

AMERICAN ARCHITECT AND ARCHITECTURE

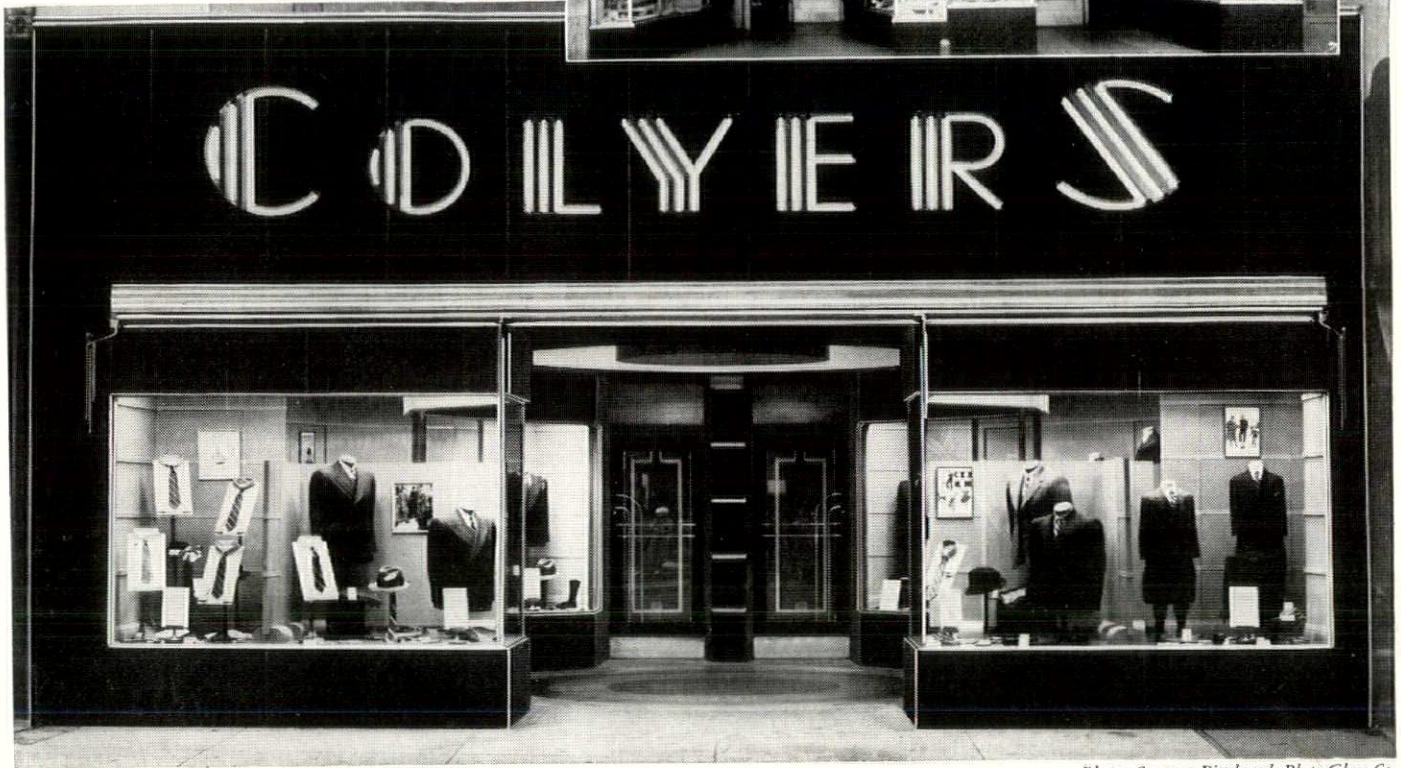


FEBRUARY, 1937 • UNIT PLANNING No. 2-STAIRS

Before: → Poor display and unattractive appearance hampered sales.

After: New Store Front of Anaconda Bronze ↓ created this result.

Colyer's Clothing Store, Newark, N. J. Doon Shillman, New York City; Frank Grad & Sons, Newark, N. J., Architects. The Fatzler Co., Gen. Contractors.



Photos Courtesy Pittsburgh Plate Glass Co.

Store fronts of Anaconda Bronze PAY BIG DIVIDENDS

*Anaconda Architectural Bronze
adds a note of quality in the
display of merchandise*

Retailers are finding commercial value in the lasting beauty and utility of Bronze. This store front in Newark, N. J., indicates the trend. It brings character and distinction to the merchandise displayed therein.

And Anaconda Architectural Bronze is as economical as it is suggestive of quality. Durable and absolutely rustproof, it renders permanent



service. It is easily cleaned and may be kept in its original state with only occasional attention. Even when bronze work has been neglected, cleaning and polishing quickly restore its natural lustre.

Good merchandising is essentially the same on America's "Main Streets" as it is on Fifth Avenue, New York. And on Fifth Avenue, 80% of the store fronts are bronze. The American Brass Company is the principal supplier of bronze, copper and nickel silver in the form of extruded shapes, drawn shapes, sheets, etc., as used in the construction of ornamental work of every description. 37280

Anaconda Copper & Brass

THE AMERICAN BRASS COMPANY, General Offices: WATERBURY, CONNECTICUT
Offices and Agencies in Principal Cities . . . In Canada: ANACONDA AMERICAN BRASS LTD., New Toronto, Ont.



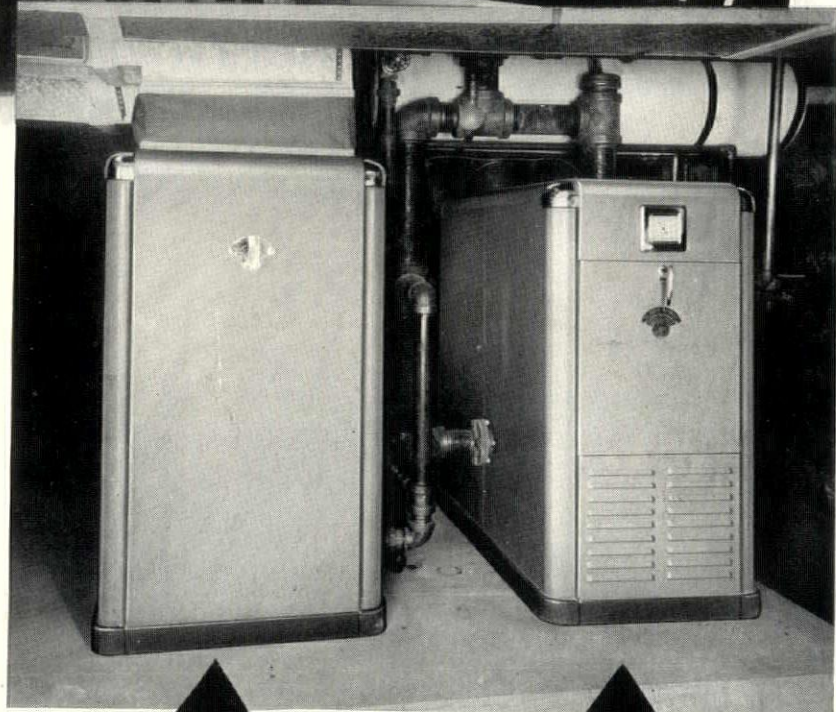
FITZGIBBONS
"Split System"
Air Conditioning,
Heat, and
Hot Water Supply

*A beautiful home
deserves a fine
 air conditioning
 installation*

The home of Mr. Otto G. Raymond, Washington, D. C., has the eye-satisfying beauty of the best traditions of American architecture—and it also enjoys healthful conditioned air in selected rooms, with economical steel boiler heat in kitchen, bath and garage, as well as year-round hot water at low cost. The illustration shows the Fitzgibbons equipment furnishing these three services.

This is "Split System" air conditioning—the further step beyond simple air conditioning.

You can get this with the twin units—the Fitzgibbons Steel Boiler and the Fitzgibbonsaire—or you can get it with a single combined unit—the Fitzgibbons Boiler-Air Conditioner. Both of these installations provide year-round hot water supply—tankless, if desired.



"Fitzgibbonsaire" gives cleaned, tempered, humidified and circulated air . . . *Fitzgibbons "Oil-Eighty"* the steel boiler that gives radiator heat and domestic hot water

The air is warmed by steam from the boiler—no direct connection between air ducts and combustion chamber, hence entire absence of "speaking tube" effect, conveying combustion sounds to the rooms. No possibility of seepage of gases in the circulated air. A quiet, sturdy unit.

Works with any good oil burner to provide outstanding fuel economies. Also built in types for stoker and gas firing. When equipped with the Fitzgibbons TANKSAVER, provides year-round tankless hot water supply.

GET THE FACTS about modern air conditioning, in the catalog describing the Fitzgibbons "Split System." Write today.

Fitzgibbons Boiler Company, Inc.

General Offices:

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

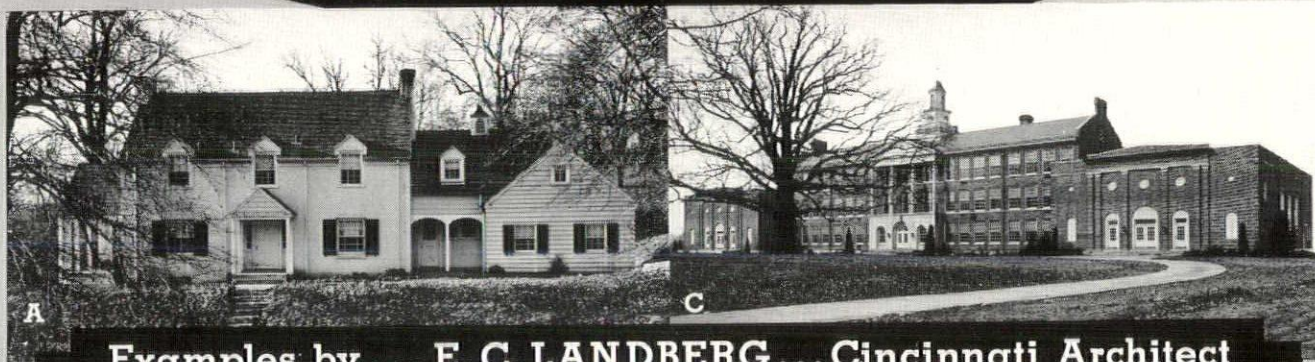
Works: OSWEGO, N. Y.

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 2654, dated February, 1937.

AMERICAN ARCHITECT AND ARCHITECTURE, FEBRUARY 1937

Uses for
WROUGHT IRON
 defined by
"CORROSION STUDIES"



Examples by . . . **E. C. LANDBERG** . . . Cincinnati Architect

A Genuine wrought iron was specified in Dr. W. F. Everwine's residence, Cincinnati, for hot and cold water lines, concealed waste lines above first floor, and for heating supply and return lines.

B Genuine wrought iron specified in Ninth Street Baptist Church, Cincinnati, for hot and cold water and fire lines, concealed waste lines, exposed waste lines above first floor, vents and drains; also for heating supply and vacuum return lines above ground.



C In the Junior and Senior High School, Hillsboro, Ohio, genuine wrought iron was specified for hot and cold water and fire lines, concealed waste lines and exposed waste lines above first floor, vents and drains; also for two inch and smaller heating supply and vacuum return lines above ground.

● In step with modern trends, our offer to make corrosion studies has met with response in the profession. Leading architects and engineers have welcomed the assistance we give in analyzing local water, soil and gases because it gives a thorough engineering background to the job of material selection.

The procedure covers two major steps. First, determining the sever-

ity of corrosion of various pipe services — then specifying the pipe that has the best record for long life and economy in those services. Note the examples illustrated. Wrought iron has been specified for the services where a corrosion study has proved it best.

Let us aid you in analyzing the probable corrosive conditions in any building you may be planning. And

let us present the building profession's experience covering a half century with wrought iron in those services.

Send your request for corrosion study assistance to our nearest Division Office, or our Engineering Service Department in Pittsburgh. As a starter, give location of building and types of services. A. M. Byers Company. Established 1864. Pittsburgh, Boston, New York, Philadelphia, Washington, Chicago, St. Louis, Houston, Seattle.

BYERS
GENUINE WROUGHT
IRON PRODUCTS

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

PIPE - WELDING FITTINGS - SPECIAL BENDING PIPE
 PLATES - SHEETS - O. D. TUBES - FORGING BILLETS
 STRUCTURALS - BAR IRON - RIVETS - CULVERTS

AMERICAN ARCHITECT AND ARCHITECTURE

CONTENTS FEBRUARY 1937

COVER. Golden Gate Bridge, by Ernest Born

TRENDS. . . . News . . . Events . . . Facts . . . Faces . . . Ideas . . . Opinions . . . Comments . . . presented in a classified and logical sequence **4**

THIS MONTH AND NEXT. **27**

FRONTISPIECE. DeLaWarr Pavilion, Bexhill, by Mendelsohn and Chermayeff **28**

MODERN ARCHITECTURE IN ENGLAND. Berthold Lubatkin of Tecton explains the paradox of important contemporary work in a country worshipping tradition. **29**

ARCHITECTURAL OVERTONES. Bridges on the Pacific coast are the subject for a fine pictorial section. **43**

EDITORIAL. . . . New Codes for Old . . . Melting Pot Architecture **51**

ARCHITECTS and AVOCATIONS. Architects at play **52**

HOUSING and PLANNING. II. The second of a series of excerpts edited by Sir Raymond Unwin from lectures given by him at the Town Planning Studio of Columbia University. **53**

HOUSE OF DAVID M. GOODSTEIN in Scarsdale, N. Y. This house indicates close cooperation between the architect, Lennart Palme, and the decorator Ross Stewart of W. & J. Sloane. **57**

CHATHAM VILLAGE. This is the second part of the Buehl Foundation's housing development in Pittsburgh. Ingham and Boyd were the architects and Henry Wright the consultant, Ralph Griswold, landscape architect. **63**

PORTFOLIO OF SHOW WINDOWS. No. 124 in a series of minor architectural details **67**

THE DIARY. The notes and opinions of Henry Saylor. **79**

SALVAGED FROM TIME. Part IV of the reminiscences of Claude Bragdon **81**

CUNARD-WHITE STAR LINE BUILDING in Boston is a fine example of architectural face lifting by Kilham, Hopkins and Greeley, Architects **85**

FAVORITE FEATURES. Common problems in every-day practice **87**

STAIRWAYS: UNIT PLANNING . . . Series No. II . . . on the correct planning of units that are recurrent in practice **91**

TIME-SAVER STANDARDS. . . . Stairs, Dimensions and Clearances . . . Stairs, Unit Planning Data **96**

TECHNICAL DIGEST. A review of articles of interest to architects in current allied journals. **100**

BOOKS **102**

TECHNIQUES. . . . Methods . . . Materials . . . Research . . . Practices in School Architecture **104**

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. CL No. 2654

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.

LEGISLATION

NEVADA IS ONE OF THE LATEST STATES to pass legislation limiting the tax on real estate. With nine states already in line, and proposed measures before the legislatures of fifteen other states, it seems certain that the entire country will follow before long. The taxation committee of the National Association of Real Estate Boards, leaders in the fight to base real estate taxes on productivity of income, feel that more rapid strides will be made from now on because of the tremendous voting power of the property owners who are backing state activities. Nevada's amendment was adopted at the November elections by popular referendum. It limits the total tax which may be levied against real estate for all purposes to 5 per cent of the true valuation.

CONSTRUCTION

A NEW RESEARCH LABORATORY, of interest to designers because it utilizes the newest materials to achieve color conditions and architectural distinction worthy of the most complete metallurgical laboratories in the industrial world, will be constructed in Middletown, Ohio, for the American Rolling Mill Company. Porcelain enamel, stainless steel, and glass block will completely supplant conventional building materials, and the entire building will be equipped for summer and winter air conditioning. According to a recent announcement, the laboratory will be a single story building providing 43,500 square feet of area. It was designed by the Austin Company, and will be erected by it at a cost of approximately \$260,000, exclusive of equipment.

EXPANDED HOME BUYING in 1937 is forecast on the basis of: (1) Recent wage increases, index of normal times; (2) Dividend payments; (3) Provision for retirement income through Social Security Legislation.

ACCORDING TO THE FHA SURVEY of new home owners in a suburban community, 90 per cent of the residents in new homes erected under the FHA insured mortgage system are paying 28% less in MONTHLY PURCHASE INSTALLMENTS than they had previously paid in rent.

INDICATIVE THAT BETTER GRADE BUILDING MATERIALS are being used, boom in copper and brass will mark an all-time record this year. Consumption of brass pipe and copper tubing in 1936 will surpass by 15 million pounds, any previous year's total in the history of the industry. (The Almanac Barometer 12/5/36).

ENCOMIUM

our highest praise for

JOSEPH HUDNUT

Dean of the
Harvard School of Architecture

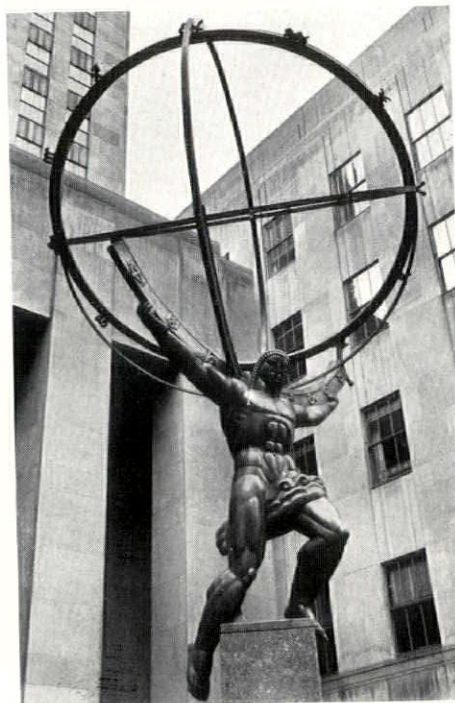
Because, by bringing Walter Gropius to this country as Professor of Architecture at Harvard University, he has made a seven league stride for Architecture in both education and practice.

Because his clear foresight has so constantly revitalized our academic halls with the practical spark of such men as Henry Wright and Werner Hegemann.

Because it is his conviction that the profession of architecture must be reconstructed, "not merely so that it will survive the demands of social utility, but so that it will lead and command."

Because he believes that student architects should be trained, "not to tell us again that Rome was magnificent and Amiens sublime, but to tell us, through a wider understanding of technology and human environment, that our own world is not devoid of significance."

Because he does something about it.



Lee Lawrie's Atlas is the most recent work at highly sculptured Rockefeller Center

THE DOW SERVICE OF NEW YORK has shown uncanny accuracy in its previous annual forecasts of daily building reports for New York City. In 1935 the Dow Service predicted a volume of \$150,000,000, whereas the actual total was \$2,000,000 over this figure. In 1936 its forecast was \$225,000,000, and the actual total was \$220,000,000. In its twenty-first annual forecast for New York City's 1937 building volume, it predicts a million dollars a day of construction work. This should inspire men in many related fields throughout the country.

THE CONTRACTS AWARDED LAST MONTH in the 37 eastern states for residential building aggregated over \$65,000,000 in volume according to F. W. Dodge Corporation Reports. This was \$20,000,000 larger than the total recorded for December, 1935. Non-residential building contracts totaled almost \$73,000,000 in December, 1936, for an increase over the previous year of \$7,000,000. Reports such as these, indicate that for the twenty consecutive months, building volume for the month has exceeded that of the same month the year previous.

FINANCE

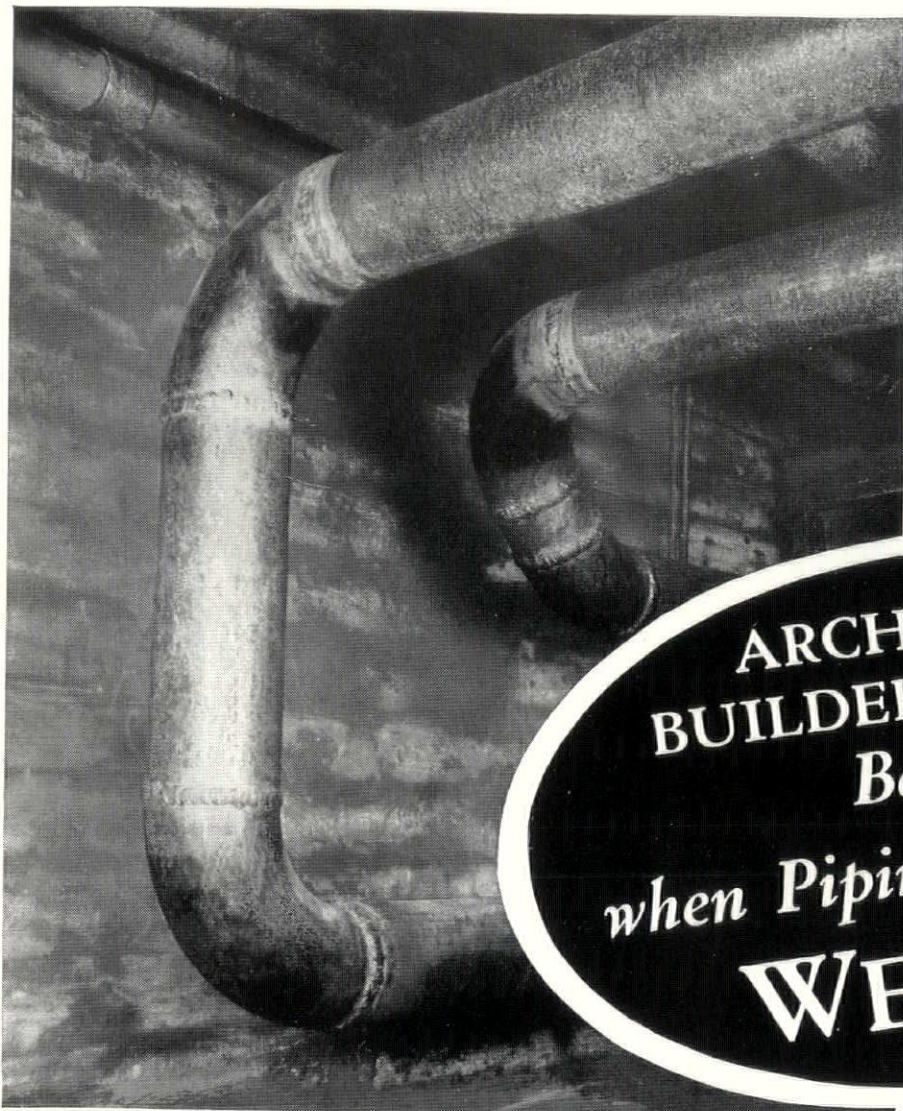
AMOTT, BAKER & COMPANY give the following information on Realty Bond Price Averages, as of January 1, 1937: "With issues in four out of the five major cities contributing substantial gains, eastern real estate bond averages, based on market action of 200 typical issues, increased 3 per cent in December, the largest increase recorded for any month of the year."

"This increase, which compares with an increase of 1.4% in November, brings the total appreciation for the 12 months of the year to 13.9%. The average price per \$1,000 principal amount of bonds advanced from \$430 on November 30, to \$443 as of the close of 1936."

"Gains (or losses) recorded by cities in December were: New York, 3.4%; Buffalo, 3.3%; Boston, 3.8%; Pittsburgh, 1.3%; Philadelphia, 0.3% (loss)."

HOUSING

NEW YORK'S MAYOR F. H. LaGUARDIA brought a recent luncheon meeting of the Public Education Association to earth with something of a bump when he discarded some 90 minutes of carefully phrased speech-making by the simple statement that psychology could not solve the problem of crime prevention so well



ARCHITECT
BUILDER • OWNER
Benefit
when Piping Systems are
WELDED

Welding is a method whereby pipe and fittings are joined into an integral, permanent system. To the architect, welding brings easier designing, fewer mechanical limitations, and simplified specifications. To the builder, welding when properly used simplifies the installation and saves important time and money. To the owner, welding assures an enduring, permanently leakproof piping system at lower cost.

Linde engineers are skilled in the design and installa-

tion of pipe by welding. Their cooperation has been extended in the welding of many millions of feet of building and power piping, and more than 20,000 miles of overland pipe lines. This wide experience is available to you through any Linde office. Ask for the technical data especially prepared to aid in designing and specifying "Piping Joined by Oxy-Acetylene Welding". The Linde Air Products Company, Unit of Union Carbide and Carbon Corporation, New York and Principal Cities.

Everything for Oxy-Acetylene Welding and Cutting

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

FROM



LINDE

UNION CARBIDE



PHOTO: ACME

Tenement conditions such as this where a Philadelphia building collapsed to kill and maim tenants poignantly points the grim lesson that slum elimination is probably cheap in the long run

as economics. The Mayor, prefacing many remarks in his unscheduled talk with the phrase, "this will surprise you experts," said in part, "If I had my choice between the Child Guidance Bureau and a free lunch, I'd take the free lunch. A T-bone steak and German fried potatoes

is one of the best preventives of crime I know.

"I am sorry the economic side was not stressed today. A sanitary, cheerful, low-rent home . . . has a great bearing on the child and his relationship with his family. It will cost millions and millions of dol-

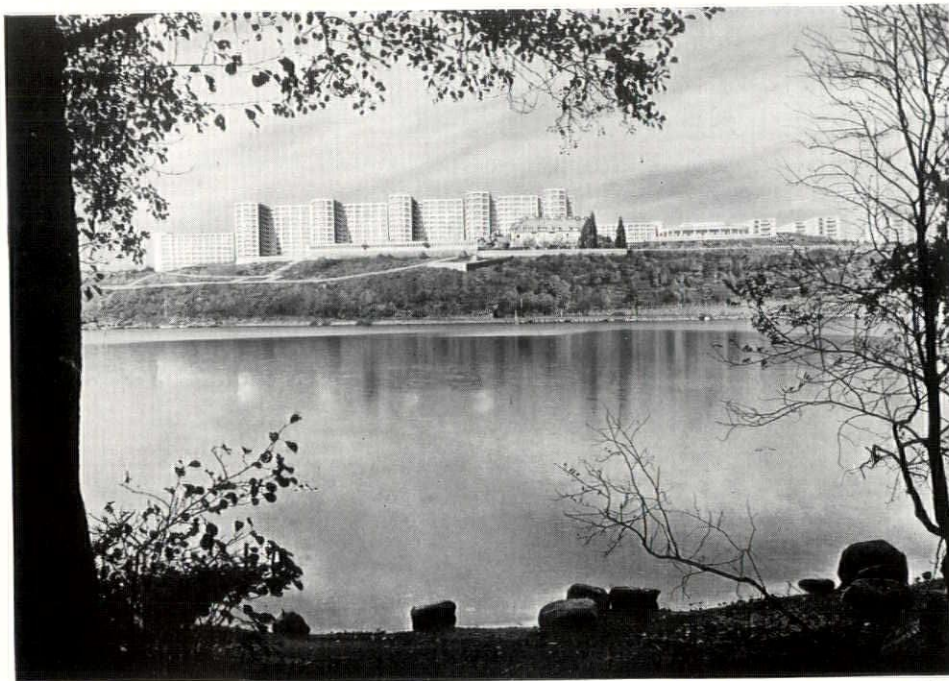


PHOTO: UNDERWOOD & UNDERWOOD

A proposed new hospital for Stockholm is ideally situated for the convalescent overlooking a placid water setting

lars, but wouldn't it be better to spend in that direction than to look at crime charts and statistics?"

WILLIAM STANLEY PARKER, Chairman of the Committee on Construction Industry Relations, believes that Housing promises the greatest possibilities in the building industry during the next few years. "However," he says, "the important underlying factor is the attitude of lending agencies in the small house field, toward eliminating previous undesirable practices. We are told that undesirable jerry-building is progressing in various centers as gayly as heretofore. Apparently some people have money to lend on this kind of construction as readily as in the merry days of the Twenties. Wherever such is the case, it is obvious that there will be no opportunity for employment of architects."

"One field," Mr. Parker continues, "that offers opportunity for some members of the architectural profession, is the active development of local and state planning agencies all over the country, as a result of the valuable program of the National Resources Committee. Architects who have training and practical experience in these fields may well find here their opportunity for employment."

"TWENTY-THREE MILLION AUTOMOBILES are not in use today because any business organization felt sorry for people who might otherwise have to walk." Thus emphasizing the need for business men to turn their talents to the problem of organizing a home building industry, Mr. A. S. Freed, Chairman of the Committee for Economic Recovery, addressed the Economic Club of Detroit on the subject of Business Opportunities and Responsibilities in National Home Building Program. At the same time he was careful to point out that, "Nothing would be more dangerous at this time than the formation of gigantic home building companies by the same interests which now control, let us say, the automobile, steel, or other great industries. The battle now being waged by government against the concentration of economic power, would intensify itself with this reborn industry as its battle ground. . . . It is up to us, as business men, to prove that private business and banking are a great asset to the welfare of the people of the United States." It was Mr. Freed's considered opinion that, "We will never have a real home building program in this country until business realizes that, apart from social gain, home building is also a potentially excellent business proposition."

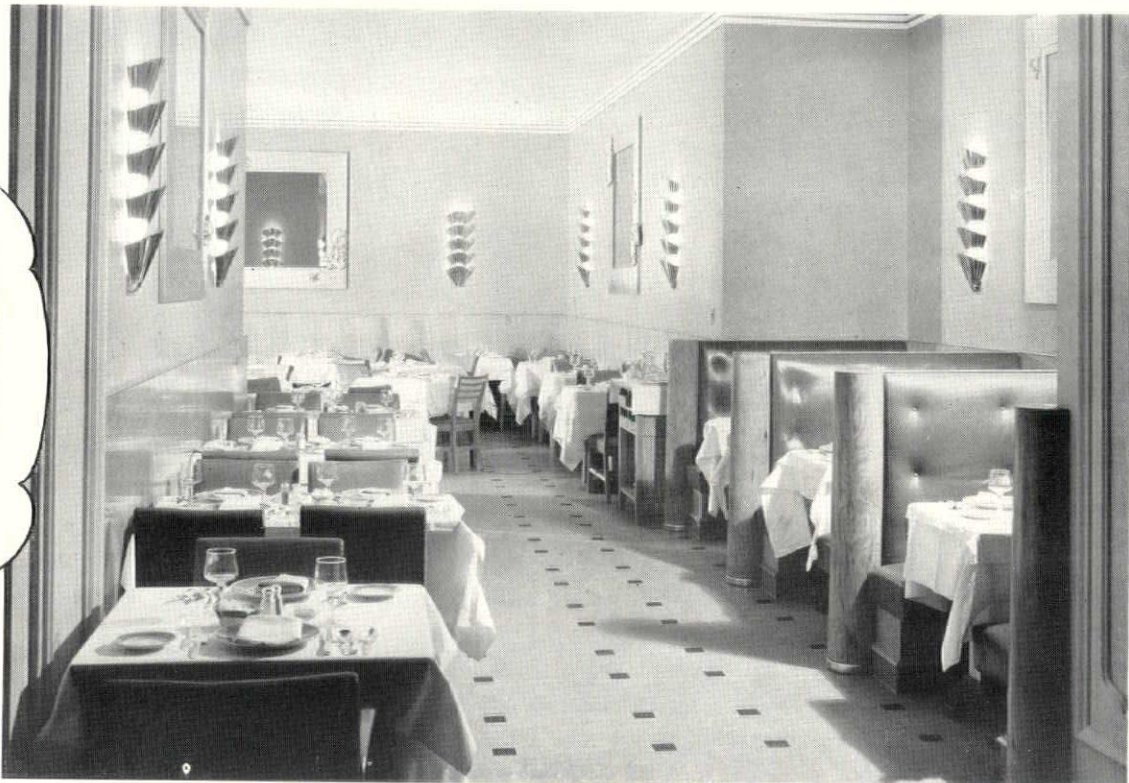
THE THEORY OF FOUR SOUND WALLS and a sturdy roof is rapidly fading into

ANNOUNCING

a new rubber tile backed by two fine old names

ARMSTRONG - STEDMAN

Rubber Tile floor in the Eitel Restaurant, Chicago. Colors are red spot tiles on a field of gray. Armstrong offers the only complete line of resilient floors, including—besides Rubber Tile—Linoleum, Cork Tile, Accotile, and Linotile. Hence, the Armstrong Architectural Service Bureau can offer unbiased suggestions on the best type for every need.




NOW available to architects is a complete new line of floors: *Armstrong-Stedman Reinforced Rubber Tile*. Manufactured and guaranteed by the makers of Armstrong's Linoleum, this new line is the first to be announced following the purchase of the Stedman Rubber Flooring Company by Armstrong.

Stedman Rubber Tile has long been popular with architects. As *Armstrong-Stedman Reinforced Rubber Tile*, this product has been completely re-styled and is now avail-

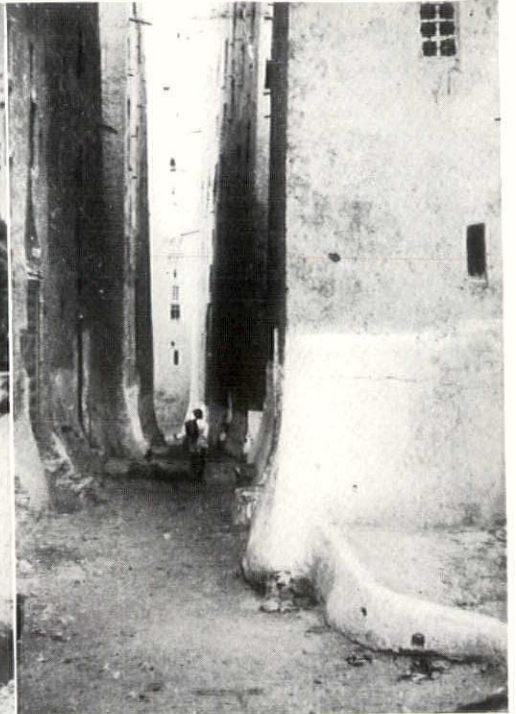
able in 40 colors—including marble: and two-tone effects. A wide assortment of sizes permits the creation of original designs with a minimum of expense for cutting.

This new rubber tile is a thoroughly practical floor for residences or public buildings. A filament reinforcement in the rubber prevents distortion of designs and retards wear. The rich clear colorings run through the full thickness of the material. Three gauges— $\frac{1}{8}$ ", $\frac{3}{16}$ ", and $\frac{1}{4}$ "—provide a grade for every purpose.

Armstrong-Stedman Reinforced Rubber Tile is easy and inexpensive to install—and easy and inexpensive to maintain. Cigarette burns and commonly spilled liquids can be removed with exceptional ease. Write now for samples and a color-illustrated copy of "New Beauty and Comfort in Floors," illustrating the design possibilities of this quiet, restful flooring. Armstrong Cork Products Company, Building Materials Division, 1201 State Street, Lancaster Pa. 

ARMSTRONG'S *Linoleum* and RESILIENT TILE FLOORS

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



WIDE WORLD

In the Wadi Hadramant of Southern Arabia, Hans Helfritz, a German explorer, found three "skyscraper" towns. The oldest of these, Shibam, with a population of 7,000 people, is the Capital of the Shibam Valley. The town consists of clay structures, ten to fourteen stories high, built so closely together that they are an ideal protection against marauding Bedouins. The windowless lower stories connected by underground passages, serve as stables and for the storage of supplies. Due to the abnormally dry climate, many of these clay structures are from four to six centuries old

limbo as the fundamental concept of adequate housing. Today, every architect is aware that community and neighborhood services, healthy and attractive surroundings, and adequate recreational facilities must be given a prominent place in planning.

It is with this broader view of the home that the Public Works Administration is pursuing its \$130,000,000 housing program for families of pinched incomes: lending unity and coherence to its work by giving the landscape architect an increasingly important role. Multi-family housing practice, which called for as great a coverage of land as local building codes would permit—often as high as 80 per cent in the "good old days" has been discarded. Buildings in PWA's 50 projects in no case take up more than one-third of the area, and in most instances cover less than one-fourth.

Preliminary studies are being made on wood block scale models, to determine an effective relationship between buildings and open areas, and it is left up to the landscape architect to put the remaining ground to the best use. Unquestionably Herbert W. Schmitt, Principal Landscape Architect of the PWA Housing Division, has voiced the opinion of many in saying, "Contrary to popular belief, the landscape

architect is not merely an exalted gardener. The flower pot on a fire escape belongs to the era of the 12-hour working day."

SHOWS AND FAIRS

THE PARIS INTERNATIONAL EXPOSITION OF 1937, opening under the sign of Discovery, Mother of Technique and the Arts, will have as its central theme "human progress through scientific research." France, inspired by the necessity of making an inventory of progress, has undertaken the gigantic task of presenting to the public the total sum of modern science from mathematics to physiology.

Lighting effects will contribute one of the Exposition's most attractive features. Moreover, the combination of indirect and under-water illumination, searchlights, lamps arranged in countless shapes, and even jets of steam and colored smoke, give promise of magical beauty. Some of these effects are to be combined with music specially written by such gifted composers as Igor Stravinsky, Arthur Honegger, and Florent Smith.

One of the most outstanding developments of recent times, and one destined to become even more universal in its ap-

plication, is that of refrigeration and cooling. Consequently, the International Ice Palace, another highlight of the Exposition, will interest not only architects and engineers, but also the layman. Situated on the Seine bank, between the Alexander III and Alma bridges, the building will be two stories high, with a 150 foot tower projecting from the roof. This structure will be covered with ice during the summer months, and at intervals will erupt with a miniature snow storm. It will be illuminated at night by means of a new process, using gases obtained from one of the latest cooling methods. The building will house an exhibit of refrigeration equipment developed during the past 60 years, and the public will be invited to taste ripe fruits which have been kept fresh by freezing for six months.

THE SITE OF THE GOLDEN GATE INTERNATIONAL EXPOSITION OF 1939—a 400 acre man-made island—is providing alert Californians with a fresh batch of "reasons why you should visit our shores." The United States Corps of Engineers recently reported to William P. Day, Exposition Director of Works, that the project is approximately at the half-way mark.

An imposing array of statistics

HERMAN NELSON

System of Air-Conditioning for Schools

*That EXTRA Something
which makes
all the Difference*

In almost every industry there is some one product which stands out above all others. In such a product is built that indefinable something which over a period of time stamps it as a leader in its field. It is seldom due to one feature alone, but rather to painstaking research, advanced engineering and exacting manufacturing standards. It is the final result of a policy which is satisfied with nothing less than the best results obtainable.

THE HERMAN NELSON CORPORATION

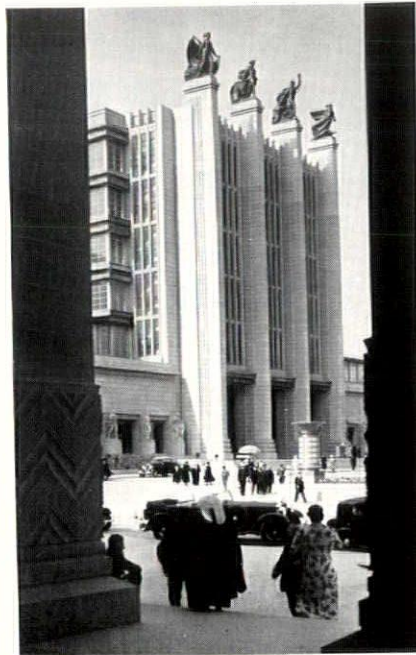
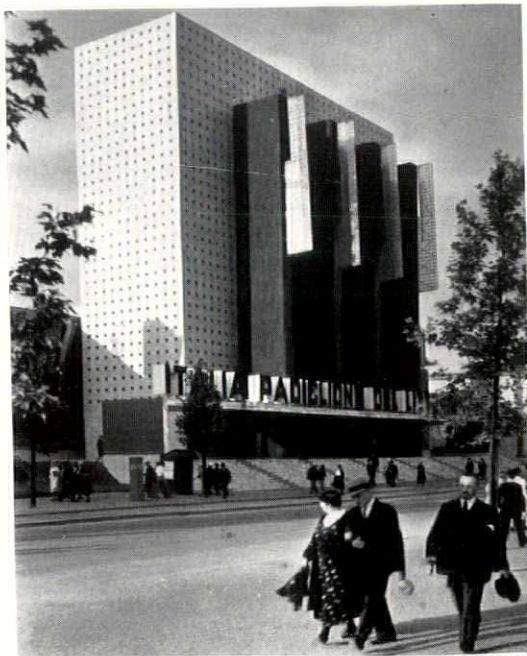
General Office and Factories at Moline, Illinois
Sales and Service Offices in all Principal Cities



PHOTOS: G. E. K. SMITH

BUILDINGS AT THE BRUSSELS FAIR

These four buildings at the Brussels World's Fair of 1935 are newsworthy because they are excellent fair buildings for a world's fair conscious profession. They also indicate the clear-cut nationalistic lines with which European architects are interpreting the modern style. (Above left) The British Empire Building, chaste in a design which still owes a great deal to classicism. (Above right) "Bon Marche" the department store building is typical of the gallic flair for fashion. (Below left) The Italian Building depends on the symbols of vast fasces for its vigor. (Below right) The permanent main Exhibition Building is a characteristic gesture in that its obvious root are in the Beaux Arts



are now ready, and architects working over plans for summer cottages will be interested to know that with 8,900,000 cubic yards of sand in place the fill is 47% complete; that the three-mile-long rock sea wall is 75% finished; that nine dredges, operating on a 24-hour day schedule, placed 2,600,000 cubic yards of material in the fill during October, a record they have since surpassed

Foundations have been started and concrete is being poured for the administration building and two airport hangers. These three buildings, which will form part of the central airport terminal after the exposition, will cost approximately \$1,750,000. Meantime, final architectural plans for all major buildings have been completed, and a large scale model is now on display at the San Francisco City Hall.

THERE ARE PROBABLY SOME FEW AMONG US who can truly appreciate the magnitude of a project such as the New York World's Fair of 1939, now under construction. The uninitiated, however, must sit back and grasp a few straws from such guiding hands as those of Col. John P. Hogan, Chief Engineer, for the Fair.

To determine the best methods of illumination, so that the maximum effect will be obtained both during the daytime and under artificial lights, experiments are now being conducted with scale models. New lighting equipment, as yet untried on a commercial scale, has been so successful that it is well within the realm of possibility that the devices used in illuminating this Fair will set a standard for future equipment.

Ample windows — incorporating the most modern practices of fenestration, are essential to our present-day mode of living. In addition to consideration for comfort, Architects, today, capitalize on natural surroundings and frame the living picture in all its beauty with — Picture Windows. Here the vital importance of quality glass is readily recognized.



Architect, John C. B. Moore; Photograph by Thurman Rotan Photos.



Libbey · Owens · Ford Glass Company, Toledo, Ohio, manufactures a complete line of flat glass, including Flat-Drawn Window Glass . . . Polished Plate Glass, both clear and in colors . . . Heavy Sheet Glass . . . Greenhouse Glass . . . Safety Glass . . . Tuf-Flex Tempered Plate Glass . . . Vitrolite Colorful Structural Glass . . . Aklo Heat-Absorbing Glass . . . and distributes the Figured and Wire Glass manufactured by the Blue Ridge Glass Corporation of Kingsport, Tenn.

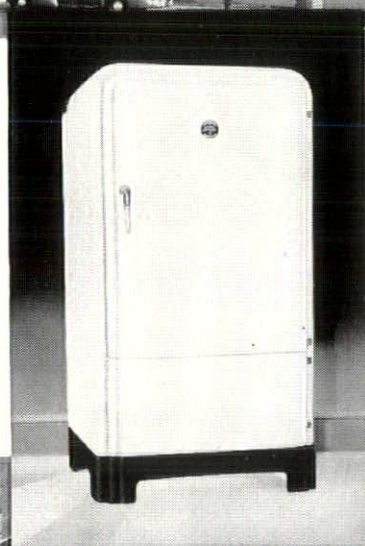
LIBBEY · OWENS · FORD
Quality Glass

9 YEARS' EXPERIENCE PROVES THAT SERVEL ELECTROLUX ASSURES LOW MAINTENANCE COST.. LASTING SATISFACTION



This apartment building at 151 Ocean Avenue, Brooklyn, N. Y., was equipped with Servel Electrolux Refrigerators in 1928.

When Spitzer & Werner built this new apartment house at 39 Ocean Avenue, Brooklyn, N. Y., they again chose the Gas Refrigerator.



"DELIGHTED WITH THE WAY THE GAS REFRIGERATOR SAVES US MONEY ON MAINTENANCE COST EVEN AFTER LONG SERVICE" . . . *Say Spitzer & Werner*

Prominent Brooklyn Builders Choose Servel Electrolux for New Apartment House

• From Boston to Los Angeles, from Texas to Canada, the swing is to the gas refrigerator. Experienced builders everywhere are installing Servel Electrolux. Because Servel Electrolux has *proved* in 8 . . . 9 . . . 10 years and more of constant service that it gives *continued* low maintenance cost . . . permanent silence . . . lasting satisfaction in every way.

Here, for example, is what Mr. H. J. Spitzer, of Spitzer & Werner, prominent Brooklyn builders and owners, says about the gas refrigerator:

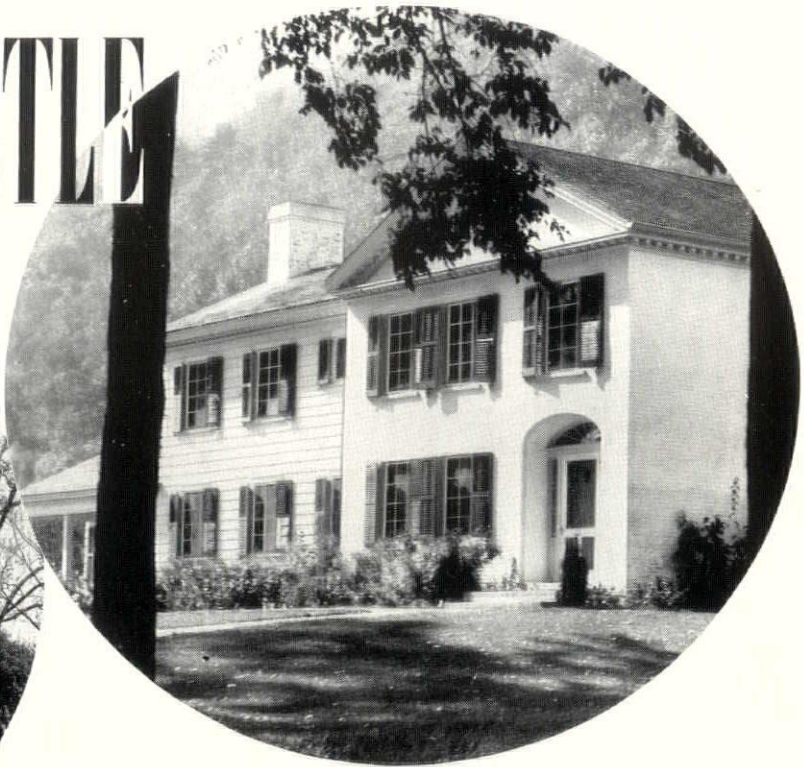
"We have been equipping our properties with Servel Electrolux since 1928, and are delighted with the way the gas refrigerator saves us money on maintenance cost even after long service. Naturally, we selected the new air-cooled Servel Electrolux for our latest building at 39 Ocean Avenue."

The gas refrigerator offers the maximum of tenant-appeal, the maximum of trouble-free, low-cost performance. It will pay you to get the facts about it. See the new 1937 models at your local gas company showroom, secure full information. And, if you want further proof, ask your builder friends what their experience with Servel Electrolux has been.

Servel, Inc., Servel Electrolux Sales Division, Evansville, Indiana.

**EXPERIENCED BUILDERS SPECIFY SERVEL ELECTROLUX
THE GAS REFRIGERATOR**

COTTAGE OR CASTLE



THERE'S A SOUND REASON FOR CURTIS "INSULATED" WINDOWS

Architects know that, generally speaking, the owner of a small home cannot afford all the comforts and luxuries he desires. But the best windows he can buy—strangely enough—are entirely within his means.

That's true because the Curtis *Silentite Window* is *Insulated* and saves up to 25% on heating costs—a saving of the greatest possible importance to the man of medium means. And today *Silentite* double-hung windows—after 5 years of successful performance—are being specified for small as well as large homes in ever increasing numbers. The Architect favors them because one basic frame fits any type of wall and because they are pre-fit to simplify specifications and installation. The contractor prefers them because they save installa-

tion time and labor. And naturally any homeowner likes them because they are so easy to live with.

Silentite windows will not stick or bind. They will not rattle. They are draftless and dustless. Seeping snow or rain cannot soil draperies, floors or wall coverings. *Silentite* glides up and down so smoothly that a child can easily lift or lower it. There are no weights to jam or cords to break. Add to all that a substantial reduction in heating costs—and it's not much wonder that this window is fast becoming first choice with home builders.

In specifying *Silentite Windows* there's the comfortable assurance they will return the homeowner a handsome profit on his investment—functioning smoothly and economically for the life of the house itself.

CURTIS COMPANIES SERVICE BUREAU, DEPT. AA-2, CURTIS BUILDING, CLINTON, IOWA

Send, today, for complete information on the advantages of the *Silentite Window*. The coupon is a convenient way to get the facts

CURTIS BROS. & CO., CLINTON, IOWA
 CURTIS & YALE CO., WAUSAU, WIS.
 CURTIS SASH & DOOR CO., SIOUX CITY, IOWA
 CURTIS DOOR & SASH CO., CHICAGO, ILL.
 CURTIS-YALE-PURVIS CO., MINNEAPOLIS, MINN.
 CURTIS COMPANIES, INC., CLINTON, IOWA
 CURTIS, TOWLE & PAINE CO.,
 LINCOLN, NEBR., TOPEKA, KAN.

Curtis Woodwork is available through the following distributors:
 Allen A. Wilkinson Lumber Co., Indianapolis, Ind.
 Rust Sash & Door Co., Kansas City, Missouri
 Morrison-Merrill & Co., Salt Lake City, Utah
 Hallack & Howard Lumber Co., Denver, Colorado
 Campbell Coal Company, Atlanta, Georgia
 Jacksonville Sash & Door Co., Jacksonville, Florida
 W. P. Fuller & Co., Boise, Portland, Sacramento,
 Seattle, Tacoma, Spokane.

OTHER CURTIS PRODUCTS: Exterior and Interior Doors • Frames • Trim • Entrances • Moldings • Panel Work • Kitchen Cabinets • Cabinet Work • Mantels • Stairways • Shutters • Screens • Storm Doors and Windows • Garage Doors • Mitertite Door and Window Trim



THE "INSULATED" DOUBLE-HUNG WINDOW

CURTIS COMPANIES SERVICE BUREAU, Dept. AA-2
 Curtis Bldg., Clinton, Iowa

Please send me further information on the Curtis Silentite Pre-Fit Window Unit.

For information on other Curtis products, as listed above, check here.

Name

Street

City

State

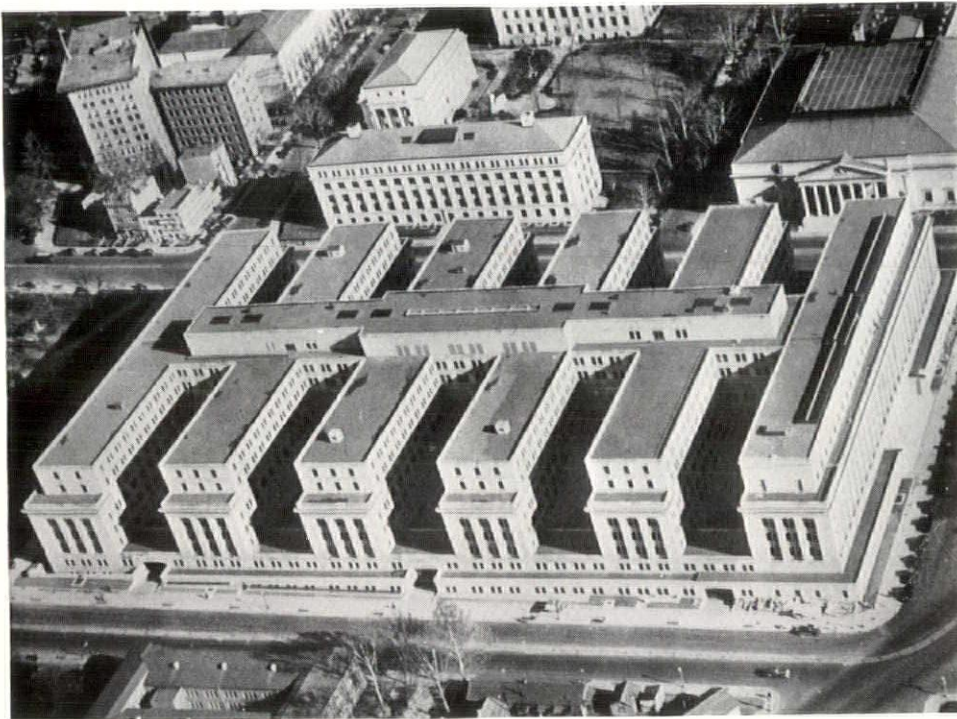


PHOTO: PICTURES

Covering two city blocks, the recently completed "South Interior Building" will be the new home of the Interior Department

The Fair Corporation is about to receive bids for the spring planting of some 500 large trees, to be followed by a similar planting in the fall of 1937. This will practically complete the large tree program. Shrubbery and flowers will be added as rapidly as construction permits. Since the landscaping will become a part of the park improvement after the Fair, this work is being carried out more extensively than might otherwise be necessary.

Construction offers only those few problems common to a city providing everything but shelter for some 800,000 people. Generally speaking, the exhibit buildings will be of simple frame construction, with metal lath and stucco exteriors, erected on spread footing or pile foundations. The emphasis, quite naturally, will be on form rather than complicated engineering design. It is estimated, however, that the materials used for all construction will exceed 500,000 tons.

Thus far the work has been held to a rigid schedule. Fair officials attribute much of their success to the fact that one of the most distinguished groups of architects and engineering consultants ever brought together have, by their clear thinking, been able to avoid many of the mistakes which have hampered other fairs.

ORGANIZATIONS

AN INTERNATIONAL CONGRESS OF ARCHITECTS will be held in conjunction

with the Paris Exposition during the week of July 17, 1937. Plans are not quite complete, but whether visiting architects attend in an official capacity, or simply as individuals, they will be extended certain privileges, and will be able to participate in all of the entertainment provided by the Congress. There will also be available to those registered at the Congress, reductions in the cost of travel, and in admission to the Exposition and places of amusement.

The Congress will be attended officially by delegates from twenty-four countries, and the opportunity to meet architects from all over the world should be a great incentive to many American architects to attend. Professional interest will center around the papers and discussions which will be reviewed by the Congress. Any material submitted for consideration must be received in Paris on or before April 15th to allow time for translation. The Themes of the Congress are as follows:

I. PROFESSIONAL.

Circumstances under which Architects and Contractors may fully collaborate.

II. TECHNICAL.

Influence of the use of local material upon form, the economy and the appearance of structures.

III. EDUCATIONAL.

a. Fundamental Training:

The degree of general culture necessary in order to undertake

the study of architecture.

b. Post-Graduate Education: Probation:

Various technical studies required for fitness to practice the profession of architecture.

IV. CITY PLANNING.

Sanitation of old towns, and Rehabilitation of urban districts.

A. Studied at the Congress in Rome, September 1935:

"The Evolution of the Profession."

B. REFERENDUM

"Existing legislation concerning the responsibility of the architect to individual clients and to the State."

THE NATIONAL ASSOCIATION OF REAL ESTATE BOARDS closed its twenty-ninth annual convention, held this year at New Orleans, more determined than ever to get action from both its member groups and the Government. Paul E. Stark, Madison, Wisconsin, was elected president for the year beginning January 1937; Mark Levy, Chicago, Ill., was re-elected treasurer for a sixth consecutive term; five of eight vice presidents were re-elected, three assuming office for the first time; and thirteen new members were voted to the board of directors.

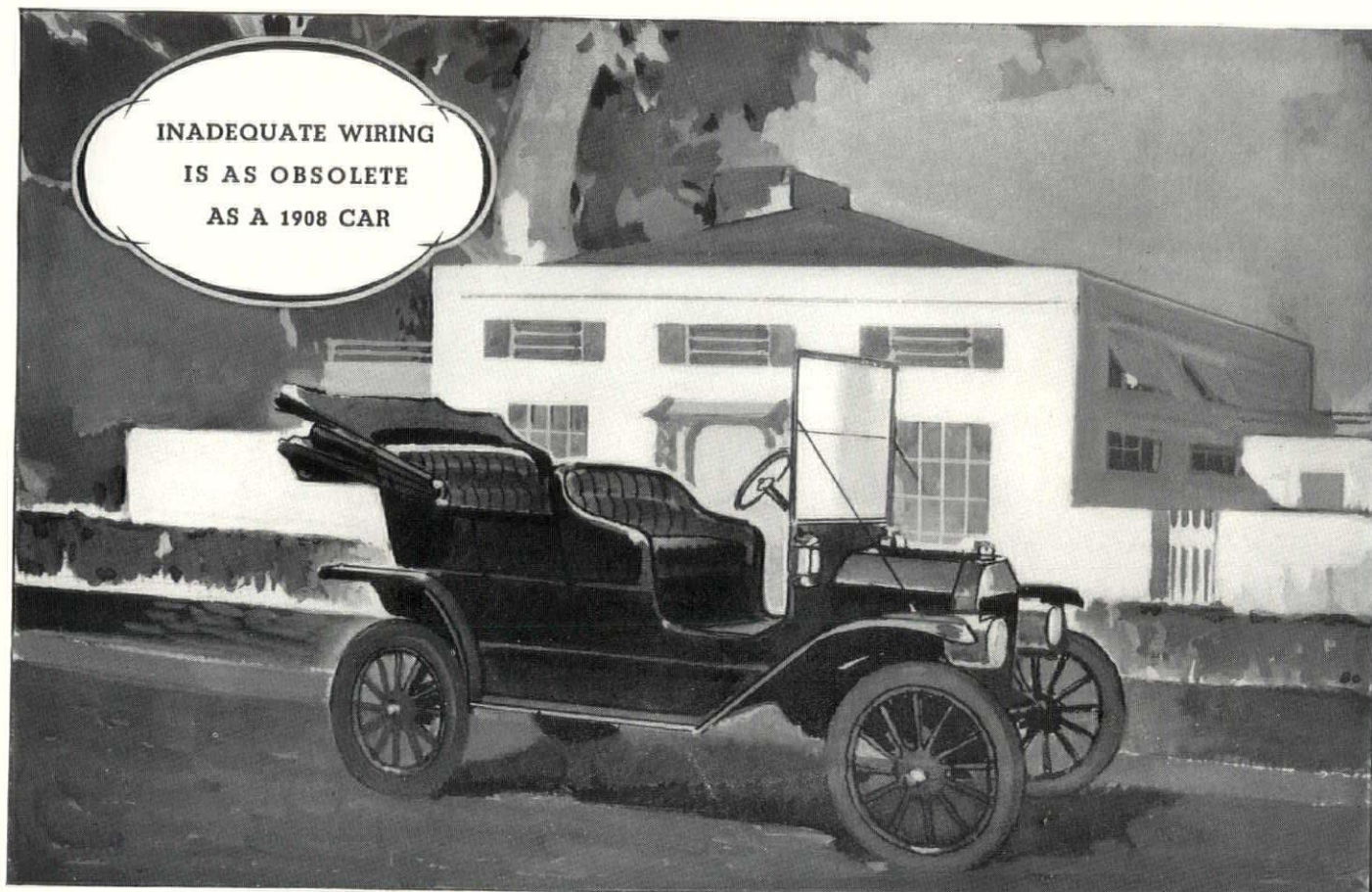
Thus armed, and encouraged by a letter from President Roosevelt which FHA Administrator Stewart McDonald read at the opening session, the Association set its course for the coming year. Specifically, President Roosevelt pointed out that, "We have too long ignored the importance of housing in the economic structure of the nation," and asked the Association to help discover the ways in which private capital can co-operate with public authorities in improving the housing conditions of the nation as a whole.

The result of discussion and the recommendations of special committees, was a fourfold program which not only included proposed congressional legislation, but set at least one clear standard for Association activity in every state.

1. The Association favored the formation of a national foundation for research and education in real estate.

2. It approved a resolution proposed by its committee on real estate finance, (a) reaffirming its request that a mortgage discount agency be established as soon as possible; (b) asking that government guarantee of mortgage insurance through the FHA be extended, with amendments to make FHA more flexible and useful to business; (c) authorizing its president and appropriate committees to seek such legislation as will accomplish this at the next session of Congress; (d) recommending an amendment of

NOTHING WILL "DATE" A HOUSE AS QUICKLY AS ELECTRICAL WIRING



Specify G-E Planned Wiring* and Be Ready for the Future

Living, as we do, in a period when electrical home equipment is advancing by leaps and bounds, it is essential that homes be wired adequately, not only for present needs, but for those of the future. Today, a new home in which the electrical wiring isn't sufficient to supply adequate current for modern appliances is definitely out-of-date even before it is occupied — as obsolete as a 1908 automobile.


The one sure way of knowing that your houses will stay up-to-date is to specify General Electric Planned Wiring, the G-E Radial Wiring System. With this wiring, home owners will be able to have full advantage of all

electrical equipment available today and of new developments as well.

From an architect's point of view, the G-E Radial Wiring System is ideal because it may be specified as a unit — no bothering about minute details. And it is easy to check because all specifications are clearly indicated.

Learn more about this modern way of wiring houses that keeps them modern. Write for the Architect's Manual on the G-E Radial Wiring System, Planned Wiring for Residences and Small Buildings. Address Section CDW-712, Appliance and Merchandise Department, General Electric Company, Bridgeport, Connecticut.

*G-E Radial Wiring System



**GENERAL
ELECTRIC**

**WIRING
MATERIALS**

APPLIANCE AND MERCHANDISE
DEPT., GENERAL ELECTRIC CO.,
BRIDGEPORT, CONNECTICUT

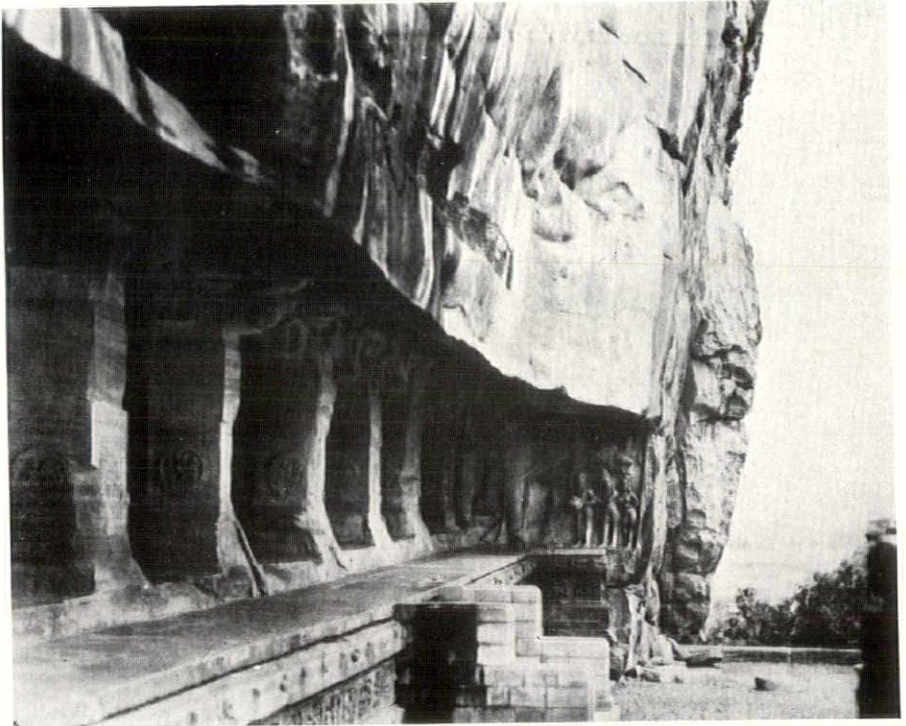
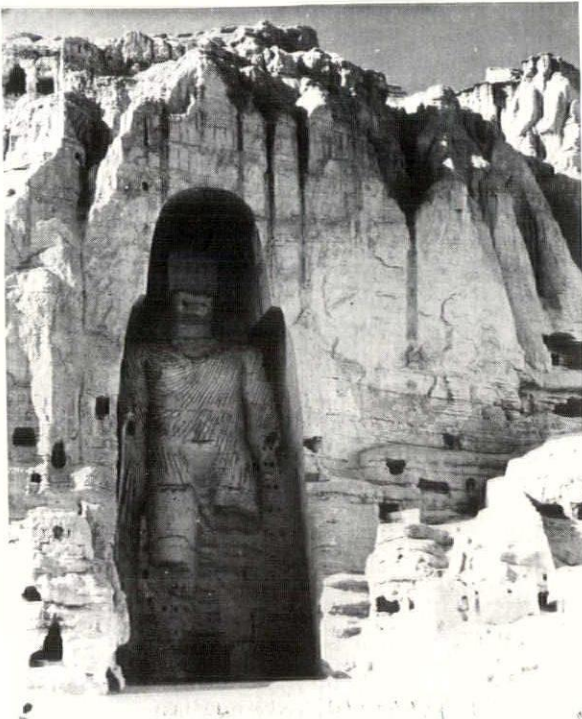


PHOTO: COPYRIGHT TOWNSEND JOHNSON FROM WIDE WORLD

A recent expedition sponsored by the Fogg Museum of Harvard went to India and Afghanistan for the purpose of making colored photographs of Buddhistic frescoes. Among other records also made is (left) that of what is believed to be the largest statue in the world, a 172-foot Buddha carved in solid rock, found in the Bamian Valley of Afghanistan. At one time the head and hands were painted, the robe being covered with gold leaf. The cave temples at Badami, India (right) have interesting sculptures of Siva in the guise of a lion

Title 111 of the National Housing Act to provide for regional mortgage banks to purchase insured mortgages.

3. It adopted a report of its committee on housing, asking the Government to abandon direct federal building of housing projects, suggesting instead that public utility housing companies be authorized by state law, where locally approved, for housing lowest income group, and to undertake rehabilitation projects.

4. It restated and interpreted a position long held by the Association regarding real estate taxes, and wrote into its program of tax action in every state this proposal: "that the present system, erroneously referred to as an 'ad valorem' tax on real property, be replaced by a system of taxation based on capital value established solely through warranted annual productivity, income, or utility of real estate, and that the tax laws of the states be amended or rewritten for this purpose."

THE MUNICIPAL ART SOCIETY announced through its president, Electus D. Litchfield, that a jury had been selected and approved by Mayor La Guardia, to pick the architects eligible for municipal appointments in 1937. The architects selected are: Leon N. Gillette, Chairman; Arthur Loomis Harmon; W. P. Ban-

nister, secretary of the State Registration Board; and John V. Van Pelt, alternate.

THE INTERNATIONAL ASSOCIATION FOR TESTING MATERIALS will hold a Congress in London, from April 19th to 24th, 1937. The purpose of the Congress is to obtain international co-operation in the study of materials and their testing, and to provide facilities for the exchange of views, experience, and knowledge connected with this subject. Advance proofs of the papers to be presented, and other details pertaining to the Congress, may be obtained by addressing the Hon. Secretary, K. Headlam-Morley, 28 Victoria Street, London, S.W.1.

THE UNITED STATES OF AMERICA and the City of St. Louis have agreed to erect together in St. Louis a great monument to President Thomas Jefferson and the pioneers who laid the foundation for the westward development of our country. By a joint resolution of the House and the Senate in 1935, the United States Territorial Expansion Memorial Committee was created to "consider and formulate" plans for the project, and the National Park Service was designated as the executive agency to study plans and prosecute the construction. Thirty million dollars has been approved as the ulti-

mate cost of the project, although its exact nature has not been decided. With this in mind, the American Institute of Architects has recently published in the Octagon a very complete outline, proposing a Museum of American Architecture.

ART

EVERY YEAR, FOR A DOZEN OR SO, the harsh weather which presages spring—and makes home a more desirable playground—warms the hearts of those militant disciples of the flying chip, the soap sculptors.

Few hobbies offer the excitement of creation, or the artistic and educational interest that can be obtained so inexpensively with a cake of white soap, a knife, and a few orange sticks. Thus, it is small wonder that the yearly competition, sponsored by the National Soap Sculpture Committee, has been so successful. The winning contestants are nominally rewarded with prizes given by Proctor & Gamble, and the contest is open to old or young, rich or poor. Prizes are awarded in several classifications so that, no matter who you are, you may compete.

Entry Blanks, and information can be obtained from the National Soap Sculpture Committee, 80 East 11 St., New York, N. Y.

7 REASONS WHY YOU SHOULD

SPECIFY

BRIGGS

Beautyware
PLUMBING FIXTURES

Color Briggs Beautyware offers soft, rich, solid colors and exclusive, pastel, two-tone combinations as well as gleaming white. As every architect knows, the beauty of any bathroom or kitchen is enriched by the tasteful use of color.

Light weight Beautyware needs no special wall or floor supports. Easier handling and installation save both time and money. Formed metal construction makes Beautyware stronger than heavier fixtures.

Safety The Briggs Beautyware Safety Tub has a serpentine embossed bottom that reduces the danger of slipping, also, a broad, flat safety seat on the outer rim.

Acid resisting The porcelain enamel finish on all Beautyware fixtures is acid-resisting and stain-resisting. But the cost is no higher—an outstanding plus value in Briggs Beautyware.

Sanitation Superior sanitary features cost no more—vitreous porcelain inside and out, unyielding bond between metal base and porcelain enamel, and easily cleaned, removable overflows in lavatories.

Rust proof The formed metal base of Briggs Beautyware is completely surfaced with porcelain enamel, which preserves all the original beauty and sanitation.

Smart style The beauty of Briggs fixtures is an irresistible feature that appeals particularly to women. Beautyware is designed to harmonize with modern decorative treatments, while providing maximum utility.



Write for the new, full-color Briggs Beautyware folder.

© 1937

BRIGGS MANUFACTURING COMPANY

PLUMBING WARE DIVISION • DETROIT, MICH.

101 Park Ave., New York, N. Y.

• 177 N. Michigan Blvd., Chicago, Ill

2980 Wilshire Blvd., Los Angeles, Cal.

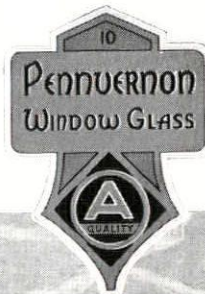
• 657 Lincoln Rd., Miami Beach, Fla.

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



THE FIRST
 IN A SERIES OF INTERESTING WINDOW TREATMENTS
 ARCHITECT . . . FREDERICK SOLDWEDEL

These qualities distinguish Pennvernion Window Glass: Unusual freedom from flaws and surface distortions. Clarity. Brilliant surface finish on both sides of the sheet. Exceptionally accurate reflectivity. That's why Pennvernion Windows are better windows.



THE Pittsburgh Plate Glass Company makes a quality flat glass to fill almost every architectural need. And it manufactures a Pittsburgh Paint for practically every residential, industrial and commercial purpose. We invite you to call upon us for any aid we may be able to render you.

A complete line of Pittsburgh Products of the following types is available through our 71 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

PITTCO STORE FRONT METAL

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

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

AWARDS

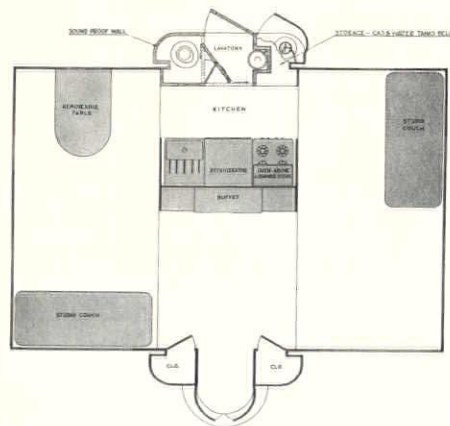
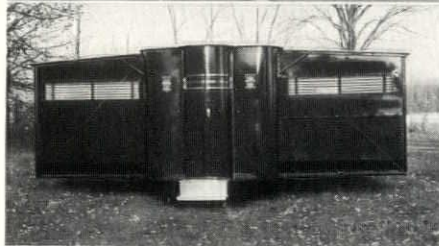
THE ALUMNI ASSOCIATION OF THE AMERICAN ACADEMY IN ROME has just announced the award of a \$200 first prize to a team whose members attended the University of Pennsylvania. The annual award to stimulate "advancement of collaboration among the arts," was decided by a committee under Michael Rupano, the landscape architect. The members of the winning team were: Henry M. Abbott, architect; Miss Louise Lawser, painter; R. Duhme, sculptor; and Alfred Edwards, landscape architect. Their subject was a private museum of fine arts on an island in a lake.

In addition to the first prize, two "first" medals were given to other teams from the University of Pennsylvania, and four "second" medals were awarded to teams from the University of Michigan, The University of Pennsylvania, the Cleveland School of Architecture of Western Reserve University, and the Carnegie Institute of Technology. There were also a number of honorable mentions.

SIR RAYMOND UNWIN, visiting professor in the Columbia School of Architecture, and an international authority on housing and town planning, has just been named to receive the Royal Gold Medal for distinction in architecture. Sir Raymond was chosen by the Council of the Royal Institute of British Architects, to receive the highest British award in the field of architecture. Traditionally, presented by the King, since it was instituted by Queen Victoria in 1848, Sir Raymond will receive the Royal Gold Medal from King George VI.

Sir Raymond has been a pioneer in Town planning. He was chief designer of Letchworth, England's first garden city, and has been instrumental in planning many of England's other model town projects. During the War, he was director of the housing section of the British Ministry of Munitions. Following that, and until his retirement in 1929, he was chief adviser on architecture to the Minister of Health. In 1934, he headed a committee of foreign experts who aided President Roosevelt on problems of low-cost housing.

Among his many honors, Sir Raymond was president of the Royal Institute of British Architects; president of the International Federation for Housing and Town Planning; he holds honorary degrees from four universities, and was knighted by King George V in 1932. For the past semester he has been in charge of studies in housing and town planning at Columbia University, under a grant from the Carnegie Corporation.



H O U S E O N W H E E L S

Actually in production with first deliveries due in March, William B. Stout's folding house should soon astound a trailer conscious populace. Priced at \$3,650 completely equipped and furnished, it unfolds to become a home in five minutes. The folding mechanism is operated by a hand crank. As a trailer it is approximately 18 feet by 7. Opened it is 12 by 20 feet. It is constructed of aluminum alloy sheets on a framework of welded steel tubing. It is insulated, heated, soundproofed, and completely furnished with a galley, shower bath, lavatory, refrigerator, radio, buffet, venetian blinds, and two studio couches . . .

SCHOOLS

WALTER GROPIUS, THE DISTINGUISHED GERMAN ARCHITECT, has just accepted an appointment as Professor of Architecture at Harvard University. Famous throughout the world as the formulator of a new and successful system of architectural training, Gropius is largely responsible for the popularity of modern design in Germany, Holland, and England. His accomplishments in social architecture—group housing and institutions—are perhaps more significant than those of any contemporaries, and have furnished models for similar developments all over the world.

Gropius was born in 1884, the son of a well established architect. After graduation from the Technische Hochschule of Munich, he spent several years in architects' offices, and then travelled for two years in England and Italy. Returning to Berlin, he entered the office of Peter Behren, then the most famous of German architects, and it was here that Gropius developed the theory of contemporary technique on which his work is based.

His first major step was the design of a factory at Alfeld. It marked him as a most original architect, and led to a commission for the Hall of Machinery at the Cologne Exposition—the most advanced piece of architecture built before the war. After three and a half years of distinguished war service, Gropius was made director of the Grand Ducal Art School at Weimar. His experiments in education soon made the academy the most famous architectural school in Germany. When the School was moved to Dessau, Gropius built a complete group of buildings for it that represented the largest modern project executed up to that time. They remain to this day an impressive symbol of his extraordinary skill.

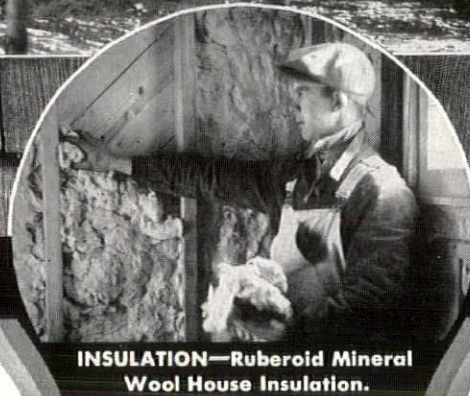
In 1928 Gropius resumed practice in Berlin. Here his work on many important buildings further demonstrated his talent for raising ordinary building to the level of fine architecture. Several years later Gropius went to London because of the political pressure at home. He was warmly received and has remained there up to the present time. The news of his appointment should indeed be welcome to students of architecture, and the people familiar with his work.

THE NEW YORK UNIVERSITY SCHOOL OF ARCHITECTURE AND ALLIED ARTS has announced a course of Elementary and Advanced Plan Reading and Estimating, under A. Benton Greene, B.S., R.A. The class will meet on Saturdays from 1:30 to 3:20 p.m., starting February 6th. Two points will be given toward university credit. Fee: \$25.00.

Modern Homes demand MODERN BUILDING PRODUCTS



ROOFING—Eternit Timbertex Asbestos-Cement Shingles. American Method.



INSULATION—Ruberoid Mineral Wool House Insulation.

SIDE WALLS—Eternit Timbertex Colonial Asbestos-Cement Siding Shingles.

PICTURED are three modern RU-BER-OLD Building Products that no architect or builder should ignore. Each contributes yearly dividends in economy, comfort, and safety.

Timbertex Asbestos-Cement Shingles and Sidings

Today you can have colorful roofs and side walls, with the charm of weathered cypress, that are rot-proof, fire-proof, termite-defying and age-enduring. These asbestos-cement shingles are made in colorful wood tones, and never require painting or staining. There is a style to fit every type of architecture and to please every purse. They offer beauty and sure protection with surprising economy.

RU-BER-OLD BUILDING PRODUCTS
BUILT-UP ROOFS
ASBESTOS SHINGLES
ASBESTOS SIDINGS
ASPHALT SHINGLES
MINERAL WOOL HOUSE INSULATION
ASBESTOS PIPE COVERINGS
WATERPROOF SHEATHINGS
NEWTILE
NEWMARBLE

RU-BER-OLD Mineral Wool House Insulation

This indestructible wool is one of today's most efficient insulating materials. It is absolutely fire-proof, vermin-proof, is inert toward moisture. It affords excellent sound-deadening and acoustical qualities. RU-BER-OLD Mineral Wool, whether installed loose or in bats, can be expected to save 20% to 35% in fuel bills in winter, and make the interior of a house 10 to 15 degrees cooler in summer. Obtainable loose, packed in 35 lb. bags, or in bats 15" x 23".

Investigate all three of these modern RU-BER-OLD Building Products. Mail the coupon for specification data. Check also any other RU-BER-OLD products that may interest you.

RU-BER-OLD

ROOFING AND BUILDING PRODUCTS

The RUBEROID Co., 500 Fifth Avenue, New York, N. Y.		A.A.-2
Please send specification data covering the Ruberoid Products checked.		
Gothic Shingles <input type="checkbox"/>	Asphalt Shingles <input type="checkbox"/>	Newtile Wall Panels <input type="checkbox"/>
Timbertex Shingles <input type="checkbox"/>	Timbertex Sidings <input type="checkbox"/>	Built-up Roofs <input type="checkbox"/>
Name _____		Asbestos Pipe Coverings <input type="checkbox"/>
Address _____		Newmarble Wall Panels <input type="checkbox"/>
		Mineral Wool House Insulation <input type="checkbox"/>

FOR LASTING APPEAL—USE MORE **Kawneer** RUSTLESS METAL CONSTRUCTION!



● The interesting possibilities that lie in the wider use of Kawneer bronze, alumilite or other rustless metal members are practically limitless. Complete, attractive construction is available in either rolled or extruded members, and in addition Kawneer furnishes architectural metal work to special details. The use of modern Kawneer metal on even the most simple front adds life, dignity and appeal that would otherwise be lacking.

Full size details are available on

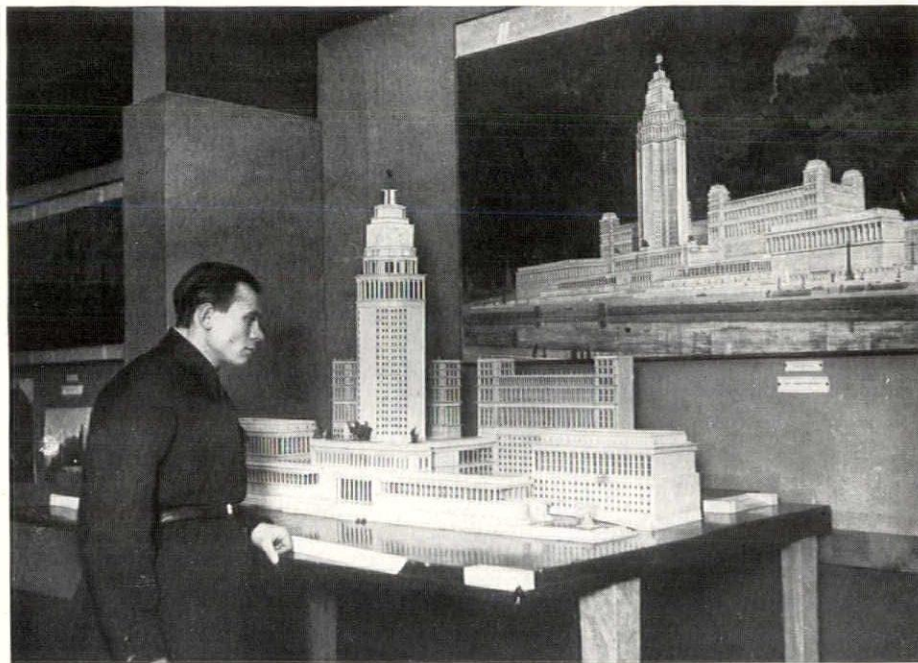
rolled or extruded Kawneer construction for (1) Sash, and (2) Bars, (3, 4) Awning Bars in Hood, Recessed or Concealed types, Transom Bars, and stock mouldings, including Snap-on mouldings and others for use with structural glass—as well as grilles, thresholds, showcase doors, ventilators, and other customary members.

Special metal work includes (5) Metal Signs, (6) cast ornaments and architectural metal

work of every type, (7) special mouldings, (8) Rustless Metal Doors, and (9) bulkheads, cornices, spandrels and pilasters. Other Kawneer members make it possible to face the entire front with metal when desired.

WRITE THE KAWNEER COMPANY, NILES, MICHIGAN, FOR ADDITIONAL DATA.

Kawneer
RUSTLESS METAL
STORE FRONTS



PHOTOS: SOVFOTO

Inconsistent and strange is the architectural trend in the Soviet Union. While the new factories of Sverdlovsk (above) contrast sharply with the old buildings, the proposed House of the Peoples Commissariat of Heavy Industry in Moscow by D. Friedman can only be considered a sop to a cake-hungry people

THE INTEREST IN SWEDISH ARCHITECTURE, handcraft and applied arts, and the growing desire of so many foreigners to learn how Sweden effected the recovery from depression, and solved many social problems that still trouble a majority of nations, has prompted the Swedish National Union of Students to plan two courses for next summer, at the historic Upsala University. Combined with interesting excursions, the courses will offer a complete and authoritative survey of those subjects. In addition, a general course will be

given, broadly delineating the background and rise of Swedish culture. The courses will be given in English. Fees for the handicraft and social science courses are: \$30 tuition, for each course; and approximately \$25 for three weeks board. For the general course; tuition \$15, and about \$25 for board and lodging. The courses are planned between August 11 and 31st.

THE LOWELL M. PALMER FELLOWSHIP IN ARCHITECTURE has just been announced by Princeton University. Its purpose is

to enable a student of unusual promise to undertake advanced study, exempt from tuition fees, with the help of an additional cash award sufficient for a year's residence. Applicants must be less than 27 years of age on October 1, 1937, and applications must be received not later than March 15, 1937. Blanks, or other information, may be obtained from the Secretary of the School of Architecture, Princeton University, Princeton, N. J.

THE COLUMBIA UNIVERSITY SCHOOL OF ARCHITECTURE has established an evening studio of architectural design, which opened Feb. 3rd, for advanced study by those who have either completed an academic course, or who have had extensive practical experience. Max Abramowitz and Howard Dearstyne, designers in the office of Harrison and Fouilhoux have been named critics to the new studio. The studio, a unit of Extension Architecture, will be open six evenings, during four of which criticism will be given.

THE ANNUAL PRIZE OF THE BOSTON SOCIETY OF ARCHITECTS, has been awarded to Gilbert E. Hoffman, a graduate student in the School of Architecture of the Massachusetts Institute of Technology, according to an announcement made on January 28th. Second prize was given to J. J. Amory, of the Harvard School of Architecture; and third prize went to Harris A. Kamp, another graduate student in architecture at Technology. The subject for this year's competition was "a smoking lounge for an ocean liner." Mr. Hoffman is a graduate in architecture of the Carnegie Institute of Technology, Class of '36. Mr. Kamp received his degree in architecture in 1934, and a master's degree in 1935, from the University of Illinois.

PRINCETON UNIVERSITY'S SCHOOL OF ARCHITECTURE has announced competitive prizes of \$500 each, for the year 1937-38. The purpose of the Princeton Prizes in Architecture is to permit men of unusual ability, who desire to complete their training, to study at Princeton. The prizes will be awarded as the result of a competition in design to be held from 9.00 a.m. April 16th, to 9.00 a.m. April 26th, 1937. Candidates shall be unmarried male citizens, not less than 21, nor more than 27 years of age on September 1, 1937, who have been employed as draftsmen in architects' offices for not less than three years, or who have otherwise demonstrated their ability in architectural design. Applications, and regulations governing the awards may be obtained from Professor M. L. Beck, Chairman, Princeton Prizes in Architecture. McCormick Hall, Princeton, New Jersey.

The *Aristocrat* of Roofing—

U·S·S COPPER-STEEL TERNES

WHEN you are building a fine house—or a public building—you can end your roofing problems by specifying USS Copper-Steel Ternes as the material. They give lasting service and satisfaction.

Also, while USS Ternes last longer, look more attractive and weigh less than many other roofing materials, their cost is extremely moderate. So economical are these USS Ternes both in initial cost and in upkeep, that you can assure your clients, "A roof for an aristocrat at the price a poor man can afford," with USS Ternes.

Why do you suppose that certain Hindu temples in distant India are roofed with the so-called tin from oil cans? It is because these cans were made of ternes, and pious Brahmans have learned the excellent features of such roofs in rain or shine. Terne roofs give unexcelled protection, are fireproof, lightning-proof, easy to clean and last indefinitely.

Specify USS Ternes of the heavier coatings for your next job. They endure longer and are suitable for every type of roof. USS Ternes may be painted in the color you choose to harmonize with the house you are building.



Specify U·S·S ROOFING TERNES

CARNEGIE-ILLINOIS STEEL CORPORATION

Pittsburgh




Chicago

Columbia Steel Company, San Francisco, *Pacific Coast Distributors*

United States Steel Products Company, New York, *Export Distributors*

UNITED STATES STEEL



FOR SHOWMANSHIP
WITH INTEGRITY
ARCHITECTS ARE TURNING TO
CONCRETE

Pressure of current economics has barred the use of expensive decorative materials and of costly elegance in theatre design. Instead, the architect has been forced to design beautiful buildings of moderate cost and of very low upkeep.

The solution? Balaban & Katz' Will Rogers Theatre provides one answer. For this firm and its architects made comprehensive comparative cost studies of various materials and decided that a better looking building could be produced in concrete. Yet costs were kept low.

Concrete is serving equally well in a wide range of buildings—homes and churches, offices and factories, schools and hospitals. To its beauty and architectural distinction it adds firesafety, strength, permanence—and the economy that results from combining structural and architectural functions in one material.

Let us help you plan your next building in concrete. There are many helpful facts about the latest technique in our free Information Sheets and in the new manual, *Forms for Architectural Concrete*.

PORTLAND CEMENT ASSOCIATION

Dept. 2-2, 33 W. Grand Ave., Chicago, Ill.

*Balaban & Katz' new Will Rogers Theatre, Chicago
C. W. and Geo. L. Rapp, Inc., Architects
Lieberman & Hein, structural engineers
Paschen Bros., Inc., contractor*

**AGAIN
NORGE
LEADS!**

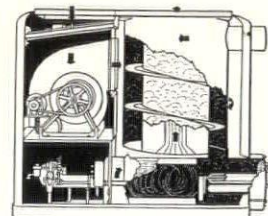
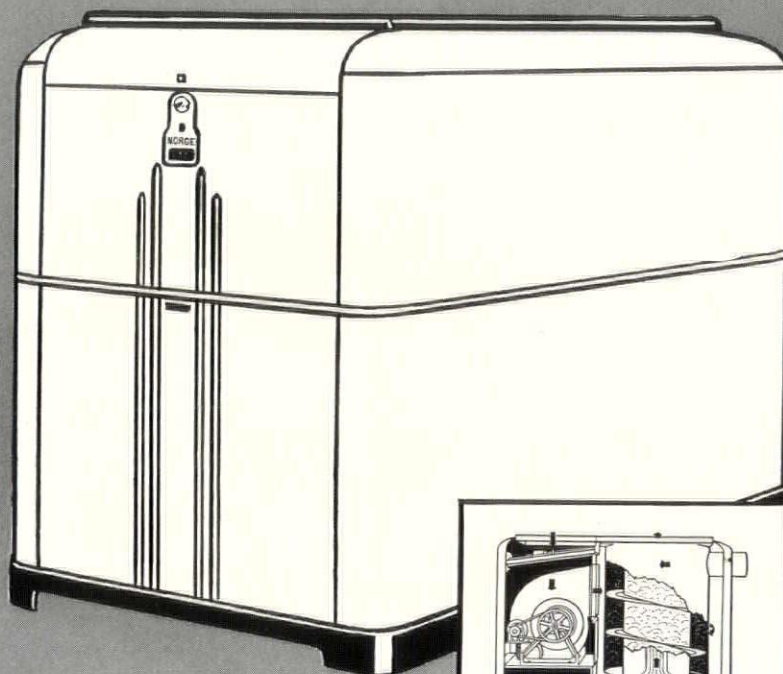
Builders, as well as owners,
are insisting on the
Norge Fine-Air Conditioning
Furnace after they learn
of its Amazing Efficiency

Norge is years ahead in home heating equipment. Home heating costs can be cut as much as 50%—service calls practically eliminated when a Norge Fine-Air Conditioning Furnace is installed. First cost, also, is amazingly low for this modern heating and air-conditioning plant.

These are broad claims, but tests prove that Norge *under-rates* its new heating equipment—as thousands of satisfied owners will agree. Investigate Norge home heating equipment today—it presents the biggest opportunity in years!

NORGE HEATING AND CONDITIONING DIVISION
Borg-Warner Corporation, Detroit, Mich.

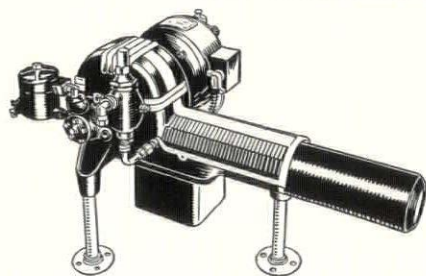
**Investigate the Sensational Norge
Home Heating Equipment Today!**



**CUTS HEATING COSTS
AS MUCH AS 50%**

The Norge Fine-Air Furnace operates at efficiencies of 80% and up as against 40% to 70% for ordinary systems. Winter air conditioning and domestic hot water supply are of special Norge design.

HC-2



**THE NORGE WHIRLATOR
OIL BURNER**

Operates on a new principle originated by Norge. A trouble-free, economical unit that will make any furnace more satisfactory. You can *demonstrate* its vital differences.

THE NORGE GAS BURNER

Triple control gives economy never before possible with gas. Tests prove Norge has the most efficient gas burning unit on the market.

NORGE COAL STOKER

Gives uniform heat, more heat, cleaner heat from cheaper coal. Eliminates smoke, soot and ashes because it burns fuel perfectly. Gears are made by Borg-Warner experts.

NORGE

Plus Value Home Appliances

Norge Rollator Refrigeration (Domestic and Commercial), Ranges (Gas and Electric), Washers and Ironers are the



new performance and style leaders for 1937. Write for complete information on these plus-value home appliances.

**Now buildings and residences of moderate cost
can have Bronze or Aluminum Windows**
AIRTIGHT · DUSTPROOF · RUSTPROOF · RATTLEPROOF

For more than 20 years, we have served the Architect—with architectural metal work of many kinds. During this period, we have made fine bronze and aluminum windows for many of America's principal buildings. . . . Today we can offer you these remarkable new *patented* windows, with top quality in both workmanship and materials, at prices less than half of those formerly paid for windows of much lower efficiency and no higher quality.

The surprisingly moderate cost of Permatite Windows — both casement and double-hung — opens up vast new fields. The amazing improvements developed in Permatite Windows warrant your full consideration.

These new windows are airtight, leakproof, dustproof and rattleproof; they have unusual ease of operation; they are rustproof

**PERMATITE
WINDOWS**
Bronze or Aluminum · Casement or Double Hung

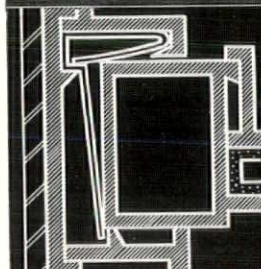
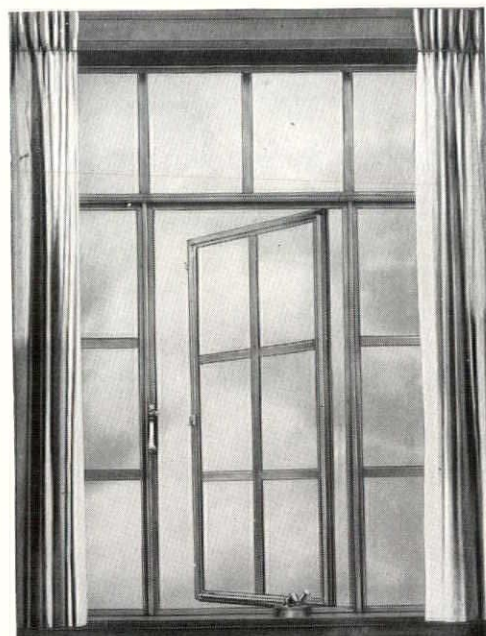
and free from warping and sticking. . . . To your client, these features mean lasting beauty, pleasure, comfort and a continuing saving in fuel.

Laboratory Tests at the Daniel Guggenheim School of Aeronautics, New York University, indicated — for both casement and double-hung windows — an unprecedented resistance to air infiltration. These windows are ideal for air-conditioned homes.

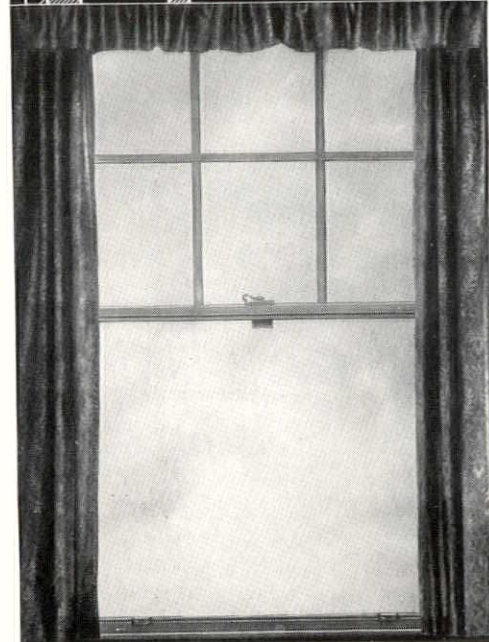
In **Sweet's 1937 Catalog File** you will find 36 pages of descriptions, specifications and reports of laboratory infiltration tests — plus details of many interesting and exclusive construction features.

We invite you to consult Sweet's
or to write us for a catalog.

**PERMATITE
WINDOWS**



FULL SIZE SECTION — DOUBLE-HUNG WINDOW IN ALUMINUM. NOTE TUBULAR SECTIONS GIVING MAXIMUM STRENGTH, AND RESILIENT, NON-CORROSIVE WEATHER STRIPPING, POSITIVELY SEALING CONTACT BETWEEN SASH AND FRAME IN TWO CONTINUOUS LINES.



WINDOWS · REVOLVING DOORS · TABLETS · ARCHITECTURAL METAL WORK



GENERAL BRONZE CORPORATION
34-19 Tenth Street · · · Long Island City, N. Y.

AMERICAN ARCHITECT AND ARCHITECTURE

THIS MONTH

WE ARE INDEBTED to The Museum of Modern Art and Ernestine Fantl, Curator of Architecture, for the illustrations for Modern Architecture in England and the biographical material herewith.

SERGE CHERMAYEFF F.R.I.B.A., although born in the Caucasus in 1900, was educated in England. In 1933 he formed a partnership with Erich Mendelsohn, which has recently been dissolved.

AMYAS CONNELL, born in Eltham, New Zealand, 1901. Educated in New Zealand and at London University. Received Rome Scholarship in 1926. Partner in firm of Connell, Ward and Lucas.

E. MAXWELL FRY, A.R.I.B.A., born in Cheshire, England, 1899. Educated in England. In 1935 he formed a partnership with Walter Gropius. Founder Member of MARS, and member of the Council of R.I.B.A. and the Housing Centre.

FREDERICK GIBBERD was born in Coventry, England, 1908. Although he studied at a school of architecture, he considers himself "mainly self-taught." Author of articles and reports on low-rental flats.

OLIVER HILL, F.R.I.B.A., born in London, 1887. Decided at the age of 10 to become an architect. Studied in England and began private practice in 1912.

ERICH MENDELSON, born in East Prussia, 1887. Studied at the Technische Hochschule, Charlottenburgh and in Munich. Went to England in 1933 and worked in partnership with Chermayeff.

COLIN A. LUCAS, born in London, 1906. Graduate of Cheltenham and Trinity College, Cambridge. Partner in Connell, Ward and Lucas.

BERTHOLD LUBETKIN, born in Caucasus, 1901. Studied in Moscow and in Paris. Won first prize in competition for Ural Polytechnical University U.S.S.R., 1925. Practiced in France before going to England in 1930 where he formed firm of Tecton.

A. H. MOBERLY, F.R.I.B.A., born in Great Budworth, Cheshire, England, 1886. Educated at Kings College, Cambridge.

MARSHALL SISSON, F.R.I.B.A., born in Gloucester, England, 1897. Studied University of London and British School in Rome. Winner of Jarvis Studentship and Duveen Fellowship. Studied in office of John Russell Pope.

J. ALAN SLATER, F.R.I.B.A., born in England. Educated at Cambridge.

BASIL R. WARD, born in New Zealand, 1902. Studied in New Zealand and England. Won Jarvis Studentship in 1926. Member of the firm of Connell, Ward and Lucas.

NEXT MONTH

THE ROOFS OF TAXCO seen from the Cathedral have inspired others, but seldom as they inspired Ernest Born when he painted our cover.

BELLEVUE, a community development near Copenhagen is one of the finest of its kind in Europe. Arne Jacobsen, Architect.

MEXICAN STREET SCENES is the subject for Architectural Overtones.

THE PORTFOLIO and FAVORITE FEATURES will combine to show Porch Columns and Posts.

UNIT PLANNING, NO. 3 will present facts about recent progress in kitchen layout.



BALCONY ▶
LOUNGE ▶
SUITE ▶

EPILOGUE
DESIGNED BY
ANDREW GARDNER
ARCHITECTS
1998

MODERN ARCHITECTURE IN ENGLAND

The English architectural picture presents a paradox. Despite tradition, reactionary building officials and recurrent war scares, England builds in the best contemporary manner

BY BERTHOLD LUBETKIN

THE general feeling among American architects appeared, at least until recently, to be that in their own country there was little or no hope for the immediate development of modern architecture. They felt that terrific real estate interests, combined with a rather conservative attitude, at least in domestic work, toward new building technique, formed almost insurmountable obstacles to the would-be modern architect. But the last five years have brought very considerable changes in the sphere of modern architecture, changes which are enough to shake any convictions as to the future course of events, enough to prove that the strangest reversals are not only possible, but likely.

In those countries which had been considered the most conservative, and therefore the most difficult ground for the modern architect, the modern movement is making great progress, while in others, which had been looked upon as the promised land of architectural development, a tremendous reversal has taken place. In Germany, once the foremost country in constructive innovation, the prevailing political regime has banished modern constructional methods and the external characteristics of modern architecture. The flat roof has become the symbol of revolt, the mark of political unreliability; to design horizontal windows is to attract the attention of the secret police. A very similar situation exists in Austria and central Europe. In Russia, on the other hand, any attempt to design buildings of a light and joyful appearance is interpreted as an attack on the proletariat, by depriving him of the monumental proofs of his new-found material prosperity. France and Czechoslovakia have long been paralyzed by economic crises.

This reversal of the old order is so complete that it is not surprising to find that England has become almost the only country in which modern architecture can flourish in com-

parative freedom. This circumstance has naturally attracted many foreign architects, fleeing from political restrictions or economic stagnation in other countries. A paradoxical situation arises; England, which had so long lagged behind the continent in accepting new architectural and technical ideas, now leads the world in this domain. But in England the price which has to be paid in fighting for each innovation represents an enormous amount of creative energy. Each step on the road to progress is a struggle against conservatism and prejudice, as we shall see later.

As in the case of Albania, which has the most up-to-date telephone system in the world, the last country to adopt technical improvements usually introduces the most modern; according to this precedent, England, whose architectural history is so full of adaptations and improvements of foreign ideas, might be expected to possess the most mature modern architecture. Unfortunately, several factors have combined to retard the attainment of this goal.

One of the most important of these factors is just that influx of architects from abroad which might have, and in some ways has, proved so happy for English architecture. In many cases, architectural models have been transplanted in time and in space in such a way as to render them meaningless. Architects, who in the recent past, had made great contributions to the development of the modern movement on the continent, found themselves uprooted by political and social changes. Transplanted to another country, they were likely to continue their work in too unbroken a sequence, not realizing that the sociological conditions were so very different as to invalidate such a lack of flexibility. Their ideas, methods, and stylistic approach of a few years ago died with the surroundings which gave birth to them, while the evolution of architecture has given rise to some new



PHOTO: STOWELL

problems, new requirements and new methods of solutions.

In fact, the whole architectural scene in England is fundamentally different from that of other countries. While in England a considerable interest has long been taken by the general public in matters of town and country planning and architecture, this public interest is not of a kind that would favor progress. The general interest in planning is a purely negative and conservative one, and results almost exclusively in efforts on the part of the public to preserve existing amenities and old buildings simply as museum pieces or artificial settings. There is little or no interest in progress, in fact any attempt at alteration of the existing conditions calls forth violent protest, and is accepted, if at all, as a necessary evil.

Another characteristic of the English situation, the outcome of the public's attitude, is the building legislation. It is required that every design should be submitted to the local authority for acceptance or rejection, purely on grounds of amenity. Not unnaturally, this committee, composed as it is of local business men, often builders, is usually opposed to architectural innovations. It is extremely difficult to appeal against the decision of a local authority, and the waste of time involved is so great that their rejection is generally a death sentence to any project. This unwillingness to accept any change, aesthetic or technical, is also seen in the regulations governing construction, to which every building must comply. These building regulations, based on the standards of sixty years ago, make no allowance for modern technique, and result in extremely clumsy and out-of-date methods of construction. These in turn have their influence on the building industry as a whole. It is difficult to persuade manufacturers to execute modern designs, for they prefer to adhere to the old "safe" models which they know by heart. The actual building is also influenced; foremen, knowing that the safety factors stipulated by law are ridiculously large, do not insist on careful workmanship, (this particularly in the case of reinforced concrete) with the result that the general standard of execution and finish has become very low, and is now behind that of the rest of Europe.

The result of this tremendous body of prejudices and obstructions, supported as it is by the authority of the law, has been to lend a disproportionate importance to very small points. To obtain permission to build a flat roof is in itself such an achievement that it is likely to overshadow, in the mind of the architect, the significance of his original conception. The result is that at present it is almost impossible to judge objectively the aesthetic qualities of a building. So much has to be taken into consideration, that the only firm criterion is that of function, and we see a return to the functionalist doctrine, which was probably believed in less by its own originators than by any of those who came after. This is hardly to be wondered at in a situation where one cannot, for instance, criticize an obvious coarseness and over-heaviness in the structural members of a building when one knows that it is only due to the local surveyor's abysmal lack of knowledge of reinforced concrete construction.

Often unable to apply any exacting standard of aesthetic values in the criticism of buildings which they know to have been executed only after a long struggle with uneducated and unsympathetic officials, architects and critics are forced to regard buildings from a standpoint which, in more favor-

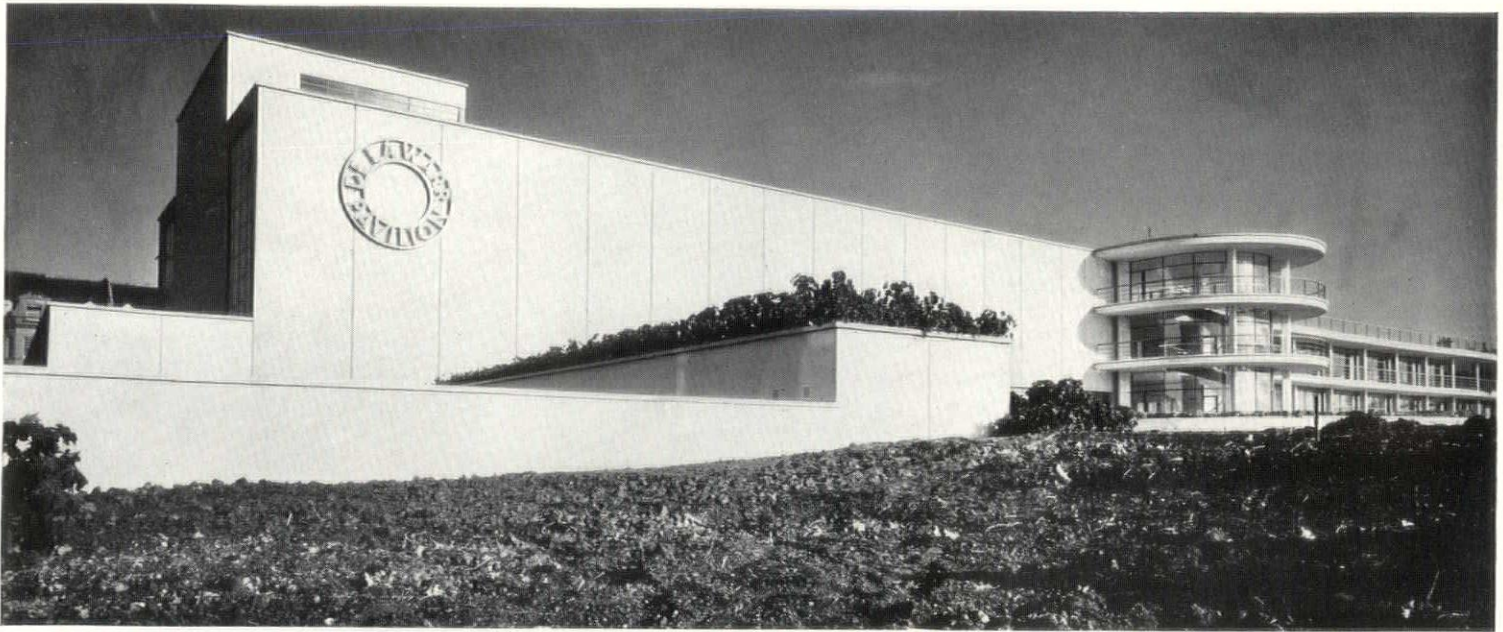
able conditions, they would never have dreamed of adopting. If modern architecture is to make the progress of which it is capable, it should go without saying that every building fulfills the purpose for which it is intended; this should be the starting-point, not the ultimate criterion. But a mass of repressive regulations and a lack of intelligent constructive criticism have brought us to a position where this elementary requirement is almost our only yardstick in judging the value of buildings. It is clear that in these circumstances the greatest necessity is architectural criticism; such criticism, if it existed, would serve a twofold purpose; first to educate the public, and through them to remove the outside obstructions to architectural progress; and second to clarify the ideas of the architects themselves, and to provide them with that common intellectual basis which for the moment is so sadly lacking.

Unfortunately, energetic criticism, such as could achieve these ends, is almost entirely lacking in England at the moment. This is no mere accident, but is to a great extent due to the fact that the entire architectural press is so influenced by the present libel laws that it can do little more than give a short technical description of the buildings illustrated. In these circumstances, the architects have been forced to organize themselves for purposes of education and propaganda.

The first of such groups to be formed was the MARS (modern architectural research) Group, in which were centered the hopes of the more advanced sections of architects in this country. Unfortunately, this group has, during the three years of its existence, gradually become less and less of a vital force. One reason for this appears to be a consequence of the lack of criticism we have just examined. Approaching their problems without much clarity of thought, and having far less in common with one another than they had imagined, these architects have never overcome the initial difficulty of formulating their own definition of modern architecture.

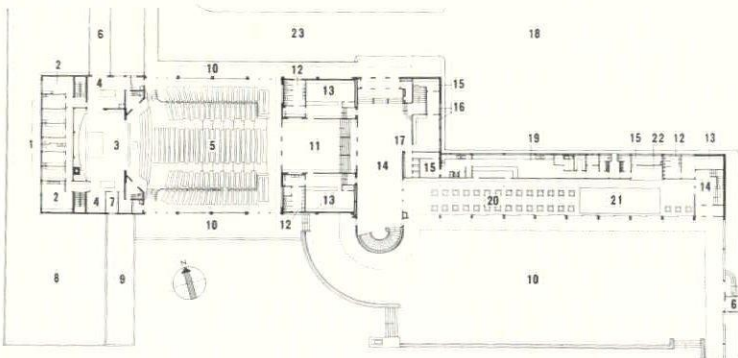
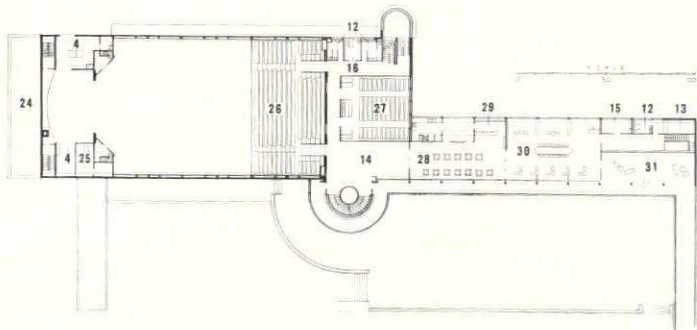
In a time of crisis, they might have been able to give more time and attention to the problems of organization and program, but as the whole life of the group has corresponded with a period of specially intense building activity, just those architects who might have made valuable contributions to the group as a whole have been most fully occupied with their own work. In consequence, the members have been unable to agree on any fundamental issue, and as a result, the volume and importance of their work has been steadily decreasing.

A newer organization, which at first sight would appear to have little connection with specifically modern architecture, is the Architects' and Technicians' Organization. This group came together on a purely social and political basis, and is not actually concerned with any stylistic questions, but while its main interest is in such problems as housing, it may perhaps lead to some amelioration of the architect's position. For it is impossible to separate the broader issues of town and regional planning and housing from the whole body of building legislation, and a concentrated attack on this front based on purely utilitarian grounds, might result in a reform of the law and of its administration, which would have important repercussions on the conditions of architectural work. This may seem hard to achieve, but at least it is a far more realistic and promising line of attack than any idealist grouping of modern architects can hope to be.



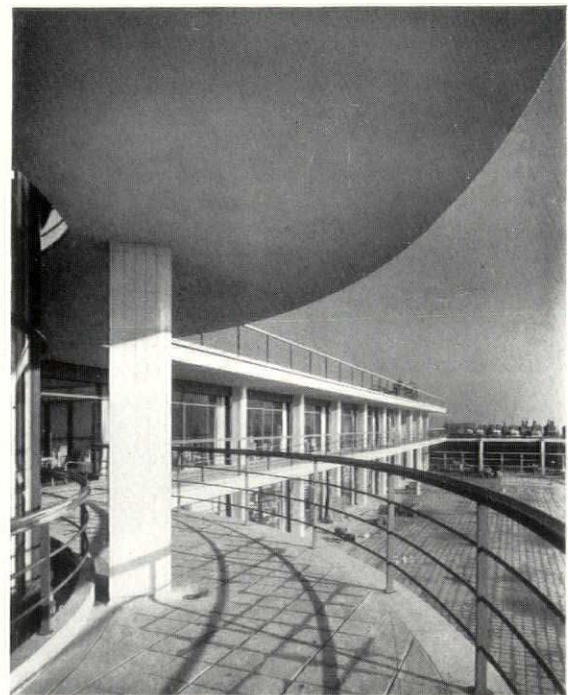
PHOTOS COURTESY OF THE ARCHITECTURAL REVIEW, THE ARCHITECTS AND THE MUSEUM OF MODERN ART

THE DE LA WARR PAVILION, BEXHILL MENDELSON AND CHERMAYEFF, ARCHITECTS



- | | | |
|-------------------|------------------|----------------------|
| 1. Dressing Rooms | 11. Foyer | 21. Dance Floor |
| 2. Chorus | 12. Toilets | 22. Orchestra |
| 3. Stage | 13. Coats | 23. Drive |
| 4. Scene Dock | 14. Hall | 24. Roof |
| 5. Auditorium | 15. Storage | 25. Electric Gallery |
| 6. Ramp | 16. Office | 26. Gallery |
| 7. Stage Manager | 17. Telephones | 27. Conference Hall |
| 8. Stage Yard | 18. Auto Parking | 28. Lounge |
| 9. Flower Box | 19. Kitchen | 29. Bar |
| 10. Terrace | 20. Restaurant | 30. Library |
| | | 31. Sun Parlor |

The winning design in a competition held in 1934, the Bexhill Pavilion is a notable step toward eliminating the usual tawdry Edwardianism of the average English seaside resort. The recreational building shown here is the first of an extensive proposed development which will include an hotel, apartment building, cinema and large bathing pool



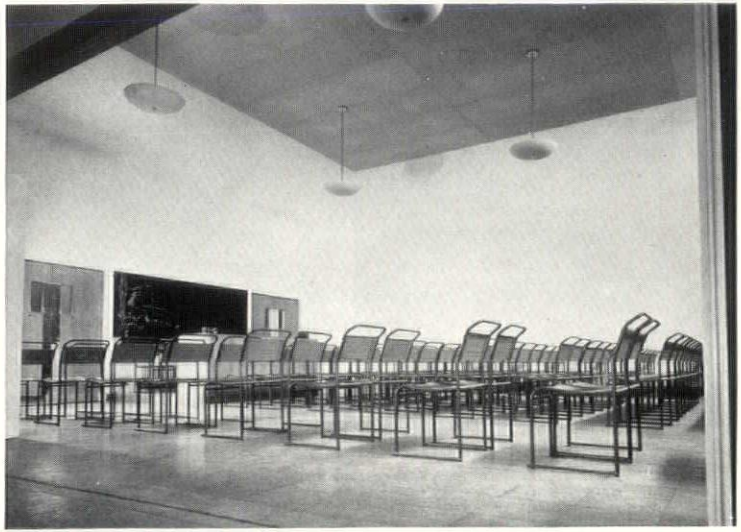


The interior design of the Pavilion is an architectural refutation of the average Englishman's estimate of his country's climate. Vast glass areas open to sun and air on the sea side of the building. (Left) The problem of handling the sloping floor in the auditorium and yet maintaining direct circulation with terraces on either side was skillfully solved by means of the side passage and seats on a single level. (Below) The library and reading room on the second floor is typical of the open quality of the building

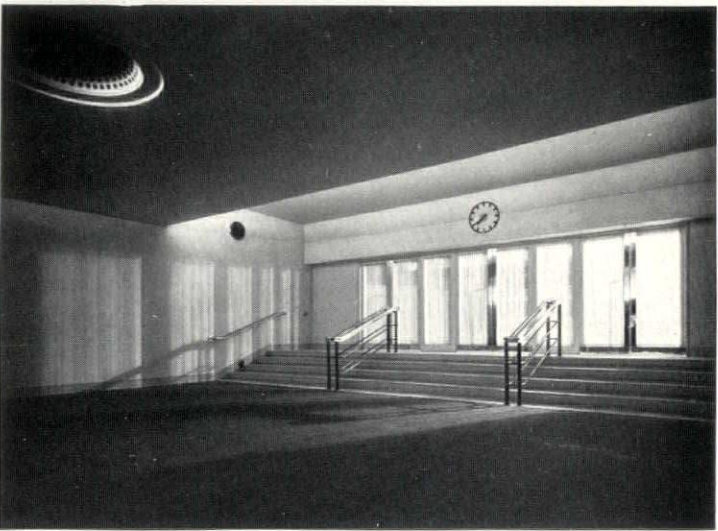




1



2



3



4

1 The entrance hall with its magnificent free standing stairway is typical of the chaste architectural forms employed throughout. The bank of doors leads to the restaurant

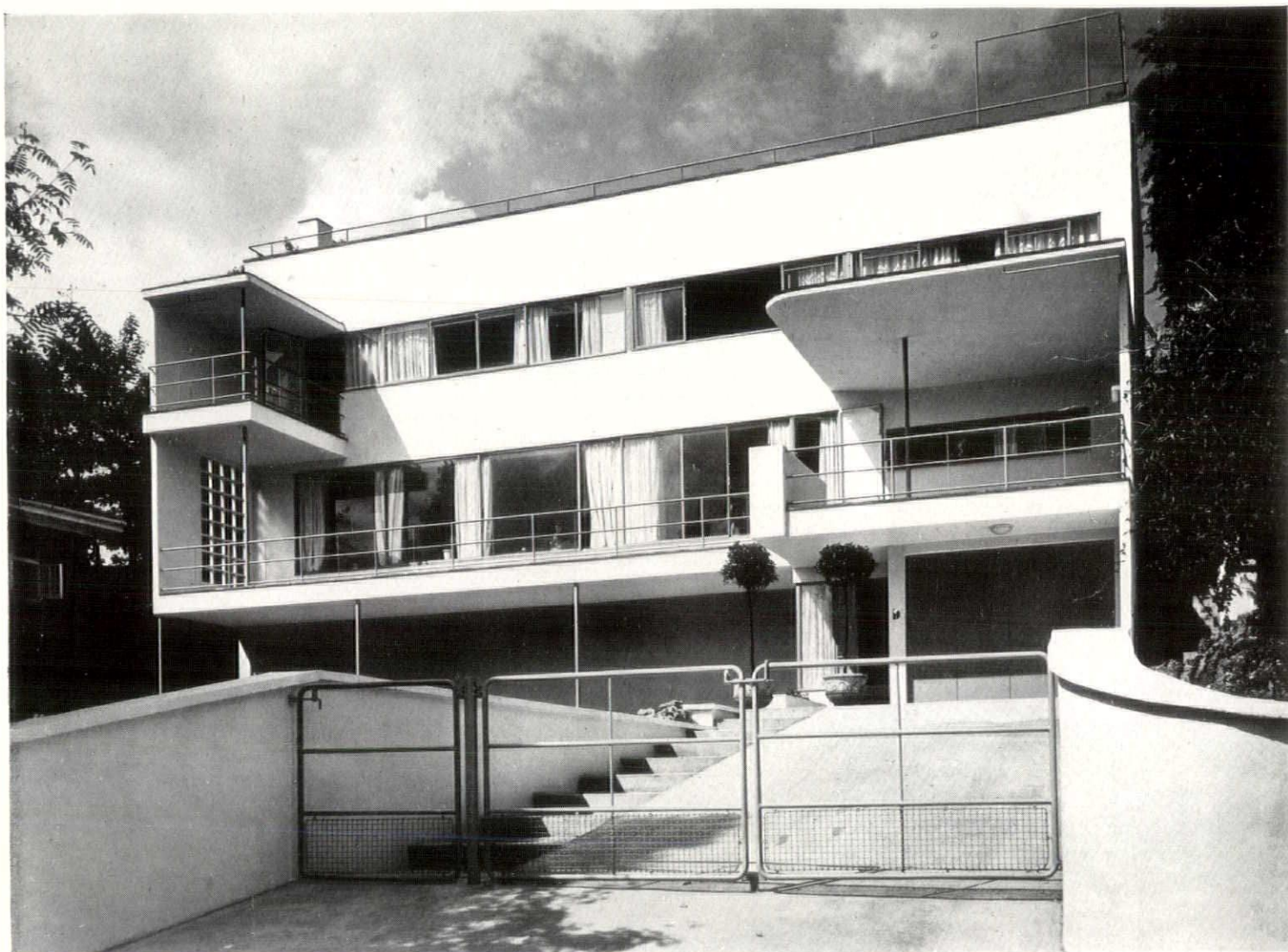
3 The foyer to the auditorium is an excellent example of what a room of this type should be and seldom is, a direct passageway leading to more important things beyond

2 The conference hall on the second floor at the rear of the auditorium has rows of well designed tube metal chairs that give the room a remarkably businesslike air

4 Lally columns define a passageway in the restaurant. The room is logically long and narrow to enable diners to overlook the sea and the open air dining terrace

THE DE LA WARR PAVILION, BEXHILL

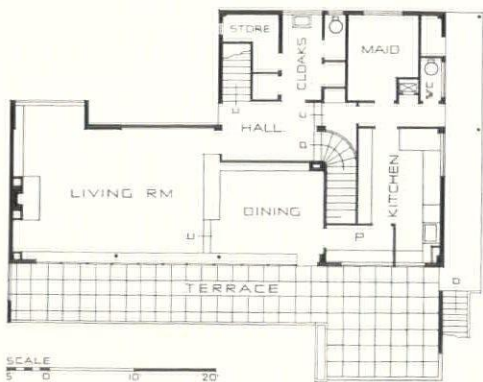
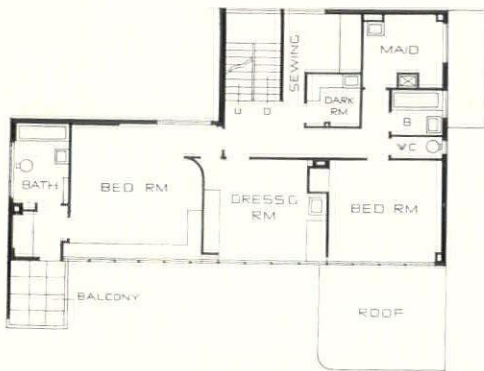
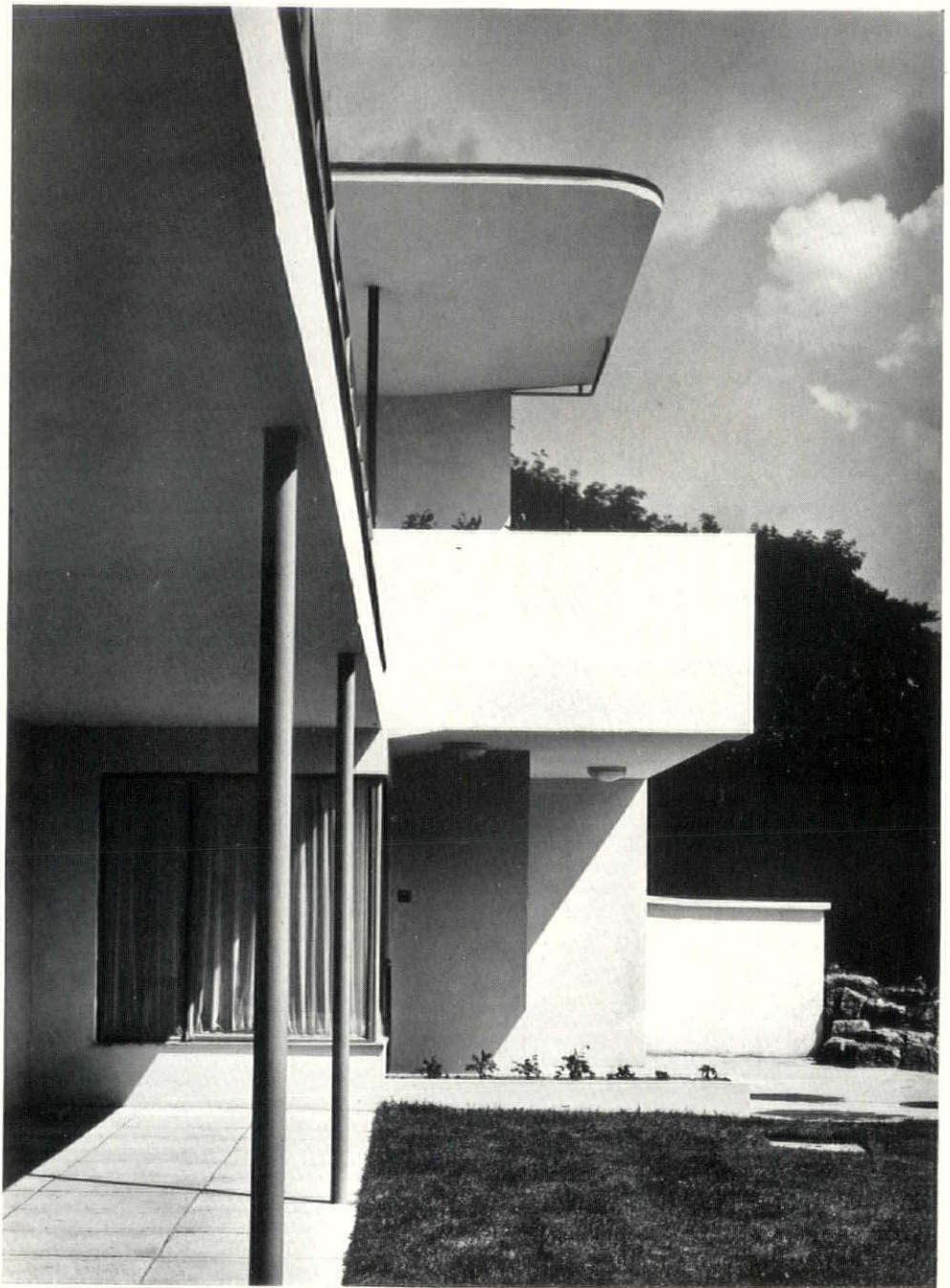
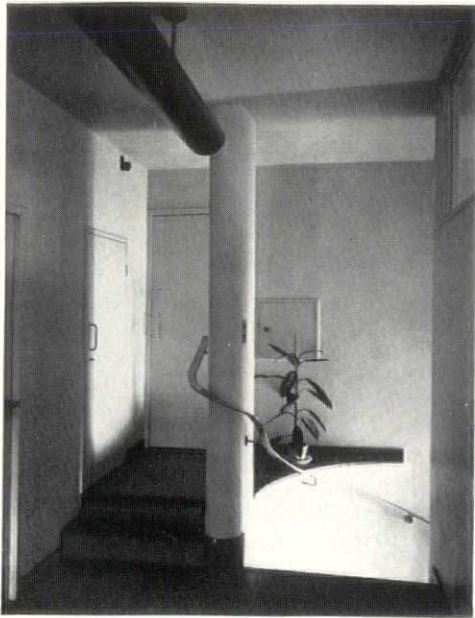
MENDELSON AND CHERMAYEFF, ARCHITECTS



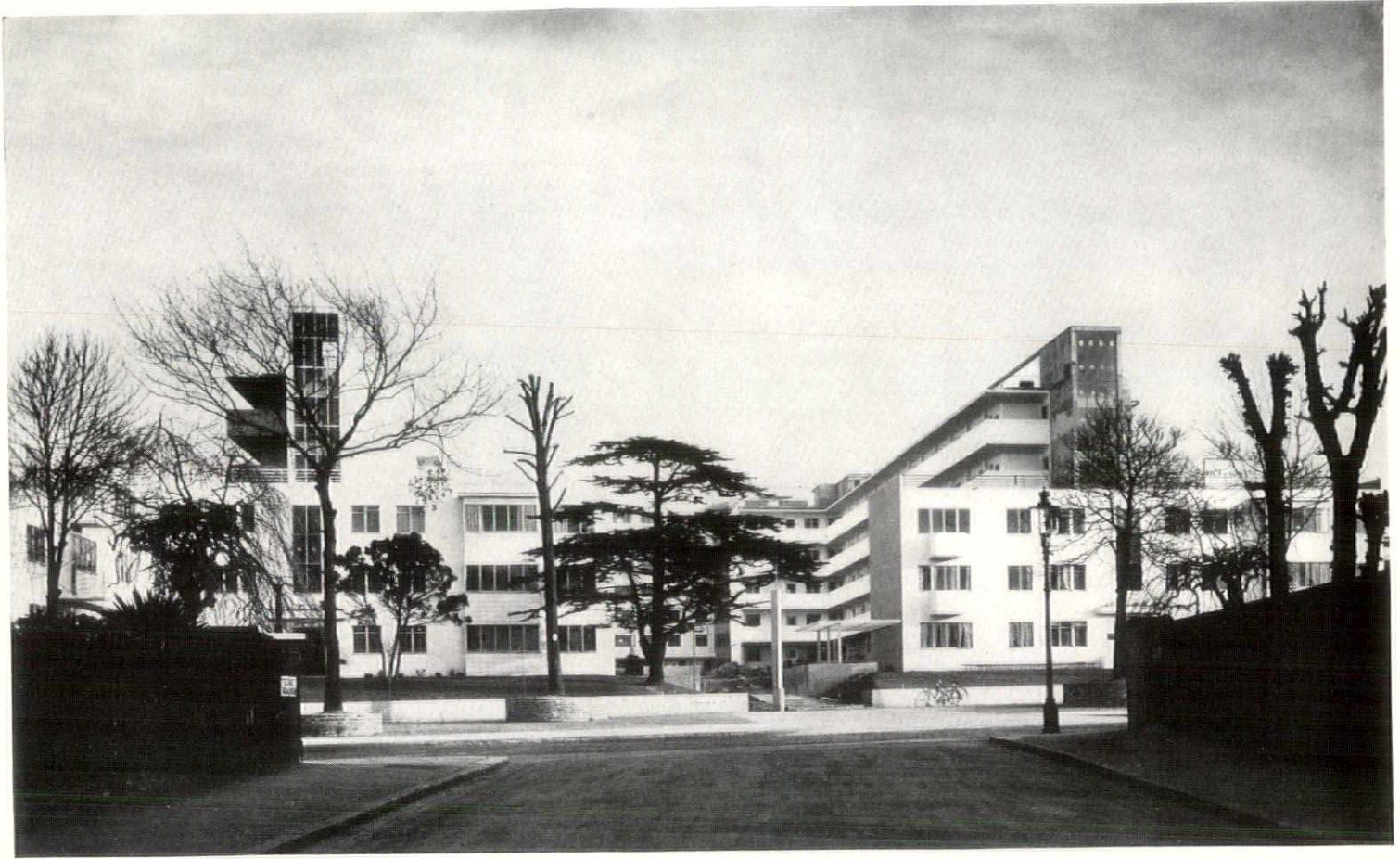
HOUSE IN FROGNAL WAY, HAMPSTEAD

E. MAXWELL FRY, ARCHITECT

The site on which the house stands slopes steeply upwards from the street. Although presenting extra problems, this location allowed for a fine view of London and preserved easy access to the garage. Construction is of reinforced concrete throughout. Plywood used as shuttering is responsible for the smooth external facing which is finished with a concrete paint. The use of lally columns and metal tubing accentuates the horizontality of the structure which results in an air of lightness



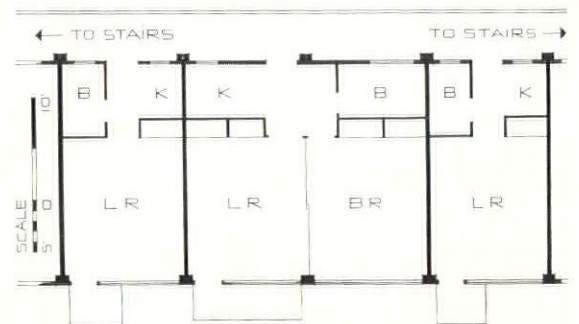
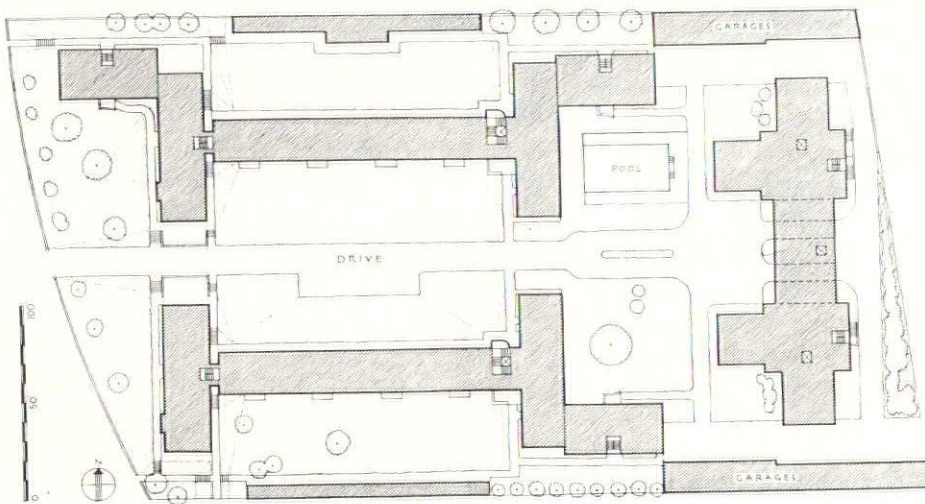
The planning of the garage at a lower level allows direct covered access from the street and garage to the hall on the living room level. The street and the view being to the south, all living room and bedroom windows are placed on this front. The living and dining space are separated only by low built-in furniture. The kitchen opens directly to both dining room and terrace which is sheltered at either end from the wind. The second floor contains the two large bedrooms and the dressing room and a small covered balcony which projects over the terrace. The stairs lead up to the roof which is carefully drained and surfaced, and protected on three sides by wind screens



PULLMAN COURT, STREATHAM, S. W.

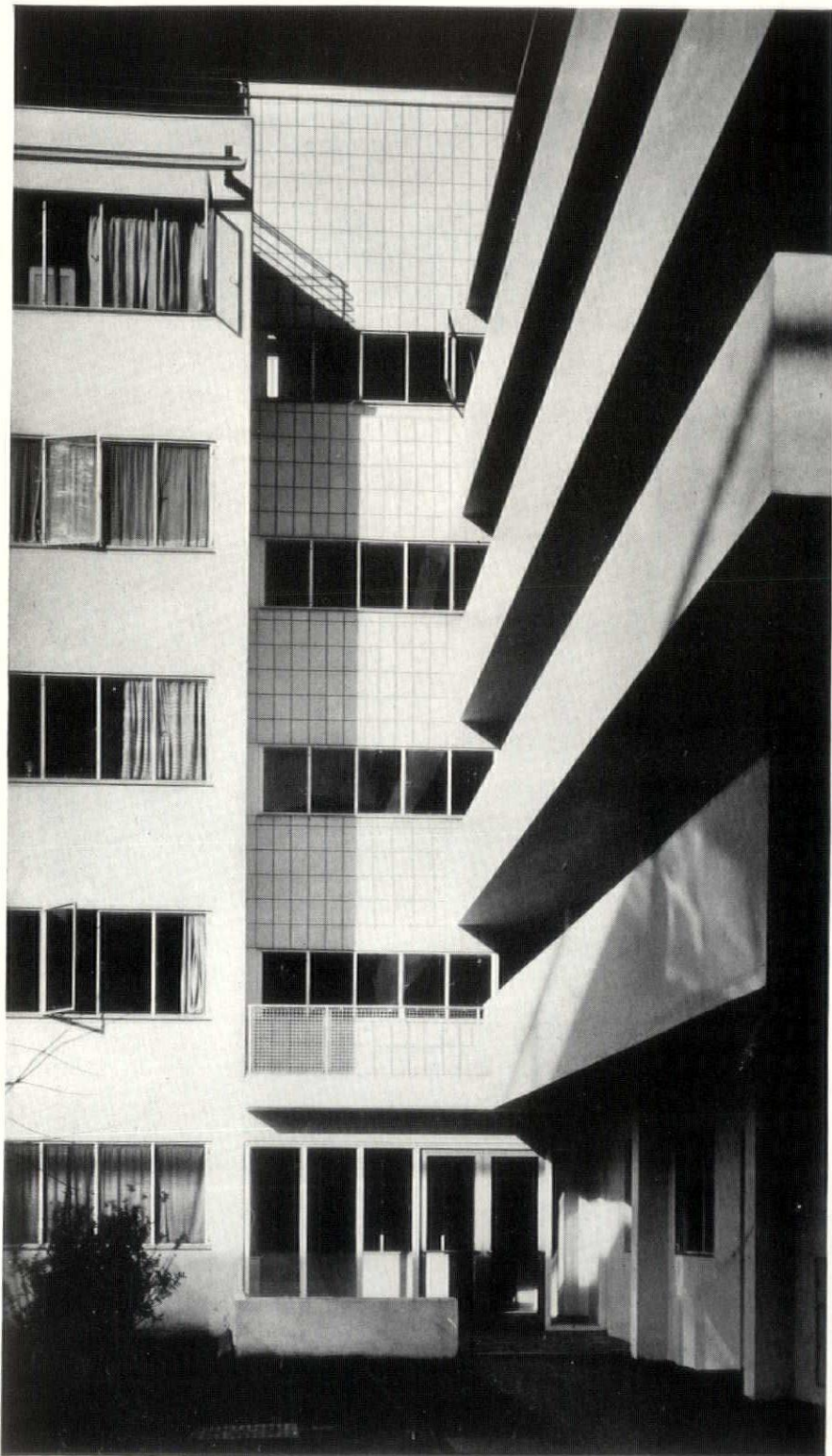
FREDERICK GIBBERD, ARCHITECT

The site, consisting of about $2\frac{3}{4}$ acres, slopes upward from west to east. There is a frontage of 258 feet on the west side. In this enclosure there are 218 one, two and three room apartments, roof gardens, a swimming pool, garages, and pleasantly adequate driveways and lawn areas. Construction is mainly of concrete. Reinforced concrete frame and 4-inch panel walls are lined with 1-inch of cork for insulation. Balcony and gallery floor slabs are of reinforced concrete, while other floors are of hollow tile $5\frac{1}{2}$ inches thick. Columns and beams, wherever possible, have been standardized and arranged so that beams are concealed



Typical one and two room flats

PULLMAN COURT, STREATHAM, S. W. FREDERICK GIBBERD, ARCHITECT

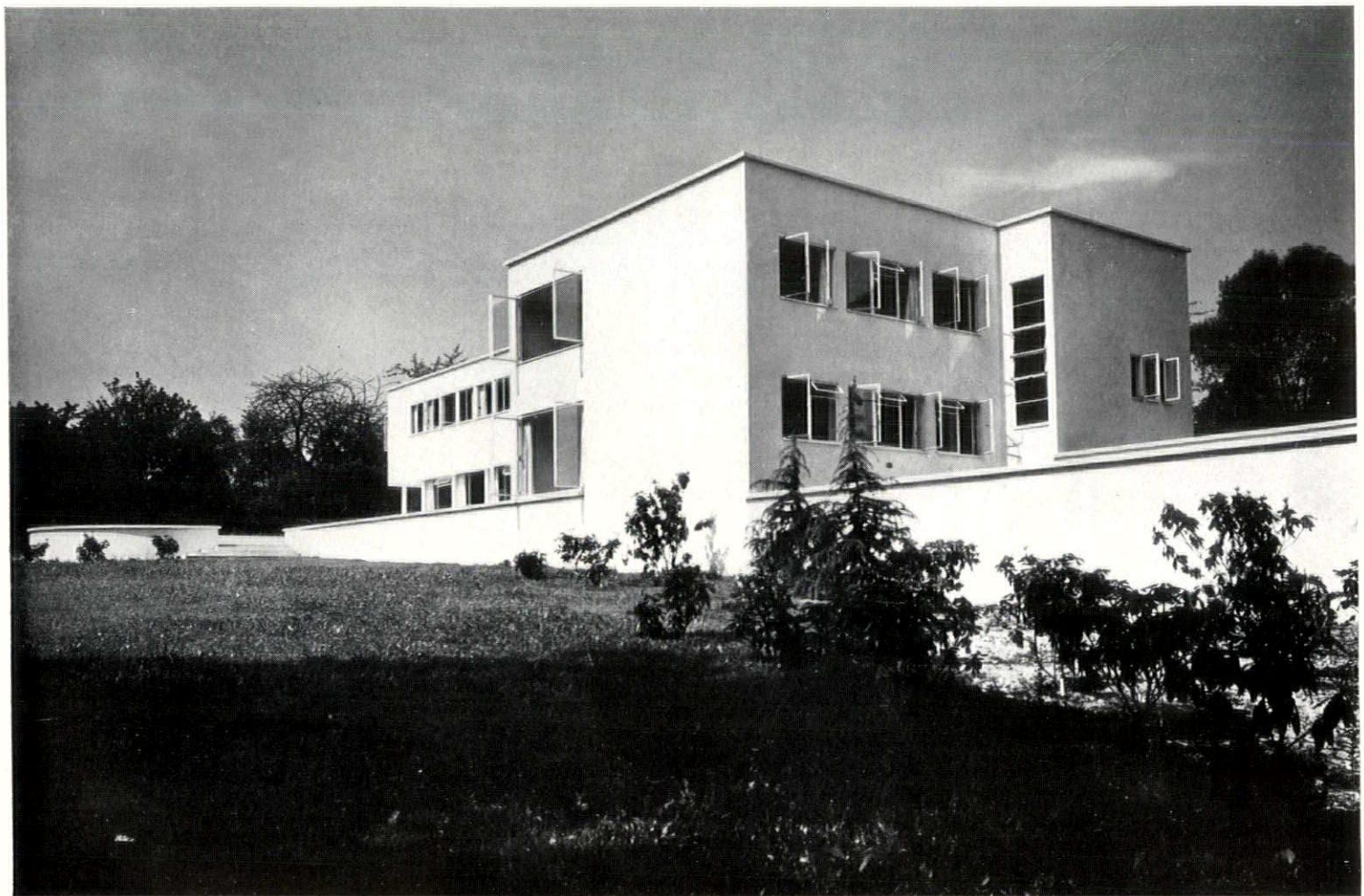
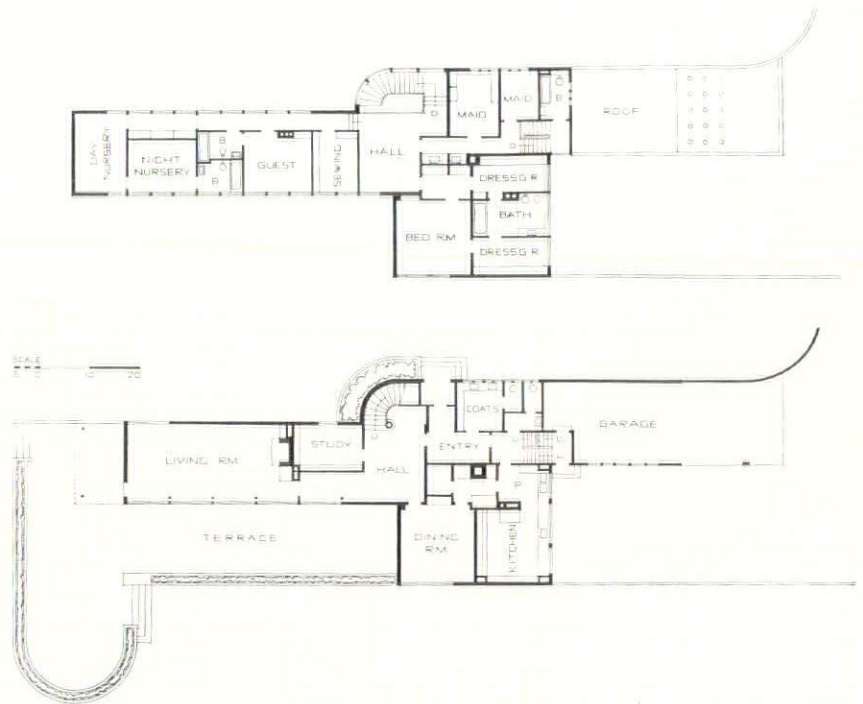


The apartments have been planned with three types of access, by external galleries, by grouping around an elevator hall, and by entrances on either side of a staircase. The open gallery type, while unsuited to American conditions, results in a remarkably fine pictorial effect. Other novelties include a roof railing which serves as a permanent scaffolding cradle and walls painted in different bright colors. The colors and tones change with a change of plain. Buildings near the street are browns and pinks, while those in the rear are grays and blues



**HOUSE AT CHALFONT, ST. GILES
MENDELSON AND CHERMAYEFF, ARCHITECTS**

Located on a high point this large country house has a commanding view of open country to the southeast, and of woods to the west. Due to a down slope to the north, the service yard, garage and other service elements are unobtrusively handled. Construction is of reinforced concrete with hollow tile floors and slabs. Insulation is of 1-inch cork and 1/2-inch Celotex wall boards. The compact plan recalls typical German practices of a few years ago in the large ground floor hall, and the long well-lighted hall on the bedroom floor. The plan of the large terrace is an example of Mendelsohn's predilection for curved forms

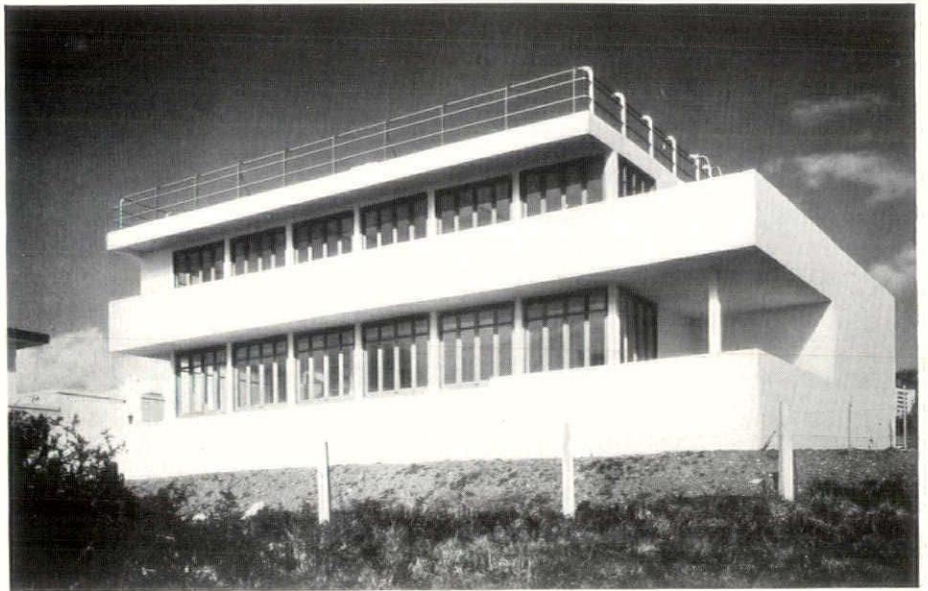
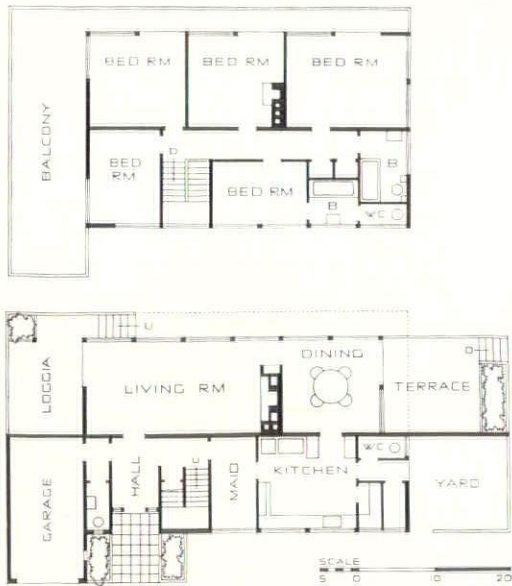




The west elevation seen from the south (above) presents an orderly horizontal feeling that ties the house to its hilltop setting. This is due to the long banks of windows on both first and second floors and by the overhang of the day nursery on the south side. The treatment of the vestibule (right) with radiator grilles incorporated in the built-in console. The mirror above enlarges the apparent size of a narrow passage, reflects the outdoor view and establishes the architects' feeling for suavity

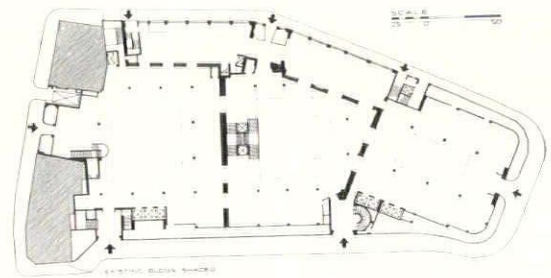
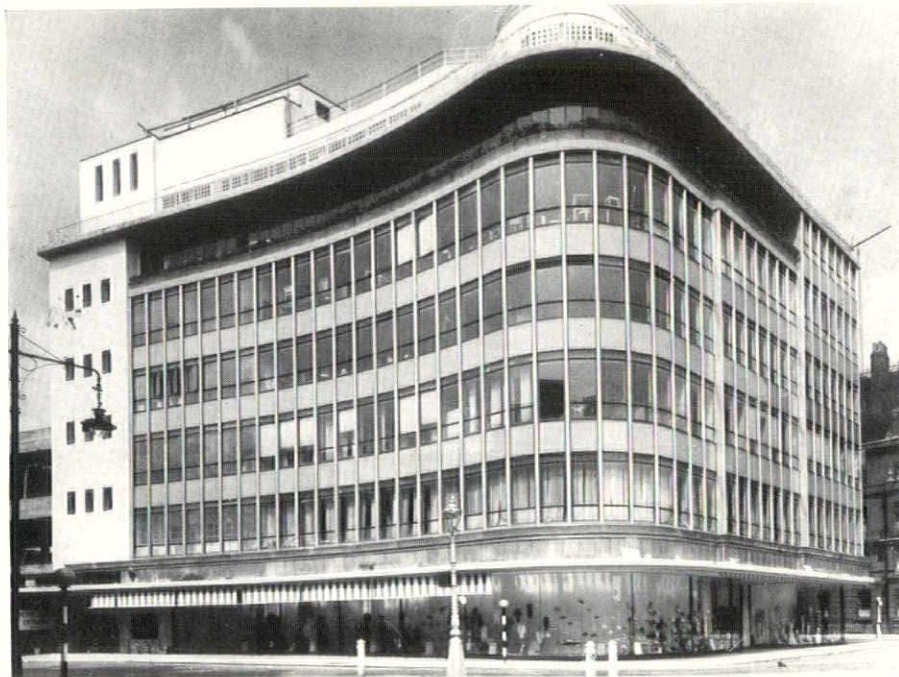


HOUSE AT CHALFONT, ST. GILES
MENDELSON AND CHERMAYEFF,
ARCHITECTS



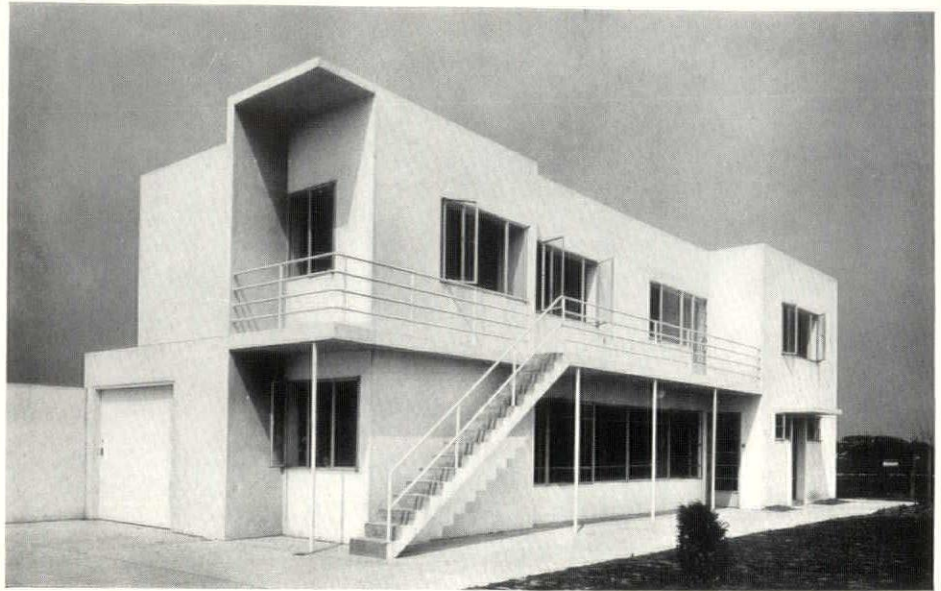
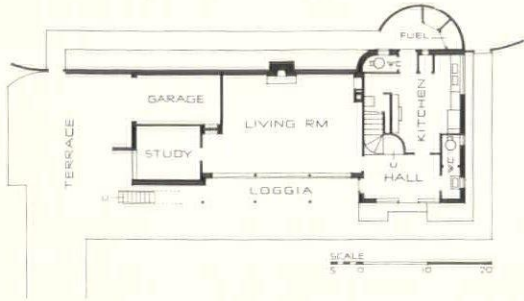
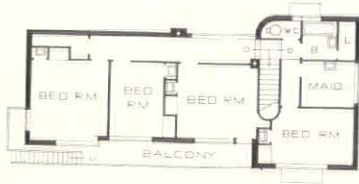
**HOUSE AT CARLYON BAY, CORNWALL
MARSHALL SISSON, ARCHITECT**

Built near the edge of a cliff this compactly designed house was designed to take advantage of a fine sea view. Long rows of folding windows occur on all sides, except the northwest. The overhanging balcony is a necessary protection because of the large window area and the exposed location



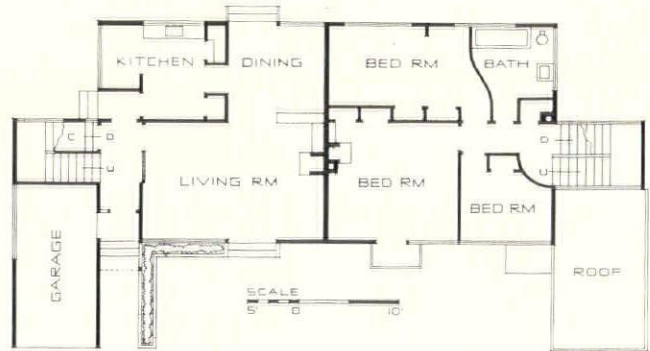
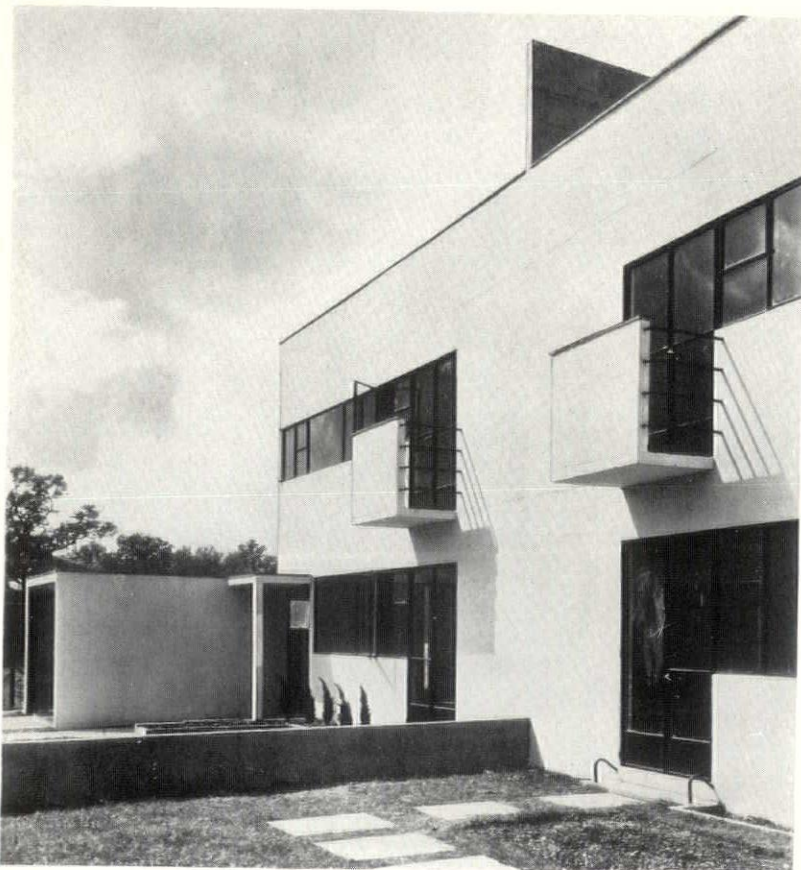
Surrounded by the drab eclectic "facadism" of other buildings fronting on Sloane Square, this new store stands out as an example of architectural lucidity. Its design was governed by no contemporary clichés, but by an entirely logical handling of steel and glass. An interesting framing problem was presented by the swimming pool and squash courts in the penthouse. The exterior finish is paint

**STORE FOR PETER JONES LTD.
SLATER & MOBERLY, ARCHITECTS**



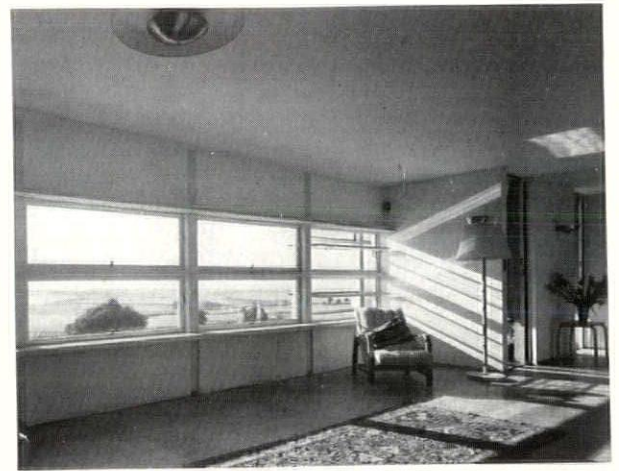
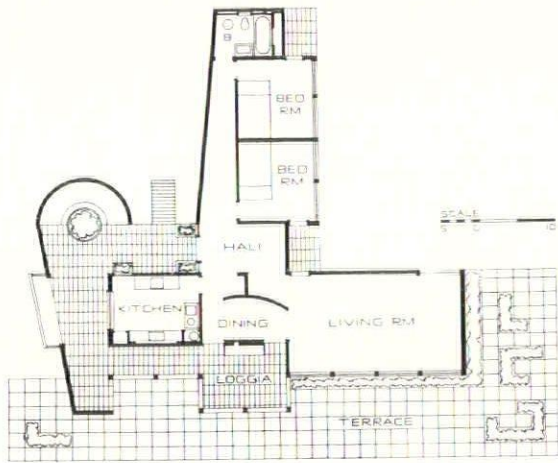
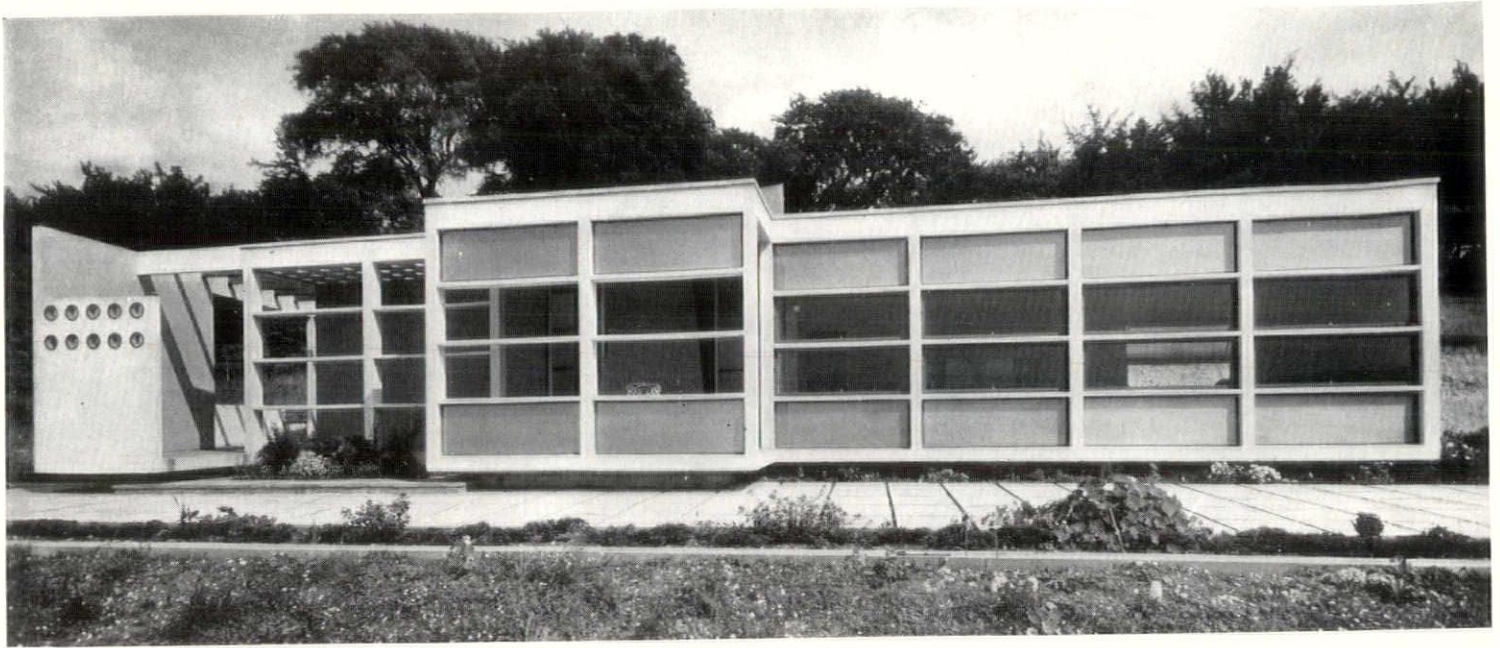
The fact that this is one of twenty speculatively built houses is indicated by points in the plan that are traceable to a realty developer's method of putting appearance before convenience. The spacious entrance hall offers startling contrast to the cramped space at the top of the stairs, and the lavatory's curved wall is just a pleasant form

**HOUSE AT FRINTON-ON-SEA
OLIVER HILL, ARCHITECT**



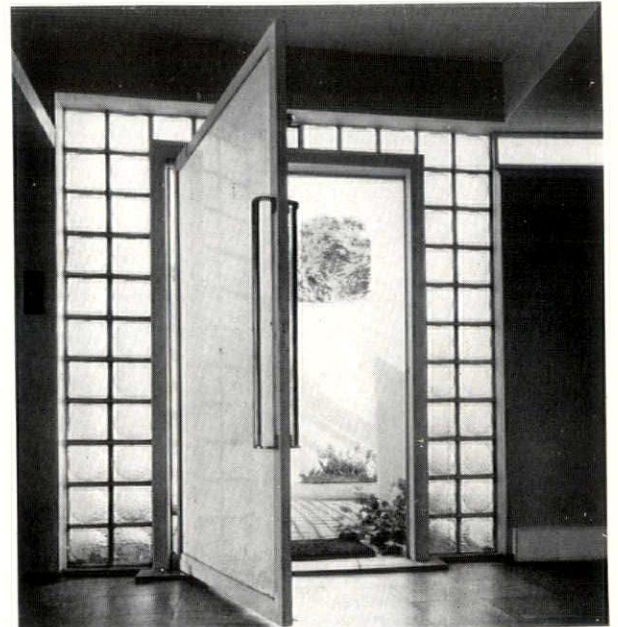
Originally rejected by a reactionary building authority on the grounds that it was "injurious to the amenities of the neighborhood" this two-family house was only built after a year's persistent effort on the owner's part. The result seems a definite advance in a special type of suburban dwelling that is usually an architectural horror

**SEMI-DETACHED HOUSES AT RUISLIP
CONNELL, WARD AND LUCAS,
ARCHITECTS**



This small house is a characteristic example of this firm's extraordinary skill and invention in concrete design. In this particular case, not only the mullions, but even the delicate muntins are made of concrete. The result is an air both of strength and remarkable delicacy. Many features of the plan, especially the hall designed for diminishing traffic and the simplified wall area of the dining space are worthy of study

**HOUSE IN WHIPNADE
LUBETKIN AND TECTON, ARCHITECTS**





PHOTOS: ORVILLE LOGAN SNIDER FROM TRIANGLE

YAQUIMA BAY BRIDGE, NEWPORT, OREGON

ARCHITECTURAL
OVERTONES..... BRIDGES

Apparently the sight of a bridge has always had the power to evoke deep appreciation in all types of mankind. Part of this is undoubtedly due to a natural human respect for engineering skill in overcoming environment. But perhaps even more than this is our subconscious admiration for aestheticism as the direct result of function



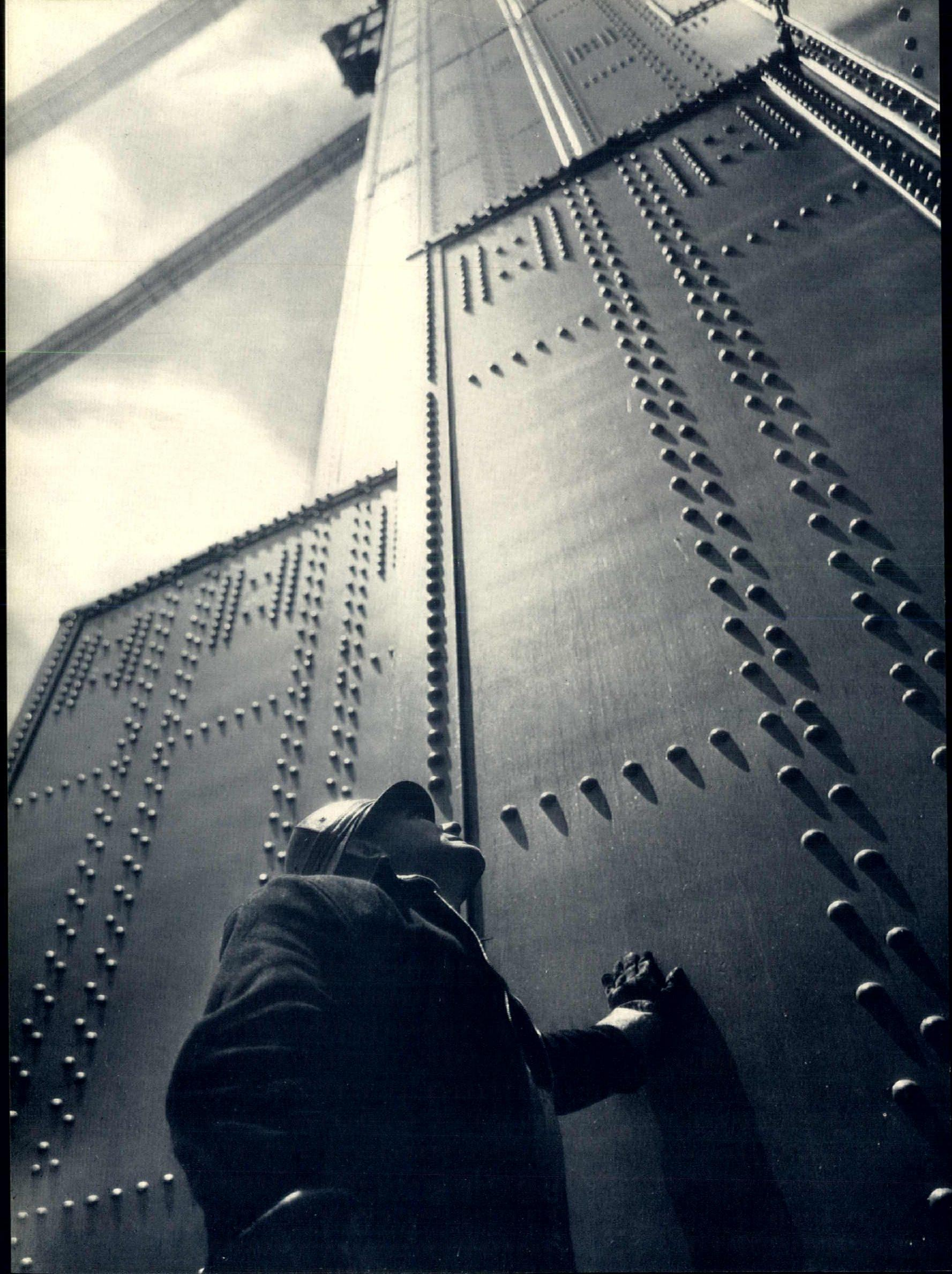
COOS BAY BRIDGE, NORTH BEND, OREGON

One of the links in the great highway system which will one day connect Alaska with the Argentine.

ALSEA BAY BRIDGE, WALDPOR, OREGON

Another highway bridge which lent itself to an interesting study of light and shade on its concrete surface

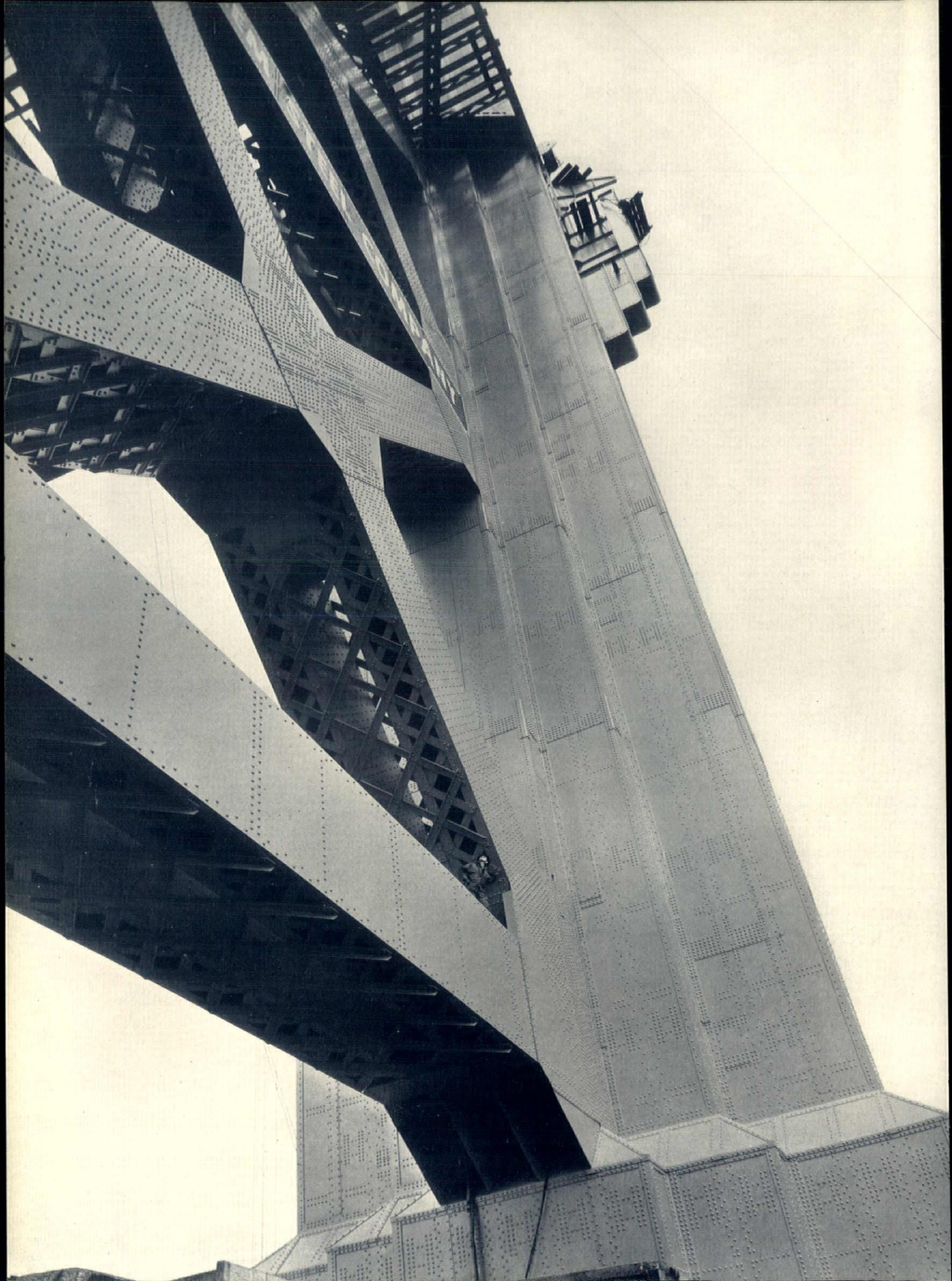




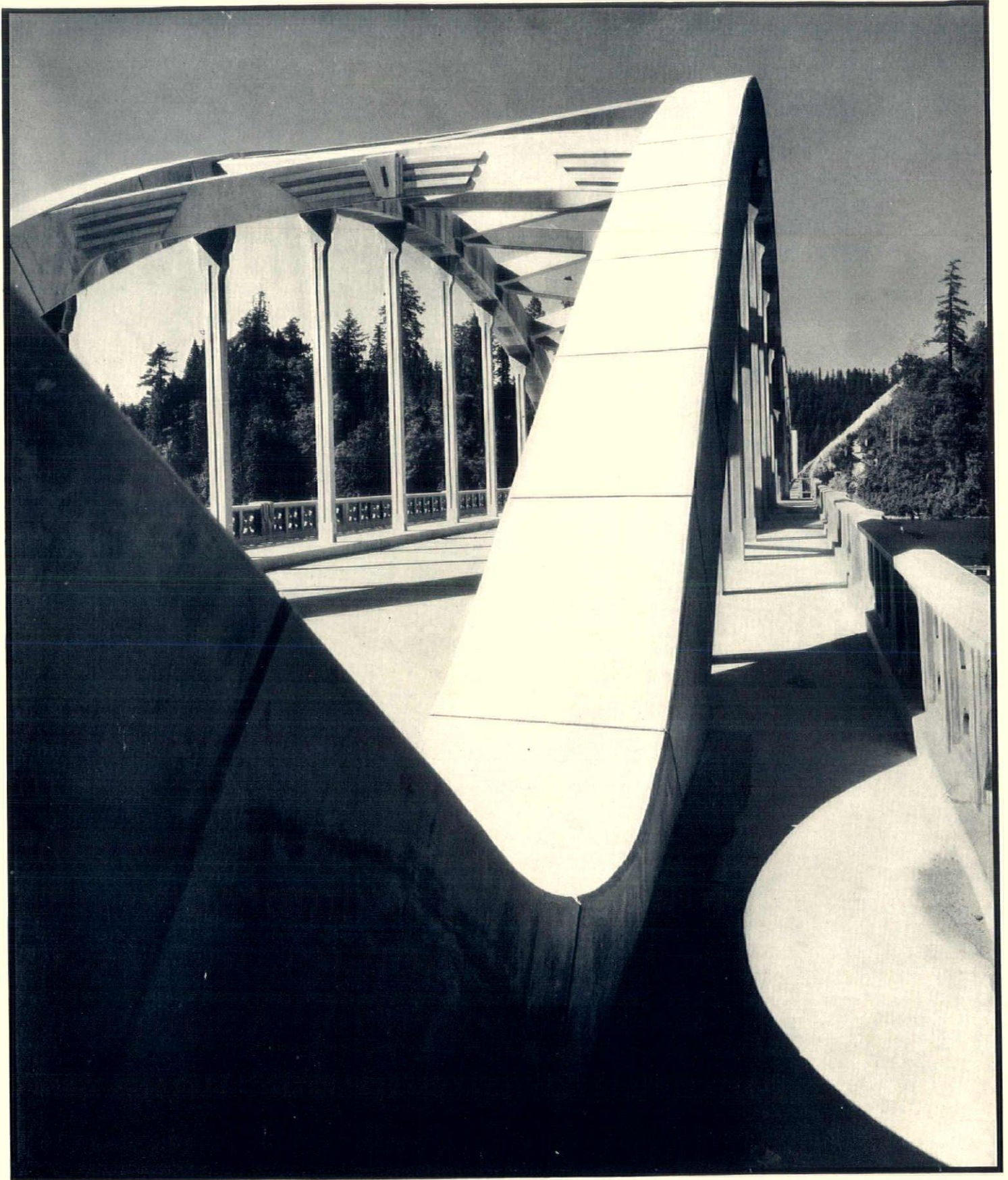


GOLDEN GATE BRIDGE, SAN FRANCISCO, CALIFORNIA

These, and the following two pages, show close-up views of the jewel-like steel surface of one of the great engineering feats of our time. Fortunately the engineers in charge have had the good taste to finish the steel work with a protective paint of a color called International Orange







UMPQUA RIVER BRIDGE, REEDSPORT, OREGON

Concrete and modern engineering result in a form of unusual grace

NEW CODES FOR OLD

PUBLIC SAFETY is the *raison d'être* of building codes. The code of America's largest city serves as a model for the majority of its other cities. New York's old code has been obviously obsolete and unrealistic in relation to present day commercial necessities and the advances in the techniques and materials of building. This was realized in 1929 when twenty-one committees started working to redraft the building code to make it consistent and in conformity with the science of building. A year ago the results of this work were published, and the matter placed in the hands of the Board of Aldermen. Attempts have been made to incorporate changes to the advantage of various groups, such "jokers" have been found and aired, "politics" naturally has entered the discussions, the passage of the new code has been delayed for divers reasons. It is time that the new code, as drafted by the experts, unmodified by special interests of any nature, should be made law. Public safety will be protected and new efficiency and economy will be made possible by the new code. There is nothing to be gained by the public or by the building industry in any further delays. We have faith in the code as drafted and submitted. Why can it not be made effective at once, so that contemplated construction may be undertaken on an efficient basis? The new code is especially needed now because of the agitation for a 30-hour building week which is a deterrent to needed building, making still more acute the shortage of skilled labor.

MELTING-POT ARCHITECTURE

AMERICAN ARCHITECTURE has always been susceptible to foreign design influences. In fact it has sought them, has imported leading foreign architects and designers both by direct invitation and by offering better opportunities for success than obtain in the native countries of these practitioners. The schools still seek to import progressive design leaders from abroad to teach young Americans. The list is long and imposing and to it now is added the illustrious name of Walter Gropius who comes to Harvard this month. The long line of French masters, many Grand Prix men,—Despradelles, Duquesne, Cret, Carlu, Haffner, Labatu—as well as other leaders from abroad,—Saarinen, Lescaze, Neutra, Steinhof, Fouilhoux, Ruhtenberg, Unwin, to name but a few,—far outshadows in fame our own American born and trained teachers of architecture. A possible exception is Frank Lloyd Wright, and he had to be recognized abroad before his grudging acceptance here. The American fashion is to import its fashions from Paris, London, Dessau. And so our architecture in all its lack of unity is truly expressive of our national traits, true to our predilection to adopt and adapt the architecture of others. New vigor and vitality is brought in by leaders from abroad to be absorbed by young minds that quicken to such inspiration. Our styles come out of the national melting pot of design and some are only warmed over in the simmering. They are done to taste, to our taste,—not unified, not homogeneous; for American taste itself is catholic, eclectic and still affected by the ingredients of distinct savor that are stirred into the cauldron and dipped out on occasion. As the boiling down proceeds, we can look confidently toward an architecture more unified, more logical, more useful and more beautiful because of the strong influences we have imported to add to our native ingenuity, organizing genius and uncommon common sense.

Kenneth K. Stowell

EDITOR

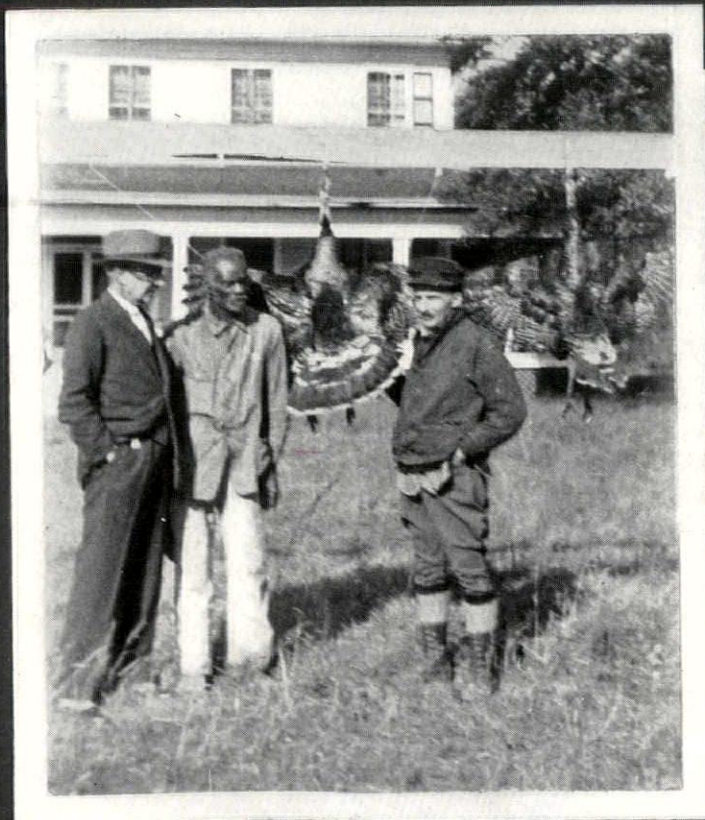
Architects and Avocations



One could hardly call it an avocation, for this is the first time Frederick V. Murphy has ever had occasion to be welcomed back to Washington after a honeymoon.



The Tarzan Trio, voyageurs in Canadian wilds: Frank McCoughey of Chicago, Robert and Roy Childs Jones of Minneapolis, getting farther and farther away from housing and architectural education.



Becalmed on Long Island Sound, Skipper Wesley Sherwood Bessell analyzes aesthetics with his supercargo, Jack Sheridan the illustrator.

Louis Skidmore, in between world's fairs, hunts the wild turkey down in Alabama.

HOUSING and PLANNING - II

BY SIR RAYMOND UNWIN

THE STANDARD OF HOUSING NEEDED FOR FAMILY LIFE IN MODERN COMMUNITIES

SOME years ago before housing became a most prominent question in England, we had a rough and ready standard used very often in cases of overcrowding. This standard regarded 360 cubic feet of air space as enough per person, though it was not in the law. A committee was formed before the war to investigate this matter. They reported that a general standard of 500 cubic feet for an adult and 250 cubic feet for a child under 10 years of age should be taken as the standard.

This was not an exact, scientific formula but an approximate guide. A very high room would be smaller in floor area than a room with a very low ceiling. For that reason we have come to the conclusion that for low-cost housing 8 feet is sufficiently high.

Then, of course, there is some difference between a sleeping room, where one usually spends a whole night, and a living room, which ones goes in and out of and uses for shorter lengths of time. The 500 cubic feet standard, is applied as a general rule to the sleeping room. Somewhat less cubic footage is used for the living room.

There are some minor regulations, e.g., a house will be overcrowded if owing to the ages and sexes of the occupants 2 people of different sexes, over ten years of age, have to sleep in one room.

Out of 8,582,969 houses surveyed, 341,554 were condemned as overcrowded. If you improved the scale by adding a living room not to be counted for sleeping purposes you would increase that number to 1,633,214 overcrowded. If the scale were improved only 10%, it would bring the number overcrowded up to 800,000. This is the problem which we are working on in England.

The importance of setting standards for number and size of rooms has to do with a great many things other than just health. Comfort, amenity, convenience, and opportunity for any kind of cultural life must be taken into consideration.

I want to emphasize one point about this question of size, and suggest size should be based on the needs, and not the cost of a house. Most of the expenses of building remain about the same for a house with a footage of 500 sq. ft. and one with a footage of 700 sq. ft. The expensive parts of a building have nothing to do with size; and these remain approximately the same regardless of size. These, include plumbing, utility items and their installations, sinks, toilets, staircases and landings, entrance, and for site, share of road, services, etc.

We went into this matter in England and found the following to be true. In a three-bedroom house the cost of building is approximately 8 shillings per square foot, or \$2.00 in your money. A house containing 760 sq. ft. then costing 304 £ or \$1,520; if it were reduced from 760 sq. ft. to 700 would, apparently, cost \$120 less. Actually, however, we discovered that you save, by reducing size, only $\frac{3}{8}$ of the average cost of floor area, so that \$2.00 cost per foot is reduced to a 75 cent per ft. saving. You would then, actually save \$40 instead of \$120.

I'm sorry to say that both our governments say to themselves "less space—less cost," without looking into the matter with any thoroughness. And by so doing they may be diminishing the value twice as much as they diminish the cost.

STANDARDS ADOPTED BY COMMITTEE—ENGLAND

Living Room:

Area	180 sq. ft.
Cubage	1,440 cu. ft.
Occupants	3 Adults

First Bedroom:

Area	150 sq. ft.
Cubage	1,200 cu. ft.
Occupants	2 Adults 1 Child

Smallest Bedroom:

Area	65 sq. ft.
Cubage	520 cu. ft.
Occupants	1 Adult

The size of the intermediate room was not fixed. 100 sq. ft., however, is desirable in most instances; in this room it is not so important to fix the exact size. The smallest would accommodate one adult or two children.

STANDARDS OF ACCOMMODATION FOR LOCAL AUTHORITIES IN REHOUSING PROJECTS

4 Persons.....	2 bedrooms, minimum requirement
5 Persons.....	3 bedrooms, minimum requirement
7 Persons.....	4 bedrooms, minimum requirement

This general standard must be complied with by local authorities when rehousing. It does not include the living room as sleeping space; in the rehousing projects the standard includes only the bedrooms. The penal standard is less strict and includes all habitable rooms.



... Space for communal activity is illustrated by this view of a bathing place in some Vienna flats. The communal meeting rooms found in the Hillside Homes development in this country are a similar example. . . .

PLANNING SHOULD PROMOTE THE BEST RELATIONS BETWEEN HOUSING, INDUSTRY, COMMERCE, CULTURE and the OTHER ELEMENTS OF COMMUNITY LIFE

I want to explain why we adopted the standard of 12 dwellings to the acre, and why it is not extravagant.

Taking the figure of 200 pounds an acre for land, or \$1,000 in your money, if 12 houses are placed on this, only one road across the plot is needed to give the necessary frontage: adding road-making costs, the rental value of the plot comes to 7 pence halfpenny or 15 cents per week. Taking exactly the same piece of land and standards, but building 24 cottages to the acre, it is necessary to put in an extra road, and the size of the plots diminishes accordingly. With plots of 360 square yards the cost is 15 cents per week. With 24 houses to the acre and only 159½ square yards it is 12 cents a week. If the density is increased to 36 houses to the acre, with the necessity of putting in a third road, the average plot area is then reduced to 93 square yards while the cost is 10 cents a week. The increase in density while reducing the area of each plot from 360 to 93 square yards, will only reduce the weekly rent of the plot from 15 to 10 cents, or 5 cents reduction.

In many cases, however, there is not only no saving, but the smaller plot actually costs more than the larger one with lower density.

The tendency to crowd land when there is no necessity economically, and no advantage to be gained, is very remarkable.

Observe that when you crowd the land you are immediately raising your road cost per house. The more roads the more road junctions, and this too adds to the cost.

To pass from the question of density to the relation and proportions of different parts of a town, here are some interesting figures from Letchworth, giving the proportion of the area required for different purposes in that new town where land has been available as required with little restriction from cost or other obstacle. The following are the percentages of the developed area used for the main purposes:

Commercial	.....	3.56%	of whole area
Industrial	.....	15.15%	" " "
Residential	.....	81.27%	" " "

In Welwyn, a more recent garden city not so fully developed, figures are:

Commercial	.....	6.48%	of whole area
Industrial	.....	27.09%	" " "
Residential	.....	65.04%	" " "

This means really that the people living in Letchworth have occupied more garden space than those in Welwyn.

When I was in Boston, I found a report which gave figures that are interesting because they are nearly comparable to ours for Letchworth and Welwyn. The population of Boston proper is about 700,000:

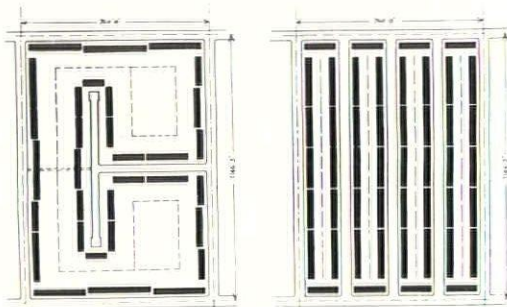
Commercial	.....	1.95%	of whole area
Industrial	.....	10.45%	" " "
Residential	.....	70.00%	" " "

The unclassified portion is much bigger in Boston than in the other two places under discussion, being about 20.00%. The total area in Boston which we are dealing with is 30,000 acres gross and 17,000 net. Consider the similarity between the figures.

For town planning we need accurate figures based on many more examples than these; but one fact stands out among them and that is that overwhelmingly the largest portion of a built-up area is occupied by dwellings.

It is very important in town planning to know just how much area should be given to factories; to the business section; to residences, etc.

We have already seen that the question of exactly what density one allows buildings does not have any great influence on the whole size of the town, but it does on the actual area needed.



... To realize how the loss from crowding comes about, observe that when the land is crowded, the road cost per house is immediately raised. With the same initial cost per acre, \$1000, it would cost 4 cents more per month for the privilege of living under the more crowded conditions. . . .

**ON WHAT CONDITIONS CAN GOOD HOUSING
BE SECURED FOR ALL WHO NEED IT**

People dwelling in slums do not always realize that the conditions are bad. One of our first tasks in all housing schemes is to educate the public with which we are dealing to the standards of decent living we set for them. This would be an easy problem if we considered a decent standard of housing as important as a decent standard of educational opportunities.

Let us assume that we are agreed thus far: that it is important, indeed essential, for a community to set certain reasonable standards of housing by which all persons living in that community must abide.

What are the conditions, then, under which this improvement of housing should be done? There has been much discussion of supplying free housing as we supply free education. In regard to education there is much to be said for this method. The problem is not quite the same in housing, however. One can't standardize houses and localities. People have a way of living where they want to. The education precedent is a good one for establishing the need to secure general housing standards, but is not a good one for giving free houses all around.

A great deal of research is being done in this country to see how you can build more cheaply. This is very well and good; but you wouldn't have much chance of saving anything this way comparable to what would result from reducing the percentage which rent represents on the cost to something more like ours in England. This is a problem which needs careful consideration. You have to pay 4.42 higher per cent on cost in rent than we have to in England for the same cost of construction.

When all is said and done as to the possibilities of reducing the cost of building and the rate of rent charged, you will have to face the fact that a large number of lower income groups and the unemployed cannot afford to pay even such reduced rents on dwellings.

It is agreed that private enterprise cannot be expected to supply these people with homes; it is not fair to ask them to function at a loss, as the whole basis of their existence depends on their ability to earn a profit.

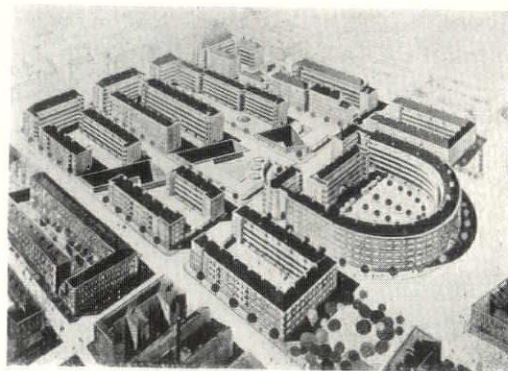
What can be done then? One answer is to say that nothing can be done; that the problem is insoluble, at least for the present, because it is too expensive. A valid argument in reply to this, however, is that a community cannot afford to have slums. Of course, you can supply relief, or dole, to the people who can't afford to pay rent. Many say that housing is simply a wages problem and must be solved by increased wages. I cannot say I have a great deal of trust in that way of solving the problem. It is not practical. It would be a very expensive way of dealing with the immediate problem.

We can give assistance in some form only to those who cannot afford to pay the necessary rent. It is not necessary even to give them free houses, but to scale the rents according to what they can pay, so that houses up to the prescribed standard may be available for all who need them, at rents which each can afford to pay.

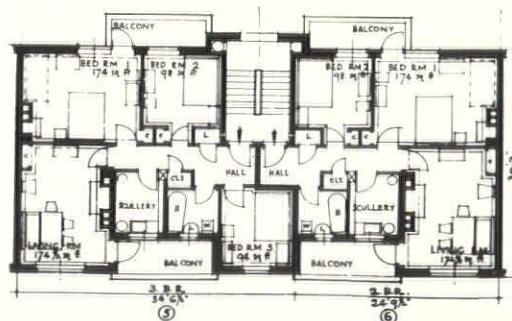
The problem is not as alarming as it looks. It does not mean that you must go on paying forever the subsidy for these houses, not securing enough rent to pay off their capital investment. On the contrary, the rent paying capacity and the rents of the dwellings are likely to rise as time passes. The economics of rents are curious.

There is a tendency in all civilized countries for rents of the smaller types of dwellings to rise; as towns expand, as population increases, etc., rents tend to rise more than enough to offset depreciation. I think this is probably true in this country now and is certainly likely to remain so. Owing to the rise of rents after the war in London and indeed in England, all the houses built there before the war for lower income groups are now paying very good returns on the original cost. And I should not be surprised to find the same thing true in New York, apart from the worst period of the slump.

Because land costs rise and because building costs rise with the general improvement in the standard of living, rents tend to rise also. In the long run, ownership of small houses is a very good investment, if they are well



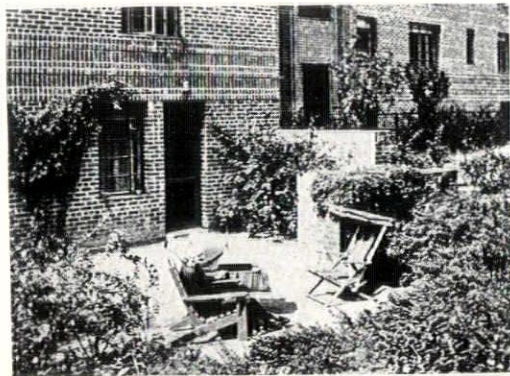
... In the construction of flats, road space and cost do not necessarily increase as with cottage building. The gain is made by ignoring the supply of open area for garden or recreation. In this large area of well designed flats in Liverpool, it is quite obvious that the land available for each family is very small. . . .



... Typical plans of Liverpool Housing. Two bedroom and three bedroom, enclosed staircase type. . . .



. . . The need of outdoor spaces for flat dwellers is recognized, even in flat buildings. The only trouble here is that the private open space accommodation is only available for persons living on the ground floor. . . .



. . . This is a very jolly idea and most ingenious but there isn't enough open space to go around; it will not divide up for each tenant regardless of the floor on which he lives. . . .

maintained, for their rents are likely to rise with age, rather than fall. Rent of old houses of the smaller types, in fact, tends to approach that which would be needed to pay a return on the cost of new ones.

In my country we had a great shortage of these smaller houses and were obliged to provide some kind of assistance. A great deal of the need for this assistance may well have elapsed, however, before the 60-year amortization period runs out and the revision of subsidy from time to time to meet such change in conditions has been provided for. The central government of England gives to the municipality so much a year in respect of every house, in order that the municipality may be able to rent the house at less than private enterprise could afford to do. The municipality is also required to contribute its share of the subsidy; thus the rent is further reduced by this contribution by the municipality, which is, generally speaking, one-half of the sum which the government puts into the pool. This aid is promised for 60 years, but actually the government reconsiders the conditions and may change the amount of subsidy according to need. In the next 10 or 20 years if general standards of living improve, the government may be able to reduce by half the amount of subsidy. In another 20 years it might find that it did not have to pay anything. If the houses which I was building 50 years ago had been subsidized at that time, they would not need any assistance today, and would be repaying in the increased rents the subsidies originally given. So I don't think that we should look upon this problem as indissoluble. Do not be afraid to give some grant in aid of rent. You have already accepted as a proper charge the tremendous cost for free education; and for other things too; you do in fact pay a subsidy in the public interest. The motor industry, in a sense, has been subsidized to the extent of the public money being spent to make roads on which the automobiles could travel. If you had waited until you could pay as you went for these roads before driving on them, you would have waited a long time. The same is true of housing.

The solution of the housing problem is not merely one of building more new houses. We already have a great many old houses, with tenants living in them that must be taken care of; these are old, of bad design, overcrowded, and today not fit for human habitation—what we call slums. We have found some 300,000 of such houses in England. There our local authorities are working on a five-year program to clear these out, and rehouse the occupants; already 100,000 new houses for this purpose have been completed. On these a substantial subsidy is paid. That, I believe, is the only way that the housing problem can be tackled; for it is not reasonable to expect low income groups of new tenants to pay not only the rent to meet outgoings on the cost of new houses, but also on the compensation paid for pulling down the old district. That must be an additional charge that cannot be expected to be realized in the rent of new houses. That element then must be met out of public funds. In the last housing bill at home, however, because it was not found altogether easy to give no compensation in many cases where the individual owner actually was not responsible for the general condition, and where that individual depended on the houses for income, the law was made a little more lenient.

Finally we have the question of overcrowding. We have had too few houses for our population for a great many years; the position was made much worse because of the cessation of building during the war. We set to work building houses in 1919, but unfortunately we discovered that in 1931 instead of having fewer families in excess of the dwellings we had more. The number went up from 760,000 to 864,000. This can be explained by the fact that although the rate of increase of population was going down, the rate of increase of families was going up, owing to the rapid reduction in the average size of each.

Since then we have had a tremendous building boom, and we have finally gotten back to the figure of 1911 or perhaps a little better with $\frac{1}{4}$ of a million families more than dwellings.

Most people are coming to realize that some subsidy is necessary to satisfactory progress, for the stabilization of society demands that arrangements be made allowing every one a decent standard of housing accommodations.

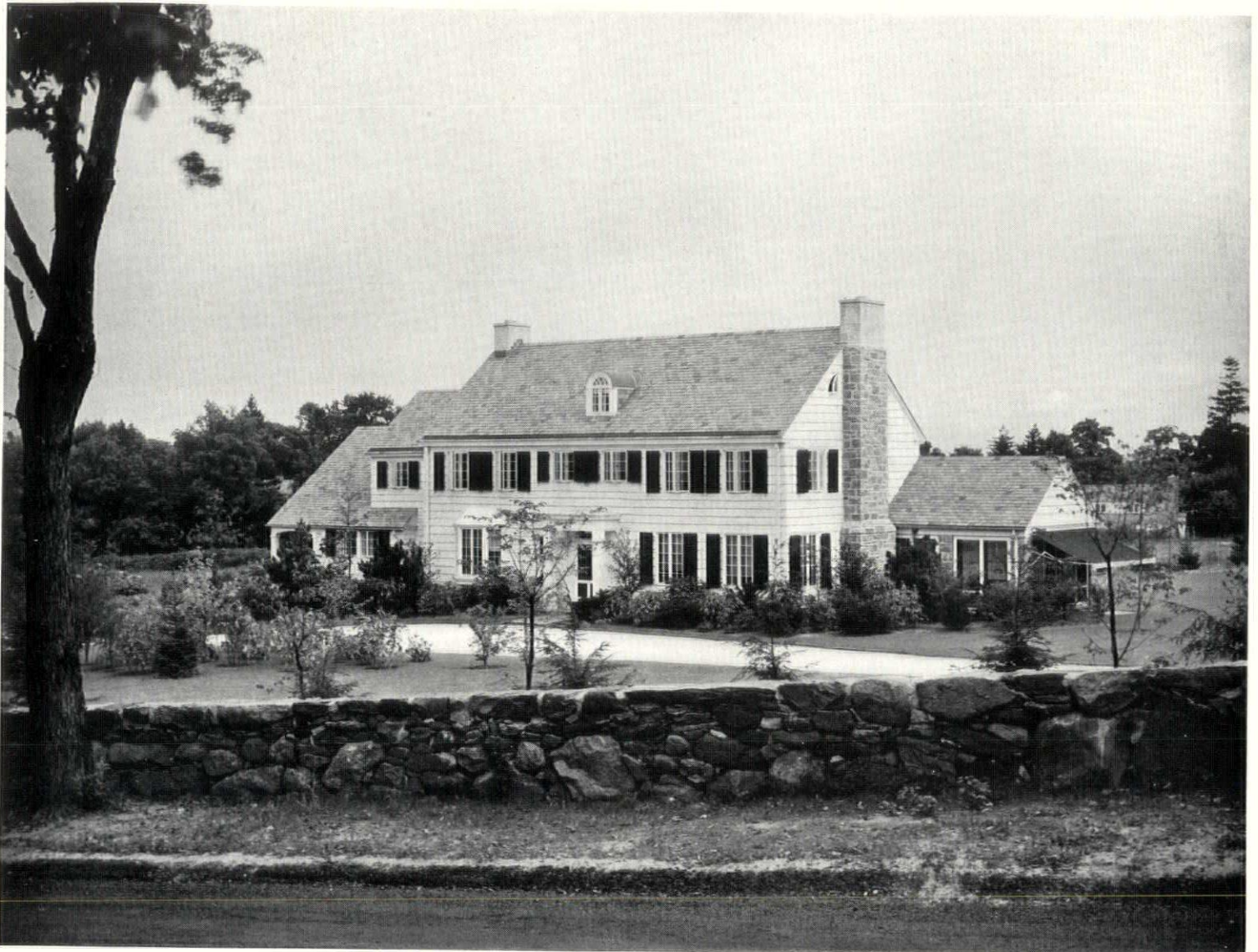


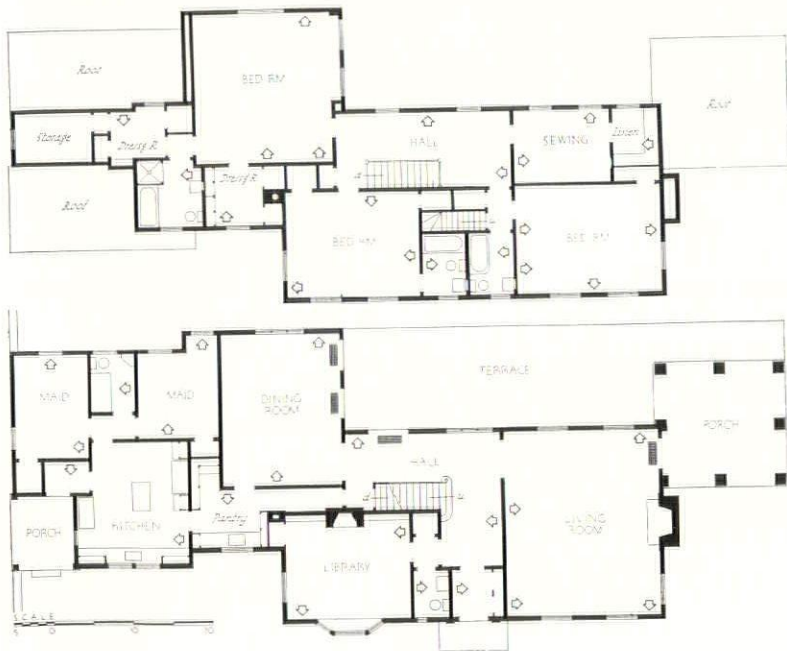
PHOTO: SCHNALL

HOUSE OF DAVID M. GOODSTEIN, SCARSDALE, N. Y.

LENNART PALME, ARCHITECT

ROSS STEWART OF W. & J. SLOANE, DECORATOR

THIS house is representative of a certain phase of contemporary American taste. Although inspired by traditional Colonial forms, its exterior design has been largely governed by the owner's plan requirements. The free fenestration is but one indication of this. In other words, this house has been designed from the inside out. Two elements are especially unusual about the interior treatment. One is the thorough winter air-conditioning system and the other is the interior decoration which, in harmony with the exteriors, is predicated on tradition, but not hidebound by it.



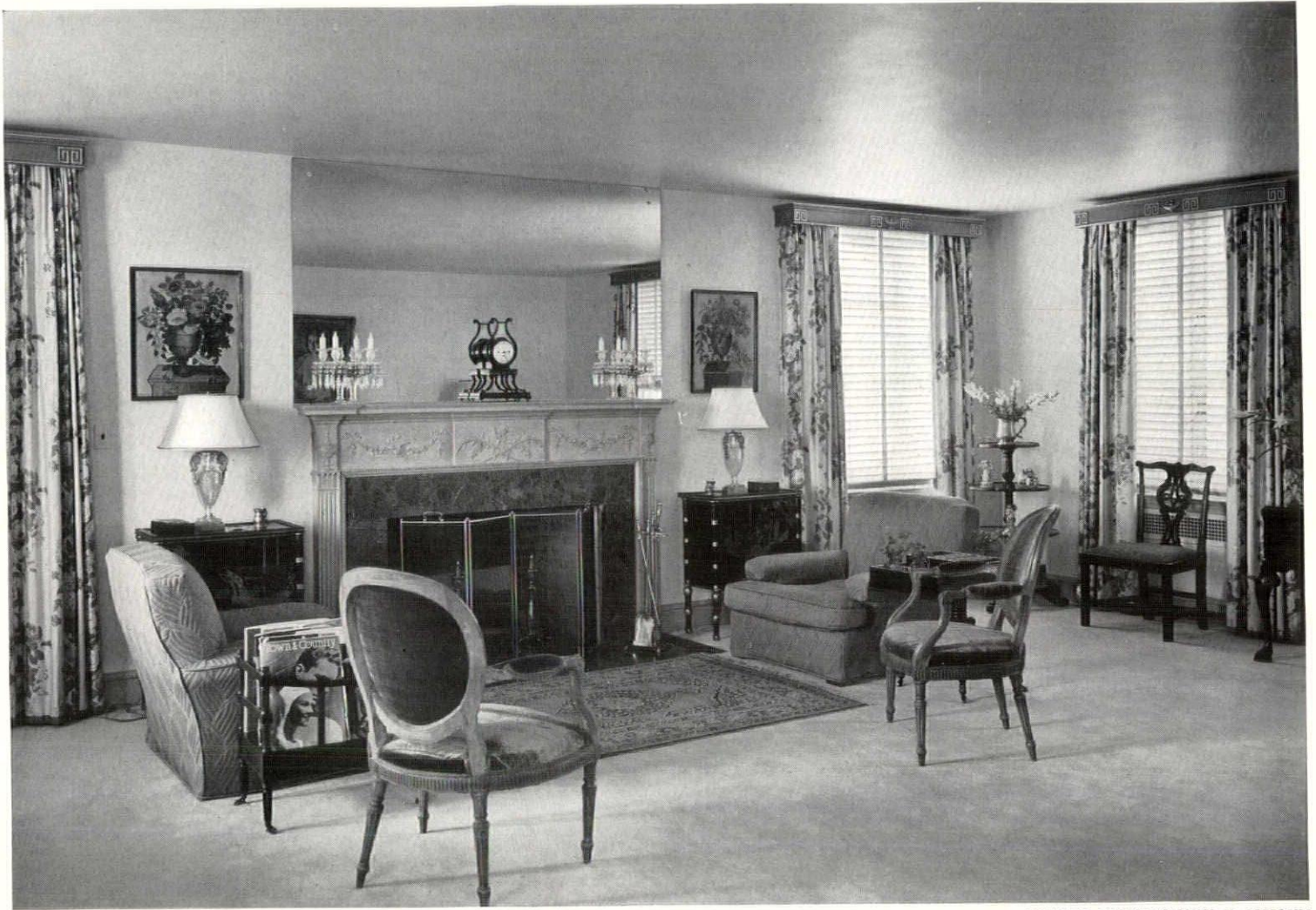
Western type framing, with all sheathing on walls, roof, and floors nailed diagonally to obtain rigid construction, has been used. The main house has exterior walls covered with 25-inch random width handsplit cedar shingles. The garage wing is covered with 8-inch cypress siding. Roofing is green Vermont slate. The house is painted white with green shutters and red exterior doors for accent. Exterior walls and attic floors have a 4-inch rock wool fill, doors are weatherstripped, and all windows are double glazed to insure adequate insulation. The flow of the air conditioning system is indicated by arrows on the plan. Small auxiliary convectors which overcome heat loss at exterior doors are indicated

HOUSE OF DAVID M. GOODSTEIN, SCARSDALE, N. Y.

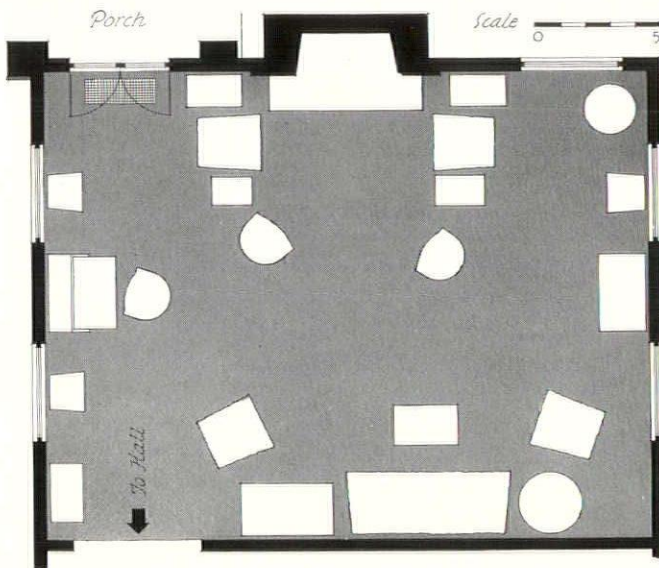
LENNART PALME, ARCHITECT

ROSS STEWART OF W. & J. SLOANE, DIRECTOR





INTERIOR PHOTOS: SAMUEL H. GOTTSCHO

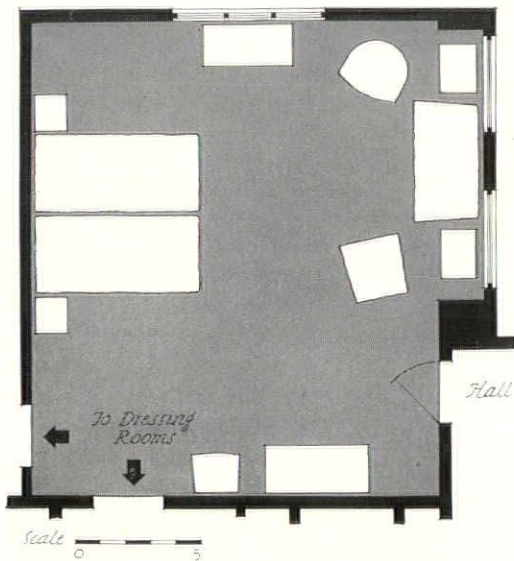


The nearly square shape of the living room dictates separate conversational groupings. That at the fireplace is more formal in its symmetry than that on the interior wall. The passage from porch to hall is very nicely handled. Furniture is a happy combination of modern upholstered, Louis XVI, and Georgian pieces, several of which are antique. The color scheme is beige and blue-green, with some dull red accents. The walls, ceiling and carpet are beige. The beige and green chintz used for draperies is repeated on the sofa. (Opposite page, top) the pine paneling in the library is almost natural colored and wax finished. The ceiling and carpet are green. Draperies are beige on green chintz, and the chairs are upholstered in brown leather. (Below) The dining room walls and ceiling are white. Carpeting is lime green, a note which is repeated on the eggplant draperies. Chairs are upholstered in lemon yellow leather

HOUSE OF DAVID M. GOODSTEIN, SCARSDALE, N. Y. LENNART PALME, ARCHITECT. ROSS STEWART OF

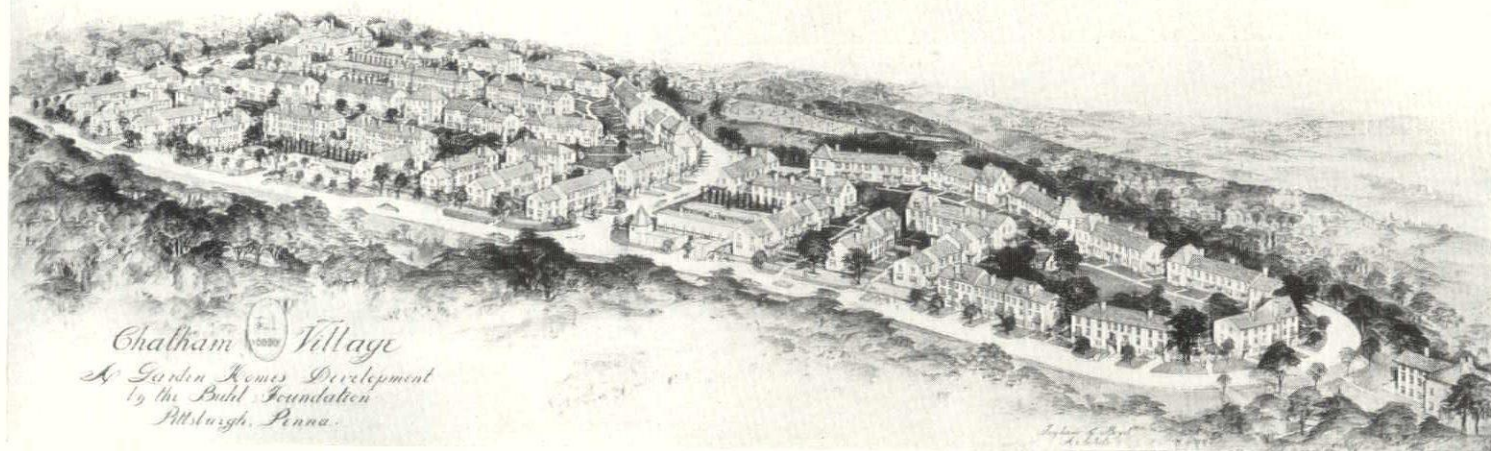


W. & J. SLOANE, DECORATOR



Many home owners are logically testing their aesthetic reactions to the modern movement in the decoration of their bedrooms. This one is an excellent example of restrained modernism, based on, so far as the furniture is concerned, Sheraton forms. The two large recessed windows are given the feeling of one, by the use of a mirror on the wall between. The color scheme is a cool and restful combination of powder blue and white

HOUSE OF DAVID M. GOODSTEIN, SCARSDALE, N. Y. LENNART PALME, ARCHITECT. ROSS STEWART OF W. & J. SLOANE, DECORATOR



CHATHAM VILLAGE, second unit, PITTSBURGH, PENNSYLVANIA

INGHAM AND BOYD, ARCHITECTS

HENRY WRIGHT, CONSULTANT

RALPH E. GRISWOLD, LANDSCAPE ARCHITECT

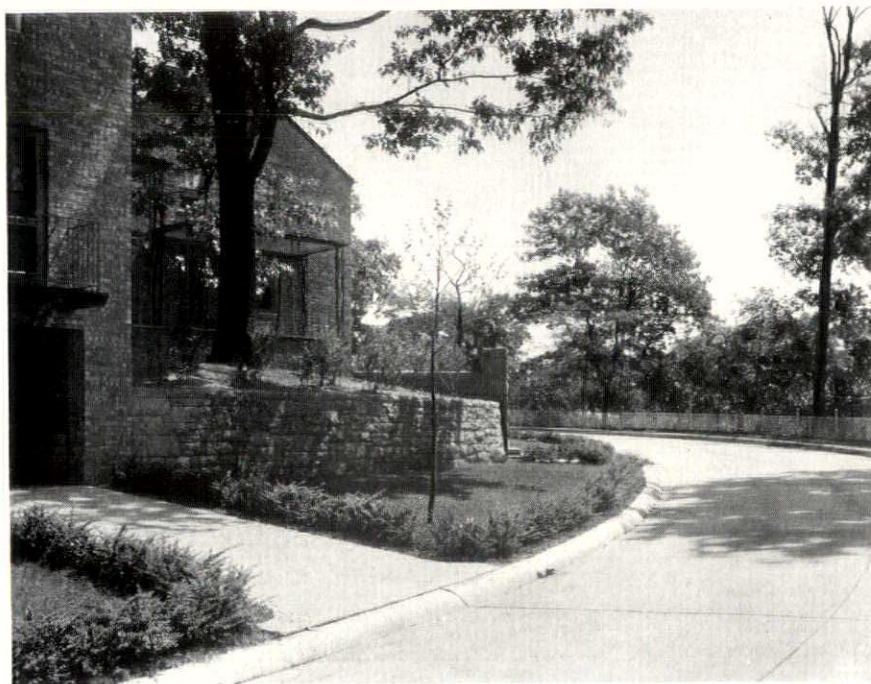
THE FIRST UNIT of this large-scale housing development for so-called white-collar families, was built in 1931. Its 129 homes have been more than 99% productively occupied since its opening. A second unit, increasing the size of the Village to 197 homes, was opened last May. The Buhl Foundation's \$1,600,000 project is convincing evidence of the trustees' confidence in large-scale, low-cost housing as a sound and stable investment. Chatham Village is built on a hilltop just across the Monongahela from Pittsburgh's Golden Triangle—on land which because of its slope had long been avoided for residential building.



At top of page, the architect's perspective of the two units now occupied. At right, an airplane view of the Village, with the belt of woodland that protects it



An interior court of the second unit. Considerable effort and expense were devoted to preserving the existing trees



CHATHAM VILLAGE, SECOND UNIT

The financial aim and basis for rent is a net 5% above all charges, including amortization and maintenance reserves. Chatham Villagers pay from \$47.50 to \$87 monthly rent for houses varying in size between five and nine rooms. Of the rent dollar, 20 cents goes for taxes, 17 for house and grounds maintenance, 11 for management, 11 for amortization, while 41 becomes net yield, to return 5% on the investment

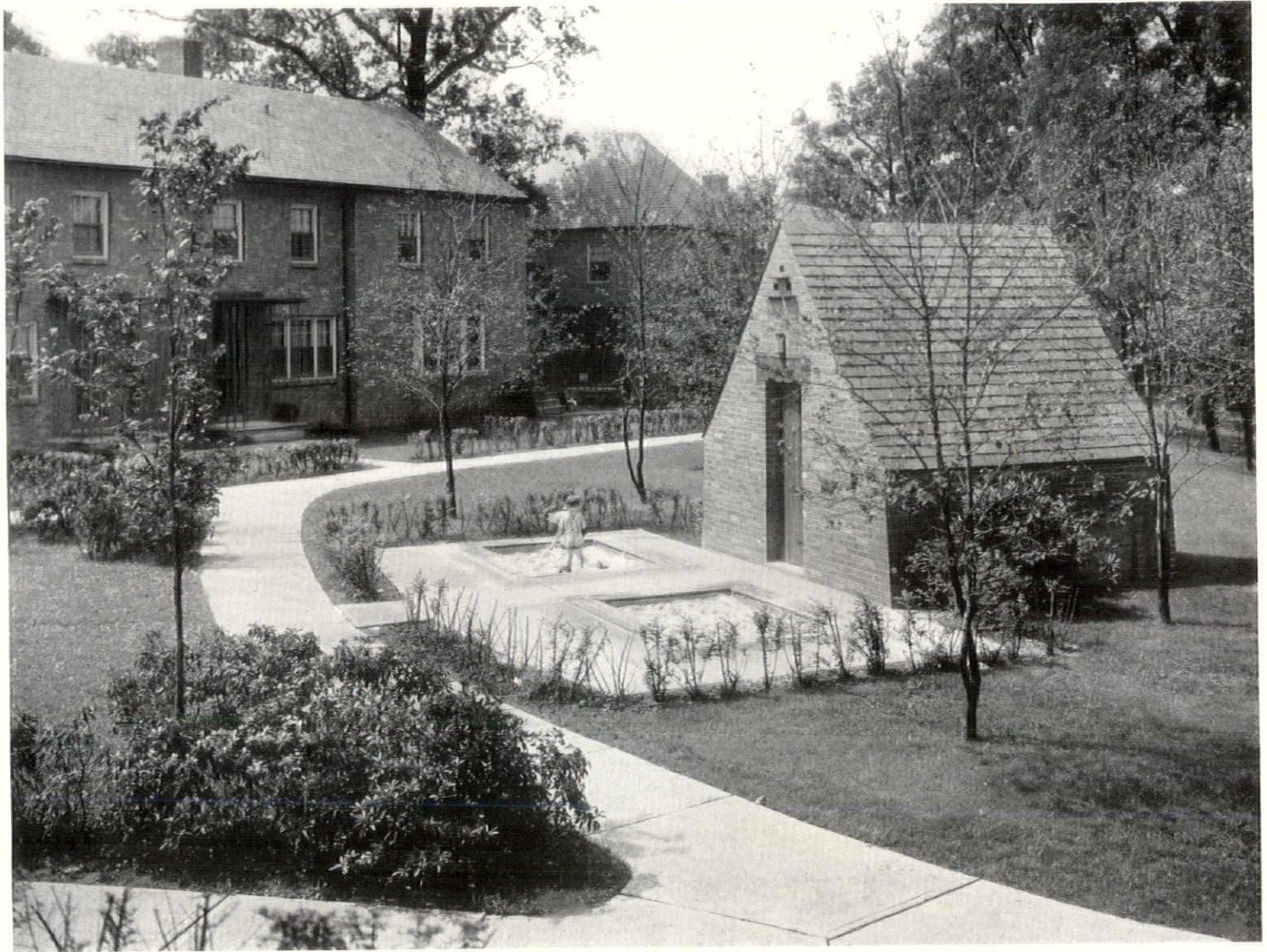


The rear of the group shown on the opposite page, with service entrances and garages on the road frontage

INGHAM AND BOYD, ARCHITECTS

Spacious lawns, trees, carefully tended hedges, and flower beds are maintained by the management. Houses face the gardens, with back doors toward the street. Garages are in part built integrally with the houses, in part grouped in compounds. All wiring is underground; garbage receptacles are below ground; portable clothes reels are kept indoors when not in use. There are 2 miles of hiking trails in the woodland belt





Sand boxes and playgrounds provide safe play, well isolated from vehicular traffic. The small building in the foreground is for the management's garden tools

In some houses there are full-sized kitchens, in others, kitchenettes. Forced-draft kitchen ventilation, natural-gas ranges, steel cabinets, automatic gas-fired hot water service, electric refrigeration are used throughout



**CHATHAM VILLAGE, SECOND UNIT
INGHAM AND BOYD, ARCHITECTS**

THE PORTFOLIO Show Windows . . .

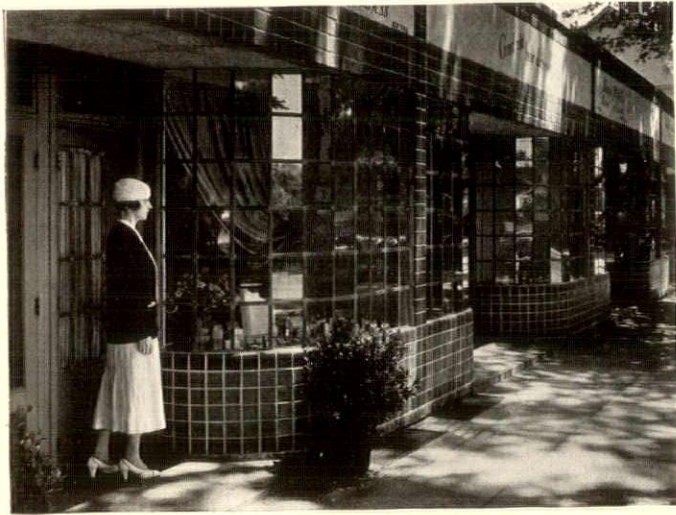


A New York bakery
Adams & Prentice

PORTFOLIOS IN PREPARATION—Porch Columns and Posts, March . . . School Entrances, April . . . Resilient Floors, May . . . Flèches, June

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.

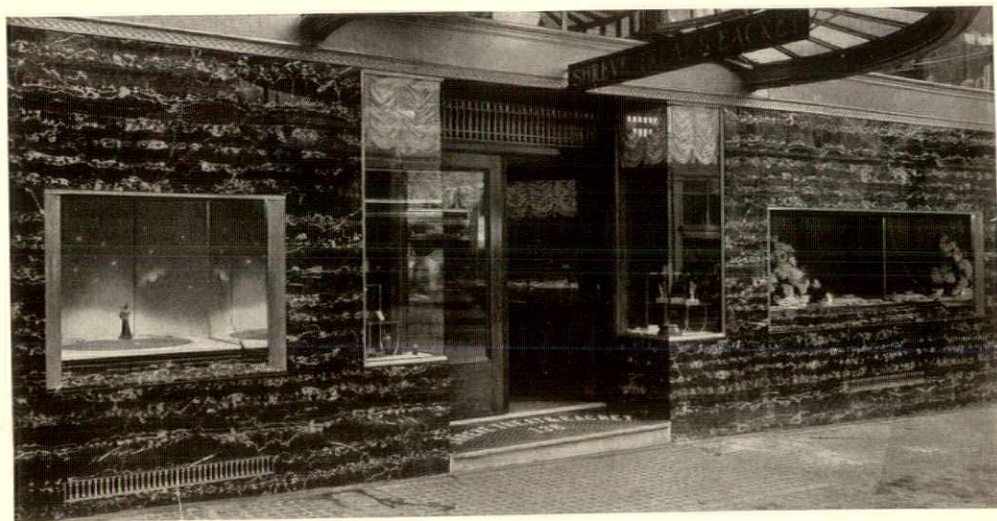
NUMBER 124 IN A SERIES OF COLLECTIONS OF PHOTOGRAPHS ILLUSTRATING VARIOUS MINOR ARCHITECTURAL DETAILS



East Hampton, N. Y.
Robert Tappan



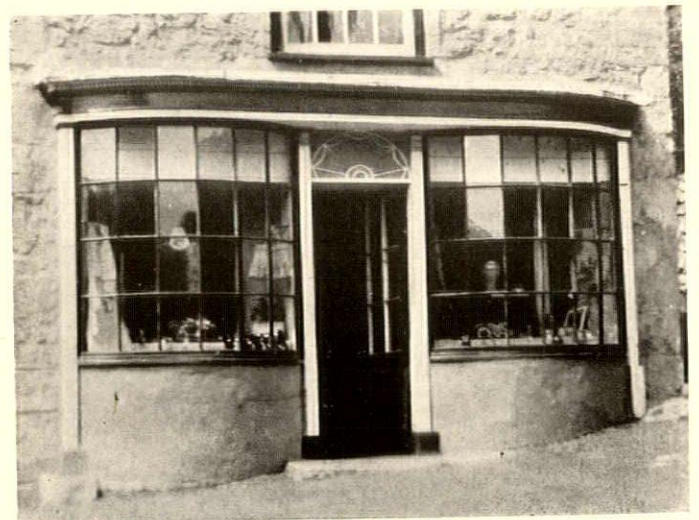
Late Eighteenth Century
Northamptonshire, England



Invisible glass with black and gold marble
San Francisco, Calif.



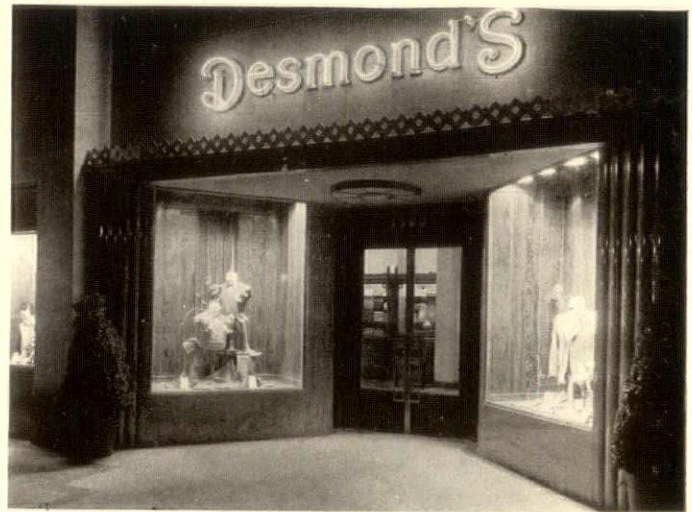
Dupont Barbier, Paris
Djo Bourgeois



Black muntins and frame
Godshell, Isle of Wight



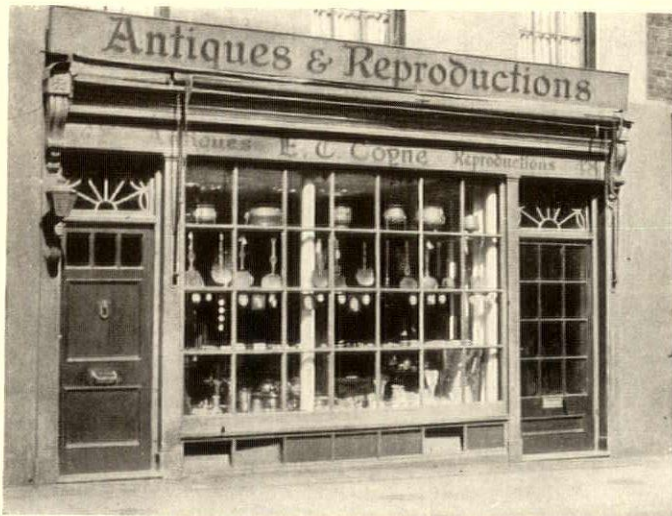
Saybrook, Conn.
Francis A. Nelson



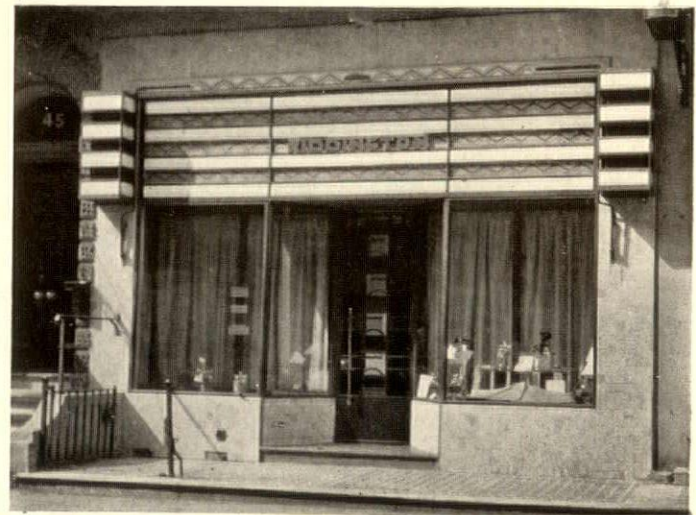
Wilshire Boulevard, Los Angeles
Gilbert S. Underwood & Company



Wilshire Boulevard, Los Angeles
John and Donald Parkinson



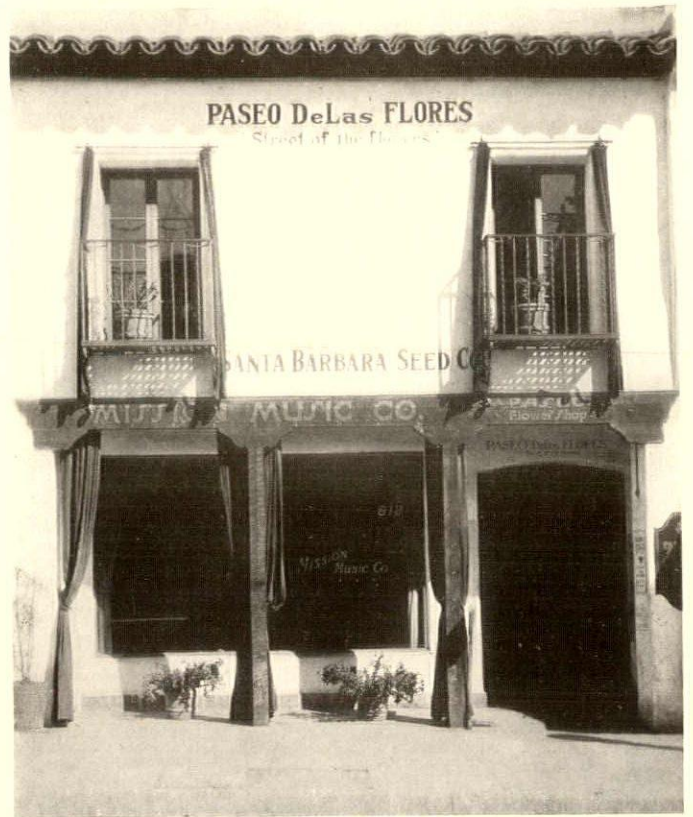
Church Street—1792
London



Dover Street
London



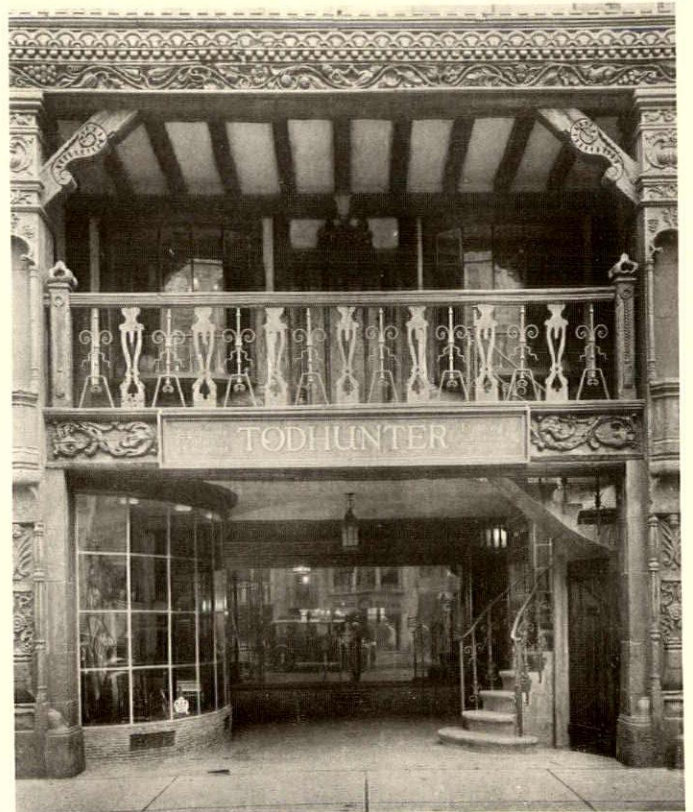
Electric furnishings
Paris



Santa Barbara, Calif.
P. H. Greene



A boot shop in
Rouen, France



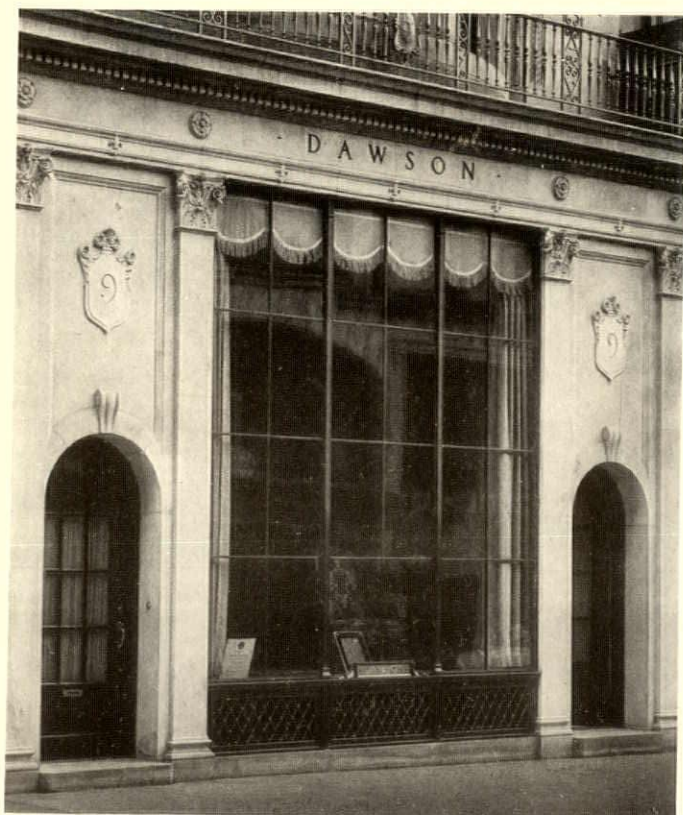
East 57th Street, New York
Arthur Todhunter



Los Angeles, Calif.
T. Beverley Keim, Jr.



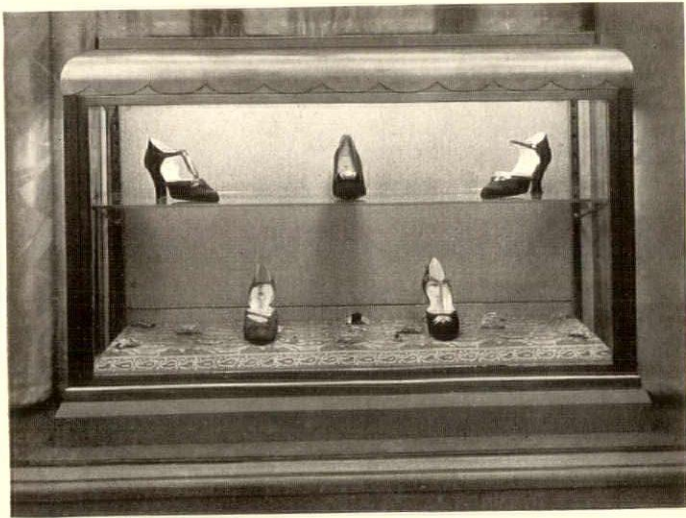
Rue du Faubourg Saint-Honoré, Paris
Maurice Bizet



East 56th Street, New York
Greville Rickard



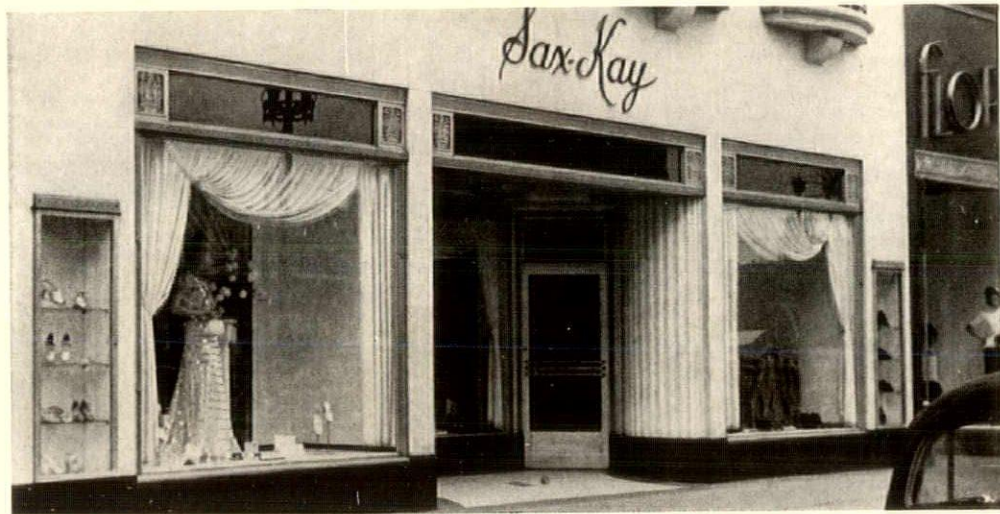
Paris
Débat Ponsan



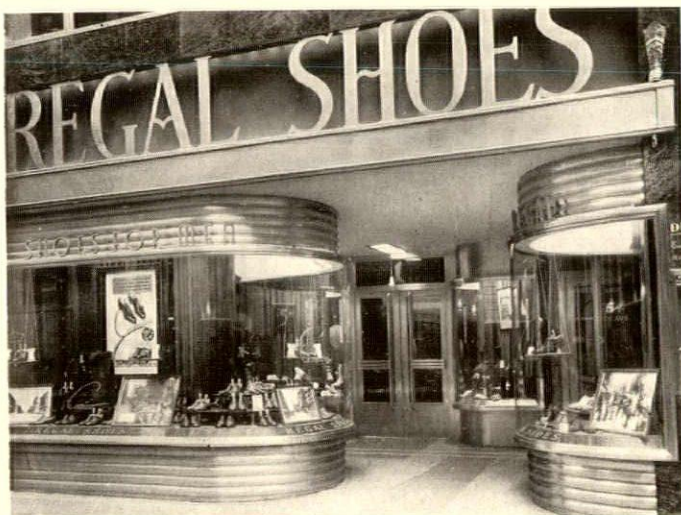
Interior corridor window
New York



Westhampton, N. Y.
Peabody, Wilson & Brown



Washington Boulevard, Detroit
C. Howard Crane



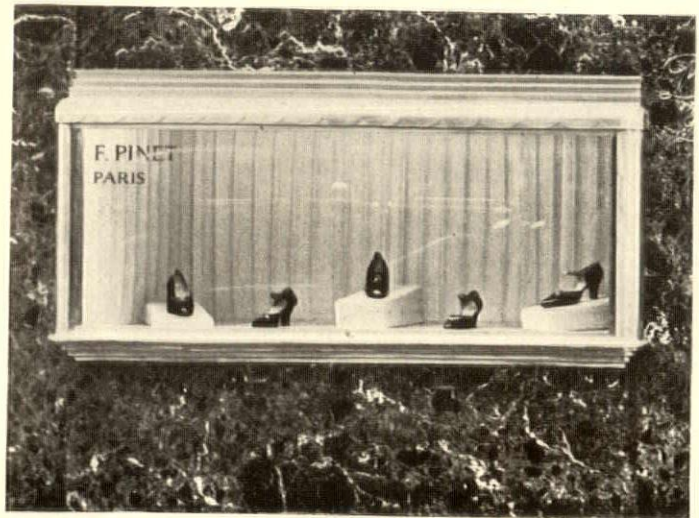
Fifth Avenue, New York
Morris Lapidus; Ross-Frankel, Inc.



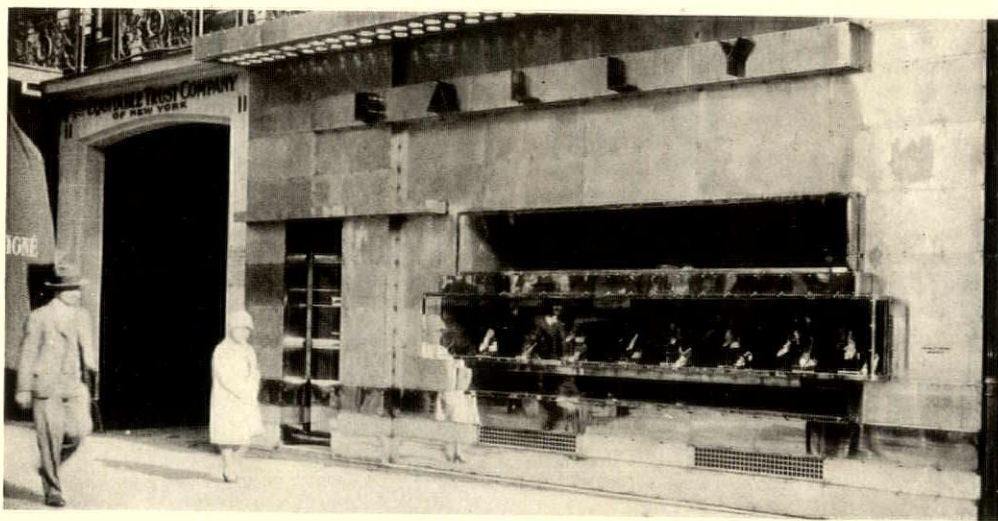
One of a New York chain
Horace Ginsberg



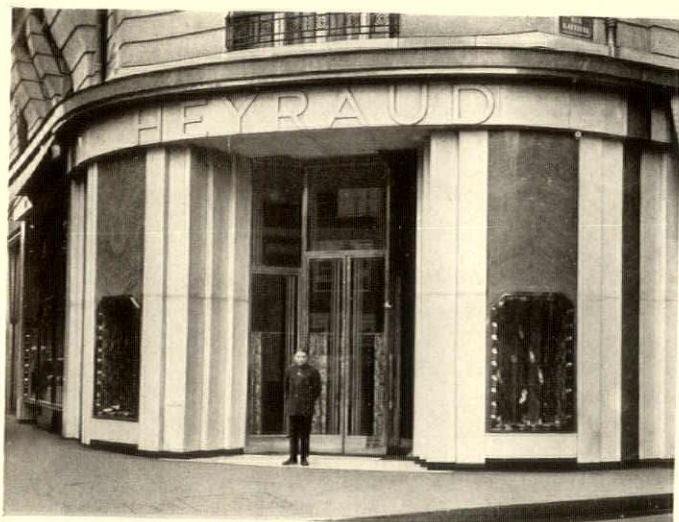
Michigan Avenue, Chicago
Holabird & Root



The small window for concentrated display
Fifth Avenue, New York



Boulevard de la Madeleine
Paris



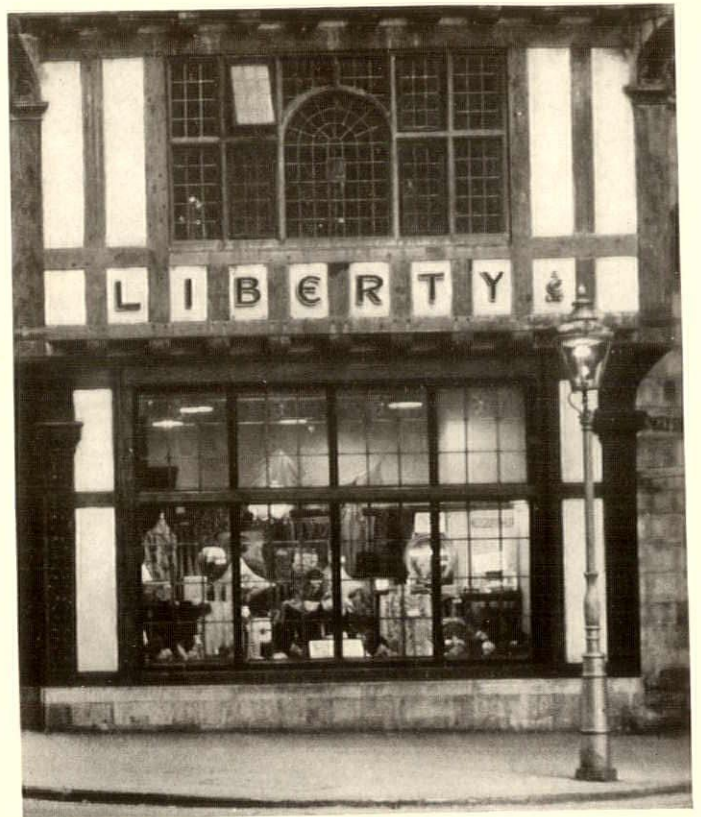
Boulevard Haussmann, Paris
Maurice Bizet



Fifth Avenue, New York
Harold Sterner



Fifth Avenue, New York
Frank H. Holden



Great Marlborough Street, London
Edwin T. Hall and E. Stanley Hall



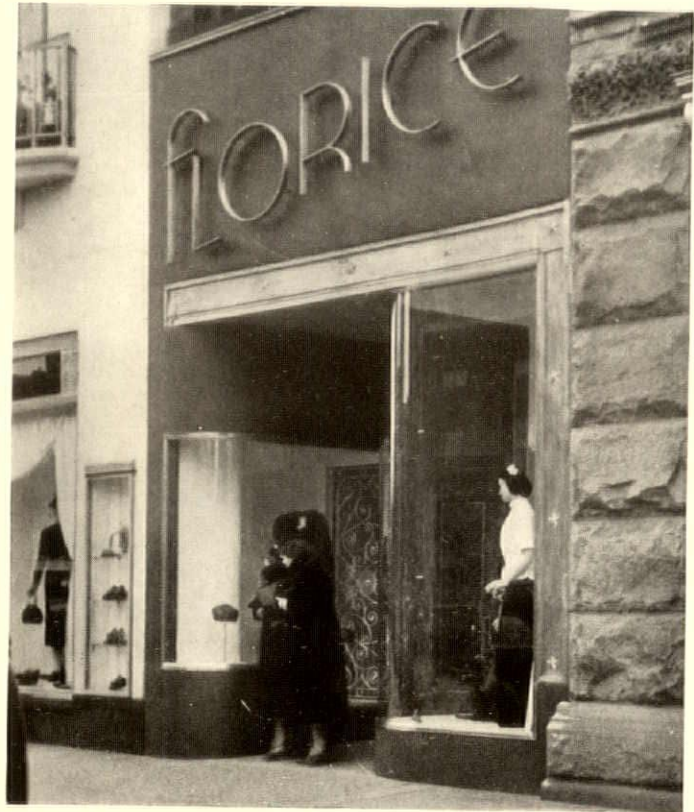
Brooklyn Edison Company, Brooklyn
Albert Hart Hopkins



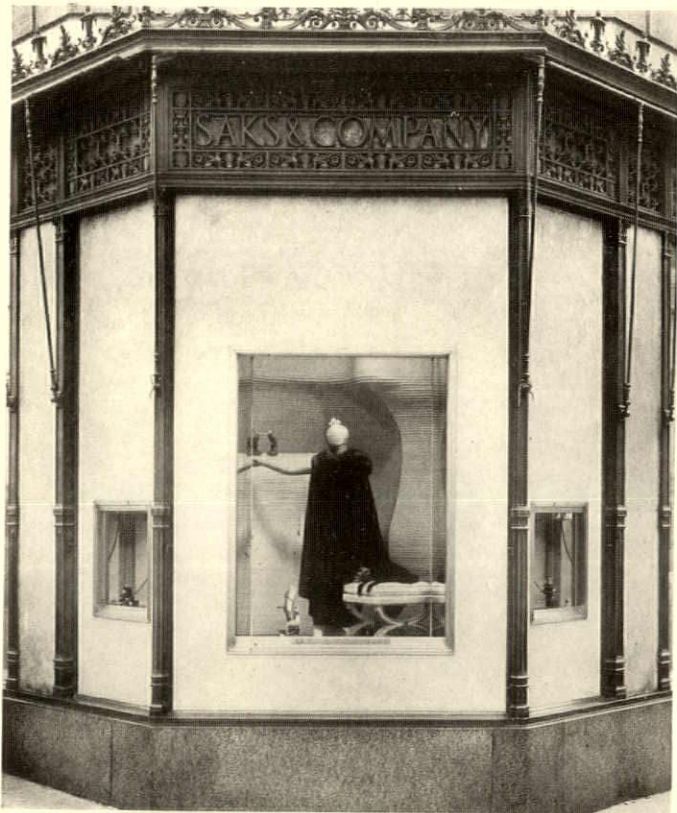
Fifth Avenue, New York
See later development opposite



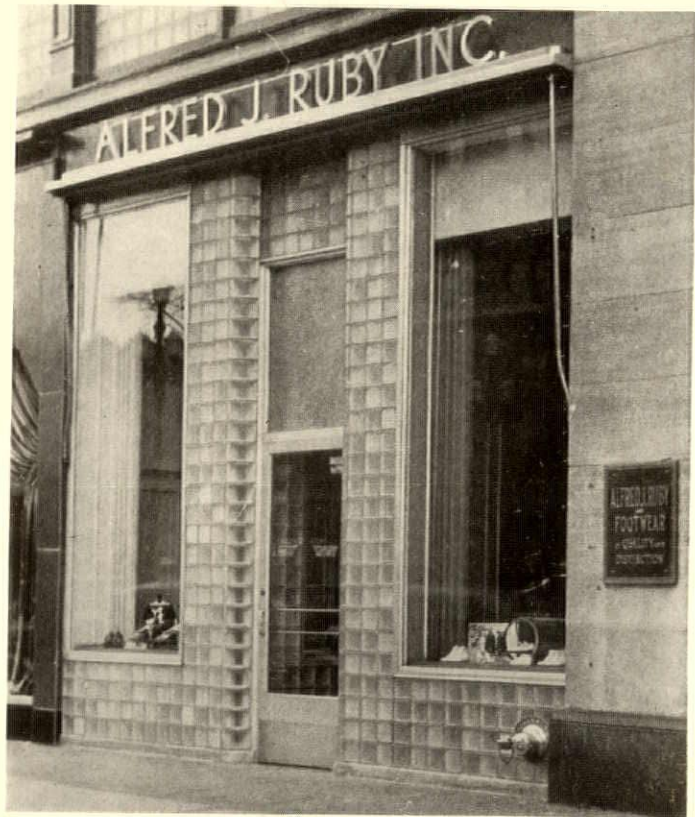
East 57th Street, New York
Greville Rickard



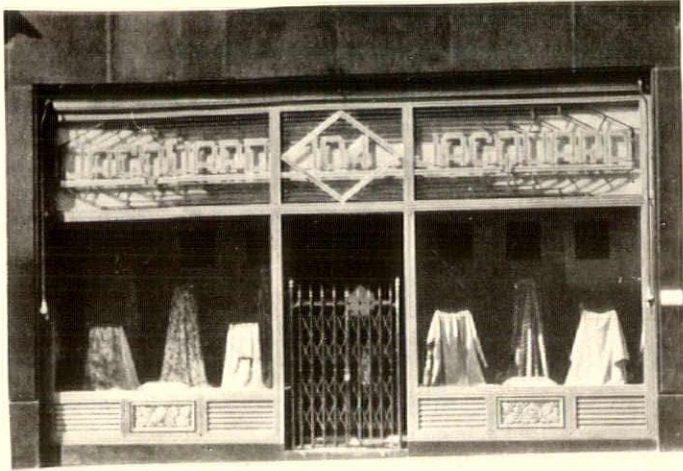
Washington Boulevard, Detroit
American Show Case and Manufacturing Co.



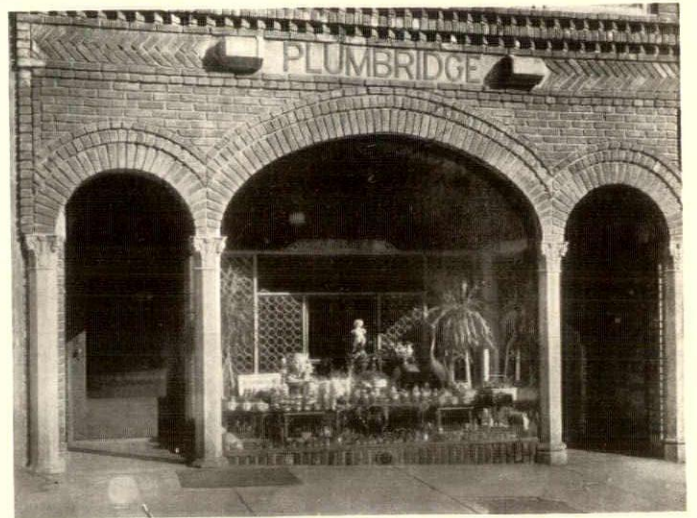
Fifth Avenue, New York
Smaller windows with invisible glass



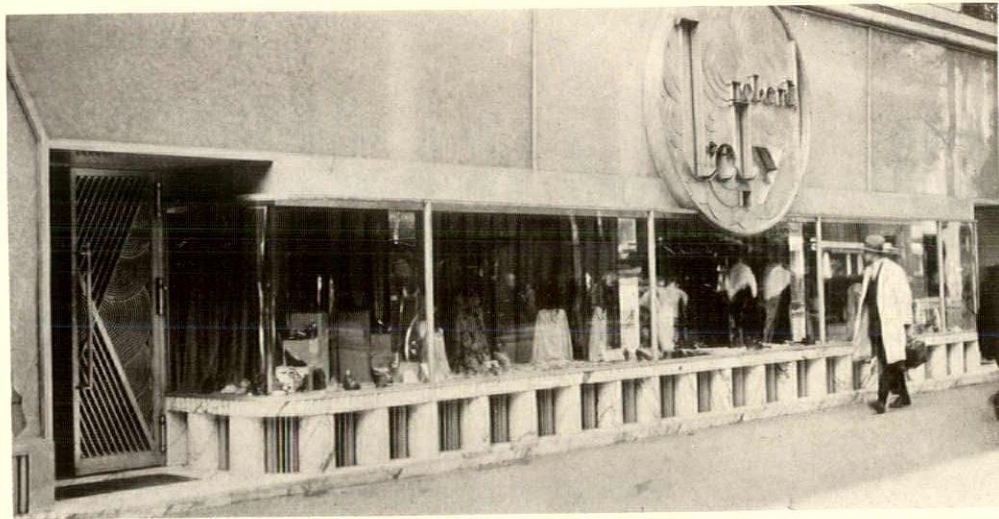
Washington Boulevard, Detroit
Konrad Keck



New Bond Street
London



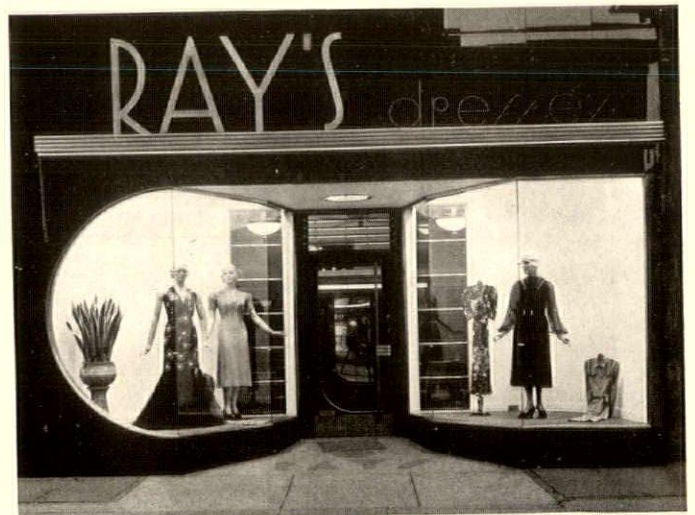
Madison Avenue, New York
Hughes & Hughes



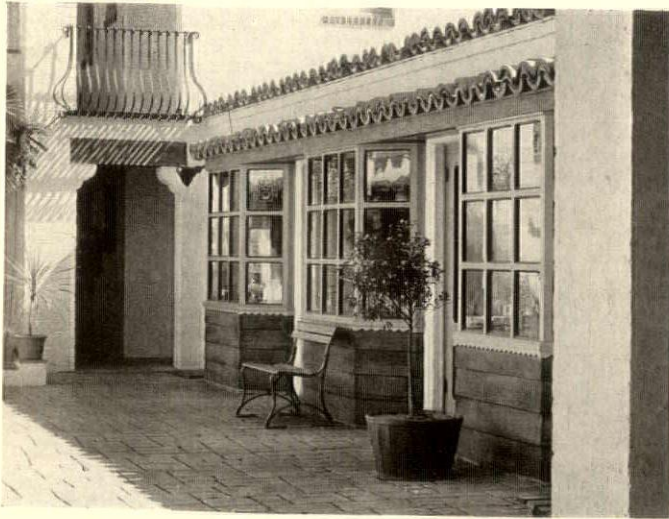
Mottled glass and white marble
Boulevard Haussmann, Paris



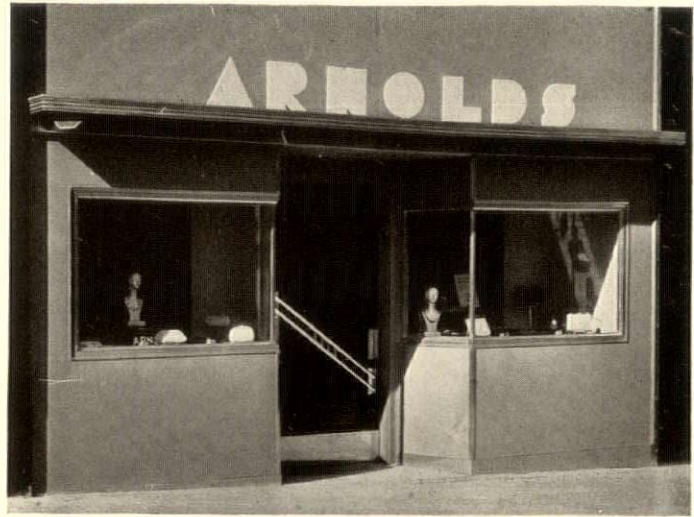
Washington Boulevard, Detroit
Lancelot Sukert



Second Avenue, New York
Morris Lapidus; Ross-Frankel, Inc.



Palm Springs, Calif.
Jonathan Ring



Michigan Avenue, Chicago
Holabird & Root



Berlin
O. R. Salvisberg



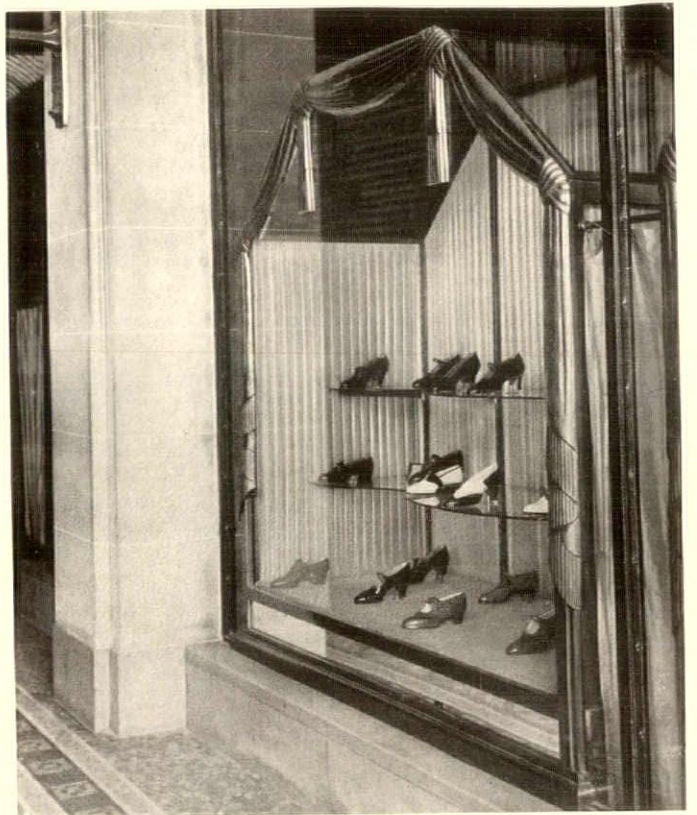
Chicago, Ill.
Herbert Sobel; J. Arthur Drielsma



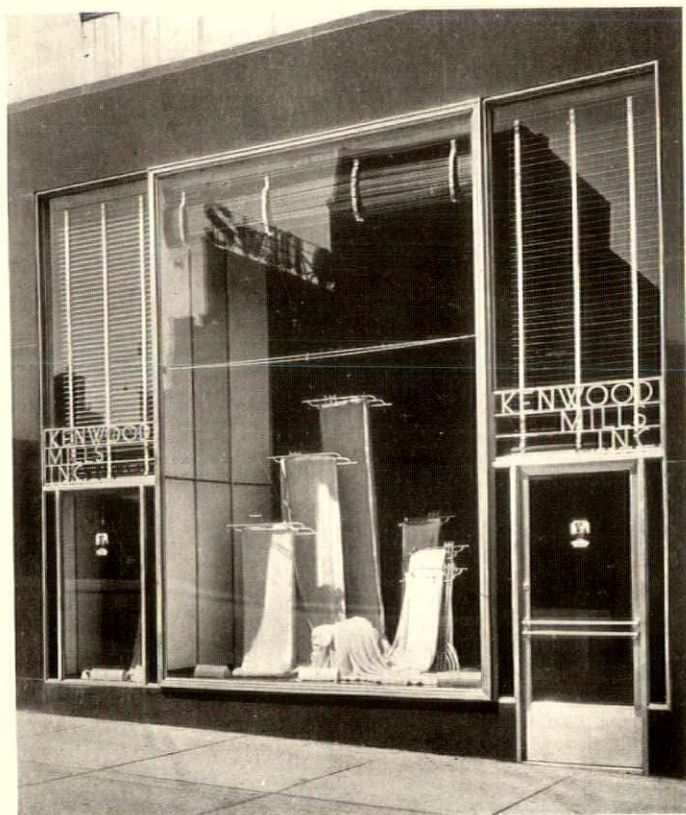
Marble and bright metal
Paris



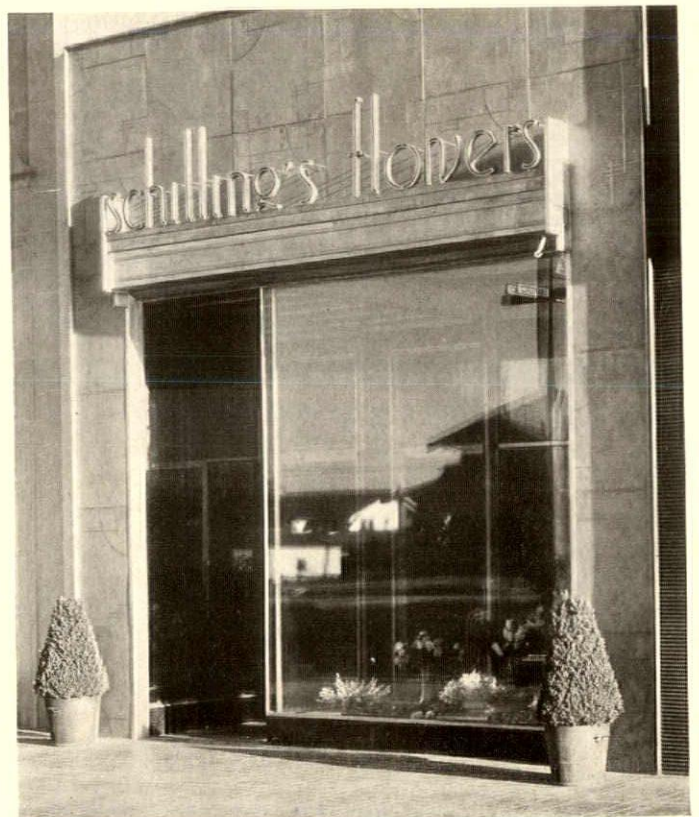
Washington Boulevard, Detroit
I. M. Lewis



Interior corridor window
Lido Arcade, Paris



North Michigan Avenue, Chicago
Holabird & Root



Wilshire Boulevard, Los Angeles
Morgan, Walls & Clements

Friday, January 1.—A day for resolutions and aspirations. Among other hopes for 1937, I trust we shall see more honest buildings—structures in which the designer neither copies primarily the vernacular of past epochs nor the affectations of passing fashions. I hope that the architectural profession will find in 1937 some practical way to serve the small-house client. I hope to see established a reasonable standard for low-cost housing—something between bare shelter and a combination of too costly amenities. I hope to see some designs for a World's Fair that will be something other than an echo of Chicago, Copenhagen, Stockholm, and Paris.

Monday, January 4.—A rather blasé crowd of newspaper men and other guests watched the first sending, a few days ago, of plans by short-wave radio across the Atlantic. The sending of photographs by radio is now an old story, but this was the first time that an architectural drawing has been so transmitted. It was the foundation plan for the United States Pavilion at the Paris 1937 Exposition, as designed by Paul L. Weiner, Charles H. Higgins, and Julian C. Levi.

Wednesday, January 6.—F. R. Yerbury is a significant name, not only to the architects of Great Britain, but to those of America. For thirty-five years Mr. Yerbury has been a guiding force of the Architectural Association, and for twenty-five years, its secretary. To American architects his photographs of what is new in European architecture have been appreciated as the product of an architect, a craftsman, and a discriminating mind. His retirement last month as secretary of the Architectural Association was an occasion of mourning in London. We trust that for many more years he will continue to act as architectural explorer and recorder to send us pictorially news of what is going on in Europe.

Thursday, January 7.—Further details concerning the sort of contract that the World's Fair Corporation is making with outside architects appeared when Stephen F. Voorhees spoke at The Architectural League today. The outside architect is paid a lump sum by previous agreement for carrying his design of a building somewhat beyond the stage of preliminary sketches. Development of the design thereafter is by the corporation's own staff of engineers and draftsmen, the architect conferring. As to supervision of the work, the designing architect again co-operates with the corporation's staff, being paid on a per

THE DIARY

Mary Taylor



diem basis. The same general arrangement applies to the sculptors, landscape architects, and mural painters.

Voorhees makes clear the fact that there is no intention on the part of the Fair to establish enduring standards of construction; the buildings it will erect, with few exceptions, are to be short lived, so that there is plenty of latitude for experiment and innovation.

Saturday, January 9.—The Royal Academy of Arts opened its winter exhibition yesterday to the architects, with a showing of British architecture from the beginning of the 17th Century to the present time. Here is praise from Sir Hubert: "The Academy in thus honoring British builders asserts the claim of architecture to be an art—indeed, the greatest of all arts of design."

Monday, January 11.—I rose in meeting several years ago and said that Charles Bulfinch, America's first trained architect should be in the Hall of Fame. Apparently I was in the minority, for though his name has been proposed and voted upon two or three times, he has not been elected. And now—I feel a sort of vicarious shame in reporting it—one of the three Bulfinch churches still remaining to us is offered free to anyone who will take it away. It is the old First Church of Christ Congregational in Pittsfield, Mass., which Bulfinch designed in 1793. True, the old church isn't all that she used to be. Damaged by fire, moved away from the original site, used as a gymnasium for a girls' school and as a hotel ballroom, her original glory must be somewhat tarnished. Nevertheless, here is a Bulfinch, gone begging.

Tuesday, January 12.—At the New York Chapter meeting today, the main subject for discussion was the proposed New York State War Memorial at Albany. It is hard to understand how, over a long period of years, repeated legisla-

tion looking toward the erection of a suitable memorial could be passed without, however, arriving at something other than the present absurdity. War memorials have taken many curious forms, but never, it seems to me, anything quite so unfitting as a self liquidating office building and garage, to be rented. It seems a particularly happy circumstance that the American Legion has at last awakened to what has been going on, with the probable result that the scheme will be put to death quickly in the coming legislative session.

There still remains, of course, the problem of evolving the proper form for the State War Memorial, and determining who shall design it. Colonel Frederick Stewart Greene, Superintendent of Public Works, under whose jurisdiction the Division of Architecture falls, threw down the gage of battle very definitely when he said, "In my opinion all public designing should be done by the government architects, national and state; that all private work should be done by private architects."

Possibly the most convincing argument against such procedure is the State bureau's advocacy of a State war memorial which, on the face of it, is a travesty. If that is the best judgment the State architectural bureau can furnish its clients, the citizens of the State may well question the advisability of expecting from the bureau any architectural service.

Thursday, January 14.—Collaboration in the fine arts was discussed today at The League by the sculptors. Here are a few high-lights:

A. A. Weinman—Where work of several sculptors requires a balancing of groups, have a supervising sculptor. Do not permit the contract for carving to be taken from the sculptor and awarded to the lowest bidder.

Leo Friedlander—The sculptor must be in at the start of the whole conception, not merely called in to do some trimming. The time element, bugbear of all artists, should not be permitted to spoil a result; experience at Rockefeller Center showed that the public's interest is restimulated by the addition of murals or sculpture after the building is in use.

Lee Lawrie—Collaboration is not the only way to a successful result—for instance, in the 13th Century cathedrals, structure frequently preceded sculpture by a century. My collaborative training was had with Bertram Goodhue. I like to think that I was a help. Looking back, however, I realize that I did not have much say about it. Goodhue had a way of making me think that the

idea he conceived was my own, and he was such a master at this that I wasn't aware of it until after he had gone.

Friday, January 15.—Went to see another opening of newly designed interiors. Most of the large department stores seem to be getting the habit of opening these events with all the ceremony attending a varnishing day at the National Academy. I find myself earnestly trying to be sympathetic with the contemporary interiors, and to understand the reasoning back of them. It is difficult. So many of these rooms "designed for living" seem to be merely additional spasmodic efforts to be different at any cost. Since the lines of curtain heads have always been accented, if at all, either horizontally or vertically, we now find one accented with diagonal lines. Since shelves of books have practically always been illuminated from the room itself, why not light them instead from inside the wall and above each shelf?—though it involve losing an additional four inches across the whole room. It has been the custom, generally speaking, for heavy draperies at the side of a window to be of one fabric and one pattern. Why not use four different colors on each instead of one? And thus it goes.

Monday, January 18.—John Wenrich's exhibition of architectural renderings in color, which has graced the walls of the grill room at The Architectural League for a week, gave way today to a series of water colors which Theodore Kautzky had made in New York City and on a trip abroad. His use of the dry brush in solving numerous minor problems of indication is worth going a long way to see.

Tuesday, January 19.—Dropped in to Griffith Bailey Coale's studio to see in the finished cartoon state his three-part panel for the Dry Dock Savings Bank, New York, which Cross & Cross have designed. The subject is "Safe Harbor," and a big square rigger is slipping in through a storm to her quiet anchorage in the shelter of the harbor. Coale's technique interested me particularly in that he finishes his canvas to the minutest detail in the charcoal drawing before touching it with a brush. Moreover, on a glass-top table in his studio were twenty-seven mounds of paint representing the whole palette, each mound bearing a number so that it becomes, apparently, a very simple process to apply the color to a canvas as specifically outlined as this. Coale never paints over another color, believing that by keeping the pigment thin he gets a better result.

Wednesday, January 20.—What happened to the graduates of the architectural schools of three years ago when there were no architectural jobs to be had? One of these men turned up tonight as the scientific expert of the Libbey-Owens-Ford Glass Company, telling a large group of architects and members of The Producers' Council of some new developments in glass making. The gathering seemed to divide about equally its interest in the products described and the fact that so much technical knowledge of glass on the part of Harold M. Alexander could have been acquired so soon after his architectural education.

Thursday, January 21.—Back to school tonight in an attempt to learn something about pencil representation from Theodore Kautzky. Kautzky is not only able to use a pencil as few men have, but seems also able to pass along at least a part of that ability to others in a large and enthusiastic class.

Saturday, January 23.—The tendency of the day seems to be to turn things inside out. Architects are joining the parade in this direction, for we hear of a new type of Venetian blind made to operate on the outside of the window instead of the inside. Ernest Flagg, several years ago, put window shades on the outside of apartment house windows, and apparently they are still there and working.

Philadelphia, Monday, January 25.—Lunched with Charles Klauder, who tells me that a number of the Philadelphia men are enjoying a weekly life class held in The Arts Club. Klauder's familiar sanguine crayon serves him; Walter Karcher works in pastels; Livingston Smith in oils; Nicola D'Ascenzo is likely to use any one of these or some other medium.

Monday, January 25.—The world do move. Here are several counties of New York State, through their associations of builders, urging the licensing of building contractors. They pattern the suggested law upon the architects' registration requirements. This, of course, is not the first effort of this kind in America. There is already legislative provision for licensing contractors in twelve of the States.

Wednesday, January 27.—The Honorable Ortha D. Wearin, member of the House of Representatives from Iowa, is coming to be regarded more and more as one of those rare statesmen who knows something of the architectural

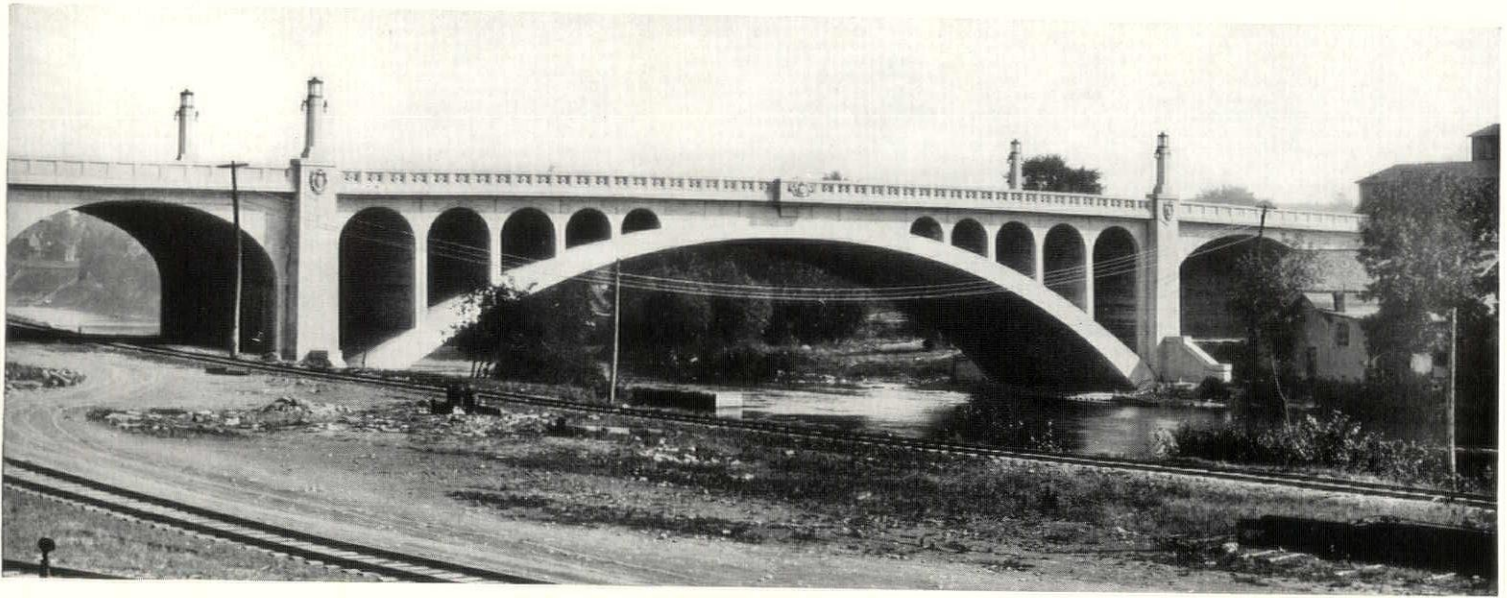
profession's problems, and acts as a general champion of the fine arts. Mr. Wearin helped notably to put more or less quietly to death the effort to reconstruct the east front of the Capitol. It has just come to my notice that he was the author of this resolution introduced in the recent Congress: "Resolved by the Senate and House of Representatives of the United States of America in Congress assembled, that the memorial authorized and directed by Act of Congress to be erected in the District of Columbia to the memory of Thomas Jefferson be constructed in accordance with the design selected from an architectural competition held in accordance with provisions of the American Institute of Architects and the Fine Arts Commission."

Thursday, January 28.—Frederick Ackerman tells me that in some of his researches into costs of housing, he finds that some housing built in 1880, in New York City, cost per room to build just about what corresponds today to the cost of the plumbing and electric work for quarters of the same size.

Meanwhile, however, out at Purdue University, they have just built a two-family house of one story at a cost under \$1,400, but without overhead or profit.

Friday, January 29.—Hidden away in the *Bulletin of the Garden Club of America* for last September, is a rather thrilling story of what Grosvenor Atterbury did to turn a cooling system into a thing of beauty for the garden. This was out in Arizona where the thermometer gets as high as 120 in the shade with the humidity as low as 10. Obviously you can evaporate a lot of water in that air with a correspondingly large cooling action in what remains. Atterbury devised a system of fountains and cascades, and a particularly decorative wrought iron tower over which the water falls in a finely divided spray. A pump circulates the system through house and garden, adding water to make up for the loss in evaporation. Incidentally, the cooling tower provides possibly the only privately owned and mechanically operated rainbow.

Saturday, January 30.—The surrealists, whose work has been on exhibition in the Museum of Modern Art, are quite peeved over the fact that the Museum exhibited at the same time work of immature children and the insane. Alfred Barr, the director, said that, after all, each group was thinking in terms of a dream world—the surrealists knowingly, the children and the insane unconsciously.



The Hunter Street Bridge across the Otonabee River at Peterborough, Ontario, Canada, in the design of which Mr. Bragdon collaborated with Frank Barber, engineer

SALVAGED FROM TIME • IV

Extracts from the Autobiography of **CLAUDE BRAGDON**

IN my architectural work, though struggling to free myself, I was still the bondslave of tradition and precedent, so that in retrospect one of the few achievements in this field to which I now look back with any degree of satisfaction is my part in the design of the Peterborough Bridge.

In 1918 I was asked by Frank Barber, an eminent Canadian engineer, to collaborate with him on a re-enforced concrete bridge to be built over the Otonabee River at Peterborough, in the Province of Ontario, Canada. He had been awarded the commission, but he was able to convince his clients, the Peterborough City Council, of the necessity of employing an architect, and his choice fell on me.

It was agreed between us at the outset that the engineer's function in such a collaboration was to discover that particular form of a bridge which would best meet the given requirements from the triple standpoint of efficiency, economy, and endurance. But the function of the architect, aside from the recognition that he was a purveyor of beauty, was not so easy to define. In the effort to do so we got nowhere until a single word, struck out in the heat of

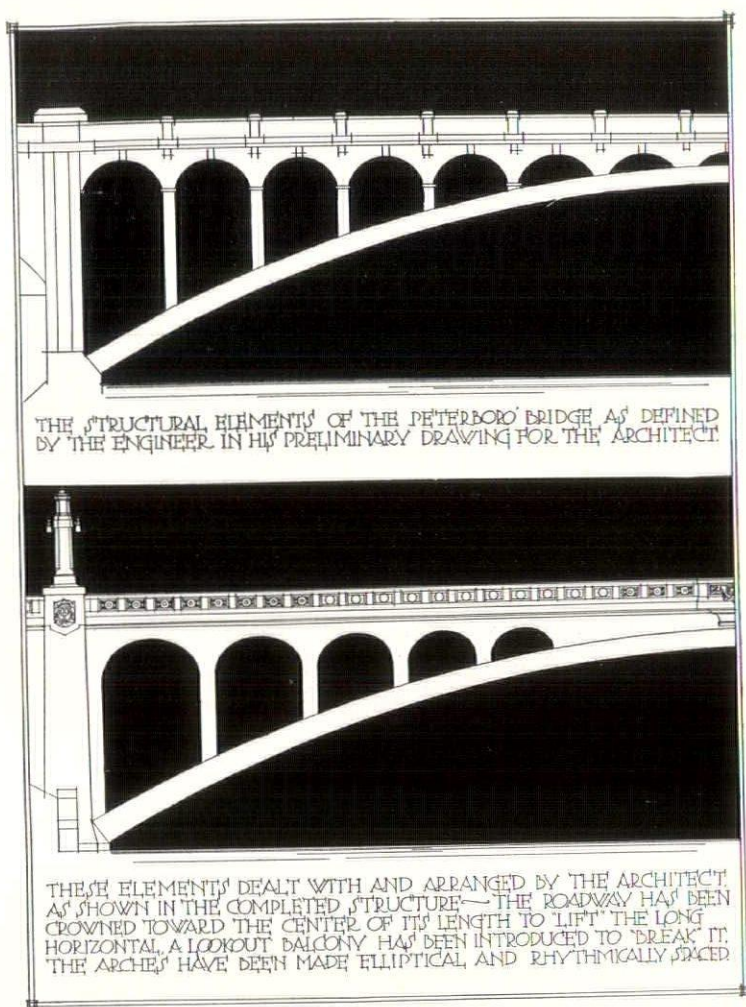
discussion, settled the difficulty and illuminated the subject with a new light. That word was "dramatize," and for us both the architect became thenceforth the dramatic artist, his function being to express, as clearly and eloquently as possible, everything that needed to be or could be expressed to bring out the beauty of that necessity which determined that the bridge as a whole and in its various parts should be as it was and not otherwise.

Mr. Barber decided upon a single arch over the river, with a clear span of two hundred and thirty-five feet, the roadway being supported by means of an arcade footing on the main arch ring. He gave me a diagram of his conception and I set to work. The modifications which I introduced into his design were not many, nor of a radical nature, but I think they were important—"The little more and how much it is!" in Browning's phrase.

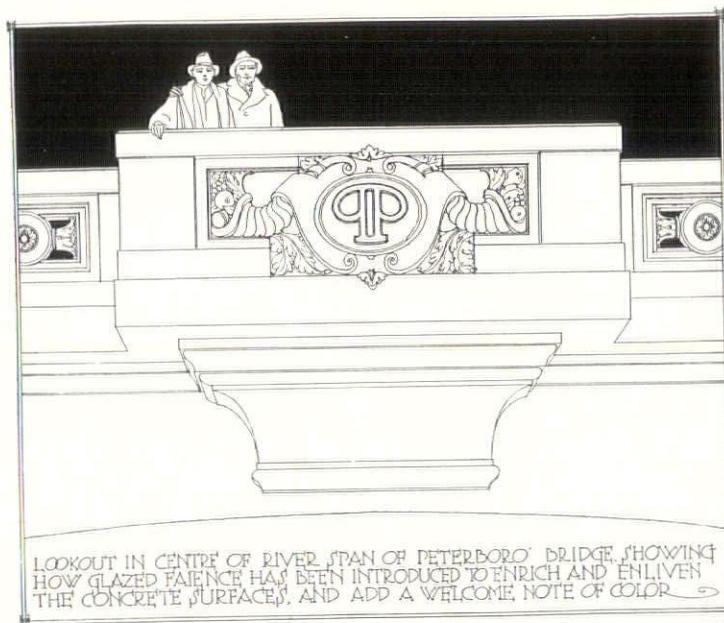
The arches of the arcade supporting the roadway I diminished proportionately in width toward the center, and I translated the semi-circles into semi-ellipses. By these means the eye was more completely satisfied because these changes represented a return to nature,

where rhythmic diminution is everywhere in evidence, and circular curves are rarely encountered, while ellipsoids abound. The Greeks "crowned" the long horizontal stylobates of their Doric temples, because such a line, if mathematically straight and level, would appear to sag. In obedience to the same aesthetic need the long parallel lines of the roadway and parapet were given a scarcely perceptible rise toward the center of the span, and, to diminish the severity and monotony of this long line of the top of the bridge, I introduced in the center a little projecting balcony which would also serve the useful purpose of enabling one to pause to view the river without impeding or being impeded by less idly disposed pedestrians.

The tremendous abutments necessary for resisting the thrust of the main arch ring, though buried out of sight, I made to declare themselves by carrying upward tapered piers, terminating in four electric light standards, thus defining to the eye at a glance the limits of the principal span. These standards were of a form unassociated with any of the historic styles, their shape (slightly tapered elongated parallelepipedons with



BY COURTESY OF THE ARCHITECTURAL RECORD



BY COURTESY OF THE ARCHITECTURAL RECORD

Mr. Bragdon's drawing of the accent introduced at the center of the span to break the severity and monotony of the long horizontal

Analytical drawings comparing the engineer's design for the Peterborough Bridge with the architect's dramatization of its elements

man: "I am interested only in success." This perhaps accounts for his choice of me, for by that time I was accounted a successful architect. As it was agreed that I should do the planning and designing of the new building, we spent hours together in conference; and though I was never one of Eastman's intimates, I attended his parties and he came to dinner at my house. He thought well of me then, whatever he may have thought later, for he commissioned me to design an elaborate sunken garden for his East Avenue estate.

To certain of life's aspects and issues—æsthetic, philosophic, ethical—Eastman seemed blind: content to accept the opinion of others, professing his own ignorance. But concerning those things which really interested him he was enormously well-informed and efficient, a master of clear, straight thinking. A man of steel in an age of steel, a stoic, a slave of duty, in his later years he worked conscientiously at large-scale entertaining, big game hunting, and other Midian amusements, but there was never any joy in him. He lived a loveless, wifeless, childless existence, its loneliness aggravated rather than mitigated by his enormous wealth.

He had not only the point of view, but the physical appearance of some priest-king of ancient Egypt, and I like to think that he might have been just that, and I his architect, and the Chamber of Commerce building just another temple or tomb. Certainly his attitude toward Labor was that of a Pharaoh.

broadly chamfered edges) suggesting the plane and hammer more than the trowel or the chisel for they were not cut and built by a mason, but moulded in wooden forms.

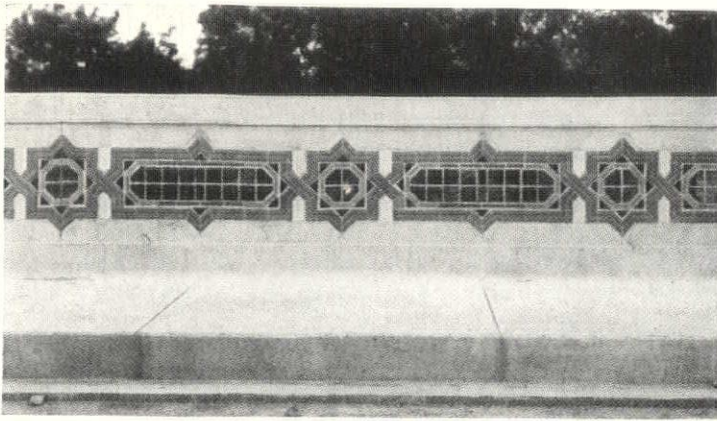
Feeling the need of a more positive appeal to the æsthetic sense than cast cement could yield—"beauty of a richer strain"—I introduced colored faience, used purely as ornament, protected from the action of the elements and subject to no structural strain, and combined the two materials in such a way that they could be set independently of one another. I used this faience in the panels of the parapet and in the form of cartouches bearing a double "P" flanked by Canadian fruits and grains, the colors being cream-white, an earthy yellow, Della Robbia blue and a mineral green. These, in their setting of warm-toned cement, imparted a note of grace and individuality.

I collaborated with Mr. Barber on several other bridges. Called upon to design the parapet of the East York-Leaside Viaduct, in Toronto, I conceived the idea of making a continuous

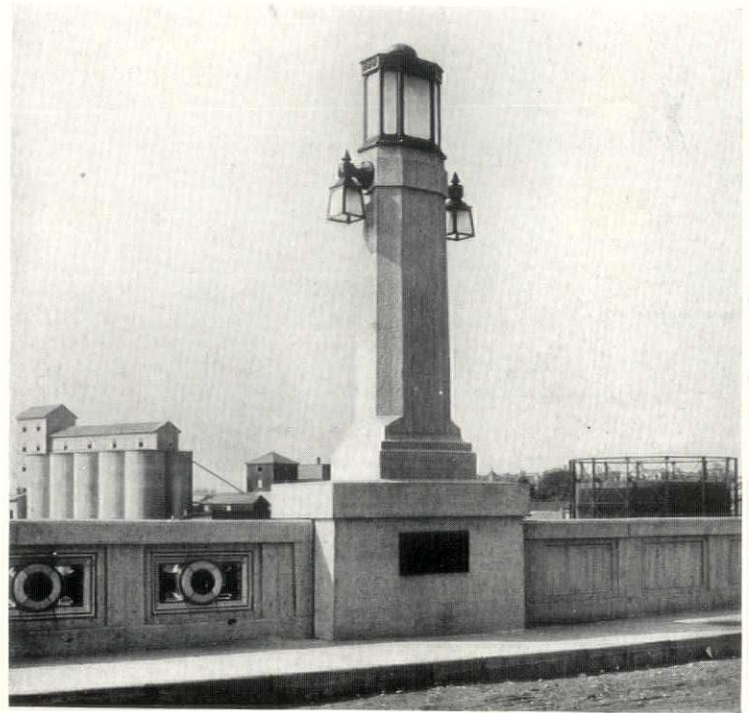
band of geometrical ornament done in colored encaustic tile set flush with the surface of the cement-concrete which was afterwards rubbed smooth with carborundum. The effect of this, stretching away in the distance on either side of the roadway, proved highly pleasing.

From the time of his phenomenal rise to fame and fortune, up to his death in 1932, George Eastman was the most powerful man in Rochester. He was genuinely and intelligently concerned with the welfare of the community in which he had grown up, and to its problems he devoted much disinterested labor. I never knew anyone with a more acute sense of the responsibilities which position and wealth entail.

In 1917 Eastman volunteered to provide a new building for the Rochester Chamber of Commerce, and I was chosen to be its architect in collaboration with Messrs. Foster and Gade. In his novel about Rochester, "The Fault of Angels," Paul Horgan put this highly characteristic speech into the mouth of the character corresponding to East-



Parapet of the East York-Leaside Viaduct, in Toronto, Canada, in which Mr. Bragdon used a continuous band of geometrical ornament carried out in colored tile set flush with the surface of the concrete



Detail of the lighting standards on the Peterborough Bridge, which serve to define the limits of the principal span and to accent the abutments

I was on the train with him when he was traveling to his first meeting with Henry Ford. He was strongly against the high wages being voluntarily paid by Ford: he seemed to regard it in the light of a betrayal, making it so much more difficult for the rest of them to keep the working man in his place. I had tried to interest Eastman in color-music, but failed. This provoked me into asking why he gave seven millions to the promotion of music, about which he professed to know little, yet he would give nothing toward a correspondent development of light, concerning which he certainly knew a great deal. His answer was characteristic as it was frank: "It is true that I know little about music, but working people need something to keep them happy and contented when they are not engaged in working, and music seems to do just that." In this way I learned from his own lips that his benefactions to music were in the nature of insurance against industrial unrest.

Profoundly dissimilar in character and outlook, it was inevitable that Eastman and I should break with one another, even though I had for him the greatest liking and respect. The incident which precipitated this rupture was of no great importance: had it not been that it would have been something else.

The outstanding feature of the Chamber of Commerce building was a lofty hall, occupying the entire top floor, wherein a thousand people could be fed simultaneously, which used to be known

as a "Banquet Hall." Here was a great opportunity for the architect. In Venice I had been much impressed by the stately chambers of the Palace of the Doges: the walls paneled, without applied architecture, with decoration of gold and color in the ceiling but practically nowhere else. I decided to make the room I had to do like that. I submitted the scheme to Eastman and he approved. I explained that the decoration of the ceiling would be the important matter and for that reason it would be advisable to omit it from the general contract so that we might ourselves select our man. He saw the point, and agreed with me. I made the side walls of acoustic tile and paneled oak, without ornament, and designed the elaborate plaster-work of the ceiling solely with a view to the effect it would have done in color and gold.

When the room was nearly completed and the ornamental plaster-work of the ceiling was "in the white," Eastman and I met there by appointment and I reminded him of our former conversation and told him that it was now time to let the contract for the decoration. "How much will it cost?" was his first question. I told him that it would probably cost from five thousand to twenty thousand dollars, the difference depending upon the eminence of the artistic talent employed. He ruminated. "I could give an ambulance to France for five thousand dollars; I like the ceiling just as it is—I think I'll leave it that way," he finally said.

I was dumbfounded; particularly because I knew how impossible it was to make him understand the way I felt. "But Mr. Eastman," I protested, "if I had known that, I would have designed the whole room differently; color is the only thing which will save it from looking mean and bare."

"There's nothing the matter with the room," he answered, "it's a perfectly good room for the purpose for which it is intended, and what more can anyone ask? You architects are full of expensive notions; engineering is all that there is to architecture anyway."

With that he started to walk away. To my sensitive ear what he had just said was little short of blasphemy. I followed him to the elevator: "Very well, Mr. Eastman, if that's the way you feel about it, I don't know why you have me for your architect; you can find plenty of better engineers. I guess I can't work for you any more."

He had his way about the ceiling, of course, but after the opening dinner I never went into that room again. On that occasion Eastman publicly paid me a handsome compliment, but our relationship came automatically to an end.

In the summer of 1923 Walter Hampden visited me in Rochester and announced that he was considering taking a year's lease of the National Theatre in New York, but he did not want to do so without my assurance that I would design and supervise his productions. This meant moving to New York and



PHOTO: ROCHESTER TIMES-UNION

Mr. Bragdon's last visit with the late George Eastman found him sitting for Fausta V. Mengarini, sculptor, for a portrait head afterwards presented to the Dental Dispensary given by Mr. Eastman to the city of Rome

the abandonment of my architectural practice, but I interpreted it as the knocking of destiny at my door and accepted his offer. This altered my status from Fellow of the American Institute of Architects to Brother of the United Scenic Artists, Local 829, a subsidiary of the Decorators' and Paperhangers' Union of the American Federation of Labor. Although professionally and economically this may have been a step downward—my friends all seemed to think so at the time—it was one which I have never had occasion to regret, because it took me to New York, and into a group of younger and less inhibited people; it enabled me to exercise my creative imagination in new ways, giving me light as a plaything; and it brought me into intimate daily contact with Walter Hampden, a prince among men—a great refreshment after having served for so many years that captain-of-industry consciousness which unwittingly crucified the artist in me.

In 1931 I found myself again in Rochester. I had gone to Pulaski, to attend the funeral of my Uncle Emmett. In the bleak Spoon River graveyard I had watched his coffin being lowered into that black earth which some day will be my blanket too. I had stopped off in Rochester for a day to visit my sister; the following morning I would be back in New York. I decided to go

and call on George Eastman, for I had heard that he was ill, and I wanted him to feel that in spite of what had happened between us I was still his friend.

I ascended the steps of the great pillared portico of Eastman's house and rang the bell. His negro butler presently appeared and towered above me in an attitude almost menacing. In answer to my inquiry if Mr. Eastman were in he asked me if I had an appointment. I knew the man well, and by this time he had recognized me also. He invited me in, saying that Mr. Eastman was walking in the garden and that he would go and announce me. Presently I found myself alone in the great square drawing room.

It was a room which had never known the sound of children's laughter; the walls were adorned by the sort of paintings which millionaires buy because they bear the right trade-mark and are expensive; the furniture was arranged with the aid of some decorator's blueprint. Beside me was a great mahogany desk equipped with writing materials which had never been used, a paper cutter, and "The Life and Letters of Walter H. Page" in two volumes. The waning light of a cloudy October afternoon came through the heavily curtained windows.

Presently the butler returned and ushered me into the library where I found Eastman sitting on a sofa in front of a

wood fire. He was cordial in his frosty, constrained way. We conversed, but without mentioning our former differences. The only thing which seemed to interest him at the moment was a new surfacer with which he was having his driveway covered, declared by him to be just as good as asphalt and very much cheaper. I started to go, but he detained me. A trained nurse in white, who had all the while been hovering in the offing, came in and reminded him of an appointment. He asked me to come and give my opinion of a bust of himself which was being made to be presented to the Dental Dispensary given by him to the city of Rome. As he struggled to his feet he seemed quite feeble, but waving the nurse aside he tottered into the hall, and he himself operated the automatic elevator by which we ascended to the second floor.

In a great square westward-facing chamber, with no curtains at the windows, and on the floor a rolled-back rug, was a strikingly handsome woman dressed in trousers, a sweater, tennis shoes and a little cap, working on a clay effigy of Eastman, meantime smoking a cigarette. We were introduced to one another. She was Fausta V. Mengarini, a distinguished Italian sculptress. I thought the likeness excellent, and said so, which seemed to please them both. With some difficulty Eastman mounted into a high, straight-backed chair raised on a pedestal, and assumed the pose of an Egyptian seated statue; head erect, feet together, the forearms and hands resting on the thighs. The resemblance was so striking that I had to speak of it: "I have always thought, Mr. Eastman, that you might be a reincarnation of some Egyptian priest-king. As you sit there you look like a statue of Rameses, Second." (Though it was rather the mummy of that monarch which I had in mind.)

At this he merely smiled his icy smile, but the sculptor took fire at the idea at once, wondering why she herself had failed to notice the resemblance. This discussion was interrupted by the arrival of a photographer from *The Times-Union*, to take both their pictures, and so I took my leave. Eastman's farewell was not warm, for there was no warmth in his nature, but it was friendly. This last visit eliminated any dregs of bitterness either of us may have ever felt towards the other; and when, about a year later, I learned that he had methodically planned his own death and compassed it, my compassion for that suffering and stoic soul was untainted by ignobler emotion.

(To be concluded)



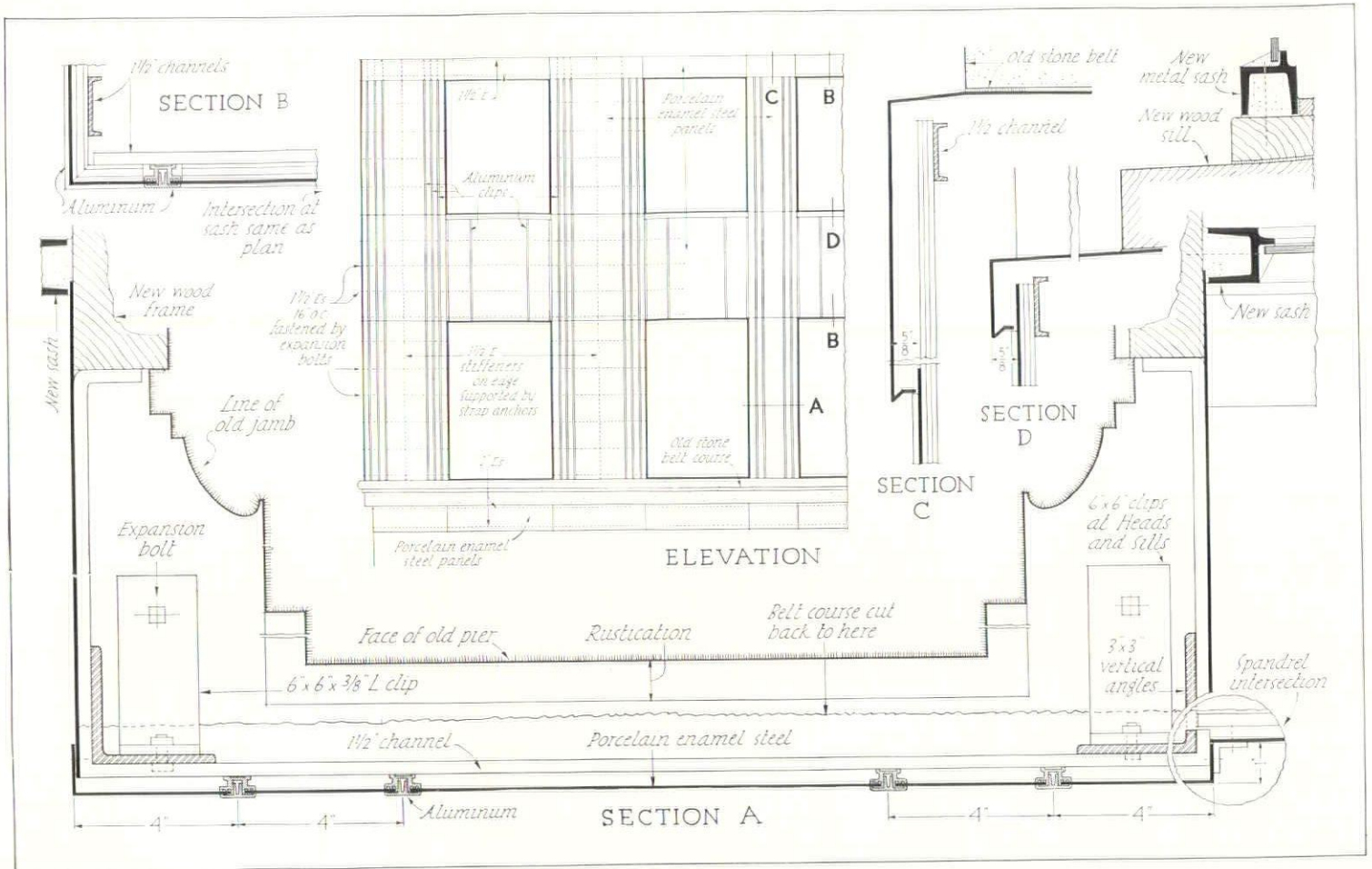
PHOTOS: PAUL WEBER

The wedding cake style of an old building is concealed by a new facing of porcelain enamel steel sheets. The black area at the ground floor level is structural glass accented with metal lettering. Relatively few plan changes have been made as is indicated by the identical location of door and windows in both the old and new façades

CUNARD WHITE STAR BUILDING

BOSTON, MASSACHUSETTS

KILHAM, HOPKINS & GREELEY, ARCHITECTS



Porcelain enameled steel panels in sizes up to two feet six inches by eight feet are held in position by Revecon structural sections screwed to steel furring. A feature of this system is that these panels may be easily removed. The predominant color is battleship gray with enameled decorations in red, white and black and additional accents made possible by the use of aluminum clips

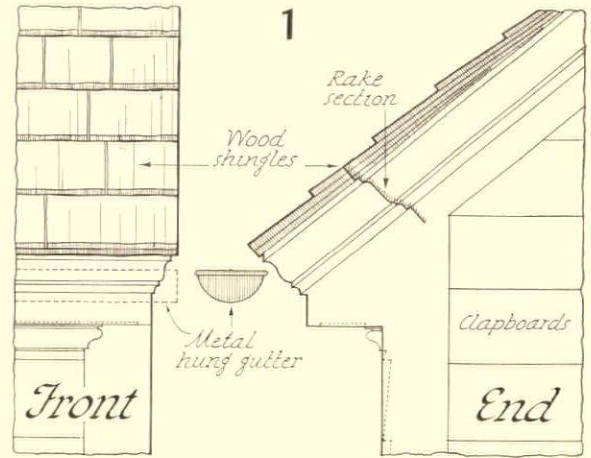
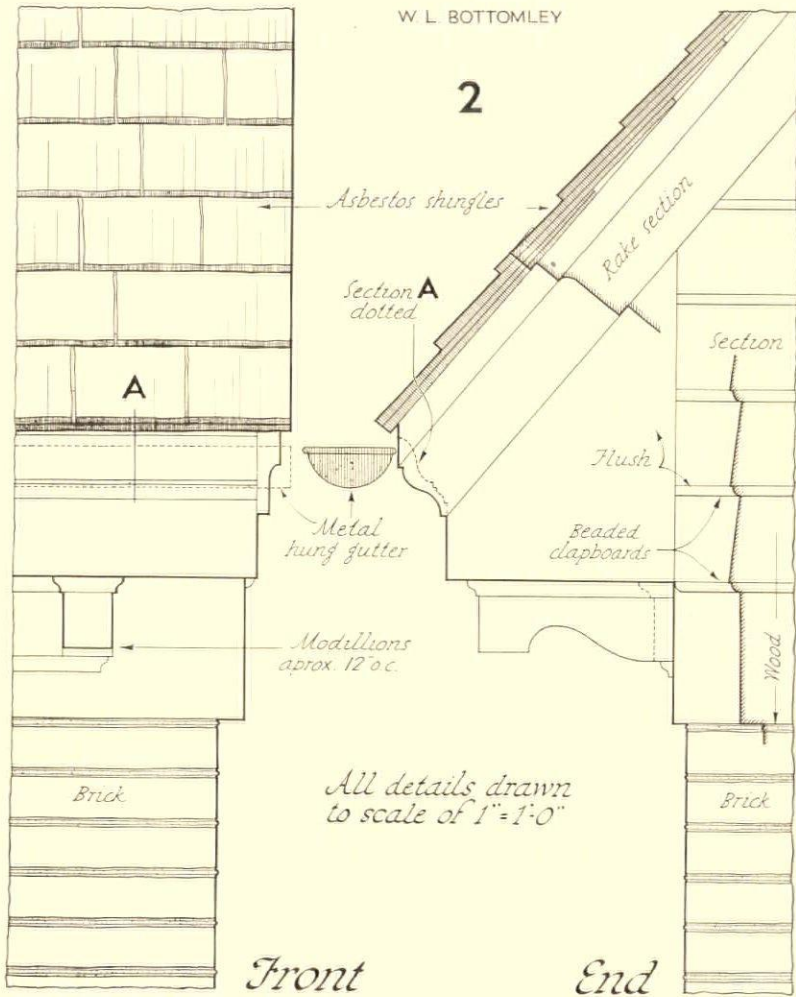


CUNARD WHITE STAR OFFICES, BOSTON, KILHAM, HOPKINS & GREELEY, ARCHITECTS

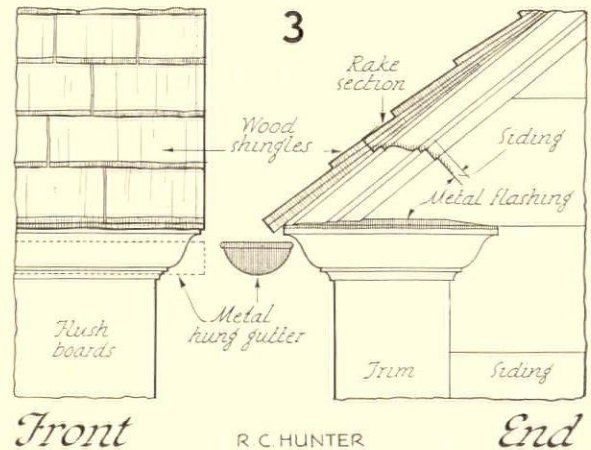
FAVORITE FEATURES

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

Eaves Returns of Wood



HORACE W. PEASLEE., GERTRUDE SAWYER, J. H. LAPISH



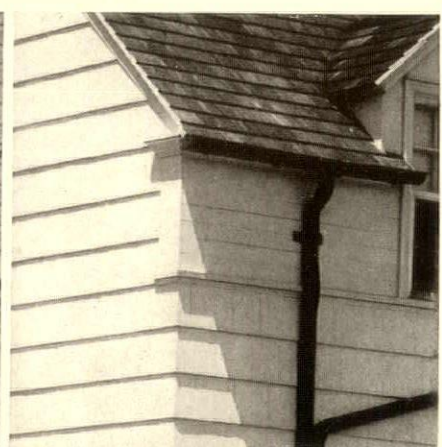
R. C. HUNTER



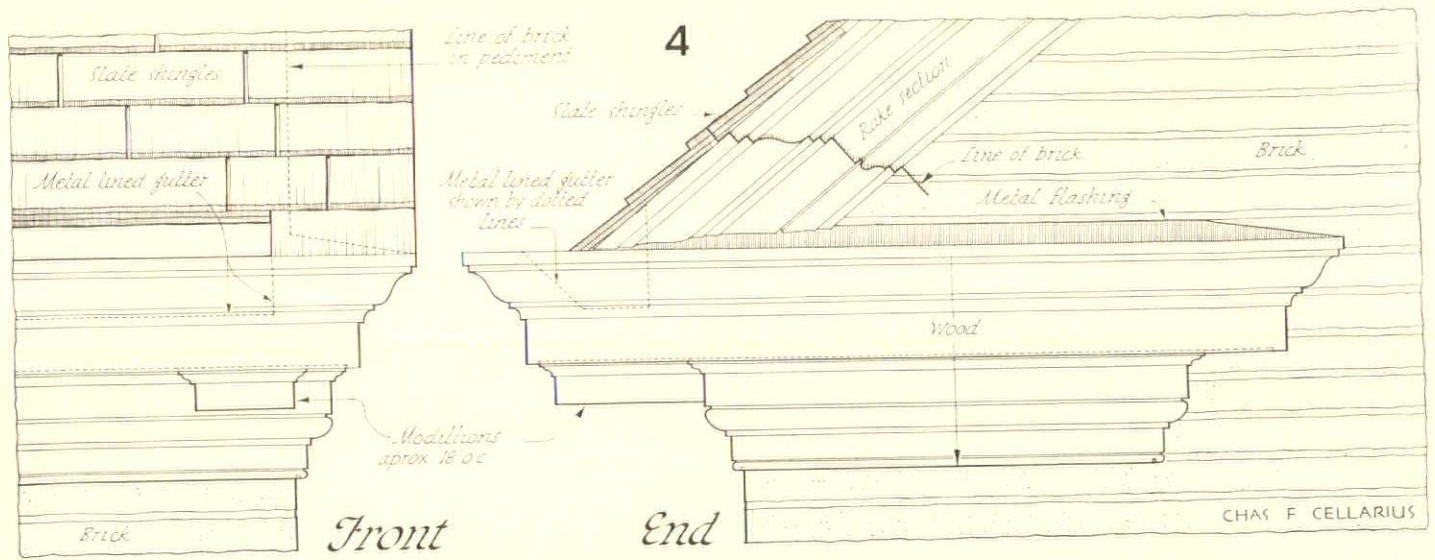
1



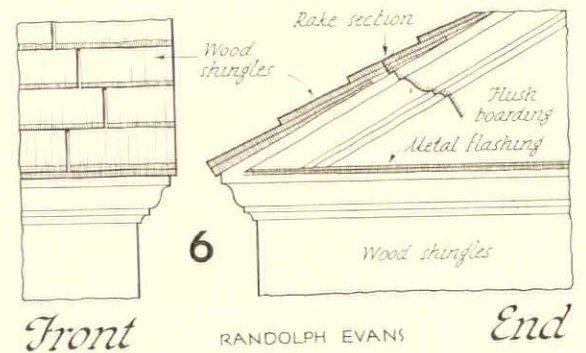
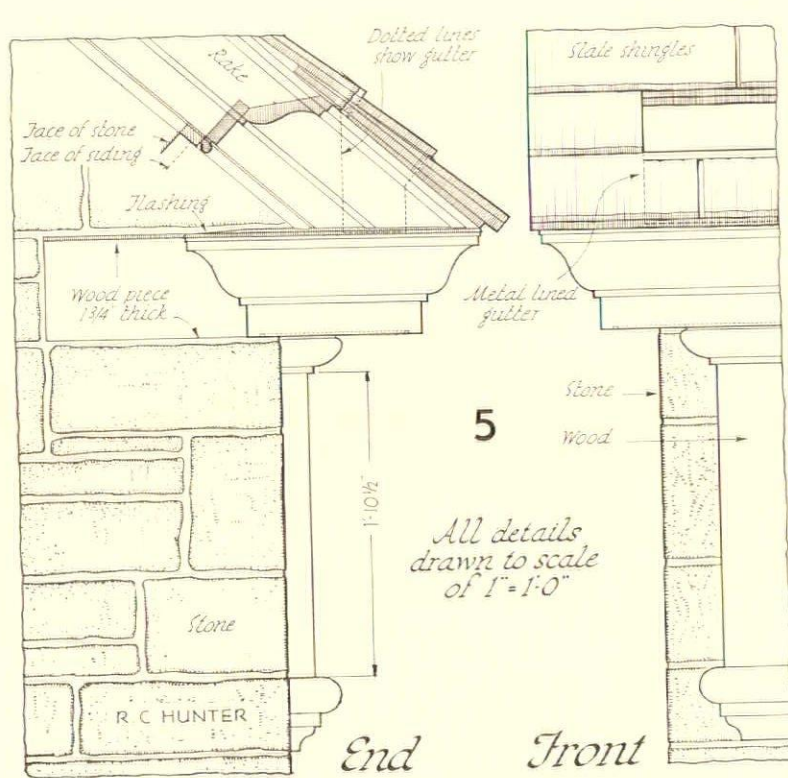
2



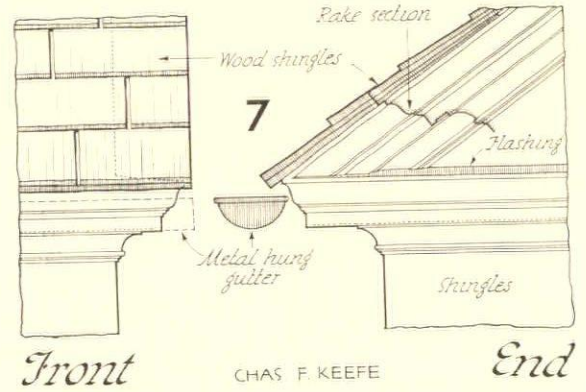
3



CHAS F CELLARIUS



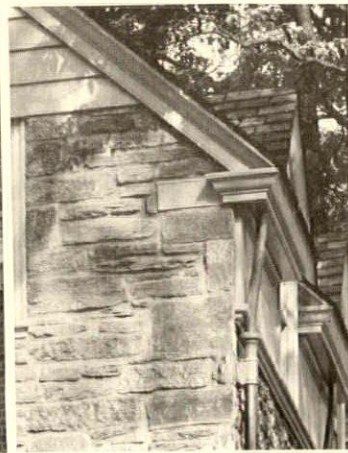
RANDOLPH EVANS



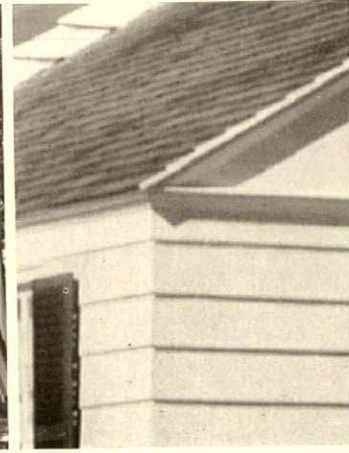
CHAS F. KEEFE



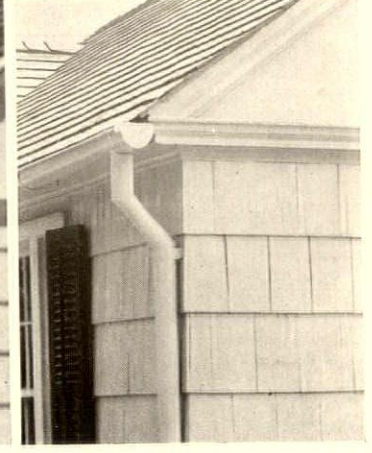
4



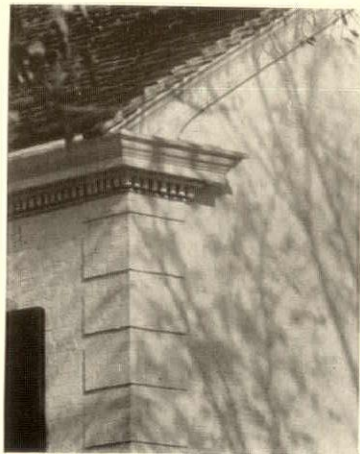
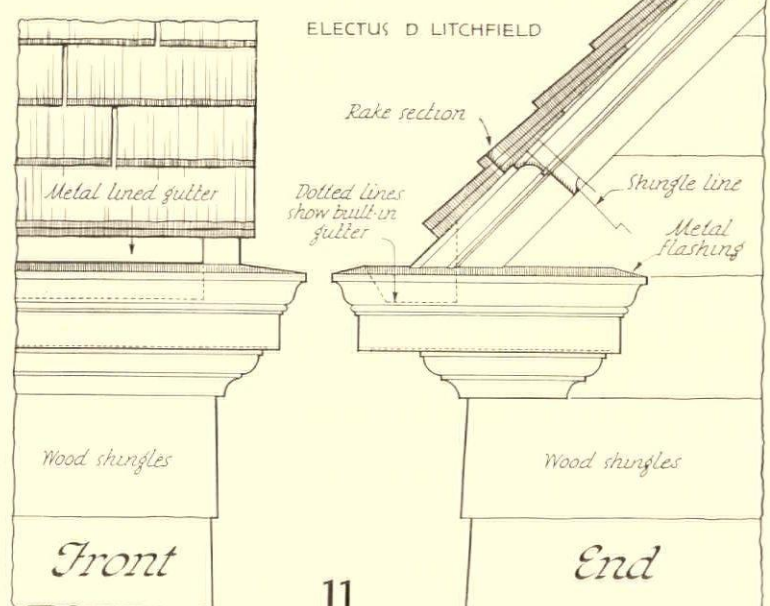
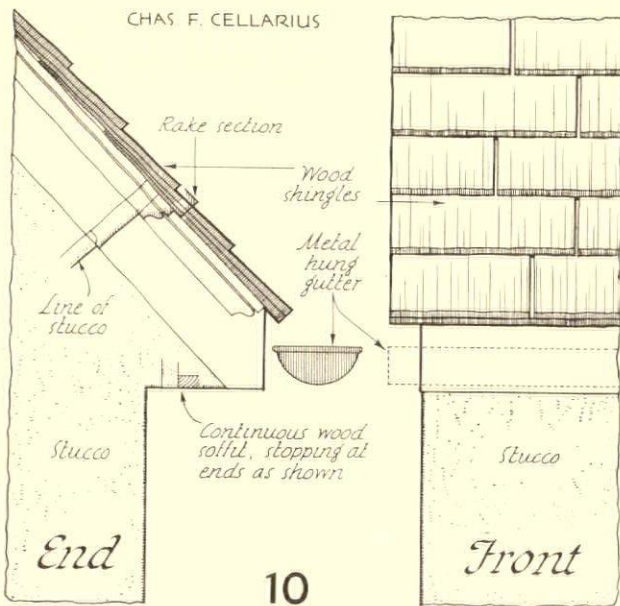
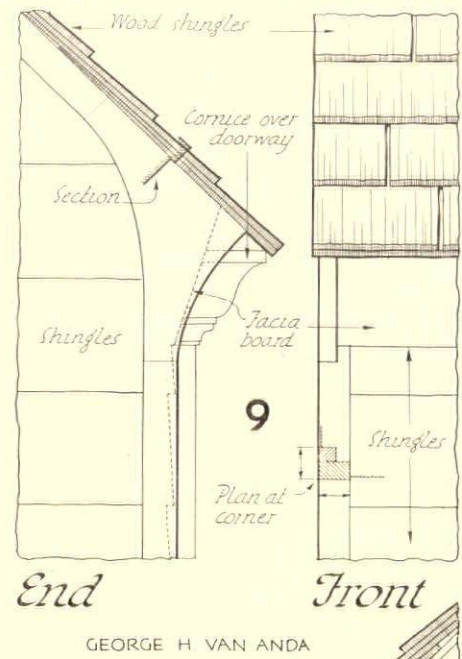
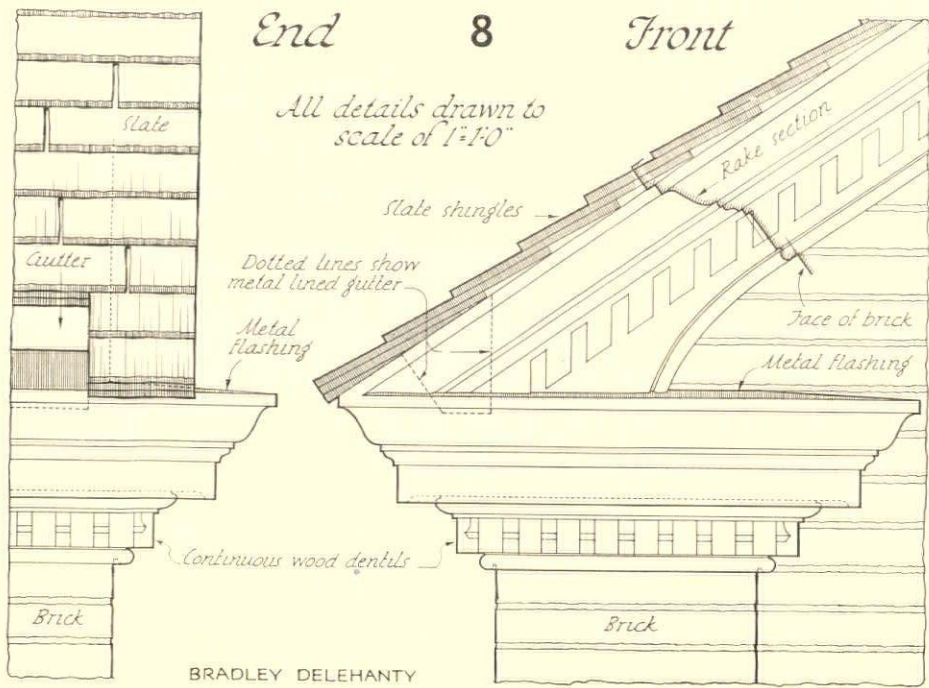
5

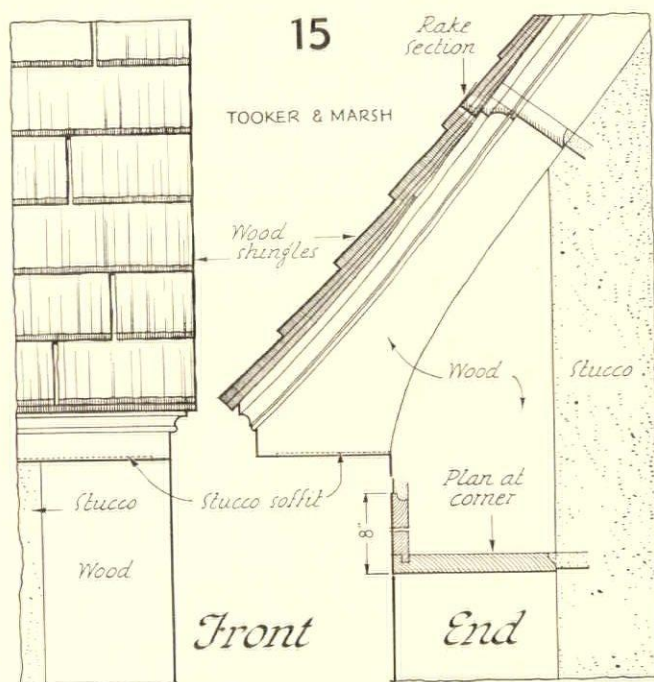
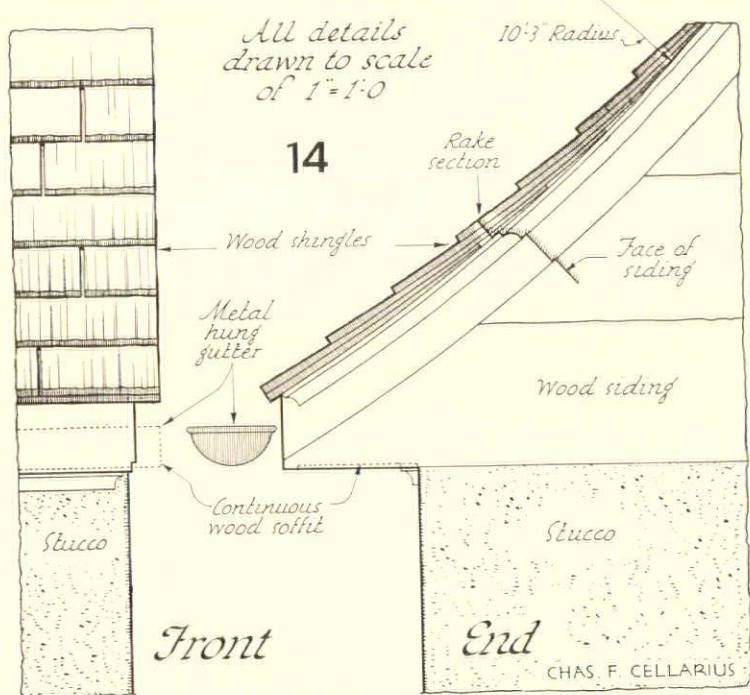
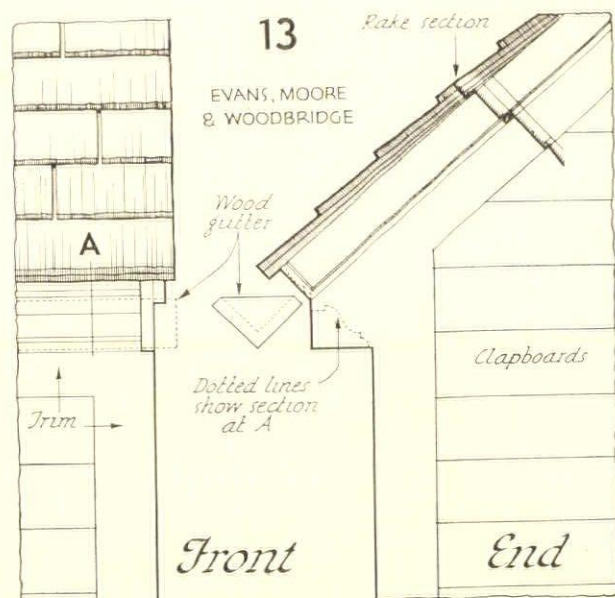
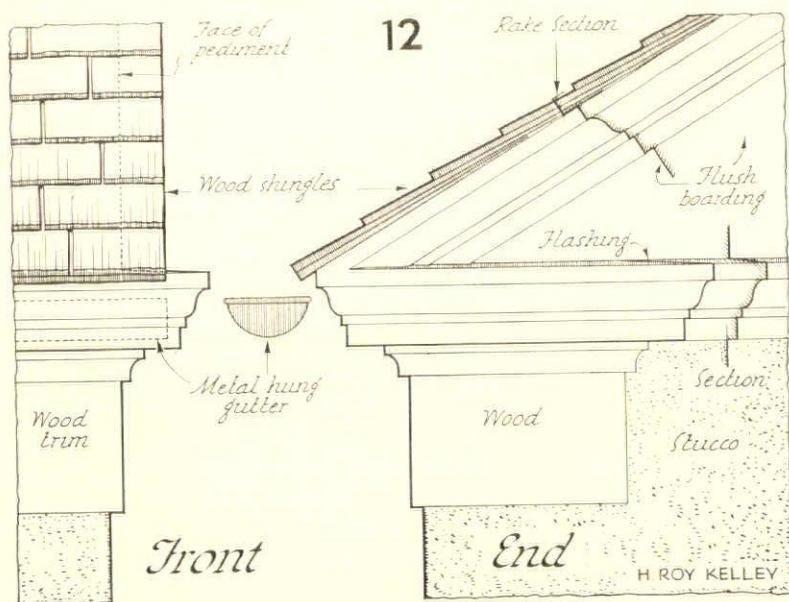


6



7





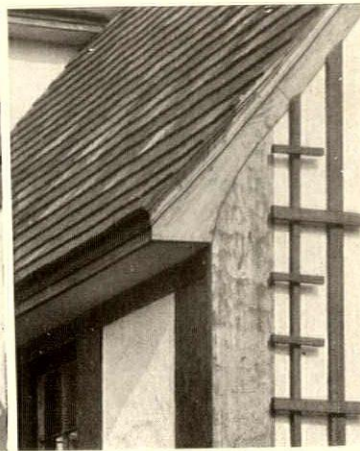
12



13



14



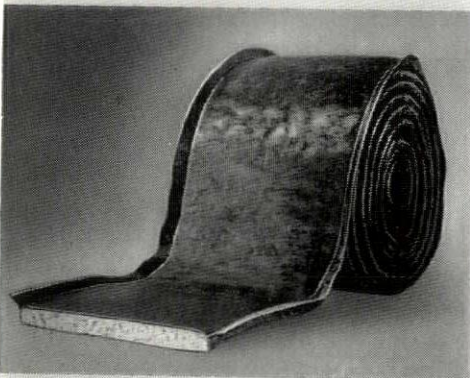
15

LEADING THE
PROCESSION



AGAIN IN
1937!

Announcing THE NEW DOUBLE-SEALED BALSAM-WOOL



DOUBLE-SEALED
against wind and moisture—im-
proved flanges for easier application.

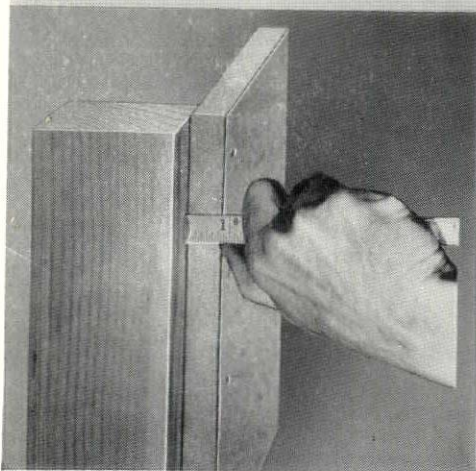
Balsam-Wool pioneered the idea of sealed insulation—insulation completely protected from moisture and wind infiltration by a sealed, moistureproof covering. Thousands of Balsam-Wool applications—thousands of satisfied building owners—have proved the soundness of that idea. Architects, engineers and builders have been convinced by the overwhelming mass of evidence in favor of sealed insulation. Competition—adopting imitation as the sincerest flattery—has followed suit.

TODAY, there is a new Balsam-Wool—DOUBLE-SEALED Balsam-Wool, doubly protected against wind and moisture. Today, the tough, kraft paper

covering of Balsam-Wool is coated with asphalt on both sides—affording the greatest assurance of permanent efficiency that insulation has ever given. In addition, the new Balsam-Wool has improved, reinforced flanges for easier, faster application.

In 1937, Balsam-Wool stands as the one insulation that meets every demand in every type of building . . . answers every requirement of air conditioning. Doubly sealed against wind and moisture . . . rotproof, verminproof and treated to resist termites . . . highly fire-resistant . . . non-settling . . . Balsam-Wool is available in three thicknesses for all insulating needs. Write for complete information.

And . . . THE NEW NU-WOOD SHEATHING



Another forward step is the new NU-WOOD Sheathing—strong, rigid, moistureproof. Nu-Wood Sheathing is process-sealed against wind and moisture. All edges and surfaces are sealed to re-

sist moisture. It is 25/32" thick. It is termite treated. It is easy to apply—cutting application costs to the minimum. Details about Nu-Wood Sheathing are yours for the asking!

WOOD CONVERSION COMPANY

NEW YORK • ST. PAUL • CHICAGO

Mills at Cloquet, Minnesota



... The New
NU-WOOD
SHEATHING
—Strong, rigid,
moistureproof.

WOOD CONVERSION COMPANY
Room 159, First National Bank Bldg., St. Paul, Minnesota
Gentlemen: Please send me information and samples on
 New Double-Sealed Balsam-Wool
 New Nu-Wood Sheathing

Name

Address

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



GLASS

A new form of translucent glass, known as Thermolux, originally made in Italy, is shortly to be manufactured in this country. Thermolux is a compound glass, with a central lamina composed of spun silk threads, arranged in a regular manner, and held between two sheets of clear glass. This central layer is porous, and in order that the air it contains may remain undisturbed, the edges are hermetically sealed. The advantages of the glass are that it provides insulation against sun heat, directional light diffusion and conservation of indoor warmth, and that it eliminates glare. The glass is claimed to transmit sunlight, without sun heat, permitting an undistorted transmission of the visible wave lengths of the spectrum, and so giving all indoor colors their true values. The diffusion of light is as nearly as possible complete, so that there is no effect of blinding illumination contrast—such as may occur where there are patches of sunlight on a floor.

717M

INTERIOR FINISH

The "hairy" or coarse textured surface which heretofore has been characteristic of all insulating boards has been entirely eliminated in the new Armstrong board known as Temlok De Luxe. This new product is available in the form of planks,

panels, and tiles, as well as boards. The new smooth finish is obtained by an exclusive surface treatment and the full insulating value of the material is retained. The pleasing texture of the new type of Temlok and the range of factory-applied colors open up a broad field for its use as decorative interior treatment. In addition to the natural golden buff color of Temlok, the new board also is furnished in the following standard colors: white, cream, ash, green, and walnut. Other colors can be furnished as specified. The new light colors of Temlok De Luxe Interior Finish offer high light reflection value. The new board also possesses valuable acoustical properties. Original and pleasing decorative effects are easily achieved. The large boards provide an attractive all-over finish and are ideal for use in connection with wood trim or wainscoting. Manufactured by the Armstrong Cork Products Co., Lancaster, Pa.

718M

STEEP ROOF PITCH

Having demonstrated, throughout a long period of years, its exceptional qualities for built-up flat roof construction, coal-tar pitch has now entered the lists as a steep roof material. Rigid laboratory tests and practical application on numerous commercial jobs, have demonstrated that the new steep roof pitch combines all the well known waterproofing and enduring qualities of coal-tar pitch with unusual pliability and stability. Made to withstand the coldest of winter weather without cracking, checking or loss of bond, it is particularly resistant to slide at high temperatures. Roofs constructed of this material and tarred felt and surfaced with gravel or slag, applied according to specifications furnished by the Barrett Co., of New York, manufacturers, are bonded for 20 years.

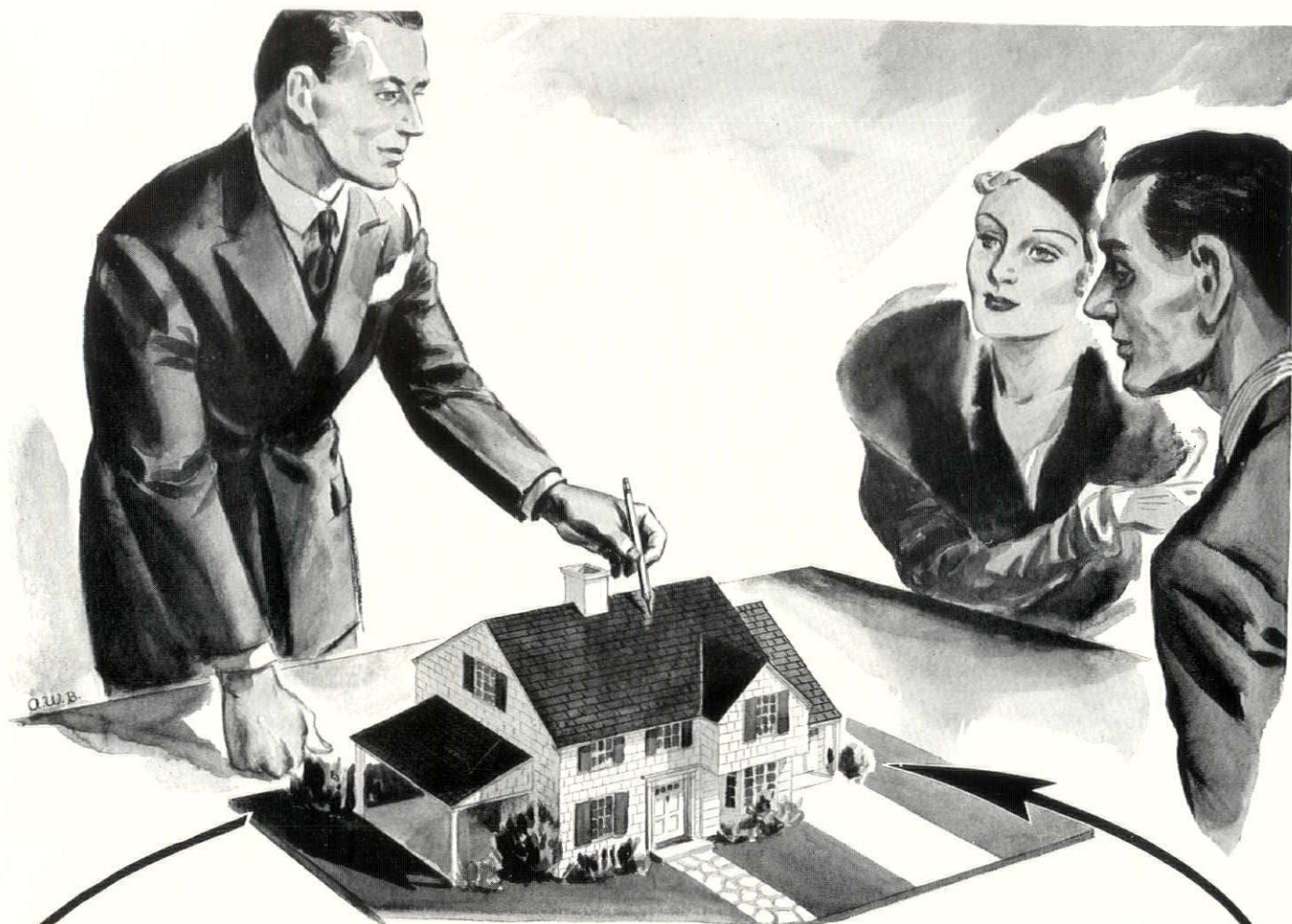
719M

CORK TILE

An important advantage of the new Armstrong's Beveled Cork Tile is the fact that it can be installed over rough suspended subfloors without the necessity of sanding. Surface irregularities in the subfloor are offset by the beveling of the tile. Since sanding is eliminated, the smooth surface given to the tile at the factory need not be removed. A beveled cork tile floor also has a pleasing appearance. Use of cork tile as an attractive, practical, and distinctive wall covering is another recent development. Beveled cork tile is attractive for walls or wainscoting because it introduces a slight pattern effect. It also tends to conceal uneven wall surfaces. Manufacturers: Armstrong Cork Products Co., Lancaster, Pa.

720M





**For that "hard-to-please" client — suggest an
all Certigrade Red Cedar Shingle exterior!**

NOTHING wins client approval quicker than assurance of individual beauty and style for his home. Certigrade Red Cedar Shingles give both in high degree. The beauty of Certigrades lies in the rich tones of the wood . . . straight, even grain . . . and deep shadow lines cast by the thick ends. Individual style is found in their random widths and their ready adaptability to any architectural style.

But architects must also have an eye to the practical. They must specify long life materials of reasonable cost. Again they find their answer in Certigrades. No wood exceeds cedar in insulation value or ability to withstand the most severe

wear. With a Certigrade exterior, fuel bills are substantially reduced . . . and the home will be noticeably cooler in summer. Despite their low initial cost, Certigrade Shingles last for decades with minimum upkeep expense.

With thousands of homes being built

and remodeled under the sound program of the FHA, architects can assure meeting FHA material requirements by specifying Certigrade Red Cedar Shingles for both roofs and side walls. Red Cedar Shingle Bureau: Headquarters, Seattle, Washington; Canadian office, Vancouver, B. C.

Insulate as you decorate!

Certigrade
RED CEDAR SHINGLES



Illustration from a home designed by Randolph Evans, Architect

REINFORCED RUBBER TILE

The new line of Armstrong-Stedman Rubber Tile, consisting of forty striking colors, is the first to be announced following the purchase of the Stedman Rubber Flooring Company by Armstrong. The line includes a number of completely new colors, as well as refinements of the colors found prior to the purchase. In the manufacture of the tile, new cotton fibres—short filaments almost invisible to the eye—are introduced into the rubber compound which surrounds and impregnates them, forming a reinforced mass that later, under a tremendous vulcanizing pressure, becomes a homogeneous whole. This process results in high tensile strength and maximum resistance to abrasion, indentation, and penetration. The new tile is distinguished by its non-directional swirl marbling feature which hides wear and traffic

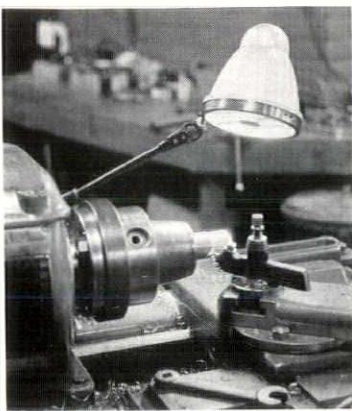
marks. Manufacturers: Armstrong Cork Products Company, Lancaster, Pa. **721M**

FLOORING

A new wood block flooring has recently been announced by the Jennison-Wright Co. of Toledo, Ohio. Each individual block is bonded into strips about 8 feet long, by galvanized steel wire trusses tightly imbedded within the side surfaces of the blocks and milled for tight fitting galvanized steel wire crimped splines, which interlock each strip to the other in the floor. This Kreolite Flexible Strip End Grain Wood Block flooring is treated with a Jenolac impregnation to preserve it against the penetration of moisture or dirt, is light in color, very easy to keep clean, offers the tough end grain of the wood as the wearing surface, is smooth, and easy underfoot. **722M**

LIGHTING

SUPPLEMENTARY LIGHTING UNITS



For some tasks it is desirable to use a relatively small lighting unit which will produce a high level of illumination at the point of work, such as at sewing machines, benches, etc., where the area to be lighted is small and the unit can be located relatively close to the work. The new Suplite, a product of G. E., represents a very definite improvement over the old "half-shade" type of equipment. In this new unit the lamp is operated base-down, with the

filament well up in the reflector, thereby minimizing direct glare from the bulb. This type of unit provides a level of illumination of about 200 footcandles at a distance of a foot with a 60-watt MAZDA lamp. The reflector is spun of semi-matte finished aluminum and is elliptical in contour. Manufactured by General Electric Co., Nela Park, Cleveland, Ohio. **723M**

of the lighting system. This unit can be wired to control automatically either row of lights in one room or in a group of rooms with the same exposure. In some localities two cells per room or per exposure have been used—one to control the inner row and one to control the outer row of lighting units. **724M**

LUMINAIRES

Especially designed to concentrate light on the vertical and horizontal surfaces of bins and stacks, a new luminaire has been announced by the Westinghouse Electric and Manufacturing Company, East Pittsburgh, Pa., for the proper illumination of book aisles, stock room bins and stacks and wherever a distribution of light on a vertical plane is required. This bin and stack luminaire consists of a reflector and socket cover, with socket. The reflector is designed to direct more light to the working plane with two triangular vanes located opposite each other to provide proper eye shields, or light cut off, up and down the aisles between the bins. The sides of the reflector are slightly dipped to redirect light into the bins and cut off stray light that would otherwise be lost. The back connected sign receptacle allows for easy wiring and the nickel plated interior eliminates lamp freezing. Standard 60, 75 or 100 watt inside frosted lamp can be used as desired. **725M**

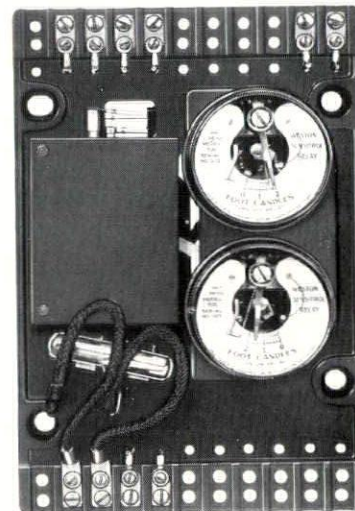
PHOTOELECTRIC CELL CONTROL



Electric Co., Nela Park, Cleveland, Ohio, has been brought into the classroom to remove the human element from the control

The best efforts of architects to provide better sight conditions are often wasted when it is left to the teacher to control the lighting—whether natural or artificial. This is true because the eye is admittedly a poor judge of lighting conditions. It has been found by test that when the inner row of lights in a classroom were operated manually they were turned on only about one-sixth of the time that they should have been on in order to maintain a desirable level of illumination on the inner row of desks throughout the school day. The photoelectric cell, a product of General

ELECTRIC-EYE



automatically just as soon as they are no longer needed. The Weston automatic illumination control unit used for this

Photronic "electric-eye" control, which turns lights on and off automatically to maintain a predetermined level of illumination, has now achieved practical success in the schoolroom.

When daylight entering from the windows falls below an adequate level on the desks farthest from the windows the photronic cell "sees" the deficiency and operates a light switch by means of a sensitive relay providing good light throughout the room. If daylight falls to still lower levels, a second group of lights is turned on in the same way. Conversely, with increasing daylight, lights are turned off

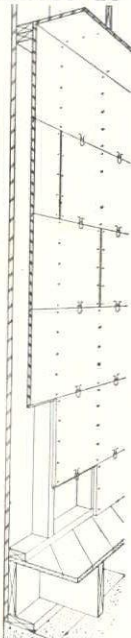
THE *Insulite* WALL OF PROTECTION

OUTSIDE . . . BILDRITE SHEATHING

Insulite Bildrite Sheathing gives you these plus values:

1. Four times the bracing strength of ordinary wood sheathing.
2. Far greater insulation than lumber.
3. No open joints or knotholes . . . windproofed walls.
4. Waterproofed all the way thru, every fibre protected by asphalt.
5. Quickly and easily sawed for rapid application.
6. Moderately priced.

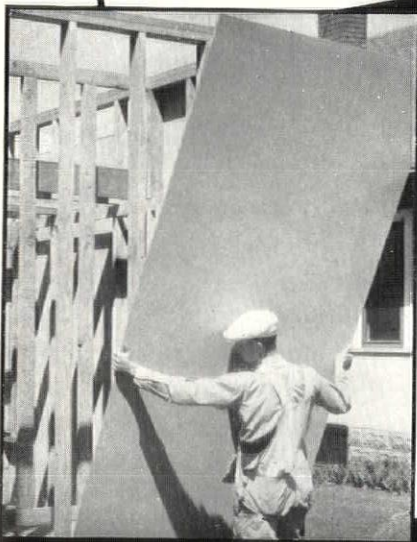
Insulates as it builds . . . Gives **DOUBLE** insulation!



INSIDE . . . LOK-JOINT LATH

On inside walls Lok-Joint Lath forms the *second wall of insulation*, a plaster base, plus:

1. Eliminates lath marks on walls and ceilings.
2. Reduces the passage of sound through walls and ceilings.
3. Insulates effectively.
4. The "Lok" joint assures a rigid, level plastering base.
5. Minimizes the possibility of plaster cracks.

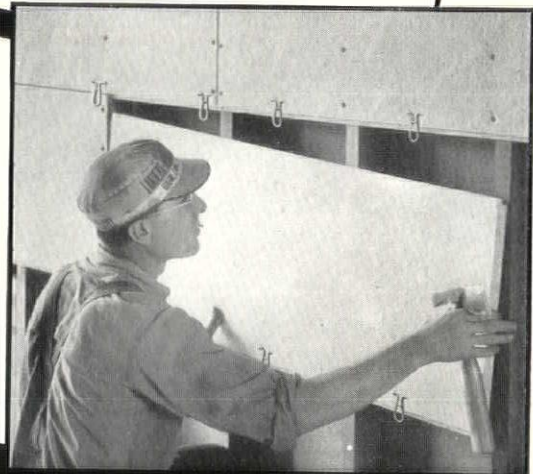
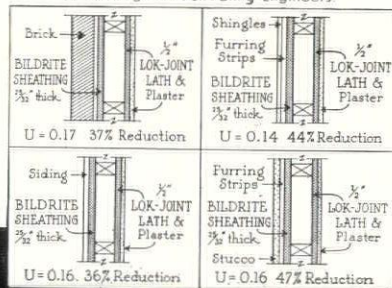


Bildrite Sheathing fits snugly around windows and provides insulation over pulley pockets

HEAT LOSS REDUCTIONS

Compared with same relative type of construction with wood sheathing and wood lath. The same percentage of reduction applies when 1/2" Insulite Interior Finish products are used instead of Lok-Joint Lath.

"Heat loss coefficient based on values recommended by the American Society of Heating and Ventilating Engineers."



The units of Lok-Joint Lath fit quickly and securely into place . . . providing full insulation value at the joints

© 1937 I. CO.

Insulite Products are protected against attack by termites, rot and fungi and have always been guaranteed

WALL OF PROTECTION BY

For further information, see SWEET'S Catalog No. 22, section 10

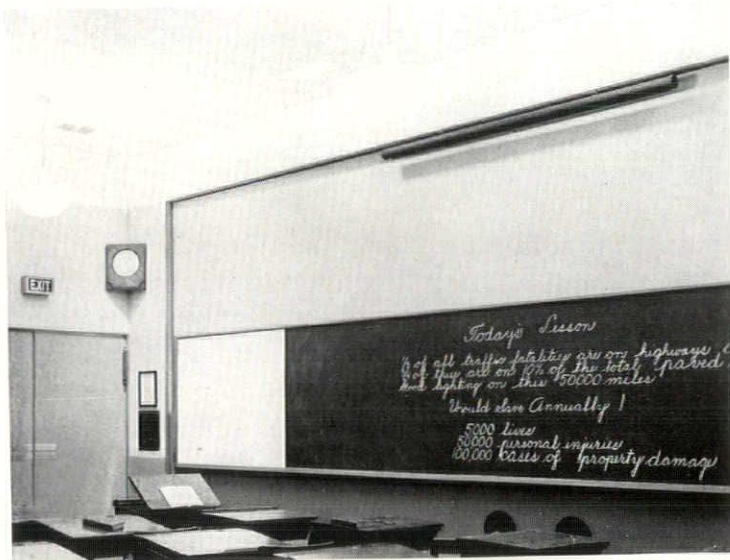
INSULITE

THE INSULITE COMPANY • MINNEAPOLIS, MINNESOTA

purpose consists of a Photronic "electric-eye" mounted on the classroom wall, and wired to a relay panel, which may be located in the hallway or any convenient point. On the relay panel, the desired "turn on" and "turn off" values are set in advance on two independent "foot candle" scales. When light reaching the photo-cell rises or falls to the chosen values, the relay operates the switch controlling the artificial lights. By using separate control units and double-filament lamps, it becomes possible to preserve an even level of light across the classroom whether the day is bright or dull. Product of the Weston Electrical Instrument Corporation, Newark, N. J. **726M**

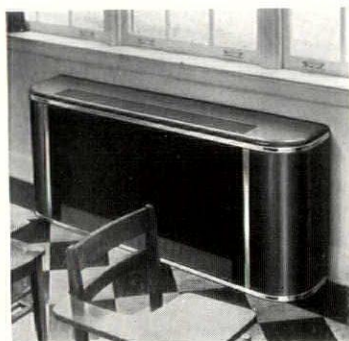
BLACKBOARD LIGHTING

One of the most difficult visual tasks in the classroom is the reading of the usual chalk writing on blackboards, particularly for those students in the back of the room when the writing is on the front board. This is because the blackboard is usually not black but grayish, and the mark of the chalk is not solid white, so that there is very poor contrast between the background and the writing. Another factor which often makes this seeing task difficult is the presence of reflected glare from natural and artificial light sources. In order to overcome these disadvantages,



UNIT VENTILATORS

One of the simplest methods of ventilating individual rooms that meets all the requirements to be considered in the ventilation of schools, is the Unit Ventilator System as developed by the B. F. Sturtevant Co. of Boston, Mass. Each room is equipped with an individual unit ventilator having a fresh air inlet, two motor driven fans and a radiator with necessary controls, all enclosed in a steel cabinet. The unit delivers fresh air, recirculated air, or both, through its radiator into the room. The system is very flexible, and may be either manually or automatically controlled. **729M**



it is recommended that even if there is good general lighting in the classroom, provision be made for blackboard lighting. The units are of the prismatic-lens type, recessed in the ceiling. Where it is impossible to recess the units, they can be mounted at the ceiling. Product of General Electric Co., Nela Park, Cleveland, Ohio. **727M**

INDIRECT LUMINAIRE



For general commercial lighting applications where attractive luminaires and soft, diffused indirect lighting are required, the Silvern luminaire recently announced by the Westinghouse Electric and Manufacturing Company, East Pittsburgh, Pa., finds wide application. Providing highly efficient, economical illumination, the Silvern is available with three styles of enclosing globes. With the standard white enclosing globe, a soft light is cast over the basin exterior giving the entire unit a rich lustre of extremely attractive appearance. With the ring design enclosing globe a touch of smartness is added to the luminaire. In this combination, the globe is decorated with an attractive design in aluminum to relieve the unbroken whiteness of the standard globe. When the Silvern is equipped with the opaque aluminum painted enclosing globe, a highly efficient, totally indirect lighting unit is obtained. A small part of the globe is left uncovered to give a soft light on the aluminum exterior of the basin. The hanger is made of aluminum and is sturdily constructed. The husk is drawn from No. 8 B & S gauge special etching grade aluminum. A mogul, one-piece easy-to-wire socket has all metal parts nickel-plated, and all cavities filled with high heat wax. The socket adapter is a one-piece construction to provide simplicity of assembly, and is arranged to lock stem and husk together. **728M**

HEATING

STOKER TIMING DEVICE

When the outside temperature is high enough to maintain the room temperatures above the thermostat setting, the Stokerelay, a product of the Minneapolis-Honeywell Regulator Co., Minneapolis, Minn., will operate at regular intervals for a sufficient time to keep the fire alive and ready to respond when heat is needed. Changes in the length of timing period or in the frequency of the operations are made by very simple adjustments and without changing gears or securing any special parts. **730M**

PILOT OPERATED VALVE

Operated by a small induction motor driving through a gear train to open and close the valve as the controller demands, this valve is provided with a shaft extension and special key to fit, which permits opening and closing manually in event of interruption of power supply. Valve covers are normally locked on and



Meet
Mr. O. R. EQUAL

This two-faced little weasel is a recognized menace to the architectural profession. His guise is "open bidding," but unless check-reined, he is likely to burrow into and undermine both value and performance. Beware of Mr. O. R. EQUAL . . . one sure way of exterminating him is to keep him OUT of the specifications.

A good place to stop ROOF LEAKS is in the roofing specs

When an architect specifies a Barrett Specification Roof he stipulates known quality, known quantities and known application technique to produce a known result.

Mr. O. R. EQUAL does not assure any of these. Instead, he may invite unequal bidding and the use of inferior products and unproved standards. He may cost considerable in maintenance expense and damaged property.

There is no equal to the authenticated service records which have been established by Barrett in the built-up roofing field. Barrett Specification Pitch and Felt are produced to meet exacting manufacturing specifications. Barrett Specification Roofs are applied according to rigid standards by Barrett Approved Roofers who measure up to definite criterions of workmanship, experience and integrity.

Exact building specifications encourage fair bidding practices and promote good construction. They are just as essential as exact manufacturing and application specifications. Why give Mr. O. R. EQUAL a chance

to hedge? The first place to guard against roof leaks is in the specifications . . . a leak there may be a life-long leak . . . one which cannot be repaired.

THE BARRETT COMPANY

40 Rector Street, New York, N. Y.

2800 So. Sacramento Avenue
Chicago, Illinois

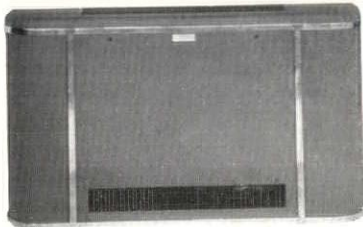
Birmingham
Alabama



The nearest Barrett Approved Roofer may be found in the Classified Telephone Directory under "Roofers."

are removable by use of the same special key used for manual operation. This locking feature prevents tampering by unauthorized persons. Manufactured by the Minneapolis-Honeywell Regulator Co., Minneapolis, Minn. **731M**

UNIT VENTILATORS



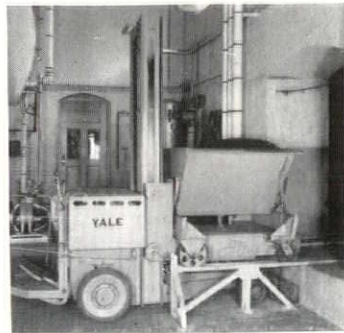
The possibility of change in the requirements of schoolroom ventilation, as set up by law in many States, means that thought must be given to the selection of apparatus that will not become obsolete when such changes occur. A new unit ventilator that may be altered very easily and without expense, to meet new requirements or desires, is the Peervent, product of the Peerless Unit Ventilation Co., Inc., Bridgeport, Conn. Available in various sizes and with two types of cabinets, the units operate on one of three cycles: 100% outdoor air, fixed minimum of outdoor air, or variable proportion of outdoor and indoor air. Regardless of which cycle of operation is selected, changes to any other cycle any time after installation may be made without additional expense. **732M**

TWIN THERMOSTAT

Designed to blend inconspicuously yet pleasingly with new and existing home and office decorations, these thermostats consist of two separate thermostats, one used to maintain constant room

temperatures during the day—the other during the night. A product of the Minneapolis-Honeywell Regulator Co., Minneapolis, Minn., they are designed to improve heat distribution in the heating plant and eliminate "Cold 70°." Simple dial adjustments provide compensation for heating plant and building variables as well as a graduated cam for a scale adjustments on "day" side. Both manual and electric switches are available to change from the "day" to the "night" side or from the "night" to the "day" side. The switch, manual or electric, can be located at the thermostat or at a remote point. **733M**

ELECTRIC LIFT TRUCKS



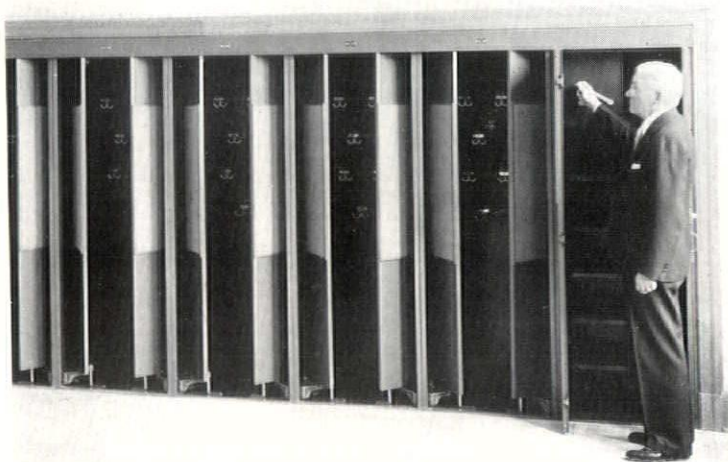
The operation of lift trucks in combination with dump bodies for the purpose of coal firing is becoming increasingly evident. The operation consists of filling the dump body with coal, then moving it on a track to the electric lift truck. Picked up by the truck it is taken to the hoppers of the boiler, elevated, then dumped. Due to the short haul and the intermittent service, the life of the equipment

is expected to be long. Product of the Yale & Towne Mfg. Co., Philadelphia, Pa. **734M**

FURNISHING

WARDROBE UNITS

Consisting of clothing accommodations for pupils, supply storage space, and teachers' closet, the new Bergerobes, a product of the Berger Manufacturing Co., Canton, Ohio, contribute greatly to efficient classroom administration. They consist of metal units equipped with two receding type doors. Operation of the doors for the clothing storage units may be multiple by means of a lever within the teachers' closet. The units are self contained and easily installed. Ventilation is of the recognized standard method, consisting of an open space beneath the doors through which air is forced upward into ducts. **735M**



MULTI-USE BLACKBOARD

By instantly adapting it for other study purposes, the Multi-Use Blackboard Fixture, product of Austral Sales Corp., New York, N. Y., releases all special rooms for standard class purposes. Every panel is reversible, and may be had with cork on one side and blackboard on the other or with both sides of the same material. Two pivoted metal brackets permit the leaf to be brought forward into easel position. An attached color tray catches any drip from painting. With the leaf in vertical position, work boards may be placed upon the brackets providing display shelves or work benches. **736M**

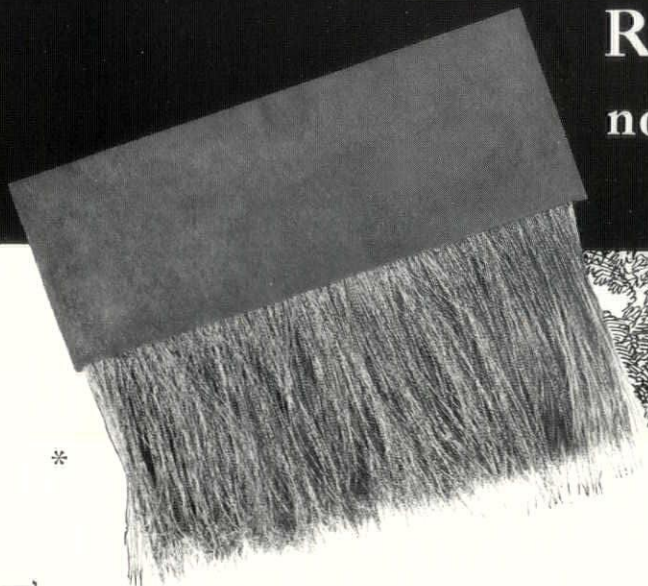


Old English Thatch

Man's oldest and most beautiful

ROOF MATERIAL

now adapted to today's standards



*

THE most practical architect may now employ authentic thatched roof effects in his designs—with full assurance that none of the roof's utility features will be sacrificed.

Aesthetically, Old English Thatch is a roof material with which you can avoid pronounced horizontal roof lines—sharp angles—hardness of line and texture—measured spacings—laboratory colors.

Contours, soft *vertical* lines and texture, the suggestion of massiveness and hand work, nature's own colors—these are the design features of Old English Thatch.

Old English Thatch is genuine, imported Palmyra Reed, scientifically manufactured in shingle* form (see detail), so that, when laid, the finished roof retains all the charm and beauty of Old World thatched roofs.

From the utility standpoint, Old English Thatch gives a completely modern roof—easily installed, weather-tight, virtually everlasting, and possessing special insulating qualities.

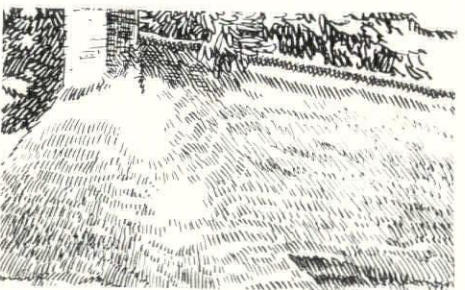
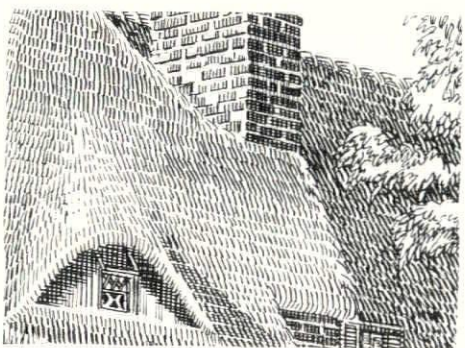
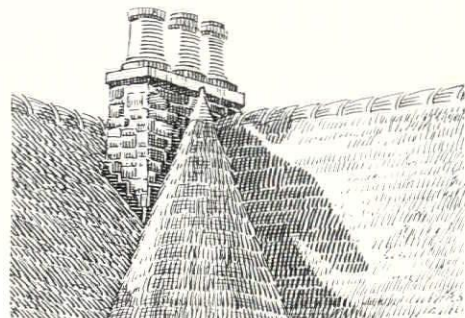
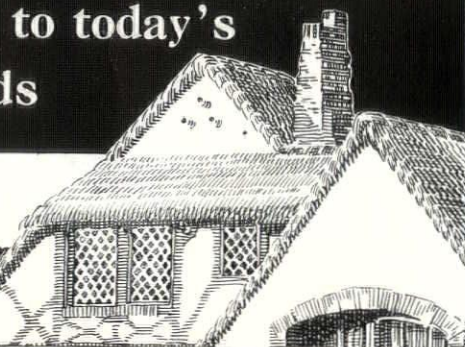


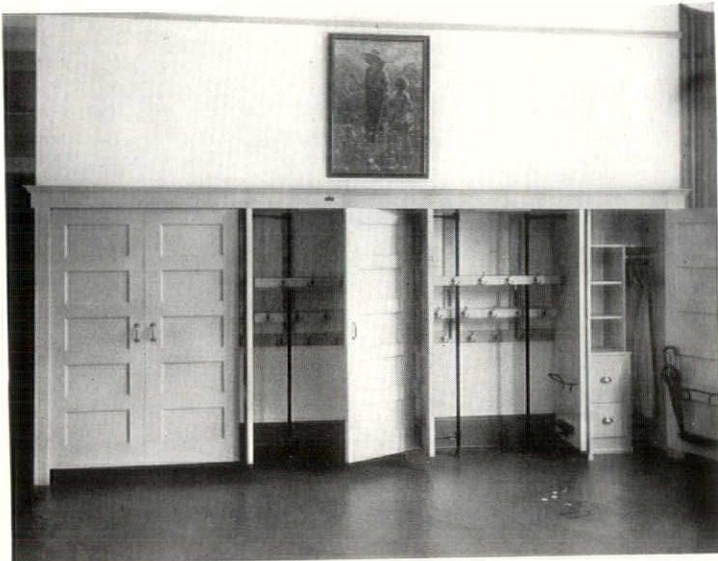
Write for complete file data

*Shingle Construction

Specially selected and treated Palmyra reeds are embedded in 6 in. of asphalt. 20 lb. asbestos roofing felt is folded and bonded on each side of the asphalt to form the shingle base. Shingles are 30 in. wide by 27 in. long. The base of two layers of asbestos, asphalt and reed is 12 in., with the free reed extending about 15 in.

THATCHED ROOF MFG. CORP., STAMFORD, CONN.



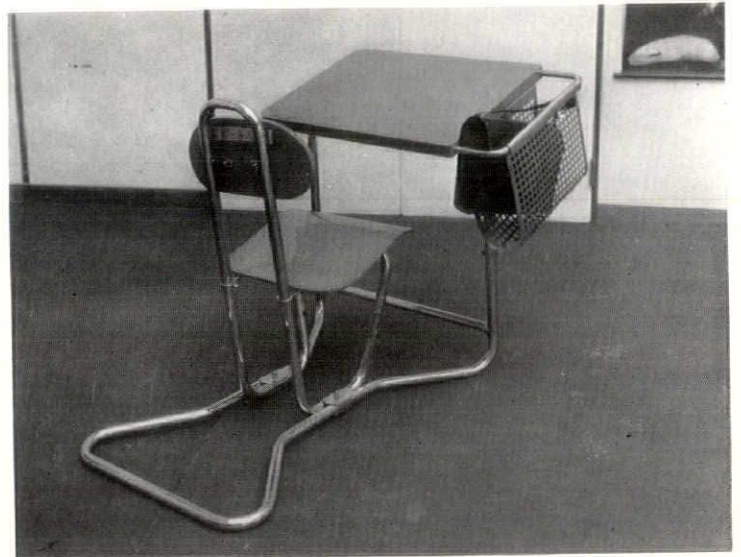
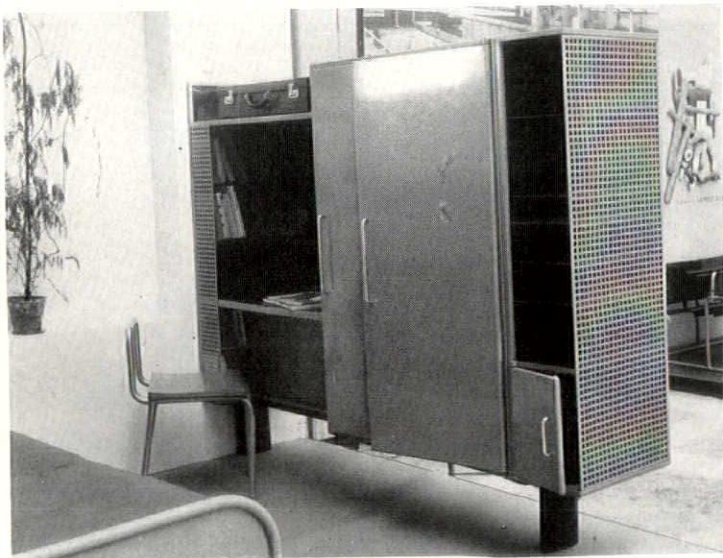


WARDROBE

Due to their interior design Fairhurst Wardrobes, a product of the American Car and Foundry Company, New York, N. Y., care for more pupils than is commonly the case. With a standard depth of 2 feet, the widths vary to individual requirements. In the open position the doors are entirely out of the way at the ends of each compartment. The doors pivot, leaving aisles and interiors free from obstructions whether the doors are open or closed. The operating hardware can be arranged so that each door is opened and closed independently of the other, or so that only one door of each pair need be operated. The wardrobes are furnished complete in wood or metal, including hooks and hangers. **737M**

COMBINATION UNIT

An interesting, compact design of a wardrobe, which includes a writing desk besides clothing and book storage, was recently exhibited at the 1936 Salon d'Automne in Paris. Designed by Marcel Gascoin, the unit is made entirely of metal and finished with lacquer. It is easily moved, and can be used in conjunction with similar units to create cubicles for individual study. **738M**



DESK AND CHAIR

Displayed at the 1936 Salon d'Automne in Paris was this design for a school desk and chair by Rene Herbst. The supporting members are made of plated tubular steel, and the desk top chair seat and back, are of green acetate plastic material. Rene Herbst, in collaboration with Dr. Martiny, designed them to insure physical fitness for their purpose. **739M**

FOLDING TABLES

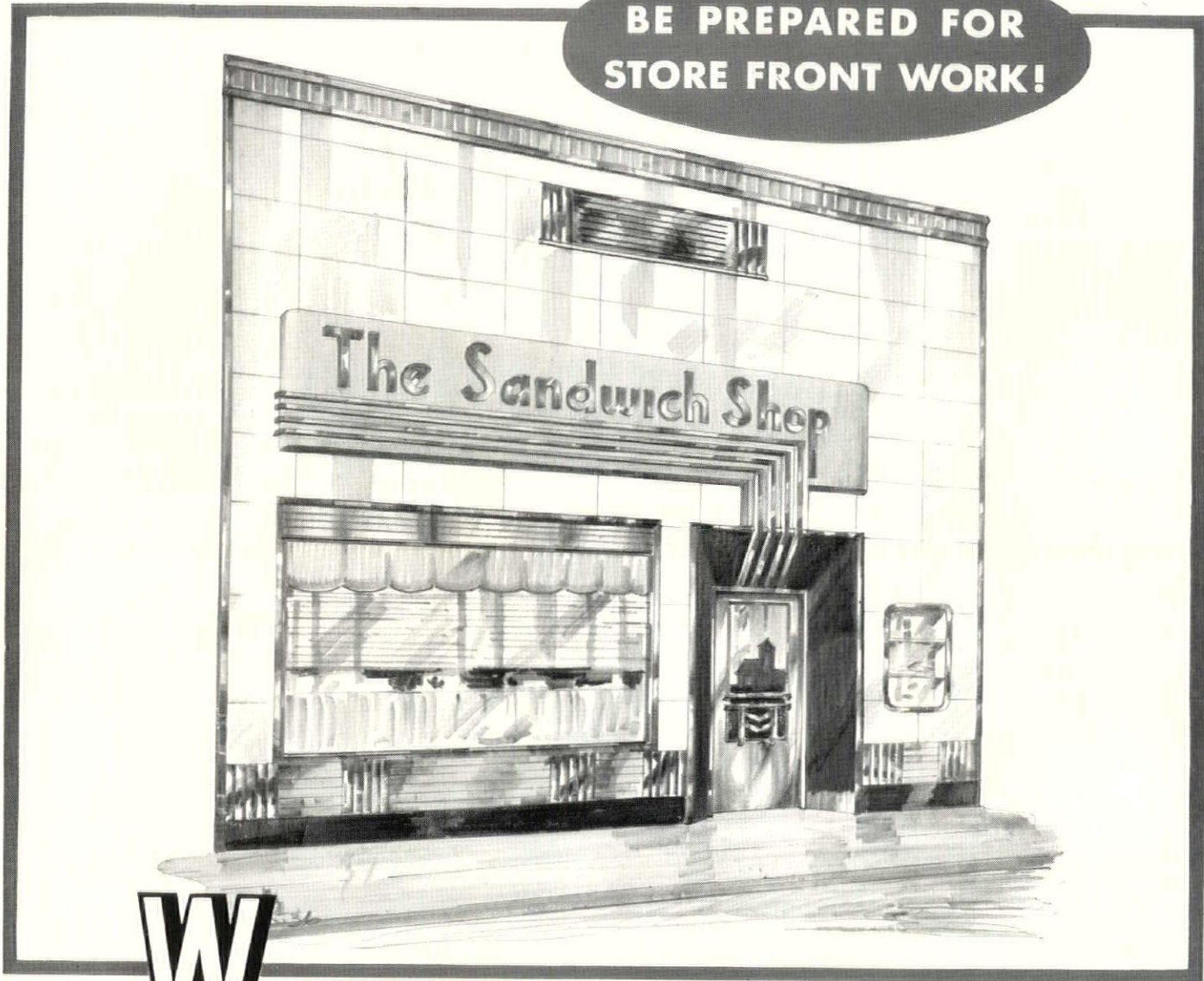
Fold-O-Leg tables, products of the Mitchell Manufacturing Co., Chicago, Ill., may be used for many different purposes. The legs are made of welded steel tubing with steel folding braces securely attached to the tops. Patent single jack-knife locking assembly permits folding and opening of legs with one hand. The steel leg units when folded into the recessed table top allow stacking which affords economy in storing. **740M**

DOUBLE DESK

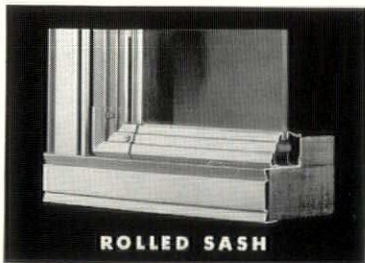
Metal has been used on all the supporting and usually most abused parts of this furniture designed by Jean Prouve. The desk tops are of plain unvarnished wood; the remainder is lacquered in blue. Displayed at the 1936 Salon d'Automne in Paris. **741M**



**BE PREPARED FOR
STORE FRONT WORK!**



WRITE FOR FULL SIZE DETAILS OF ZOURI SECTIONS — AVAILABLE FOR EVERY TYPE OF STORE FRONT



ROLLED SASH



EXTRUDED SASH

Architects and builders everywhere are profiting by renewed activity in the store front field... since aggressive merchants in every line are demanding better store fronts than ever before.

ZOURI is well equipped to furnish up-to-date rustless metal members, which mean so much in the appearance of any type of front. Complete, harmoniously designed construction is available in both rolled and extruded types... including sash, bars,

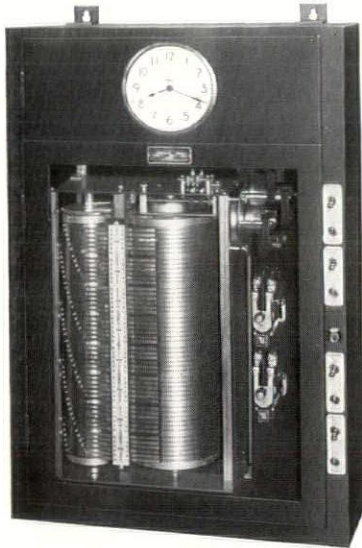
awning and transom bars, and a wide variety of modern mouldings for jambs, sills, pilasters, and other uses. Awning Bars, include the new Recessed, Concealed and Hood types. Entrance Doors, Metal Signs, and special architectural metal work are also furnished. Furnished in bronze, alumilite, and stainless steel.

Write Zouri Store Fronts, Nilus, Michigan, for full size details. SEE THE 12 PAGE ZOURI CATALOG IN THE NEW SWEET'S.

ZOURI STORE FRONTS

MISCELLANEOUS

PROGRAM INSTRUMENTS



For controlling classroom schedules, the Warren Telechron Co., Ashland, Mass., manufactures a single and multiple circuit Program Instrument. Operating on a 24-hour cycle, 7-day calendar element, the single circuit instrument is mounted in a metal cabinet with locked door. The multiple circuit instrument operates on a 12 or 24-hour cycle with adjustable long and short duration signal contacts, and is mounted in a glass paneled heavy gauge cabinet with lock; for surface or flush mounting with conduit connections at top and back; complete, ready to install. Terminal strip and pilot clock are in a separate compartment. **742M**

ELECTRIC PIPELESS ORGAN

Smaller than a piano, a midget in comparison with the vast pipe organs of traditional style, yet capable of 253 million different tones is the electric organ invented by Laurens Hammond of Chicago. Pipeless, it can match in volume of sound the greatest pipe organs. Without reeds or trumpets, it can simulate an infinite variety of musical instruments. Its maintenance cost is that of a radio, standard radio tubes being used not to produce sound but to amplify tones. The synchronous motor which drives the tone generator consumes only ten watts from the house electric circuit; the amplifier requires about 180 watts. A small knob above the keyboards operates the tremulant; a foot-pedal controls the swell. Besides the five-octave manual keyboards there is a pedal clavier of two octaves. The organ is unaffected by temperature or humidity. The electric contacts are composed of a platinum-iridium alloy. The keys are of plastics, mounted permanently on aluminum shanks. **743M**



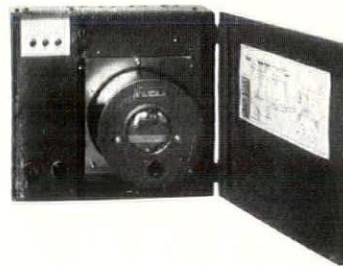
SIGNAL DEVICES



An important factor in the daily routine of educational institutions is the right kind of signaling devices. A recent development of the Schwarze Electric Company, of Adrian, Mich., for classroom and office signals is the Schwarze Chime Signal. This approved Chime Signal is the Xylophone Bar and Resonator type. It produces a mellow, musical-toned chime, which, though soft and dignified, can be heard above the usual school noises.

Other practical devices used in school buildings are the Schwarze Aluminum Full Grids. These grids completely protect outside bells from all common hazards. Schwarze Weather-proof Protective Housing provides insurance for outside bells, against damage from the elements and from dust, dirt, and soot. **744M**

CLOCK SYSTEM CONTROL



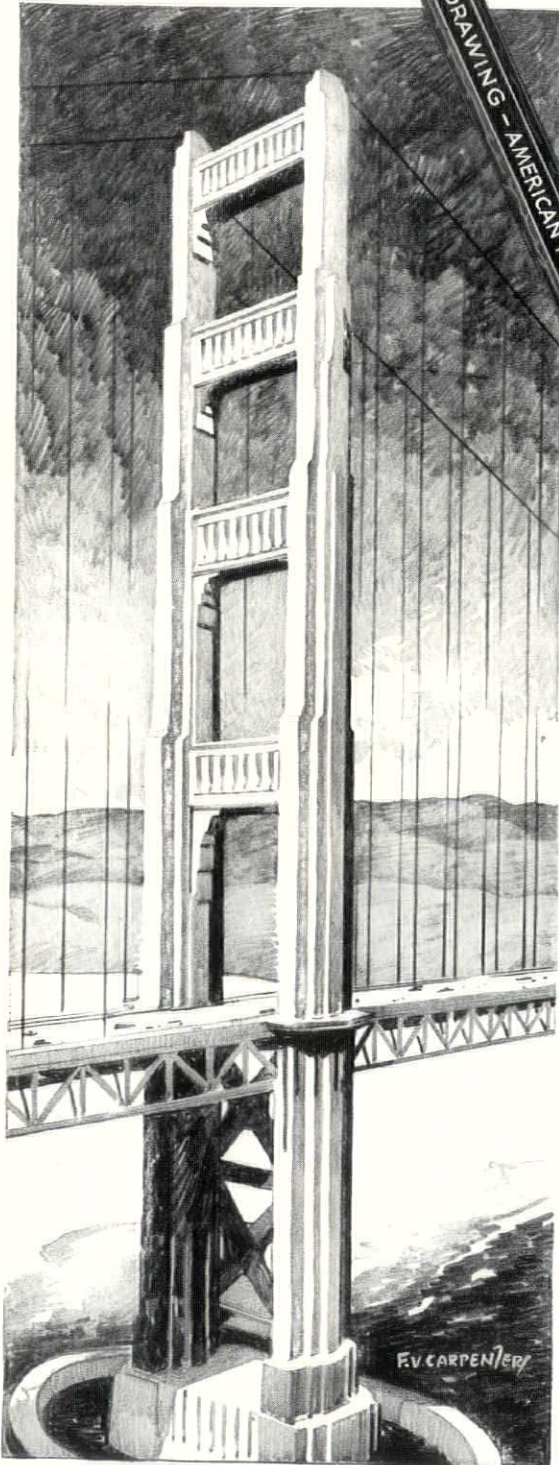
Clocks installed on a common wiring system may be controlled from a central point through automatic or manual resetting devices, manufactured by the Warren Telechron Co., Ashland, Mass. The automatic type measures the interruption period and operates all time-keeping units on a 3-wire circuit at an accelerated rate, after resumption of power, until the system returns to correct time. The manual type operates by means of a flush mounting unit with key type switches for stopping or resetting the entire system. **745M**

TILE CONNECTORS

A revolutionary development for the installation of absorption bed tile is the new E-Z Drain Tile Connector. Made of heavy galvanized iron it is practically indestructible. The tiles are held perfectly in line, and no earth can fall into the joints. Even spacing is automatic, and an equal amount of liquid is distributed at each joint thereby assuring an equal distribution of liquid over the entire bed area. Two types are manufactured. The first is used where gravel lines the bottom of the trench, and where the back-filled soil is firm. The upper half of the joint is covered, sealing the joint against fill-ins or earth dams. The lugs on either side go inside the tile, and insure proper spacing. These lugs are easily bent with the fingers, and can be readily inserted into the tile end. The second type is designed especially for installations in sandy, open soils. This type extends entirely around the tile, forming a strong collar which holds the tile ends securely in place. The bottom half is slotted, and spacing of the tile is automatic. The lugs are adjustable, permitting easy adoption of the connector to any style of tile manufactured, and to any irregularities in the tile itself. Manufactured by the Kaustine Co., Inc., Perry, N. Y. **746M**

The Golden Gate Bridge was started

with a pencil



Joseph B. Strauss, C.E., D.Sc., Pres. and Chief Engineer, Strauss Engineering Corp., Chicago; International authority on bridge design; Originator of Strauss trunnion bascule bridge; Chief Engineer, Golden Gate Bridge, San Francisco, Cal.; Co-Designer, Montreal-South Shore Bridge, Montreal, Canada; Chief Engineer Columbia River Bridge, Longview, Washington.

ROUNDING out the natural beauty of San Francisco's Golden Gate, has risen a new monument to the constructive genius of man—the Golden Gate Bridge.

With majestic towers reaching 746 feet skyward, a main span of 4200 feet and two side spans of 1125 feet—it is the longest suspension bridge in the world.

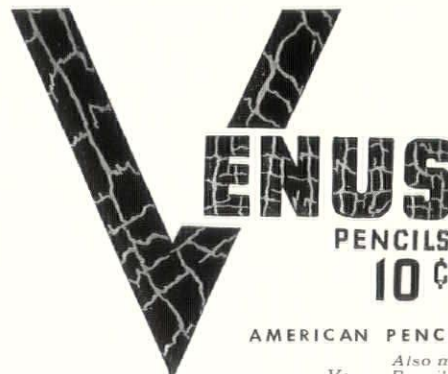
But before construction began—before a contract was let—Joseph B. Strauss, Chief Engineer, and his staff spent many months in planning, sketching and revising—working primarily with paper and pencils!

We are proud of the fact that Venus Drawing Pencils have always been popular favorites in the extensive offices and drafting rooms of the Strauss Engineering Corporation.

Exact grading, plus the smooth, easy writing of Venus pencils has won for them the preference of many leading engineers, and architects. This stamp of approval can invariably be traced to the "colloidal" lead* found only in Venus Drawing pencils.

America's finest drawing pencil—the Venus—offers you your choice of 17 precise shades of black.

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



AMERICAN PENCIL COMPANY, Hoboken, N. J.

*Also made in Canada by
Venus Pencil Company, Ltd., Toronto*

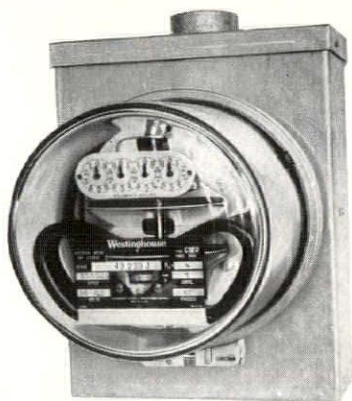
LIGHT METER



A compact light meter, so small that it can be conveniently carried in a vest pocket, has been made available by the General Electric Co., Nela Park, Cleveland, Ohio. In appearance the meter very much resembles a small square-shaped desk clock. On the front of the meter is a rectangular-shaped scale with a range from 0 to 75 footcandles. This range may be increased to a maximum of 750 footcandles by using the multiplier provided. On the scale are candle ranges for different seeing tasks, such as reading large print, office work, drafting, and sewing on dark goods. The back plate of the meter carries the minimum recommended operating footcandle values for different types of work; also a small lug for making zero adjustment. On the top of the meter is the light-sensitive cell which is connected directly to an ammeter calibrated to read in footcandles.

747M

POLYPHASE DETACHABLE METERS



Suitable for any a-c application where a two-element watt-hour meter is required, a new line of polyphase detachable meters has been announced by the Westinghouse Electric and Manufacturing Company, East Pittsburgh, Pa. All of the advantages familiar to the single phase detachable meter have now been incorporated in the two-element line. With two complete elements and discs they may be applied on the same basis as corresponding conventional polyphase meters.

In addition to the many advantages of the detachable construction for outdoor and indoor mounting, adaptability for enclosed wiring, protection against current diversion, interchangeability, low installation costs and general metering economy, these meters have many advantages over the conventional bottom-connected polyphase meter. Suitable sockets for indoor or outdoor installations are available for each of the meters.

748M

LABORATORY EQUIPMENT

De-airated Knight-Ware is an improved ceramic product having a tight, close-grained body which is tough, uniform, thoroughly vitrified and wholly inert to the action of acids, alkalis, chemicals, and corrosive solutions and gases. The de-airing process eliminates such body defects as blisters, pinholes, and lamination. It safely permits a reduced thickness of the ware, giving greater resistance to thermal shocks, a neater appearance and a decreased weight. Knight-Ware products include laboratory sinks, table troughs, sumps, and piping, and are manufactured by Maurice A. Knight, Akron, Ohio.

749M

ACID-PROOF SINKS

Made in one piece with integral drainboards, back, tailpieces, overflows, traps, etc., Cereware sinks are highly vitrified clay products designed to withstand the abuse to which such equipment is exposed. They have a glazed surface that will not craze or peel, and is as resistant to chemical action as the body it covers. There are no sharp corners at the sides and bottom, as these are rounded to facilitate cleaning and to prevent the collection of waste. Cereware sinks are the product of the General Ceramics Co., New York, N. Y.

750M

EXHAUSTER

Artificial draft as provided by this exhauster for the moving of a variable volume of acid gas is under control and more economical than other means when the initial cost and repairs of a chimney are considered. The exhauster is made with the stoneware housing completely enclosed in a cast-iron shell, which serves to protect the stoneware from damage due to external causes. The machines may be driven by belt or directly connected to an electric motor. Manufactured by the General Ceramics Co., New York, N. Y.

751M

SEPTIC TANK

Designed to produce a particularly clear effluent, the Kaustine Super-Septic Tanks have special sloping baffles, so arranged as to discharge the incoming flow over the entire width of the tank with no disturbance of sludge. Outlet baffles prevent the scum from being discharged into the disposal field. The unusual shape of the tanks allows for ample sludge, scum, and gas areas, and at the same time provides large capacities that are of proper proportions. The tanks are made of Armco Ingot Iron, and coated inside and outside with Black Plastic Enamel. Manufacturers: Kaustine Co., Inc., Perry, N. Y.

752M

TOILET FIXTURES

Seats designed for the hard usage encountered in school buildings and made to operate without repair or maintenance expense are found in the Sani-Black line of the C. F. Church Mfg. Co., Holyoke, Mass. The core is of thoroughly kiln dried hardwood to which is anchored a steel plate housing the axis for hinge rotation. The whole exterior, core, plate, and integral check hinge, is covered with a thick coat of composition hard rubber moulded under great pressure. The result is a homogeneous unit of great sanitary qualities.

753M

PIPE JOINTS

The "Flexlock" pipe joint represents a new development in coupling U. S. Stoneware bell-and-spigot pipe. Designed by the B. F. Goodrich Co., and developed for use with chemical stoneware in co-operation with the U. S. Stoneware Co., New York, N. Y., the joints are moulded rubber rings having internal and external circumferential ribs which grip the bell and spigot of the pipe. This type of joint affords a perfect seal, yet is flexible to care easily for expansion. It is economically installed, and requires no joint replacements.

754M

FIRE ESCAPES

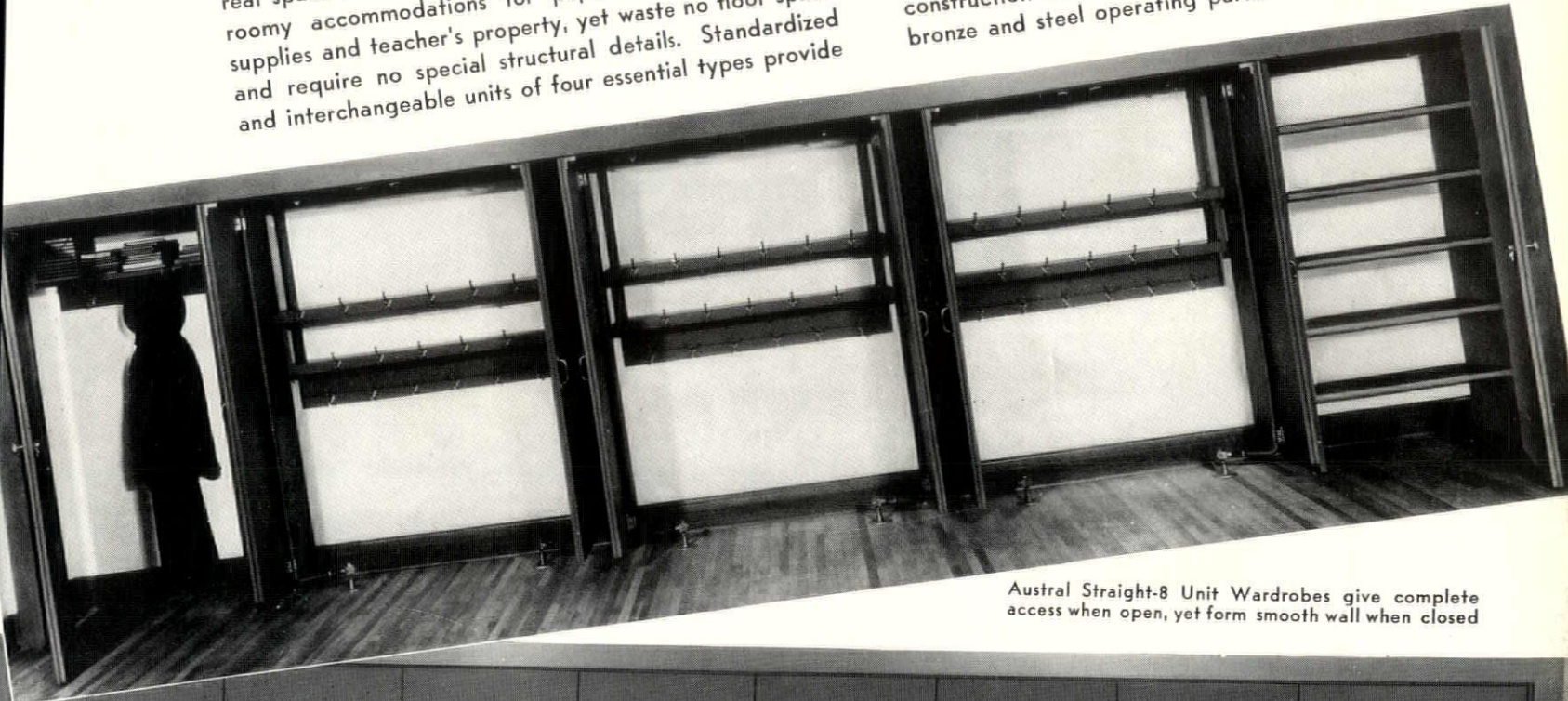
Hazards of the platform system commonly used with spiral escapes are eliminated in the direct entrance spiral slide fire escape made by the Potter Mfg. Co., of Chicago, Ill. The escape is entered from within the building through doors equipped with anti-panic hardware. A patented swing bar makes for ease of entrance and reduces the interval of operation.

755M

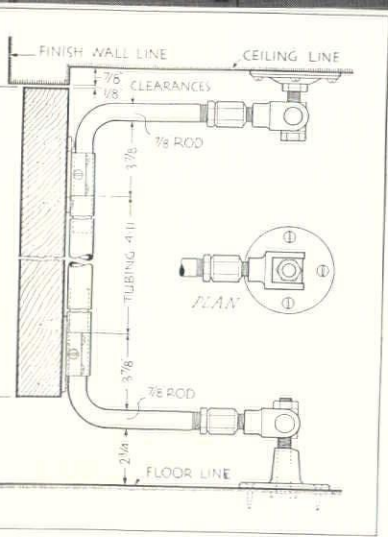
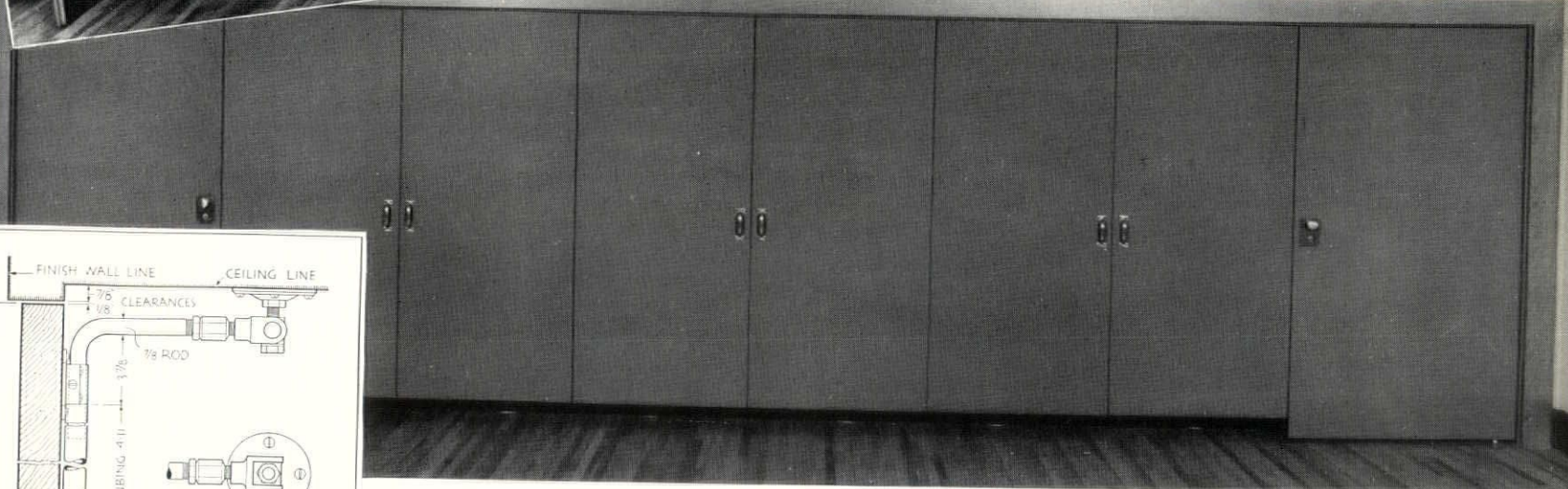
Space Saving School **Unit** Wardrobes

When wardrobes require no more floor space than that taken by the over-clothing they shelter, they are real space-savers. Austral Straight-8 Wardrobes provide roomy accommodations for pupils' clothes, classroom supplies and teacher's property, yet waste no floor space and require no special structural details. Standardized and interchangeable units of four essential types provide

flexibility to fit any classroom requirements and any budget. . . . *Sanitary:* entire floor space is free of obstructions. *Ventilated:* ceiling grilles to vent ducts and open hanging of all clothing assures free air circulation around garments. *Durable:* because of steel construction throughout with accurately machined sturdy bronze and steel operating parts.



Austral Straight-8 Unit Wardrobes give complete access when open, yet form smooth wall when closed

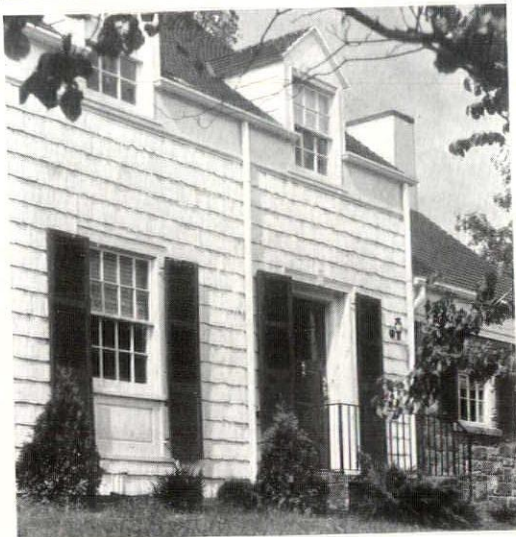


In step with modern school planning standards, Austral Straight-8 Unit Wardrobes are economical of space, cost and maintenance. They add but 2'-2" to the net clear dimension of a classroom. They require no extra doors to corridors, no windows for light and ventilation, no floor space for

access. Special features include: six-way adjustment of precision operating hardware, baked enamel finish on steel that requires no further treatment in field, sanitary details that simplify cleaning. Send for complete literature including data on Austral Multi-Use Blackboards and other school equipment.

AUSTRAL SALES CORPORATION
101 PARK AVENUE • NEW YORK CITY

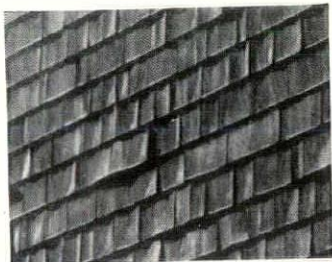
● **How WEATHERBEST Stained Shingles and Shakes give Enduring Style and Beauty with Lasting Economy**



Charming home of Dr. W. L. Seward, West Orange, N. J. R. C. Hunter, Architect

AFTER 6 YEARS

of wear these ordinary shingles (stain brushed after shingles were laid) are cracked and warped—due to contraction and expansion caused by moisture penetrating underside of shingles.



AFTER 13 YEARS

under same weather conditions, these WEATHERBEST Stained Shingles retain their charm and will remain serviceable for many years more. No attention has yet been given them. A single coat of WEATHERBEST Stain will renew their original life and color.



● WEATHERBEST Stained Shingles are made only of No. 1 Certigrade Red Cedar Shingles, kiln dried, rigidly sorted and graded. Each shingle is separately impregnated with color pigments ground in premium linseed oil and highest quality penetrating and binding oils. As a result of this WEATHERBEST Stained Shingles are unusually beautiful and they retain their life and color for many years . . . providing enduring beauty at lowest cost.

For complete information and specifications, see Sweet's Catalog, Time Saver Standards, or write WEATHERBEST CORPORATION, 1272 Main St., No. Tonawanda, N. Y.



WEATHERBEST—Leading in Quality for a Quarter Century

TECHNIQUES

ENCLOSED DC MOTOR



Designed for general service a new line of fan cooled totally enclosed direct current motors is announced by Westinghouse Electric and Manufacturing Company, East Pittsburgh, Pa. Westinghouse Type SK totally enclosed fan cooled motors are built so that all foreign matter is excluded from the interior of the motor. When dust lodges in the windings

of a motor it is almost certain to wear away the insulation and cause grounds and short circuits. The interior of this type of motor is also protected against the entrance of splashing water such as occurs during the hosing of floors or walls. This design has a distinct advantage that permits mounting the pulley or pinion close to the supporting bearing. Also, the motor may be mounted close to a wall or gear box at the pulley and without interfering with the free flow of ventilating air. The flexibility in this construction also permits adaptation, with some modifications, for water-proof and explosion tested applications.

756M

MODUTROL MOTOR

Designed by the Minneapolis-Honeywell Regulator Co., Minneapolis, Minn., the motor is an oil immersed type speed reducer providing a convenient means of translating demands from controllers—operating on functions of temperature, pressure, or relative humidity—into mechanical motion. By immersing in oil and sealing against leakage quiet operation without periodic lubrication is insured. Including a spring return, an interruption of the main current supply, either intentionally or as a result of power failure, causes the motor to be moved to a normally closed position.

757M

VISIBILITY METER



The Luckiesh-Moss Visibility Meter is a new tool designed especially for the lighting specialist. A product of General Electric Co., Nela Park, Cleveland, Ohio, it consists essentially of two colorless filters with precise gradients of

known transmission factor which may be rotated simultaneously in front of the eyes while performing a visual task. The observer holds the instrument to the eyes in much the same manner as he would hold a pair of binoculars and with a finger of his right hand turns a disc which rotates the gradients until the object viewed is just describable. If, for example, the reading on the scale marked "Relative Visibility" is 2, then the object viewed is twice as easy to see as the smallest object which can be recognized by persons who have average normal vision. The scale on the left of the meter shows Recommended Footcandles. This scale is based upon the visibility of reading matter printed in 8-point Bodoni type and black ink on excellent white paper when lighted to a level of illumination of 1-foot-candle. If all visual tasks are studied with the Visibility Meter at a standard level of 10 footcandles, the scale gives a direct reading of the number of footcandles needed so the object can be as easily seen as is 8-point under 10 footcandles.

758M

IVORYLITE DEVICES



SWITCHES. RECEPTACLES. PLATES

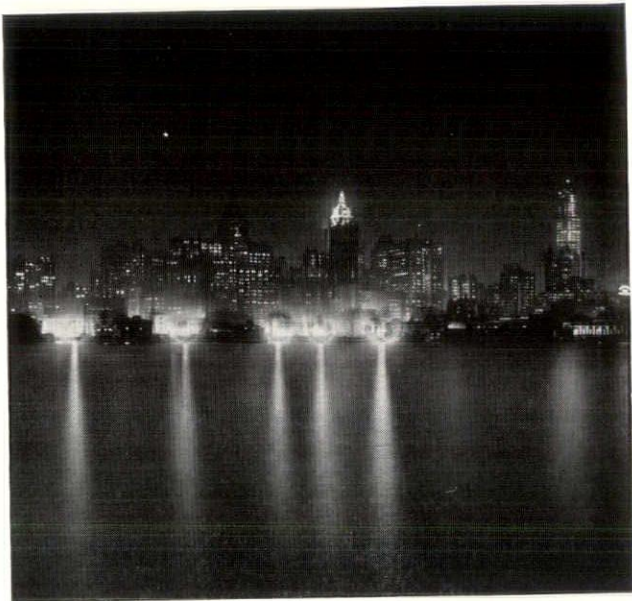
H & H

IVORYLITE Switches, Receptacles, Plates harmonize beautifully with the light wall surfaces of modern interiors. This cream-tinted white moulded material is *ivory-like* in appearance and of solid color throughout. Will not chip, flake or wear off.

IVORYLITE is now available in a complete line for all home-wiring requirements. Plates have attractive borders, with ribbed surface. When soiled they are easily cleaned with a damp cloth. Ask for illustrated page supplement for your catalogue.

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

Lights and Shadows



Courtesy of the New York Edison Co.

For more than 40 years the 17 accurate and definitely graded degrees of Koh-I-Noor pencils have provided a medium for satisfactorily producing light, delicate tints or deep shadows, as the occasion required.

Draftsmen the world over have long recognized that the name "Koh-I-Noor," the symbol of quality in diamonds, is also the password to the best in lead pencils. Whatever your task, choose the Koh-I-Noor degree best suited to your individual taste to produce the desired results.

A copy of our Drawing and Sketching Material catalog, volume 5, is yours for the asking.

KOH-I-NOOR

The Perfect Pencil

KOH-I-NOOR PENCIL COMPANY, INC.
373 FOURTH AVENUE NEW YORK, N. Y.

TECHNIQUES..

FLOOR COVERING

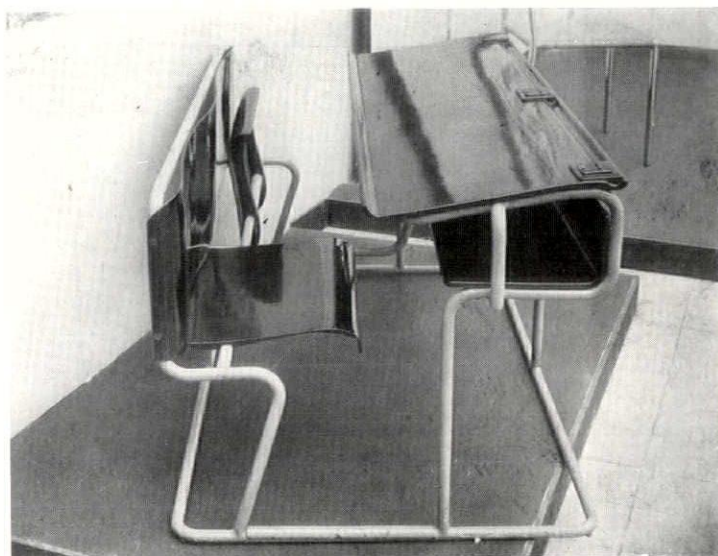
Armstrong's Mastic Armoflor is a new floor covering consisting of a calendered mastic mix on a backing of tough saturated felt. This new product was developed especially to meet the demand for a floor for areas where reasonable durability and low cost are of first importance. An outstanding advantage of Mastic Armoflor is that it can be installed on grade level concrete floors in direct contact with the ground, except where an excessive moisture condition exists. On such installations the floor is applied with Armstrong's Mastic Cement. Durability of the new floor is assured by an extra-heavy wearing surface. It is recommended that the floor be waxed immediately after installation in order to protect the surface and to bring out the full beauty of the material. Where the surface becomes soiled during the installation of the floor, use of a special floor cleaner is advised before the wax is applied. Armstrong's Mastic Armoflor is available in four colors—red, green, black, and brown, a product of the Armstrong Cork Products Company, Lancaster, Pa. **759M**

LINING FELT

A new lining felt, developed for the purpose of providing the best possible permanent installation of linoleum, has been introduced by Armstrong Cork Products Co. This new product is made by Armstrong at the company's own felt mill in Fulton, N. Y., under careful supervision and laboratory control. Made of a selected grade of rugs, it has maximum tear resistance, penetration sufficient to insure maximum bonding and shearing qualities, and has good sound-deadening properties. The new lining felt is resistant to slitting, is heavy enough to take up average irregularities in the subfloor, and dense enough to retard scuffing during installation. As a guide for quick measuring, trade-marks are stamped on the felt exactly one yard apart. In installing linoleum, the lining felt is cemented to the floor, and the linoleum is cemented to the felt. The lining felt takes up expansion and contraction of the wooden floor boards, and adds to the resilience of the floor. **760M**

FURNITURE

Prominent among the school furniture displayed this year at the 1936 Salon d'Automne in Paris, was this lacquered desk and chair combination. Andre Lurcat, noted French architect long associated with school buildings, was the designer. Made entirely of metal to reduce maintenance costs, the furniture is finished with a blue and black lacquer. **761M**



CORK INCREASES AIR CONDITIONING EFFICIENCY IN THIS MODERN STORE . . .



Armstrong's Corkboard on Ducts, Intakes and Other Parts of Air Conditioning System, Helps Assure Year Round Comfort in this S. H. Kress Building, Fort Worth, Texas

ABOVE LEFT—Interior of the beautiful new Kress Store at Fort Worth, showing an unusual and decorative handling of inlets from conditioned air ducts which are insulated with Corkboard.

ABOVE—Armstrong's Corkboard Insulation assures maximum operating efficiency for the Carrier Air Conditioning Equipment in this store built by Bowen Construction Co., Fort Worth.

"MADE-TO-ORDER" weather is provided in this up-to-date Kress building, by a combination winter and summer air conditioning system designed by Jaros, Baum & Bolles, consulting engineers of New York, in collaboration with the architect, Edward F. Sibbert, of the same city.

Throughout the entire air conditioning system, Armstrong's Corkboard Insulation helps assure maximum operating efficiency and economy. The supply and return ducts and fans for the fourth floor—and the supply ducts for the first floor—are insulated with 2" corkboard. All other ducts

are protected by corkboard in 1" thickness. Additional insulating efficiency is provided by 1½" corkboard on the walls of the candy room on the second floor.

For all types of air conditioned and normally heated buildings, Armstrong's Corkboard is an important factor in helping to regulate temperatures and lower cooling or heating costs. Because of its unique cell structure, it forms a positive barrier to the passage of heat, and permanently resists the efficiency-destroying effects of moisture. Moreover, Armstrong's Corkboard offers other valuable advan-

tages. It is structurally strong, light in weight, and easily erected in any kind of construction. It will not settle or pack, and is not subject to deterioration through decay, mold or any other structural change. It is a positive fire retardant.

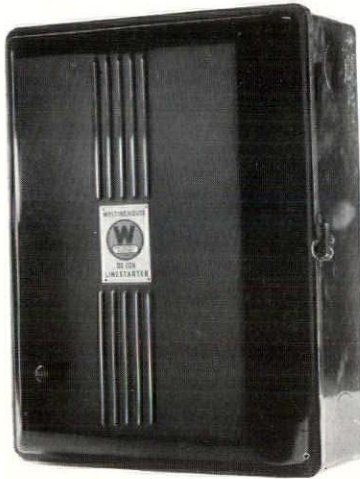
Armstrong's engineers will gladly work with you in figuring insulation requirements for any type of job. Write today for complete details and samples of Armstrong's Corkboard. Armstrong Cork Products Company, Building Materials Division, 926 Concord Street, Lancaster, Pennsylvania.



Armstrong's CORKBOARD INSULATION

TECHNIQUES..(CONTINUED)

NON-REVERSING LINESTARTERS



A new line of De-ion non-reversing line starters has recently been announced by the Westinghouse Electric and Manufacturing Company, East Pittsburgh, Pa. Available in four sizes ranging from 25 amperes to 150 amperes, they are used for across-the-line starting of squirrel-cage induction motors, and as primary switches for wound rotor induction motors. Typical applications include machine tools, textile machinery, pumps, fans, and similar machines where control is desired from a push-button or other pilot device

with complete protection to operator, motor, and machine. These line starters are compact in design with complete accessibility and dependability. The De-ion arc quencher confines, divides, and extinguishes the arc almost instantly without flash or scattering of flame, giving not only a high degree of safety but also practically unlimited life of arc box and contacts. Vertical operation of the magnet prevents accidental closing of contacts due to mechanical shock or tilting. Reliable motor protection is provided by a new bi-metal thermal overload relay. Their appearance is distinctive with rounded corners and ver-

tical lines on the cover. The contactor and overload relay are mounted on a steel panel with no back of panel wiring which makes the line starters ideal for built-in applications. All parts and terminals are conveniently accessible from the front. **762M**

LIGHTWEIGHT CONCRETE IN ENGLAND

The demand for lightweight concrete in modern building is increasing and several novel materials which can be used for making it, in place of pumice mainly imported from the volcanic deposits near Coblenz in Germany, or furnace clinker and coke breeze, are described in a Bulletin prepared by the Building Research Station, recently issued in England by the Department of Scientific and Industrial Research. One of these products, the production of which is new to England, is "foamed slag" made by rapidly chilling molten slag from blast furnaces manufacturing pig iron. Foamed slag is extensively used in Germany and competes seriously with pumice even in the vicinity of the pumice quarries. Building blocks are made of various sizes and shapes so that it is not necessary to cut blocks during construction. It is claimed in Germany that blocks 50 per cent larger in size than ordinary clay bricks are only half the weight, and for the same volume are only half the price of clay bricks. An example in England of the use of foamed slag concrete blocks is to be found in the Fire Testing Station at Elstree, Hertfordshire, recently erected for the Fire Offices Committee.

Production has also been begun in England of a light material obtained by rapidly heating clays and shales, while the Building Research Station has found that certain slates when heated expand to many times their original thickness.

(Continued on page 130)

FRICK TRADE MARK

Refrigeration

Is used for air conditioning 14 stories of the building at 22 East 40th Street, N. Y. City, where two Frick Compressors carry the refrigerating load of 285 tons. Get the benefit of our experience in air conditioning work, dating back over a quarter of a century.

WAYNESBORO, PENNA. U.S.A.

FRICK CO.

DEPENDABLE REFRIGERATION SINCE 1882

COLORFUL STORE FRONTS

with Inlays

Formica store fronts are colorful, and with inlays in color or metal are capable of producing some highly individual effects. They are installed rapidly and easily by carpenters. For these reasons they have gained a large popularity for the fronts of chain stores, theaters and other buildings everywhere.

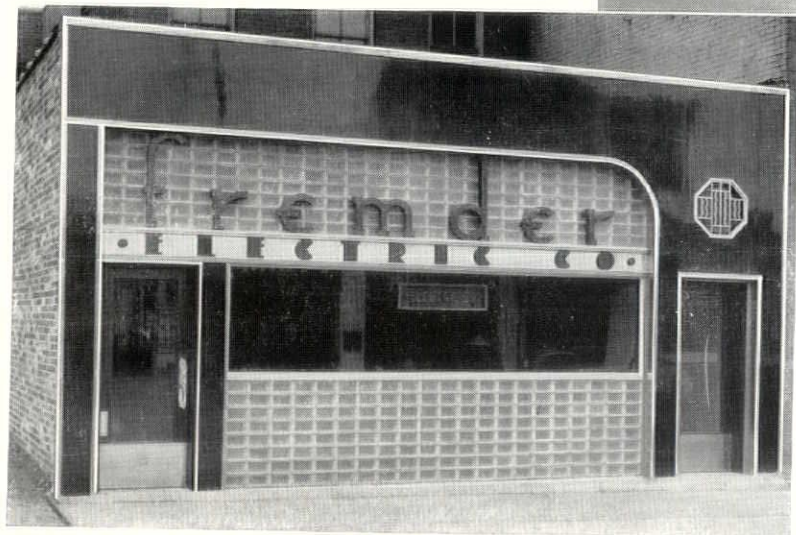


Above: Formica store front in jet black, installed with metal ornament at Delmar Boulevard and Skiker, St. Louis, Mo.

Right: Formica store front in a characteristic blue color with sign inlaid in bright white metal. This is one of many installed in several cities by this leading chain store.



Below: Store front at 4522 Delmar Boulevard, St. Louis, Mo.; Leo Abrams, architect, Sol Abrahams & Son, Contractors.



Formica for store front purposes is available in several thicknesses and in more than 50 colors. Decorations are possible by inlaying white metal, or by inlaying one color over another. The colors are fast and not affected by sunlight. In some places these store fronts have doubled a merchant's volume in the same space.

THE FORMICA INSULATION CO.
4651 SPRING GROVE AVE., CINCINNATI, O.

FOR BUILDING PURPOSES

FORMICA



KILLING TWO BIRDS WITH ONE STONE

Woburn's City Hall was concreted in typical Massachusetts winter weather. Knowing that 'Incor' cures thoroughly in one-fifth the usual time, Architect M. A. Dyer specified this ten-year-tested high-early-strength cement, (1) for floor slabs and roof, to reduce cold-weather heat-protection costs, (2) for the wearing course of floors and basement, to obtain greater wear resistance. Results:

Concrete, self-supporting 8 days sooner, saved that much heat-protection cost on each floor—earlier re-use reduced form costs. Net saving, \$517. And floor surfaces, cured thoroughly in 24 to 48 hours, are stronger, denser, more water-tight. Completed in 1929, 'Incor' concrete is in perfect condition today. Better concrete, at less cost—two birds with one stone. Suggesting that architects consider the economy of switching to 'Incor'* on cold-weather concreting now in progress. Made and sold by Lone Star Cement Corporation, New York. Sales offices in principal cities.

*Reg. U. S. Pat. Off.

'INCOR' 24-HOUR CEMENT

AMERICAN ARCHITECT AND ARCHITECTURE, FEBRUARY 1937

NEW CATALOGS...

Readers of AMERICAN ARCHITECT and ARCHITECTURE may secure without cost any or all of the manufacturers' catalogs described on this and the following page by mailing the prepaid post card printed below after writing the numbers of the catalogs wanted. Distribution of catalogs to draftsmen and students is optional with the manufacturers

Gravity Heaters

96 . . . The important exclusive features, together with details of construction, of the Janitrol Gravity Heater are described and illustrated in a six-page booklet (Form SP-16) recently issued by Surface Combustion Corporation, Toledo, Ohio.

Aluminum Paint

97 . . . The uses and application of aluminum paint prepared with Alcoa Albron Aluminum paste or powder are discussed in a 64-page booklet issued by Aluminum Company of America, Pittsburgh. It describes the advantages of this type of paint and demonstrates its use in many fields of industry. Complete specification data are included.

Rock Wool Insulation

98 . . . A 24-page consumer brochure recently published by Johns-Manville, New York, discusses the necessity for insulation to provide a cooler, more comfortable home in summer and an easier-to-heat home in the winter. It describes Rock Wool Home Insulation and contains several photographs of insulated homes, owners of which give actual figures on winter fuel savings. The blowing process, by which rock wool can be evenly applied in walls of existing homes, is fully described.

Wall Coping

99 . . . Robinson Salt-Glazed Vitriified Clay Lap-Lok Wall Coping is fully described and illustrated in Bulletin L, a 4-page folder published by The Robinson Clay Product Company of New York. Buff colored Lap-Lok Coping to match stone and buff colored brick work is now available. Filing Size; A. I. A. File 5-K.

Copper Shingles

100 . . . A twelve-page catalog published by The New Haven Copper Company, Seymour, Conn., discusses the advantages of Kenmar Copper Shingles for roofing of residences and other buildings. Many typical installations are illustrated.

Hatchways

101 . . . The Bilco Home Hatchway is illustrated and described in a four-page, filing-sized, catalog issued by Bilco Mfg. Company, New Haven, Conn. Dimensions and a setting diagram are included.

California Redwood Lumber

102 . . . Standard specifications for grades of California Redwood Lumber as adopted July 15, 1936, by the California Redwood Association, San Francisco, Cal., are embodied in a 64-page, pocket-sized booklet. Stock patterns of worked California Redwood are illustrated on the concluding pages of the manual.

Arc Welding

103 . . . "The New Arc Welding Technique" is the title of a new booklet (Bulletin No. 412) recently released by The Lincoln Electric Company, Cleveland. It describes the features and advantages of Dual Continuous Control on the new "Shield-Arc S.A.E." welder.

Circulating Unit Heater

104 . . . The Muelleraire, a complete portable, automatic, gas-fired circulating unit heater, is described and illustrated in a four-page catalog issued by L. J. Mueller Furnace Co., Milwaukee, Wisconsin. Ratings and dimensions are given.

Steel Boilers

105 . . . An illustrated folder (Circular RM-92) just released by Kewanee Boiler Corporation, Kewanee, Ill., shows its new Smartline Jackets for the Round "R" type Steel Boilers for heating homes and smaller buildings. The features of these boilers, together with complete mechanical specifications, are described and tabulated. Filing size; A. I. A. File 30-C-1.

Plywood

106 . . . "Facts About Douglas Fir Plywood" issued by Douglas Fir Plywood Association, Tacoma, Washington, contains informative data heretofore unpublished by this organization. Physical characteristics, finishing methods, test data, and representative uses, such as for crack-proof walls and ceilings, wainscoting, partitions, flooring, sheathing, concrete forms, etc., are fully described.

Radiators

107 . . . Burnham Slenderized Radiators and Fero Tube Radiators are cataloged in a small brochure of 16 pages (Form No. 764A) available through Burnham Boiler Corporation, Irvington, N. Y. Complete dimensional and rating data are included. Universal Wall Brackets are also illustrated.

Cellular Steel Floor

108 . . . Complete details about the Robertson Wiring Method, which involves, basically, the Robertson Cellular Steel Floor, a structural load-carrying element, and a complementary system of headers or cell feeders, are contained in a 52-page brochure published by H. H. Robertson Company, Pittsburgh.

Dumbwaiters

109 . . . John W. Kiesling & Son, Inc., Brooklyn, N. Y., recently published a four-page catalog illustrating and describing its line of electric dumbwaiters and doors. The important features of the line are fully outlined.

NO POSTAGE REQUIRED ON THIS CARD

AMERICAN ARCHITECT and ARCHITECTURE

February, 1937

New York, N. Y.

Please have the following catalogs reviewed in this issue sent to me.

Numbers

• I also desire further information about the new products described in this month's "Techniques." . . .

Numbers

• I would like to have catalogs and information concerning the following products advertised in this issue. (Write page number or name.)

Check here for FREE copy of "WHEN YOU BUILD" booklet.

Name

Firm name

Address

City

Occupation

These NEW Catalogs may be obtained through

AMERICAN ARCHITECT and ARCHITECTURE

Wallpaper

110 . . . A few typical selections from the wide range of patterns to be found in the "Designs of Today" series in wallpaper as created by Richard E. Thibaut, Inc., New York, are presented in a small portfolio recently issued. Also included is a small folder describing Duray, the washable wall covering.

Stainless Steel

111 . . . The physical properties, fabrication methods and uses of Enduro 18-8 Types Stainless Steel are fully discussed in a 24-page and cover booklet (ADV-144) prepared by Republic Steel Company, Cleveland, Ohio. A table of laboratory corrosion data is included.

High-Early Strength Cement

112 . . . Helpful information on the mixing and placing of concrete at low temperatures is contained in a new broadside issued by Lehigh Portland Cement Company, Allentown, Pa. Data include recommended practice with Lehigh Early Strength Cement, comparative strength values, determining service strength at low temperatures, etc.

Winter Air Conditioning Unit

113 . . . The "Afco Air-Stream Unit" for oil burning is discussed in Bulletin No. 115-C, a six page folder issued by American Furnace Company, St. Louis, Mo. Operation, mechanical specifications, sizes and capacities are fully described.

Cast-Iron Oil-Heating Unit

114 . . . A general catalog on National Nu-Way Cast-Iron Oil Heating Units is offered by National Air Conditioning, Inc., New York. Each feature of the unit is fully described, together with longitudinal sectional and dimensional drawings. Filing size; A. I. A. File 30-C-14.

Decorative Iron Work

115 . . . The line of plain and ornamental railings, bracket and pier lanterns and interior gates manufactured by The Stewart Iron Works Company, Inc., Cincinnati, Ohio is described and illustrated in a new 20-page, filing 1-sized catalog (No. R-36) just issued. Details of construction, typical specifications and instructions for measuring are included.

Flexwood

116 . . . Instructions on how to specify and erect Flexwood are contained in a four-page filing sized folder issued by United States Plywood Company, Inc., New York.

Steel Boiler

117 . . . The Richardson Scotlo Boiler, a steel boiler embodying the features of the Scotch Marine and Locomotive type boilers, is described and illustrated in a four-page folder issued by Richardson & Boynton Co., New York. Sectional drawings, ratings, etc., are included.

Outside Blinds and Awnings

118 . . . Wilson Outside Blinds and Awnings, made in wood or metal, are featured in a four-page, filing-sized folder recently published by The J. G. Wilson Corporation, New York. Several types are illustrated.

Air Conditioning

119 . . . "Modernize—Merchandise" is the title of a new 12-page bulletin issued by Carrier Corp., Newark, N. J., on air conditioning for stores, restaurants, theatres, funeral parlors, etc. Various types of units for ceiling, wall and floor mounting are included. In addition, the use of compressors and evaporative condensers is illustrated. A feature of the brochure is diagrammatic visualization of duct work and cooling coil headers.

Refrigerators

120 . . . Universal Refrigerators, which use the Ice-Cycle System of refrigeration, are featured in a 16-page catalog (No. R371) recently published by Landers, Frary & Clark, New Britain, Conn. All models in the line are illustrated and described, together with the individual features.

Red Cypress

121 . . . The Southern Cypress Manufacturers Association, Jacksonville, Fla., has issued a booklet entitled "An Inside Story of Tidewater Red Cypress for Interiors of Beauty and Stability" which illustrates the use of this material in many interiors and presents instructive data on its merits.

Vibration Control

122 . . . Two new four-page brochures issued by The Korfund Company, Inc., Long Island City, N. Y., pertain to hammer and punch press vibration control and newspaper press foundations. Each describes the use of Korfund vibration isolation products for each condition.

Single Phase Motors

123 . . . The features and advantages of Century Repulsion Start Induction, Brush Lifting, Single Phase Motors are set forth in an eight-page catalog recently issued by Century Electric Company, St. Louis, Mo. Various models of $\frac{3}{8}$ to 40 hp are illustrated.

Gas Water Heater

124 . . . Three new folders have been issued by The Pittsburgh Water Heater Corp., Pittsburgh, Pa., relating to Pittsburgh's Streamline Automatic Gas Water Heaters, Models M-1, M-2 and E-2 respectively. Dimensions and ratings are given.

Oil Furnace

125 . . . Condensed information on the S-N completely automatic Oil Furnace is contained in an illustrated, four-page filing-sized catalog (Form 411) issued by Scott-Newcomb, Inc., St. Louis, Mo.

Traffic Signals and Controls

126 . . . A conveniently indexed catalog (No. 226) covering the line of traffic signals and controls manufactured by Crouse-Hinds Company, Syracuse, N. Y., has just been issued. It gives complete data on traffic signals, controls, beacons and flashers, traffic flow regulator, accessories, poles, pedestals and cabinets, etc. Included are complete dimensional data, schematic wiring diagrams, list prices and other pertinent data.

FIRST CLASS
PERMIT NO. 5
(Sec. 510 P L & R)
NEW YORK, N. Y.

BUSINESS REPLY CARD

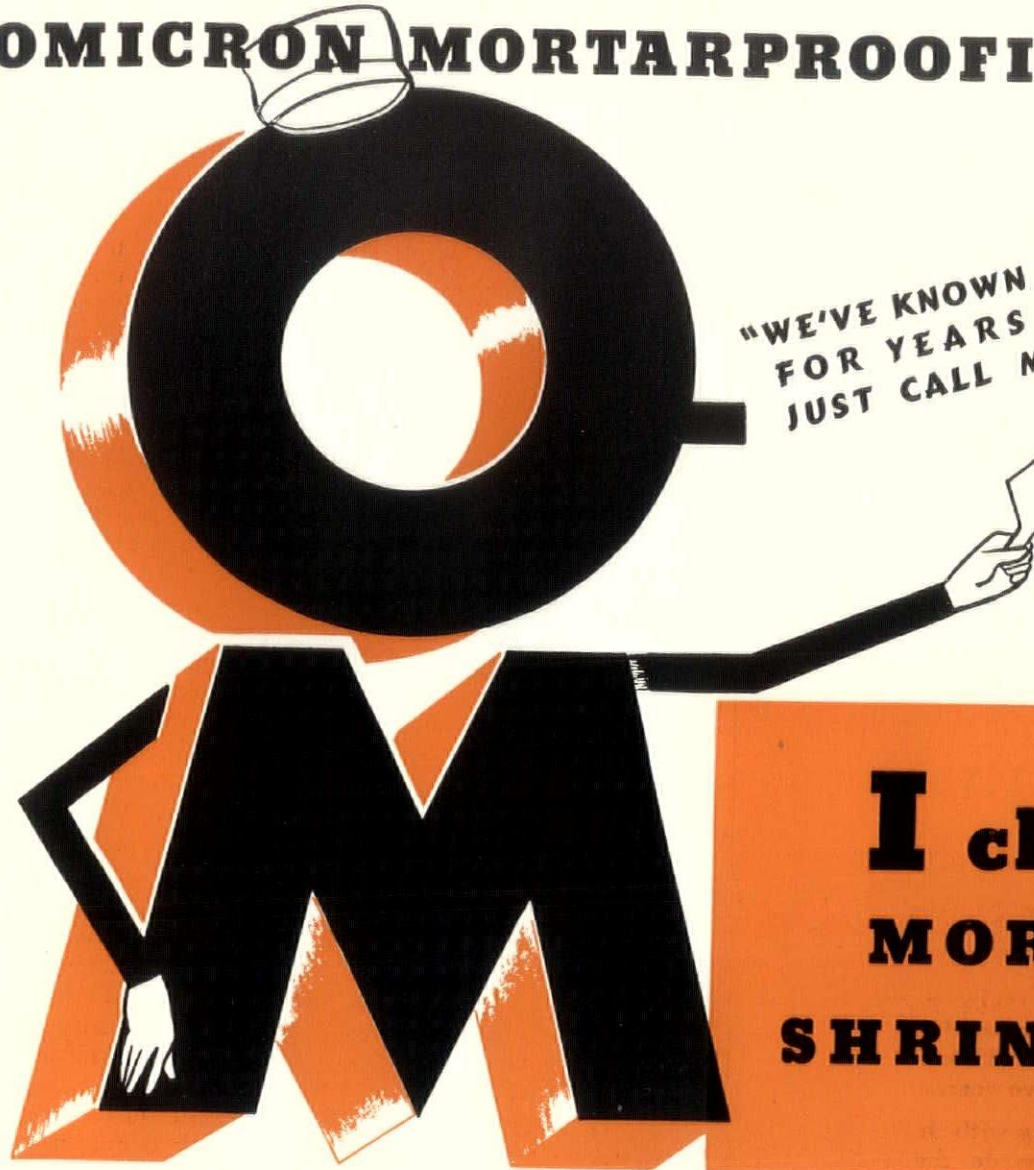
NO POSTAGE STAMP NECESSARY IF MAILED IN THE UNITED STATES

2c. POSTAGE WILL BE PAID BY

AMERICAN ARCHITECT
and ARCHITECTURE

572 Madison Avenue
New York, N. Y.

OMICRON MORTARPROOFING SAYS



"WE'VE KNOWN EACH OTHER
FOR YEARS... SO NOW
JUST CALL ME O. M."

I check MORTAR SHRINKAGE!

"MY FRIENDS call me O.M.—for short. By my initials or my full name, they know I'm the same, efficient, effective product that has made such a great record in successfully attacking mortar shrinkage!

"I prevent bond failure . . . make possible weatherproof brick walls . . . because I reduce the excess water, hence check shrinkage cracks—the principal cause of leaky walls!

"Last year I was twice as busy as the year before, and it looks like I'm heading for the busiest year of my life. More and more folks are discovering I do a real job for little money!

"Write me now, for complete list of recent O. M. jobs, and ask for proof of O. M. facts on your job under actual working conditions."

THE MASTER BUILDERS COMPANY • Cleveland, Ohio
In Canada: The Master Builders Company, Limited, Toronto

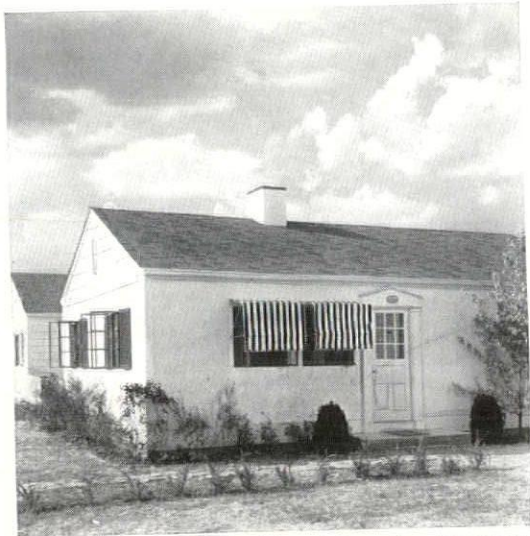
Actual photo of ordinary mortar joints. Note shrunken, cracked mortar, permitting rapid water seepage and destruction.



Actual photo shows how Omicron Mortarproofing preserves the bond—makes possible weatherproof brick walls.



MASTER BUILDERS



Tego-bonded panels form entire exterior and interiors of this Gunnison Magic Home, Louisville

TEGO-BONDING

MEANS EXPOSURE-PROOF PLYWOOD

PLYWOOD that is really proof to water, weather and mold has become an established commercial product in the past two years.

Tego-bonding—gluing with dry resin film adhesive—has made the availability of such a material a fact.

Tego-bonded plywood offers not merely improved resistance to moisture and exposure breakdown. It offers permanent assurance against delamination due to glue deterioration, whether from water, climate changes or mold growth.

Tego Resin Film is manufactured by *The Resinous Products and Chemical Company, Inc., Philadelphia, Pa.*

RESINOUS  PRODUCTS

(Continued from page 124)

The resulting concrete is cellular in structure and will float on water.

A table giving figures for the properties of various lightweight concretes shows that those made from foamed slag and expanded slate compare very favorably with those made from other materials.

In England, lightweight concretes have been used mainly for internal work. As regards external work, various failures, the Bulletin states, that have occurred in Great Britain owing to lack of knowledge of the properties of the concretes have prevented a more extended use of these materials in external walling. "It is felt, nevertheless, that any consequent general restriction of the use of lightweight concretes is unnecessary, since much fuller information on the properties of these materials and the precautions necessary in their use is now available. Lightweight slag aggregates and pumice have been extensively and most successfully used in Germany in external wall construction, while in France lightweight concretes are freely used for the inner leaf of hollow walls in framed structures. In view of the great economies in weight and the enhanced thermal insulation afforded by walls of this kind, it would be unfortunate if their rational development were to be prejudiced."

For many of the purposes for which lightweight concretes are required, a very modest mechanical strength is adequate and it is felt that undue importance may have been given to strength requirements in using similar materials in Great Britain, with the result that shrinkage troubles have been common.

The strength of concrete increases with the proportion of cement used in it but the expansion and contraction of the concrete as it picks up and loses moisture with changing weather conditions also increases and this may cause cracks and other troubles. Mixes with only 1 part of cement to 12 parts of lightweight material are used for panel fillings for external walls in Germany and the use of such lean mixes may be an important factor contributing to the successful work which has been carried out abroad in lightweight concretes.

It is pointed out that porous concretes cannot be expected to afford any high degree of protection to embedded steel from external corrosive agencies, so that some additional protection will be necessary. All lightweight concretes, it is stated, appear to take normal plasters quite satisfactorily, provided the concretes do not contain an appreciable quantity of salts soluble in water which may dissolve out of the blocks and pass into the plaster, so causing slight unsightly stains or complete disfigurement of decorations. Owing to the presence in lightweight concretes of air-filled cavities, these concretes allow heat to pass through them to a much smaller extent than normal concrete. Thus buildings in which they are used should be easily warmed in winter and should be cool in summer. Dealing with the transmission of noise through partitions, the Bulletin states that in simple structures, lightweight partitions are not likely to be very effective as sound insulators since it is generally agreed that sound insulation increases with mass per unit area of the partition. Work at present in progress, however, indicates that by breaking structural continuity it is possible to obtain high values of sound insulation with relatively light materials. It seems likely, therefore, that the trend of development of soundproof partitions will lie in the direction of special forms of cavity construction in lightweight materials.

As regards fire resisting properties, little first-hand information is available owing to the absence in the past of large scale testing facilities in this country. This has now been remedied by the erection of a fire testing station at Elstree. The Bulletin refers, however, to tests carried out in the United States of America on hollow concrete walls, in which certain types of lightweight aggregate, notably expanded clay and slag, showed a marked superiority to ballast aggregates in respect of both heat resistance and residual strength after exposure. Tests on concrete protection for structural steel columns, on the other hand, indicated that clinker concrete was less effective than some of the dense concretes—a result which supports the recommendation that clinker aggregate should not be used for this purpose.

In conclusion a number of special points are referred to which should be considered in specifying concrete mixes of lightweight aggregates for various uses.

STEEL BRIDGE COMPETITION

Students of engineering and of architecture are invited to participate in the ninth annual design competition offered by the American Institute of Steel Construction. A circular describing this competition is now being mailed to all the colleges and universities in the United States, and students are asked to submit their designs not later than April 12, 1937. A jury of nationally known authorities will be named to make the selections on or about April 20.

There will be three cash prizes instead of the two prizes offered in previous years. The design selected as the best will receive an award of \$150; the second best, \$100, and the third \$50.

The subject of the competitive design is a steel highway bridge. The bridge carries a highway in a straight line over a stream 300 feet wide from bank to bank. A four-lane highway, 40 feet between curbs with one 5-foot sidewalk, is to be carried across the navigable stream, connecting a parkway on the high land to the south with a boulevard on the plateau to the north. Suitable lighting is to be provided for the type of traffic carried.

The required navigation clearance at the center of the stream is 150 feet horizontal and 70 feet vertical (with the necessity of maintaining this clearance prism during construction). There is also a requirement that no piers be built in the stream. On the north river bank is a double track railroad, occupying a right-of-way width of 50 feet, within which no piers may be constructed.

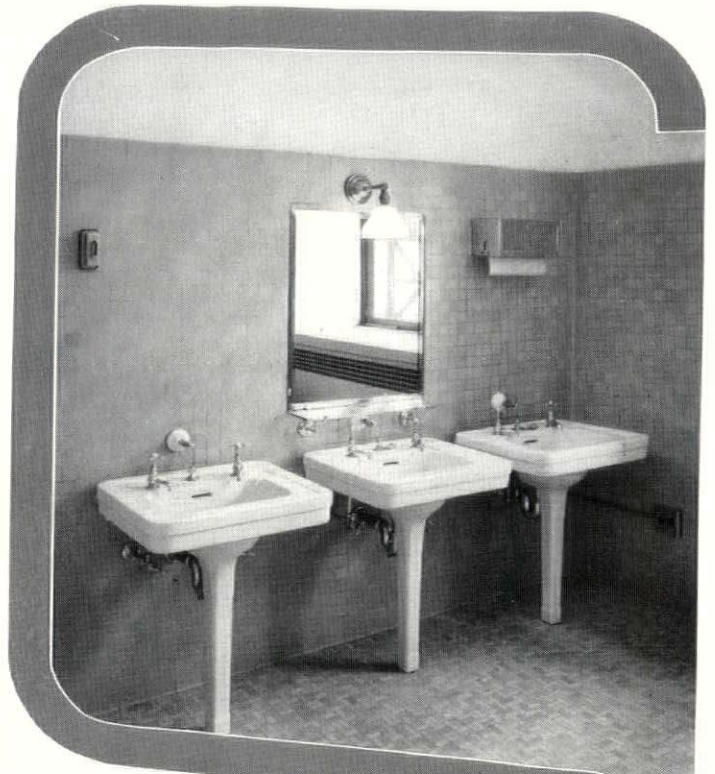
The problem presupposes that there are ample funds available with which to build an efficient structure of good appearance, but no money is available for expensive decoration or masonry. The superstructure must be of steel throughout and the abutments and piers of stone-faced masonry.

LECTURE TOUR FOR HOUSER

Captain Richard L. Reiss, an internationally recognized authority on public housing arrived in New York City from England last month to make a speaking tour of the eastern states under the auspices of the National Public Housing Conference.

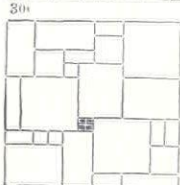
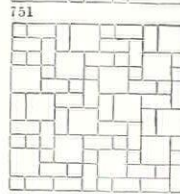
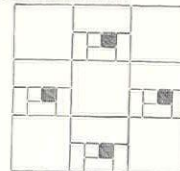
His first address in this country was made before the fourth annual slum clearance and low rent housing conference held at the Hotel Willard in Washington, January 22 to 24,

SPARTA MOUNTED TILES FOR THE FINEST OF PUBLIC BUILDING INTERIORS



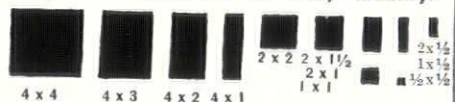
Washroom in Archives Building,
Washington, D. C.
Office of John Russell Pope, Architect

PATTERN NO.:



Many architects specify unglazed ceramic mosaic for walls and floors, because this material is durable and maintains an appearance of newness. Sparta walls, always set by the FLOATING method, are permanent and low in cost. Patterns employing either large or small units meet your scale requirements. Not only flat, but cushion-edge, fluted or beaded surfaces are available.

Write or telephone for specifications, sketches, samples or suggestions. We cheerfully serve architects in every locality.



Here are the sizes we will mount individually or collectively. Try a new pattern with them. The result will please you.

BY THE

SPARTA
CERAMIC CO.
EAST SPARTA, OHIO

110 EAST 42ND STREET, NEW YORK, N. Y.
LEXINGTON 2-1618

under the sponsorship of the same organization. Following this he is expected to fill several speaking engagements throughout the eastern seaboard and as far west as the Mississippi.

His itinerary now includes: Washington, Baltimore, New York, Philadelphia, Pittsburgh, Chicago, St. Paul, Milwaukee, Madison, Columbus, Cincinnati, Toledo, St. Louis, Indianapolis, South Bend, Fort Wayne, Des Moines, Detroit, Cleveland, Akron, Youngstown, Buffalo, Albany, Boston, Hartford, Bridgeport, New Haven, Princeton, N. J.

Captain Reiss is a member of the London County Council's housing committee, the body charged with the slum clearance and rehousing program of London. He is vice-chairman of Welwyn Garden City and Hampstead Garden Suburb Trust, two of the largest public housing developments in England; he is also chairman of the London Labourers Dwellings.

From 1918 to 1928 he headed the executive committee of the Garden Cities and Town Planning Association. For his services to Norway's housing program, he was made a Knight of the Order of St. Olav.

A few of his dates for speaking engagements are still open. Inquiries regarding Captain Reiss' schedule should be addressed to Miss Helen Alfred, Secretary, National Public Housing Conference, 112 East Nineteenth Street, New York.

PROFESSIONAL STUDY COURSE AT COLUMBIA

Professional studies in the remodeling, design and construction of modern building will be inaugurated in the

University Extension division of the Columbia School of Architecture during the Spring Session, it is announced by Prof. George M. Allen, who will direct the new program. Courses in the illumination of buildings, contemporary interior materials and color, specification writing, construction cost trends, and housing developments will augment the present curriculum.

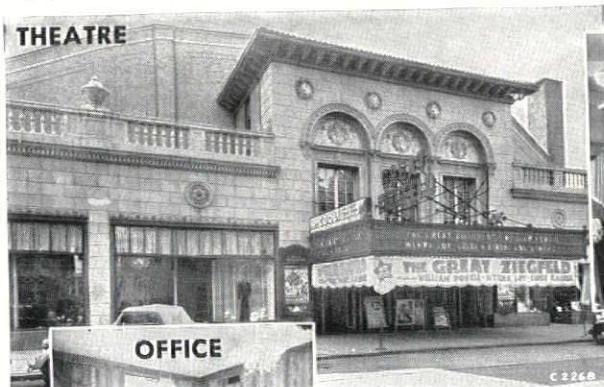
Greater consumer understanding of light, color and materials is a growing factor in the effectiveness of contemporary work, Prof. Allen explains. "Widespread awakening of public interest in things modern, the growing understanding that present equipment for living is much superior to that of the past, and the increasing awareness of the layman to stimulating changes in materials, textures and colors point toward higher standards of aesthetic appreciation on the part of the public," he says.

Non-structural and decorative materials will be treated in the study of contemporary interior materials and color under the direction of Theodor Carl Muller, Designer. Recent developments in metals, synthetics, plastics, compositions and the important new surrogates will be investigated, as well as other mediums which comprise the vast industrial source to be evaluated and handled by the designer. The bases of color theories and their applications in the light of physics, chemistry, psychology and aesthetics will be presented.

The Department of Electrical Engineering will co-operate with the School of Architecture in the course in the illumination of buildings, to be given by Alvin L. Powell, past president of the Illuminating Engineering Society.

Artificial illumination is constantly playing a more important part in the design of structures, the announcement

More typical examples of CARBONDALE AIR CONDITIONING



- Stores
- Hotels
- Theatres
- Hospitals
- Restaurants
- Public Buildings
- Offices
- Banks
- Apartments
- Homes
- Factories

CARBONDALE equipment for air conditioning service possesses new and valuable capacity control features.

Why not allow a Carbondale representative to discuss your requirements and explain these features?

CARBONDALE DIVISION

CA 7-11 WORTHINGTON PUMP AND MACHINERY CORPORATION

ATLANTA
BOSTON
BUFFALO
CHICAGO

CINCINNATI
CLEVELAND
DALLAS
DENVER

DETROIT
EL PASO
HOUSTON
KANSAS CITY

General Offices: HARRISON, NEW JERSEY

Representatives in Principal Cities of Foreign Countries

LOS ANGELES
NEW ORLEANS
NEW YORK
PHILADELPHIA

PITTSBURGH
ST. LOUIS
ST. PAUL
SAN FRANCISCO

SEATTLE
TULSA
WASHINGTON

points out. "A few years ago it was the practice to complete the plans for a building before lighting received consideration. With the modern viewpoint and the availability of a wide variety of efficient light sources, lighting equipment has become a component part of the design and structure. The architect of the future will very definitely plan illumination effects and not leave these to the electrical contractor or owner."

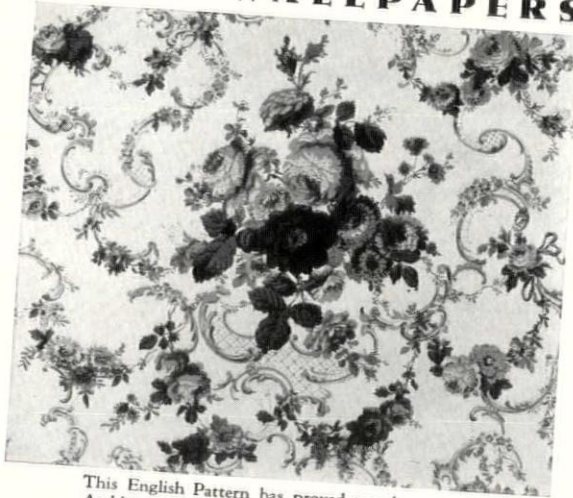
An evening studio of architectural design for advanced students will have as critics Max Abramovitz and Howard Dearstyne, designers in the office of Wallace K. Harrison and J. Andre Fouilloux. Mr. Abramovitz attended the Ecole des Beaux Arts as Paris Prize Finalist and spent two years studying modern architectural developments in Europe. Mr. Dearstyne completed his architectural training in Germany at the Bauhaus in Dessau and Berlin under the tutelage of Hannes Meyer and Ludwig Mies van der Rohe.

Additional courses in air conditioning, the mechanical equipment of buildings, methods of construction, statics, the small house, architectural drafting and design, and the history of architecture will be given in evening classes of University Extension, registration for which is under way and will continue until February 6.

NEW COURSES AT N.Y.U. SCHOOL

Several special courses designed for architects, contractors, and others in the building field will be offered by the New York University School of Architecture and Allied Art during the second term, Dean Bossage has announced.

LLOYD WALLPAPERS



This English Pattern has proved popular among Architects and Decorators throughout the country.

If you have not recently visited a Lloyd showroom, we urge you to do so. Here you will find new inspirations in wall coverings, from a simple pattern to the most elaborate hand painted panels.

Write for special samples selected for the Architect and Decorator

W. H. S. Lloyd CO. INC
48 WEST 48th STREET, NEW YORK CITY

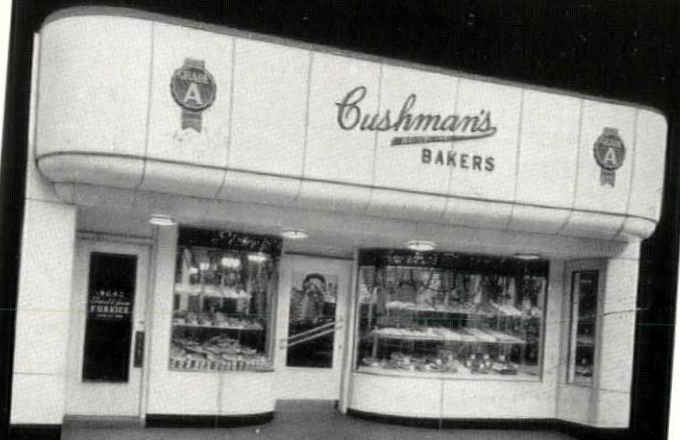
BOSTON: 420 Boylston St. NEWARK: 45 Central Ave.
 CHICAGO: 434 So. Wabash Ave.

BRING THE STORE TO LIFE

WITH A

VERIBRITE

PORCELAIN ENAMEL STORE FRONT



ALL COLORS • MODERN • BEAUTIFUL

Wiser and keener grows the business man. More and more is the magnetic power of the beauty and design in modern materials employed as an active producer and profitable aid in successful selling.

Veribrite porcelain enameled store fronts are a revelation and an inspiration to designers, builders and owners. Attractive colors of your own selection are fused into the metal—allowing the production of most fantastic color schemes or more conservative, yet smart, glistening blacks. Veribrite porcelain enamel store fronts retain their original brilliance, colors and sanitary clean appearances—they do not fade, chip or wear away, and stand rough usage. Veribrite Porcelain Enamel may be had in all shapes and is more adaptable to modern architectural design than other materials. Customers are drawn toward a store through the impelling fascination of beautiful porcelain enamel. Give full freedom to your creative ability and Veribrite will bring your plans to life. We are prepared to cooperate in store front planning and also shall be glad to send information on installation methods, uses and colors.



A VERIBRITE Special Feature—the new non-corroding, spring steel clip allows the installation of panels without the use of batten strips or other exposed trim mouldings. The porcelain enamel panels may be installed on either wood or steel framing. Panels are not fastened directly to the wall, but inserted in clip, allowing a margin between joints for expansion and contraction.

CENTER PANELS MAY BE REMOVED WITHOUT DISTURBING ADJACENT PANELS.

GENERAL PORCELAIN ENAMELING & MFG. CO.
 4145 W. Parker Ave., Chicago, Illinois

Send me Veribrite Store Front Folder.

Name

Address

Some
Architect
is back of this!



THERE may be snows and blizzards outside, but there's cozy comfort here. No chilly corners! No rooms hard to heat! Less danger from drafty floors! All because some architect specified Gimco Rock Wool insulation when he planned the home.

He knew that in winter Gimco checks wasteful loss of heat, insures more uniform temperature throughout the house, and saves up to 50% of fuel costs. Likewise, he knew that it protects against a sweltering summer sun—keeps the entire home from 8° to 15° cooler.

**Unsurpassed
Insulating Efficiency**

Gimco Rock Wool is processed from solid rock. Yet more than 90% of its volume is trapped air in tiny air cells. Installed wall-thick its conductivity is only .067 BTU's—an efficiency unsurpassed by any other building insulation.

Gimco is as everlasting as rock itself. It won't deteriorate, disintegrate, dust out, or pack down—never needs to be replaced or replenished. It is fire-proof, moisture-proof, vermin-proof.

Let us tell you more about the comforts and economies you can assure your clients when you specify Gimco Rock Wool insulation. Write the General Insulating & Mfg. Co., Alexandria, Indiana.



Gimco is easily and quickly blown over the top floor ceiling or into the side walls of homes already built. No muss—no dirt.



Gimco Sealal Bats are easily fitted between studs in buildings under construction. Can be easily cut to fit irregularly shaped spaces.

Gimco
ROCK WOOL

HOUSE INSULATION

Made by the world's largest exclusive manufacturers of Rock Wool Products

Courses in air conditioning, plan reading and estimating, as well as in architectural practice and design will be offered, Dean Bossange said. Practicing members of the architectural and engineering professions and other specialists will be the instructors.

"A course in air conditioning has been planned to provide architects and others in the building field with a sufficient knowledge of the reasons for air conditioning, the factors that determine the capacities, type and arrangement of equipment and the results which such equipment must deliver to enable them to select intelligently the type of equipment best fitted for any particular project, to determine approximately the capacities and other features required, and specify or check the proposed installation to insure that it will meet the needs of the project," Dean Bossange said.

"The course on air-conditioning will be conducted by Alfred L. Jaros, of the firm of Jaros, Baum and Bolles. It will consist of fifteen two-hour lectures, supplemented by a number of exercises and problems. Present day conditions will be assumed as the basis for discussion. Emphasis will be placed on the practical consideration of the subject.

"An elementary and an advanced course in Plan Reading and Estimating will include the recording of quantities and pricing of all items entering into the construction of residential and industrial buildings. In recording quantities, the construction methods of each trade will be discussed, and the specifications relating thereto will be studied. In pricing, the costs will be analyzed into their constituent elements so that the student, by substituting any change in price of labor or material, can keep his data up to date. Guest speakers, specialists in their respective fields, will be invited to participate in the discussions. The course will be conducted by Mr. A. Benton Greene, practicing architect.

"The School of Architecture will also offer the tenth series of practical courses reviewing the fields of architectural design, construction and practice. Each course will consist of a two-hour session weekly for fifteen weeks. The intent will be to summarize the more important aspects of each subject."

"All of these courses assume previous grounding in the subject presented," Dean Bossange said. "They will be scheduled in the evenings and on Saturday afternoons for the benefit of those who are employed. Courses will be so arranged that a student may register for any or all subjects without conflict. They will offer an excellent opportunity for architects, designers, and draftsmen to keep in touch with modern developments and to review subjects in which they may have become rusty. The courses will also be suitable for those who are preparing to take the architectural license examination.

"The courses offered will be: Architectural Design, History of Architecture, Architectural Practice, Building Construction and Superintendence, Mechanical Equipment and Structural Design. They will be given by men who are specialists in their respective fields, practicing members of the architectural and engineering professions."

SUMMER INSTITUTE AT WELLESLEY

The point of view of architects is desired in the cross-section membership of the Summer Institute for Social Progress at Wellesley where economic theories are squared with practical experience through stimulating discussions of present day problems by men and women in the professional.

business and industrial worlds. "The World Challenge to Democracy—How Can America Meet It?" is to be the very pertinent subject for the two weeks' institute for men and women to be held on the campus of Wellesley College, Wellesley, Mass. from July 10th to 24th. Dr. Colston E. Warne of the Economics Department of Amherst College will be the leader, and those interested in the possibility of attending should write to G. L. Osgood, 14 West Elm Avenue, Wollaston, Mass. for details and membership blanks.

SINUS AND CONDITIONED AIR

Don't sleep in a freezing cold bedroom or sleeping porch, particularly if you are one of the several million people now expecting the seasonal onslaught of sinus trouble, advises a health bulletin just issued by Northwestern National Life Insurance Company.

A bedroom temperature of 68 degrees is cool enough for health, if proper humidity is maintained. If no humidifying device is used, the room should be kept a few degrees cooler. But with the blood circulation slowed by sleep, the bulletin warns, the nasal passages are poorly protected against bitter cold, which frequently starts irritation in the sinuses.

Air conditioning of homes and offices is one of the best defenses against sinus trouble, according to the bulletin, which warns that prevention is much simpler than cure.

Conservative treatment is recommended for sinus sufferers, based on good food, plenty of sleep, and general constitutional measures. Outdoor exercise throughout the winter stimulates the mucous membranes of the nasal passages. Any



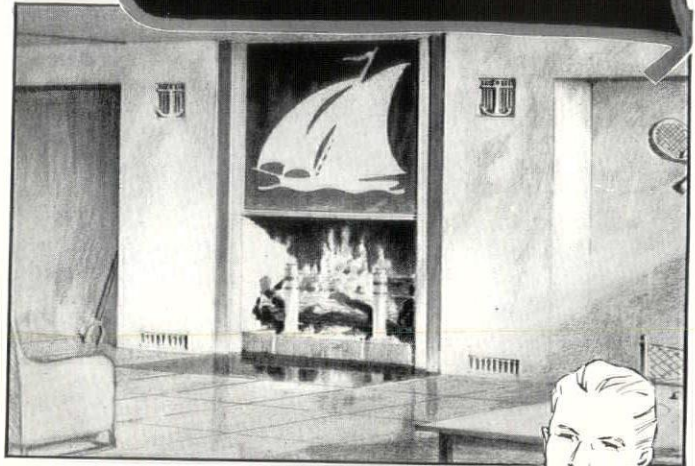
SAMSON
SPOT
Sash cord

● It is never difficult for an architect to explain why he specifies Samson Spot Sash Cord. All he need do is unravel an end.* Anyone can see and appreciate the superior quality of its all-yarn construction. The evidence of its greater durability is plain. Its greater value and economy are obvious. It is always of the same quality for it is made in only one grade, which can always be determined by the Colored Spots—our trade mark.

*Sample for test sent on request.

SAMSON CORDAGE WORKS
BOSTON, MASS.

The **EASY WAY** to Heat Basement Recreation Rooms



This **FIREPLACE** *circulates Heat—*



At last!—an easy solution to the heating problem in basement recreation rooms. This perfectly-operating fireplace heats the entire room quickly . . . draws in cool air, warms it, returns it to far corners. All the friendly cheer of an open fireplace . . . with no unsightly heating pipes, no ceiling radiators.

Ideal for Summer Camps

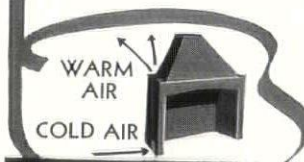
Adds weeks to normal camp use—cozy comfort during the fall hunting season or on winter week-ends. Specify it for homes or camps in any climate. Thousands in use.

Will Not Smoke

The Heatilator is a metal form around which any style fireplace may be built. It is correctly designed to give the proper ratio between fireplace opening, throat and flue. Firebox, damper, smoke dome and down-draft shelf are all included in the unit. Simplifies construction, saves material, saves labor.

Write for Details.

HEATILATOR CO.
772 E. Brighton Ave.
Syracuse, N. Y.



Heatilator Fireplace

one subject to even slight sinus trouble should stay out of poorly ventilated or smoke-filled rooms, and should be particularly careful to avoid people with colds; the common cold is the chief source of sinus infections; colds and sinus trouble are highly contagious.

SEMI-ANNUAL SURVEY OF REAL ESTATE

Renewed demand for business property is already reflected in higher rental scales for the downtown sections of cities in about three fourths of the principal cities of the country. This is perhaps the outstanding good portent in the findings of the Twenty-Eighth Semi-Annual Survey of the Real Estate Market made by the National Association of Real Estate Boards from confidential reports by officials or committees of its member boards over the country.

Reports from 253 cities, made by officers or committees of their local real estate boards, are included in the survey, released recently. A steady advance is shown in every phase of the market, more nearly uniform for cities of every type and every geographical section than has been the case for years. Many cities report the gain as far enough consolidated as to indicate a very active building year ahead, but new construction is very definitely for use. A steady healthy rise is indicated.

In cities where real estate advance has been most marked, new building is reported as having stabilized the upward movement of residential rents. New apartment construction has begun to join new home building to counterbalance the growing absorption of existing residential space.

Comments from individual cities show the very close re-

lationship between financing conditions and the outlook for new home building. Mortgage terms available, including interest rate and length of the mortgage term, are cited by city after city as the dominating factor of their individual situation in the market outlook.

Real estate prices are higher. The advance now shown in 80% of the cities of the country, began, of course, in built property. The present survey shows the first post-depression reports of an advance in the price of home sites. The rise here reported by some cities has been as much as 10%. Subdivision lots are selling more actively than last year in two-thirds of the cities.

Market demand is more active in 96% of the cities. Only one city of the 253 showed any sag either in market activity or price level. Things are still going at about the level of last year in 4% of the cities.

Every city of over 100,000 population reports a more active real estate market than a year ago.

Repossessed property is still dominating the market in some cities, but the proportion is very much smaller than was the case six months ago.

The low returns yielded by savings banks and similar institutions are a factor in turning idle funds into investment real estate.

Details of the survey findings as to demand and supply of various types of structures, mortgage supply, interest costs, et cetera follow:

Residential space shown to be well absorbed. But notwithstanding the increased space absorption, rise in residential rents, while very general over the country, has been very gradual. This is true both for detached houses and for apartments.

**5 reasons why you should specify—
WESTERN RED CEDAR**

- 1 - Beauty**
- 2 - Durability**
- 3 - Economy**
- 4 - Insulation Value**
- 5 - Paintability**

NO OTHER WOOD excels Western Red Cedar in natural enduring beauty. For exterior surfacing and trim, Western Red Cedar Beveled Siding and Western Red Cedar Exterior Trim offer unmatched resistance to time, weather and rot. Its ease of workability, good behavior and unexcelled painting and staining qualities make it the ideal wood for interior trim and paneling. For all-round use specify Western Red Cedar Lumber.

For further information refer to Time-Saver Standards J1.2.1, or write: Western Red Cedar Lumber — 5566 Stuart Bldg., Seattle, Washington



AN ORGANIZATION OF THE FOLLOWING MANUFACTURERS

Aloha Lumber Company - Aloha, Washington	St. Paul & Tacoma Lbr. Co. - Tacoma, Wash.
Bratlie Bros. Mill Co. - Ridgefield, Wash.	Seattle Cedar Lbr. Mfg. Co. - Seattle, Wash.
William Hulbert Mill Company - Everett, Wash.	Snoqualmie Falls Lbr. Co., Snoqualmie Falls, Wn.
McMaster Lbr. & Shingle Co. - Marysville, Wash.	Weyerhaeuser Timber Co. - Tacoma, Wash.
E. C. Miller Cedar Lbr. Co. - Aberdeen, Wash.	Whatcom Falls Mill Co. - Bellingham, Wash.

Under-supply of single family dwellings is shown in 72% of the cities. Only 1½% of the cities report any over-supply. In a similar survey of six months ago 76% of cities reported an under-supply of single family dwellings. The slight decrease would appear to be an indication of the balancing effect of new home building.

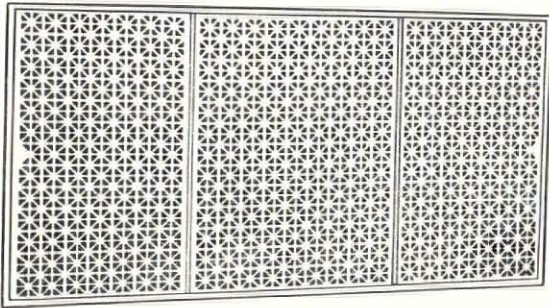
An under-supply of apartments exists in 55% of the cities, according to these official confidential reports from local real estate boards. One city reports every desirable apartment unit occupied. Only 2% of the cities report any remaining over-supply of apartments.

No city of over 100,000 population shows any over-supply in single family dwellings, but the very largest cities (over 500,000 population) in 22% of the cases show over-supply of apartments.

Rents are up for single family dwellings as compared with a year ago in 90% of the cities, and are down in less than 1½% of the cities. Apartment space is higher in 86% of the cities and not a single city of the country shows any down-trend of apartment rents.

The amount of increase most commonly reported is only about a 10% increase. Approximately half the cities of the country give their rent rise as 10% both for detached dwellings and for apartments. Approximately 20% of the cities show a 15% rise in both single houses and apartments. While 13% of the cities show a 20% rise in single family dwelling rents, only 8% of them show this much advance in apartment rates. Only about 4% of the cities show the rise for either houses or apartments to be as high as 25%.

The Association's semi-annual survey gives the only quantitative national study so far made of spread in residential



There Is No Substitute for Experience

OVER 200 YEARS in the register and grille business is the combined record of the executives of the Register & Grille Manufacturing Co., Inc. From office force to factory the entire organization is made up of men whose work reflects the experience of many years of fine craftsmanship.

And the officers and directors are all men highly regarded throughout the trade.

James H. Bailey President	Bruce R. Tuttle Vice Pres. & Counsel	Frank T. Bailey Vice President
Trowbridge A. Warner Sales Manager	Clifford D. Bailey Secretary	Alfred L. Tuttle Treasurer
Russell T. Bailey Director	Edward F. Blom Director	Eric D. Mollander Director

REGISTER & GRILLE MFG. CO.
INCORPORATED

70 BERRY STREET - - - BROOKLYN, N. Y.

Snap-On

FOR ECONOMICAL CONSTRUCTION



PYRAMID METAL MOULDINGS

Beautiful, modern decorative trim need not be expensive. The ease of installation of Pyramid SNAP-ON Mouldings after all the work is finished, and their permanence without maintenance cost, makes their specification logical where distinction is essential. Labor saving is often more than 50 per cent.

For new work or old, for interior or exterior, Pyramid SNAP-ON Mouldings add richness. Because of the SNAP-ON feature they can be placed for the best modern design... yet no nails or fastenings ever show.

Three simple operations... and Pyramid SNAP-ON Mouldings are installed. 1. Nail on track 2. Hook flange of Moulding under one side of track. 3. SNAP-ON the Moulding.

Pyramid Mouldings are available in Satin or Mirror finishes, Stainless Steel, Bronze, Copper or Brass.

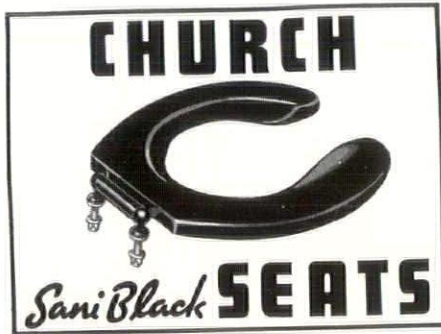
The exterior application illustrated is in porcelain enamel, installed by Erie Enameling Co., Erie, Pa.

A folder, showing Pyramid SNAP-ON Moulding in other modern uses will be sent upon request and without obligation to you.



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

**DEVELOPED ESPECIALLY
FOR
SCHOOLS**



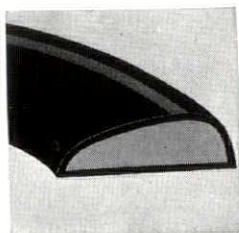
**Unbreakable—
it never needs replacing**

Not even the hard knocks of school life can damage a CHURCH Sani-Black SEAT. They are indestructible. They never wear out, need no maintenance—outlast the building!

Leading schools have selected CHURCH Sani-Black SEATS. They are standard equipment with the Boards of Education in many cities and counties... because their everlasting construction makes them impervious to acids, time and the physical abuse that seats receive from school children.

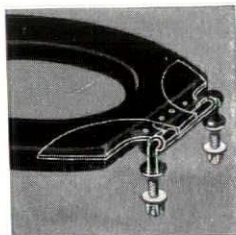
Hardwood core and hard rubber surface are molded into one integral unit by 8 tons of pressure. Hinge posts are hard rubber over brass, molded integrally during the same operation. There is no exposed metal to corrode or tarnish. Soap and water are all that are needed to keep CHURCH Sani-Black SEATS clean and sanitary. They are easily installed and fit all bowls.

A free sample cross section will give you proof of the strength and permanence of CHURCH Sani-Black SEATS. Write for it today and for the catalogue showing the complete line. Dept. K2, C. F. CHURCH MFG. CO. • HOLYOKE, MASS. ... Div. of American Radiator & Standard Sanitary Corp.



**THE FIRST COST
IS THE LAST**
HARD RUBBER molded over hardwood makes each Sani-Black Seat an unbreakable, everlasting unit.

STEEL HINGE PLATES molded integrally, never loosen. Hinges, hard rubber over brass, never corrode.



CHURCH Sani SEATS

rent change. Detailed findings will be given in a supplemental release.

Increasing demand for business space is reflected in higher rent levels in 72% of the cities reporting. Not a single city in the country reported business space rates as down over last year. In 28% of the cities they hold to last year's levels.

In outlying business districts the pick-up has not gone so far. But even here 45% of the cities report higher rental scales, and only 1% show a lower scale than last year.

Under-supply of business property is already reported in 13% of the cities. Cities of under 25,000 population most frequently show the shortage of commercial space, with 25% so reporting. Over-supply is still shown in 13% of the cities.

Office space still lags behind business space. But higher rental scales are in effect for downtown office buildings in 36% of the cities, and not a city anywhere in the country shows a lower scale than last year.

In outlying centers, 24% of the cities show higher office rentals, and only 1% show a lower rate than last year.

Apparently the change in office building demand has come with about the same rapidity in cities of every size.

Gross cost to the borrower on first mortgages with good security is reported to be at about last year's level in 61% of the cities, with 37% of the cities reporting that the cost is falling. Interest costs are going up in 2% of the cities, all of them comparatively small cities.

Present actual interest rate at which first mortgage loans on new moderately priced homes are now most commonly being made is still the 6% rate. Of cities reporting, 64% cite it as the rate in most common use. This is exactly the percentage of cities so reporting six months ago.

A 5% rate prevails as common in 30% of the cities on this kind of mortgage.

Only four cities of the country show any rate lower than 5% as in common use.

Capital is seeking loans in 75% of the cities. Desirable loans are available in excess of capital supply in 14% of the cities. This is almost exactly the proportion of cities so reporting six months ago.

A detailed table of interest rates reported as now most common for homes, and comments of local real estate board officials as to effect of mortgage terms available on new home building in their communities, will be given in a supplement to the survey summary, to be released February 7.

ANNOUNCEMENTS

Bowman Graton and Christian E. Born announce the formation of the firm, Graton & Born, for the practice of Architecture at 45 Newbury Street, Boston as successors to the office of the late S. Bruce Elwell, Architect, with whom they were associated.

Frederick J. MacKie, Jr. and Karl F. Kamrath announce the formation of the firm, MacKie & Kamrath, for the practice of Architecture at the Shell Building, Houston, Texas.

Donald G. Fudge announces the opening of offices for the practice of Architecture at 351 College Avenue, Elmira, New York.

Hymen Rosenberg announces the opening of offices for the

practice of Architecture at 611 Jones Law Building, Pittsburgh, Pa.

Graham, Anderson, Probst & White, Architects, announce that beginning January 1st, 1937, the partnership will be composed of Edward Probst, Marvin G. Probst, William E. Graham, Edward E. Probst, and Wellington J. Schaefer. Offices at Railway Exchange Building, Chicago.

Gabriel A. Poitras, Architect, announces the formation of the firm, Langlais & Poitras, for the practice of Architecture at 105 Mountain Hill, Quebec, Canada. Requests manufacturers' catalogs.

Isadore H. Braun, Architect, announces the removal of his office to 123 W. Madison Street, Chicago, Ill. Requests manufacturers' catalogs.

Alexander H. Spitz, Architect, announces his return from Government work to private practice with offices at 220 South State Street, Chicago.

Theo. Steinmeyer, Architect, announces his return from Government work to private practice with offices at 460 East Madison Street, Springfield, Missouri.

Robert P. Woltz, Jr., Architect, 211 Insurance Building, Fort Worth, Texas, announces that he has taken J. Herschel Fisher and Philip G. Willard as his associates.

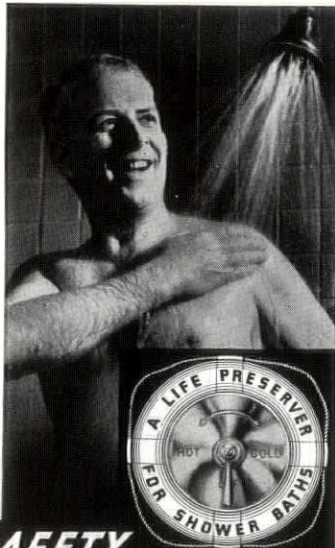
Want to eliminate the danger of scalding in your shower baths and stop unexpected changes in the water temperature?



● **No more slipping in a soapy tub or on a wet tile floor while trying to dodge a "shot" of icy cold or scalding water**—When you use a shower bath regulated by a Powers safety shower mixer the temperature remains right where you want it. You can really enjoy the thrill of a comfortable shower in absolute safety.

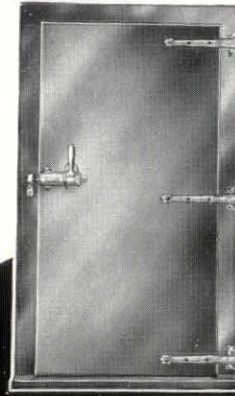
Why they're more economical—There's no loss of time or waste of hot or cold water while waiting for a shower at the right temperature—Powers mixers cost more—They're worth more.

Write for circular describing this remarkable shower mixer. The Powers Regulator Company, 2751 Greenview Avenue, Chicago. Offices in 45 Cities—see your phone directory.



POWERS SAFETY SHOWER MIXERS

GUARDIAN OF PROFITS



SPECIAL-FINISH DOORS in Monel Metal, Chrome Nickel (Stainless) Steel.

Also in Porcelain Enamel, front or back, with metal trim.

Refrigeration plants noted for high efficiency prove every day that **JAMISON-BUILT COLD STORAGE DOORS** increase income by reducing outgo. Faster operation, tighter seal, modern improvements, and longer wear are the reasons... For maximum profit, specify only **JAMISON-BUILT DOORS**. Free bulletin on request.

JAMISON COLD STORAGE DOOR CO.

Jamison, Stevenson, and Victor Doors

HAGERSTOWN, MD., U.S.A.

Branches in principal cities

JAMISON-BUILT DOORS

See our catalog in Sweet's Catalog File



Photo by Albert Rothschild

Smyser-Royer Co. cast iron veranda design No. 69 as used at Green Acres Estates, Long Island, N. Y. Medium price dwellings selling for approximately \$8,450.

CAST IRON VERANDAS
by Smyser-Royer

For houses large and small, Smyser-Royer Co. cast iron verandas may be utilized with remarkably attractive effects. Your inquiries are invited. Estimates, prices, or a complete catalogue of designs will gladly be furnished on request.

Main Office and Works York, Pa.
Philadelphia Office Architect's Building, 17th & Sansom Sts.

SMYSER-ROYER COMPANY

OBITUARIES

CLARENCE H. JOHNSTON, died on December 29, 1936, terminating a brilliant career both as an organizer and an architect. Mr. Johnston was 77 years old when he passed away at his home in St. Paul. From early boyhood, when his design for poultry houses and other farm buildings, won a prize at the Minnesota State Fair, Mr. Johnston made speedy steps to the front rank of architecture. He studied extensively abroad, and in this country, and contributed his talent to the design of many important institutional and public buildings. Among them are a section of the University of Minnesota; St.

Mary's Hospital in Rochester, Minn., the college of St. Teresa at Winona; the State Office Building; and the Minnesota State Prison at Stillwater. During his early years in New York, Mr. Johnston and a group of other young architects, founded the New York Sketch Club, which later became the Architectural League of New York. With him were such prominent men as Francis H. Bacon, James Knox Taylor, Cass Gilbert, and William Bates. In 1886, Mr. Johnston went to St. Paul to establish his own practice, and has lived there ever since. He was a member, a Fellow, and a past director of the American Institute of Architects; a past president and director

of the Minnesota chapter of the Institute; and a member of the Minnesota Club, and the Somerset Club.

WILSON POTTER, prominent New York architect, died on December 30, 1936, at the age of 68. Among the best known of Mr. Potter's designs were those for the Peekskill, Poughkeepsie, Geneva, and Fulton High Schools in New York, the Ardmore High School, Ardmore, Pa., and the Bristol High School at Bristol, Conn. In addition to these he designed many school buildings throughout New York State, Pennsylvania, and Connecticut.

PETER A. JULEY, for many years a pioneer in the field of portrait and color photography, died of pneumonia on January 13, 1937, at his home in New York City. He would have been seventy-five on January 30th. Mr. Juley was born in Germany, and came to this country in 1884 after graduating from the University of Coblenz. Taking up photography as a hobby, Mr. Juley settled in Cold Spring, N. Y., and then became a professional photographer specializing in portrait work. In 1901 he joined the staff of Harper's Weekly, where for the next five years a large part of his time was spent on national tours with President Theodore Roosevelt. Following this, Mr. Juley re-entered private practice, establishing the firm of Peter A. Juley & Son when his son, Paul P. Juley, joined him a short time later. Mr. Juley continued his personal activity in the firm until his final illness. The company has made art photographs for many individuals and organizations, and thousands of its pictures have appeared in the leading newspapers. Mr. Juley was official photographer for the National Academy of Design, and formerly for the New York Public Library.

EPHRAIM KEYSER, the sculptor who designed the tomb of President Chester A. Arthur, died on January 26th at the age of eighty-six. Born in Baltimore, and educated at public schools, and at City College, he finished his studies at the Royal Academy of Fine Arts in Munich, and in Berlin. He won a silver medal at Munich, for his statue "The Page," and the Meyerbeer scholarship to Rome for "Psyche," which is now in the Cincinnati Art Museum. Mr. Keyser continued his work abroad for some years. Later he executed busts of Sidney Lanier, now at Johns Hopkins University; Baron De Kalb, a piece for which he was commissioned while still living in Berlin, and which now stands on the State House grounds at Annapolis; Henry Harland; Cardinal Gibbons; and Dr. Daniel C. Gilman. He was at one time an instructor at the Rhinehart School for Sculpture in New York.



For
CORRECT
ARCHITECTURAL
EFFECTS

FOR correct architectural effects, BLINDS must be included as an integral part of window designing, and provision must be made for necessary bundle space and reveal for operating mechanism. BLINDS should be incorporated in projects now being planned, even in the preliminary sketches, and certainly in the final drawings and specifications. Columbia Venetian BLINDS offer all the traditional beauty and many other advantages not possessed by any other blind. Our Architectural Plan Department has prepared a series of detailed drawings, never before published, showing needed and essential designing data for all types of BLIND installation.

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

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

The Supervision of Construction Operations

by
W. W. BEACH

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 Dampproofing
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

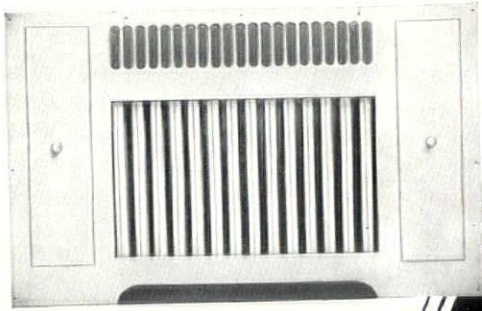
This book is perhaps the first comprehensive treatment of the supervision of construction to be published and is indispensable to architects, engineers, construction superintendents, technical libraries, students and all interested in architecture and engineering. Written by one of the best-known architect-engineers 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.

UNTIL MARCH 1—\$4.80

Special Prepublication Offer

The publishers are pleased to announce a 20% discount on all purchases of this unique work made before publication. All orders received by Charles Scribner's Sons at 597 Fifth Avenue, New York City, by March First, will be filled at the special price of \$4.80 and sent postpaid in the United States. After publication the price will be \$6.00.

CHARLES SCRIBNER'S SONS • 597 FIFTH AVENUE • NEW YORK CITY



The Burnham Panel Front is made of pressed steel. It screws directly to the wall. Fits flush with baseboard. Panel on either side is removable to reach the control valve. Made in various standard heights and lengths.

Two Kinds of Heat from the One RADIATOR

As you know so well, in spite of their better appearance advantage, there have always been two disadvantages to enclosing radiators:

First—you get only convected heat. You lose the distinct advantage of radiant heat.

Second—the pull of the cool air across the floor to supply the enclosed radiator is often uncomfortable. This is especially true with automatic controlled heat, such as oil, gas and stoker-firing of coal with their intermittent on-and-offs.

The problem, therefore, is to overcome floor drafts and secure the combined advantage of both the *radiant* and *convected* heat.

That is fully accomplished by recessing the Burnham Slenderized Radiator and using the Burnham Panel Front. The large opening in the panel exposes the radiator, which is so good looking it gives a grille effect. From it comes an abundance of radiant heat. From the grille above comes the convected heat, flowing at a high velocity, causing a rapid circulation.

The reflected radiant rays heat the lower part. The convected, the upper part of the room. The two come together, giving not only a quicker heating result, but one free from objectionable drafts. It insures a gently comfortable heat at all parts of the room. You get the two kinds of heat from the one radiator. Send for booklet giving full particulars.

Burnham Boiler Corporation

Irvington, New York

Zanesville, Ohio

Representatives in All Principal Cities
of the United States and Canada

The Burnham Slenderized Radiator is no deeper than the length of your forefinger. Fits under windows between studs. Is 40% smaller than old tube-type radiators. Heats 40% quicker. Glad to tell you exactly why.

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.....	117
Andersen Frame Corp.....	143
Armstrong Cork Co.....	7, 123
Arrow-Hart and Hegeman Electric Co.....	121
Austral Sales Corp.....	119
Barrett Co., The.....	111
Briggs Manufacturing Company.....	17
Burnham Boiler Corp.....	142
Byers Co., A. M.....	2
Carbondale Machine Corp.....	132
Carnegie-Illinois Steel Corp.....	23
Celotex Corp.	Back Cover
Church, C. F., Mfg. Co.....	138
Columbia Mills, Inc.....	140
Columbia Steel Co.....	23
Curtis Companies Service Bureau.....	13
Fitzgibbons Boiler Co., Inc.....	1
Formica Insulation Co.....	125
Frick Co.....	124
General Bronze Corp.....	26
General Electric Company.....	15
General Porcelain and Enameling.....	133
General Insulating and Mfg. Co.....	134
Heatilator Co.	135
Insulite Co., The.....	109
Jamison Cold Storage Door Co.....	139
Kawneer Co., The.....	21
Koh-I-Noor Pencil Co., Inc.....	122
Libbey-Owens-Ford Glass Co.....	11
Linde Air Products Co., The.....	5
Lloyd, W. H. S. Co., Inc.....	133
Lone Star Cement Corp.....	126
Master Builders Co., The.....	129
Milcor Steel Co.....	144
National Lead Co.....	103
Nelson, Herman Corp.....	9
Norge Heating & Conditioning Div., Borg-Warner Corp.	25
Pittsburgh Plate Glass Co.....	18
Portland Cement Assn.....	24
Powers Regulator Company, The.....	139
Pyramid Metals Co.....	137
Red Cedar Shingle Bureau.....	107
Register & Grille Mfg. Co.....	137
Resinous Products & Chemical Co., Inc.....	130
Ruberoid Co., The.....	20
Samson Cordage Works.....	135
Scribner's Sons, Charles.....	141
Servel, Inc.	12
Smyser-Royer Co.	139
Sparta Ceramic Co.....	131
Thatched Roof Mfg. Corp.....	113
Union Carbide & Carbon Corp.....	5
U. S. Steel Products Co.....	23
Vitrolite Div., Libbey-Owens-Ford Glass Co. Third Cover	
Weatherbest Corporation.....	120
Western Red Cedar Lumber.....	136
Wood Conversion Co.....	105
Zouri Store Fronts.....	115



DAVID M. GOODSTEIN RESIDENCE, SCARSDALE, NEW YORK
Equipped with Andersen Casement Windows • Lennart Palme, Architect

Andersen WOOD CASEMENTS

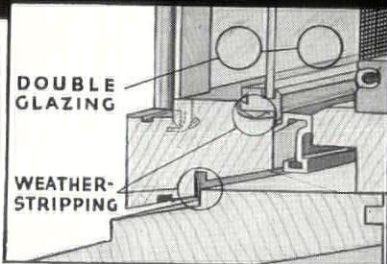
Give Homes a Distinguished Beauty

THERE IS AN Andersen Casement Window for every type of architecture . . . designed to meet the exacting requirements of home builders for unusual window beauty . . . the exacting requirements for air conditioning!

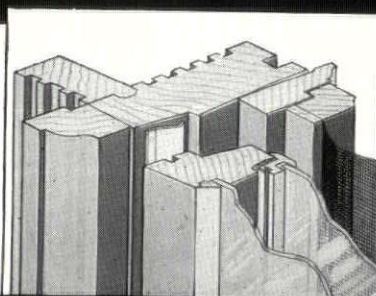
Andersen Units overcome objections heretofore found with both wood and metal casements. All wood parts are protected against decay, termites, and moisture with Andersen-Bruce Preservative Treatment.



70% LESS AIR LEAKAGE as the result of SUPERIOR *Leakproof* CONSTRUCTION...



Note the superior Andersen Construction fixtures: removable double glazing which reduces heat loss 60% and controls condensation. Air leakage stopped by spring bronze weather strips and special leakproof frame construction. Inside aluminum screen. Underscreen operator. Extension hinges for easy washing. In a nutshell—70% less air leakage!



See the Andersen Catalogue of Complete Window Units in SWEETS Section 11-14.

NARROLINE WINDOW

A Double-Hung Unit with modern mullions and trim. Completely weatherstripped and ideal for air conditioned homes. Time tested counterbalancing method of sash operation. Andersen-Bruce treated against decay, termites and moisture.

ANDERSEN BASEMENT UNIT

Another Andersen money-saver for builders. Complete unit including frame, sash, hardware and screen. Protected against decay, termites and moisture with Andersen-Bruce Preservative Treatment.

USE THIS CONVENIENT COUPON

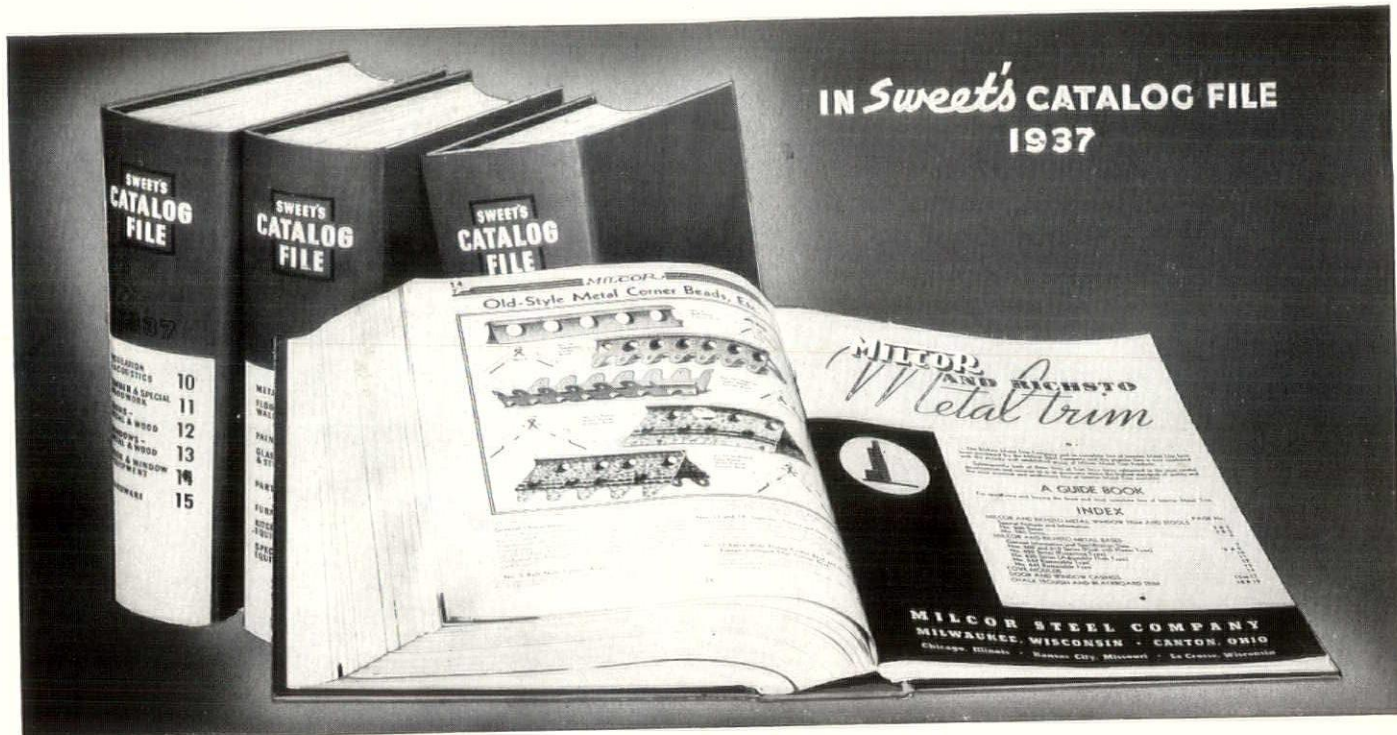
ANDERSEN FRAME CORP.
Bayport, Minnesota

AA27

Please send complete details on:

- Andersen Master Frame Andersen Narroline Unit
 Andersen Casement Unit Andersen Basement Unit

NOTE: See your dealer for a demonstration with working models on any Andersen product—or write us.



IN *Sweet's* CATALOG FILE
1937

MILCOR AND RICHSTO *Metal Trim*



No. 500 Window Stool
1 1/2 inch Radius

No. 525 Decorative
Metal Window Stool

Here you will find a detailed working manual on these outstanding lines of metal trim, embodying the latest improvements developed by Milcor engineers.

Designed for permanence, fire-safety, sanitation, and resistance to use and abuse, the present complete line

of Milcor and Richsto metal trim has filled a genuine need and met with wide acceptance. These qualities, combined with practical and economical installation methods, establish Milcor and Richsto as the line to turn to when you are developing specifications for trim.

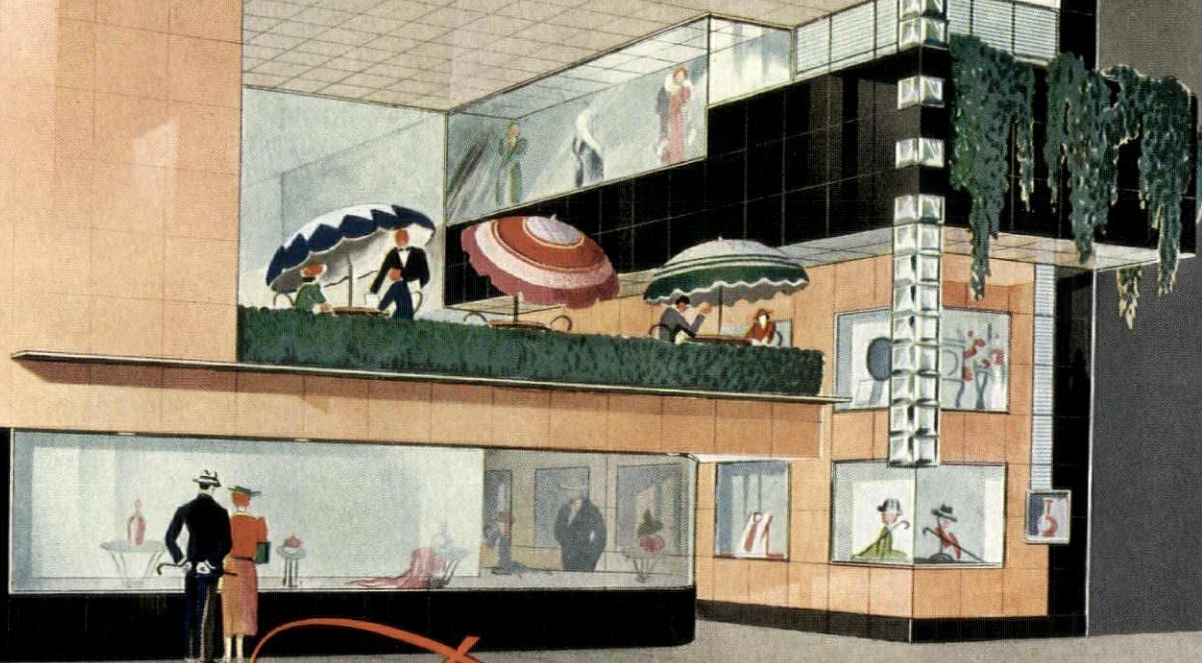


★ When your new Sweet's catalog arrives, turn to section 9 and review these advantages. This complete guide to Milcor and Richsto Metal Trim is available also as a section of the Milcor Manual, sent separately on request.

MILCOR STEEL COMPANY
MILWAUKEE, WISCONSIN CANTON, OHIO
Chicago, Ill. Kansas City, Mo. La Crosse, Wis.

TURZAK

BRENTS



Design

WITH VITROLITE IN MIND



Impulse follows the eyes. A Vitrolite front makes an effective eye-catching frame for your client's merchandise, and emphasizes its quality. It invites the passerby to stop and buy. Architects all over the country are demonstrating to merchants the high "face value" of Vitrolite by the actual sales gains of stores where they have used it. The attraction possibilities offered by its extensive color selection and the effects obtainable with sandblast and inlay are boundless. In combination with modern metals, the results are stunning. . . . Vitrolite is the very last word for new, ultra-modern buildings.

It lasts a lifetime, and its beauty is maintained ever new by wiping with a damp cloth. . . . Our engineering department will be glad to assist you in suggesting layouts or details for any projects that are on your boards. Or write for new Vitrolite literature and construction details.

Vitrolite Division, Libbey • Owens • Ford Glass Company, Toledo, Ohio

LIBBEY • OWENS • FORD

VITROLITE

Colorful structural glass

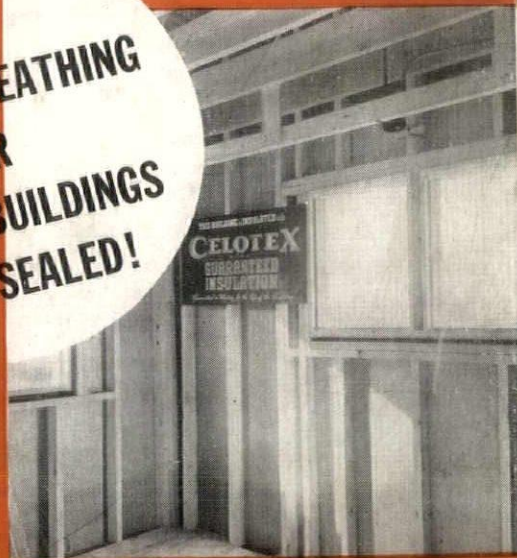


For display windows, be sure to use L-O-F quality plate glass. For interiors, mirrors of L-O-F polished plate, clear or in colors, offer interesting decorative possibilities.

GIVE CLIENTS THE ADDED PROTECTION OF **VAPORSEAL** INSULATING SHEATHING



THE
MODERN SHEATHING
FOR
MODERN BUILDINGS
—IT'S SEALED!



Vaporseal is standard waterproofed Celotex, sealed on both sides and all edges by a continuous asphalt coating, and additionally sealed against vapor by a special aluminum compound on the framework side.

YOU assure your clients of better homes—lasting satisfaction—when you specify Celotex Vaporseal Insulating Sheathing. This new Celotex product provides building material and insulation both at one cost. It is triply protected against the destructive effects of moisture. It offers 7 really important advantages in any home you plan:

- 1** *It is integrally waterproofed—then sealed in asphalt on both sides and all edges—and further sealed against vapor by a special aluminum compound on one side!*
- 2** *Original Celotex insulating value is maintained because the two seals are on the surface!*
- 3** *Strong and stiff—provides great bracing strength!*

4 *Not an "extra"—replaces ordinary materials of the same thickness—25/32". Fits without waste.*

5 *Marked for nailing to assure proper application and fast installation—fits tight, stops wind infiltration!*

6 *Protected against termites and dry rot by the patented Ferox Process!*

7 *It is backed by the Celotex Written Life-of-Building Guarantee!**

Let us send you a sample and further information about Vaporseal now.

*The Celotex Written Life-of-Building Guarantee, when issued, applies only within the boundaries of Continental United States.

CELOTEX
BRAND—INSULATING CANE BOARD
Reg. U. S. Pat. Off.
World's Largest Manufacturer of Structural Insulation

THE CELOTEX CORPORATION AA 2-37
919 N. Michigan Ave., Chicago, Ill.

Without obligation to me, please send a sample of Vaporseal Insulating Sheathing and full particulars about it.

Name

Address

City State