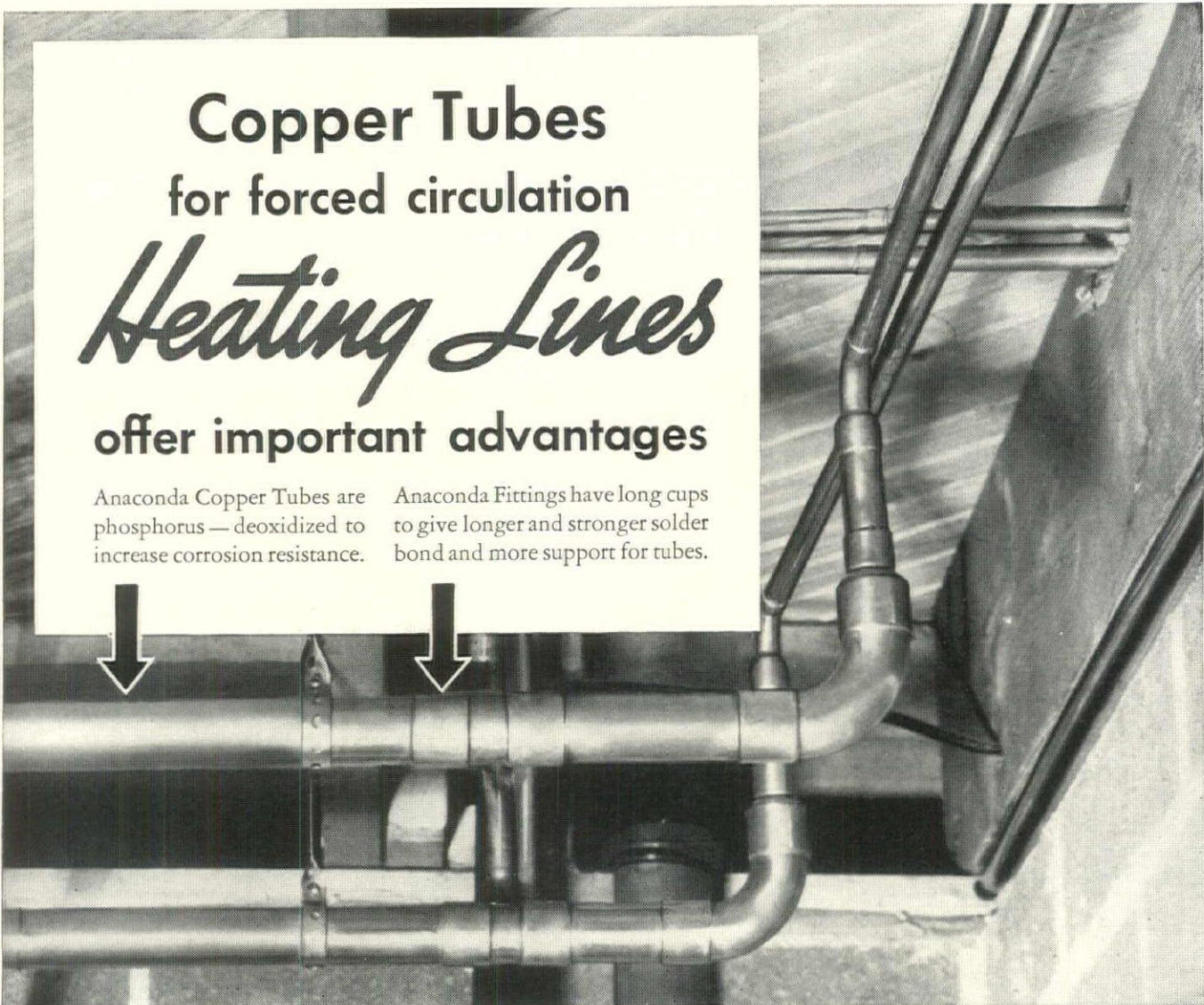


# AMERICAN ARCHITECT

A N D A R C H I T E C T U R E



UGUST  
937



## Copper Tubes for forced circulation *Heating Lines*

offer important advantages

Anaconda Copper Tubes are phosphorus — deoxidized to increase corrosion resistance.

Anaconda Fittings have long cups to give longer and stronger solder bond and more support for tubes.

**H**ERE'S the best value in piping, not only for hot and cold water and air conditioning lines, but for the heating system as well. For heating lines, Anaconda Copper Tubes mean a lower heat loss. On most jobs, insulation is unnecessary. And smaller sizes can almost always be used because the smoother inside walls of copper tubes permit a higher rate of water flow. More heat is delivered — faster! Yet these non-rust tubes cost little

more installed than the home-builder would pay for piping that rusts.

Soldered joints eliminate pipe threading, making possible lighter weight, lower cost tubes. No wonder this modern rustproof piping is being used in houses costing as little as \$4,000 and \$5,000!

It is genuinely economical to use Anaconda Copper Tubes, as well as other Anaconda products for rustproofing the home

3761A

*Anaconda*  
DEOXIDIZED *Copper Tubes*



THE AMERICAN BRASS COMPANY

Offices and Agencies in Principal Cities

GENERAL OFFICES: WATERBURY, CONNECTICUT

In Canada: ANACONDA AMERICAN BRASS LTD., New Toronto, Ontario



ALBANY, N. Y.

U. S. Post Office, Court House and Custom House, Gander, Gander & Gander, Architects. N. R. Sturgis, Associate Architect. E. D. Litchfield, Consulting Architect.



HARTFORD, CONN.

U. S. Post Office, Court House and Federal Building, Malmfeldt, Adams & Prentice, Architects.



SIOUX CITY, IOWA

U. S. Post Office and Court House, Beuttler & Arnold, Architects.



TRENTON, N. J.

U. S. Post Office, Office of Supervising Architect, Treasury Dept.



COATESVILLE, PA.

U. S. Post Office, Office of Supervising Architect Treasury Dept.



STOCKTON, CALIF.

U. S. Post Office, Bliss & Fairweather, Architects.



TERRE HAUTE, IND.

U. S. Post Office, Miller & Yaeger, Architects.



LANSING, MICH.

U. S. Post Office, Bowd-Munson Co., Architects. Albert Kahn, Inc., Consultants.



ADA, OKLA.

U. S. Post Office and Court House, William T. Schmitt, Architect.

# FITZGIBBONS STEEL HEATING BOILERS

*selected for*

*many recent Federal Buildings*

Rugged construction, high efficiencies, maintained economy, and the fact that they are available in types for any fuel, have been reasons for the selection of Fitzgibbons Boilers in many Federal Building projects.

Fitzgibbons' reputation has been fifty years in the making. An unbroken half century devoted exclusively to the successful manufacturing of steel boilers has inevitably developed in Fitzgibbons Boilers every refinement of design and of production.

*Fitzgibbons engineers are prepared to aid in the selection of the right boiler for any set of conditions.*

*Full details and catalogs upon request.*

**Fitzgibbons Boiler Company, Inc.**

GENERAL OFFICES:

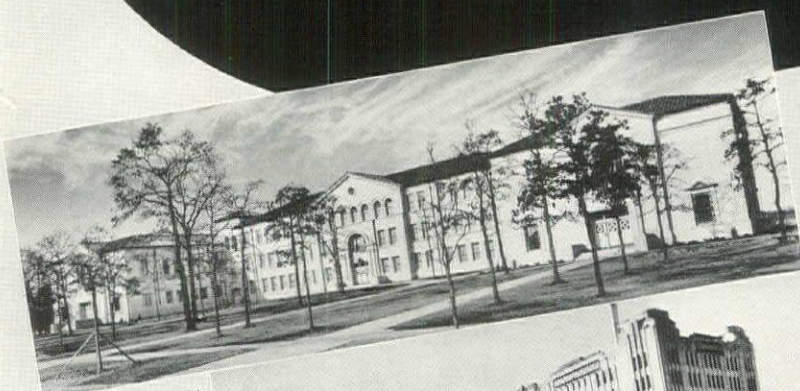
ARCHITECTS BLDG., 101 PARK AVENUE, NEW YORK, N. Y.

Works: OSWEGO, N. Y.

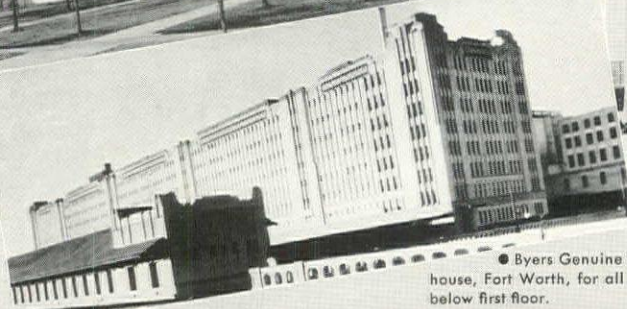
*Branches and Representatives in Principal Cities*

American Architect and Architecture, published monthly by Hearst Magazines Inc., 572 Madison Avenue, New York, N. Y. \$3.00 per year; Canada, \$4.00; Foreign, \$5.00. Entered as second class matter April 5th, 1926, at the Post Office at New York, N. Y., under the act of March 3rd, 1879. Issue 2660, dated August, 1937.

Let a  
**"CORROSION STUDY"**  
 tell you where to use  
**WROUGHT IRON**



● Genuine Wrought Iron specified in the Riverside Junior Senior High School, Fort Worth, for heating piping and water lines leading from mains to meter locations.



● Byers Genuine Wrought Iron specified in Texas and Pacific Terminal Warehouse, Fort Worth, for all water piping above ground, and all steam return piping below first floor.



● Byers Wrought Iron specified in Texas and Pacific Passenger Station, Fort Worth, for all water pipe above ground, all steam piping below first floor and in tunnels, and all steam return piping below fourth floor.

• Examples by . . WYATT C. HEDRICK, Inc. . . Fort Worth Architect •

● Let us aid you in analyzing pipe, tank and smokestack services to determine the corrosive conditions that will be encountered. On the basis of this information and the records of the materials that have served under similar conditions, plus your own experience, you can select with assurance the proper material for each type of service.

Note the examples illustrated. Wrought Iron has been specified for those services where a study of the conditions, plus experience, proves it longer lived and more economical.

For assistance in making a "corrosion study,"

get in touch with our nearest Division Office, or write our Engineering Service Department in Pittsburgh. A. M. Byers Co. Established 1864. Pittsburgh, Boston, New York, Philadelphia, Washing-

ton, Chicago, St. Louis, Houston, Seattle, San Francisco.

**BYERS**  
**GENUINE**  
**WROUGHT IRON**  
 Tubular and Flat Rolled Products

*Specify Byers Genuine Wrought Iron Pipe for corrosive services and Byers Steel Pipe for your other requirements*

# AMERICAN ARCHITECT AND ARCHITECTURE

**C O N T E N T S**  
**AUGUST 1937**

**COVER.** Armillary sphere on the campus of Phillips Academy, Andover, Mass. Paul Man-ship is the sculptor, and the photograph is by Samuel H. Gottscho

<b>TRENDS.</b> News . . . Events . . . Ideas . . . Opinions . . . Comments	<b>8</b>
<b>SOME DETROIT ARCHITECTS AND THEIR AVOCATIONS</b>	<b>22</b>
<b>EDITORIAL.</b> Doldrums and New Business	<b>25</b>
<b>FRONTISPIECE.</b> The spirit of Detroit, from a photograph by Charles Sheeler	<b>26</b>
<b>DETROIT ARCHITECTS EDIT A SECTION</b> From Architecture FOB to Camp and/or House Trailers this section, prepared by a joint committee of the Detroit Chapter of the AIA and the Michigan Society of Architects, is representative of recent architecture and architectural thought in the Detroit area	<b>27</b>
<b>ARCHITECTURAL OVERTONES.</b> Recent murals by eight American painters	<b>43</b>
<b>SOME RECENT BUILDINGS OF THE UNITED STATES GOVERNMENT.</b> Louis A. Simon, F.A.I.A., discusses in broad general terms what is happening to our federal architecture—with examples representing a wide geographical spread	<b>51</b>
<b>ROYAL PALM CLUB, MIAMI, FLA.</b> A former yacht club has been metamorphosed by Robert Law Weed, architect, into a night club for the semi-tropics	<b>57</b>
<b>THE RACQUET CLUB, PALM SPRINGS, CALIF.</b> Spencer & Landon, architects, use white painted brick, white stucco, natural bamboo, green leather, and brilliant awnings in a tennis and swimming club for the southwest	<b>60</b>
<b>HOUSE OF D. S. COLBURN, HIGHLAND PARK, ILL.</b> Glistening white walls and dark brown trim in the contemporary manner as developed by Gilmer V. Black	<b>63</b>
<b>THE PORTFOLIO.</b> Vertical Sun Dials, which subject is number 130 in the series	<b>67</b>
<b>FAVORITE FEATURES.</b> Masonry Finials as a common problem of design in everyday practice—how the ten specific examples look and how they were detailed	<b>79</b>
<b>HOUSE OF W. T. WALKER, PALM SPRINGS, CALIF.</b> A long low house with a patio and swimming pool, as designed by Charles O. Matcham, architect	<b>83</b>
<b>THE DIARY.</b> Observations, personalities, comments, and rumors, by Henry Saylor	<b>85</b>
<b>SWIMMING POOLS.</b> Ten examples covering a wide range of size and treatment, which may be examined more understandingly if studied in connection with the article and Time-Saver Standards on this same subject on the pages immediately following	<b>87</b>
<b>TIME-SAVER STANDARDS.</b> Swimming pools in the residential class	<b>92</b>
<b>BOOKS</b>	<b>96</b>
<b>TECHNICAL DIGEST</b>	<b>98</b>
<b>PARIS EXPOSITION</b>	<b>102</b>
<b>TECHNIQUES</b>	<b>104</b>

KENNETH KINGSLEY STOWELL, A.I.A.  
*Editor*

HENRY H. SAYLOR, A.I.A.  
*Associate Editor*

WALTER SANDERS  
*Associate Editor*

CARL MAAS  
*Managing Editor*

ROGER WADE SHERMAN  
*Technical Editor*

TYLER STEWART ROGERS  
*Director of Technical Service*

R. F. GARDNER  
*General Manager*

T. W. TOWLER  
*Advertising Manager*

JAMES A. RICE  
*Western Manager*

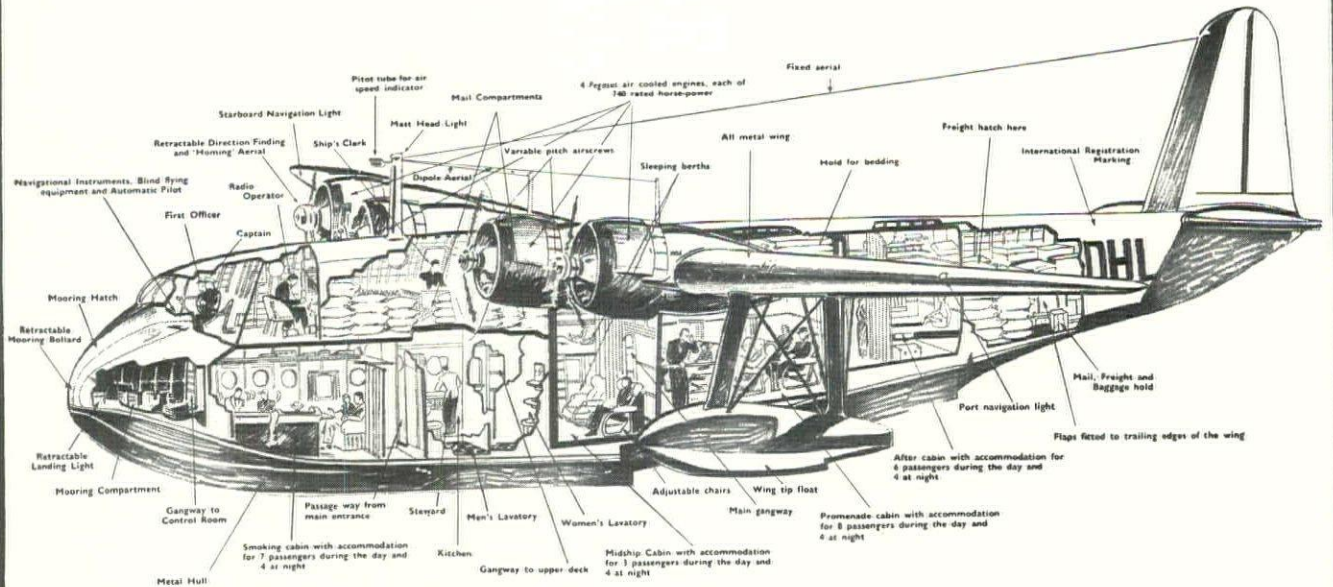
Vol. CLI No. 2660

AMERICAN ARCHITECT (Trade-Mark Reg. U. S. Patent Office), with which is combined ARCHITECTURE (Reg. U. S. Patent Office). Published monthly by Hearst Magazines Inc., 572 Madison Avenue, New York. Other Offices 919 N. Michigan Avenue, Chicago, General Motors Bldg., Detroit, 132 Newbury Street, Boston. William Randolph Hearst, President, Richard E. Berlin, Executive Vice President, John Randolph Hearst, Vice President, Earle H. McHugh, Vice President, R. F. Gardner, Vice President, T. W. Towler, Vice President; W. R. Peters, Treasurer, Arthur S. Moore, Secretary. Copyright, 1937, by Hearst Magazines Inc. Single copies, \$1.00. Subscription: United States and Possessions, \$3.00 per year, Canada, \$4.00, Foreign, \$5.00. Entered as second class matter, April 5, 1926, at Post Office, New York, under Act of March 3, 1879. American Architect and Architecture is protected by copyright and nothing that appears in it may be reproduced either wholly or in part without special permission.

# GIANT EMPIRE FLYING-BOAT

## First of the Atlantic Fleet

*started with a pencil*



### THE EMPIRE FLYING-BOAT

28 ARE NOW BEING BUILT FOR IMPERIAL AIRWAYS

Length, 88ft. ; Height from water line, 24ft. ; Speed, 200 m.p.h. (approx.) ; Span, 114ft. ; Weight fully loaded, nearly 18 tons ; Crew, 5 ; Accommodation, 24 passengers on day stages and 16 on night journeys

WITH the recent launching of the mighty "Cavalier" the New York-Bermuda service now becomes a reality! From the pressing pace of the world's largest city to the leisurely life of semi-tropical British Isle will be only a matter of hours. But even more significant, the New York-Bermuda hop forms the first link in the proposed transatlantic service!

As with all such great achievements, this one started with pencil and paper. From the original sketch to the precise, finished specification drawing, pencils were used.

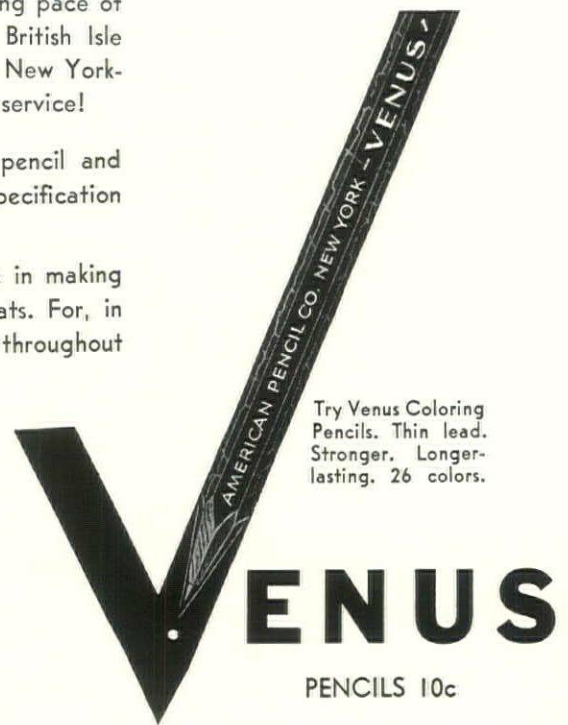
The makers of Venus Drawing Pencils are proud of their share in making possible today's outstanding engineering and architectural feats. For, in the drafting rooms of leading firms in America, England and throughout the world, the preferred pencil is Venus.

Venus Pencils are as precise as are the professional men who use them. There are 17 shades of black, for example. Each is accurately graded and tested—triple-checked to be sure every pencil in each grade is always identical. The famous Colloidal\* process used in making Venus Pencils guarantees smooth, even lines.

If you are not already using Venus Drawing Pencils it will pay you to try them.

\* U. S. Pat. No. 1,738,888

**AMERICAN PENCIL COMPANY • Hoboken, New Jersey**  
Also made in Canada by Venus Pencil Company, Ltd., Toronto



Try Venus Coloring Pencils. Thin lead. Stronger. Longer-lasting. 26 colors.

# VENUS

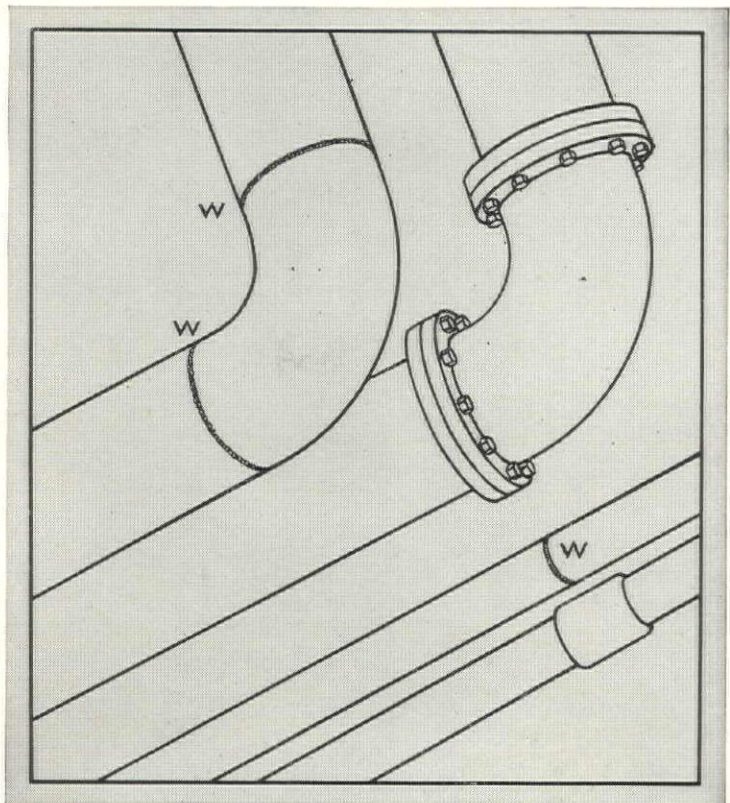
PENCILS 10c

# Specify Welding

## for simplified piping installations

**O**XY-ACETYLENE welding simplifies every step in the installation of pipe. Blueprints are simplified. Costly fittings are eliminated. Pipe is bought in random lengths at a considerable saving. Weight is reduced, and heavy supports and scaffolding are unnecessary. Tool expense is cut in half. The welded joint requires less time and labor. The cost of covering the welded system is less. The welded system is permanently tight—it minimizes expensive leaks and servicing.

Linde engineers have prepared a 200-page book, "Design of Welded Pipe," to assist you in piping projects. Ask the nearest Linde office how you can obtain a copy. The Linde Air Products Company, Unit of Union Carbide and Carbon Corporation, New York and principal cities.



The welds, "W", are smooth inside and flush with the pipe wall on the outside. Each weld is inherently more simple than any other joint can possibly be.

*Everything* for Oxy-Acetylene Welding and Cutting

LINDE OXYGEN • PREST-O-LITE ACETYLENE • OXWELD APPARATUS AND SUPPLIES

FROM



LINDE

UNION CARBIDE

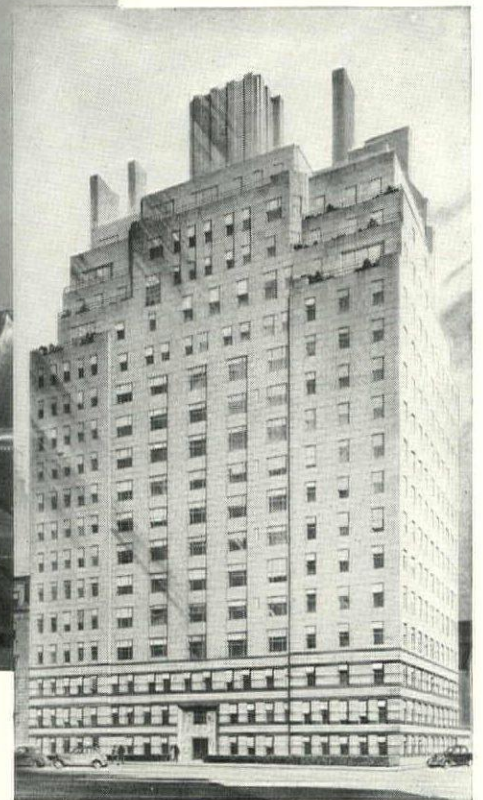
# PERMATITE WINDOWS

**N**OW YOU CAN give apartment buildings and homes the advantages of windows in bronze or aluminum—at prices below those formerly paid for windows of much lower efficiency and quality.

Permatite Windows—casement or double hung—assure the satisfaction of your clients. Their lines emphasize the beauty of the interior decoration. Their simplicity enhances the

attractiveness of the exterior. Their wide vision makes for more light and cheer.

Many features of these new, patented windows appeal immediately to practical clients. The new, built-in metal weatherstripping forms a virtually airtight seal—keeps out moisture, dust and dirt—stops heat loss at the windows—and reduces fuel costs.



*(Right) Nearly 1,000 Aluminum Permatite Windows—Double Hung and Casement—were selected for the 16-story and pent-house apartment building, now nearing completion at 19 East 72nd Street, New York. The architects are Rosario Candela and Mott B. Schmidt; the builder, Hegeman Harris Co., Inc.; management, Brown, Wheelock, Harris, Stevens, Inc.*

WINDOWS • REVOLVING DOORS • TABLETS • ARCHITECTURAL METAL WORK



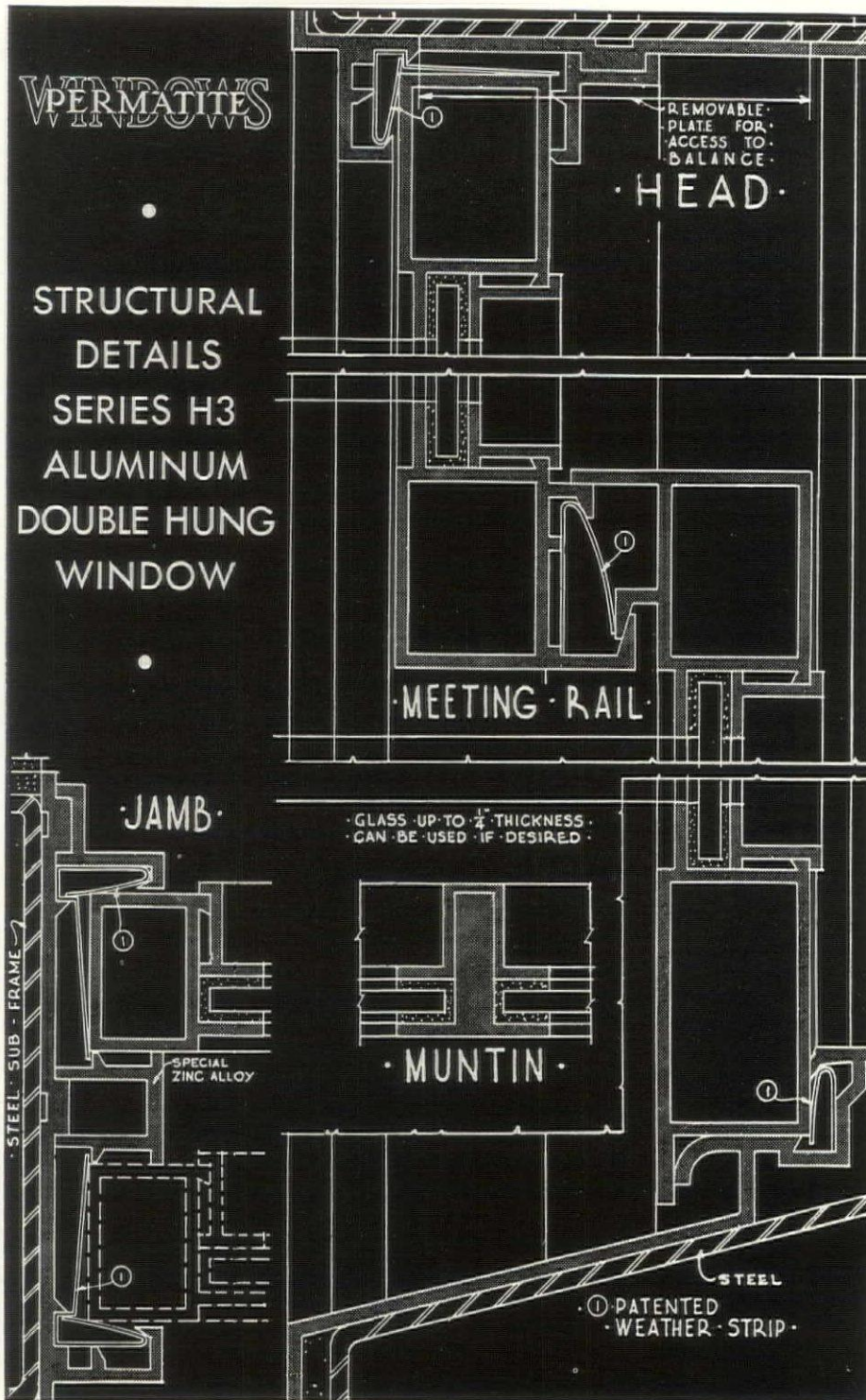
**GENERAL BRONZE CORPORATION**

34-19 Tenth Street

Long Island City, N.Y.

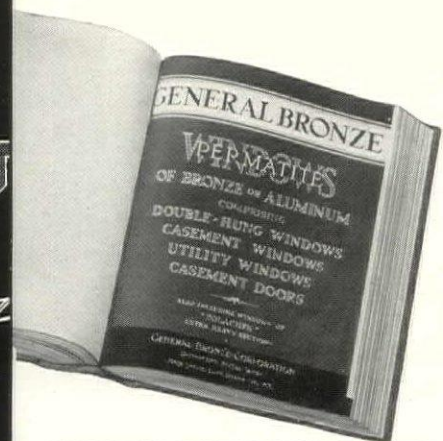


# Bronze or Aluminum • Casement or Double Hung Priced for homes and buildings of moderate cost



Exhaustive tests indicated— for both casement and double hung windows—an *unprecedented* resistance to air infiltration. That's why they aid the efficiency of insulation and air-conditioning—in both homes and public buildings.

Permatite Windows are sturdily built and airtight—yet they operate with surprising ease. They will not warp, stick—or rust. No painting is required—maintenance cost is negligible. Contractors appreciate their easy handling and installation. For construction details and specifications, consult Sweet's or write us for a fully illustrated catalog.



**SWEET'S 1937 CATALOG FILE** contains 36 pages of details, specifications and results of laboratory infiltration tests.

WINDOWS • REVOLVING DOORS • TABLETS • ARCHITECTURAL METAL WORK



## GENERAL BRONZE CORPORATION

34-19 Tenth Street

Long Island City, N.Y.

**GOVERNMENT & LEGISLATION**

THOSE WHO HAVE FOLLOWED THE PRESIDENT'S TECHNIQUE of setting his projects in motion are familiar with the publicity build-up which usually precedes a ringing message to his lieutenants to start work on another objective. It might be well, therefore, to note a rather obscure item which came over the AP's wire from Washington on July 14th. According to this dispatch, Mr. Roosevelt says he is convinced Americans pay too much of their money to landlords. With this thought in mind, he said that he had talked to nine government experts and asked them to look for a method of reducing rents. The President said that he had discussed with his experts extension of the limited dividend corporation system, which, he told newshawks, might help make possible the financing of homes and apartments for rent. From the President's remarks it was gathered that he favored the old practice of allotting 20% of a family's income for rent. All of which might be just another indication that Mr. Roosevelt has his heart set on low-cost, low-rent housing, and—perhaps—that if landlords don't want they're going to be put in the Administration's already crowded doghouse along with our friends the Princes of Privilege.

**CONSTRUCTION**

**BACK IN 1928**—nine long years ago—revisions in New York City's building code were begun. Changes in the existing statute were indicated because of technological progress in the construction industry, which had outmoded some of the stringent requirements of New York's building code. After a checkered career, the new code was finally approved on July 20th, with Father Knickerbocker's aldermen registering their thumping approval to the tune of a 45 to 9 vote. All along, aldermen had admitted that the many technicalities of the bill were incomprehensible to the average legislator. "The public does not expect aldermen to be Leonardo da Vincis," said Alderman John Cashmore, while Murray W. Stand made the endearing remark that "I'm only an alderman and probably a dumb one at that." Such candor was refreshing indeed. Most debate was caused by the steel welding provision. But there was also argument over the bill's allowing of steel mesh construction, it being advanced that this would lead to terrific loss of life in case of gas explosions or an explosion like the New London, Texas, school disaster. And there was some bickering over

—ENCOMIUM—  
Our Highest Praise  
to  
CHARLES D. MAGINNIS

Because, election as president of the American Institute of Architects comes as his "just due."

Because he is taking office at a time when force and vision will be needed to carry through the Institute's program in planning, housing, and war on rackets in the construction industries, we would like to lend moral support and wish him well.

Because of his Irish ability to win and hold friends.

Because combined with his popularity (and consummate skill as an after dinner speaker), he has through work and technical excellence gained the expressed respect of the leaders in his chosen field of work, architecture.

the fire-proofing features—particularly the one providing that the seventh, eighth and ninth stories of residential buildings of that height may have steel floors thinner than at present, with a fire-retarding capacity of one and one-half hours instead of three.

Mayor F. H. LaGuardia's approval of the bill is expected. It is to go into effect January 1, 1938... thus giving architects and engineers sufficient time to acquaint themselves with the many innovations.

**THAT OLD AND RATHER TEDIOUS BUG-ABOO**, advancing realty and construction costs and their reaction on building activity, has been raising its ugly head quite frequently of late. Lugubrious brethren, upset over the state of things, say that superficially conditions might look dandy now, but, they wail, what of the future? Although these viewers-with-alarm have been quite articulate, they have been just about offset by the calm, reassuring voices of the rose-tinted-glasses fraternity. Culling gloomy comments is an unpleasant task, but we must be realists, so here are some of the complaints... together with a few of the more cheerful remarks.

**THE TWENTY-NINTH SEMI-ANNUAL SURVEY OF REAL ESTATE CONDITIONS** throughout the country by the National Association of Real Estate Boards discloses that realty prices are higher in 84% of the leading cities than was the case one year ago. In 63% of the cities advances of

10% are reported, and the survey says that in a few instances increases of 15% to 20% were found. An increasing scarcity of single-family homes is revealed in all cities, regardless of population, whereas an adequate or superfluous supply of business space is reported for practically all cities over 200,000. Incidentally, one part of the survey shows that the number of home sites purchased during the first four months of this year was approximately double the rate of home production. So either there's a lag in construction reports or else there's a lot of speculative realty buying going on.

**AND THEN, IN A RECENT ISSUE OF PRINTER'S INK**, we come across Mr. L. Seth Schnitman in a doleful mood. The rise in construction costs, says he, which figures up to 30% to 50% over 1932 lows, is a menace, and if Recovery's insecure, finger-nail grip is loosened by mounting costs, the effect on construction industries may toss the country back into the gaping jaws of another depression's wolves. Mr. Schnitman says that we're being asked to absorb near-peak construction costs on a per-capita national income at least 25% below peak levels.

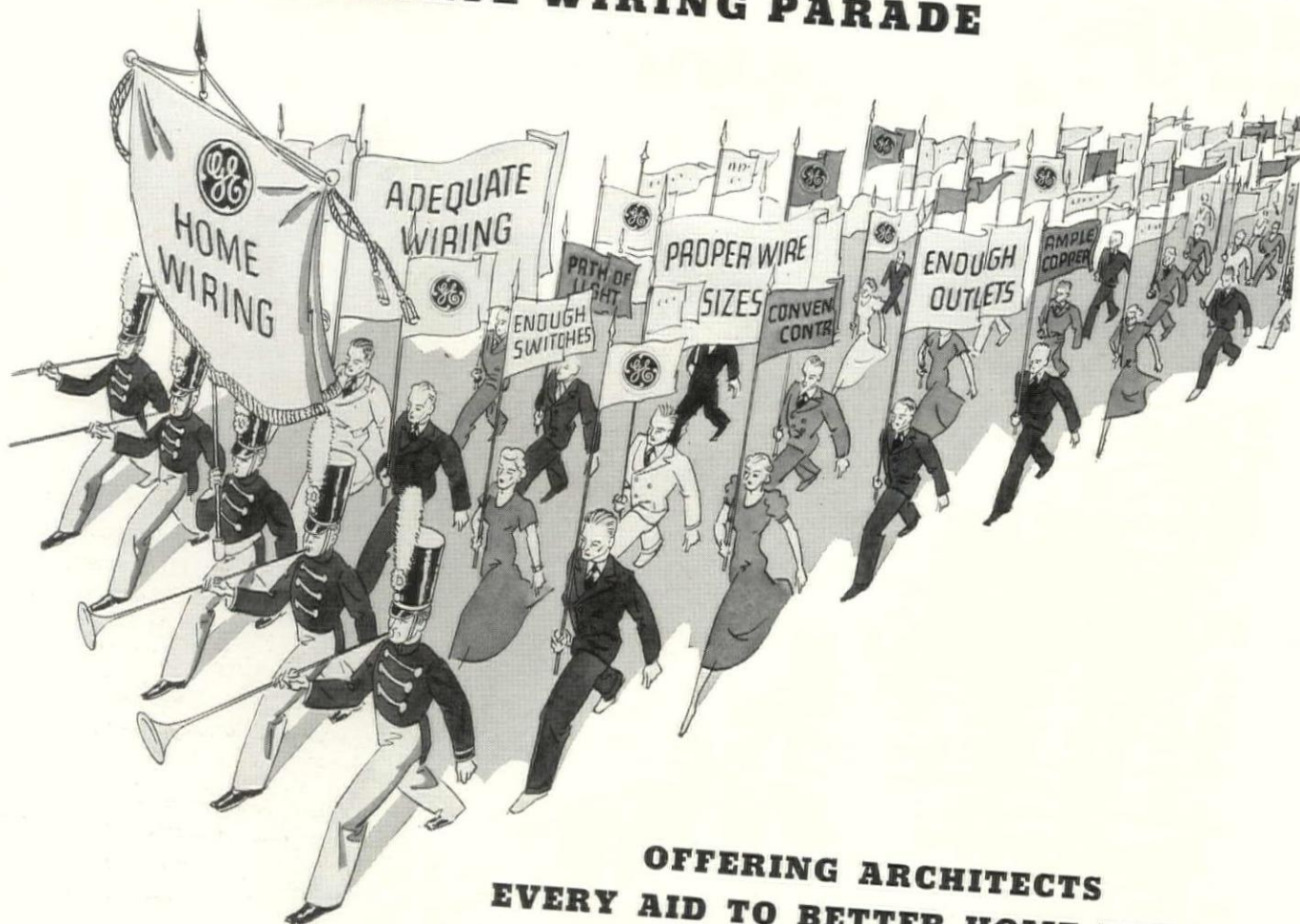
**IF THIS DOESN'T GIVE YOU THE WILLIES**, just glance at a recent issue of *News and Opinion*, the bulletin published by the Building Trades Employers Association of the City of New York. The new union scales of wages and hours is given, and after looking it over you may decide to go buy a trowel and join the Union. We are strongly tempted ourselves, the only drawback being that we wouldn't know what to do with all the resulting spare time if we did.

Here's part of the aforementioned scale (just enough to make you feel underprivileged):

TRADES	HOURS	RATES PER HOUR
Bricklayers .....	7	\$1.88 4/7
Bricklayers' Helpers ...	7	1.14 2/7
Carpenters .....	7	1.75
Cement Masons.....	7	1.75
Hoisting Engineers....	7	2.00
Plasterers .....	6	2.00
Plumbers .....	7	1.75

Needless to say, *News and Opinion* has an editorial conniption fit over all this, and wonders how it'll end. Trouble is, says *N. & O.*, it is not real collective bargaining which establishes these scales. Why should there be twenty or more separate wage negotiations, wage scales and conditions of work, it wants to know. The already definite signs of a building slump, it is predicted, will give Union officials, who had a share in causing it,

# GENERAL ELECTRIC IN THE FOREFRONT OF THE ADEQUATE WIRING PARADE



## OFFERING ARCHITECTS EVERY AID TO BETTER HOME WIRING

Today, the public is becoming more and more interested in the electrical wiring of the homes they buy. Everybody wants to use electrical appliances, and experience has shown them that appliances can't be used satisfactorily and conveniently unless the wiring is adequate.

Therefore, let General Electric, an old veteran in developing adequate wiring help you with the wiring in the homes you design.

For years General Electric has advocated adequate wiring. New materials have been developed as the need for them arose. Wiring methods and wiring systems have been designed by G-E engineers.

The line of General Electric wiring materials is complete. G-E wiring materials are all of the same uniform high quality, and are designed to be used together.

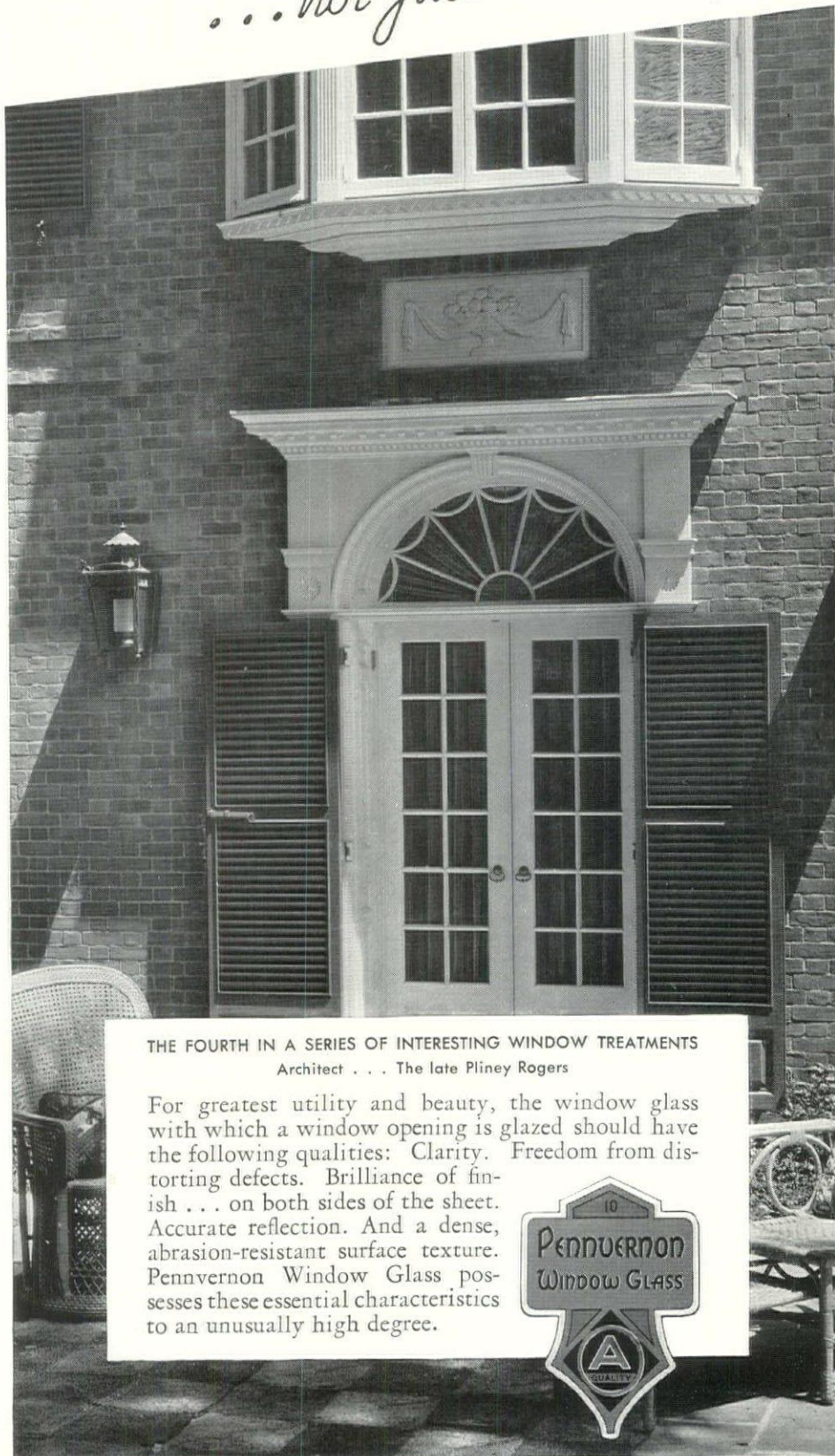
Find out more about G-E Wiring Materials and G-E Home Wiring. G-E Home Wiring may be installed in 101 different ways and is suitable for any type or size of house. With it, wire sizes are large enough and outlets plentiful enough. The layout is simple and direct. G-E Home Wiring is adequate and assures satisfied clients.

For further information on G-E Wiring Materials or G-E Home Wiring, write to Section CDW-718, Appliance and Merchandise Department, General Electric Company, Bridgeport, Connecticut.

**GENERAL  ELECTRIC**  
**WIRING MATERIALS**

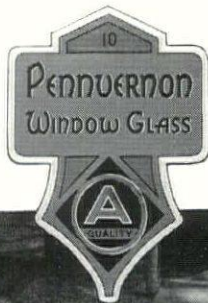
APPLIANCE AND MERCHANDISE DEPARTMENT, GENERAL ELECTRIC COMPANY, BRIDGEPORT, CONNECTICUT

Specify **Pennvernion**  
*... not just window glass*



THE FOURTH IN A SERIES OF INTERESTING WINDOW TREATMENTS  
 Architect . . . The late Pliney Rogers

For greatest utility and beauty, the window glass with which a window opening is glazed should have the following qualities: Clarity. Freedom from distorting defects. Brilliance of finish . . . on both sides of the sheet. Accurate reflection. And a dense, abrasion-resistant surface texture. Pennvernion Window Glass possesses these essential characteristics to an unusually high degree.



**T**HE Pittsburgh Plate Glass Company maintains a staff of special architectural representatives. The whole duty of these men consists in rendering the architect every assistance within their power in connection with the use of glass and paint. We urge you to call upon us at any time when a visit from one of our architectural representatives would be helpful to you.

*A complete line of Pittsburgh Products of the following types is available throughout 74 branches in leading cities:*

**PITTSBURGH GLASS PRODUCTS**

- Polished Plate Glass
- Pennvernion Window Glass
- Carrara Structural Glass
- Ornamental Glass
- Pittsburgh Mirrors

**PITTSBURGH PAINTS**

- Sun-Proof Paint
- Wallhide Paint
- Waterspar Enamel
- Waterspar Varnish
- Florhide Enamel

**PITCO STORE FRONT METAL**

*See Sweet's for complete specifications and for addresses of Pittsburgh Plate Glass Company branches.*

*Paint* **PITTSBURGH** *Glass*  
 PLATE GLASS COMPANY

# Permanently Efficient and Economical

## USG RED TOP INSULATING WOOL

FIREPROOF...MOISTURE RESISTANT...DOES NOT DECAY

### A Proved 4-inch Conductivity Coefficient of .066

A FORM OF RED TOP  
INSULATING WOOL FOR BOTH  
NEW AND OLD HOUSES



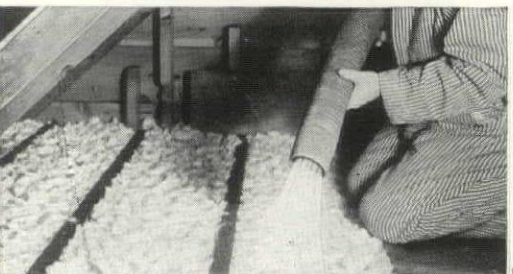
RED TOP STRIP WOOL—in 3 and 9 ft. lengths to handle large areas quickly and easily.



Showing stud application. Backed with heavy waterproof paper, RED TOP STRIP WOOL is easy to nail.



RED TOP JUNIOR BAT WOOL—in smaller sizes for use in complicated framing plans.



RED TOP NODULATED AND GRANULATED WOOL—in loose form for pouring or "blow-in."

*Specify this unique Insulating Wool  
that never has to be replaced!*

■ You can specify Red Top Insulating Wool\* with full confidence that it will supply efficient, economical insulation. Made from the same chemically stable mineral base as glass, spun to a fluffy, resilient, long-fibered wool as light in weight as cotton, it has these important characteristics:

**FIREPROOF**—Red Top Wool will not burn or support combustion. It is approved by Underwriters Laboratories.

**MOISTURE RESISTANT**—It is inherently moisture resistant, which means that it maintains its insulating efficiency under all atmospheric conditions.

**DOES NOT DECAY**—Unaffected by air, water, acids or gases, it never crumbles or rots. Will not harbor vermin.

**EFFICIENT**—Independent laboratory and university tests show that a 4-inch thickness of Red Top Wool has a conductivity coefficient of .066 BTUs per sq. ft., per hour, per degree temperature difference.

**ECONOMICAL**—Because of its high insulating value, low first cost and long life, we believe you will agree that Red Top Insulating Wool is the most economical insulation your client's dollar can buy.

Send for free "Descriptive and Specification Data" book with sample of Red Top Insulating Wool.

**ONLY RED TOP INSULATING WOOL GIVES YOUR CLIENTS SO MANY  
OUTSTANDING ADVANTAGES: ONLY USG DEALERS AND APPROVED  
APPLICATORS SUPPLY RED TOP WOOL!**

UNITED STATES GYPSUM COMPANY  
300 West Adams St., Chicago, Illinois

AAA-8



Please send "Descriptive and Specification Data" book on Red Top Insulating Wool.

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_

\*Reg. Trade Mark

**UNITED STATES GYPSUM COMPANY**

a headache for which aspirin will be of no avail.

As a grim sort of prognostication of things to come, *N. & O.* tells what has happened to building in France, where high wages, taxes and governmental labor policies are causing stagnation. Compared to the upward trend in other large countries, France—according to this account—presents a dismal picture indeed. It almost makes us ashamed of America for nagging France about those War Debts when we read:

"... building construction in France has steadily declined during the past three years until in December, 1936, the number of permits was 35% less than in December, 1933, and the entire year averaged only about 65% of the year 1913. In Paris, a city of five million population, permits for only 35 single-family dwell-

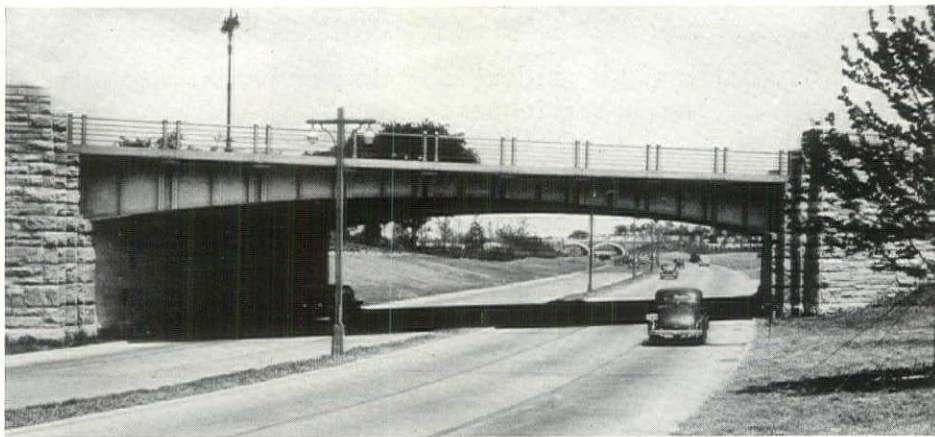
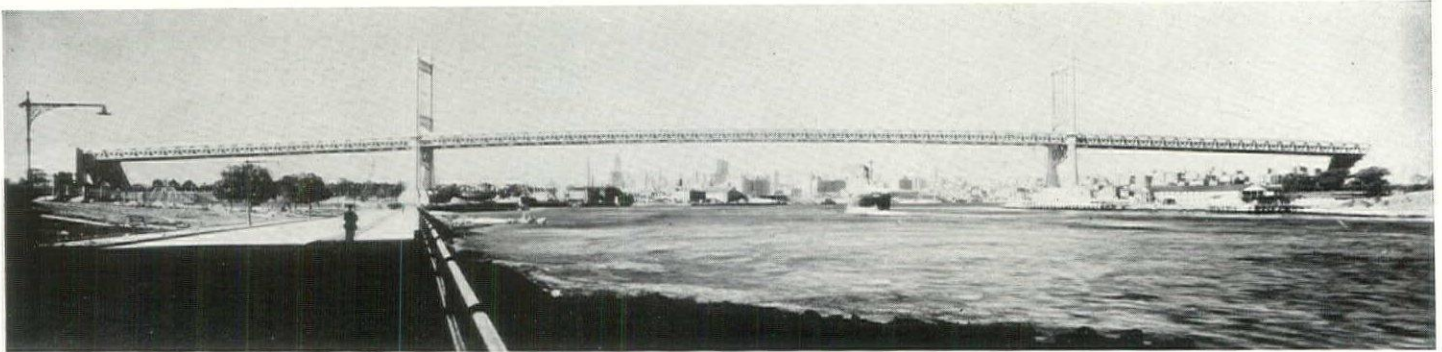
ings were asked in 1936, and for two-family and upward houses, permits totalled only 154, covering less than 2,000 families. In 1936 New York City permits provided for more than 33,000 families."

**THIS IS THE KIND OF TALK** Mr. Thomas G. Grace, New York State Director of the Federal Housing Administration, doesn't like to hear. Recently Mr. Grace deplored even the discussion of higher building costs as tending to discourage perfectly solvent persons from entering into home building investments.

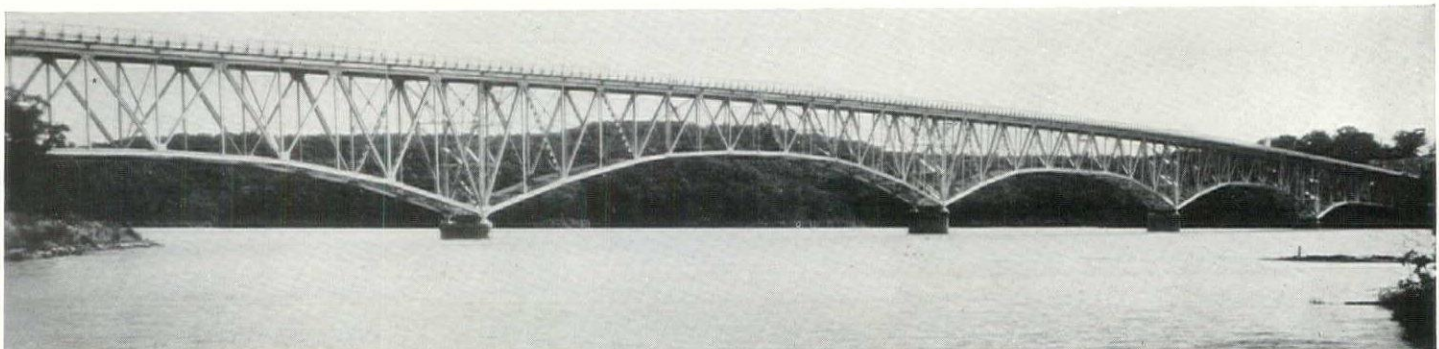
**BUT, AH,** says the Federal Home Loan Bank Board, anyway increased buying power and higher rentals are spurring residential building activity. The volume of residential units constructed in April, 1937, was 68% higher than in April,

1936. And then the FHLB goes on to say that employment and wages, which outstripped the increase in cost of living, were responsible for the rise.

**SO LET'S CON A COUPLE OF SUNSHINY ITEMS.** Writing in the *Review* of the Society of Residential Appraisers, Frank J. Hallauer, principal engineer of the Department of Agriculture, looks into the crystal and sees 1941 as the peak of the current building cycle. In that year, says he, housings for about 700,000 will be constructed; this year—1937—Mr. Hallauer estimates production will run around 500,000 housing units. Conditions will continue good until 1951, according to Mr. Hallauer, whose predictions are based on study of previous building cycles and the size of America's families. This latter factor does not usually receive great



**THE MOST BEAUTIFUL BRIDGES OF 1936,** according to the American Institute of Steel Construction, are: Class A (above)—East River Crossing of the Triborough Bridge, New York (O. H. Ammann, chief engineer, Allston Dana, engineer of design, Aymar Embury II, architect); Class B (below)—Hurricane Deck Bridge, Lake of the Ozarks, Mo. (Sverdrup & Parcel, engineers); Class C (left)—Astoria Boulevard over Grand Central Parkway Extension, New York (L. I. State Park Commission and Triborough Bridge Authority, engineers).



# Floors of Today for The "House of Tomorrow"

Can an architect anticipate future style trends in floors? You may find your answer in the fact that for the "House of Tomorrow," sponsored by the Ladies' Home Journal at the North American Homes Exposition, Sloane-Blabon Linoleum was selected. In this breath-taking residence of glass, steel, and marble with vanishing bedrooms, walls that sink out of sight, and indoor rooms that become outdoor

terraces at the touch of a button, modern Sloane-Blabon Floors enhance the beauty of "tomorrow's" living room and dining alcove, stress the practical character of the smart kitchen. So, whether you are planning something futuristic or being very practical in a modern way, please remember that the advanced floor styles in Sloane-Blabon Linoleum can assist, even suggest, your decorative ideas.



*In lovely "House of Tomorrow" living room, Sloane-Blabon Clear White Linoleum harmonizes softly with white rugs, blue-white color scheme*

## Sloane-Blabon

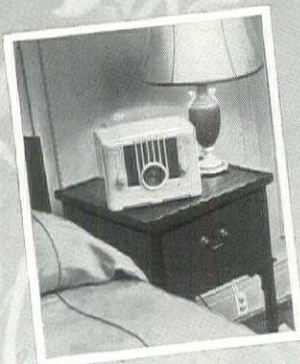
C O R P O R A T I O N  
TRENTON, N. J. • PHILADELPHIA, PA. • NEW YORK, N. Y.

### FLOOR COVERINGS

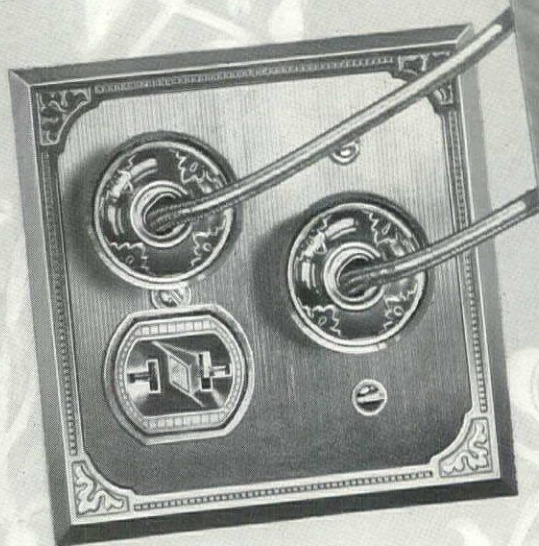
STRAIGHTLINE AND MARBLETONE INLAID LINOLEUMS  
GENUINE INLAID LINOFLOR RUGS AND YARD GOODS  
BATTLESHIP, PLAIN AND JASPÉ LINOLEUMS  
CORK CARPET • CUSTOMBILT TILE • SERVICE BOND  
AND CALMAR ENAMEL-SURFACED RUGS AND YARD GOODS

W. & J. SLOANE, SELLING AGENTS DIVISION • 295 FIFTH AVENUE, NEW YORK

# RADIO OUTLETS



## H & H



This neat hook-up for radio connections provides for Aerial, Ground and Power connections from a one-gang outlet. Or in 2-gang type (first above) with extra opening for appliances. As easily installed as any convenience outlet; fits any standard-depth wall box. Gets rid of straggling surface wires; serves equally well for old buildings or new work; *completes* the electrical conveniences.

Aerial, Ground and Power connections are plainly indicated on receptacle. The aerial and ground plug has blades set at angle to prevent insertion in the power slots. Receptacles and plates come in brown Bakelite and cream-tinted white IVORYLITE. (These units are designed for separate aerials. For 2-to-20 outlets from *one* aerial, use the Multicoupler Antenna System — instruction-sheets on request).

**HART & HEGEMAN DIVISION**  
THE ARROW-HART & HEGEMAN ELECTRIC CO. HARTFORD, CONN.



# Here is Veneer Construction Reinforced like Concrete!



Howard E. Hall, Architect . . . Camden, N. J.

... and these walls are thoroughly protected against penetration of air and moisture because the architect specified J-M STEELTEX

THE brick wall of this well-designed, well-built house boasts a reinforcement, moisture-resistance and firesafety heretofore unmatched in ordinary brick or stone-veneer construction.

The use of J-M Steeltex makes possible a reinforced, monolithic construction—no sheathing is required. Flue-like air space is eliminated. Properly filled mortar joints assured. Further protection against wind and moisture is supplied by the double-ply, heavy waterproof backing of J-M Steeltex.

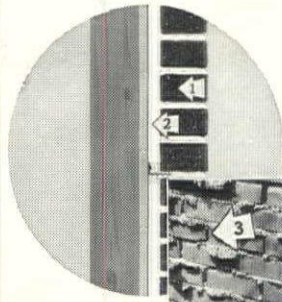
Hence, Steeltex provides a thoroughly modern brick-veneer construction that shields your clients' houses with a solid slab of cement, brick and steel. And therefore assures them of greater year-round protection at virtually no maintenance.

There are also Steeltex products designed for plaster, stucco, and concrete floors. For full details on these products or any other J-M Building Materials, write Johns-Manville, 22 E. 40th St., N.Y. C.

Check the advantages of Steeltex Construction against the ordinary method of applying brick or stone veneer

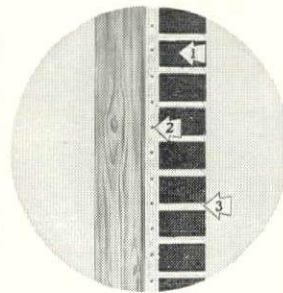
#### Here's the Ordinary Method:

1. The brick wall is free standing, separated from the framework and fastened by means of occasional metal ties.
2. When Steeltex is not used, the mason must leave a 1" air space between brick and sheathing. This becomes a dangerous flue in case of interior wall fires.
3. Partially filled vertical joints on the inside of the brick wall offer little barrier to the penetration of air and moisture.



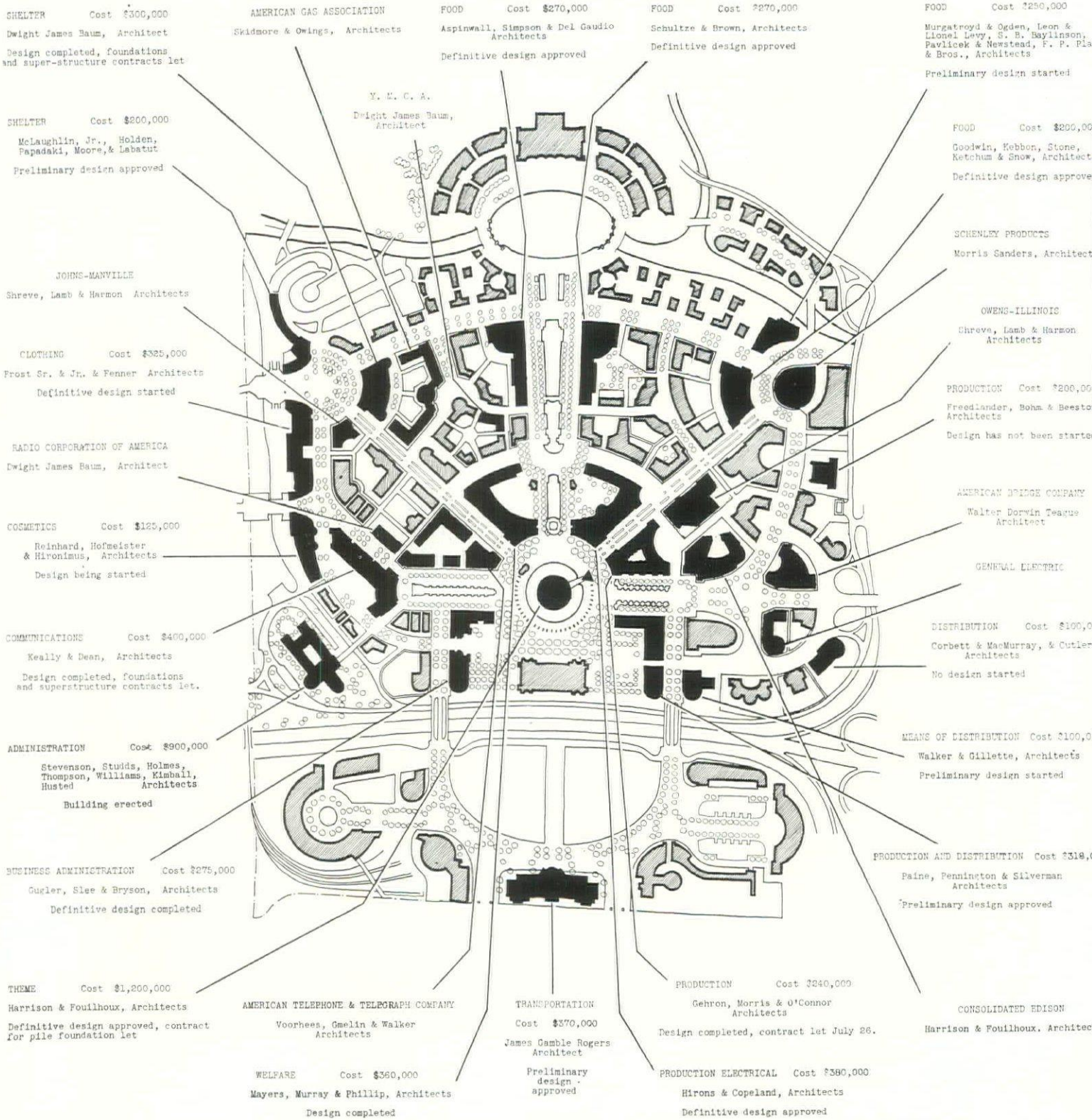
#### Here's the Steeltex Method:

1. The brick wall is built as an integral part of the structure.
2. The brick is bonded to a 1" slab of cement mortar, which in turn is permanently reinforced by heavy galvanized steel wires. Air space is eliminated.
3. Properly filled mortar joints are assured, and the heavy waterproof Steeltex backing adds further protection against the penetration of wind and rain.



## JOHNS-MANVILLE Building Materials

Asbestos Roofing and Siding Shingles • Decorative Asbestos Wall Boards • Insulating Boards • Home Insulation • Steeltex • Asphalt Tile Flooring • Acoustical Materials, Etc.



Here's the way the New York World's Fair looks at the moment — who is doing what and how far it has progressed towards the 1939 opening date

emphasis; the number of persons to a family has been declining at the rate of 5% a decade for the last fifty years, and Mr. Hallauer believes that this increase in family units will play just as important a part in stimulating building as

growth in population. Sir Raymond Unwin recently stressed the same phenomenon.

MYRON L. MATTHEWS, WRITING FOR THE DOW SERVICE, breaks down the cost of

constructing an average American home. Also, allocation of non-residential expenses is given.

The residential building construction dollar is spent: 27.3¢ for carpentry, 14.8¢ for brickwork, 11.7¢ for concrete work,



*She wants  
a beautiful floor*



*He says  
it must be durable*

You can satisfy both with this *reinforced* rubber tile . . .



*Armstrong-Stedman Reinforced Rubber Tile with field of Verde Antique and fret of Sea Green White, Light Jade, and White Sea Green.*

**F**INE, interwoven fibres make Armstrong-Stedman Reinforced Rubber Tile durable and attractive.

This reinforcing—an exclusive Armstrong feature—prevents buckling or crazing. It makes the tile more resistant to denting and abrasion. It also improves coloring and graining by preventing the pigments from "flowing" during the manufacturing process. These important

advantages add nothing to the cost of Armstrong-Stedman Reinforced Rubber Tile—the aristocrat of floors.

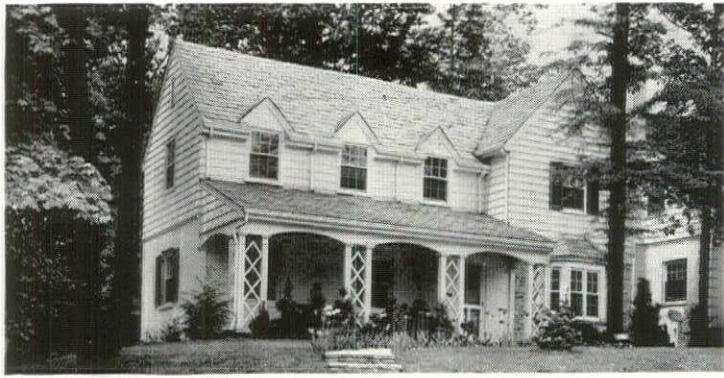
Forty colors and three gauges are available in marble, paisley, and

two-tone effects. See *Sweet's* or write now for file-sized *New Beauty and Comfort in Floors*. Armstrong Cork Products Co., 1401 State Street, Lancaster, Pa.



## ARMSTRONG'S *Linoleum* and RESILIENT TILE FLOORS

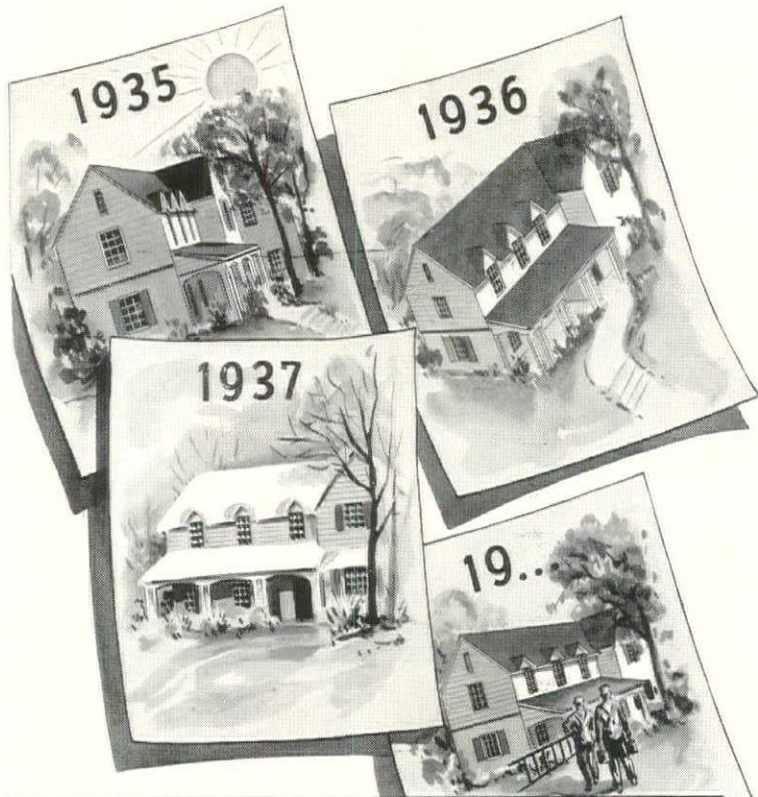
LINOTILE · ACCOTILE · CORK TILE · RUBBER TILE · LINOWALL · ACOUSTICAL CEILINGS



**1934**

They drove in my last nail today. And then the painters came. Feel pretty proud decked out in three coats of gleaming Eagle White Lead. Every one who passes by says, "Wouldn't you like to be living there!"

*Diary of a house painted with...*  
**EAGLE pure WHITE LEAD**



**1935**

Just went through a tough winter. And now the sun's trying to parboil my hide. The joke is on him. Eagle Pure White Lead gives an *elastic* paint film. Even though the wood I'm made of expands and contracts, my paint film won't crack or scale.

**1936**

Still looking fine—thank you! My mistress has a facial every week but I won't need one for years. Eagle Pure White Lead can sure take a lot of punishment from the weatherman. Paint chemists say it's because Eagle White Lead is chemically active—it *anchors deep* in the surface it is applied to.

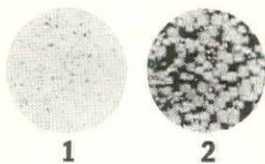
**1937**

This is getting monotonous—but my 1934 complexion is still practically good as new! Eagle White Lead is surely a good investment. Now I know what the architect meant when he said it costs less per square foot per year.

**19...**

Ready at last for another beauty treatment. Feel pretty good about holding off two years longer than my "twin house" across the street. The painters will have an easy time of it. Eagle Pure White Lead weathers by a gradual even chalking—forms a perfect surface for repainting. Are they using Eagle White Lead again?—you bet your life they are!

**Camera shows why Eagle White Lead gives better paint protection . . . . .**



Pigment particles (1) actually "blossom out" when Eagle White Lead is mixed with linseed oil (2). This chemical union of lead and oil anchors deep in the surface it is applied to—sticks on like glue. It stays tough and elastic under the most brutal weathering—doesn't crack or scale when surface expands or contracts.

**EAGLE pure WHITE LEAD**



*Safeguards the beauty of wood, stucco and brick. Choice of good painters since 1843.*

THE EAGLE-PICHER LEAD COMPANY • CINCINNATI, OHIO

10.1¢ for plumbing, 8.2¢ for plastering and lathing, 6.6¢ for heating and ventilating, 4.5¢ for electric fixtures and wiring, 4.2¢ for painting, 3.5¢ for tile work, 1.8¢ for roofing, 1.3¢ for excavating and grading, .5¢ for papering and 5.5¢ for miscellaneous items such as hardware, glazing, etc.

The non-residential construction dollar goes the way of all flesh like this: 20.7¢ for concrete work, 17.2¢ for brickwork, 8.7¢ for structural steel, 7.6¢ for elevators, 6.6¢ for heating and ventilating, 6.6¢ for electric wiring and fixtures, 6.4¢ for carpenter work, 5.2¢ for plumbing, 4.3¢ for plastering and lathing, 2.5¢ for excavation and grading, 1.7¢ for tile work, 1.6¢ for painting, 1.3¢ for roofing, 1.3¢ for glass and glazing and 8.3¢ for miscellaneous.

These are national statistics based on investigation in more than a dozen cities, of costs accruing from the time excavation is started. The figures do not include overhead expenses, profits, cost of land, finance charges, or that pitifully minor item—architects' fees.

**AND FROM CHICAGO** comes word of interest in connection with lower cost construction work. Some laudable gentleman has invented a new kind of cold rivet, which is being diligently investigated by engineers and builders. If the inventor's claim stands scrutiny, cost of putting the new rivet in place will be 3¢ . . . as opposed to 15¢ for the present hot rivet. One effect of this new development might be to make possible steel frames for houses—thus eliminating plaster cracks.

## SCHOOLS

**DEAN LEOPOLD ARNAUD**, of the Columbia School of Architecture, announces that at the opening of the new academic year in the fall a laboratory will be established for research in design correlation . . . a new and different development in architectural training. Says Dean Arnaud:

"Designs for furniture and other mobile equipment will be correlated to the requirements of the human being and his environment. They will then be constructed for actual tests and the theoretical research will be followed by practical study of methods of production.

"An Italian chair of the sixteenth century, for instance, is not outmoded on account of its style, but because today people have adopted different methods of sitting, and the Italian chair no longer provides comfort. In many other ways esthetic factors or styles have changed and at the same time human beings have changed in their viewpoint in respect to design and conveniences."

Frederick J. Kiesler of New York will be director of the laboratory, and during the Summer sessions at Columbia will give a course in training for art in industry, which will be in the nature of a preparatory course for the research laboratory work.

## LABOR

During the past few years Seattle has earned for itself a reputation as a hot-spot of labor unrest. Not surprising, therefore, is the outcropping of organized draftsmen talk recently heard there. Attention was first called to the situation when Seattle architects received notice their draftsmen were to be organized. Accompanying this notice was an intimation that after a certain date the Seattle Building Trades Council will refuse to have its members work on a structure for which plans were produced after a definite date, unless the union stamp appears on the blue prints. Such action, it was predicted, would be subject to court restraint, since interference of this kind with an individual's practice of his profession is illegal. . . . especially where employees do not desire organized collective bargaining.

In reporting on this situation to the Board of Directors of the American Institute of Architects, Mr. William Stanley Parker, of Boston, declared that most, if not all, architects and their draftsmen will find the underlying idea of this move quite offensive to their conception of the relationship which should exist between professional co-workers.

"Draftsmen may appropriately ask whether they should be denied the protection of such organized bargaining if the professional relationship fails to secure for them what they consider to be fair conditions of employment. If they ask such a question, as they appear to be asking in Seattle, the architects and their draftsmen as a group must answer it. The answer may lie in a new form of relationship between draftsmen and the Institute which, after all, is their national professional organization."

Mr. Parker pointed out that draftsmen may join the chapters of the American Institute of Architects as junior associates, but they have no right to hold office or vote on chapter business. When a draftsman is deemed qualified by the chapter he may be advanced to full associateship, but he still has no power to hold office, no voice in chapter business.

"The present situation," continues Mr. Parker's report, "suggests a fresh analysis of the relationship of draftsmen to the Institute in an effort to find a formula that will be satisfactory to the draftsmen

and will bring about the affiliation with the Institute of a very substantial proportion of draftsmen. If this can be accomplished, it will be the soundest answer to those draftsmen who feel they need the protection of an outside unionized organization with national union affiliations.

"If this problem cannot be successfully solved, we may, with some reason, look forward to some form of draftsmen's unions in the larger cities. It does not appear likely that they will be found needed in smaller communities in which there are no large architectural offices." That the Institute will soon announce some revised set-up to meet this situation seems likely from the report.

## COMPETITIONS

**IN A COMPETITION SPONSORED BY THE PITTSBURGH GLASS INSTITUTE** for the best use of glass as an architectural and decorative medium, Abel Faidy, Chicago designer, won first prize of \$1,000. Through courtesy of the American Federation of Arts, Mr. Faidy's prize-winning design will be shown next winter in museums throughout the country. Winner Faidy, whose wife is a sister of famed sculptor Gutzon Borglum, resides in Chicago, where he gives lectures on modern architecture and conducts classes in design.

## FAIRS

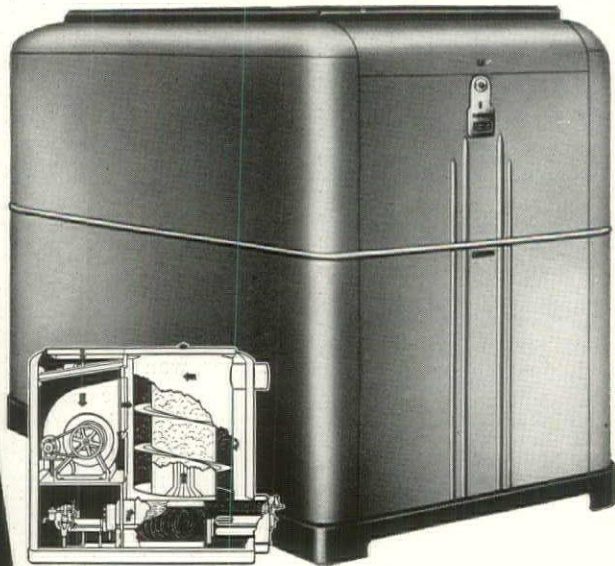
**AFTER PREVIOUSLY VETOING AS TOO GENEROUS** the \$5,000,000 appropriation to aid New York's World Fair of 1939, a couple of weeks ago President Roosevelt signed a bill providing \$3,000,000. At the same time he signed a bill tossing \$1,500,000 into the hopper of San Francisco's Golden Gate Exposition.

In connection with New York's Fair, President Grover Whalen's decision to enter his city's mayoralty contest evoked much interest, since this step came soon after a statement by Mr. Whalen that he did not choose to run. Mr. Whalen has severed all his corporate ties to make the race, retaining only his presidency of the World's Fair. Incidentally, in his first statement to the press Mr. Whalen said he would make housing one of the chief issues of his campaign.

A few days prior to this development it was announced that U. S. Steel, Metropolitan Life and the YMCA had taken space for the coming Fair. Walter Darwin Teague, industrial designer, has been retained by Big Steel as consultant in preparing its exhibit, while the preliminary plans for the Y's one-story service center are now being drawn up by Dwight James Baum, architect of the West Side YMCA.

(Continued on page 123)

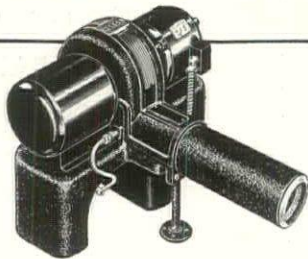
# NORGE LEADS WITH THE FIRST GREAT ADVANCE IN HOME HEATING EQUIPMENT SINCE THE INTRODUCTION OF CENTRAL HEATING



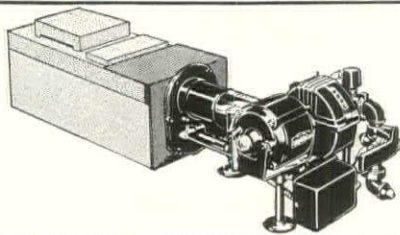
● All good heating systems today have automatic controls, air conditioning, and other modern features—but only Norge has developed an all-steel, spiral heat transfer unit that extracts the most heat from every dollar's worth of fuel. The hot gases of combustion are carried spirally upward over 36 lineal feet of boiler-plate steel. Overall efficiencies are as much as 80% and up!

The Norge Fine-Air Furnace is a complete winter air-conditioning system. For summer, complete cooling equipment powered by the famous Norge Rollator compression unit may be added. No matter what kind of heating you may be considering, *be sure to see the Norge before you buy!*

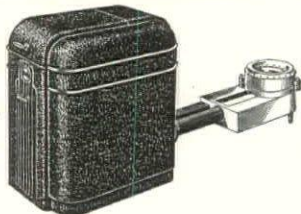
**NORGE HEATING AND CONDITIONING DIVISION**  
Borg-Warner Corporation, Detroit, Michigan



**NORGE WHIRLATOR OIL BURNER...** operates on the exclusive Whirlator principle—clean, quiet, economical. For use in the Norge Fine-Air Furnace or in modernizing your present heating plant.



**NORGE GAS BURNING UNIT...** cuts heating costs with gas up to 50%. Triple-control of mixture in this new pressure-type unit gives you more heat from less fuel. Be sure to investigate this amazing burner.



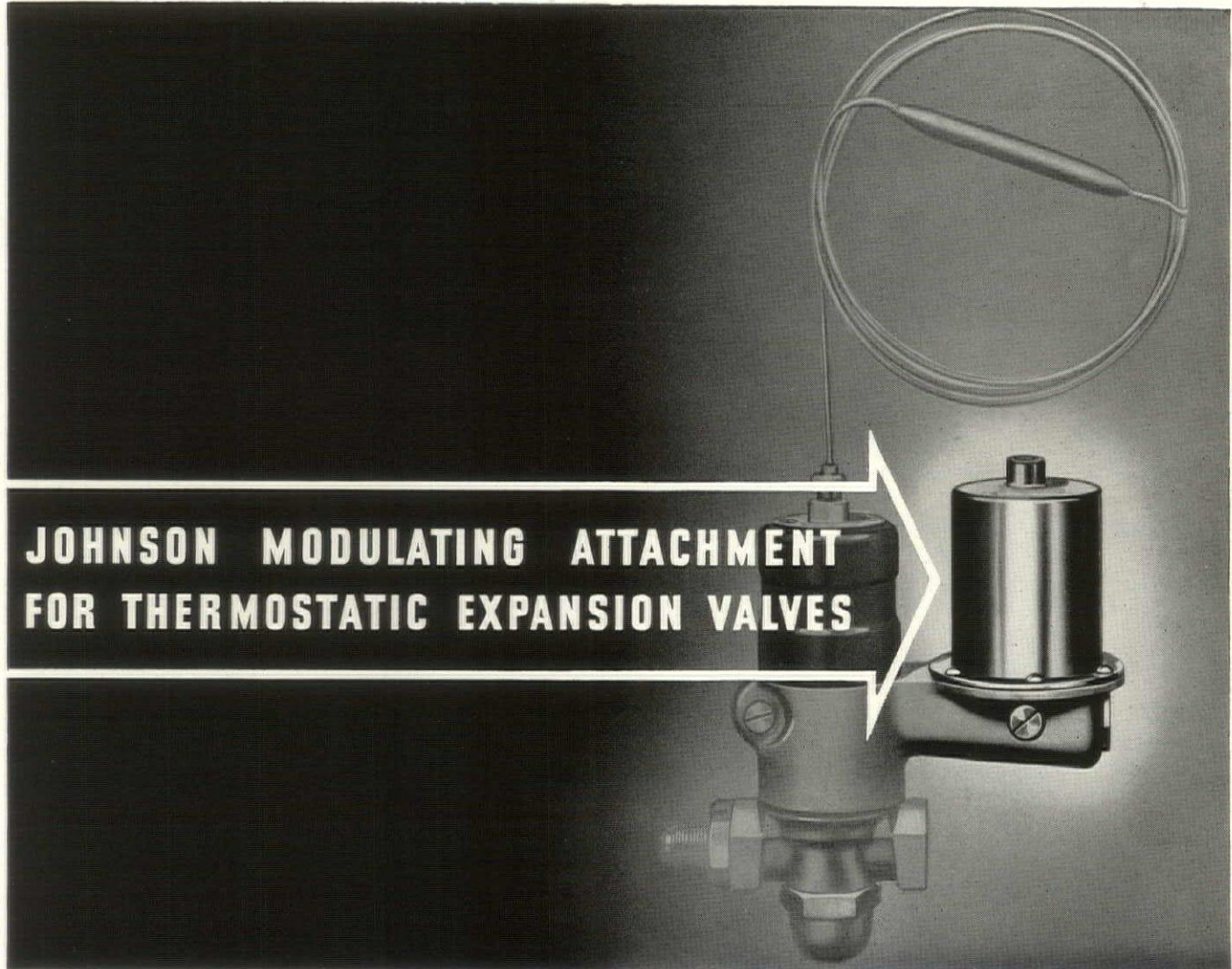
**NORGE COAL STOKER...** makes an automatic heating plant of your old coal furnace. Extra capacity, most modern design, low in cost. Feeding mechanism of exclusive Norge construction—trouble-free and dependable.



## NORGE PLUS-VALUE HOME APPLIANCES

See the sensational new Rollator Refrigerators and Norge Concentrator Gas and Electric Ranges today!

Norge Autobuilt Washers and Duotrol Ironers are this year's style and performance leaders. Investigate! HC-12



**JOHNSON MODULATING ATTACHMENT  
FOR THERMOSTATIC EXPANSION VALVES**

*Again Johnson Simplifies -*  
**REDUCING INSTALLATION AND MAINTENANCE COSTS**

These "modulating attachments" are applied, in the Johnson factory, to various standard makes of thermostatic expansion valves, forming a complete unit that is controlled by a distant thermostat as well as by the usual bulb on the outlet of the evaporator. The bulb operates the expansion valve in the usual way. When maximum cooling is not required, the controlling instrument, sensing room or duct temperature or humidity, gradually "throttles" the expansion valve, regardless of the action of the bulb,

reduces the flow of refrigerant. Actually *two* automatic control valves, combined in one!

The superiority of this combined action is evident, as compared with the practise of starting and stopping the compressor or operating an automatic stop valve in the liquid line. Less labor during installation. Reduced maintenance costs. Annoying delays minimized . . . One more of the "specially-tailored" devices for air conditioning control that are available only in *Johnson Systems*.

SEND FOR BULLETINS V-301 TO 303

**JOHNSON**

**AUTOMATIC TEMPERATURE AND HUMIDITY CONTROL**

JOHNSON SERVICE COMPANY, MILWAUKEE, WISCONSIN • BRANCH OFFICES IN PRINCIPAL CITIES

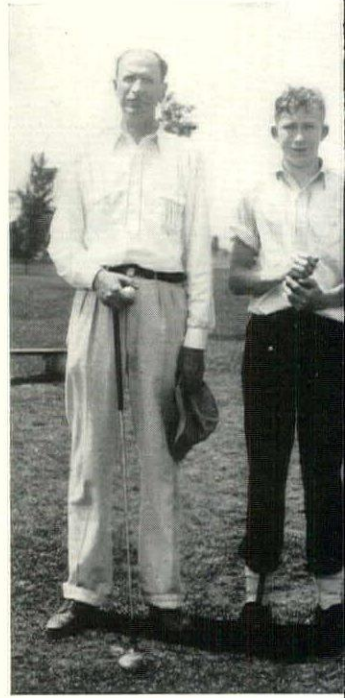


H. J. MAXWELL GRYLLS of Smith, Hinchman & Grylls, Inc., says that he doesn't usually putt with his driver

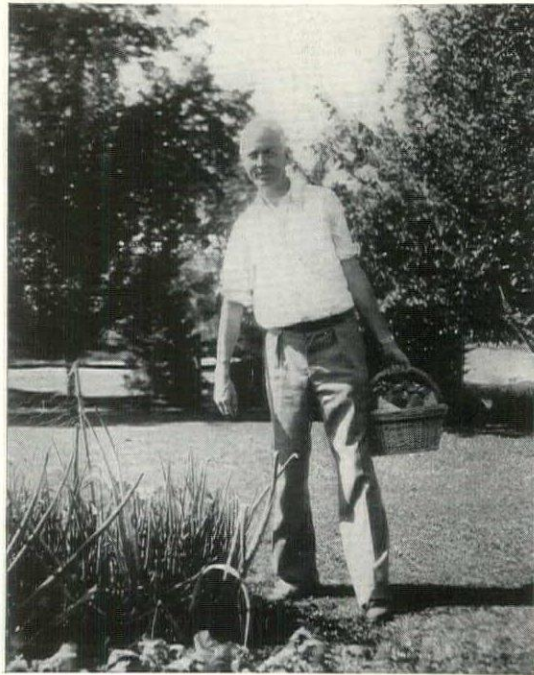
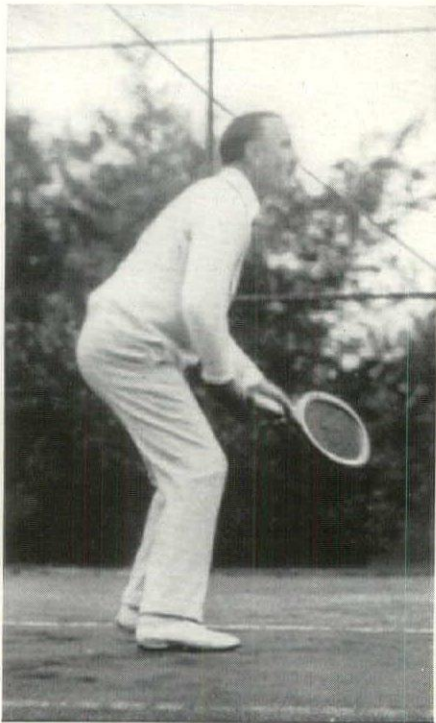


TALMAGE C. HUGHES, whose chief occupation seems to be editorial work. His hand is usually visible in the Michigan Society Bulletin, and he served as executive editor for the Detroit guest editors in this issue of our own magazine

**SOME DETROIT  
ARCHITECTS AND  
THEIR AVOCATIONS**



J. IVAN DISE, who is not only golfer himself, but is rearing his son to be another



RICHARD H. MARR divides his spare time between swimming, sailing, and gardening

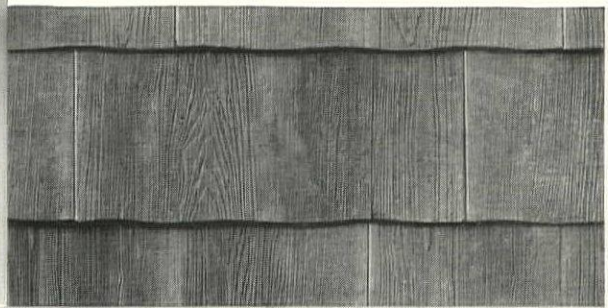
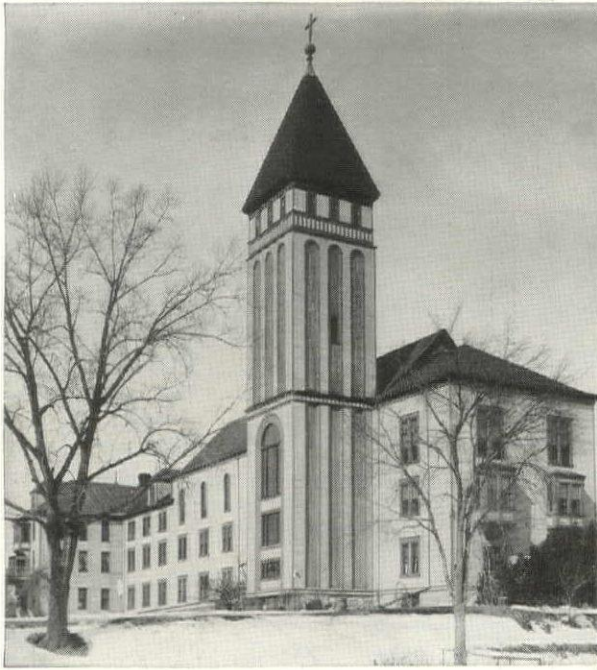
Left, ROBERT O. DERRICK, of Derrick & Gamber, Inc., gets his exercise in several ways, one of them on the tennis court

Right, BRANSON V. GAMBER, the other half of Derrick & Gamber, Inc., was caught illustrating the working of the stocks at Williamsburg





# ETERNIT TIMBERTEX COLONIAL SIDING



Main building of Villa Maria Academy, nationally famous school for girls, at Frontenac, Minnesota. Applicators: U. S. Roofing & Siding Co., St. Paul, Minnesota.

*In one Operation . . .*

**NEW FIRE-PROTECTION  
NEW INSULATING VALUE  
NEW BEAUTY OF TEXTURE  
NEW BEAUTY OF LINE**

*and Reduced Maintenance Costs*

WE ARE constantly hearing of new reasons for using Eternit Timbertex Sidings. Rarely does modernization show so clearly how well Eternit Timbertex Sidings can be used to emphasize the important architectural features of a building.

Many different factors led to the selection of Eternit Timbertex Colonial Siding, in this case. 345 squares were used. Greater fire-protection and lower maintenance costs were particularly important considerations. As originally built, the costs for painting, repairs and maintenance were tremendous items. Today they are at a minimum. No paint or stain will ever

RU-BER-OID ARCHITECTURAL PRODUCTS
BUILT-UP ROOFS
ASBESTOS SHINGLES
ASBESTOS SIDINGS
ASPHALT SHINGLES
ROCK WOOL HOUSE INSULATION
ASBESTOS PIPE COVERINGS
WATERPROOF SHEATHINGS
NEWTILE
NEWMARBLE

again be required. Moreover, this Timber-tex Siding provided additional insulation for the sidewalls—with resulting economy in winter fuel and greater comfort in the summer months.

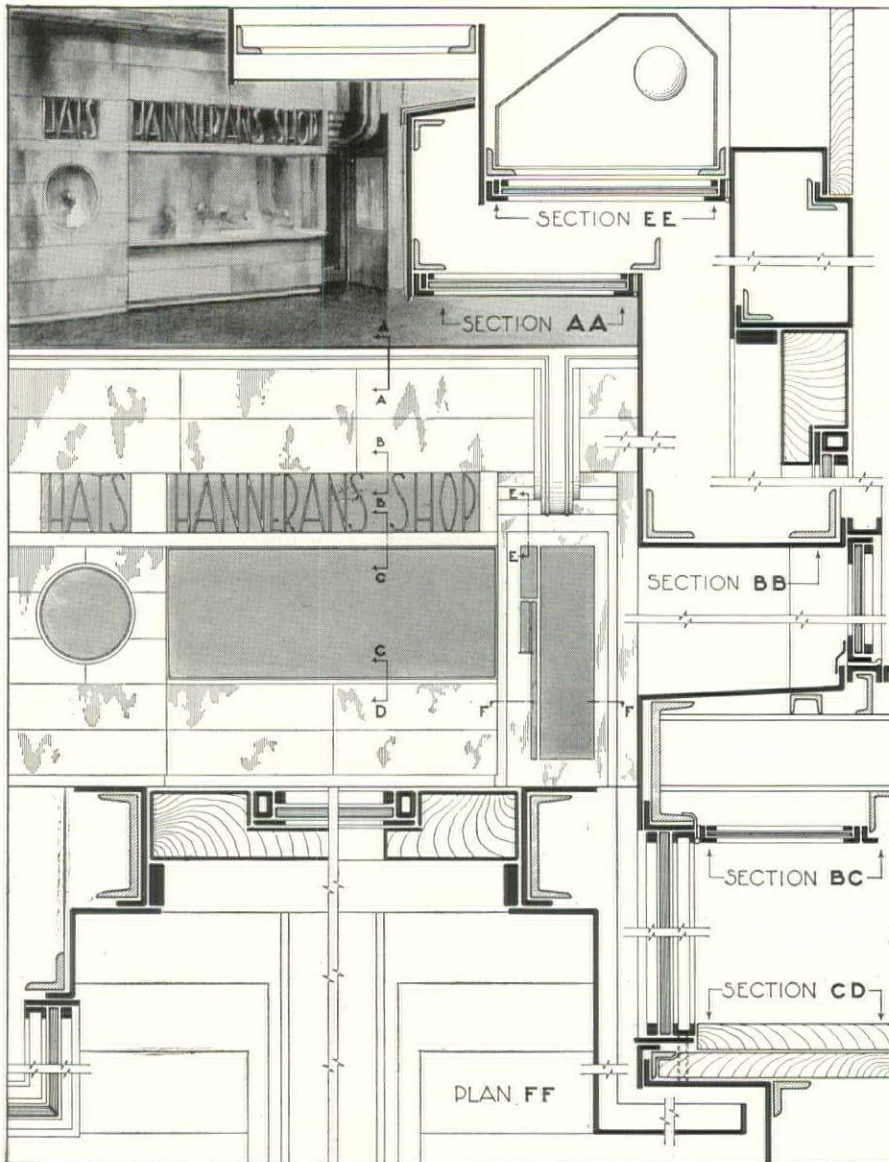
In the wide range of Eternit Timbertex Shingles and Sidings, you can find the exact color, texture or line to help you put extra beauty, extra refinement, into almost every job. We would welcome the opportunity to tell you about any or all of the Ruberoid Architectural Products. They are up-to-the-minute in quality and design; they are money-savers. Please let us know your interests. Write Dept. A.A.-8

# RU-BER-OID

**ROOFING AND BUILDING PRODUCTS**

**THE RUBEROID CO. EXECUTIVE OFFICES: 500 FIFTH AVENUE, NEW YORK**

# Like throwing a Fence across the Sidewalk . . .



**FIVE ADVANTAGES** *This modern store front for high-rent metropolitan shopping districts makes effective use of USS Stainless Steel. It is designed to stop traffic, to invite window-shopping, to attract customers into the store. Its brilliant plane surfaces of exposed metal give extra prominence to its small location. Note also the unusual simplicity of construction. For complete information (16 pages of facts, photographs, tables, and drawings) see Sweets, or write for new booklet "USS Stainless Steel in Architecture."*

**T**HAT'S how you can stop traffic for your client with a brilliant store front of USS Stainless Steel.

Its clean sparkle will suggest fresh, modern merchandise. Display your client's goods to best advantage. Invite window shopping. Attract new customers into his store.

You can truthfully advise your client that a new store front of USS Stainless Steel — matched by counters, trimming and equipment inside the store — will be one of the best business-getting investments he can make.

In addition to its permanent beauty, remind your client that USS Stainless Steel is eminently practical. Like glistening glass its surface is immune to weather, needs only ordinary washing to keep it looking new. Being one of the toughest forms of steel it resists scratching and abrasion, should outlast his building.

Cost need be no problem. Point out to your client that USS Stainless Steel will cost him not a cent for polishing. Nor painting. Nor lacquering. Nor replacements. Per year of service, USS Stainless Steel is one of the least expensive materials he can use.

Our nearest district sales office will gladly recommend local fabricators, skilled in making USS Stainless Steel store fronts and architectural trim at moderate cost.

## U·S·S STAINLESS STEEL

AMERICAN STEEL & WIRE COMPANY, *Cleveland, Chicago and New York*  
 CARNEGIE-ILLINOIS STEEL CORPORATION, *Pittsburgh and Chicago*  
 NATIONAL TUBE COMPANY, *Pittsburgh*



Columbia Steel Company, San Francisco, *Pacific Coast Distributors* • United States Steel Products Company, New York, *Export Distributors*

# UNITED STATES STEEL

# OLD DRUMS AND NEW BUSINESS

CONSTRUCTION seemed almost to be on its way toward a new boom in the early part of the year, but its trend has changed and the curve leveled off. Construction figures used in charting the progress or retrogression of building activity are such that it is not always possible to determine the true meaning of the curve, as far as architectural interest in the picture is concerned. By and large, a curve showing the amount of residential construction contracts would be an indication of the architectural activity throughout the country. The other figures which entered into the usual statistics involved large industrial expansion and government projects which hardly will affect the rank and file of the profession.

The incipient boom has been nipped by rising costs, both of materials and labor. Many architects, whose clients were ready to go ahead, have been discouraged by these high costs since the bids coming back were so much higher than original estimates that owners decided to shelve the projects for the time being. Of course, it is impossible to tell at this point whether costs will be stabilized, will drop or will rise, but it is doubtful if we can count on very substantial reductions the rest of this year. The architect's only recourse is to persuade the prospective builder—

1. That even at present prices he is still getting more for his money than in the 1927-1929 era.
2. That investment in such a tangible as real estate and a home is wise.
3. That the plans and specifications can be revised downward to meet the original budget.

Again the architect is affected by conditions beyond his control.

A ray of sunshine in the building picture is that a recent real estate survey shows a great increase in the purchase of building lots. This, of course, indicates either potential home builders or investors hoping for appreciation in real estate values. New owners of lots are potential architectural clients and an upswing in lot ownership will mean an increase in home building. This is true especially at the present, when rentals are still increasing, and the shortage of houses is becoming more and more acute.

■ There may also be more work for the architect if the plan of the Federal Home Loan Bank Board can be made to work successfully. The plan contemplates, among other things, the requirement of competent architectural aid in designing the homes, in the specification of materials, and also in the supervision of construction. The owner of a home so constructed with architectural supervision will receive a "Federal Certificate of Registration," which, it is hoped, will be not only a personal satisfaction, but a seal which will strengthen the investment security in the case of re-sale or foreclosure.

■ Small homes need architectural supervision, but fees will probably have to be very low both actually and in relation to the time involved. Will the most competent architects be available for this exacting and time-consuming service for small fees? If fees are inadequate, either the quantity or the quality of the service rendered in supervising construction may suffer. The plan should prove to be a long step forward in eliminating jerry building. If it should develop that unworthy structures receive this Federal Certificate, a black mark will be chalked up against the architectural profession, for it is the architect who will be responsible for the supervision as well as for the design and specifications.

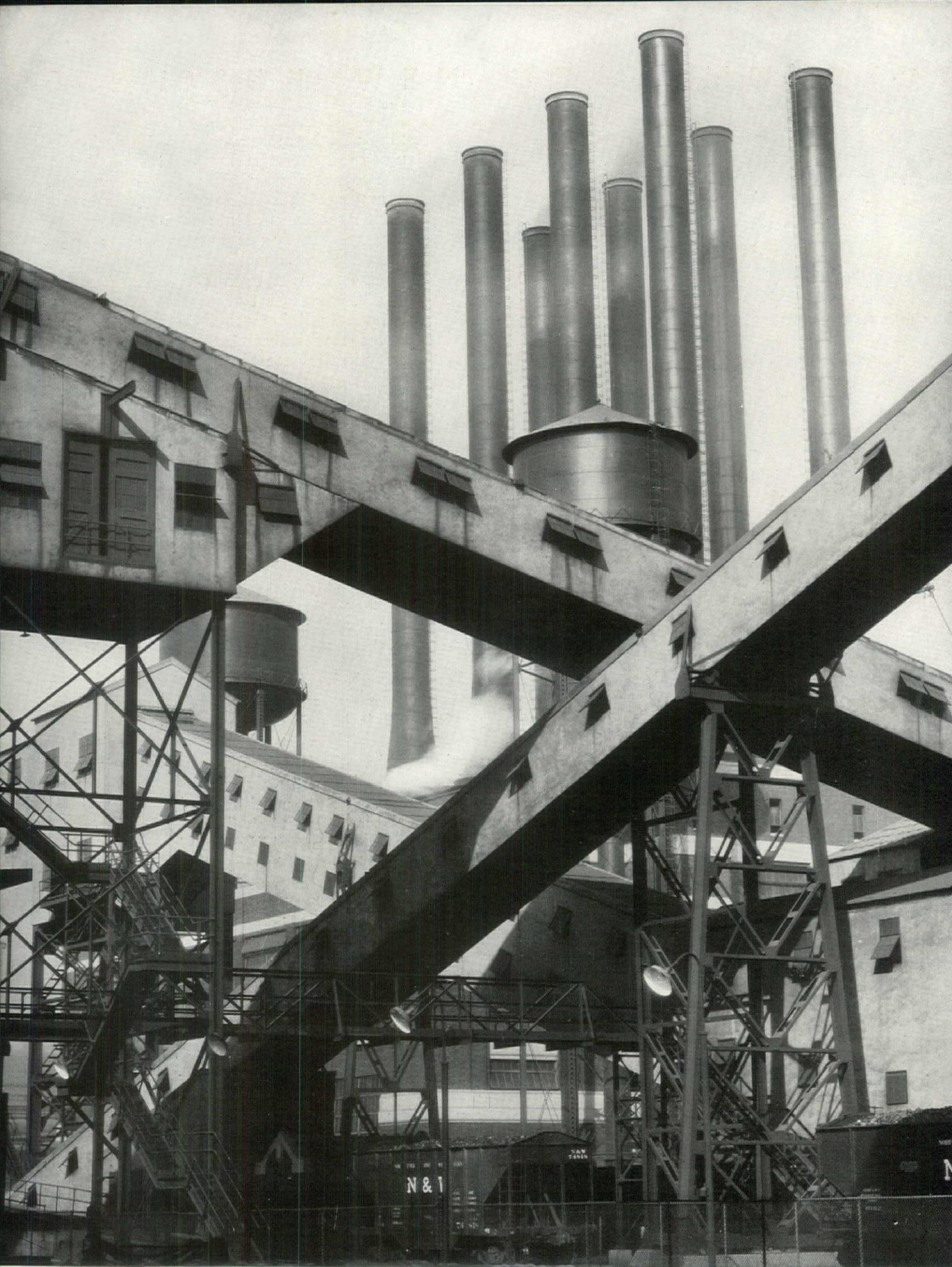
■ Some speculative builders, interested in profit, may need to cut corners to make sure of their profits, and it is naïve to expect a minimum of supervision to guarantee first-class materials or workmanship. And speculative builders are also going to realize the value of the government bureau certificate as a selling point. Put these two things together and you'll see what it means in architectural responsibility. If the architect can choose contractors he knows to be reliable, who are honest in their construction whether he is there or not, then undoubtedly there will be better construction in this low-price field.

■ The F. H. L. B., in its very commendable efforts to achieve better building and safer loans, is offering to place on the architectural profession a heavy responsibility. Whether or not the profession is willing to accept this burden wholeheartedly still remains to be seen.

■ Upon the competency and integrity of the architects engaged in this work depends the success or failure of the plan, from a professional as well as a financial point of view.



Editor



THE RIVER ROUGE PLANT OF THE FORD MOTOR COMPANY. PHOTOGRAPHED BY CHARLES SHEELE

## ARCHITECTURE F.O.B.

ROGER ALLEN

EVERY schoolboy knows that Canada is north of the United States. But in Detroit you travel due south to go to Windsor, Ontario.

Of course there is a scientific explanation of this phenomenon. The Detroit river bends sharply as it passes the two cities, turning Canada, for a short distance, south of the United States. However, I scorn such an obvious explanation; it seems quite unbecoming, keeping with the known contrariness of Detroit that Detroiters should insist on locating Canada south of the United States while all the rest of us are convinced that it's north. Detroit is like that.

Detroit is the city to end all cities. It has grown fabulously out on an industry designed to make the city—every city—out of the past. Its tremendous centralization of industrial power comes from the production of a machine that will do, what it has done, more than any other invention in the world's history to hasten the de-centralization of urban civilization. The motor car is the best known medium for getting away from wherever you are. Since most Americans are filled with a fierce and burning desire to go somewhere else, principally for the pleasure of coming back almost immediately, the automobile is the answer to a nation's prayers. Distance having thus been annihilated, there is now no reason whatever why workers should live in the city in which they toil. And now that it has been made possible to break up a man's home merely by running into his trailer (a clear gain in time and directness over the older and more devious method) it is triumphantly clear that the city, as such, is on the way out, thanks to Detroit.

There is a faintly inhuman atmosphere about Detroit. Anything that happened yesterday might as well have happened in the Pleistocene age. If you see a business man sitting at a table in the Motor Bar and staring into space, five dollars will tell you ten that he is not considering the events of the dear old past; no, he is figuring out how to tell the public that the 1937 model of the Skidless coupe (pronounced coop) is definitely superior to the 1939 model, which the public will not see until 1938. The fact that the gentleman is still in the year 1937 does not register with him, and if you remind him of it he will shrug vaguely and class you as a dangerous radical.

Probably there never was a town where tradition meant less than it does in Detroit. Every now and then somebody makes a half-hearted and abortive effort to interest the nobility and the gentry of today in the gaudy doings of Pontiac's conspiracy, the unbecomingly approachable conduct and neckwear of the Sieur de la Mothe, the various facets of the glamorous history of the city, but it is strictly no dice. Detroit is too busy wondering what year after next to devote any time to the year before last. Detroit has some of the best architecture in the United States and some of the worst. Its best makes you glad that you had the foresight to be born in Michigan; its worst reminds you of

Max Beerbohm's sad remark, "All it takes to be an incendiary is a box of matches and a sense of beauty."

But it is not my job to talk about Detroit's architecture. I want to discuss, just briefly, the effect and impact of Detroit upon the architecture of the rest of the world.

Because of the stream of completed automobiles that rolls out of Detroit, with notable contributions from Pontiac, Flint and Lansing to swell the stream, the architecture of every city in the United States has been changed. Towns, villages and hamlets are now conditioned to the automobile. I have no doubt that in time the human race will become immune to carbon monoxide fumes, and that thumbs, in this hitch-hiking age, will eventually become at least 12 inches long. These changes in the human machine will take time; far more time than it took to revolutionize American architecture in the Model T age.

To make room on city streets for ever more and more traffic lanes, the streets have been widened and in the process it has been the delightful task of the modernizer to retire permanently from view some of the choicest examples of the Pointed Gothic style of architecture that bloomed when Rutherford B. Hayes ruled this land. Frankly admitting that some of the new buildings that replaced them are not of such exceptional beauty as to cause the shade of John Ruskin to regret that he had to pass from this vale of tears without beholding them, yet by and by the large new buildings are better than the old. They had to be.

To say that the effect of Detroit's No. 1 product upon American architecture is not beneficial is to argue that an automobile show room is not more pleasing to the eye (and to the nose) than was the old time livery stable, an assertion that would encounter considerable eyebrow-lifting. A whole new class of buildings, both for manufacturing and retailing, came into use with the automobile. These, added to the still more numerous and important replacements made necessary by street-widenings, have made the American city a better place at which to look than it would have been had not Henry Ford and his compeers made gasoline good for something besides kindling recalcitrant fires. I like to think that some Newton of the motor world, sitting under a tree in the back yard, witnessed an explosion that blew a cook through the wall of the kitchen immediately after the cook had touched a match to the gasoline-saturated kindling in the range, and mused, "It would be a far, far better thing if this explosive power could be harnessed to permit the cook to travel, more slowly it is true, but with more control of direction," and then instantly inventing the internal combustion engine. If it did not happen that way, it should have.

So indirectly we get our architecture f.o.b. Detroit. Cities are being deserted, to the profit of their suburbs and the countryside, because the automobile has made the city a place to work in, not to live in. It may be argued that Detroit is destroying itself in the process. If that were true, I doubt if Detroit would care, having more important fish to fry. But I think that long before the decentralizing process attains much headway in Detroit, the gentlemen of that city will have figured out something else that will operate to keep that eager stream of immigrants from less dynamic sections pouring into Wayne county. Probably they have figured it out already; it wouldn't surprise me. Nothing that could happen in Detroit would surprise me, or surprise Detroit.



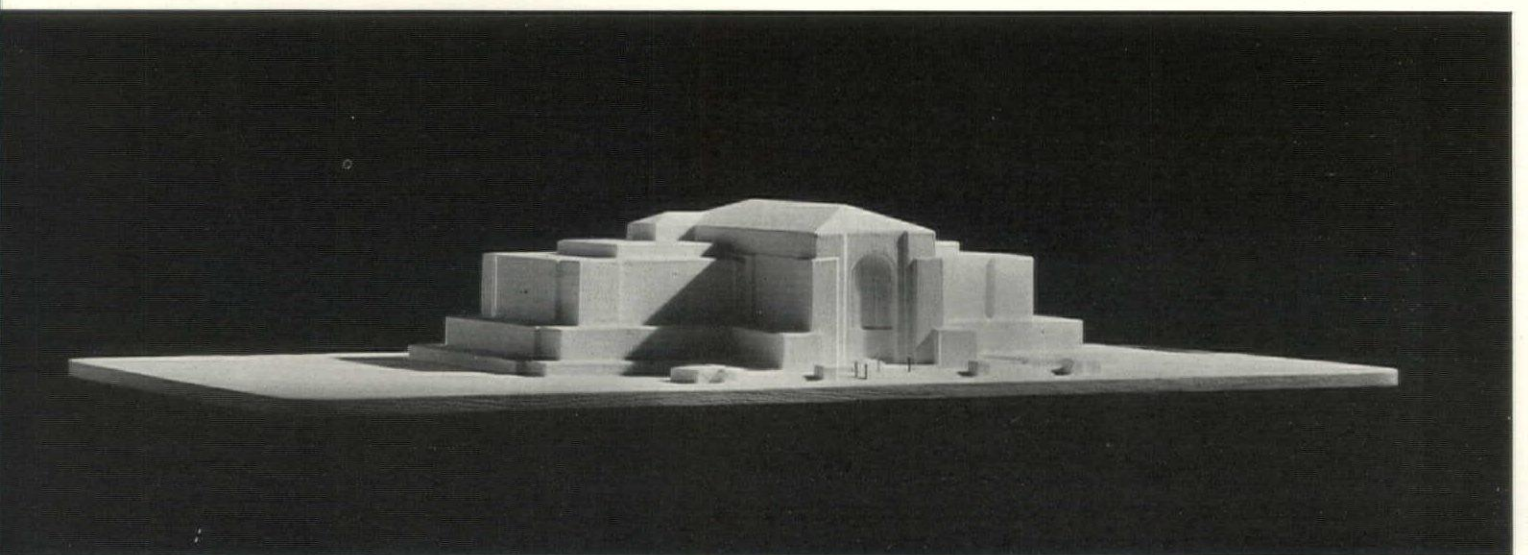
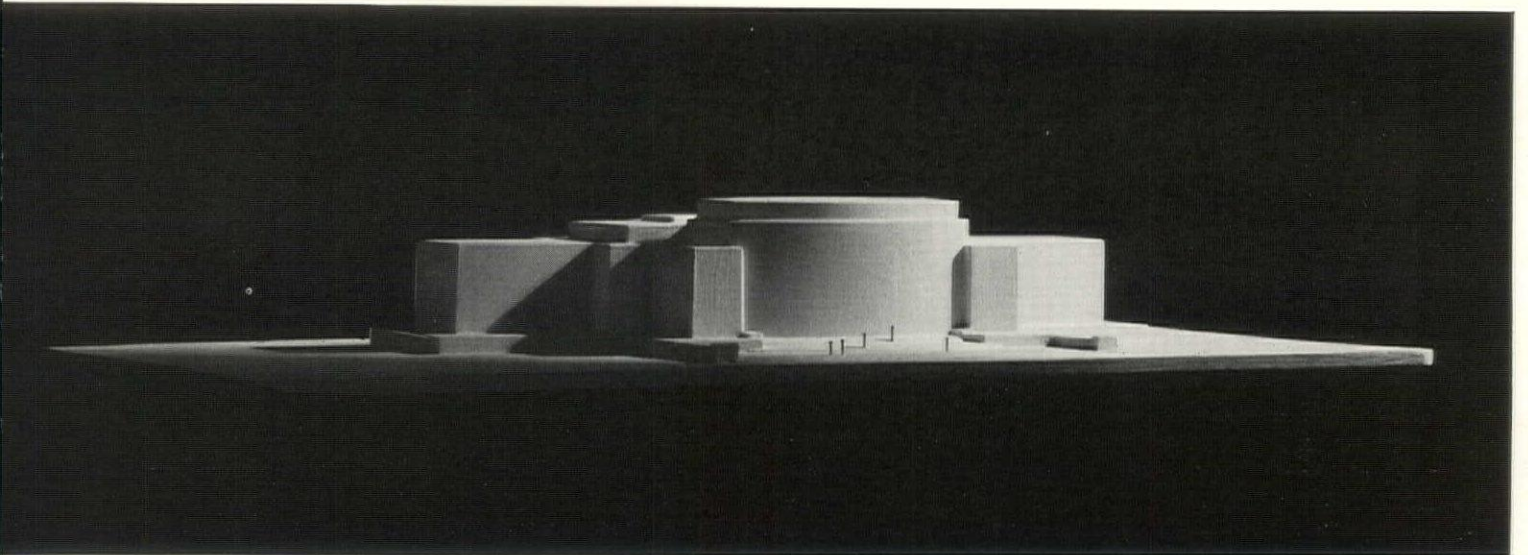
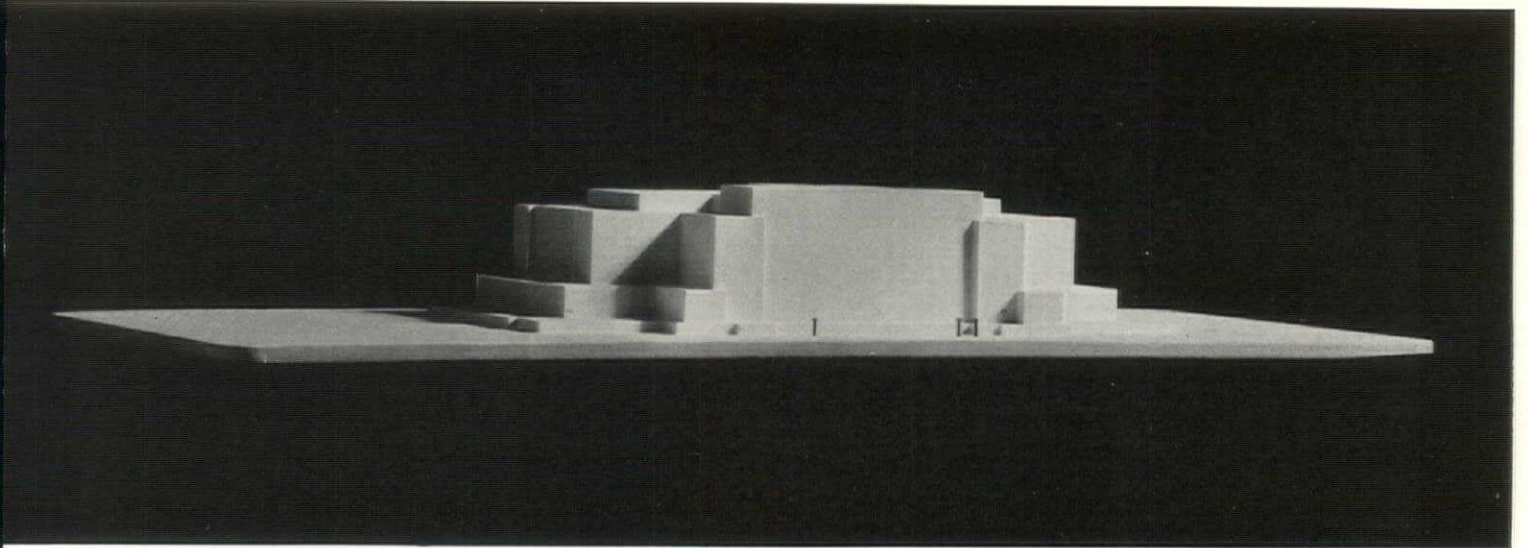
BIRD HOUSE, DETROIT ZOOLOGICAL PARK

DONALDSON & MEIER, ARCHIT



WESTERN HIGH SCHOOL

N. CHESTER SORENSON, ARCHIT



MODEL STUDIES, SCHOOL OF GRADUATE STUDIES, UNIVERSITY OF MICHIGAN

SMITH, HINCHMAN & GRYLLS, ARCHITECTS

# ON THE STUDY OF ARCHITECTURE

BY WELLS BENNETT

Director, College of Architecture, University of Michigan

THE history of architecture in Michigan, as far as work of any significance is concerned, extends over a span of about one hundred years. The history of architectural education in the state of Michigan as represented at the University extends over a period of thirty years. Most people would agree that in these last three decades there has been such an acceleration of the nation's development in what are called the refinements of civilization that more of the strenuous life, as well as more of strenuous architecture, has been packed into this period than in the other two-thirds of the century. A world war, several economic booms, and a world-wide depression have come and gone within these thirty years, leaving their high water marks and their scars.

Architecture, faithfully reflecting civilization, has had its dull and good moments in these thirty years. When the first students began to study architecture at the University of Michigan they found that the architect spoke to the world through such variations as he might ring on two themes: Classicism or Romanticism as expressed by the Gothic, Spanish or other variation. The steel frame structure was just winning acceptance and the development of reinforced concrete was just at its beginning. Both were suspect as being dully utilitarian and a bit difficult to reconcile with tradition. It was still thought necessary to make this reconciliation. The tempo of thought for the client with whom the architect had to deal was gradually being stepped up, but as yet there was no perceptible break with the long tradition in thought about architecture. It was wood frame or masonry wall for honest construction and always the outward appearances must follow tradition. Industrialization was indeed well established, the great cities had long been on the make, but the automobile was not yet a factor in transportation for business and pleasure, and the meaning of mass production as we accept it today was hardly dreamed of. This was the world upon which the first graduates of our architectural schools entered to play their part, and is the point of departure from which our present generation of mature practitioners have made such adjustments as they might.

What is the state of the profession of architecture as the student of today enters into it? Those who intend to take up the profession are invariably told that architecture is a fine art, that it also comprises the art of building well, and that, in brief, the architect must combine among his talents a keen sense of the esthetically creative, such as is expected of the sculptor and painter, and at the same time, that he must master construction and all the practical details of making his fine conception permanent in wood, stone, or metal. This is a possible combination of qualities, as the careers of men as far apart in time and thought as Leonardo da Vinci and Frank Lloyd Wright both attest. Young architects, however, having been advised of the scope of their field, have always gone blithely on their way, in

the majority of the cases leaning heavily on design and managing with construction as best they might. However, like the profession's heroes of the Renaissance and the Gothic periods the more competent men have rarely been able to combine both these qualities.

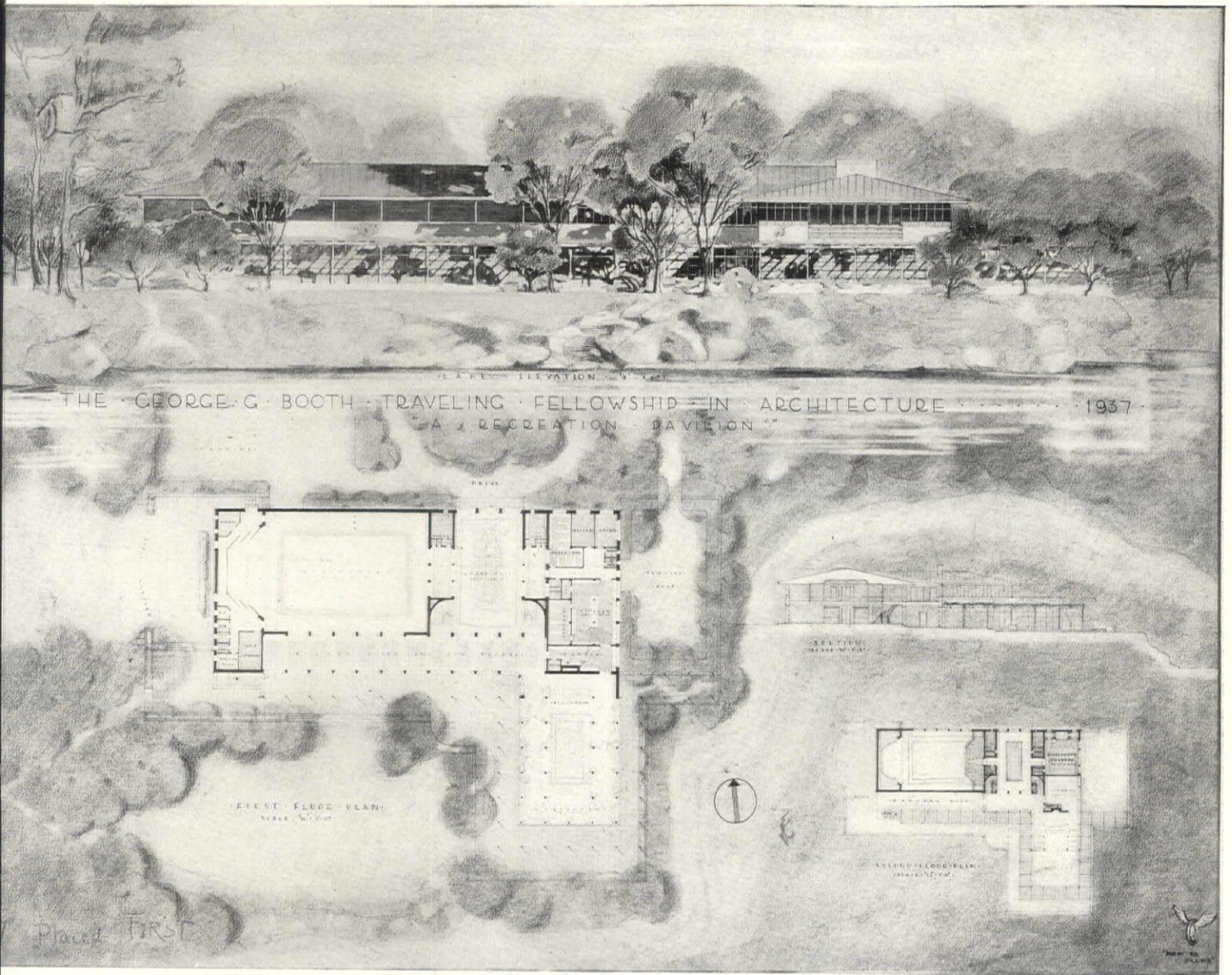
In the professional world today we realize that even the prospectus for the architect is no longer adequate. The fields just mentioned above have become much more complicated, and as in medicine, though the individual may get the general view he cannot specialize in all the details. Furthermore, there is a fourth dimension, so to speak, in which the architect, if he is to continue to exist, must maintain himself. With the youthful hopeful in architecture let us glance at these present-day factors.

In the technics of architecture we are now faced with new and constantly developing materials offered for structure or surface. Moreover, through extension of the mass production idea, there are appearing numerous and various fabrications of these materials. New forms in structural framing are constantly in process of evolution. Now that we have broken with the old masonry tradition, we hold nothing sacred in new. Neither the rolled steel section nor the reinforced concrete of flexibility in structural design with standardization of uneffecting economy in the use of time and materials, seems likely to come into building as it has made its way into other industries.

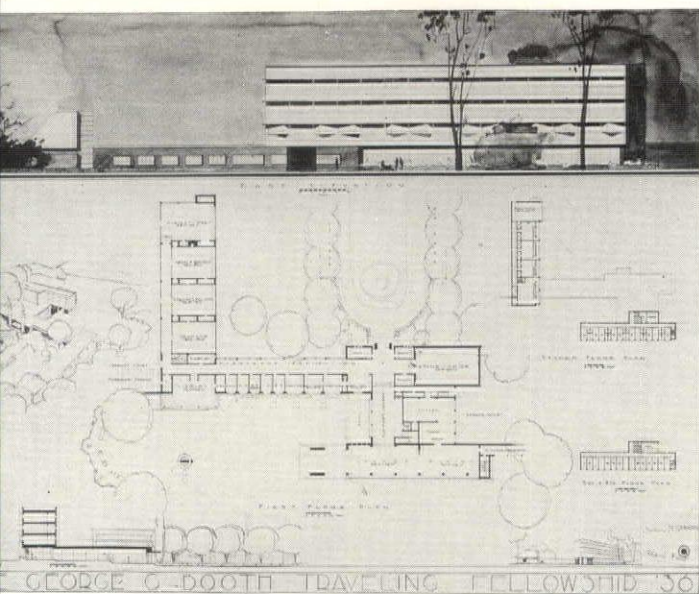
Experiments with new surfacing materials have paralleled developments in framing. Here the changes imposed by synthetic materials and the machine as fabricator enter the field of esthetics with new form, new textures, and new use of color. Now the long period of adjustment of appearance to the facts of modern construction is ending, and co-ordination of structure with form and finish is a natural process as never before since the break with simple masonry construction. The student's selection on these new materials and on the idea of co-ordination with avidity instinctive if sometimes superficial. Of his own time and akin in spirit to the automobile, the radio, and cellophane packaging, he considers novel architecture to be contemporary architecture and sometimes forgets about stability and permanence. The cantilever seems the logical answer for all structural problems and the corner window the solution of all fenestration. Where a young man thirty years ago envisioned his life flowering to "the song and dance of the Renaissance," students of today revel in "the International Style," in both cases, of course, with more zest than reason. It is likely, however, that in the technics of architecture, in the co-ordination of the esthetic and structural, the student will always grapple with this problem.

Then there is the matter of technical equipment. Once accessory to the work of architecture, mechanical elements are today insistent on recognition as part of the fundamental

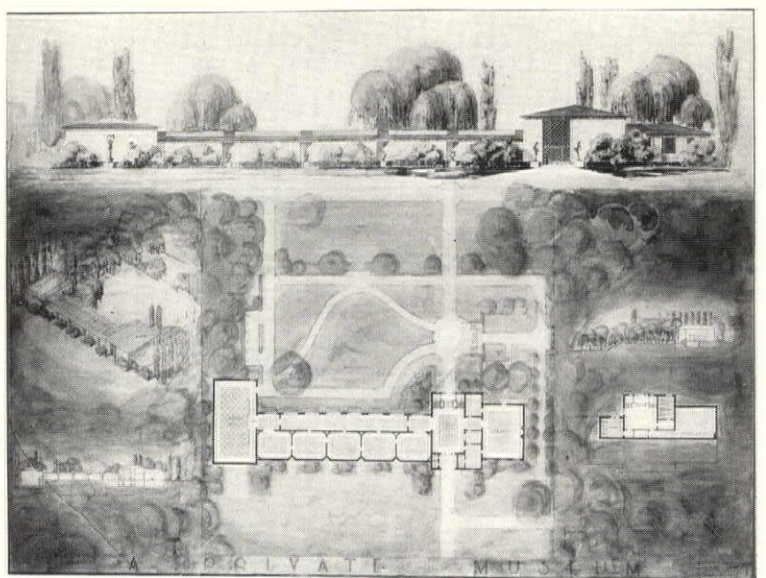




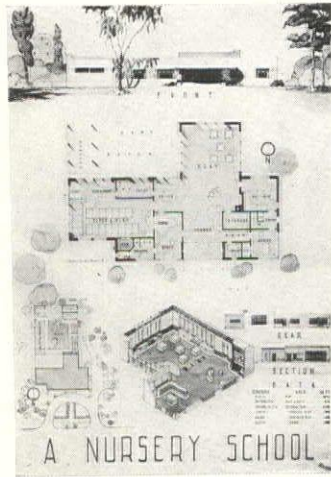
George G. Booth, Traveling Fellowship Award, 1937. Ernst L. Schaible



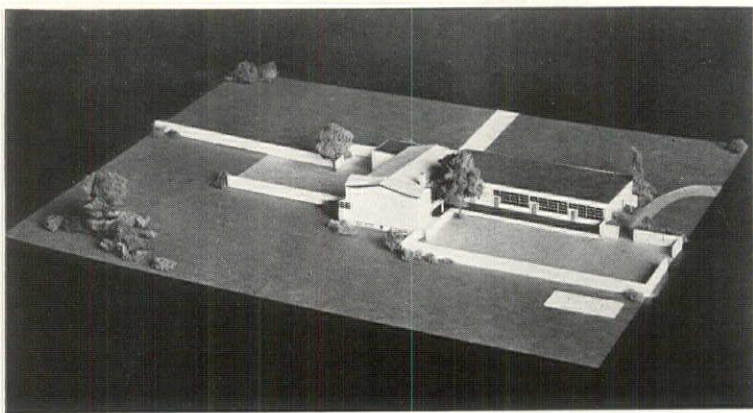
Senior Design, University of Michigan. Frederick H. Graham



Junior Design, University of Michigan. George Sprau



Senior drawing (left), Mary Louise Kessberger; and elementary design (right) Lawrence B. Lackey, University of Michigan



Model of Junior Design Problem. Richard V. Trusdell, University of Michigan

organization of every building. Every person who accepts the world of today must agree that this co-ordination is not only inevitable but highly desirable. It is not necessary to bow down to the machine but it would be silly not to accept it as our servant and make it completely at home. Heating, vertical transportation, electrical and related mechanical equipment are of increasing importance and they meet the architect upon the threshold of every planning problem. Here the average student of architecture is only restrained from accepting as gospel the "house as machine" by his lack of knowledge of machinery. By disposition he is rarely a machinist.

So architectural education on the technical side alone meets a highly complex situation today. The architectural school is certainly no longer a temple for the worship of tradition. In the College of Architecture at Michigan there is no interest whatever in the battle of the styles. Modern demands as to beauty and utility in plan, form, construction, and equipment are recognized as the substance of architecture. These elements transcend any style. The student, as has been said, is enthusiastic, but often superficial. After all, ramps and escalators must have head room. Even the most modernistic chimney may properly begin at the level of the heating unit and extend

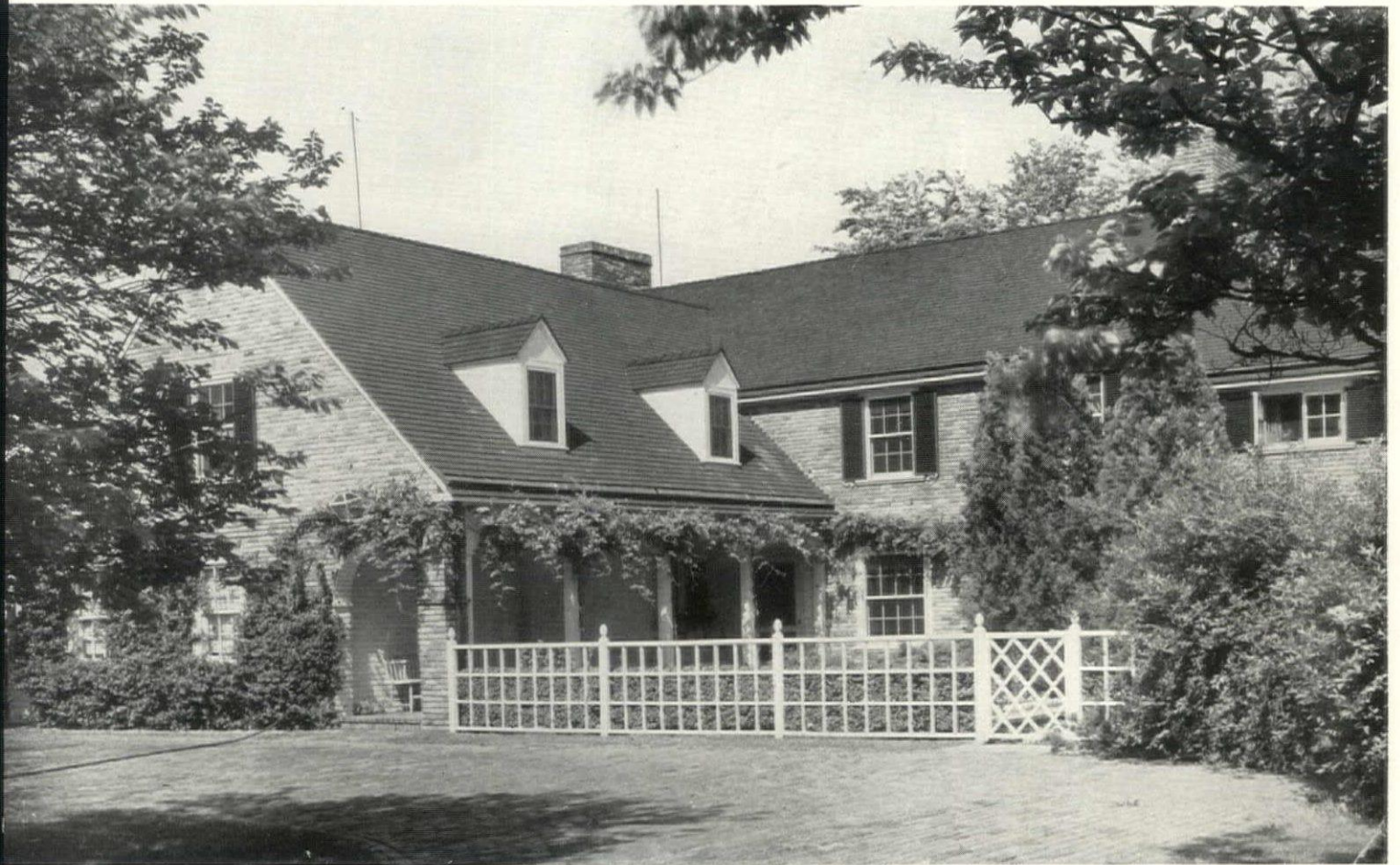
through the roof in a generally vertical direction. Even the most daring structural scheme must somehow attain stability. To be a good designer or a good structural man is not enough. Tomorrow's architect must be on speaking terms and preferably on working terms with the whole technological field as regards architecture. It would be humanly impossible for him to master all the details but he must see the whole picture. Most important of all, he must if possible sense, not the gimmicks of a superficial "modernism," but the universal principles of architecture pervading both changing physical forms and changing human needs.

With all the training in the world and with all the experience which the good office can give to the hopeful youth just coming from college, there is still something wanting. The young man who has had professional training, but, in the interest of his success and the advancement of the profession, there still remains an extension into another dimension. The most complete artist, the most brilliant planner and technician, may fail of a place in the sun and may indeed shrink to the status of a hired man for interests and individuals more powerful than he, with a narrow intensive technical training, is prepared to withstand. Busied with the creative side of the profession alone, the temperamental artist might count the world well lost were the architecture thus produced the better or the status of the profession the more secure, but this is not the case.

The architect in practice is constantly called on to present his case to the public. Building committees and individual clients demand of him not only expert advice in the production of beautiful and efficient buildings, but they expect from him as well an awareness of economic and social problems. The architect in practice must show that architectural projects as he proposes them are of the fabric of American civilization today and that he is cognizant of current trends. Not from an ivory tower but from the contact with the current of today's needs must the architect deliver his message. Our profession can only maintain itself as its members represent it. Through a broad view of modern life combined with a mastery of technical problems the architectural profession will not only justify its existence but will prove its service indispensable.

Some men have naturally an adjustment to environment, just as the occasional genius is a natural as an architect in the technical sense. For the general student, however, adjustment to the modern world can best be achieved through the acquisition of a broad cultural background in college, preferably preceding the professional courses. Training in salesmanship or in business methods in the narrow sense is beside the point, for these are mere gadgets of a professional man's education. Historical, modern languages, economics, sociology, and philosophy, however, set a discipline for the mind and at the same time open to it the ultimate freedom.

To sum up our problem objectively, the student about to enter the profession of architecture should distinguish between being a draftsman and being an architect. If he has the capacity and the desire he should look forward to being an architect. To understand architecture and to effectively practice it, he should obtain first a general education including at least two years of college. The ensuing period, spent in a good architectural school, will be followed by an internship in an architect's office. With this introduction our student may hope to find for himself a complete professional life whose compensations in service and the satisfactions that come from creative work are unsurpassed.



HOUSE OF C. GILBERT WALDO  
IVAN DISE, ARCHITECT

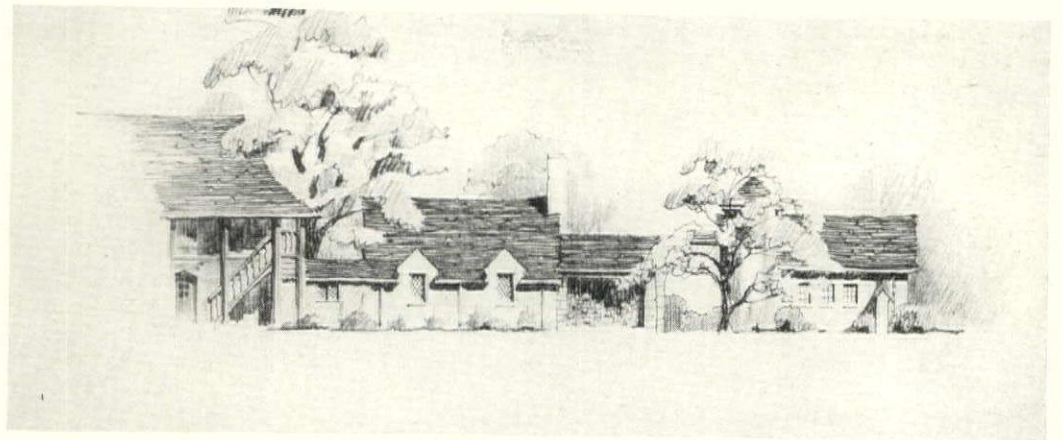
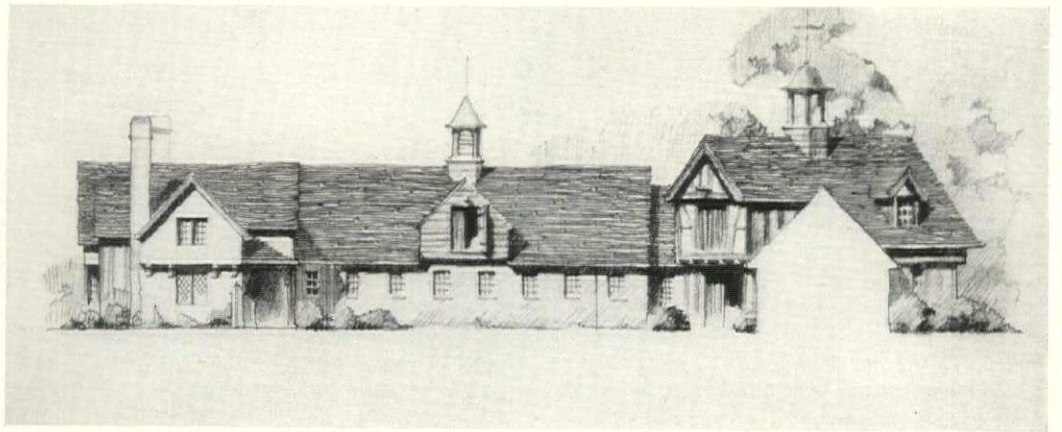
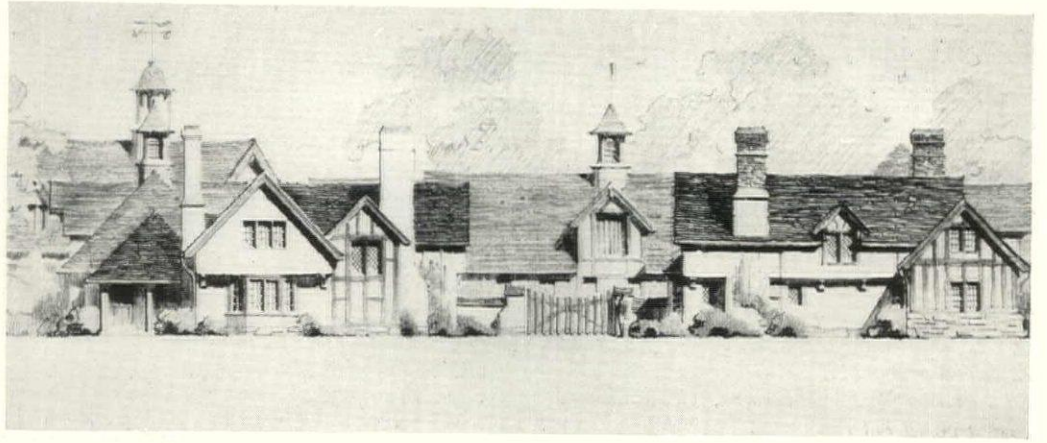


HOUSE OF RICHARD JORDAN  
HERBERT AND FRANCES SCHMITZ, ARCHITECTS



BOY'S BEDROOM,  
HOUSE OF LARRY HUME  
D. ALLEN WRIGHT, ARCHITECT

OFFICE STUDIES,  
HOUSE OF LEONARD C. HANNA,  
CLEVELAND, OHIO  
ERRICK & GAMBER, INC.,  
ARCHITECTS



# SHORT CUTS IN LINEAR PERSPECTIVE

By FREDERICK CROWTHER

Note: The author of this article, Mr. Frederick Crowther, is in the forefront of America's architectural illustration artists in perspective and water-color. He states herein in simple terms some of the things he has learned over a long period, and offers some short cuts to perspective methods. "It is probably true," says Mr. Crowther, "that many have for years held to perspective methods that are untrue." Only by long experience has Mr. Crowther met and corrected these false impressions, which he here passes on to his conferees.

1. To establish stationary point in relation to the plan of the building.

Five times out of ten a satisfactory point can be obtained by combining the extreme corners of the building within an angle of  $30^\circ$ . This apex of the angle becomes the stationary point. (Fig. A.)

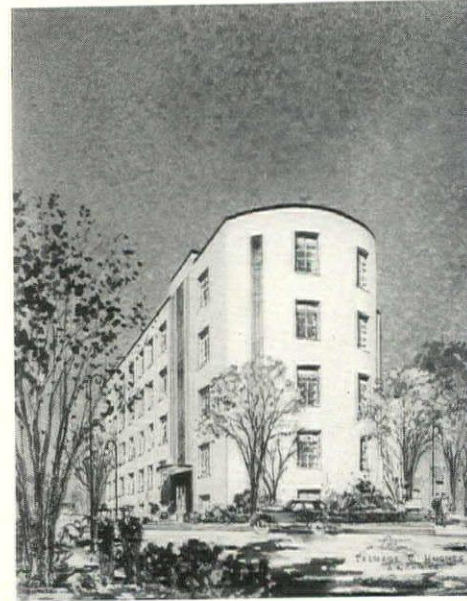
There is nothing arbitrary in this method of establishing the stationary point, but it has proved quite successful in pictures of buildings of two to four stories in height and of average width. For tall buildings it is generally more pleasing to diminish the angle of  $30^\circ$ . For any building of unusual height or width the best method of all is to make a few simple block perspectives at a very small scale until a satisfactory stationary point has been found. The little time and trouble involved are well worth while.

2. To establish picture plane, vanishing points, and vertical measuring line.

Bisect the angle of  $30^\circ$ , which gives the center line. At an angle of  $90^\circ$  to center line draw line through near corner of plan. This determines the picture plane, and the point of intersection of picture plane with the visible vertical planes of the building determines the vertical measuring line at the same scale as the plan of the building. To establish the vanishing points draw lines from the stationary point parallel with the front and side of the building until they intersect with picture plane. These intersections determine the vanishing points for all horizontal lines on the front and side of the building. (Fig. B)

3. To put the building into perspective elevation.

Take a sheet of paper and pin to a drafting-board a little wider than the width of the two vanishing points as determined by Fig. B. With the head of the T-square working from lower edge of the drafting-board draw a vertical line corresponding to center line in Fig. B. At right angles to this, and the full width of the board, draw a line well down towards the lower edge of paper. This establishes the horizontal plane. Having established the center line and horizontal plane, measure the distances of the two vanishing points on either side of the center line as shown on Fig. B, and place a pin at each of these two points. Now measure the three corners of the building as projected from the plan to picture plane, and establish these in relation to the center line, erecting verticals. Using the nearest corner as a vertical measuring line, mark off the grade line of the building, to the same scale as the plan, approximately  $5'-0''$  below the horizontal plane, and the full height of the building above



From a water-color rendering by Frederick Crowther of a proposed apartment house of which Talmage C. Hughes is the architect

grade. Draw line from these points toward the two vanishing points to where they intersect with the corners of the building already established and we have the building in perspective (Fig. C).

The foregoing presents the elements of perspective generally familiar to all architectural draftsmen. From this we go to the lesser known principles, stunts or short-cuts whatever you please to call them.

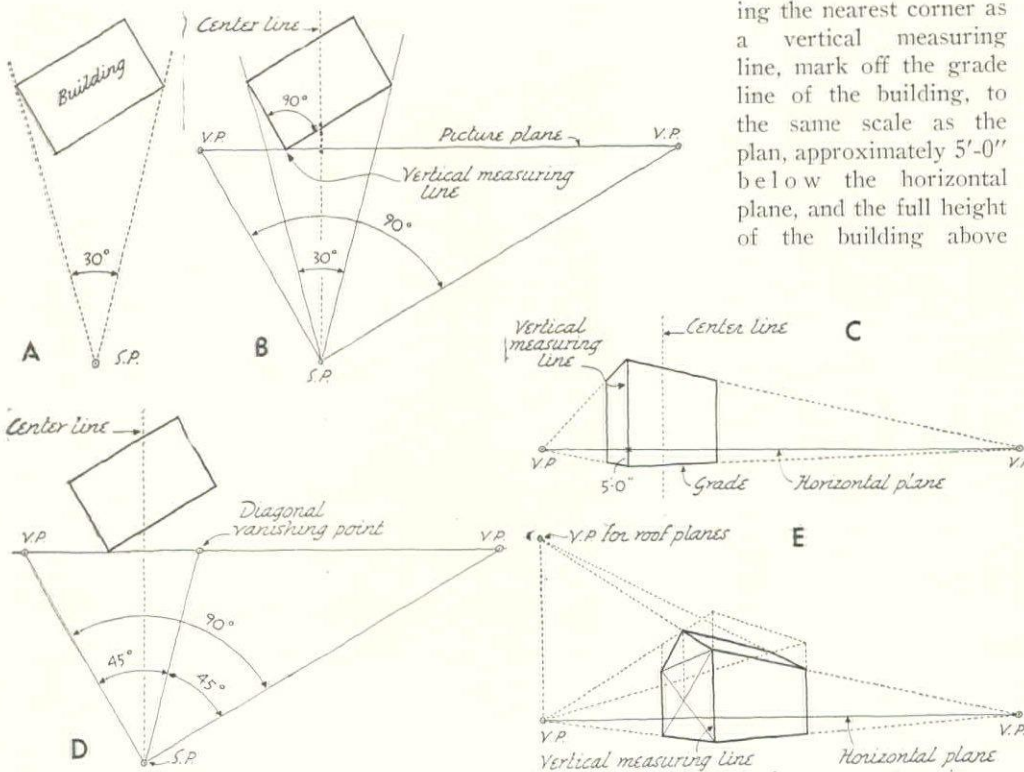
It is not claimed that these stunts make necessarily for greater speed, but they certainly eliminate a great deal of drudgery and labor in drawing all door and window openings, cornices, roofs, bay window dormers, etc., on the plan and projecting from there to the picture plane, as well as removing the hazard caused by the multiplicity of lines.

4. To establish a third or diagonal vanishing point.

This is most useful, and but rarely practiced. Having established the two usual vanishing points as shown in Fig. B, bisect the angle of  $90^\circ$  formed by the stationary point and the two vanishing points and carry the line until it intersects with picture plane. This establishes a third or diagonal vanishing point (Fig. D). The purposes of the diagonal vanishing point will be explained later.

5. To establish a plain gable roof in perspective.

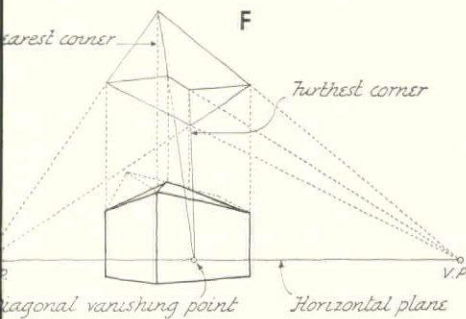
So far we have assumed our building to be a plain rectangle in plan with a flat roof. We now add a gable, in a sketch which is self-explanatory (Fig. E). Note the method of determining center of end gable in perspective by use of diagonals. Also remember that the true height of ridge is erected on the



vertical measuring line and projected towards vanishing point until it intersects with center of gable thus established. The vanishing point for roof plane is determined by carrying the near edge of the pitch on until it intersects with a vertical line erected from the vanishing point, as shown. This vanishing point is very useful where a number of vertical surfaces, such as dormers, chimneys, etc., intersect the roof.

To establish a plain hip roof in perspective. This involves the use of the diagonal vanishing point shown in Fig. D.

Proceed to draw a plain gable roof in the manner shown in Fig. E, with the diagonal vanishing point determined in addition to the two usual vanishing points. At a point well above the established roof line draw a reflected plan of the gable roof, with the edge line, as shown (Fig. F). From the



nearest corner of building on reflected plan draw a line towards the diagonal vanishing point until it intersects with ridge line on the reflected plan. Now carry a line from the diagonal vanishing point through the farthest corner of building on reflected plan until it intersects with the ridge line in the plan. These two points will give the true length of the ridge in perspective. Drop them down until they intersect with the edge in perspective; connect the intersections with the three visible corners of building eaves and the hip roof is established.

To divide a given distance into a number of equal parts in diminishing perspective. Every draftsman is familiar with the problem of dividing a horizontal line of even length into a certain number of equal parts (say five) without the use of dividers. The method is to erect a vertical line at one end of the horizontal line, mark off upon it to any scale the given number of units, connect the last point of the vertical line with a diagonal to the other end of the horizontal line, run horizontal lines from each division on the vertical line until they intersect with the diagonal line and then drop down to divide up the horizontal line into the desired five equal parts. (Fig. G)

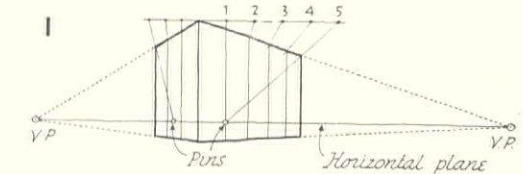
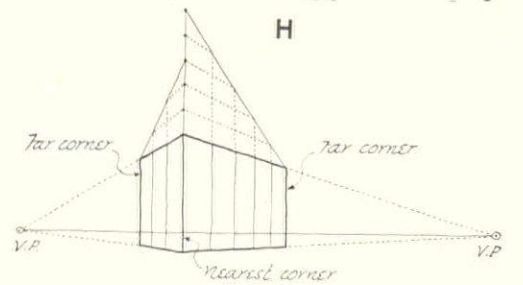
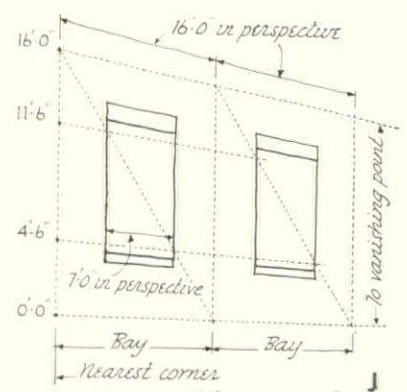
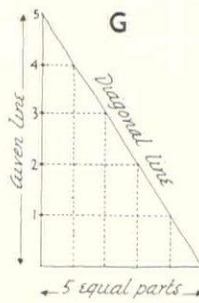
This solution of a simple problem can be applied to perspective once the regular vanishing points have been determined. For instance, a plain rectangular building has been established in perspective with vanishing points as shown in Fig. C. For our purpose we wish to divide the front elevation

into, say, five equal parts and the side elevation into three equal parts. The method is as follows (Fig. H): Continue the vertical line formed by nearest corner above the roof line and divide into five equal units. From the fifth point draw a diagonal line from the far corner of the building at the roof line as shown. Now carry a line from each unit mark towards the vanishing point until it intersects with the diagonal line; drop the points of intersection down to the face of our building below, which is now divided into five equal parts in perspective. Using a diagonal from the third unit point on the side elevation and continuing in the same manner, gives us three equal parts in perspective. It will readily be seen that it is equally simple to divide a given distance into unequal parts such as door and window openings as desired, or to tick off on our measuring line all the important horizontal dimensions.

The following is another method of handling the same problem (Fig. I). Draw a line from top line of building to right of nearest corner, parallel with horizontal plane. Divide into five equal units. Connect end of line with far corner of building at roof line and continue through until line intersects horizontal plane. Put a pin at point of intersection and, with pin as center, draw lines from each of the five divisions until they intersect top line of building.

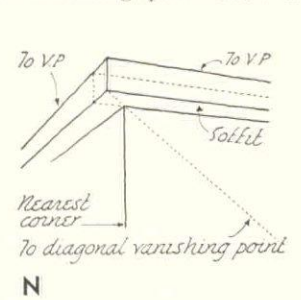
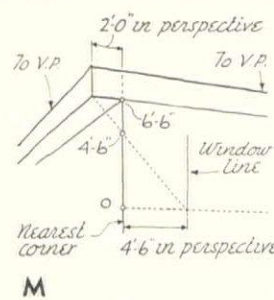
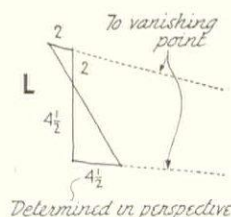
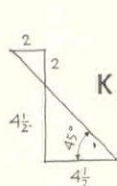
8. For the purpose of this article we will assume that the five equal parts assumed in Fig. I are bays of, say, 16', in the centers of which we wish to establish window openings, say 7' wide (Fig. J). Having established the vertical lines representing bays, mark off on nearest vertical, 00, 4'-6", 11'-6", 16'-0", to any scale. Draw a line from 00 towards vanishing point until it intersects with next vertical. Draw a diagonal from 16'-0" to this intersection. Then draw lines towards vanishing point from 4'-6" and 11'-6" until they intersect with diagonal, and this will give a 7'-0" window in the center of 16'-0" bay in the perspective.

9. In Fig. K we show an elementary geometric diagram with which everybody is familiar. With its aid and a given horizontal dimension already determined, we may readily establish any second horizontal line of any special length. Fig. L shows the



above diagram in perspective. Referring back to Fig. J, we find that the distance of 4'-6" from nearest corner to window heading has been established in true perspective. We now wish to establish in perspective a flat roof slab projecting 2'-0" from the face of building (Fig. M). Establish the nearest corner and window as indicated in Fig. J. We know this width to be 4'-6", and so we mark off on the nearest vertical, to any scale, 0, 4'-6", and 6'-6", and draw a line from 0 towards the vanishing point until it intersects with vertical line of window heading. From this intersection draw a diagonal through point 4'-6" and continue until it intersects with a line drawn from vanishing point through and beyond point 4'-6". The point of intersection gives the slab projection of 2'-0", in the form of a profile flush with the face of the building.

To determine the mitered corner of the slab in perspective, draw a line from the diagonal vanishing point (Fig. N) through the intersection of underside of slab with nearest corner, and carry through. Now, from the lefthand vanishing point draw a



line through the lower edge of the profile of slab until it intersects with the line from diagonal vanishing point. This intersection establishes the position of the mitred corner of the slab in true perspective.

10. To draw a bay window in perspective where the distance of, say, 16'-0" between bays has already been established as in Fig. J. Plan of bay is shown in Fig. O.

On the nearest vertical line of the 16' bay already established in perspective, mark off (Fig. P) to our scale, 0, 2'-6", 5'-6", 10'-6", 13'-6" and 16'-0". Draw line from 0 towards vanishing point until it intersects with second vertical line of 16' bay. Draw diagonal line from point of intersection to 16'-0" mark of nearest vertical. Draw lines from the intervening dimensions between 0 and 16'-0" towards vanishing point until they intersect with diagonal line. Erect vertical lines from these intersections until they meet the topmost line (16'-0"). From the left-hand vanishing point draw lines through points *a*, *b*, *c* and *d*. From the diagonal vanishing point draw a line through point *d* until it intersects with the line projected from point *c*, which gives the depth of the bay window in perspective plan reflected. It then becomes a simple matter to complete the plan in perspective, giving the four corners of the bay.

11. Short method of establishing vanishing points on a drafting-board of limited size.

The establishment of vanishing points for a drawing of even moderate size was at one time considered quite a problem, necessitating the use of the office floor and the moving around of the furniture. One method was to pin the plan on a wall, with a nail for a stationary point and use long straight-edges to determine the intersection of the lines of the 90° angle with the picture plane. Actually, all that is necessary is a drafting-board large enough to hold the plan and the stationary point. Place the plan any place on the board which will give the necessary distance below for the stationary point, and the plan need not necessarily be parallel with the edges of the

board. Having determined the position of center line and picture plane as shown in Fig. B, measure the actual distance in inches along the center line from the stationary point to the picture plane. Assuming this distance to be, say, 30", now measure off along the center line away from the picture plane towards the stationary point thirty or thirty inches (any size, say eighths or quarter inches (point *A* in Fig. Q)). From point *A* draw lines parallel with the front and side of the building until they intersect the picture plane.

In the same units as used to determine point *A* on center line, measure from center line left and right to these intersections and the resulting number of units will give the actual distance in inches of vanishing points from center of picture. The same method of course would be used in determining the position of diagonal vanishing point. Distance *C*, measured in the same units, gives the actual measurement in inches from center line to vanishing point. The shorter vanishing point is likewise readily established in inches.

12. To establish vanishing points on a board of limited size.

The first things required are two T-squares, one for right hand and one for left hand, with the lower portion of the head cut off so that upper edge of blade is exactly in the center between top and bottom of the T-square head (Fig. R). Next, we require a number of pieces of common yardstick (given away by paint stores) cut to the exact length of the T-square heads. Having already determined the distances of the vanishing points on either side of center line as described in Figs. B and Q, we will assume the distance of the longer vanishing point to be on the right hand, 60" from center line (Fig. S). The 60" vanishing point is way off the board, but the shorter vanishing point, which we will assume has been found

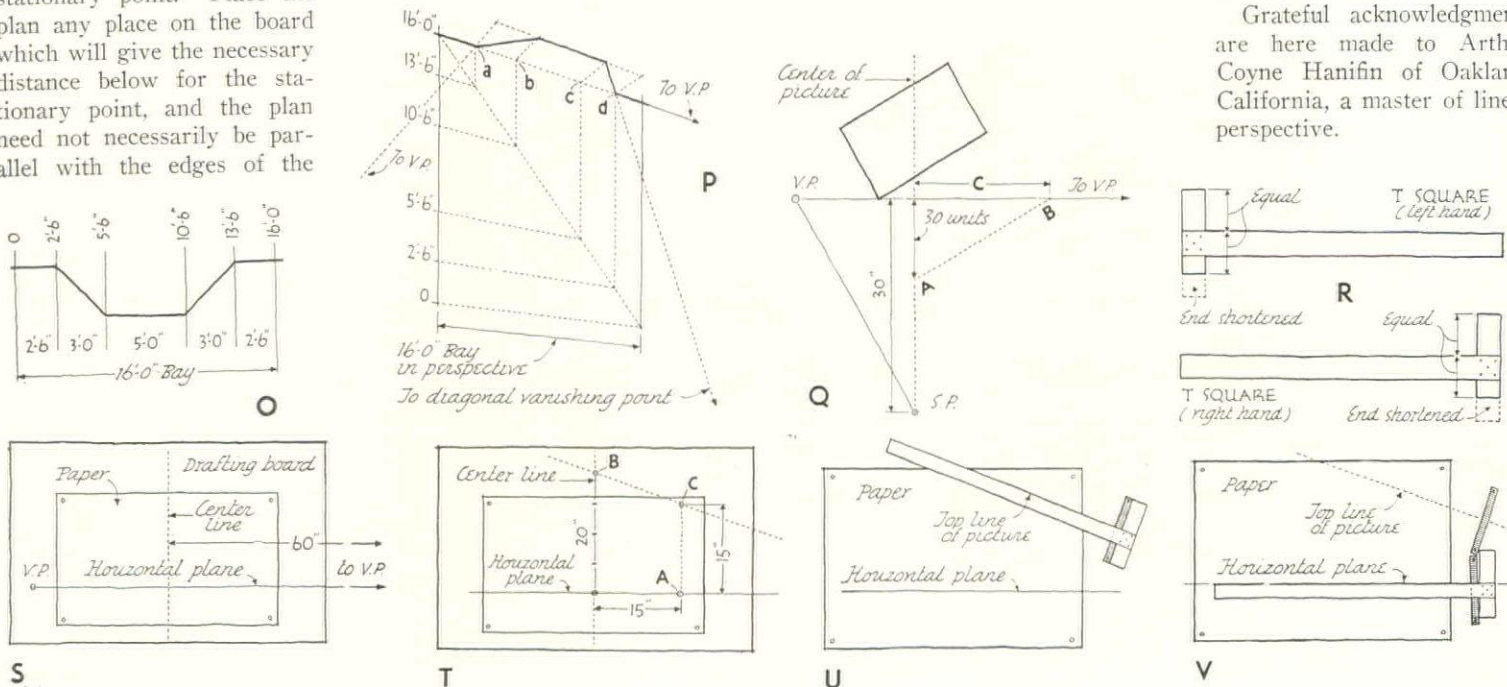
to be 15" away, is well on the board. Having established the center line and horizontal plane, we now assume some dimension which will divide evenly into 60", let us say 15" which is one-fourth of the distance from center line to the 60" vanishing point, and becomes point *A* in Fig. T.

On the center line of picture measure off which will again divide evenly by four (just as the 60" was divided by four). In this instance we'll say 20", establishing the point *B*. Now on this perpendicular drop back one-fourth of the 20" to 15", which establishes point *C*, and a line drawn from the point *B* through the point *C*, if continued through, would eventually meet the horizontal plane at a point exactly 60" from the center line of picture.

Now place the blade of the T-square along what we may call the top line of picture (Fig. U) and nail a piece of the yardstick to the board along the inside edge of the T-square head. Now bring the T-square blade down to and along the horizontal plane, with the upper inner corner of the head touching the piece of yardstick nailed to the board. Then take another piece of yardstick and touching with it the lower edge of the stick already nailed in place secure it in position crossing the lower inner edge of the T-square head as in Fig. V. With the head of the T-square, working off these two tangents, a line from any point on the upper edge of the blade will lead to the vanishing point.

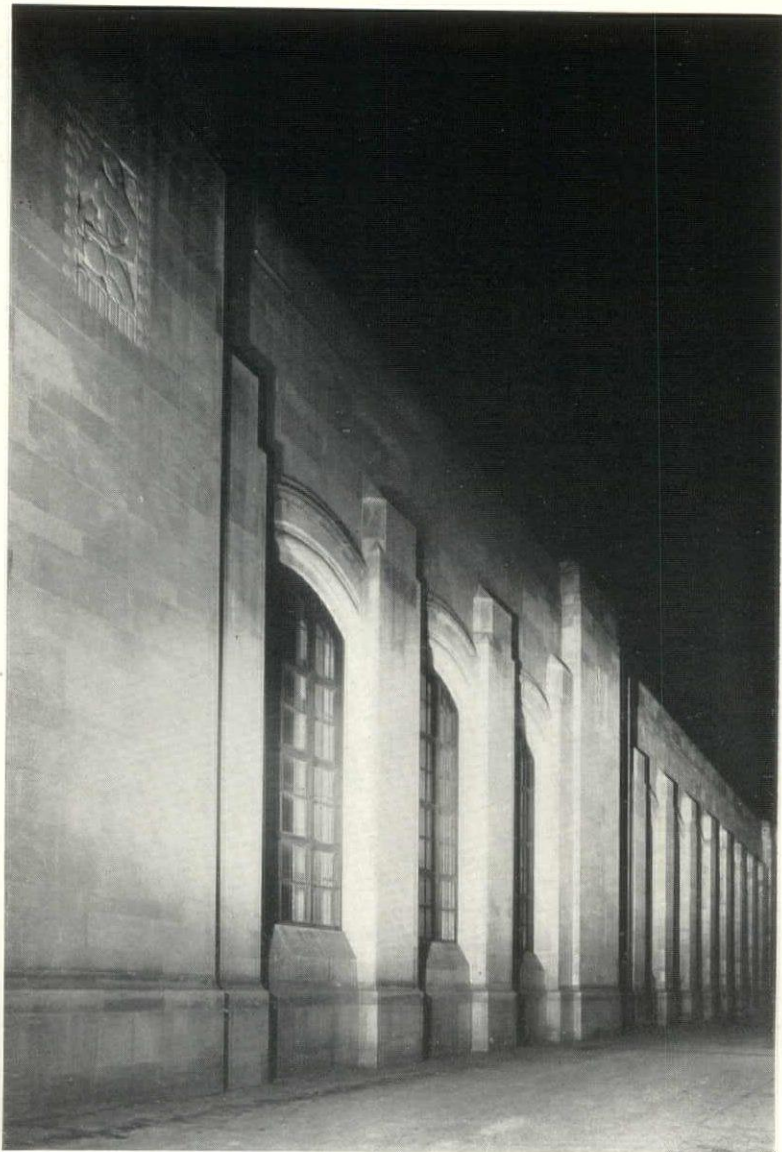
13. In the preparation of a finished drawing it has been found good practice to place sheet of tracing paper over the paper on which the finished drawing is to be made and a hole made in the center of the tracing paper a little larger than the size of the building. All calculations in perspective can then be made on the tracing paper either above or below the hole.

Grateful acknowledgment are here made to Arthur Coyne Hanifin of Oakland, California, a master of linear perspective.





PUMPING STATION, SPRINGWELLS STATION  
JOHN C. THORNTON, ARCHITECT

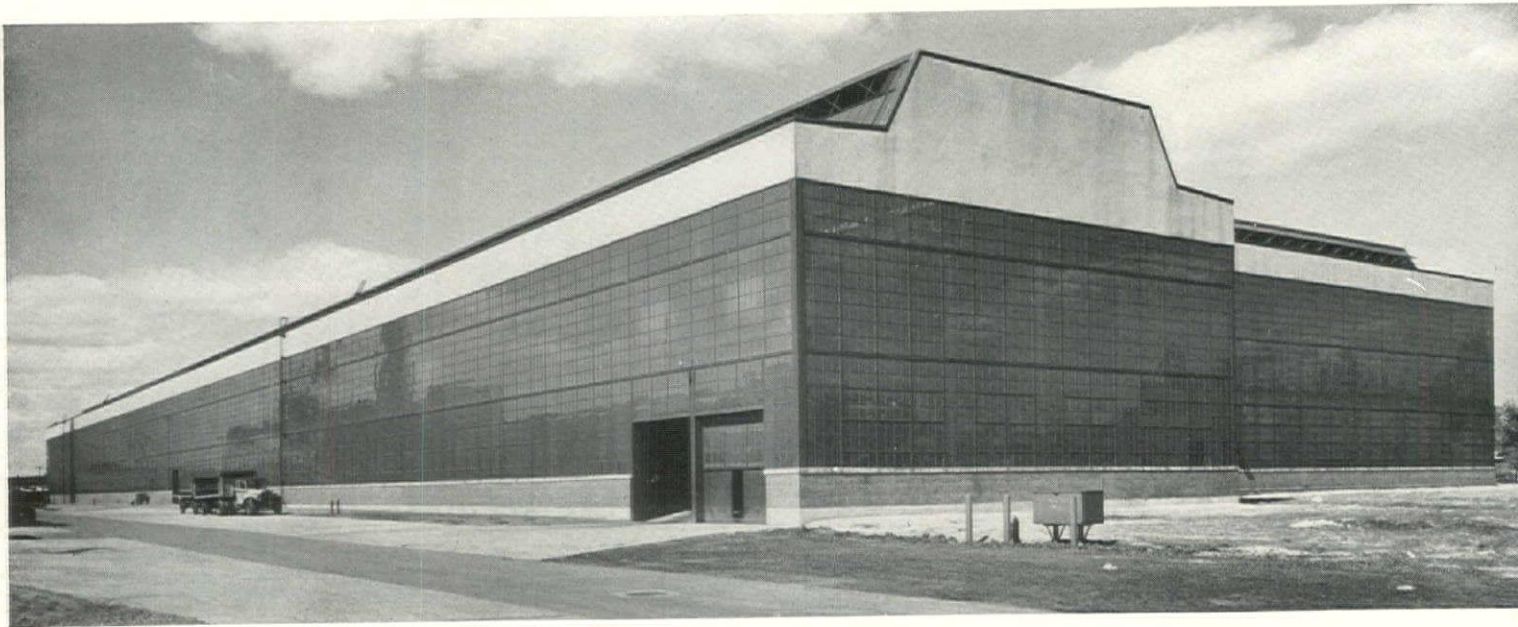


WESTTOWN THEATRE  
CHARLES N. AGREE, ARCHITECT



**MACHINE SHOP, AMERICAN BLOWER CORPORATION  
ALBERT KAHN, INC., ARCHITECTS**

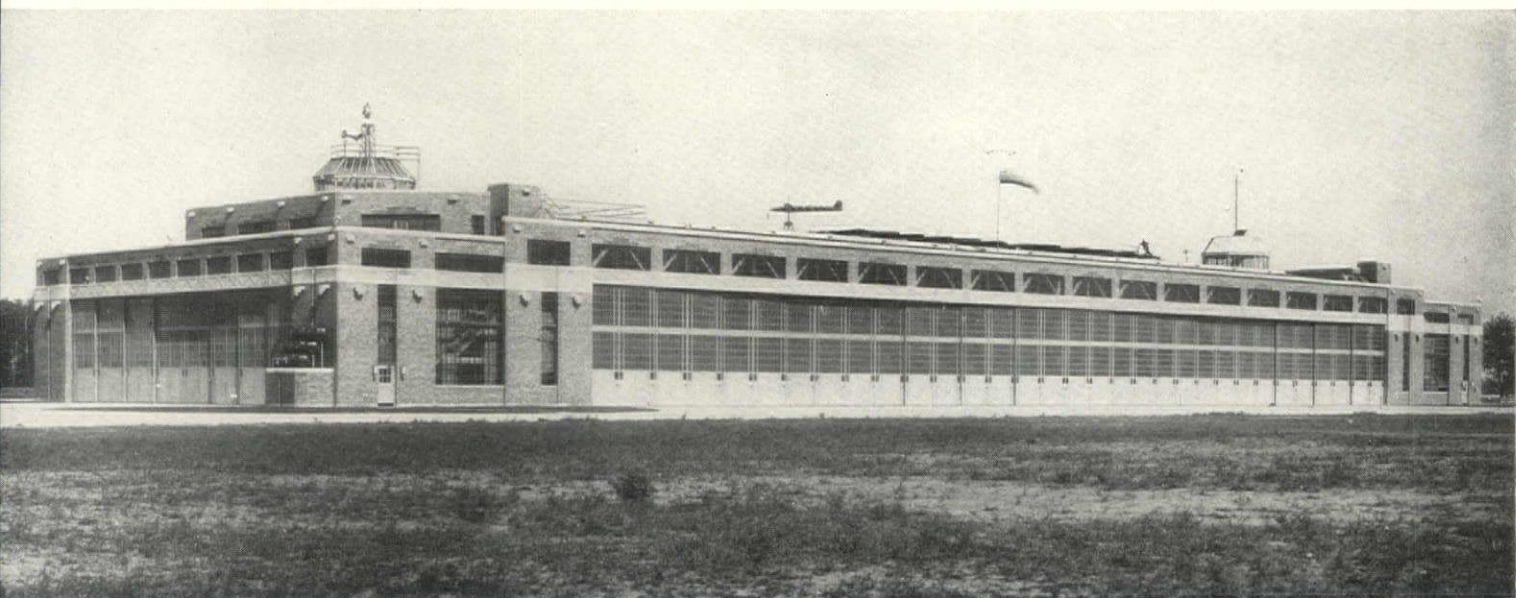
**PRESS SHOP, DE SOTO FACTORY  
ALBERT KAHN, INC., ARCHITECTS**





OFFICE BUILDING, UPJOHN COMPANY  
ALBERT KAHN, INC., ARCHITECTS

ANGAR, WAYNE COUNTY AIRPORT  
SIFFELS & VALLET, INC., ARCHITECTS



# CAMP and/or HOUSE TRAILERS

BY JOSEPH P. WOLFF,

Commissioner of Buildings and Safety Engineering, City of Detroit

THE house trailer or mobile home unit is definitely here to stay. Its development and world wide use may not be so rapid when compared with the history of the automobile, nevertheless, it is not difficult to conceive of thousands of trailer colonies scattered throughout the nation, their population shifting with the seasons and with industrial labor demands.

The house trailer, as we know it today, has probably been developed from the use of the camp trailer. These outfits were folding tent-shaped affairs so arranged as to be portable by being constructed around a two-wheeled trailer attachment. Their use never assumed great proportions probably because the limited conveniences and comforts afforded were not commensurate with the original cost or the time involved in preparing them for casual overnight parking. In comparison with the camp trailer, the modern house trailer is a palace. It is not difficult to understand why the house trailer has increased in popularity among those of our population who enjoy travel and recreation in the "great open spaces."

Although the house trailer today is probably used by the greater majority of owners as a convenient camping unit, there are some people who occupy them as home units throughout the entire year.

Due to the mobility and the various uses to which the trailer is seemingly adaptable, it is certain that the house trailer is destined to play an important role in our modern era.

The advent of the house trailer has not been without accompanying problems of considerable social, sanitary and economic significance.

It has been conceded that the home is the very foundation of our government. If this is true, can one imagine a government functioning with any degree of certainty and solidity when the majority of its citizens live in houses on wheels? Although some may predict a roving citizenry, one must not overlook the fact that the American ideal has been, and probably always will be, a tangible something, such as a piece of land that a man may call his own, with a comfortable shelter thereon. If the trailer is to be considered a permanent dwelling and can be proved suitable as such, our future American home would be constructed on the basis of accommodations made available within a floor area of not to exceed two hundred and eighty (280) square feet. The history of small home units does not support the contention that the one-room development is in any measure satisfactory as a permanent place of abode for the average American family. It is obviously doubtful, even if it were possible under existing housing and building laws, that the time has arrived where the camp or house trailer, even those of elaborate proportions, can properly be classed as a permanent home or dwelling.

If house trailer influx is not restricted and controlled to some degree the trend may be expected to increase continually. Such regulations as may be adopted must be basically sound from the standpoint of health and safety, and justly equitable from the real property owner's point of view. Irrespective of the type of government, taxes are essential for its support. A municipality is now, and undoubtedly always will be supported chiefly by a tax levy upon real property. A mobile home unit is obviously not real property.

The trailer owner or user naturally has certain rights which cannot and should not be abrogated. On the other hand the owner of real property has rights and basic inherent value which it is the duty of organized government to protect.

As a house trailer is basically a vehicle, no other classification is possible. As a vehicle its permanency of location is not controlled by the factors affecting real property. It is movable at the will and whim and caprice of the owner or operator. At a given location a house trailer cannot be considered a permanent structure, and its use as a dwelling, so far as a particular location is concerned, is therefore temporary.

The regulations proposed are founded upon three basic premises:

First: The house trailer is a vehicle designed and intended for temporary parking at given locations and as such cannot legally or logically enjoy the unrestricted use of land either public or private.

Second: Inasmuch as there are no methods of taxing house trailers for the support of municipal governments, a limitation of parking to such periods as may appear reasonable and proper for any given municipality is deemed to be a constitutional home rule legislative procedure.

Third: For the health and safety of the trailer occupants, well as the protection of the public in general, regulatory measures for the control of parking sites and camp areas are valid and may be enforced.

The proposed ordinances were drafted by representatives of the Board of Health, Police Department, City Plan Commission and the Department of Buildings and Safety Engineering. The first deals with the trailer proper and is an ordinance to regulate the parking of occupied and unoccupied trailers within the city limits; to require the registration of occupants of trailers, and to fix penalties for the violation thereof. The second deals with trailer camps and is an ordinance to license and regulate the location, maintenance and operation of trailer camps within the city limits; to establish rules and regulations relating to the management, operation and inspection thereof; and to fix penalties for violation.

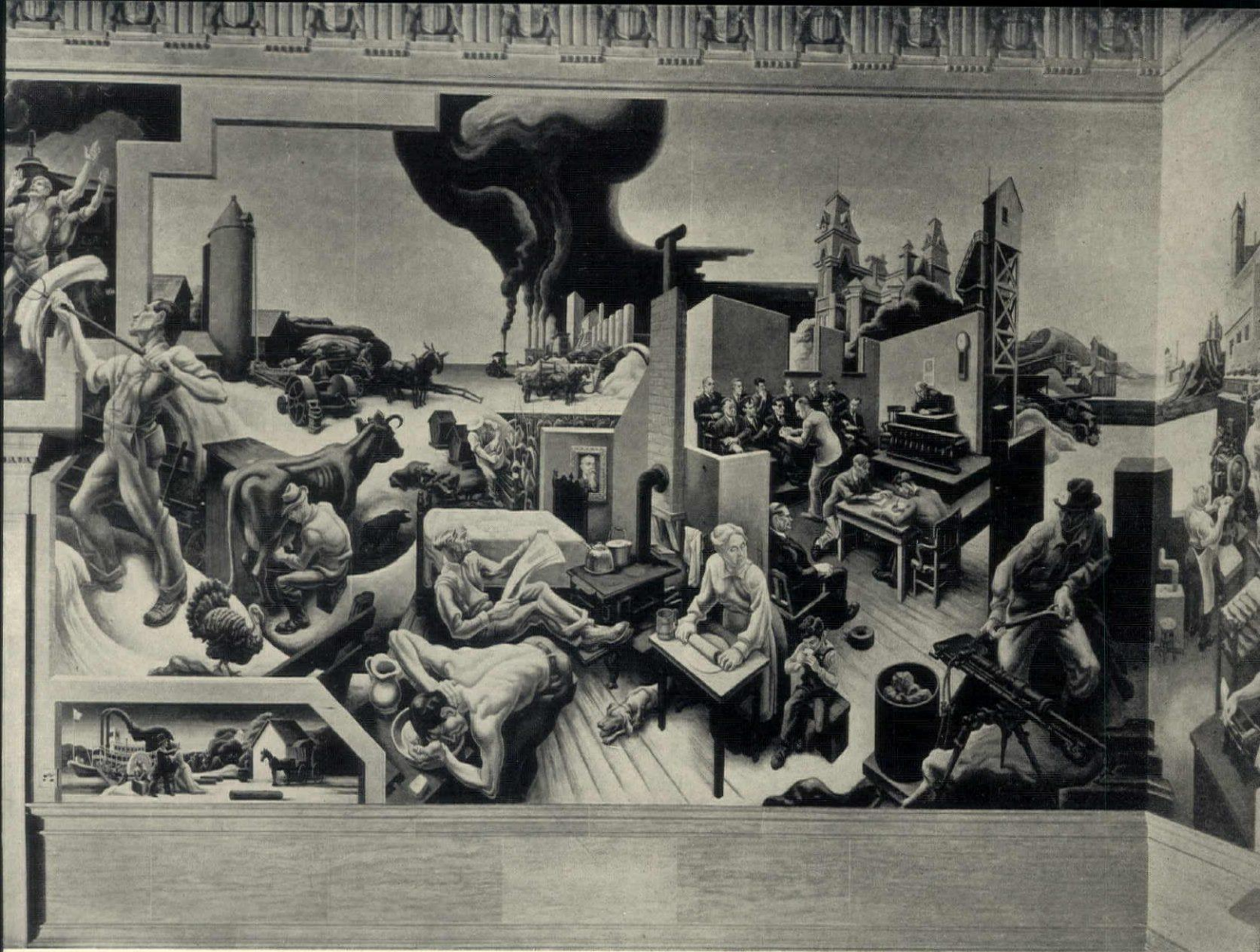


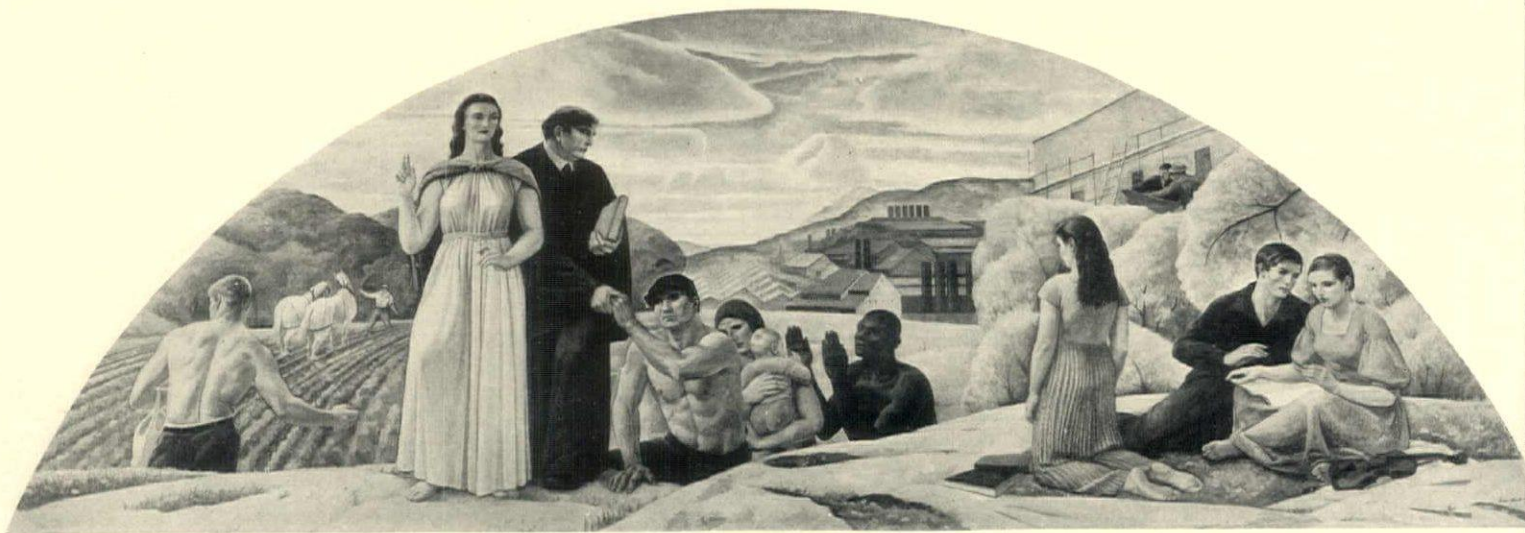
PHOTO: ANDERSON

THOMAS HART BENTON came naturally by his desire to record on the walls of the State Capitol the history of Missouri with which his illustrious name is synonymous. These latest examples of his work show a freedom from the artist's earlier convoluted manner of painting

WHEN George Biddle proposed to the Government that it employ artists to decorate walls at a plumber's wage it indicated two things. First, that one of the most important branches of the fine arts was in a sorry state and, second, that most artists in America very sensibly thought of themselves as no more and no less than skilled workmen. The latter idea must have come as a great shock to the group of artists who thought of their work in a more Olympian light. The result of Mr. Biddle's proposal has been tremendously important to American art and to the American artist. Younger men who might have hidden their light under a bushel for years were discovered practically overnight. And, even more than this, the American people were made conscious of mural painting—and probably will continue to be for a long time to come

ARCHITECTURAL  
OVERTONES . . .

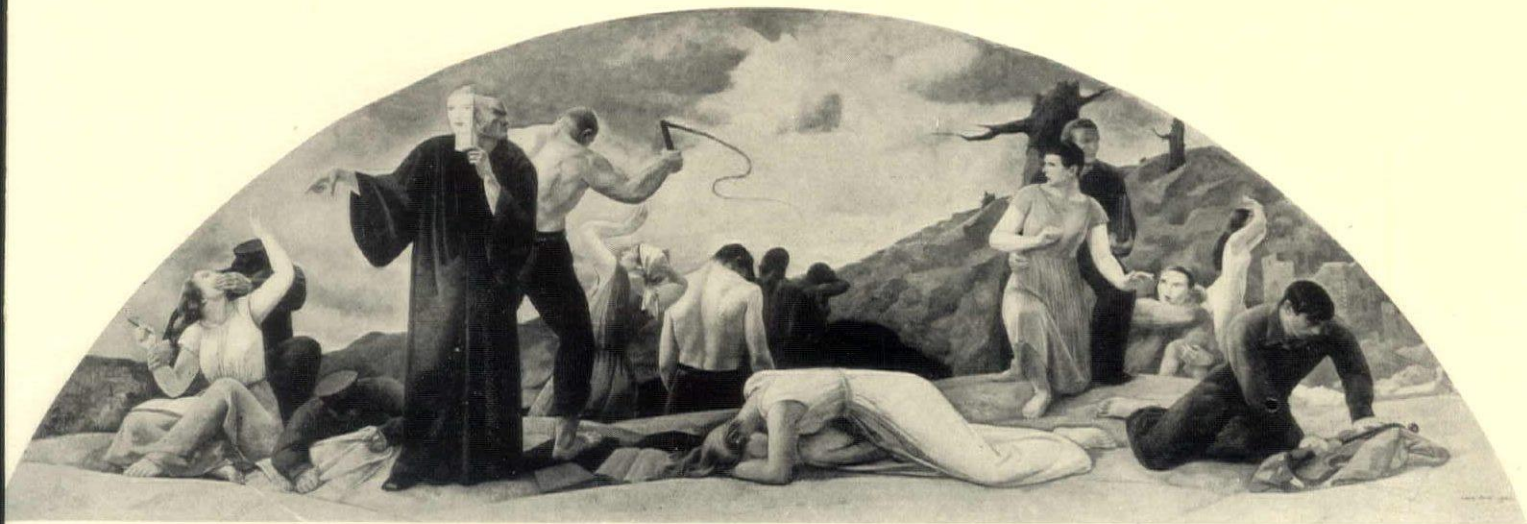
RECENT MURALS BY EIGHT AMERICAN PAINTERS



LEON KROLL was an important and honored American painter long before he was commissioned to paint these lunettes in the Attorney General's private office in the new Department of Justice Building in Washington. That above represents the "Triumph of Justice" and that on the opposite page the "Defeat of Justice." They are painted in Kroll's usual careful style, clear in color and drawn with a fine regard for firm, plastic modeling

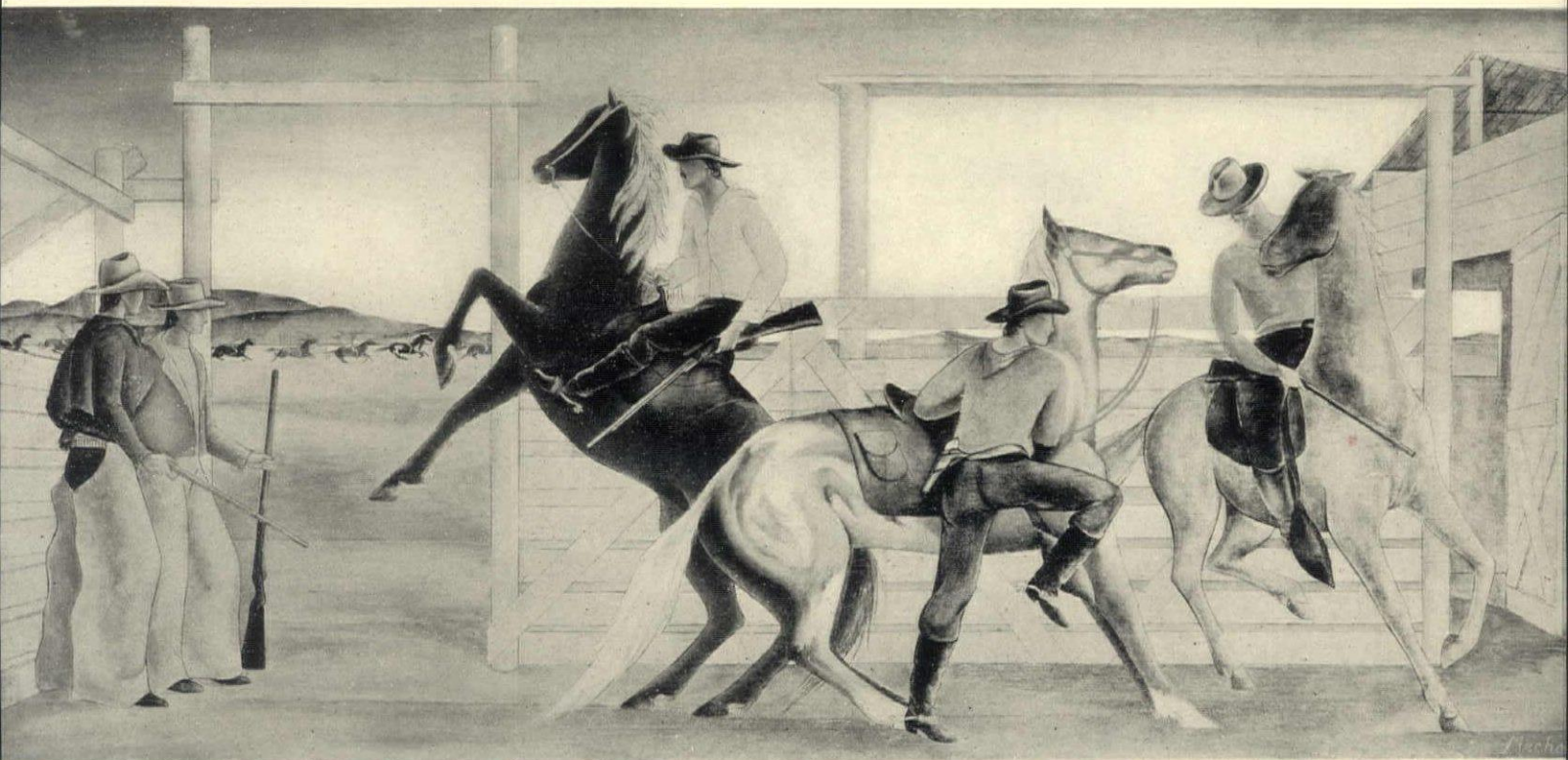
COURTESY OF THE TREASURY DEPARTMENT ART PROJECTS





COURTESY OF THE TREASURY DEPARTMENT ART PROJECTS

FRANK A. MECHAU is one of the discoveries that has come out of the Treasury Department Painting Program. Only thirty-three years old, his work had included but one previous mural, "Horses at Night," for the Fine Arts Department of the Denver Public Library as a PWA project, until he was selected to do these two for the Colorado Springs Post Office. Since these were completed he has won a competition for murals in the Post Office Department Building in Washington



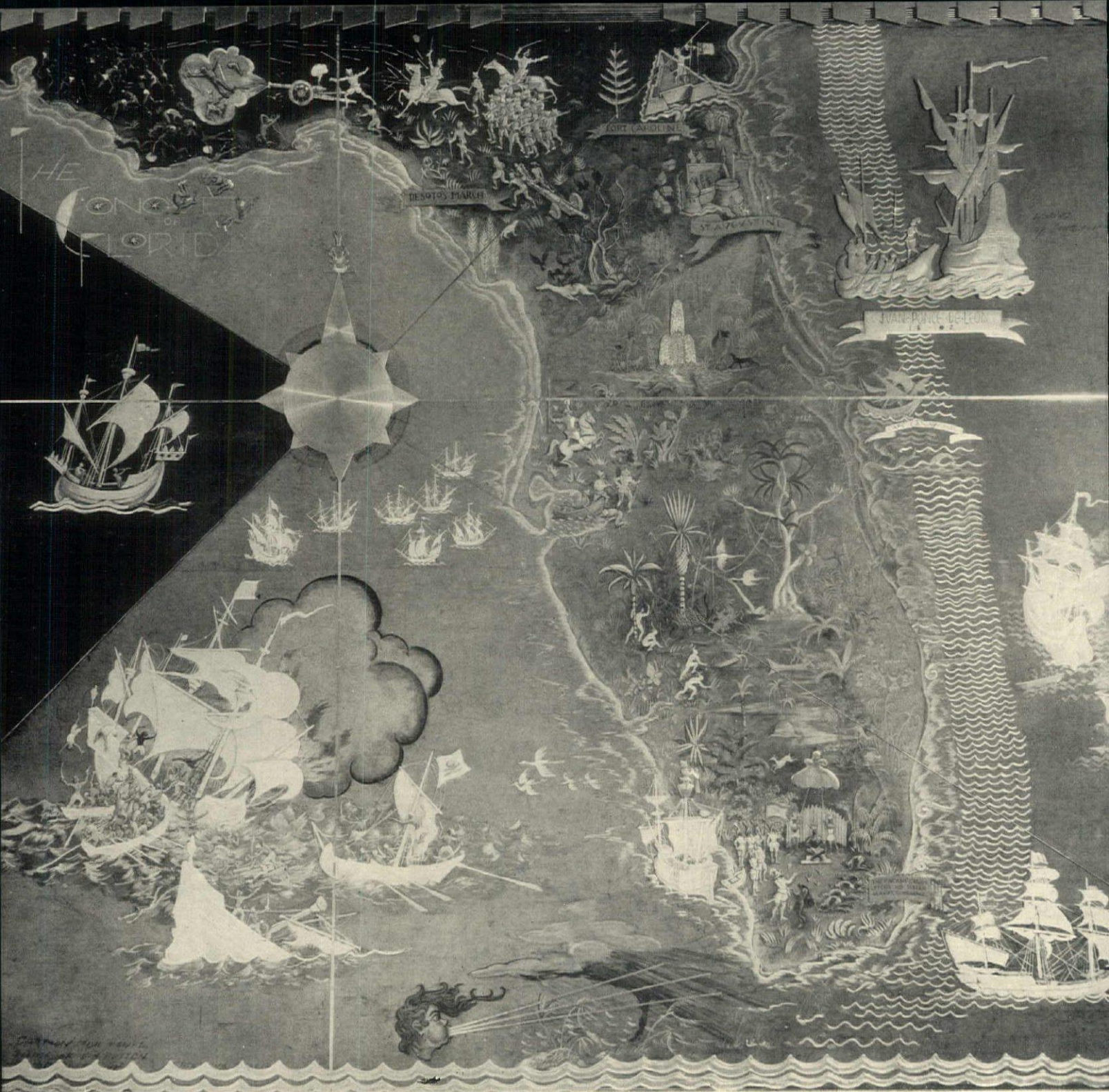


PHOTO: CAMP

FRED DANA MARSH has always been expert in obtaining interesting technical effects in his decorative mural work. This panel commemorating the conquest of Florida in the Palm Beach home of E. H. Hutton shows an unusual combination of painted surface with applied metal relief

DEAN CORNWELL not only painted the brilliant murals but he also designed their background for the new Raleigh Room of the Warwick Hotel in New York. Included among many unusual features are the carved and painted circular glass dance floor lighted from below, and amusing seals representing the work and hobbies of many a prominent contemporary

PHOTO: NYHOLM







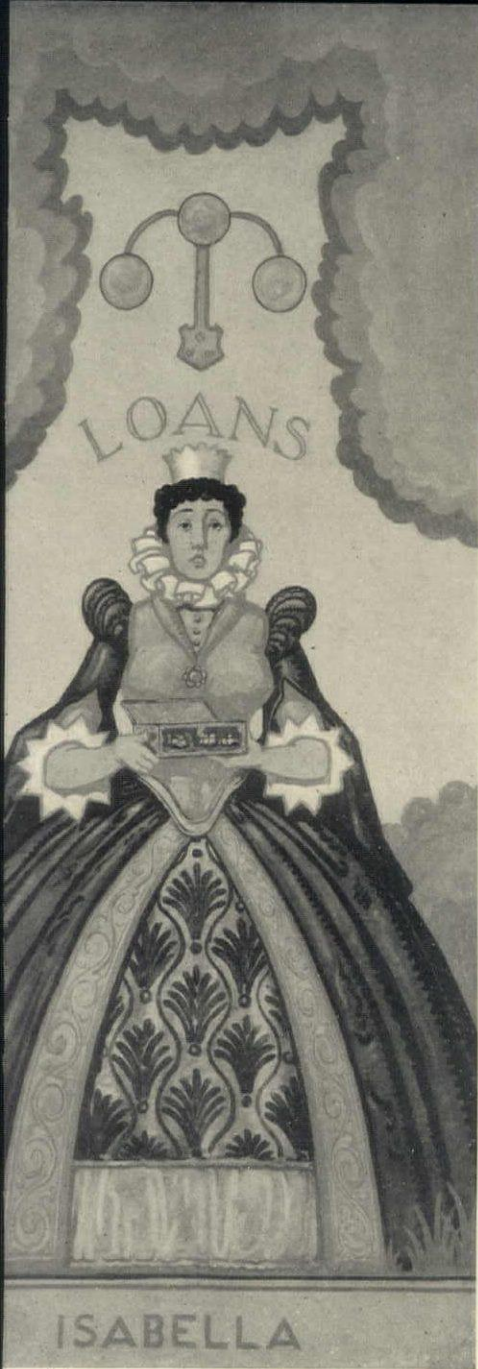


PHOTO: JULY

ARTHUR CRISP'S flat poster-like technique is especially well adapted to these amusing decorative records of famous women in history

D. PUTNAM BRINLEY, faced with a definitely circumscribed area, behind the altar of St. George's Church in Bridgeport, Conn., developed the Gospel Story. Mr. Brinley, as in some of his previous works, follows the naïveté of many primitives in ignoring such dogmas as diminishing the size of figures and buildings in receding planes, playing with pattern somewhat in the manner of the tapestry weavers

PHOTO: LAROCHE

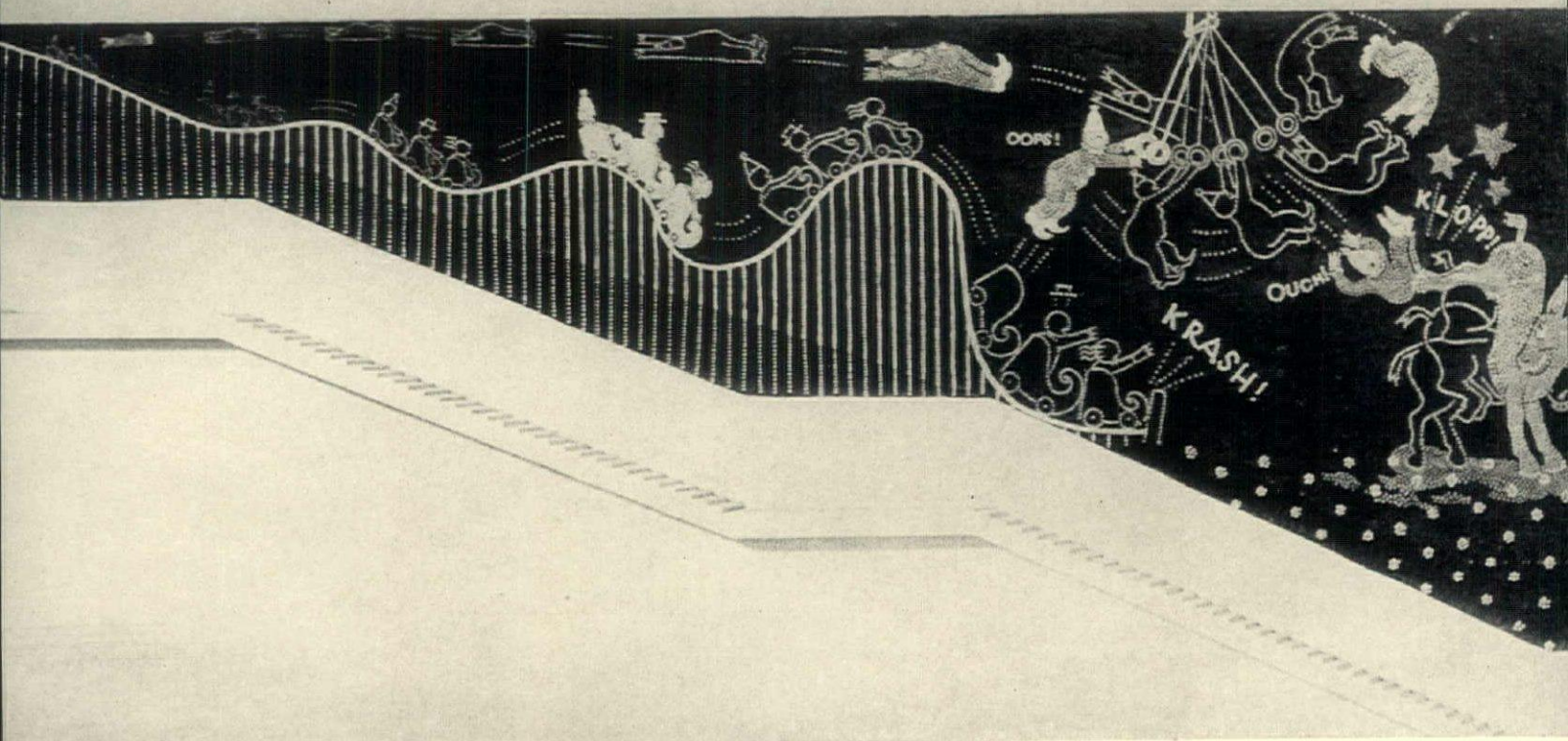


PHOTO: SOICHI SUNOMI, COURTESY OF THE MUSEUM OF MODERN ART

LOUIS FERSTADT designed this electro-mural as part of a proposed community center. It is to be executed in various colored electric lights against a dark blue background and is to have synchronized sound effects. The entire project was developed by the Architects, Painters and Sculptors Collaborative, consisting of one architect, six sculptors and fifteen mural painters. The lone architect is Oscar Stonorov



Preliminary perspective, U. S. Post Office, Santa Barbara, California. Reginald Johnson, Designing Architect, Procurement Division

## SOME RECENT BUILDINGS OF THE UNITED STATES GOVERNMENT

BY LOUIS A. SIMON, F.A.I.A.

THE accompanying reproductions of photographs show some recent designs of federal buildings constructed under the jurisdiction of the Procurement Division of the United States Treasury Department. In some respects they are illustrative of the decided change that has come into architectural expression generally, both in public and private buildings.

Since architecture has demonstrated a purpose sufficiently vigorous to have perpetuated its practice through centuries of history, and since in its more worthy examples, expression varies with materials, climate, tradition and standards of cultured thought, there is significance and there is interest in the architectural trends that thrust forward in any particular country and sometimes are especially marked in only one or more phases of that country's community life. An opportunity to observe such trends occurs in the design of some hundreds of buildings of the United States Government.

When all is said and done, architecture creates environment, and it does so by expressing some dominant idea—it may be force and strength, of light playfulness, of restrained and scholarly dignity or florid exuberance of spirit. And even for any particular building, the determining factor of this that we call architectural design, may easily waver on the one hand between nothing more tangible than a designer's mood, or may be dominated, on the other hand, by a regard for strict and sometimes previously unsuspected principles of esthetics. Design is indeed a subtle process, a thing of analytical searchings, and highly emotional at the same time. And what kind of a trend and such searchings and such emotions may start on its course at any particular time, no man can tell—the tides rise and ebb, and the moon rides serenely on undisturbed by the ripples below. But the point is that there is serious purpose here, that tends to offset a certain free-for-all libertine quality that is frowned on or lauded, according to the observer's point of view. Obviously, in our social system with all its ramifications, we are in the midst of stupendous changes that are difficult to measure. That the United States Government is rising to its

opportunities in many fields, calls for no argument. We have moved into a consciousness of new relationships to our fellow-men, and that the mass of our countrymen are ready for change has been unhesitatingly shown. The history-making of our epoch carries architecture with it, and while architectural traditions have not been wrecked, incidents are not lacking to show that they have received some visible dents on the surface. And so far as the arts are affected, among the complex and elemental forces that shape our destinies the desire for novelty may not be overlooked; it is something that has a real place in the scheme of things, and the human mind welcomes it.

It is startling to awaken to the fact that there are now even some words which architects could formerly use with impunity anywhere, but which now must be reserved for private conversations where they may be still held current. Such words as art, beauty, symmetry, harmony, and rhythm need a strong context if they are to be relieved of the charge of being saccharine twaddle. Whereas austere, stark, utilitarian and functional with a new emphasis cry out for a tempered and more liberal view of modern architectural performance. For the conservative-progressive, whose arteries have remained sufficiently pliant to yield to the possibility of ordered change, but who still values the sailor's maxim, "never to let go with one hand until you get hold with the other," there is peace and comfort still to be found. The passing of the extravagancies of exaggerated formalism brings to the surface the possibilities of a living architecture not based on the disregard of precedent but on a different, more subtle and more creative way of using and reflecting that part of tradition which is universal—giving to inherited forms a power of adaptation to new materials, structure and processes.

And if, as a whole, the designs of a Government's public buildings are shaped by the composite efforts of that country's architectural ability, be the result what it may, it is at least a logical expression of the time; and to that extent it possesses the spark of enduring life.



U. S. Post Office, Petersburg, Virginia  
 Donald Anderson, Designing Architect, Procurement Division

U. S. Post Office, Hollywood, California.  
 Claud Beelman; Allison & Allison, Associate Archi

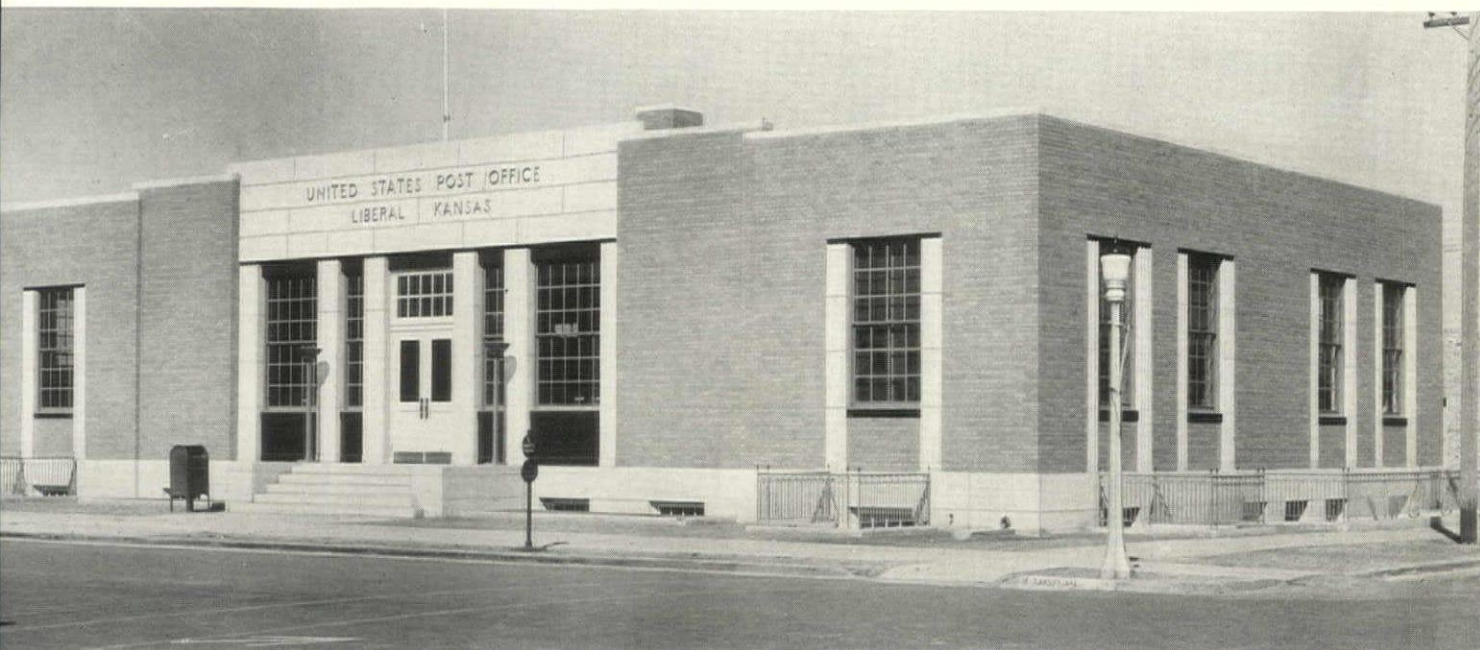


SOME RECENT BUILDINGS O



In Park Postal Station, Chicago, Illinois.  
 Ward L. Cheney, Designing Architect, Procurement Division

U. S. Post Office, Liberal, Kansas.  
 Supervising Architect's Office



THE UNITED STATES GOVERNMENT



Roseland Postal Station, Chicago, Illinois.  
John C. Bollenbacher, Designing Architect, Procurement Director



Perspective of U. S. Post Office, Wilmington, North Carolina.  
Rudolph Stanley-Brown, Designing Architect, Procurement Director



U. S. Post Office, Kerrville, Texas.  
Atlee B. & Robert M. Ayres, Architects

**SOME RECENT BUILDINGS**

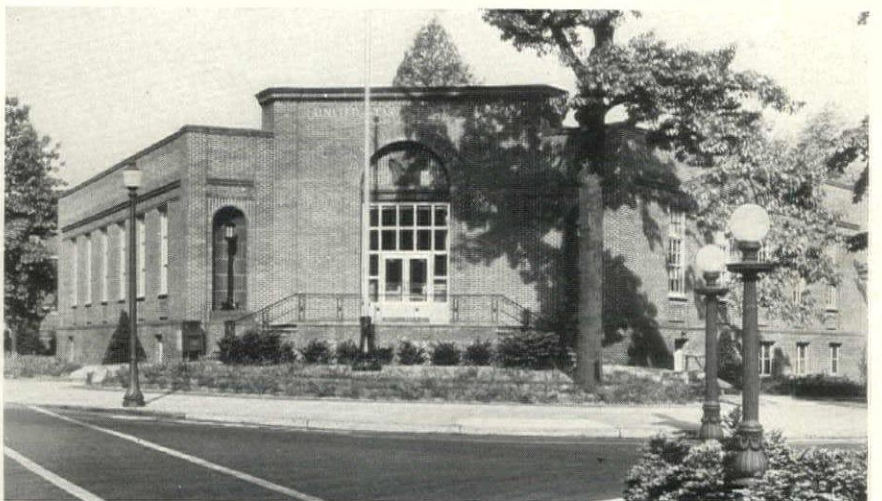




Perspective of U. S. Post Office, Gary, Indiana.  
 L. Cheney, Designing Architect, Procurement Division



U. S. Post Office, Storm Lake, Iowa.  
 Supervising Architect's Office



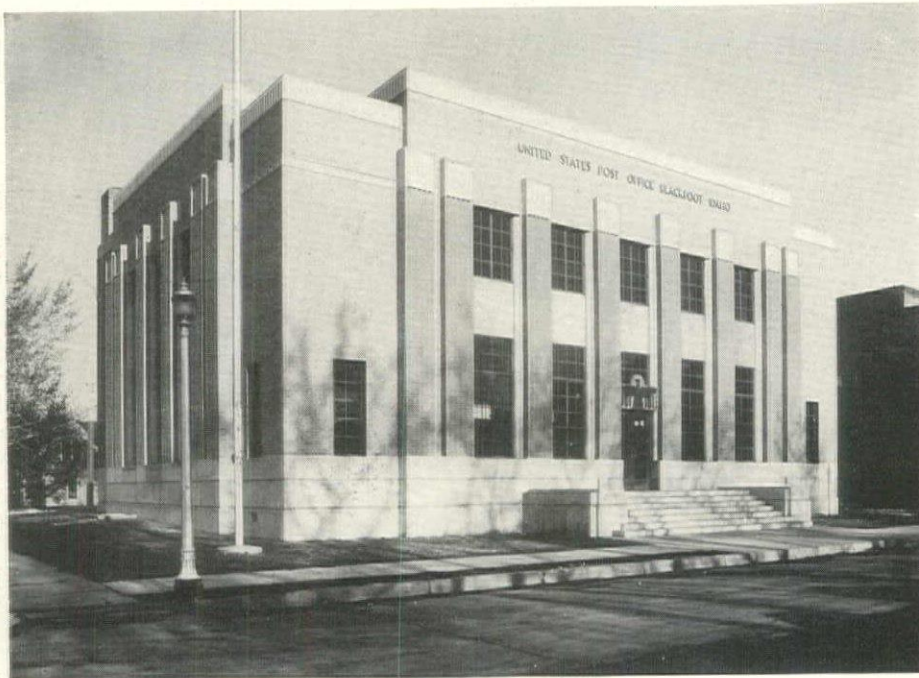
U. S. Post Office, Rutherford, New Jersey.  
 I. Williams, Designing Architect, Procurement Division

**UNITED STATES GOVERNMENT**

U. S. Post Office and Custom House, Houlton, Me.  
Supervising Architect's Office



U. S. Post Office, Blackfoot, Idaho.  
Supervising Architect's Office



U. S. Post Office, South Pasadena, California  
Supervising Architect's Office



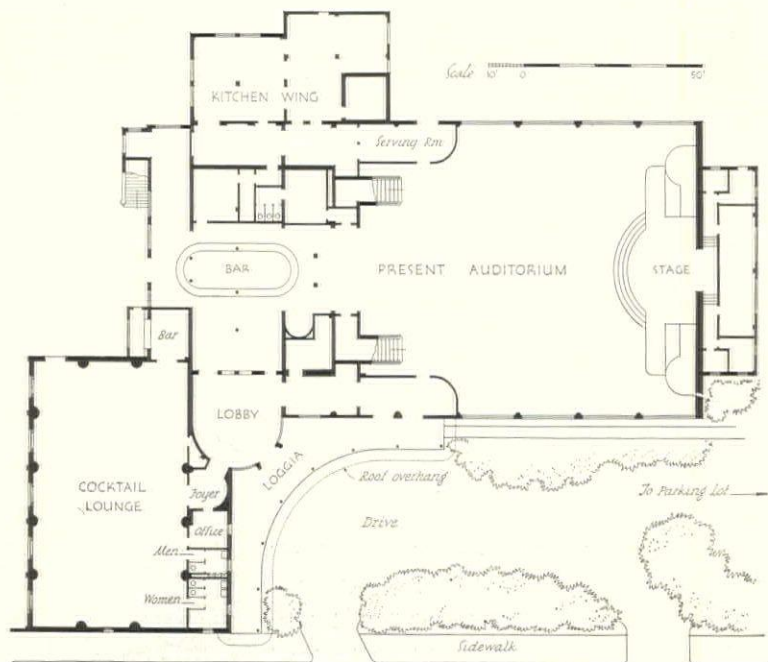
**SOME RECENT BUILDINGS  
OF THE  
UNITED STATES GOVERNMENT**

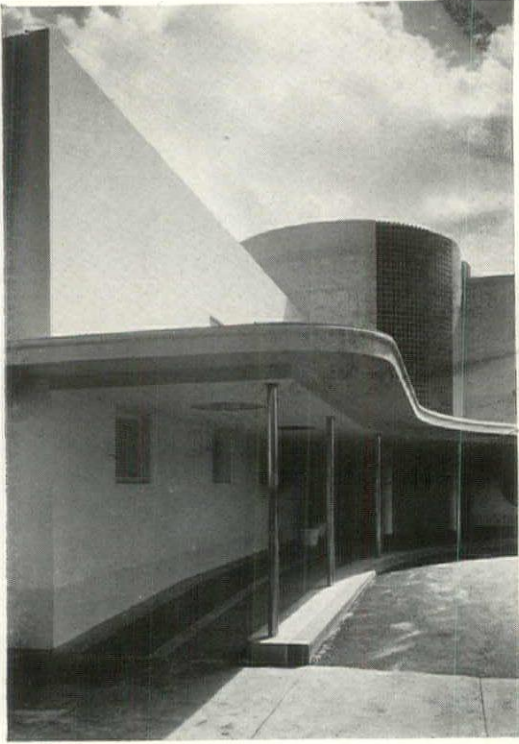


PHOTOS: SAMUEL GOTTSCHO

Originally a private yacht club, the addition of a large auditorium and the redecorating of the old club house converted the building into a night club. The location proved so desirable for the club so popular, that two additions have been necessary since. In every case, materials were selected for their durability to a semi-tropical climate, and the comfort of the patrons considered from both a visual and physical standpoint.

**ROYAL PALM CLUB, MIAMI, FLORIDA**  
**ROBERT LAW WEED, ARCHITECT**





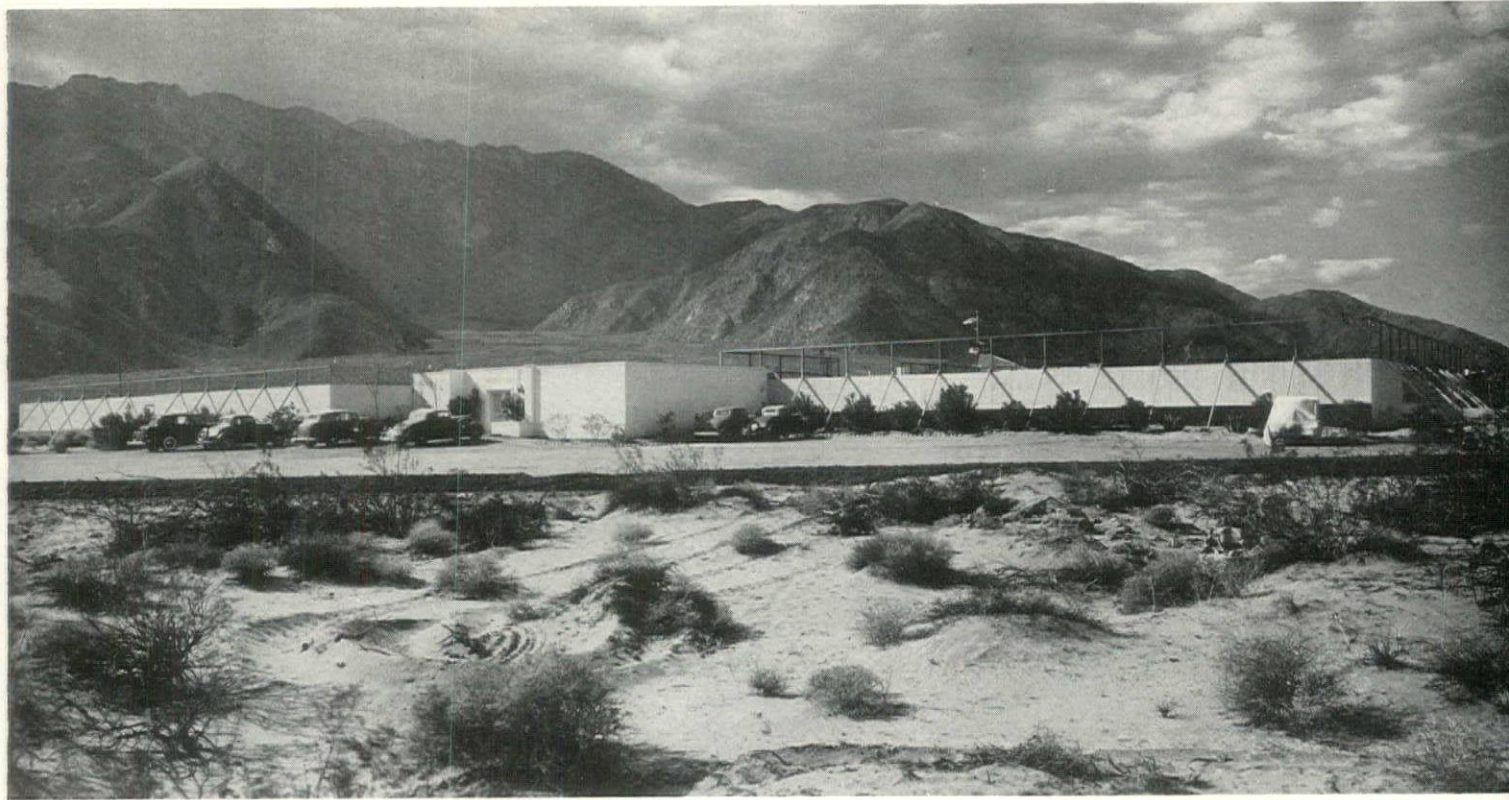
Latest additions included the covered approach and new entrance foyer. Glass block was used extensively not only for the admission of light, but for the decorative quality it lends the interior treatment

ROBERT LAW WEED, ARCHITECT

...als of a spirited, light nature abound throughout the building, and do much  
...overcome the feeling of severity usually associated with this style of architecture.

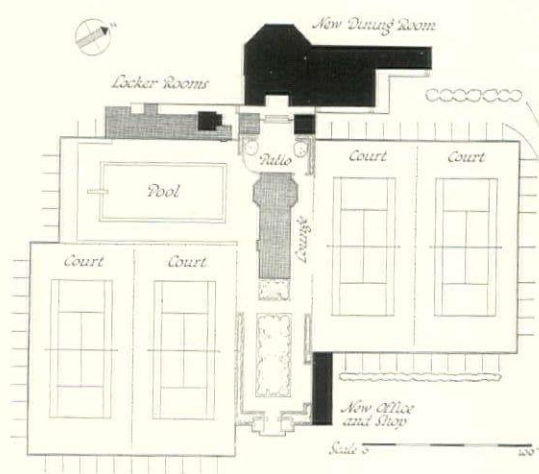
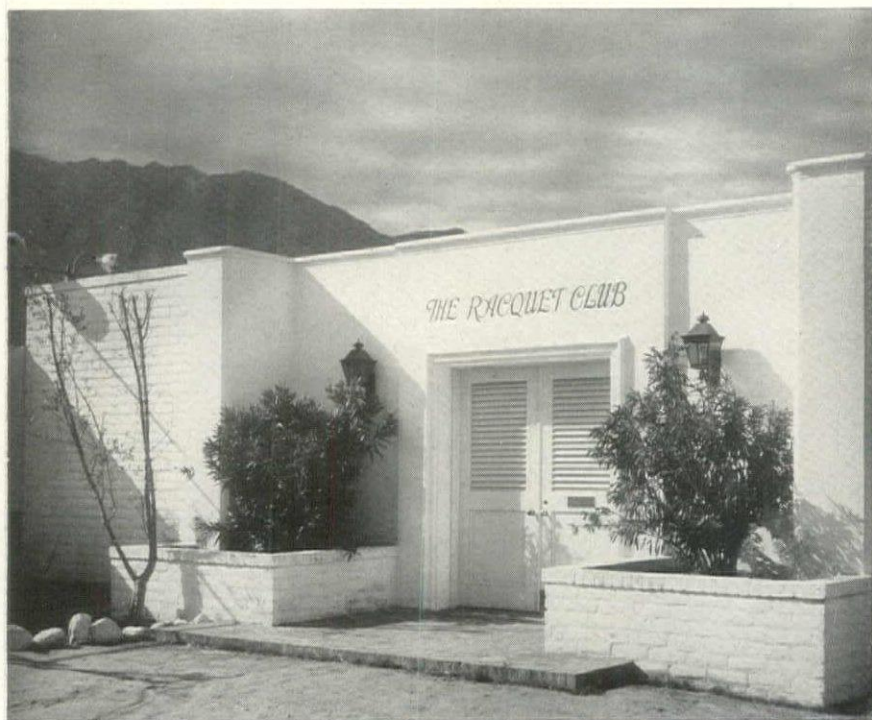
...remodeled bar room has been made accessible  
...m both the main entrance and the dining room.





PHOTOS: MOTT STUBBS

**THE RACQUET CLUB, PALM SPRINGS, CALIFORNIA  
SPENCER & LANDON, ARCHITECTS**



A popular resort for movie stars, this private club for swimming and tennis has been added to, over a period of three years. The original buildings, Lounge and Cocker Room are of frame and stucco. The new Entrance and new Dining Room are of reinforced Grout Lock brick



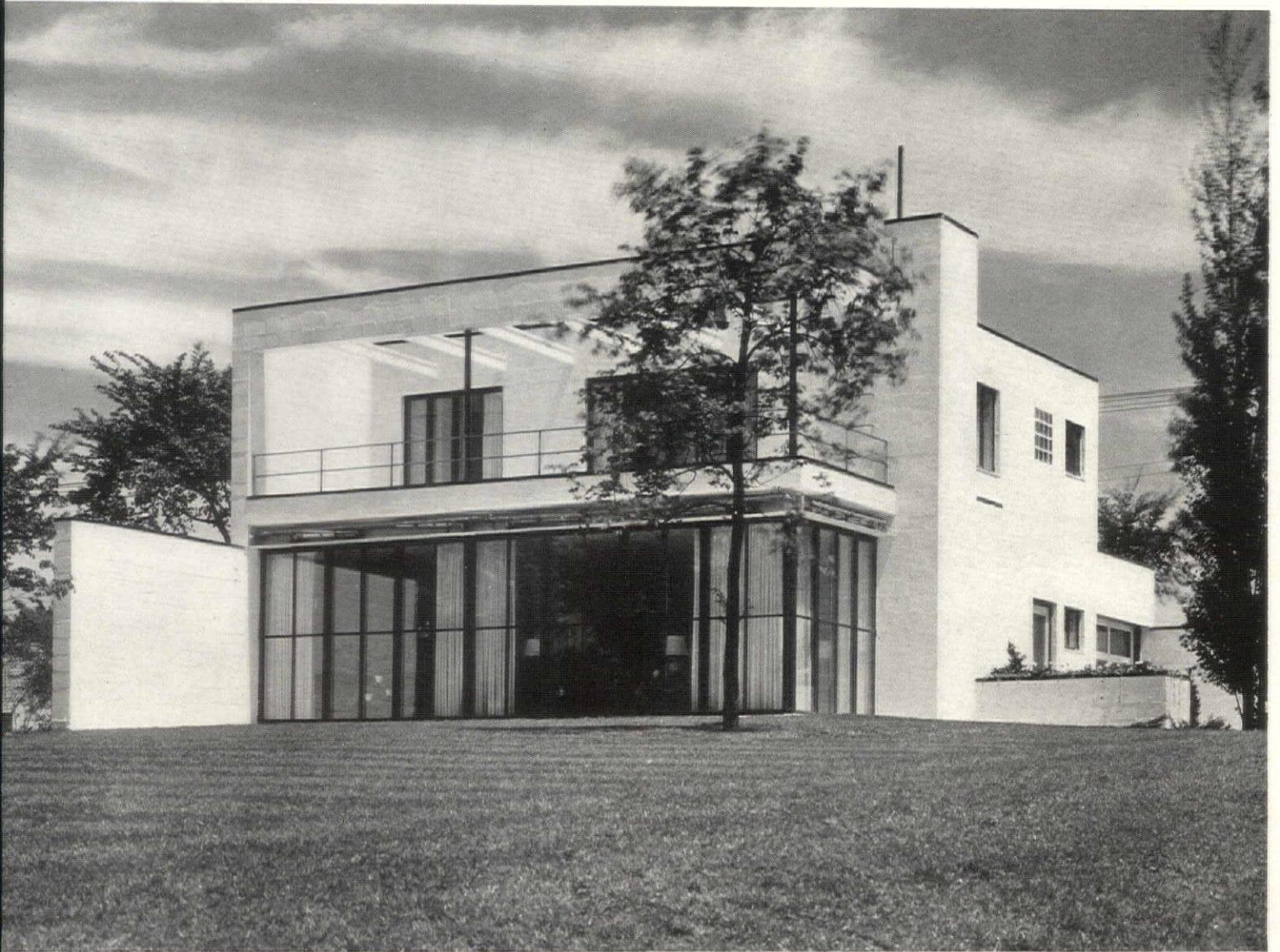


THE RACQUET CLUB, PALM SPRINGS, CALIFORNIA  
SPENCER & LANDON, ARCHITECTS

Natural bamboo and green leather are used as finish in the cocktail bar. The floor is of stone. Exposed brick walls painted white and colored canvas ceiling lend a gay touch to the dining room. Colored cement is used for the floor and linoleum for the dance floor.





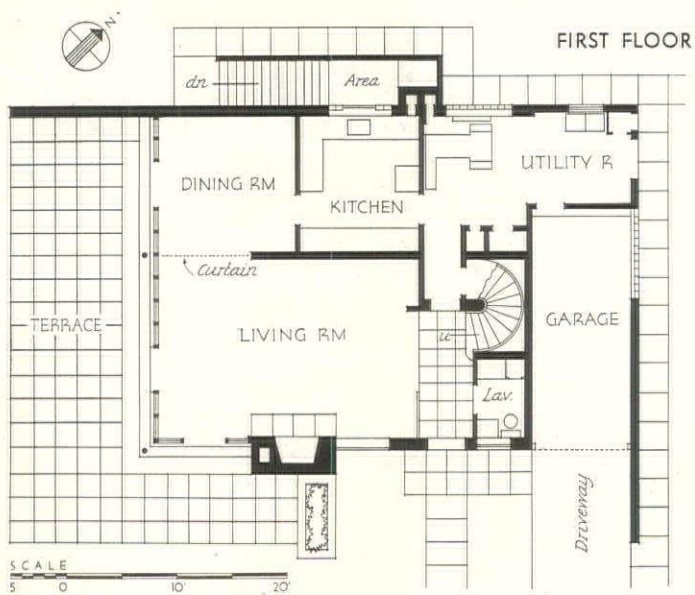


PHOTOS: HEDRICH-BLESSING, COURTESY CRANE CO.

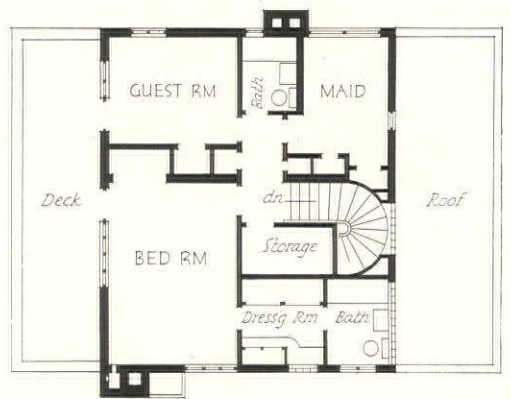
Occasionally an architect is fortunate enough to find a client who is uninhibited by considerations of resale value and similar bugaboos that restrict individualistic design. This house is the result of the architect's having that type client and the excellence of the result is obvious. Constructed of Haydite concrete masonry with concrete floors, joists and roof, the house has been painted with two coats of white silica cement paint which allows the texture of the concrete blocks to be seen. Deep brown trim on copings, windows—terrace enclosure and awnings accents the whiteness of the walls

**HOUSE OF D. S. COLBURN  
HIGHLAND PARK, ILLINOIS  
WILMER V. BLACK, ARCHITECT**



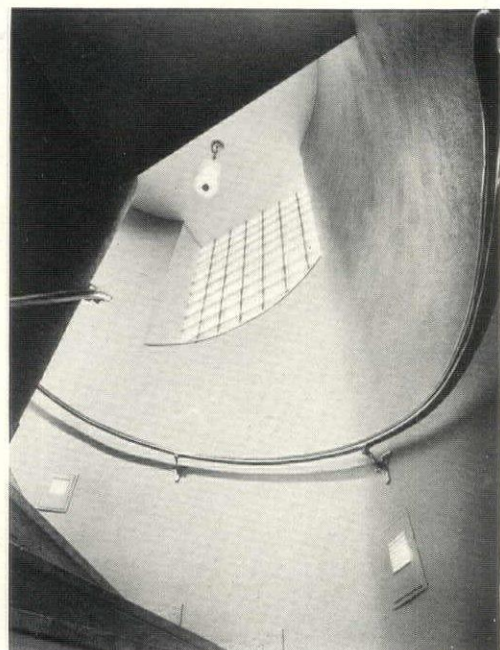


**SECOND FLOOR**





Because the problem was so individualistic, the plan naturally has many unusual features. Since the basement, for storage only, is small, the heating and laundry spaces are on the first floor. Although it is built on a corner lot, heavy traffic on the fronting avenue dictated placing the entrance and garage on the side street and the main living areas to the rear. Projecting walls assure a sense of privacy. (Opposite page top): A peach bloom colored mirror above the fireplace wall and the large window areas give a gracious sense of outdoor living. (Above)—The glass screen partition between the entrance hall and living room creates an added feeling of spaciousness. A color scheme of brown walls, eggshell rug, ceiling and furniture upholstered in brown, flamingo pink, eggshell and gold, contributes an air of gaiety. (Right) A view of the circular stair with its glass block area for light



**HOUSE OF D. S. COLBURN, HIGHLAND PARK, ILLINOIS**  
**ELMER V. BLACK, ARCHITECT**

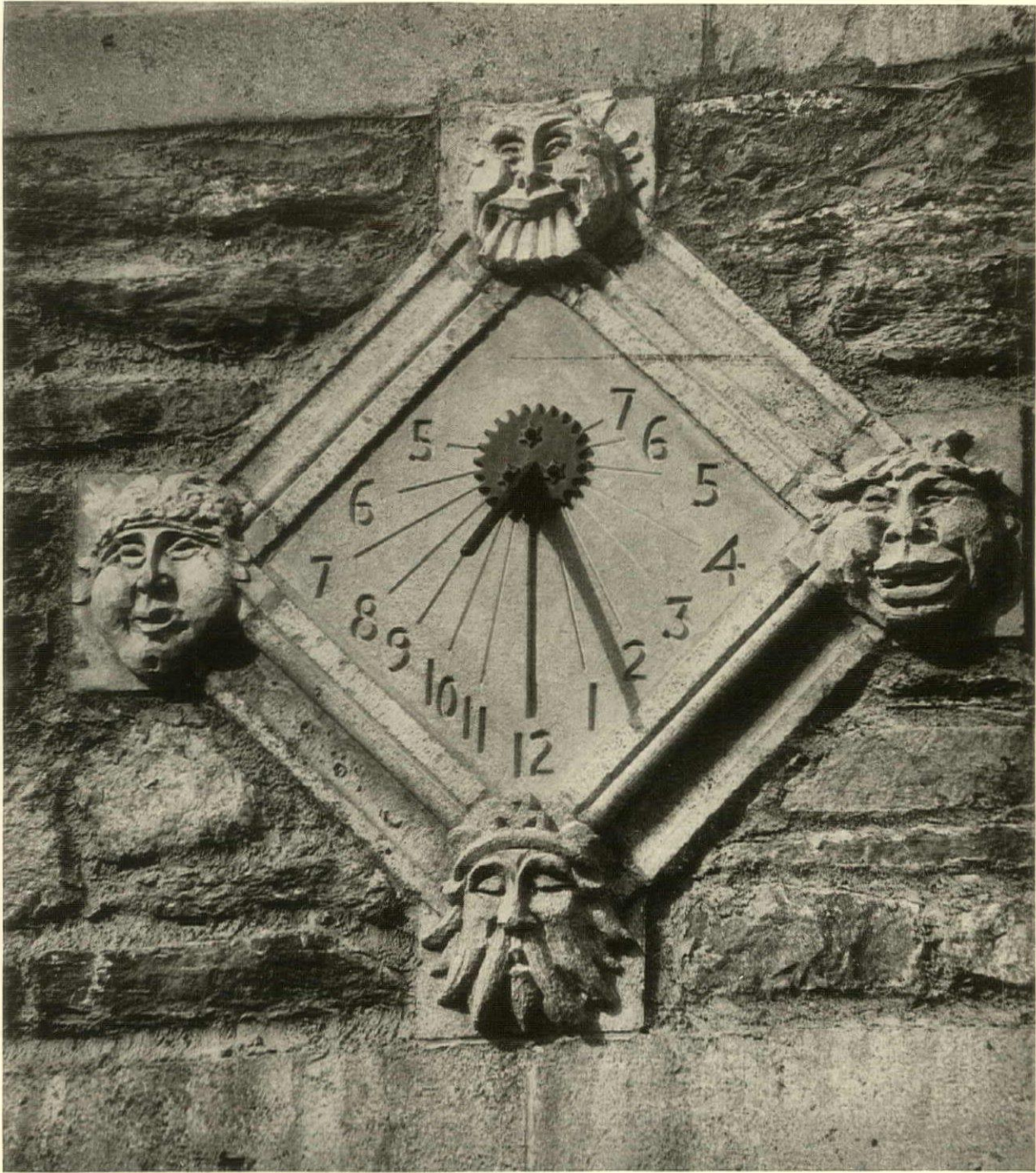


Particular attention has been paid to the proper design of all utility areas throughout the house. Closets and cabinets have been carefully studied in relation to the sizes of the various things that will be stored in them. Glass block has been skillfully handled in both the kitchen and master bathroom. In these rooms bright color is again well used. The bathroom is dove gray, black and flamingo pink, and the kitchen is soft robin's-egg blue, lime yellow, black and white.

**HOUSE OF D. S. COLBURN  
HIGHLAND PARK, ILLINOIS  
GILMER V. BLACK, ARCHITECT**

THE PORTFOLIO

# Vertical Sun Dials



Brookville, N. Y.  
Roger H. Bullard

**PORTFOLIOS IN PREPARATION**—Wall-face Dormers, September . . . Door Steps, October . . . Doorway Side-lights, November . . . Resilient Floors, December

The Editors welcome photographs of these subjects. . . . Forms close eight weeks in advance of publication. A list of the subjects that have appeared will be sent upon request. Certain of these past Portfolios are available to subscribers at 25 cents each; or five subjects for one dollar

**NUMBER 130 IN A SERIES OF COLLECTIONS OF PHOTOGRAPHS ILLUSTRATING VARIOUS MINOR ARCHITECTURAL DETAILS**

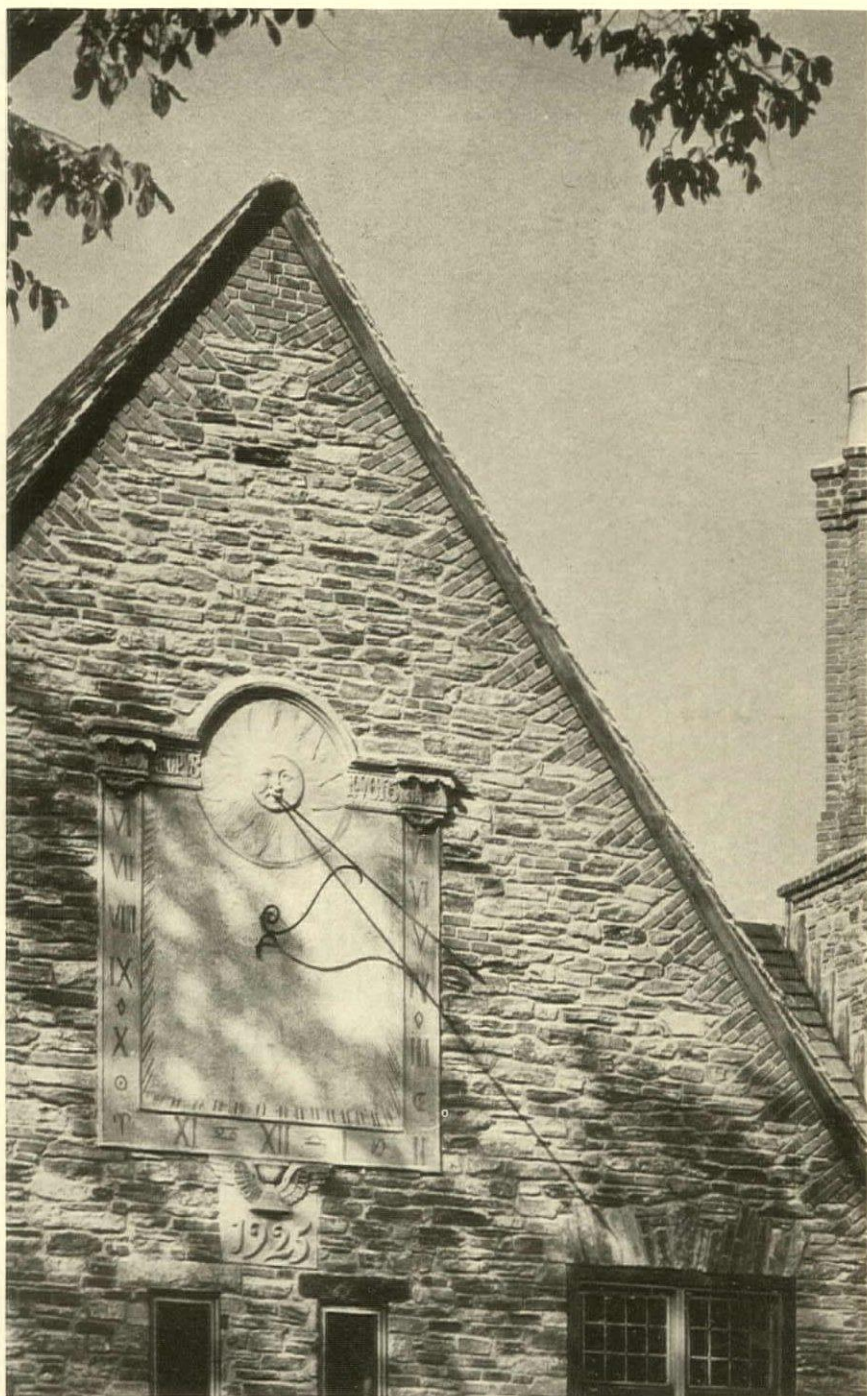


Above, Bayside, N. Y.  
James W. O'Connor

Upper right, Locust Valley, N. Y.  
Coffin & Coffin

Lower right, Barnwell, S. C.,  
in the public square



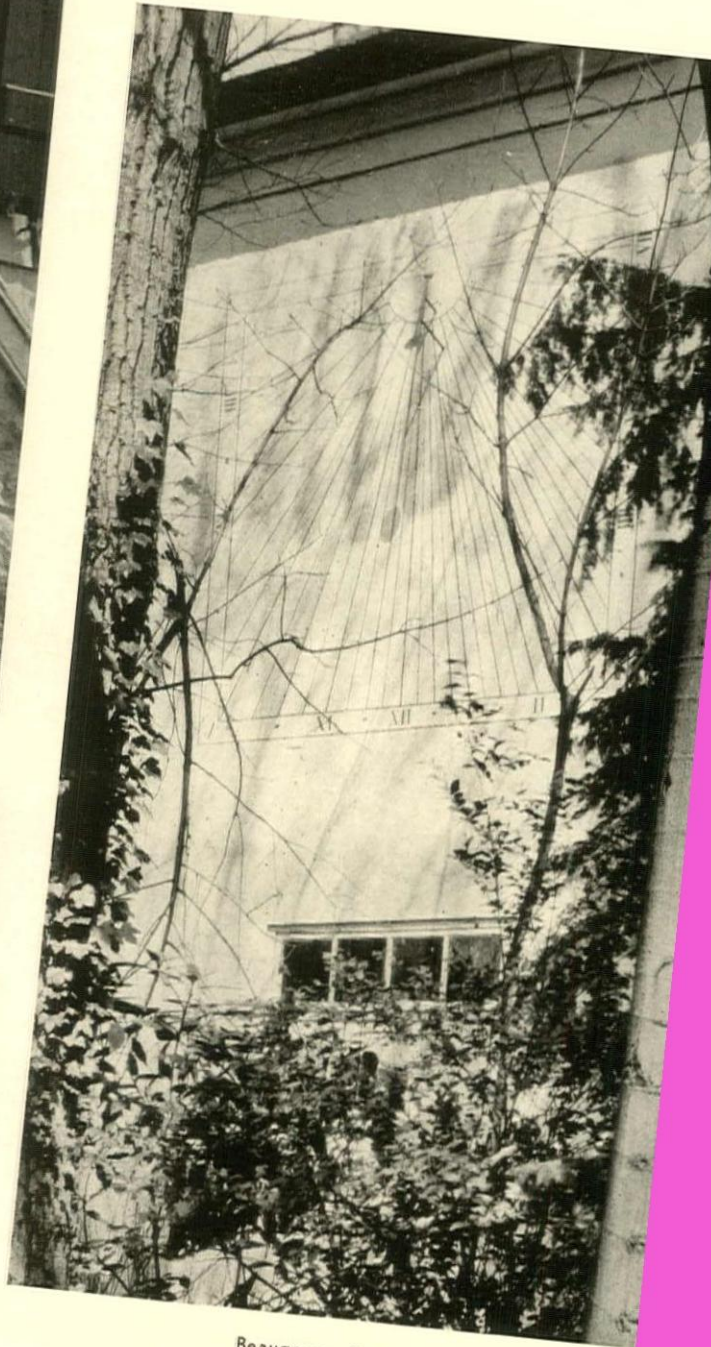


Upper left, Haverford, Pa.  
W. Pope Barney; Edith Emerson

Above, Maplewood, N. J.  
Office of John Russell Pope

Lower left, Art Center, Cleveland, Ohio  
Hubbell & Benes; F. L. Jirouch

Darien, Conn.  
Charles S. Keefe



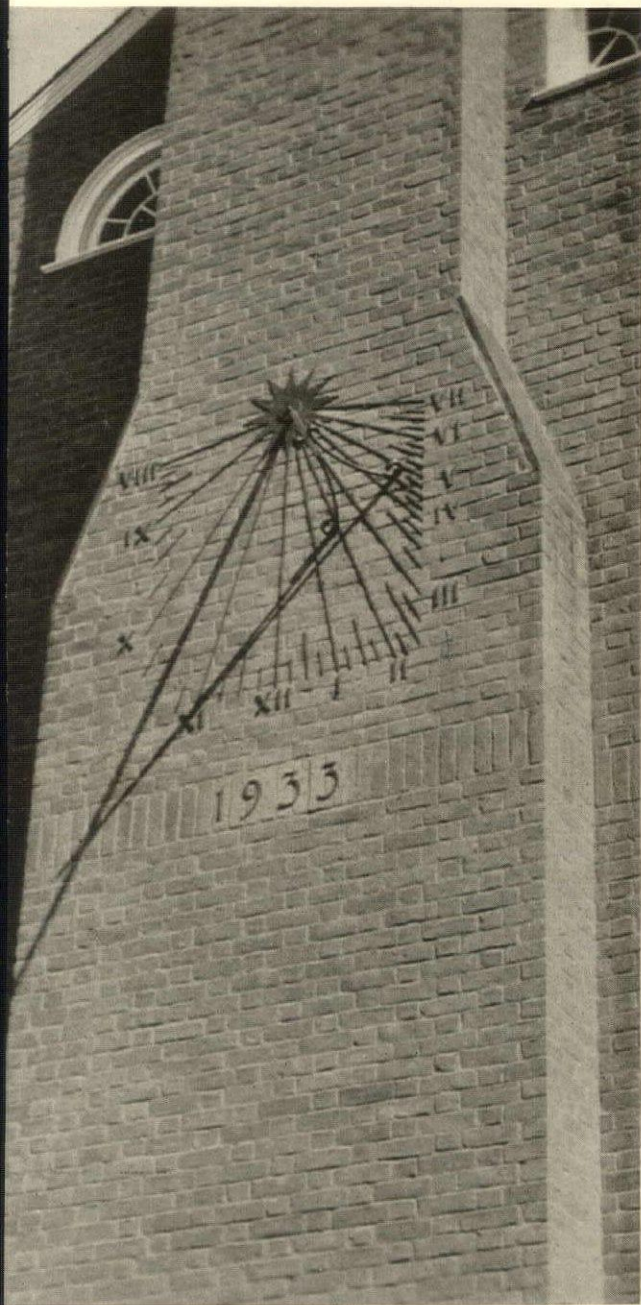
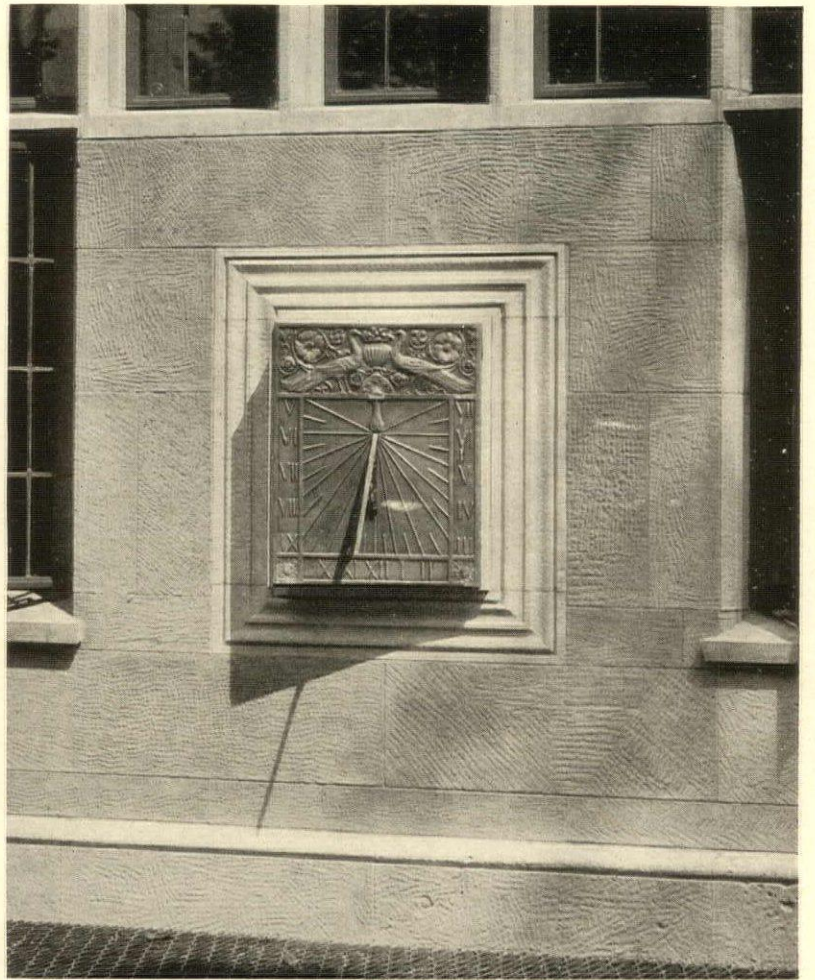
Beaugency, Touraine,  
France



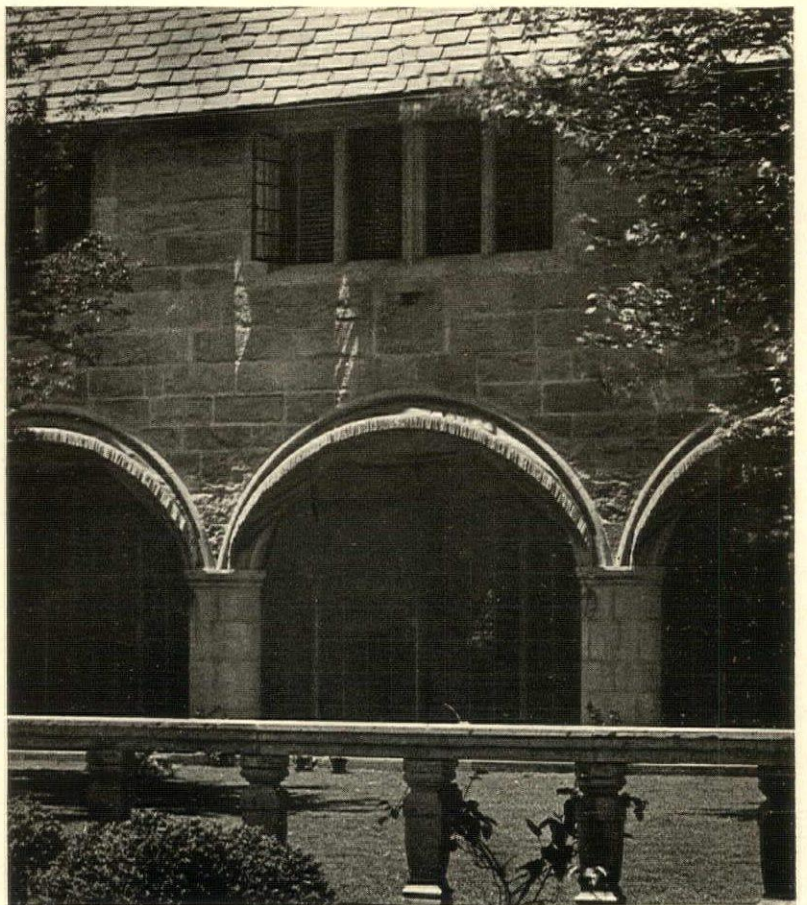
Brockport, N. Y.  
Dryer & Dryer



Detroit, Mich.  
Richard H. Marr

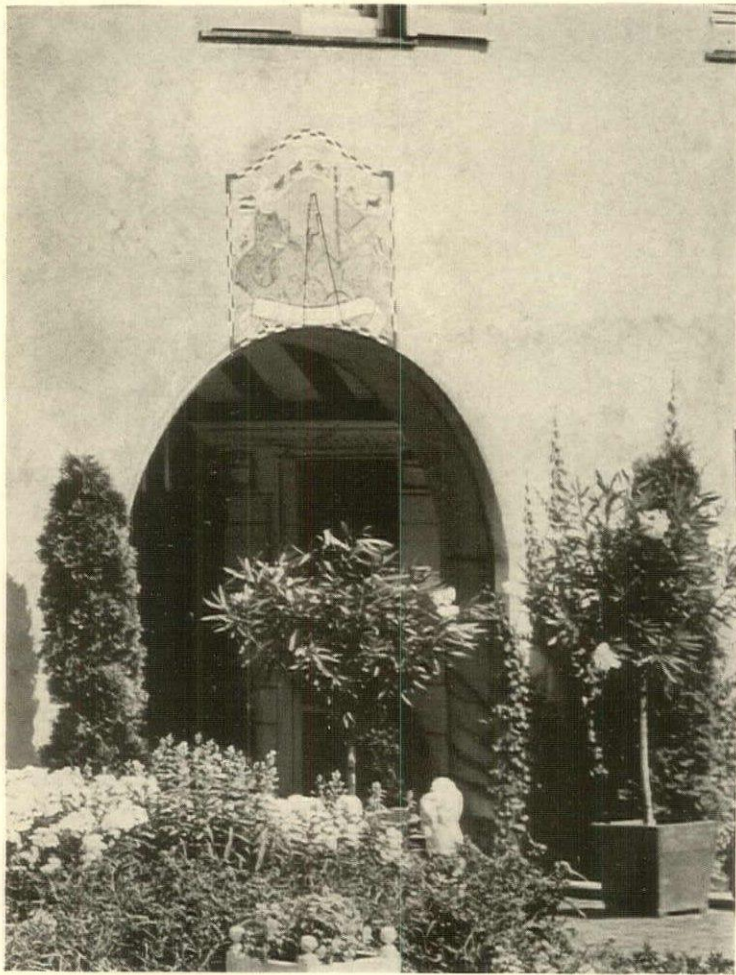


Leonia, N. J.  
J. Ernest G. Yalden

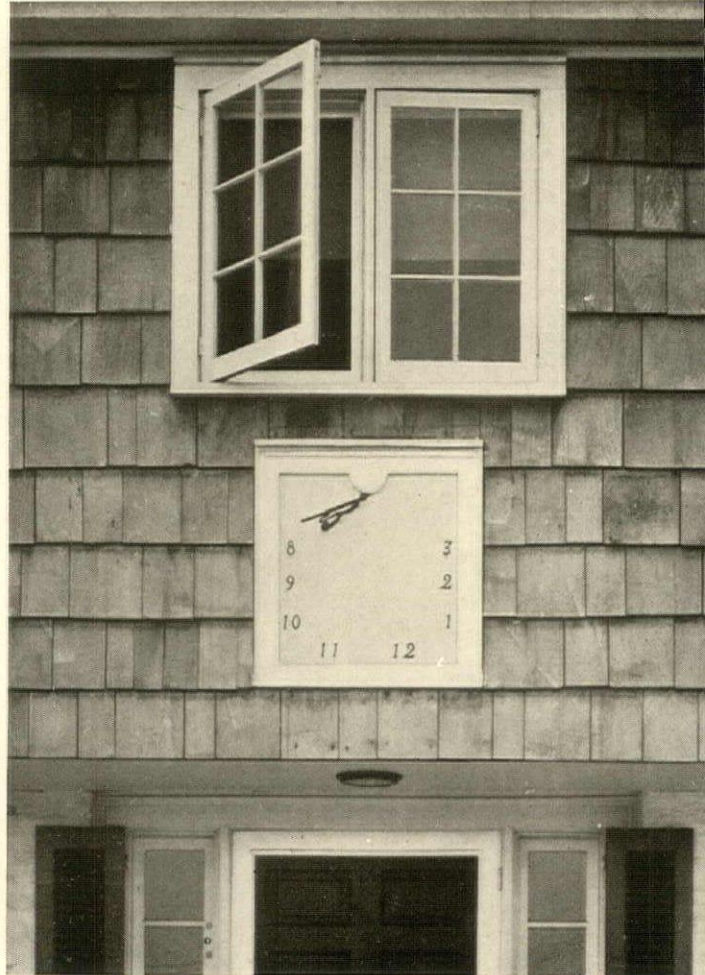


Glen Head, N. Y.  
Roger H. Bullard

Princeton University Library,  
Princeton, N. J.  
Robertson & Potter

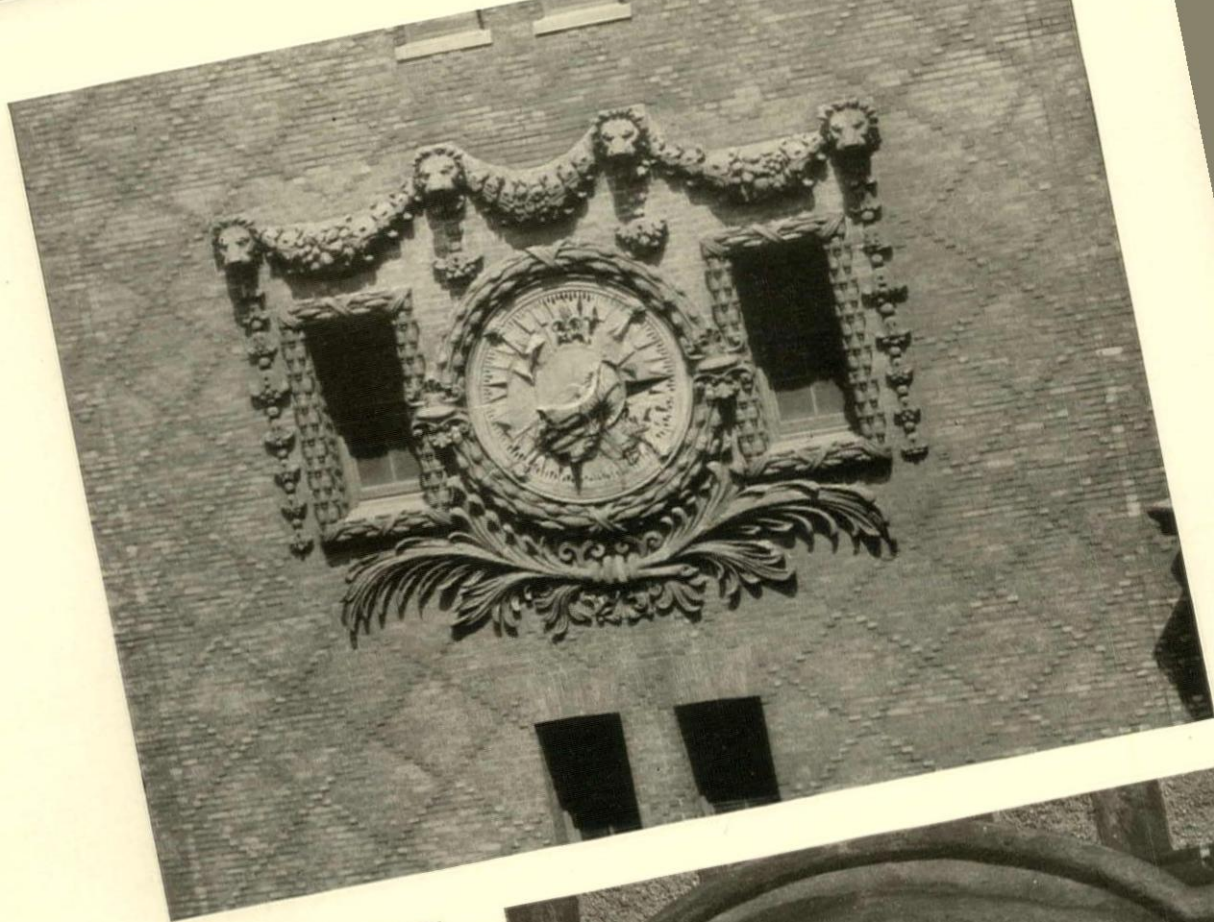


Lake Geneva, Wis.  
Howard Shaw



Lansdowne, Pa.  
W. Pope Barney

Former Madison Square Garden,  
New York, N. Y.  
McKim, Mead & White



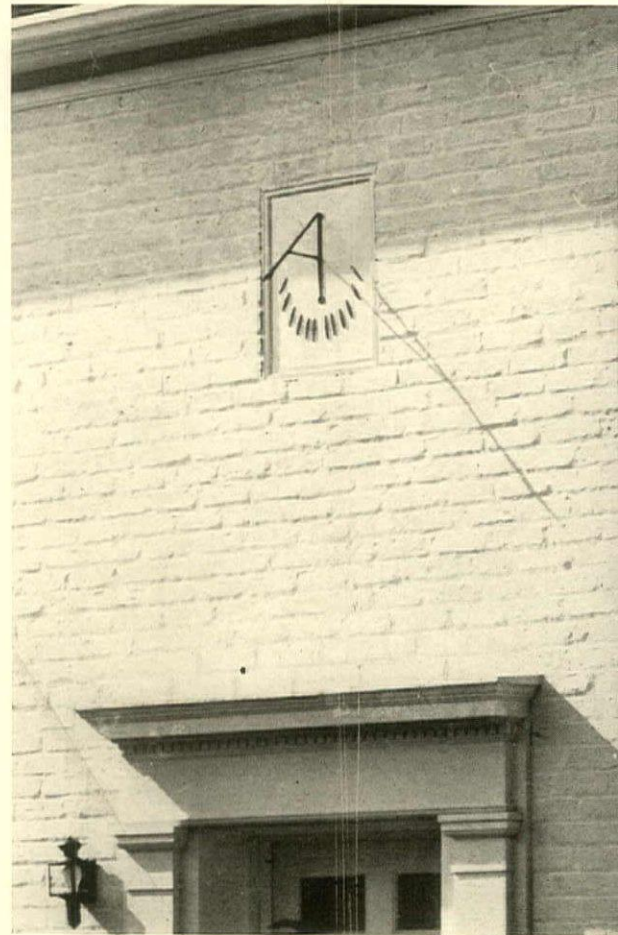
Munsey Park, N. Y.  
H. Lawrence Coggins



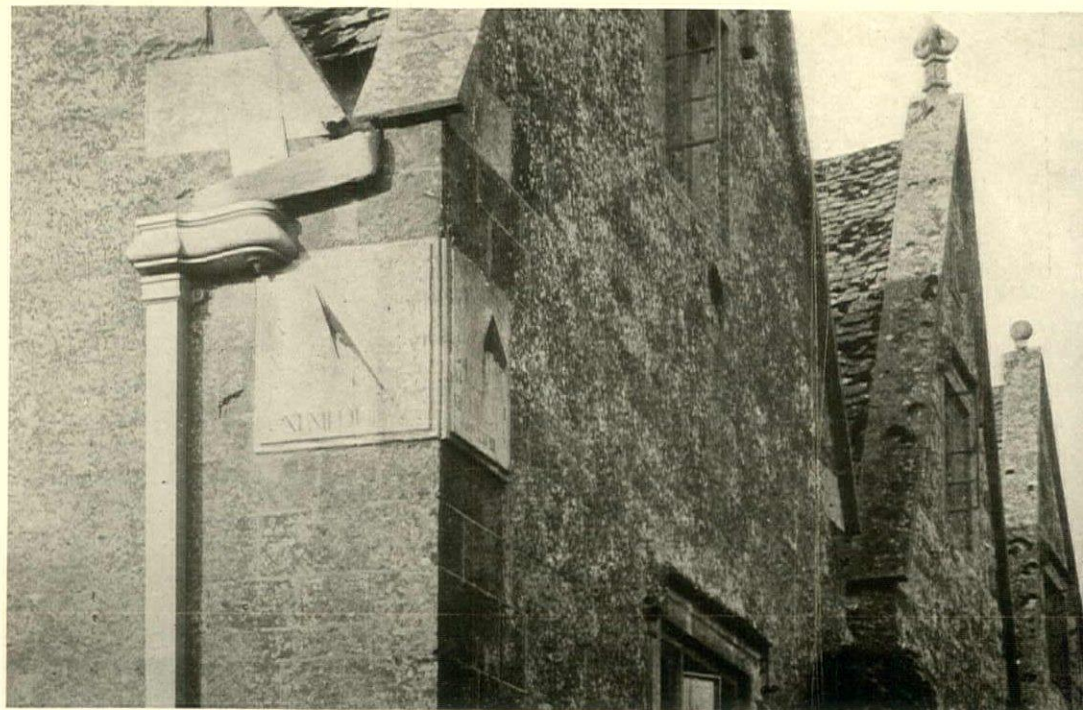
Portchester, N. Y.  
Dwight James Baum



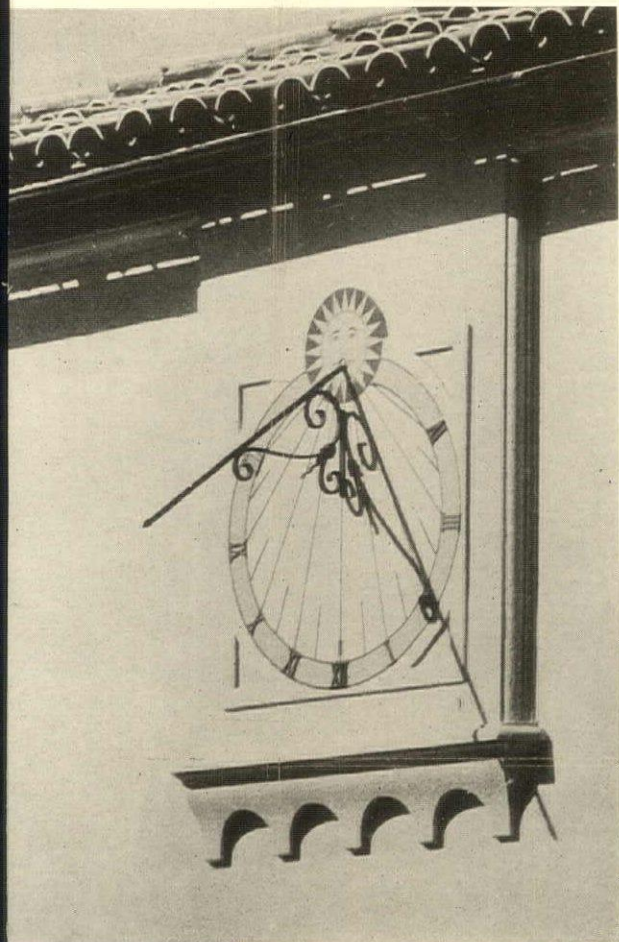
New Rochelle, N. Y.  
Laurits Christian Eichner



Chatham, N. Y.  
Randolph Evans



Double-faced angle sun dial  
in the Cotswolds, England



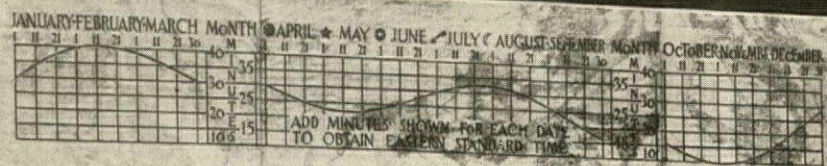
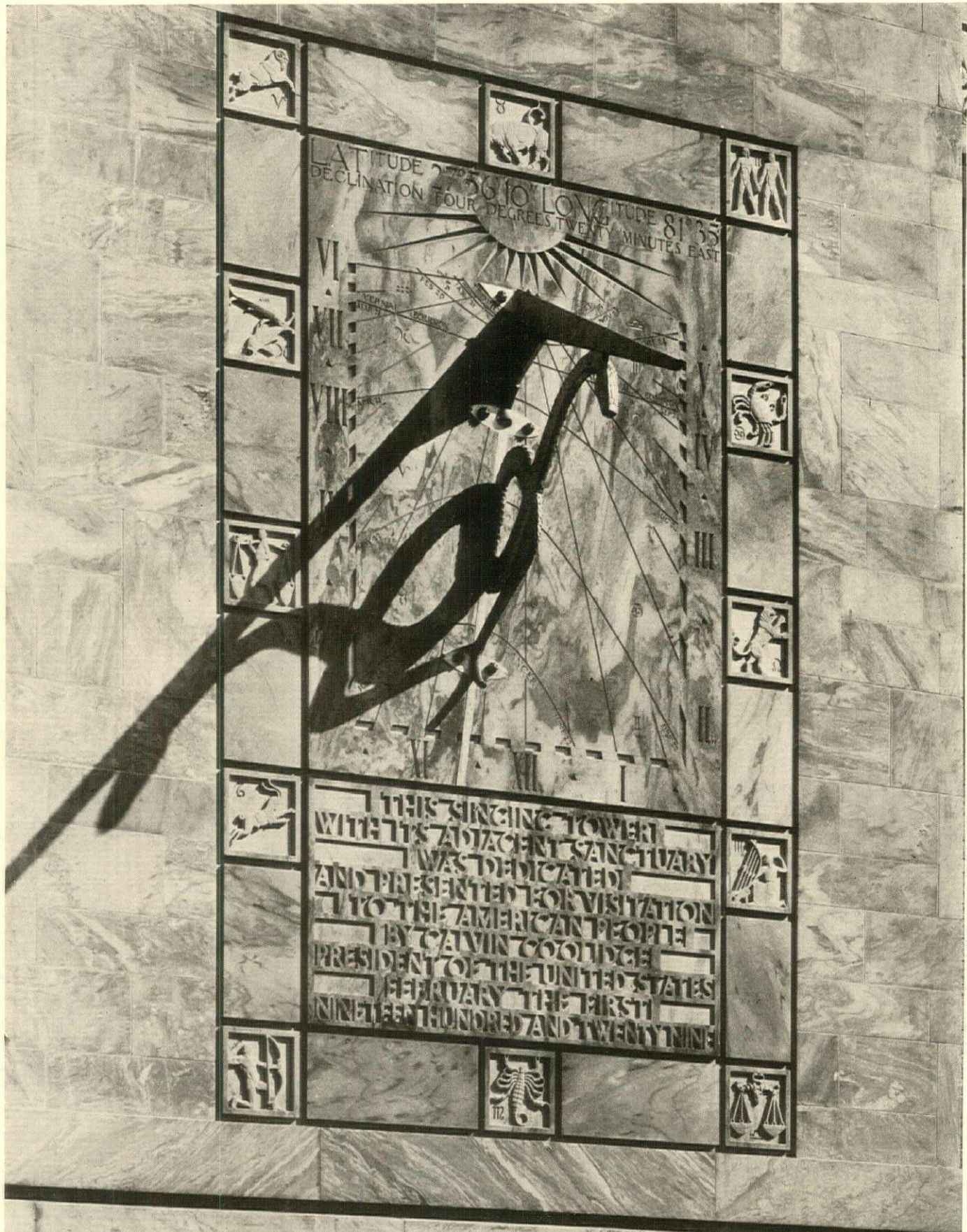
Santa Barbara, Calif.  
Winsor Soule and John Frederic Murphy



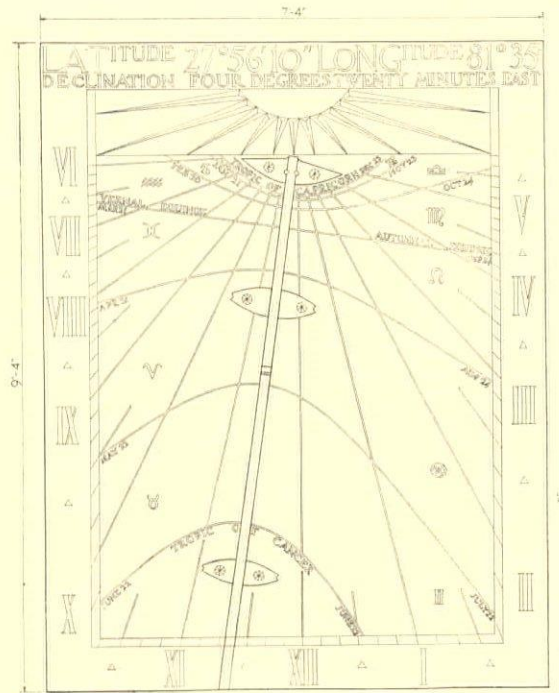
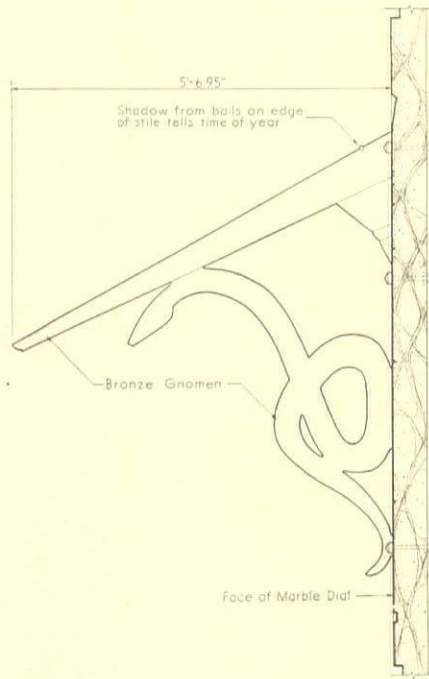
Southbury, Conn.  
Paul G. Darrot



Chipping Campden (1480)  
Gloucestershire, England



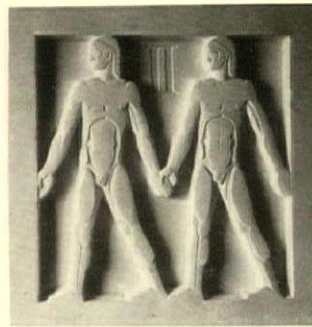
One of the most elaborate sun dials in America is that on the Bok Singing Tower, Mountain Lake, Fla., designed by Milton B. Medary, architect, and Lee Lawrie, sculptor. The signs of the zodiac, incorporated in a border around the dial proper, were modeled by an associate of Lee Lawrie's—Robert C. Wakeman



ARIES



TAURUS



GEMINI



CANCER



LEO



VIRGO



LIBRA



SCORPIO



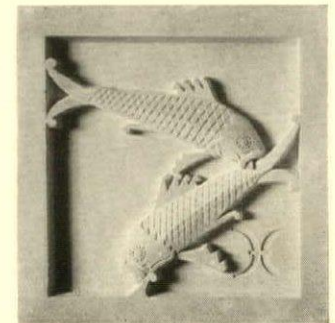
SAGITTARIUS



CAPRICORNUS



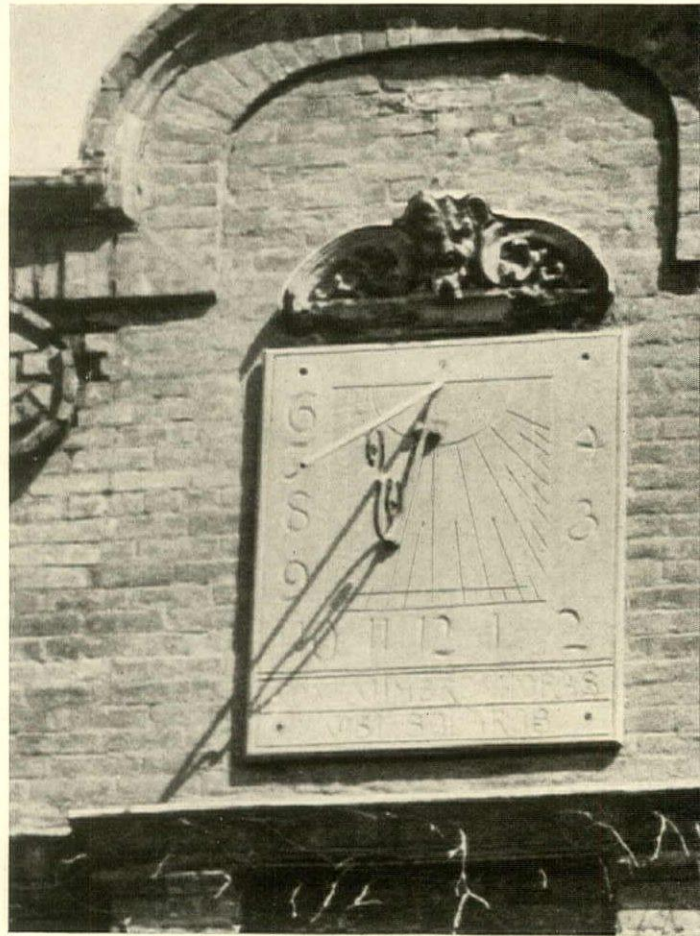
AQUARIUS



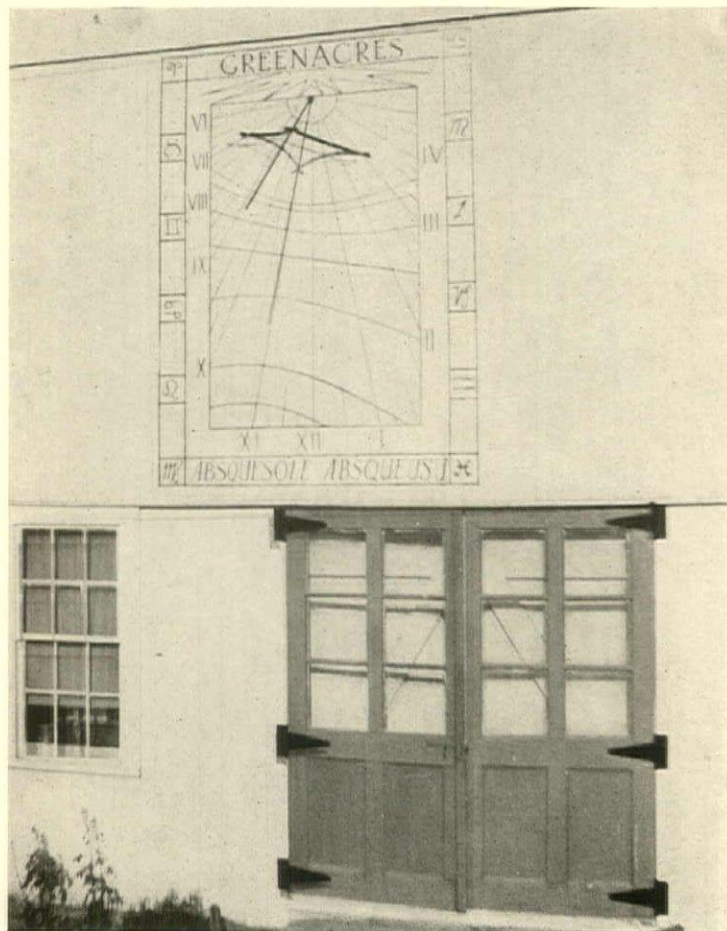
PISCES



Forest Hills, N. Y.  
William E. Haugaard



Pepperidge  
Oakdale, N.



Studio of Arthur S. Covey  
Torrington, Conn.

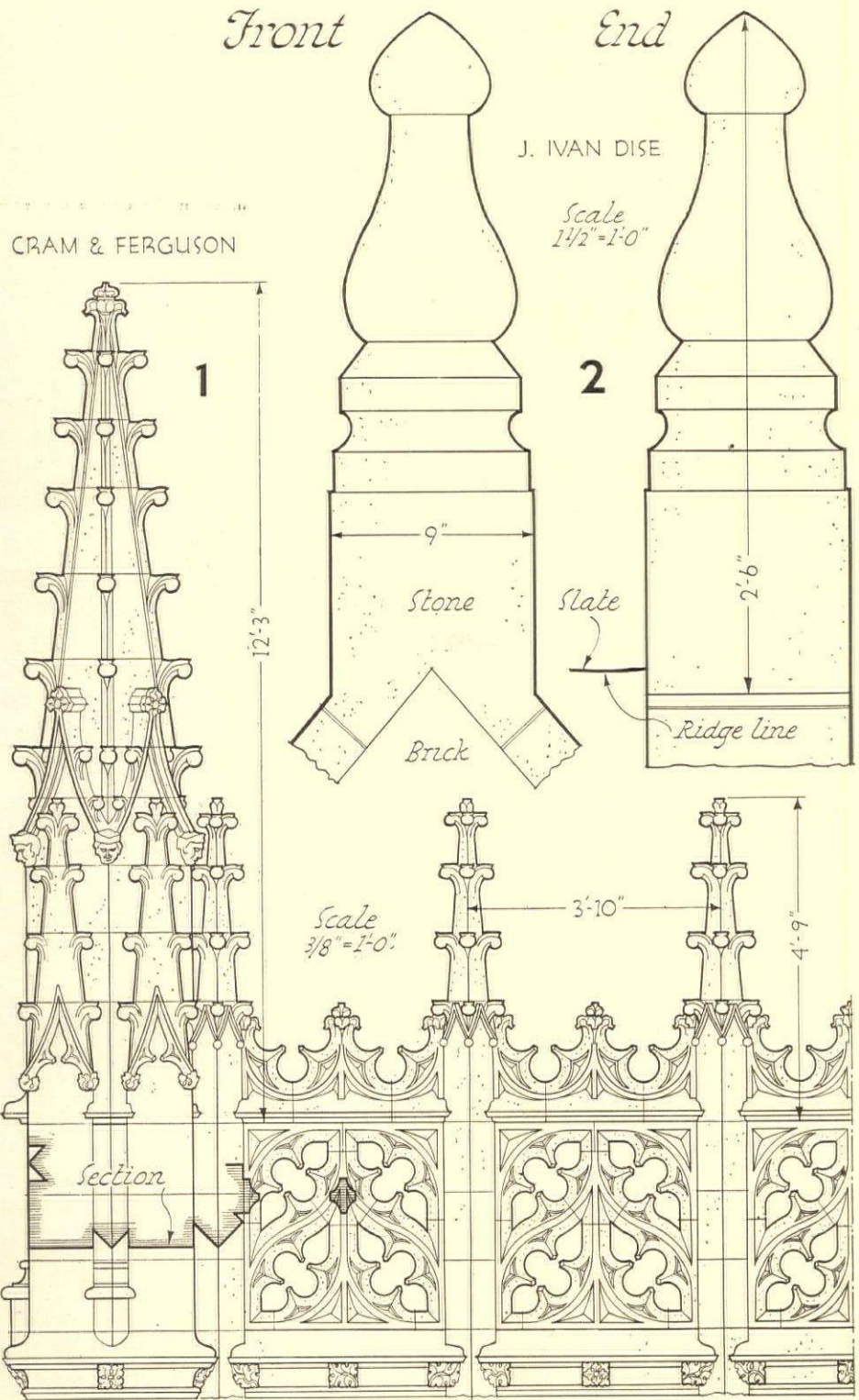
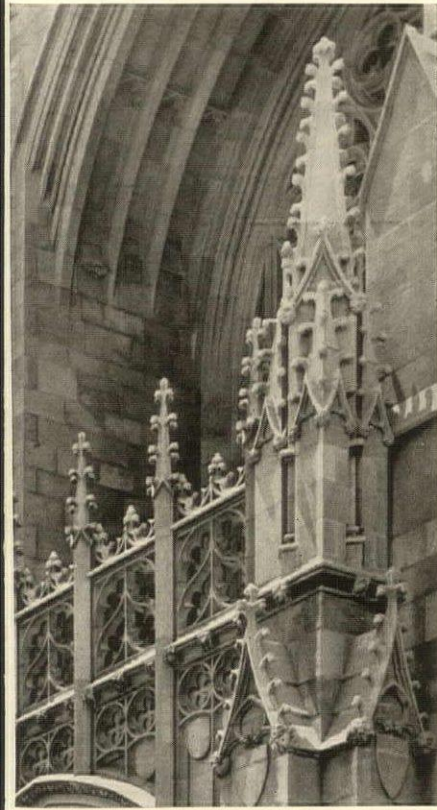
J. Ernest G. Yalden;  
Arthur S. Covey

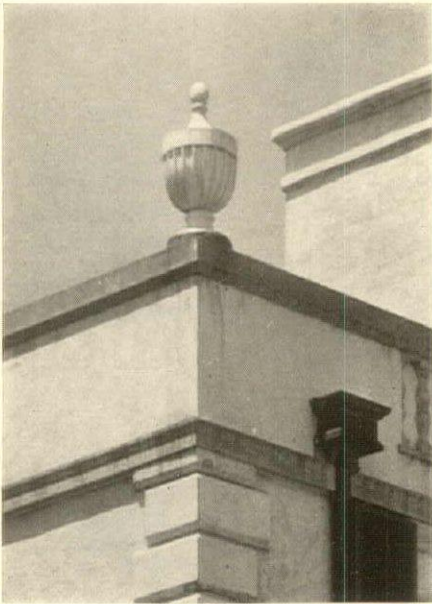


# FAVORITE FEATURES

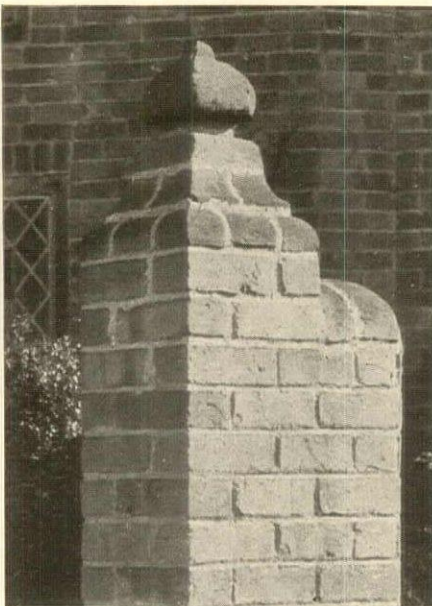
Common problems of design in everyday practice-how the results look and how the drafting-room detailed them

## Masonry Finials ...





3

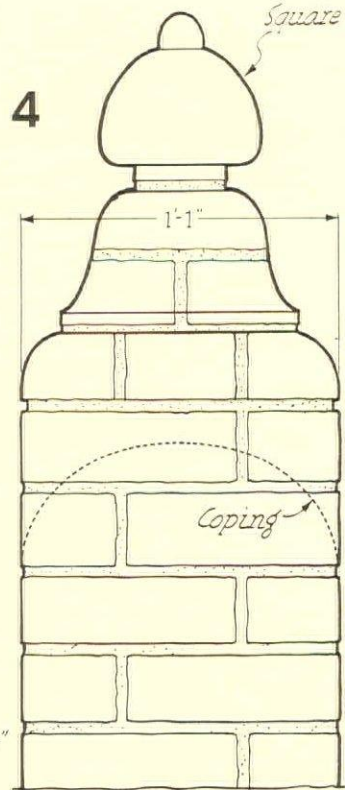
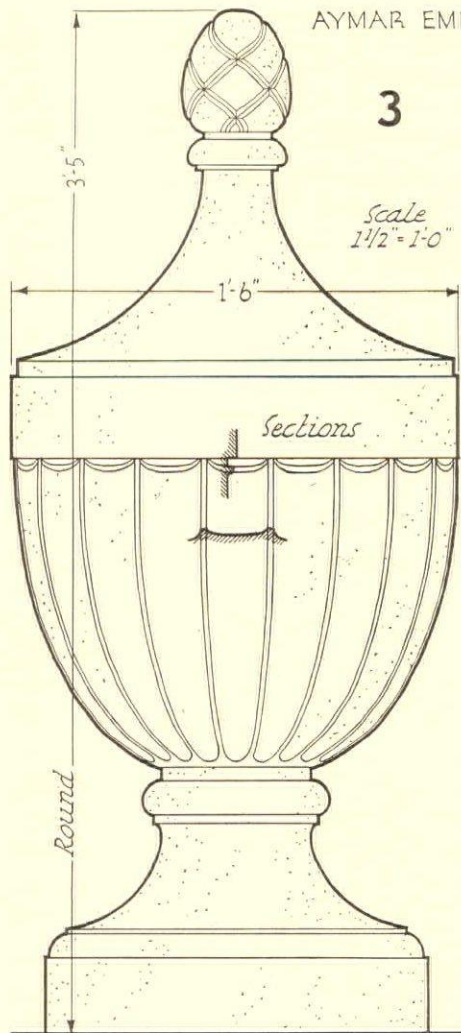


4

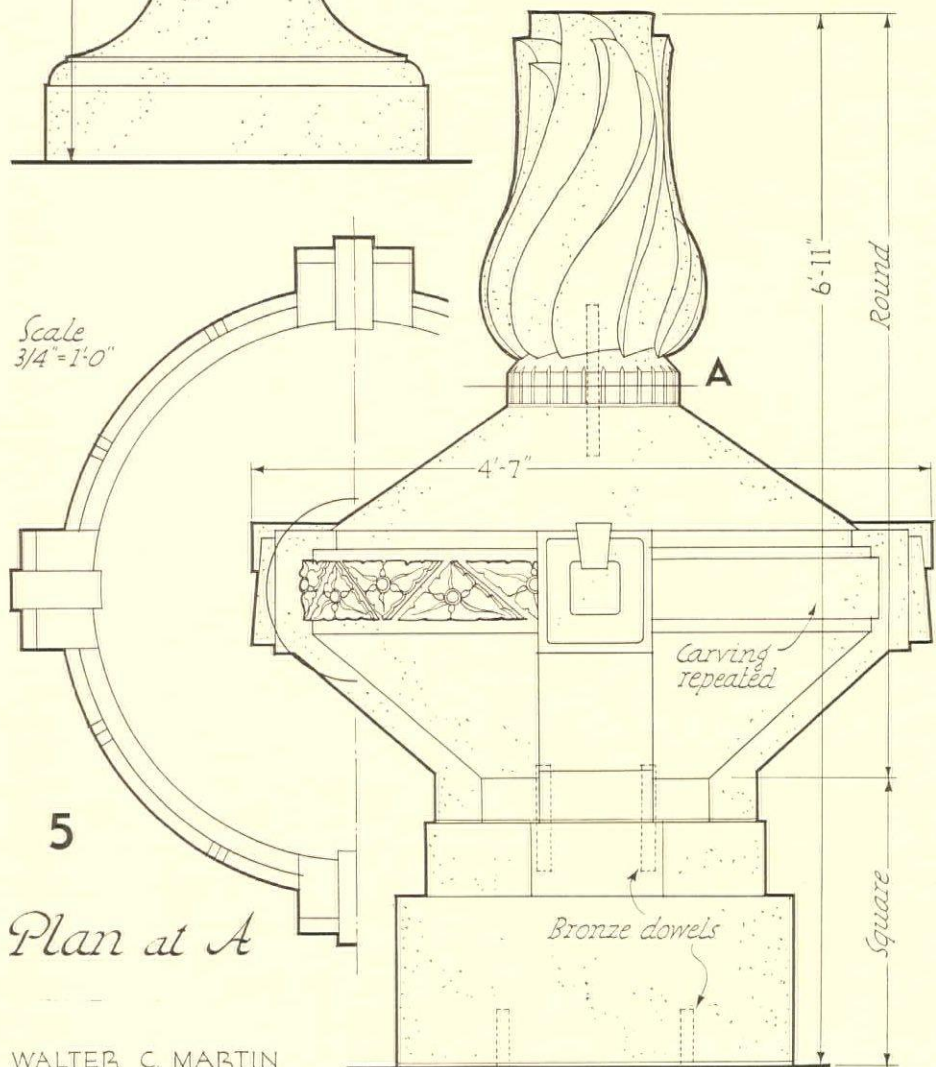


5

AYMAR EMBURY II



WESLEY SHERWOOD BESSELL



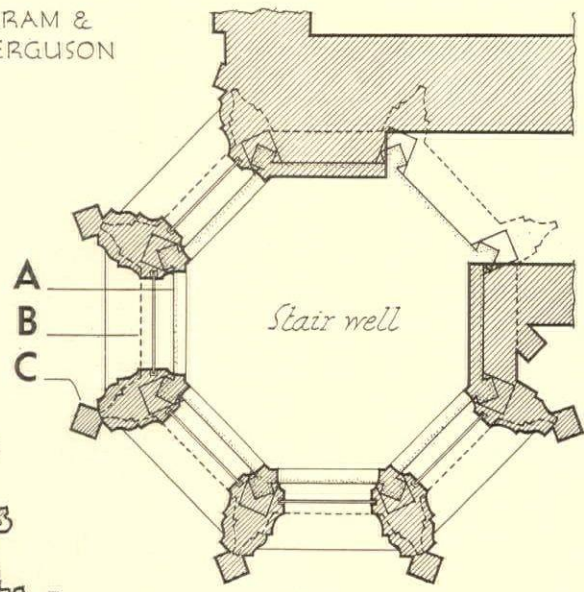
WALTER C. MARTIN

CRAM & FERGUSON

Scale  
3/8" = 1'-0"

6

12'-6"

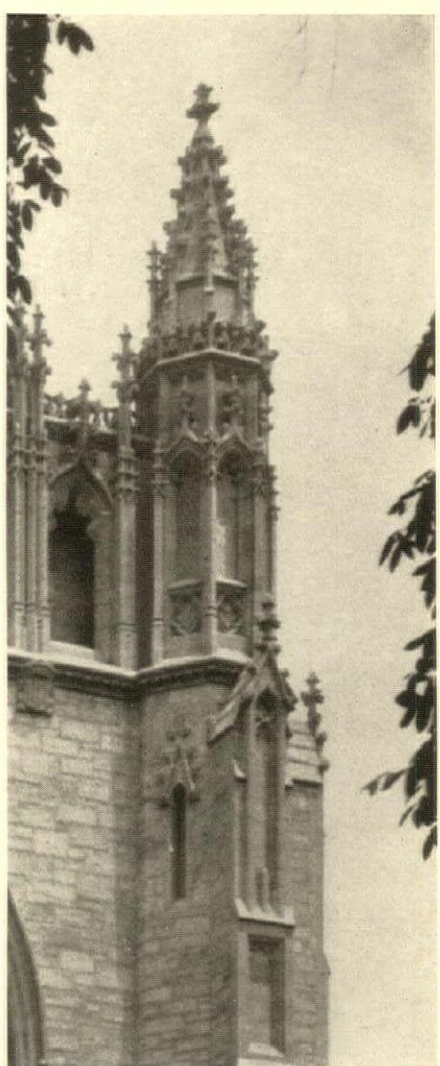
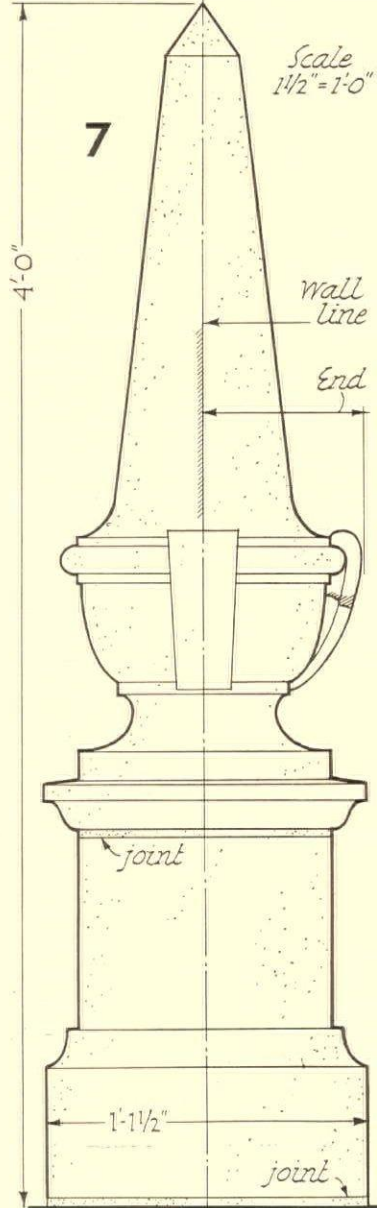


Plan

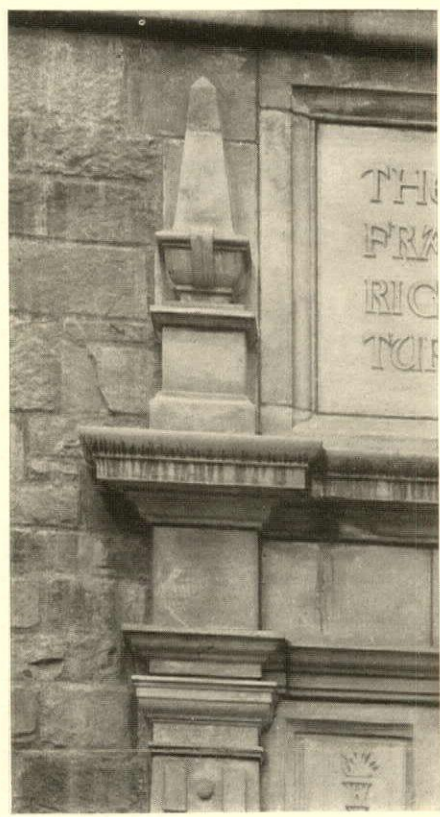
YORK & SAWYER

Scale  
1 1/2" = 1'-0"

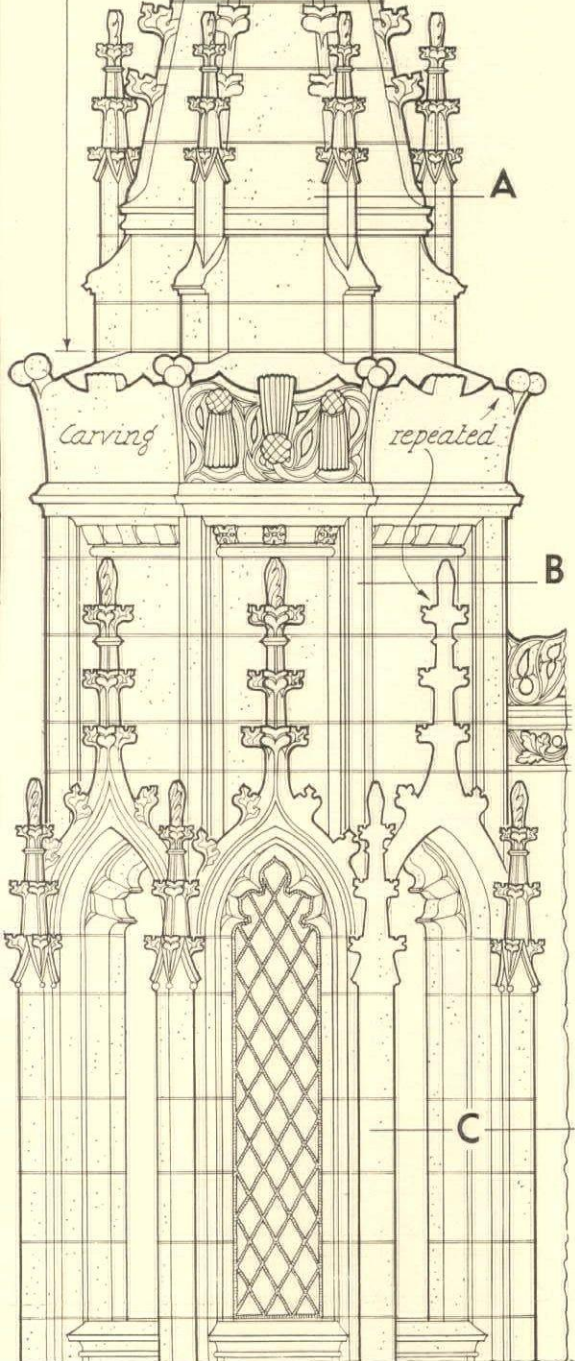
7



6



7

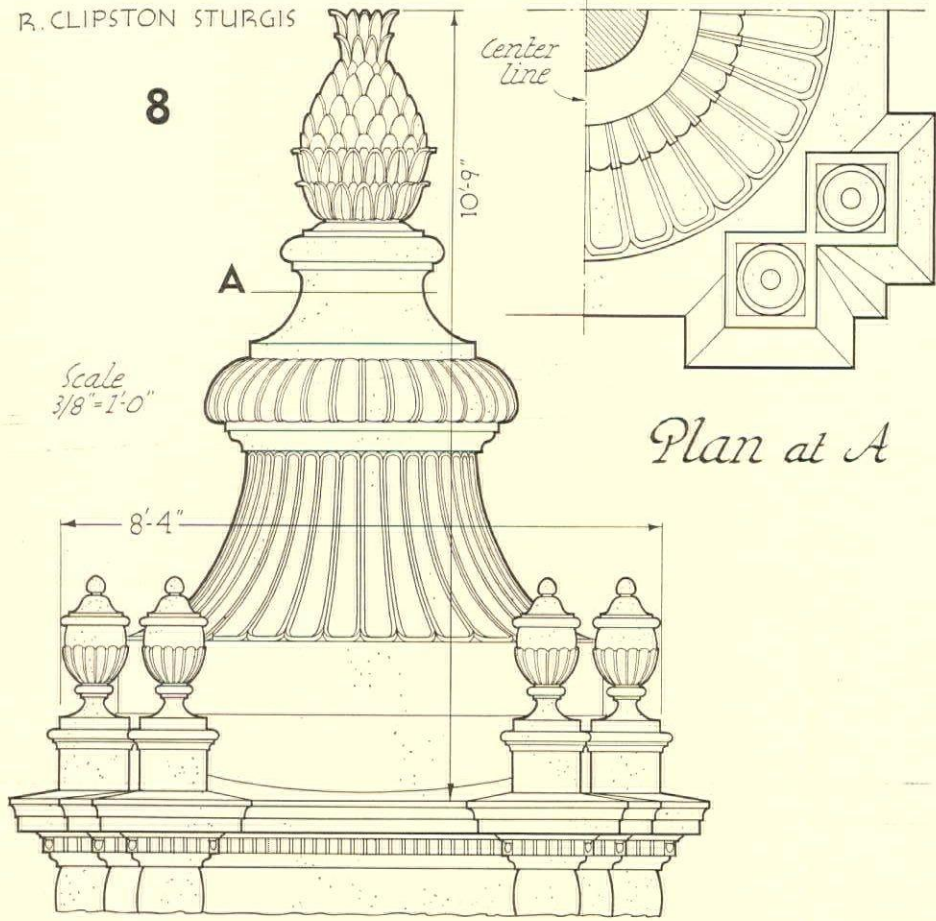




8

R. CLIPSTON STURGIS

8



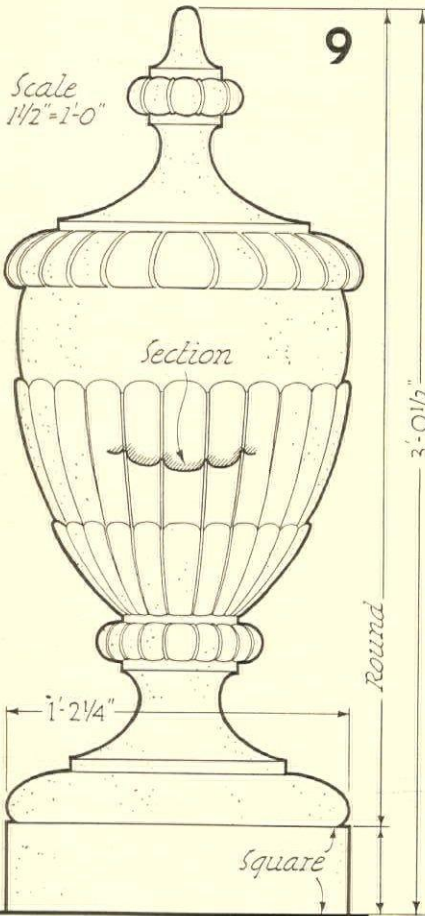
Plan at A



9

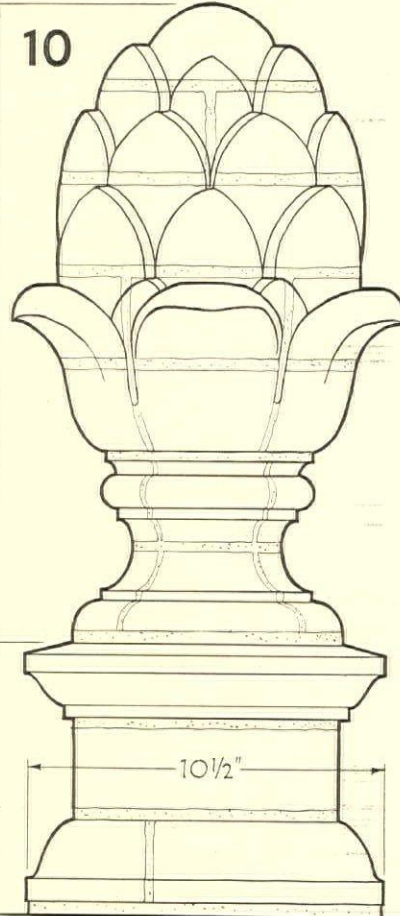
REGINALD D. JOHNSON

GODWIN, THOMPSON & PATTERSON



9

Scale  
1 1/2"=1'-0"



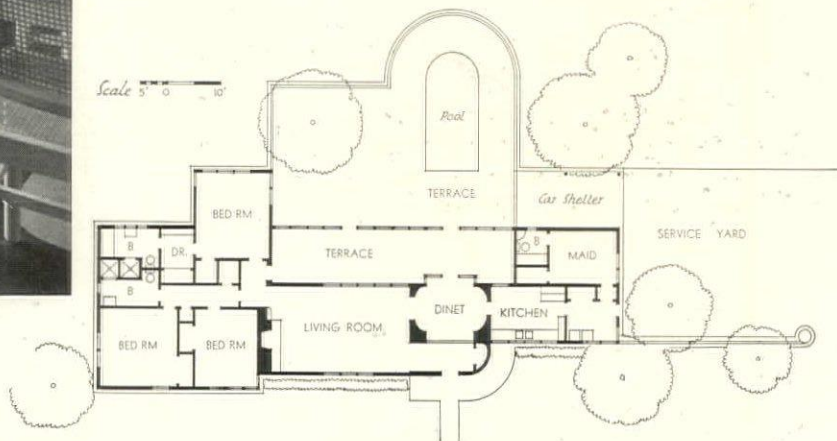
10

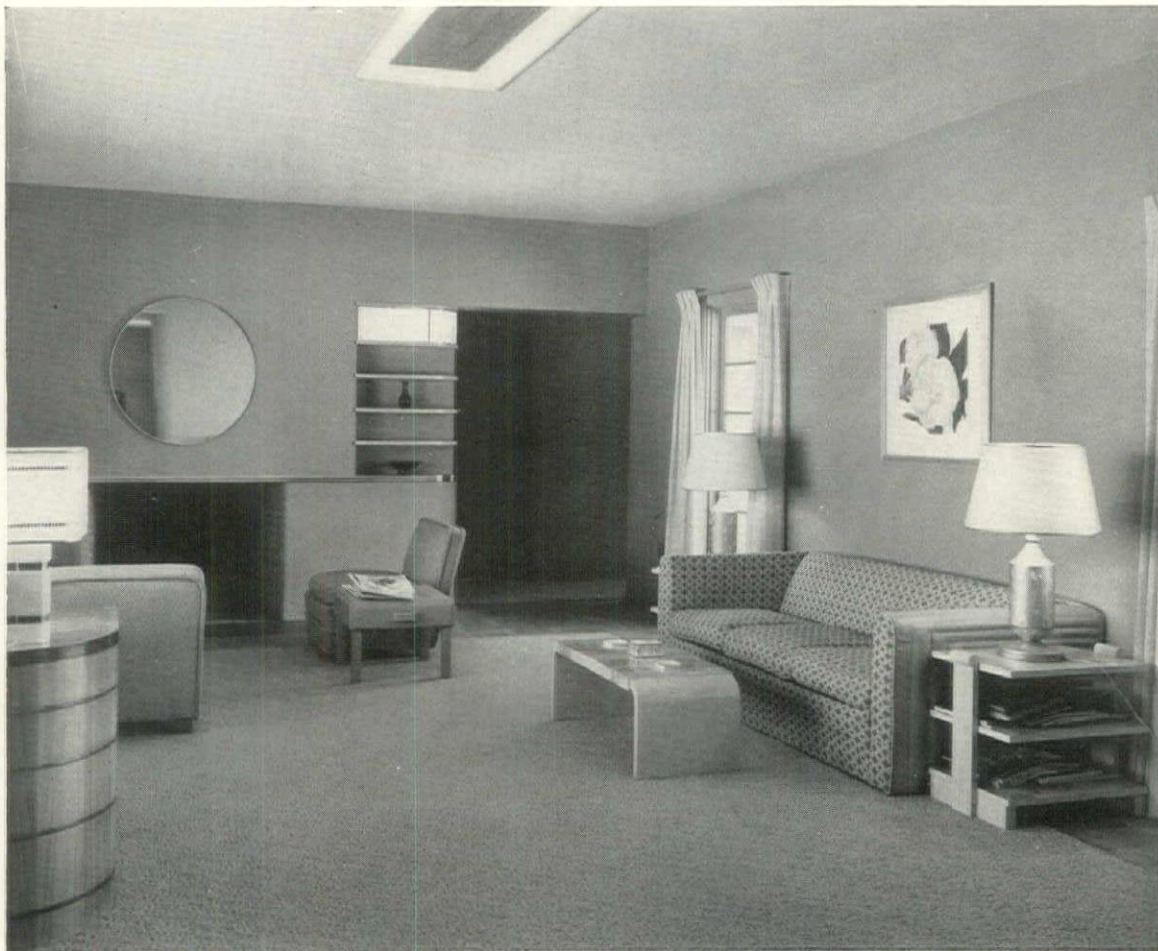


10

**HOUSE OF W. T. WALKER,  
PALM SPRINGS, CALIFORNIA  
CHARLES O. MATCHAM, ARCHITECT**

Comparatively undocumented, this house might fairly be called desert style. The white exterior and use of modern materials in a simple, unadorned way results in a restful freshness. Since no color could compete with the color of the environment, white is used almost exclusively in this area





The enclosed terrace (above) opens on a small patio and swimming pool. . . . The living room (below) has walls painted a deep beige. Upholstery is green and beige, and all trim and furniture of natural bleached wood.

**HOUSE OF W. T. WALKER  
PALM SPRINGS, CALIFORNIA  
CHARLES O. MATCHETT  
ARCHITECT**

ursday, July 1.—The New York Chapter in its post-Convention meeting at lunch today, tried a new experiment in reporting the proceedings to its members. A preliminary meeting had been held to apportion to certain of the delegates each a particular section of the proceedings on which to report verbally and briefly. This avoided one difficulty which occasionally arises when a single delegate reports impressions of an entire Convention. For instance, one of my friends happened to attend the post-Convention meeting of another Chapter recently, and was decidedly surprised that the reporting member's impressions of the relative importance of the Convention proceedings differed radically from his own.

Friday, July 2.—This is surely a red letter day for the Diary in that news comes through Miss Frances Johnson and Mr. Percy J. Williams that Mount Vernon is at last being measured and drawn. I suppose there are rather complex reasons behind the long continued refusal of the Board of Regents to allow photographs and drawings to be made of Washington's home. Some years ago, when Paul Willstach was writing his book, he and I went down there, and were permitted by Colonel Dodge to photograph outside but not inside. Under Mr. Williams' direction a particularly accurate survey is being made, with scale and size details to supplement Miss Frances Johnson's photographs. The unusual manner and accuracy with which this survey is being made is a longer story than can be told here, but it will be published in these pages before many months with the most comprehensive showing of Mount Vernon ever attempted.

Saturday, July 5.—I hear echoes of the Princeton Round Table Conference through Albert B. O'Connor, Clarence Stein, and Barney. It must have been a great success in bringing together, for a frank discussion of fundamentals, this year's graduates of the Architectural Department and established architects both from Princeton and other schools. Dean Emerson's speech was the key-note. The spirited argument between a recent graduate who claimed that the Gothic style of college dormitories is an invitation to vermin and other loveliness of darkness, and, on the other hand, the ready defense by Charles Klauder, who believes that college dormitories must be something more than mere shelter, must have been worth going miles to hear.

Sunday, July 7.—A cog has slipped somewhere apparently, in the building of the Paris Exposition, for it is said that at its formal opening recently, half the buildings were not finished, and some had not been begun. There are those who are pointing with pride to the fact that the pavilions

## THE DIARY

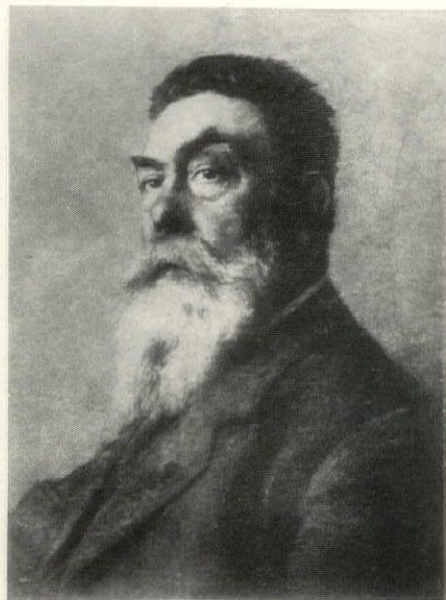
Henry Taylor



of the totalitarian states were ready—Russia, Italy, and Germany, but so was the pavilion of Belgium—so what?

Monday, July 9.—George B. Cushing of the A. M. Byers Company, tells me of a rather striking change in buying habits since the unlamented depression. During those dark days, purchasing agents of industrial plants and the like had been instructed to make only necessary repairs, and to keep the cost of those down to the irreducible minimum. The fruits of that policy are already becoming evident in more rapid obsolescence and the necessity for new repairs. Cushing says that the whole attitude of these big buyers has changed radically now. Thankful that the necessity for such false economy actually is past, they are once more insisting upon high quality materials, particularly in view of the fact that the element of labor cost is growing more rapidly than the cost of material.

Tuesday, July 12.—In lunching with a group of men at the League today, the question of the Jefferson Memorial was discussed in some detail. One fact that seems not generally understood, judging from the



Victor Alexandre Frederic Laloux (1850-1937), from a painting exhibited at the Grand Palais in 1914

controversial opinions, is that there are really two distinct questions at issue. One is this: Is the L'Enfant plan for Washington, as further developed by the McMillan Park Commission, still so eminently suited to the conditions that it should be carried out to the extent of keeping the kite form? The second is this: If the first question is answered affirmatively, then is the proposed form of the Jefferson Memorial the best that could be devised?

If those who want to argue about the matter at all would keep these two points separated, their contentions might be more easily understood.

The latest news from Washington is that the plan, in so far as it concerned the shore line of the Tidal Basin, is being restudied in an attempt to leave the cherry trees undisturbed.

Wednesday, July 13.—Laloux is dead. For a generation, at least, the name of Victor Alexandre Frederic Laloux has been a mighty one among the patrons of the Paris ateliers. From his magnificent and inspiring personality, America has profited in the training of Arthur Brown, Jr., Charles Butler, Jacques Carlu, John W. Cross, William A. Delano, William Emerson, Carl F. Gould, Frederic C. Hirons, Jean Labatut, William E. Parsons, Henry R. Shepley, Clarence S. Stein, and others. Not so much through his own work, such as the Hotel de Ville in Tours, and his Gare de Quai d'Orsay, but in the work of his pupils, Laloux's influence upon the architecture of today is immeasurable.

Thursday, July 14.—Professor Harold F. Clark of Columbia University, has been doing some research to find out the average earnings in the various professional and business activities. Architecture falls below medicine, law, dentistry, and engineering. In a working life span of forty-three years, the present value of the average architect's earnings for that period is \$82,500. The doctor's life span is a year less, and he earns \$108,000. Apparently the longer you live the less you earn. Farm labor has the longest working life span—fifty-one years—but it only averages \$10,400. In the ministry, a man may look forward to a forty-four year working span, and in that time he earns just about half as much as an architect.

Friday, July 15.—Lunched with Thomas Stapleton, who has one of those jobs that architects dream about—the design of a whole new community center for Princeton, including an inn, shops, apartments, offices, all carried out in the traditional style flavor of the locality.

Saturday, July 17.—We frequently seize the opportunity of poking fun at the British architects' ideas of house planning. They

apparently do not agree with some of the things we do over here. A writer in the *Architects' Journal*, London, says, "For example, we like fresh air; we also like at appropriate times the good old English custom of a fog; we like open fires; we do not like enormous spaces of window which betray to the outside world the inner secrets of our domestic life; and we don't enjoy communal arrangements for eating. It should be recognized that although the English climate does not suffer from extremes, it demands continuous access to some comfortable refuge, and that to design a house that makes the most of the few bright days of summer is not enough."



*Monday, July 19.*—I see that the Chicago Chapter has given up the house it has been occupying, designed by Henry Hobson Richardson. The house had been given to the Chapter by the John J. Glessner estate in 1924. The Chapter finds itself unable to finance the project in compliance with the donor's wishes.

*Wednesday, July 21.*—The increasing complexity of building costs and the difficulty of estimating these in advance is brought out rather clearly by one of the Dow Service reports. In Toronto, for all forty-six cities from which reports are obtainable. Yet in the aggregate, construction costs are 25% less than in New York. On the other hand, brick is cheapest in Chicago, yet the building costs there are slightly above New York at present. In addition to the sale prices on materials, costs must take into account availability of supply, of labor, the efficiency of projects, and all these things must be weighted in accordance with their relative importance.

*Friday, July 23.*—One hears plenty of talk these days of new building materials, and the *Architect and Building News* of London muses over the possibilities. For instance, the aid of air in motion as an effective substitute for glass has been used by French locomotive engineers. They introduce an ingenious baffle in the design of the cab to eliminate the glazed opening and the danger of its becoming obscured by rain and dirt. When the locomotive is in motion, a thin plane of air is driven across the window, flicking away rain and grit. If we carry this idea a little further, we might have a house with walls and roof consisting entirely of thin planes of rapidly moving air. Turn off the air, and where are you? In the garden.

*Saturday, July 24.*—Speaking of the architect's relationship to the public, as we were

a month or so ago, here's a bit of heresy from an active practitioner. He apparently puts a good deal of stock in that Bible story of the mote and the beam in one's eye.

"After all, it seems to me, the profession has tried to look out for itself and has not tried to look out for its clients, and I do not blame the building public at all for its discovery of this deplorable situation! It seems to me that architecture should be approached as any other art should be, with the full knowledge of its devotee, with the willing to be the instrument of the art, modestly doing his part to solve its problems, in collaboration with many others. I cannot see that the present assumption that a man who has had some academic schooling, and a few years' experience as a draftsman, can be metamorphosed into an architect by the acquisition of a client. Our present position, it seems to me, is due to that assumption.

"Would not the profession as a whole be a great deal better off if its members were recruited from boys and girls who not only showed a better than average ability to draw, but who were willing from school days on to learn enough of one or more of the building crafts—such as plumbing or bricklaying—so that they could get a certificate of proficiency there, and then realize that practice over the drawing-table must be supplemented by business training? Having had that preparation, surely a very salutary feeling of the modest part that the architect plays in the ultimate production of a building will have been borne in upon the student, and he will expect to do his part as a collaborator and not as a self-appointed Czar. Naturally owners feel they are entitled to a little credit for their own creative ideas and so are exasperated by many of our fellows' assumption of importance.

"When a man discovers that he can hire an architect as he does a lawyer to do a particular job, and will find that he pays him what that job is worth regardless of any predetermined percentage charge, I feel sure that our profession will never find it necessary to combat any such laws as were recently being discussed by the New York State legislature."

Is there any bright young man present who would like to stand up and say a few words for the architectural profession?

*Monday, July 26.*—Charles F. Lewis, director of the Buhl Foundation, Pittsburgh, whose success in the building and administration of Chatham Village surely gives him the right to be heard, thinks that private capital could do a lot more in housing than is generally expected of it. It is popular today to say that private capital do nothing in low-cost housing, and that the job must be turned over to the Government. Mr. Lewis suggests a four-fold program: 1.

Let business encourage more adequate zoning legislation; 2. Let the government federal, state, and municipal—destroy slum housing; 3. Let FHA be strengthened as an agency for research, for stimulation, and for financing large-scale operations; 4. Let private capital on a sound investment basis build large-scale planned communities which are to be managed as income-producing properties which are inherently as near blight-proof as is possible to contemplate.

One of the obvious hurdles to the above is to induce private capital to think of housing in a new way. It has in the past thought of housing as a speculative gamble, to be produced and sold at once or produced for the sake of the unearned increment in the natural appreciation of real estate values. Instead, in England, housing is looked upon as a long-time carefully produced investment to bring a modest, but regular return.

*Wednesday, July 28.*—Robert D. Kohn thinks it will be a shame if we cannot find some way to keep alive the impulse to give a more wide-spread training in design since as has been offered by work relief activities. If it is true that prosperity is rapidly overtaking us, does this mean that we shall no longer be able to afford the "extraneous" of offering training to ordinary everyday people in line, form, color, music, drama, organized play and the dances? If we can afford to spread the seeds of culture in the community at large? Mr. Kohn believes that the way to keep alive the good elements of this depression effort is to integrate and co-ordinate the many educational organizations in the wide field of the activity in some way to the public educational system.



*Friday, July 30.*—Carleton W. Adams, president of the West Texas Chapter, got in his chest recently a few thoughts on the contractor: "Contractors are men that do not know the meaning of the word 'contract'. They are always extending, reaching, and out, and building up and up. They are men who must expand or bust; and they sometimes do expand and bust; but they never by any chance contract.

"Contractors' special words are 'extension,' 'expansion,' and best of all, the very special word, 'extra.' If they were called 'extractors,' it would be more appropriate."

*Saturday, July 31.*—I see that another woman architect of London has come through as winner of a competition—Miss Drew, who with Mr. Allison won the Dawlish Competition. It is the first feminine victory since Miss Scott's win of the Shakespeare Theatre at Stratford





PHOTO: SAMUEL GOTTSCHO

ESTATE OF WARREN WRIGHT, MIAMI BEACH, FLORIDA  
 MARTIN L. HAMPTON, ARCHITECT

REMODELED GREENHOUSE  
 ESTATE OF MRS. CHARLES PLATT  
 WAPPINGERS FALLS, N. Y.

## SWIMMING POOLS

WITHIN the past few years swimming pools have become almost standard equipment for residences in the higher price range. Their design and treatment has resulted in many and varied solutions, from the most formal to the informal, from remodeled greenhouses to abandoned gas storage tanks. When made an integral part of the residence, their treatment is frankly that of swimming pools, depending little on landscaping. In instances where the pool is isolated from the main house and placed in natural surroundings, its treatment demands the combined talents of architect and landscape architect. The following four pages present a variety of successful solutions of the swimming pool problem.

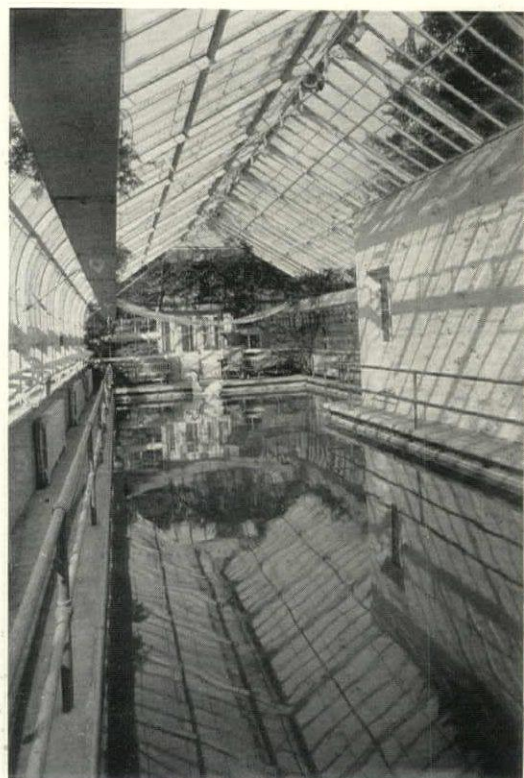
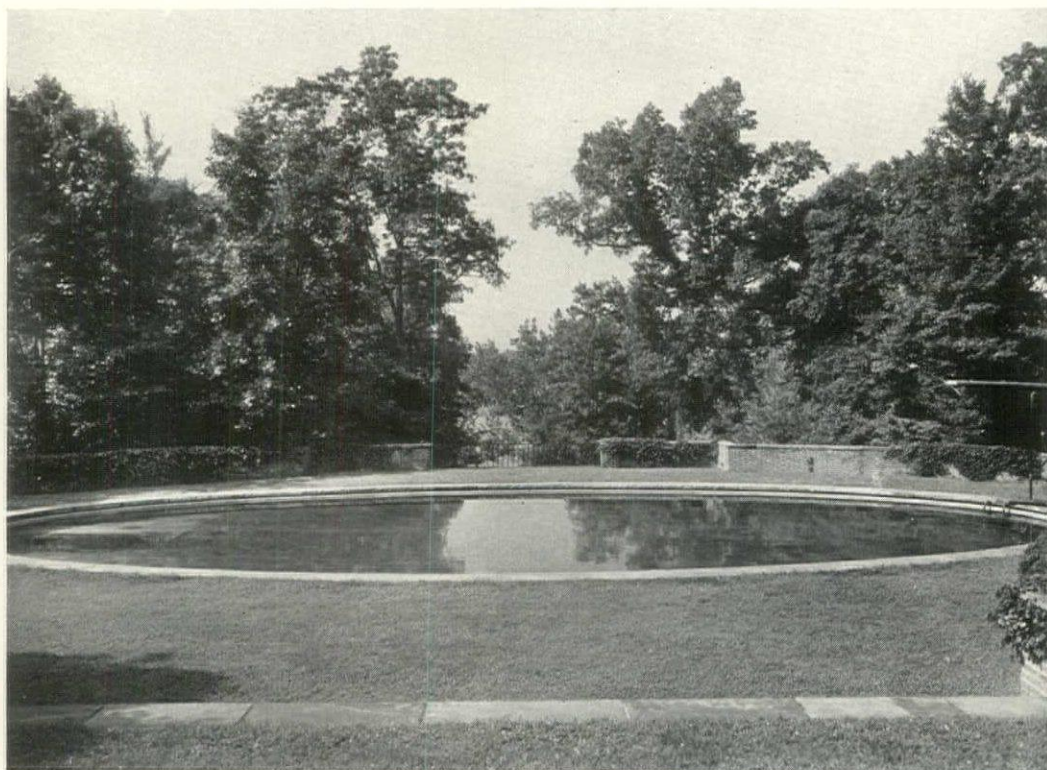
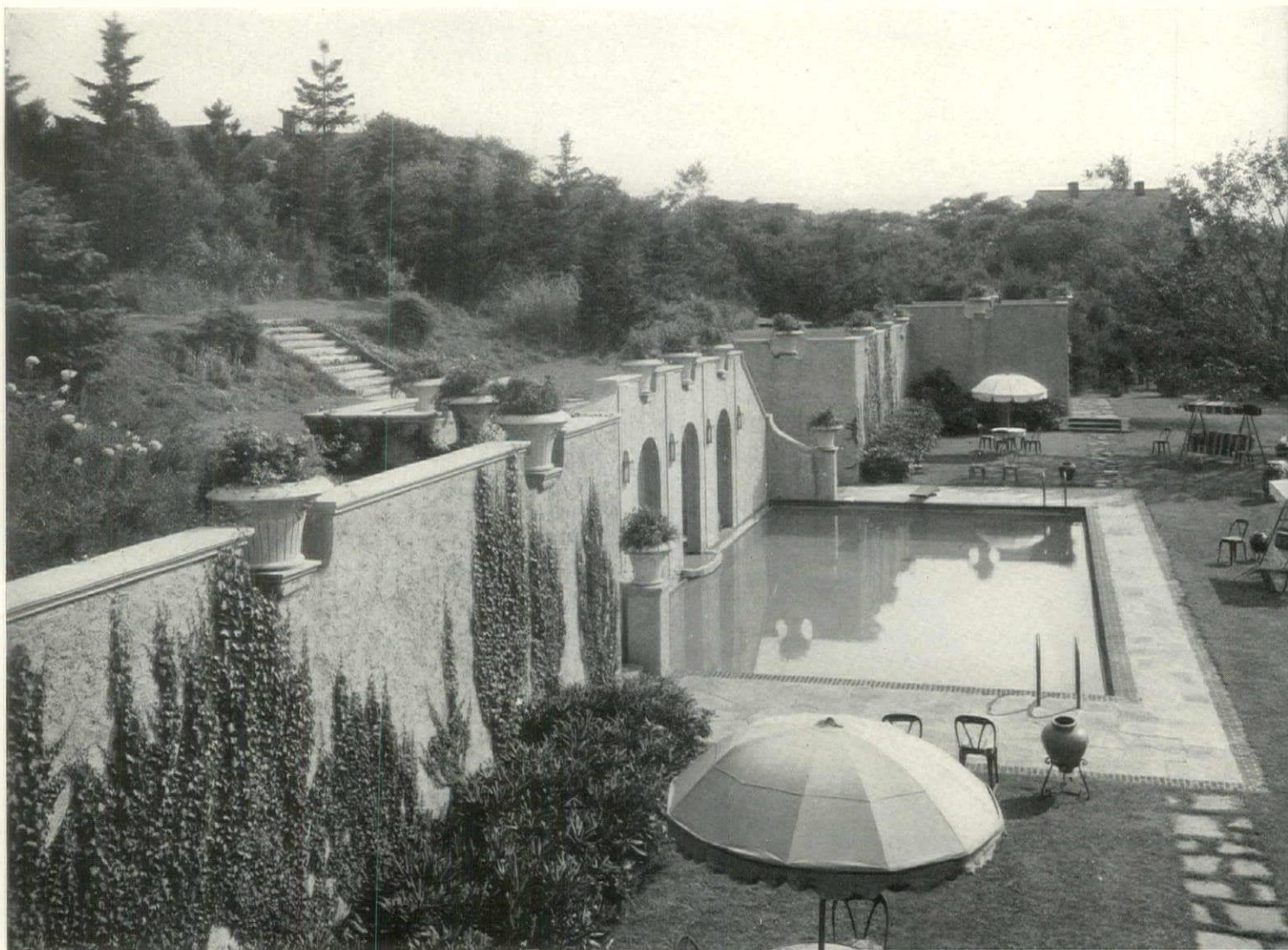


PHOTO: HUBBARD



PHOTOS: SAMUEL GOTTSCHO

ESTATE OF S. FULLERTON WEAVER,  
EAST HAMPTON, LONG ISLAND  
SCHULTZE & WEAVER, ARCHITECTS  
JACOB JOHN SPOON, LANDSCAPE  
ARCHITECT

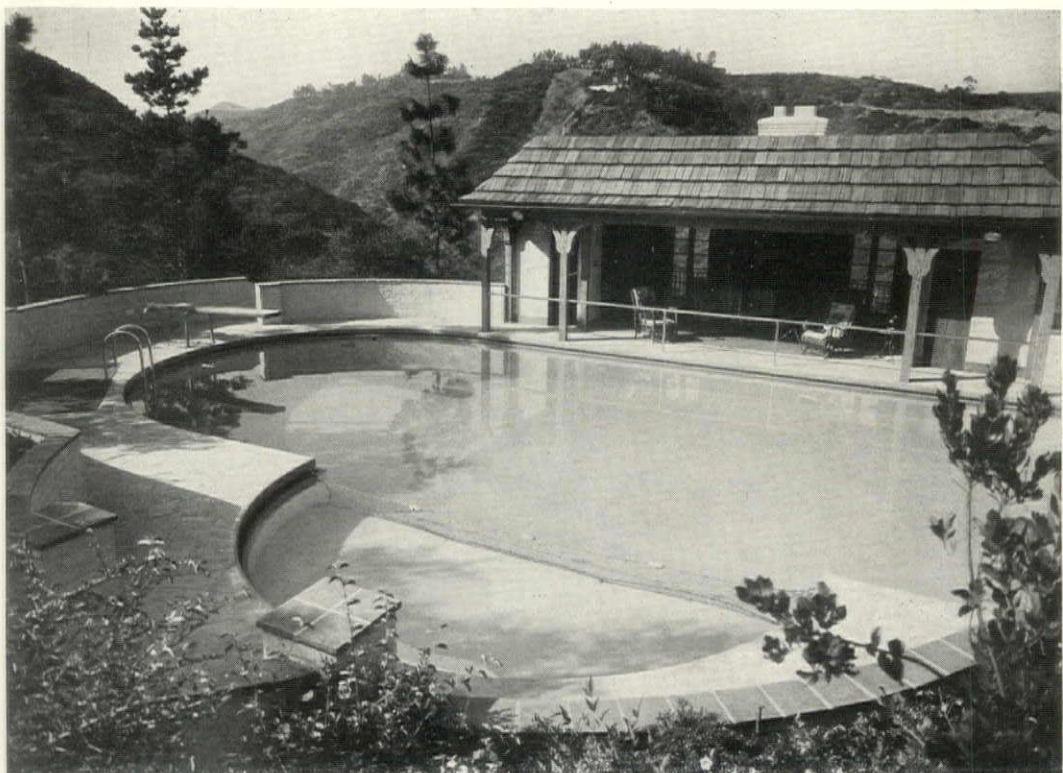
ESTATE OF COL. A. E. PIERCE,  
WARRENTON, VIRGINIA  
VITALE & GEIFFERT, LANDSCAPE  
ARCHITECTS

## SWIMMING POOLS



PHOTO: SAMUEL GOTTSCHO

STATE OF JOHN C. HORNING,  
MIAMI BEACH, FLORIDA  
MARTIN L. HAMPTON, ARCHITECT



STATE OF WARNER BAXTER,  
SANTA MONICA, CALIFORNIA  
HARRY E. WERNER, ARCHITECT

**SWIMMING POOLS**

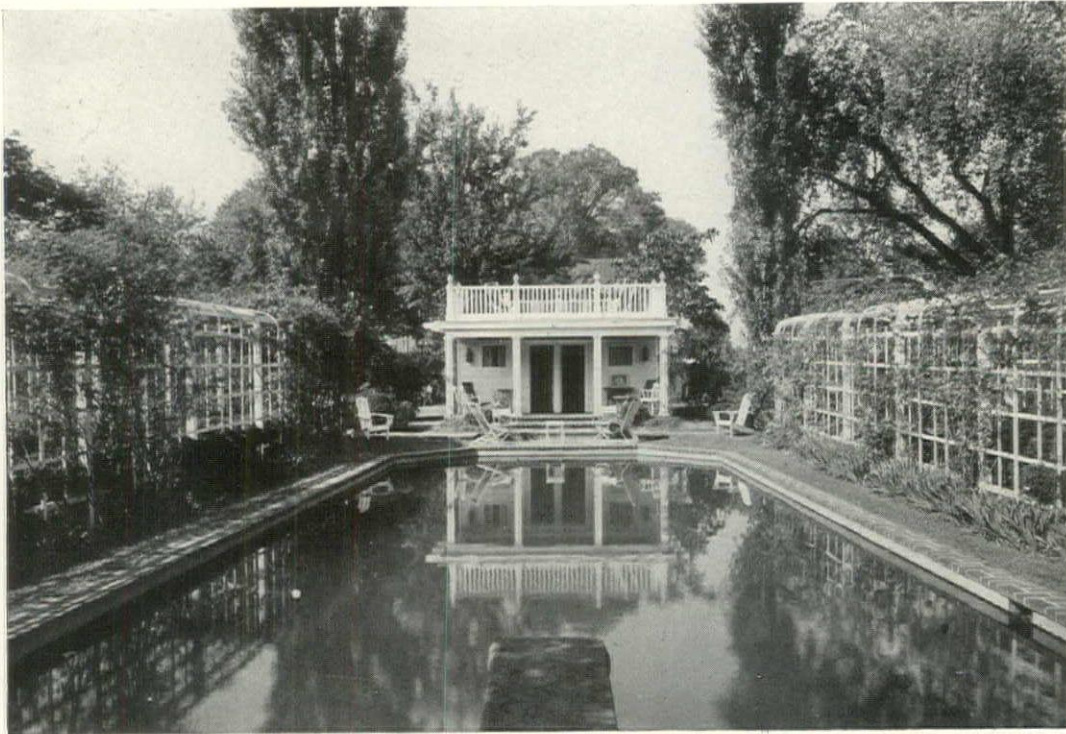


PHOTO: HUBBARD

ESTATE OF PHILIP D. LAIRD,  
NEW CASTLE, DELAWARE



ESTATE OF MARSHALL FIELD,  
HUNTINGTON, LONG ISLAND  
TREANOR & FATIO, ARCHITECTS



PHOTO: SAMUEL GOTTSCHO

## SWIMMING POOL



PHOTO: SAMUEL GOTTSCHO

RESIDENCE OF COL. L. J. BALSAN,  
 PALM BEACH, FLORIDA  
 HENRY H. HOBBS & FATIO, ARCHITECTS

COMMUNITY POOL,  
 WILKES BARRE, PENNSYLVANIA  
 WILLIAM H. THOMPSON,  
 ARCHITECT



PHOTO: HUBBARD

**SWIMMING POOLS**

# SWIMMING POOLS—2—Equipment

This, the second of two sheets on swimming pools, contains data on sanitation and other pool equipment. For planning and construction data see T-S.S. Serial No. 86, "Swimming Pools—1—Design Data."

## SANITATION

Some form of water purification is required in all swimming pools. Most sanitary codes have definite regulations; consult local authorities.

**Bathing load.** Pool capacity should be checked to insure compliance with data in diagram, "Sanitation—Recirculation System." If intermittent rather than continuous sterilization of pool water is used, allow approximately 1,000 gal. per 7 persons between sterilizations (see plumbing diagram below).

Bacterial quality is usually specified in state or local sanitary codes.

**Methods of operation are three:** fill-and-draw, continuous flow and recirculation, the names being self-explanatory. In *fill-and-draw systems* disinfectant is usually omitted; method is uneconomical, tends to become unsanitary and should be condemned. *Continuous flow method* usually employs disinfectant, added intermittently or continuously; is expensive unless a

constant source of cheap water is available, and can be entirely satisfactory as to sanitation. *Recirculation method* is most common. Pool water is circulated through filters (with or without addition of make-up water), disinfected, and returned to pool. Operation may be continuous or intermittent depending on bathing load.

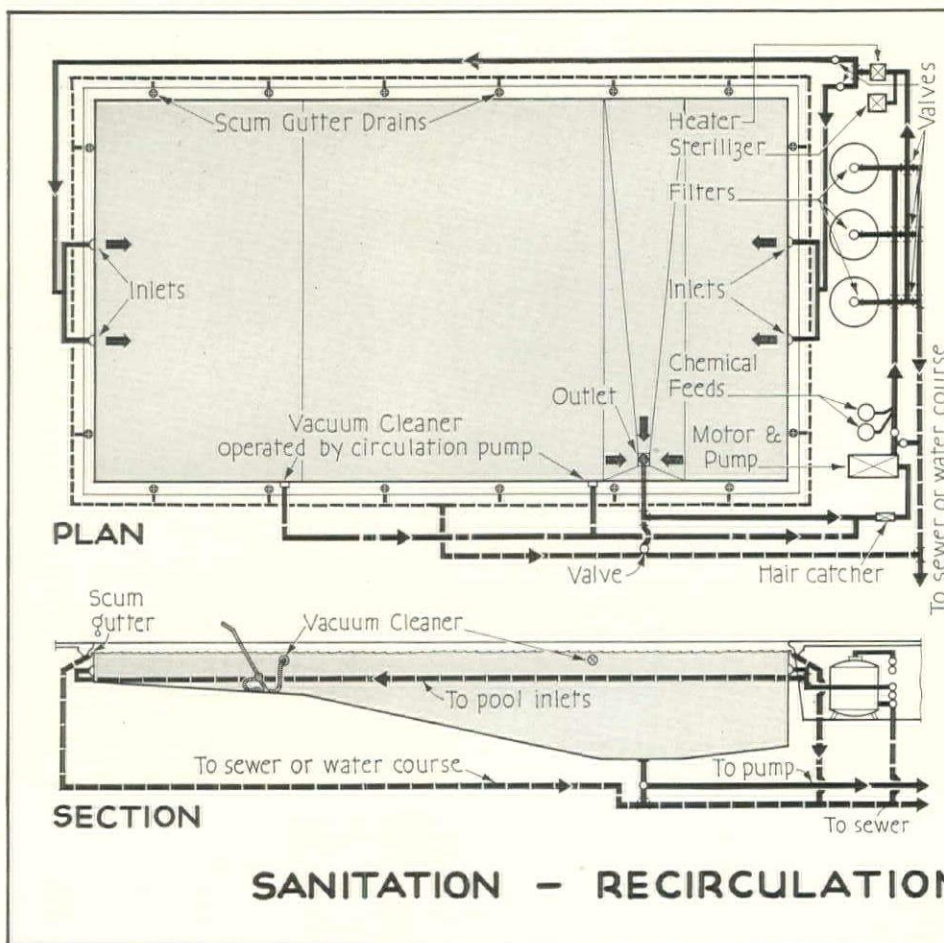
**Sterilization** should be done after filtering and is accomplished by one of four methods shown in the diagram. *Chlorine method:* Any one of several forms of chlorine is added to filtered water by-passed through a chlorinator and back into the pool supply. Chlorine should not be added by hand directly to pool water as thorough distribution is necessary. Continuous automatic operation is preferred. *Colloidal silver:* Operated by ionizing pure silver electrodes by means of direct electric current and adding the resultant colloidal silver to by-passed water similarly to chlorine method. Intermittent operation is possible as silver remains effective in suspension in water for several weeks. *Ozone* and *ultra-violet* methods are not commonly used commercially in U. S.

**Equipment** necessary for pressure filter systems is shown in its proper order in the diagram. Additional items not always re-

quired include: one additional filter (for greater flexibility); sight glasses to be set into line from filter to sewer for observing cleanliness of filter discharge; recirculation pumps for "back-washing" filters and thus cleansing them; rate of flow indicators and controllers for filters. An alternate to the pressure filter is the gravity system, which may be more satisfactory when water level is higher than filter level. A swimming pool (or sanitary) engineer should be consulted. Built-in *vacuum cleaners* may be omitted if portable equipment is provided. *Heaters* for tempering the pool water are usually of the indirect type, steam operated, set into the discharge line between the sterilizer and the pool inlet. Many different types of equipment are manufactured, both as units and as complete systems.

## LIGHTING

Pools, particularly commercial and indoor types, may be lighted for night use by overhead or submerged reflectors, or both. Overhead lighting is satisfactory alone if pool lining is highly reflective. Submerged lighting provides greatest safety for swimmers and permits use of colored special effects. Several kinds of overhead standards and "wet" or "dry" niche submerged projectors, as shown in the lighting diagram, are available.



## TYPES OF STERILIZERS

1. Chlorine gas, liquid or hypochlorite (most common)
  2. Colloidal Silver (see text)
  3. Ozone
  4. Ultra-violet ray
- } (not commonly used)

## FILTERS

Generally batteries of 3 to permit cleaning 1 while 2 are operating. Solid matter must be coagulated by adding alum or other chemicals before water enters filters. Soda ash added to preserve alkalinity; Copper sulphate to kill algae. To determine Size and No. of filters, allow 3 gal. per Sq.ft. of filter area per minute.

## BATHING LOAD

Desirable Max. = 20 persons per load gallons of clear water

## DAILY TURN-OVER (complete replacement of pool water with clean water)

- Private pools : 1 per day
- Semi-private : 2 per day
- Public pools : 3 per day

# SWIMMING POOLS—2—Equipment

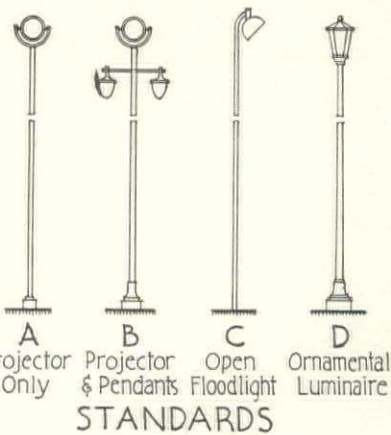
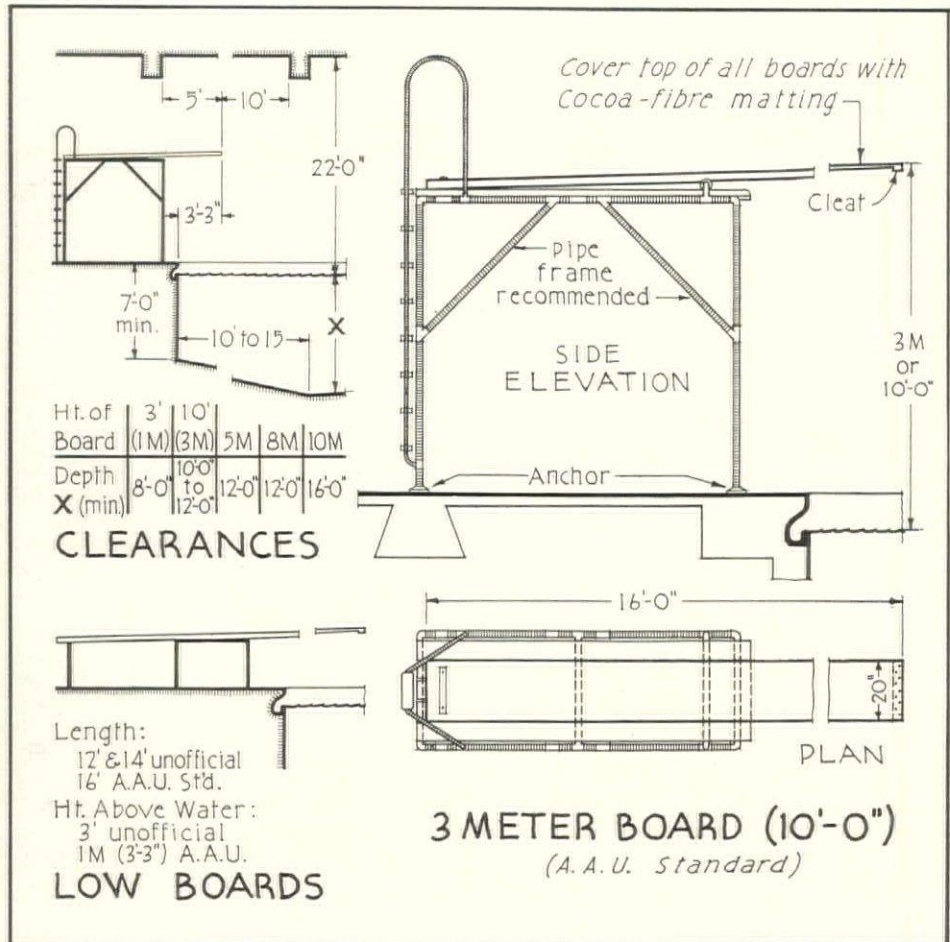
## AMUSEMENT EQUIPMENT

**Diving boards** for competitive sport should measure 1 meter (3'-3") and 3 meters (10'-0") from water line to free end of board, and should be 16'-0" long. **High platforms** for competition should be immovable, should measure 5 meters by 2 meters (minima), and should be erected in three heights: 10 meters, 8 meters and 5 meters, variations of 10% being permitted. Each platform should project 1 meter beyond platform (or pool edge) immediately below it. Unofficial boards, and clearances for all types, are shown in the diagrams. Surface of boards, platforms and racing take-off should be covered with cocoa-fiber matting.

Slides may be provided in connection with swimming pools; and sand beaches or boxes with wading pools only.

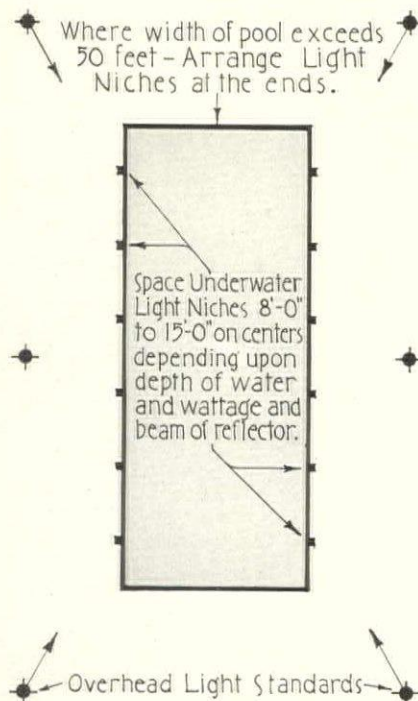
## BATH HOUSE EQUIPMENT

In large public pools all possible sanitary precautions should be taken. Bath-houses should be equipped with showers and sterilizing foot-baths, and possibly with straddle-showers located so as to make their use compulsory before entering the pool. The practice of providing "wet" toilets for bathers and "dry" toilets for non-bathers, is recommended.



STANDARD	A	B	C	D
Watts Min.	0.5	0.5	0.5	0.6
Per Sq. Ft. Rec.	1.0	1.0	1.0	1.25
Max.	Variable			
Max. Spacing	120'	120'	120'	60'
Mounting Ht.	25'-35'	25'-35'	25'-30'	17'
Projector Wattage	750	750	750-1000	1000
	1000	1000	1500	

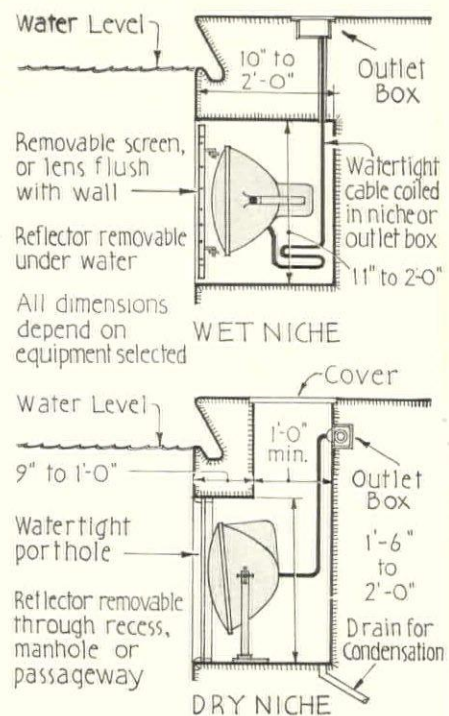
## OVERHEAD LIGHTS



## TYPICAL LAYOUT

# SWIMMING POOL LIGHTING

(Not to Scale)



## SUBMERGED LIGHTS

(250 to 1000 watts each)

Depth, waterline to  $\phi$  fixture: 1'-3" to 1/2 depth of pool, depending on wattage & type of fixture

# SWIMMING POOLS-1-Design Data

This sheet, one of two on swimming pools, gives planning and structural data on various types of pools. Equipment is discussed on T-S.S. Serial No. 87, "Swimming Pools-2-Equipment."

## PLANNING FACTORS

**Control of bathers** is necessary in all types of pools to assure sanitary conditions and for safety. *Public pools* (commercial or institutional) are preferably fenced or otherwise enclosed and separated from all adjacent areas. In *semi-private pools* (as for clubs) where patronage is limited, enclosures may be omitted depending on the degree of privacy. In both above types opportunity should be provided for inspection and routing of bathers. *Completely private* pools may be more free in design. Access to all types should be at shallow end.

**Segregated areas** within the swimming pool, or in separate pools, should be provided for diving and swimming. *Wading pools* should be entirely separate. Wading pools should be from 8 in. to 1 ft. deep and inlets should be above water level.

**Size of swimming pool** should be first computed from methods given in the diagrams on this sheet. Surface area thus obtained should be checked with bathing load per 1000 gals. of water as shown on T-S.S. Serial No. 87. A.A.U. recommendations for the maximum commercial pool are: 165 ft. x 70 ft.; minimum depth 3 ft. at sides, greatest depth at center; if greater capacity is required, additional pools should be built for economical operation, maintenance and control.

**Surrounding areas.** *Walkways* are preferably masonry. Recommended sizes are shown in diagrams. *Beaches* or *grass plots* are not recommended inside swimming pool enclosures.

## DESIGN AND CONSTRUCTION

**Sidewalks and bottom.** A competent engineer should be retained to insure proper structural design and reinforcing. Material should be reinforced masonry. Indoor pools may consist of steel shells lined with thin reinforced masonry.

Expansion joints should be provided 50 to 60 ft. (max.) on centers in walls and bottom. Structural joints should be reinforced to permit transmission of loads without settling.

**Watertightness** may be obtained in concrete or concrete-backed pools by proper specification and supervision of concrete. Reinforced unit masonry and masonry supported by steel shells should be provided with membrane waterproofing. Indoor pools

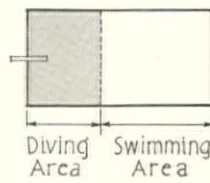
located over occupied spaces should be provided with insulation drip pans and condensation gutters.

**Drains** from pool should be multiplied or protected by baffle plates if drainage system causes uncomfortable "vortex" current. Water from walkways should not be permitted to flow into pool. Sub-soil drains with open joints should be provided spacing depending on soil conditions.

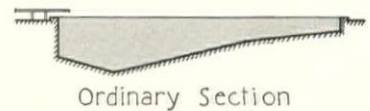
**Curb and gutter details** vary, the "goose-neck" safety gutter curb or "starting platform" dimensions for racing must be maintained as noted in diagrams.

**Projections** into swimming space should be avoided. *Ladders* should be flush or removable bronze type if possible; *hand holds* or *rails* should not project beyond curb-face unless removable.

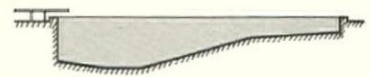
**Finish** of pool interior should be smooth and light in color for cleanliness. Satisfactory finishes are: Tile, terra-cotta, enameled brick or white cement troweled smooth or painted with specially prepared materials. Non-slip finish of wall ways, curb-tops and treads of ladders is essential.



TYPICAL RECTANGULAR PLAN



Ordinary Section

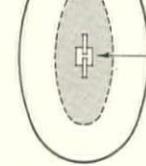


Recommended A.A.U. Standard

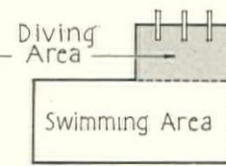


Pat. Pre-cast Slab Construction

TYPICAL SECTIONS (Rectangular Pools)



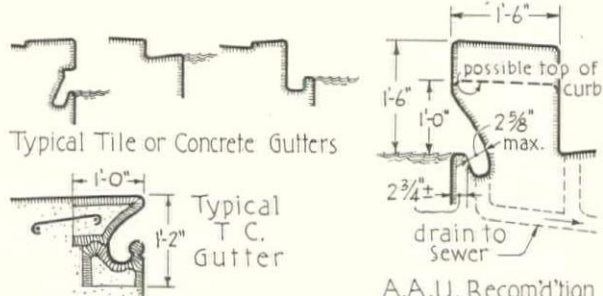
ROUND OR OVAL PLAN (Large Public Pools)



L-SHAPED PLAN (Large Public Pools)

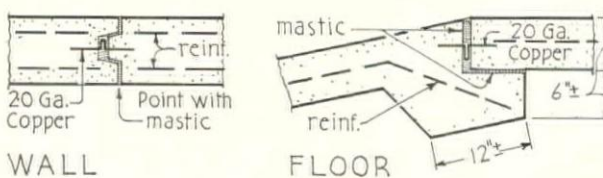


IRREGULAR NATURALISTIC (Private)



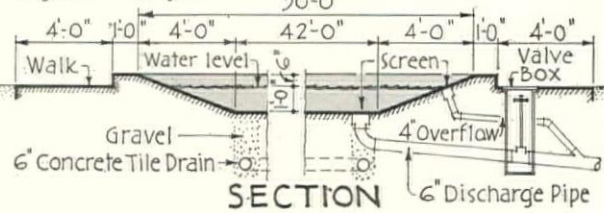
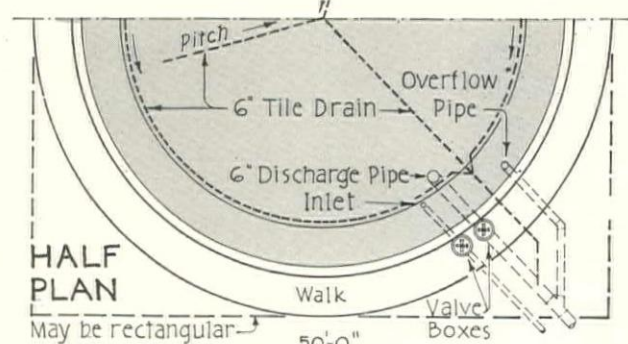
NOTE: In no case should water from walks enter pool

### TYPICAL GUTTERS & CURBS



### WALL FLOOR LOAD-TRANSMITTING EXPANSION JOINTS

(No Scale)



### TYPICAL 50' WADING POOL SECTION





## BOOKS FOR THE ARCHITECT'S LIBRARY

**MEMOIRS OF THE AMERICAN ACADEMY IN ROME. Vol. XIV.** Preface by George K. Boyce. 112 pages of text; 41 pages of plates, 10 by 14 inches. Illustrations from photographs and drawings. Printed in Austria. Paper binding. New York: 1937: American Academy in Rome. \$5.

This latest volume in a notable series recording some of the more advanced work of the Lararia of Pompeii. The Lararia is adopted as a convenient term for describing the house shrines of Pompeii through which becomes possible the study of the ancient Roman domestic religion.

**ART IN FEDERAL BUILDINGS. Vol. I: Mural Designs, 1934-1936.** Text by Edward Bruce and Forbes Watson. 310 pages, 13½ by 10¾ inches. Washington, D. C.: 1936: Art in Federal Buildings, Inc. \$6.50.

Here is a volume marking the beginning of a new era in America. Certainly heretofore there has been no such official recognition of art as an essential part of our public buildings. Neither has there heretofore been such a democratic method of selecting the artists and the art that is to embellish our post offices, city halls, and court houses. The system of anonymous competitions developed by the Treasury Department Art Projects, under Edward Bruce, is one that not only marks a new epoch in the discovery of talent among the younger artists, but has also been suggested as a model for competitions in the architectural field. Here are excellent reproductions of a wide variety of murals as produced in two years. An appendix showing simple architectural details of the settings for these paintings is a valuable addition. Forbes Watson contributes an excellent section in which the history and achievement of mural painting in America is brought into sharp focus.

**INTERIOR DECORATING. "How To Do It Series." By Duncan Miller.** 80 pages, 7¼ by 9¾ inches. Illustrations from photographs and drawings. Printed in Great Britain. New York: 1937: The Studio Publications, Inc. \$3.50.

After laying the elementary foundations of design in interior decoration, the author comes at once to the practical technique of achievement. The reader will be shown what brushes and other tools to use, a great deal about fabrics and their cutting, practical rules for color harmony, modern lighting technique, and the like.

**HANDBOOK OF INTERIOR WIRING DESIGN.** 80 pages, 8½ by 11 inches. Illustrations from photographs and line drawings. Pamphlet binding. New York: 1937: Prepared by Industry Committee on Interior Wiring Design. \$1.

A book that has been compiled after careful study and deliberation by a representative committee of the electric wiring and equipment industry. This is no mere boiling down of a series of specifications for residential, commercial, and other work, but rather a concise list of practical requirements and suggestions for the best practice, accompanied by an outline of the ways and means of insuring these. The booklet is sponsored by many of the larger associations and institutions concerned with the use of electricity.

**FORESTS, TREES, AND WOOD. By Francis E. Tustison.** 96 pages, 6 by 9 inches. Illustrations from drawings and photographs. Stiff paper binding. Peoria, Ill. 1936: The Manual Arts Press. 65 cents.

The author is in the Department of Physics and General Mechanics, Stout Institute, Menomonie, Wis., and has prepared this little volume particularly for the use of students in wood working.

**HOUSE WIRING. By Thomas W. Poppe and Harold P. Strand.** 256 pages, 4¼ by 6½ inches. Illustrations from diagrams and photographs. Linen paper binding. New York: 1937: The Norman W. Henley Publishing Co. \$1.

An elementary handbook prepared for the electrician, his helper, and his apprentice.

**HANDWERKSMOSEL. Formgebung und Konstruktion. By Hans Beblo.** 36 pages, 10¼ by 14¼ inches. Illustrations from photographs and diagrams. Printed in Germany. Stiff paper binding. Stuttgart-W: 1936: Julius Hoffmann. Obtainable in America from Architectural Book Publishing Co., New York City. \$1.80.

This is a carefully detailed presentation of joinery methods used in handcraft furniture. The text is in German.

**PROFILES OF GREEK MOULDINGS. Two volumes—one of text, one of plates. By Lucy T. Shoe. Preface by Gorham Phillip Stevens.** 188 pages of text, 15 by 21¼ inches, illustrated by line drawings; 79 plates with illustrations from drawings and photographs. Published for The American School of Classical Studies at Athens. Cambridge, Mass. 1936: Harvard University Press. \$10.

Here is a beautifully presented collection representing the most extensive assemblage of molding profiles from the Greek world of the various periods. The profiles have been made with painstaking accuracy, and are clearly shown at full size. Any architect interested in reclaiming the exquisite subtlety of the Greek moldings in modern work will find these volumes practically indispensable. The enormous amount of research and labor involved was made possible through the fact that it represents Miss Shoe's offering for her doctor's degree.

**WITHOUT BENEFIT OF ARCHITECT. By Frazier Forman Peters.** 212 pages, 5¼ by 7½ inches. New York: 1937: G. P. Putnam's Sons. \$2.

No one should shy at this book because of its title. It is by no means an argument for doing without an architect. Rather it is a strongly implied argument to show that any one who is foolish enough to undertake such a course is laying up for himself troubles to an extent of which he has no conception. Mr. Peters is an architect himself. He writes well, and, if somewhat dogmatically, it is the more convincing.

**REAL PROPERTY INVENTORY OF ALLEGHENY COUNTY. Preface by Ralph J. Watkins.** 312 pages, 8½ by 11 inches. Illustrations from maps, with folding map of the City of Pittsburgh, 1936. Pittsburgh: 1937: Bureau of Business Research, University of Pittsburgh. \$5.

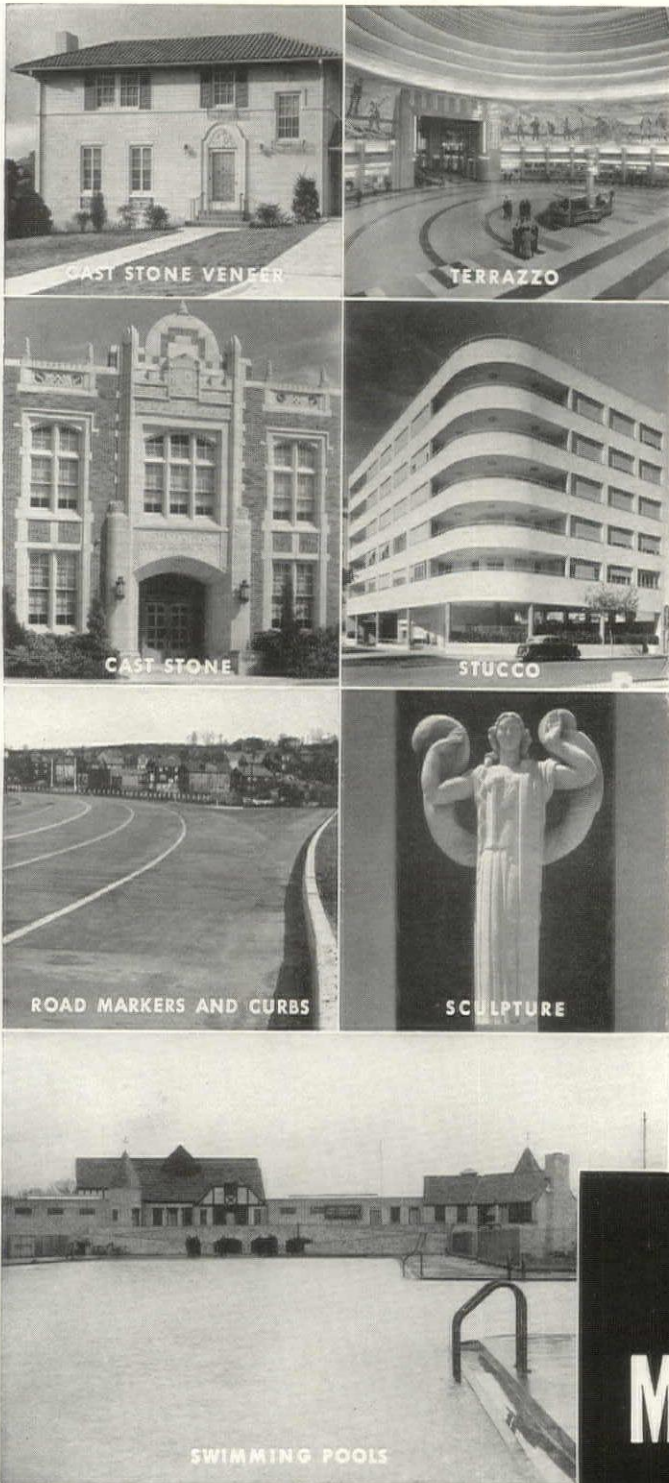
A survey of housing and related conditions conducted, with Federal Work-Relief Funds, in co-operation with the Federal Civil Works Administration of Pennsylvania, the State Emergency Relief Board of Pennsylvania, the United States Department of Commerce, and the Federal Works Progress Administration.

**LONDON: The Unique City. By Steen Eiler Rasmussen. Introduction by James Bone.** 404 pages, 6¼ by 9 inches. Illustrations from photographs and drawings. Printed in Great Britain. New York: 1937: The Macmillan Co. \$4.

Probably the best way to get a detached and impartial view point of a city is through the eyes of a foreigner. Steen Rasmussen is a Dane from Copenhagen, who has found in London an appeal that has drawn him to visit that city year after year. The reasons why London is a scattered city rather than a concentrated city, such as Paris and Vienna, are matters of concern to him and take him far back into history. Rasmussen ends the volume with a passionate appeal that London shall not sell its birthright for the cottage, for a block of flats, such as are, in Rasmussen's opinion, "constructed slums."

**NEW CHURCHES ILLUSTRATED. Foreword by Cecil Harcourt Smith.** 152 pages, 9 by 12¼ inches. Printed in Great Britain. London: 1937: Incorporated Church Building Society. Paper binding \$1.50; cloth, \$2.

England has its Incorporated Church Building Society, founded 1818, which aids financially and otherwise in the building, enlarging, and repairing of church buildings. Here is a collection of churches that have been built in the last ten years, brought together in photographs and floor plans from their previous publication in various English architectural journals. The date of erection, cost of structure and of furniture and fittings, the type of construction, and number of sittings, are given in connection with each example illustrated.



At the left are shown seven ways in which Medusa White Portland Cement (Plain or Waterproofed) can be used to improve construction.

**STUCCO** Medusa White Portland Cement stucco gives an almost unlimited variety of color and texture combinations with which to create individuality, charm and character in stucco homes. Waterproofed Medusa White Portland Cement repels all moisture, protecting the stucco against staining and the deteriorating action of frost and freezing of absorbed water.

**CAST STONE** Medusa White is internationally used in cast stone building trim. This use of Medusa White gives the architect or builder almost unlimited possibilities for ornamenting brick, stone, concrete or stucco buildings because it can be cast to meet specifications. Medusa White cast stone is also used as a veneer for houses or buildings.

**TERRAZZO** Many of the most colorful and magnificent terrazzo floors in this and other countries are made with Medusa White Portland Cement (Plain or Waterproofed) white or tinted, used as a matrix for beautiful colored marble chips. No matter how colorful or how intricate the design, a terrazzo contractor using Medusa White, Plain or Waterproofed, can meet the requirements.

**SCULPTURING, ROAD MARKERS, CURBS AND SWIMMING POOLS** Medusa White is widely used for making magnificent pieces of sculpturing, for white road markers and curbs and for the finishing coat in outdoor swimming pools.

Send the coupon below for complete specifications.

Use  
**MEDUSA WHITE**  
**THESE 7 WAYS**

- Medusa White cast stone veneer house. John Hagy, builder.
- Terrazzo floor in the Cincinnati Union Terminal. Architects, Fellheimer and Wagner.
- Medusa White cast stone trim on Dallas, Texas, modern school. Architects, Bryant and Sharp.
- Medusa White stucco apartment house, Buenos Aires. Architects, Sanchez, Lagos, De La Torre.
- Medusa White road markers and curbs on Route 6 near Palisades, New Jersey.
- Sculpturing in Medusa White, 1937 Pan American Exposition. Sculptor, Raoul Josset.
- Swimming pool with a lining made with Medusa White Portland Cement. Architect, Eric E. Hall.

MEDUSA PORTLAND CEMENT COMPANY  
1005 Midland Building, Cleveland, Ohio

Gentlemen: Please send me complete specifications on the use of Medusa White Portland Cement.

Name.....  
Address.....  
City..... State.....

# TECHNICAL DIGEST

## KEY TO PRESENTATION

Typical reference: 15 N'36:14-26 gptv

This indicates: Issue of November 15, 1936, pages 14 to 26 inclusive, presented according to the following key:

d—detail drawing    g—graph    p—plan  
s—section            †—text    v—photo view

Accordingly, gptv means graph(s), plan(s), text and photographic view(s) in the article mentioned.

## ACOUSTICS

**Theater acoustics today.** (C. C. Potwin). *Better Theaters*. 29 My'37:41-42 pt

Part I: Auditorium Form Factors. Basic nature of acoustics in theater design—even extends to lot selection.

Size and shape of the auditorium. Essential to maintain low cubage per seat for best results with reproduced sound. Best room proportions for distribution of sound energy and control of reflections have been found to be:

Length =  $2\frac{1}{2}$  times height.

Width =  $1\frac{1}{2}$  times height.

The article also describes defects and correction of long auditoriums by splays to avoid parallel walls.

**Acoustics of a broadcasting station.** (C. M. Mungler). *Architect & Engineer*. Je'37:39-43 tv

Description of new acoustical features of station KFWB in Hollywood.

The now familiar theory of live and dead ends of room was discarded for (1) selective absorption by use of a variety of materials, and (2) use of carefully designed contour ceilings and wall splays.

In one studio the latter elements resemble the bellows of an accordion, surfaced with wood, well-braced and backed up with a variety of acoustic absorbers. Another room uses six different wall materials. There are also notes on measures taken for sound insulation.

## AIR CONDITIONING & HEATING

**Air ducts of metal lath with treated plasterboard soffits.** (H. J. Hagen). *The Plastering Craft*. 15 My'37:18-19 & 4p. dtv

This installment deals with ducts finished on outside with plaster, with duct construction of metallated rocklath (plaster finish), and with thermal insulation. There are illustrations of corridor ducts, ducts in angles of rooms, curves, dips and suspended ducts.

**How to build to save fuel.** (G. L. Larson). *American Builder*. Je'37:76-77 gt

Calculation of economic values of nine different stages of thermal insulation as applied to an eight-room house. Final type consists of storm sash and doors and four-inch insulation on ceiling and walls.

Cost tables include total heat loss, percent saving, square feet of hot water radiation, oil per season, oil cost, fuel saving, cost of construction, interest and depreciation, net saving, net percent return on investment, years for net fuel saving to pay off investment, cost of heating plant necessary, and reduction in plant cost.

**Panel heating.** (A. Gini). Casabella. (Milan). Ap'37:36-39 dgtv

Discussion in Italian of technical articles and correspondence, giving details, graphs, and views of panel heating installations under construction.

**CO, CO<sub>2</sub> & Draft.** (G. W. Bohn, from Oil Heat). *Real Estate & Bldg. Management Digest*. Je'37:20 †

Every cubic foot of excess air or draft in a furnace decreases the heat delivered. Complete combustion of one gallon of oil is secured with about 1900 cubic feet of air. The stack gas then analyzes 14-15% CO<sub>2</sub> and a trace of the dangerous CO. Less air than this increases CO and also decreases heat.

These facts are advanced in support of the wider use of automatic draft regulators.

**What will the fuel dollar buy?** (D. H. Clary, from The Coal Dealer). *R. E. & Bldg. Management Digest*. Je'37:20 †

Tests of coal from 500 American fields by the U. S. Bureau of Mines show an average overall efficiency of 58% (ratio of heat developed to total contained heat of fuel). Anthracite rates highest up to 71%, semi-bituminous lowest down to 51%. Eastern bituminous high was 65%. Stokers give highest efficiencies, and hot water is 3% more efficient than steam.

**Fans & decibels.** (From Power). *R. E. & Bldg. Management Digest*. Je'37:26 †

The average ear does not hear sounds below 22 decibels in intensity and fans with a noise level of 40-50 decibels are considered quiet. Blade noise is proportional to the square of the velocity, and low speed fans are consequently quieter. The rest of the mechanism, through research, is also becoming more quiet.

## CONSTRUCTION

**Notes on inspection of structures in Europe.** (A. L. Boase). *American Concrete Institute Journal*. My-Je'37:521-540 dstv

Description and details of Freyssinet methods and applications (including Marine Station at Le Havre, supported by 100-ft. hydraulically-molded hollow piles). Notes on long span hollow-membered concrete bridges, continuity in buildings (Highgate Apartments, Lon-

don; Hotel Astoria, Copenhagen), architectural concrete, industrial and commercial buildings (including examples of railroad stations, shops, piers and hangars).

**Reinforced brickwork.** (R. Fleming). *Architect & Engineer*. Je'37:33-35, 43 †

A review of what has been written of this type of construction. This is in extended, annotated bibliography form readily constituting a history and summary of technical progress in all countries.

The great engineer Brunel was perhaps the first to use R. B. M. (Reinforced Brick Masonry), in the Thames River Tunnel (1825), but the real pioneer was A. Brebner, who laid nearly three million square feet of reinforced brick in India (1920-1923), and who subsequently wrote a two-volume treatise on its use.

**Sheathing with plywood.** (N. S. Perkins). *American Builder*. Je'37:142, 144 tv

Brief notes on recent U. S. Forest Products Laboratory tests on thin fir plywood sheathing which indicate that 5/16 inch thickness is stronger and cheaper than other methods. The 4 x 8-ft. panel cost only 40-60% as much as diagonal sheathing to erect. There is no cutting except for openings, no 30% waste allowance and fewer nails are required. Even the 1/4-inch thickness was found to be 40% more rigid than diagonal sheathing when nailed, and much more rigid when glued to studs.

Plywood has also been found highly satisfactory as a shingle base, being strong, wind-proof and yet permitting "breathing" of water vapor necessary to keep wooden shingles from rotting.

**Industrial buildings.** (F. Masi). Casabella. (Milan). Ap'37:20-27 stv

Brief Italian text. Twenty-five views and sections of industrial construction types, mostly steel trusses and bents.

**Safety in welding.** (R. B. Lincoln). *Welding Journal*. My'37:6-10 stv

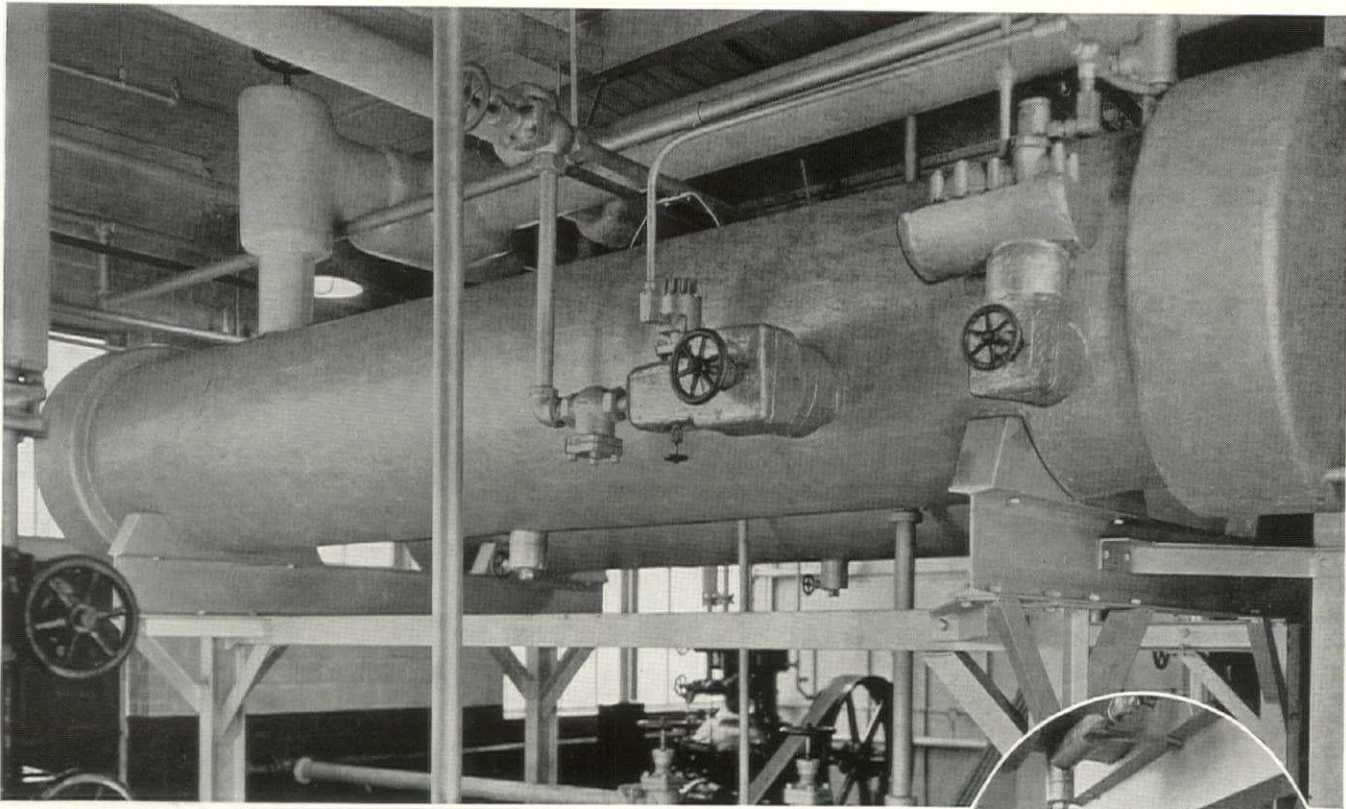
Considers provisions which should be in specifications to insure safety and also describes the welding technique necessary to meet these requirements. Analysis of photos and diagrams of both good and bad welds.

See also **Structural welding mistakes** (M. P. Korn). 15-16 dt

**Welding symbols and instructions for their use.** *Welding Journal* Je'37: 9 p supplement dt

The standard symbols developed by the American Welding Society revised and now recommended to the American

# **CORK** *helps deliver* **CONDITIONED AIR** *in Buffalo's largest installation*

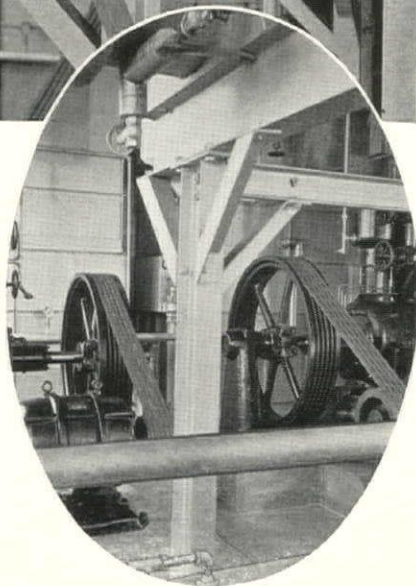


ATOP SATTLER'S BUFFALO STORE, this engine room supplies conditioned air to floors below. All ammonia piping, shell and tube vessels are insulated with Armstrong's Cork Covering. Consulting Engineer: Edward C. Ashley, New York City.

~ ~ ~

**S**ATTLER'S big Buffalo store boasts the city's largest air conditioning installation. 480 tons of refrigeration is supplied by machinery, located in a penthouse on the roof. Conditioning units deliver 165,000 cubic feet of air a minute throughout the store. Efficient operation is assured by insulation with Armstrong's Cork Covering, specified by Edward C. Ashley, consulting engineer, New York City. This cork insulated equipment serves for both summer cooling and winter heating use.

Cork presents a definite barrier to the passage of heat, and keeps refrigeration loss at a minimum. And its natural resistance to moisture assures long life, with continued efficiency in service. Let Armstrong work with you in planning insulation for air conditioning jobs. Write for complete information about Armstrong's Cork Covering and Corkboard Insulation to Armstrong Cork Products Co., Building Materials Division, 926 Concord St., Lancaster, Pennsylvania.



### **VIBRACORK QUIETS MACHINERY**

Although this 120 tons of air conditioning machinery is in constant operation, noise and vibration are not transmitted to the store floors beneath it. This nuisance is avoided by a vibration-absorbing cushion of Armstrong's Vibracork installed under compressors, pumps, and other equipment. The Mollenberg-Betz Machine Company made the installation of Buffalo Forge Company air conditioning units and Frick compressors.

# *Armstrong's* **CORK COVERING**

**CORKBOARD INSULATION**

**VIBRACORK**

Standards Association for adoption as American Standards.

In addition to the descriptive text and symbols there is a typical machine drawing showing their use.

## DESIGN & PLANNING

**Architectural standardization.** (O. P. Bernard). *Journal Royal Institute British Architects*. (London). 22 My'37:742-744 †

Analysis of what the writer terms "assembly objective" and "government of design by a dominant dimension." The former relates to the need for dimensional correlation of the various units and equipment which go into a building; the latter is our old friend unit- or modular-design.

This article puts forward an interesting argument for a factor of seven as the basis of all dimensioning.

**Mathematical design.** (M. Texier). *L'Architecture*. (Paris). 15 Ap'37:137-140 †

A discussion in French of several mathematical bases of design and proportion, including crystallography (crystals illustrate the division of dimensions into exact whole numbers), the concept of the incommensurable as a basis for art, the mathematics of rhythm, the module, and relations gained by use of the compass.

Numerous examples are given from historic buildings.

**Stores, shops & offices.** (F. E. Towndrow, R. L. Stubbs, & B. E. Verstone). *Design & Construction*. (London). My'37:263-289 pstv

Short technical articles on planning, comparative plans of department stores and analysis of a recent example with a "plan digest." Descriptions and views of numerous stores, shops and offices complete this design supplement.

## LIGHTING

**Modern forms and materials for theater lighting schemes.** (F. M. Falge). *Better Theatres*. 29 My'37:9-10, 32-33 tv

A review of new devices and their application to theater lighting problems. New reflecting and translucent elements are described, illustrated and definite applications listed for each item.

**Lighting the theater.** (W. D. Riddle). *Better Theatres*. 29 My'37:11-18 dtv

Pictures and captions to describe several features of theater lighting. There are schemes suggested for a front, for a lobby, an auditorium and foyer, using coffers, troughs, louvers and translucent marble. There are also eight views of actual theater lighting solutions.

**Economy and effectiveness in lighting methods and maintenance.** (J. T. Knight, Jr.) *Better Theatres*. 29 My'37:23-26 †

Discussion of elements of illumination. Definitions of terms and methods of lighting. Notes on maintenance and recon-

ditioning of lighting elements with emphasis on theater illumination types.

**Windows and room-lighting.** (E. W. Hummel). *Der Baumeister*. (Munich). Je'37:121-123 dgstv

Brief German text with nine three-dimensional graphs of lighting intensities with various window shapes, in corner and interior rooms. There are other graphs of intensities, diagrams showing the amount of light cut off by differing schemes of muntins, and a short table of reflection factors for colored surfaces.

**Recessed lighting fixtures.** (F. N. M. Squires, from *Electrical Contracting*). *R. E. & Bldg. Management Digest*. Je' 37:4 †

Abstract of an article on the danger due to heat of recessed illumination. Since temperature may reach 320°F. with a single 100-watt lamp, and since dust accumulations are often ignited at lower temperatures, it is imperative to take precautions.

It is recommended that the metal of enclosures be not less than 22 gauge (Nat'l. Board of Fire Underwriters), and that for lamps larger than 25 watts all sides of the box be covered with ¼-inch asbestos board or one inch of rockwool. No rubber covered wire should be closer than four inches, and soldering is taboo.

**New technical developments in lamp making.** *Illuminating Engineering Society Transactions*. Je'37:596-597 †

Ten percent more light output from incandescent lamps without additional current is now possible through the use of a new high efficiency filament. This new lighting element is the culmination of 24 years of continuous research. It consists of doubly coiled wire, 19/10,000's of an inch in diameter. Some idea of the precision necessary is found in the fact that from an original length of 20 inches the filament is reduced to a coiled coil 5/8-inch long. If the coils touched the lamp would short and fail.

The theory of this type of filament is that the greater the concentration of filament the lower the heat loss due to convection currents of the gas charge in the lamp. The gases are necessary to reduce filament evaporation and consequent blackening of bulb.

## MATERIALS & FINISHES

**The atoms that make up metals.** (L. R. van Wert). *Science Digest*. Jl'37:59-62 †

Clear discussion, condensed from a radio talk, of the elements of metallurgy, revealing the inner magic of atomic arrangements which distinguish various metals.

"Metals deform when they are worked by a process of internal crystalline slip . . ." Hardening is effected by increasing the resistance to slip. One

method is to alloy a certain amount another metal, the two kinds of atoms forming a stronger bond. Another way by chemical combination of metals which "some of the dispersed particles find their way along the potential plane of slip and there . . . inhibit free movement" by friction.

**Aluminum-coated steel.** (W. L. Laurence). *New York Times*. 11 Jl'37: Science, p. 7 tv

Recently developed by Prof. C. G. Fisher (Head of Division of Electrochemistry, Columbia University), this latest form of steel has high corrosion resistance, aluminum and the tensile strength of steel. It is said that it will displace tin plate and galvanized iron since it is more resistant to corrosion, acids and high temperatures. (It has withstood 1800°F. for 1000 hours. Tin melts at 450°F., Zirconium at 784°F.)

The new material will be useful for airplanes, automobiles, vibrating machinery of all kinds, and for bridge construction.

**Windmills protect pipe from corrosion.** (From *Industrial Bulletin* of A. D. Little, Inc.). *Heating, Piping & Air Conditioning*. My'37:293 †

Buried steel corrodes at the rate of 100 pounds per year per ampere of electrolytic current. Long pipe lines are now protected by reversing the current flow, impressing upon them low-voltage D.C. from power. The pipe then becomes the cathode (negative) instead of the corroding anode (positive), eaten away by the electrolytic chemistry of the earth. A pile of scrap iron, buried nearby, preferably in rock salt, is used as the anode and it corrodes rapidly in place of the pipeline.

It is suggested that this method of counteracting corrosion might be applied to other objects of steel subject to electrolysis.

**Efflorescence and staining of brickwork.** (L. W. Burrig). *The Builder*. (London). Je'37:1187-1190 gtv

Preprint of Clay Products Technical Bureau Bulletin No. 3, dealing with the origin, prevention and treatment of the unsightly effects.

Under *efflorescence* the following are discussed: nature and mode of formation, external and internal sources of water, soluble efflorescing salts, tests for liability of brick to effloresce, avoidance and treatment in new structures, ingredients for mortars.

Corrodible metals, pigments, lime metallic substances which leach out, oxidize, and vegetable growths, are considered under *staining*. The distinction is made that stains are permanent without treatment while efflorescence dissolves and disappears when the brickwork is wetted.

(Continued on page 119)

# QUESTIONS

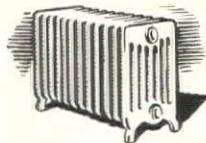
## your clients are asking about Automatic Heating

*The following questions are among those most frequently asked of  
Delco-Frigidaire representatives in the field*



**1. What kind of heat should I install in a new house?**

The present trend is toward automatic forced warm air heating, combined with winter air conditioning. The problem of supplying this kind of heat at reasonable cost—and to fit houses of any size—is perfectly met by the Delco Conditionair, an automatic heating plant, burning either gas or oil, which also provides *winter air conditioning* as it heats. It circulates a fresh supply of warm, filtered and humidified air to every room in the house. Yet, due to the economies of the Thin-Mix Fuel Control and the Multi-Path method of heat transfer, the average operating cost of Delco Conditionair is little more than that of ordinary automatic heat. *And* it can be purchased already equipped with cooling apparatus for *summer air conditioning*—all in one convenient package; or, the cooling equipment can be added later provided properly designed ducts have been installed.



**2. I prefer radiator heat. What kind should I investigate?**

The Delco Automatic Furnace, equipped with the money-saving Thin-Mix Fuel Control, provides fully automatic heat for hot water, steam or vapor systems at remarkably low cost. Its principle of construction prevents heat waste up the chimney. It is available for gas as well as oil—and with new, smaller models it offers sizes that are an economy in houses with any number of rooms.



**3. Who is Delco-Frigidaire?**

Delco-Frigidaire is the air conditioning division of General Motors. It offers equipment for the automatic heating, cooling and conditioning of air . . . in homes both large and small

—in stores and other commercial establishments—for winter, for summer and for year 'round use. A most complete line of dependable and economical equipment for every use.

**4. Is my architect informed as to these General Motors Products?**

Delco-Frigidaire is delighted to cooperate with architects in any possible way and for this purpose maintains a Consultation Service.

● For complete information about Delco-Frigidaire heating, cooling and conditioning equipment for residences and business establishments write, wire or mail the coupon below

*Delco-Frigidaire Conditioning Division  
General Motors Sales Corporation  
Dayton, Ohio (Dept. A48)*

Please send me complete information about Delco-Frigidaire heating, cooling and conditioning equipment for my files.

Name \_\_\_\_\_

Street \_\_\_\_\_

City and State \_\_\_\_\_

*It Pays to Talk to*

# DELCO-FRIGIDAIRE

The Air Conditioning Division of General Motors

**AUTOMATIC COOLING, HEATING AND CONDITIONING OF AIR**

AT THE PARIS WORLD'S FAIR



PHOTO: EUROPEAN

Despite war scares, falling francs and falling cabinets the still uncompleted 1937 Paris Fair opened only one year late. Government bigwigs shined silk hats to be impressive at the opening ceremonies. The building is Belgium's



PHOTO: LYNX

It takes a certain kind of genius to make life's unessential seem like downright necessities. The French have an extraordinary capacity for doing this. Chic and charm are sold to the public by means of fairs and a clever use of the word silhouetted above.

It may have been a coincidence that the world's largest stainless steel figures on the U. S. S. R. building (left) flaunted a hammer and sickle directly in the face of the eagle atop the German Pavilion directly opposite

PHOTO: EUROPEAN



PHOTO: WIDE WORLD

The German Pavilion (right) after a summer under foreign meal will be shipped piecemeal to Nuremberg where it will be used as a war memorial



An exhibition of sculpture adorns the fore-court of the permanent art museum designed by Jacques Carlu

PHOTO: LYNX





# You'll Never Need to *Tiptoe*



## On AZROCK covered floors

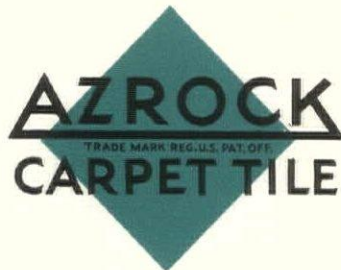
**T**HERE'S a gentle resilience created by the random interlacing of cotton and asbestos fibers in this modern mastic tile that makes Azrock Tile an ideal floor covering wherever the reduction of sound is important: in large offices where disturbance would thwart efficiency, in apartments and hotels, restful homes, on theater aisles, library floors, down miles of quiet halls and corridors and—of course—as the floor covering for hospitals and sanitariums. Absorbing and minimizing noise to a great degree, the resilience of Azrock also gives a very comfortable walking surface for the relief of foot-exhaustion and its attendant nerve strain.

And Azrock, with its wide array of colors from which to choose (both plain and marbled), and the different available sizes, makes such a beautiful floor! It's durable, too—manufactured to stand up staunchly under grueling wear and long service. Moisture proof, fire-resistant, sanitary, easily maintained, moderate in cost, Azrock is hard to beat!

An innovation is the new Micro-cut Azrock Tile! Joints are tighter, smoother than ever before obtainable in asphalt and mastic tile floor coverings. The tile now fits micro-close, free from dust-catching cracks and rough edged joints.

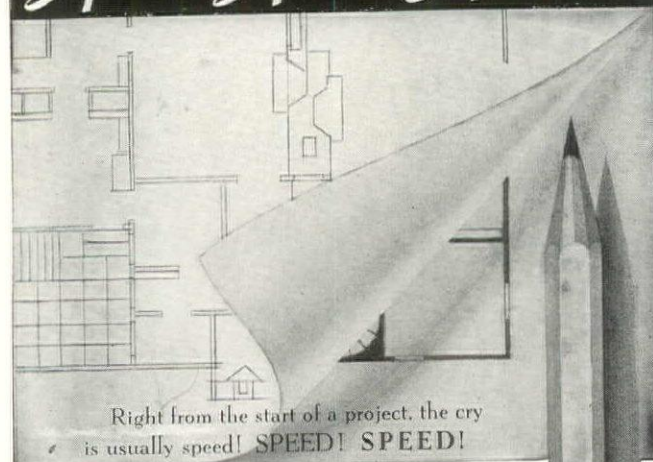


*Write to Uvalde Rock Asphalt Co., San Antonio, Tex., for name of your nearest distributing contractor.*



Other Azrock Products:  
Azrock Industrial Tile . . . Azrock Planktile

*Speed Speed Speed*



Right from the start of a project, the cry is usually speed! **SPEED! SPEED!**

The architect, anxious to please his client, meets this demand by utilizing every short cut possible.

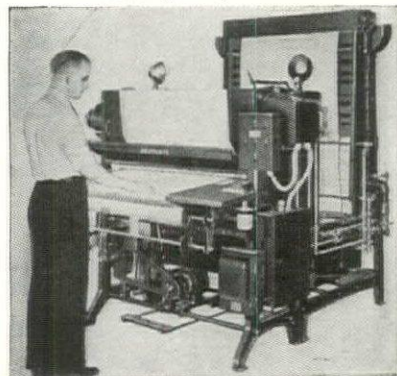
Today, many drawings are made directly on tracing paper. The drawing is then rushed to modern, high-speed blue print machines, so that prints may be delivered to the estimator, the contractor and the builder at the earliest possible moment.

To produce a clear, legible print, pencil lines must "cover," or in other words, the deposit of graphite must be such that light rays of the blue print machine cannot penetrate them.

This is effectively accomplished with a Koh-I-Noor drawing pencil—the same pencil which, through its qualities of materials and workmanship, gained the confidence of architects many years ago. These same high qualities today, make Koh-I-Noor the unanimous choice of discriminating draftsmen.

**KOH-I-NOOR LINES  
PRODUCE GOOD BLUE PRINTS**

Send for leaflet P 55



Courtesy Paragon-Revolute Corp.

*Koh-I-Noor Pencil Company, inc.*  
373 Fourth Avenue, New York

✱ L & C HARDTMUTH ✱ "KOH-I-NOOR" ✱ HB ✱

## TECHNIQUES

METHODS . . . MATERIALS . . . RESEARCH PRACTICE

### ELECTRIC SPIGOTS

Of interest to garden lovers, landscape designers and others is the new Electric Spigot designed by the National Electric Products Corporation, Pittsburgh, Pa., to supply electric current for use outside of houses. This electric spigot places a weatherproof hood and a cover hinged with a heavy spring over the outlet. It keeps out rain, snow and ice, yet can be lifted with the flick of a finger. It may be placed on a garage, garden or house wall. Installation is simple. Drill a 1 3/4" hole in the wall, pull the cable through the opening, attach it to the self-binder of an armored or non-metallic cable that the spigot features, and secure it to the wall with two screws. **826**

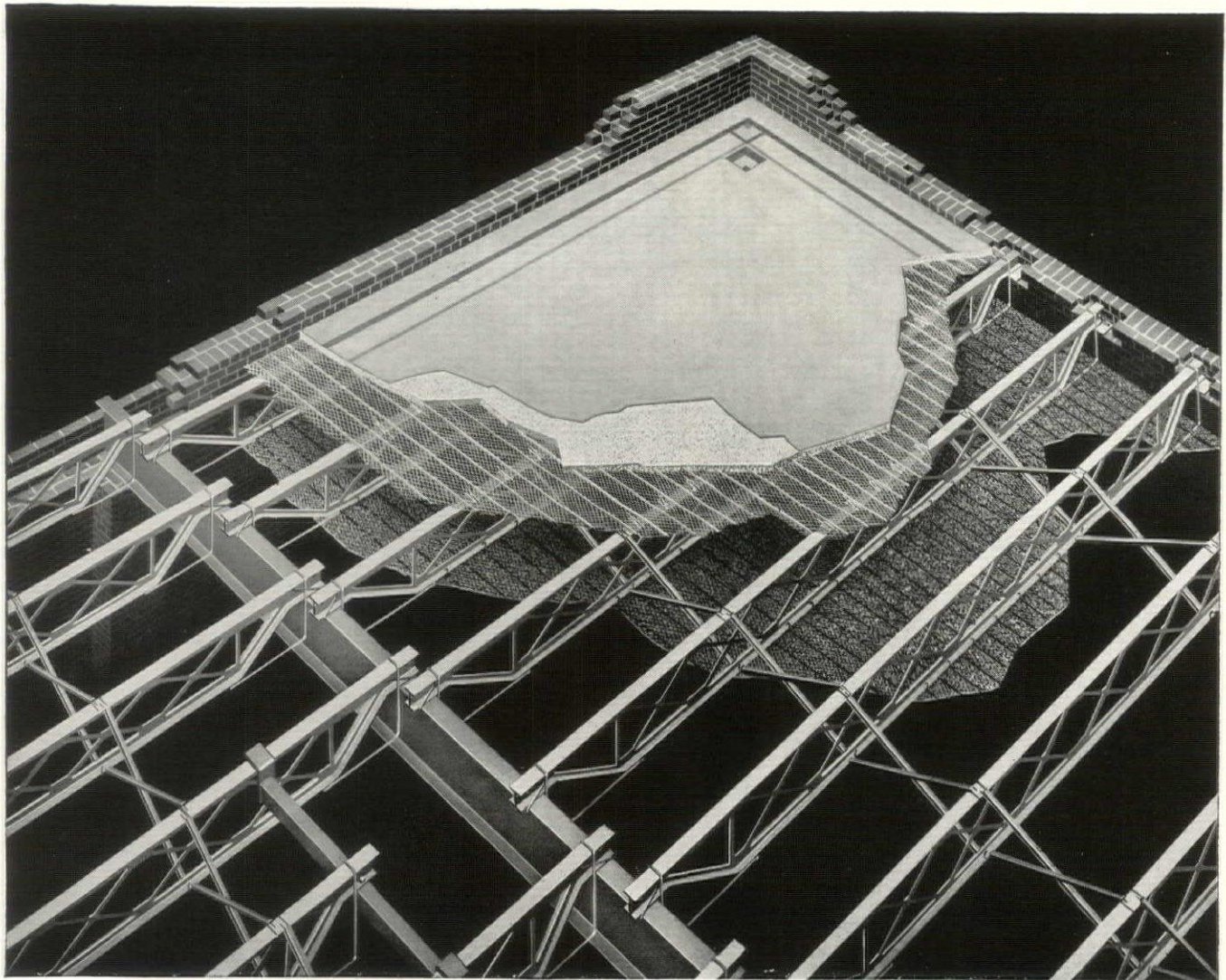
### MERCURY VAPOR LAMP TRANSFORMER

A new high intensity mercury vapor lamp transformer, when used with the proper high intensity lamp is said to provide much greater lighting efficiency and better seeing illumination, has recently been placed on the market. Special core manufacturing methods were created which included the use of extremely thin laminations of high silicon steel and the use of oversize wire for all coils. In addition, coils are precision wound and are of the armored insulation type, double impregnated. Another feature of these transformers is the universal mounting. Removable mounting legs make it suitable for either wall, ceiling or pendant mounting. A thread coupling is an integral part of the end plates and is ready for pendant mounting simply by removing the end plate cover. Two positive contact universal terminal panels, each mounted in a large compartment with ample space for making connections, is another feature. All connections to line and lamp are made at the terminal panels, no joints or taping required. Connections may be made from either or both ends of transformers. A new product of the Acme Electric & Mfg. Company, Cleveland. **827**

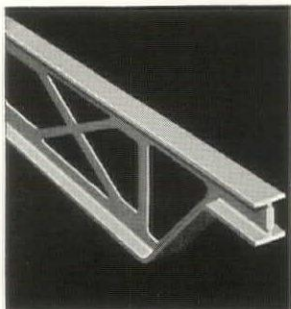
### THE PLANNED LAUNDRY



Step by step, engineers and home economists have perfected equipment and processes to emancipate the housewife from household drudgery—and now comes the complete electric planned laundry. A logical arrangement of the complete electric planned laundry gives a production line for the clothes to follow. From the time the clothes come down the chute, enter the laundry, they follow logical steps of progression through to the ironers. The planned laundry is divided into four groups: collecting and sorting, washing, drying, and ironing centers. Each center has a definite function to perform and while each division is dependent on the others, they can be treated separately for operation and classification procedure. These planned laundries may be adapted to conditions and equipment already existing in the home. Many contributions, such as movable bins



*Basis*  
**FOR**  
**FIRE-SAFE, RIGID**  
**FLOOR CONSTRUCTION**



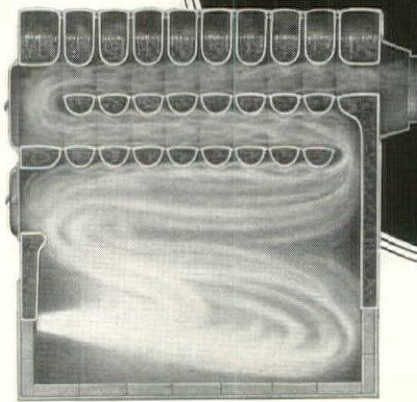
**T**ODAY'S home-buyers are definitely interested in fire-safe first-floor construction. They recognize it not only as a protection for their property and investment, but also as a means of reducing insurance costs. Bethlehem Open-Web Steel Joists provide an economical and practical basis for this type of floor construction.

Bethlehem Open-Web Steel Joists combine high strength with light weight. As used in residences and other light-occupancy structures of average size, they weigh only 50 or 60 lbs. and require no special handling equipment. In combination with a solid floor slab, such as concrete, and a plaster basement ceiling, they form a floor structure with a fire-resistance rating of better than two hours and will confine the fire to the basement for that period of time, preventing its spread to other parts of the house.

In addition to fire-safety, floors built with Bethlehem Open-Web Steel Joists bring other major advantages. They are more rigid than floors built with conventional members and materials. They will not sag away from baseboards or woodwork. They help eliminate unsightly plaster cracks and put an end to annoying creaks. They are immune to termite attack. Yet Bethlehem Open-Web Steel Joists increase the original cost of the structure only very slightly.

**BETHLEHEM STEEL**  
**COMPANY**





Here the Conversion Boiler is burning oil. A change in the base and it can be switched over to coal—either hand or stoker fired.

## A Two Way Boiler With a Three Way Economy

(Either Oil or Stoker Fired)

**YOU** say there's no need of a two-way (two-fuel) boiler. But what does your client say? There are many cases where folks haven't liked oil, and would have switched to coal, if it hadn't meant buying an entirely new boiler. There are likewise not a few cases, where after a while folks who had stoker-fired boilers, wished they had an oil burning one.

With the battle of fuels on, why clamp your client down to the necessity of using exclusively coal or oil? Why not use a Burnham Two-Way Conversion Boiler? One that performs, with equal satisfaction and economy, with either fuel. One that can be changed from one to the other with comparatively little cost. A boiler with a *three-way*, back and forth economy fire travel. A long fire travel that makes a short fuel bill.

Send for the full facts about this Burnham Two-Way Conversion Boiler.

**Burnham Boiler Corporation**

Irvington, N. Y.

Zanesville, Ohio

*Representatives in all Principal Cities  
of the United States and Canada*

colorful settings, improved appliances, proper arrangements, and modernized allied equipment, are all evidenced by the ease and economy with which the laundry may be done in these planned laundries, according to Westinghouse Electric & Mfg. Company, East Pittsburgh, Pa.

828M

### PREFORMED EXPANSION JOINT FILLER



A new type of rubber expansion joint filler for all conventional joint openings used in concrete highways, structures, curbs, sidewalks, tanks and other miscellaneous types of construction has been introduced by The B. F. Goodrich Company, Akron, Ohio. These preformed strips are made of specially compounded rubber. They are designed with flexible lips on the two sides which project upward against the concrete surface of the joint opening, making their removal difficult. In order that the strips may be easily compressed, they are made with a large tubular opening in the center. The top surface is slightly indented or grooved to provide for downward thrust of surface upon compression.

829M

(Continued on page 114)

## IN OVER 500 POOLS

leading architects depended on  
**EVERSON** technical service and  
**EVERSON** equipment to assure  
a successful pool.

- ★ WATER FILTRATION
- ★ WATER STERILIZATION
- ★ UNDERWATER LIGHTING
- ★ AND POOL EQUIPMENT

To registered architects EVERSON offers an unqualified service. This service includes periodic bulletins on recent swimming pool developments and detail drawings, and specifications worked out for the individual pool under consideration. Use this service fully. It is yours on request—is given without obligation.

## EVERSON MFG. CO.

"The Swimming Pool People"

203 HURON STREET, CHICAGO

Branch Office: 155 East 44th St., N. Y.

Manufacturers of:

EVERSON Recirculating System

EVERSON Underwater Lights

EVERSON Sterilizing Equipment

Complete line of Swimming Pool Equipment and Supplies.

# NOW—ROCK WOOL by BARRETT



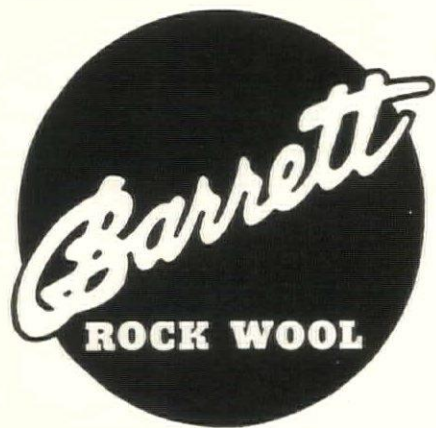
ARCHITECTS will welcome Barrett's entrance into the insulation field. They know the Barrett name is assurance of dependable materials—products that are accepted readily by engineers, builders and the public. When you specify Barrett Rock Wool you specify the product-quality that Barrett has always represented—quality that means client satisfaction. Write for details.

COMPLETE LINE . . . ALL TYPES  
BLOWING FIBER..BATTS..LOOSE WOOL

**THE BARRETT COMPANY**

40 Rector Street, New York, N. Y.

2800 So. Sacramento Ave., Chicago, Illinois    Birmingham, Alabama



NOW MORE THAN EVER, IT'S **BARRETT** "BETWEEN THE WORLD AND THE WEATHER SINCE 1854"

# PROTECT YOUR

*... with Air Conditioning*

**1. CLIENTS WILL THANK YOU  
FOR THE EXTRA COMFORT**



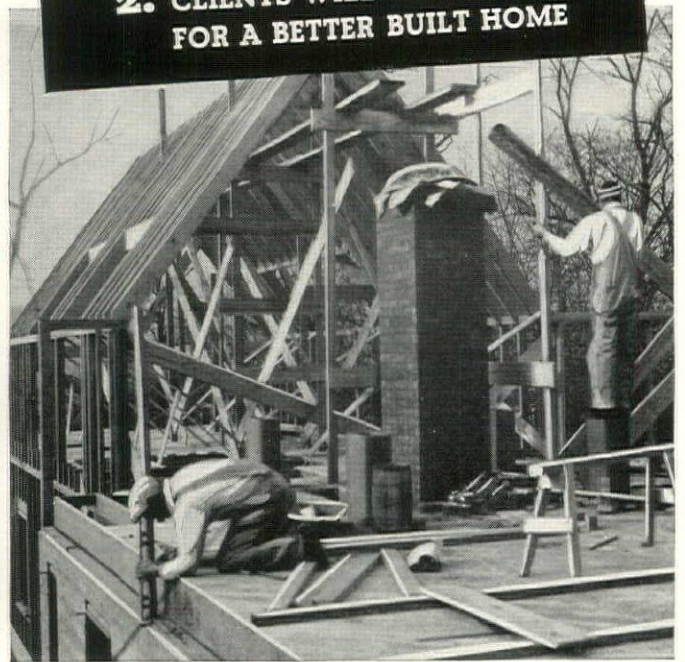
**Radiant Heat from radiators—Conditioned Air from ducts—provide every necessity of P. C.\***

Your homes are judged by the comfort they provide when comfort is most essential — during the winter heating season. That is when the independent systems of Sun-like Radiant Heat from radiators and Conditioned Air from ducts provide the accurate control and equal distribution of warmth so necessary to complete **P.C.\***

Featured in the new American Radiator Conditioning Systems are new-style Radiant Convectors, completely concealed beneath windows, there they halt cold drafts, make window areas warm and cozy, send out from their radiant panels the Sun-like rays of living warmth at living level . . . give rooms an extra attractiveness for living and looking that make home more desirable.

\* PERSONAL COMFORT

**2. CLIENTS WILL THANK YOU  
FOR A BETTER BUILT HOME**



**Radiator piping and simplified ducts do not weaken structural members—avoid undue settling**

The simplified ducts of an American Radiator Conditioning System (simple because the heating load is carried independently) do not weaken floor plates — leave structural members strong, not cut away — keep the building sturdier with less chance of cracked walls and ceilings.

Other minor annoyances, too frequently encountered, are also eliminated by the American Radiator Conditioning Systems. Bedrooms and other rooms are assured privacy: there is no "telephone effect" through ducts. Ventilation and circulation may be had when needed, even when the thermostat says "no heat!" Changing winds or open windows will not affect heat distribution. These little things, important when they happen, protect your reputation by their absence.

*New* **AMERICAN RADIATOR**

BRING IN FRESH AIR. ADD HUMIDITY. CLEAN THE AIR. CIRCULATE THE AIR. GIVE SUN-LIKE RADIANT HEAT. WARM EVERY ROOM EVENLY. SUPPLY YEAR-ROUND DOMESTIC HOT WATER.

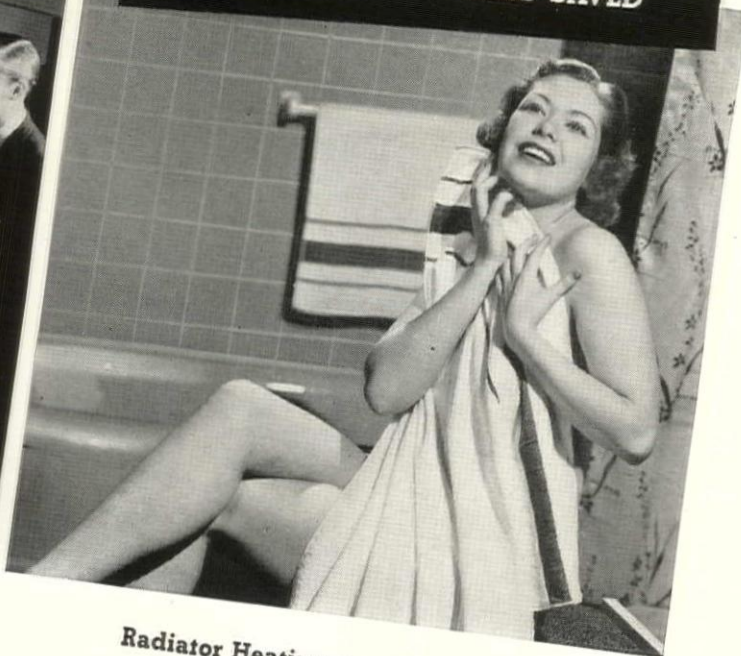
# REPUTATION!

*based on Radiator Heating*

**3. CLIENTS WILL THANK YOU FOR YEARS OF TROUBLE FREE SERVICE**



**4. CLIENTS WILL THANK YOU FOR HOT WATER COSTS SAVED**



**50 years of proved installations back this system with experience — not experiment**

There is nothing untried about American Radiator Conditioning Systems. All parts are made to work together; are backed by engineering research; by the responsibility of the best known name in heating; and by a half century's experience in making a complete line of

**AMERICAN IDEAL  
RADIATORS BOILERS**

Installation principles too, are proved. Heat distribution, balance, correct layout are no problems to the Heating and Plumbing Contractor. He is skilled in supplying comfort — has been for many years. Not experiment, but experience dictates the method of installation and assures trouble-free operation through the years.

**Radiator Heating supplies hot water without extra major equipment**

Two savings are represented by American Radiator Conditioning Systems. A saving in hot water; it comes from the heating boiler. And a saving over the years, in efficient performance, in more heat from less fuel, in repair and replacement. Ideal Boilers are made of time-tested, corrosion resistant cast iron.

Year after year, your reputation is enhanced by the comfort, the quality, the performance and the economy of the American Radiator Conditioning Systems in your homes.

**AMERICAN RADIATOR COMPANY**  
DIVISION OF AMERICAN RADIATOR & STANDARD SANITARY CORPORATION

40 West 40th Street, New York, N. Y.

## CONDITIONING SYSTEMS

EASILY INSTALLED WITHOUT WEAKENING FRAMEWORK OF TWO-STORY HOUSES.  
SUMMER COOLING WHEN DESIRED. ARCO AIR-CONDITIONING CAN BE ADDED TO ANY GOOD RADIATOR HEATING SYSTEM.

LISTEN IN! American Radiator Fireside Recital... every Sunday 7:30 P.M. E.D.S.T. WEA-F-NBC Network.



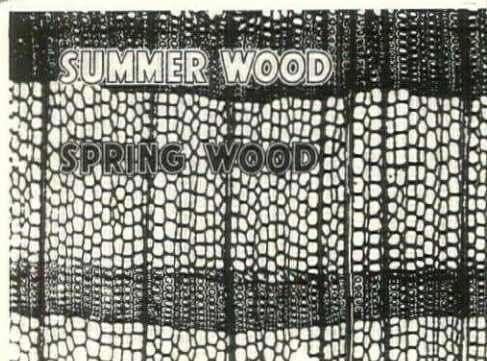
THE WOOD THAT  
GROWS IN THE SPRING — TRA-LA !!  
HAS NOTHING TO DO WITH THE CASE —

*It's summer wood which makes it important to specify White-Lead*

You've met brothers who look and act so different that you'd never think they were sons of the same father and mother. Spring wood and summer wood are like that. They grow up side by side, but what a contrast in appearance . . . and behavior!

Summer wood is the bad-acting brother. It is divided into small, compact cells. The walls of these cells are thicker, harder and considerably less porous than the cell walls of spring

**NATIONAL LEAD COMPANY**  
111 Broadway, New York; 116 Oak St., Buffalo; 900 West 18th St., Chicago; 659 Freeman Ave., Cincinnati; 1213 West Third St., Cleveland; 722 Chestnut St., St. Louis; 2240 24th St., San Francisco; National-Boston Lead Co., 800 Albany St., Boston; National Lead & Oil Co. of Penna., 316 Fourth Ave., Pittsburgh; John T. Lewis & Bros. Co., Widener Bldg., Philadelphia.



• Look at the end grain of a board under a microscope. You will see something very much like this. Note the denser cell structure of the summer wood. Many paints have difficulty adhering to such a surface. Dutch Boy White-Lead gets a good anchorage on both spring and summer wood. That's one of the reasons why this paint does not scale off.

wood. Consequently certain paints have difficulty adhering to summer wood. After a short term of service, they "lose their grip" and start to scale off.

But not Dutch Boy White-Lead. This paint gets a good firm hold on both spring and summer wood. It does not "let go" but continues to present an unbroken surface to the weather.

Still another point to be considered is wood's incurable habit of

expanding and contracting. Some paints haven't enough elasticity. They crack under the strain. But not Dutch Boy White-Lead. This paint is highly elastic when first applied. And it stays that way through years of service.

Every Dutch Boy White-Lead application is a tailor-made paint job—mixed to suit the special requirements of the surface to be painted—tinted to the exact shade you and your client desire. By specifying Dutch Boy White-Lead, you secure that combination of beauty and durability which is a fundamental objective of good architecture.

**DUTCH BOY WHITE-LEAD**

*Good Paint's Other Name*





YOU GAIN TWO WAYS

*When you Specify*

## GENERAL ELECTRIC EQUIPMENT

● **FIRST—READY ACCEPTANCE.** General Electric products are valued for inherent qualities of worth and leadership. These same qualities are to be found in G-E Heating and Air Conditioning equipment. Like anything bearing the famous G-E monogram, it must be better—or General Electric would not stamp that symbol on it. It must make—and keep satisfied users. It must protect the reputation of the one who sells and recommends it.

Those facts are well known. That's why *there is never any question regarding the acceptance of a General Electric product.*

● **SECOND — ASSURED PERFORMANCE.** General Electric Heating and Air Condi-

tioning equipment is *designed, built and warranted by one company—General Electric.* It is backed by the world's finest engineering and research organization.

That's why *there is never any question regarding the performance of a General Electric Heating or Air Conditioning System.*

For information regarding G-E Automatic Heating units or G-E Air Conditioning equipment consult with the General Electric Distributor in your neighborhood. If you have trouble locating our representative, write us direct. Address—General Electric Company, Air Conditioning Department, Div. 81015, Bloomfield, New Jersey.



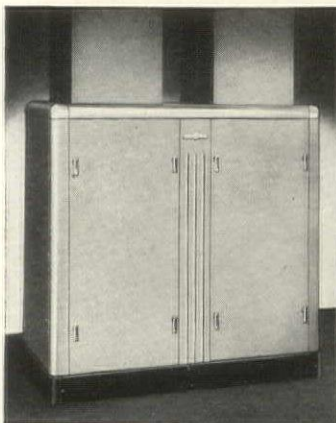
G-E OIL FURNACE



G-E GAS FURNACE

# GENERAL ELECTRIC

AUTOMATIC HEATING · AIR CONDITIONING



G-E OIL-FIRED  
WARM-AIR CONDITIONER



G-E GAS-FIRED  
WARM-AIR CONDITIONER

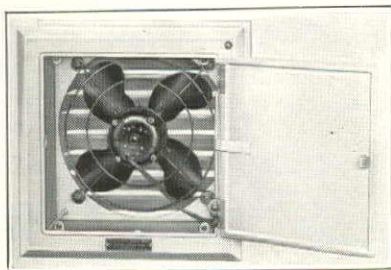


G-E WINTER AIR CONDITIONER  
FOR RADIATOR HEATED HOMES



G-E AIR CONDITIONING UNIT

**VENTILATOR FAN**



for home or office and has an air moving capacity of 875 cubic feet of air per minute. The wall box can readily be installed in new homes at the time of construction or in modernized homes.

The Emerson Electric Mfg. Company, St. Louis, Mo., has announced the addition of the 12-inch Seabreeze Ventilator to its present line of Seabreeze Fans. This ventilator is available in a built-in wall box for permanent installations or with suitable metal panel. It is suitable

830M

**SELF-CONTAINED ROOM CONDITIONER**



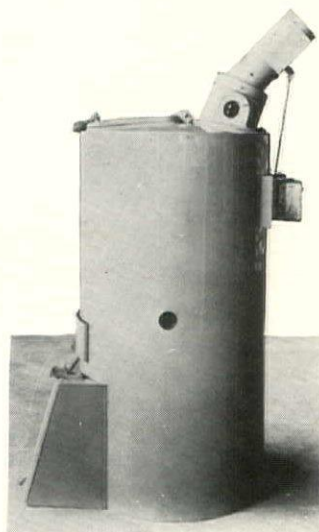
performing this function it is said to absorb moisture condensed by the cooling coils and is discharged out the window. The unit is semi-portable and has a cooling rating of about two-thirds

Designed to furnish a high degree of summer comfort in single rooms of a home or office suite without requiring a water connection, a new unit room conditioner has been developed by the General Electric Company, Bloomfield, N. J. Designated as Type AF-1 the unit has a built-in air-cooled condenser. Air from outdoors is brought in through a window duct by a separate fan to cool the refrigerant in the condenser. After

of a ton. This can be increased to about one ton by supplying a very small water line and making minor changes in the mechanism. No drain connection is required under either conditions. The unit must necessarily be mounted at a window. It has a laminated window duct 18 inches in length which is adjustable to a shorter length if necessary. The enclosing cabinet is of burled walnut with slotted moldings through which air return and delivery passes. There are no grilles.

831M

**RESIDENTIAL STEEL MAGAZINE BOILER**



port on the top of the boiler. Constructed in one size—30 square feet of standing hot water column radiation—it is only 53 inches high and 26 inches in diameter. Ash is deposited in an enclosed container large enough to hold a week's supply

The Anthra-Heat Magazine Feed Steel Boiler for the five or six room house is a product developed in the laboratories of Anthracite Industries, Inc. The Fitzgibbons Boiler Company Inc., New York, is one of two manufacturers licensed to produce and sell this boiler. It has been specifically designed to provide semi-automatic heat for from twenty-four to forty-eight hours with minimum attention. It is claimed that it will heat the average five to six room house with an annual fuel consumption of from five to six tons of Pennsylvania anthracite. Automatic thermostatic control is a built-in feature and fuel is admitted through a large



**Refrigeration**

Is used in conditioning 30,000 cu. ft. of air per minute at the Woodward & Tiernan Printing Company, St. Louis, Mo. The refrigerating load is carried by the 8¾-in by 6-in. Frick Freon-12 compressor shown.

Printers, restaurateurs, hotel owners, theatre operators, funeral directors—they and a score of others all use Frick Dependable Refrigeration. Ask for literature and estimates today.



DEPENDABLE REFRIGERATION SINCE 1882

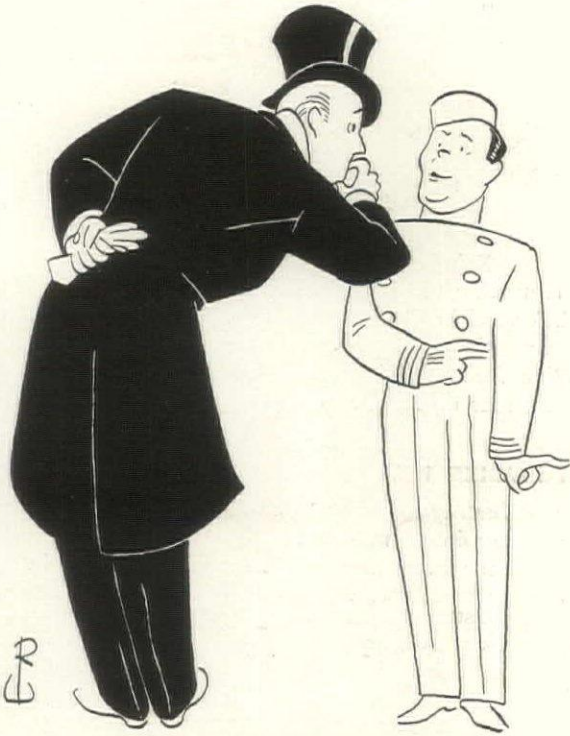
**FRICK Co.**

WAYNESBORO, PENNA. U.S.A.



# THE PLANNING AND EQUIPPING OF

## Public Toilet Areas



**N**EXT month AMERICAN ARCHITECT AND ARCHITECTURE offers what is believed to be the first compilation on public toilet areas which sets forth the best method of finding the *type* of equipment to be used, the *amount* of equipment to be used, and the *space* to be allocated once the occupancy of the structure is determined.

The material will cover railroad stations, theaters, restaurants, etc., and will be presented as the subject of two Time-Saver Standard sheets and the Unit Planning article.

---

### ALSO IN THE SEPTEMBER ISSUE, AMERICAN ARCHITECT AND ARCHITECTURE

CONTEMPORARY ARCHITECTURE IN ITALY—by Bruno Funaro and Seymour Saltis. Youthful, vital, and inspired by Romanesque simplicity, today's Italian structures embody a proper application of materials and one of the few modern decorative motifs of real significance.

W. P. INMAN PLANTATION, GEORGETOWN, S. C.—by Wyeth & King, Architects. A splendid example of the larger house designed in the tradition of the locality.

RESIDENCE, MIAMI BEACH—by Russell T. Pancoast, Architect.

RESIDENCE, EVANSTON, ILL.—by White and Weber, Architects.

RESIDENCE, STATE COLLEGE, PENN.—by H. W. Loman, Architect.

RESIDENCE, CALIFORNIA—by F. L. Confer, Architect, and James H. Anderson, Jr., Associate.

EXPOSITION ARCHITECTURE—by Walter Dorwin Teague, famed designer of Fair buildings (notably for Ford) at Chicago, San Diego, and Dallas, and now on the Board of Design of the New York Fair. Based on a report he made recently to the New York Directors, his article points up the many problems confronting architects who must stimulate Fair audiences notorious for their low I.Q.

ARCHITECTURAL OVERTONES—old Pennsylvania barns, and other farm buildings.

PORTFOLIO—devoted to Wall Face Dormers.

FAVORITE FEATURES—Wall-face Dormers.

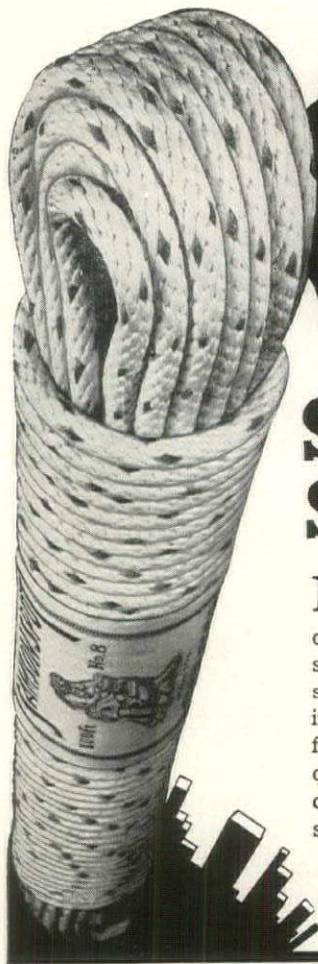
ILLINOIS TITLE & TRUST CO., WAUKEGAN, ILL.—by Holabird & Root, Architects.

MARGARET'S FLOWER SHOP, LOS ANGELES—by Morgan, Walls, and Clements, Architects.

---

*Don't Miss the September Issue of*

# AMERICAN ARCHITECT AND ARCHITECTURE



only  
**ONE**  
quality

## SAMSON SPOT SASH CORD

**M**ADE of extra quality uniform fine yarn, spun in our own mills. Firmly braided, smoothly finished, carefully inspected and guaranteed free from imperfections which cause inferior sash cord to wear out quickly. Specified by leading architects everywhere. Send for sample.

**Samson Cordage Works**  
BOSTON, MASS.

for  
Safety,  
Comfort and  
Economy

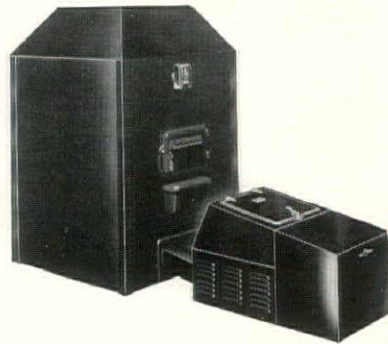
**Use  
SHOWER  
MIXERS**

If you want to eliminate the danger of scalding and unexpected "shots" of hot or cold water in your showers install Powers Mixers. Write for circular. 2720 Greenview Ave., Chicago; 231 E. 46th St., New York; Offices in 45 cities. See your phone directory.

**THE POWERS REGULATOR CO.**

Chestnut sized anthracite coal is recommended. In addition to its function as a house heating boiler, it may also be used for domestic hot water service only, in larger residences, small apartments and commercial buildings. 832M

### NEW HEATING SYSTEM



The Anchor Stove Range Co., New Albany, Indiana, announces a new Anchor Kolstoker Heating System, a complete warm air unit with automatic stoke feed. Both furnace and stoker were designed to work together. Full heating efficiency at all times is said to be obtained by reason of self-cleaning radiator. Extra heavy cast iron construction and asbestos lining allow for more uniform heat. The furnace has a removable plate for installation of fan and filter unit if desired. A special coil is available for hot water in warm weather. Shifting position of a reversible lower section permits stoker installation from front or either side. The design also offers four different smoke pipe positions. 833M

### DIRECT READING RULE

The new Stanley No. 6386 "Pull-Push" rule has a direct reading feature for inside measurements. When the case and blade butt against the work, a red indicator on the case points to the exact inside measurement. The flexible-rigid blade has a white baked enamel surface against which the black graduation stand out. Manufactured by Stanley Tools, New Britain, Conn. 834M

## Your Goal— and Ours



Architects, everywhere, acknowledge the fine art of accommodating tradition to modern usage. Designers of today and for tomorrow, Danersk Craftsmen join their efforts to the desire of the architect, to produce distinction.

Today, Danersk furniture is in a score of famous American Colleges (including the beautiful Sterling Memorial Library at Yale); many important banks in New York and elsewhere; numerous great hospitals, some of the best clubs and in many executive offices throughout the land.

In the interests of better design, we have developed certain styles particularly appropriate for these purposes. We welcome opportunity to design and make furnishings which complement the architect's accomplishment.

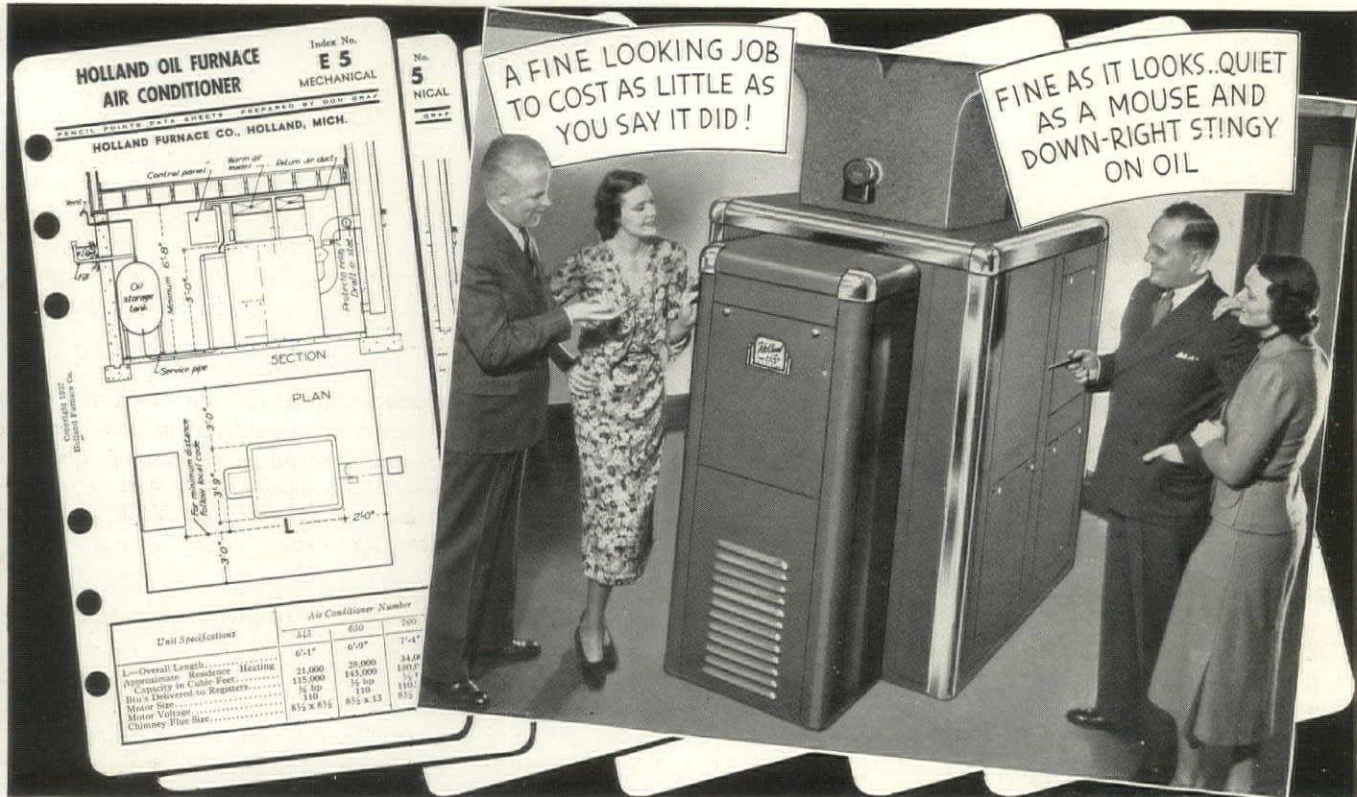
*The DANERSK CRAFTSMEN, Inc.*  
Stamford, Conn. Post Road at Noroton

# FREE DON GRAF DATA SHEETS

## On New Holland

# OIL-FURNACE AIR CONDITIONER

COMPLETE IN ONE UNIT



*Now Ready...SET of 7...Prepared Especially for Architects and Draughtsmen!*

● Every architect who takes pride in giving clients the greatest possible value will want a set of these new data sheets on the Holland Furnace Company's remarkable new Oil-Furnace Air Conditioner. They have been carefully and accurately prepared by the well known Don Graf, B. S., M. Arch., for the express purpose of making, specifying and detailing as rapid and as easy as possible. Technical facts have been boiled down to bare essentials and have been skilfully arranged for quick reference. They conform in size and perforation to the popular Pencil Point series and will fit the standard binders. The coupon will bring you your set at once.

**HOLLAND FURNACE COMPANY**  
**HOLLAND, MICHIGAN**

*World's Largest Installers of Home Heating and Air Conditioning Systems*

**LOCAL HOLLAND ENGINEER IS AT YOUR SERVICE**

There is a competent factory-trained Holland engineer in your locality who will gladly cooperate with you in every way possible. See "Holland Furnace Company" in your phone book.

**HOLLAND FURNACE COMPANY**  
 Dept. AA-8, Holland, Michigan

Mail me **FREE** data sheets on Oil-Furnace Air Conditioner and other information indicated.

- Holland Oil Burners
- Holland Furnaces
- Holland Automatic Coal Burner
- Have Engineer call

Name.....

Address.....

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

# MODERN



## PYRAMID *Snap-On* Stainless Steel MOULDINGS

IN LONDON, the Cocktail Lounge of the Regent Palace Hotel is distinctively trimmed in Pyramid SNAP-ON Mouldings. Here is truly modern impressiveness with restrained dignity.

The Pyramid SNAP-ON feature conceals all nails or screws in the track which firmly holds the cover moulding. The SNAP-ON installation method often affords a labor saving of fifty per cent.

Pyramid SNAP-ON Mouldings are quickly and easily applied on top of wallboard, plaster or other materials after all other work is finished. They may be placed where good decoration indicates. It is not necessary that they fit between joints or over edges.

Pyramid SNAP-ON Stainless Steel Mouldings will not rust, tarnish, or corrode. Stainless Steel, Bronze, Copper, Brass or Aluminum Mouldings are available in Satin or Mirror finishes.

Send today for the new folder which illustrates Pyramid SNAP-ON Mouldings in typical modern use.

**PYRAMID METALS CO.**  
460 North Oakley Blvd., Chicago, Ill.

## A LETTER TO THE EDITORS

AMERICAN ARCHITECT AND ARCHITECTURE:

Your valuable magazine by both its announced policy and choice of subject matter in monthly range of contents has gone far in the past two years to present the architectural "trends" of today, and to point the way in pictured and printed word to "building the world of tomorrow." I am encouraged to suggest an additional aspect of the architectural field not yet touched upon. This is the education of the men in the ranks of the mechanical and building trades called "skilled labor."

A recent news item (N. Y. Times) related that President William M. Lewis, of Lafayette College, Easton, Pa. has proposed that a central educational exhibit be made at the N. Y. World's Fair of 1939. This exhibit would present the history of higher education in the United States in a central building with the co-operation of high schools, preparatory schools, colleges, and universities and by foundations and the educational committee of the Fair. . . .

This suggestion of President Lewis to be all-embracing should include the education of skilled labor in all the trades which has been completely neglected for many years, and now progressing so slowly and spasmodically as to warrant widely expressed fears for a scarcity in all the large centers. . . .

The public schools in many of our largest industrial centers have made advances toward a primary trade education under the generic term of "vocational training" and, in line with the old German "continuation schools," develop the tendencies of pupils, whose usual aims were the desire of their parents to put them to work as soon as possible. The age required by work certificates in most of the States is sixteen years, which has resulted in the common habit of pupils in and above secondary schools and in our colleges to abandon their education before graduation. . . .

You have made an excellent beginning by publishing the clearly reasoned and informative article by Dr. Walter Gropius of Harvard, entitled "Education Toward Creative Design." This essay, as well as his recently published book "The New Architecture and the Bauhaus," deals with education in the crafts and design elements of mechanical production, but accents the true fundamentals of work over the drafting board, as well as holding the tools. . . .

I suggest that it would be timely and appropriate for your magazine to advocate the establishment of a system of trade or craft training, involving both theory and practice in all divisions of the building and machine trades for both beginners and those well advanced but not yet up to the standards required by skilled competition. I would propose that such systems be made a co-ordinate branch of public education with separate courses of instruction and separate teachers, and that their fitness and selection be participated in and approved by competent authorities in the labor union and by the education boards governing in their jurisdiction.

The United States, the State, and the Municipal Housing Authority could be petitioned to provide a fund for one such unit at the coming N. Y. World's Fair of 1939, making it an integral part of the planned exhibit suggested by President Lewis. No time should be lost, however, as construction on many parts of the Fair is already underway.

I trust that this suggestion will meet your approval, and that your readers may be stirred to comment upon this vitally important topic.

(Signed) Frederick W. Moore,  
Architect & Engineer.

## TECHNICAL DIGEST—(Continued from page 100)

**New method of bonding porcelain enameled architectural panels to masonry.** The American Enameler. My'37:5-7 tv

Illustrated description of the new Pem-lox method, a sprayed and baked porous bonding coat on the back of the standard porcelain enamel metal sheets.

**Results of the Securit-Vis competition.** Casabella. (Milan). Ap'37:42-45 tv

Fourteen views showing the great variety of uses of tempered glass suggested by a recent European competition.

See also: Domus (Milan) Ap'37: Supplement.

Nearly sixty photo views and drawings of entries in this competition with ideas for use of hardened glass in furniture and other details.

**Glass to moderate glare and heat from windows.** (L. T. Sherwood). Illuminating Engineering Society Transactions. Je'37:665-686 †

Not only interception of solar infra-red rays (heat) but excessive glare and objectionable color effects must be avoided in industrial buildings.

This paper is published as a cross-section of experience and includes several simple tests to assist users of the material. It is followed by a nine-page discussion by members of the Society.

**Facts and fallacies about red and white oak flooring.** American Builder. Je'37:86-87 tv

The three main reasons for the general public's preference for white oak for flooring are stated to be: (1) For many years the source of almost all oak lumber was limited to white oak districts; (2) Only white oak is suitable for cooperage (because of tannic acid in red oak). This raised cost and the popular idea of quality followed. (3) Quartered white oak has a larger and more pronounced figure than red oak.

On the other hand, red oak grows to larger sizes, yielding greater average lengths for economy in millwork and laying. If anything, red oak is more uniform in color and takes a better finish than white oak. It is claimed that any oak floor, white or red, when properly finished and maintained will last the life of the building in which it is laid.

**Darkening of shellacked floors.** (H. R. Anderson, from American Painter & Decorator). R. E. & Bldg. Management Digest. Je'37:6 †

The high tannic acid content of red oak flooring may combine with particles of iron from brush ferrules or old containers to gray or blacken white shellac over sap wood.

It is suggested that only fresh shellac be used for oak floors. Such discoloration may be removed by brushing with two-pound-cut fresh white shellac con-

taining four ounces oxalic acid crystals per gallon.

## PLUMBING

**Cross-connections.** Domestic Engineering. My'37:87-88, 187 st

Question, answer and diagram analysis of an important sanitary defect in plumbing installations. Describes both direct cross-connections (actual pipe connection) and indirect (due to siphonage, etc.) Notes on tests for possibility of siphonage.

**Running water.** (L. M. Forbes). American Builder. Je'37:104, 106, 108, 110 st

Description of the activity of the Electric Water Systems Council, illustrated by several methods of providing water supply for rural residences.

There are sections showing treatment of both shallow and deep wells with equipment located in different places.

**Plumbing problems.** Domestic Engineering. My'37:90-91, 94, 96 st

Continuation of the series of plumbing section problems. There are blanks to be completed by those interested, corrected drawings and criticisms of problems from previous issues.



Color  
FOR  
ARCHITECTURAL  
EFFECT

**M**ANY combinations of color effects may be obtained with Columbia Venetian BLINDS. The possibilities are almost limitless. To do this effectively, color consideration should be made in the preliminary specifications and certainly incorporated in the final drawings. Our Architectural Plan Department has prepared color charts showing varied combinations of tapes and slats. Columbia BLINDS can be used on any type window, skylight, transom or glass door. Special detailed drawings have been prepared to assist the architect with unusual installations giving dimensions for needed bundle space and other important designing data. We invite architectural consultation.

Write for your copy of "Architectural Data Sheets No. 1"

**THE COLUMBIA MILLS, Inc., 225 Fifth Ave., New York**

# NOW READY....TIME-SAVE

## OFFERED AT COST TO OWNERS OF TIME-SAVER BINDER NO. I

So many Time-Saver Standards sheets have been issued that a second binder is now necessary for proper filing and use of these and further Time-Saver sheets to come.

For this reason we have prepared Time-Saver Standards binder No. II—exactly like the original binder except for a "II" on the Tubak binding.

The new binder will be sent for \$1.25 (postpaid in U. S.), which is the actual manufacturing cost.

If you have not yet registered and are eligible to receive Time-Saver Standards, both binders plus a complete index and the 128 Time-Saver Standards prepared to date will be sent you for \$5 (actual cost of binders and reprinted sheets). In addition you will receive, *without cost*, all future sheets issued under this plan.

Time-Saver Standards contain much-needed and often used data on all phases of building design and construction. They present solutions to the problems most commonly met in practice. To judge their value to you, examine the editorial Time-Saver sheets in this issue of *American Architect and Architecture*.

Time-Saver Standards are issued by this magazine as a service to architects who wish to save time, avoid errors, and cut down on office expense. To use these sheets properly now requires two binders. To order your second binder—to register now for both binders plus all sheets issued to date—the coupon below is all you need.

### YOU ARE ELIGIBLE TO RECEIVE, WITHOUT CHARGE

all TIME-SAVER STANDARDS hereafter issued by AMERICAN ARCHITECT AND ARCHITECTURE under our free distribution plan, if your application shows you to be in active practice in the United States as:

1. A member of an architectural firm or an individual architect in private practice.
2. A consulting or designing engineer (mechanical, electrical, structural, etc.) actively engaged in building work.
3. A regular employe of an architectural or engineering organization in the capacity of executive, designer, specification writer or "squad boss."

4. A designer, supervising architect or engineer for a financial or educational institution, large property owner or developer.

To get full value out of these Standards you must possess all sheets issued to date and the two special Tubak binders. Eligible applicants receive these at the special price of \$5.00 postpaid.

If you are not eligible for our free distribution service, you may purchase two special binders, all TIME-SAVER STANDARDS issued to date and all issued within one year, for \$7.00 (within the United States); \$9.00 foreign. All prices subject to increase.

# TIME-SAVER STANDARDS

PUBLISHED BY AMERICAN ARCHITECT AND ARCHITECTURE, NEW YORK CITY

Technical Service Division, AMERICAN ARCHITECT and ARCHITECTURE  
572 Madison Avenue, New York

Please send me TIME-SAVER STANDARDS BINDER NO. II, for which I enclose \$1.25 (price, prepaid in U. S.).

I wish to register to receive, without further cost, TIME-SAVER STANDARDS to be issued in the future. I enclose \$5.00 to cover the cost of two (2) Tubak binders and 128 pages of Time-Saver sheets prepared to date.

Name of individual.....

Name of Firm.....

Address of Firm.....

Payment must accompany all orders. Please check form used  Cash  Money Order  Check

Fill in both halves of coupon if you are registering for this service.

Dominant class of work done by firm (principal types of buildings such as small or large residences, commercial buildings, schools, etc.).....

Position of applicant (firm member, designer, engineer, specification writer, squad boss or executive in building field).....

Are you a subscriber to AMERICAN ARCHITECT and ARCHITECTURE?.....

If not, do you see it regularly?.....

I certify the above answers are correct.

Signed .....

(Non-eligible applicants may use this registry form but must enclose \$7.00 if U. S.; \$9.00 foreign, for 2 binders, Standards issued to date and all new Standards to be issued within one year.) Prices subject to change without notice. 8



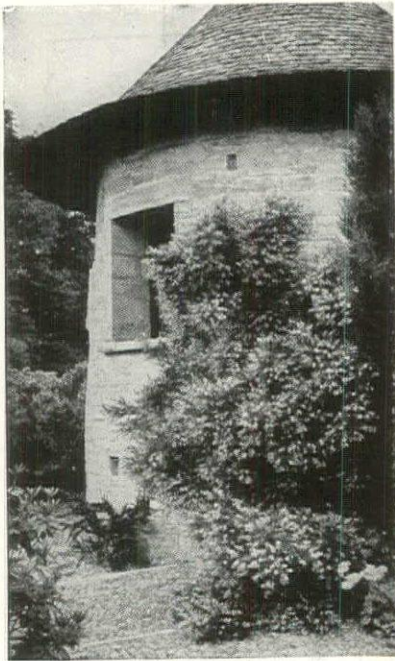
# STANDARDS BINDER NO. II

If you already have  
Time-Saver Binder  
No. I . . . . .



Order Binder No. II  
today to avoid over-  
crowding Binder No. I

TIME-SAVER STANDARDS COVER SUCH IMPORTANT TOPICS AS:—Air Conditioning Design and Equipment; Architectural, Electrical, Plumb-  
ing Symbols; Areas, Weights, Live Loads, Mensuration; Basement Planning, Ceiling Heights, Waterproofing; Bathroom Planning, Fixtures, Accessories; Beam  
Design, Steel, Concrete; Brickwork, Brick Coursing Table; Closet Planning; Concrete Work, Beams, Columns, Slabs; Dimensions of Human Figure, Common Objects,  
Dimensions of Building Elements; Domestic Water Supply Requirements; Driveways, Back-grounds; Electrical Systems and Equipment; Elevators; Fireplace and Chimney Design; Furnaces  
and Boilers; Garages, Automotive Dimensions; Heating Systems and Equipment; Heat Transmission, Insulation; Kitchen Planning and Equipment; Lighting Design  
and Materials; Paints, Selection and Use; Piping and Ductwork; Plumbing Systems; Refrigerators, Ranges, Sinks; Roofing and Sheet Metalwork; Sewage Disposal  
Systems; Special Structural Systems; Stairways, Climeways, Walkways; Store Fronts; Structural Steel Design; Tennis Courts and Game Areas; Tile and Tilework;  
Waterproofing and Dampproofing; Wiring Materials and Systems. 128 sheets of condensed reference information now issued, many more in preparation.



# Garden Decoration and Ornament for Smaller Houses

by **G. A. Jellicoe**

The author, who is well known as a town-planner and designer of houses and gardens, analyzes in this profusely illustrated volume the structural features and ornaments of gardens for small country houses, suburban and town houses. *The London Times Literary Supplement* praised it for its "beautifully chosen illustrations" and spoke of it as "of a quality rare in modern garden books . . . full of stimulating ideas." *Country Life* says "it should be of great value to home and estate owners and garden lovers all over the world."

\$6.00

# The Supervision of Construction

by **W. W. Beach**

This book is perhaps the first comprehensive treatment of the supervision of construction to be published and is indispensable to architects, engineers, construction superintendents, technical libraries, students and all interested in architecture and engineering. Written by one of the best-known architect-engineers in the Middle West, it is an authentic, up-to-date handbook that fills a long-felt need. Within its 488 pages are included all the details of the superintendent's work; there are appendices, 20 diagrams and illustrations. \$6.00

## Contents

The Duties of Superintendents  
A Superintendent's Records  
The First Day on the Job  
Beginning the Work  
Contract Changes  
Foundations and Masonry Materials  
Concrete Form-Work  
Concrete Work  
Concrete Reinforcement and Other Built-in Members  
Waterproofing and Damp-proofing  
Finishing Concrete Surfaces  
Roughing-in by Pipe Trades  
Job Progress  
Masonry  
Terra-cotta, Cut-stone, and Pre-cast Stone  
Structural Steel  
Miscellaneous Metal-work  
Structural Carpentry  
Roofing and Sheet-metal-work  
Furring, Lathing and Plastering  
Marble-work and Tiling  
Finish Carpentry  
Finish Hardware  
Glass and Glazing  
Painting and Varnishing  
Electric Work  
Heating and Ventilating  
Plumbing  
Completion and Acceptance  
Cost-plus Construction

C H A R L E S S C R I B N E R ' S S O N S

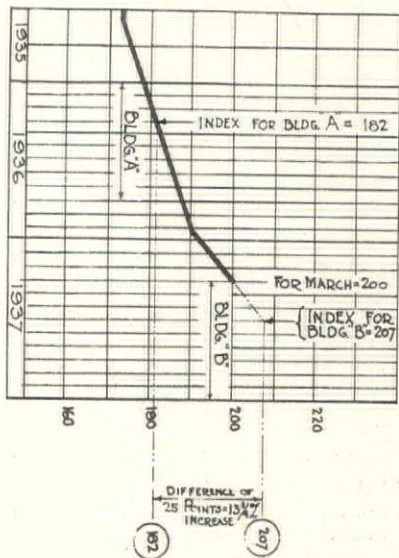
**COSTS**

**DOCUMENTING ITS BRIEF** with well-stated argument, the Morton C. Tuttle Company, of Boston, issued a pamphlet not so long ago which declared that costs are due to rise even more during the last half of this year. Why? Mainly because there's a severe shortage of skilled labor, a bequest of the Time of the Great Weep. Further, studies made by the Tuttle Company some years back showed that during boom building periods labor efficiency of all skilled mechanics decreased about 20% below what could be expected when building demands were subnormal. Therefore, building operations will be slowed up—more time and expense to figure on the ledger.

A very helpful part of this pamphlet is a chart illustrating one method of computing building costs. Because much of the material and many of the subcontracts are bought in the early stages of building, the cost of any particular construction job will more nearly correspond with the index figure of building costs at the beginning of the project than with the index at time of completion.

The following example of how to use a building cost index is given:

Assuming that the cost is known of a building constructed during the first nine months of 1936 and that a duplicate of this building is to be built beginning April 1, 1937, the construction period of which will continue for nine months thereafter, the method of calculating the index cost for this second structure is illustrated on this graph:



**HOUSING**

THE FEDERAL HOME LOAN BANK BOARD has just announced completion of that impressive new wrinkle it's been working on for some months. It's called the "Federal Home Building Service Plan,"

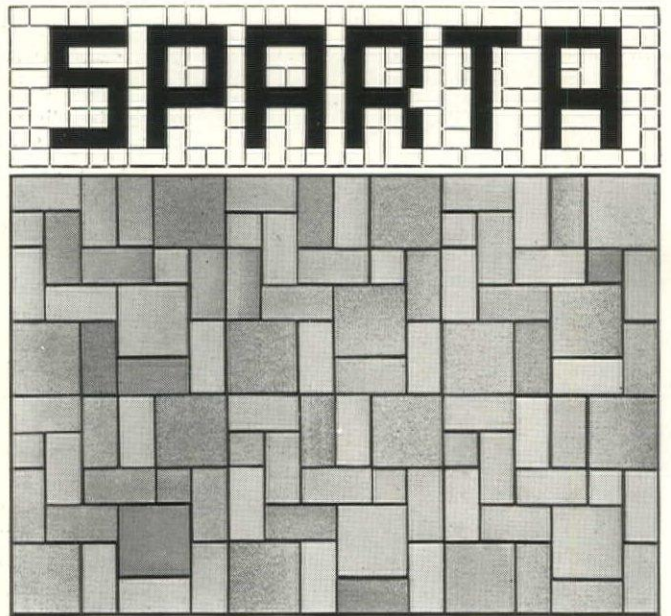
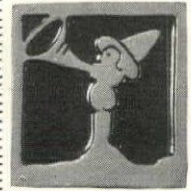
and is described as "a nation-wide program to assure the small home builder a sound investment and eliminate shoddy construction." Already endorsed by the directors of the American Institute of Architects, here's how what will probably be called the FHBSPP works:

Mr. Osgood P. Booblebaum wants to build a house. The Booblebaums, it is assumed, are among those millions of American families—83% of the total—whose annual incomes are \$3,500 or less, and who, therefore, are restricted to homes costing less than \$8,000. At any rate, Mr. Booblebaum goes to one of the

3,900 thrift and home-financing institutions of the Federal Home Loan Bank system and expresses his desire for his own home. Just as though he had pressed a little button, Mr. B. sets the mighty FHBSPP machinery in motion. After investigation of Mr. B.'s earning capacity and resources, the FHBSPP provides:

- Sound financing counsel;
- The largest loan and most liberal terms consistent with his resources and credit;
- Competent architectural aid in designing his home—a structure suitable to his family needs, site and neighborhood;
- Selection of a qualified contractor;

**TODAY'S MOST VERSATILE TILE**



**NO. 310 GOLDEN PHEASANT**

Yesterday, 1" white hex for more than fifty percent of floor tiling. Today, with the wide use of colored walls and tiles, the answer is Sparta No. 310 "Golden Pheasant." It blends well with any color and with adjoining hardwood. High in quality, low in cost, and easily set. Let us save your time by offering helpful suggestions for your specifications.

**SPARTA CERAMIC CO.**  
110 East 42nd St. LEXINGTON 2-1618 NEW YORK, N.Y.  
PLANT AT EAST SPARTA, OHIO



USE THIS COUPON

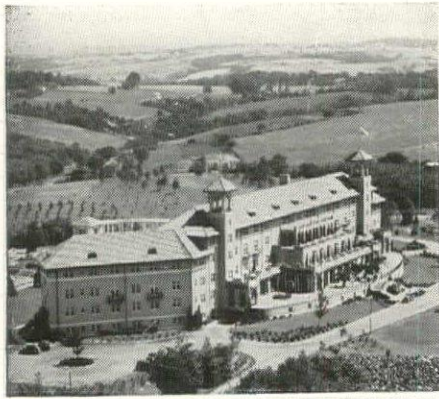
SPARTA CERAMIC CO.  
110 East 42nd St., New York  
Please send your new Bulletin to:

Name .....

Address .....

City..... State..... A.A.S.

**NEW!**  
Now you can specify and use  
**SPARTA FAIENCETTES**  
(Plastic Glazed Tiles)  
in 10 attractive colors: 1" x 1", 2" x 1" and 2" x 2" sizes.  
**Moderate Cost**



WOOD AERIAL SURVEYS

Hotel Hershey, Hershey, Pa.

## HEATING SATISFACTION IN NEW HOTEL HERSHEY

Owners Provide for Comfort  
of Guests with Webster  
Moderator System

### MODERN IN EVERY DETAIL

Hershey, Pa.—Hotel Hershey, built in 1933 to provide luxurious accommodations for the thousands of visitors to this great sports center, achieves perfectly balanced heating service with a pneumatic-type Webster Moderator System of Steam Heating.

One of the show places of the East, the 200-room Hotel Hershey is modern in every detail.

"The Webster Moderator System is typical of the fine equipment that we have installed to insure the comfort of our guests," explains Joseph Gassler, Managing Director of the Hotel. "No expense has been spared to make our accommodations the finest possible."

The importance of effective heating is increased by the Hotel Hershey's exposed location in the center of a 10,000 acre farm in the foothills of the Blue Ridge Mountains.

During the severest weather, the Webster Moderator System has met every demand made upon it. Heat is distributed evenly and rapidly to all sections of the Hotel through accurately sized Webster Metering Orifices. A Webster Outdoor Thermostat adjusts the rate of steam delivery with every change in temperature or wind direction. A manual Variator allows the operator to adjust the steam supply to meet special conditions, such as heating up or reducing the night heating load.

J. F. Snavely, the Operating Engineer, says: "The Hotel is evenly heated at all points. There is no overheating during periods of mild weather and practically no loss of heat from window opening."

After experience with the performance of the Webster Moderator System in the Hotel Hershey, a Webster System was installed in the Community Inn, another property of the Hershey Estates.

These before-and-after facts point the way to maximum comfort and economy in heating new buildings as well as in modernization of existing installations. Consult your architect, engineer or heating contractor. Or address WARREN WEBSTER & CO., Camden, N. J. Pioneers of the Vacuum System of Steam Heating Representatives in 60 principal U.S. Cities—Est. 1888

Specification of proper materials and a check on these materials;

Supervision of construction;

A Federal Certificate of Registration, stating that his home has been built under the Plan—thereby strengthening investment security and resale value.

It is stated that the services of architects can be obtained at moderate costs because of the development of quantity supervision in a field where their services have been utilized but seldom. Further, that economies of construction and a sounder investment will more than compensate the home owner for the "modified" technical fee included in construction costs. Groups of architects have already been or are being formed in all parts of the country to do this work.

It is most sincerely hoped that this thorough and well-devised plan will supply the link between financing and construction in the small home field . . . a link which has long been sorely needed.

### ART

TO SERVE AS LIAISON between a group of modern artists and architects desiring to incorporate their work in public or industrial building, an agency—the first of its kind—has been formed by Edith Gregor Halpert at 113 West 13th Street, New York City. Called the "Bureau for Architectural Sculpture and Murals," the new body, which hopes to meet the demand for creative art decoration in buildings of all kinds, divides its list of artists into two groups.

The first list is composed of older, established artists whose work is represented in major museums and private collections; the second group is made up of younger artists, all of whom were represented in the "New Horizons in American Art" exhibition held at the Museum of Modern Art last September.

Artists in the first group: Robert Laurent, sculptor, and the painters Bernard Karfiol, Yasuo Kuniyoshi, Georgia O'Keeffe, Charles Sheeler, Niles Spencer, Nicolai Cikovsky, and Anne Goldthwaite; and Carl Walters, ceramist.

The second group consists of Rainey Bennett, Raymond Breinin, Louis Gagliolmi, David Fredenthal, Hester Miller Murray, Joseph Pandolfini, Gregorio Prestopino, Mitchell Siporin, and John Stenwall—all painters—and Duncan Ferguson, sculptor.

### ELECTED . . .

ARTHUR LOOMIS HARMON, designer of public buildings and monuments, as president of the New York Chapter of the American Institute of Architects to succeed Hobart B. Upjohn. Other officers chosen: Eric Kebbon, vice president; Frederick G. Frost, secretary; Cornelius

J. White, treasurer, and Harvey Stevenson, recorder.

President Harmon is a partner of the firm Shreve, Lamb & Harmon. He studied at the Chicago Art Institute and was graduated from the Columbia University School of Architecture in 1901. He has received gold medals for his design of the Hotel Shelton, New York, and for his collaboration in the design of the Empire State and Hollender buildings. Mr. Harmon lives at Irvington-on-Hudson, is a fellow of the American Institute of Architects, an associate of the National Academy of Design, and an honorary member of Zeitschrift des Bundes Deutscher Architekten. He is a past president of the Architectural League of New York, and a member of the Beaux Arts Institute of Design.

### EARNINGS

DR. JOHN F. CLARK, in charge of the Department of Educational Economics at Columbia University, has just completed an eight-year study undertaken to determine the average life earnings of those engaged in sixteen different vocations . . . among which architecture is included. One finding which will occasion little or no lifting of architectural supercilium: of all the professions for whose pursuit specific training is required, architecture pays least. Dr. Clark's modus operandi was to arrive at the average annual income of men in each field—according to the number of years employed. Thus he established the amount received for each successive year of work.

Here's Dr. Clark's lifetime table . . . the first of its kind ever compiled:

OCCUPATION	PRESENT VALUE OF AVERAGE EARNINGS FOR A	
	WORKING LIFE SPAN	WORKING LIFETIME
Medicine . . . . .	42 years	\$108,000
Law . . . . .	43 years	106,000
Dentistry . . . . .	45 years	95,400
Engineering . . . . .	43 years	95,300
Architecture . . . . .	43 years	82,500
College Teaching. . . . .	44 years	69,300
Social Work. . . . .	45 years	51,000
Journalism . . . . .	46 years	41,500
Ministry . . . . .	44 years	41,000
Library Work. . . . .	46 years	35,000
Public School		
Teaching . . . . .	45 years	29,700
Skilled Trades. . . . .	44 years	28,600
Nursing . . . . .	40 years	23,300
Unskilled Labor. . . . .	44 years	15,200
Farming . . . . .	51 years	12,500
Farm Labor. . . . .	51 years	10,400

Dr. Clark's figures, we gather, are not the gross life earnings of these vocations but rather the total net earnings. After looking them over, we've just about decided against retiring to that little farm we've been thinking about.

# HOUSE INSULATION MADE FROM GLASS?

## YES, AND BETTER INSULATION, TOO!

RED TOP Insulating Wool, one of the newest products made by Corning Glass Works, is a startling result of scientific research in glass.

Here is a new insulating material . . . fireproof, resilient, moisture resistant. Snowy white as surgical cotton. Made from highly refined minerals in standard glass furnaces. Spun into threads as light as eiderdown! Yet as permanent and as chemically stable as glass itself.

Felted into a compact mass, it answers the need for a highly efficient insulation that will reduce ceiling loads and lower installation costs. (A room-height strip four inches thick weighs less than two common bricks.) RED TOP is, in fact, the one mineral wool insulation available in strips nine feet long for easy application. Each strip is protected by a full length waterproof paper backing, with an inch and a quarter flange on the sides for nailing.

RED TOP Wool is also made in bats with or without waterproof backing and in granulated form for blowing into the walls of old buildings. Samples and complete information will be gladly furnished. Write U.S. Gypsum Company, Chicago, or direct to Fibre Products Division, Corning Glass Works, Corning, New York.

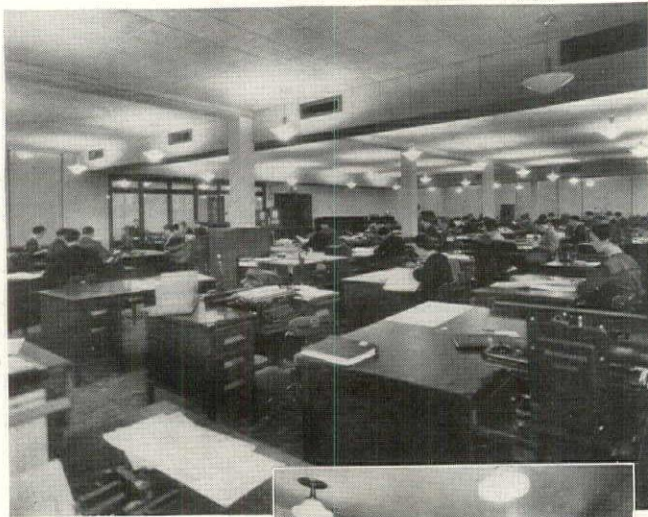
**U.S. RED TOP INSULATION**  
*marketed by*  
**UNITED STATES GYPSUM COMPANY**  
*for*  
**CORNING GLASS WORKS**



**CORNING**  
*means*  
**Research in Glass**

# These OFFICES

are examples of the great variety  
of business places successfully  
**AIR CONDITIONED BY**  
**CARBONDALE**



## COMPLETE COMFORT

means...

- Increased employee output
- More business
- Greater profit

Carbondale air conditioning equipment has new and valuable capacity control features. A Carbondale engineer, backed by an organization with 37 years of experience in this field, will be glad to explain them to you... and to cooperate fully in the solution of your air conditioning problems. There is no obligation.

### CARBONDALE

DIVISION

WORTHINGTON PUMP AND MACHINERY CORPORATION

General Offices: HARRISON, NEW JERSEY

CA 7-36

Offices and Representatives in Principal Cities

# CARBONDALE

## INDEX TO ADVERTISERS

This index is an editorial feature, maintained for the convenience of readers. It is not a part of the Advertisers' contract and American Architect and Architecture assumes no responsibility for its correctness.

American Brass Co., The.....	Second Cover
American Pencil Co.....	4
American Radiator Co.....	108, 109
American Steel & Wire Co.....	24
Armstrong Cork Co.....	17, 99
Arrow-Hart & Hegeman Electric Co.....	14
Barrett Company, The.....	107
Bethlehem Steel Co.....	105
Burnham Boiler Corp.....	106
Byers Co., A. M.....	2
Carbondale Div., Worthington Pump & Machinery Corp.....	126
Carnegie-Illinois Steel Corp.....	24
Celotex Corp.....	Back Cover
Columbia Mills.....	119
Columbia Steel Co.....	24
Corning Glass Works.....	125
Danersk Craftsmen, Inc.....	116
Delco Frigidaire Conditioning Div., General Motor Sales Corp.....	101
Eagle-Picher Lead Co.....	18
Everson Mfg. Co.....	106
Fitzgibbons Boiler Co., Inc.....	1
Frick Co.....	114
General Bronze Corp.....	6, 7
General Electric Co.....	9, 113
Holland Furnace Co.....	117
Johns-Manville.....	15
Johnson Service Co.....	21
Kewanee Boiler Co.....	127
Koh-I-Noor Pencil Co.....	104
Linde Air Products Co., The.....	5
Louisville Cement Co.....	Third Cover
Medusa Portland Cement Co.....	97
Milcor Steel Co.....	128
National Lead Co.....	110
National Tube Co.....	24
Norge Heating & Conditioning Division.....	20
Pittsburgh Plate Glass Co.....	10
Powers Regulator Company, The.....	116
Pyramid Metals.....	118
Ruberoid Co.....	23
Samson Cordage Works.....	116
Scribner's Sons, Charles.....	122
Sloane-Blabon Corp.....	13
Sparta Ceramic Co.....	123
Union Carbide & Carbon Corp.....	5
United States Gypsum Co.....	11
U. S. Steel Products Co.....	24
Uvalde Rock Asphalt Co.....	103
Warren Webster & Co.....	124

**PEORIA'S NEW POST OFFICE**  
Building from the Boiler up"

Photograph and description of placing  
boilers through the courtesy of the  
PEORIA JOURNAL-TRANSCRIPT  
Peoria, Illinois

The new United States Post  
Office at Peoria will be heated  
by 3 Kewanee Smokeless  
Boilers weighing 16,600 pounds  
each, with a rated capacity of  
100 square feet . . . approxi-  
mately 25 tons of Steel Kewanee  
Boilers.

Each of the three boilers was  
hoisted to the edge of the excava-  
tion by truck. A crane with  
"Caterpillar" tread moved up  
the incline toward the boiler and  
hoisted it from the truck. Note  
that the crane was kept as nearly  
perpendicular as possible to pre-  
vent the weight of the boiler  
from overbalancing the hoist-  
ing crane.

The boilers were then swung  
toward their previously pre-  
pared concrete bases and placed  
on the sand floor . . . the crane  
then moved to a new position  
to hoist the boiler. By repeating this  
operation several times the  
boilers were safely moved a dis-  
tance of about 100 feet.



**1,323**  
**UNITED STATES POST OFFICES**  
and other Treasury Department Buildings are heated by  
**1,583 KEWANEE**  
**STEEL BOILERS**

*Of the Government-owned post offices mentioned editorially in this issue the following 7 are heated with Kewanee Boilers:*

- U. S. Post Office, LIBERAL, KANSAS
- U. S. Post Office, SO. PASADENA, CALIF.
- U. S. Post Office, WILMINGTON, N. C.
- U. S. Post Office, KERRVILLE, TEXAS
- U. S. Post Office, SANTA BARBARA, CALIF.
- U. S. Post Office, BLACKFOOT, IDAHO
- U. S. Post Office, GARY, INDIANA

• When Uncle Sam specifies mechanical equipment he has the benefit of the brains and experience of the greatest engineering staff ever assembled. The substantial percentage of all Government-owned post office buildings that are heated with Kewanee Boilers indicates their ability to provide dependable heat at low cost.

**KEWANEE BOILER CORPORATION** Kewanee  
ILLINOIS

Eastern District Office: 37 West 39th Street, New York City

BRANCHES IN 61 CITIES

division American Radiator & Standard Sanitary Corporation

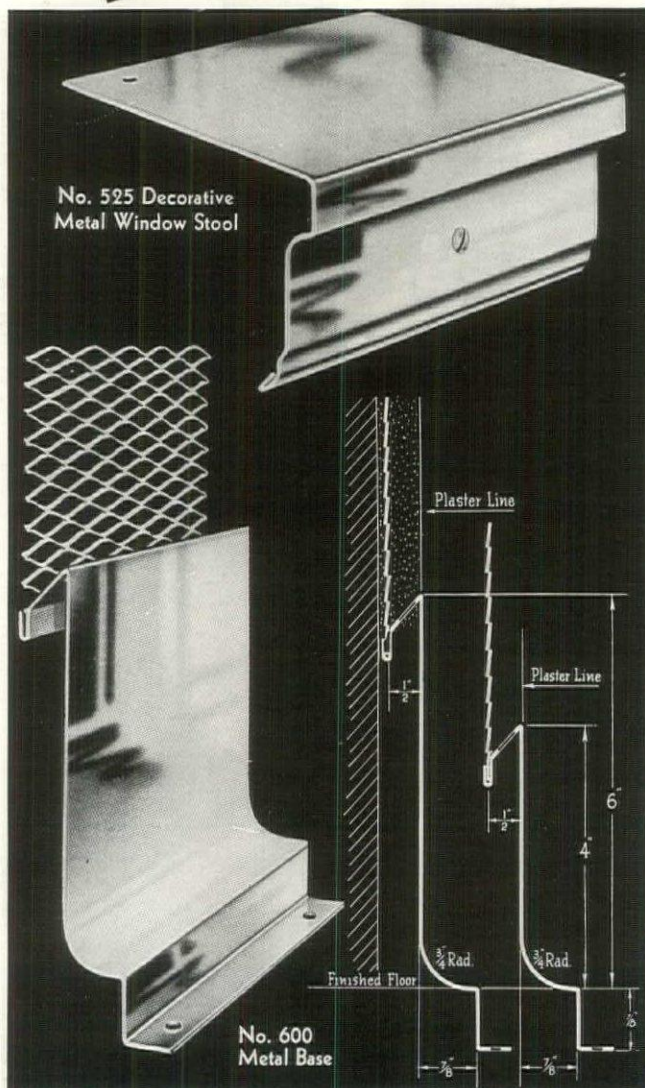


**ON THE  
HIAWATHA**  
America's most popular,  
profitable train

# MILCOR AND RICHSTO METAL TRIM

meets modern requirements  
in the modern spirit

Smartness in style combined with every practical construction advantage has made Milcor & Richsto Metal Trim the specified line for Hiawatha passenger car equipment. Milwaukee Road designers know that every part of this high-speed train — carrying capacity loads daily — is subject to unusual strain and wear. Their recognition of the time-defying properties and construction qualities of Milcor and Richsto metal trim is in keeping with the established reputation of this most frequently specified line. Where *permanent utility* and *enduring beauty* are a consideration in your designs, you and your client will find complete satisfaction in Milcor and Richsto. See Sweets or write for a copy of the Milcor and Richsto Metal Trim Manual.



**MILCOR STEEL COMPANY**  
MILWAUKEE, WISCONSIN      CANTON, OHIO  
Chicago, Ill.      Kansas City, Mo.      La Crosse, Wis.

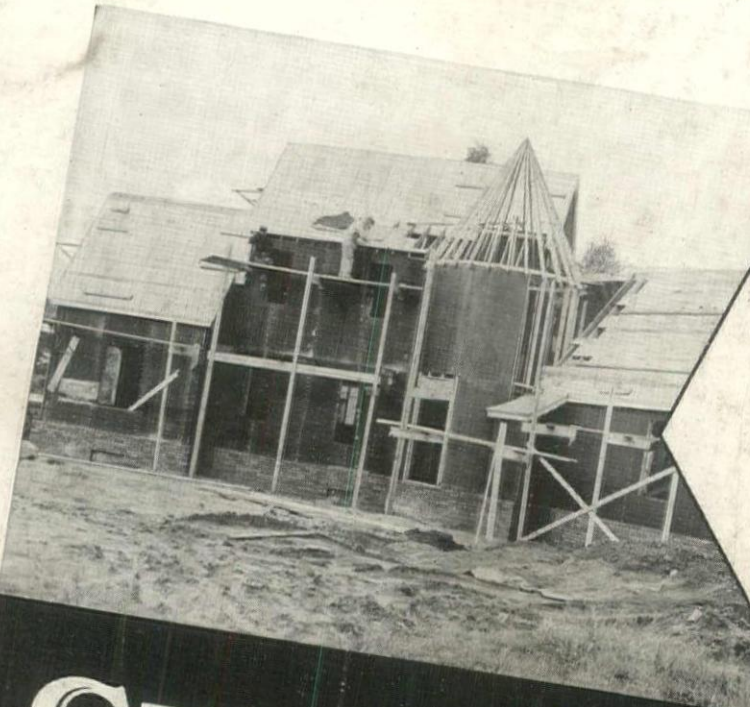




# BRIXMENT IS PLASTIC!

**W**ITH the possible exception of slaked lime putty, Brixment makes a *more plastic, more easy-working* mortar than any other materials you can use. ★ ★ But along with this plasticity, Brixment mortar also has strength greater than that of the brick itself! ★ ★ Bonds perfectly with the brick. Won't cause efflorescence. Won't fade mortar colors. Waterproofed during manufacture. ★ ★ One part Brixment, three parts sand. Five bags will lay approximately 1000 brick. Louisville Cement Company, *Incorporated*, Louisville, Kentucky. ★ ★

●



**Unharmmed**

**Despite 4 Inches  
of Rain During  
Construction!**

**CELOTEX VAPOR-SEAL**  
REG. U. S. PAT. OFF.  
**INSULATING SHEATHING**

*Sheds Water "... like the proverbial Duck's Back," says builder of this home. "Exposed to nearly 4 inches of rain ... and I cannot see any change or swelling!"*



**Weather Side:** Vapor-seal is waterproofed Celotex—sealed on both sides and all edges by a continuous coating of special asphalt. It looks *right* on the building ... sheds water "like the proverbial Duck's Back"!

**Framework Side:** The framework side is coated at the factory with a special aluminum coating as a further seal against moisture. Vapor can't affect Vapor-seal's original Celotex insulating properties!

**Celotex Insulating Lath:** Replaces ordinary lath. Nails direct to framework in large sheets that go up fast. Provides a strong, unbroken plastered foundation securely locked by patented beveled and shiplapped joints. Bonds plaster securely. Guards against cracks and permanently prevents lath marks. Assures beautiful walls and ceilings and provides the lasting insulation your clients want. Protected against termites and dry rot by the Ferox Process.

**Builds Better  
Homes Because:**

- 1** It is integrally waterproofed, then sealed in asphalt on both sides and all edges, and finally coated with a special aluminum compound on the inside for a further seal against vapor!
- 2** Original Celotex insulating value is maintained because the 2 seals are on the surface!
- 3** Vapor-seal Insulating Sheathing is strong and stiff—provides great bracing strength!
- 4** Not an "extra"—replaces ordinary materials of the same thickness—25/32". Large sheets!
- 5** Marked for nailing to assure proper application and fast installation—fits tight and stops wind infiltration, even in pulley pockets!
- 6** Protected against termites and dry rot by the exclusive, patented Ferox Process!
- 7** Only Celotex is backed by the Celotex Written Life-of-Building Guarantee!\*

\*The Celotex Written Life-of-Building Guarantee applies only within Continental United States.

*Guaranteed in Writing  
for the Life of the Building*

THE CELOTEX CORPORATION AA 8-37  
 World's Largest Manufacturer of Structural Insulation  
 919 N. Michigan Ave., Chicago, Ill.  
 Without obligation to me, please send me a sample of Vapor-seal Insulating Sheathing and full particulars about its advantages and application.

Name.....  
 Address.....  
 City..... State.....