteful amount of hot water (if available) is run on it. This steams up the whole bathroom.

Robert Cleveland



Typical guest accommodations: left, Tucson Biltmore (Arthur T. Brown, Archt.); right, Santa Ynez Inn, Los Angeles (Alfred Gilman, Archt.)

No stock furniture finishes will withstand everything — the best available for general service will not resist acetone-type nail-polish removers. Many courts add plate-glass tops. If these are supplied locally, be sure to specify edges ground and top beveled — grinding alone leaves a sharp aris.

Two luggage racks should be provided for a double room and they should have a rear curb of some sort as well as bumpers or projecting rear legs to hold luggage and rack away from wall or foot of bed. Stock chairs are now available designed so that they will not mar walls (rear legs project beyond line of back).

Typical double room should provide: 2 double beds, 1 night table, 1 combination vanity-desk with mirror, 2 luggage racks (one can be used as vanity bench), 1 arm chair (2 better), 1 straight chair, 2 lamps, 1 waste basket, regional maps on wall.

Lighting: If wall outlets are wired to switch from doorway, ceiling light may be omitted. One lamp on night table and one on desk (shared by arm chair) will usually

Carports or garages: Ultra-violet rays of sunlight, condensation of dew, evaporation of rain, freezing and thawing of snow and ice, spotting by birds, trees and insects, and salt atmosphere are all harmful to automobile finishes. These destructive elements indicate the desirability of keeping cars in closed garages. But the motor court patron is a transient; the garage is by no means a necessity for a motor court; unless the climate is extreme, carports or open parking will be acceptable. A higher rating, however, will be granted by associations for garages.

When carports are provided at the ends of grouped rental units, the transition to the next building may require special detailing, particularly if there is variation in site grades. Doubling up supports is awkward and such central posts are subject to battering by inaccurate drivers. It is much simpler to forget about having a clean, repetitive unit building, and frankly design a bridged shelter between the two buildings.

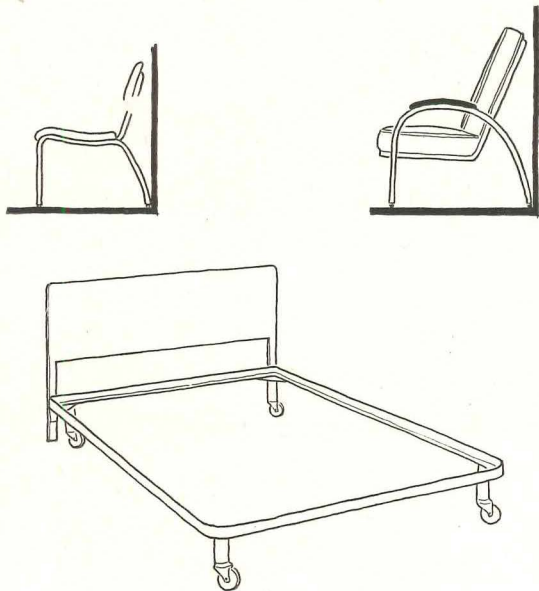
There is no need to plaster soffits of carports unless it is felt that the additional fire resistance is essential.

MOTELS

CONSTRUCTION NOTES

Foundations: Dense concrete block on poured footings make satisfactory foundations for these predominantly one-story structures.

Walls: 8-in. cinder blocks with or without plaster and/or stucco and with or without furring, depending on climate, are used in majority of better jobs. A number of reliable block paints are available which apparently do a good job of waterproofing unplastered block. Integrally-colored concrete brick units, brick backed up with 4-in. cinder block, brick veneer and frame are also used.

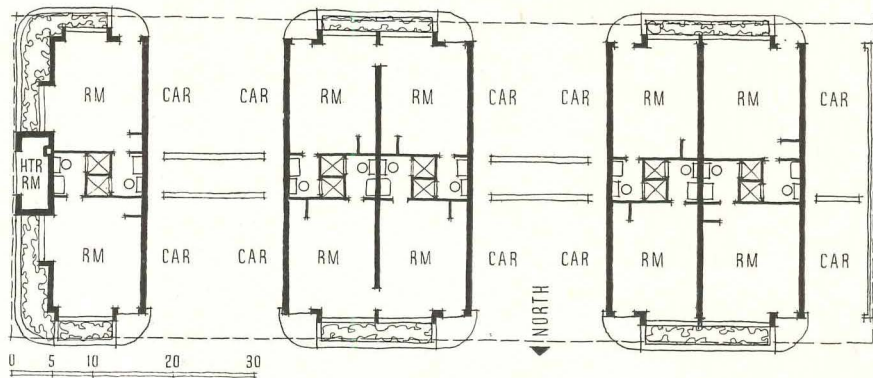


insulation job often neglected is between backed-up medicine cabinets.

WEATHER CONSIDERATIONS

Orientation: Studied location and area of fenestration, provision of calculated hoods and screens for sun control, and consideration of prevailing seasonal winds can make considerable difference in heat load and summer and/or winter comfort. Architects cannot afford to be unfamiliar with latest developments in this field which has a constantly growing documentation.

Heating: An increasing use of radiant panel heating is noted, with source in floor slab. This location is not considered ideal by many heating engineers, who prefer ceiling panels. Time lag is much longer in floor (heating and cooling off) and floor finishes are sometimes not appropriate (carpet, softening materials). Many motor courts are located in natural gas areas and use individual



Left, satisfactory types of standard furniture: chairs with rear legs projecting to prevent marred walls, simple metal "dolly" bed. Plan above: Motel Pam, near Columbus, Ohio (Tibbals-Crumley-Musson, Archts.), essentially a double-unit scheme with variations. Utility core down center is lighted by clerestory. Split heating (part radiant, part radiators) is designed to prevent frozen plumbing in unvented units in winter

Floors: Slabs on grade with asphalt tile finish are very frequently found.

Partitions: 4- or 6-in. cinder block with or without plaster (much better sound reduction with plaster but inexpensive, attractive and easily maintained texture without).

Ceilings: Gypsum board, acoustic board or tile are common. Natural finish flush wood boards can give pleasant relief from white ceilings. Painted wood plank roofs with exposed beams (mill construction) are used in some "ranch-type" structures.

Sound Control: Planning with entries, closets and baths between rental units is common. One sound-

gas-burning units. These, when unvented, have given much trouble, ranging from excessive condensation to fatalities. Effective new vented units are available which heat room without exposed flame. Radiant baseboard heating is becoming more popular.

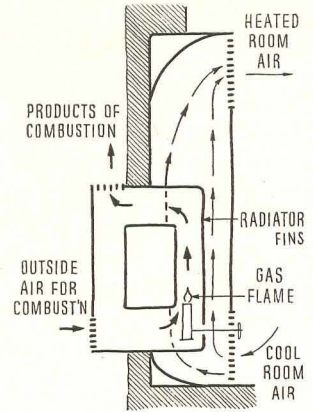
Ventilation: Planning for cross-ventilation or "right-angle ventilation" is usual in warmer climates and recognized in motor court publicity as a selling point which the city hotel can offer to only a few guests. Electric fans mounted on a high wall bracket are effective, and out of the way of children and pets.

Air conditioning: Southern and Southwestern courts and motor hotels are often 100 per cent air conditioned and could not hold their business without this feature.

One extensive court in a Middle Atlantic state, with forced hot-water heating pipes run underground in tile (24 in. minimum depth) from heating plant to individual cottages and to restaurant unit-heaters, discovered that, in summertime, water in the pipes was 60° and gave considerable cooling effect when circulated through the unit-heaters in dining room.

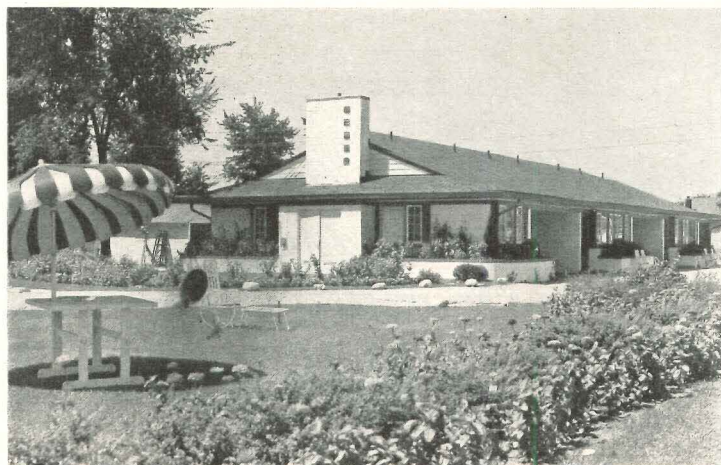
Rainfall: Driveway, parking and general site drainage is extremely important since guests enter rooms directly from outdoors and room maintenance work can be tripled by muddy shoes. There is also a psychologically bad effect in driving into a motor court on a rainy evening and finding pools of water everywhere.

Snow removal: If project is in a snow region, and is extensive, a Jeep with 5- or 6-ft-wide snowplow attachment (standard accessory available in either width) will be invaluable.

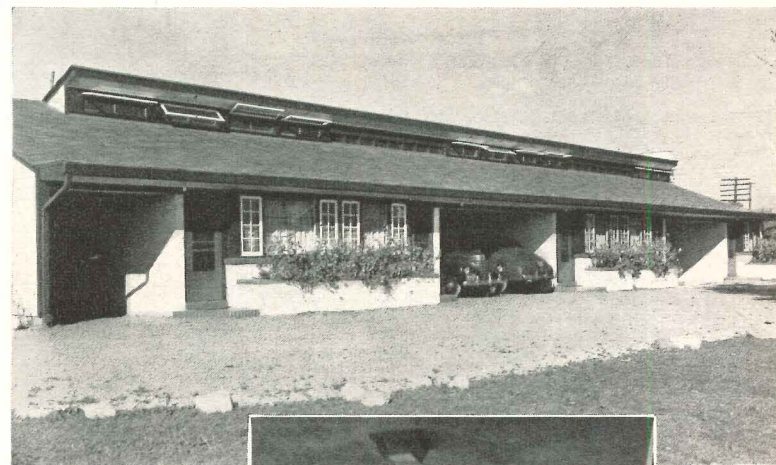


Standard type of unit heater for motels burns piped or bottled gas, must be on outside wall; combustion air is separate from room air

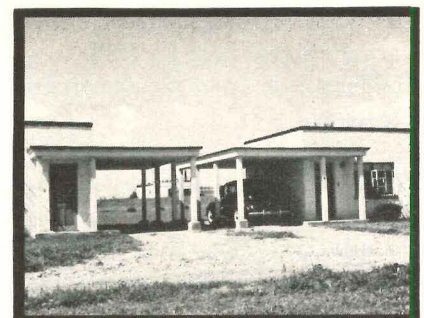
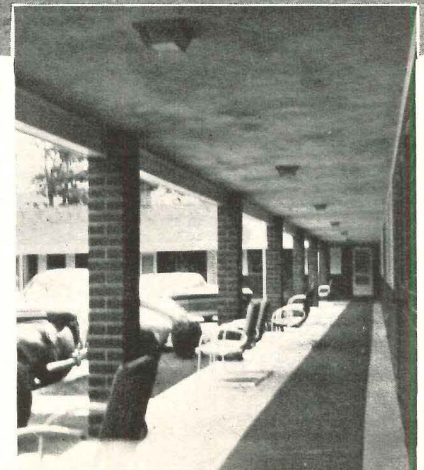
Joyce Studio



Joyce Studio



Above, two views of Motel Pam showing covered car parking, continuous roof. Right, cars parked at door but not under roof, George Washington Motor Court, Fredericksburg, Va. (R. R. Sollenberg, Designer). Lower right, individual carports, but units so close together that a common roof (see Motel Pam above) would seem more sensible

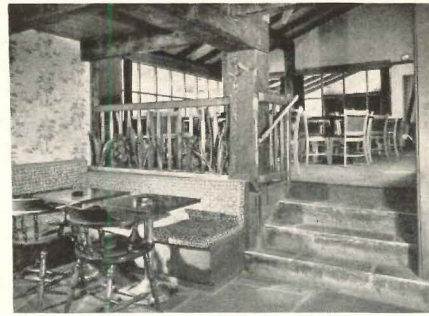
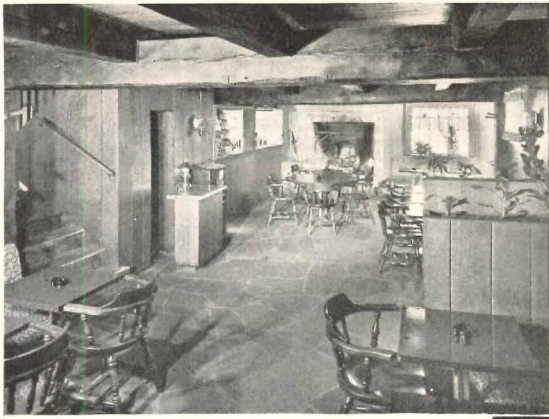


Pawley

PROMOTIONAL FEATURES

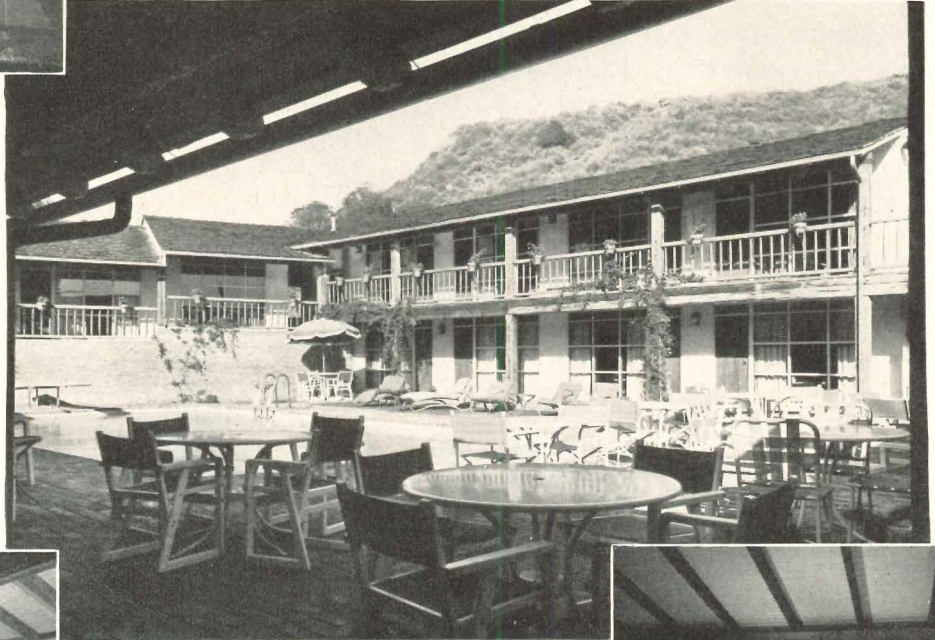
As hotels have done before them, motor courts now compete with each other (and with hotels) by offering many special amenities and services. Some of these are quite small gadgets but are helpful and remembered by guests. Following are typical items:

- Telephone or intercom with switchboard
- Room radios (coin-operated type is resented by some guests)
- Electric fans
- Ironing board, outlet (note current)
- Razor outlet
- Individual small refrigerators (wall type)
- Bottle opener
- Shoe cleaner
- Flyswatter
- Touring information: maps and guides



MOTELS

Robert Cleveland



- Gift shop
- Auto service and filling station
- Laundry service
- Diaper service
- Valet
- Ice service (cube maker or bulk cube box)
- Soft drink vending machine
- Free cool drink on arrival, free morning coffee

- Playground equipment
- Badminton
- Tennis
- Shuffleboard
- Golf (putting course)
- Swimming pool
- Skating
- Lounge (fireplace, magazines, radio, television)
- Game room
- Ping pong or deck tennis

Signs and advertising: The following media should have design study:

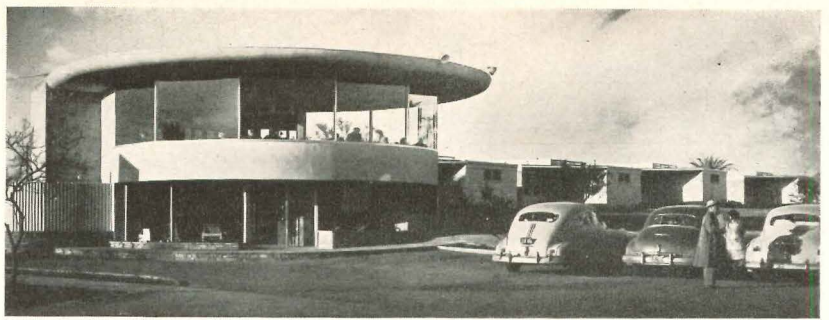
Highway signs; entrance sign(s); vacancy and no-vacancy signs (note particularly problem of association emblems); directional signs on project; regional character items.

Recreation and entertainment: In general, recreation areas should not be near enough to rental units to disturb sleep. Since they are promotional in nature it is good to have them visible from highway; but safety must also be considered.

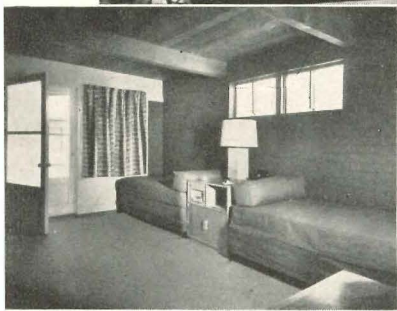
Pets: While not strictly promotional, management policy toward pets is of definite importance to guests traveling with animals. Some operators rent only certain units to pet-owners (to be able to reassure subsequent guests with allergies, etc., that *their* quarters have not been so occupied) — some merely ask for cooperation indoors and put up signs about the shrubbery. Others flatly refuse to rent to pet-owners, advertise the fact and save something on maintenance at the cost of turning away such business. Some resort hotels provide kennels.

NOTES ON FOOD OPERATIONS

Detailed data on roadside restaurants is outside the scope of this study but references on the subject are



Maynard Parker



Julius Schulman



Such facilities as restaurants and service stations are not considered satisfactory adjuncts of the average motel except as promotional items. However, just to prove the rule, in quite a few cases this type of accommodation has been found exceptionally profitable. In many instances, climate, locale, custom, or a special talent has been exploited. On the facing page are shown five dining areas in Santa Ynez Inn near Los Angeles, one of them a pool-side terrace (Alfred Gilman, Archt.). The four photos above, of the Tucson Biltmore, Tucson, Ariz. (Arthur T. Brown, Archt.), show the semi-circular dining room elevated above the central mall and swimming pool, with the 4-unit cottages, much like those shown previously in plan, in the background. Photo at left, lounge, Palm Springs Biltmore, Palm Springs, Calif. (Frederick Monhoff, Archt.)

MOTELS

given in the bibliography. It is agreed by many operators that kitchenettes are not desirable. It is extremely difficult to maintain sanitary standards with transient use and the extra attraction for vermin is just one more problem. Some courts have facilities to provide travelers with breakfast; a coffee room or counter is sufficient. Location near existing dining facilities is one answer, but if project is isolated, provision of full restaurant service becomes urgent. No one wants to get back in his car after driving 300-400 miles to look for a place to eat, after finding a place to sleep. The inconvenience will be remembered.

ASSOCIATIONS

Of the many organizations whose insignia and guidebooks indicate superior motel accommodations, two are discussed here; others are listed in the bibliography.

American Automobile Association has trained field men covering all main highways in North America. Their motel reports, analyzed on standard forms, are based on five considerations: general appearance, atmosphere, equipment, maintenance, cleanliness. The A.A.A. pamphlet, *Affiliation Requirements for Motor Courts*, tells standards to be met for listing in A.A.A.'s *Accommodations Directory*.

Quality Courts United, Inc., an operators' association, sets superior standards for industry protection. It has 128 members in Eastern seaboard states, is ten years old, requires applicants to fill out detailed *Analysis of Facilities* grading sheets. These, covering planning, landscaping, construction and equipment as well as housekeeping, etc., are checked, and acceptance further depends upon favorable action by the Board of Directors.

BIBLIOGRAPHY

KEY

b bibliography	m maps
d details, diagrams	p plans
f forms	s sketches
g graphs, charts	t tables
	v photos

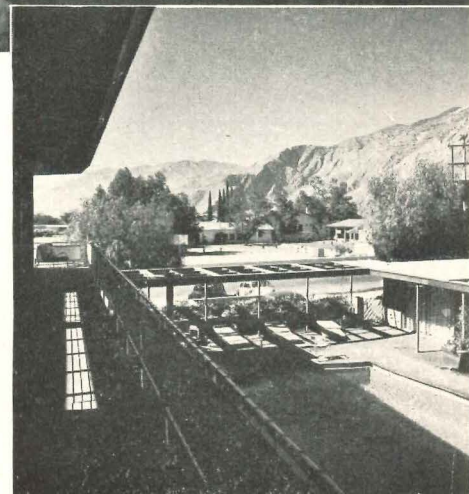
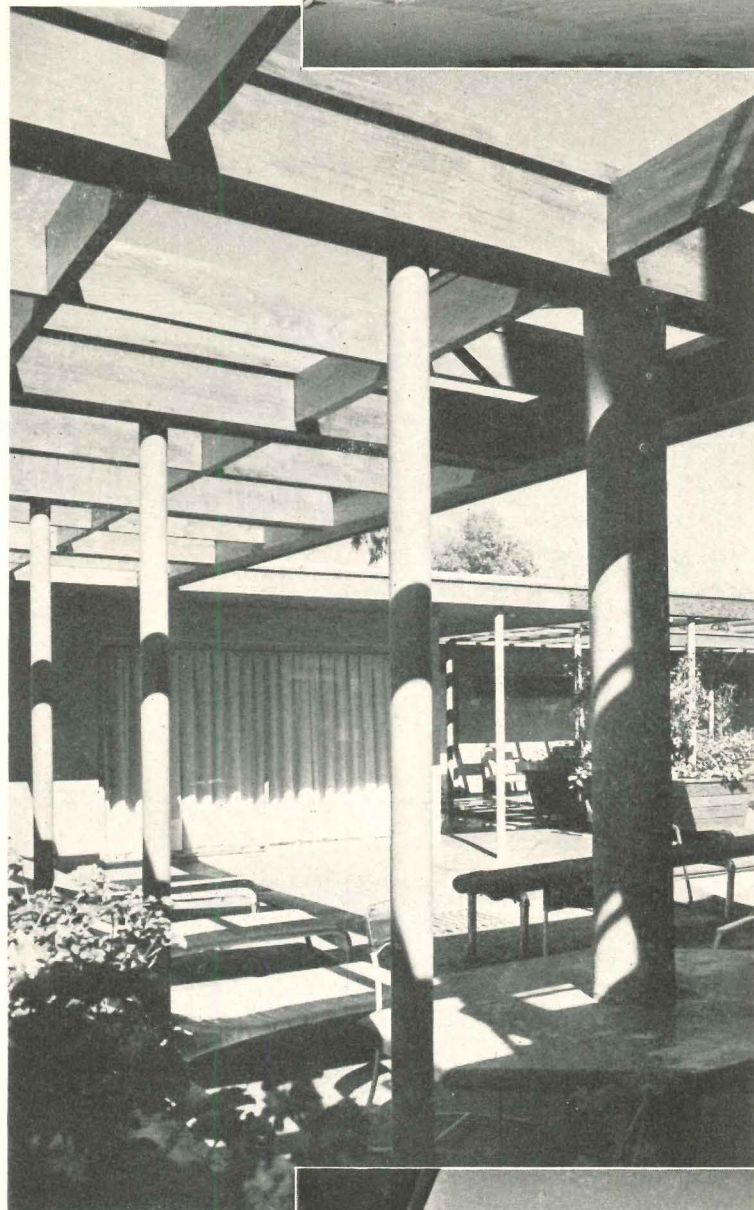
BOOKS, PAMPHLETS

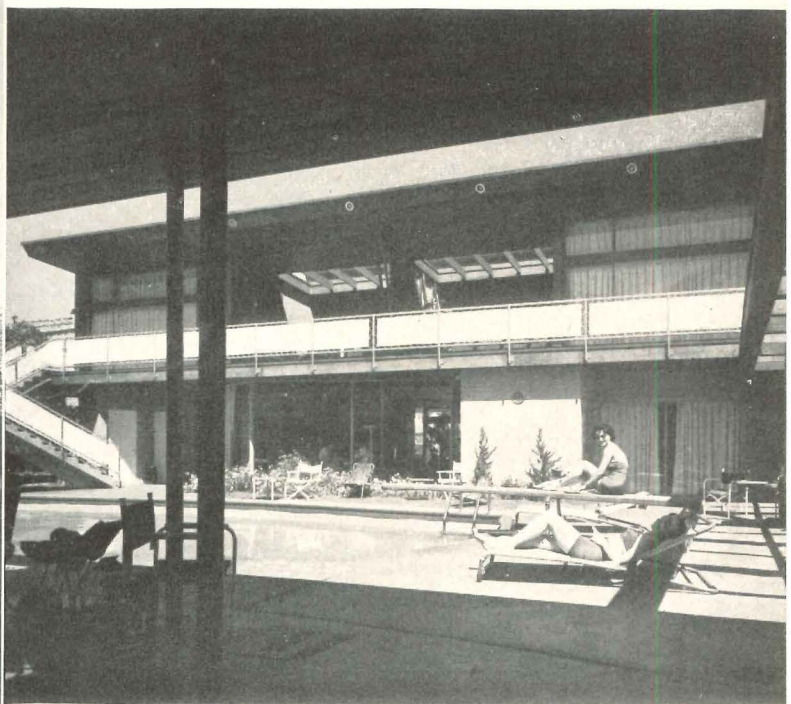
1. American Hotel Assn. Public Relations Committee. *How to Sell the Motor Traveler*. A.H.A., New York, 1948. 55pps.
2. *Architectural Record. Time-Saver Standards*. F. W. Dodge Corp., New York, 1st ed., 1946.

Residential furniture	pp. 98-99, 110-111
Bathrooms	133-140
Closets	141-154
Garages	155-156
Hotel bedrooms	169-173
Restaurants, bars	176-184

(Continued on page 190)

Julius Schulman





Pepper Tree Inn, Palm Springs, Calif. (Stewart Williams, Archt.), is, again, almost a resort hotel for motorists rather than a place for a tourist's overnight stop. Partly two-storied, its one-story portion provides access to guests' rooms by means of a roofed walk, and encircles a courtyard and swimming pool



POTENTIALITIES OF PLASTICS IN BUILDING

By Albert G. H. Dietz*

SOME years ago ARCHITECTURAL RECORD observed that of all the materials that can go into a building none is more intriguing — or baffling — to the average architectural designer than plastics. Plastics have become still more complex, still more baffling, and still more intriguing.

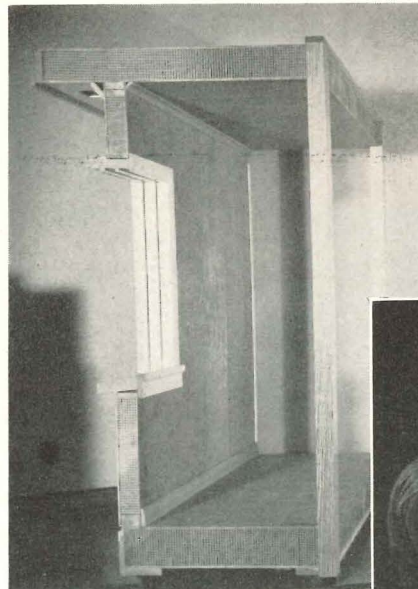
Much of the confusion concerning plastics seems to arise from a failure to recognize that the term does not relate to a single material but to many materials. Within their own domain, plastics possess at least as broad a range of properties as metals, and are capable of at least as great a diversity of compositions. Much more than metals, they are commonly combined with other materials like wood, paper, fabrics and fibers to provide still more diverse properties. Frequently it is difficult to say whether the finished article is a plastic modified by another material or vice versa. Often the combination possesses unique properties which could not be supplied by either constituent by itself. Finally, the presence of the plastic may be so completely hidden, as in adhesives and coatings, that it comes as a surprise to realize that the plastic is there and may, in fact, supply the essential ingredient that makes the application possible at all.

In this article the principal types will be briefly summarized together with the principal methods of manufacture. Some of the newer materials and techniques will then be discussed to show the directions in which developments are proceeding and how they may be applied in buildings.

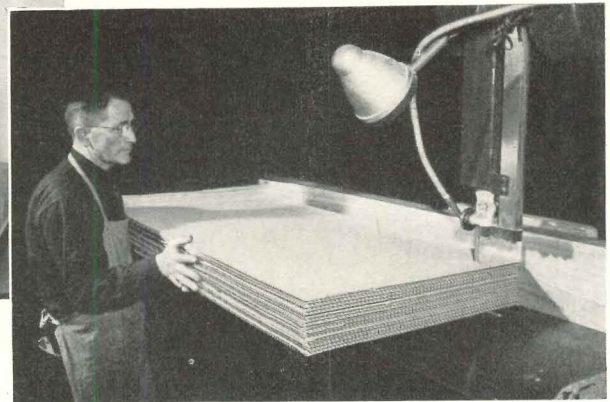
Classification

Most of the plastics can be classified into several fairly well-defined categories, although a certain amount of overlapping exists.

It is convenient to classify them into two principal categories, usually called thermoplastic and thermosetting, based upon their reaction to heat. The thermoplastics soften and become plastic upon heating, and harden upon cooling. They will do so any number of times. The thermosetting plastics or thermosets, when first heated, soften and become plastic, but upon further heating become hard and will not soften again even if



Forest Products Labs.



Floors, walls and roof of the Acorn house (shown being unfolded and in finished form on opposite page) are lightweight sandwich construction. Sandwiches are cross-corrugated paper, impregnated with plastic resin, plastic-bonded to plywood

more heat is applied. The hardening or "curing" or "setting" reaction is therefore irreversible. Some thermosets seemingly depart from this rule because they harden rather completely at one temperature, but soften partially at still higher temperatures. This softening, however, is not complete because the materials, if deformed at these temperatures and cooled and hardened in the deformed shape, tend to revert to their original shapes if heated again.

The more important chemical types are listed below. Many others could be added to this list. Only those of apparent interest in building have been included.

Thermosetting Resins

- Phenol formaldehyde and related resins
- Urea formaldehyde
- Melamine formaldehyde
- Alkyds
- Polyesters
- Silicones

Thermoplastic Resins

- Acrylics and copolymers
- Polyamides

- Polyethylene
- Polystyrene and copolymers
- Polyvinyl chloride and copolymers
- Polyvinyl butyral
- Polyvinylidene chloride and copolymers

Cellulosics

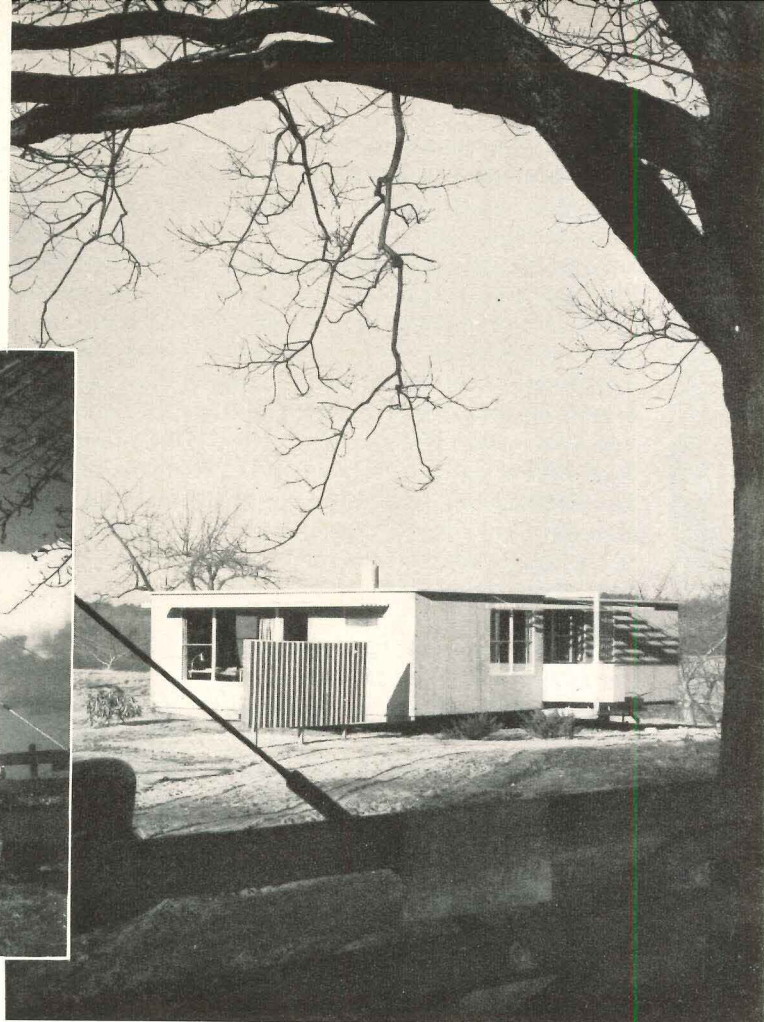
- Cellulose acetate
- Cellulose acetate-butyrate
- Cellulose nitrate
- Cellulose propionate
- Ethyl cellulose
- Regenerated cellulose
(often not considered a plastic)

Many of these are modified by the inclusion of fillers, plasticizers, colors, and stabilizers. The phenolics are modified by fillers such as wood flour for general purposes; asbestos for heat resistance; mica for electrical properties; and chopped fabric, chopped cords and fibers for increased strength and resistance to impact. Many of the thermoplastics, particularly vinyl chloride and the cellulosics, are drastically modified by the inclusion of plasticizers, which may convert a hard, brittle resin into a soft plastic material.

* Associate Professor, Department of Building Engineering & Construction, Director Plastics Research Laboratory, Massachusetts Institute of Technology



Above and right: Ezra Stoller—Pictor



As the foregoing list shows, many materials are copolymers; that is, chemical combinations of two or more types. For example, vinyl chloride and vinyl acetate are commonly copolymerized to provide a soft vinyl by modifying the hard rigid vinyl chloride with the soft vinyl acetate.

Fabrication

Many fabrication methods are used, of which only the most important will be mentioned.

Compression molding. Thermosetting materials are commonly molded in heated molds under high pressure to form the cured finished part. Variants of this are transfer and plunger molding. Thermoplastics may also be compression molded. A great variety of small and large parts is molded by this method, which is in many ways the most versatile of all. Examples are radio cabinets and handles for doors and drawers.

Injection molding. Thermoplastics are commonly molded by forcing the hot, soft material under high pressures

into relatively cool molds. The material hardens upon cooling in the mold. Faster cycles are achieved by this method with the thermoplastics than by compression molding. Like compression molding, this is a method used for a great variety of parts, such as polystyrene wall tile and transparent blocks.

Extrusion. Thermoplastics are extruded into continuous profiles like architectural moldings, edging strips, tubing, and the like. The cellulose and the vinyls lend themselves especially well to this technique. It is also used for extruding coatings, such as vinyls, on wire.

Casting. Certain acrylics, polyesters, and phenols may be cast in simple molds. This may be done by the manufacturers of the basic materials, or some of the polyesters and phenolics may be cast by the final fabricator.

Machining. Many of the plastics, especially in the form of sheets, rods, tubes, and laminates may be machined by sawing, turning, punching, milling and other standard techniques.

Blow molding. Softened thermoplastic sheet may be formed by air, steam or hydraulic pressure.

Film and Sheet. These may be formed on calender rolls, by casting on moving belts, by extrusion or by slicing ("skiving") from solid blocks.

With the foregoing brief resume of the principal types of plastics and fabricating methods, some of the newer, and more significant materials and processes which have found their way into building applications, or promise to do so, will be reviewed. Many others could be included.

High Pressure Laminates

High pressure laminates have been employed for years, on a limited scale, in building applications, but since the end of the war have been used at an accelerating pace in more and more decorative and semi-structural applications. These materials are formed in heated presses under pressures ranging from 1000 to 3000 psi and are therefore called high pressure laminates as compared with

the reinforced plastics or low-pressure laminates in which the forming pressures range from practically zero to a maximum of perhaps 50 psi.

In the high pressure laminates a typical combination of materials consists of a base of several sheets of strong kraft paper impregnated with a phenol-formaldehyde resin. This is overlaid with a sheet of printed paper, a fabric or a thin wood veneer. The overlay is then faced with a sheet of melamine resin. The combination is placed in a heated press and cured into a solid sheet by heat and pressure. The phenolic and melamine resins, being thermosetting, will not soften upon the application of heat, although they will char if heated enough. The transparent melamine face is one of the hardest and most abrasion resistant of the plastics and protects the decorative sheet underneath. It is also immune to solvents, like water and alcohol, to which it is likely to be exposed.

A cigarette-proof variant is made by incorporating a thin sheet of aluminum under the decorative sheet. The aluminum conducts away the heat from a burning cigarette, for example, so fast that the charring temperature of the laminate is not reached.

Laminates such as these are commonly employed as facings and backings on plywood for tables, counters, and many similar applications. Several large-scale installations have been employed in the furniture and paneling of hotels.

Reinforced Plastics

The term "reinforced plastic" has recently come into general use to describe the type of sheet material consisting of resins reinforced with various fibers and filaments. The most commonly employed combination is a polyester resin reinforced with glass fibers in the form either of mats or of woven fabrics.

Fabrication of these materials is simple. The liquid resin and the reinforcing material such as glass mat or fabric are applied over a simple form to the desired thickness and then hardened by the application of moderate heat. Before hardening, the lay-up may be wrapped in a flexible blanket such as a rubber bag, and subjected to air pressures ranging from a few pounds to 25 or 50 psi or, as in the newer techniques and with the newer resins, no pressure may be exerted and no blanket employed. Curing is sometimes carried out in an oven, but it may also be completed in a heated room or chamber. Once the resin has hardened, it does not soften appreciably upon the application of heat. The resulting ma-

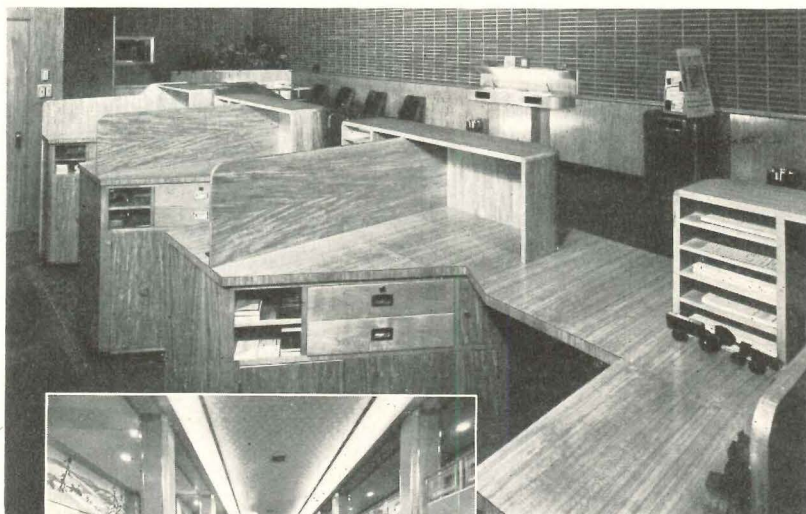
terial is translucent unless pigmented or filled, and may be colored by the inclusion of dyes.

These materials had their inception and trial uses during the war, where they were found especially useful for such applications as housings for air-borne radar. Here they were required to withstand exposure to extremes of temperature and to high-velocity wind and rain. In other applications they were developed for body armor and for boats. Since the war they have found many applications including a rapid expansion in small boats like dinghies and in larger

vessels such as naval personnel-carrying craft 25 to 35 ft long. In all of these applications they have proven themselves to be strong, extremely tough, abrasion resistant and durable.

In the building field these materials have so far been employed chiefly in the form of corrugated sheets in conjunction with traditional corrugated sheet materials for the enclosure of aircraft hangars and industrial buildings. Since they are made in standard corrugations and are applied by the same techniques as are employed with standard corrugated materials, they require no special trades.

Formica Co.



Arborite Co., Ltd.

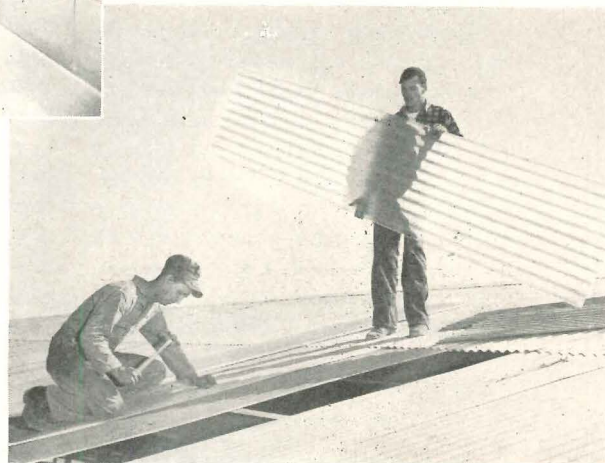


Formica Co.



High pressure laminates have come into more extensive decorative and semi-structural uses lately. Thin wood veneers overlaid with transparent plastic were employed in the bank (above) and hotel lobby (left). In the bathroom decorative plastic was used

Texas Industrial Film Co.



They can be placed anywhere in the roof or wall pattern where light transmission is required. These materials have also been found attractive for interior or exterior decorative and semi-structural treatments where appearance is important.

Transparent Rigid Sheet

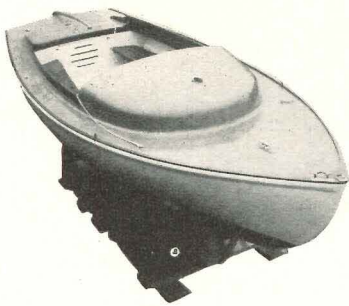
Transparent plastics in sheet form were used to a limited extent in buildings before the war, but wartime requirements accelerated developments in this field now being used in buildings

The acrylics, for example, found application in aircraft of all kinds for win-

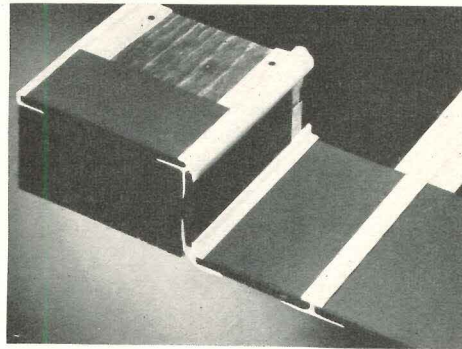
dows, blisters, and other parts affording vision. The techniques of vacuum and snapback molding were highly developed for the manufacture of such parts. In vacuum molding a heat-softened sheet of the plastic is clamped over a vacuum pot, drawn into a hemispherical or other concave shape as the air is evacuated from the pot, and allowed to cool and harden in this shape. The sheet may be also drawn down against a mold. In snapback molding the same steps are followed, but a mold of the required shape is placed in the concave blister, after which the plastic sheet is allowed to

snap back as the vacuum is released and thus to take the shape of the mold.

Molded acrylic sheet, transparent or colored translucent, is widely used for such items as illuminated signs. Corrugated sheet is employed for sky lighting and wall lighting, large illuminated trough and ceiling lights, and for many decorative and semi-structural applications both indoors and out. Where danger of breakage is severe, the sheet is used in place of glass for glazing, but where scratch-resistance or dimensional stability are important, it is not the equal of glass.



Cape Cod Shipbuilding Co.



Tennessee Eastman Corp.

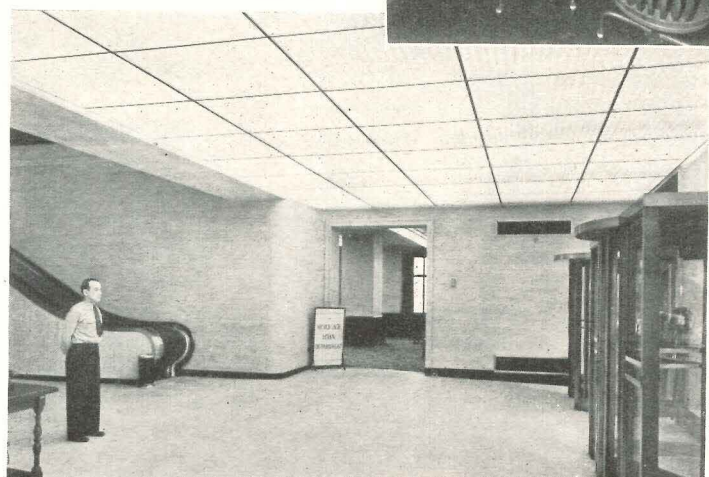
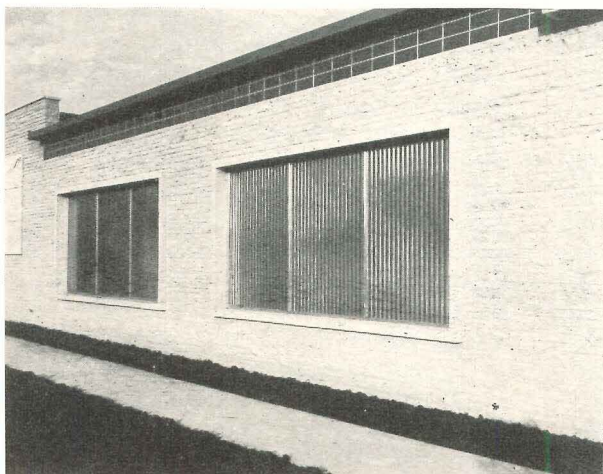


Rohm & Haas Co.

Reinforced plastics are used in buildings mainly in the form of corrugated sheets for fenestration (directly below and opposite page), and also for interior and exterior decorative uses. Boat hull (above) of this plastic demonstrates fabrication possibilities

Above: moldings for covering wallboard seams and holding it in place. Right-hand photos: uses for flat and molded acrylic plastic. "Shell" sign is interior-lighted. Clear panels for press box. Corrugated white translucent panels for luminous ceiling

Texas Industrial Film Co.



From the decorative standpoint, the ability of the acrylics to pipe light around bends has been utilized to obtain novel lighting effects. Sheet containing surface or internal carving can be edge-lighted for decorative purposes.

The transparent and colored cellulose, especially cellulose acetate, are similarly employed for decorative and semi-structural purposes, particularly indoors. Their tendency to absorb moisture with consequent deterioration under atmospheric exposure makes them unsuitable for prolonged outdoor exposure. The sheet stock is easily heat-formed into a variety of shapes, and it also lends itself readily to cementing and heat sealing for the formation of joints and seams. For these reasons cellulose sheets are widely used for packaging of all kinds.

Adhesives

One of the lesser-known but large-scale applications of synthetic resins is in the field of high-strength, high-durability adhesives. In building applications, these adhesives have been employed primarily for bonding wood but, although woodbonding is probably the most important application of these adhesives, they are being actively employed in other fields for the bonding of metal to metal or to wood, and for bonding plastics, glass, and many other materials.

For bonding wood, the principal synthetic resin adhesives are phenol, urea, resorcinol, and melamine-formaldehyde and closely related chemical types. These are all thermosetting adhesives, but the ureas and resorcinols can be formulated with suitable hardeners or catalysts to cure — slowly it is true — at ordinary room temperatures. The phenol and melamine types require elevated temperatures, ranging up to 300 F, to effect a cure. The ureas and resorcinols cure more rapidly at these temperatures.

When properly formulated and cured, the phenols, resorcinols, and melamines all withstand prolonged boiling without delamination, are immune to attack by mildew, and retain their strength upon exposure to atmospheric conditions. The phenols have the advantage on cost and are the standard adhesives for waterproof or exterior grade plywood. The melamines are light-colored or colorless and can therefore be used advantageously with thin, light-colored veneers through which the dark-colored phenols might show and be unsightly. The resorcinols are costly but have the great advantage of curing at ordinary temperatures. They are therefore widely

used as assembly adhesives where maximum durability is needed but heat cannot well be applied, as in glued laminated wooden members like ships' keels which are to be exposed to severe conditions. The ureas are less able to withstand extremes of combined high temperature and humidity, but are excellent for applications like glued-up doors for interior use, general assembly gluing, and such items as glued-laminated arches for roofs and other protected locations. They are relatively inexpensive, light-colored, and usable at ordinary temperatures.

Sandwiches

The structural sandwich consisting of hard, dense faces and insulating cores has been employed in various forms in the building field for a number of years. With the advent of the synthetic resins as adhesives and impregnants, considerable experimentation and development have taken place to evolve new, lightweight sandwiches for building purposes. Cores, for example, have been developed consisting of paper impregnated with a phenol-formaldehyde resin and formed into honeycomb-shaped cellular slabs, or into crossed-corrugated structures suitable for use between facings of resin-bonded plywood, paper-laminate, or metal. The adhesives used to bond together the honeycomb or corrugated sections are based upon resins such as phenol, urea, and resorcinol-formaldehyde, and are bonded to the facings with the same adhesives.

In one experimental house built with sandwiches of crossed-corrugated cores with plywood facings, the average weight of floor, wall, and roof construction is 2½ lb per square foot. The entire one-story, 800 sq-ft house including mechanical equipment and steel supporting beams (no foundation; the house rests on piers) weighs 6½ tons. Because it is of such light weight, and because of the strength and stiffness of the sandwich construction, the sections of the house can all be hinged together, folded, loaded on a truck, unloaded, unfolded, and erected with the assistance of light gin poles.

Flexible Film and Sheet

Within the past ten years flexible plastic films have grown from a relatively small part of the industry to a position of leadership in the annual tonnage figures. Two materials which developed largely during the war years were polyvinyl chloride and polyethylene. Together with cellulose acetate, the other cellulose derivatives, polyvinylidene chloride, and rubber derivatives, they provide films possessing a

wide range of properties. All of these films are widely used in packaging of all kinds.

The vinyls are used in a great diversity of items such as raincoats, collapsible backyard wading pools, and beach accessories. Polyethylene is outstanding in its inertness to solvents at ordinary temperatures, and in its ability to remain flexible at low temperatures. The process of high-frequency electronic welding has grown fast in conjunction with the vinyl and vinylidene chlorides.

In building applications the vinyl and vinylidene chlorides, either by themselves, copolymerized together, or copolymerized with other vinyls like vinyl acetate, can be made into flexible film and sheet for shower curtains, upholstery and flooring. For these purposes advantage is taken of their toughness and resistance to wear and staining.

Coated Fabrics and Papers

Fabrics coated with cellulose nitrate have long been used for upholstery and similar purposes. Today fabrics are being coated with vinyl and vinylidene chlorides or their copolymers, and with another vinyl — polyvinyl butyral — whose great toughness and soft drape make it particularly useful for the coating of fabrics to be used for upholstery. Polyvinyl butyral is the interlayer in practically all of the safety glass made today. One form of vinyl sheet is heat-quilted through a thin batting material to a back-up sheet.

The stain and scuff-resistant wall-papers which have become available within the past few years are in most instances coated with a thin film of cellulose acetate or vinyl chloride.

Coatings

Plastics are increasingly taking their place in coatings, either entirely by themselves or formulated with older natural materials. This field is too complex to be completely covered here, so only a few highlights can be given.

The alkyd resins are widely employed as the base or vehicle for coatings, especially on metal. They may be used entirely by themselves, may be mixed with natural materials like linseed or other drying oils, or may be compounded with other synthetic resins like urea and melamine formaldehyde which are often introduced, singly or in combination, to provide increased hardness. Depending upon the mixture, the resulting product may harden or "dry" at ordinary temperatures, or may require baking. These materials are widely used on home appliances like refrigerators and stoves, and as finishes for automobiles.

Phenol-formaldehyde and related resins are widely compounded with natural or plastics-based drying oils to provide air-drying or baking paints, varnishes, lacquers, and enamels.

Plastic-based Fabrics and Filaments

This is such a large and growing field that only a few of the highlights can be mentioned.

Nylon and rayon are familiar to architects as fibers and fabrics based upon plastics. Nylon is a polyamide, while the various rayons are either regenerated cellulose or cellulose acetate. Recently, the term "estron" has been introduced to refer specifically to cellulose acetate. Fibers and fabrics based upon vinyl resins are also produced in large volume and are used, among other things, for upholstery.

Of particular interest in building is the rapidly growing use of polyvinylidene chloride fly screens to take the place of metals. Their non-corroding and non-staining characteristics make them particularly attractive. The same material made into monofilaments and woven into fabrics is widely used because of its toughness, wear resistance, and resistance to staining for automobile seat covers and for upholstery.

Among the newer fibers — of which there are many — may be mentioned regenerated cellulose which has been oriented by drawing while being formed so as to align the molecules in the direction of the filament. Like nylon, this provides a filament of great strength.

Silicones, Fluorocarbons

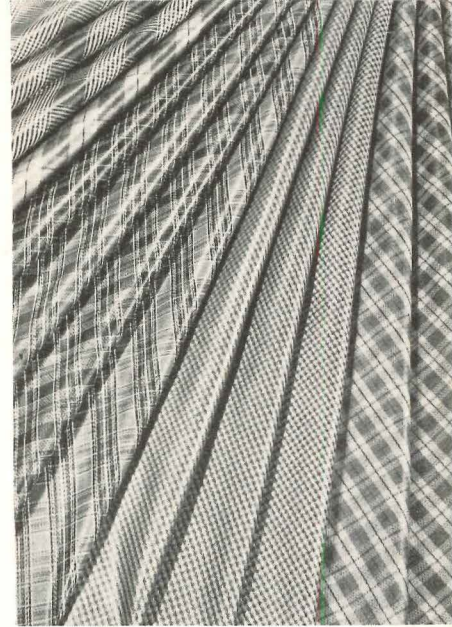
The silicones, based upon silicon instead of carbon, possess extreme durability, excellent electrical properties,

and high moisture repellence. Silicones are made in the form of soft rubbery materials, oils, and greases, and impregnating varnishes, all of which retain their properties under extremes of temperature. Electric motors insulated with silicone and glass cloth have been run continuously at temperatures of 350 F or higher and 90 to 100 per cent relative humidity. In the building field the rubbers have been used to a limited extent as gaskets for setting glass. One of the promising applications is a water-repellent treatment for masonry. They are used to make fabrics moisture repellent. The present high cost is a deterrent, but the extreme durability of these materials under all sorts of adverse exposure conditions makes them attractive for building applications.

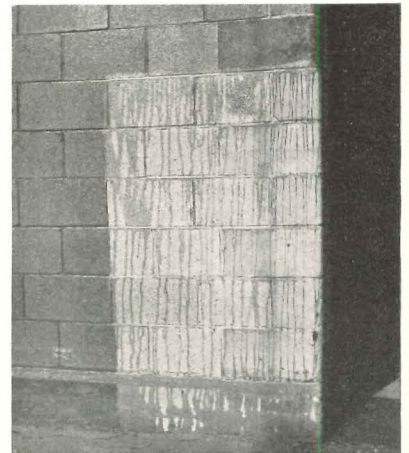
The fluorocarbons, in whose chemical makeup fluorine or fluorine plus chlorine is substituted for hydrogen, offer another group of extremely durable plastics. The all-fluorine type is resistant to all known solvents except molten alkali metals like sodium. Like the silicones, they are not easily wetted and therefore are moisture repellent. Their electrical properties are outstanding. In finished form they look and feel much like a gray-colored hard parafin. Their high cost has held back building applications, but in the form of packing and gaskets in chemical plants, for example, they have given an excellent account of themselves.

This article has been focused on the trend in plastics and some of the present and possible future uses in building. The entire industry is still developing fast, and the next five to ten years may be expected to bring out new materials, modifications of the old, and further applications.

Plastic-based fabrics are widely used for upholstery because of their toughness, wear and stain resistance. Some plastic forms nonstaining fly screens. Photo below fabrics shows waterproofing quality of silicones. Area in right-hand corner is treated

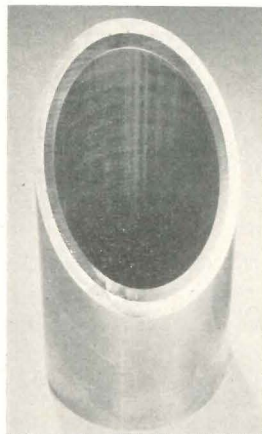
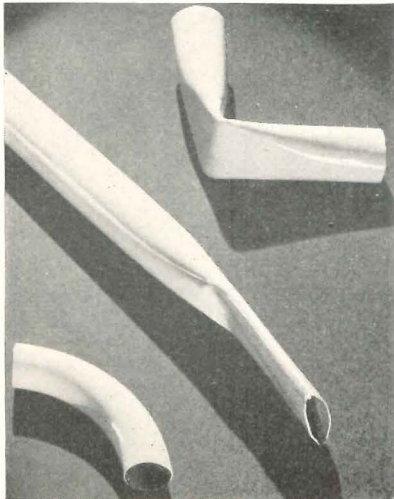


Susquehanna Mills



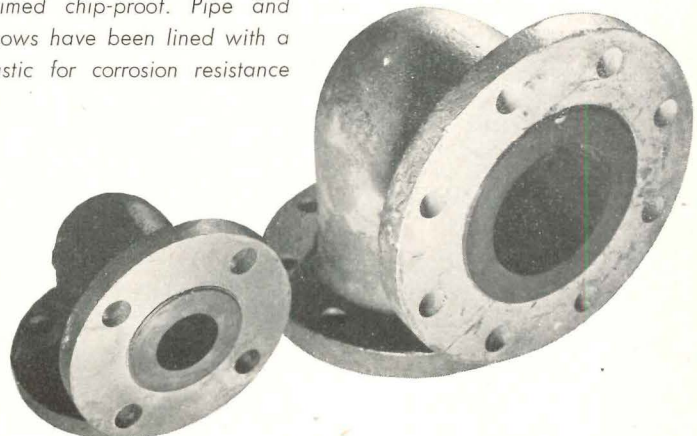
Wurdack Chemical Co.

Tennessee Eastman Corp.



Dow Chemical Co.

Steel tubing in photo far left is coated with extruded plastic, claimed chip-proof. Pipe and elbows have been lined with a plastic for corrosion resistance



PREVENTING OPERATING ROOM EXPLOSIONS

New design changes in safe practice recommendations for hospitals

By Roy Hudenburg*

HOSPITAL architects now have a new guide for designing operating rooms so as to minimize fire and explosion hazards. A new set of National Fire Protection Association recommendations for hospital operating rooms replaces a 1944 code that is now considered obsolete.

The 1944 code, based on scant data about the extent of explosive mixtures in the operating room, made excessively

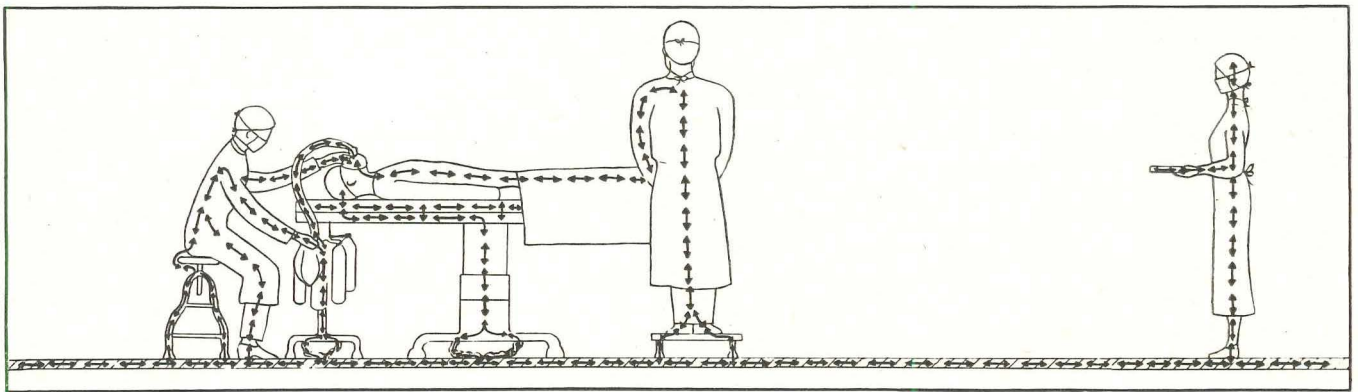
restrictive requirements for electrical installations. The American Hospital Association's Council on Hospital Planning and Plant Operation felt that these 1944 recommendations were inadequate and worked unnecessary hardships on hospitals. Three years ago it instructed its Safety Committee to work toward a revision that would be more acceptable to hospitals.

The resulting new recommendations affect six major points (1) a new safety range for combustible anesthetics, (2) removal of specific ventilation requirements, (3) requirements for conductive flooring, (4) grounding of personnel and

equipment, (5) precautions for anesthesia storage rooms, and (6) use of cautery.

1. New Safety Level. The new N.F.P.A. Committee on Hospital Operating Rooms based its recommendations on the following considerations, which are printed in the appendix of its newly-adopted standard: "Available data and recent investigations (1948-1949) indicate that, under customary operating procedures, explosive anesthesia mixtures are diluted by air in the operating room to a nonflammable range before reaching a point 2 ft distant from a point

* Secretary of the American Hospital Association's Council on Hospital Planning and Plant Operation. The author's article as it appears here has been abstracted from "New Recommendations for the Control of Operating Room Hazards," *Hospitals*, December 1949.

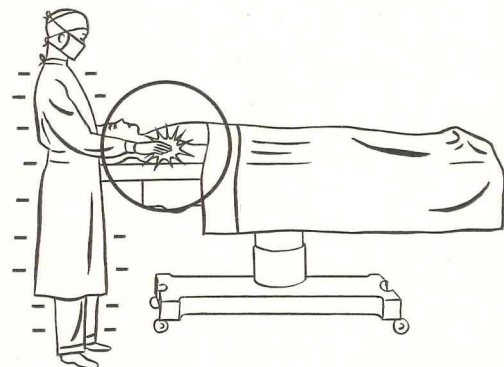


Above:

Arrows show two-way flow of static electric charges generated in operating rooms. Conductive floor is common connector. Anesthetist is grounded in four ways: (1) through the anesthesia apparatus; (2) through the patient; (3) through his stool and (4) through conductive shoe soles. Anesthesia apparatus and operating table are grounded by drag chains. Patient is grounded through both of these — through the connecting links of conductive rubber tubing of apparatus and conductive rubber pad of table. The surgeon wears conductive shoes, stands on grounded footstool. Nurse wears conductive shoes

Left:

A hazardous electric spark is the potential danger in an operating room set up with disregard of the new safety principles. The spark may occur when the doctor, who builds up an electric potential, touches the patient or other object in the area containing combustible gas mixtures



of leak involving the quantities of anesthetics used in anesthesia procedures. However, the liquid character of ether permits its spillage, and ether fumes may collect close to the floor as well as being released from the anesthesia system."

Investigations indicate that the 2-ft measure contains a substantial factor of safety. The committee, however, defined the hazardous zones in anesthetizing locations as extending 5 ft above the floor. This 5-ft level is particularly important in placing permanent electrical installations. Accordingly, electrical outlets, switches and x-ray viewing panels installed below the 5 ft level in hospital operating rooms or other anesthetizing locations must be explosion-proof.

The explosion-proof, ceiling-hung light is no longer required. The requirements set forth in the new recommendations are easily met by standard ceiling-hung surgical lights now on the market.

One change is made in specifications for the ordinary fixture: the ceiling-hung surgical light must have no integral or appended switch unless that switch itself is explosion-proof. Also, no arcing device on the fixture may come within 5 ft of the floor.

Former recommendations stated that

the operating room constituted a hazardous area to a height of 7 ft if it was ventilated according to certain specifications. The entire room was considered hazardous if these ventilating specifications were not met. Since it is virtually impossible to keep the modern ceiling-hung surgical light above a 7-ft level, this meant that every such light in the hospital had to be explosion-proof.

Fixed installations above the 5-ft level now need only to meet ordinary provisions of the National Electrical Code. Room switches installed above 5 ft need not be explosion-proof.

The new term "anesthetizing location" replaces the term "operating room" in this standard. It is defined as "any area of a hospital in which it is intended to administer to a patient any combustible anesthetic agent in the course of examination or treatment and shall include operating rooms, delivery rooms, anesthesia rooms and rooms used for preoperative preparation of the patient."

The definition specifically says that corridors serving anesthetizing locations present electrostatic hazards, and suitable precautions should be taken.

The word "serving" should be read as "leading to" or "tributary to." When-

ever the corridor actually serves as an anesthetizing location, it becomes subject to all regulations applying to the operating room.

2. Removal of Ventilation Requirement. Because of the high rate of gas dispersion, the committee felt that general room ventilation has no effect on the concentrations of explosive gases in the limited area around the patient's head and gas machine where these explosive mixtures exist. Accordingly, the committee removed from its mandatory standards any specific requirements for ventilation.

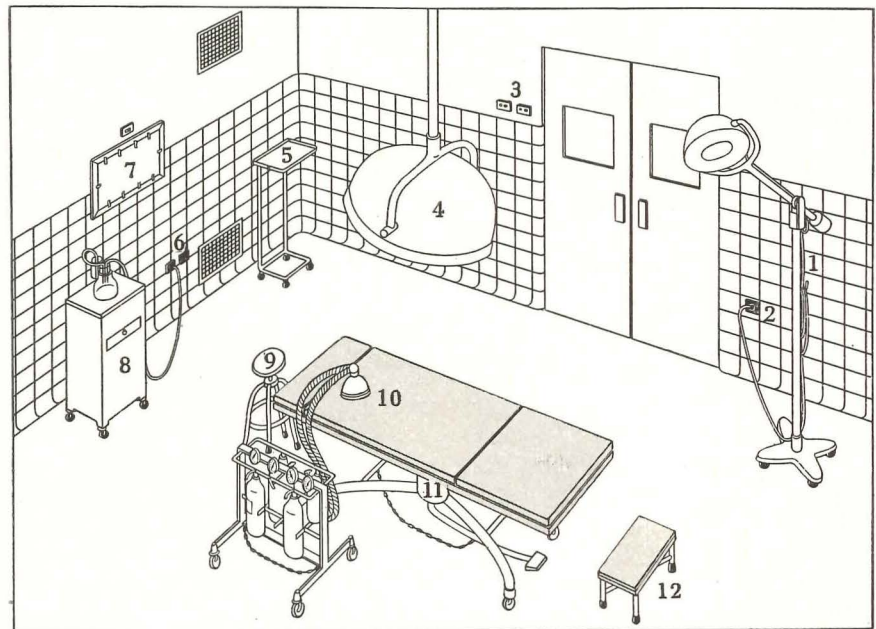
In recommending these safeguards, the committee felt that it is virtually impossible to prevent some accumulation of explosive mixtures and that, therefore, safety must be attained by eliminating all possible sources of ignition, particularly by static.

The recommendations say that high humidity is not sufficiently reliable for complete control of electrostatic sparks.

The committee's vital concern with the problem of static electricity is probably best demonstrated by a quotation from the section of these standards dealing with electrostatic hazards.

"It cannot be too strongly empha-

Operating rooms under the new standards will include safety devices as illustrated (tiling indicates the 5-ft level). Numbered items are: (1) portable surgical lamp — grounded through conductive rubber casters. (2) explosion-proof outlet — below the 5-ft level. (3) push-button switches — need not be explosion proof since they are above 5-ft level. (4) ceiling-hung operating room light — explosion-proof construction is no longer required except for outlets or switches incorporated into the construction. (5) instrument stand — grounded through conductive-rubber casters. (6) pair of explosive-proof outlets. (7) recessed x-ray view window with electrical connections outside of operating room; toggle switch to operate is above the 5-ft level and need not be explosion proof. (8) suction apparatus — grounded by conductive rubber casters; motor within the cabinet must be explosion proof. (9) anesthetist's stool — grounded through conductive rubber tips; seat must be unpainted, and if a pad is used it must be covered with conductive rubber. (10) anesthesia apparatus — mask and hose of conductive



rubber; this unit is grounded by a drag chain but the same purpose would be met if casters were of conductive rubber. (11) operating table — the pad is of conductive rubber; table is grounded to floor

by a drag chain. (12) surgeon's metal footstool — has conductive rubber tips, and padding, if used, must be of conductive rubber. The floor must be constructed of conductive materials

sized," the standard says, "that a partial chain of precaution will generally increase the electrostatic hazard. For example: Conductive flooring may be ineffective unless all personnel wear conductive shoes or other grounding devices and unless all objects in the room are electrically continuous with the floor."

The anesthetizing location must be served with electricity through a transformer that will isolate the circuit from the grounded circuits existing elsewhere in the hospital. Unlike ordinary alternating current hookups, this circuit will not have a grounded side. The requirement is intended, first, to prevent electrical arcs due to insulation failures and, second, to guard against electrical shock due to the failure of insulation on wires.

Hospitals in areas served only by direct current will have a more serious problem. Other means of providing ungrounded circuits are suggested in the recommendations.

3. Conductive Floor. The electroconductive floor becomes the common connector through which all objects in the room are electrically intercoupled. The intercoupler now in use in some hospitals, which interconnects certain operating room personnel and equipment by the use of wires leading to a resistance unit, is not an approved grounding device under these standards.

Now the entire floor surface in anesthetizing locations, anesthesia storage locations and corridors serving such areas must provide a path of moderate electrical conductivity between all persons and equipment making contact with the floor. Incidentally, this conductive floor need not be connected to a building ground.

The electrical resistance of this floor must be in excess of 25,000 ohms but shall be less than 500,000 ohms when measured between two electrodes placed 3 ft apart *at any point on the floor*. This means that the ordinary terrazzo floor containing brass grids is not acceptable under these standards. Acceptable floors include a terrazzo floor containing acetylene black, a terrazzo-type floor containing magnesium oxychloride, a composition floor, a plastic floor and floor coverings made of such materials as conductive rubber, conductive linoleum and conductive asphalt tile.

As this floor is to be the common link, steps must then be taken to ground equipment and personnel to the floor.

4. Grounding of Personnel and Equipment. The patient is grounded

to the surgical table through a conductive rubber covering on the table pad. The table itself then must be grounded to the floor by either conductive rubber casters or by a drag chain.

The anesthetist and the anesthesia gas machine, of course, are the most important links in this chain of static prevention. The anesthetist has a triple connection to ground. His stool should first be grounded to the floor by either conductive rubber tips or a drag chain and should have an unpainted and uncovered seat.

The second line of grounding for the anesthetist is through the wearing of conductive footwear or other personnel-grounding device. The third line is through the anesthesia gas machine and the patient, which should form one continuous grounded circuit. The gas machine itself should be grounded to the floor. It should be equipped with conductive rubber parts, including the tube leading to the face mask.

All equipment in the room should be of metal and again must be grounded to the floor through conductive rubber tips, conductive casters or drag chains.

Anesthesia explosions happen fast and their causes are difficult to determine in later reconstruction. Yet, inquiries made by the American Hospital Association's Safety Committee seem to indicate, with little room for doubt, that static discharge was the source of ignition in each fatal explosion occurring in 1948.

All portable electrical equipment is required to be explosion-proof and should be equipped with three-wire appliance cords. The third wire is a grounding wire, which must be attached to the outer casing of the appliance. The other end of this cord must be attached to a three-pronged plug designed particularly to fit into an explosion-proof receptacle. In order to prevent an electrical spark, that plug is so designed that it may not be withdrawn while the current is on.

5. Anesthesia Storage Rooms. Storage rooms for combustible anesthetics should be constructed with a minimum of a 1-hr fire rating and should not communicate directly with operating, delivery or anesthesia rooms. The standards specify that storage areas should consist of two separate rooms, one for combustible anesthetics and the other for oxygen and nitrous oxide.

The storage area should have an electroconductive floor, and electrical installation should be explosion-proof. The area should be ventilated by a gravity

system rather than by a mechanical system operated by an electric motor.

6. Cautions for Cautery. The committee faced a knotty problem in connection with the use of cautery during anesthesia with combustible agents. In cautery a definite possible source of ignition frequently is used near explosive gas mixtures.

It was obvious that varying patient reactions to anesthetics demand that the surgeon have free choice of anesthesia agents. At the same time, it was realized that the surgeon cannot be denied the use of cautery and high frequency electrical equipment when he considers it necessary.

One reason for the lack of acceptance of the 1944 recommendations by many hospitals was the fact that it categorically prohibited the use of cautery despite the surgeon's needs.

Provisions should be made for some ventilation in the hazardous area about the patient's head during the use of cautery. It is suggested that the use of high frequency and electronic equipment in the presence of combustible anesthetic agents be controlled.

A number of additional hazards discussed includes such electronic equipment as amplifiers, recorders, television cameras and x-ray machines.

The new recommendations prohibit the piping of combustible anesthetic agents, which would include such gases as ethylene. Piping of oxygen is permitted, of course, and the standard prescribes regulations for oxygen piping.

Safety Committee recommendations were not adopted in full by the N.F.P.A. committee. Certain electrical requirements are not yet in agreement with recommendations of the Safety Committee, but they represent a compromise.

The N.F.P.A. committee is being continued even though it has brought out these recommendations. As with all recommendations of the N.F.P.A., these are open to later amendment. The committee is to meet again in 1950 to consider any recommendations for changes. At that time, the Safety Committee will once again have an opportunity to present its recommendations.

In the meantime, it seems unlikely that any modifications made will seriously affect the major provisions of these standards. Those who have studied the recommendations in detail, including several hospital architects, believe the standards are sufficiently minimal that hospitals cannot seriously object to early compliance.

HEATING SYSTEMS FOR HOUSES

Convactor Baseboard Heating Systems: 1—Typical Layouts

By William J. McGuinness

Professor of Architectural Engineering

Pratt Institute

At this writing the use of baseboard convactor heating in this form is relatively new. Speedy research is resulting in changes in the units, their ratings, etc. Before completing designs based upon the information contained herein, check with manufacturers.

Adaptability to Various Systems

Baseboard convectors are most frequently used in connection with the series loop circuit and using forced hot water. They can be used successfully in a two pipe forced hot water system or in a conventional one pipe forced hot water system, where they are connected individually like radiators. Another possible use is in two pipe steam systems. They are not adaptable to one pipe steam systems because of the difficulty of steam and condensate passing each other in the small pipes.

Series Loop, Forced Hot Water

The water flows through a series of convactor baseboards and back to the boiler by the motive power of a pump. If limited to circuits not exceeding 30,000 to 45,000 Btu per hour heat loss, the temperature of the heating water does not drop greatly. Average temperatures of 200 F and less are used and the temperature drop in the system is usually designed as 20°. A number of such circuits are possible, supplied by a single main, picked up by a single return and adjusted by balancing valves. With this arrangement it is possible to use baseboard series loop circuits in quite large buildings.

Comfort

Like cast iron radiant baseboard, the tube and fin type, discussed here, is effective in maintaining a fairly

constant temperature at the various height levels in a room. The lower portion of the wall above the baseboard is kept at a greater mean radiant temperature and adds to comfort. Convection currents are more distributed than in radiator systems and will result in less wall discoloration if the system is otherwise well designed. Response to a call for heat is as fast as that of any system.

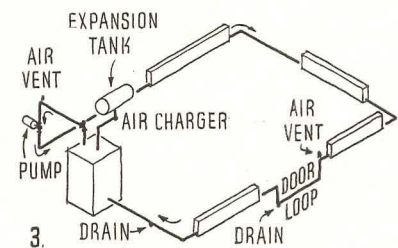
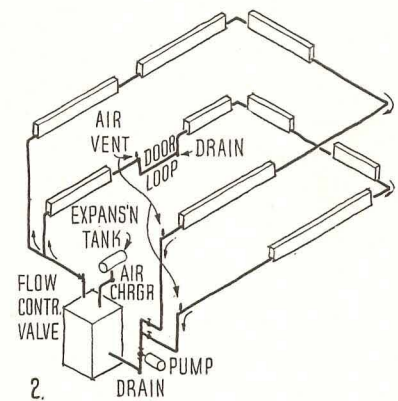
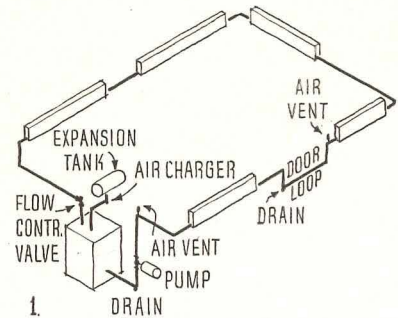
Performance

Except for the series feature, the performance of a series loop, forced hot water system is similar to that of any hot water system using a circulating pump. The connections at the boiler are the same. For a complete diagram of suggested connections, the reader is referred to Time-Saver Standards, Forced Hot Water Systems: 1, Sept. 1949. There, all connections are shown including controls and domestic hot water. An improved control is shown here in Fig. 7. Instead of turning the circulating pump on and off by means of a room thermostat, this system provides continuous circulation at a water temperature which varies to suit the outdoor temperature. Smoother operation is the result of this process.

The baseboard system operates with the same or slightly better economy than a conventional radiator job of forced hot water. Maintenance is about the same, involving manual venting periodically of all the high spots instead of at each radiator. Automatic vents may be installed at an additional cost.

Pipe Expansion

Straight runs of over 30 ft are not recommended unless expansion is provided for by means of a door loop (if it occurs) or of an expansion loop placed horizontally in a partition or other available space.



TYPICAL LAYOUTS FOR BASEBOARD CONVECTORS

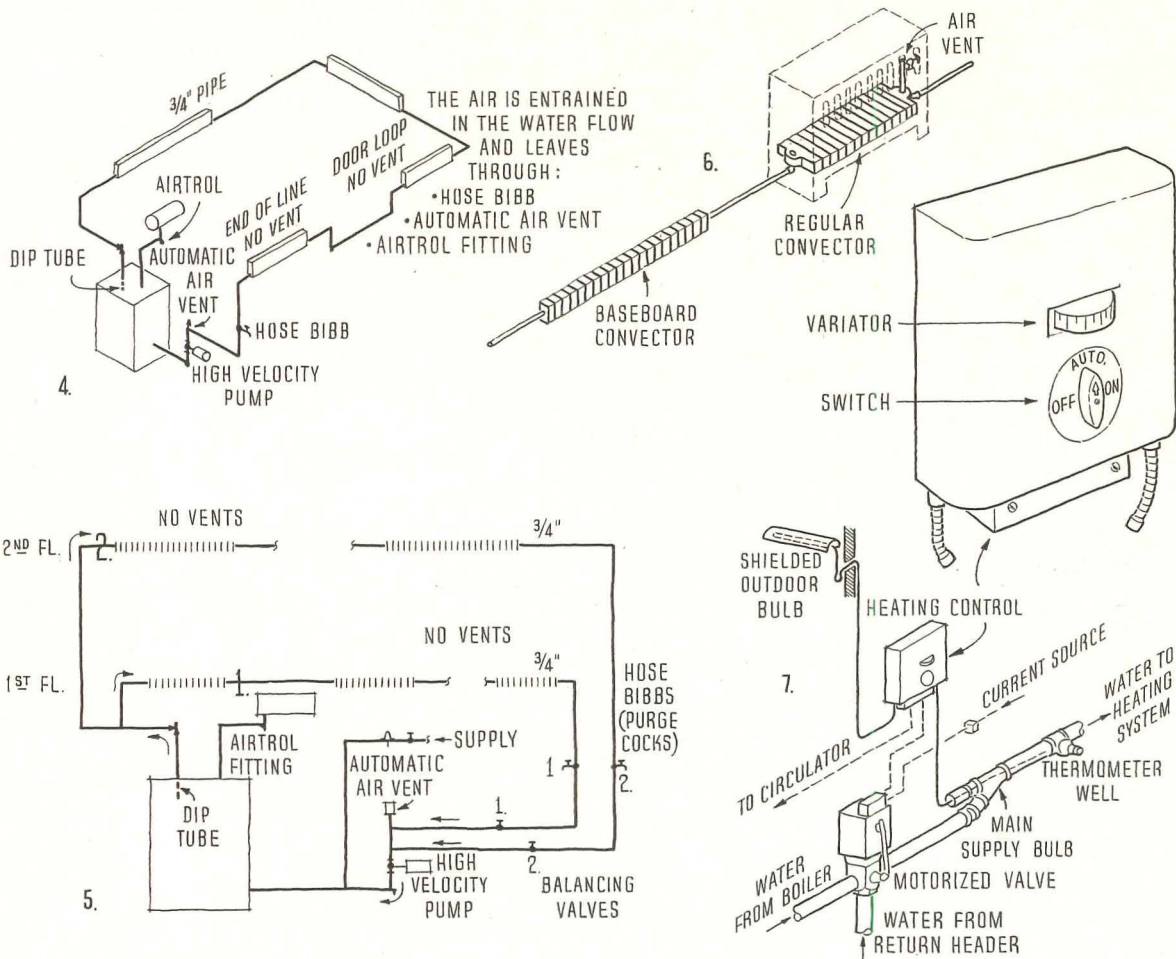
1. Single circuit series loop.
2. Multi-circuit (2 story) series loop. Note balancing valves above pump.
3. Series loop, convectors level with or below boiler. Note recommended position of pump.

Notes: Examples are series loop and forced hot water, the most commonly used type. Drain all low points and vent all high points in each system.

HEATING SYSTEMS FOR HOUSES

Convactor Baseboard Heating Systems: 2—Special Layouts

By William J. McGuinness



4. System using vents at boiler only.

The Warren Webster Co., by using 3/4 in. units and 3/4 in. pipe, with high velocity circulator, maintains water speed between 2 and 5 ft./sec. At this rate air is carried back to boiler where it rises. Dip-tube prevents its re-entrance into system. It leaves through airtrol fitting. Air clinging to pump impeller rises and is exhausted by automatic vent. At start of season, hose bibb and supply valve (not shown) are opened. Pump is started. Air leaves through hose bibb. When a solid water stream flows, hose bibb is turned off.

No additional vents for door loops or at end of line are needed with this system.

5. Warren Webster 2-circuit system.

Pre-season air purging is accomplished separately in circuits 1 and 2 by means of valves 1 and 2 and hose bibbs 1 and 2. To purge circuit 1, close valve 2, open hose bibb 1 and supply line. Pump until solid stream emerges from hose bibb 1. Then close hose bibb 1. Circuit 2 similarly vented. System then operates as described.

6. Combined use with regular convectors.

Where scanty wall space precludes use of baseboard convectors, regular copper convectors and enclosures may be used in same circuit with some changes in the engineering design. Regular convector should be vented.

7. Controls.

The Warren Webster control shown above operates automatically to vary water temperature supplied to base units, as set by outdoor temperature. With control unit switch set at "automatic," motorized valve mixes boiler water and return water to produce a temperature which is increased as outdoor temperature drops. At outdoor "design temperature" boiler water only is circulated. Circulating pump runs continually and boiler water is kept at maximum temperature by an aquastat controlling fire. Variator permits a slight adjustment during automatic operation. "On" position of switch causes boiler water only to be passed, for a quick warm-up. "Off" turns off circulator.

HEATING SYSTEMS FOR HOUSES

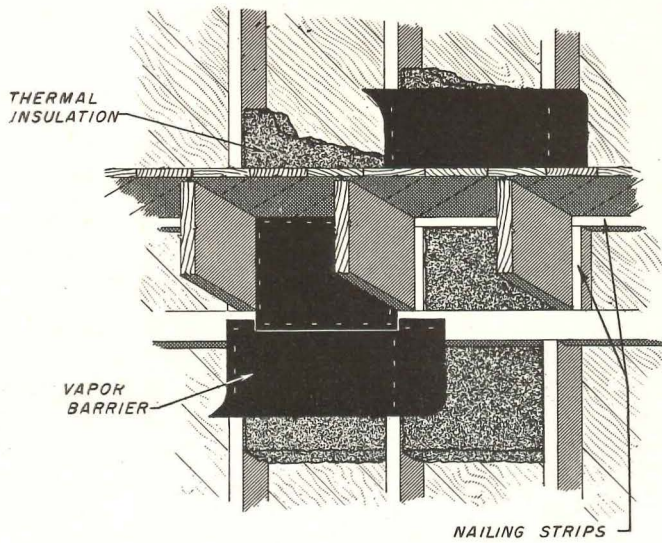
Convactor Baseboard Heating Systems: 3—Basic Data Table

By William J. McGuinness

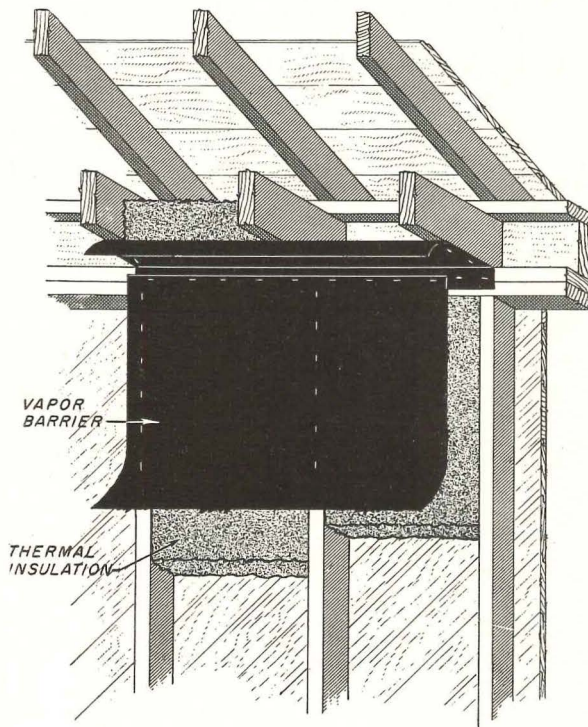
MFR. & TYPE (Partial Listing)	SIZE (Inches) & MATERIAL		TYPES AVAIL. & DIMENSIONS		OUTPUT Btu/Hr./Lin Ft of Base at Water Temp. F					DETAILS R = Recessed NR = Non Recessed
	Pipe	Fins	Re-cessed	Non Re-cessed	170°	180°	190°	200°	215°	
DUNHAM BOTS	1 Steel	2 3/4 x 4 Steel	X Y (inches) 2 1/2 x 10	X Y (inches)	562	636	722	807	948	
BOTSA	1 Steel	2 3/4 x 4 Alum.	2 1/2 x 10		695	792	900	1005	1180	
BOTCA	1 Copper	2 3/4 x 4 Alum.	2 1/2 x 10		735	835	946	1055	1245	
STERLING (Distrib. by H. B. SMITH) & U. S. RADIATOR Fin-Ray	1 Steel	2 x 4 1/4 Steel	1 1/2 x 8	2 1/8 x 7 3/4	370	420	470	525	600	
	1 1/4 Steel	2 3/4 x 4 1/2 Steel	2 1/4 x 9	2 7/8 x 8 1/2	565	645	725	805	925	
WARREN WEBSTER HNL (Heating Element Low)	3/4 Copper	2 1/4 Diam. Copper		2 x 8 1/4	310	350	400	450	*	
HNS (Heating Element Std.)	3/4 Copper	2 1/4 Diam. Copper		2 x 8 1/4	380	430	490	550	*	
U. S. RADIATOR Comfort Ray	Steel Assembly See Detail		2 x 10 May be recessed		445	500	565	625	720	
<p>(Note: This is a pressed steel unit more comparable to Cast Iron Radiant Baseboard. Systems are designed on that basis.)</p>										
VULCAN Standard	1 Steel	2 x 4 1/4 Steel	1 3/8 x 8	2 1/8 x 8	369	421	469	523	600	
Standard	1 1/4 Steel	2 3/4 x 3 3/4 Steel	2 1/8 x 8 1/8	2 7/8 x 7 3/4	568	648	721	806	924	
F.S. Cover	1 Steel	2 x 4 1/4 Steel	1 1/8 x 8 1/8	2 1/4 x 8 1/2	341	389	433	484	555	
F.S. Cover	1 1/4 Steel	2 3/4 x 3 3/4 Steel	2 1/4 x 8 1/2	2 15/16 x 8 1/2	525	600	668	748	855	
F.S. Cover (2 high)	1 Steel	2 x 4 1/4 Steel	1 1/8 x 13	2 1/4 x 13	566	644	720	802	920	
F.S. Cover (2 high)	1 1/4 Steel	2 3/4 x 3 3/4 Steel	2 1/4 x 13	2 15/16 x 13	872	994	1110	1249	1420	
<p>Notes: 1. Vulcan uses aluminum & copper also. For ratings see literature. 2. *Warren Webster does not recommend temperatures over 200 F. 3. The sq ft of radiation per ft of length may be determined by dividing Btu/lin ft output by standard heat emission in Btu/hr at temperature. Example: 600 Btu/hr/lin ft (at 215 F) ÷ 240 Btu/sq ft/hr = 2.5 sq ft of rad/lin ft.</p>										
<p>Dampened models also available</p>										

CONDENSATION CONTROL FOR HOUSES

Vapor Barriers: 4 — Ceilings

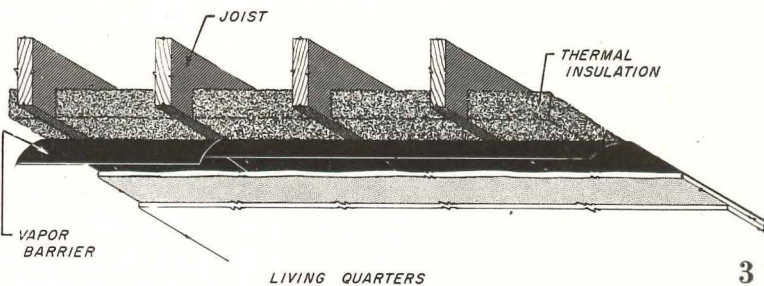


1



2

UNOCCUPIED ATTIC SPACE



3

LIVING QUARTERS

THIS is the second of two parts abridged from the Housing and Home Finance Agency's publication, *Condensation Control*, by the U. S. Dept. of Agriculture in collaboration with the HHFA.

Junction of Second Floor and Wall (Fig. 1)

1. Vapor barriers should be carefully placed over nailing strips at end of spaces between joists and along wall at joist level, to restrict flow of water vapor into outside walls. Floor and ceiling provide large surfaces through which water can penetrate into enclosed area. These can contribute more vapor to end of space than an equal area of outside room walls.

2. Insulate wall sections between floor joists and along wall at joist level as carefully as the main wall areas; heat loss will be as great as in other outside wall areas.

3. Air spaces should be allowed on both sides of insulation where practical, and always when reflective-type insulation is used.

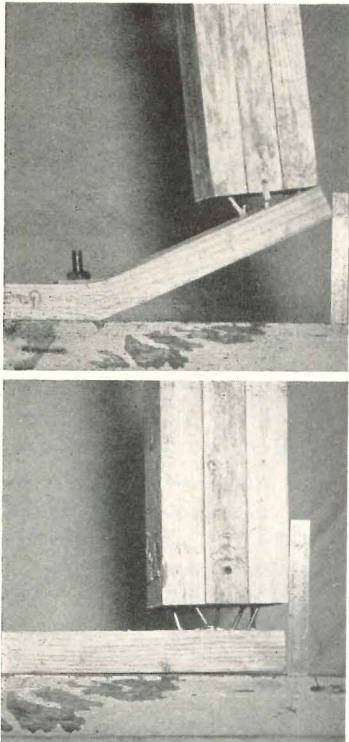
Ceilings Adjacent To Unheated Attic (Figs. 2 and 3)

1. Vapor barriers are considered necessary on the warm side of all top story ceilings in areas with temps of -20°F and colder, and with flat roofs in warmer climates. They should be applied below joists and running parallel to them, prior to attachment of ceiling. Lap over side wall plate and fit carefully around openings. Hatches should be closed tightly by catches. In existing buildings, barriers can be applied above ceiling and held in place by wood strips fixed over barrier edges turned up against joists.

2. Insulation, when used, should be placed over ceiling after latter has been applied, and on backs of all doors into unheated spaces.

(Continued on page 149)

PRODUCTS for Better Building



Tests on green lumber house frame assembled with plain nails (below) resulted in nail failure at joint; frame with annularly grooved nails (top) failed first at base plate. Detail of new nail at left

Annularly Grooved Nails

According to a research report, "Thrust Resistance Of Housing Frames," by E. George Stern, Director of Wood Research Laboratory, Virginia Polytechnic Inst., annularly grooved *Stronghold* nails exhibit far greater holding strength than ordinary plain-shank nails.

After a study of the accepted standards of designing wood members in a frame structure, it was deduced that the initial resistance of the frame to lateral forces depends primarily on the efficiency of the joints, or nails. To provide data on joint strength, comparative racking tests on typical southern pine housing frames were set up, employing dry and green lumber, and regular and improved nails.

Test results indicated that the frame built with green lumber and assembled

with improved nails supported a 4.6 times larger lateral thrust than the one with plain-shank nails; and the dry lumber frame with annularly grooved nails supported a 5.2 times larger lateral thrust than the one with ordinary nails. The frames built with dry lumber supported 1.5 (plain-shank nails) and 1.7 (improved nails) larger lateral thrusts than those built with green lumber. Independent Nail & Packing Co., Bridgewater, Mass.

Waterproof Finish For Asphalt Shingles

Asphalt-Seal, a waterproof finish for weatherproofing and beautifying dirty, weatherbeaten asphalt side-wall and roof shingles, is said to stop bleeding and crumbling of the shingles by sealing the pores of the surface. The product is reported equally applicable to all other types of asphalt materials. It comes ready-mixed in three light and four dark colors.

A companion product, *Shingle-Seal*, is manufactured for use on asbestos materials. Dewatex Mfg. Corp., 42nd St. and Dyer Ave., New York 18, N. Y.

Vandal-Proof Floor Drain

A new floor drain makes use of a special lock which allows only authorized personnel to have access to the internal strainer and drainage line. The tamper-proof cover is designed to eliminate the possibility of vandals clogging or damaging the drain. The unit was developed for use in public buildings, hospitals and institutions, and reportedly meets the latest government specifications. J. A. Zurn Mfg. Co., Pittsburgh Ave., Erie, Pa.

Power Exhauster

The *Air-Van* power air exhausting unit is claimed to be completely weather-proof and to have the heaviest construction of any device of its kind. The pancake type motor is enclosed and out of the air stream, which is said to eliminate damage by moisture and corrosive fumes. The air outlet is designed to prevent blow-back under extreme weather conditions. Air is expelled out and downward onto roof by a squirrel-cage fan, with no back draft damper required. The unit has a low silhouette

to avoid projection above parapet. The Gallaher Co., 4106 Dodge St., Omaha, Neb.

Convactor Radiators

The line of *Cabinet Convactor* radiators includes recessed, semi-recessed, free standing and wall-hung types. Designed for use with steam or forced hot water systems, the heating elements have seamless copper tubes expanded into aluminum fins. Each header is equipped with top and bottom fittings for ease of installation.

Cabinets are made of heavy gage steel, with square edges and corners. The front panels are said to be easily removed by hand, without the use of any tools. Wall-hung units are provided with either flat or sloping top and front outlet. Knockouts are provided for concealed piping hookups. Units are available in 6-, 8- and 10-in. depths, and all but the semi-recessed type in 4-in. depth. Lengths are in 4-in. increments from 16 to 64 in. The Rittling Corp., 1298 Niagara St., Buffalo 13, N. Y.

Compact Range

Frigidaire *Thrifty-30* ranges feature 30-in. width and what are claimed to be the largest ovens in any electrical household range. The oven occupies the full width of the unit, directly under the four flat-top Radiantube surface cooking units. A full-width storage drawer is located under the oven. The units are all-porcelain, and come with appliance outlets, leveling glides and oven clock controls. Frigidaire Div., General Motors Corp., 300 Taylor, Dayton 1, Ohio.

Integral Color in Asbestos Panels

Designed to eliminate painting and decorating expense, *Transitone* movable walls employ asbestos panels colored all the way through. They are available in two colors—light green or tan. The walls are said to be light weight, fire-proof, and to have a pleasing texture. The panels are hung on steel studs, forming a 4-in. double-faced partition. They may also be used as interior finish for outside walls, and are said easily installed or relocated. Johns-Manville, 22 E. 40th St., New York 16, N. Y.

(Continued on page 202)

MANUFACTURERS' LITERATURE

Aluminum Foil Insulation

Simplified Physics of Thermal Insulation. Booklet describes properties and features of aluminum foil accordion insulation. Installation steps are illustrated for various type structures. Among the topics discussed are: heat transfer, conduction and density, absorption and emissivity, heat loss by radiation, reflection, condensation, humidity, performance tests, use with radiant heating systems and heat flow. A number of photographs, drawings, charts and suggested specifications are included. 44 pp., illus. Infra Insulation, Inc., 10 Murray St., New York, N. Y.

Air Diffusers

Selection Manual, Anemostat Draftless Aspirating Air Diffusers. Presents the complete Anemostat line of air diffusers, accessories and volume controls. Many charts and graphs give data on: air changes per hour for heating, cooling or ventilating; neck velocities, ratings, application; projection distance; radius of floor spread; and dimensions. Typical specifications and installation notes are given with illustrations of special and typical applications. 64 pp., illus. Anemostat Corp. of America, 10 E. 39th St., New York 16, N. Y.*

Movable Walls

Mills Movable Metal Walls (Catalog No. 50). Discusses the features of the movable walls for structural stability, adaptability, design, soundproofing, maintenance and economy. Construction drawings and specification data cover the various wall types, accessories, fittings and hardware. Uses in many types of construction are pictured. 48 pp., illus. The Mills Co., 975 Wayside Rd., Cleveland 10, Ohio.*

Custom Carpets

Nye-Wait, Carpets for the Few. Pictures in color many textures, designs and color ranges available in wool or

nylon custom-woven carpets. The manufacturing process is illustrated, along with rooms using the various styles of carpeting. 20 pp., illus. Nye-Wait Co., Inc. c/o Raymond and Heller, 295 Fifth Ave., New York 16, N. Y.

Fireproof Millwork

(1) *Wood Fire Doors; (2) Custom-Built Millwork.* The first bulletin illustrates and describes Protexol-impregnated wood fire doors. Charts summarize fire test performance; construction details and characteristics are given.

The second contains information on the impregnation process and the facilities of the plant for producing custom millwork. A section explains construction and design features of Fox-made Gate City awning windows. 4 pp. ea., illus. Fox Brothers Mfg. Co., 2715 Sidney St., St. Louis 4, Mo.*

Flat Slab Construction

Smooth Ceilings System of Flat Slab Construction. Bulletin gives design data for flat beamless floor construction with steel column heads embedded in the slabs. Typical details are given along with features of the system. Typical installations in finished and uncompleted stages, and a table covering comparative strength and stiffness are also given. 4 pp., illus. Smooth Ceilings System, 302 Metropolitan Life Bldg., Minneapolis 1, Minn.*

Aluminum Extrusions

Designing With Aluminum Extrusions. Book explains basic principles for designing and using extruded aluminum shapes. Beginning with features and examples of extrusions, it continues with manufacturing possibilities and limits, and structural design considerations. Assemblies, connections and dimensional tolerances are analyzed, and the characteristics of aluminum, selection of alloy and temper, fabricating properties, finishes and cost factors are covered. Many diagrams, tables and pictures are included. The book is available without

charge to engineers, architects, designers and others requesting it on company letterhead. 138 pp., illus. Reynolds Metals Co., 2500 So. Third St., Louisville, Ky.*

Special Service Doors

Bilco Doors For Special Services (1950 Catalog). Covers a line of roof scuttles, hatchways; sidewalk elevator and ash hoist doors; trench covers and frames; and cellar doors for outside access. Each type is presented with photographs, details, dimensions, materials and other pertinent data. 12 pp., illus. The Bilco Co., 164 Hallock Ave., New Haven 6, Conn.*

Electric Conduits

National Electric Conduits. (Catalog No. 603). Describes a line of conduits and tubing including rigid, flexible, metallic and non-metallic. Elbows, connectors and couplings are reviewed, along with straps, junction boxes and box connectors. Size and weight tables are given for each of the items covered. 30 pp., illus. National Electric Products Corp., Chamber of Commerce Bldg., Pittsburgh 19, Pa.*

Studless Partitions

Metal Lath News (Vol. 14 No. 1). Covers studless, solid 2-in. partitions of metal lath and plaster. Phases of their construction on a number of building projects are described and illustrated. Features and test results are also given. Technical data sheets include specifications, erection details and sketches of fasteners. 16 pp., illus. Metal Lath Manufacturers Assn., 636 Engineers Bldg., Cleveland, Ohio.

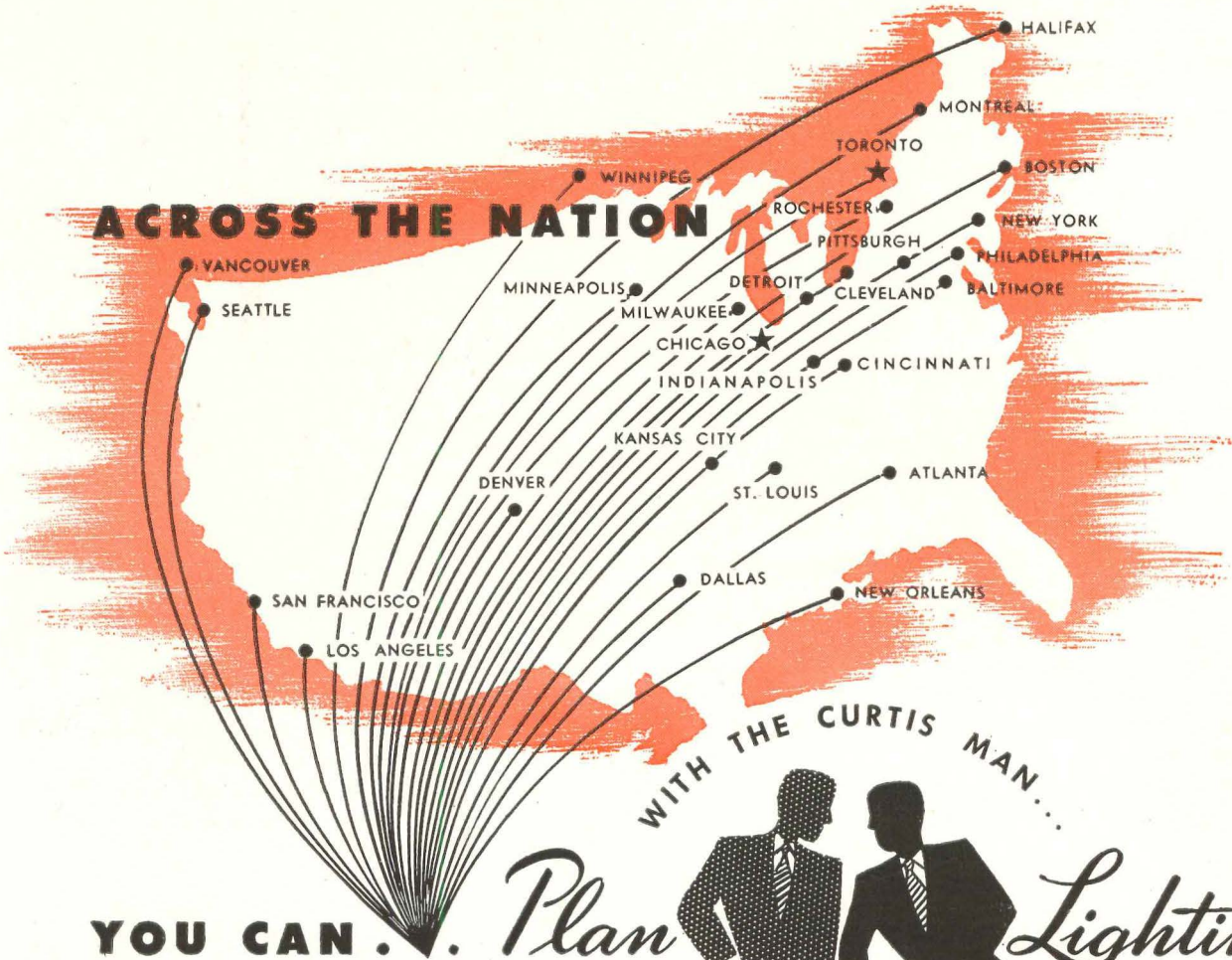
Fibre Board

Tri-Ply Insul-Bond Fibre Board Products. Discusses insulation and acoustical properties and features of the material for construction and decoration of walls, ceilings and partitions. A cutaway drawing demonstrates use of several types of

(Continued on page 220)

*Other product information in Sweet's File, 1950.

ACROSS THE NATION



YOU CAN . . .

WITH THE CURTIS MAN . . .



Plan Lighting

STORES

SCHOOLS

OFFICES

BANKS

DRAFTING ROOMS

CHURCHES

HOSPITALS

INDUSTRIALS

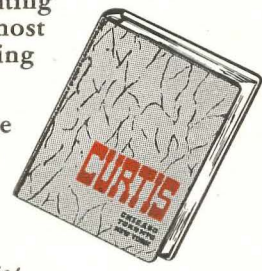
CUSTOM LIGHTING

For more than 50 years, Curtis Lighting has been a pioneer in the development of new lighting techniques . . . designing, engineering and producing the finest lighting equipment available. World-wide acceptance of Curtis Lighting Equipment is evidenced by a roster of outstanding lighting installations which includes the Sistine Chapel in Rome . . . the First National Bank of Chicago . . . Los Alamos Research Laboratories, New Mexico . . . Toronto Stock Exchange, Canada . . . plus many schools, stores and offices in your immediate city.

Whatever your lighting problem may be, a full time Curtis Representative is near to assist you. He is a lighting engineer, rich in a background of wide experience. His job is to help you achieve not only the correct answer to your lighting problems, but also to assure you the most efficient administration of your lighting dollar.

If quality lighting is of interest to you, the new Curtis catalog should be in your hands.

Write for this catalog today.



CURTIS

LIGHTING, INC., 6135 W. 65th STREET
CHICAGO 38, ILLINOIS

Exclusive Representatives in the Following Cities...

ATLANTA, BALTIMORE, BOSTON, CHICAGO, CINCINNATI, CLEVELAND, DALLAS, DENVER, DETROIT, INDIANAPOLIS, KANSAS CITY, LOS ANGELES, MILWAUKEE, MINNEAPOLIS, NEW ORLEANS, NEW YORK, PHILADELPHIA, PITTSBURGH, ROCHESTER, SAN FRANCISCO, SEATTLE, ST. LOUIS.

and Over 450 Authorized Distributors Throughout the Nation

Who gets blamed when a fireplace smokes?

WHY are thousands of new homeowners caused the expense and disappointment of smoky fireplaces every year? Because many inexperienced masons fail to carry out architects' designs, use rule-of-thumb methods and build hearths out of proportion to flues. But, who is usually blamed by the homeowner? The Architect.

How to insure smokeless fireplaces without supervision

The Heatilator* Fireplace unit is a complete fireplace from hearth to flue, around which any style of fireplace can easily be built . . . even by inexperienced masons, and without costly supervision by the architect. The Heatilator unit consists of:

1. A scientifically designed firebox.
2. A properly proportioned throat.
3. A removable damper with adjustable poker control.
4. An extra wide down-draft shelf.
5. Complete metal smoke dome to speed passage of smoke into chimney.



Typical placement of warm-air grilles in a projecting fireplace.

Because these vital parts are pre-built in one compact form, the Heatilator unit insures a fireplace that draws properly and will not smoke. It eliminates guesswork and other causes of failure.

Costs little, if any, more than ordinary fireplace

Because the Heatilator unit is ready to install, it saves mason time and labor. It saves on expensive firebrick. Thus, a completed Heatilator Fireplace costs little, if any, more than an ordinary fireplace! In addition to this original economy, and

even more important, your client can count on the *lifetime* economy of smokeless, trouble-free operation.

Heatilator unit ups fireplace efficiency

The Heatilator Fireplace draws in cool air from floor level, heats it, and circu-



A Colonial Fireplace built around a Heatilator unit. Warm-air grilles are located in the bookshelf sides.

lates it to every corner of the room, and to other rooms as well. On cool Spring and Fall days, this use of heat ordinarily wasted makes furnace operation unnecessary. In mild climates, it is the only heating equipment needed. It saves the cost of expensive heating plants that are used only a short time each year.

Heatilator Fireplaces are ideal for summer camps and cabins, making them usable weeks longer in Spring and Autumn. It solves the heating problem in basement recreation rooms without unsightly pipes and radiators. Heatilator units, made of boiler plate steel, are built for a lifetime.

A Heatilator Fireplace permits any architectural style and the use of any material. The air intake and outlet grilles are easily placed to blend with the general design. When the fireplace projects into the room, the grilles are out of sight

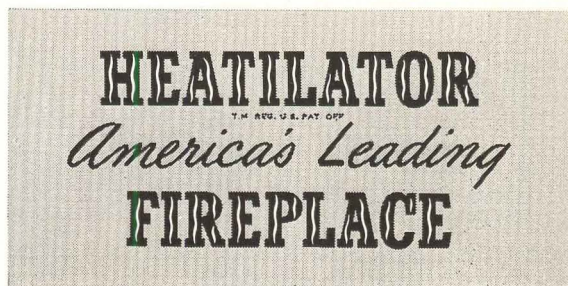
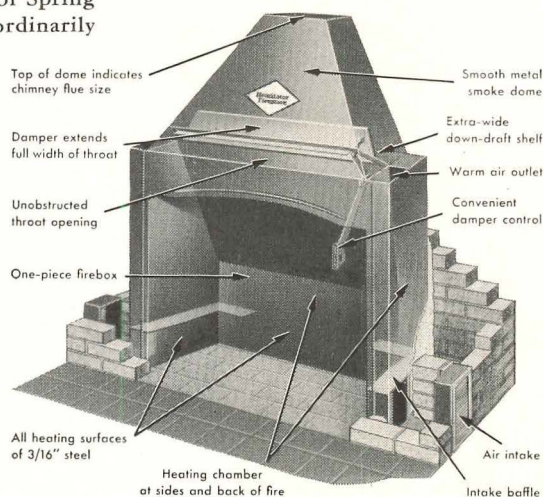


The warm-air grilles in this striking Colonial fireplace are hidden in cupboards.

in the ends. If the fireplace is flush, the intakes can be placed in baseboards on either side of the hearth . . . outlets high above mantel.

Give clients the advantages of a Heatilator unit. Write today for complete information. Heatilator, Inc., 613 E. Brighton Avenue, Syracuse 5, N. Y.

*Heatilator is the reg. trade mark of Heatilator, Inc.



CONDENSATION CONTROL FOR HOUSES

Vapor Barriers: 5 — Attics

(Continued from page 144)

Partly Finished Attic With Dwarf Walls (Fig. 4)

1. Vapor barriers should be installed on ceilings beneath unheated attic spaces as noted before. They may extend from between joists below dwarf walls, back to outside wall, but it would probably be less expensive and better to cover entire ceiling than to fit barriers between joists. Except in the southern states when insulation is omitted, dwarf walls, ceilings and roof over attic living areas should be carefully fitted with barriers. Fit doors to unheated spaces tightly to stops by weather strips or other seals. Thin doors inclined to warp should be held by catches.

2. Insulation, if used, should be placed on ceiling below unheated attic, on dwarf wall, roof over heated space and backs of doors to cold spaces.

3. An airway should be provided over insulation in roof. Provide for air circulation behind dwarf wall and between rafters.

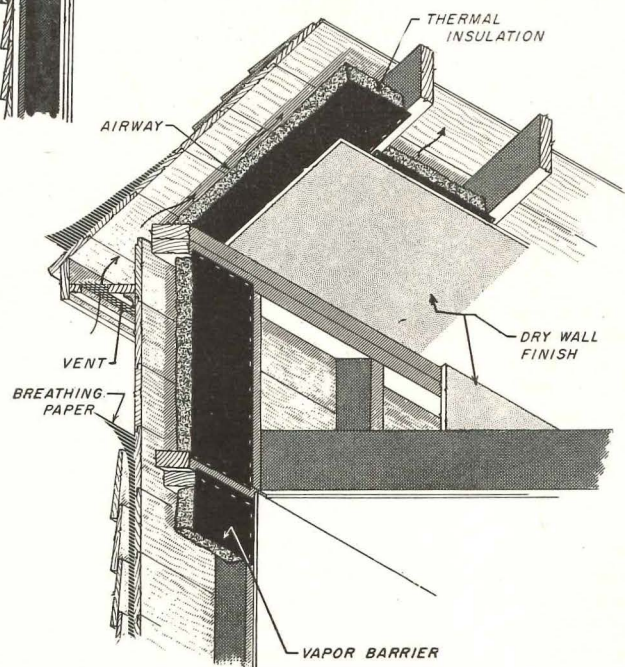
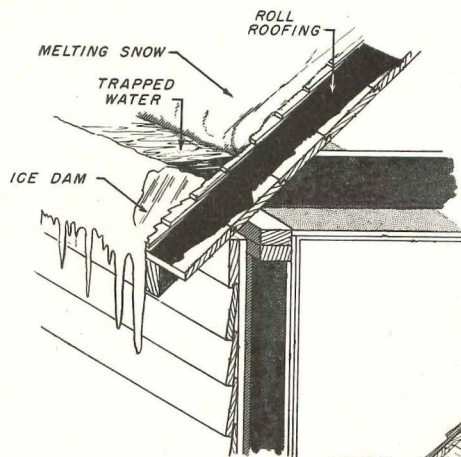
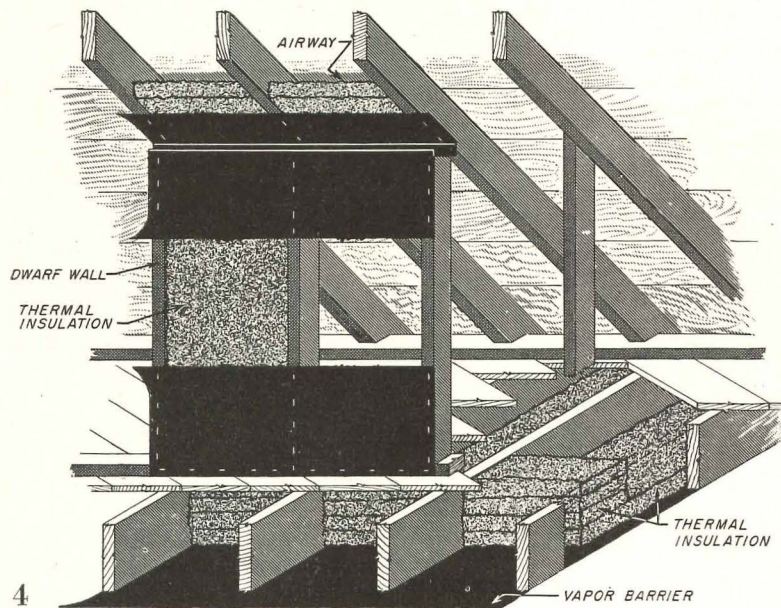
Finished Attics (Fig. 5)

1. Vapor barriers should be placed around heated areas as noted in the previous section. Some form of dry wall finish is best along walls and lower part of roof to prevent damage to barrier. Ice along eaves often causes water to back under shingles and into building. To prevent this, lay single course of heavy roofing felt, roll roofing or sheet metal over eaves, and extend under shingles well above line of wall. Long nails projecting into attic or wall may condense water and collect ice in cold weather. As a safeguard against stained ceilings, etc., resulting from this, clip nails close to wood.

2. Insulation, when used, should be on both side wall and between rafters of roof.

3. An airway over insulation in roof should be allowed.

(Continued on page 151)



Milcor *manual*

Metal Lath AND ACCESSORIES

FOR FIRESAFE

CONSTRUCTION

NEW!

in Sweet's
Architectural File

STEEL PRODUCTS

Complete information on the most complete fireproof line **Milcor Metal Lath** and Accessories

In the 1950 Sweet's Architectural File is a new, enlarged, and completely revised issue of your favorite handbook on modern fireproof construction — the Milcor Manual. Forty-eight pages of helpful facts on the most complete line of steel building products made. Packed with time-saving guides for design and specification: descriptions, photos, architectural and erection details. Keep it at your fingertips. Turn to Section 12a/1a for the Milcor Manual in the 1950 Sweet's. If you need an extra copy for your specification writers, it will be sent without charge.

INLAND STEEL PRODUCTS COMPANY

Formerly Milcor Steel Company

4035 WEST BURNHAM STREET • MILWAUKEE 1, WISCONSIN

Baltimore 24, Md. • Buffalo 11, N. Y. • Chicago 9, Ill. • Cincinnati 25, Ohio • Cleveland 14, Ohio
Detroit 2, Mich. • Kansas City 8, Mo. • Los Angeles 23, Calif. • New York 22, N. Y.
Rochester 9, N. Y. • St. Louis 10, Mo.



WHY PUT UP WITH SPRINGY FLOORS?

There's no need today to accept springy floors as a necessary evil when planning a light-occupancy structure. Instead, design for solid under-foot stiffness by specifying open-web steel joists of proper span-depth ratio.

Bethlehem Open-Web Steel Joists are ideal for firm, non-springy floor construction because they minimize vibration without increasing the amount of material in the floor structure. What's more, they make any home or building in which they are used fire-safe, for when combined with concrete floor slab and plaster ceiling, they provide a type of floor construction which is non-combustible.

Bethlehem Open-Web Joists also offer other important advantages to the architect and builder. They save construction time, because pipes and wiring can be run through the open webs of the joists. They are immune to attack by termites and vermin. They provide floors which are sound-retardant. They come plainly marked, ready for placing. And they can also be used advantageously in roof construction.

You'll find our Folder 522A of great help in designing for economy and stiffness with Bethlehem Open-Web Joists. Ask the nearest Bethlehem sales office for a copy, or write to us at Bethlehem, Pa.

BETHLEHEM STEEL COMPANY, BETHLEHEM, PA.

On the Pacific Coast Bethlehem products are sold by Bethlehem Pacific Coast Steel Corporation
Export Distributor: Bethlehem Steel Export Corporation



★ BETHLEHEM OPEN-WEB JOISTS

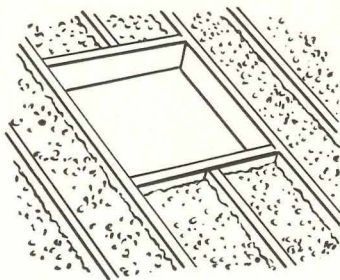
How to make provision for attic fans in your homes

It is a simple matter to plan new homes so that they can be made comfortable throughout hot summer months. The two steps described below will save

money for owners by providing for inexpensive installation of package attic fans, the most economical and practical means of cooling an entire house.

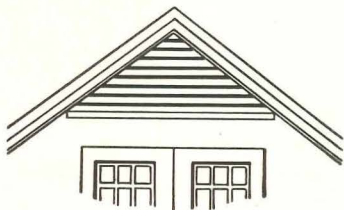
Step 1. Frame for ceiling opening over hallway.

By framing and installing fan when home is built, no extra construction expense is involved. If installation is to be made later, framed opening can be temporarily plastered over or closed with plywood.

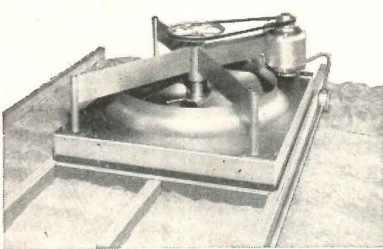


Step 2. Provide adequate louvres in proper location.

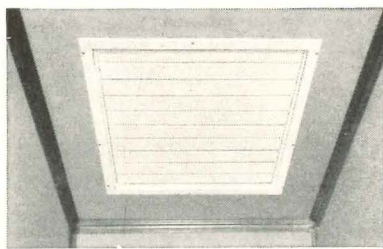
On new construction it costs very little to include ample exhaust openings to handle attic ventilation. These may be gable louvres or porch, soffit or basement exhausts, depending on the design of the house.



Installation of Hunter Package Fan can then easily be made when home is built, or later



This new fan is a compact unit, with built-in fan, motor and suction box. Fits low-clearance attics. Certified air delivery ratings for any size home or climate.



Automatic or pull chain shutters are quiet, tight-closing. Fit narrow hallways. Soft ivory finish (baked enamel) harmonizes with the color scheme of any room.

.....
MAIL FOR COMPLETE CONSTRUCTION DETAILS

Hunter Fan and Ventilating Company, 396 S. Front St., Memphis 2, Tenn.
 Send copy of "How to Cool for Comfort" to:

Name..... Firm.....
 Address..... City & State.....

Hunter Package Attic Fans

THE RECORD REPORTS

(Continued from page 152)

The change does not alter degree requirements, which will remain at five years for architecture and interior design and four years for general art. Sufficient non-specialized courses in architecture and art are being retained at the freshman and sophomore level to satisfy recommendations by the Association of Collegiate Schools of Architecture for continuous training.

Engineers' Council Sponsors New Accreditation Program

Reaccreditation of engineering curricula in engineering colleges has nearly been completed by the Engineers' Council for Professional Development, an organization representing the major engineering societies of the nation.

Inspection of 114 colleges has been completed by the Committee on Engineering Schools of the E.C.P.D., under the chairmanship of H. T. Heald, president of the Illinois Institute of Technology. Inspection of the remaining 39 is expected to be completed this year.

Approximately 75 per cent of all the engineering curricula inspected have been fully accredited; 14 per cent have been provisionally inspected; and 11 per cent have not been accredited.

The problem of accreditation of graduate curricula in engineering colleges also is being studied by the Committee, which has prepared a definitive statement on the general characteristics of a good engineering curriculum.

The Committee has also accredited curricula in 13 technical institutes.

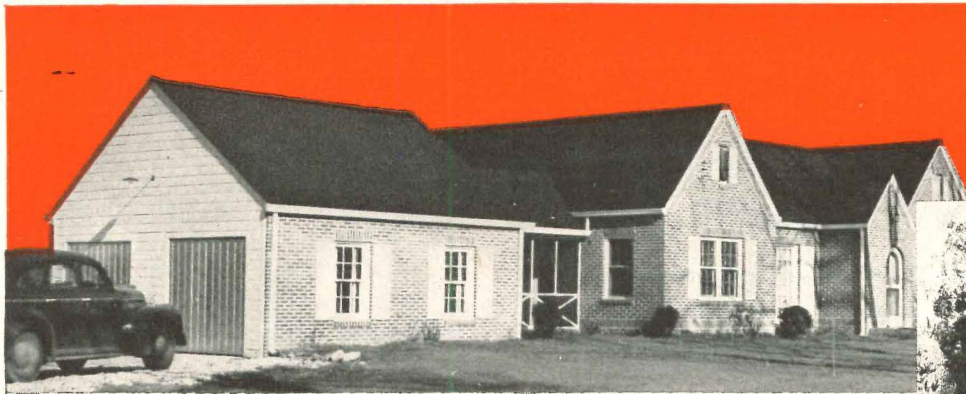
Special Courses

- "Space Heating with Solar Energy" will be the subject of a course-symposium at the Massachusetts Institute of Technology August 21-26.

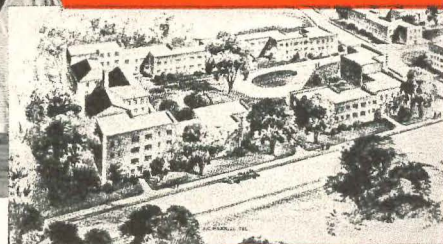
The program, which is sponsored by the Solar Energy Research Project under the Dr. Godfrey L. Cabot Fund for research in utilization of solar energy, will seek to "promote more discriminating application of the available engineering knowledge in architectural and engineering practice." A small registration and tuition fee will be charged.

Activity will be divided into two parts. The Educational Section will consist of a series of four or five lecture and discussion periods covering a brief historical survey of attempts at

(Continued on page 156)



HOME



APARTMENT



STORE



FACTORY

Again THE BEST IS THE SIMPLEST

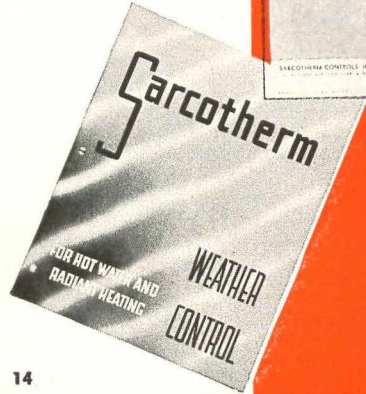
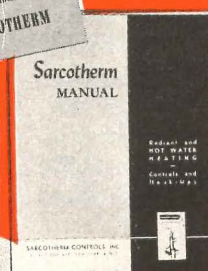
The simplest kind of a mixing valve, controlled by inside and outside liquid filled thermostats—that is the control called Sarcotherm. The mechanisms are strictly mechanical, no electricity or compressed air. Nothing mysterious, and each vital mechanism is a device that has proven its worth for more than a quarter of a century. Nothing could be more simple or dependable.

SARCOTHERM WEATHER CONTROL

In designing heating systems, Sarcotherm makes the job simple and easy, too.

Sarcotherm is versatile. Multiple zone control, automatic night set backs, control of split systems and double switch lines can be incorporated into the heating hook-up with ease. And of course, Sarcotherm is the control that made radiant heating practical for all types of projects, large and small.

It is easy to explain this simple system and its advantages to prospective owners. The new Sarcotherm Catalog is written in non-technical language. Engineering data, imprinted mailing pieces and other material are at your service. Ask for a set and judge what Sarcotherm Simplicity can do for you.



14

Sarcotherm

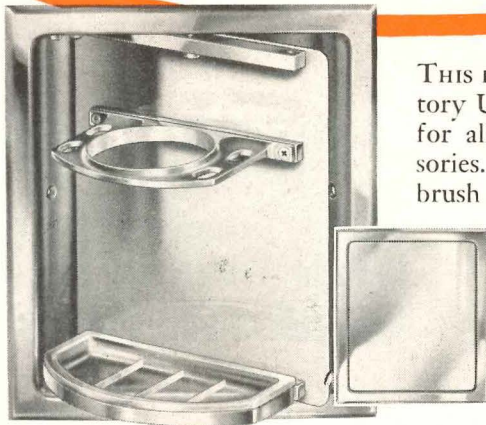
SARCOTHERM CONTROLS, INC. • Empire State Bldg. • NEW YORK 1, N. Y.

(Continued from page 154)

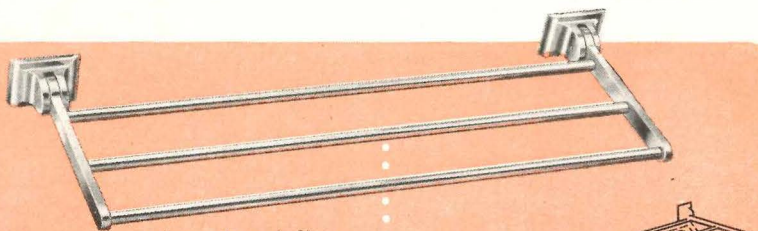
There's something **SPECIAL** about bathrooms when accessories are **HALL-MACK**

TRADE MARK REG. U.S. PAT. OFF.

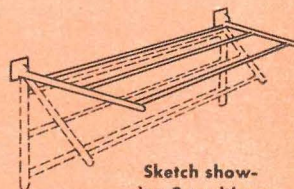
In Hall-Mack's complete selection of bathroom accessories you'll find unique special accessories like these—made to add the final touch of convenience and appearance to any bathroom . . .



THIS BEAUTIFUL Concealed Lavatory Unit is a perfect companion for all other Hall-Mack Accessories. Soap, tumbler and toothbrush are ready at the touch of a finger—yet smartly concealed when not in use. These bathroom necessities are mounted on a revolving panel, and only a polished chrome surface flush with the bathroom wall is visible when the unit is closed . . .



AND HERE IS A three-bar Adjustable Towel Rack—a real space-saver. It's instantly adjusted to any of three positions (horizontal, 45°, or down) and is ideal for drying hosiery, for displaying guest towels, and for bath towel storage. Drops down out of the way when not in use, yet provides so much extra convenience when needed.



Sketch showing 3 positions of Towel Rack

LOOK FOR all of the extra qualities in bathroom accessories—and you'll choose Hall-Mack! Remember—there is a complete line to give you the right accessories for every bathroom need. Hall-Mack also makes a full selection of fine Medicine Cabinets and other recessed specialties. Write for details. Hall-Mack Company, 1344 W. Washington Blvd., Los Angeles 7, California.



utilization of solar energy; classification and discussion of the types of solar heat collectors; a review of current research; solar geometry; climatic factors and atmospheric absorption; design of a typical flat plate collector; discussion of glass, south-facing windows and overhangs; methods of heat storage; recommendations for utilization of the collected heat; and a few typical design problems.

The Symposium Section will consist of four or five symposium sessions with contributions from leading research people and others with actual experience in the field. The M.I.T. Solar House is conveniently located for demonstration purposes in connection with this symposium.

Further information and enrollment details are available from: Donald F. Monell, Research Associate, Solar Energy Research Project, Committee on Space Heating, M.I.T. Room 7-346, Cambridge 39, Mass.

- M.I.T.'s 12-week 1950 summer session will offer a series of subjects in climatology.

The special program, planned by the Department of Meteorology, will include eight courses, four each in the two summer terms from June 12 to July 21 and July 24 to September 1. The course subjects will cover general, applied and regional climatology, statistical methods, micrometeorology, and the theory of low-level turbulence and diffusion.

Application forms and further information may be obtained from Prof. Walter H. Gale, who is in charge of M.I.T. summer session activities, at Room 3-107, M.I.T., Cambridge 39, Mass.

Faculty Appointments

- Gregg and Briggs, architects and engineers of Chicago and Peoria, Ill., have been appointed consultants to the University of Illinois on campus planning and development. One of the partners in the firm, Cecil C. Briggs, has been serving half-time as visiting professor of architecture since 1948 and will continue his teaching as part of the new contract

- Three practicing architects will act as visiting critics for the College of

(Continued on page 158)



Thompson's
CAFETERIA

Kenneth E. Holmes, Architect

MODERN DOOR CONTROL BY *LCN* • DOUBLE-ACTING CLOSERS CONCEALED IN HEAD FRAME

THOMPSON'S CAFETERIA, 27 WEST RANDOLPH STREET, CHICAGO

LCN CATALOG 11-E ON REQUEST OR SEE SWEET'S • LCN CLOSERS, INC., 466 WEST SUPERIOR STREET, CHICAGO 10

Architecture at Cornell University for the spring term. They are Sanford B. Wells and Philip C. Johnson of New York and Joseph N. Boaz of Oklahoma City. Mr. Johnson is director of the department of architecture and design at the Museum of Modern Art.

• Ernest J. Kump, San Francisco architect, is serving as visiting lecturer

in architecture at Stanford University during the winter quarter. Mr. Kump is the second of three visiting lecturers for the Stanford Art Department during this school year. Albert Henry Hill, architect, also of San Francisco, was lecturer for the fall quarter; and Eldridge T. Spencer, the university's director of planning, will lecture during the spring quarter.

Fellowships

• The annual competition for the Rice Institute Traveling Fellowship in Architecture will be held in the Department of Architecture at Rice from April 17 to May 19.

The Fellowship provides a sum of \$1200 to be used for foreign travel and study, with a minimum of five months' residence in the foreign country chosen.

To be eligible for the fellowship, the candidate must have graduated from the Department of Architecture of the Rice Institute with a B.S. in Architecture, or attain this degree at the Commencement of June 1950. The candidate must be under 30 years of age.

Requests for application blanks should be addressed to: The Department of Architecture, The Rice Institute, Houston 1, Tex.

• Final drawings in the competition for the Schermerhorn Fellowship for 1950-1951 must be submitted not later than April 1, the Columbia University School of Architecture program specifies.

The fellowship, one of three traveling fellowships given successively, one every third year, by the school, is available to graduates of the school during the 10 years after they first receive a degree from the school. They must be citizens of the United States.

The competition for the fellowship is conducted in two stages. The preliminary competition, a three-day sketch problem, was held in January; and competitors chosen to enter the final competition received their programs February 11.

Final judgment will be held at the School of Architecture during the last half of April.

ECONOMICAL SAFE AND CLEAN

**Specify
Corruform**

**Economical Strength
100,000 psi**
One quality, uniform standard.

Patented **CORRUFORM**
is your guarantee for safe
construction.

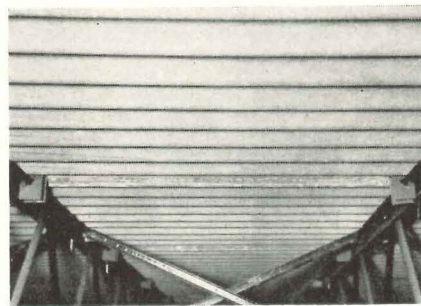


1. SAFE—Light rigid sheets and attachments easily placed. A secure form for trades and concrete. No stretch or side pull on joists, beams or walls.



2. ECONOMICAL—Light high-strength—100,000 psi—steel to take construction abuse. No sag or material waste, concrete placed and finished by common practice on firm stable CORRUFORM.

HIGHEST STANDARD — LOWEST COST — Patented Tough-Temper Corruform for concrete in joist floors and roofs sets new standards of appearance and safety. Corruform permits material and labor savings sufficient to reach minimum-cost joist construction.



3. CLEAN—No cleanup on floors below, no unsightly leakage, true and level. Bright decorative corrugated pattern for exposed ceilings, vinylprimed for painting, or galvanized.

CORRUFORM SPECIFICATION—Standard-weight Corruform with 2-3/16 inch wide 1/2 inch deep corrugations, weight .72 lbs. per sq. foot, has a guaranteed average strength of 100,000 psi and single-test minimum strength of 95,000 psi.

SEND FOR
AIA FILE
TODAY



GRANITE CITY STEEL CO.
Granite City, Illinois



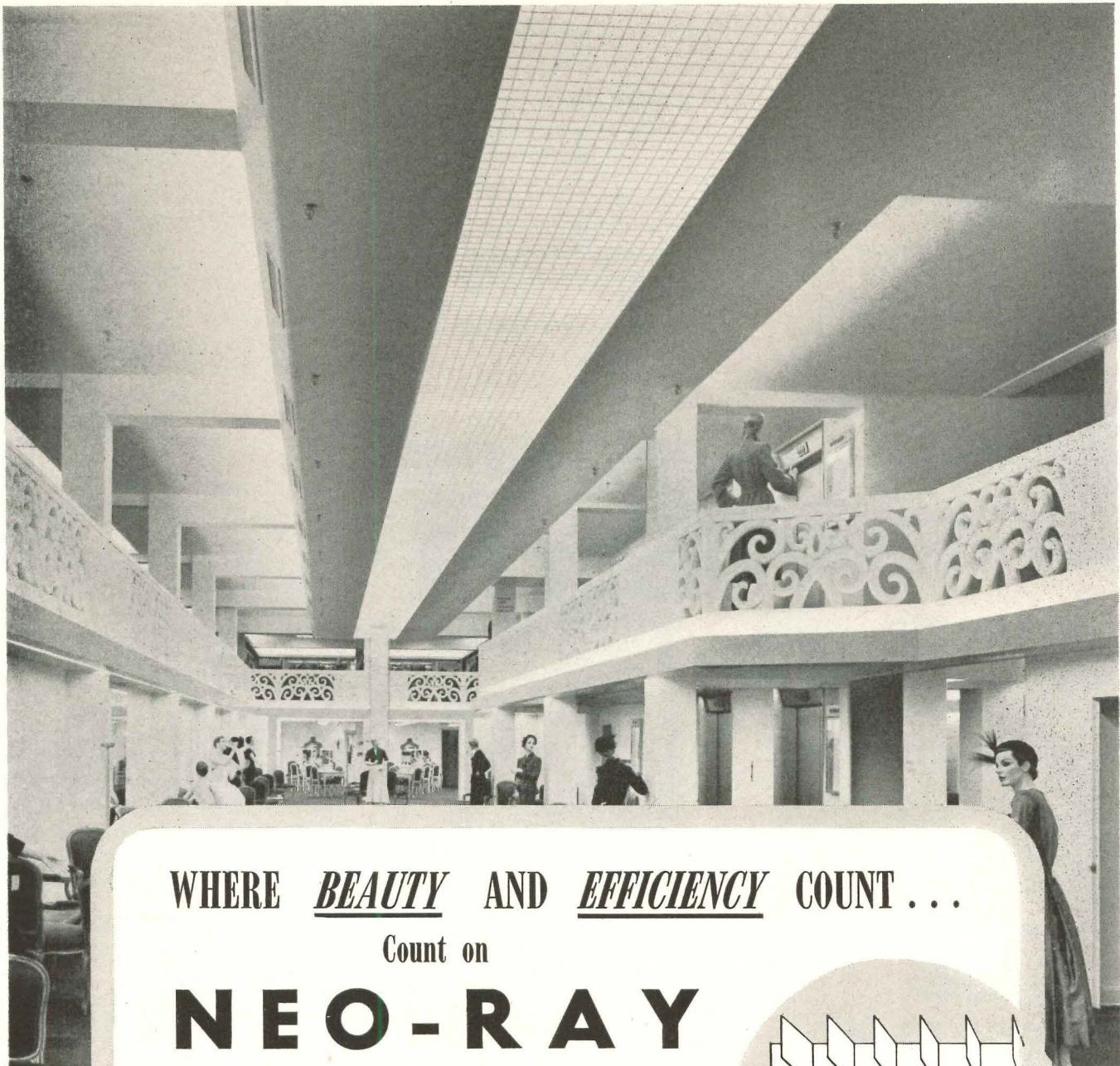
EXHIBITIONS

Product Design

Industrial design was spotlighted as a large-scale showing of the work of Brooks Stevens Associates at the Milwaukee Art Institute opened on January 10 for a six-weeks period.

Marking the 15th year of the firm's existence, the exhibition surveyed 125 products designed for nearly 100 companies. These products ranged from paper packages to heavy machinery,

(Continued on page 160)



WHERE BEAUTY AND EFFICIENCY COUNT . . .

Count on

NEO-RAY

America's Smartest Louvred Ceiling

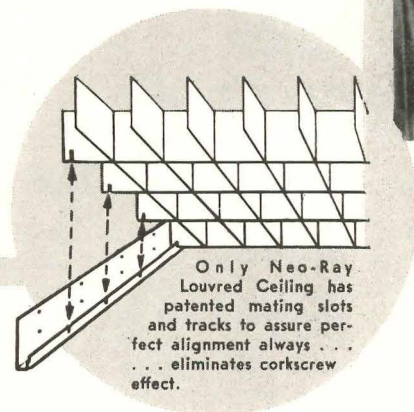
Lighting beauty and efficiency are achieved with Neo-Ray Louvred Ceiling in Russeks Department Store, Philadelphia, Pa.

Architect: Thalheimer & Wietz

Ever wonder why so many specifications call for Neo-Ray Louvred Ceilings? Here's the answer: Neo-Ray is the only louvred ceiling with so many patented and exclusive features: perfect alignment under all conditions . . . back to back track assembly . . . adaptable to any type of ceiling . . . easy and simple to install.

Remember — on the next job that calls for efficient lighting plus beauty that blends with attractive interiors — specify Neo-Ray Louvred Ceilings.

See our catalogue in Sweet's
Architectural File for 1950, Sec. 31a
16



Only Neo-Ray Louvred Ceiling has patented mating slots and tracks to assure perfect alignment always . . . eliminates corkscrew effect.

SEND FOR NEW 64 PAGE CATALOG

Gives complete engineering data and lighting tables for each item in our complete line of fluorescent, slimline, and incandescent fixtures.

Plus

New simplified spot lamp tables for computing light intensities in show windows and all high-lighted areas.

NEO-RAY PRODUCTS, INC. • 315 EAST 22nd ST. • NEW YORK 10, N. Y.

from kitchen utensils to an entire factory.

Industrial design was also the topic of a national conference held at the Institute January 28, with the sponsorship and cooperation of the Society of Industrial Designers. Speakers at the conference included Walter Dorwin Teague, Egmont Arens, Dave Chapman, Brooks Stevens, James S. Plaut, and Philip McConnell.

Plant Maintenance Show

More than 100 companies had exhibits in the first national Plant Maintenance Show held in the Cleveland Auditorium January 16-19.

The first major conference on plant maintenance was conducted at the same time under the sponsorship of the American Society of Mechanical Engineers and the Society for the Advancement of Management.

COMPETITIONS

Homes for Family Living

A Builders' Competition offering 10 Merit Awards for the "Best Homes for Family Living" built and sold in the United States during 1949 is sponsored by *Parents' Magazine*.

Entries, which will be divided into five regional groups according to geographical location, will be judged in two price groups based on actual selling price: houses sold for less than \$16,000 and houses sold for \$16,000 to \$25,000.

One award will be made in each cost class for each of the five geographical regions. From the 10 Merit Awards, one house will be selected for the 1949 National Merit Award for the Best Home for Family Living.

Jury of Award for the competition, which closes May 1, 1950, will include the president of the National Association of Home Builders; Richard Bennett, A.I.A., of Loeb, Schlossman & Bennett; William H. Scheick, A.I.A., executive director, Research Advisory Board, National Research Council; Mrs. Maxine Livingston, Family Home Editor, *Parents' Magazine*. Also members of the jury will be five regional advisers to be announced later.

Awards will be Certificates of Merit. *Parents' Magazine* will publish the National Merit Award.

Full information may be obtained from: Builders' Competition for Merit Awards, *Parents' Magazine*, 52 Vanderbilt Ave., New York 17, N. Y.

John Stewardson Scholarship Offered for Advanced Study

U. S. citizens between 21 and 30 who have studied or practiced architecture in Pennsylvania for at least a year are invited to compete for the John Stewardson Memorial Scholarship of \$1300 for architectural study in this country or abroad under direction of the Managing Committee.

Candidates must also meet one of the following alternative requirements: four years' office experience; three years' office experience and one year college; two years' office experience and two years college; four years college and no office experience. The college must be an accredited school of architecture.

Registration must be made by March

(Continued on page 162)

Pella ROLSCREENS

FIT ALL TYPES and MAKES OF WINDOWS

ROLSCREENS provide freedom from screen troubles! Once in place, always in place. No putting up — no taking down! No painting! No seasonal repairs! No storage space required. By minimizing window screen maintenance, ROLSCREENS pay for themselves over the years.

The exterior beauty of windows is preserved by ROLSCREENS because they are made of neutral colored AluminA wire cloth and installed on the **inside**. ROLSCREENS cost no more than good quality flat-frame screens. When annual maintenance and labor costs are considered, ROLSCREENS actually cost less than ordinary screens.

10-YEAR GUARANTEE assures that clients will be satisfied with ROLSCREEN performance.

ROLSCREEN DETAILS IN HANDY FILE PACK for installing on all types and most makes of windows. Ready for tracing right onto your plans.



MAIL COUPON

ROLSCREEN COMPANY,
Dept. B-15, Pella, Iowa.

Without obligation, please send **FREE** new file of ROLSCREEN details and specifications in A.I.A. folder.

Name _____
 Firm Name _____
 Address _____
 City & Zone _____ State _____

Made by makers of


FAMOUS PELLA VENETIAN BLINDS and CASEMENT UNITS




**A longer run
for
your money**

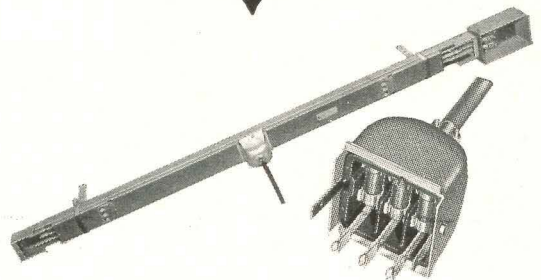
**also . . . in
midget size**



PLUGIN BUSDUCT


YOUR ELECTRICAL DOLLARS WILL GO MUCH FARTHER with Plugin  Busduct . . . because here's an electrical distribution system designed to economize on everything but efficiency.




By providing convenient plug-in outlets every foot of the way, there's always a ready power source for new or present equipment anywhere along the production line . . . just plug-in wherever you want . . . no slowing down production to make needed changes . . . no expensive wiring delays . . . no high cost electrical maintenance . . . in fact, there's nothing much to do but *plug-in and let 'er roll*.

Add up these and many more cost-cutting features of Plugin  Busduct . . . and you'll agree that here is the electrical distribution system that makes ends meet in more ways than one.



 **POWER PLUGIN**, the new midget-size Plugin  Busduct of 50-amp. feeder capacity, is now available for equipment requiring connections for 1/2 to 3 HP motors, 240 volts or less, AC or DC (7 1/2 HP maximum, with dual-element fuses).

Featuring all the convenience, flexibility and economy of Plugin  Busduct, this new Underwriter Laboratories approved duct is made in 5-ft. and 10-ft. sections with plug-in outlets every 20 inches . . . additional outlets and special lengths available on special order.

For more information about Plugin  Busduct and  Power Plugin, write for Bulletins 701 and 703 . . . or talk to your  Representative (he's listed in Sweet's).



Frank Adam Electric Co.

ST. LOUIS 13, MISSOURI

Makers of BUSDUCT • PANELBOARDS • SWITCHBOARDS • SERVICE EQUIPMENT • SAFETY SWITCHES • LOAD CENTERS • QUIKHETER

15. Blanks are available from Henry D. Mirick, Secretary, Room 809, 12 S. 12th St., Philadelphia 7, Pa.

AWARDS

Elgin Home Building Contest

Elmer Gylleck, Architect, of Elgin, Ill., was among five winners of the 1949 Elgin Better Building Contest spon-

sored by the Elgin Real Estate Board.

Mr. Gylleck, who designed the winning entry in the \$10,000 to \$15,000 class, was honored for the two-bedroom frame house erected for Milton Goodson, owner.

In the \$15,000 to \$20,000 class, the winner was Engineer Robert E. Linden, for the house he designed and built for himself.

Others honored were Builders Earl

Creemans (under \$10,000), Sevrin C. Swabeck (over \$25,000) and Clifford Lamp (\$20,000 to \$25,000).

Judges in the contest were Earl H. Reed, Chicago architect, the real estate editors of three Chicago newspapers and two magazine editors

Students Awarded Rust Prizes

Two students in the Carnegie Institute of Technology School of Architecture have received cash prizes from the Rust Engineering Co. of Pittsburgh for exceptional handling of problems involved in designing modern plants for production of window glass.

Casimir J. Pellegrini Jr. of Pittsburgh was awarded first prize of \$100 and Robert T. Stevens of Carnegie, Pa., was awarded the \$50 second prize. Both are sons of architects.

The winning students submitted designs of glass factories, suitable for a Pittsburgh site, capable of producing 200 tons of flat window glass per day. Both designs were cited for excellent handling of raw materials, production flow, ventilation of furnace building, and arrangements of glass cutting booths, warehousing and personnel and administrative facilities.

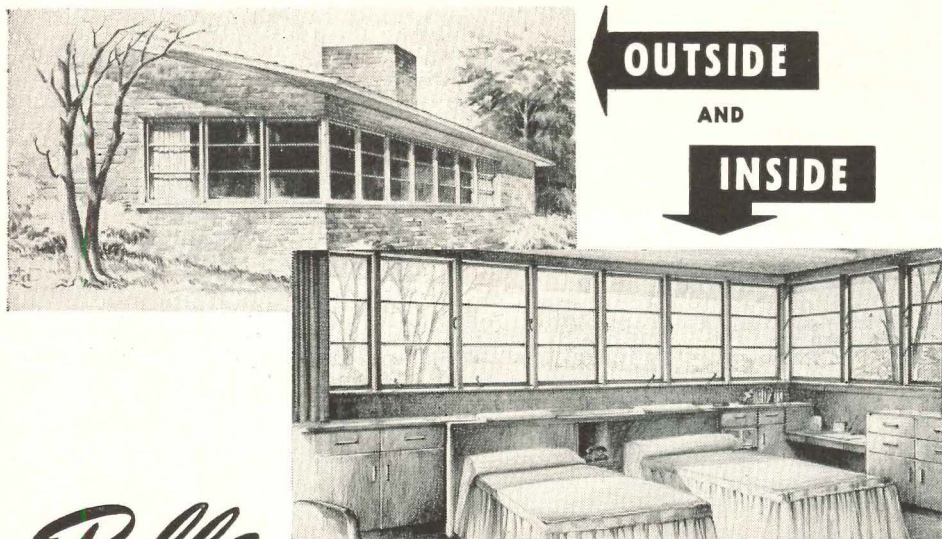
Mr. Pellegrini is the son of Mr. and Mrs. C. J. Pellegrini of Pittsburgh, and Mr. Stevens is the son of Mr. and Mrs. Percy Stevens of Carnegie.

Members of the judges' panel were: B. Kenneth Johnstone, dean of the College of Fine Arts, Carnegie Tech; John Pekruhn, assistant professor of architecture; Joseph E. Spagnuolo, associate professor of architecture; and Mario C. Celli, chief architect, the Rust Engineering Co., who also acted as visiting critic, assisting the regular faculty during classes for students working on the problem.

Steichen and Reynolds Chosen For 1950 A.I.A. Medal Awards

Edward Steichen, photographer, of Ridgefield, Conn., and Joseph Gardiner Reynolds Jr., artist and designer of stained glass windows, will receive the medal awards of The American Institute of Architects for 1950 for distinguished work in arts relating to architecture. The Fine Arts Medal will be presented to Mr. Steichen and the Craftsmanship Medal to Mr. Reynolds at the A.I.A. annual convention in May.

(Continued on page 164)



Pella CASEMENT WINDOWS

PROVIDE CUSTOM WINDOW EFFECTS from STOCK SIZE UNITS

Pella Casement Units can be combined into more than 300 different sizes of varying width and height. Installation cost is cut to a minimum because all Pella Casement Windows are completely assembled and pre-fitted at the factory. Pella Casements, in modular dimensions, fit right into specified rough openings.

CHECK THESE CONVENIENT, LOW-COST **Pella** FEATURES

ROLSCREENS—Pella Casements are equipped with inconspicuous, convenient Rolscreens that roll up and down like window shades. Rolscreens eliminate putting up, taking down, painting, repairing and save valuable storage space.



EASY TO OPERATE — Pella's patented hinge design and construction assure easy operation.

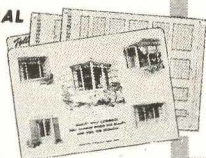
FITS ALL TYPES ARCHITECTURE — Pella Casements fit snugly into wood, frame, brick, brick veneer, stone, etc. They convey dignity and stateliness to Colonial architecture . . . enhance Cape Cod "coziness" . . . lend breadth to Modern or Spanish styles and sturdiness to half-timbered English.

DUAL GLAZING AND WEATHERSTRIPPING
All Pella Casements are dual glazed to insulate against winter cold and summer heat . . . weather-stripped to eliminate drafts.

3-LIGHT WIDE UNIT — Only Pella can build these wide casement units, made possible because of Pella's patented hinge design, superior sash construction and steel inner frame.

For Further Information, see our catalog in

SWEET'S ARCHITECTURAL AND BUILDING FILES



ROLSCREEN COMPANY, Dept. B-14, Pella, Iowa

Without obligation, send me PELLA CASEMENT DETAIL file . . . a complete set of drawings showing sizes, applications and various combinations of Pella Casement units.

Name _____
 Firm _____
 Address _____
 City _____ State _____

PELLA CASEMENTS • ROLSREENS • VENETIAN BLINDS

Light for tomorrow Today!

Thor PORTABLE POWER
TOOLS

WITH PITTSBURGH PERMAFLECTOR
LIGHTING EQUIPMENT



Pittsburgh Permalector Fluorescent and Incandescent Lighting Equipment is "years ahead" in sound engineering and construction; in design—with functional beauty adaptable to any type of installation; and in economy, ease of installation and ease of maintenance. These points of superiority benefit all who use lighting. Ask for complete details on how and why Pittsburgh Permalector Lighting Equipment gives you the "light for tomorrow"—today!

Independent Pneumatic Tool Co.
Chicago, Ill.

A. Epstein & Sons—Architect
Marsh Electric Co.—Elec.Con.

PITTSBURGH REFLECTOR COMPANY

402 OLIVER BUILDING • PITTSBURGH 22, PENNSYLVANIA

MANUFACTURERS OF FLUORESCENT & INCANDESCENT LIGHTING EQUIPMENT

Permalector Lighting Engineers in All Principal Cities



For a Picture Story about
PLANNED LIGHTING

Write and tell us whether you are interested in store, office, bank, school or other type of lighting and a Bulletin covering the subject will be sent you promptly.

PITTSBURGH PERMAFLECTOR LIGHTING EQUIPMENT IS DISTRIBUTED BY BETTER ELECTRICAL WHOLESALERS EVERYWHERE

THE RECORD REPORTS

(Continued from page 162)

ELECTIONS APPOINTMENTS

• Lester T. Avery, president of the Avery Engineering Co. of Cleveland, has been elected president for 1950 of the American Society of Heating and Ventilating Engineers. Other officers elected were: Lauren E. Seeley, dean of the College of Technology, University of New Hampshire, first vice president; Ernest Szekely, president, Bayley Blower Co., Milwaukee, second vice president; Reg F Taylor, consulting engineer, Houston, Tex., treasurer Mr. Avery succeeds Alfred E. Stacey Jr., director of application engineering for the Carrier Corp., Syracuse, N. Y.

• W. Fred Dolke has been elected president of the Chicago Building Congress, and Paul D. Angell was named executive vice president. Other architects among the officers and directors are: William Holabird, Elmer C. Jensen, Jerrold Loebel and Charles W. Nicol.

• F. Ray Leimkuehler, supervising architect for the St. Louis Board of Education, has been appointed chairman of the Board of Adjustment of the City of St. Louis. The Board handles appeals from rulings of the City Building Commissioner and the City Board of Public Service in matters relating to zoning within the City of St. Louis.

• Paul R. MacAlister has been elected chairman of the Board of the Chicago Chapter of the American Designers' Institute. Officers also include: Robert C. Williams, vice chairman; Joseph R. Mango, secretary; and Eugene R. Russell, treasurer. The National Board of Trustees at the annual meeting also voted to move the Institute's headquarters to Chicago.

• Officers for 1950 of the National Association of Real Estate Boards have been elected as follows: Robert P. Gerholtz, Flint, Mich., president; H. Walter Graves, Philadelphia, treasurer; and, as regional vice presidents, Robert W. Leavitt, Lake George, N. Y.; Nestor Weigand, Wichita; W. Ed Wallace, Oakland, Calif.; Kenneth E. Sarles, Racine, Wis.; Claude A. Campbell, Toledo; Ernest H. Howerton, Logan, W. Va.; Edward S.

(Continued on page 166)

No. 7868

Electricity is doing more and more outdoor work these days — and our line of rugged, weatherproof wiring devices is one of the reasons why. In our complete line, there's a receptacle or switch for every application. Every unit offers long-lived, dependable protection against outdoor weather and excessive indoor humidity. Switches and receptacles are also combined in attractive one and two gang units. Each unit comes assembled ready for installation and furnished with weatherproof mats. Snug fitting covers automatically close when plug is removed thus keeping receptacles clean and dry when not in use.

Check into these versatile switches and receptacles today — see how they meet your most exacting application requirements, your own standards of uniform high quality.

Branches in: Boston, Chicago, Cleveland, Cincinnati, Dallas, Denver, Detroit, Los Angeles, New York, Philadelphia, San Francisco, Syracuse.

In Canada: Arrow-Hart & Hegeman (Canada) Ltd., Mt. Dennis, Toronto

SEE OUR LISTING IN SWEET'S ARCHITECTURAL FILE



For complete information, address your specific requirements to:
1903 Laurel Street,
Hartford 6, Connecticut

ARCHITECTS
THAT KNOW BEST
SPECIFY

WIRING
DEVICES

HART
H & H

HEGEMAN
DIVISION

ENCLOSED
SWITCHES

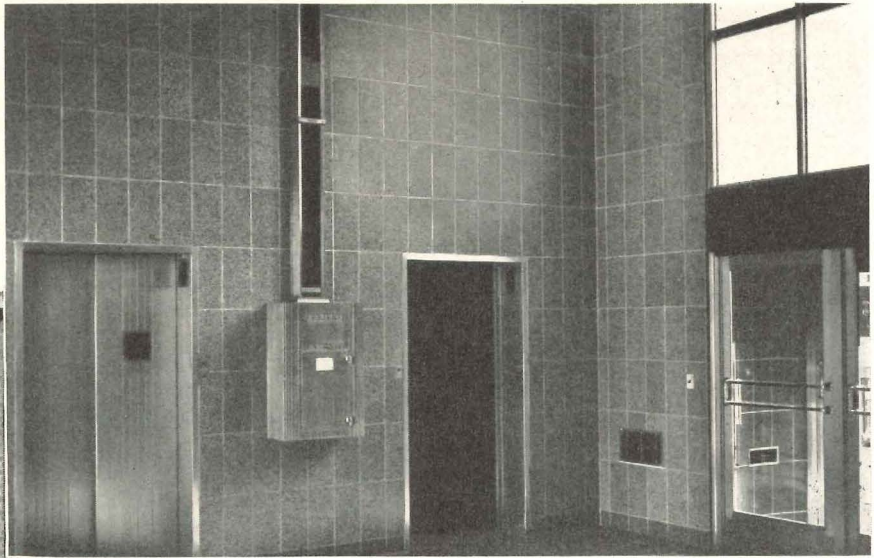
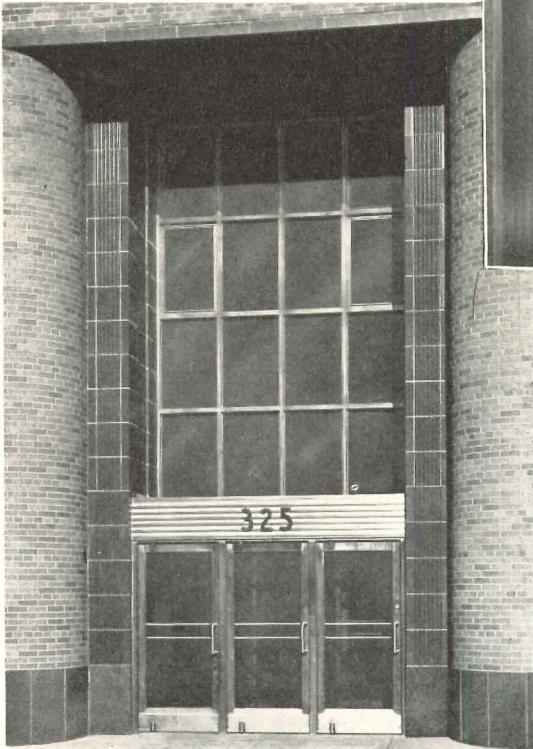
THE ARROW-HART & HEGEMAN ELECTRIC COMPANY
HARTFORD, CONNECTICUT

UNION MOTOR TRUCK TERMINAL

Spring Street, New York, N. Y.

Architectural Division of
Port of New York Authority—*Architects*
Cauldwell-Wingate Company—*Builders*

Enduro-Ashlar Architectural Terra Cotta, in a warm orange-brown, harmonizes pleasingly with the variegated brick surfacing of this huge modern structure.



You can see why the Architectural Division of the Port of New York Authority selected **ENDURO-ASHLAR** ARCHITECTURAL TERRA COTTA

When you appraise its beauty, consider its quality, compare its cost, and give thought to its easy maintenance, you'll readily understand why more architects than ever before are specifying Enduro-Ashlar Architectural Terra Cotta. It can be produced in units large or small, for interiors or exteriors, plain surfaces or decorative sculpture, in an unlimited range of ceramic colors. Minimum maintenance is assured because Enduro-Ashlar Architectural Terra Cotta requires only simple soap-and-water washings to retain its original richness and beauty indefinitely.

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

FEDERAL SEABOARD TERRA COTTA CORP.



10 EAST 40th STREET, NEW YORK 16, N. Y.
PLANTS AT PERTH AMBOY AND SOUTH AMBOY, N. J.

THE RECORD REPORTS

(Continued from page 164)

O'Donnell, Holyoke, Mass.; Larry W. Long, St. Petersburg, Fla.; Ira E. High, Boise, Idaho; M. A. Rowe, Houston; Harold J. Grove, Omaha; Irving F. Truitt, Norfolk, Va.; and Floyd S. Padgett, Colorado Springs.

• Harry S. Rogers, president of the Polytechnic Institute of Brooklyn, was elected chairman of the Engineers' Council for Professional Development at the annual meeting of that organization.

• Emil J. Szendy, A.I.A., of New York City, specialist in the study and preparation of building codes, has been named technical director for the New York State Building Code Commission. Mr. Szendy will receive a salary of \$12,000.

• Officers for the Society of Architectural Historians have been elected for 1950 as follows: president, Buford L. Pickens, New Orleans; vice president, Charles E. Peterson, Philadelphia; secretary-treasurer, Mrs. John M. Gilchrist, Mount Vernon, N. Y.; editor of the Journal, Walter L. Creese, Louisville; directors, Karl Lehmann, New York University, and Carroll L. V. Meeks, Yale University.

• Miss Ione Ulrich has been elected treasurer of the Museum of Modern Art, New York City. Miss Ulrich, who is Mrs. George W. Sutton Jr. in private life, has been assistant treasurer and business manager of the Museum.

• Paul Windels heads the Regional Plan Association as president for this year. Other officers are: Thomas S. Holden, C. McKim Norton and Harold S. Osborne, vice presidents; Earl B. Schwulst, treasurer; and Mabel H. Ward, secretary. Mr. Windels has recently been elected an Honorary Associate of the New York Chapter of the A.I.A.

OFFICE NOTES

Offices Opened

William Beckett, A.I.A., announces the opening of his offices for the practice of architecture and related design at 9026 Melrose Ave., Los Angeles 46, Calif.

(Continued on page 170)

Here's How To:

- Cut Your Floor Maintenance Costs
- Reduce Slipping Accidents
- Improve Your Products



FOOT SAFETY IN EVERY FOOT



Install A. W. Super-Diamond Rolled Steel Floor Plate in your plant and you eliminate floor maintenance bills and costly slipping accidents. It requires no maintenance, and the exclusive engineered Super-Diamond Pattern "grips without a slip" keeping men's feet safe and secure. A. W. Super-Diamond improves products too. On machine tool bases, saddle tanks, lift trucks and on heavy construction equipment, both stationary and mobile, it guards against slipping accidents. Architects, product engineers, safety engineers and purchasing agents everywhere specify Super-Diamond for safety.

Write or use the coupon for Free information-packed 16-page catalog L 33.

A.W. SUPER-DIAMOND

FLOOR PLATES THAT GRIP



A Product of ALAN WOOD STEEL COMPANY

Conshohocken, Penna.

Gentlemen:

Please send me a Free copy of your 16-page Super-Diamond Catalog L 33.

Name _____ Title _____

Company _____

Street _____ City _____ State _____

Other Products: PERMACLAD, Stainless Clad Steel • A. W. ALGRIP ABRASIVE Floor Plate
Billets • Plates • Sheets • Strip • (Alloy and Special Grades).



Your "public" wants **COLOR**

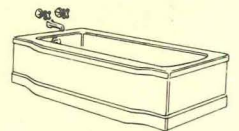
BRIGGS *Beautyware*

gives them **COLOR** at
the lowest price in history!

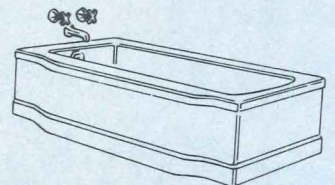
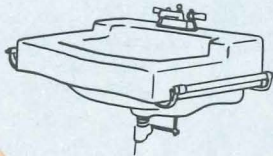
Briggs four exclusive decorator colors, plus white, now available in both porcelain enamel steel and vitreous china.

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

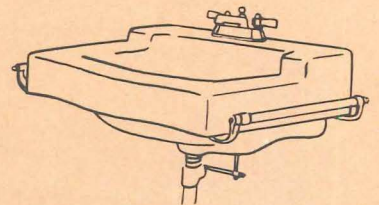
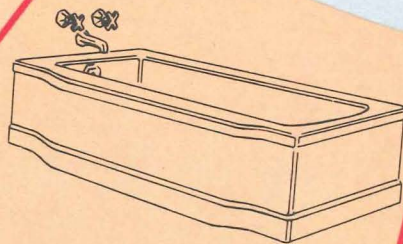
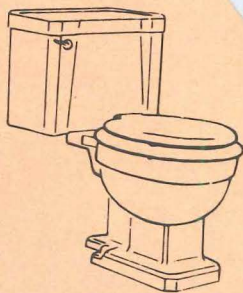
For the first time... customers can get the colored fixtures they want... at a price they can afford to pay. Briggs makes it possible! Offers first-quality fixtures in color for only 10% more* than the same stainproof, lightweight, precision-made fixtures in white. Start featuring Briggs Beautyware colored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



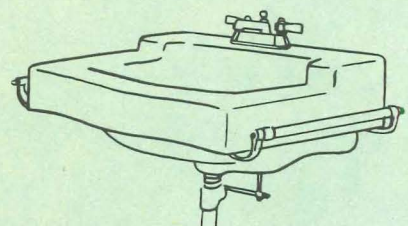
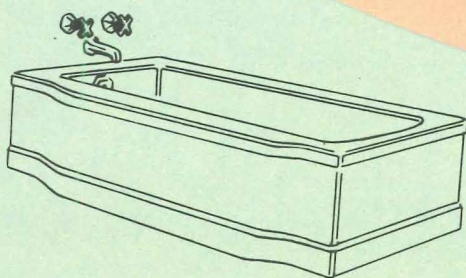
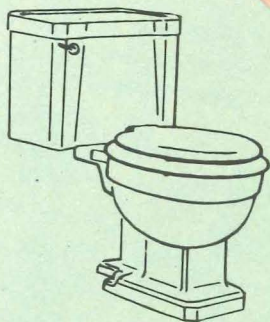
IVORY



SKY BLUE



SANDSTONE

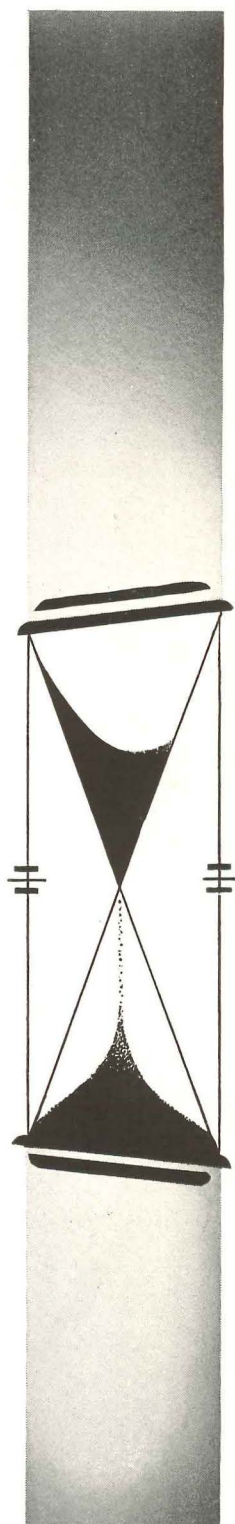


SEA GREEN

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

COPYRIGHT, 1950, BRIGGS MANUFACTURING CO.

How You Can Save Time on Air Conditioning Jobs!



It takes no more than a telephone call to your nearest York District office to bring a York-trained air conditioning and refrigeration engineer to your desk. He's an *experienced* engineer, fully qualified to help slash hours of drudgery from your preliminary planning, cost and analysis work, and installation chores. His technical assistance is "guaranteed" by data files covering thousands of successful York-equipped installations in every type of business and industry. He can tell you, too, about York's Certified Maintenance Plan . . . a unique service that assures continuous efficiency, relieves you of time-consuming post-installation responsibility.

**"See Your
Architect,
Engineer,
Contractor,
First"**

York believes in channeling contract work through you . . . and York gives you unequalled support in providing the finest central station systems possible . . .

- a complete line of equipment
- competitive prices
- accurate, dependable product ratings
- technical assistance based on "case histories"
- cooperation with architects, engineers, and contractors
- practical help from York-trained engineers
- a national organization
- continuous product research and development
- certified maintenance

York offers a complete line of air conditioning and refrigeration products backed by seventy-five years of fruitful research and acknowledged public acceptance. Each York product is designed to be—and *has proved to be*—a cost-cutter and service-improver wherever installed. A promise from the past, for the present and future, of better, more efficient service for your clients. If you have any air conditioning or refrigeration work *on the board*, call your nearest York District Office. See how the York-trained engineer can help fractionalize detail work. See how profitably his wide-range technical experience dovetails with your requirements for any type of installation. No obligation, of course. York Corporation, York, Penn.

PIONEERS IN INVENTION AND DEVELOPMENT SINCE 1874

Refrigeration and Air Conditioning

OUR BUSINESS IS IMPROVING YOUR BUSINESS



MEMO

Jim:

I've specified that only Inland HI-BOND reinforcing bars be used on your new project. Here's why:

- 1 - They not only meet but exceed minimum standards set up by ASTM A305-49.
- 2 - Because of proper ratio of bearing to shearing areas, you obtain greater bond between the steel and concrete, thus providing more efficient transfer of stress at splices and reducing the size of tension cracks. In other words, you'll get a more efficient and better-looking structure.
- 3 - You'll save money — first, because with HI-BOND, we can eliminate end hooks on your job which means a saving in steel, fabricating and placing costs. And because a single wire loop holds HI-BOND firmly in place — even during pouring of concrete — that means further savings in wire and tying time.
- 4 - Inland HI-BOND is available for prompt shipment from the Ryerson Company and other leading steel warehouses throughout the middle and far west. And HI-BOND costs no more than ordinary reinforcing bars.

WEG

**INLAND
HI-BOND**

The Reinforcing Bar with the
"BUILT-IN" ANCHORAGE!

INLAND STEEL COMPANY, 38 S. Dearborn St., Chicago 3, Ill.
Sales Offices: Chicago, Davenport, Detroit, Indianapolis, Kansas City, Milwaukee, New York, St. Louis, St. Paul



DON'T LET ROT AND TERMITES ENDANGER YOUR GOOD REPUTATION



You protect yourself and your clients when you specify WOLMANIZED Pressure-Treated Lumber. It stops costly damage due to wood decay and termites. It gives your clients better construction and prevents trouble that neither of you want to experience.

WOLMANIZED Lumber is pressure-treated. It provides sure, lasting protection against rot and termites—lasts 3 to 5 times longer than untreated wood. It's a time-tested, service-proved building material. Besides, it's clean, odorless, non-leaching and paintable.

Stop Costly Damage to Wood Structures at These Common Danger Points

Here are some of the common conditions that call for the use of WOLMANIZED Pressure-Treated Lumber:

1. Where excessive ground moisture, rain or thaws cause early decay failures.
2. Where wood is subject to termite attacks.
3. Where wood touches concrete or masonry.
4. Where steam and vapor from industrial processes promote wood decay.
5. Where walls, floors, ceilings are subject to condensation from refrigeration.
6. Where wood is exposed to moisture in humidified buildings.

FREE BOOKLET TELLS THE STORY

Get all the facts. See why WOLMANIZED Pressure-Treated Lumber provides sure, lasting protection against wood decay and termites.

Write for "THE WOLMANIZED Story" today.



AMERICAN LUMBER & TREATING COMPANY

General Offices: 1650 McCormick Bldg., Chicago 4, Illinois

Branch Offices: Baltimore, Boston, Jacksonville, Fla., Los Angeles, New York, Portland, Ore., San Francisco, Little Rock, Ark.



For SURE
protection
build with ...

WOLMANIZED
PRESSURE TREATED LUMBER

THE RECORD REPORTS

(Continued from page 166)

Edward Twiss Dunlap, A.I.A., has opened offices for the general practice of architecture at 1656 33rd St N.W., Washington, D. C., and "Edlee," Bethesda 14, Md.

Fraioli-Blum-Yesselman, Consulting Engineers, announce the opening of their structural engineering office, 113 W. 42nd St., New York 18, N. Y. Members of the firm are Joseph L. Fraioli, Werner Blum, and Joseph B. Yesselman.

Clayton Kantz, Architect, has opened offices at 1739 Yuba St., Redding, Calif.

Charles E. King, Architect, announces the opening of offices for the practice of architecture and design at 19a N. Illinois St., Belleville, Ill.

Charles B. McElroy, A.I.A., has opened an office for the practice of architecture at Wise, Va.

Vincent Pellegrino announces the opening of his office for the practice of architecture at 26 Court St., Brooklyn 2, N. Y.

New Firms, Firm Changes

Richard Barancik, formerly assistant to the head architect at the Chicago Housing Authority, has announced the opening of his own architectural firm, Richard Barancik & Assoc., 919 N. Michigan Ave., Chicago, Ill. Richard Conte is associated with Mr. Barancik.

Thomas D. Broad and Donald S. Nelson announce the association with them of W. J. B. Sullivan, architect, as chief of building planning, and S. M. Melton, educator, as educational plant adviser, in the firm of Broad and Nelson, Architects-Engineers-Planners, Reserve Loan Life Bldg., Dallas 1, Tex.

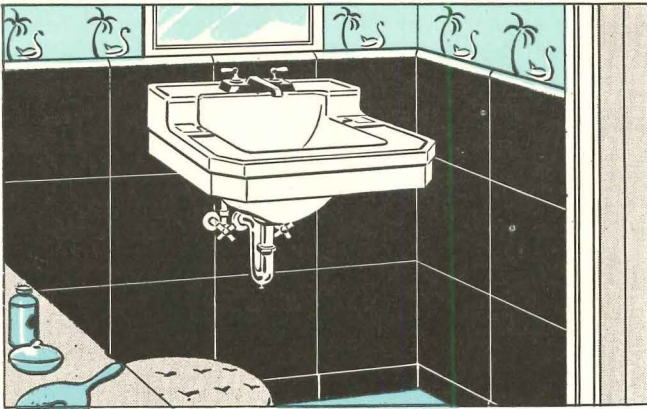
John H. Cline Jr., Civil Engineer, and J. Austin Zerkle, Architect, announce the formation of a new partnership, Cline & Zerkle, with offices in the Pacific Bldg., 610-16th St., Oakland, Calif.

Coolidge Shepley Bulfinch & Abbott of 122 Ames Bldg., Boston, Mass., announce that Joseph P. Richardson has been admitted to partnership.

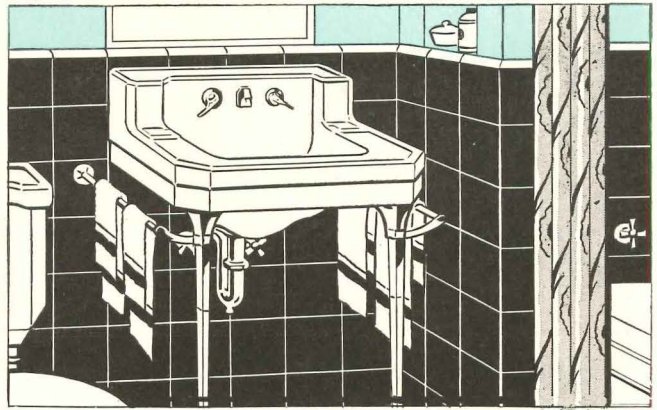
Incorporation of Robert Sidney Dickens & Associates, Chicago design firm, and a change in name to Dickens, Inc., has been announced by R. S. Dickens, president and chairman of the board. Robert H. Askren is vice president in charge of sales.

(Continued on page 172)

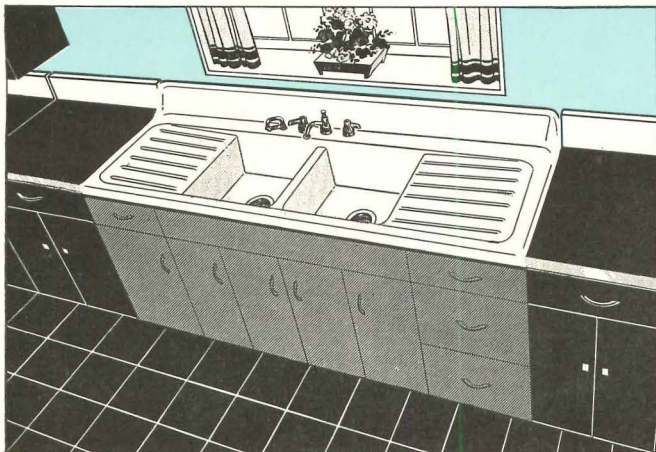
Richmond's at Home all through the House!



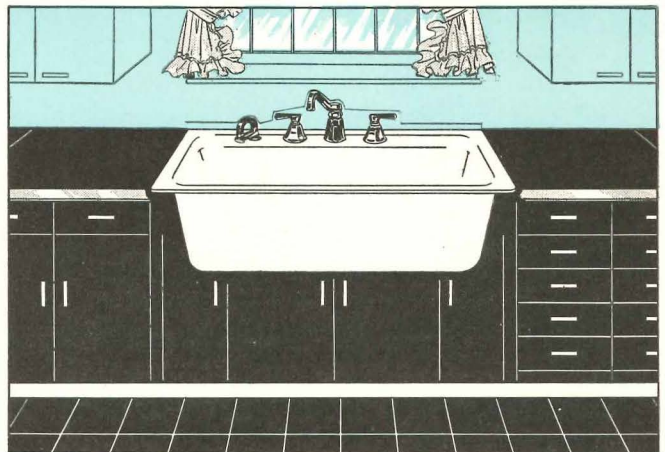
In the Powder Room, the Richmond RICHLEDGE, Plate #G-152. All the big lavatory features and beauty at a budget price. A compact wall-hung china unit to fit the smallest bathrooms. Chrome-plated legs and towel bars optional. In 2 sizes: 18" x 15"; and 19" x 17".



In the Master Bathroom, the Richmond BROMLEY, Plate #G-132. Smart and modern—will glamorize any bathroom. A shelf-back, square bowl vitreous china lavatory with front overflow and anti-splash rim. Chrome-plated legs and towel bars optional. In 2 sizes: 22" x 19"; and 20" x 18".



In the Kitchen, the Richmond SERBIN, Plate #1585. A handsome ledgeback acid-resisting enameled cast-iron sink with double drainboard and double compartment. Ideal for base cabinet installations in the most modern kitchens. Drilled for deck-type supply fittings with hose and spray.



In the Smaller Kitchen-Dinette, the Richmond STRATTON, Plate #2110. A beautiful enamel acid-resisting cast-iron flat-rim sink for built-in counter top installations—one of the fine Richmond line of quality sinks. Drilled for supply fitting with hose and spray.

Insure Satisfied Customers With Smart, Sturdy Richmond Sinks and Lavatories

When you specify or install Richmond you're guaranteed customer satisfaction. For Richmond's top-quality products make a lasting impression all through any house. Whatever the situation, there's a Richmond rugged enameled cast-iron sink (or sink and tray combination) of versatile design with acid-resisting enamel to serve the finest kitchens. Whatever the location,

there's either a Richmond vitreous china or enameled cast-iron lavatory of superior construction, design and finish to grace the finest bathrooms. And with each Richmond unit, there's a choice of four tasteful pastel colors—Azure Blue, Bermuda Coral, Fern Green and Oriental Ivory—plus the famous Richmond "whiter-white" shade.

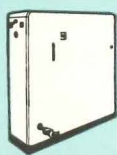


RICHMOND

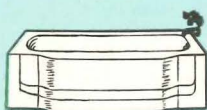
RICHMOND RADIATOR CO.—AFFILIATE OF REYNOLDS METALS CO.



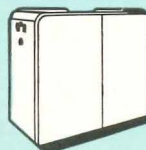
Vitreous China



Gas Boilers



Enameled Cast Iron Ware



Winter Air Conditioners
Gas—Cast iron or steel
Oil—Steel

See your wholesaler or Mail Coupon Today:

Richmond Radiator Company AR-3
19 East 47th St.
New York 17, N. Y.

Please send me additional information and literature on the Richmond line of fine plumbing fixtures. No obligation, of course.

Name.....
Company.....
Address.....

THE RECORD REPORTS

(Continued from page 170)

Nairne W. Fisher and Daniel C. Bryant have formed a partnership, with offices at 79 W. Monroe St., Chicago, Ill.

Frederic R. Harris, Inc., Consulting Engineers, announce the association with them of Walter D. Binger, Consulting Engineer. Mr. Binger, former vice president of City Investing Co., will continue as consulting engineer for the company.

Hugman-Silber, Architects, wish to

announce the dissolution of their association and the separate continuance of each in the practice of architecture as Robert H. H. Hugman, 107½ W. Commerce St., San Antonio 5, Tex., and Paul G. Silber & Co., 1919½ Cincinnati Ave., San Antonio 1, Tex.

George S. Kocher and Hollis Logue announce their association for the practice of architecture as Kocher & Logue, 246 S. First St., San Jose, Calif.

Samuel E. Lunden, Roger Hayward and Ben H. O'Connor announce their association as partners for the practice of architecture under the firm name of Lunden, Hayward & O'Connor, Architects, with offices at 520 Security Bldg., 510 S. Spring St., Los Angeles 13, Calif.

Metcalf & Eddy, Engineers, with offices in the Statler Bldg., Boston, Mass., and at 111 Butter St., San Francisco, Calif., announce the admission to the firm as partners of Scott Keith, John W. Raymond Jr. and Russell J. Rice.

Charles F. Neergaard and Dr. Allan Craig, Consulting Service in Hospital Planning, Organization and Management, announce that Dr. Harvey Agnew has become a partner in the firm, which will be known as Neergaard, Agnew & Craig. A divisional office is being opened at 134 Bloor St. West, Toronto, Ont., with Dr. Agnew in charge. Helge Westermann, A.I.A., is an associate of the firm. Dr. Agnew, who will continue on a part-time basis as director of the School of Hospital Administration of the University of Toronto and until July as editor of the *Canadian Hospital Journal*, was executive secretary of the Canadian Hospital Council from its inception in 1931 until his recent resignation, and he was instrumental in the establishment of the School of Hospital Administration at Toronto two years ago.

Formation of the consulting engineering firm of R. R. Popham Engineer has been announced. The firm's roster includes architects as well as mechanical, electrical, structural, civil and chemical engineers.

Ramey, Himes & Buchner, Architects, of Wichita, Kans., announce the opening of a Tulsa office for consultations. The address of the new office is: 1437 S. Boulder, Tulsa, Okla.

Robert P. Simon and Gerhard Rettberg have announced the establishment of the architectural firm of Simon & Rettberg, 406 S. Russell, Champaign, Ill.

The office of York and Sawyer, Architects, of 101 Park Ave., New York, N. Y., and 1308 18th St. N. W., Washington, D. C., announces the admission to general partnership of Russell Colean and Frederick H. Voss. Admission to the firm of Edward J. Olivine and Harry R. Allen as associates also has been announced.

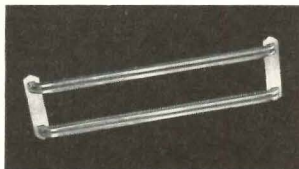
(Continued on page 174)

WHEN PLANNING DISTINCTIVE BUILDERS HARDWARE for . . .

**PUBLIC BUILDINGS
HOSPITALS
SCHOOLS
OFFICE BUILDINGS
HOTELS, ETC.**



make CIPCO part of your plans



CIPCO CUSTOM-BUILT ARCHITECTURAL HARDWARE



CIPCO PACKAGED PUSH and PULL BARS, PUSH PLATES and KICK PLATES

Your favorite Architectural Hardware Consultant will be happy to work with you in specifying and selecting Cipco Hardware. Our Custom Built department is organized to produce any design desired . . . or we can suggest appropriate layouts. We are equipped to fabricate orders of any size—in brass, bronze, aluminum and stainless steel . . . on prompt delivery schedules. For quality . . . smart appearance and enduring service . . . specify CIPCO all around.

CIPCO originated the method of packaging kick plates and push plates as illustrated. Size, style and finish are clearly indicated and screws are enclosed. This method makes for ease of itemization. Also helps prevent mistakes in selection . . . saves time in installation.

Our latest Catalog No. 49 can be obtained from your Hardware Consultant or write us—Dept. R.

Manufacturers of
Fine Hardware for 25 Years



CIPCO CORPORATION

22nd and COLE STREET • ST. LOUIS 6, MISSOURI

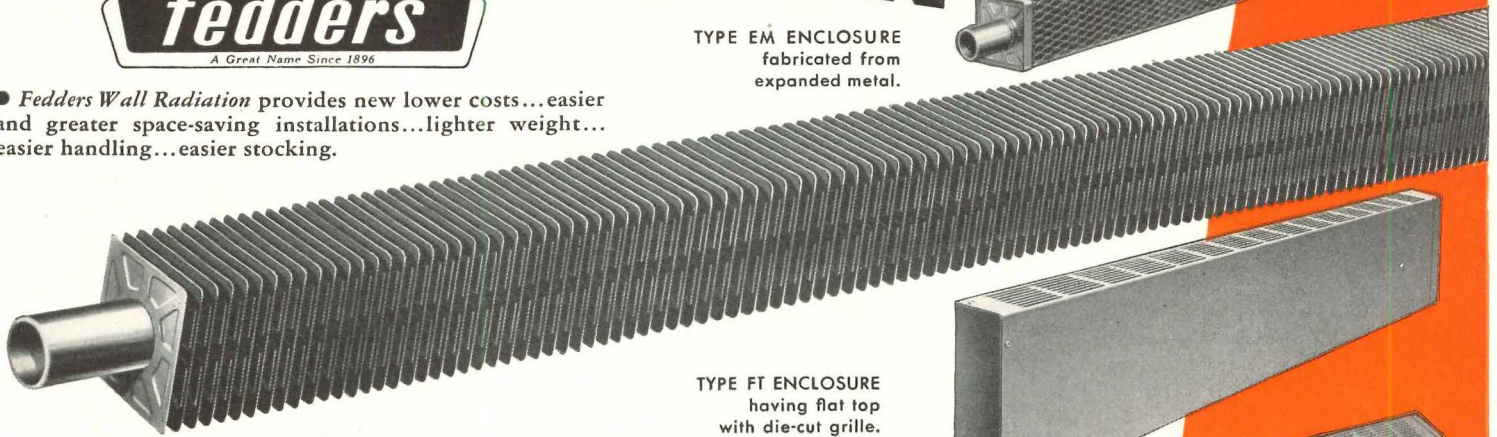
fedders

Announces NEW WALL RADIATION



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

TYPE EM ENCLOSURE
fabricated from
expanded metal.



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

Three styles of enclosures are available as illustrated.

Fedders Wall Radiation for steam and hot water lines is available in lengths from 2 to 12 feet in 6 inch increments. 38 and 50 fins per foot on 1 1/4 inch tube and 24 fins per foot on 2 inch tubes. Write for catalog WR-C1 TODAY.

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



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



FEDDERS-QUIGAN CORPORATION
BUFFALO 7, N. Y.

Quigan

New Addresses

The following new addresses have been announced:

John Vincent Anderson, A.I.A., Route 2, Woodstock, Ill.

Edwin C. Bruno, A.I.A., 4120 Oakton St., Skokie, Ill.

Norman J Hamill, A.I.A., 408 Lewi-son Bldg. Butte, Mont.

Laitala & Nuechterlein, Architects,

600 Hollister Bldg., Lansing 8, Mich.
Robert Stauber & Associates, 3325 N. Lincoln Ave., Chicago, Ill

Neuropsychiatric Hospital

A new 1000-bed Neuropsychiatric Hospital estimated to cost about \$20 million will be built at Pittsburgh for the Veterans Administration. Consisting of 14 buildings and occupying 250 acres, the institution is expected to take two

years for completion. The principal structure will be a six-story General Medical and Surgical Building which will be of reinforced concrete frame construction with brick walls. The hospital was designed by the Pittsburgh firm of Prack & Prack in association with Alfred Hopkins & Associates, of New York, and Bowers & Barbalat, of Pittsburgh. Guy B. Panero, Engineers, of New York, did the mechanical design, while Blum, Weldin & Braun, of Pittsburgh, were the civil engineers and Ralph Griswold, also of Pittsburgh, did the landscape design.

Venezuelan Super-Highway

The famous climb in a careening taxi along an old Spanish trail from the seaport of La Guaira to Caracas will soon be replaced by a huge engineering project with the construction of a new \$30 million super-highway through the mountains by the Venezuelan government. Three steel bridges and a tunnel blasted through the mountains will replace the former thrill ride. Construction will take approximately two and a half years.



BAMBERGER & REID, ARCH., San Francisco, Calif.

A smart, clean interior finish for paneling, woodwork, molding and trim. Inexpensive to apply . . . stains and waxes in one operation combining the transparent, penetrating colors of stain with the soft lustre of a wax finish. Wear resistant and easy to maintain.

UNIQUE BLOND COLORS

CABOT'S STAIN WAX comes in a wide selection of attractive colors including White, Ivory, Silver Gray, Seashore Gray and Natural . . . which complement modern interiors. Natural and White may be tinted with colors in oil for additional variety. **ALSO AVAILABLE** in conventional dark shades . . . Maple, Mahogany, Walnut and California Redwood.

WRITE TODAY for color card and actual samples of wood.

**SAMUEL CABOT
INC.**

322 Oliver Bldg., Boston 9, Mass.



Above: Paul Windels, recently elected as 1950 president of the Regional Plan Association, has also been named an Honorary Associate, New York Chapter, A.I.A.

ADDENDUM

Miss Lydia C. Davis of Santa Ana, Calif., was landscape architect for the new campus for Santa Ana Junior College, which was featured in an article in the December issue of the RECORD. Miss Davis' name was inadvertently omitted from the list of credits. Ralph C. Flewelling and Walter L. Moody were the architects.



General Service Building, University of Michigan, Ann Arbor.
 Harley, Ellington & Day, architects and engineers;
 R. L. Spitzley Heating Company, heating contractors;
 Spitzley-Rettenmier Company, ventilating contractors, all of Detroit.



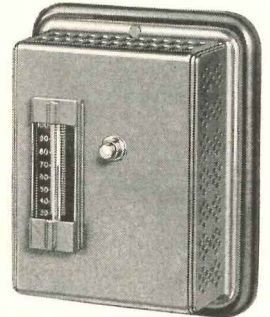
at all hours . . .

SAVE MONEY

in empty rooms

with

JOHNSON DUAL CONTROL



Money is wasted when unoccupied rooms are heated to 70 or 72 degrees. That is why buildings, in which certain areas are occupied at odd hours, should be equipped with Johnson *Dual* Temperature Control, the built-in, automatic "brain of the heating system." Johnson *Dual* Control maintains proper occupancy temperatures in spaces which are in use and, at the same time, insures reduced economy temperatures in all vacant rooms.

Both economy and comfort are assured in the General Service Building at the University of Michigan where 588 Johnson *Dual* Thermostats provide individual room control. The thermostats are interconnected in four groups, according to the normally-expected usage of the various rooms in the building . . . (1) offices, (2) student publications, (3) broadcasting studios and (4) all other rooms.

The *Dual* thermostats in any group are shifted, from a central point, to operate at reduced temperature during the hours when the rooms in that group are not expected to be in use. If any room should be occupied when its group has been set for reduced temperature, merely pushing a button on the *Dual* thermostat resets that room to the normal comfort level. All unused rooms in the group remain at the reduced economy temperature. What a saving of fuel (or of central station steam)! It is all done automatically by Johnson in Michigan's General Service Building . . . including temperature and humidity control equipment applied to four ventilating systems for the offices and studios.

Johnson brings to the solution of small temperature control problems the same broad experience and understanding that are needed for larger heating systems, such as that at Michigan. No one wants to waste fuel. Call a nearby Johnson engineer. A consultation, which carries no obligation, will prove exceedingly valuable in your plans for reducing your fuel budget. JOHNSON SERVICE COMPANY, Milwaukee 2, Wisconsin. Direct Branch Offices in Principal Cities.

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

1950 Construction May Equal 1949 mark, Official Asserts

"Canadians may be able to maintain in 1950 the high volume of construction achieved in 1949," Dr. O. J. Firestone, director of economic research for the Department of Trade and Commerce, said in a recent address before the Eastern Ontario Lumber Dealers Association.

"In engineering the prospects are

bright, with many utilities and most governments expecting to spend a bit more in 1950 than in 1949.

"In general construction the trend is mixed. There may be less money spent on factory buildings and possibly a little less on commercial buildings. More is likely to be spent on institutional and government buildings, however.

"Housing is the great question mark.

But the outlook is for the volume of house building in 1950 to come close to the 1949 peak."

Construction Volume for 1949 Sets Record at \$1140 Million

Figures showing that in 1949 \$1140 million of construction contracts were awarded in Canada (plus some \$5 million in Newfoundland) have been released by MacLean Building Reports Ltd.

These figures represent an increase of 19 per cent over 1948 and a new, all-time record.

Factory awards showed the greatest increase, reversing the 1948 pattern when that category was the only one to drop below the 1947 level. Other categories shared the upward trend, with engineering registering the second highest percentage gain.

Promise and Problems of 1950 Discussed by Trade Minister

Capital investment in Canada in 1950 will reach close to the 1949 mark of something over \$3 billion, according to a forecast by Trade Minister Howe.

Mr. Howe expects institutional building, especially hospital construction, to continue high. Largely because of building of oil pipelines, he anticipates an increase in the utilities category.

Declines are forecast in agriculture, manufacturing and commercial business. Residential construction is expected to attain nearly the 1949 level.

Building Loans Up

NHA loans totaling \$158,500,000 went to Canadian builders in 1949, an increase of \$50 million over 1948, Central Mortgage and Housing Corp. reports.

The loans went into construction of more than 28,700 houses, 8000 over the 1948 total.

Industry Gets Tax Relief

Under a new ruling announced by Deputy Minister V. Scully of the Department of National Revenue, industries no longer pay income tax on money invested in plant. Specific rates have been set for depreciation and depletion.

The ruling came a month after a speech by President and General Man-

(Continued on page 178)



THIS MAN IS PAID TO HELP ARCHITECTS AND THEIR ENGINEERS!

He is a specialist in planning and engineering RCA Sound Systems for every type of building: Schools . . . Hospitals . . . Hotels . . . Factories and Offices . . . Churches . . . Department Stores . . . Airports and Terminals . . . Warehouses and Garages . . . Auditoriums . . . Recreational Centers . . . Institutions . . . Stadiums . . .

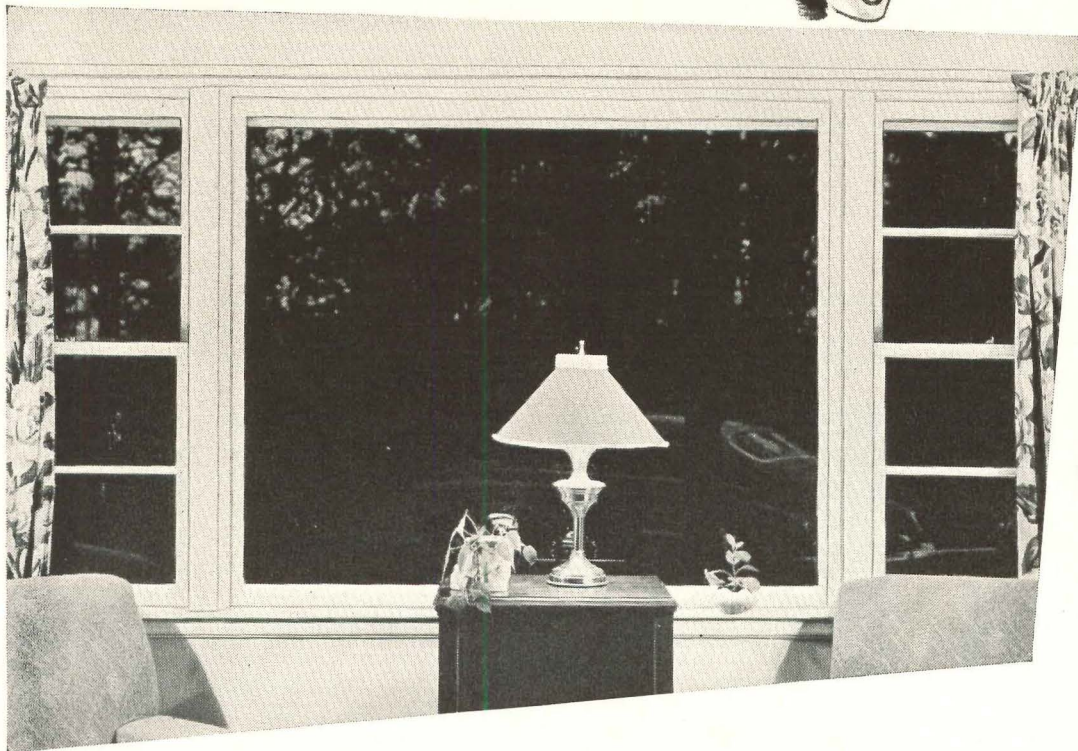
No matter what size or type of job you have on your drawing boards, you can get practical help from RCA in fitting RCA Sound Systems to your architectural plans. No obligation, of course.

Contact your nearest RCA Sound System distributor or write: Sound Products, Department 3C, Radio Corporation of America, Camden, New Jersey.



SOUND PRODUCTS
RADIO CORPORATION OF AMERICA
ENGINEERING PRODUCTS DEPARTMENT, CAMDEN, N.J.

In Canada: RCA VICTOR Company Limited, Montreal

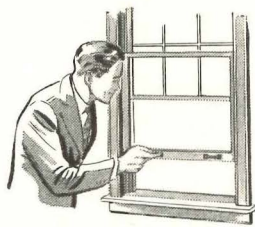


Why Silentite Windows ... make happy home owners!



WEATHER STAYS OUTSIDE

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



EASY YEAR-ROUND OPERATION

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



MODERN BEAUTY IN 12 STYLES

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

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



Curtis Companies Service Bureau
AR-3S Curtis Building
Clinton, Iowa
Please send me book on *Silentite windows*, including casements.
I am architect contractor prospective home builder student.
(Please check above)

Name.....
Address.....
City..... State.....

ager J. M. Breen of Canada Cement Co. of Montreal, in which Mr. Breen asserted that tax allowance for depreciation is much too low in view of present costs.

"When the allowances were first set forth they were fairly satisfactory," Mr. Breen said, "but costs have more than doubled since then. In consequence every industry I know complains of these low depreciation allowances."

Institute Offers Fellowship

Conditions for award of the Royal Architectural Institute of Canada College of Fellows Scholarship have been announced.

The scholarship will be open to those who have graduated from the recognized schools of architecture in Canada during the past five years, who are Canadian citizens, and who have taken their entire architectural training in Canada.

The \$1500 award is to be used for travel, study and research.

Canadian Architects Hold 43rd Annual Assembly

Hon. Mr. Justice E. K. Williams, chief justice of the Court of King's Bench for the Province of Manitoba, was guest speaker at the annual dinner of the Royal Architectural Institute of Canada held February 25 at the Fort Garry Hotel, Winnipeg, Man.

The dinner climaxed the three-day 1950 Assembly of the R. A. I. C., the 43rd annual meeting of the organization.

The program for the Assembly included a manufacturers' exhibit and two seminars. A technical seminar on beamless floor construction was conducted by three engineers: Prof. Jack Hoogstraten, University of Manitoba; J. Sumner, chief engineer, Green-Blankstein-Russell & Associates; and C. V. Antenbring, manager, Cowin & Co. A cultural seminar was in charge of Prof. Dick Bennett of Chicago.

Construction Group Elects

Robert Drummond of Toronto has been named president of the Canadian Construction Association. P. G. Wilmut of Montreal is vice president.

Hugh P. Sheppard Heads Ontario Architects

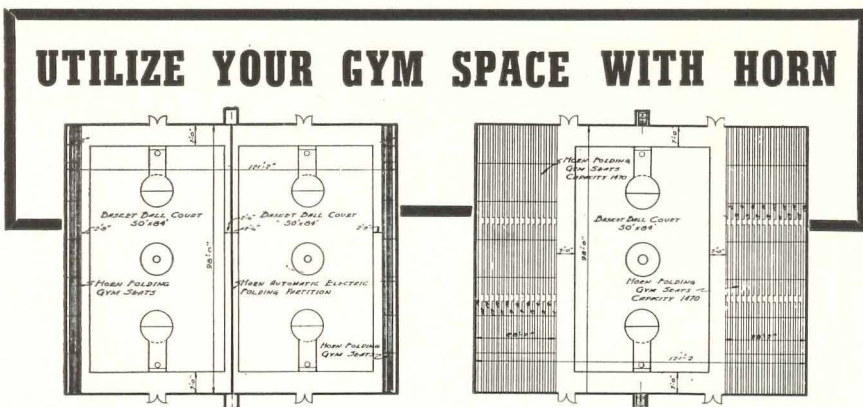
Hugh P. Sheppard of Windsor has been elected to head the Ontario Association of Architects for 1950, and Earle L. Sheppard of Toronto has been named vice president.

Other officers are: H. Gordon Hughes, Ottawa, treasurer; Charles Lenz, Hamilton (retiring president), J. V. Connor, London, and Gordon S. Adamson and F. H. Marani, Toronto, council.

H. H. Madill of Toronto has been appointed to head the registration board, with John M. Kitchen of Ottawa as vice chairman. John D. Miller of Toronto was named as secretary of both council and registration board.

The association at its Diamond Jubilee Dinner heard an address by Sir Alexander Clutterbuck, United Kingdom High Commissioner to Canada, who urged cooperation with other members of the free world as the way to salvation

(Continued on page 180)

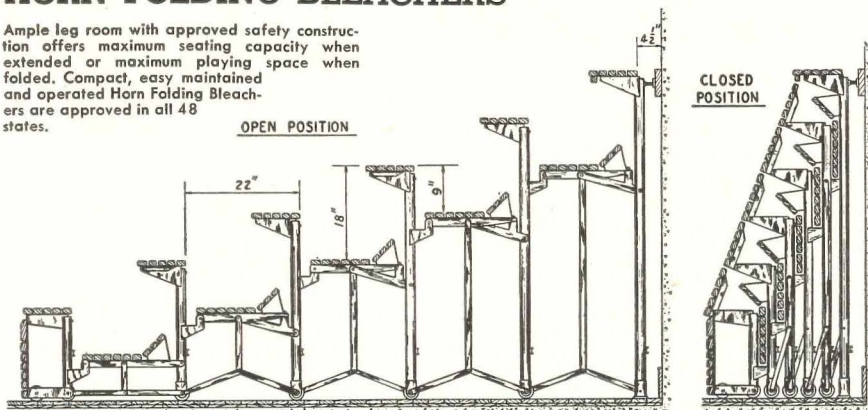


Two regulation basketball courts separated by a Horn Automatic Electric Folding Partition. Horn Folding Bleachers in folded position.

HORN FOLDING BLEACHERS extended increases the seating capacity for the BIG GAME! Horn Folding Bleachers will meet your requirements.

HORN FOLDING BLEACHERS

Ample leg room with approved safety construction offers maximum seating capacity when extended or maximum playing space when folded. Compact, easy maintained and operated Horn Folding Bleachers are approved in all 48 states.



ROWS	FLOOR SPACE		**HEIGHT	ROWS	FLOOR SPACE		**HEIGHT
	IN USE	*CLOSED			IN USE	*CLOSED	
3	4' 9"	1' 8 3/4"	3' 0"	12	21' 3"	4' 3 1/8"	9' 9"
4	6' 7"	2' 0 1/8"	3' 9"	13	23' 1"	4' 6 1/2"	10' 6"
5	8' 5"	2' 3 1/2"	4' 6"	14	24' 11"	4' 9 7/8"	11' 3"
6	10' 3"	2' 6 7/8"	5' 3"	15	26' 9"	5' 1 1/4"	12' 0"
7	12' 1"	2' 10 1/4"	6' 0"	16	28' 7"	5' 4 5/8"	12' 9"
8	13' 11"	3' 1 5/8"	6' 9"	17	30' 5"	5' 8"	13' 6"
9	15' 9"	3' 5"	7' 6"	18	32' 3"	5' 11 3/8"	14' 3"
10	17' 7"	3' 8 3/8"	8' 3"	19	34' 1"	6' 2 3/4"	15' 0"
11	19' 5"	3' 11 3/4"	9' 0"	20	35' 11"	6' 6 1/8"	15' 9"

*Dimension includes 4 1/2 in. space between top seat and wall.
**Height in open position same as closed. For Bleachers higher than 20 Rows write for complete details and dimensions.



HORN BROTHERS COMPANY
DIVISION OF HORN INDUSTRIES • FORT DODGE, IOWA, U.S.A.

NOW! for the Newest
Most Efficient Fluorescent Light Source*

* for general illumination



New "MAGNA-FLO 75"

Especially Designed for the NEW 8-foot, 75-w, T-12 Slimline Lamps!

More Light at No Extra Cost
... as much as **10% MORE!**

Two Lamps do the Work of Four!
Instant Start! No Starters Needed!
Lower Operating and Maintenance Cost!

Modern streamlined lighting of factories and shops may now be obtained with these new individual Benjamin "Magna-Flo 75" Lighting Units or with the continuous lines of light of the new Benjamin "Lite-Line 75" System. These units use most efficiently the big, new Slimline 75-w fluorescent lamps—8 feet long, 1½ inches in diameter—which have a greater light output than any other fluorescent lamp.

Higher Efficiency

With Benjamin "Magna-Flo 75" it is possible to obtain from 7% to 10% more light on the working surface than is secured from the same wattage by other

comparable systems. The lamps themselves give 10% or more lumens per watt. Two sockets take the place of four in this longer unit.

Lower Operating Cost

"Magna-Flo 75" operates with extra economy because there are fewer lamps to maintain—fewer lamps to replace. There is extra economy, too, in instant starting because no starters are needed and related maintenance problems are eliminated. The single-pin base construction of the new Slimline Lamps saves time in installation and replacement. New "Twin-Turret" heavy-duty lampholders are especially designed to lock these single-pin lamps securely in place and prevent their dropping out.

Extra Strength and Safety

"Magna-Flo 75" has the extra strength required for the most satisfactory oper-

ation of these big, long lamps. There is extra strength in the one-piece, heavy-duty channels, in the sturdy channel coupling and in the high quality porcelain enamel steel reflectors.

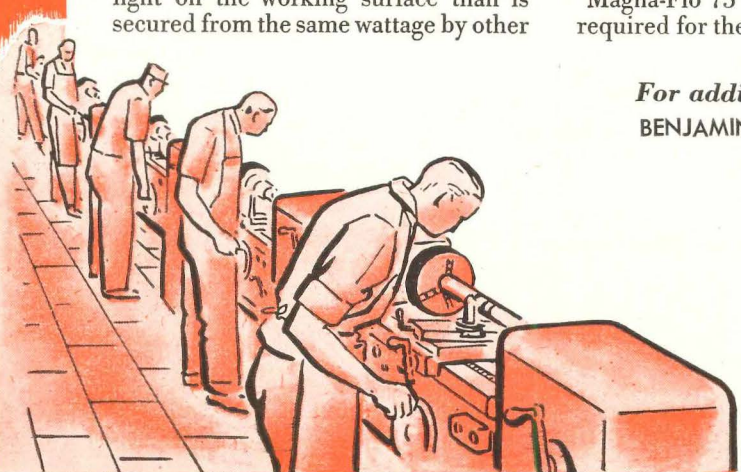
Benjamin "Life-Time"

Porcelain Enamel Reflectors

Benjamin Porcelain Enamel Steel Reflectors are standard equipment with "Magna-Flo 75". Porcelain Enamel is the ideal reflecting surface for the new Slimline Lamps. It has a high reflection factor (82%) and its diffusing characteristics help to improve the quality of the lighting and minimize glare.

Porcelain Enamel cuts maintenance costs, too, as it will not discolor or deteriorate under adverse atmospheric and operating conditions. Furthermore, its original high reflectivity is easily maintained by soap-and-water cleaning.

For additional data send for Bulletin No. Ad 5612. Write:
BENJAMIN ELECTRIC MFG. CO., DEPT. Q-1, DES PLAINES, ILLINOIS



BENJAMIN
TRADE MARK
"Magna-Flo 75"
FLUORESCENT LIGHTING UNITS

Distributed Exclusively Through Electrical Wholesalers

R-3281

in the crucial years just ahead. Beyond the immediate danger period, Sir Alexander predicted "brilliant years" of progress.

Sir Alexander's address climaxed a busy two-day convention. Discussion of various aspects of the public housing program made possible by new federal legislation was an important feature of the convention, with U. S. and Canadian authorities contributing. Exhibits of new

building materials and methods, architectural photographs and art work were on display; and a hobby show on architects' leisure pastimes revealed talents as varied as pie-making and model railroading.

Engineers Elect Executives

Newly elected president of the Association of Professional Engineers of On-

tario is Edward V. Buchanan, general manager of the London, Ont., Public Utilities Commission and of the London Railway Commission.

Also named to the 1950 executive are: W. H. M. Laughlin and O. D. Johnston, vice presidents; Col. T. M. Medland, executive director; and Col. J. M. Muir, secretary-treasurer. All are Toronto residents.

The association's new council represents the five branches of professional engineers. Among its members are 7000 Ontario graduate professional engineers and 3500 student engineers who are affiliate members.

Further Wage Increases Held Invitation to Unemployment

Subscribing to the theory that the best defense is offense, Retiring President Allan C. Ross had a few words to say at the annual convention of the Canadian Construction Association on the subject of anticipated labor demands for higher wages.

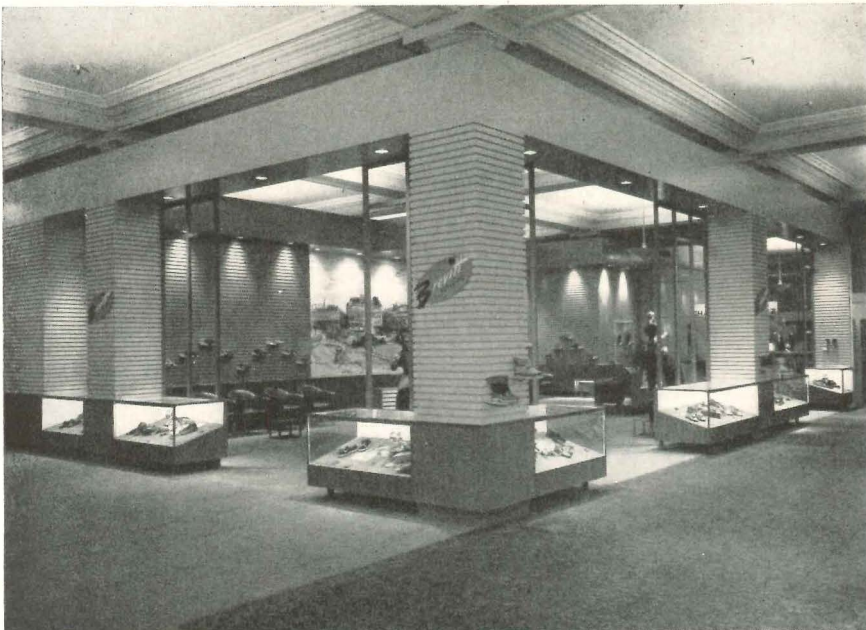
"I firmly believe," he declared, "that any further increases in our wage structure will stop or delay many a project, and that unemployment and disruption will follow."

Increased construction costs, Mr. Ross asserted, are due "very, very largely . . . to increased wages and lowered productivity, both on the job site and in materials production."

(Continued on page 182)

Brevitt Shoe Salon at B. Altman & Co., New York

Designer: John Muller



THE CASE OF THE WANDERING SHELVES

PARDON our peaked hat and British accent. They're just props anyway, to introduce a recent "case" we solved successfully. It started with our assignment to do the new Brevitt Shoe Salon at B. Altman & Co. Brevitt is a top-notch English shoe concern.

And here's where Bergen's wood-wizardry came to the rescue. The designer's plans called for display shelves that could "wander" all over the columns and background panels of the Salon. Shelves that could be easily

positioned to reflect changing display ideas. It was elementary, Watson. Bergen aged-in-the-wood craftsmanship always solves these puzzling cases with an élan and dispatch that leaves bystanders shaking their heads in wonderment.

But why wonder about Bergen's unique position in the field? Call us . . . write . . . or telegraph. We will see you with case histories that make fascinating material. And that's because, to Bergenize is also to be budget-wise.

Write to Dept. A for our Portfolio of "Jobs Well Done." It's worth seeing

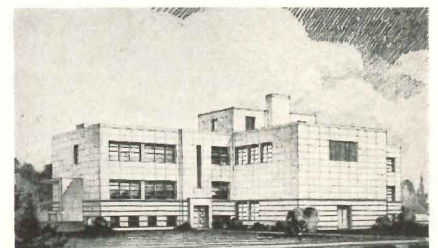
Bergen-sure the success of your modernization program with



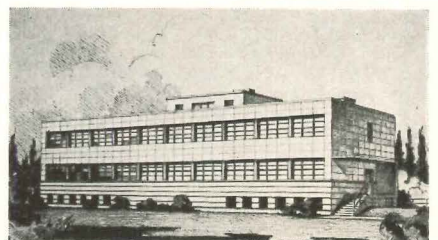
Architectural woodwork that makes the designer's plan an enduring reality

Phone: PResident 2-3121

1552-56 BERGEN STREET, BROOKLYN, N. Y.



William R. Souter & Associates are architects for a \$575,000 nuclear research laboratory (photos of renderings above and below) at McMaster University, Hamilton, Ont.



American Blower—a time-honored name in air handling



In Dallas, as in other cities, American Blower Air Handling Equipment serves commerce, industry and public utilities. For air handling data in the Dallas area, call American Blower—Central 5518. In other cities, consult your phone book.



Look before you buy. Comparison tests prove the superiority of American Blower Products. There's a big difference in quality, design, quietness, operating costs and efficiency between American Blower and other air handling equipment.

Air is free . . . use it profitably!

SPECIFYING fine, quality equipment for a job is a pleasure for every architect.

At times, however, it's really a problem to know whose equipment is right for the job. And on that score we'd like to suggest these five points to guide you in your selection of air handling equipment:

- (1) Is the proposed equipment built by a reputable manufacturer with years of experience?
- (2) Has the manufacturer facilities for research and testing?
- (3) Are units tested in accordance with the Standard Test Code?
- (4) Are the services of experienced engineers available in the field?
- (5) Will the manufacturer (if practical) furnish equipment for comparative tests?

If you consider the merits of the air handling equipment you are about to specify on your jobs in the

light of these points, we're certain you'll agree that American Blower offers more value per dollar invested.

Phone our nearest branch office for facts covering American Blower air handling equipment, or write for a free technical bulletin.

AMERICAN BLOWER CORPORATION, DETROIT 32, MICHIGAN
CANADIAN SIROCCO COMPANY, LTD., WINDSOR, ONTARIO
Division of AMERICAN RADIATOR & Standard Sanitary Corporation

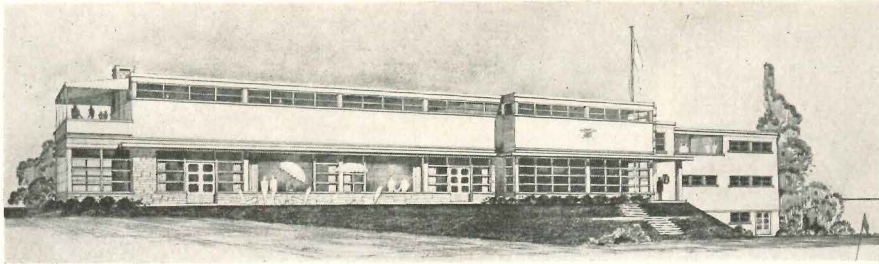
YOUR BEST BUY

AMERICAN BLOWER

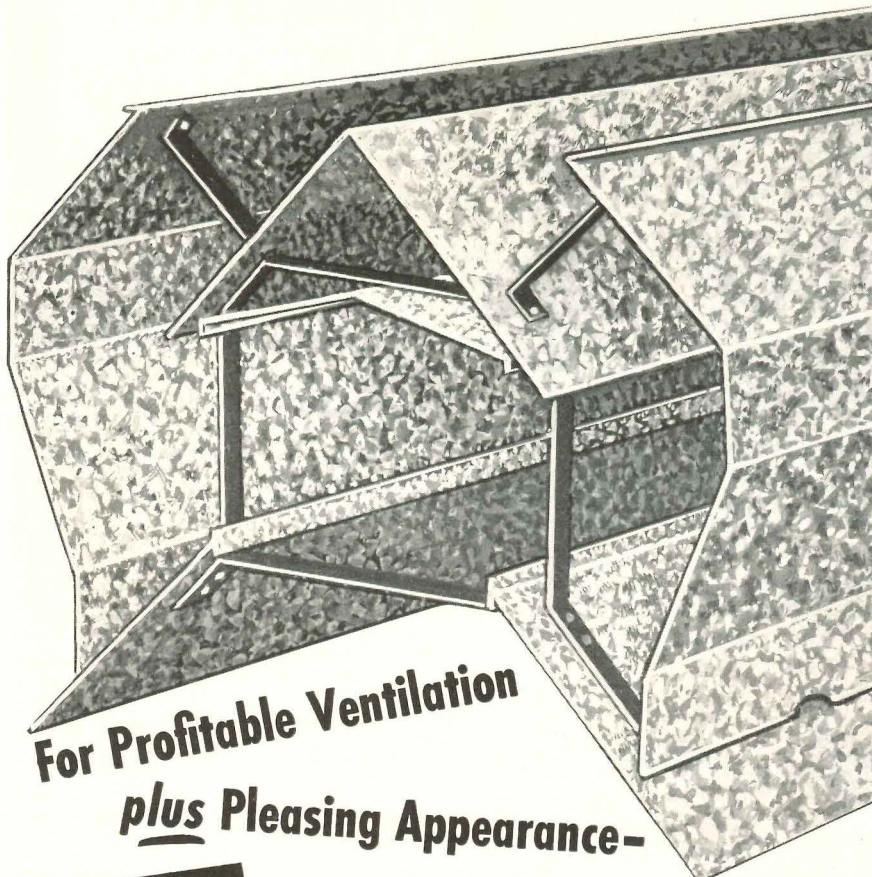
AIR HANDLING EQUIPMENT

Serving home and industry

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



Plans for Summerlea Golf and Country Club, Lachine, Que., call for two-story building, 200 by 40 ft., with steel frame, stone and stucco walls. Architect is L. C. Meadowcroft



**For Profitable Ventilation
plus Pleasing Appearance—**

**Swartwout
-Dexter**

Heat Valve®

**THE
Original
RIDGE
VENT**

Peak roofs on factory and commercial buildings make ventilation easy if you free the way with low-friction, natural-flow Heat Valve. Large capacity per square foot of opening makes this Swartwout design economical and profitable equipment. Other types, including powered ventilators, fill any need on any type of building.

Write for
BULLETIN
338 G

18511 Euclid Avenue, Cleveland 12, Ohio

The Swartwout Co.

Industrial Ventilation Specialists Since 1904

Equipment for *Controlled* Air Circulation

Mr. Ross had a word for employers as well. "Good keen competition is to be desired and welcomed, but cutthroat competition that is uneconomic leads to bankruptcy and unemployment," he cautioned.

On the housing shortage, Mr. Ross said: "Housing for the low income group is a troublesome problem that has existed throughout the world from time immemorial, and your association believes it can only be handled, and probably only partially at that, by some form of government subsidy."

Comments

• Writing in the Daily Commercial News 1950 Building Forecast, A. J. Hazelgrove, retiring president of the Royal Architectural Institute of Canada, has some pertinent remarks to make on Canadian architecture.

"Why should architecture develop in a manner distinctively Canadian when requirements and function develop forms similar to those which meet parallel requirements elsewhere? The national characteristics of the architecture of the past were national because the outlook of the people was geographically limited. Local crafts developed and perfected the national ideas. These conditions which thus led to the development of distinctively national architecture are no longer with us. We live in a world where distance is measured in time rather than space, where all who will are in full and constant communication by both the spoken and the printed word.

"The insularity which developed the glories of ancient Greece in literature and in architecture was an insularity which has no counterpart in modern times. Today architects the world over are producing work which is vital and related to the present-day needs of living man. Forms are being shaped which bear no reference to the architecture of the past. Granted then that needs are universal, of what earthly use is it to force architectural forms into a national mould merely to satisfy a national ego?"

Mr. Hazelton concludes: "A distinctive Canadian architecture is improbable, if not impossible."

• Every five-room bungalow that is built involves an expenditure of about \$1000 for roads, water, sewer and other

(Continued on page 184)

Now Available! the Perfect Combination

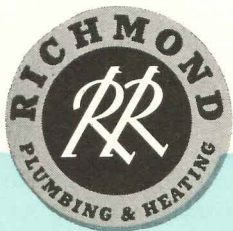


THE
RICHMOND
Claremont
 vitreous china, two-piece,
 quality closet combination
 Plate G-210

Now you can get the perfect closet combination — Richmond's Claremont — a compact close-coupled unit with a reverse trap bowl. Just look at this combination:

- **Richmond Quality.** Really built for satisfaction. Choice of 4 pastel colors or the famous Richmond "whiter-white."
- **Richmond Performance.** Large water area, deep seal, self-draining jet.
- **Richmond Appearance.** Smooth modern lines and a finish fit to grace the finest bathroom.
- **And Richmond Reputation.** The name Richmond is assurance of sound design, long trouble-free operation.

The Claremont's the perfect combination — a combination you'll want to specify and install.

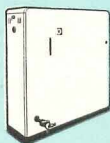


RICHMOND

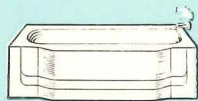
RICHMOND RADIATOR CO. — AFFILIATE OF REYNOLDS METALS CO.



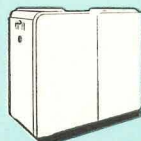
Vitreous China



Gas Boilers



Enameled Cast Iron Ware



Winter Air Conditioners
 Gas—Cast iron or steel
 Oil—Steel

See your wholesaler or Mail Coupon Today:

Richmond Radiator Company AR-3
 19 East 47th St.
 New York 17, N. Y.

Please send me the latest literature and information on the Richmond line of fine plumbing fixtures. No obligation, of course.

Name _____

Company _____

Address _____

services, and another \$1000 for schools," declared D. B. Mansur, president of the Central Mortgage and Housing Corp., in a talk before members of the Canadian Construction Association.

Turning to housing prospects, he said that for 1949 Canada will show more new houses completed, in relation to population, than any other country. Mr. Mansur pointed out that the cost of a house to the homeowner has not in-

creased appreciably over the past year and that, in the higher-priced field, prices are somewhat lower, because demand in that category appears to be dropping.

He also reminded his listeners that while the cost of the average house is about twice as much today as 10 years ago, the income of the average individual is more than twice what it was in 1940.

• James Govan, architect and engineer, has been lauded for his "pioneering" efforts in achieving general recognition in Canada for insulated walls and windows as a must for every building.

Charles Neergaard, New York consulting engineer, told members of the Ontario Hospital Association that he learned the value of insulation from Mr. Govan when they collaborated on the Prince Edward Island Hospital in 1932.

"Many of our buildings in recent years," Neergaard said, "have substantiated Govan's findings that the reduction in the heating plant saves enough money to meet the additional cost of insulating the walls and double-glazing the windows."

• J. C. Parkin of John B. Parkin Associates suggests that paint manufacturers should label their cans with the light reflecting value of their contents.

In a speech before the Toronto Paint Club, Mr. Parkin pointed out that such labeling would help in the control of "brightness contrasts" of light — "the newest development in functional architecture."

"As well, manufacturers should set up a standard set of colors, as does the British Color Council," Mr. Parkin said, "so that architects can judge paint by its quality, ordering any color by its number."

Mr. Parkin also had a word for all suppliers of the Canadian construction industry: "It is necessary for architect, supplier and painting and decorating contractor to work as a team if Canadian construction is to take an important place in the world."

Landlords Increase Rents

The new Ottawa regulation which allows property owners an 18 per cent rent increase for unheated and a 22 per cent increase for heated self-contained dwelling units is proving popular — at least with property owners.

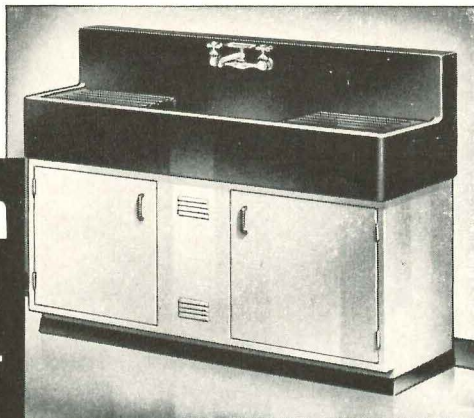
Since the government announcement, Rental Administration offices across Canada have been busy filling requests for the new offer-of-lease forms.

Most landlords have offered present tenants a lease of 12 months, effective February 1, in accord with the government ruling. Tenants have a 30-day

(Continued on page 188)

**New! for your laboratory
THIS "10 FEATURE SINK"
...at No Extra Cost**

Kemtherm
A GUARANTEED
PRODUCT OF
KEWAUNEE MFG. CO.
Available Now
in Stock at Adrian, Mich.



- Molded in one piece
- No joints or seams
- Interior corners are radiused
- Attractive uniform ebony black surface
- Sloping bottom to give complete drainage
- Guaranteed to withstand maximum thermal shock in normal laboratory use
- Extremely resistant to all chemical attack other than hydrofluoric acid
- Extremely resistant to attack by bases and salts
- Highly resistant to attack by acids at room temperatures
- Easily and thoroughly cleaned with detergents or if necessary by solvents

Write for Special Kemtherm Sink Folder illustrating and describing 15 models of this new "10 Feature Sink" for all Laboratory uses

Representatives and Sales Offices
in Principal Cities



C. G. Campbell, President

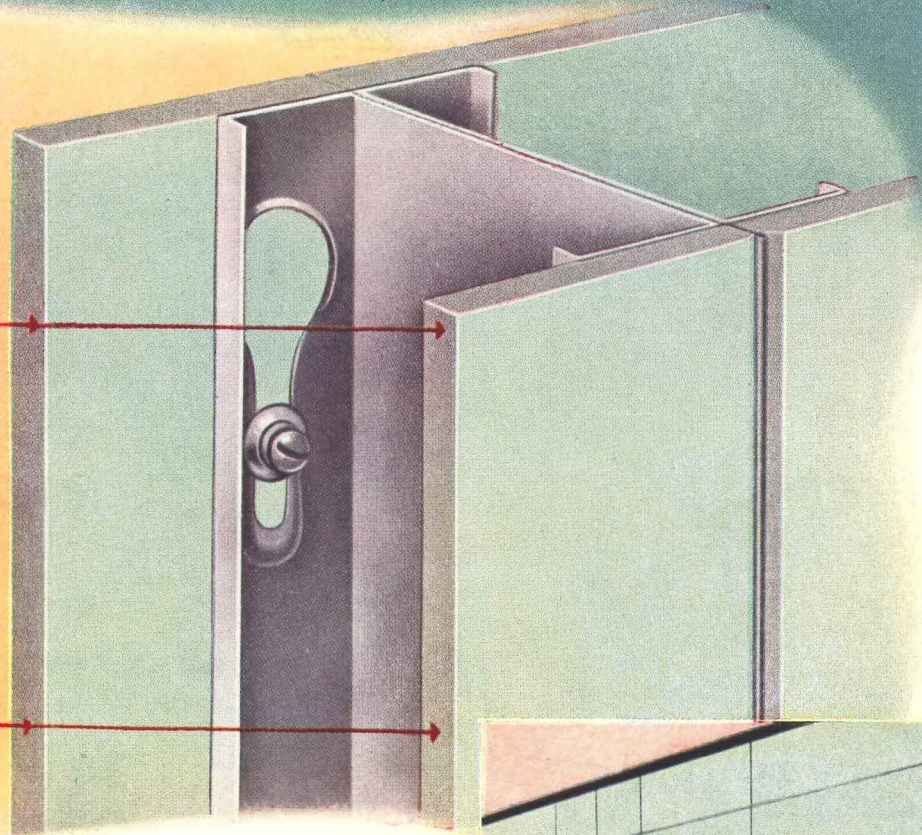
5046 SOUTH CENTER STREET • ADRIAN, MICHIGAN

Johns-Manville Announces

A NEW DEVELOPMENT IN MOVABLE WALLS

**Asbestos Panels
"INTEGRALLY
COLORED"
at the Factory**

Cutaway of typical J-M Movable Wall construction. The 7/16"-thick asbestos panels, on patented steel studding, are available in a light green and light tan. NOTE HOW THE COLOR GOES ALL THE WAY THROUGH EACH PANEL!



No more painting. No more redecorating maintenance.

In the world's largest laboratory devoted to the improvement of building materials, Johns-Manville scientists have perfected a process for introducing inorganic pigments as an integral part of the asbestos panels used in J-M Movable Walls.

As a result, these beautifully-textured, fireproof panels now come pre-colored.

What's more, you'll have the advantage of "integral coloring," with the color going *all the way through*

each panel, so that it will never wear off. Your walls will have that "first-day newness" *every day* for years and years to come!

By eliminating painting and decorating expense, these new Transitone* Movable Walls will help you to meet your wall and partition requirements *economically*.

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



Johns-Manville



Transitone

MOVABLE WALLS with asbestos panels colored all the way through



Thrush HORIZONTAL CIRCULATOR

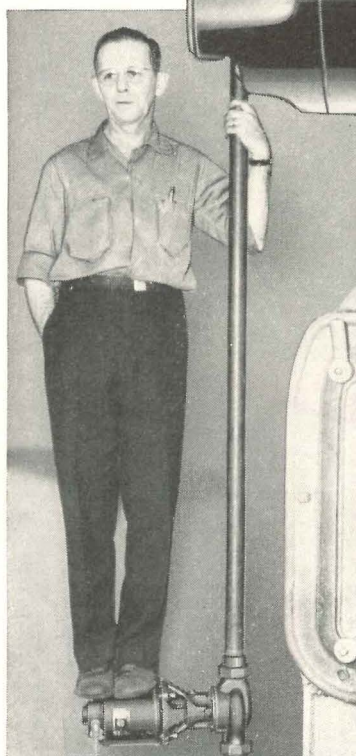
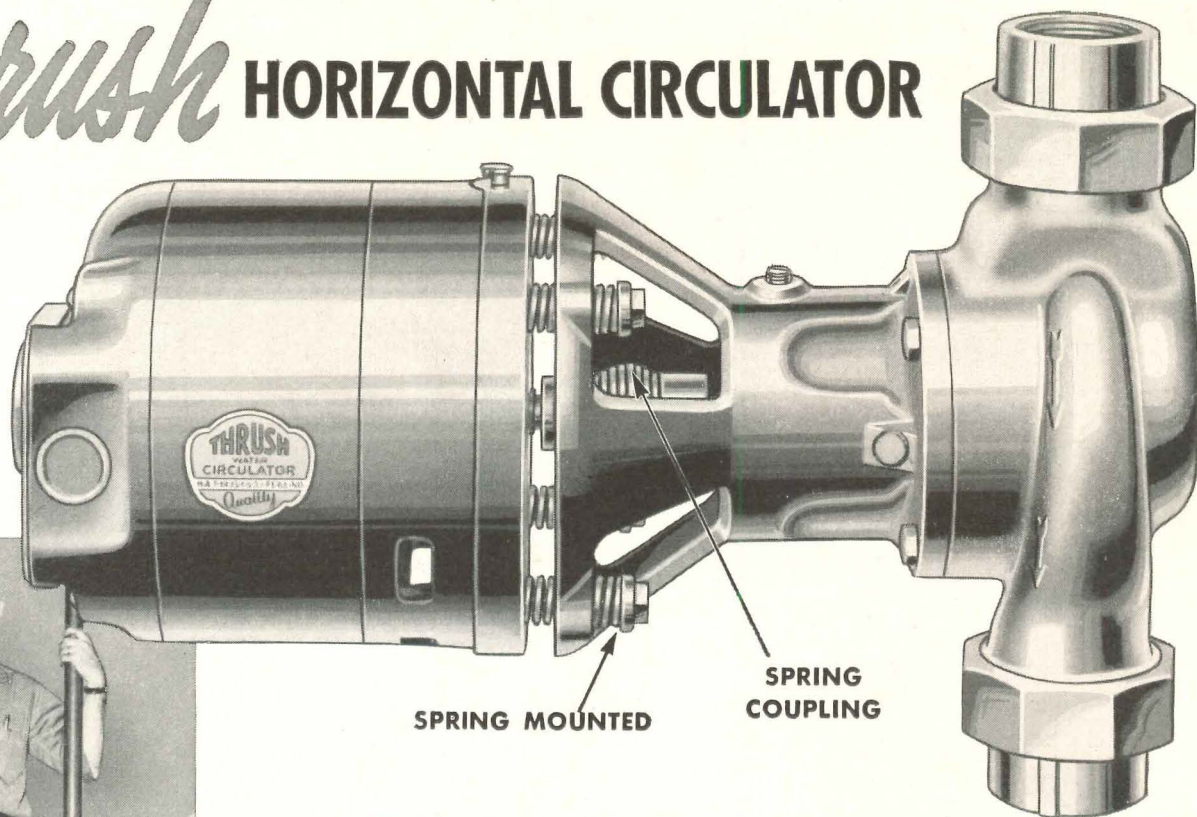


Illustration shows great strength of spring mounting which holds motor in perfect alignment always.

PERMANENT

Alignment!
QUIET FOR A LIFETIME

THE THRUSH Horizontal Water Circulator is sturdily built, to operate efficiently and quietly throughout its life. Tempered steel spring mounting of motor to Circulator frame and patented spring coupling connection of motor and pump shafts, assure permanent alignment with smooth, vibration-free performance. The unique spring suspension never loses its resilience or sags, as no rubber is used. Sealed-in lubrication with positive oil flow over all moving surfaces, means freedom from wear and service troubles. Thrush pioneered Forced Circulating Hot Water Heat for homes, and this new Horizontal Type Circulator is the culmination of nearly a quarter century of experience in circulator building. Specify Thrush controls for real satisfaction.



FOR MORE INFORMATION, SEE OUR CATALOG IN SWEET'S OR ADDRESS DEPARTMENT J-3.

H. A. THRUSH & COMPANY • Peru, Indiana



Because
this can be
12 different doors
 ... it costs a lot less

One of 135 Fenestra Doors in Mandeville High School, Flint, Mich. Architect: Bennett & Straight of Dearborn. Contractor: Karl B. Foster, Flint.

The secret is a clever hinge arrangement—plus a muntin, a glass panel and a metal panel. This same beautiful Fenestra* Hollow Metal door can be used: Swing-in or swing-out . . . left or right hand—each with panels of metal or glass . . . with or without a muntin.

It costs a lot less because Fenestra craftsmen can give you the variety you need and still concentrate production facilities on a few basic high-quality types. Naturally, when production waste in time and money is eliminated, quality goes up and cost comes down.

This door is tough—it can be kicked and slammed and still look good. After years of use, a coat of paint will make it like new again.

This door is easy to handle—it swings open and shut smoothly, quietly. That operating balance never changes. Each door is packed with sound-smothering insulation.

This door is fire-safe—steel won't burn.

Door Comes Complete with Frame and Hardware. Each Fenestra door is carefully packaged to protect the gleaming finish. You can *count on* quality with Fenestra . . . over half a century a leader in metal fabrication. Take advantage of versatile Fenestra Stock Hollow Metal Doors. See Sweet's Architectural File, Section 16a/8. Call your Fenestra representative (listed in the yellow pages of your telephone directory) for further information, or . . .

*Trademark

Fenestra

Doors • Windows • Panels

MAIL THIS COUPON

DETROIT STEEL PRODUCTS COMPANY
 Door Division
 Dept. AR-3, 2252 E. Grand Boulevard
 Detroit 11, Michigan

Please send me, without obligation, information on
 Fenestra Stock Hollow Metal Doors.

Name _____
 Company _____
 Address _____



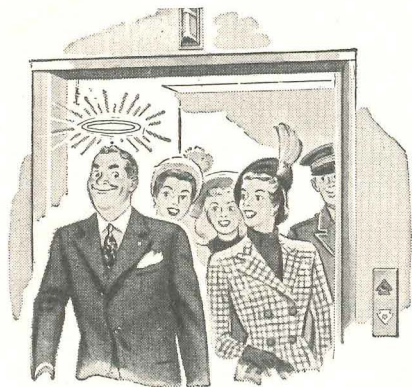
skylines ...

by *Otis*

Puerto Rico is the scene of a spectacular achievement in post-war economic recovery. In just five years, OPERATION BOOTSTRAP has attracted over fifty widely diversified industries; launched the world's largest single housing project of 10,000 small homes at Puerto Nuevo; embarked on a multiple hydro-steam electric power program and a \$25,000,000 water supply and sanitation system for the Island's 77 communities; increased its school, hospital and health services; and furthered a \$25,000,000 a year island paradise tourist program by completing the magnificent 300-room Caribe Hilton Hotel — which joins a fast growing skyline served by 232 Otis elevators.

JOHN BULL DOES IT AGAIN.

England has had the fastest Escalators in the world since 1930. Now it has the longest. Two of them — 170 feet long with a rise of 85 feet — for the new tunnels under the River Tyne. One is for pedestrians. The other, of all things, is for bicyclists!



HOTEL MAN WITH A HALO.

Guests can't help praising the velvety-smooth riding elevators in the Biltmore Hotel, New York. There's scarcely any sensation of movement since the elevators have been modernized by Otis.

HOSPITAL ELEVATORS?

They're mighty important in emergencies. That's why 3,749 hospital elevators are on Otis maintenance. Service is dependable. The equipment is always in excellent condition. And management can stop worrying about lengthy shutdowns and unexpected bills. Everything's covered by a flat monthly service charge. 259 Otis offices are ready to handle maintenance — *anywhere!*



ELEVATOR COMPANY

Home Office: 260 11th Ave., New York 1, N. Y.

THE RECORD REPORTS

CANADA
(Continued from page 184)

think-it-over period, after which they must pretty well accept the new increase or look for other housing.

Career Guides Offered In Government Series

A series of authoritative booklets on Canadian occupations is published by the Department of Labor as a guide to young people in choosing careers.

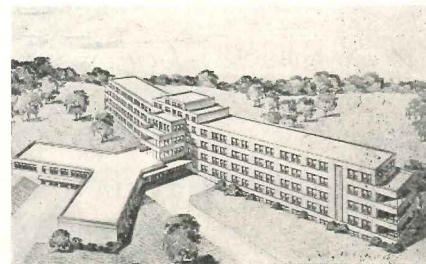
Most recent addition to the series is "Careers in Natural Science and Engineering," which covers the professions of architecture and engineering.

Greek Gods and Architects

Toronto Architects Mathers and Haldenby probably wish they had never heard of the noble figures of Greek mythology.

It all started innocently enough. The new Bank of Nova Scotia building needed some sort of ornamentation, and the architects felt that such themes as Canada's flora and fauna, natural resources and provincial emblems were somewhat overworked. Instead, they looked to the land of the Parthenon for inspiration.

The impressive models of the gods were scarcely in place when the 'phone calls started. Puzzled businessmen wanted to know the connection between the Olympians and banking. A religious group marked the arrival of Pegasus and Zeus to Bay Street by loudly protesting the use of "heathen mythology." And then an office worker in a building across the street called to object to the forms of goddesses Venus and Hera. Not sufficient realism, he complained!



Hamilton, Ont., taxpayers have approved construction of a 300-bed convalescent hospital (photo of rendering above) to cost \$2,700,000. Architect is J. D. Kyles

Nailability GIVES YOU Speed



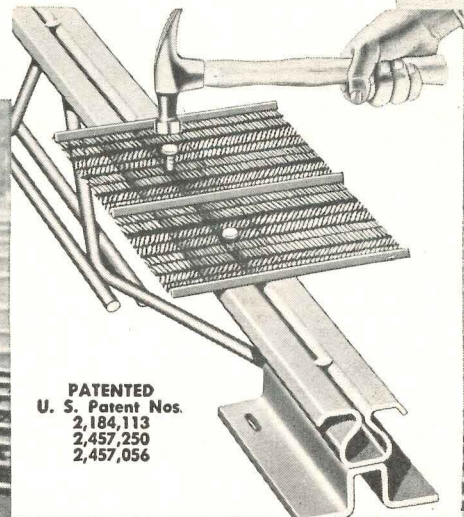
In a single dwelling or this 26 million dollar Pittsburgh Airport, Macomber Nailable Steel Joists give you speed. This is Macomber's contribution to construction economy.

It's far easier and faster to drive a roofing nail or staple into slab centering materials. The anchorage is more positive. The cost per SQUARE FOOT is less.

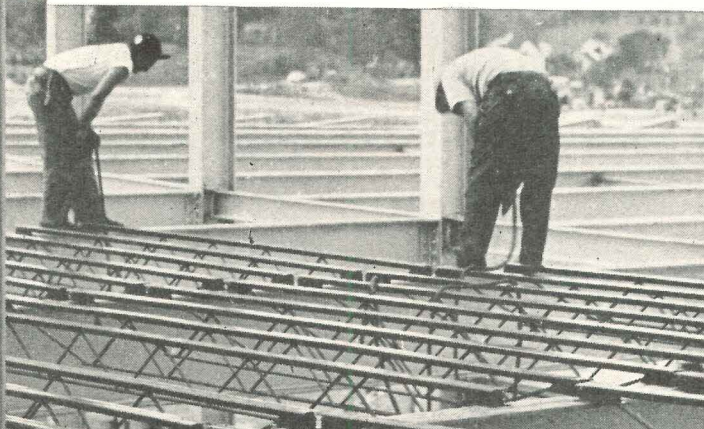
Once a contractor sees Macomber Nailable Steel Joists laid, bridged, anchored and nailed into, there is a workmanlike look and FEEL to the job that assures future preference.

These exclusive advantages all add up to the most important reason for specifying Macomber — PROFIT. Write for catalog.

MACOMBER NAILABLE STEEL JOISTS



PATENTED
U. S. Patent Nos.
2,184,113
2,457,250
2,457,056



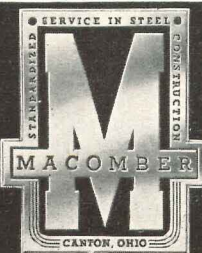
Greater Pittsburgh Airport Building

STANDARDIZED STEEL BUILDING PRODUCTS

MACOMBER • INCORPORATED CANTON, OHIO

IN CANADA, SARNIA BRIDGE CO., LIMITED, SARNIA, ONT.
IN MEXICO D. F.—MACOMBER DE MEXICO S. A. CEDRO 500

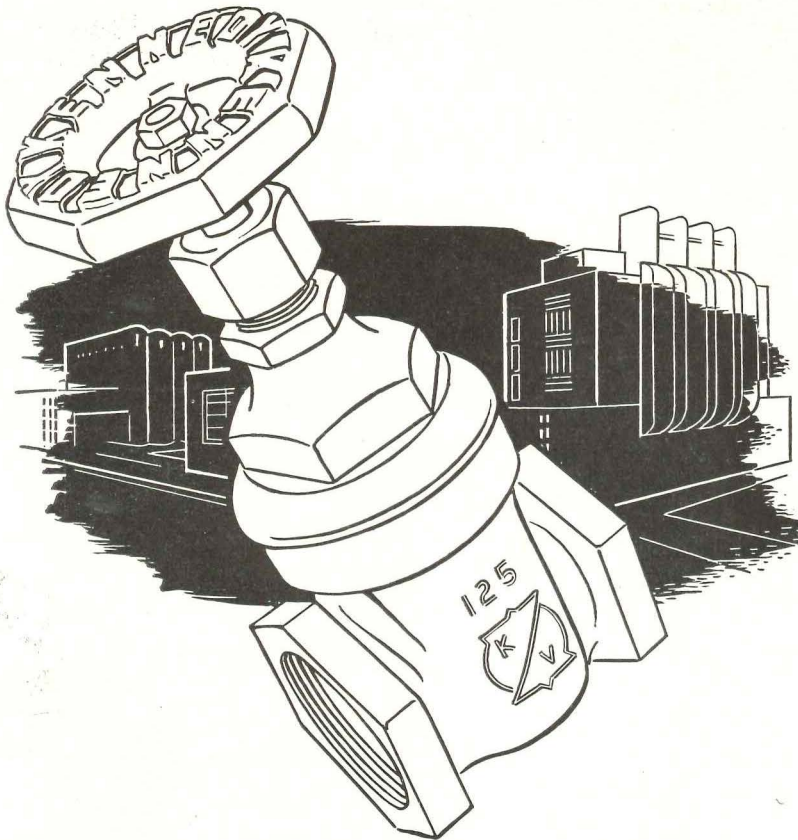
V BAR JOISTS • LONGSPANS • BOWSTRING TRUSSES • STEEL DECK



Architectural Record, Time-Saver Standards, continued:
 Service stations 232-233
 Recreation areas, pools 368-386
 Orientation, solar data 401-409
 Driveways, walks, steps 419-430
 Garden pools 431-432
 Domestic hot water 539-540
 Sewage disposal 553-564
 Signs (illuminated) 600-603
 3. Automobile Manufacturers Assn. *Automobile Facts and Figures*. A.M.A., Detroit, 1949. 80pp. (Annual on production, use, highway data.) gt
 4. Dahl, J. O. *Restaurant Management*.

Harper & Bros., New York, 4th rev. ed. 1944. 348 pp. fpt
 5. Dana, A. W. *Kitchen Planning*. Harper & Bros., New York, 1949. 218 pp. pv
 6. Hamilton, F. F., *Hotel Front Office Management*. Pub. by author, Miami, Fla., 2nd ed. 1947. 436 pp. (Small hotels.) f
 7. Horwath & Horwath. *Hotel Operations in 1948*. (17th annual study.) H.&H., New York, 1949. 48 pp. gt
 8. Horwath, E. B. & Louis Toth. *Hotel Accounting*. The Ronald Press Co., New York, rev. ed. 1948. 483 pp. ft
 9. Love, H. B. *Establishing and Operating a Year-Round Motor Court*, [Industrial

(Small Business) Series No. 50]. U. S. Dept. of Commerce, Office of Small Business, 1945. 125 pp. fpv
 10. National Interregional Highway Committee. *Interregional Highways, 1944 Report*. (House Document No. 379 78th Cong. 2nd Sess.) Public Roads Admin., Federal Works Agency, 1944. 184 pp. (proposed highways.) dmv
 11. National Recreation Assn. (G. D. Butler). *Recreation Areas, Their Design and Equipment*. A. S. Barnes & Co., New York, 1947. 174 pp. bpv
 12. Public Roads Admin. *Highway Statistics 1947* (GPO Catalog No. FW 2.2: H53/7/947). Public Roads Admin., Federal Works Agency, 1947. 106 pp. t
 13. *Waldorf-Astoria Manuals, The*. Dahl Publishing Co., Stamford, Conn., 1947. Vol. 1: Office, apartments, clerks, etc. 203 pp. fv
 Vol. 2: Mechanical communications, Uniformed services. 126 pp. fv
 Vol. 3: Food service. 200 pp. fv
 Vol. 4: Housekeeping (in press).



If function is your objective . . .

you consider it from all angles . . . from basic design to the vital part played by materials and equipment. Valves, even though they are hidden performers, are essential to the function of the structure itself. Be sure of dependable performance and efficient flow control by specifying KENNEDY Valves. They have been leaders in quality and dependability for nearly three quarters of a century. That is why, when writing specifications, you should have the complete 240 page KENNEDY Valve Catalog. Write for your copy.

Established 1877

The KENNEDY VALVE MFG. CO.
 ELMIRA, NEW YORK

VALVES • PIPE FITTINGS • FIRE HYDRANTS

PERIODICALS

GENERAL ARTICLES, REFERENCE ISSUES

American Magazine:
 14. "Camps of Crime," by Hoover and Cooper. Feb. 40:14-15, 130-132. s
Architectural Record:
 15. "Highway Hotels," Building Types Study No. 103. July 45:66-79. ps
 16. "Hotels," Building Types Study No. 81. Sept. 43:67-82. dpv
 17. "Hotels," Building Types Study No. 85. Jan. 44:52-70. (Modernization, planning, equipt.) psv
 18. "Hotel Laundries," Time-Saver Standards. Jan. 44:93-94. pd
 19. "Motels Move Into the Select Circle". May 48:95-117. (Examples.) pv
Beaux-Arts Inst. of Design Bulletin:
 20. "A Motel" (B.A.I.D. Program), by H. H. Harris. Oct. 45:18-21. ptv
 21. Criticism (B.A.I.D. Class B Program), by C. C. Braun. Oct. 45:18. (Motels.)
Fortune
 22. "Hotel Design," by George Nelson. Sept. 47:106-109, 140, 143. (Hotel faults, maintenance, design.) gmv
 23. "That Hotel Boom." Sept. 47:103-105 + overrun. (Finance, statistics.) g
Hotel Management
 24. "Analyzing Your House For Efficiency," by E. E. Post. Dec. 47:28-32, 76, 84, 90. (Checklist of hotel planning, structure, equipment.) p
 25. "Before You Invest—Investigate," by E. E. Post. Aug. 48:67-70. (Highway hotel projects.) ps
 26. "Building Highway Hotels and Motor Courts That Will Pay Dividends," by H. E. Werner, Archt. Aug. 48:34-47, 94, 100 (Financial data on Santa Anita, Arcadia, Cal., pp. 48-49; 650-seat restaurant, pp. 50-53, pv; 44-seat drive-in, pp. 53-55, pv). pv
 27. Reference Issue on Motor Courts. July 45.
 28. "Why Many Downtown Hotel Guests Are Switching to Motor Courts," by Hattie and Constance Plemons. Apr. 49: 49-51, 106. (Business success at Motor Inn, Wichita Falls, Tex., services provided, travelers' statements.) v
 29. "Why More and More Tourists Are Turning to Motels," by R. P. Bryant. Aug. 47:32-36. ps
Motels and Courts
 30. "18 Points for Motor Court Operators." Feb. 49:16-17, 22.
 31. "Here's Looking at You Through the Eyes of Hotel Men," by Stuart Todd. (Continued on page 192)

**MOST HEATING SYSTEMS
END UP BY**

WARMING THE AIR

WHY NOT

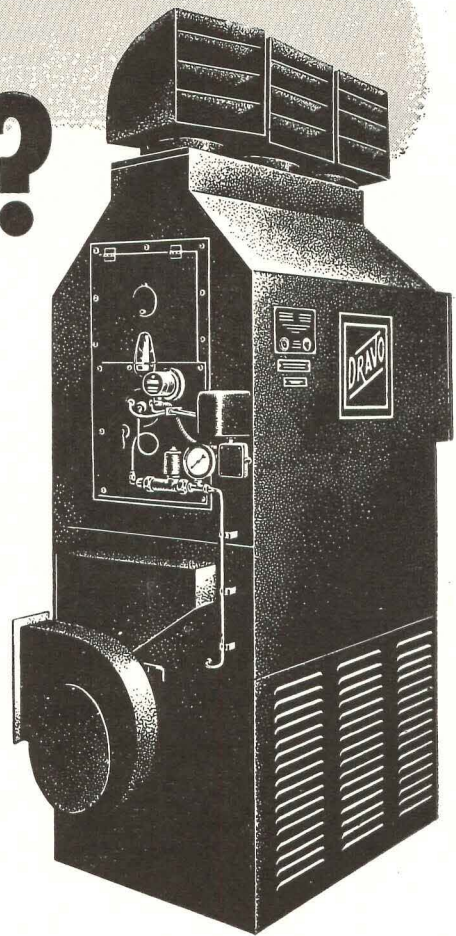
BEGIN WITH IT ?

DRAVO
Counterflo
HEATERS

Dravo *Counterflo* Heaters provide a highly efficient heating method for open area structures. This method is efficient because it heats the air right where it's to be used and without

employing water or steam as intermediaries.

No "conversion" losses with Dravo *Counterflo* Heaters on the job. The heater warms the air, and the positive, directed circulation floods the working zone with warmth. Burns oil or gas as fuel—can be readily converted from one to the other. Low fuel cost—80 to 85% efficiency. Low installed cost—users report 50 to 66% less investment than in standard wet type heating systems. Immediate delivery, quick, easy installation, no delays due to pipe shortages. Thousands of successful installations. Write for Bulletin CE-523-35



DRAVO
CORPORATION
DRAVO BUILDING, PITTSBURGH 22, PA.

Dravo also manufactures the *DRAVO CRANE CAB COOLER* for air conditioning hot-metal crane cabs.

PITTSBURGH • CLEVELAND • PHILADELPHIA • DETROIT • NEW YORK • CHICAGO • ATLANTA • BOSTON

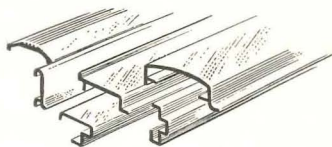
Sales Representatives in Principal Cities. Mfd. and Sold in Canada by Marine Industries, Ltd., Sorel, Quebec.





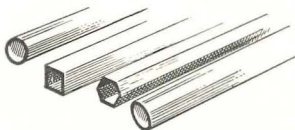
REYNOLDS

A COMPLETE ALUMINUM SERVICE TO ARCHITECTS AND FABRICATORS



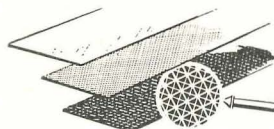
EXTRUDED SHAPES*

Reynolds standard extrusions include thresholds, jambs, sills, copings, etc., many of which are locally warehoused. Special designs can be produced to meet building schedules.



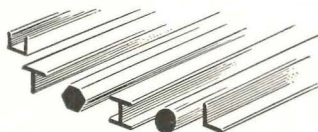
TUBULAR PRODUCTS

A full line of aluminum tubing in local warehouse stock. Special shapes fabricated to order.



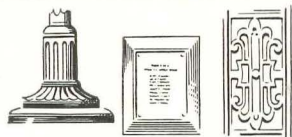
SHEET*

A complete selection of aluminum sheet in plain, corrugated, embossed and perforated designs.



STRUCTURALS

Rolled aluminum structurals such as angles, H beams, I beams and many forms of rod and bar stock.



ORNAMENTAL CASTINGS

Any type of ornamental casting produced to specification by independent foundries from Reynolds Aluminum pig and ingot.

*IDEALLY SUITED TO MODERN CURTAIN WALL CONSTRUCTION

This complete aluminum service, from mine to you, is as near as your phone. And remember, bright, enduring Reynolds Architectural Aluminum costs less than any of the modern architectural metals. So, whatever your needs, large or small, just call the nearby Reynolds Sales Office listed under "Aluminum" in your classified telephone directory. They can tell you where many of the items may be obtained from local warehouse stock. If it's a fabricated aluminum product they will be glad to recommend the names of dependable suppliers. In any case, when it's aluminum for architectural use, ask Reynolds.

Write for the Reynolds Architectural Aluminum folio. Contains technical data on the complete range of materials and engineering drawings for direct tracing.

REYNOLDS METALS COMPANY • Aluminum Division
2572 SOUTH THIRD STREET • LOUISVILLE 1, KENTUCKY

OTHER ALUMINUM BUILDING MATERIALS — Alumi-Drome (prefabricated utility building), Gutters, Downspouts, Reflective Insulation, Roofing and Siding, Built-up Roofing, Windows. Address requests for information to Reynolds Metals Company, Building Products Division, 2015 South Ninth St., Louisville 1, Ky.



REYNOLDS Architectural ALUMINUM

A COMPLETE ALUMINUM SERVICE TO ARCHITECTS AND FABRICATORS

MOTEL BIBLIOGRAPHY

(Continued from page 190)

- Nov. 48:9, 22; Dec. 48:10, 12, 23; Jan. 49:9, 16.
32. "Lo! How the Mighty Have Fallen," by Stuart Todd. July 49:7, 20. (Comment on recognition of motor courts.)
33. "The Payoff," by Stuart Todd. Mar. 49:5, 24.
34. "Standards for Tourist Courts," by Mark McMillin. Aug. 48:6, 14. (United Motor Courts Assn. standards.) **Motor News (Detroit A.A.A.)**
35. "Hotels and the Traveler," by Creighton Peet. Feb. 49:8-9, 23. (Services for motorists.) **Nation's Business**
36. "A Car Hotel and Hot Water Too," by R. M. Henry. Sept. 47:101. **Reader's Digest**
37. "Thriving Drive-Inns." Sept. 47:84-86. (Motor court industry expansion, reasons for popularity.) **Saturday Evening Post**
38. "Just What the Motorist Ordered," by F. J. Taylor. July 5, 47:32-33, 90, 93. (Motor court, Bakersfield, Cal.) **Tourist Court Journal**
39. American Hotel Association proposal to meet tourist court competition. June 48:3, 16; Aug. 48:3; Dec. 48:5, 28.
40. A.H.A. Survey Report. Dec. 47:18-19. (Recommendations to hotels to meet motor court competition.)
41. "Generalizations On Tourist Court Requirements," by H. W. Peaslee, Archt. Nov. 45:11-12, 24. (Layout, admin.) **s**
42. "Looking Forward," by H. B. Love. Aug. 45:17. (18 suggestions for motels by Duncan Hines.)
43. "Salesmen's Questions." Mar. 48:5, 22. (Accommodation requirements of firm with national sales force.)

EXAMPLES — NEW ENGLAND

44. South Yarmouth, Mass., Cabins. David Fried, Archt. *Progressive Architecture*, Dec. 47:55-57. (6 2-br. cabins.) **pv**

EXAMPLES — SOUTH ATLANTIC

45. Return Motor Court, New Market, Va. C. W. Wenger, Archt. *Motels & Courts*, Feb. 49:5. (8 units, utility building.) **v**
46. Colony Inn, So. of Richmond, Va. *Tourist Court Journal*, May 44:5-7, 10-11. (Colonial Inn with cottages. 32 units, 12 in cottages, restaurant.) **s**
47. Mount Vernon Motor Lodge, W. Palm Beach, Fla. *Tourist Court Journal*, May 45:5-9. (44 units, E-plan.) **pv**

EXAMPLES — EAST SOUTH CENTRAL

48. Bozeman's Court and Restaurant, Nashville, Tenn. *Motels & Courts*, Oct. 48:23. (26 units.) **v**

EXAMPLES — EAST NORTH CENTRAL

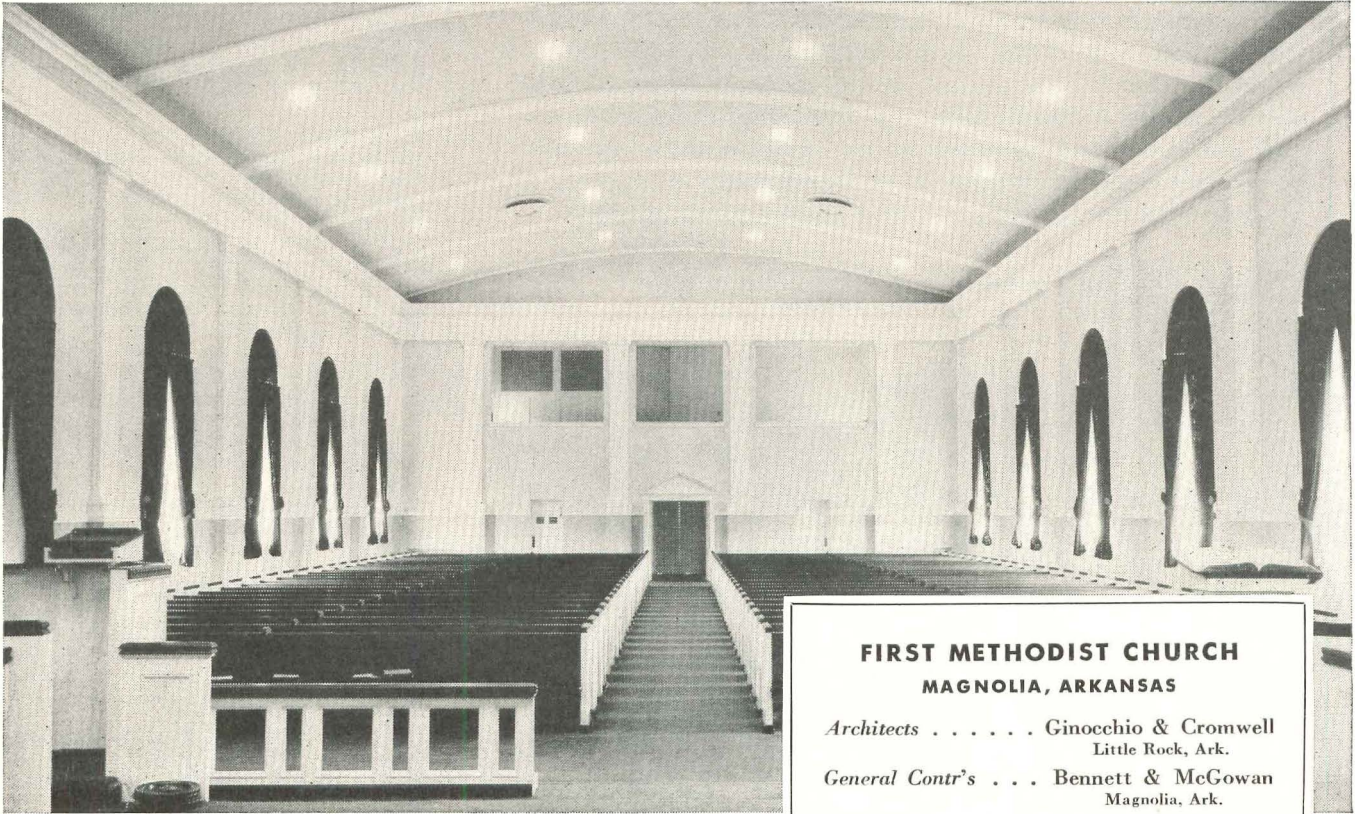
49. Motel Pam, Columbus, Ohio. Tibbals-Crumley-Musson, Archts. *Tourist Court Journal*, Nov. 47:4-7, 30. (10 units, 3 buildings.) **pv**

EXAMPLES — WEST NORTH CENTRAL

50. "Easy Servicing Features Motel for Year-Round Occupancy," White Bear, Minn. N. R. Johnson, Archt. *American Builder*, Mar. 49:84-85. (Double cross plan, interior access to units.) **dpv**

(Continued on page 194)

See How Gold Bond Products Work Together For You!



FIRST METHODIST CHURCH MAGNOLIA, ARKANSAS

Architects Ginocchio & Cromwell
Little Rock, Ark.
General Contr's Bennett & McGowan
Magnolia, Ark.
Plast. Contr's E. J. Brown
Magnolia, Ark.

GOLD BOND PRODUCTS USED:

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

You'll build or
remodel better with
Gold Bond

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

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

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

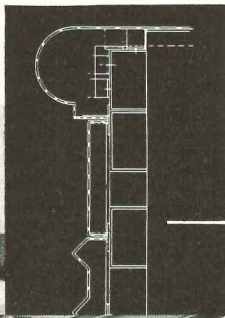
NATIONAL GYPSUM COMPANY, BUFFALO 2, NEW YORK

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

nature and seaporcel* blend in rugged beauty

For harmony with other materials - for variety and contrast - or alone in simple beauty - turn to Seaporcel Architectural Porcelain Enamel. Here, Bell Telephone Laboratories present an imaginative blending of Seaporcel Architectural Porcelain Enamel and *natural rock*. Over 10,000 sq. ft. - in light brown terra cotta finish - was utilized in the exterior facing of this modern edifice at Murray Hill, N. J. For beauty of appearance - low installation and maintenance cost - permanence - resistance to weather - and the integrity of its manufacturer . . .

Seaporcel Architectural Porcelain Enamel is unsurpassed.



Architects: Voorhees, Walker, Foley & Smith,
New York City



Like facts? Yours for the asking — a new "Fact Sheet" — giving complete, informative blue print diagrams and specifications of the Bell Telephone Laboratories Dining Room Facilities illustrated above. Just printed. Ask for a copy.

seaporcel metals inc.

28-02 Borden Avenue, Long Island City 1, N.Y.
STillwell 6-4900

See our catalog in SWEET'S $\frac{6d}{3}$

For More
Information —
Use This
Form

Member, Porcelain
Enamel Institute

*Reg. U.S. Pat. Off.

SEAPORCEL METALS INC. 28-02 Borden Avenue, Long Island City 1, N.Y.

Please send me Fact Sheet on Bell Laboratories _____
Send me General Catalogue and other information _____

NAME _____

COMPANY _____

ADDRESS _____ CITY _____ STATE _____

MOTEL BIBLIOGRAPHY

(Continued from page 192)

EXAMPLES — WEST SOUTH CENTRAL

51. "A One-Story Hotel for a Texas Town," Dow Hotel for Dow Chemical Co., Freeport, Tex. A. B. Dow, Archt. *Architectural Record*, Jan. 44:67-68. (23 rooms.) pv
52. Tower Courts, Falfurrias, Tex. Ford & Rogers, Archts. *Tourist Court Journal*, Oct. 48:5-9, 20. (4 units.) pv

EXAMPLES — MOUNTAIN:

53. Bradley Skytel, Boise, Idaho. *Tourist Court Journal*, July 49:10-11, 25, 26, 37. (14 units, private plane parking.) pv
54. "Resort Hotel For Postwar Travelers." Wurdeman & Becket, Archts. *Architectural Record*, Aug. 44:74-76. (Bungalows behind resort hotel, Las Vegas, Nev.) ps
55. El Rey Hotel, Cedar City, Utah. *Motels & Courts*, Mar. 49:9. v

EXAMPLES — PACIFIC:

56. Motor Hotel, Long Beach, Cal. W. T. Dreiss, Desnr. *Progressive Architecture*, June 48:68, v; Nov. 48:65-67. (Two-wing plan; one housekeeping unit, 6 one-room units in each.) pv
57. Calistoga Motel, Napa Valley, Cal. J. H. Garrott, Archt. *Architect & Engineer*, May 47:16-17. (Rental units, tavern, dining room.) ps
58. Beverly-Carlton Hotel, Beverly Hills, Cal. S. Reisbord, Archt. *Architectural Forum*, Feb. 49:105-109. (3-story apartment hotel, patio, swimming pool.) dpv
59. El Rancho Sacramento. F. W. Green, Archt. *Architect & Engineer*, Sept. 47:25-27. (56 units, pool.) v
60. Tropic Palms Hotel, W. Los Angeles, Cal. B. A. Schutt, Archt. *Architectural Record*, May 48:110-113, pv; *Hotel Management*, Oct. 48:76-77. (44 units.) pv
61. Carl's Sea Air, Santa Monica, Cal. B. A. Schutt, Archt. *Architectural Record*, May 48:107-109. pv
62. Carmel Valley Inn, Monterey, Cal. R. R. Jones, Archt. *Architectural Record*, May 48:102-106; *Hotel Management*, Oct. 48:78-81. (24 units, restaurant, pool.) pv
63. Paso Robles Inn, Cal. *Hotel Management*, Jan. 46:36-39, 108. (Two-story bldgs., 6-12 units each, angled plan, restaurant, coffee shop.) pv
64. Casa Munras Hotel & Cottages, Monterey, Cal. *Hotel Management*, Oct. 47:40-43, 96. (160 room project, recreation facilities.) pv
65. Carousel House, Laguna Beach, Cal. Massen & Greene, Owner-desnr. *Hotel Management*, Mar. 48:47-51. (Small motor court.) pv
66. Villa Hermosa, Palm Springs, Cal. Clark & Frey, Archts. *Architectural Record*, Feb. 48:116-119. (20 units, two-story, pool.) pv
67. The Westerner. Boyd Georgi, Archt. *Tourist Court Journal*, Mar. 49:6-8, 34, 37. v
68. Motel El Rancho, Fresno, Cal. (Hull Hotel Chain). *Tourist Court Journal*, May 46:5-7, 24. (80 units, restaurant, dining-dancing patio, pool.) v

EXAMPLES — FOREIGN:

69. Holiday Hotel, Tijuca, near Rio de Janeiro. Roberto Bros., Archts. *Architectural Forum*, Nov. 47:72-73 pv; *Progressive Architecture*, Dec. 48:56-60, pv; *Architectural Review*, Dec. 47:185-188.

(Continued on page 196)

Nothing heats better than Modine Convector Radiation . . . NOTHING LOOKS MORE BEAUTIFUL IN A BEAUTIFUL ROOM



To find out why the new Modine Convector is the *better* way to heat apartments, homes, schools, offices or hospitals, call your Modine Representative. He's listed in the "Where-to-Buy-it" section of your phone book. Ask to see a sample, or write direct. Modine Mfg. Co., 1510 Dekoven Avenue, Racine, Wisconsin.

Send for New Modine Convector Catalog Today!

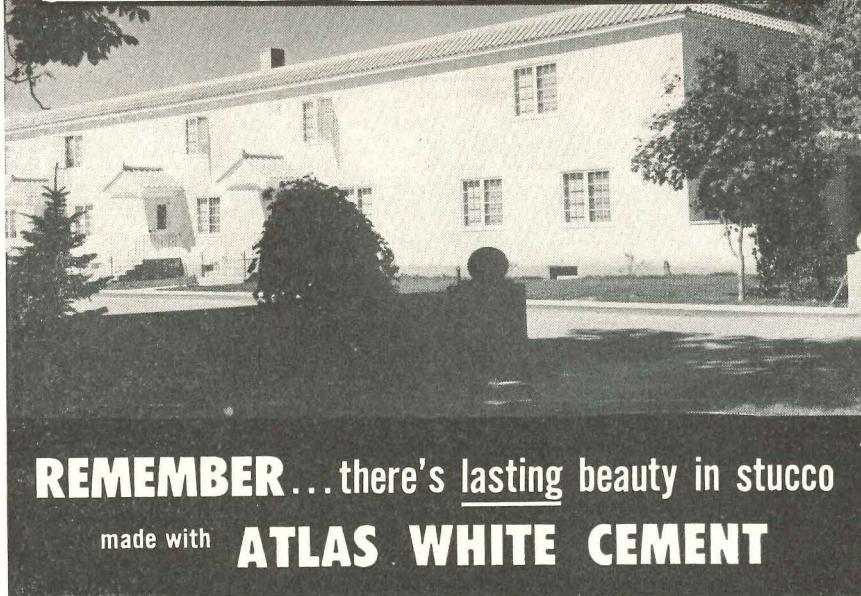


Design and Mechanical Patents Pending

Modine CONVECTORS

R-1049

**WHEN
IT'S TIME TO
DECIDE...**



**REMEMBER... there's lasting beauty in stucco
made with **ATLAS WHITE CEMENT****

● You give sound advice to your client when you suggest Atlas White Cement—or Atlas White Duraplastic*—for a modern stucco finish . . . for thus you counsel longer life for the beauty and utility of your design.

A matrix of Atlas White Cement, in white or in one of an infinite variety of pigment-based colors, brings out the full beauty of stucco. It also sets off, in contrast or blend, the full color values of pigments used in portland cement paint or of aggregates used in terrazzo and architectural concrete slabs.

Atlas White Cement complies with ASTM and Federal Specifications for portland cement. It has the same advantages when used for concrete and is used in the same way. Concrete made with Atlas White Cement cleans easily. Maintenance costs are low.

ATLAS WHITE DURAPLASTIC*

air-entraining portland cement adds new advantages to stucco at no extra cost. It provides increased plasticity that makes application easy; greater durability; stouter resistance to weather. Ask for details.

For further information on the uses of Atlas White Cement, see SWEET'S Catalog, Section 4E 7a and 13C 5, or write to Atlas White Bureau, Universal Atlas Cement Company (United States Steel Corporation Subsidiary), Chrysler Building, New York 17, N. Y.

*"DURAPLASTIC" is the registered trade mark of the air-entraining portland cement made by the Universal Atlas Cement Company.



FOR BEAUTY AND UTILITY

ATLAS WHITE CEMENT

FOR TERRAZZO, PAINT, SLABS, STUCCO

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

MOTEL BIBLIOGRAPHY

(Continued from page 194)

70. Tourist Hotel, Ouro Preto, Brazil. O. Niemeyer, Archt. *Architectural Forum*, Nov. 47:71. **pv**

EXAMPLES — PROJECTS:

71. "Airport Hotel." J. G. Carr, Archt. *Architectural Record*, July 45:78-79. **dps**
 72. "Motor Traveler's Hotel." Wiley, Fletcher & Fletcher, Archts. *Architectural Record*, July 45:75-77. **dps**
 73. "Design for the Northeast." Robin & Vogel, Archts. *Hotel Management*, Aug. 48:66-67. (30-room highway hotel, restaurant, grille room.) **ps**
 74. "How \$315,000 Can Build This 50-Room Highway Hotel Today." J. B. Gander, Design Inc. *Hotel Management*, Aug. 48:61-65. **pv**
 75. "Two Versions of an Outpost Inn." G. McS. Jackson, Desnr. *Hotel Management*, Aug. 48:56-60. (Standard and deluxe plans, unit room study.) **ps**

TECHNICAL ARTICLES:

Architectural Record:

76. "A (filling) Station for a Highway Hostelry." H. H. Harris, Archt. Feb. 44: 78-80. (Shopping center, truck yard, drivers' dormitory, tourist cabins.) **ps**
 77. "Airport Restaurants." J. G. Carr, Archt. Oct. 45:108-110. (Time-Saver Standards, pp. 122, 123, 125.) **pv**
 78. "Analysis of Restaurant Space and Layout." Sumner Spaulding, Archt. Oct. 45:105-107. **ds**
 79. "Critical Clearance Dimensions For Automobiles." Time-Saver Standards, Oct. 47:157. **t**
 80. "Drive-in Restaurants and Luncheonettes." Building Types Study No. 117. Sept. 46:99-114. **psv**
 81. "Highway Restaurants." F. R. Keally, Archt., and A. W. Dana, Kitchen constl. Oct. 45:102-104. **ps**
 82. "Insulation of Concrete Floors in Dwellings." Time-Saver Standards, Jan. 48:120, 123, 125. **dt**
 83. "Poured Resilient Flooring for Houses." Jan. 48:115-116. **v**
 84. "Progress In House Heating Equipment," by Clifford Strock. Apr. 49:139-145. **v**
 85. "Restaurants," Building Types Study No. 139. July 48:119-142. **pv**
 86. "Restaurants and Bars," Building Types Study No. 127. July 47:96-121. **pv**
 87. "Second Thoughts on Radiant Heating," by Chapman and Fischer. Mar. 49: 133-135, 176, 178. **dg**
 88. "West Coast Innovations In Swimming Pool Design." Dec. 48:143-144. **dv**
Hotel Management
 89. "Planning Roadside Inns For Today's New Patronage." Francis Keally, Archt. Oct. 45:30-32. (Restaurant; pp. 32-33, 126, Kitchen by A. W. Dana.) **ps**
Motels and Courts
 90. "How to Melt Snow," by Ernest Dench. Jan. 49:7, 14.
 91. "Is a Court Restaurant Practical?" by Raymond Schuessler. Sept. 48:7, 23. **v**
 92. "Kitchens, Pro and Con," by A. S. Cohoon. Aug. 48:12, 22.
 93. "Motel Books & Their Keeping," by Stuart Todd. Sept. 48:14-15. **f**
 94. "Promotion Methods," by Raymond Schuessler. Apr. 49:7, 19.
 95. "Technique of Highway Sign Advertising," by Raymond Schuessler. Jan. 49:4.

(Continued on page 198)



BANISH "Booby Trap Showers"

with the **DOUBLE** safety of



THERMOSTATIC SHOWER MIXERS

Why be "Half-Safe" with mixers that only protect bathers from scalding caused by *pressure* changes? No mixer is really safe or non-scald that does not give *double* protection against both *pressure* and *temperature* changes in water supply lines... plus a *complete* shut off on cold water failure.

Regardless of (1) *temperature* or (2) *pressure* changes in water supply lines, a Powers thermostatic mixer holds the shower temperature constant. Failure of cold water instantly and *completely* shuts off the shower. Bathers can really relax and enjoy their showers.

May we send Bulletin 358-H?

- For new showers or when modernizing obsolete showers — play safe, use Powers Thermostatic Shower Mixers. Phone our nearest office or use coupon below. There's no obligation.



The Powers Regulator Co.

2752 Greenview Ave., Chicago 14, Ill.

- Please send Bulletin 358-H and prices.
- Have an engineer call.

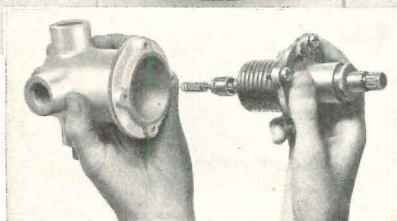
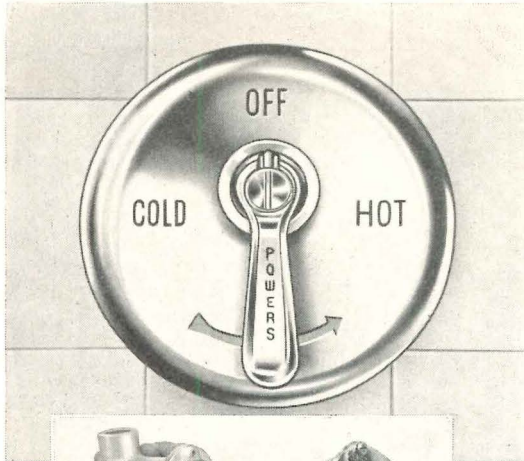
Name _____

Title _____

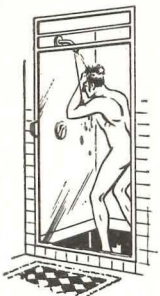
BTH Address _____



Right: Type H Mixer for Concealed Piping has 6" diameter dial. Mixer for exposed piping has 3 1/4" dial.



ONLY ONE MOVING PART, easily accessible from the front. Minimum of maintenance, simple, rugged construction. Parts subject to wear have hard chromium finish.

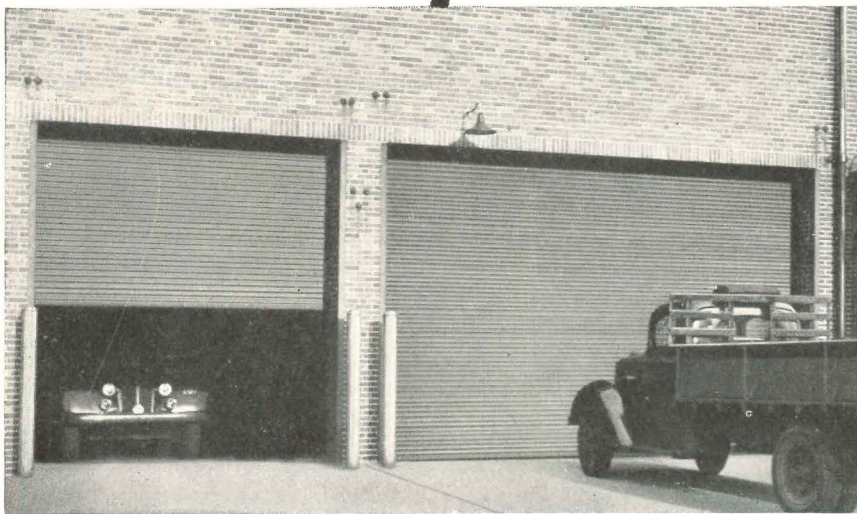


MODERN SHOWERS require the safest shower regulator made ... **POWERS.**

Just ONE Accident may cost Many Times More than Powers Thermostatic Shower Mixers



Open upward smoothly, easily
 Save floor and wall space
 Coil completely out of way
 Rugged all-metal construction
 Extra all-around protection
 Motor or manual control



You provide better door service at lower cost with Kinnear's combination of efficient *coiling upward action* and protective, all-metal, *interlocking-slat construction*. Kinnear Rolling Doors offer you *maximum* use of space around doorways. They open and close with smooth, time-saving ease, year after year. They defy wind, weather, or intrusion. Electric push-button operation available, with remote controls if desired. Kinnear Rolling Doors are built in any size, for new or old construction. Write for complete details today.

The KINNEAR Manufacturing Company

FACTORIES: 1860-80 Fields Avenue, Columbus 16, Ohio
 1742 Yosemite Avenue, San Francisco 24, California
 Offices and Agents in Principal Cities



KINNEAR
 ROLLING DOORS

MOTEL BIBLIOGRAPHY

(Continued from page 196)

Tourist Court Journal
 96. "Advertising and Selling a Tourist Court." Apr. 45:5-9, 18-19. s
 97. "Fill 'er Up!" Feb. 45:9-11. (Service Stations for tourist courts.) s
 98. "Landscaping & Beautifying." Mar. 45:5-13, 18-19, 22. p
 99. "Let's Eat." Dec. 44:9-12. (Coffee room operation.) s
 100. "Lighting the Modern Motel," by W. D. Riddle. Nov. 44:5-7. s
 101. "Linen," by G. H. Stevenson. July 38:5-7. (Bedding.) v
 102. "Location of the Future." July 44:5-9, 14. (Motel location factors.) ms
 103. "Planning a Tourist Court," by T. E. Lightfoot, Archt. Aug. 44:5-11, 19. pv
 104. "Plant & Prune," by L. R. Kuykendall. Mar. 46:4-6, 29. (Landscaping.) sv
 105. "Postwar Furnishings," by Earl Crawford. Jan. 45:5-7, 13. De Anza Motor Inn, Santa Barbara, Cal. Cliff May, desnr. sv
 106. "Make It Hot; Then Cool." Sept. 44:5-10. (Plumbing, heating, cooling.) d
 107. Name Preferences. Sept. 48:12. (Questionnaire results.)
 108. "So You Want to Finance a Court." June 44:5-7, 11.
 109. "Tourist Court Plumbing." Oct. 44:5-8, 18. pv


STATISTICS

American Magazine
 110. 1948 Travelogue. The Crowell-Collier Publishing Co. 250 Park Avenue, New York 17, N. Y. (Travel preferences, plans.)
Automotive Industries
 111. "Total Passenger Car Registrations 1935-1948." Mar. 15, 49:91. t
Hotel Management
 112. "Hotel Dollar, The," by Horwath and Horwath. Jan. 49:44. (Charts averaging operation expenses and sales.) g
 113. "Vacation Preferences." Jan. 47:27-30. (Data from *Holiday Magazine* survey, 1946.) t
 114. "What Lies Ahead For 1949 In Hotel Sales and Profits," by P. B. B. Andrews. Jan. 49:33-35, 112, 114. gt
Motels & Courts
 115. "American Travel Methods" (Abstract of No. 111). Apr. 49:2.
 116. "Florida Motor Court Statistics." Oct. 48:15.
Public Roads
 117. "National System Of Interstate Highways." Sept. 47:19-20. (Map 14x20. GPO Catalog No. FW 2.12:H53/8.) m
 118. "Summer Traffic Survey, 1947." Mar. 49:148-149. g
 119. "Trends In Motor Vehicle Travel 1936-1945," by G. P. St. Clair. Oct.-Nov.-Dec. 46:261. Same 1946: Mar. 48:45, 49, 52. Same 1947: Mar. 49:156-160. g
Survey of Current Business
 120. "Airline Passenger Miles." 1947 Supplement: 104 (1935-1946) t; Dec. 47: S-22 (1947) t; June 49:S-22 (1948). t
 121. "Foreign Travel Statistics." 1947 Supplement: (1935-1946) monthly averages. t; Dec. 47:S-23 (1947) t; June 49: S-23 (1948). t
 122. "Hotel Operating Statistics." May 48:S-23 (1947) t; June 49:S-23 (1948). t
 123. "Income Survey By States and Regions 1929-47." Sept. 48:10-21. t
 124. "National Parks Visitors Statistics." 1947 Supplement: (1935-1946) monthly averages. t; May & Sept. 48:S-23 (1947) t; June 49:S-23 (1948). t

(Continued on page 200)

**New ideas in efficient design . . .
old standards of comfort . . .**

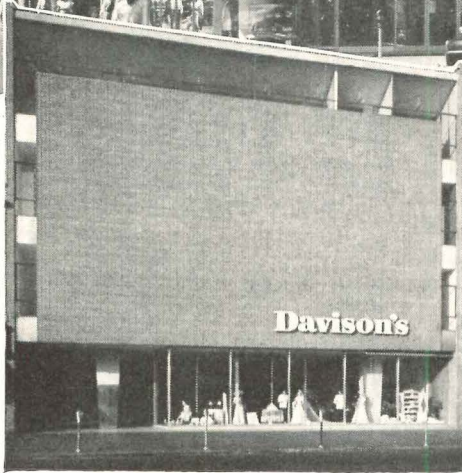
**with KEWANEE[®]
Steel BOILERS**



Designed by Ketchum, Gina' & Sharp, in association with Harold M. Heatley, for Davison's Department Stores in Augusta and Columbus, Georgia; these ultra-modern buildings provide more efficient selling space at minimum cost.

A radically new single bay method of framing, with cantilevered floors, sets the supporting columns 12 feet back from the front and side walls. Columns are eliminated from the central part of the floors and small, intimate selling bays provided next the walls.

Davison's



It is significant that in designing these buildings where latest concepts of functional efficiency and customer comfort are combined, Kewanee Boilers were selected to do the heating job.

Thus, today, as over a period of 80 years, the nation's leading architects and engineers turn to Kewanee Boilers when they require dependable heating for their finest buildings.

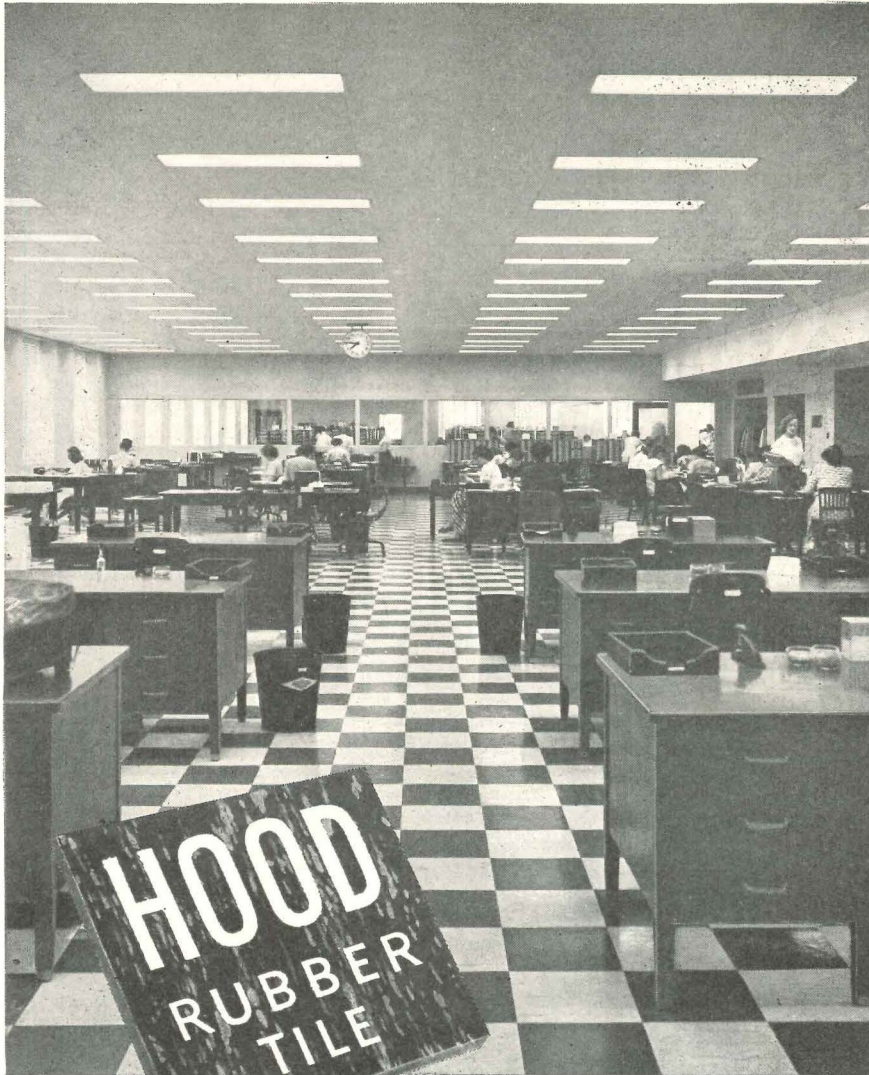
Kewanee Type "C" Boilers for mechanical firing were installed in these modern stores by Reliance Engineering Co., Charlotte, N. C.

KEWANEE BOILER CORPORATION

BOILERMAKERS 80 YEARS KEWANEE, ILLINOIS
Branches in 60 Cities—Eastern District Office: 40 West 40th Street, New York City 18

Serving home and industry

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



The CHOICE for

Yes, and the choice among the country's leading architects, designers and decorators for these jobs for 25 years. Why? . . . because when they specify Hood Rubber Tile, they know from past experience that they are recommending better flooring . . . flooring that lasts a lifetime, is easy to clean, is resilient, quiet, and offers a full range of sparkling colors and pattern possibilities that enhance any decorative plan. For proof, and to make your job easier, see Sweet's or write for full-color booklet.

HOOD RUBBER TILE
HOOD ASPHALT TILE



- ✓ Offices
- ✓ Reception Rooms
- ✓ Corridors
- ✓ Display Rooms
- ✓ Hospital areas
- also
- ✓ Banks
- ✓ Stores
- ✓ Schools & Colleges
- ✓ Bldgs. & Insts.
- ✓ Residences
- ✓ Hotels & Clubs
- ✓ R. R. Cars & Ships

MOTEL BIBLIOGRAPHY

(Continued from page 198)

125. "Passenger Car Registrations." Apr. 49:3.
 126. "Railroad Passenger Miles." 1947 Supplement: 107 (1935-1946) t; Dec. 47:S-22 (1947) t; June 49:S-23 (1948). t
 127. "Railroads In 'The Postwar Economy.'" May 48:16-21. (Passenger mile data.) g
Tourist Court Journal
 128. "Annual Operating Averages For Tourist Courts." July 49:6-9, 26; July 44:5; Aug. 46:4-7; July 45:5-6, 19; Sept. 44:13; July 43:10. g
 129. "Let's Not Spread 'Em Too Awful Thin." July 49:28-29. (Survey statistics, San Diego area.)
U. S. News & World Report
 130. "Better Vacations This Year." May 6, 49:22-23. (Travel statistics.)

SOURCES

ASSOCIATIONS, PUBLISHERS OF LISTS:

131. *American Automobile Assn.*, Pennsylvania Ave. & 17th St. NW, Washington, D. C. Annual, *Accommodations Directory*.
 132. *American Hotel Assn.*, 221 W. 57th St., New York 19, N. Y.
 133. *American Motel Assn., Inc.*, 1060 Broad St., Newark 2, N. J. Motel guide.
 134. *American Motor Hotel Assn.*, 306 New Moore Bldg., San Antonio 5, Tex. *Travelog*, highway atlas.
 135. *Duncan Hines, Inc.*, Box 548, Bowling Green, Ky. *Guidebook, Lodging for a Night*.
 136. *New England Council*, Statler Bldg., Boston, Mass. *Road map guide book of New England, New York & Quebec*.
 137. *Northeastern Cabin Owners Assn., Inc.*, 83 Highland St., Plymouth, N. H. Leaflet map, list (gives 294 members).
 138. *Quality Courts United, Inc.*, McKays Hotel Court, Ocala, Fla. (128 courts).
 139. *United Motor Courts*, 1460 Pennsylvania, Denver 3, Col. Motor travel guide.
 140. Walker, R. A., Pub., Haverhill 1, Mass. *Recommendations*, annual. (1948-49 has 294 listings in Eastern U. S., Canada.)

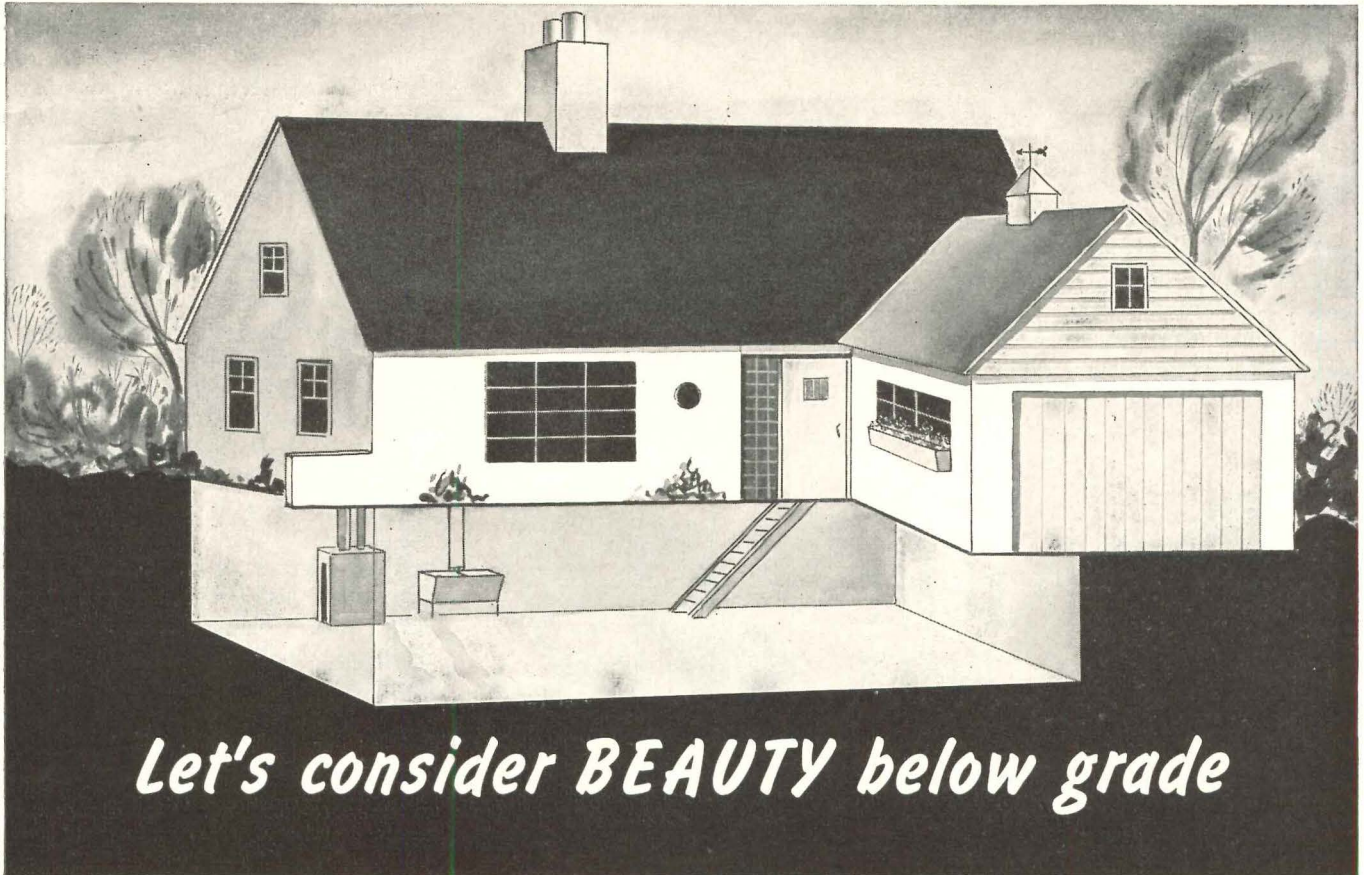
HOTEL ACCOUNTANTS:

141. Harris, Kerr, Forster & Co., 18 E. 48th St., New York 17, N. Y.
 142. Horwath & Horwath, 41 E. 42nd St., New York 17, N. Y.

MAPS:

143. *Public Roads Admin.*, Federal Works Agency, Supt. of Documents GPO, Washington, D. C. Transportation, traffic flow maps. *Roads, Price list No. 45*.
 144. Oil Companies' Touring Services: Free maps, guides and information. *Conoco Travel Bureau*, Denver, Col. *Esso Touring Service*, 15 W. 51st St., New York 19, N. Y. *Shell Touring Service*, 50 W. 50th St., New York 20, N. Y.
 In addition to periodicals listed before, the reader is referred to *American Motel Magazine*, new publication of the Patterson Publishing Co., 5 S. Wabash St., Chicago, Ill.; and to *Traffic Volume Trends*, monthly statistical leaflet of the Public Roads Admin., Supt. of Documents, GPO, Washington, D. C.

For indices to current periodicals, see: *Reader's Guide to Periodical Literature*; *Art Index*; *Industrial Arts Index*. H. W. Wilson Co., 950 University Ave., New York, N. Y.



WHY IS BEAUTY—an important factor in home designing—neglected below grade? All too frequently basements, representing 20% or more of the home area, are left unfinished. These basements are highly valued by home owners for laundries, workshops, recreation and play rooms. Why, then, should they be neglected . . . particularly when it costs so little to decorate with Medusa Paints!

With colorful Medusa Paints, you transform dull unfinished basements into bright, livable areas. *But this is only half the story of Medusa Paints.* On walls, Medusa Portland Cement Paint actually protects the construction . . . sealing out mild dampness, while Medusa Rubber Base Coating gives concrete floors a super-tough finish that has remarkable wearing qualities. Specify these long lasting paints for basements, utility rooms, garages, breezeways, stucco and concrete block homes—in fact, all concrete and masonry surfaces! To help you specify harmonizing color schemes, we have prepared color chip folders. Write for them.

MEDUSA PRODUCTS DIVISION

of **MEDUSA PORTLAND CEMENT COMPANY**

1015-2 MIDLAND BUILDING • CLEVELAND 15, OHIO



BEST for Masonry Surfaces
MEDUSA PAIN

REG. U. S. PAT. OFF.



PRODUCTS
(Continued from page 145)

Pressure Latch

A light pressure on the door panel releases the externally invisible *Tutch Latch* and opens the door. No handles, knobs or pulls are reported required. It is installed with the strike on the door and the latch fastened inside the cabinet. The compact, hidden latch is said to have positive action, to be easy

to install and, in operation, to employ only two moving parts. Phillips Tutch Latch Co., 40 Exchange Place, New York 5, N. Y.

Plastic Stair Treads

Supplex plastic stair treads are designed with shallow ribs to provide a slip-proof surface, even when wet. Manufacturer claims they retain a sleek, satiny finish after repeated cleanings, are impervious to grease and water, and extremely abrasion resistant. The treads are held in place by tracks, and the nos-

ing is fitted snugly to the edge to prevent catching heels or toes in the tread. They are available in 6 colors and in 18-, 24-, 36- or 72-in. lengths. Industrial Synthetics Corp., 225 North Ave., Garwood, N. J.

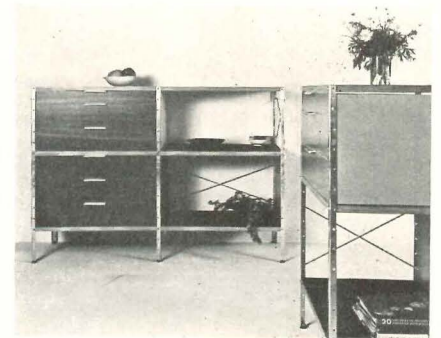
Automatic Clothes Dryer

Described as fully automatic, the *Thor* electric dryer is of the tumbler-vacuum type, and draws heated air through clothes to dry. The operator need only load clothes into the machine, set control for degree of dryness desired and push starting button. The machine shuts itself off when clothes are dried.

The cabinet is 30 in. wide, 24 $\frac{3}{4}$ in. deep, 36 in. high, and finished in white baked enamel. Capacity is 8 lb dry or 16 lb wet weight. Thor Corp., 54th Ave. and Cermak Rd., Chicago 50, Ill.

Low Cost Storage Units

Architect-designer Charles Eames has added two new storage units to his series of simplified functional furniture. The two units, 24 and 48 in. wide, have vertical members of cadmium-plated steel. Horizontal surfaces are marine plywood with a plastic coating, held in place by bolts or angle irons. Panels or crossed struts provide needed stiffness.



Storage units have frank, simple frames, well finished fittings and hardware

These openly engineered frames may be fitted with a variety of shelves, doors, sliding trays and drawers. Panels come in a variety of finishes to provide accent and color: birch, walnut; black, white, beige, gray, blue, red or yellow. Standardized, machine-made parts are said to result in low cost for the efficient designs. Herman Miller Furniture Co., 1 Park Ave., New York, N. Y.

(Continued on page 204)

**WOMEN
DON'T
WANT**

⋮

**Noisy Bells
OR
Kitchen Smells**

irritating smell
of kitchen odors

nerve-wracking
noise of doorbells

**NU-TONE
CURES BOTH**

NU-TONE
TRADE MARK

**ELECTRIC
DOOR
CHIMES**

**KITCHEN
VENTILATING
FANS**

Women hate the old-fashioned, nerve-wracking noise of doorbells and buzzers—and the irritating smell of kitchen odors. They love the warm, friendly tones of a NuTone Door Chime and the sweet, fresh kitchen air that a NuTone Kitchen Ventilating Fan provides. Give the ladies what they want! Specify a NuTone Door Chime and a NuTone Kitchen Ventilating Fan in every new home you plan. Write for FREE literature. NUTONE, INC., Dept. AR-2, Cincinnati 27, O.



In this florist shop in Wilmette, Ill., Designer Donald Stuart King used *Thermopane* to achieve the combined benefits of dramatic display, a sun-flooded interior and a minimum of condensation. The high humidity of a florist shop in northern Illinois' cold winters naturally called for windows of *Thermopane*.

To keep visual fronts visual

● Steam or frost kills the main function of a storefront.

Merchants want their stores and merchandise on display in any weather.

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

Thermopane's insulation offers other worth-

while benefits for storefronts. Its two panes of glass, with dry air sealed between, reduce heat transfer, help keep store interiors warmer in winter and cooler in summer.

Thermopane materially aids air conditioning by reducing load on equipment and by helping keep indoor temperatures more uniform.

To help you in your design work, L·O·F has prepared a set of Don Graf sheets on *Thermopane* which provide full information on heat transfer, condensation points, sound insulation and other data. Write for your file copy. [®]

GLASS MAKES IT A VISUAL  **FRONT**

LIBBEY·OWENS·FORD

Libbey-Owens-Ford Glass Company, 6635 Nicholas Building, Toledo 3, Ohio.

PRODUCTS
(Continued from page 202)

Metal Wall Tile

Crown Metal Wall Tile is reported to have a bonded guarantee against rusting, cracking, crazing, chipping or peeling. The tile is made of heavy gage rust-resistant steel, double enameled in a range of colors, or stainless steel in satin or glossy finishes. The product is said to be embossed to the right depth for max-

imum holding strength, and to have a dappled surface for highlights and sparkle. Ohio Can and Crown Co., 16th & Harsh Ave. S.E., Massillon, Ohio.

Drafting Aid

A triangular scale for architects and engineers made of *Vinylite* plastic strips gripped by an aluminum core, is said to give far longer wear than conventional scales and to be very low in price. The plastic is reported dimensionally stable, and resistant to water, oil, grease and most chemicals. The fins and core are

interlocked by a special process to allow for the different expansion coefficients of the two materials. Markings are coated with a Vinylite resin base liquid to prevent rubbing off. Wolsey Co., Inc., 727 Kohler St., Los Angeles 21, Calif.

Insulation Board

A new line of insulation board products features two new finishes: *Leth-R-Grain*, said to resemble split cowhide, and a textured design on Insulation Board Plank known as *Gray-tex* and *Green-tex*. *Leth-R-Grain* is reported washable and scuff resistant, and comes in 3 by 8 ft and 4 by 8 ft panels in Morocco Red, Antique Brown and Jade Green. Both materials are suggested by the manufacturer for use as wainscoting or overall wall finishes in commercial buildings, cocktail lounges, dens, etc. The Flintkote Co., 30 Rockefeller Plaza, New York 20, N. Y.

WEATHER STRIPS FOR SLIDING DOORS

ACCURATE
TRADE MARK
REG. U.S. PAT. OFF.

In this splendid Kentucky home, "ACCURATE" metal weather stripping for sliding doors was installed in 1944 in accordance with specifications by Mr. James Kellum Smith, of McKim, Mead & White, Architects. Five years of constant use have demonstrated the truly dependable performance of sliding doors fitted with "ACCURATE" weather stripping. Everywhere, more and more architects and owners are looking to "ACCURATE" for real sliding door weather protection. Consultation invited.

ACCURATE METAL WEATHER STRIP CO., Inc.
215 EAST 26th STREET, NEW YORK 10, N. Y.



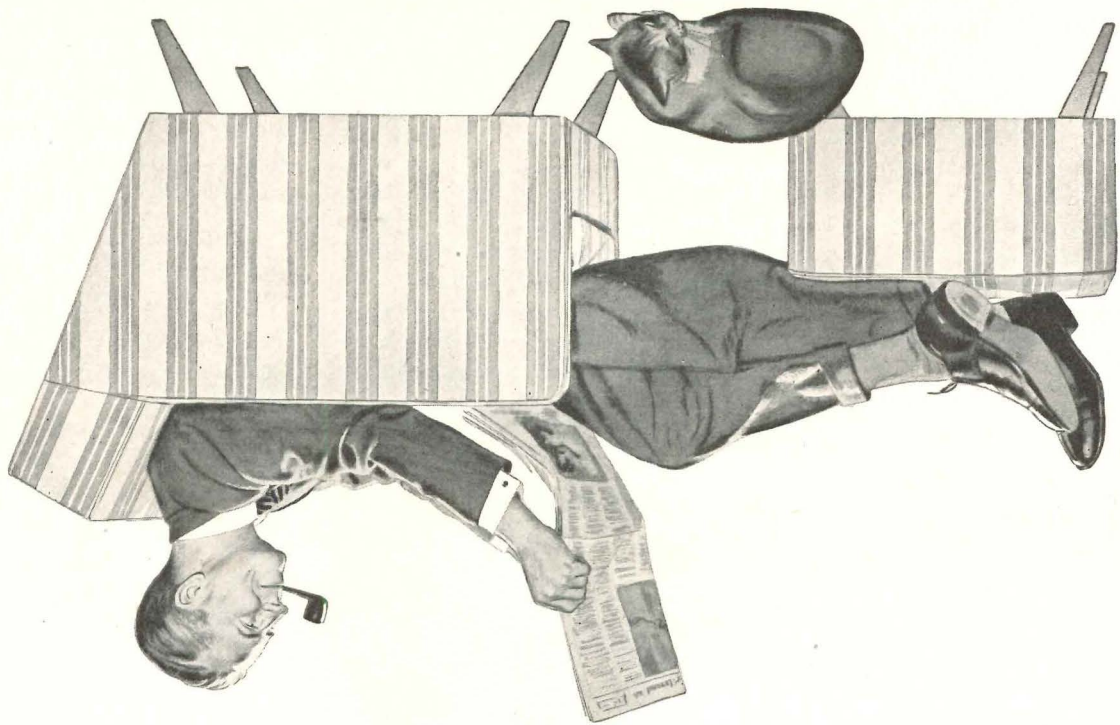
Range with separate oven and cooking-top units permits wide choice of arrangement and combination

Modular Range

The *Universal Select-A-Range* is a forward step in flexible kitchen planning. It is comprised of three basic interchangeable, independent, self-contained units: an oven with baking and broiler space; a surface cooking unit; and a one-drawer storage cabinet. More than 25 different arrangements can be created from these modular units, giving the owner free choice in working heights, arrangement and cabinet work. Units may be purchased separately, and added to as desired. No venting is said to be required, allowing units to be recessed in counters, cabinets or walls.

The ovens feature one piece enamelled interiors, thermostat control, automatic timer, smokeless slotted broiler grid and preheat push button. Surface

(Continued on page 206)



USKON turns home heating upside down!

**ELECTRICAL
CEILING
PANELS** } offer Architects New Freedom in Design—
Complete Client Satisfaction

Now a revolutionary *new kind of heat* has been made possible by the scientists of United States Rubber Company. It's USKON—the healthiest, finest heating in the world—for those who want the best.

Heating by radiation, USKON consists of invisible electric panels in the ceiling, which warm healthfully, comfortably, conveniently—the way the sun does. And the heat it gives is *true radiant heat* . . . so pleasant, so satisfying.

USKON MAKES THE HOMES YOU DESIGN MORE BEAUTIFUL— Architects, designers and contractors find that Uskon solves major structural problems . . . eliminates need for cellar, radiators, fuel storage, lowers construction costs, frees space for other uses, and offers new freedom of design. Uskon is a boon to decorators, allows unhampered placement of furniture and drapes. Uskon is now in its fourth successful winter in homes from coast to coast. It can be installed easily and quickly by an electrical contractor in any home, office or store, new or old.

AMAZING USKON PANELS are $\frac{1}{4}$ inch thick, consisting of electrically conductive sheets of specially processed rubber,

sandwiched between stiff layers of fireproof insulation. *Rubber itself safely conducts electrical warmth over entire surface.*

USKON IS HEALTHIER— It gives uniform warmth from head to foot . . . keeps floors toasty warm . . . provides natural humidity . . . eliminates drafts . . . assures fresher air. Uskon eliminates harmful grime and gases. No circulation of dust, germs, pollen. Uskon is healthier heat.

USKON IS SAFE AND TROUBLE-FREE— Just a flip of the switch and you have Uskon heat. Heating of each room is individually controlled. Uskon is so safe it is approved by Underwriters' Laboratories, Inc. Nothing to get out of order. No repairs needed, no cleaning or other nuisances.

Write today and let us send an Uskon representative to visit you with complete installation and operating details about Uskon. Absolutely no obligation to you. Electrical Wire and Cable Department, United States Rubber Company, Rockefeller Center, New York 20, N. Y.

USKON®



ELECTRIC RADIANT CEILING PANELS

Made by UNITED STATES RUBBER COMPANY

Distributed by GRAYBAR ELECTRIC COMPANY

PRODUCTS
(Continued from page 204)

units are said to have four fast-heating electric units, swivel mounted for easy cleaning, and adjustable seven-heat control switches. Separate toe bases, back splash units and platform lights are also available for building counter units of the range and storage drawers. Landers, Frary & Clark, New Britain, Conn.

Humidifier

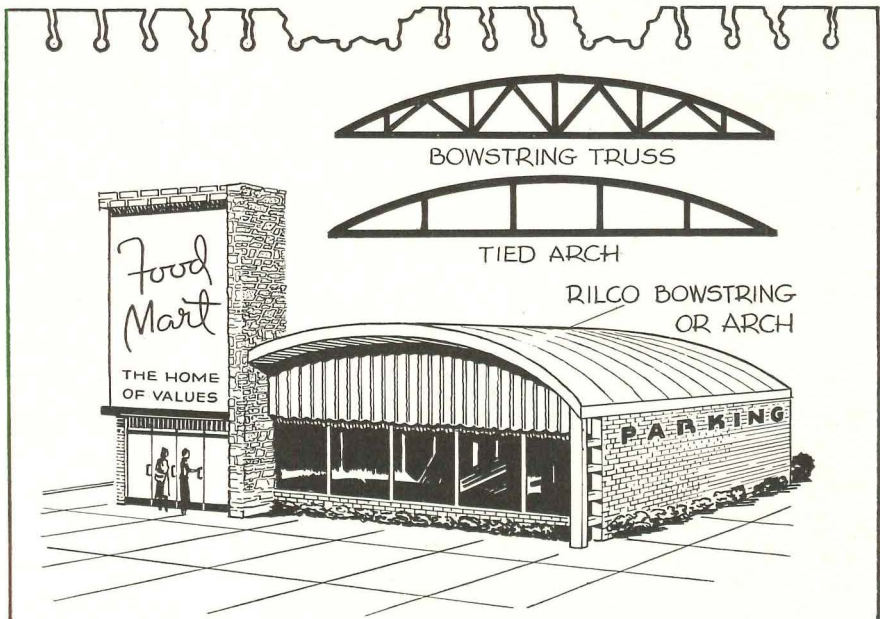
Designed to provide adequate humidification to steam or hot water heated houses, the *Series 200 Vapomaster* extracts waste heat from the stack to evaporate water. The vapor is discharged into basement or first floor for natural diffusion through the house.

The humidifier consists of a cast aluminum chamber with external fins, a float chamber, float valve and water connection. The finned chamber projects partway into the stack and is mounted

on an easily attached boot. In the front of the aluminum chamber, outside the stack, is a well or wet leg. Moisture is conducted to the dry leg by 8 plates. Heated by the finned aluminum, these plates evaporate moisture slowly so that it is absorbed by the atmosphere of the house. Skuttle Mfg. Co., 4099 Beaufait, Detroit 7, Mich.

Linoleum With "Textured Look"

Said to be carpet-like in appearance, *Texfloor* inlaid linoleum is being introduced in 26 patterns and five basic colors: multi-colored white, tweed gray, homespun blue, silver green and claret red. Textured designs feature leaf motifs, diamond patterns, basket-weave effects, kitchen tiles, and 9 by 9 in. Jaspe tiles. The first three types are made in 2-, 3- and 4-yd widths; the latter are produced in 2-yd widths only. Sloane-Blabon Corp., 295 Fifth Ave., New York 16, N. Y.



What can YOU do with RILCO trusses?

● Dramatic architectural effects are inherent in buildings designed around Rilco Glued-Laminated Wood Arches and Trusses. Not only is designing easy, but construction is swift and simple and economical with these engineered pre-fitted structural members.

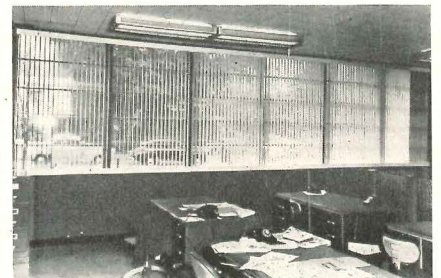
Standard Rilco arches and trusses allow you almost unlimited designing freedom and in addition, Rilco engineers constantly work with architects to develop special arches and trusses for specific building projects.

Clients and contractors alike will appreciate your designing around Rilco Arches and Trusses. They make solid, smart looking buildings and they're simplicity itself to erect.

Next commission you get... see what you can do with modern glued-laminated wood framing. See our 12 page illustrated catalog in Sweet's or write us for more information.



RILCO WORKS WONDERS WITH WOOD
Laminated **PRODUCTS, INC.**
1670 First National Bank Building • Saint Paul 1, Minnesota



Cloth blinds offer ease of cleaning, variable sun-control, simple operation

Vertical Cloth Blinds

Sun-Vertikal blinds provide a new and unusual window treatment affording sun control and privacy. The blinds are made of vertical acetate rayon panels, slipped over metal hooks at top and bottom to hold the fabric taut. A special control rod allows them to be opened or closed by a touch of the hand.

Economy of maintenance is a feature of the blinds. The panels are said to be dust repellent and easily removed and washed. No ironing is necessary. The fabric strips are available in 22 colors, which may be used singly or together to produce varied curtain effects. Sun-Vertikal Blind Co., 1638 Division Ave., S, Grand Rapids, Mich.

(Continued on page 208)

GOOD LOOKS UNLIMITED
 within rigid cost limits

K & M "Century" No. 5
AMERICAN METHOD TYPE
ASBESTOS-CEMENT
ROOFING SHINGLES

Mecco Construction Company, Philadelphia, is using K&M "Century" No. 5 Roofing Shingles on a group of distinguished all stone homes like this, at Broad Axe Village, Ambler, Pa.



Attractiveness, utility and cost are the architect's three-horned dilemma, especially in residential roofing. This presents a challenge that informed architects find themselves happily able to meet today, by employing K&M "Century" Asbestos-Cement Shingles.

The desired richness to enhance any over-all scheme is inherent in the deep cypress graining of K&M Shingles. The mineral pigments—surf green, Spanish red, black, white—are not merely on but *in* these shingles, for enduring beauty.

Architect, builder and owner can all agree on the economics of K&M Shingles. The handy 24" three-course units, rapidly laid with self-alignment, using only two nails per unit, save labor time. No maintenance, because normally there is nothing that weather, rot, or even fire, can do to K&M Asbestos-Cement Shingles.

Your inquiry for specification and application data will have our prompt attention. Write us.



Each 24" K&M shingle unit (above) lines up for that clean "custom" effect.

*Original manufacturers
 of Asbestos-Cement Shingles
 in this country.*



KEASBEY & MATTISON
COMPANY • AMBLER • PENNSYLVANIA

PRODUCTS
(Continued from page 206)

Water Heater

The *Burkay "180"* water heater is designed to provide sterilizing water for small restaurants and cafes. The heater has an input capacity of 40,000 Btu/hr and stores 4½ gal of 180 F sanitizing water for rinsing operations. Storage tank is self-contained within the heater. Relatively little piping is re-

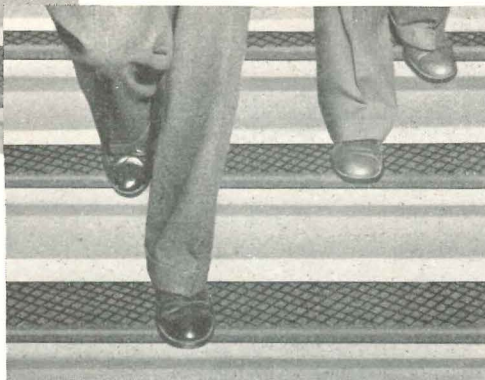
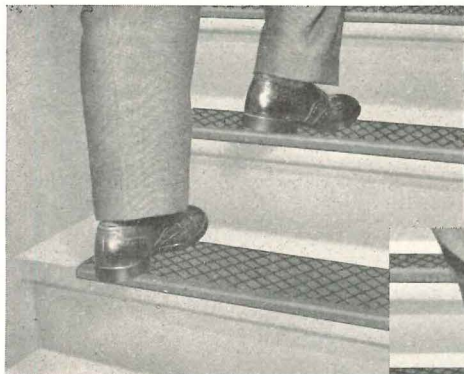
ported necessary, with water normally supplied by the building's source of warm water. Outer dimensions are: 30 in. high, 16 in. diam. A. O. Smith Corp., 3533 N. 27th, Milwaukee 1, Wis.

Folding Chairs

A metal folding chair with zipped-on fabric seat and back was introduced recently. Designed by Eva Zeisel, the chair is made in three types: side, lounge and high-back. Frames consist of a continuous, curved steel tube, held

open by two easily removed cross bars. The lower part of the frame is identical in all the chairs, while different upper parts are snapped on to form the three types. By removing the cross bars, the chair can be quickly flattened for storage and shipping.

The hammock-like seat of nylon or plied cotton, and the spring action of the tubular frame combine comfort and light weight. The chair was developed for use both indoors and outdoors. Richards-Morgenthau, 225 Fifth Ave., New York, N. Y.



Action photos of up and down stair traffic. Note points of foot contact which are also the points of slipping and of wear.

Safe GOING UP and DOWN

Feralun* Safety Treads are made to protect all "danger spots" from slips and wear

As the illustrations show, feet hit different parts of a stair tread when walking *up*—and walking *down*. A glance at any worn stairway will show the results of this "up and down" wear.

Feralun treads are made to provide full protection from this "double traffic" all stairways must serve. They always have abrasive granules in the nosings—for the *down* traffic, and should be wide enough (at least 4") to protect the *up* traffic as well.

Not only do these sturdy cast iron abrasive treads give underfoot safety *up* and *down*, but they also give protection from wear as well. Installations of Feralun treads are still giving maintenance-free safety after more than a quarter century of continuous use.

For full information on Feralun and other underfoot safety products, see Sweet's File, Architectural, Sec. 13a/10, or write to:

AMERICAN ABRASIVE METALS CO.

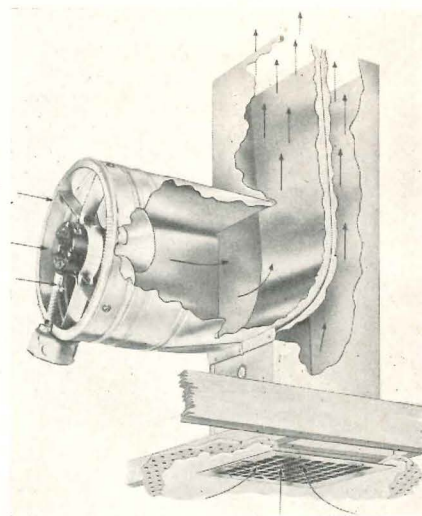
463 Coit Street • Irvington, New Jersey

USE FERALUN TREADS AND BE SAFE... "DOWN AND UP"

*Reg. U. S. Pat. Off.

Dual Ventilator

Both kitchen and attic are ventilated, and the stale air exhausted to the outside by a fan unit recently announced. The *Attifan Dual Ventilator* is designed for installation above the kitchen stove with only the grill in view. A duct extends up through the attic and is vented to the outside. Motor and fan

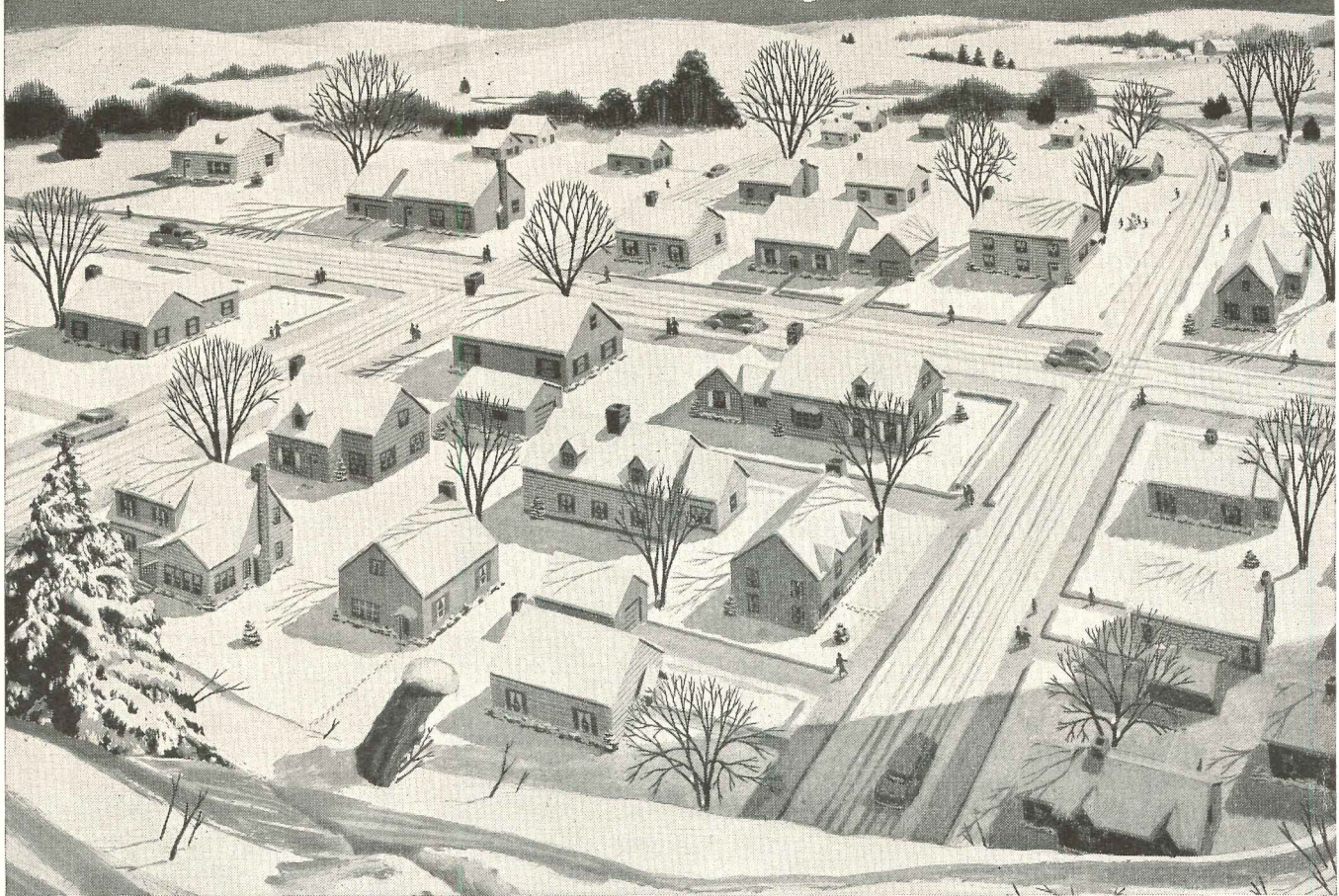


Fan unit ventilates both kitchen and attic

are mounted in an adjoining duct opening into the attic, and draw air from kitchen and attic simultaneously. The unit is said to lower room temperatures by 15 to 20 F, as well as withdraw odors, smoke, etc. from the kitchen. Advantages cited include motor replacement away from airborne cooking grease, lack of fire hazard and quiet operation. Product of Kool Air Engineering Co., San Bernardino, Calif., Attifan is nationally distributed by Appliance Products Co., Los Angeles 6, Calif.

(Continued on page 210)

This is "Comfort Valley"...

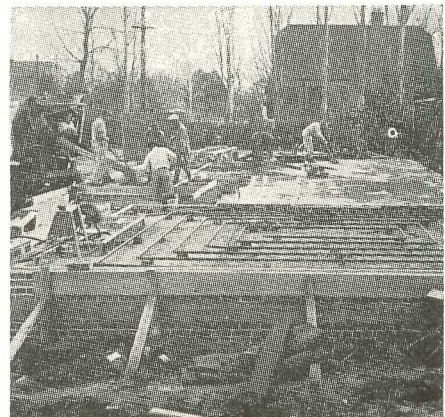


Where Steel Pipe is first choice for Radiant Heating . . .

"In the comfort of a valley, home can seem 'a dream come true,'" a poet once said . . . and his words are a perfect description of many a modern American home development. For what can make for more happy living, when the chill winds of winter blow, than the snug warmth of new, radiant heated homes in "Comfort Valleys" everywhere?

Radiant Heating systems in such homes are at their best, of course, when installed with durable, adaptable, economical steel pipe. You see, steel pipe's proved service record in conventional hot water and steam heating systems over more than 60 years would, alone, entitle it to first consideration. But, more than that, the *specific* piping requirements of the popular new Radiant installations are met in *every* particular by steel pipe. It's readily formed, easily welded, imparts structural strength, and importantly, has the same co-efficient of expansion as concrete, plaster and masonry. It's lower in cost, too, and is made to outlast the useful life of the building.

Already, as in conventional heating, more steel pipe is used for Radiant Heating than any other!

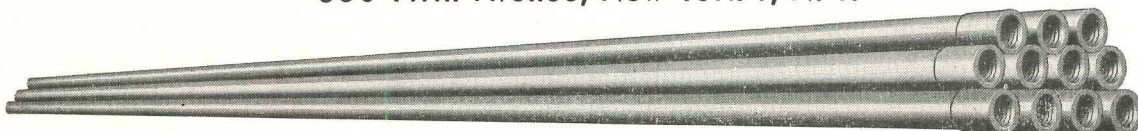


The inherent characteristics of steel pipe are perfectly "matched" to the installation requirements of Radiant Heating.

COMMITTEE ON STEEL PIPE RESEARCH

OF AMERICAN IRON AND STEEL INSTITUTE

350 Fifth Avenue, New York 1, N. Y.



PRODUCTS
(Continued from page 208)

Decorative Rubber Matting

A decorative rubber floor matting is being produced in a waffle-like design in black, maroon, red or green. The matting is designed for areas where regular corrugated matting is too light or unattractive, and perforated mats are too heavy for such service. The design is said to be easy to clean, making

it useful over carpeting in public places to prevent tracking mud and dirt. Matting is available in $\frac{3}{16}$ -in. thickness and 36-, 48- and 52-in. widths. United States Rubber Co., 1230 6th Ave., New York 20, N. Y.

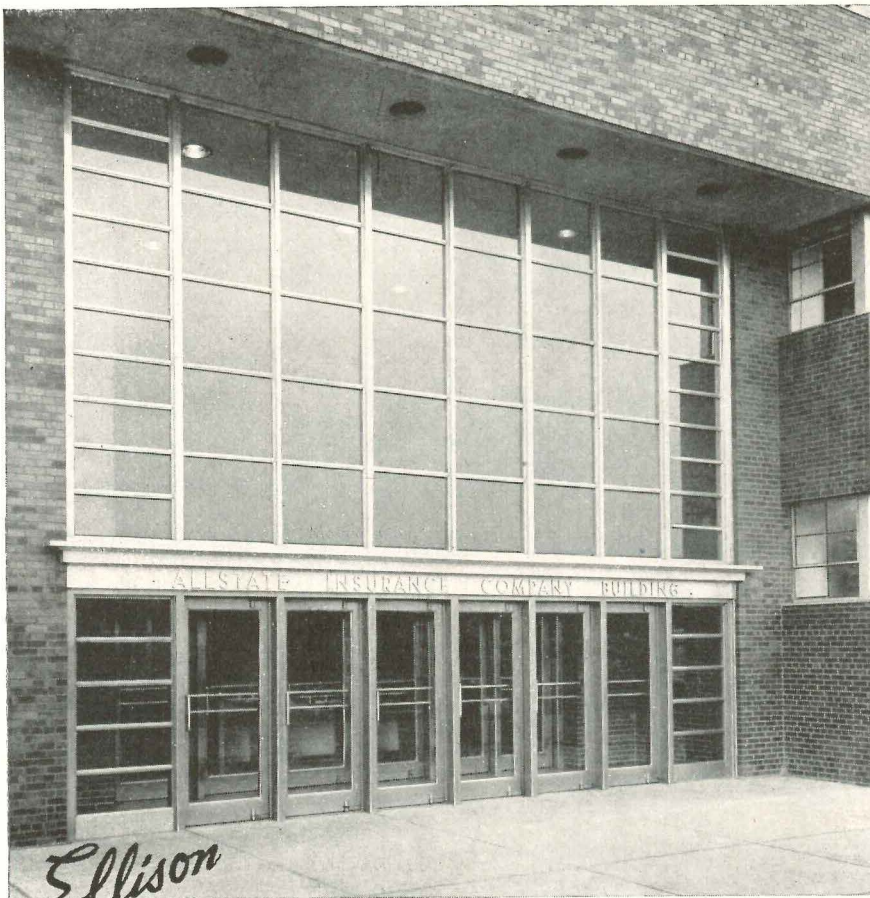
**Air Diffuser
for Acoustical Ceilings**

Joined integrally with a square panel of lightweight metal, an adaptation of the *Kno-Draft Adjustable Air Diffuser* has been designed for use with standard acoustical ceiling units. According to

the manufacturers, the simple flat design of the diffuser makes it blend unobtrusively with these ceilings. The unit has all the standard features of the *Kno-Draft* line: adjustability for angle of air discharge, air volume control, etc. W. B. Conner Engineering Corp., 114 E. 32nd St., New York 16, N. Y.

Insulation Fasteners

Speed Clip has been developed to fasten insulation permanently to sheet metal roofs and walls without adhesives. The fastener, which also can be used to secure insulation to duct work, is driven like a nail through the insulation and into the metal. The clip is said to have a razor-sharp point for penetrating steel .040 to .050 in. thick, and to form a barb which assures a secure, wind-proof installation. Box flanges and rigidity are reported to prevent the clip being driven too far into the steel. A flat head allows smooth application of finish roofing. The fastener is produced in three sizes. Tinnerman Products, Inc., 2035 Fulton Rd., Cleveland, Ohio.



the **Balanced Door** in THE ALLSTATE BUILDING, Chicago, Ill.
architects Carr & Wright, Inc., Chicago, Ill.



The Door that lets
TRAFFIC through QUICKLY

Ellison
the **BALANCED DOOR**

ELLISON BRONZE CO.
Jamestown, New York
representatives in 71 principal cities



Easily installed masonry tie features rounded, safe edges, secure anchorage

Wall Tile For Masonry Veneer

The Copperweld *V-Lok Tie*, consisting of a v-shaped prong and a nail, is reported to provide a safe, strong and permanent tie for masonry wall veneers. The tie has a steel core, and is copper coated by a special process. It is said to be rust and corrosion proof. In use, the tie is nailed to the studding, and bent to the angle required to anchor masonry facing. The wide-spread, crimped prongs are claimed to resist tensile stresses and hold securely in mortar. Copperweld Steel Co., Glassport, Pa.

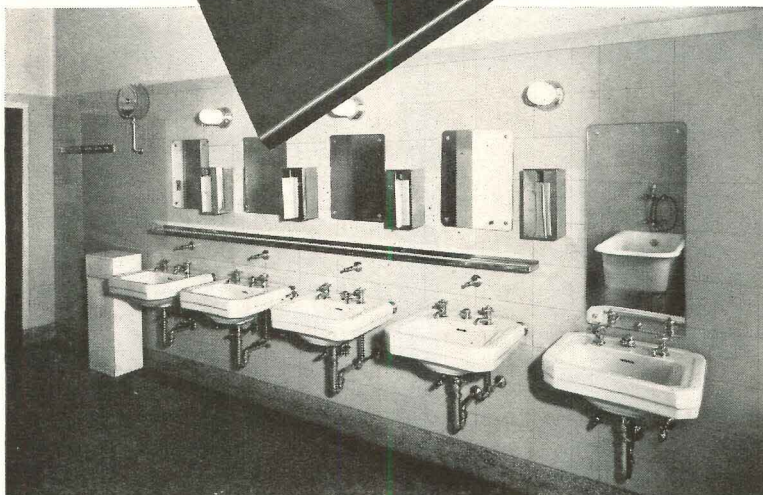
(Continued on page 212)

“I’ve found
client satisfaction
in
Carrara Glass”



THAT'S been the experience of architects all over the country. And there are cogent reasons why this is so: Carrara Structural Glass is a *quality* product, finely machined. It's flawless, with a closely-knit structure. It produces true, even joints. There is no lippage. It is free from warpage. Carrara Glass is a permanent material. It will not check, craze, fade or stain. It's impervious to moisture, weather, chemicals, grease and pencil marks. Adaptable to almost any design, it can be decorated by sand-blasting, fluting, shading or painting for ornamental purposes. Its beauty and the many possible color combinations offer the creative designer infinite opportunities for original effects.

Here, indeed, is a versatile, dependable medium, highly acceptable to your clients. The result of extensive Pittsburgh research, which is dedicated to solving architectural problems by supplying materials which will produce better jobs, it is worthy of consideration in all your plans.



Architect: Allward & Gouinlock, Toronto, Canada

Carrara *the quality structural glass*



PAINTS • GLASS • CHEMICALS • BRUSHES • PLASTICS

PITTSBURGH PLATE GLASS COMPANY

PRODUCTS
(Continued from page 210)

Truss Doors

Kennebec Truss Doors, of the hollow core, flush type, incorporate four wires or trusses to prevent warping. The wires are adjusted at the factory, with simple hollow screw fittings and metal plates to hold them in alignment, and are said to need no further attention.

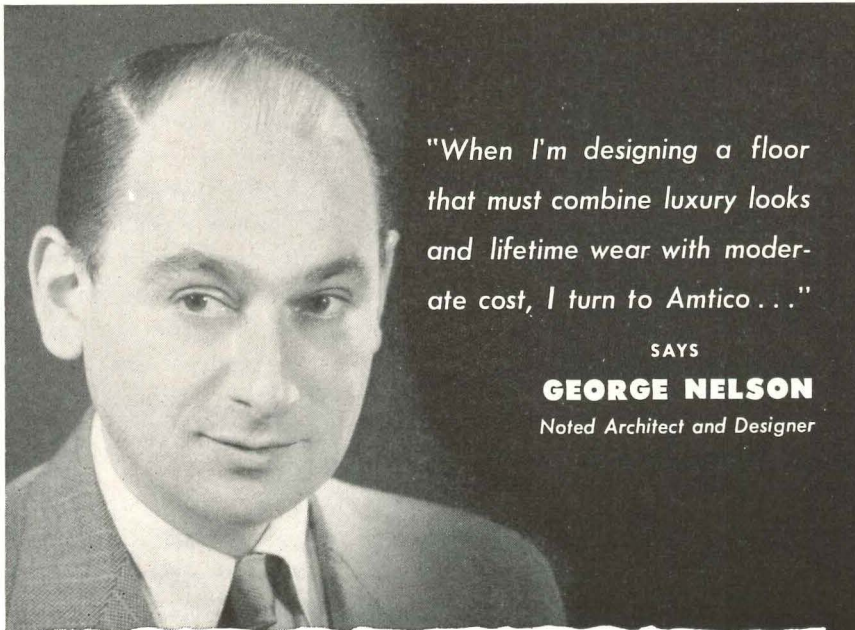
An additional feature is that, by an adjustment with a screwdriver, any door may be warped to conform to a door frame that is itself out of line. The doors are surfaced with birch veneered plywood, and are claimed to resist warping even under extremely adverse conditions of heat, moisture and rough use. Truss Door Div., Kennebec Inc., Bingham, Maine.

Plastic Shades

New window shades, made of a Vinylite plastic film, are said to combine

toughness and durability with a smooth and lustrous finish. These *Plastishades* are available in four colors, ivory, white, green and tan. Stock shades are made in 36-, 42- and 48-in. widths and 6- and 7-ft lengths. Made to measure shades are produced in widths up to 48-in. and lengths up to 9-ft.

The plastic material is reported unaffected by moisture, mildew or insects, to be tear resistant, and not to support flame. The Vinylite is also said to be resistant to fading, cracking, shrinking and staining, does not ravel and has no filling to break or fall out. Price is reported lower than cloth shades. Charles W. Breneman Co., 2045 Reading Rd., Cincinnati, Ohio.



"When I'm designing a floor that must combine luxury looks and lifetime wear with moderate cost, I turn to Amtico..."

SAYS

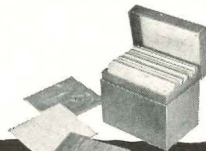
GEORGE NELSON

Noted Architect and Designer

Comparing favorably with other resilient floorings in cost, any slight added investment in **AMTICO** is soon absorbed by the way it cuts maintenance costs, and its unmatched durability. Unusual design flexibility with 22 stock colors, real rubber comfort, fire-resistance and sound-deadening qualities are other good reasons for **AMTICO**'s popularity with some of America's foremost architects and designers.

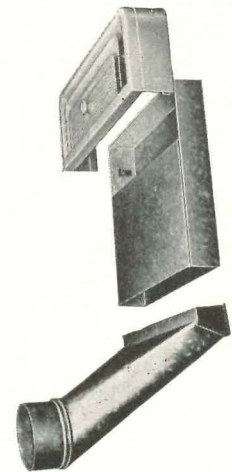
SAMPLES ON REQUEST

A free box of 4" x 4" samples of Amtico in standard 1/8" gauge and all 22 colors sent, with illustrated literature, on request. Write Dept. AR-2.



AMERICAN TILE & RUBBER COMPANY, TRENTON 2, N. J.

In Canada—American Tile & Rubber Co., Ltd., Sherbrooke, Quebec



Compact air register used with thin ducts

Floor-Type Register

A floor type register has been designed for use with the G-E *Air Wall* heating system, which reportedly requires a floor opening only 1 1/8 in. wide. No cutting or alteration of walls is said required, simplifying installation in new or old, masonry or frame construction. It is particularly recommended for buildings with walls of less than conventional thickness. The compact, complete assembly includes the die-cast aluminum register, which is installed vertically, and a sheet-metal stackhead and boot. The registers direct forced warm air upward in a fanlike pattern, in front of cold outer walls or windows. It is claimed that by also warming the walls they provide additional, radiant heat. Automatic Heating Div., General Electric Co., 5 Lawrence, Bloomfield, N. J.

(Continued on page 214)



They're moving plenty of furniture
in Tacoma since relighting with Litecontrol



... And no wonder, with their merchandise displayed in so well-lighted an area. Note the evenness of the illumination... the absence of harsh shadows... the ease of seeing... all of which make a good lighting installation.

Proper optical relationship of lamps to the Holophane CONTROLENSES* ensures this correct light distribution. The No. 9124 fixture can be used, as in this Tacoma store, with incandescent lens boxes for accent lighting... in runs of any length... or in rectangles, angles, or crosses. And its smooth, graceful lines and shallow recess depth are advantages to consider for any modern architectural design.

Other features are the flexibility of mounting, easy cleaning, easy relamping. Available in two or three

lamp models and with 75 watt slimline lamps. Write today for information and assistance in solving your lighting problems.

Installation: Rhodes Brothers, Tacoma, Wash.
 Architects: Mock & Morrison, Tacoma
 Electrical Engineers: Beverly A. Travis & Associates, Seattle
 Electrical Contractors: The Electric Construction Co., Tacoma
 Distributor: Westinghouse Electric Supply Corp., Tacoma
 Lighting Equipment: 2 Litecontrol No. 9124 curved-lens fixtures in combination with 1 incandescent lens box per run
 Lamps per fixture: No. 9124 fixture — 2-40 watt fluorescent, lens box — 1-300 watt incandescent
 Watts per fixture: No. 9124 — 100 watts, incandescent — 300 watts
 Area Lighted: 74 feet by 120 feet
 Footcandles: 50 in service (average)

Write for New Booklet!

Contains: Pictorial Index for easy, quick reference. Complete descriptions and specifications on all Litecontrol fixtures, including utilization factors, formulae and all data necessary to figure an installation from start to finish.



LITECONTROL
Fixtures

KEEP UPKEEP DOWN

DESIGNERS, ENGINEERS AND MANUFACTURERS OF FLUORESCENT LIGHTING EQUIPMENT DISTRIBUTED ONLY THROUGH ACCREDITED WHOLESALERS
 * © HOLOPHANE CO., INC.

LITECONTROL CORPORATION

36 Pleasant Street, Watertown 72, Massachusetts

Please send me a copy of your new booklet.

Name Title

Company

Street

City State

A



Todd Tibbals, Architect
Columbus, Ohio



- For faithful reproduction of your designs
- For close attention to your detailed specifications

SPECIFY
Ornamental Iron
by Artcraft

Be assured of the finest, most exacting hand wrought ornamental iron custom work. Artcraft also produces a complete line of stock items: Stoop railings, porch columns, hand rails, mail box standards, screen door grilles and chimney initials.

Send in your specifications direct for custom work, order stock items from our catalog. Two weeks delivery on custom work, immediate delivery on stock items. All work fully GUARANTEED. We ship to all points in U.S. and Canada.

SEND FOR OUR FREE LITERATURE AND CATALOG

New A.I.A. File No. 14 and 15 folder on stock and custom work is just off the press. Also our new 40 page catalog "ART IN IRON" is free on request. Write today for your copies.

Write to Dept. R

ARTCRAFT
ORNAMENTAL IRON CO.
724 E. Hudson St., Columbus 11, Ohio

Architectural Engineering

PRODUCTS
(Continued from page 212)

Steel Sliding Doors

A new welded steel sliding closet door, the *Spacemaker*, consists of two flush type steel doors operated on ball bearing rollers within a steel door frame. The unit is shipped complete, ready for installation. Doors may be purchased separately for use in wood frame openings.

The product is finished in a prime coat of baked-on paint. The units are claimed to eliminate cracks, warping and sticking. The Steelcraft Mfg. Co., 9017 Blue Ash Road, Rossroyne, Ohio.



Ceiling fixture gives soft, diffused light

Lighting Fixture

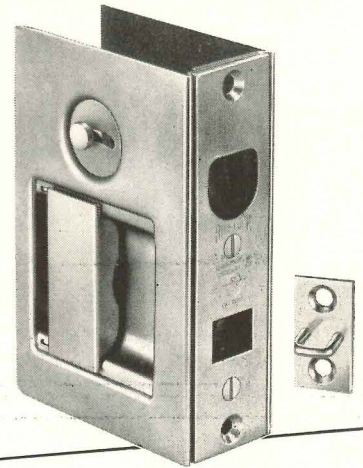
A contemporary ceiling fixture (catalog series 290-3) designed by Harry Gitlin, is said to give soft, glareless, widely diffused illumination. The light source, concealed in cups, throws light up into dome which redirects light to the floor. The fixtures are available in 24-, 30- and 36-in. diameters in a brushed brass finish. Other finishes can be supplied if specified. Ledlin Lighting, Inc., 49 Elizabeth St., New York 13, N. Y.

New Furniture Line Announced

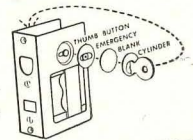
The JG Furniture Co., Inc., producers of durable furniture for use in public

(Continued on page 216)

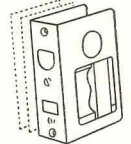
NEW SERIES 500
RITE-LOCK
FOR SLIDING DOORS



NOW-FULLY REVERSIBLE



3 ADJUSTABLE WIDTHS FIT 1 1/8" - 2" DOORS



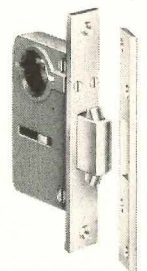
Here is the most versatile lock for every sliding door application. It is adaptable to any requirement as to hand, security and finish... while the three standard sizes adjust to fit any door thickness, 1 1/8" to 2"

The thumb button, emergency or blank discs or cylinder can be interchanged from side to side on the job. This means that dealers can supply any combination required by merely stocking a few representative discs and cylinders in popular finishes.

Rite-Lock is easily installed by a simple cut-out without any mortising. The escutcheon measures 4 1/2" x 2 7/8". All exterior parts solid brass. Write us on your letterhead for the new Adams-Rite Catalog 49.

CYLINDER DEADLOCK FOR SLIDING DOORS

This cylinder deadlock operates by cylinder from one or both sides. Fits all standard cylinders with adapter cams furnished (specify when using Yale or Sargent cylinder). Solid bronze face, strike and bolt. Heat treated aluminum alloy case. Use your own cylinders and trim. Also used as jimmy-proof lock.

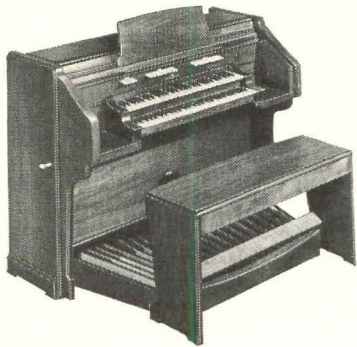


QUALITY HARDWARE FOR NEARLY HALF A CENTURY

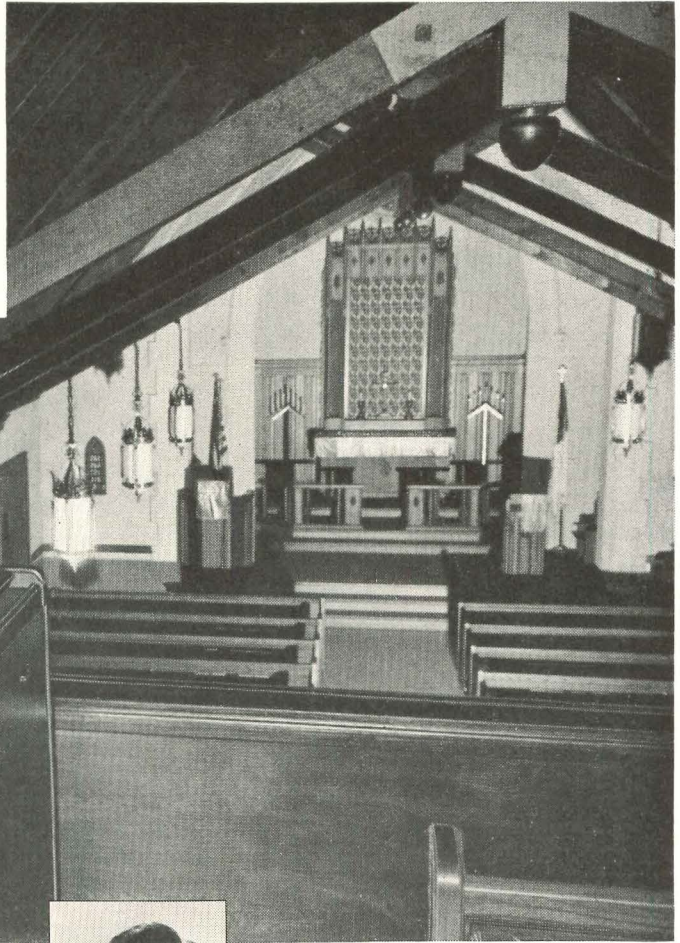
ADAMS-RITE MANUFACTURING CO.
540 WEST CHEVY CHASE DRIVE, GLENDALE 4, CALIFORNIA, U. S. A.

Wurlitzer Organ

saves space, reduces cost,
permits better design



Series 50 Wurlitzer Organ, the model selected for the new Trinity Lutheran Church



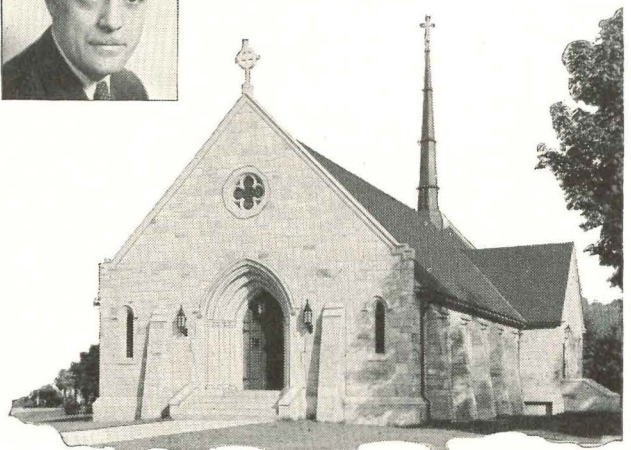
New Trinity Lutheran Church, Easthampton, Mass.
Architect: Arland A. Dirlam

Speaking of the organ installation in the beautiful new church pictured here, Mr. Arland A. Dirlam, architect, says, "Organs such as the Wurlitzer allow greater flexibility in church design . . . do not require large areas for blower units and organ chambers, and are comparatively low in cost. Consequently, space and funds saved can be diverted to many other useful purposes."

Equally important, the Wurlitzer Electronic Organ completely satisfies the church congregation. "The entire congregation is greatly pleased with our choice of a Wurlitzer," says Mrs. Worth O. Walker, organist. "It is especially satisfying to me because of its traditional church organ tone and its conventional arrangement of stops and playing technique."

Wurlitzer makes a *complete* line of electronic organs, both single-manual and double-manual types—models for *every* type of installation. Write for complete information.

THE RUDOLPH WURLITZER COMPANY, NORTH TONAWANDA, NEW YORK



WURLITZER

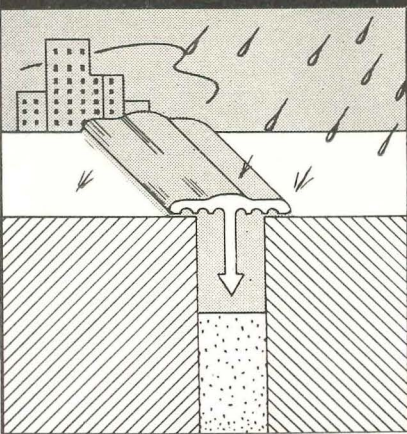
World's Largest Builder of Organs and Pianos
Under One Name

**TO STOP
LEAKS
BEFORE
THEY START-**

Specify



WEATHERCAP
for masonry joints!



- Seals joints in copings, cornices, wash and belt courses, once and for all! For sample and specification data, mail coupon.

SEND FOR YOUR SAMPLE

Minwax Company, Inc.
11 West 42nd St., New York 18, N.Y.

Please send me free sample of Weathercap with descriptive folder and specification data.

Name

Address

City

State

AR-3-50

Architectural Engineering

PRODUCTS
(Continued from page 214)

places, announces a new line of contemporary living room furniture. Designed by Ray Komai, Paolo A. Chessa of Milan, Carter Winter and Irving Sabo, the line will include a variety of chairs and other seating units, a few elemental storage boxes and tables. They will be available to architects and decorators through the manufacturer. JG Furniture Co., Inc., 317 E. 32nd St., New York, N. Y.

Heating Flow-Control

The *Thrush Flow Control Valve* is combined with an air vent tube for use on automatically-fired forced hot water heating systems. The purpose of the valve is to vent air as it accumulates in top of boiler and pass it directly into pressure tank. Water for heating system is taken from boiler, below outlet opening and free of air.

The combination valve is claimed to insure positive air elimination from the boiler, and put it in pressure tank where it can serve a useful purpose. Frequent venting of radiators, etc., is said to be unnecessary when the unit is employed. H. A. Thrush & Co., Peru, Ind.

Shock Proof Outlets

No-Shok Safety Duplex Receptacles are designed with a built-in rotary cap which automatically closes the outlet when not in use. A quarter turn of the cap with plug allows prongs to enter. When plug is pulled out, cap automatically swings shut.

The dual outlet is said to be sturdily constructed, with bronze contacts, lifetime spring action and double walls of bakelite insulating heavy duty terminals. All parts are rustproofed. Bell Electric Co., 1844 W. 21st St., Chicago 8, Ill.

Radiator Valve

Heat-Timer, a thermostatic radiator valve, is designed to permit individual room heating control. The valve is reported to be easily inserted on any ordinary radiator of a one-pipe steam system, in place of the air valve. The dial is set to any temperature desired,

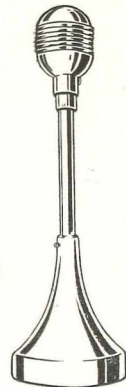
(Continued on page 218)

NEW LIGHTS
by Cannon Electric



**TYPE
DMP-1**

Marine-Type Pedestal Light, similar to the top of the Pathfinder (shown below), may be used on posts, side walls, ceiling, etc. Plastic lens in various color combinations. Low voltage or 115V. Cap and base are aluminum alloy or zinc. Mounts on 4" octagonal outlet box, with round plaster ring.



**PATHFINDER
TYPE
16264-11**

Growing in popularity for driveways, pathways, steps, gardens or grounds for permanent installation in low voltage or 115V. Colored prism lens combinations make special uses possible. Adjustable. Riser pipe extra.



New QT7 type has two filament type lamps for quick starting. Other wording such as "DO NOT ENTER", etc. may be substituted. Prism end lens in red or other color, as desired.



Write for new C-48 Condensed General Catalog for a review of Cannon Electric products and prices; Bulletin PL-2 and Q-2 for the above lights.

Address Cannon Electric Development Company, Division of Cannon Manufacturing Corporation, 3209 Humboldt St., Los Angeles 31, Calif. Canadian offices and plant: Toronto, Ontario. World Export: Frazar & Hansen, San Francisco.

SINCE 1915
CANNON ELECTRIC

LOW-COST, DEPENDABLE RUST-RESISTANCE

... for all Types of Sheet Metal Work

You get it in TONCAN IRON—the architect's favorite for every installation in which rust may be a problem.

TONCAN is an *alloy* iron. Its basic ingredient is highly-refined open hearth iron. Copper is added—*twice as much* as in ordinary copper-bearing steels or irons. Then the correct amount of Molybdenum is alloyed to bring out the full effectiveness of this double dose of copper.

This high rust-resistance is no mere surface quality. It extends *all through* the iron. Fabrication does not lessen it. TONCAN IRON readily can be formed,

punched, sheared, riveted, soldered, welded and otherwise worked—and still it fights rust.

How about cost? . . . only slightly higher than less rust-resistant materials when you figure the total labor-material-haulage costs of any job. For your client, TONCAN IRON quickly becomes a real saving through its long years of rust-resisting service.

You'll find more information in Sweet's Architectural File, or write to:

REPUBLIC STEEL CORPORATION
 GENERAL OFFICES • CLEVELAND 1, OHIO
 Export Department: Chrysler Building, New York 17, N. Y.

for **40** years . . . HIGHEST RUST-RESISTANCE
 OF ALL FERROUS MATERIALS IN ITS PRICE CLASS



Here's the story

COPPER-BEARING STEEL

Open hearth steel + Copper = Ordinary copper-bearing sheets

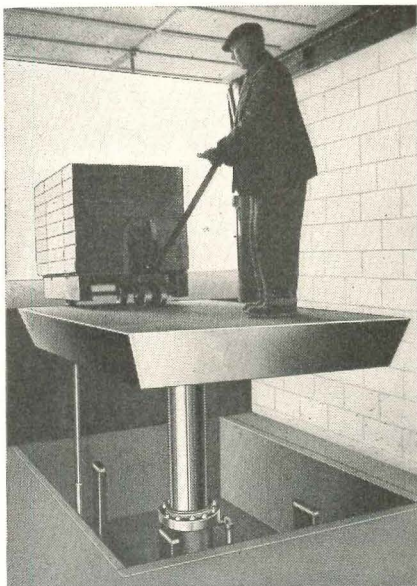
TONCAN IRON

Open hearth iron + Molybdenum in proper proportion + Twice as much copper = TONCAN IRON SHEETS, most rust-resistant ferrous sheets in their price class!

Republic 

TONCAN COPPER MOLYBDENUM IRON

— for ducts, gutters, conductor pipes, roofing, siding, tanks, ventilators, skylights, hoods and other sheet metal applications requiring rust-resistance — and for corrugated metal drainage products.



GLOBE RAMP ELIMINATOR

Even with varied floor levels, you can keep plant traffic "on the level" with a Globe Ramp Eliminator. Moves goods from one floor level to another, quickly, easily, safely.



Reduces danger of injury to workmen. Eliminates risk of cargo slipping off trucks on ramps or makeshift gangplanks. Permits faster flow of traffic through plant with great time and money savings. Air/oil or push-button control raises and lowers the Lift hydraulically. Handles up to 20,000 lb. loads. Mail coupon today for new catalogue giving specifications and complete details.

Experienced Globe Lifting Engineers will gladly furnish estimates or suggestions on all types of lifting and materials handling problems.

MAIL COUPON TODAY

GLOBE HOIST COMPANY
1000 E. Mermaid Lane
Philadelphia 18, Pa.

Please send Bulletin A350 showing illustrations, specifications on Ramp Eliminator and other time-saving Globe Lifts.

Company.....
Name..... Title.....
Street..... City..... State.....



GLOBE HOIST COMPANY

Des Moines 6, Iowa Philadelphia 18, Pa.

Architectural Engineering

PRODUCTS (Continued from page 216)

and the unit is said to maintain this temperature constantly. No changes are said required in existing controls. Heat-Timer Corp., 160 Fifth Ave., New York, N. Y.

Troffer Lighting

Neo-Ray Skylette slimline troffer-fixtures are designed with removable ends to allow continuous mounting. No partitions or joints are said to show below the reflectors. An incorporated device is said to assure permanent alignment and prevent fixture from spreading and slipping. Units are equipped with hinged wiring channel and snap-on hinges. The shallow body and reflector are finished in baked-on white enamel. Models are available with either 2, 3 or 4 lights. It is claimed that no extra parts are needed when using fixtures on continuous lighting. The Powerad Co., 79 Madison Ave., New York 16, N. Y.

Plastic Signs

The use of *Plexiglas* for outdoor electric signs is said to offer many features: weatherability, diffusion of light, light weight, impact resistance and ease of handling. Color may be integral or coated on the inside surface of a clear sheet. Copy is formed directly in the plastic or made separately and cemented on. The medium is reported low in maintenance costs and attention-getting, with same appearance day and night when internally lighted. Rohm & Haas Co., Washington Square, Philadelphia 5, Pa.

Floor Outlet

The *Universal Floor Box* features an adjustable, leveling top to provide a smooth floor surface. This finishing cover has a variable adjustment of $\frac{1}{8}$ to $\frac{1}{4}$ in., and is claimed adaptable for varying flooring thickness. Box diameter is 4 by $2\frac{3}{8}$ in. with 4 flattened sides for knockouts, plus a $\frac{1}{2}$ in. knockout in the bottom. Unit may be used for lighting, phones, etc. Frank Adam Electric Co., Box 357, St. Louis, Mo.



for forms OLD and forms NEW

Lime Plaster is the Answer

No building material lends itself so willingly to the imagery of the architect. To the smooth surfaces, regardless of their contours; the highly ornamented, regardless of their style.

Also, no substitute has matched good plaster for soundness of construction and life-of-the-building durability. It provides an interior finish that is smooth, clean, free of joints, vermin and rodent proof, fire safe and accoustically right. Finishing Lime from Northwestern Ohio has long been the accepted standard.

• OHIO WHITE and HAWK SPREAD are Ohio Hydrate's identical brands of hydrated finishing lime. They are always uniformly right, 99 $\frac{1}{2}$ % pure.

• OHIO WHITE AUTOCLAVED Finishing Lime is equally good quality. It needs no soaking. For fine, white coat plaster, brick mortar and other uses.

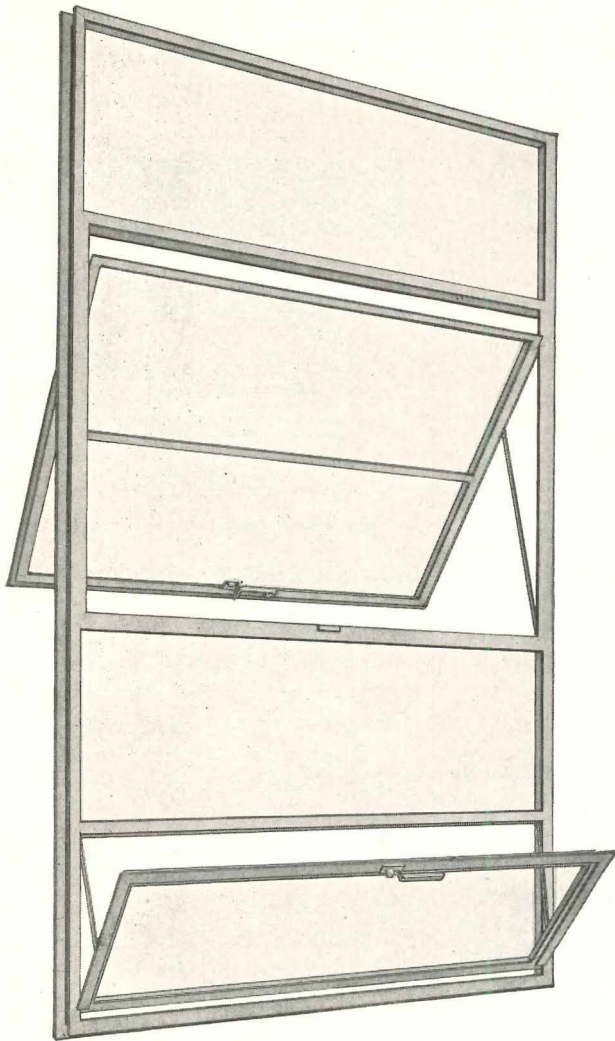
• OHIO SANLIME FINISH, a plaster for sand finish interior work, contains all ingredients in dry-mixed form. In white and in colors: ivory, buff, pink, blue, and light green.

The red zigzags on the bags are our trademark, your assurance of quality.

The OHIO HYDRATE & SUPPLY Co.
WOODVILLE, OHIO



4 advantages in the new LUPTON "MASTER" ALUMINUM WINDOW



1. **NEW DEEP SECTIONS**—Both frames and ventilators 1-5/8 inches—sturdier without sacrificing lightness. Added strength.
2. **PRECISION WEATHERING**—Ventilators fit snug and tight—naturally—without forcing. Full 5/16 inch overlapping contact.
3. **SPECIAL HEAT TREATED ALUMINUM ALLOY** used in this new Lupton Window eliminates painting and costly repair and maintenance.
4. **STURDY CONSTRUCTION**—Welded ventilator corners—strength where strength is needed.

SPECIALLY DESIGNED FOR HOSPITALS, SCHOOLS AND OFFICE BUILDINGS

The new Lupton "Master" Aluminum Window is the newest member of a great family of metal windows. A family of windows that has grown up through more than forty years to meet the changing demands of the building industry.

In your 1950 plans for hospitals, schools and office buildings you will get strength and beauty with the new Lupton "Master" Aluminum Window. Write for Data Sheets today.

MICHAEL FLYNN MANUFACTURING CO.
700 East Godfrey Avenue, Philadelphia 24, Penna.

LUPTON

METAL WINDOWS

PROTECT LIVES AND PROFITS! SPECIFY...



MODEL 10EL
10,000 WATTS

Onan Emergency Electric Plants provide power for all essential needs . . .

LIGHTS • REFRIGERATION • VENTILATING SYSTEMS • COMMUNICATIONS • OIL BURNERS • STOKERS • ELEVATORS

* When storms, floods or breakdowns interrupt commercial power, Onan Standby Plants start automatically and take over the power load within seconds, stop when power is restored. Operating and maintenance costs are negligible. Widely used in hospitals and other institutions, radio stations, hatcheries, theaters, industrial plants . . . wherever power interruptions would be dangerous and costly. Available from 1000 to 75,000 watts.

What size Standby Plant will your project need?



Send coupon below for folder on Onan Standby Plants. It will help you specify the right size plant and the necessary accessories. If you have an unusual problem write our engineering department.

D. W. ONAN & SONS INC.
5142 Royalston Ave., Minneapolis 5, Minn.



Please send me your Standby Folder

Name

Address

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

ONAN STANDBY POWER

Architectural Engineering

LITERATURE

(Continued from page 146)

Insul-Bond products in houses. Dimensions and suggestions for application are noted. 10 pp., illus. Arizona Fibre Board Corp., 40th Ave. and Lincoln, Phoenix, Ariz.

Glass Fiber Insulation

Fiberglas Thermal Insulations. Booklet describes all forms of Fiberglas thermal insulations. Data and charts on thermal conductivity and sound absorption properties are included. The booklet is illustrated with numerous application photographs and drawings. 16 pp., illus. Owens-Corning Fiberglas Corp., Nicholas Bldg., Toledo 1, Ohio.*

Masonry Chimneys

Performance of Masonry Chimneys For Houses (Technical Paper No. 13). Presents data collected under an investigation of masonry chimney construction, with conclusions for improvement of design and construction. Performance above, below and at normal operating temperature ranges is analyzed. Housing and Home Finance Agency, Office of the Administrator, Washington 25, D. C.

Floor Tile

Hako Factory Waxed Asphalt Tile For America's Finest Floors. Folder shows patterns and colors available in the tiles, feature strips and cove bases. Several floor design ideas and actual installation pictures are included. A section lists requirements for application of the tiles over various types of subfloors. 4 pp., illus. Hachmeister-Inc., 2332 Forbes St., Pittsburgh, Pa.*

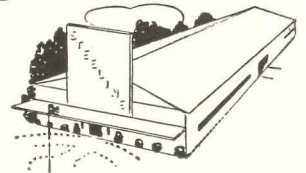
Septic Tanks

Youngstown Food Waste Disposer Installation With Septic Tank. Booklet discusses problems and solutions in connection with a septic tank system when a disposer is connected to it. Information is also provided on the operation of a septic tank, selection of a drainage field, use of leaching pools, and the use of septic tanks in series or parallel.

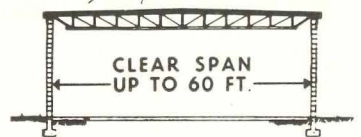
(Continued on page 222)

Cut CONSTRUCTION COSTS WITH Steeline "PACKAGED" ROOF SYSTEMS

Pitch Roof Systems



Flat Roof Systems



SLASH your construction costs and time with Steeline "Packaged" Roof Systems . . . furnished complete from the eave line up. No columns are required in the side walls.

Pitch roof systems use structural framework and heavy galvanized steel roof sheets.

Flat roof systems consist of structural steel trusses, bridging and steel deck.

Both of these Steeline Roof Systems are easy to insulate.

For more information, fill in and mail coupon below.

All Steel Buildings also available

I am interested in:

..... Pitch Roof Systems

..... Flat Roof Systems

..... All Steel Buildings

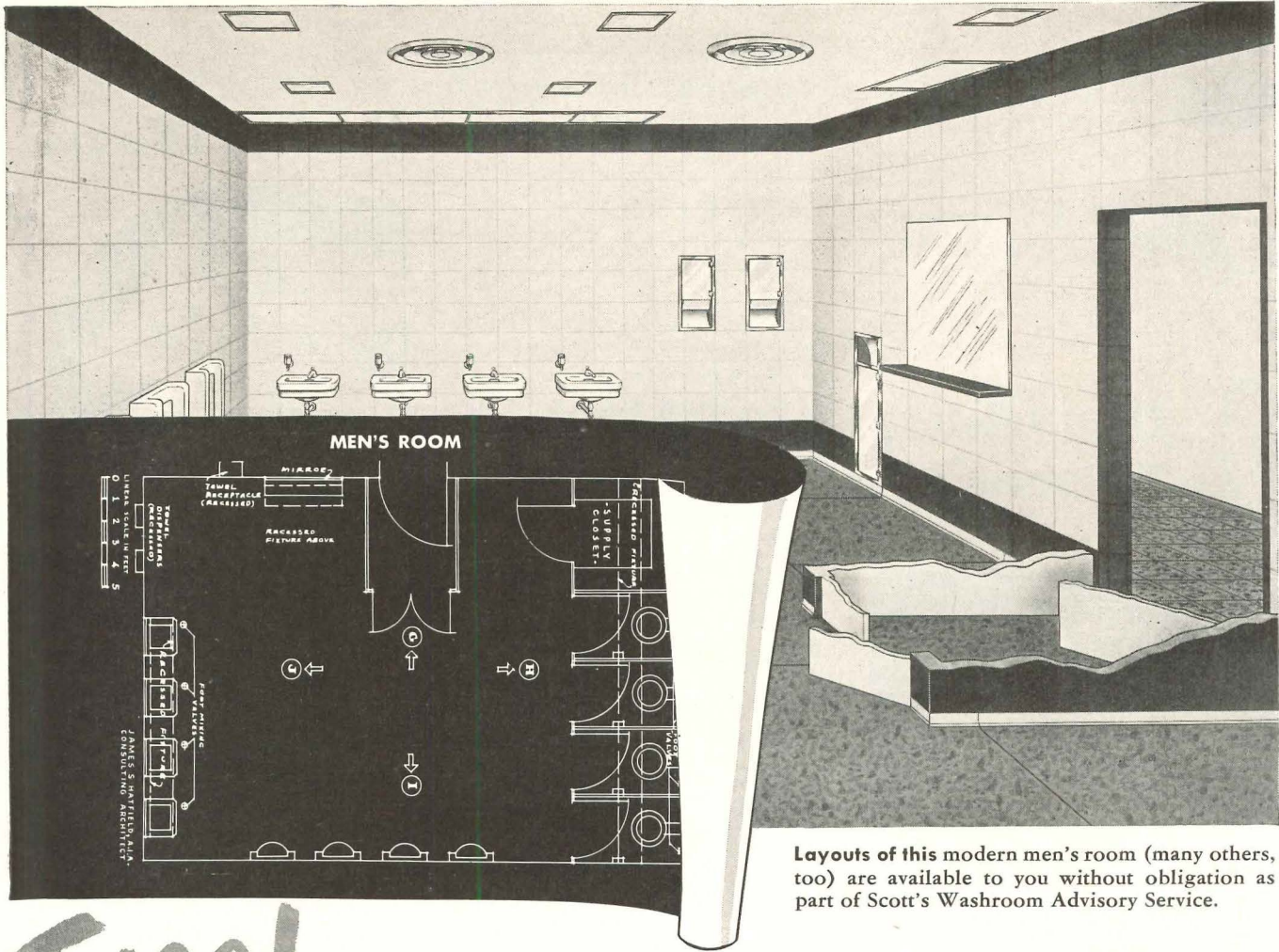
..... Width..... Length..... Height

NAME

ADDRESS

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

CAREW STEEL PRODUCTS CORP.
YORK 2, PENNSYLVANIA



Layouts of this modern men's room (many others, too) are available to you without obligation as part of Scott's Washroom Advisory Service.

Free!...

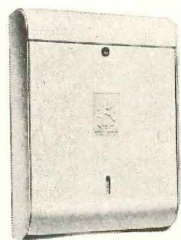
**Plans for modern washrooms like this . . .
from SCOTT WASHROOM ADVISORY SERVICE!**

Regardless of the type of building you're planning . . . regardless of whether it's new construction or remodeling . . . Scott Washroom Advisory Service can help you with trained consultants and priceless experience gained in servicing over 300,000 washrooms.

Layouts are available to help you plan the best possible personal services for your project. And remember—the extra care you put into

these rooms will enhance your reputation . . . help your client through the added good will of washroom users.

Have Scott experts give you a confidential report on the ideal washroom arrangement for the job you're working on right now. Contact Washroom Advisory Service, Scott Paper Company, Chester, Pennsylvania . . . you'll hear from us promptly.



SCOTT

Symbol of Modern Washrooms

Trade Mark "Washroom Advisory Service" Reg. U. S. Pat. Off.

**Send for A. I. A. file form brochure
on Scott Washroom Advisory Service!**

WASHROOM ADVISORY SERVICE
Scott Paper Company, Dept. A, Chester, Pennsylvania

Please send me A. I. A. file form brochure on your Washroom Advisory Service for architects.

Name _____

Company _____ Title _____

Address _____

City _____ Zone _____ State _____



Smoother



Quieter



More Economical

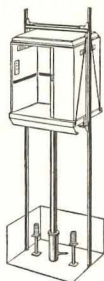
OILDRAULIC ELEVATORS

give you the velvet power of

ROTA-FLOW

Rota-Flow, revolutionary new hydraulic power transmission system, moves Rotary Oildraulic Elevators on a continuous, pulsation-free column of oil.

Rota-Flow eliminates vibration and "pumping" noise and operates with greater efficiency than any other hydraulic power unit. Automatic floor-leveling within 1/4" guaranteed, regardless of load or rate of speed.



The most practical elevator for 2, 3 or 4 stories

Owners save up to 25% because Oildraulic Elevators eliminate need for costly penthouse and heavy load-bearing shaftway structure. Powerful Rotary hydraulic jack supports entire system.

Write for Catalog

Call on Rotary's coast-to-coast field organization to help you with your elevator plans. For catalog and specifications, write Rotary Lift Co., 1103 Kentucky, Memphis, Tennessee.

Rotary Oildraulic Elevators

PASSENGER AND FREIGHT

Architectural Engineering

LITERATURE

(Continued from page 220)

Tables give tank sizes suitable for varying needs. Sketches and diagrams illustrate the different layouts presented. 9 pp., illus. Mullins Mfg. Corp., Warren, Ohio.*

Plastic Veneers

Parkwood Decorative, a Permanently Finished Decorative Material. Brochure pictures in color several applications of the decorative laminates. Descriptions, features and sizes are given for the patterns available. 4 pp., illus. Parkwood Corp., 33 Walter St., Wakefield, Mass.*

Now Panelyte Presents a New Design For Living. Includes color samples and sketches of rooms employing the new Cameo design of Panelyte, a high pressure laminated plastic. Uses and features for application on various surfaces are discussed. 4 pp., illus. St. Regis Sales Corp., Panelyte Div., 230 Park Ave., New York 17, N. Y.*

Convactor Radiator

How to Recess Type A Convectors (Booklet 1865). Step by step sequence of the installation of the convactor radiator as a semi-recessed unit in frame construction is illustrated and described. Clearances, insulation and piping connections are noted. Several rooms are shown with the unit installed. 16 pp., illus. The Trane Co., 2nd and Cameron Ave., La Crosse, Wis.*

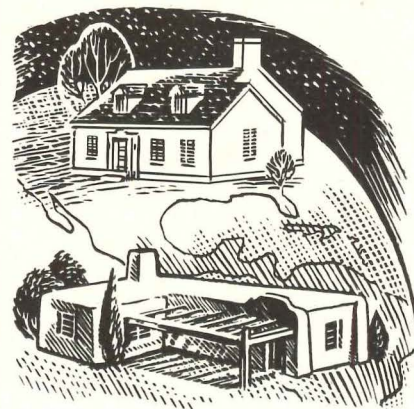
Metal Tile

Modern Materials For Modern Living. Booklet covers features, colors, finishes and specifications of Alumitile. Color photographs show use in baths, kitchens, restaurants and store fronts. Aluminum mouldings and Alumi-Shield awnings are also pictured and discussed. 16 pp., illus. Metal Tile Products, Inc., Hastings, Mich.*

Concrete Curing Compound

Permite Membrane Concrete Curing Compounds. Describes features and application of two curing compounds: one
(Continued on page 224)

Any Style For Any Climate



ENGINEERED HOUSES

are flexible!

Engineered Houses fit any climate, any style, whatever you want—your way! They're rugged individualists designed for speed—fast because we take your plans or ours and pre-cut and panelize the materials into mass-production. *Not pre-fab!* Not made to straight-jacket formulae. Versatile—an entirely new conception! \$4,000 house or \$40,000 house; one unit or a complete project. Our engineers have a billion hours of know-how proved on projects across the nation and around the world! Save on material costs. Save on erection costs.

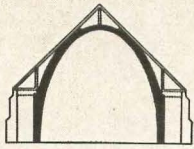
FOR COMMUNITY, INDUSTRIAL OR SPECIALIZED NEEDS

Phone, wire or write for FREE booklet ENGINEERED HOUSING and get full details on this revolutionary technique in housing construction!

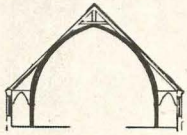
TEXAS HOUSING COMPANY



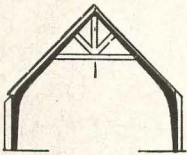
9001 DENTON DRIVE
PHONE D4-2601 DALLAS, TEXAS



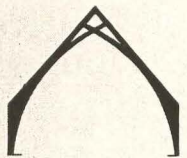
Elliptical shape is highly efficient structurally, as well as unusual and effective architecturally.



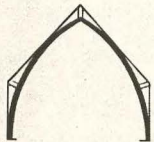
Gothic Frame
Simple "UNIT" arch clear of wall structure, leaving space for aisles.



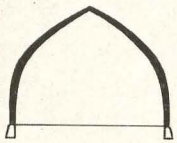
Straight top lines of this variation permit greatest economy in roof construction by providing direct seat for purlins.



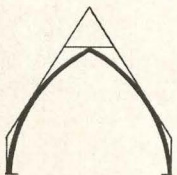
Scissors truss effect of Type G arch completely fabricated in factory is far more stable than bolted truss.



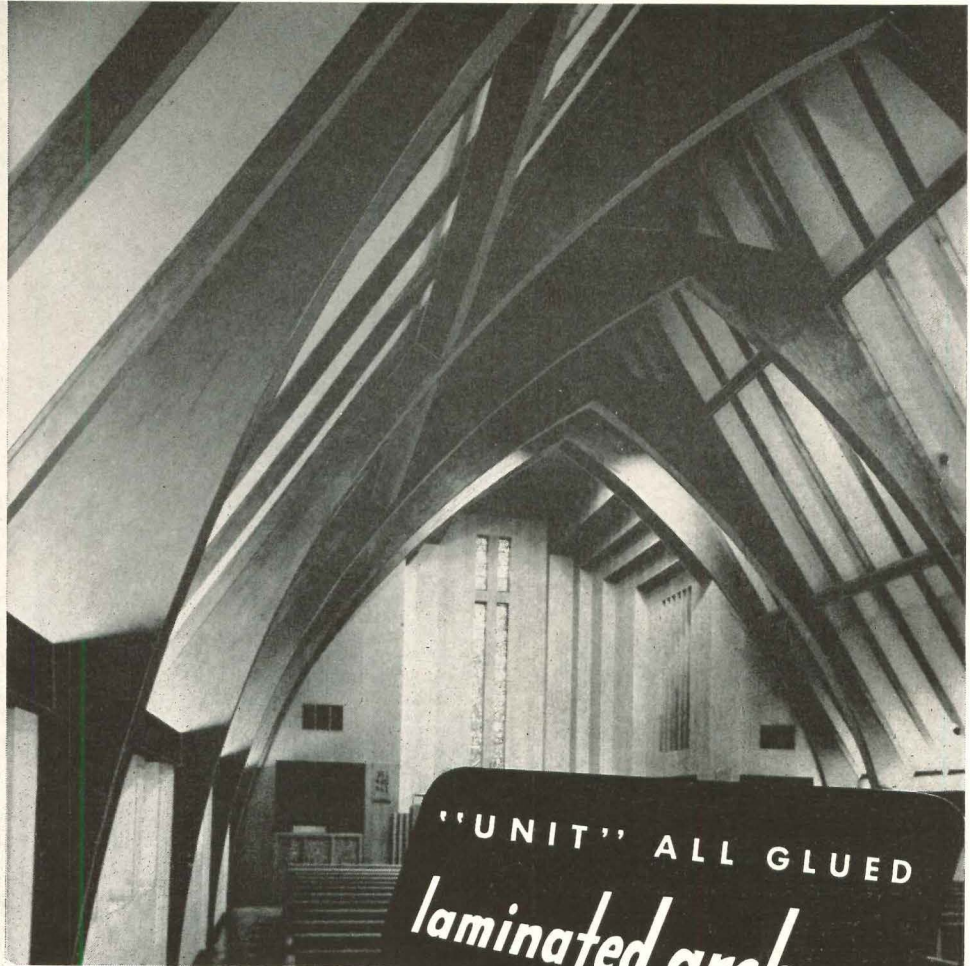
Various decorative effects may be achieved by gluing functional section during fabrication.



Type G with spring line up near eaves level provides maximum clearance.



TYPE G, may have the spring line at the heel and is the simplest form. Tie rod at heel is usual practice. Buttress may be used instead.

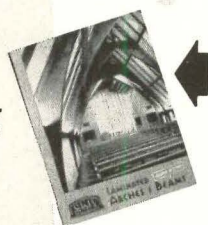


**"UNIT" ALL GLUED
laminated arches**

specify with confidence!

THE pioneering background and the design and production "know how" of Unit's technical staff has resulted in the use of "Unit" arches by leading architects all over the nation.

The laminating process (U. S. Patents No. 2177395 and No. 2172093) used in the construction of "Unit" all glued laminated arches permits shaping to any desired form resulting in greater stability than the use of natural sawn timbers . . . a structure that will not shrink, check or warp . . . a structure which offers unlimited decorative treatments and maximum fire resistance.



For complete details check Sweet's File, Architectural for our descriptive Catalog or write to Unit Structures, Inc., Peshtigo, Wisconsin. The technical staff of Unit Structures, Inc., is prepared to furnish advice and assistance to architects in the selection and application of "UNIT" glued laminated arches and beams and prepare preliminary and final design data for special units for individual application.

FOR GREATER ECONOMY . . . FOR ERECTION SIMPLICITY . . . FOR A NEW STANDARD OF MODERN DESIGN AND EFFICIENCY. SPECIFY "UNIT" ARCHES, BEAMS OR RAFTERS FOR YOUR NEXT PROJECT.

UNIT STRUCTURES, INC.  **PESHTIGO WISCONSIN**

REPRESENTATIVES IN ALL PRINCIPAL CITIES

**"AS AN ARCHITECT,
I SELECTED
WEBSTER BASEBOARD
HEATING FOR MY
OWN HOME. THAT
WAS THREE YEARS
AGO—I WOULD
USE IT AGAIN
IF I WERE
BUILDING TODAY"**



Residence of W. Marshall Hughes, A.I.A., Wyomissing Hills, Reading, Pa. Architect: W. Marshall Hughes. Builder: W. M. Hughes & Son, Inc. Heating Contractor: Corbit's, Inc.

As a home owner interested in fuel economy, and as an architect concerned with over-all appearance and design, W. Marshall Hughes is enthusiastic about Webster Baseboard Heating.

"After three heating seasons, I have found that Webster Baseboard Heating uses less fuel than estimates submitted on all other types of heating . . . gives me more uniform comfort and cleaner heating than any system I have used."

Webster Baseboard Heating is perfected hot water heating installed behind a specially-designed metal baseboard around the exposed walls of a room. It is *clean* heat, *convected* heat . . . *radiant* heat in its most practical form. Even in *sub-zero* weather, tests have shown *less than 2 degrees* variation from floor to ceiling.

Your local heating contractor can install Webster Baseboard Heating in residences, row houses, garden apartments. Write for your copy of "Questions and Answers about Webster Baseboard Heating."

Address Dept. AR-3

WARREN WEBSTER & CO.
Camden 5, N. J. Representatives in Principal Cities
In Canada, Darling Brothers, Limited, Montreal

**Webster
BASEBOARD
HEATING**

Architectural Engineering

LITERATURE (Continued from page 222)

recommended for all horizontal concrete surfaces and for vertical surfaces below ground, and the other for vertical surfaces where non-discoloration is an important factor. Test results and specification limits of the products are listed. 4 pp., illus. Aluminum Industries, Inc., 2438 Beekman St., Cincinnati 25, Ohio.

Freight Elevators

Buyer's Guide For Freight Elevators (Booklet B-4402). Ten sections explain considerations involved in selecting freight elevators. These include: determining lifting capacity and size; types of control systems; determining method of door operation; layouts for standard freight elevators; determining type elevator needed; price information; and typical and special installations. Many illustrations, charts, graphs and details are included. 44 pp., illus. Westinghouse Electric Corp., Elevator Div., Jersey City, N. J.*

LITERATURE REQUESTED

The following individuals and firms request manufacturers' literature:

Carl L. Bausch, Jr., Architect, South Londonderry, Vt.

Thomas A. Hood, Dept. of Building Engineering and Construction, Rm 5-211, Massachusetts Institute of Technology, 77 Massachusetts Ave., Cambridge 39, Mass.

L. B. McCoy, Architectural and Industrial Designer, 504 W. Magnolia Ave., San Antonio, Texas.

I. Mazurek, Student, 2402 Oakes St., Everett, Wash.

S. Donald Moore, Builder, Box 8232, Dallas 5, Texas.

James W. Rich, Student, University of California, 1295 Francisco Street, Berkeley 2, Calif.

Riddell, Larlin, and Papadakis, 2229 Macdonald Ave., Richmond, Calif.

Theodore W. Rust, Architect, Pekin, Ill.

Selby M. Wheeler, Architect, 803 Security Bldg., Denver, Colo.

The RESTORATION of COLONIAL WILLIAMSBURG

*A Reprint
of the December, 1935
Issue of*

ARCHITECTURAL RECORD

*104 pages, bound in cloth
\$2.50 per copy*

The Colonial Williamsburg Number of ARCHITECTURAL RECORD — issue of December 1935 — was sold out soon after publication but the entire editorial contents have been reprinted and bound in permanent book form with blue cloth covers.

Many thousands of these Williamsburg reprints have been sold but the demand continues unabated.

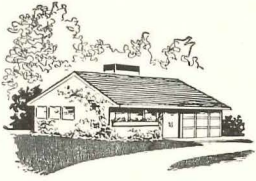
ARCHITECTURAL RECORD
119 W. 40th Street, New York, N. Y.

Enclosed is \$ for which send copies of your reprint, *The Restoration of Colonial Williamsburg*, bound in cloth, at \$2.00 per copy. (Add 2% Sales Tax for New York City deliveries.)

Name

Address

City and State A.R. 3-50



Rose-Covered Cottage or Queen of the Skyline

...THERE'S A WELDWOOD DOOR TO DO THE JOB

When you specify Weldwood Flush Doors, you combine convenience with quality material and real economy.

For here is a line of doors to fill almost any standard opening.

WELDWOOD FIRE DOORS. Absolute fire protection combined with the striking beauty of genuine birch face veneer. A large variety of other fine decorative hardwoods is available on special order. This is the *only* wood-faced fire door that carries the Underwriters' Label for Class "B" openings.

WELDWOOD STANDARD MINERAL CORE FLUSH DOORS. Guaranteed against swelling and sticking in summer... or shrinking and rattling in winter. Excellent for interior or exterior openings in schools, offices, hospitals, hotels or other institutional buildings. Incombustible mineral core provides increased fire resistance, exceptional dimensional stability, resistance to vermin and decay and insulating qualities superior to double glazing.

WELDWOOD SOLID LUMBER STAVED CORE FLUSH DOORS. Core is of thoroughly kiln-dried hardwood staves, laminated under pressure with waterproof glue



This recently completed office building in New York City contains 600 Weldwood Fire Doors. Uris Brothers Construction Co. built it. Designing architects were Emery Roth & Son. One of many major installations using Weldwood Fire Doors.

and high frequency heat. Top and bottom members are of glued up stock. This door has a high degree of dimensional stability, unusual versatility. Hardware, lights and louvers can be custom-positioned. Available in a wide variety of handsome hardwood faces.

MENGEL HARDWOOD HOLLOW CORE FLUSH DOOR.

Grid-core construction...dovetailed, wedge-locked joints on rails and stiles...and a wide variety of hardwood facings combine to make a door with a well-earned reputation for durability, beauty and economy. Meet low-budget requirements with this high-quality door.

* * *

Complete information and specification data on the entire Weldwood line of Doors is listed in Sweet's, or may be had quickly by writing our nearest office.

WELDWOOD Plywood

Weldwood Plywood is manufactured and distributed by:

UNITED STATES PLYWOOD CORPORATION U.S.-MENGEL PLYWOODS, INC.
New York 18, N. Y. Louisville 1, Ky.

Distributing units in Albany, Baltimore, Boston, Brooklyn, Buffalo, Chicago, Cincinnati, Cleveland, Detroit, Fresno, Glendale, Hartford (East), High Point, Indianapolis, Knoxville, Los Angeles, Milwaukee, Newark, New Hyde Park (L. I., N. Y.), New York, Oakland, Philadelphia, Pittsburgh, Portland, Ore., Richmond, Rochester, San Francisco, Seattle, Spokane, St. Paul, Washington, D. C. Also U. S.-Mengel Plywoods, Inc., distributing units in Atlanta, Birmingham, Dallas, Houston, Jacksonville, Kansas City, Kans., Louisville, Memphis, New Orleans, San Antonio, St. Louis, Tampa. In Canada: United States Plywood of Canada, Limited, Toronto. Send inquiries to nearest point.

Weldwood* Hardwood Plywood
Douglas Fir Weldwood
Mengel Flush Doors
Douglas Fir Doors
Overhead Garage Doors
Molded Plywood
Armorply* (metal-faced plywood)

Tekwood* (paper-faced plywood)
Weldwood Glue* and other adhesives
Weldtex* (striated plywood)
Micarta*
Flexwood*
Firzite*
Weldwood Fire Doors
Weldwood Flush Veneer Doors

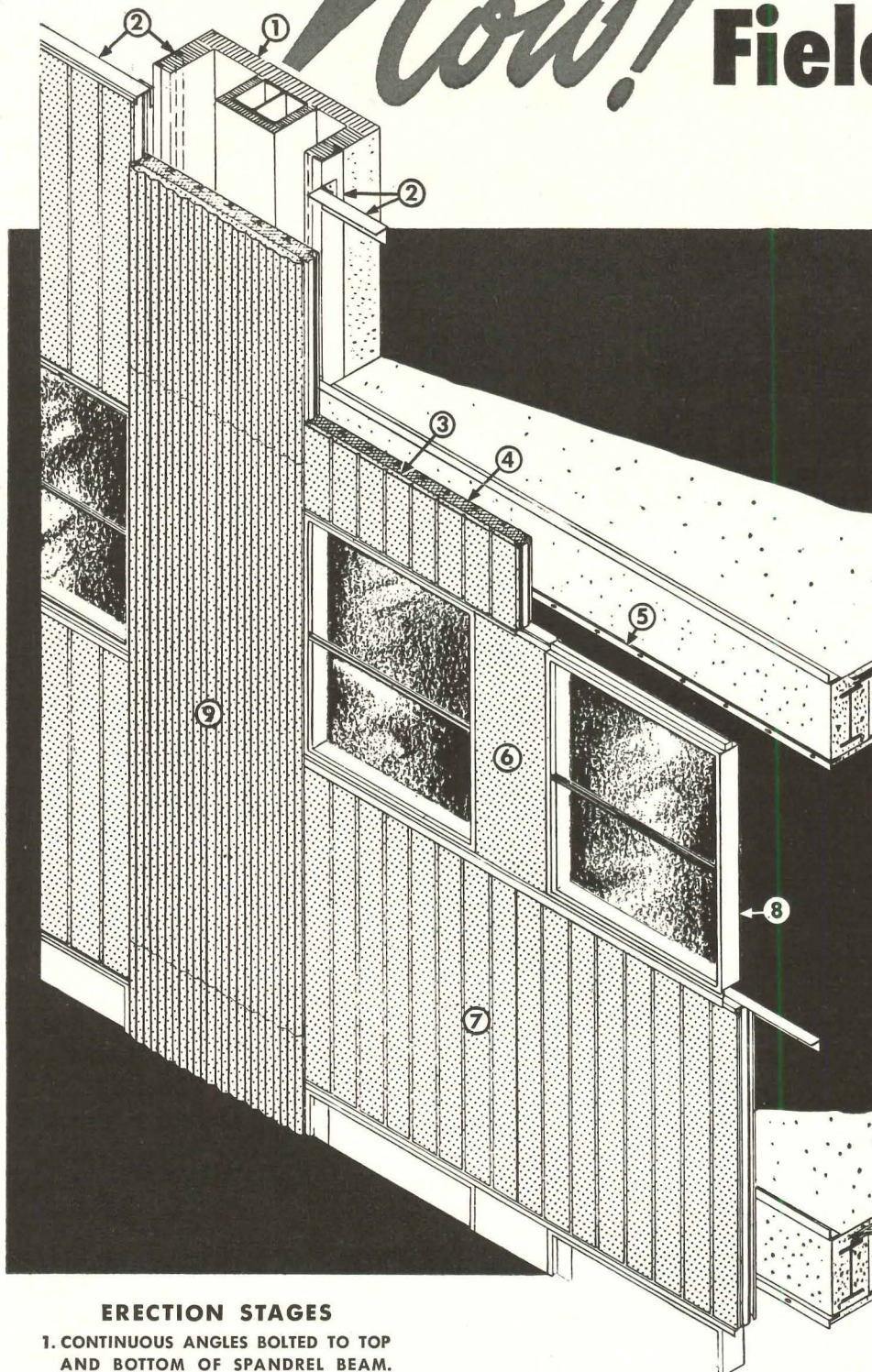
*Reg. U. S. Pat. Off.



Plastics and Wood
Welded for Good

Interior grade Weldwood Plywood is guaranteed for the life of any building in which it is installed

Now! Field-Proved



- ① Structural steel column, fireproof enclosure and pipe space.
- ② Secondary steel framing for spandrel panel support. Vertical channel—floor to floor. Horizontal steel angle between channels.
- ③ Insulating material selected to meet fire rating requirements.
- ④ Interior formed steel facing—made of Republic Electro Paintlok.
- ⑤ Structural steel angle connected to steel spandrel beam for support of spandrel and pier panels. Connections permit vertical and horizontal adjustment for accurate alignment.
- ⑥ Mullion panel—flat ENDURO Stainless Steel facing.
- ⑦ Spandrel panel—beaded ENDURO Stainless Steel facing.
- ⑧ Truscon Double-Hung Steel window, Series No. 46.
- ⑨ Pier panel—corrugated ENDURO Stainless Steel facing.

ERECTION STAGES

1. CONTINUOUS ANGLES BOLTED TO TOP AND BOTTOM OF SPANDREL BEAM.
2. SPANDREL PANELS HUNG AND BOLTED TO ANGLES.
3. PIER PANELS HUNG AND BOLTED TO ANGLES.
4. WINDOW AND MULLION PANELS BOLTED TO SPANDREL PANELS.



Enduro

for Multi-Story Buildings

Insulated Curtain Wall Panels

faced with Republic Enduro Stainless Steel

Here they are—after years of designing, engineering and testing by Republic engineers and metallurgists—practical insulated steel curtain wall panels. They're an actuality—not merely an idea—field-proved by Republic's subsidiary, Truscon Steel Company, in panels fabricated by them and applied to their new Baltimore office and warehouse.

Two steel facings enclose lightweight slabs of insulation. The outer facing of time-defying Republic ENDURO Stainless Steel can be formed to meet specific architectural requirements, and to provide stiffness and ventilation within the panel.

The inner facing of Republic Electro Paintlok is formed into pans spot-welded together to provide the structural part of the panel. The excellent paint adherence of this material makes it suitable as a finished wall—or it may serve as the base for various finishing materials.

The type of insulating material is determined by the required fire rating—with the test range at present up to 2½ hours. Depending upon panel thickness and material used, the "U" factor varies from .076 to .208.

Note these advantages:

1. **LIGHT WEIGHT**—Panels weigh from 6 to 10 pounds per square foot depending upon thickness and insulation. Possible reduction of wall weight from 150 to 10 pounds per square foot with only 1/15 the weight on skeleton frame and foundation.
2. **ADDED FLOOR AREA**—A 5-inch thick panel takes the place of a 14-inch masonry wall. As much as ¾ square foot of rentable floor space can be gained for each linear foot of exterior wall on each floor.
3. **FAST, ECONOMICAL CONSTRUCTION**—Shop preparation of panels means fast, accurate fit. Panels are attached to continuous structural angles fastened to the structural skeleton. Provision for vertical and horizontal adjustment assures accurate alignment.

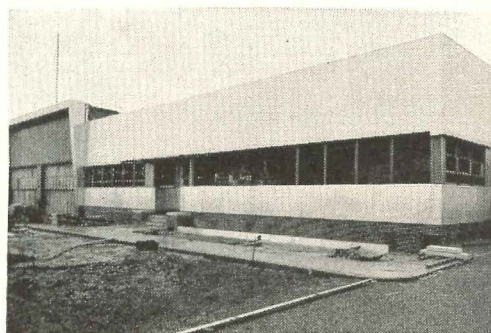
Would you like to know more about this modern type of construction and how you can apply it to multi-story buildings? Republic engineers and metallurgists are ready to bring you their unequalled experience in curtain wall design and construction . . . Write us.

REPUBLIC STEEL CORPORATION

Alloy Steel Division • Massillon, Ohio

GENERAL OFFICES • CLEVELAND 1, OHIO

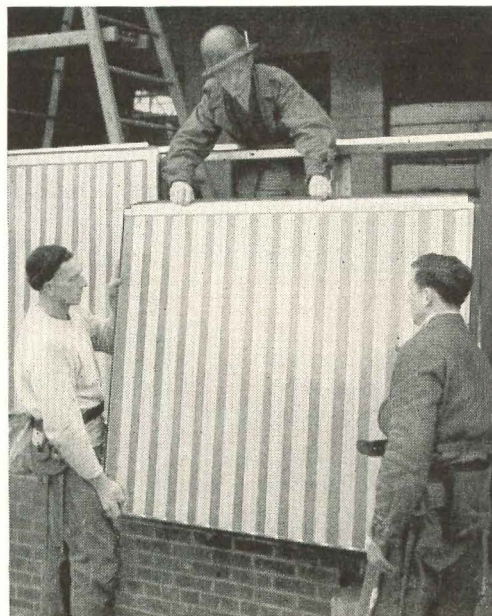
Export Department: Chrysler Building, New York 17, New York



Curtain wall panels—shown here on a partially-completed building—utilize the beauty, high strength and ease of cleaning of ENDURO Stainless Steel, as well as its great resistance to rust, corrosion and heat.

★ ★ ★

Lightweight, easy-to-handle panels can be erected rapidly, even in freezing weather.



STAINLESS STEEL

RUST-RESISTANT • CORROSION-RESISTANT • HEAT-RESISTANT • ATTRACTIVE • SANITARY • EASY TO CLEAN
EASY TO FABRICATE • STRONG • LONG-LASTING • LOW IN END COST • What more can be desired in a material?

SHARPER PRINTS
by any process!

with the world's largest selling

VENUS

DRAWING PENCILS

- **ACCURATELY GRADED**—in 17 degrees
- **STRONG**—the lead is Pressure-Proofed*
- **SMOOTH**—the lead is COLLOIDAL* processed

*Exclusive Venus Patent

They hold their points, give clear, opaque lines for clean, sharp reproduction. No smudge; no ghosts from erasures. They're smooth in action. Lines are uniform in weight and tone. There's the right degree for the tracing paper you prefer. Better prints—*by any process!*

AND FOR RENDERING—PERFECT TONAL VALUES WITH THE SOFTER DEGREES—HB TO 6B.

TRY THEM—on your drawing board!
Technical Test Kit—FREE!

AMERICAN LEAD PENCIL CO.
Hoboken, New Jersey

LOOK FOR THE GREEN CRACKLED FINISH!

American Lead Pencil Company
Hoboken, New Jersey

Dept. No. AR350

Please send me free *Technical Test Kit* featuring two Venus Drawing Pencils—in these degrees: () ().

NAME _____

COMPANY _____

STREET _____

CITY _____ STATE _____



MORE THAN A CENTURY OF EXPERIENCE

Is A Capsule Description Of
NATHAN STRAUS-DUPARQUET, INC.

To Architects we offer more than 100 years of experience in designing . . . fabricating . . . installing food preparation and service equipment for every type of commercial, industrial and institutional feeding operation.

. . . Decorating and furnishing public and private spaces in hotels, restaurants, hospitals, schools, industrial and commercial buildings and institutions.

If you are planning new installations or renovations . . . we respectfully request that you take advantage of our experience . . . we welcome your inquiries . . . a completely integrated organization is at your service!

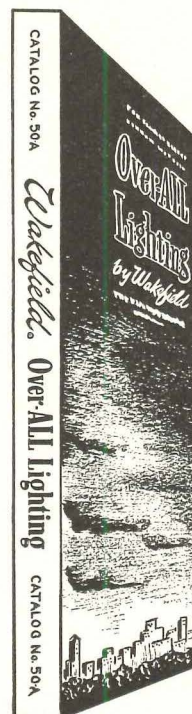
NATHAN STRAUS-DUPARQUET INC.

33 EAST 17th STREET, NEW YORK 3, N. Y.

Boston, Mass. Miami, Florida Chicago, Illinois
640 Commonwealth Ave. 1110 N. E. Second Ave. 225 N. Racine Ave.

Catalog No. 50-A

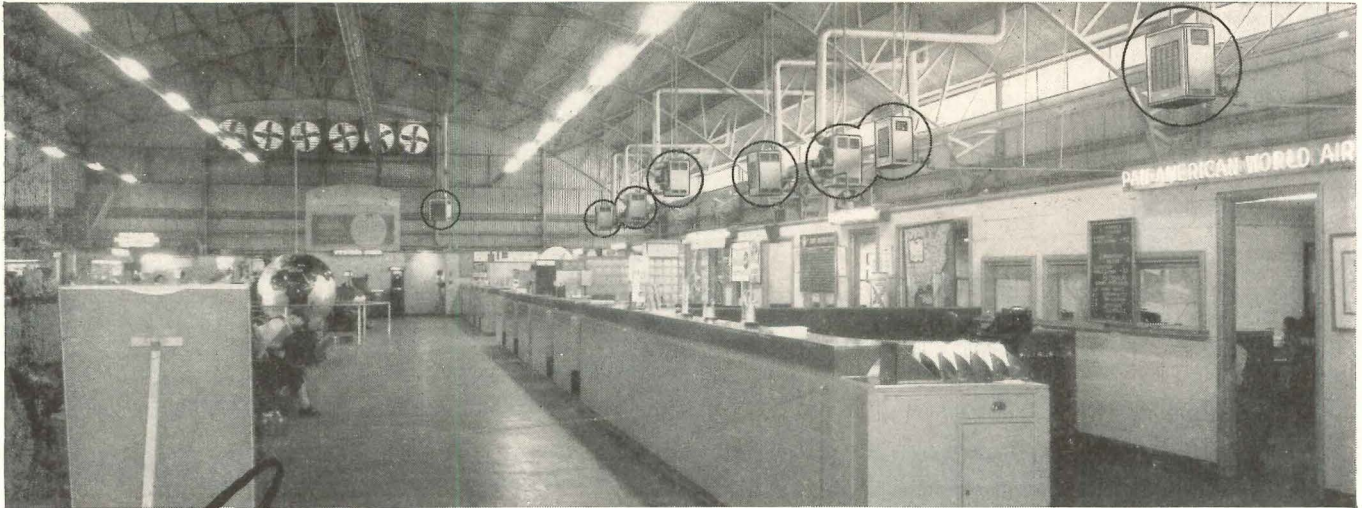
Wakefield. Over-ALL Lighting



- DISTRIBUTION CURVES
- WORKING DRAWINGS
- DESIGN DATA
- COMPUTATION METHODS

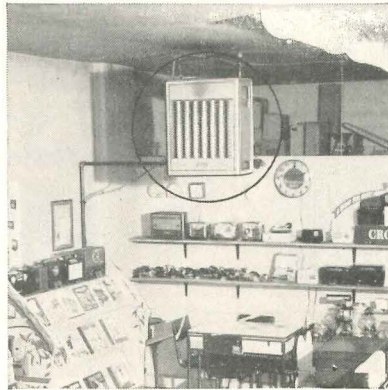
The factors that produce effective lighting for schools, offices, drafting rooms and stores are illustrated and described in this 40-page catalog of the complete Wakefield line of fluorescent and incandescent fixtures. Write for your copy.

THE F. W. *Wakefield* BRASS COMPANY
VERMILION, OHIO



Airport OR APPLIANCE STORE

JANITROL



★
Above: partial view of Moisant International Airport, New Orleans. Air line passengers benefit from both air ventilating and heating. Janitrol Unit Heaters installed by American Heating and Plumbing Company.

★
Small Janitrol Unit Heater provides clean automatic heating for customers' comfort in Cincinnati appliance store. Installation is typical of hundreds made in this city by the A. H. Gerdson Company.

UNIT HEATERS provide the advantages of clean, automatic gas heat at low installation cost

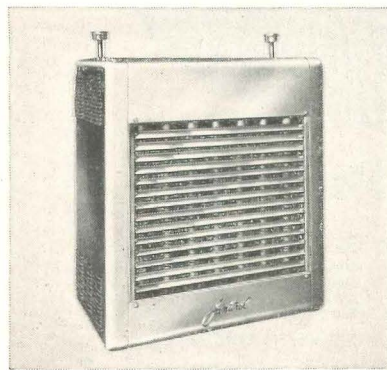
First question, on heating plans, like everything else these days is usually . . . "What's the cost?"

While heating costs include much more than the original installation because of fuel consumption, combustion efficiency, flexibility, maintenance and other factors . . . a properly engineered installation of Janitrol Unit Heaters will usually meet all requirements and cut costs.

Whether it's a huge building requiring several million BTU/hr. or the corner store with a single Janitrol Unit Heater, installations are made without the expense of installing extensive duct work.

With unit heaters, heat is directed *where* it's needed and *only* when it's needed, an important factor in operating economy.

If building plans call for air conditioning, specially designed Janitrol Gas-Fired Unit Heaters can be quickly installed in the air conditioning duct work. This eliminates duplicating duct work, pipes and blowers, for summer air-conditioning and winter heating use the same distributing system. In hundreds of stores, restaurants, offices, etc. these Janitrol installations conserve valuable space and have proved both practical and economical.



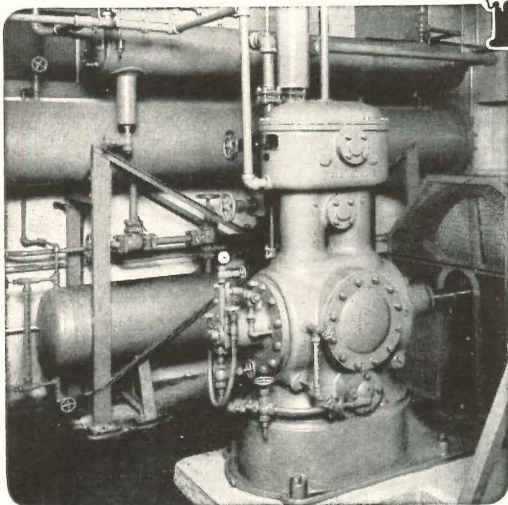
Janitrol Unit Heaters equipped for natural, manufactured or L-P gases, range in capacity from 50,000 to 450,000 B.t.u. per hour input ratings. Suspended and floor models, and types for filtered air comprise the complete line for every commercial and industrial heating requirement.

Write today

for your A.I.A. File Folder on Commercial & Industrial Heating. It's a practical guide on the selection and installation of unit heaters to meet a wide range of heating requirements.

SURFACE COMBUSTION CORPORATION • TOLEDO 1, OHIO

The Shamrock at Houston Uses



Frick Ice-making Equipment

This new 21-million-dollar hotel relies on its Frick machinery to produce 15 tons of clear ice a day.

Just as the U. S. Army, in World War II used Frick 15-ton ice plants by the hundreds, and installed them all over the world. Still buying them, too.

When you want dependability with economy, specify Frick refrigerating, ice-making and air conditioning equipment. Write for quotations now on the cooling machinery you need.



**NEW LOW GLAZING COSTS!
NEW HIGH GLAZING QUALITY!**



Requires No Painting

**Aluminum
Windows**
**Steel or Wood
Windows**

- Specify Tremglaze Aluminum color. It bonds to aluminum, requires no painting—ever. Proven on actual jobs for over ten years. Meets Aluminum Window Manufacturers Association standards.

- Specify Tremglaze yet pay no more for completed window installations than with a putty job. Save on the paint contract; specify—"Paint first—then Tremglaze". Put paint on the window where it belongs—Tremglaze requires no paint. Save on cost of cleaning glass also.

NC-102

Consult your local Tremco Representative or write to:

THE TREMCO MANUFACTURING CO.
CLEVELAND 4 • TORONTO

EDITOR

A magazine publisher is looking for an editor who is thoroughly experienced in the building trades, with special emphasis on private homes. He must know modern construction and its application to low-cost housing, and be thoroughly conversant with FHA and GI financing. He must be able to write simply and interestingly on all levels of the subject. Position is in New York. Salary is open, but state your requirements. Write fully. Box 800, *Architectural Record*, 119 W. 40th Street, New York 18.

Overwhelming Choice



No. 9500
CHURCH MOLTEX Seat

Church Seats

"THE BEST SEAT IN THE HOUSE"

G. F. CHURCH MFG. CO., HOLYOKE, MASS.
Division of AMERICAN RADIATOR & Standard Sanitary CORPORATION

THERE are good sound reasons why architects have made Church the overwhelming choice in toilet seats, whether for home, factory, school or institution.

Their styling and design is a compliment to the buyer's taste . . . their unmistakable quality a mark of good judgment—and the name "CHURCH" stamps them as *the best*.

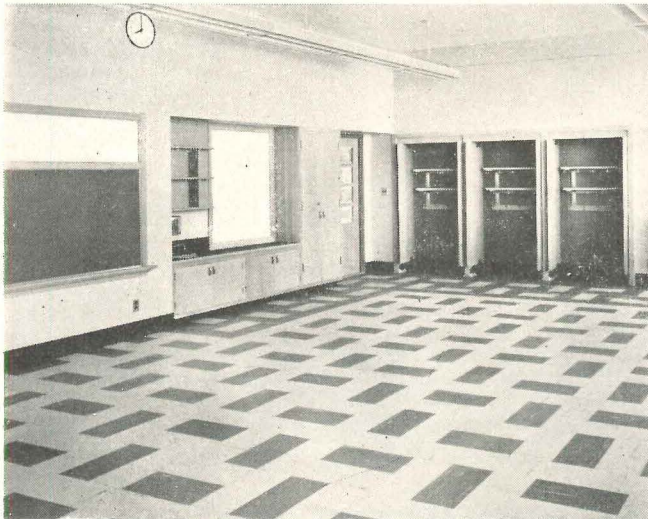
Where hard use—even abuse—is anticipated, Church MOLTEX® Seats offer the architect the assurance of *lasting* quality, lowest cost *per year of service*.

With MOLTEX, first cost is last cost. They never need replacing.

Serving home and industry

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

Imagine this FLOOR in Radiant Moultile Colors!



This attractive floor suggests the endless variety of original designs which can be achieved with Moultile's individually laid tiles. Pictured here is one of several patterns designed by Haxby, Bissel & Belair, Architects, for the Fern Hill School, St. Louis Park, Minn.

EVEN without the benefit of color, this photograph reveals much of the eye-captivating beauty of Thos. Moulding Moultile floors. It suggests the clarity of tone, the pleasing variegated effect of Moultile's crisp, clear veining. Now let your mind's eye supply the colors, as deep, rich and clear as a rainbow. Then you'll know why so many architects prefer to *design their floors in Moultile!*

Moultile is as practical as it is beautiful. It is quiet, non-slippery, comfortably buoyant underfoot . . . and practically impervious to ordinary wear. With all its advantages, Moultile is low in original cost and most economical when figured on a cost-per-year basis.

Moultile and the wide range of other Thos. Moulding Floor Materials lend themselves to virtually every flooring need. Moreover, Thos. Moulding is prepared to make special colors, or to modify standard materials for special floor requirements. Architects are invited to submit unusual floor problems to: THOS. MOULDING FLOOR MFG. CO., 165 W. Wacker Drive, Dept. AR-3, Chicago 1, Ill.

FLOORS of Achievement by...
Thos. Moulding

ORNAMENTAL BRONZE

We invite your inquiries on fine-quality bronze and wrought iron lighting fixtures, lanterns, grilles, gates, railings, and other similar building products. Write for our illustrated portfolios. Please specify products of particular interest to you. We shall be glad to quote on your requirements.

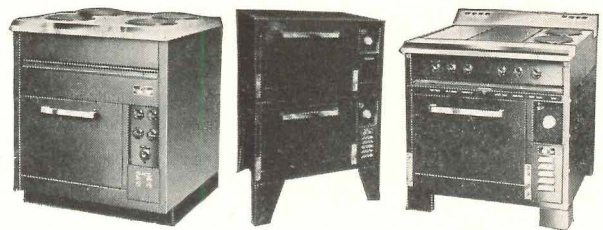


**GENUINE
BRONZE**
Name Plates
Honor Rolls
Memorials
Portrait
Tablets



MEIERJOHAN • WENGLER
METALCRAFTSMEN
1102 W. 9th St. CINCINNATI 3, OHIO

AKRON ELECTRIC RANGES AND OVENS ARE CUSTOM TAILORED TO ARCHITECTS' NEEDS



436 RANGE

621-02 OVEN

621 RANGE

Built-ins — special finishes — extra service facilities can be included in your kitchen planning using Akron Engineered Electric Ranges and Ovens.

Architects for the first time can economically overcome the limitations on kitchen planning imposed by standard equipment. The Akron Line offers a full custom service to architects adapting standard production models to meet individual kitchen needs in the finer home and large or small institution.

Akron Engineered Electric Ranges and Ovens are quality made with full automatic controls for convenient, economical electric cooking.

Write today for full details on Akron's custom service for architects or better still submit your sketch or specifications outlining your kitchen equipment needs.

AKRON
ASSOCIATED PRODUCTS, INC.
2nd National Bank Building
AKRON, OHIO
20 S. Ontario Street
TOLEDO, OHIO

An outspoken
message from
America's greatest
living architect:

FRANK LLOYD WRIGHT

"GENIUS AND THE MOBOCRACY"

Illustrated With Thirty-Nine Never Before Published Drawings
by Louis H. Sullivan

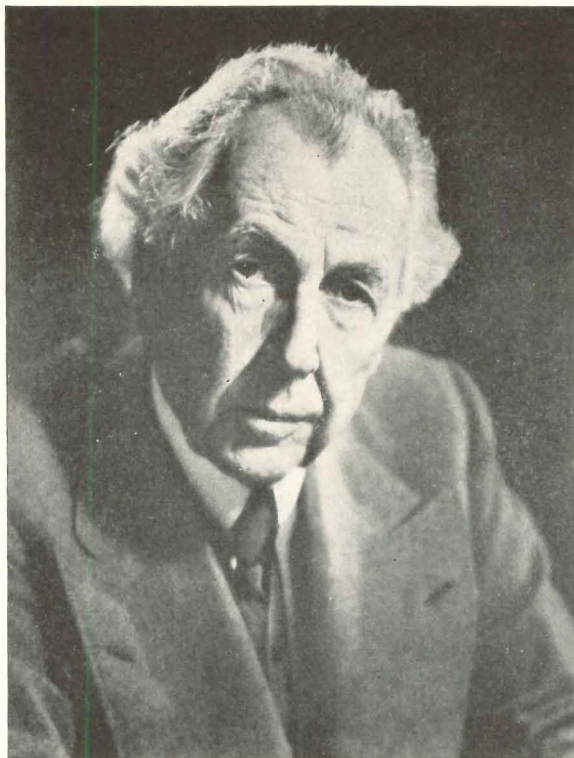
"Genius And The Mobocracy" is both a lusty diatribe against everything architectural Frank Lloyd Wright hates, and an eloquent plea for the re-establishment of organic architecture. It's an angry book. Yet a deeply tender one. For interwoven among one of the most vitriolic attacks on sham ever written is the enchanting story of Wright's professional and personal relationship with his gifted teacher, Louis H. Sullivan.

In the words of the author: "I have tried to describe the tragedy, triumph and significance of the great man who invariably signed himself Louis H. Sullivan; to tell you why I, though never his disciple—nor that of any man—called him Lieber Meister."

The Man Everyone Knows . . . But Few Understand

Anybody as iconoclastic as Frank Lloyd Wright is bound to stir controversy; certainly this book will create a maelstrom in the minds of professional and lay readers alike. His admirers will be spell-bound, his enemies outraged. But only the most narrow-gauged person could read "Genius and The Mobocracy" without discovering and enjoying the majestic quality of Wright's mind.

Wright traces the sweep of architecture from its earliest history to the latter Greeks and Romans—through the Middle Ages and subsequent Renaissance—down to modern times. He is unhappy with its genesis. But the book has infinitely more than expert criticism to recommend it. It has faith, spirited advice—and throughout—the compelling, human story of an American genius, Louis H. Sullivan.



Acclaimed by Critics

Frederick Gutheim, *N. Y. Herald Tribune*

"The present work establishes even more clearly than his remarkable 'Autobiography' the deep romanticism of Frank Lloyd Wright that has found expression in his life and his writings as well as in his work as an architect."

Talbot Hamlin, *New York Times*

"When the greatest living architect . . . writes a serious book dealing with another great architect and artist who influenced him deeply, it behooves us all to attend, to listen carefully and critically."

Architectural Forum

"In his new book, 'Genius and the Mobocracy,' Wright . . . has succeeded in producing a cultural document whose importance transcends the field of architecture. . . ."

* * *

Other Books by or about Frank Lloyd Wright

AN AUTOBIOGRAPHY
by Frank Lloyd Wright

When this now-famous book was first published, in 1932, Lewis Mumford wrote: 'No autobiography on this level has appeared since "The Education of Henry Adams." . . . Mr. Wright's book is a literary act that compares in brilliance and originality with his building.' . . . \$6.00

ON ARCHITECTURE
edited by Frederick Gutheim

The selected writings of Frank Lloyd Wright from the period 1894 to 1940, containing both published and unpublished material. It forms a keybook and sourcebook to the ideals and to the technical and aesthetic development of the architect. . . . \$6.00

IN THE NATURE OF
MATERIALS

by Henry-Russell Hitchcock

A study of Wright's designs and buildings from 1887 to 1941 by 'America's foremost architectural critic.' Included are illustrations of more than 100 buildings, with accompanying technical discussion, a critical and historical introduction, and an appendix listing all the executed buildings and projects of the architect. . . . \$6.75

As one might expect, "Genius and The Mobocracy" is also rich with Wright's highly individualistic views on Truth, Honor, Understanding, Education, Democracy and the effects of "The Machine."

Architects, particularly, will be interested in the thorough explanation this book contains of Wright's well-known, but little understood, dictum: "Instead of imitating effects, search for the principle that made them original."

Another section that will fascinate the professional reader is that given over to the reproduction of thirty-nine superb drawings by Louis H. Sullivan selected by Wright and never before published.

"Genius and The Mobocracy" is destined to be a conversation piece for years to come among all men who are interested in the fine arts. Surely, every architect can profit greatly by reading it.

Use Coupon To Send For Your Copy Today

"Architectural Record" feels so keenly the importance of Mr. Wright's new book that it has made a special arrangement with the publishers whereby you may obtain a copy conveniently of this and other books by or about Frank Lloyd Wright simply by sending in the coupon at right.

Book Department Architectural Record
119 West 40th Street, New York 18, N. Y.

Enclosed is \$_____ for:

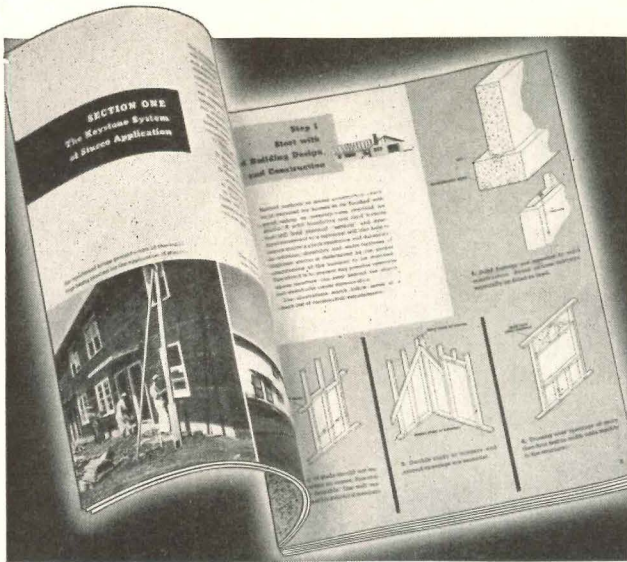
___copies of "Genius and The Mobocracy" at \$5.00 a copy
___copies of "An Autobiography" at \$6.00 a copy
___copies of "On Architecture" at \$6.00 a copy
___copies of "In The Nature of Materials" at \$6.75 a copy (add 2% for N. Y. C. delivery)

Name _____

Address _____

City _____

Zone State



See How the Keystone System Helps You Design Better-Looking Low-Cost Homes

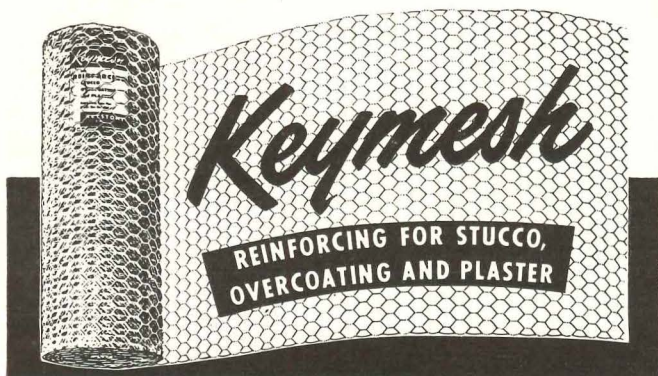
When you're looking for good home design ideas that save money, let the Keystone System of Stucco Application help you.

The 44-page Keystone System Book shows you why modern, reinforced concrete stucco gives your clients more for their money in attractive, durable homes. It tells you how you can design good-looking homes with the features people want—and still stay within a specified budget.

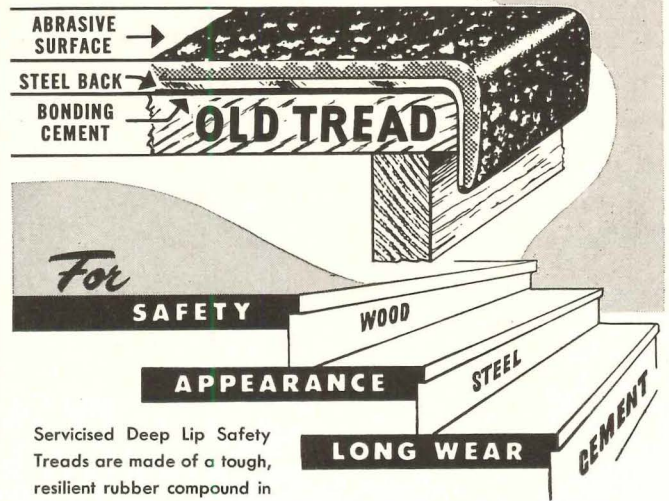
Be sure to ask your building materials dealer for a copy of "The Keystone System," or write . . .

Keystone Steel & Wire Company
PEORIA 7, ILLINOIS

Manufacturers of Keymesh Reinforcing, Welded Fabric, Tie Wire and Nails



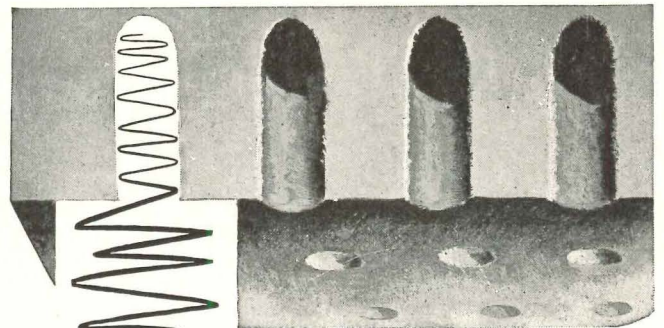
YOU CAN DEPEND ON
Servicised
DEEP LIP TREADS



Servicised Deep Lip Safety Treads are made of a tough, resilient rubber compound in which Norton Alundum aggregate has been securely embedded throughout the wearing surface. Easily applied to any surface—old or new. Deep Lip Safety Tread is 1/4" thick by 3" wide, and comes in lengths up to 84" or less. Lip depth 1 1/2". Available in Buff, Gray, Green, Red or Black.

Write for Samples, prices and complete details

SERVICISED PRODUCTS CORP.
6051 W. 65th Street • Chicago 38, Illinois



THE CEILING
with a hundred thousand
"NOISE TRAPS"

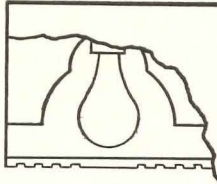
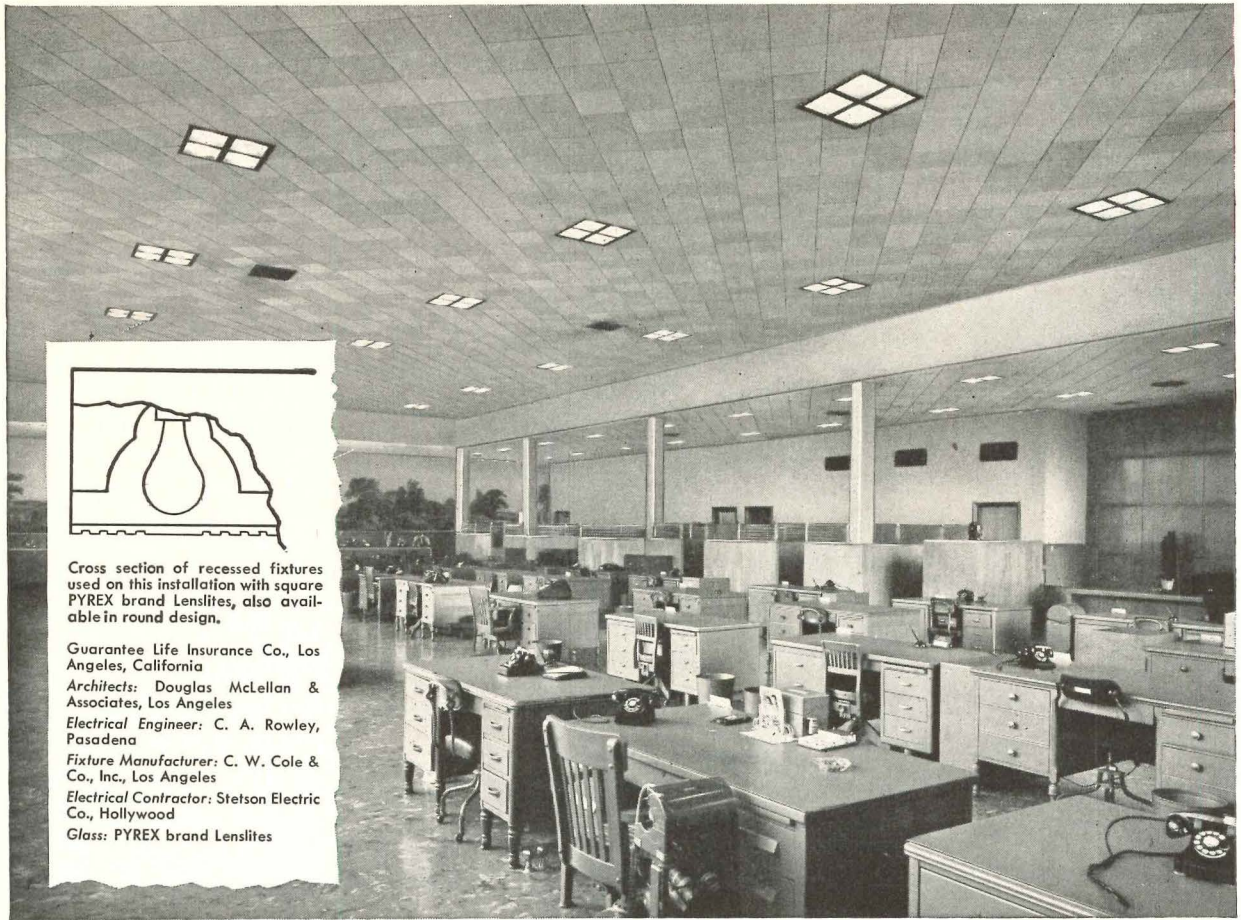
Send for Free, Fascinating Brochure: Tells you about Fibretone*, the acoustical ceiling, and how its thousands of scientifically-designed *noise traps* help eliminate unwanted noise—in offices, restaurants, banks, schools, factories, and recreation centers. Write Johns-Manville, Dept. AR-4, Box 290, New York 16, N. Y.



*Reg. U. S. Pat. Off.



Johns-Manville
FIBRETONE



Cross section of recessed fixtures used on this installation with square PYREX brand Lenslites, also available in round design.

Guarantee Life Insurance Co., Los Angeles, California
 Architects: Douglas McLellan & Associates, Los Angeles
 Electrical Engineer: C. A. Rowley, Pasadena
 Fixture Manufacturer: C. W. Cole & Co., Inc., Los Angeles
 Electrical Contractor: Stetson Electric Co., Hollywood
 Glass: PYREX brand Lenslites

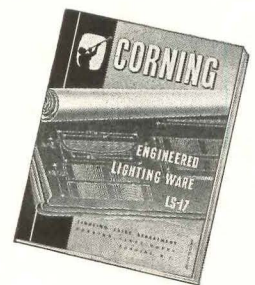
How PYREX brand Lenslites can be used to produce variable intensity levels

You can obtain effective, low cost incandescent light distribution with PYREX brand Lenslites. The home offices of Guarantee Insurance Co., Los Angeles, offer a case in point. The general office, 45 ft. wide by 95 ft. long with a 14 ft. ceiling, is lighted to an average intensity of 46 f.c. Only 21 recessed fixtures are used, each fitted with four 12" square Lenslites lighted by four 300 watt bulbs. Excellent lighting is obtained for bookkeeping and other close work.

In public space under the mezzanine, an area 18 ft. wide by 108 ft. long and a 12 ft. ceiling, 21 double lenses and 5 single lenses produce an average reading of 32 f.c. The same type of fixture is used in the lobby for still lower intensity. PYREX Lenslites offer that kind of flexibility for with them light can be con-

centrated, spread or the beam offset.

Bulletin LS-17, available on request, contains further suggestions on the use of Lenslites and other Corning Lightingware. For regardless of the lighting requirements that may be involved, you are certain of finding what you need in this line, not only from the standpoint of light transmission but design possibilities as well. Corning lighting engineers are always ready to be of assistance to you. Why not take advantage of this right now?



FREE—Corning Engineered Lighting Bulletin!

CORNING GLASS WORKS
 Dept. AR-3, Corning, N. Y.

Send me your Bulletin LS-17 describing all Corning Lightingware.

Name _____

Firm _____

Address _____

City _____ Zone _____ State _____



CORNING GLASS WORKS

CORNING, NEW YORK

Corning means research in Glass

FOR EFFICIENT, ATTRACTIVE LIGHTING . . .

CORNING ALBA-LITE for diffusion of fluorescent light . . . CORNING FOTA-LITE for high level illumination . . . CORNING brand LENS PANELS and PYREX brand LENS LITES for prismatic light control

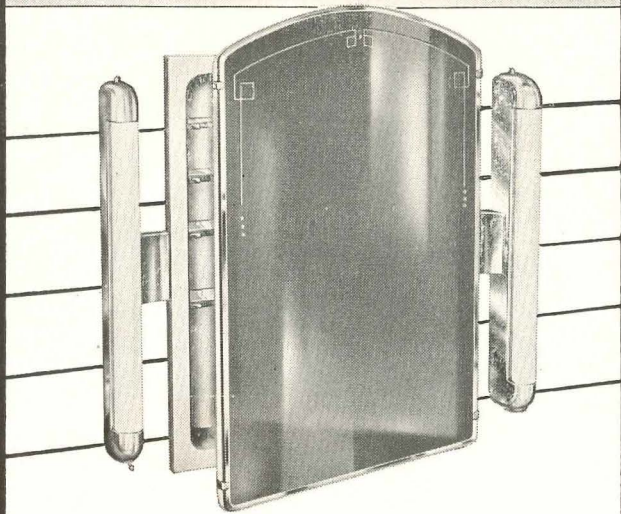
NOW

LAWSON

BATHROOM CABINETS

BONDERIZED

AFTER FORMING!



BONDERIZED AFTER FORMING is an important new feature added to all Lawson Bathroom Cabinets! The bonderizing process is applied **AFTER** all shearing, drilling and forming is completed. It provides 100% **BONDERIZED** protection against rust and corrosion . . . assures longer life for all Lawson Cabinets!

AND . . . Lawson Cabinets, **BONDERIZED AFTER FORMING**, *cost no more!*

**ARCHITECTS SPECIFY
LAWSON BATHROOM CABINETS . . .**

BECAUSE they have: *one-piece drawn steel body, stainless steel hinge and shelf supports, first-quality mirror . . . and now, they are **BONDERIZED AFTER FORMING!***

Write today for catalog of bathroom cabinets and chrome accessories.

**WORLD'S LARGEST BUILDERS
OF BATHROOM CABINETS**

THE F. H. LAWSON CO.

802 EVANS ST.,

...

CINCINNATI 4, O.



133 YEARS

Just Published!

Tells how to design for good acoustics

ACOUSTICAL DESIGNING IN ARCHITECTURE

By VERN O. KNUDSEN and CYRIL M. HARRIS

Acoustical Designing in Architecture is an informative review of principles — and a *handbook* — that you can use for day-to-day designing problems. The authors apply principles and work out examples of design of auditoriums, theaters, school buildings, homes, apartments and hotels, churches, and radio, television, and sound-recording studios.

February 1950

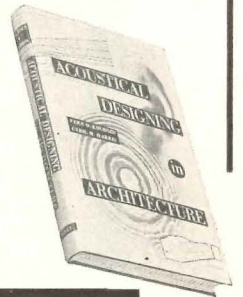
\$7.50

457 pages

Copies obtainable on approval

JOHN WILEY & SONS, INC.

440 Fourth Ave., New York 16, N. Y.



NATCOR Extruded Aluminum Mouldings for Store Fronts

THE



SEAL

of

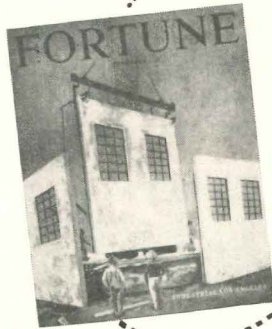
BEAUTY • QUALITY • SERVICE

Forge Ahead With Natcor

Natcor STORE FRONTS

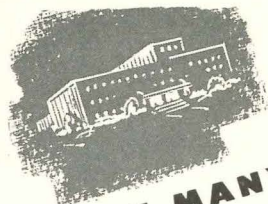
TAUNTON, MASSACHUSETTS, U.S.A.

We speak
our piece
in
FORTUNE

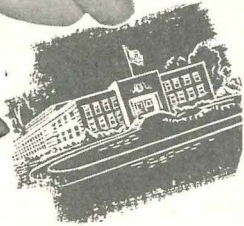
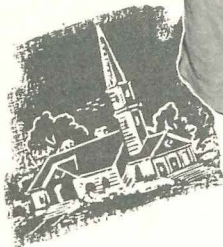
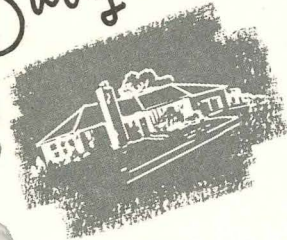


In these days when construction is urgently needed because schools and hospitals are overcrowded, because buildings and homes are inadequate, time becomes "of the essence." In the demand for greater speed in construction—standards...value...and service are easily compromised. Quality is attacked in the interest of price. That's why we are glad that there is an architectural profession that sets up standards, and demands compliance with specifications to "insure the life" of the buildings it plans. This insistence upon quality has given each succeeding generation a better world in which to "live." No better time can be found than right now to repeat this story to the American Public.

This is the first of a series of advertisements by JOSAM to appear in Fortune Magazine.



HOW MANY HOMES MUST
Baby HAVE?

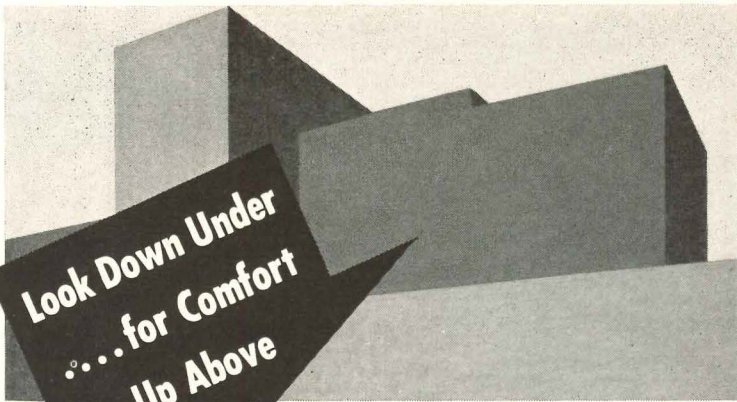


ask your architect...he built them!

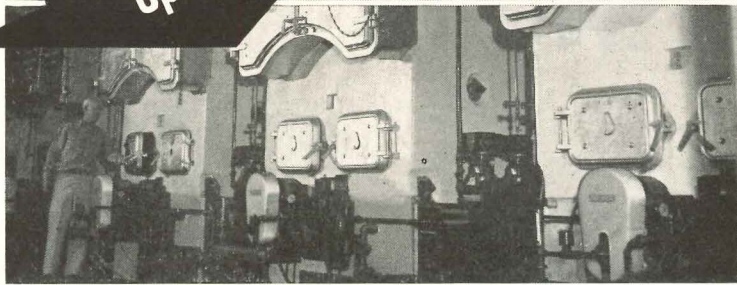
From the very first day Baby comes into this world, he places his future in the hands of an architect. From the crib in the hospital where he was born, to the college from which he will graduate, he must look to the architect for his comfort, his protection, his very existence. For this reason, the architect is many persons to the child and to the man. In the hospital, the architect, like the doctor, must be acquainted with every phase of health so that he may provide proper safeguards. In the home, the architect, like the parent, must know the needs of children, so that he can translate them in terms of plumbing and heating and lighting. In the church and in the school, the architect, like the teacher, must understand the nature of study and play, so that he can assist in their development through acoustics and air conditioning and visual aids. The architect is the man who combines the knowledge of many professions and the skill of many crafts to build a better world. Josam is proud of its association with this great profession and is honored by being the first choice of architects for plumbing drainage products for over 35 years.



JOSAM MANUFACTURING COMPANY
302 Josam Building, Cleveland 13, Ohio
World's Largest Manufacturer of Plumbing Drainage Products
DRAINS • INTERCEPTORS • BACKWATER VALVES • SWIMMING POOL PRODUCTS



Look Down Under
... for Comfort
Up Above

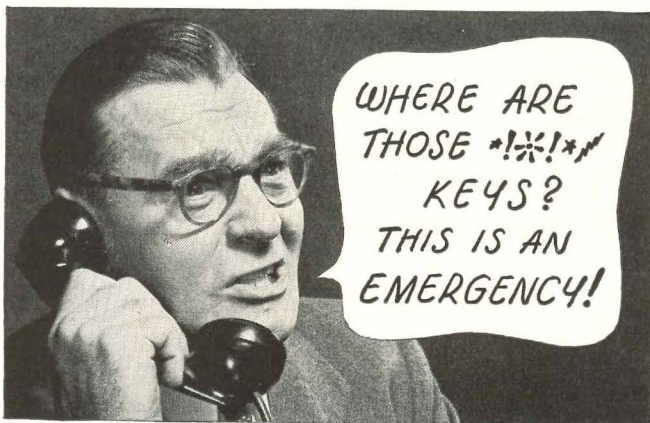


Five fully automatic, electronically-controlled Enterprise Combination Gas-Oil Burners supply Prudential's 500,000 square feet of offices with year round heating comfort—plus plenty of piping hot water for every need. Boiler room, shown above, is equipped with 4 H2P burners rated 165 boiler HP, and 1 EP burner rated 65 boiler HP.

BURNER DIVISION OF ENTERPRISE ENGINE & FOUNDRY COMPANY
18TH & FLORIDA STS., SAN FRANCISCO 10, CALIFORNIA
DISTRIBUTORS IN PRINCIPAL CITIES

BIG MODERN BUILDINGS Are Efficiently, Economically Heated with **ENTERPRISE** Oil Burners

Providing heat and hot water in buildings like The Prudential Insurance Company's new Western Home Office in Los Angeles, is a job for which more and more Enterprise Burners today are specified. Available in a wide range of industrial and automatic sizes up to 650 boiler HP per unit, Enterprise Oil and Combination Gas-Oil Burners provide the ideal solution to heating problems for any type or size building. Specify Enterprise for the best in burners. Write for bulletins and full information.



WHERE ARE
THOSE *!*!*
KEYS?
THIS IS AN
EMERGENCY!

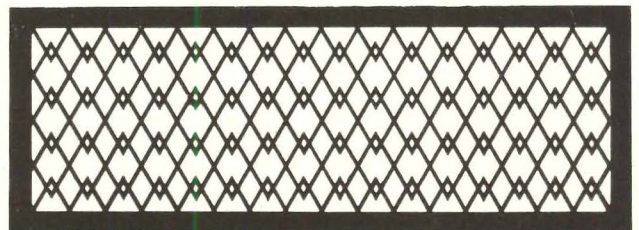
Read how **MOORE KEY CONTROL***
can save money and man-hours

You owe it to your client to investigate this modern system of key control. It saves money year in and year out by eliminating expensive repairs and replacement of locks and keys. What's more, it guarantees security, convenience and privacy. No wonder more architects every year now specify Moore Key Control for use throughout schools, institutions, hospitals, hotels... in all factories and buildings where keys are used.

***TELKEE**
TRADE MARKS ®

Mail Coupon
today for
Free Booklet

P. O. MOORE, INC., Dept. A-1
300 Fourth Ave., New York 10, N. Y.
Please send me special architect's manual for my A.I.A. file on MOORE KEY CONTROL.
Name.....
Address.....
City, State.....



A Hendrick grille design (M No. 9) suitable for use with deflecting unit in Bulator combination

The Perfect Combination of a deflecting unit and ornamental grille

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

For this combination of deflecting unit and ornamental grille there's a wide selection of Hendrick ornamental grille designs which have ample open area so the air throw and spread are not appreciably affected. Write for full information.



Perforated Metals
Perforated Metal Screens
Architectural Grilles
Mitco Open Steel Flooring,
"Shur-Site" Treads and
Armorgrids

HENDRICK
Manufacturing Company
38 DUNDAFF STREET, CARBONDALE, PA.
Sales Offices in Principal Cities

ONLY RUBBER TILE

by the makers of
KENTILE® 

OFFERS YOUR CLIENTS THIS

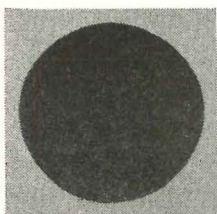
*Exclusive
Beauty*

IN COLOR AND DESIGN!



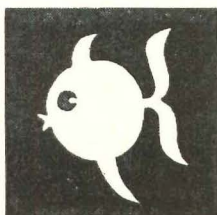
*Specify
Beautiful*
THEMETILE

Only Available in this Rubber Tile



• No other rubber tile gives you these colorful, low-cost, decorative inserts to add individual distinction to each floor design. ThemeTile helps you provide unusual, custom-designed decorating themes for ideal installations in homes, lobbies, restaurants and office foyers. *Rubber Tile by the makers of Kentile* offers you attractive Feature Strips, too, and beautifully clear, harmonized colors for added effectiveness.

advantages of longer wear, resistance to soil, easier maintenance. Dirt and moisture cannot penetrate its smooth, non-porous surface. It resists chipping, cracking, marring...does not support combustion. *Rubber Tile by the makers of Kentile* will not dry out and become brittle...keeps its beauty through years of use even under heaviest foot traffic.



Keep samples of this outstanding Rubber Tile on hand. You can recommend it to your clients for its practical

DAVID E. KENNEDY, INC.

58 Second Avenue, Brooklyn 15, New York

• Kentile

• Kencork • Rubber Tile



SPECIFY

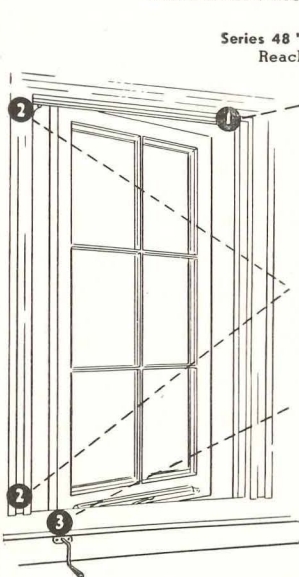
Win-Dor®

HARDWARE

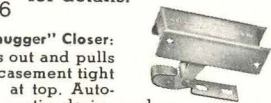
—Quality Since 1906—

The three Win-Dor devices shown below are the elements that help assure client satisfaction with your *out-swung wood casement window installations*. Each one performs a specific important function — and does it *better!* Together, they furnish the most satisfactory control that quality manufacture and the engineering experience of almost half a century can provide.

See Sweet's file $\frac{18b}{16}$ for details.



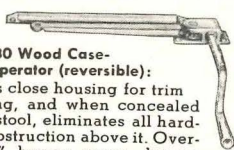
Series 48 "Snugger" Closer:
Reaches out and pulls casement tight at top. Automatic closing and release. Furnished in steel or brass, with 6 or 8-lb. spring. Reversible.



"Snuggers" also available to provide automatic closing of all doors — especially cabinet and wardrobe doors where "whip" is encountered. Eliminates latching devices. No mortising.



Series 75 Extension Hinges:
Provide 4" clearance between open sash and frame to permit cleaning outside of glass from within the room. Reinforce sash corners



Series 30 Wood Casement Operator (reversible):
Permits close housing for trim detailing, and when concealed under stool, eliminates all hardware obstruction above it. Over-size $\frac{3}{4}$ " bronze worm, bronze bushing. Steel arm, channel, and integrated housing.

THE CASEMENT HARDWARE CO.

406 N. Wood St., Dept. J, Chicago 22, Illinois

GLOBE SPRINKLERS

FIREMEN EVERY 10 FEET

They Harness Fires. The singular feature of the GLOBE Automatic Sprinkler System is that the *FIRE* itself brings into action the force that extinguishes it. It makes the *FIRE* act to destroy itself.

GLOBE AUTOMATIC SPRINKLER CO.
NEW YORK... CHICAGO... PHILADELPHIA
Offices in nearly all principal cities

THEY PAY FOR THEMSELVES

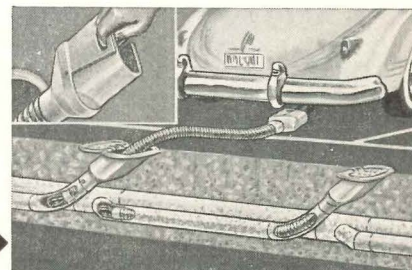
TO PREVENT THE POSSIBILITY OF POISONOUS CARBON MONOXIDE IN THE BUILDINGS YOU DESIGN

Specify "NATIONAL"

The Approved Garage Ventilation Equipment

Standardized engineering simplicity that lends perfectly to new garage buildings — efficiency, appearance, economy of installation and shop working conditions. The method of exhaust gas removal used by "National" is recommended by health departments, insurance companies, architects, building contractors and building codes in most cities and states. 4 different types of systems to choose from. Complete packaged units — ready to install. Nothing else to buy — low in cost.

Illustration shows sectional view of "National's" underfloor disappearing tube installation. Note that tube disappears without entering main trunk line — for balanced flow of air through main duct and perfect exhaust gas removal. Write for complete literature and costs.

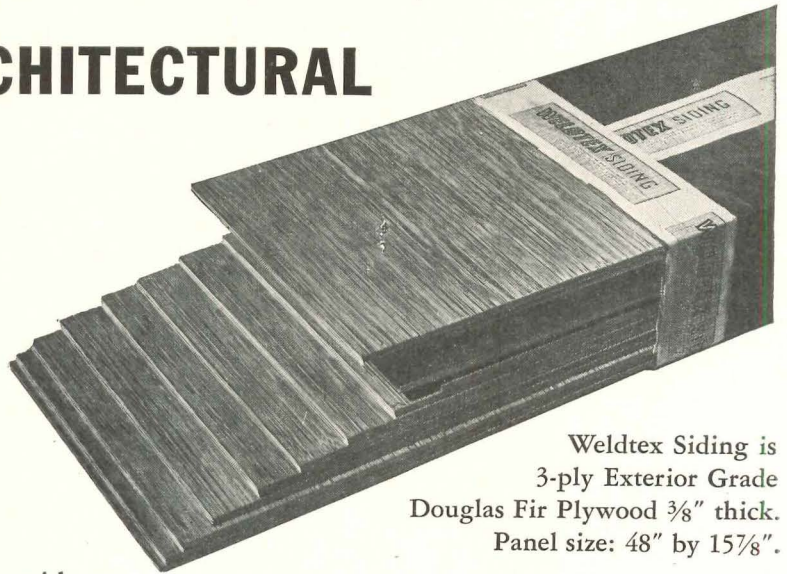


THERE ARE MORE "NATIONAL" SYSTEMS IN OPERATION IN THE UNITED STATES AND CANADA, THAN ALL OTHER TYPES OF SIMILAR SYSTEMS COMBINED. LITERATURE AND FULL INFORMATION ON REQUEST.

THE NATIONAL SYSTEM OF GARAGE VENTILATION
World's Largest Manufacturers of Exclusive Garage Ventilation Equipment
Dept. 10A, 318-330 N. CHURCH STREET
DECATUR, ILLINOIS

A DISTINCTIVE, NEW SIDING MATERIAL FOR LOW-COST ARCHITECTURAL EXPRESSION

**THIS NEW VERSION OF
WELDTEX* PLYWOOD IS
FINDING FAVOR WITH
ARCHITECTS**



Weldtex Siding is
3-ply Exterior Grade
Douglas Fir Plywood $\frac{3}{8}$ " thick.
Panel size: 48" by $15\frac{7}{8}$ ".

Chances are you've used Weldtex panels before...with striking effect. Now this popular material is available in a new form...convenient, easy-handling size for exterior siding.

The deep striations give you all the beauty of the finest cedar shakes...plus a smooth, trim, modern line that gives beauty to your designs. In *one* material, you combine all the good points of shingles and clapboard...and minimize the problems.

And look at the structural advantages.

Only 22 pieces cover a square. You get a $13\frac{7}{8}$ " exposure and only a 2" lap. You have a minimum of seams, and those easily backed up.

With a combination like that, you can see why architects who have used it are enthusiastic about Weldtex Siding.

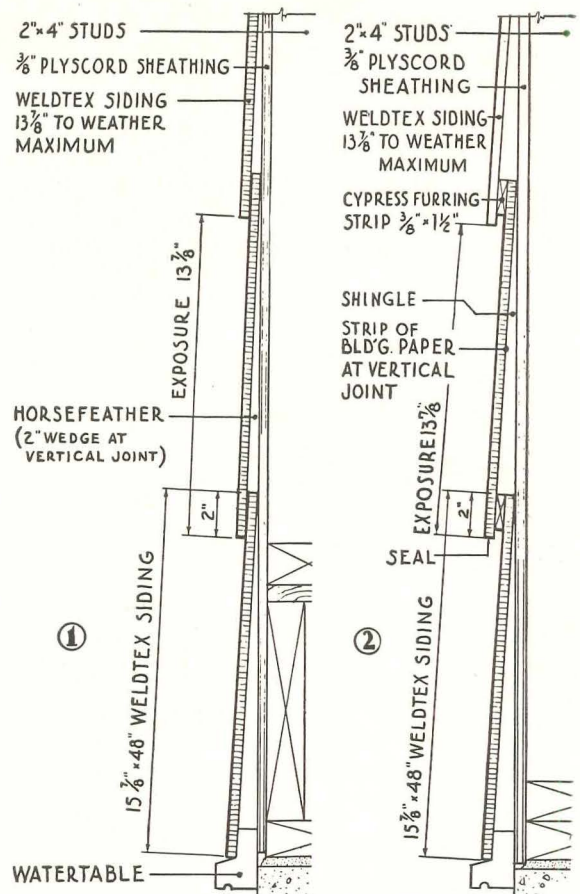
Fast application saves substantially in labor costs. Short laps and long exposure cut material requirements far below those of shingles. The easy, effective back-up for the few seams makes weather-proofing simple and certain.

Weldtex Siding is approved by F.H.A. on Federal Housing jobs.

Get complete information on this new siding material. It speeds, simplifies and improves construction...and adds beauty to any home. Write us today. We'll rush you full details.

*U.S. PAT. NOS. 2286068, 2363927, 2363492. TRADE MARK REG.

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



WELDWOOD Plywood

Weldwood Plywood is manufactured and distributed by:

UNITED STATES PLYWOOD CORPORATION U.S.-MENGEL PLYWOODS, INC.
New York 18, N. Y. Louisville 1, Ky.

Distributing units in Albany, Baltimore, Boston, Brooklyn, Buffalo, Chicago, Cincinnati, Cleveland, Detroit, Fresno, Glendale, Hartford (East), High Point, Indianapolis, Knoxville, Los Angeles, Milwaukee, Newark, New Hyde Park (L. I., N. Y.), New York, Oakland, Philadelphia, Pittsburgh, Portland, Ore., Richmond, Rochester, San Francisco, Seattle, Spokane, St. Paul, Washington, D. C. Also U. S.-Mengel Plywoods, Inc., distributing units in Atlanta, Birmingham, Dallas, Houston, Jacksonville, Kansas City, Kans., Louisville, Memphis, New Orleans, San Antonio, St. Louis, Tampa. In Canada: United States Plywood of Canada, Limited, Toronto. Send inquiries to nearest point.

Weldwood* Hardwood Plywood
Douglas Fir Weldwood
Mengel Flush Doors
Douglas Fir Doors
Overhead Garage Doors
Molded Plywood
Armorpoly* (metal-faced plywood)

Tekwood* (paper-faced plywood)
Weldwood Glue* and other adhesives
Weldtex* (striated plywood)
Micarta*
Flexwood*
Firzite*
Weldwood Fire Doors
Weldwood Flush Veneer Doors

*Reg. U. S. Pat. Off.



Plastics and Wood
Welded for Good

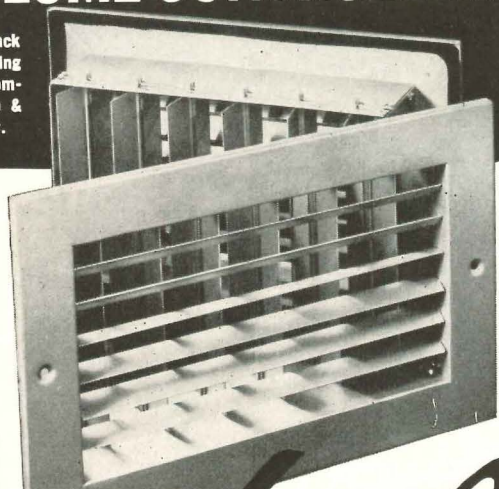
Interior grade Weldwood Plywood is guaranteed for the life of any building in which it is installed

COSTS 30% LESS

INSTALLS FOR 50% LESS

COMBINATION GRILLE & VOLUME CONTROLLER

● Front & back views of amazing new AF-325 Combination Grille & Vol. Controller.



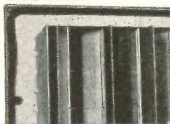
Airfoil AIR CONDITIONING OUTLETS

SOLID-SECTION AIRFOIL LOUVER



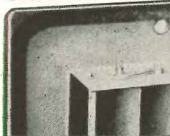
● Louver knives air in wind tunnel tests. Turbulence has been almost eliminated, giving noiseless control of air.

TWIN REAR LOUVERS



● More flexibility—greater and easier air control—faster, surer adjustment are certain.

EXTRA STRENGTH FRAME



● Special concealed support eliminates all mullions. Heavy gasket seals to duct—prevents dust streamers.

AIRFOIL scoops the air conditioning outlet world with new advance design—compact AF-325. Handles air volume and distribution with one unit. Split rear louvers control volume . . . combined with front AIRFOIL louvers give draft-free 4-way distribution.

ONE UNIT TO PURCHASE

Exclusive design holds cost at 30% less than combined costs of a volume controller and grille. Less parts—non-freeze louver action—easy adjustment—compact—rugged.

ONE UNIT TO HANDLE AND INSTALL

Workmen save valuable time handling one compact unit. There are less screws to place—less parts to fumble—less weight to carry. System adjusts in 1/10 normal time.

CHECK TYPE OF GRILLE ON WHICH INFORMATION IS DESIRED

- | | |
|---|--|
| <input type="checkbox"/> Air conditioning outlets | <input type="checkbox"/> Perforated metal & ornamental grilles |
| <input type="checkbox"/> Return air grilles and registers | <input type="checkbox"/> Door ventilators and registers |
| <input type="checkbox"/> Volume controllers | <input type="checkbox"/> Special made-to-order grilles |

TITUS MANUFACTURING CORP.
Waterloo, Iowa

RUSH me complete information including prices, discounts and delivery on the AF-325 plus above checked items.

NAME.....
ADDRESS.....
CITY.....STATE.....

EMPLOYMENT OPPORTUNITIES AVAILABLE

Advertising rates on request

Positions Open

ARCHITECTURAL DRAFTSMEN: for plan layout and detailing. Principally Schools and Hospitals. Well established, progressive office in Kansas City. Ideal working conditions. Permanent for qualified men. Give training, experience, salary expected, and references in first letter. Box 464, *Architectural Record*, 119 W. 40th St., New York 18.

ARCHITECTS WANTED: The Tennessee Valley Authority has several openings for architectural draftsmen in its Division of Design at Knoxville, Tennessee, for work on a broad construction program of hydro-electric and steam power plant buildings. Base entrance salary for these positions is \$3,900 a year, advancing through periodic within-grade increases to a maximum rate of \$4,650. Vacancies also exist for specifications writers at a base entrance salary of \$4,650, with periodic within-grade increases to \$5,400. Interested candidates should write the Chief, Personnel Office Branch, Tennessee Valley Authority, Knoxville, Tennessee.

ARCHITECT: For responsible charge of department. Personable, aggressive business getter with background of contemporary design and costs. Applications solicited from Southeast. Permanent location in Atlanta, Georgia. Write Box 465, *Architectural Record*, 119 W. 40th St., New York 18.

DRAFTSMEN: Capable of handling complete jobs from preliminaries through working drawings and details. Contemporary work in small progressive office in northern Wisconsin. Long term employment assured for right men. State education, experience, references, availability, salary, etc. Box 466, *Architectural Record*, 119 W. 40th St., New York 18.

ARCHITECTURAL CHIEF DRAFTSMAN: Capable of heading office employing 5-10 persons, doing high type progressive work of varied building classifications. Wide experience specifications and working drawings required; appreciation contemporary architecture desirable. Permanent position for qualified person. Location San Francisco. Give full details, experience, education, references, salary expected. Box 467, *Architectural Record*, 119 W. 40th St., New York 18.

WANTED: Architect with building construction experience or an architectural engineer to advise in preparation of plans, review drawings, supervise construction, etc., under Hill-Burton Act. State experience, age and salary required. Address; The Commissioner, Tennessee Department of Public Health, 420 Sixth Avenue, North, Nashville, Tenn.

ARCHITECTURAL DRAFTING ROOM SUPERVISORS: capable of directing the preparation of drawings for multistoried and other large buildings. Must be thoroughly experienced, reliable, able to assume responsibility and to carry on work without direct supervision. Positions permanent for qualified persons. Salary between \$8,000 and \$12,500 per annum depending upon qualifications. Furnish complete information as to education, experience, references, salary expected, and availability. Well established, progressive firm, operating in South Carolina, North Carolina and Georgia. Work varied, principally contemporary. William G. Lyles, Bissett, Carlisle & Wolff, Architects-Engineers, 1321 Bull Street, Columbia, S. C.

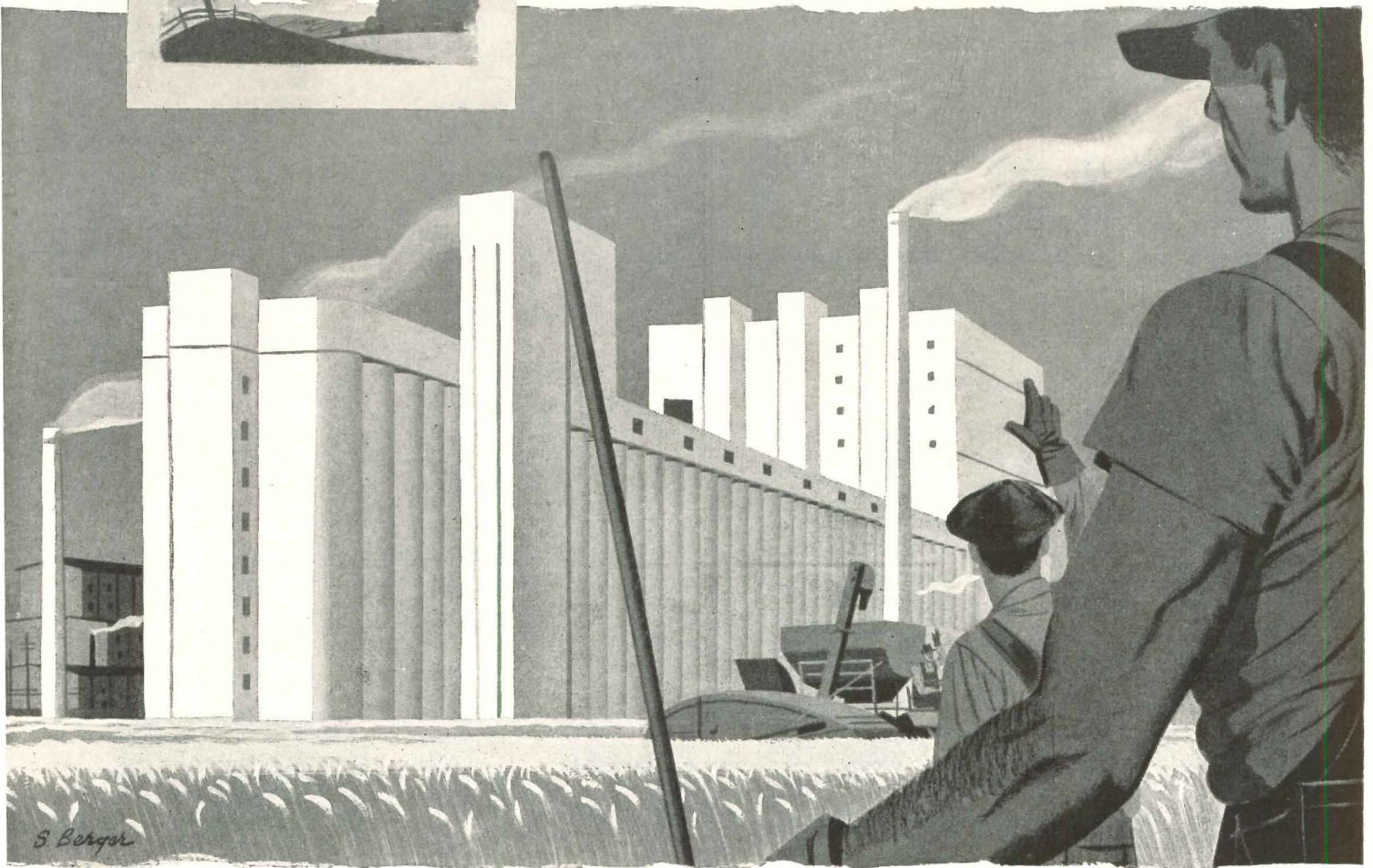
ARCHITECTURAL CONSULTANT: nationally known catalog service organization seeks professionally trained young architect. Building materials specifying, sales and marketing knowledge desirable. Give full details of personal and business history. Box 472, *Architectural Record*, 119 W. 40th St., New York 18.

Continued on page 244



Extra White...

a favorite color in nature's masterpieces



Extra Whiteness...

for distinction in functional structures

The use of Trinity—the *whitest* white cement—is most commonly associated with homes, apartments, stores and the larger buildings like schools, office buildings and monumental structures.

But it has also important merits in functional buildings. The use of Trinity White can give distinction, business prestige; and community values that will return far more to its owners than the cost involved.

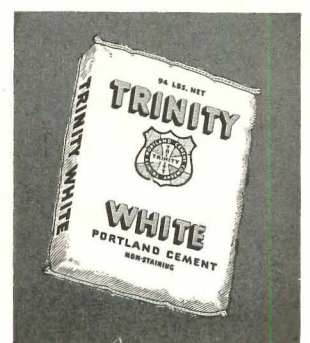
You can use Trinity in concrete architectural units...cast stone...stucco...in cement paint.

Trinity is a true portland cement; easily workable; enduring; and extra white. For further information write Trinity Portland Cement Division, General Portland Cement Company, 111 West Monroe Street, Chicago; Republic Bank Building, Dallas, Texas; 816 West 5th Street, Los Angeles.

As white

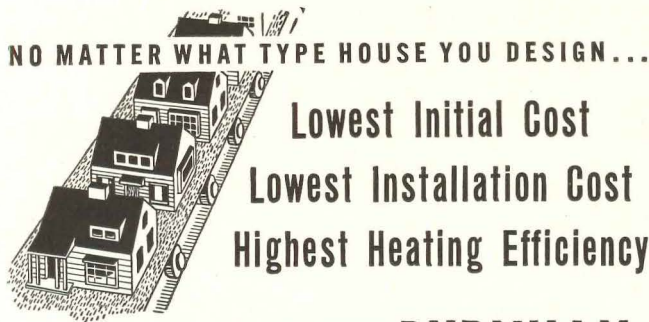


as snow



TRINITY WHITE PORTLAND CEMENT

PLAIN OR WATERPROOFED



NO MATTER WHAT TYPE HOUSE YOU DESIGN...

Lowest Initial Cost
 Lowest Installation Cost
 Highest Heating Efficiency

MAKE THE BURNHAM

PACEMAKER

YOUR FIRST CHOICE

How to cut costs—that's your big problem today. And PACEMAKER is the answer. This new Burnham oil burning boiler shows the way to substantial savings. It's the *lowest priced* cast-iron boiler on the market...but it's built to Burnham quality standards. And better yet it's factory assembled. That cuts costly installation time practically in half.

HIGH EFFICIENCY—Two crown sheets and vertical fire travel...to scrub more heat from fuel. Features usually found only in expensive boilers.

PRE-CAST CONSTRUCTION CHAMBER—Refractory is built into base before you get it.

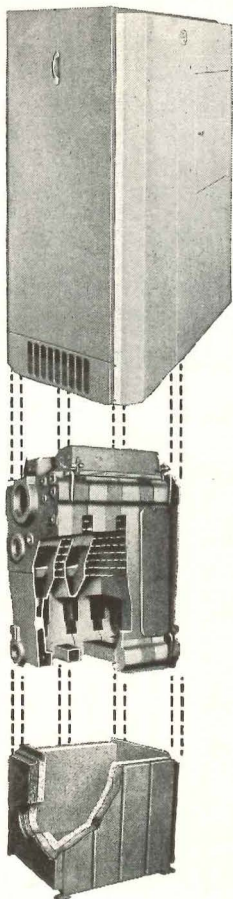
BOILER SHIPPED ASSEMBLED—A big cost-saving item in these days of high labor—Factory tested at 100 lbs. working pressure.

DOMESTIC HOT WATER—Delivers abundant hot water, Summer and Winter, at low cost. Built-in copper water heater—tankless or storage type.

CONTROLS—All mounted on front of boiler directly above oil-burner, for easy wiring.

GAS-TIGHT CONSTRUCTION—All sections machine ground for tight fit—no air leakage or escape of oil fumes.

Get all the facts on PACEMAKER—the oil burning boiler that simplifies installations and delivers what you promise!



Burnham Corporation

"PIONEERS OF RADIANT BASEBOARD HEATING"

IRVINGTON, N. Y., Dept. AR-30



.....

BURNHAM CORPORATION Dept. AR-30
 Irvington, New York

Please send me literature on PACEMAKER.

Name

Address

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

.....

EMPLOYMENT OPPORTUNITIES AVAILABLE

Advertising rates on request

(Continued from page 242)

Positions Sought

ARCHITECT: desires association with small, busy, progressive office. Thoroughly experienced in design and completion of drawings for all types of buildings. Experienced also in executive capacity. Location preferred: Dallas vicinity. Box 468, *Architectural Record*, 119 W. 40th St., New York 18.

WANTED: To form partnership in West or Southwest with established architect or one ready to establish. Capable of handling all phases of architecture. Registered in Indiana and in Caracas, Venezuela, S. A. For references, experience, and further information, write Box 469, *Architectural Record*, 119 W. 40th St., New York 18.

DESIGNER-DRAFTSMAN: Man 39 with excellent experience and ability in contemporary design desires position in medium-sized firm, Louisville, or vicinity. Salary secondary to opportunity. All phases of work. Box 470, *Architectural Record*, 119 W. 40th St., New York 18.

LICENSED ARCHITECT: Interested in partnership in established firm. NCARB 14 years experience hospitals, schools, college buildings, commercial structures. Age 38. Box 471, *Architectural Record*, 119 W. 40th St., New York 18.

Choose

THE TYPE THAT MEETS YOUR NEED

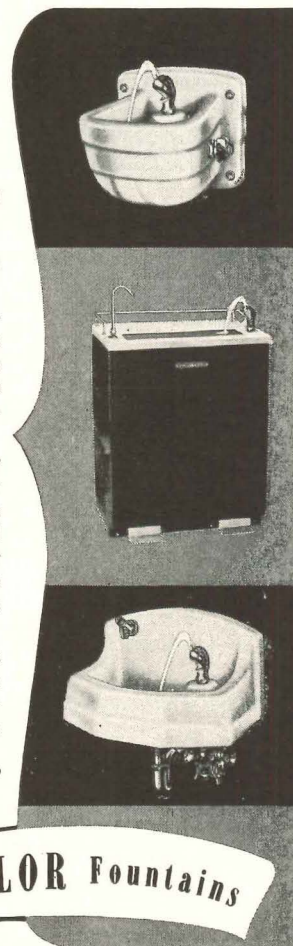
You'll find Halsey Taylor fountains ideal for school and public building installations. There's a type to meet your requirements... pedestal, wall, battery or cafeteria cooler!

The newest Halsey Taylor development, the Lo-Level Cooler for schools, is designed with the child in mind. Foot-pedal control permits filling glass with water while holding lunch-tray... the result, greater convenience, less confusion.

And of course, patented features to safeguard sanitation, are an integral part of Halsey Taylor design... in every model! Write

THE HALSEY W. TAYLOR CO.,
 Warren, Ohio

HALSEY TAYLOR Fountains



A2



this man offers you...

Expert assistance in the selection and application of the *right* acoustical product for every Sound Conditioning job. He is your local distributor of Acousti-Celotex products—the nation's most complete, quality line of acoustical materials.

His Sound Conditioning skills reflect over 25 years of experience and hundreds of thousands of installations. His acoustical products have been tested and proved to meet every building code, specification and requirement.

For custom-made installations of lasting beauty and quiet, make sure to contact the man with the most widely used acoustical products ever developed, *plus* the most extensive experience in Sound Conditioning.



ACOUSTI-CELOTEX*
CANE FIBRE TILE



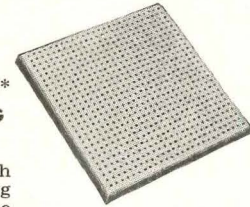
A lightweight, rigid unit, combining acoustical efficiency with a durable, smooth surface. Perforations (to within 1/8" of the back) assure repeated paintability and ease of maintenance. Available in a variety of sound-absorbent ratings. Rot proof and vermin proof (patented Ferox process).

ACOUSTI-CELOTEX*
MINERAL TILE



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

ACOUSTI-CELOTEX*
FLAME RETARDING TILE



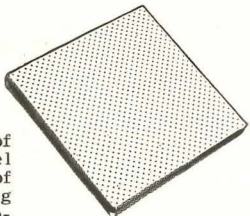
A cane fibre tile with a flame retarding surface. This tile meets all requirements for *Slow Burning* rating as stipulated in Federal Specifications SS-A-118a. It may be washed or repainted without impairing its flame retarding characteristics—and without loss of sound absorbing capacity. Supplied in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

ACOUSTI-CELOTEX*
FISSURETONE*



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

ACOUSTEEL*



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



ACOUSTI-CELOTEX
TRADE MARKS REGISTERED U. S. PAT. OFF.

Sound Conditioning Products

PRODUCTS FOR EVERY SOUND CONDITIONING PROBLEM

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

120 S. LaSalle St., Chicago 3, Illinois • Dominion Sound Equipments, Ltd., Montreal, Quebec, Canada

PARKWOOD

Decorative

SPECIFIED



Employees' Cafeteria

NEW John Hancock Building

PARKWOOD DECORATIVE was specified by the John Hancock Insurance Co., and their decorators, for all genuine wood veneer plastic table tops used in their huge, modern employee cafeteria. Daily, 3,800 people lunch here in just 2½ hours — mute evidence of the sanitary and indestructible qualities of PARKWOOD DECORATIVE.

many diverse applications

The John Hancock Building contains hundreds of PARKWOOD DECORATIVE genuine wood veneer plastic table tops of diverse woods for use in executive committee rooms, dining rooms, employees' recreation and lounge rooms, as well as for restaurant and library counter tops.



IF YOUR REQUIREMENT IS BEAUTY AND DUTY...

specify PARKWOOD *Decorative*

For beauty, PARKWOOD DECORATIVE offers a wide variety of genuine wood veneers . . . plus the new three-dimensional patterns, PARKWOOD Pebble-Tex and Stardust — in an attractive range of beautiful colors.

For duty, these beautiful laminated plastic table tops wear indefinitely and are resistant to alcohol, fruit juices, cigarette burns and the usual cleaning chemicals. With PARKWOOD there's no replacement problem!

See Our Full-Color Catalogue Sheets in Sweet's 1950 Index 14A-8

SEND NOW—FOR OUR BEAUTIFUL KODACHROME BROCHURE



Parkwood Corporation

21 Water St., Wakefield, Massachusetts

No Pencil Can Compare with

MARS-LUMOGRAPH

DRAWING PENCIL

say

ARCHITECTS, DESIGNERS AND DRAFTSMEN

Men whose work requires the finest qualities in a pencil agree that in all the world there is just one MARS-LUMOGRAPH—America's only imported drawing pencil.

Do not accept substitutes. Insist on MARS-LUMOGRAPH—made by craftsmen with almost 300 years of experience. Your choice of 19 degrees. See and feel the difference!

SPECIAL INTRODUCTORY OFFER

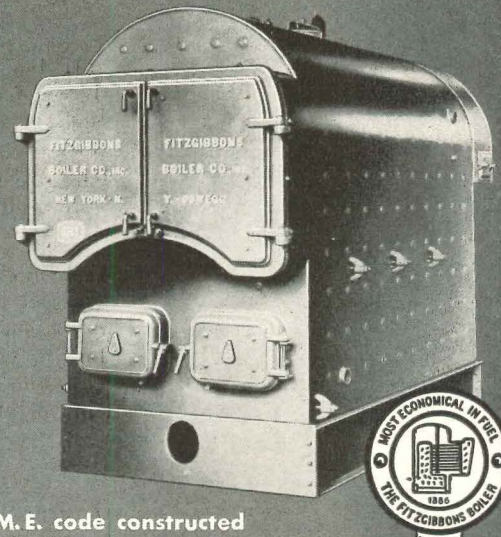
You receive FREE a one dozen assortment of Tradition-Chroma colored pencils with each order for one gross or more of MARS-LUMOGRAPH. \$17.00 per gross, less in quantity. State degrees. Write Department B. Advise dealer's name. Offer limited.



J. S. STAEDTLER INC.
53 WORTH STREET NEW YORK 13, N. Y.
STAEDTLER SINCE 1662

FITZGIBBONS

"The best in steel boiler heat"



A. S. M. E. code constructed

Hydrostatically tested

Hartford insurance inspected

S. B. I. code rated

Residential and commercial steel boilers in sizes from the small home to the largest structure.



Fitzgibbons Boiler Company, Inc. 101 PARK AVE. NEW YORK 17, N. Y.

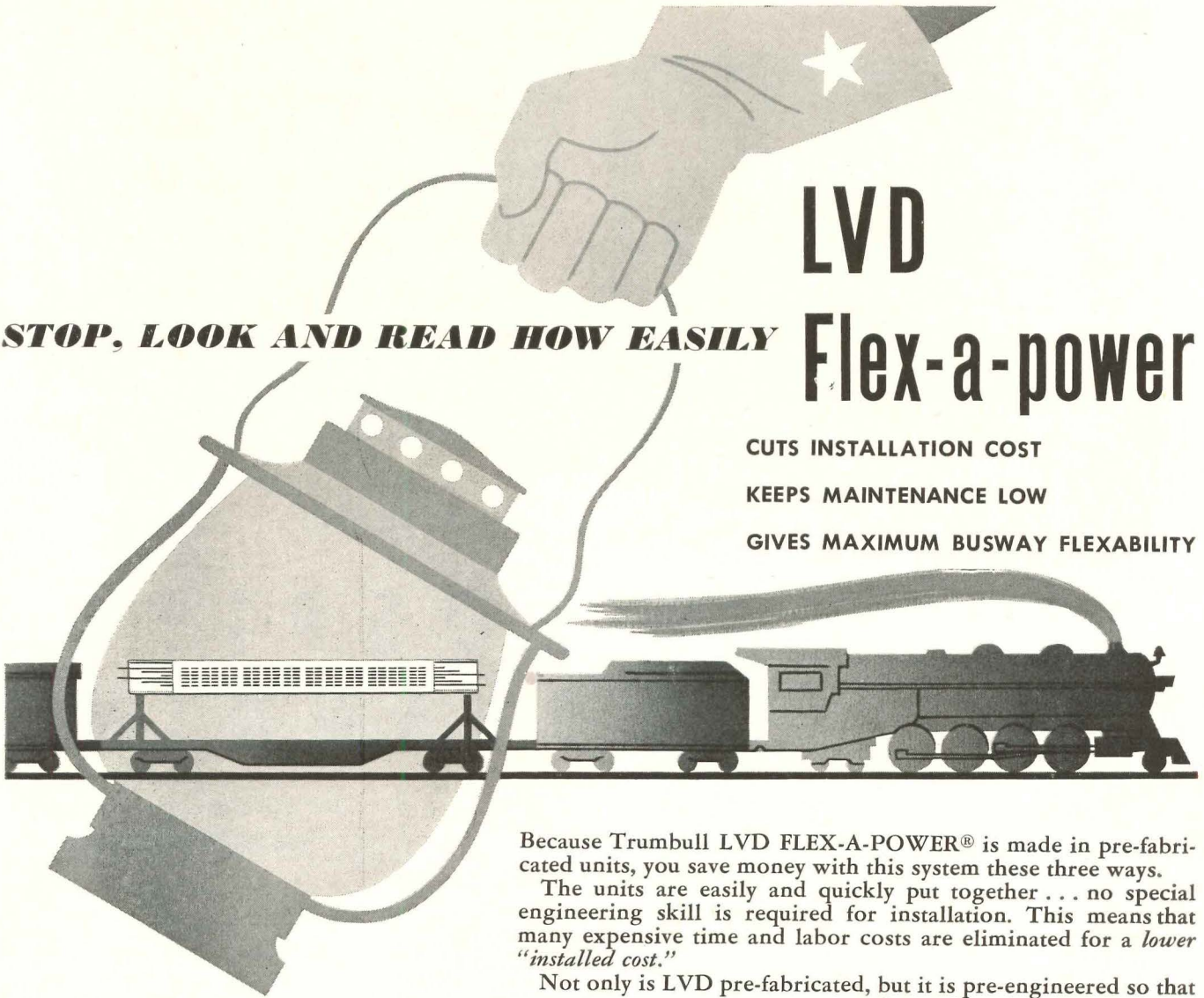
STOP, LOOK AND READ HOW EASILY

LVD Flex-a-power

CUTS INSTALLATION COST

KEEPS MAINTENANCE LOW

GIVES MAXIMUM BUSWAY FLEXIBILITY



Because Trumbull LVD FLEX-A-POWER® is made in pre-fabricated units, you save money with this system these three ways.

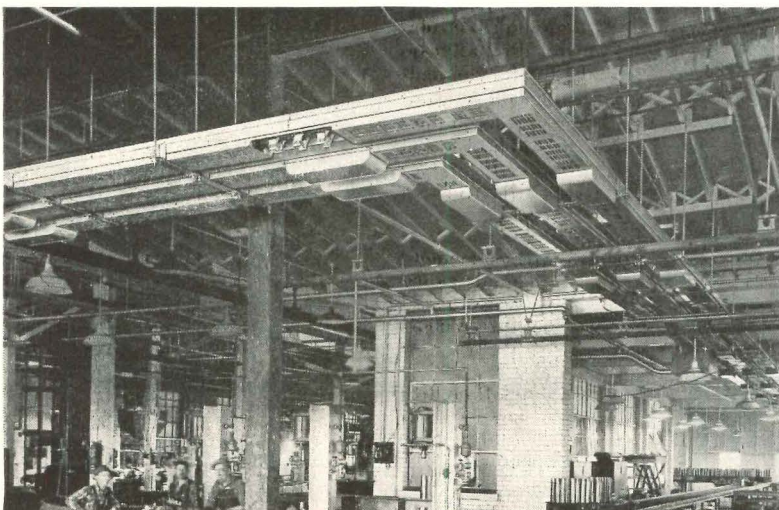
The units are easily and quickly put together . . . no special engineering skill is required for installation. This means that many expensive time and labor costs are eliminated for a *lower "installed cost."*

Not only is LVD pre-fabricated, but it is pre-engineered so that you can predetermine electrical performance before actual installation. This advantage is an important factor in minimizing voltage drop and in keeping machine efficiency high.

Another advantage — LVD FLEX-A-POWER materials do not deteriorate even under the most severe operating conditions, thus assuring years of satisfactory service *without costly maintenance repairs.*

LVD FLEX-A-POWER is readily adaptable to any power distribution problem you may have. Fast to install, its convenient "take-apartability" allows you to relocate your LVD system without the cost of replacing a single part!

Learn more about the many advantages of LVD. Write for Circular TEC 152 today. THE TRUMBULL ELECTRIC MANUFACTURING COMPANY, Plainville, Conn.



Men Who Observe the Best Electrical Practice Make It a Practice to Use

TRUMBULL ELECTRIC



TRUMBULL'S TRAINLOAD OF NEW PRODUCTS

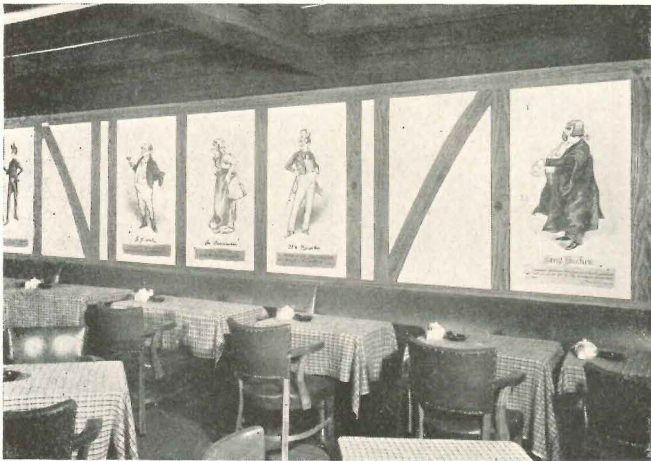


PHOTO-MURALS . . .

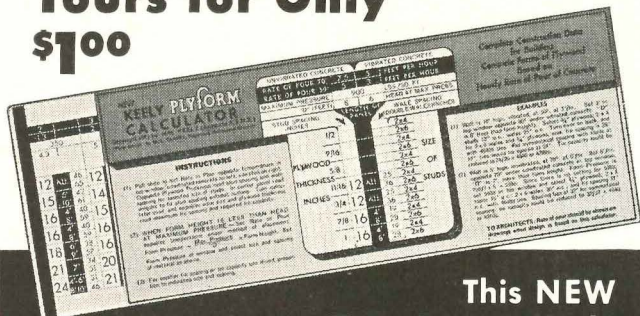
can be used to create an atmosphere appropriate to any location . . . any setting. Their decorative abilities are limited only by the imagination of the user, since photo-murals can be made of any subject — to fit any space, in full color, black and white, or sepia.

Write for your colorful 24-page booklet "Photo-Murals," an authoritative reference of ideas on the use of photo-murals.



WEST-DEMPSTER COMPANY
100 W. LYON GRAND RAPIDS, MICHIGAN

Yours for Only \$1.00



This NEW Time-Saving Keely PLYFORM CALCULATOR

SAVE time designing and building forms of PlyForm, the concrete form grade of Douglas fir plywood. Handy slide-rule calculator gives construction data, based on hourly rate of pour. Included is booklet, "Design Assumptions for New Keely Calculator." Clip coupon — now!

DOUGLAS FIR PLYWOOD ASSOCIATION, Dept. N
Tacoma 2, Washington

Please send me Keely PlyForm Calculators.
I enclose \$1.00 each to cover costs.

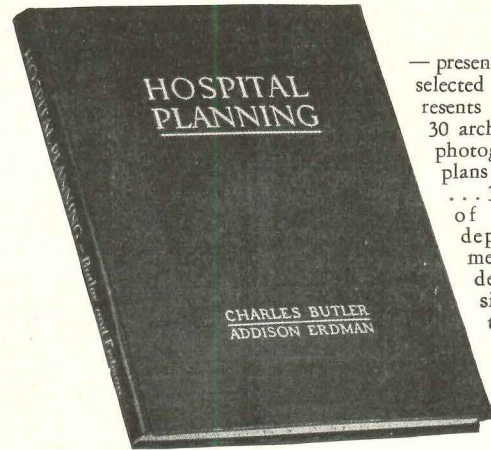
Name

Address

City Zone State

Also please send me, at no cost, copies of "Concrete Forms of Douglas Fir Plywood", and "Handling PlyForm".

Offer good in U. S. only.



— presents the plans of 51 selected hospitals . . . represents creative efforts of 30 architects. Includes 32 photographs . . . 11 site plans . . . 187 floor plans . . . 38 special unit plans of rooms, wards, departments . . . numerous construction details. 236 pages, size 8½ x 11, illustrated and indexed, stiff cloth binding. Price \$15.

AGAIN AVAILABLE

HOSPITAL PLANNING

by **CHARLES BUTLER, F.A.I.A.**
and **ADDISON ERDMAN, A.I.A.**

"HOSPITAL PLANNING," the first important textbook on the subject in a generation, offers a complete treatise on hospital architecture . . . gives a cross-section of the best in hospitals produced in this country within recent years . . . and provides exhaustive study and examination of new trends.

Messrs. Butler and Erdman, working as a team of specialists, have directed a nationwide, on-premise survey of hospital planning — in theory, in everyday practice and under the stress of unprecedented demands and emergencies. The most significant examples of hospital planning have been studied, assembled, abstracted and dramatized.

This 236-page volume is for architects and hospital groups alike. It will help architects and engineers to learn of the great advances made in hospital architecture . . . to acquire a working knowledge of hospital procedure . . . to avoid the many pitfalls which beset the hospital planner. It will help hospital administrators to visualize their problems in terms of community needs . . . show them how others are meeting similar problems. Price \$15, postage prepaid.

BOOK DEPARTMENT ARCHITECTURAL RECORD
119 West 40th Street, New York 18, New York

Enter my order for copies of "Hospital Planning" by Charles Butler and Addison Erdman, at the price of \$15. I enclose payment of \$

For New York City Delivery add 30 cents for Sales Tax — \$15.30 in all.

Name

Address

City Zone State

for appearance...



*Simple, unobtrusive design
blends with any architectural treatment.*

for performance



*Adjustment features insure
positive control of air movement.*


Kno-Draft

*... adjustable air diffusers
help solve problems
of both form and function.*

FREE HANDBOOK—Send for FREE copy of new handbook on air diffusion. Complete information on Kno-Draft Adjustable Diffusers and all necessary engineering data to help you create "custom-made" air patterns. Just fill in and mail the coupon.

W. B. CONNOR ENGINEERING CORP.

Air Diffusion • Air Purification • Air Recovery

112 East 32nd Street  New York 16, N. Y.

IN CANADA: Douglas Engineering Co., Ltd., 190 Murray Street, Montreal 3, P. Q.

W. B. CONNOR ENGINEERING CORP.

Dept 5-23, 112 East 32nd Street, New York 16, New York

Please send my FREE copy of the new Kno-Draft Handbook on Adjustable Diffusers.

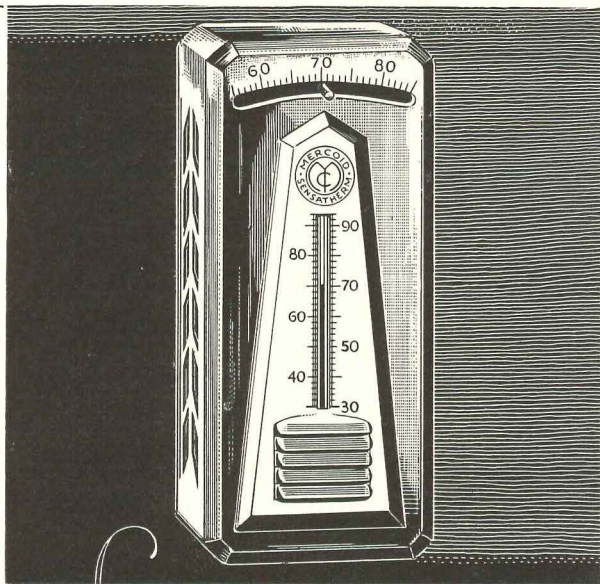
Name.....

Position.....

Company.....

Street.....

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



MERCOID

Jensatherm

IT HAS WHAT YOU NEED IN A THERMOSTAT

It maintains a home in ideal comfort at any desired temperature. It operates on a variation of $\frac{1}{2}$ " above or below the point set. It is a corrosion-proof mercury switch contact equipped control. It performs perfectly for years without any servicing attention. It is a masterpiece in mechanical precision, design and appearance.

Complete catalog sent upon request

THE MERCOID CORPORATION, 4201 BELMONT AVE., CHICAGO 41, ILL.
Manufacturers of dependable automatic controls for a quarter of a century



CUT APPLICATION COSTS

by simplifying the mechanic's job!

When you specify CHROMTRIM metal mouldings, you do the mechanic a favor and reduce application costs.

- **in aluminum**—a choice of rolled and extruded shapes
- **in stainless steel**—most shapes have tough stainless steel cladding over *easy-to-cut* non-corrosive aluminum core
- **special fasteners** eliminate the use of screws and counter sinking on many shapes
- **wider, thinner flanges** for easier nailing and greater contour smoothness on wallboard and linoleum

CHROMTRIM now is individually wrapped in red-striped jackets to protect the finish and to *identify genuine CHROMTRIM*.

R. D. WERNER CO., Inc., Dept. AR, 295 Fifth Avenue, New York 16, N. Y. In Canada: R. D. Werner Co., Ltd., Ontario

CATALOG 13J/2 in SWEET'S

Chromtrim

Easy to Buy.. Easy to Apply



STOP *that* WATER *with* FORMULA #640

A clear liquid which penetrates deeply into masonry surfaces.

The hydrocarbon solvent evaporates, leaving the pores filled with a balanced formula of seven different waxes and resins.

See our catalogs in SWEET'S Architectural Files $\frac{9a}{9}$ and Engineering Files $\frac{4f}{3}$ under Waterproofing and Dampproofing.

WRITE OUR ENGINEERING DEPARTMENT for office test kit, technical data, or regarding any special problem

J. Wilbur Haynes, Engineer



HAYNES PRODUCTS CO.

4007 FARNAM STREET • OMAHA 3, NEBRASKA



You can make it easy for your client to set up

A SCHOOL PROGRAM SCHEDULE IN 3 OR 4 MINUTES!

Today the school has more of everything *except time!*

Standard Synchronous Master-Program Controller and Clock System *saves* time. Paper tapes plainly marked in hours and minutes can be punched and installed in a very few minutes and will last for years. Any signal can easily be placed in any schedule desired by simply changing the position of its plug on the bell control board.

Bulletins and complete engineering service are available to architects.

c-1

STANDARD
FOUNDED 1884

SYNCHRONOUS PROGRAM CONTROLLER AND CLOCK SYSTEM

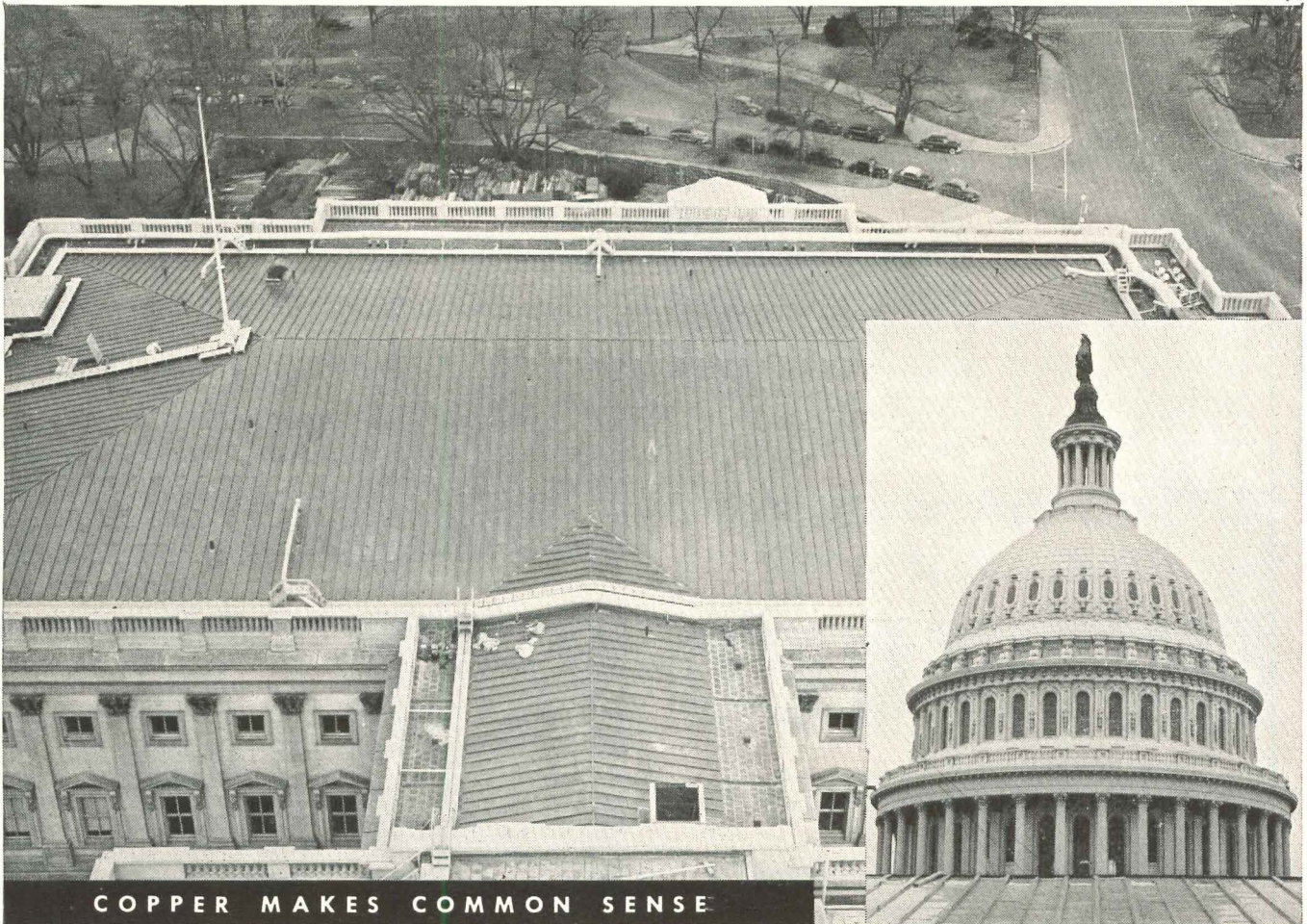
The Standard Electric Time Co.

81 LOGAN STREET • SPRINGFIELD, MASS.

after 90 years

OF PROVEN SERVICE

• The Senate Wing
• of the U. S. Capitol
• Gets a New
• Copper Roof



COPPER MAKES COMMON SENSE

90-ODD YEARS AGO, a copper roof was installed on the Senate Wing of the U.S. Capitol. Recently, to permit extensive structural work beneath the roof and elimination of skylights, this roof was removed.

BUT—after more than 90 years of satisfactory service, the original copper roof was still in good condition. It was replaced—and, of course, replaced with new copper—only because the extent of the structural work beneath made it advisable to do a complete job!

That's the way it is with copper—design and install it properly and you'll get roofs and gutters that you can depend on for more than a lifetime of service. Even then, the salvage value of the copper is high.

You will find all the facts and figures you need for proper engineering design and installation of sheet copper construction in the Revere publication "Copper and Common Sense." This authoritative manual has been widely distributed to architects and sheet metal contractors, and there is probably a copy in your files. In addition, a Revere Technical Advisor will always be glad to consult with you without obligation.

Revere materials for building construction—including sheet copper, copper water tube and pipe, and red-brass pipe are available from leading distributors throughout the United States.

• General view of the new batten seam copper roof atop the Senate Wing of the U. S. Capitol.
• Constructed of cold rolled Revere Copper in weights of 20 oz. and heavier, it replaces a copper roof which, after 90-odd years of satisfactory service, was removed to permit structural work beneath the roof and elimination of skylights.
• Architect of the Capitol: David Lynn;
• Engineers: Marshall & Gongwer; General Contractor: Consolidated Engineering Company, Incorporated; Sheet Metal Contractor: Lloyd E. Mitchell, Inc.

REVERE

COPPER AND BRASS INCORPORATED

Founded by Paul Revere in 1801

230 Park Avenue, New York 17, New York

Mills: Baltimore, Md.; Chicago, Ill.; Detroit, Mich.; Los Angeles and Riverside, Calif.;

New Bedford, Mass.; Rome, N. Y.
Sales Offices in Principal Cities,
Distributors Everywhere.

Fume-Free Air...



**IMPROVES
MECHANIC
EFFICIENCY**

**Kent-Moore
MONOXIVENT**
EXHAUST ELIMINATING FIXTURES

You'd be surprised at what an improvement there is in mechanic efficiency and morale when you take the toxic carbon monoxide away from the air they breathe. And when it comes to eliminating exhaust fumes, you'll be equally surprised at how conveniently, how efficiently it's done with Kent-Moore's J 2980 MONOXIVENT Set. It's designed for use with underfloor exhaust eliminating systems . . . features a special tailpipe adapter, an asbestos packed stainless steel tube, and a virtually airtight floor outlet assembly. Smart idea there too. You see, the adapter and tubing slip down into the underfloor duct for safe keeping when not in use. Fully protected, can't get lost or "borrowed". And it gets rid of unsightly hoses hanging from overhead. Important, too, from a cost point-of-view, is the simplified installation. Readily installed in an upturned "Y" section of the main underfloor duct. No indi-

vidual "T's" or branch ducts required. Keeps cost to a minimum for any underfloor system.



So if you're looking for effective means of eliminating exhaust fumes at low installation cost, write today for complete information on the Kent-Moore J 2980 MONOXIVENT.

J 2980



KENT-MOORE ORGANIZATION, INC.
GENERAL MOTORS BUILDING • DETROIT 2, MICHIGAN

Engineers and Manufacturers of Special Sales and Service Engineering Representatives in Principal Cities Coast-to-Coast
Automotive Service Tools and Equipment

TUFF-TRED

SAFETY STAIR NOSING

For use on any type stair whether new or old . . . in office or industrial buildings, in schools or in homes. TUFF-TREDS prove extremely long wearing because they're durably constructed of polished extruded aluminum with non-skid, semi-resilient abrasive filler. Practical architects and contractors consistently specify TUFF-TREDS because of their permanent beauty, safety and economy.

Just fill in and mail coupon below for full details

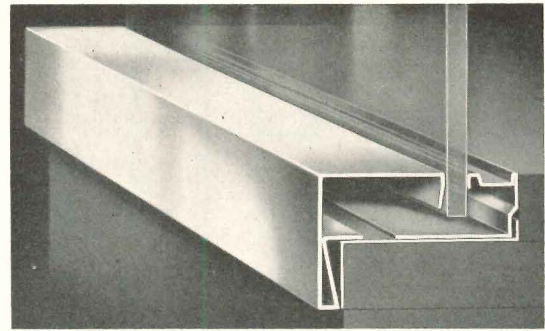
GOODLOE E. MOORE, Incorporated
Danville 6, Illinois

Please send complete details on TUFF-TREDS without obligation to:

Name

Firm Name

Address City & State



Get All 3
✓ CLASSIC
STYLING

✓ SOUND
CONSTRUCTION

✓ MODERN
SELLEVISION

with



STAINLESS STEEL
ANODIZED ALUMINUM

BRASCO MANUFACTURING Co.
HARVEY • (CHICAGO SUBURB) • ILLINOIS

SEE OUR
CATALOG
in
SWEET'S FILE
ARCHITECTURAL

INVESTIGATE! GET THE FACTS!

SAVE MONEY AND SPACE

AGTAIR® AIR and GREASE FILTERS

*Highest Efficiency!
Lowest Cost!*

Convince Yourself —
Write for Bulletin FM101-2

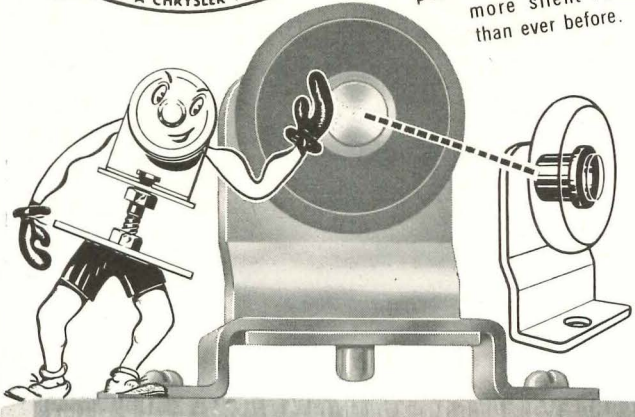
AIR DEVICES, Inc.
17 East 42nd St. • New York 17, N. Y.

HAR-VEY

ROLLING DOOR HARDWARE

-- made from the Quality Products of America's Leading Manufacturers

Bearings by Chrysler
 The Chrysler Corporation produces the oil-cushioned Oilite bearings now used in Har-Vey Hardware. These rustproof, self-lubricating bearings make possible even smoother, more silent rolling than ever before.



Check the names that stand behind a product, and you can check its quality as well. Check *these* names:

CHRYSLER CORPORATION, ANACONDA COPPER, FORMICA, REYNOLDS METALS

All are names of national leaders in quality manufacturing -- and all are typical producers of component parts for Har-Vey Hardware! These firms contribute the finest in materials and workmanship to make Har-Vey the leader in its field for quality.

Check, too, Har-Vey's *engineering* leadership -- its new features which make it completely rustproof and assure positive locking -- its superlative ease of installation -- its smooth, silent operation -- and its consistent lifetime performance in thousands of residences throughout the nation.





Check all the facts yourself! Send today for free folder giving full information on Har-Vey Hardware and varied uses of rolling doors -- with installation details.

Address: **Hardware Division T**

METAL PRODUCTS CORPORATION HAR-VEY HARDWARE
 807 N. W. 20th St. Miami, Florida

Please send me your free folder on rolling doors & Har-Vey Hardware

NAME _____
 COMPANY _____
 STREET _____
 CITY _____ STATE _____
 YOUR DEALER'S NAME _____ T

A CUTLER MAIL CHUTE should be specified for every eligible office building, public building, hotel, apartment and hospital.

Cutler Mail Boxes are available in our standard designs in large and small sizes, or your own design.

Design 5050

Catalog in Sweet's

ESTABLISHED 1883
Cutler Mail Chute Co
 ROCHESTER 7, N. Y.



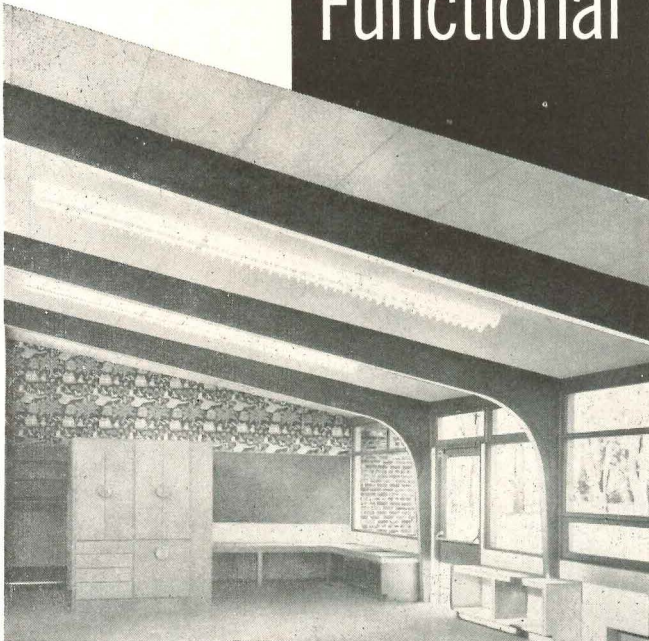
Zbitnoff Clinic Ukiah, California
 Clarence J. Felciano, Architect Santa Rosa, California

RADIANT ELECTRIC HEATED
 with
HEATSUM CABLE
 in the concrete floor

Write for free folder No. 25—Heatsum Cable for Radiant Electric Heating—Also New Insulation Data Sheet

L. N. ROBERSON CO.
 1539 East 103rd Street • Seattle 55, Washington

Flair for the Functional



Classroom in new elementary school at Waitsburg, Washington

...and tradition
in good taste

... that is a brief description of Timber Structures glued laminated arches and beams, and a good guide to their use.

Consider the classroom above, for instance. Here the graceful glulam rigid frames set the theme for a spacious thoroughly modern room. Too, they serve as primary structural members supporting the sides and roof of the building.

Glued laminated members can be slender and still have more than enough strength; or they can be massive without developing unsightly seasoning blemishes.

If color scheme contemplates bright colors, glued laminated arches and beams take paint and embellishment. If a solemn air is desired, stains may be employed; or for a friendly, informal atmosphere, glazes may be used.

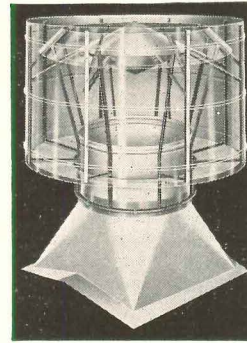
Up-to-date information about this functional, modern structural material will gladly be given to you upon request. See the Timber Structures office nearest you or write directly to us.

TIMBER STRUCTURES, INC.

P.O. BOX 3782-A, PORTLAND, 8, OREGON

Offices in Boise, Idaho; Eugene, Oregon; Lawrenceville, N.J.; Chicago; Dallas; New York; Seattle; Spokane

TIMBER STRUCTURES, INC. OF CALIFORNIA • Oakland and Sacramento
Local representatives coast to coast.



BURT KNOW-HOW ASSURES PROPER ENGINEERING FOR EFFICIENT VENTILATION

For half a century, Burt has been recognized as a leader in ventilating equipment. Over this period Burt engineers have gained invaluable training in ventilating design and application that only actual experience can supply. This specialized knowledge is available to help solve your ventilating problems on request. It is good assurance of complete satisfaction later.

THE BURT MFG. CO.

ROOF VENTILATORS • OIL FILTERS
EXHAUST HEADS

48 E. South Street, Akron 11, Ohio

SEND
FOR CATALOGS

Burt Engineers
are glad to
help on plans

LONE STAR CEMENTS

COVER EVERY
CONSTRUCTION NEED



**LONE STAR PORTLAND
CEMENT**

for concrete of outstanding
quality in all types
of construction

'INCOR' 24-HOUR CEMENT
America's FIRST high
early strength Portland
Cement—saves time,
cuts costs

**LONE STAR MASONRY
CEMENT**

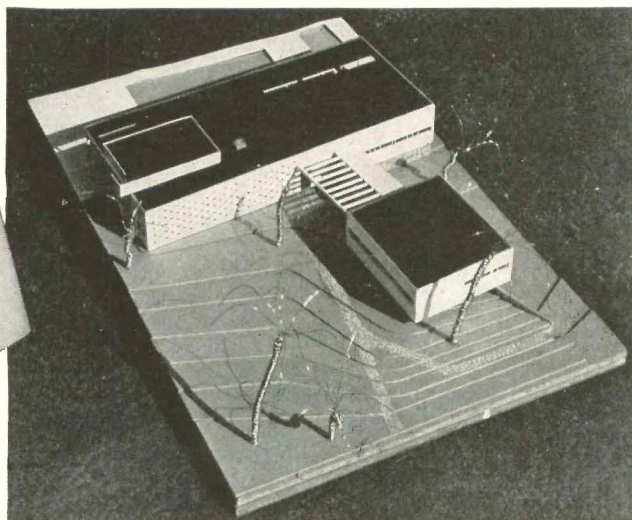
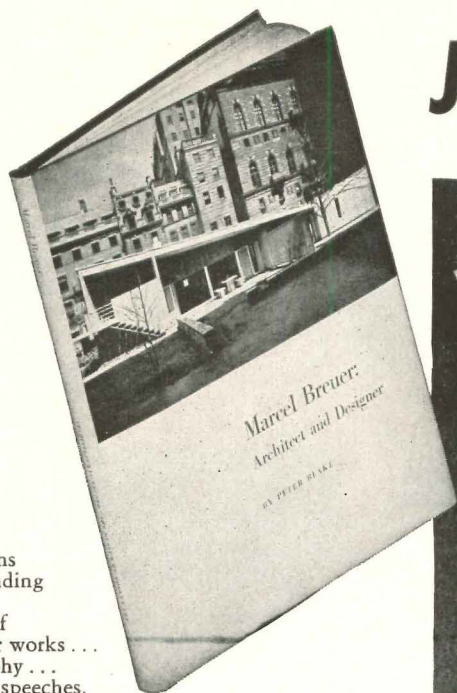
The modern masonry
cement, for really great
job performance

*Reg. U. S. Pat. Off.

LONE STAR CEMENT CORPORATION

Offices: Albany • Bethlehem, Pa. • Birmingham • Boston • Chicago • Dallas
Houston • Indianapolis • Jackson, Miss. • Kansas City, Mo. • New Orleans
New York • Norfolk • Philadelphia • St. Louis • Washington, D. C.

Just Published!



128 pages,
Fully indexed
196 illustrations
Stiff, cloth binding
Size 8½ x 11
Includes list of
Breuer's major works . . .
full bibliography . . .
excerpts from speeches.

The Inspiring Life Story of a Great Contemporary Architect . . .

"Marcel Breuer: Architect and Designer"

by PETER BLAKE

"In addition to being a most accomplished artist in his own right, Marcel Breuer has formed a link between the turbulent days of the early twenties, when many of the technical and esthetic ideas that have produced the new architecture were first formulated, and the present day with its increasingly widespread acceptance of those ideas in this country and abroad. This book is an attempt both to document Breuer's own work and to emphasize the main points in the message he is trying to convey."

Peter Blake

Curator of Architecture and Design, Museum of Modern Art.

PETER BLAKE'S "Marcel Breuer: Architect and Designer" is that rare publishing achievement — a biography which captures *wholly* the essence and spirit of its subject.

The essential meaning of Breuer's career is made clear in this significant and well-documented book as his life and works are traced from his initial contributions to architecture and design at the famous Bauhaus School in Germany to the present time. Considerable space, incidentally, is devoted to the Bauhaus experiment under Walter Gropius which has been responsible for so many notable advances in architecture and design.

Includes Many Reproductions

Fortunately, the author realized that actual reproductions of Breuer's work would explain his growth more graphically than words. Thus, the book is profusely illustrated with plans, drawings and designs made at every stage of

the architect's career. In all there are 196 illustrations, giving fascinating glimpses of Breuer's talents in action; showing his increasing interest in architecture, as distinguished from furniture design, and his later pre-occupation with American techniques. The illustrative material includes not only Breuer's designs, but also the works of those who inspired him: the expressionists, Kandinsky and Klee as well as the rationalists, Maholy-Nagy, Albers and Gropius.

* * *

It is inconceivable that anybody could read Peter Blake's book without learning a great deal. But instruction is not its main concern, nor does it account for the book's intrinsic charm. That charm, rather, lies in its magical unfolding of the drama of a great human being — in the development of a talent which ripened with each new challenge.

Whether you read "Marcel Breuer: Architect and Designer" out of professional interest or for sheer enjoyment, your time will be well invested. Handsomely bound in stiff, cloth binding, distinctively illustrated, this 128-page book will be an important new addition to your library.

To obtain your copy, simply fill in and return the coupon below. Just off the press, printed in a limited edition, the book is now available to you at the price of \$4.00, including postage.

BOOK DEPARTMENT, ARCHITECTURAL RECORD
119 West 40th Street, New York 18, N. Y.

Enclosed is \$_____ for _____ copy(s) of "Marcel Breuer: Architect and Designer," by Peter Blake, at the price of \$4.00 per copy. (For N. Y. C. add 2% sales tax.)

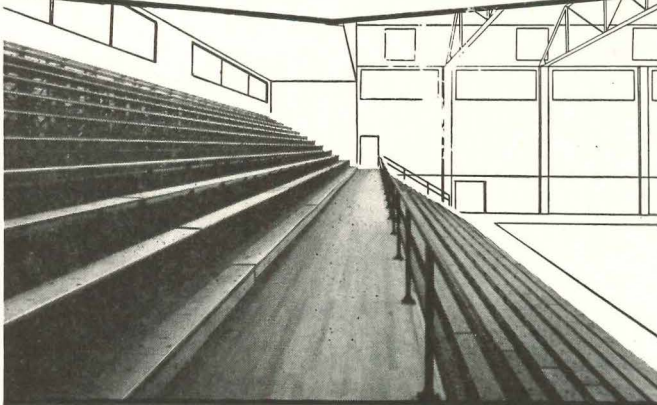
Name _____

Address _____

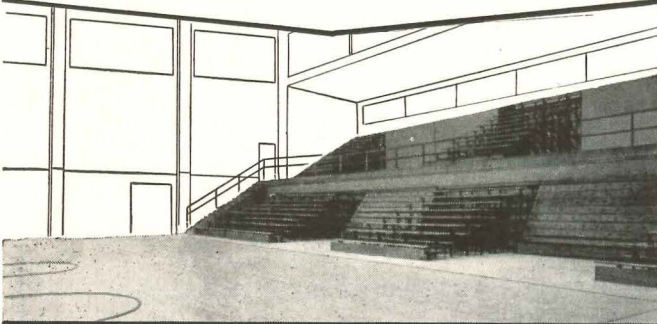
City _____ Zone _____ State _____

PLANNING A GYMNASIUM?

Here's How To Get Up To
30% GREATER Seating Capacity



—As Much As
11,200 sq. ft. MORE Usable Floor Space



—At Least
50% LOWER Seating Costs!

It's *two-level seating* with Universal Folding Bleachers! Many installations prove that this modern method (instead of built-in seating) can increase seating capacity as much as 30%. It assures much *more* usable floor space, too. For example—in a gym large enough for 4500 built-in seats and 4800 square feet of basketball floor space, *two-level seating* with Universal Folding Bleachers will not only provide far greater seating capacity in the same area, but will add 11,200 square feet *more* usable floor space when bleachers are folded back. Such a gain can provide extra cross courts . . . plus extra space for corrective physical education, wrestling, boxing, tumbling, fencing, and many other activities on both main floor and balcony levels. Equally important, actual costs of Universal Folding Bleachers are at least 50% less than usual built-in seats. Write today for typical floor plan. No obligation.

Universal
BLEACHER COMPANY

606 SOUTH NEIL STREET • CHAMPAIGN, ILLINOIS

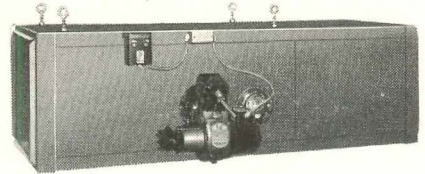
Bleacher Experts for Over 30 Years

SUSPENSION UNIT . . .

Oil or Gas!



WITH AN OUTSTANDING LINE OF BOTH OIL AND GAS-FIRED SUSPENSION TYPE HEATERS, J-C COVERS THE FIELD WITH THIS INCREASINGLY POPULAR TYPE OF FURNACE.



J-C GAS-FIRED SUSPENSION UNITS, fan or blower operated, have outputs of 68,000 to 172,000 BTU. Designed and built for performance and long life, the J-C gas fired suspension heater is ideal for heating, ventilating . . . for residential, commercial and industrial applications.

J-C OIL-FIRED SUSPENSION UNITS have outputs of 112,000 to 450,000 BTU. An efficient heater requiring less space *than any furnace* of its type and rating. Units feature greater heating efficiency with *less heating surface* . . . due to an exclusive design of ducts and baffles. Ease of installation is a feature—and ready access facilitates servicing.

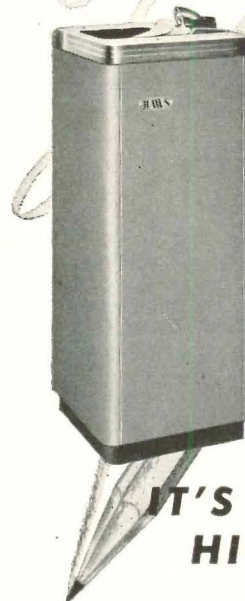


. . . AMERICA'S LARGEST AND MOST COMPLETE WARM AIR HEATING LINE . . .



A PRODUCT OF
JACKSON & CHURCH COMPANY, SAGINAW, MICHIGAN
WORK WELL DONE SINCE '81

Recognized Everywhere!



- Best Materials
- Finest Workmanship
- Trouble-free Valves and Fittings
- Complete Sanitation

Specify HAWS—and be sure!

**IT'S HAWS FOR
HIGHEST QUALITY**

Write today for '49 HAWS Catalog.

HAWS SANITARY DRINKING FOUNTAINS
ELECTRIC WATER COOLERS

HAWS DRINKING FAUCET CO.

1441 FOURTH STREET (Since 1909) BERKELEY 10, CALIFORNIA

Agents and Sales Representatives in All Principal Cities



Why did Abdullah's Camel raise an eyebrow?

One look at the *buying action* Home Owners' Catalogs stirs up will raise your eyebrow, too, Mr. Building Products Manufacturer.

Like Abdullah, home-planners buy or specify what they see in Home Owners' Catalogs. They want full facts about the building products they need for their new custom-built homes. By satisfying this hunger for buying information, Home Owners' Catalogs pre-sells the quality new-home market.

In short, Home Owners' Catalogs effectively and economically delivers your complete "sales presentation" to known, qualified home-planning families who are *impelled to buy* your products.

Give your eyes a chance to widen—and your sales a chance to rise. Put *your* consumer literature in Home Owners' Catalogs!

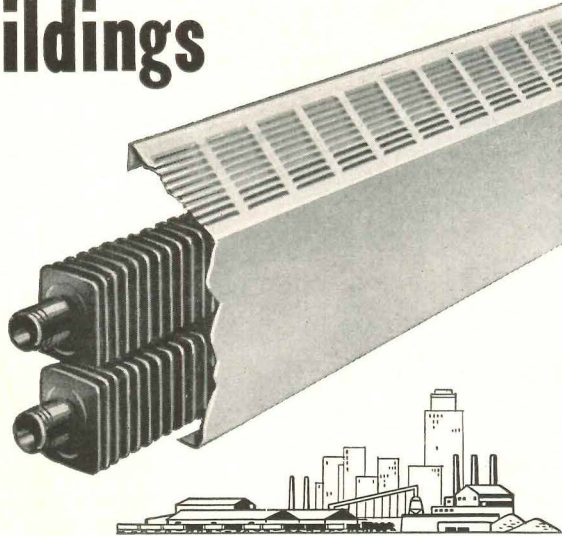


F. W. DODGE CORPORATION'S
CONSUMER CATALOG
DISTRIBUTION SERVICE

Home Owners'
CATALOGS

119 West 40th Street, New York 18, N. Y.

Why Vulcan is so popular in public and industrial buildings



Vulcan fin-tube radiation easily meets the desired standards for:

- healthful draft-free comfort
- neat appearance
- efficient maintenance-free operation
- operating economy

Customers, patrons, tenants, workers — all enjoy the supreme luxury of Vulcan's even draft-free warmth.

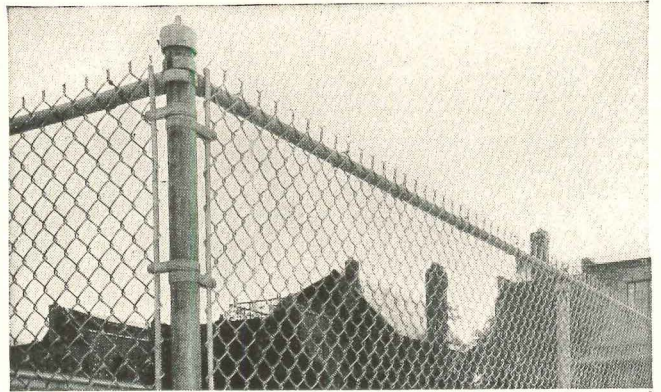
Maintenance Engineers like it because Vulcan's sturdy, quality construction relieves them of the worry of maintenance upkeep. And it is so easy to add a length of Vulcan to meet changing heating requirements when renovating or remodeling.

Architects and Heating Engineers recommend it because Vulcan can be so easily figured into the design of any architectural unit and it is easy to install... comes cut to desired lengths... requires few fittings and supports... can be used with either steam or forced hot water systems.

THE VULCAN RADIATOR COMPANY
26 FRANCIS AVE. HARTFORD 6, CONN.

Complete information on Vulcan Standard and Vulcan Baseboard Radiation for residential heating in Sweet's Architectural File.

 **VULCAN** 25 YEARS
A LEADER IN FIN-TUBE RADIATION



BE ON THE SAFE SIDE . . . SPECIFY REALOCK FENCE

Put your property on the safe side of a tamper-proof Realock® Fence. You'll get permanent protection against trespassing, vandalism and other hazards.

Made of steel wire, heavily galvanized, Realock Fence is nationally known for its rugged good looks, indestructibility, and long-lived economy.

WRITE NOW FOR FREE ESTIMATE



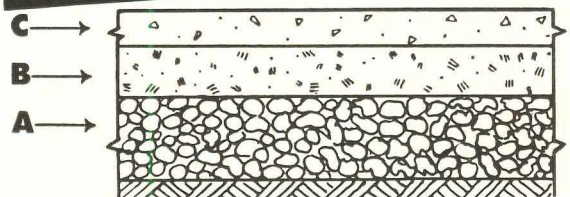
WICKWIRE SPENCER STEEL DIVISION
361 DELAWARE AVENUE - BUFFALO 2, NEW YORK

THE COLORADO FUEL AND IRON CORP.
CONTINENTAL OIL BUILDING - DENVER 2, COLORADO

THE CALIFORNIA WIRE CLOTH CORP.
1080-19TH AVENUE - OAKLAND 6, CALIFORNIA

BRANCHES & DISTRIBUTORS IN KEY CITIES EVERYWHERE

HOW TO KEEP ON-THE-GROUND CONCRETE FLOORS WARM AND DRY



No cold, damp, on-the-ground concrete floors when you use Zonolite Vermiculite aggregate in place of sand. For Zonolite makes a concrete that stops heat loss into the ground, prevents condensation. And Zonolite is light, economical, easy to handle.

On a level, well-drained base prepare a 5 or 6-inch fill of coarse stone or gravel, (A) tamped smooth and firm. On top of this, lay a moisture barrier of one or more saturated felts.

Pour 4 inches of Zonolite concrete and allow it to set. (B) Zonolite Aggregate replaces sand, in proportions of 1½ bags of Zonolite Aggregate to 1 bag of portland cement, providing up to 16 times the insulating value of ordinary concrete.

You can now pour your floor of ordinary concrete (C) and you'll have a job as permanent as the earth itself! A job that stops heat loss into the ground, eliminates condensation, saves fuel, provides comfort.

This is only one of many jobs where Zonolite concrete will save you money and time and give marvelous results. Why not write in for full information on Zonolite concrete. Here's information you ought to have handy. No obligation, of course.

ZONOLITE COMPANY
135 S. La Salle Street • Chicago 3, Illinois

Rolling Steel DOORS

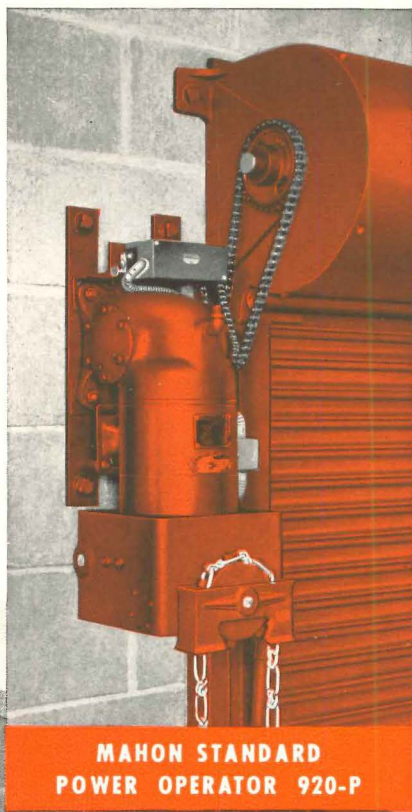
Manually, Mechanically, or Power Operated

For openings in industrial and commercial buildings, the quick opening, quick closing, vertically acting rolling steel door embodies more desirable features than any other type of door. Open or closed, it occupies no useable space inside or outside the opening . . . its coiling action requires a minimum of headroom above the opening . . . its all steel construction assures permanence and a lifetime of trouble-free service—and, most important, it provides a maximum of protection against intrusion and fire. If you select Mahon Rolling Steel Doors, whether it be for a railroad opening, truck opening, or a firewall opening, you can count on the latest developments in doors of this type . . . more compact and more practical operating devices, curtain slats of Aluminum, Stainless Steel, or Galvanized Steel which has been scientifically cleaned, phosphated, and coated with high temperature oven baked rust inhibiting enamel prior to roll-forming. These, and many other desirable features that characterize Mahon Rolling Steel Doors, merit your consideration. See Sweet's Files for complete information, or write for Catalog No. G-49.

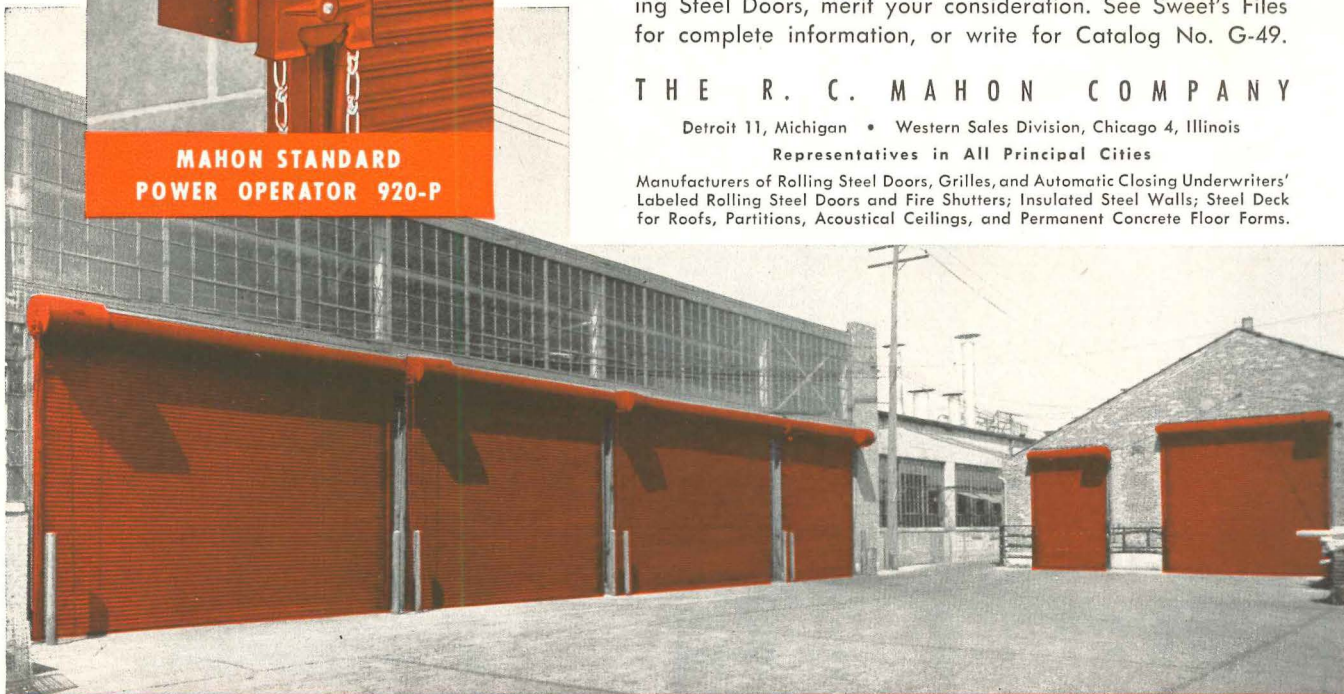
THE R. C. MAHON COMPANY

Detroit 11, Michigan • Western Sales Division, Chicago 4, Illinois
Representatives in All Principal Cities

Manufacturers of Rolling Steel Doors, Grilles, and Automatic Closing Underwriters' Labeled Rolling Steel Doors and Fire Shutters; Insulated Steel Walls; Steel Deck for Roofs, Partitions, Acoustical Ceilings, and Permanent Concrete Floor Forms.



**MAHON STANDARD
POWER OPERATOR 920-P**

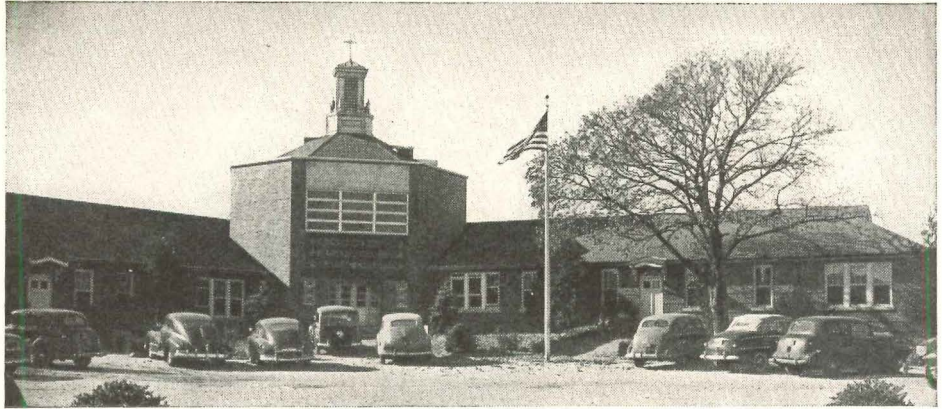


ROLLING STEEL DOORS, SHUTTERS AND GRILLES TO MEET EVERY REQUIREMENT

Mahon Power Operated Rolling Steel Doors installed in six openings in the American Metal Products Company's plant, Detroit, Michigan.

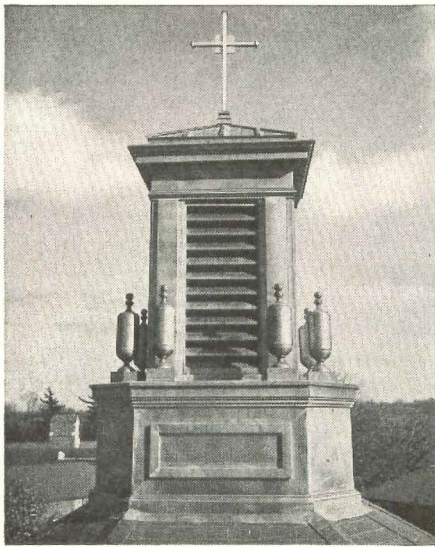
MAHON

ROOFED TO PUT A CEILING on cost. New building for St. Francis' Sanatorium for Cardiac Children, Roslyn, N. Y. Monel Roofing, flashings, copings, ornamental work fabricated and installed by John Schneider Roofing Contractors, Inc., Brooklyn, N. Y. Architect: Henry V. Murphy, Brooklyn, N. Y.; Contractor: Veit and Co., Inc., Brooklyn, N. Y.

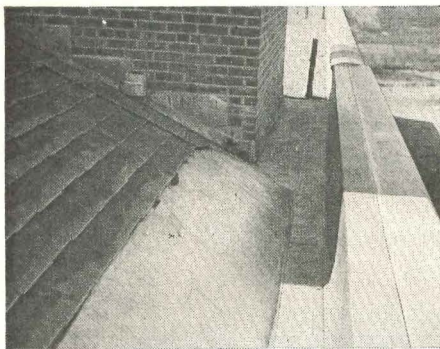


You should

TELL Economy-minded Clients about MONEL!



VERSATILITY PLUS. Close-up of ventilating tower. All sheet metal work, including louvers, flashings, copings, cross and decorations, was economically fabricated of soft-temper Monel Roofing Sheet.



MONEL FLASHINGS and gutters like these are readily fabricated and installed. No special techniques or tools required.

If *costs* interest your clients, so will the *facts* about MONEL® Roofing Sheet.

FACT ONE: Long-lasting Monel roofs are within the range of even a moderate building budget.

Here's why that is true. Monel's superior corrosion resistance, high strength, toughness and low rate of heat expansion makes it safe to use *lighter* gauge sheet. Architects reduce sheet thickness for batten seam roofs as much as two full gauges. Even greater reductions have been made for louvers, ventilators and gutters.

FACT TWO: Fabrication and installation costs for Monel roofs need be no higher than for other quality roofing materials.

The reason is that roofers cut, form and solder Monel Roofing Sheet with standard tools and equipment... in about the usual length of time. It's easy to fabricate and ductile enough to take intricate shapes and sharp corners without cracking.

FACT THREE: Most important of all,

Monel provides the lowest cost roof over the years. Roof maintenance and repair costs are minimized or eliminated.

Service records prove this. Monel installations dating back 40 years are *still* in good condition.

You can specify soft-temper Monel Roofing Sheet for every type of roofing application. Its properties make Monel a natural choice for flashings, coping, penthouse siding, cornices, leaders and downspouts, as well as complete roofs.

To help you get these points across to your clients quickly and convincingly, we've prepared a booklet that tells the whole story. Its title: *ONE METAL ROOF... for the life of your building.* The text is short, non-technical. There are sketches and diagrams... and plenty of pictures. Included, too, is an actual sample of Monel Roofing Sheet.

Write today for your personal copy, and see how helpful this booklet really is. Then tell us how many copies you want for distribution to your clients. We'll send as many as you need—without cost or obligation.



THE INTERNATIONAL NICKEL COMPANY, INC.

67 Wall Street, New York 5, N. Y.

MAIL THIS COUPON
Get free booklet and test sample of Monel Roofing Sheet

The International Nickel Company, Inc.
67 Wall Street, New York 5, N. Y.

Please send your booklet, *ONE METAL ROOF... for the life of your building*, and sample of Monel Roofing Sheet. Also tell me how I can get other literature, and special advice when needed. I understand this request does not obligate me in any way.

Name Title

Company

Street

City Zone State

AR-3-50

MONEL...for the life of the building



New! FORMICA SOFT *Glo* COLORS

With the introduction of 14 new Formica Soft-Glo colors, Formica engineers present the answer to a long time problem of decorative laminates.

Soft-Glo colors have the appearance of being solid yet offer the stain resistance formerly found only in distinct patterns.

Soft-Glo colors set a new level in exquisite decorating taste—are at home in the most genteel surroundings. Available in standard and cigarette-proof grades, polished and satin finish.

Samples of Formica in all fourteen new Soft-Glo colors are yours for the asking.

Write FORMICA, 4632 SPRING GROVE AVE., CINCINNATI 32, O.

New 16mm color sound movie "Living With Formica" pictures uses and how it is made. Available now for group showings. Write for film.

Beauty Bonded

FORMICA
Reg. U.S. Pat. Off.

at Home with People
at Work in Industry

