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JUNE, 1935

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Section
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In the Architect's OWN HOME . . .



The Sun-room in the Riverdale-on-Hudson, N. Y., home of DWIGHT JAMES BAUM, nationally-known architect of fine residences, authority on Early American pieces, Fellow of the American Institute of Architects and Gold Medalist of the Architectural League of New York and Better Homes of America.



Mr. Baum says: "On different occasions I have used W. & J. Sloane furniture in homes not only for my clients but also for myself. Their furnishings and co-operation are entirely satisfactory."

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THE BULLETIN - BOARD

PRIX DE ROME AWARDS

FOUR awards, each with a value of about \$4,000, enabling the winner to study two years at the American Academy in Rome, have been presented to four young men who have been studying painting, sculpture, architecture and landscape architecture in American colleges.

Students from all parts of the country entered the annual competitions for these Prix de Rome, which were judged at the Grand Central Art Galleries.

The jury decided that the fellowship in painting should go to Robert B. Green of Pittsburgh, Pa., graduate of Carnegie Institute of Technology, with the degree of B.A. in 1931, and of Yale University, with the degree of B.F.A. this year. He is 25 years of age.

The fellowship in sculpture was given to G. MacGregor Proctor of Wilton, Conn., graduate of Yale University in 1934 with the degree of B.F.A. He is 23 years old, and last year received honorable mention in the Prix de Rome competition. He is a son of A. Phimister Proctor, the well-known sculptor.

This year's winner in architecture is George T. Licht of New Rochelle, graduate of Yale in 1932, and son of the architect, George A. Licht. The winner is now with the Procurement Division of the Treasury Department in Washington.

Mr. Licht won the Fontainebleau Prize for study in France in 1929, the \$500 prize of the Society of Illuminating Engineers in 1934, and was finalist in the Paris Prize competition and the Rome Prize competition in 1934. He is 27 years old.

The award in landscape architecture was won by James M. Lester of Boston, Ohio, graduate of Harvard "cum laude" in 1929, with the degree of B.A., and Cornell in 1933, with the degree of B.L.A. He won a university graduate fellowship at Cornell for 1934-35, the first time it has been awarded to a landscape architect. He is 28 years old.

Honorable Mentions were given as follows: In painting, to Kipp Soldwedel and to Leonard V. Haber of New York City; and to Joseph Hirsch of Philadelphia. In sculpture, to Rev. Thomas McGlynn, New York, and to James Arthur Batty of Montclair, N. J. In architecture, to Frank Montana of New York, to Leon S. Barton of Brooklyn, and to D. Roderick Jones of Homestead Park, Pa. In landscape architecture, none.

HARLESTON PARKER GOLD MEDAL IN ARCHITECTURE

THE Harleston Parker Gold Medal in Architecture, given annually for the building that best combines beauty with usefulness was awarded to Coolidge, Shepley, Bulfinch & Abbott, Boston architects, for their work on the Lowell House at Harvard.

ARTS AND CRAFTS IN JAPAN

THE Rhode Island School of Design is sponsoring a trans-Pacific summer course in the study of arts and crafts. This travel school will include a period of study in Kyoto under Japanese professors, artists, and skilled craftsmen. Demonstrations in many of the arts and crafts, visits to art schools, libraries, museums, and trips to various parts of Japan, will be conducted. Further details may be had by addressing Dean Dana P. Vaughan, Rhode Island School of Design, 11 Waterman Street, Providence, R. I.

BUILDING UPTREND CONTINUES

FOLLOWING the decided upward swing in the building industry in March, a further sharp expansion in permit values was witnessed in April, according to the monthly report compiled by Dun & Bradstreet, Inc. In fact, the total for last month was the largest for any month in over three years, or since November, 1931.

The group totals of building permit values for the 215 cities for April, this year and last, together with percentage changes, are shown in the following table:

	April, 1935	April, 1934	Change P. C.
New England.....	\$3,820,425	\$2,348,001	+ 62.7
Middle Atlantic....	10,869,672	10,632,459	+ 58.6
South Atlantic....	4,057,205	3,302,025	+ 39.0
East Central.....	8,525,032	4,180,169	+103.5
South Central....	4,075,175	2,017,191	+131.8
West Central....	2,713,965	2,750,960	- 1.9
Mountain.....	911,443	425,257	+114.3
Pacific.....	9,404,010	3,549,013	+166.7
Total U. S.....	\$51,637,233	\$29,280,666	+ 76.3
New York City....	\$12,643,378	\$6,575,673	+ 92.3
Outside N. Y. C..	\$38,993,855	\$22,704,993	+ 71.7

The improvement in April as compared with both the preceding month and with the same period of last year was quite general. Lower totals were recorded for only one group, the West Central, where building operations were no doubt hindered by the recent severe dust storms. Comparison with March in the New England section showed a gain of 61.4 per cent. Next came the Moun-

tain States with an increase of 40.7 per cent, and the East Central with 31.0 per cent. Gains ranging from 11.7 to 19.7 per cent were reported in the West Central, South Atlantic, Pacific and South Central groups.

BUILDING PERMIT VALUES (MONTHLY)

(215 Cities)

	1935	1934	1933
Jan.....	\$26,820,268	\$20,825,055	\$17,744,805
Feb.....	27,630,307	19,320,964	17,161,943
Mar.....	45,063,852	25,505,005	17,798,441
Apr.....	51,637,233	29,280,666	22,091,417
May.....	43,825,268	28,621,505	31,525,523
June.....	33,899,650	34,452,738	34,098,384
July.....	33,899,650	26,507,925	29,484,891
Aug.....	37,501,122	37,501,122	32,391,868
Sept.....	27,450,066	27,450,066	32,243,704
Oct.....	27,450,066	27,450,066	26,198,342
Nov.....	21,125,720	21,125,720	28,021,688
Dec.....	21,125,720	21,125,720	24,915,270
Total.....	\$348,399,747	\$313,676,276	

The sharp rise registered since the beginning of this year, especially during March and April, has brought the total estimated cost of building permits for the first four months of 1935 to \$151,163,720, compared with \$94,937,690 in the same period of 1934, or an increase of 59.2 per cent. Compared with the first four months of 1933, which period witnessed the low point of the depression, the increase in the volume of building permits amounts to 102 per cent. Following is the comparison for April and the first four months of the past nine years:

	April	Four Months	Change P. C.
1935.....	\$51,637,233	\$151,163,720	+59.2
1934.....	29,280,666	94,937,690	+26.9
1933.....	22,091,417	74,796,666	-55.7
1932.....	47,741,687	168,707,036	-65.3
1931.....	152,029,087	486,096,765	-13.2
1930.....	179,811,014	559,820,744	-50.8
1929.....	479,483,093	1,294,875,220	+12.7
1928.....	295,593,198	1,149,292,327	- 3.6
1927.....	345,222,447	1,182,419,145

ION LEWIS SCHOLARSHIP

AT a meeting of the Managing Committee of the Ion Lewis Scholarship in Architecture on April 13, Mr. Harlow Hudson, graduate of the School of Architecture and Allied Arts of the University of Oregon, now a graduate student at the Massachusetts Institute of Technology, was awarded the 1935 Traveling Scholarship. A stipend of \$1200 is included in the grant.

STUDENTS' BRIDGE DESIGN

JEROME RAPHAEL, a student at Massachusetts Institute of Technology, won first prize in the seventh annual bridge design competition held by the American Institute of Steel Construction. Alexander Matthews, Jr., a student at the Yale School of Engineering, won second prize. First Honorable Mention was given to David Hiatt of New York University, and Second Honorable

(Continued on page 16)



UNDER PRESSURE!

"200 feet down. 1000 feet from the shaft. Deep below the Hudson River. 24 lbs. extra air pressure. Men can work only 2½ hours at a time twice a day. Suppressed excitement. Impending danger. Dynamite sticks set. Then the explosion. Choking fog. Gases.

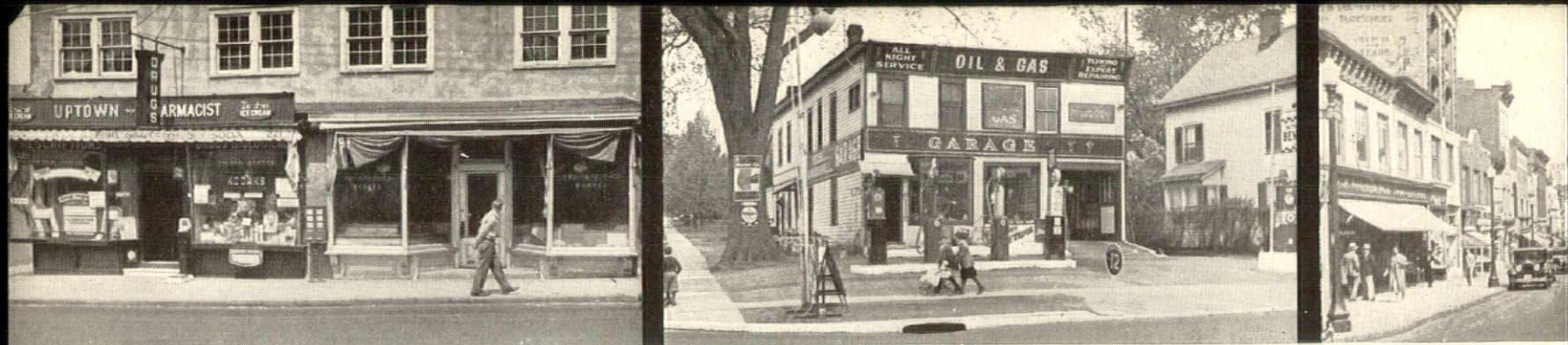
"Thanks to the Port of New York Authority, I was privileged to make a sketching expedition into the new Midtown Vehicular Tunnel, which they are building to connect New York and New Jersey. The sketch above shows the foremost part of the tunnel, called the 'drift,' as shoring is being wedged in place. My sole equipment was a 2B Microtomic Van Dyke Pencil and a pad of cameo paper. Under pressure, to be sure! But working under pressure, down there or up in a roaring airplane—anywhere—I have found that one versatile Microtomic Van Dyke is worth three or four grades of a lesser breed. And in the drafting-room, when work must be turned out in a hurry, then Microtomics show their worth."—GERALD K. GEERLINGS.

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PRACTICAL HINT—

1. Far too often when sharpening a pencil the knife nicks the lead badly, the latter breaks at the weakened point, and the pencil is blamed.
2. It is easier and quicker to get a point on very soft degrees with a razor blade or very sharp knife than on a sandpaper block.
3. Avoid using a thick, dull blade.



"MODERNIZE MAIN STREET" *Competition*



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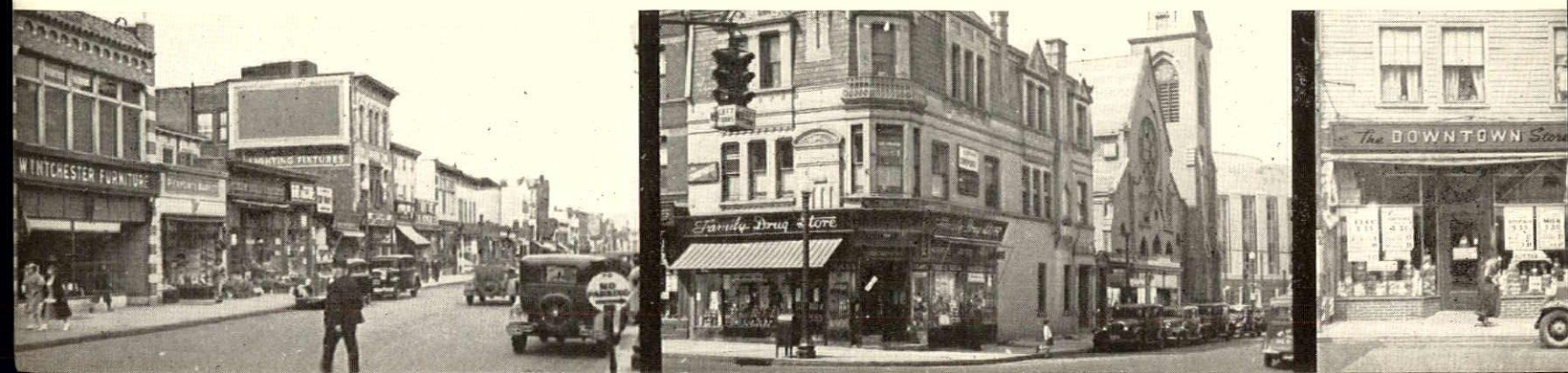
Conducted by
THE ARCHITECTURAL RECORD

KENNETH K. STOWELL, A. I. A., *Professional Advisor*



● The Food Store, the Drug Store, the Apparel Shop and the Automotive Sales-and-Service Station—the "Main Street" of every city, town, village and community has at least these four business establishments. Better merchandising demands the modernization of

thousands of them and better financing terms make it possible. The modern store should attract the public, display goods to their best advantage, provide such convenience and comfort for customers that purchasing is a pleasure. The shop front with its plate-





\$11,000 in Cash Prizes

52 PRIZES — \$11,000 TOTAL

- 4 FIRST PRIZES (one in each classification)—\$1,000 each—\$4,000
- 4 SECOND PRIZES (one in each classification)—\$750 each—\$3,000
- 4 THIRD PRIZES (one in each classification)—\$500 each—\$2,000

In addition, there will be awarded 40 Honorable Mentions of \$50 each. These Honorable Mentions will be awarded for meritorious

designs, the number of awards in each class depending on the number of worthy designs in each class as determined by the Jury.

(Competition closes 5 P.M August 12, 1935)



glass show-windows establishes the character of the store and invites the passerby to stop and shop. The interior fulfills the promise of the front, serving as the setting for the display of merchandise, providing the urge to purchase.

On the architects, draftsmen and designers of the country rests the responsibility for the effectiveness of these modernizations both economically and aesthetically. To them, therefore, the Libbey-Owens-Ford Glass Company addresses this Competition.

The Program for the Competition will be distributed June 15, 1935 and will state in detail the requirements. The Competition is in reality four simultaneous competitions, each calling for the modernization of a particular type of shop or store—(1) A Food Store; (2) A Drug Store; (3) An Apparel Shop; (4) An Automotive Sales-and-Service Station. A photograph of each shop, and all necessary data, will be

published in the Program. First, Second and Third Prizes are offered for the best solutions of the modernization problem for each type of store. Each competitor may submit as many designs as he wishes in any or all classes, each design being eligible for a prize. All designs will be submitted and judged anonymously.

The Competition will begin June 15, 1935 and will close at 5 P. M. August 12, 1935. The Jury will meet August 26 and the judgment will continue until the final decisions are reached and awards made. The Jury will consist of seven members;—five architects and two experts in merchandising.

The entry blank is for your convenience. Upon receipt of the blank, a copy of the program, the printed title to be pasted on each design, and all necessary data and instructions will be sent to the entrant.



USE THIS ENTRY BLANK

KENNETH K. STOWELL, A. I. A., Professional Advisor,
 "Modernize Main Street" Competition
 The Architectural Record, 119 West 40th Street, New York, N. Y.

Gentlemen: I desire to enter the "Modernize Main Street" Competition sponsored by the Libbey-Owens-Ford Glass Company. Please send me the Program of the Competition, the title-paster and all necessary data and information.

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or write our Engineering Service
Department in Pittsburgh for in-
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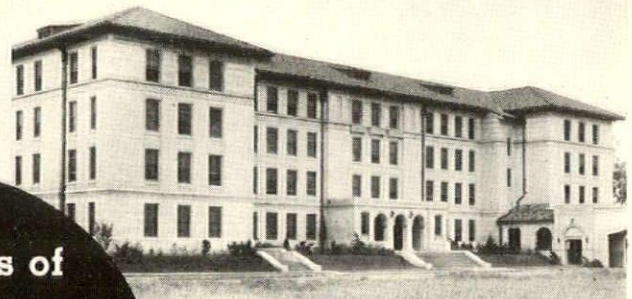
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ARCHITECTURE

REG. U. S. PAT. OFFICE

THE PROFESSIONAL ARCHITECTURAL MONTHLY

VOL. LXXI, NO. 6

CONTENTS

JUNE, 1935

	PAGE		PAGE
The Luminous Pylon as an Architectural Element	305	The Reflecting Pool	325
<i>W. M. Potter describes and illustrates some of the possibilities in a comparatively new type of light source</i>		<i>Edwin Bateman Morris muses upon the design of Washington as a city, upon Robert Mills's monument, and other matters</i>	
The Controls Over Design	311	Book Reviews	326
<i>What is back of man's creative impulses? Man himself, the physical apparatus; his physico-chemical environment; contemporary culture; function; tools; the economic element. And there is still another one, which Rutherford Boyd visualizes in these pages</i>		Shop Front for a Jeweler of International Reputation	327
The Architect's Place in the Housing Program	319	<i>Some of the drawings submitted in the Beaux-Arts Institute of Design competition for the Emerson Prize—students' solutions that have in them an idea or two for the seasoned practitioner</i>	
<i>The government has embarked on the greatest effort toward building activity on a sound basis that has ever been attempted. Where does the architect fit in? How does it affect him, and what can he do to swim along with the current? The article is by Miles L. Colean, Technical Director, Federal Housing Administration</i>		Favorite Features	333
An Architect Rambles About Williamsburg	322	<i>A small office on the estate of P. R. Levi, Charleston, W. Va.—Lewis E. Welsh's selection of a piece of his work that measured up to his expectations</i>	
<i>Dwight James Baum, whose achievements with the camera are not unknown, records his visual impressions of Perry, Shaw & Hepburn's notable restoration</i>		One Hundred Small Houses	
Welding, a Neglected Tool	324	House of Miss Vivian Ashum, Crystal Lake, Ill.	335
<i>Winsor F. Briggs tells of this comparative newcomer among the practical arts, the advantages and progress of which are not apparently as well known to the architect as they are to the engineer</i>		<i>Pierre Blouke's choice of a small house that represents an appropriate solution, within reasonable cost, of the small country estate</i>	
		A Concrete House Costing \$25000	339
		<i>Frank H. Bissell believes that this represents his best efforts to date in the design of a small house</i>	
		Better Practice	343
		<i>W. F. Bartels in his practical series moves on to the subject of doors and windows</i>	
		The Editor's Diary	347
		ARCHITECTURE'S Portfolio of Overdoors, Interior	349
		<i>A collection of sixty photographs</i>	



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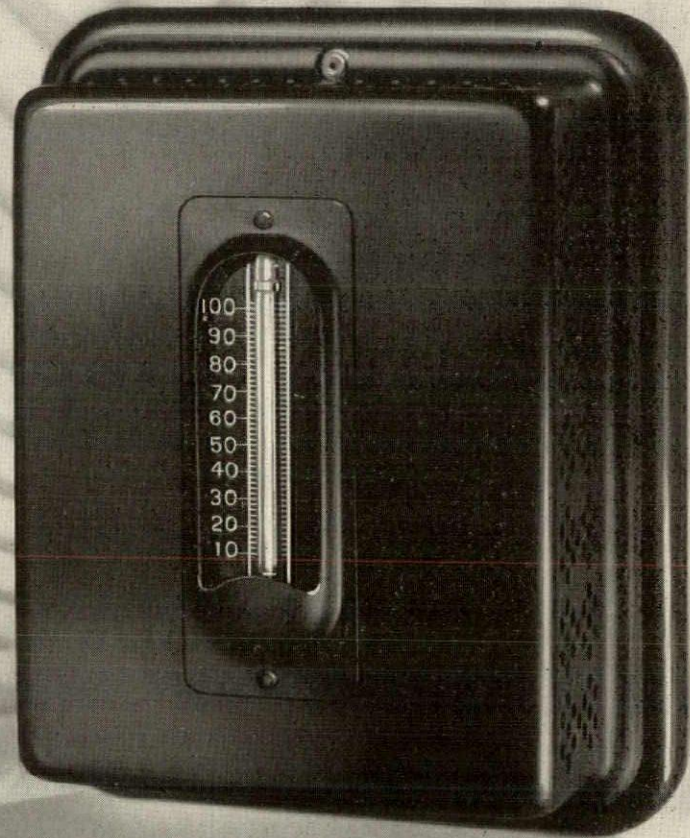
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The information throughout is clear and such that from it even a beginner can make a beautiful garden. On the other hand, the more experienced will find assistance and new avenues to explore. Size and expense are not governing factors of success: a small site and little money can also produce a complete picture. 151 pages, 6¾ by 9¼ inches. Illustrations from drawings and photographs. \$3.50.

By B. H. B. SYMONS-JEUNE



Water-plants, and particularly water lilies, are becoming more and more popular as gardeners realize that they are among the hardiest of plants; that of all hardy plants many of them produce the largest flowers and the most beautiful colors; and that they can be grown easily and cheaply in the simplest of ponds in the smallest of gardens. No modern book has hitherto existed, in English, dealing solely with this fascinating type of gardening. On the Continent, where water lilies have been grown in increasing numbers for many years, the author of this book, who is leader of research into water-plants for the Guild of German Horticulturists, is recognized as a first authority. 136 pages, 7½ by 10 inches. Illustrations from drawings and photographs. \$3.00.

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Water Lilies & Water- Plants

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The way to arrange flowers so that a genuinely artistic effect results is little known in the Western world.

Mrs. Hine, an outstanding authority on flower arrangement, for which she has won many prizes, has written this book primarily for those who want flowers in the house.

She shows how, by the use of certain simple rules, fewer flowers can achieve more varied and lovelier effects; how standards of excellence, deriving from centuries of experience in the Orient, have been affected by fashion and expediency; how balance and proportion in flower arrangement are the touchstones of successful decoration.

Her book is profusely illustrated with photographs of flower arrangements that won prizes, and thus pictorially presents the best efforts of specialists in different kinds of flowers. 147 pages, 7 by 10 inches. Illustrations from photographs. \$2.50.

By MRS. WALTER R. HINE



and—

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By RICHARD SUDELL, F. I. L. A., A. R. H. S.



It is quite impossible, without seeing this book, to appreciate its comprehensive quality. Every phase of gardening is fully and authoritatively covered, and the book should be of the utmost value to every gardener, whether amateur or professional.

Gardening, like most arts, is constantly changing. In order to get a proper register of all that is best and newest in the way of method and information, various specialists have contributed the sections devoted to their particular subject. And to assist those amateurs who specialize, some of the more popular flowers have been dealt with rather fully in the text, and the material in such cases has been supplied by gardeners who have themselves specialized in the particular flower for many years. In short, the cream of many years' experience is included in these pages, and as far as possible all that is best in modern garden information has been expressed in simple form, so that the novice will find it a useful book of reference.



With color frontispiece, 64 pages of half-tone illustrations, and 470 line drawings.

1152 pages, 5½ by 8 inches. \$3.75

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Rebuild America

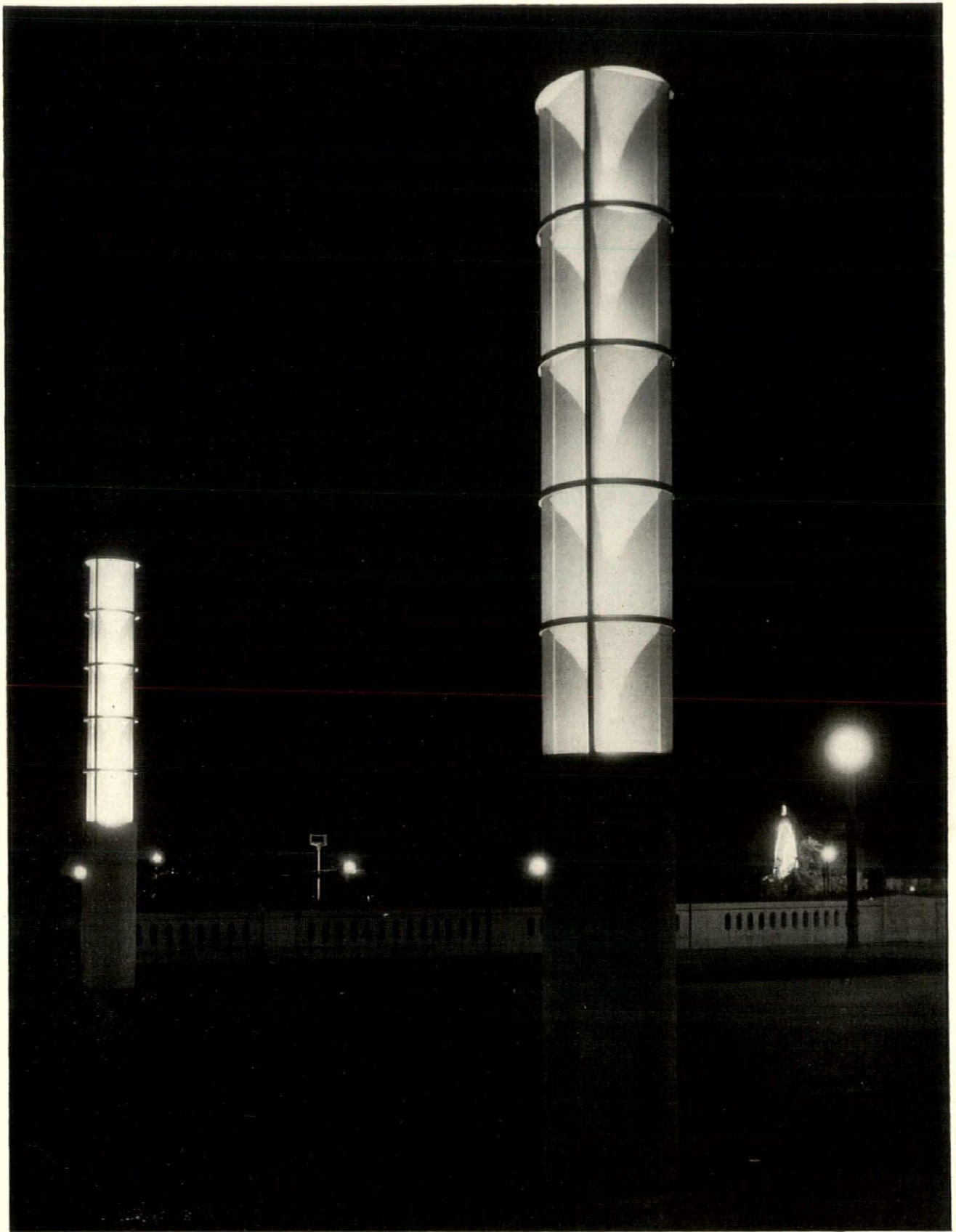
THIS nation has reached an important turn in the road. As pioneers we have necessarily built hurriedly, without taking the time and thought necessary to build particularly well. Much that we have built is in the nature of a temporary makeshift.

No one who will look about our cities will believe that this is the best we can do. Long-range planning has been conspicuous by its absence. We built for the horse and buggy, and the motor car changed our fundamental needs of space, streets, circulation. We built for self-contained communities and small manufacturing plants. Industry turned towards centralized mass production, locating its factories near the sources of materials or fuel—and small manufacturing was left high and dry by the tide. Then we discovered that over-centralization of industry had its own peculiar disadvantages, and, learning how to transmit power over high-tension wires, are now perhaps moving in the other direction in an attempt to unscramble a too greatly concentrated industry. We have shown about as much resemblance to a nationally planned activity as a pair of moles in their underground meanderings.

Nevertheless, with a rapidly increasing population, augmented by a steady flow of immigration, our needs expanded, we kept developing new virgin land, establishing new communities. We did not stop to rebuild; we merely moved beyond our mistakes, allowing them to rot, while we started another unplanned effort.

The turn of the road, however, is now just ahead of us. The curve representing the rate of increase in population is flattening out. Immigration has almost ceased. We no longer have an undeveloped continent ahead of us. The rush of pioneer building is over. We look about us and see that the job thus far is only a makeshift. We have built America, but it is far from being the best we can do. Our knowledge, our demands, our energies demand something better than the hasty, unplanned, bungled results we see about. *We must rebuild America.*

To this new goal ARCHITECTURE now sets its helm.



One of the pylon types used at the Century of Progress Exposition in Chicago—interesting in form and in the shaded tones of luminosity

ARCHITECTURE

❖ VOLUME LXXI

JUNE, 1935

NUMBER 6 ❖

The Luminous Pylon as an Architectural Element

By W. M. Potter

ARCHITECTS have always appreciated the rôle that light plays in bringing out the beauty of their creations. Is it not logical, therefore, to consider ways in which artificial light can be used to enhance the night appearance of attractively designed buildings and grounds, when without it they would be largely lost in darkness? A means to this end, resulting in additional values to owner and tenant, and adaptable in high degree to various manifestations of design, is the application of self-luminous architectural elements.

While floodlighting can be made highly attractive in the treatment of many monumental building exteriors, luminous elements made a part of the structures themselves can aid an architectural design of distinction to impress those who are on the streets at night. This

"building-in" of light has been made practicable and even expedient by the character of the modern incandescent lamp; it can be disposed by the architect in positions where older illuminants would have been impractical and unsafe. Use of this new resource gives the architect far greater control over absolute and relative brightness, and therefore over contrast and emphasis of elements, than he can obtain with any other material.

In addition, he has greater control over such factors as size, mass, line and color, as well as the frequent opportunity to use familiar building materials, taking advantage in the modern fashion of their inherent beauty. In the period of active architectural transition now occurring, new standards of design are being formulated, expressed increasingly in new materials and new treatments. In this refresh-



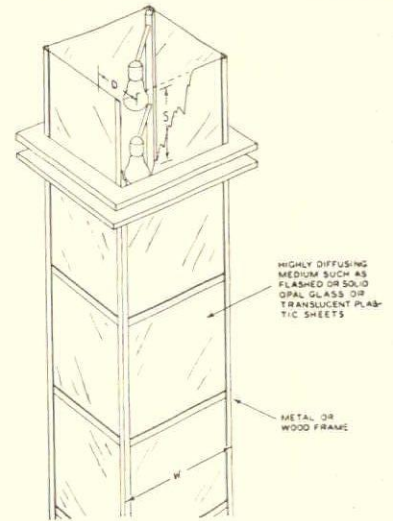
The luminous pylon has been employed effectively in gasoline service-station lighting. This one is lighted by a single vertical row of 100-watt lamps spaced 19½ inches apart. The panels are removable for maintenance

« ARCHITECTURE »
JUNE, 1935



Small-scale model of a gasoline service station, using square pylons with flashed opal glass in metal frames

Detail of one type of square pylon—one of the simpler forms



The Promenade of Light at the Copenhagen Exposition of 1931. Square portable pylons are useful for temporary installations



ing and inspiring new freedom there are many opportunities for the appropriate use of luminous forms.

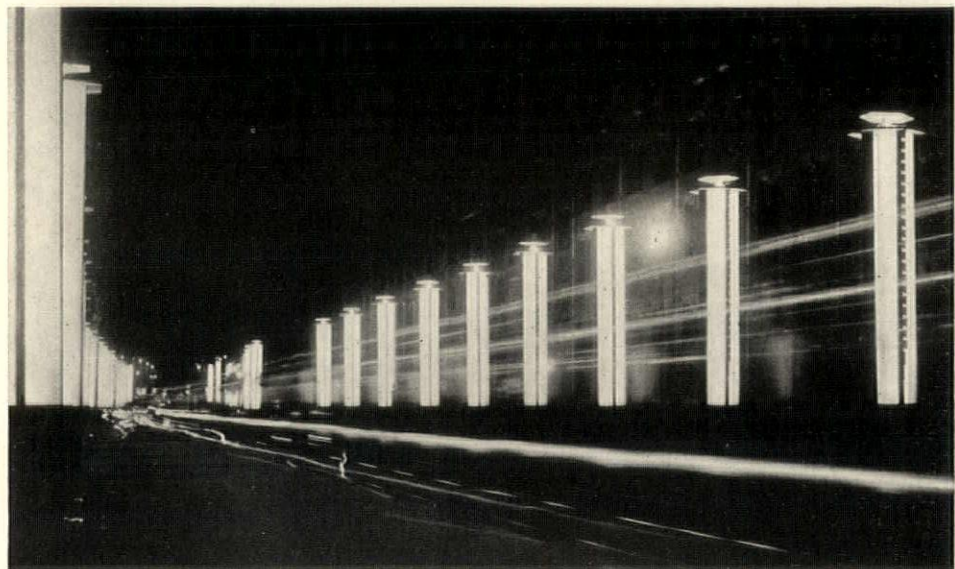
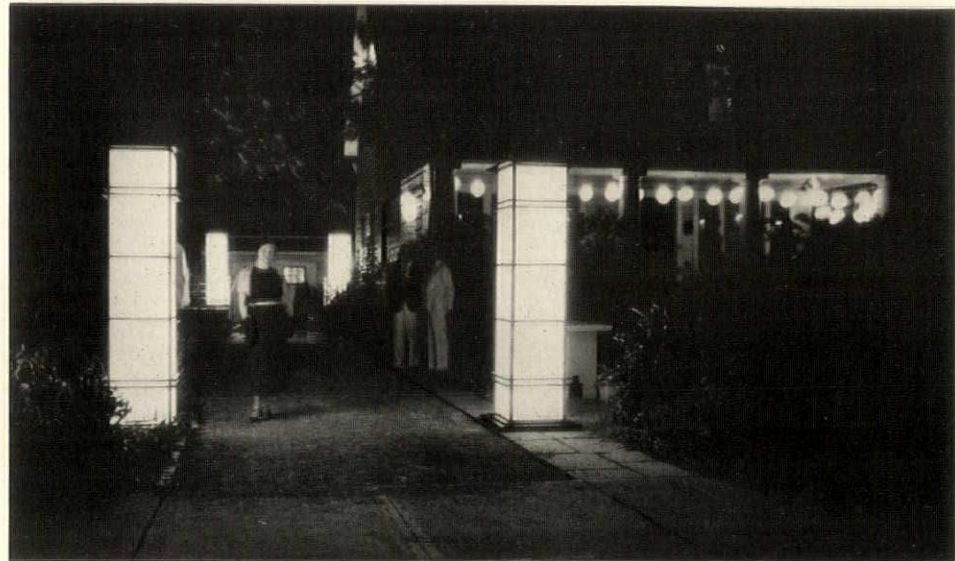
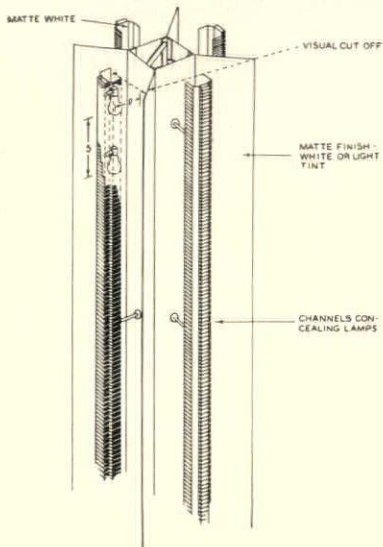
Luminous architectural elements are found in a wide range of types used both in interiors and on exteriors. Most are comparatively simple in construction. One of these forms, the luminous pylon or pillar, excites one's interest because it is adaptable to so many situations, not only as an element of design, but also for publicity and show purposes, and on occasion to provide utilitarian lighting from a unit itself of good appearance.

In many lines of business these days, electrical display is found to be indispensable, and there is an opportunity to give the sources of light more acceptable form. One of these businesses is that of the gasoline service station, about which it is always desired to build an

atmosphere of quality products and efficient service. For this the luminous pylon treatment has many valuable qualities. One of the simplest forms consists of a square or rectangular enclosure of highly diffusing glass (preferably flashed opal or light solid opal) containing a single row of lamps in the centre, properly spaced. They are not to be thought of as bright in the sense of the familiar illuminating fixtures for interiors; rather, they are softly luminous, their larger size creating an appeal without glaring brilliancy. They may be designed in various appropriate shapes. Floodlighting units may be placed within the luminous pylons and directed through lightly diffusing glass on one side to light adequately the station exterior and the yard area without the use of additional yard lighting equipment. Even though the pylons do not contain floodlighting equipment,

The luminous pylon is a possibility even for so short-lived a purpose as a garden fête or bazaar. The translucent material may be of tracing linen or even of paper

Another simple type of pylon, with angular surfaces and continuous opaque chanel to conceal the lamps



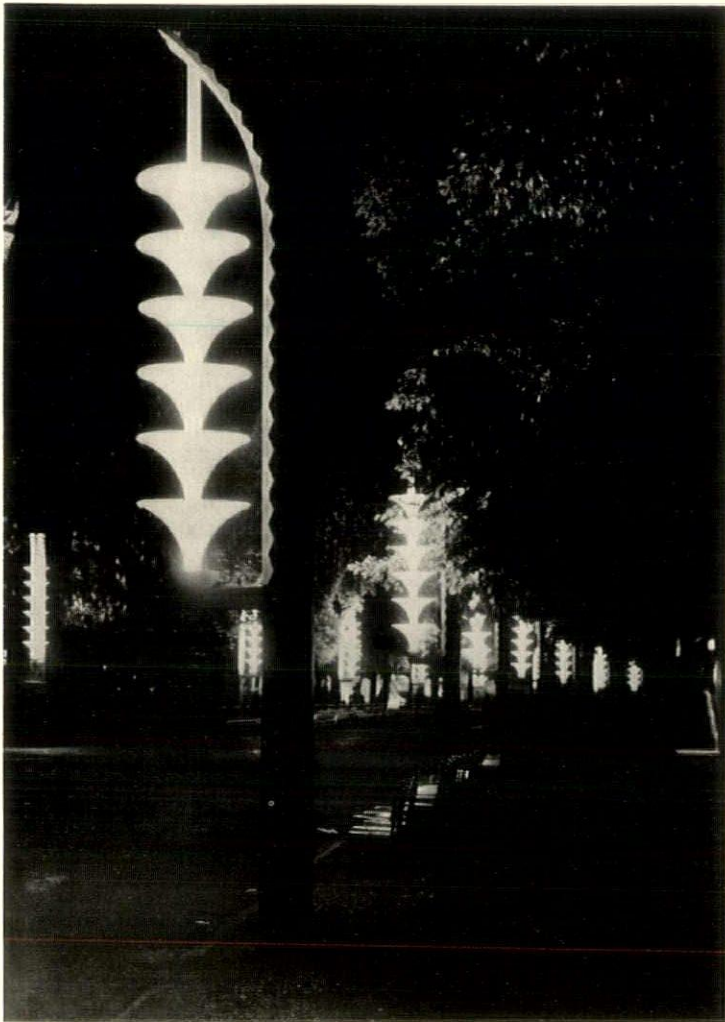
There are possibly no more effective means of lighting a thoroughfare for some gala occasion than through the use of the luminous pylon

they provide softly diffused light which helps in the efficient servicing of cars. A built-in adaptation of the same lighting idea is seen in luminous glass pilasters or piers for the station itself. These light the cars from one side, and may extend through the wall in such a manner that adequate interior lighting is also obtained from the one or two rows of lamps arranged within each unit.

Luminous pylons and pilasters are excellent mediums for signs, or other advertising messages. They are also adaptable to decorative designs, such as grille work, which add to their effectiveness. These may be of wood or metal bolted directly to the glass or to the metal structure, or may be of opaque or translucent color applied directly to the glass, as in the case of fired ceramic patterns, decalcomania, and the like. Many striking color effects may

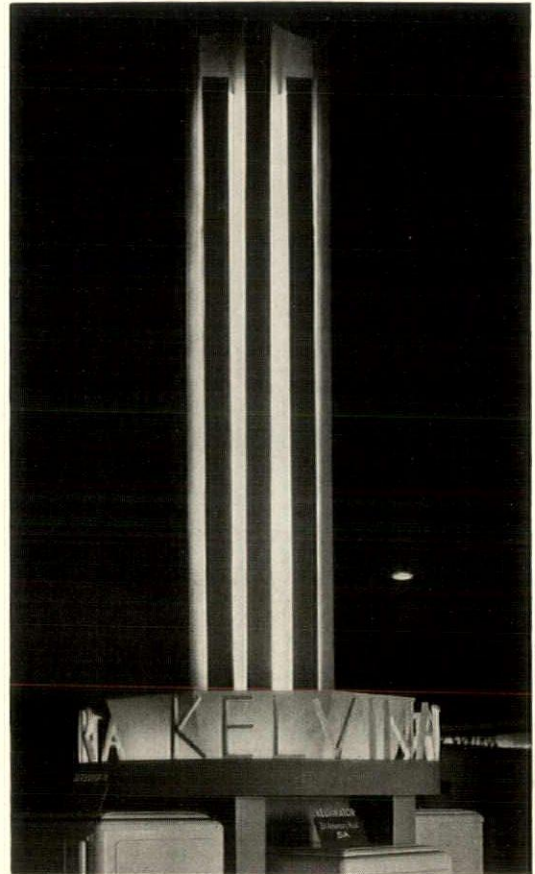
be appropriately selected, to be in keeping with the general treatment of the station exterior or the characteristic colors of the advertising material used by a particular company. These are possible through the use of colored lamps inside the elements, or by the use of highly diffusing colored glass. In the latter case, the color of the pylons will not be "washed-out" if white floodlighting strikes it. Such effects serve as an immediate and distinct identification to the fast moving public.

Obviously the advantages to be reaped from such point-of-purchase displays should appeal to other lines of business. Luminous pylons may be included in outdoor restaurants, beer gardens and the like to create an inviting, refreshing atmosphere. Novel, soft, and possibly colorful lighting from pylons heighten this effect, and experience shows that they are



A type of decorative lighting source used in the French Colonial Exhibition in Paris. Granet and Expert, architects

The luminous pylon adapted for interior display accent at the Century of Progress Exposition. The members concealing the lamps are V-shaped



unmistakable markers attracting the public. The height and size may vary widely.

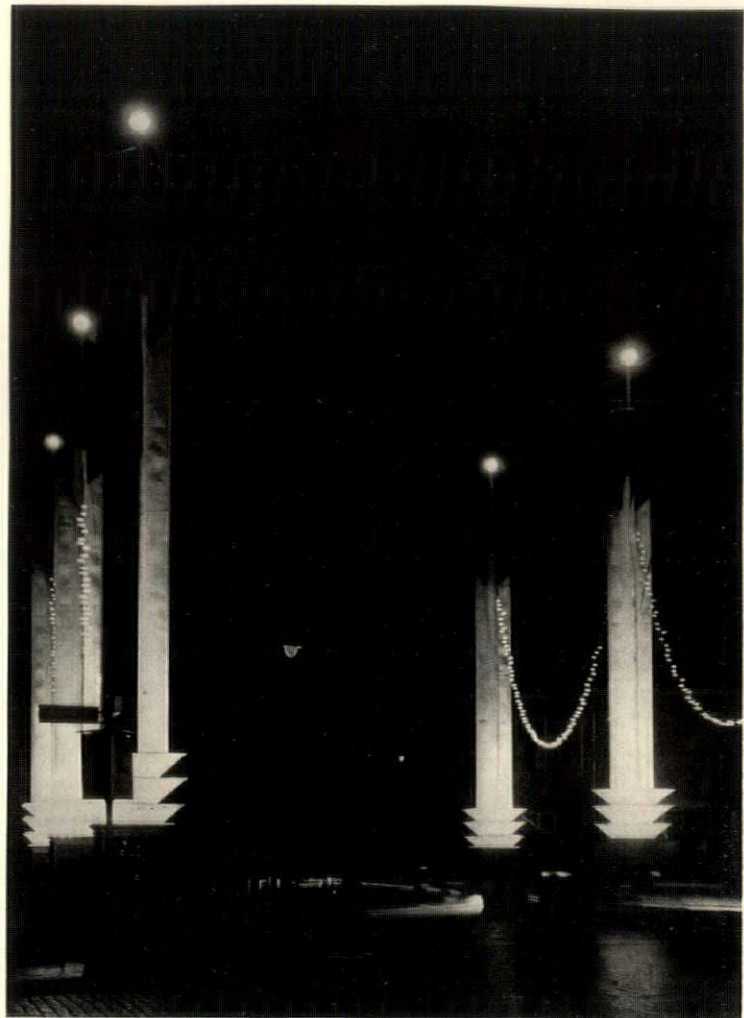
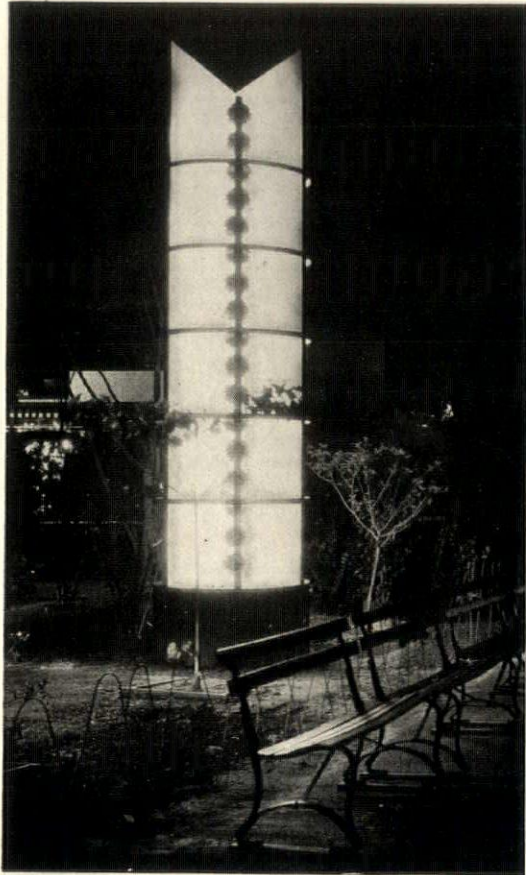
It is only necessary to suggest the possible applications for roadside inns, amusement parks, bathing beaches and pools. All such business, together with more ambitious enterprises such as theatres, may profit largely from the intelligent use of luminous structures.

An interesting and effective use of pylons of temporary construction (wood frames, translucent plastic sheets, cloth, or even white tracing paper) has been made for benefit garden parties, where it has been necessary to attract

Pylons in the "Street of the Villages" at the Century of Progress Exposition in Chicago

The fins of these pylons are lighted from below by concentrated-beam floodlights

Pylons in front of the Agricultural Building at the Century of Progress Exposition. The three V-shaped sides are lighted by 60-watt lamps one foot apart, in reflectors



customers to the more quiet and darker residential streets. The peculiar qualities for display and utilitarian lighting of pylons have been very appropriate here. They may be of low brightness. For example, in the nearer pylons of tracing paper, seen in the upper illustration on page 307 (18 inches square) 25-watt lamps on 12-inch centres would be adequate. The lighting of such units depends, naturally, on many factors.

The spectacular quality which luminous decorations may attain has been found of value in attracting customers for sales events. In Holland there have



The three great pylons of the Federal and States Building at Chicago were flood-lighted

been installations of temporary or portable units arranged at the curb line before a store to call attention to special values. They centre the attention of the buying public, for they produce that desirable air of gaiety and hospitality and the splash of light in the street so effective in drawing crowds.

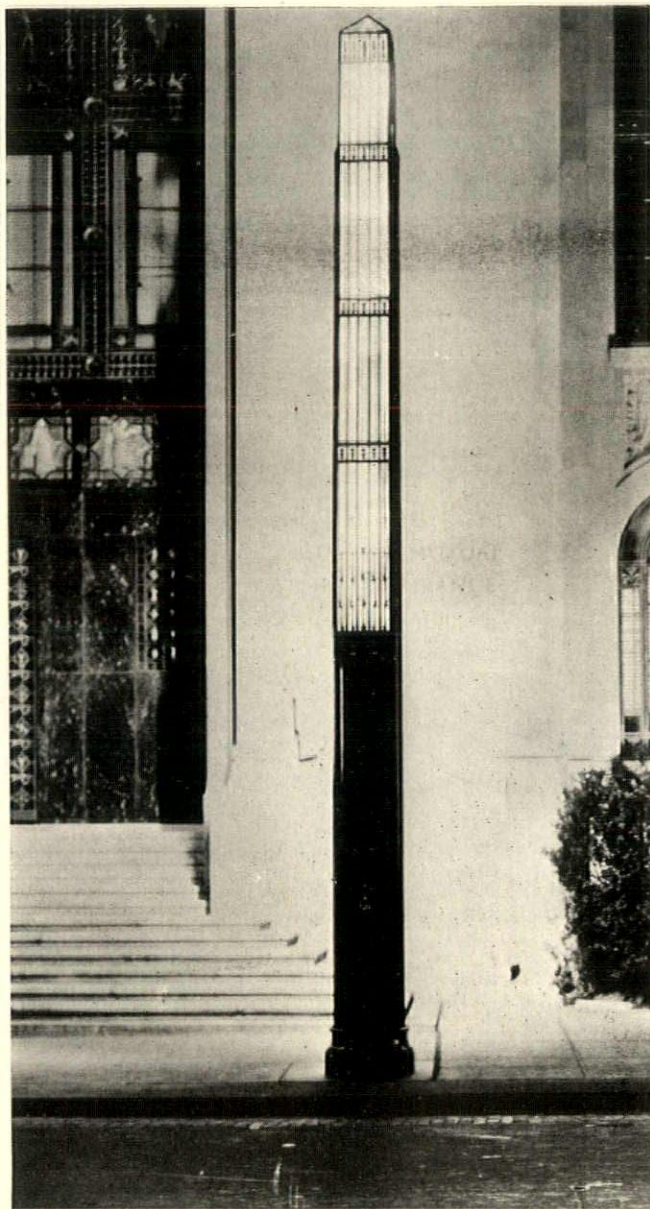
Likewise such units in a great many forms, some of them highly elaborated, have been used as distinctive markers and lighting units in many fairs and expositions, such as those held in the last few years at Antwerp, Barcelona, Copenhagen, the French Colonial Exposition in Paris, and A Century of Progress in Chicago.

Similar in nature is the use of pylons of various types to make a great impressive avenue of light for a parade on the occasion of some civic festival or national holiday. Abroad this has been done with much success. The opportunity is presented also for concerns to decorate whole streets for such occasions, or for any occasion when it is desired to attract people to a business street. There are typical applications of indirectly lighted pylons shown herewith.

For exterior display, luminous pylons are equally useful as framings or backgrounds. Exhibits of all kinds, especially with modern design, as in one illustration herewith, can derive ample advertising and illumination both from such units.

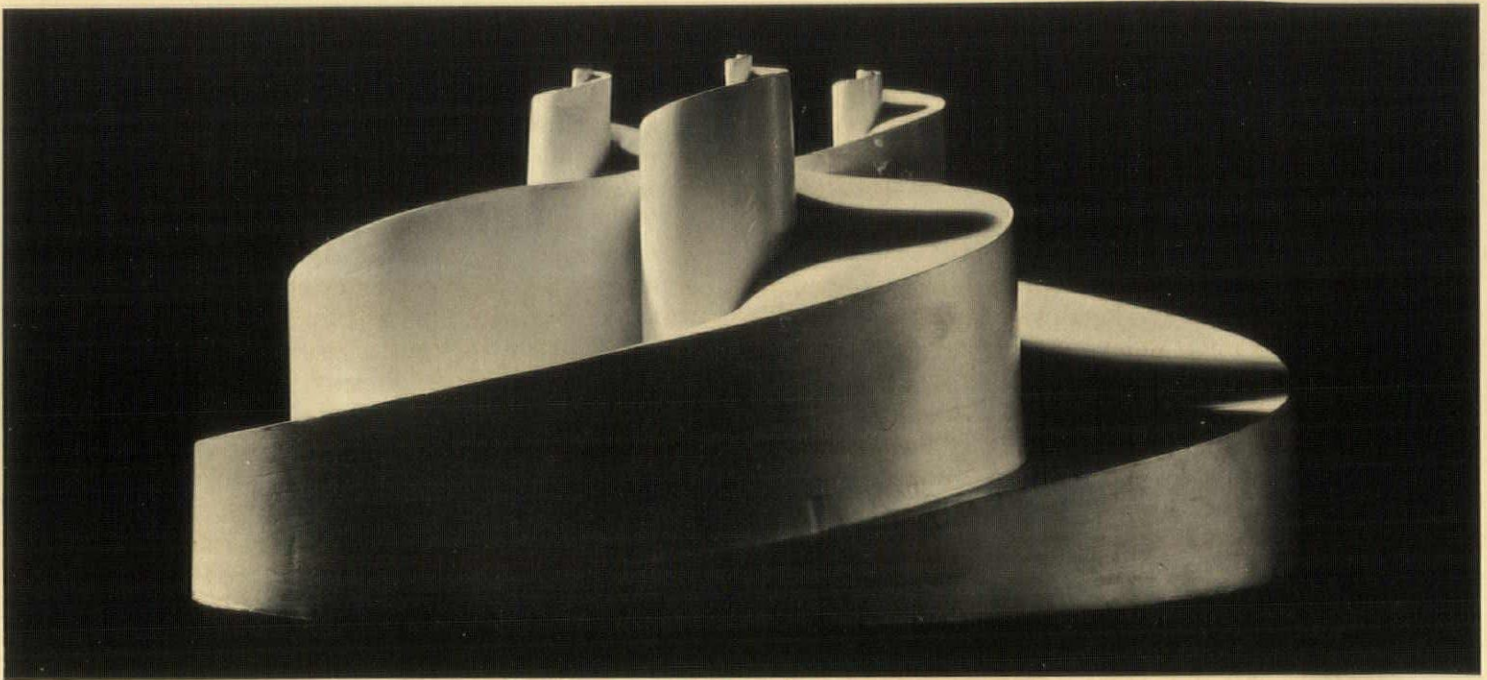
As mentioned above, pylons offer an excellent solution to the ever difficult problem of arranging floodlighting from the curb. Reflectors are concealed, for example, within a glass pylon, which is in itself a luminous decoration. An excellent example of such usage is seen in the floodlighting pylons of the Fidelity Mutual Life Insurance Co. in Philadelphia. Here the diffusing glass sides of the pylon are lighted by an auxiliary circuit of small lamps, the metal work is richly done, and the effect is dignified and finished.

It is obvious that the factors of good day appearance, soft luminosity, and simplicity of such elements suggest an opportunity for architectural designers to create units which express the spirit of their entire scheme, and which may be made appropriate to the enterprise and premises.



Here is an interesting combination of the pylon for permanent use as part of the building. It lights the entrance area by projection, while the gridded glass area itself is made luminous from a secondary cir-

cuit of small lamps. This is one side of the main entrance of the Fidelity Mutual Insurance Company Building, Philadelphia, of which Zantzinger, Borie & Medary were the architects



The Controls Over Design

By Rutherford Boyd

THRUSTING up through stone and steel, penetrating concrete, bronze and canvas, pulsating through the very fabric of all that we create is a fundamental force—the great principle of Design. But these creations of ours in the plastic and graphic arts do not spring from heaven-born inspiration alone. Whatever their source, from the simple “hunch” to the noblest aspiration, these ideas must be developed in the final complete design under the discipline of the conditions imposed upon them. Down through the pages of history Man has finally come to acknowledge these conditions, the power of these “controls” over all his activities in design. In his adversity and ignorance he has cursed them as limitations, but the urge of necessity and his insatiable curiosity have brought him to a truer knowledge of what these forces are and how they work.

Design seems to be coming into its own, the last hearty hand extended to it being that of Industry. Moreover, we are coming to realize that this thing we call Design has the same essence whether used in architecture, or in clockmaking or in fabrics. What is that essence? From where does it spring? By what forces is it controlled? A large volume would not encompass all the answers to these questions; in these few pages, which are part of a more extensive record of research, Mr. Boyd touches merely a sector of the subject—but a sector that has remained unexplored up to the present time.

—EDITOR.

What, then, are these controls over this fundamental force, Design?

First in our point of view, that complex mechanism, man himself; every thought, every inspiration is evolved out of experience by his delicately adjusted physical apparatus, with all its wonderful sensory

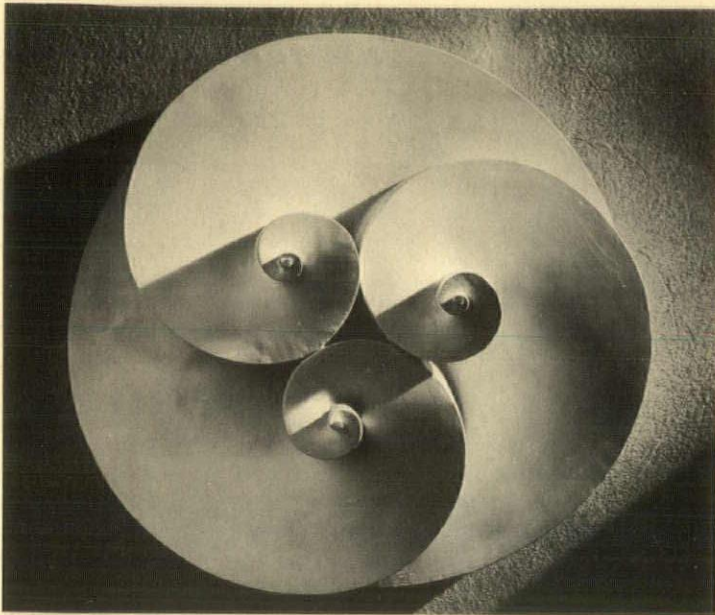
equipment. Through his invention he enhances the physical limits of his personal machine and overcomes the obstacle of his brief life-span, transforming, by his ingenious devices, the fugitive memories of the individual into the permanent records of human knowledge. His reactions to the universe in which he functions are the source of his decisions and his own selections. It is his ultimate discriminations that endow his creations in the arts with vitality and with identity. In man himself is the first of the great controls over Design.

The individual and all of the human race ex-

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« ARCHITECTURE »

JUNE, 1935



ist in the physico-chemical environment we call our universe. Here the great phenomena of Nature surround us and measure our days. This environment is vital to us, its effects profound, inescapable—we humans can live only within the narrow range of about one hundred degrees of temperature; the oxygen we breathe is the very same that rusts and corrodes. Under the universal force of gravitation we acknowledge the vertical—and the horizontal. In our sense of equilibrium is the source of our significant ideas of balance and of symmetry. Our most highly developed sensories constantly repeat in us the miracles of light. We can only exist surrounded, almost overwhelmed, by this universal control over Design—our physico-chemical environment.

The human being lives and motivates within his group, be it profession or craft, union or

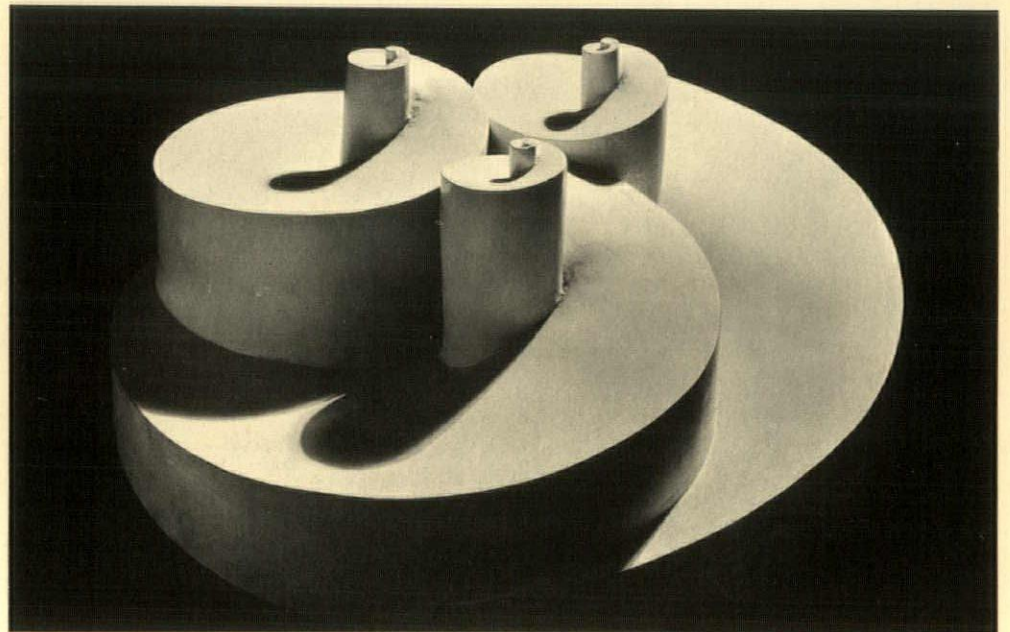
guild, and these groups collectively are the great source of contemporary culture. This includes our present evaluations of the past—some call it tradition—and our current ideas about art and life. Much of the effort, some of the pleasure of this existence occurs in the intercommunication of our thoughts through the media of print, cinema and radio. Within this control we find all matters of taste and of style, of likes and dislikes. Within these converging pressures of collective opinion we recognize the third elemental control in Design, contemporary culture. In the autobiography of some castaway who by some whim of fate grew from infancy to maturity in the complete solitude of that desert isle so dear to fiction, we would be absorbed by his adventures. Bereft of his rich inheritance, all that culture of the past, and freed from the complex contemporary life and art, he would slowly and clumsily repeat many of the trials and errors of his unknown forebears. In his brief span he could achieve little beyond the simple necessities of shelter and survival. There would not exist in his solitude what we know as contemporary culture.

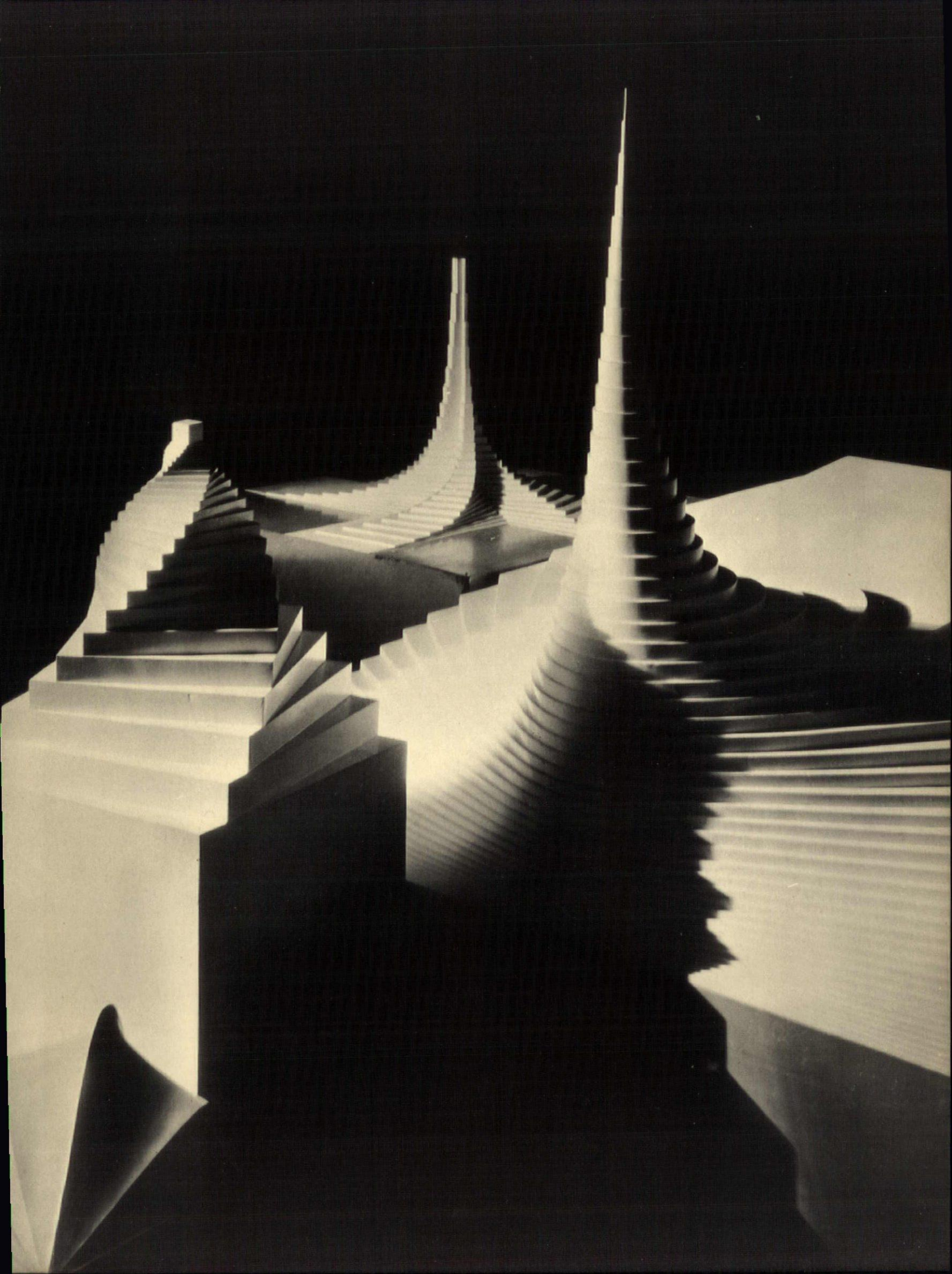
Everything that we fabricate has a purpose, a function of some kind. The pitcher must pour, the inscription must be legible, every work of art must function. Recently word-wars have been waged over this issue; proponents of functionalism even claim it to be the sole control of all that is significant in Design. Certainly function is at least one of its principal controls.

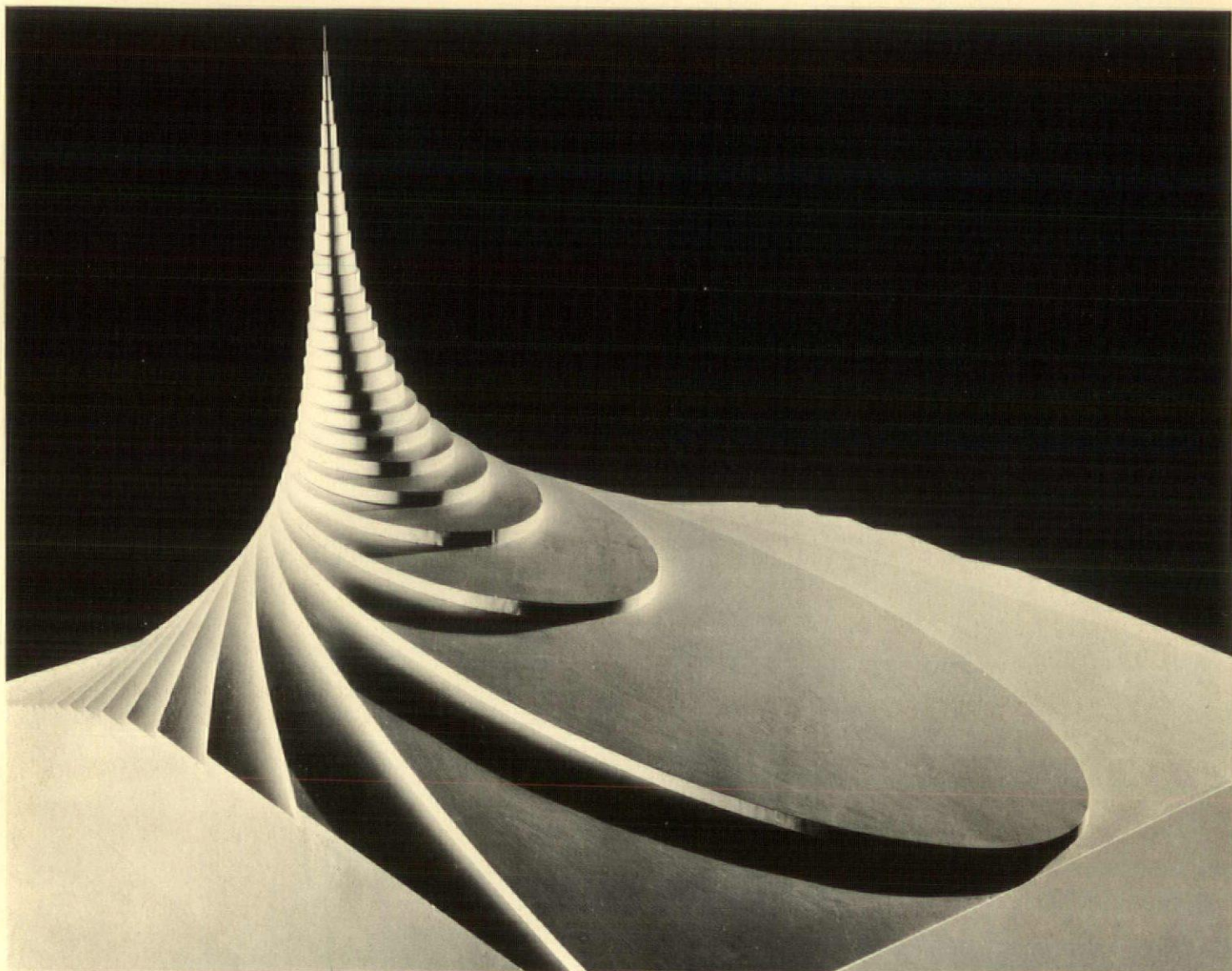
Agess ago, Man in his endless struggle for survival discovered that the ten tools on his two hands were not all that he needed. So he invented his first instruments, and worked with them in metal, wood, and stone. Twigs were bent into baskets, flints chipped into axe-heads, clay baked into pots—all of his primitive proc-

The elevation of this triple-spiral form illustrates, overleaf, the constant rise of each curve. The top view gives the spirals in plan: identical in size and shape, they have the unique property of being tangent, each spiral to the other, in two positions. Altitudes are derived from the vector ratios in the spiral plan. This design has no prototype in natural form, although many spiral curves in art are analogous to those in nature, so it is an invention in design

« ARCHITECTURE »
JUNE, 1935



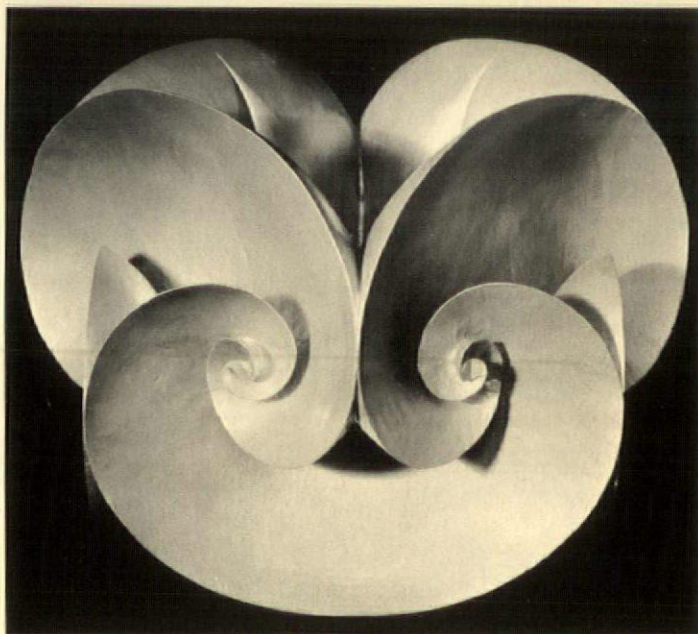




The above and the lower illustration opposite show the only model developed from a familiar construction in analytic geometry, which produces all the conic curves with a common focus and a common directrix. All upper curves are ellipses, becoming longer until they approach the single parabola, springing from the upper rear corners

esses, his tools and materials have affected all Design down through the ages. Now new synthetic materials, new processes and instruments will continue to affect Design in the present and the future of our technology. Instrument, process, material—this is technology, the fifth of the great controls over Design.

Another, an all-pervasive element in our life, has had too much control over us of late. It has been so publicized, debated and reviled for six years past that perhaps we need not dwell upon

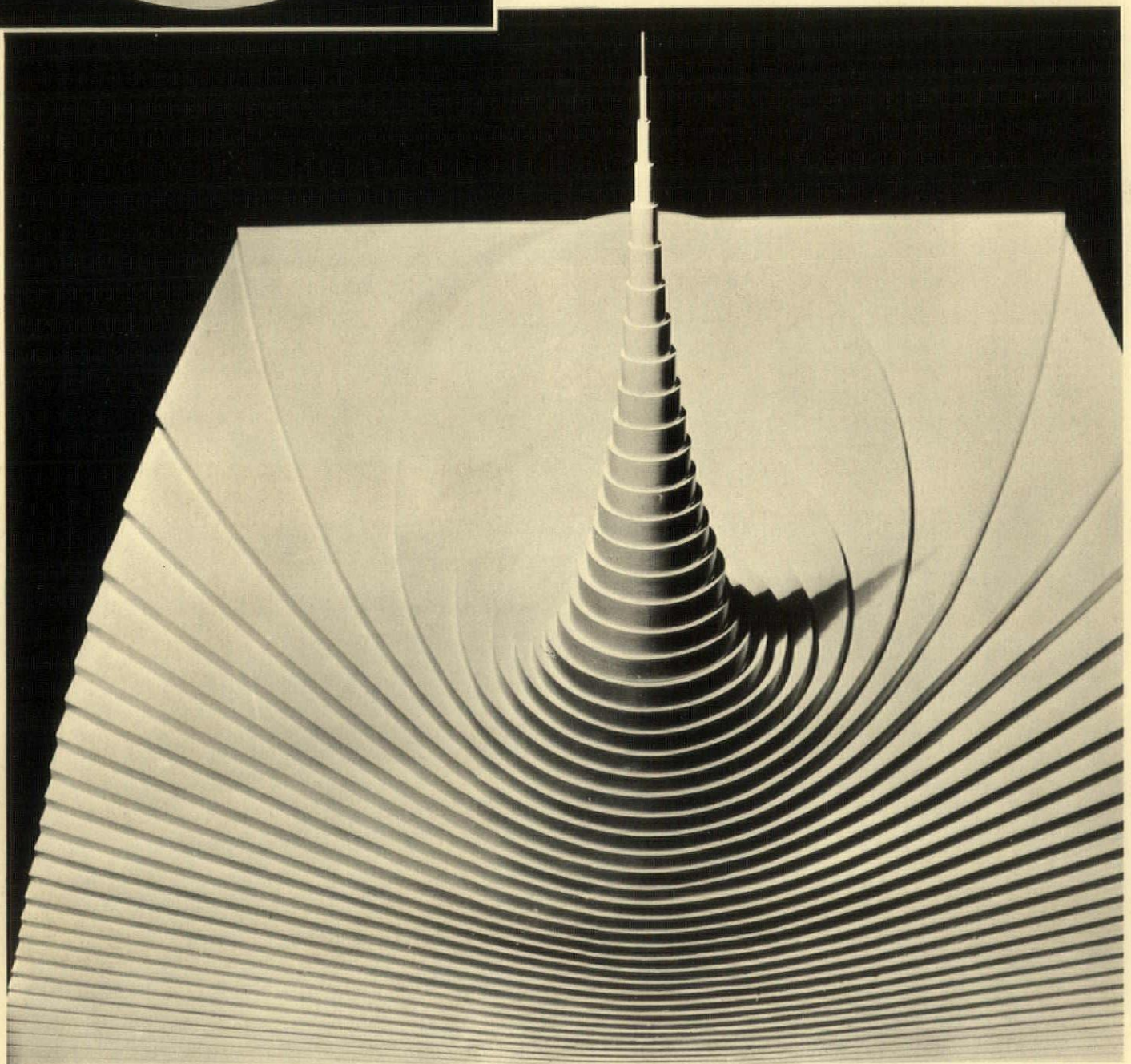


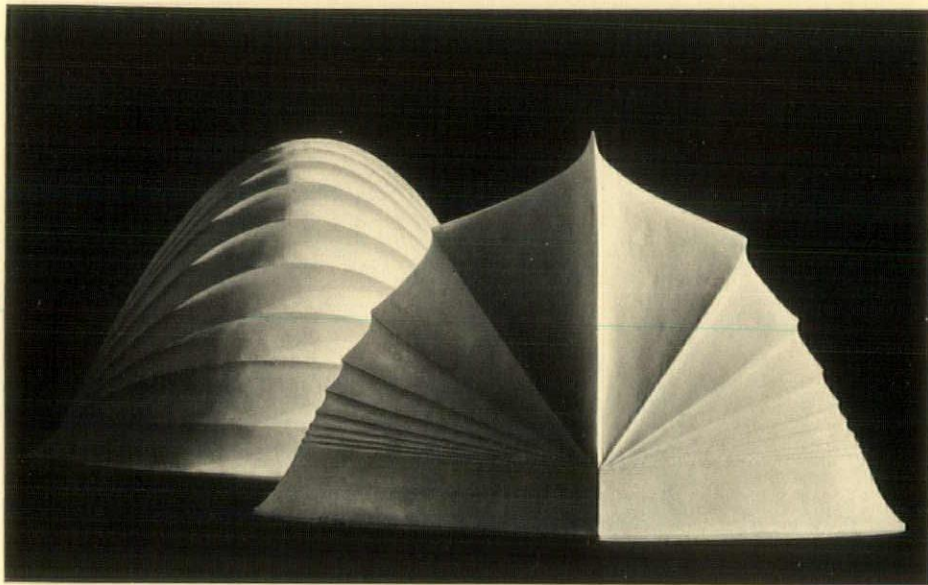


it here. Of course, it cannot be denied—it is the economic element.

Gradually we have recognized these six controls; only with much difficulty and space could many of their manifestations be clearly distinguished; interacting and interdependent, their relative significance varies greatly in each human problem. First the *human machine* which functions within the second control, the *physico-chemical environment* of Man. Then the collective thought and opinions embodied in *contemporary culture*. We can differentiate this group

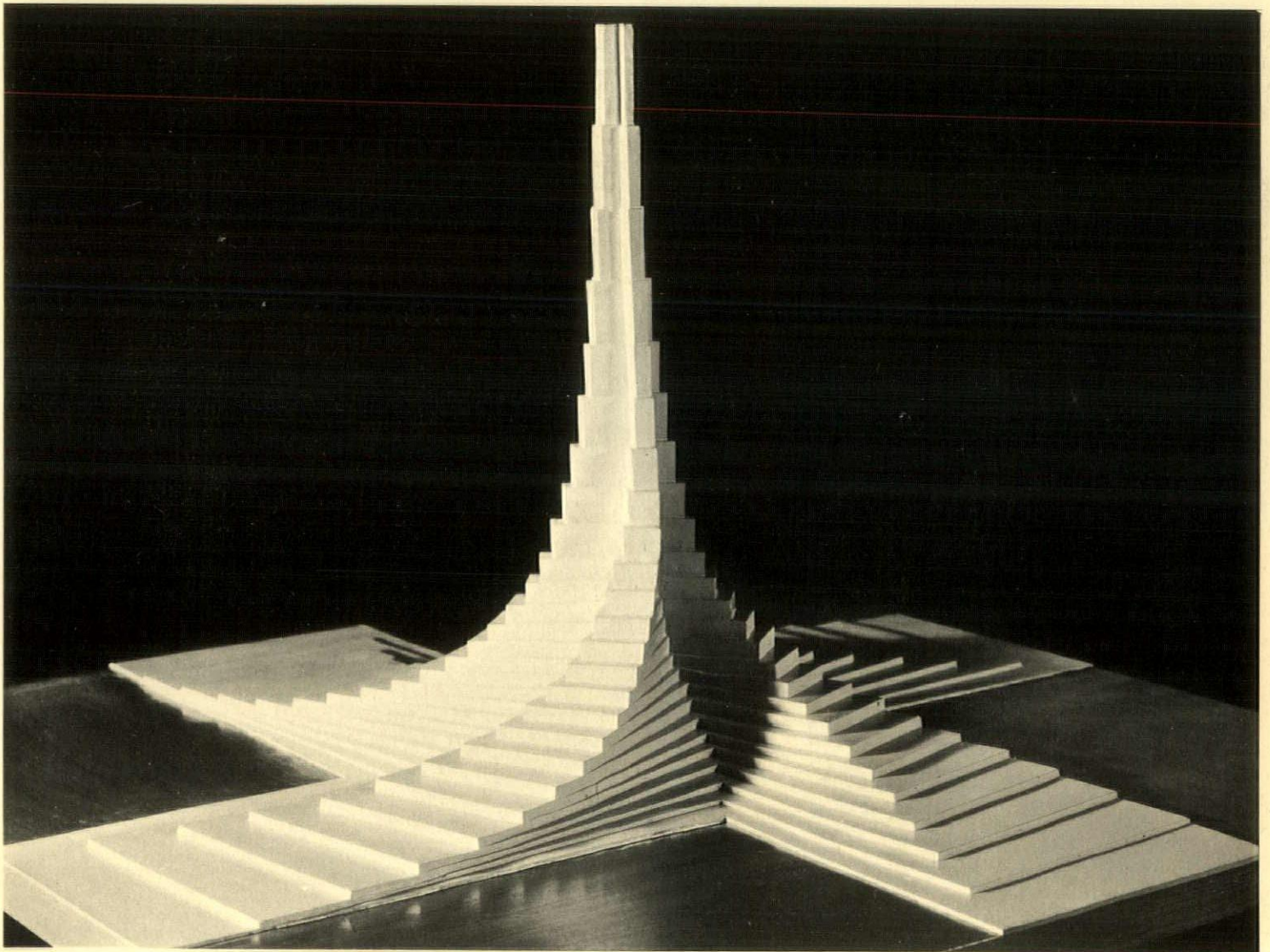
The two phases of the model at left and below on the page opposite exhibit its unique quality—all its spiral edges composed of eight segments, four similar and four in mirror-image. The vertical planes in which these spirals lie form two equal squares, turned so their eight points form an eight-pointed star in plan





These two forms are evolved within the same rectangular envelope of space: its dimensional ratio is the "golden section." The actual contours are created entirely by the parabola, in various scales

The model below is described on the next page

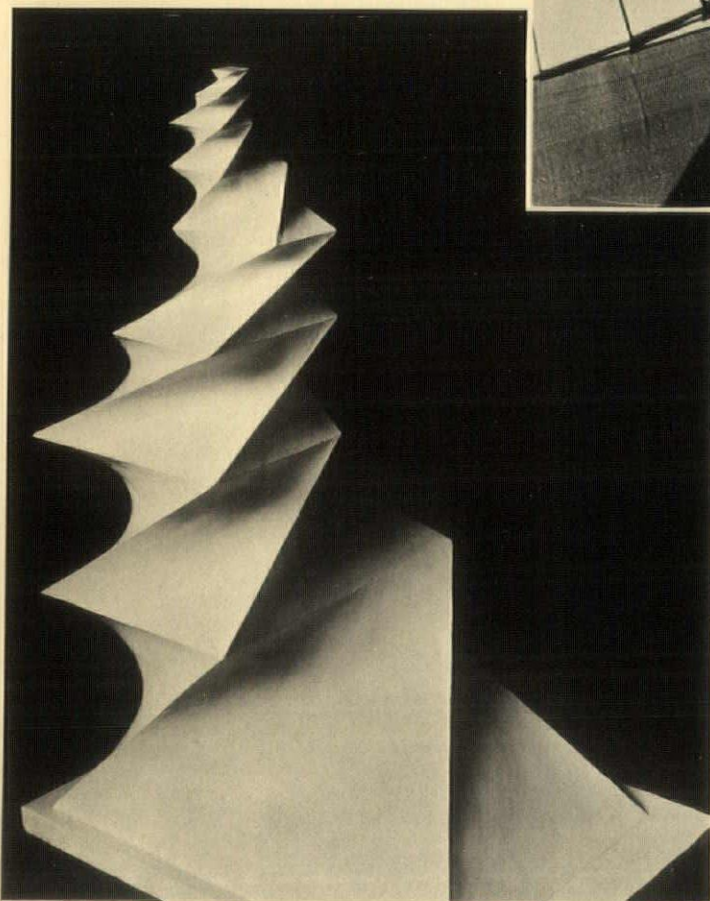
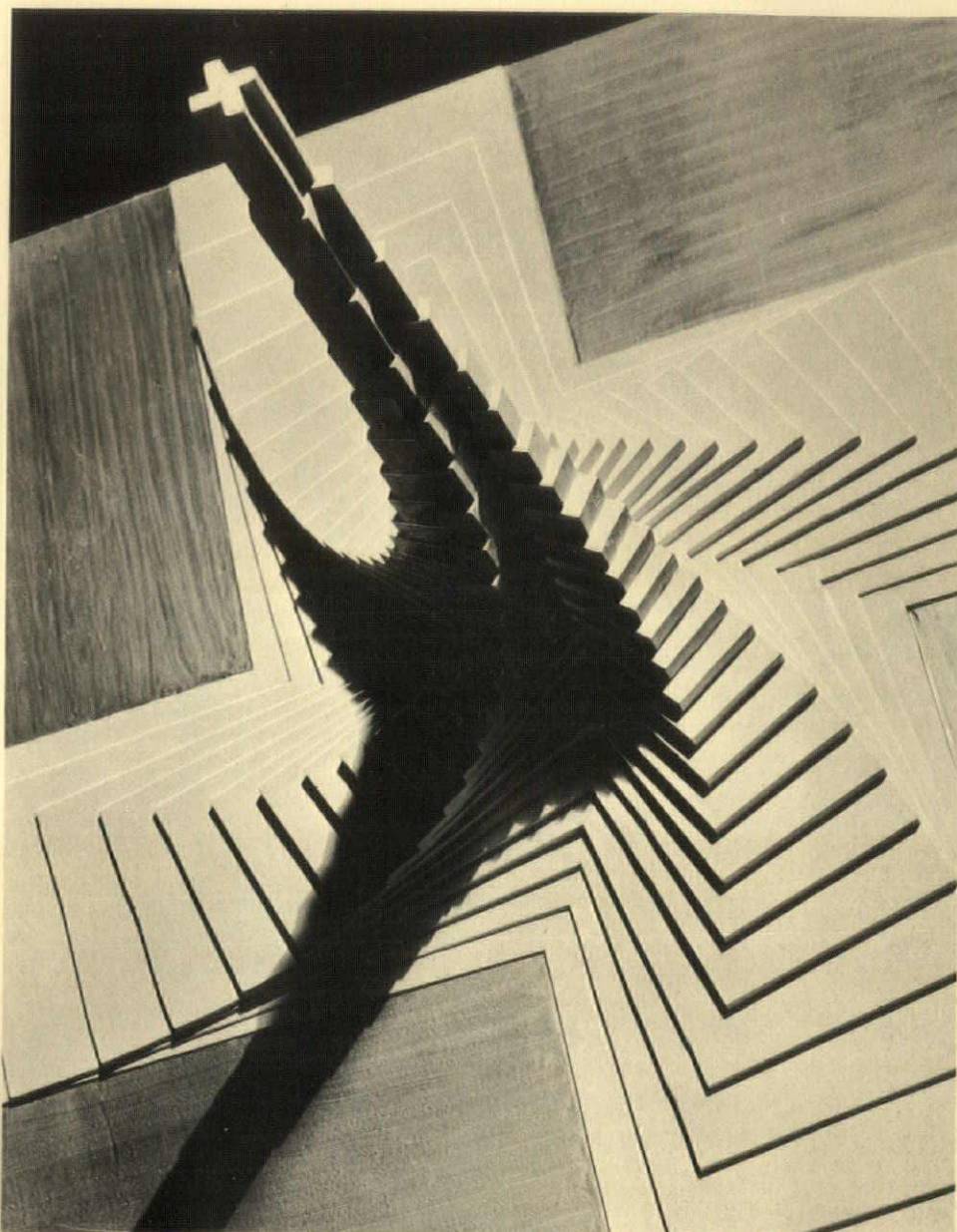


of three elements of control rather clearly from the other triad of *function, technology* and *economics*; the latter three seem to be, at least potentially more under the control of man.

Beyond these two groups we become aware of another control over Design, in a different category. This seventh control exists in the space set apart and defined by the actual form of the design. It occupies that portion of space partitioned off by the right-angled dimensions of the form, its height, length and width. Conceived as a rectangular, intangible envelope it actually encloses the work of art. Within this tri-dimensional envelope operate a number of integrated relations in space, which may be considered as

forces with metrical or proportional power. It is this element which conditions the concept of design as a purely abstract development in three dimensions. It is concerned solely with the interrelations of the parts to the whole form, and the whole form to its parts.

About this control over design we have really known very little. For a long while we have attempted to re-discover some system of relations in space used in the great periods of the past. Advocates of one or another "system" claimed to be the lost secret formulas of the past, have used largely the same sources of data to establish their claims to widely differing systems. Due to these contradictions, and the lack of really sufficient evidence, we do not know whether some such understanding of space in the arts was prevalent then or not. We can only surmise.



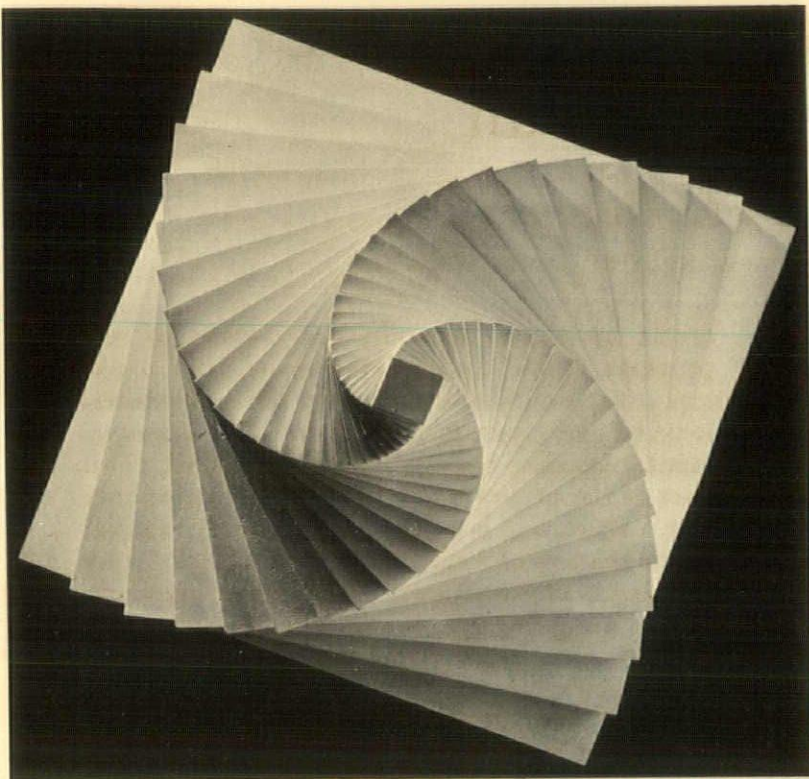
Above, the helices that rise from each angle at the base convey a powerful transformation from horizontal stability into vertical, almost flexible, form. Each stage has four interlocking equal similar rectangles.

The design at left decreases with each stage to a similar rectangle half the area of the stage below. Due to the design, any horizontal section of this form is a similar rectangle

Even before 1900 there was an increasing interest in various abstract forms—straight and curved lines, surfaces and volumes. Discrimination in their use in Design, however, seems to have been almost without exception an affair of individual choice and arbitrary preference, frequently to a great extent conditioned by functional demands. Despite this trend toward the abstract, there is not at present, to our knowl-

« ARCHITECTURE »

JUNE, 1935



edge, a single book that sets forth a clear study of the development of abstract form in two and three dimensions.

This group of photographs illustrates recent experiments with some phases of this seventh or *dimensional* control. These models, carved in plaster, were planned and designed without any functional idea whatever. They exhibit some of the possibilities of developing pure form in three dimensions without any derivations from any natural form. In fact, each model could be concretely

These two views of this model demonstrate the turning, at a constant angle on a central vertical axis, of successive squares. From above they develop in tangential form, four equal similar spirals. These tangents in sequence are the source of adjacent altitudes. Twelve horizontal phases complete a right-angle turn, consequently the upper twelve phases are identical in shape with the twelve below

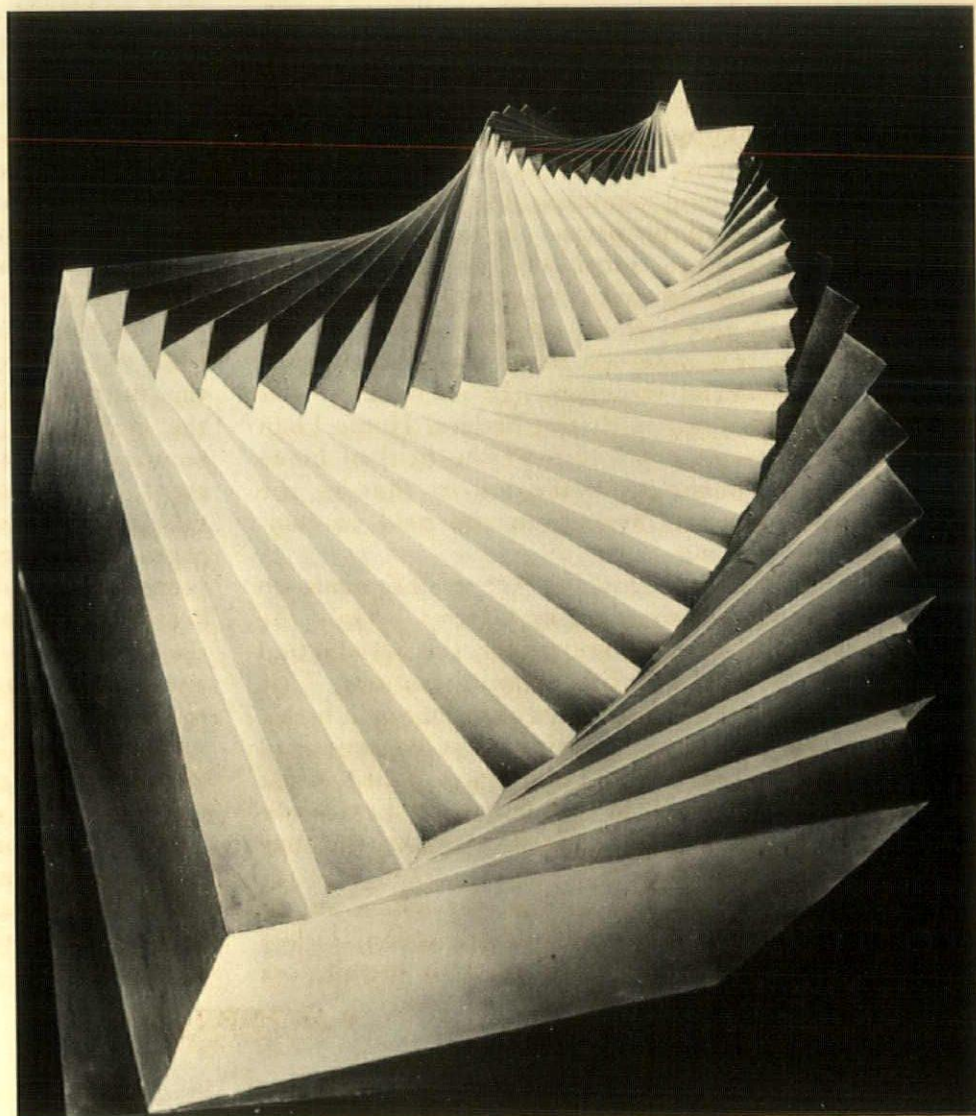
« ARCHITECTURE »

JUNE, 1935

318

described in geometric or mathematical terms. Having no direct association with any other human ideas, they simply express, in the organization of their volumes, proportional themes involved in relations of their tri-dimensional envelope.

These experiments in tri-dimensional form evoke in us the suggestion of a region in Space not inaccessible, but rather unfamiliar to the adventurer and experimenter in Design. In that region we may discover much that will be called "Beauty"—it may exist here and elsewhere—but in these models we work with the absolute relations of inorganic form through their three dimensions. We achieve order in Space; we free ourselves of preconceived ideas of long association and sentimental value in design; and we approach another, a new evaluation of Shape. In this abstract purity of Shape we may eventually come to achieve and to compose in a new music of Space.





The Architect's Place in the Housing Program



By Miles L. Colean

TECHNICAL DIRECTOR, FEDERAL HOUSING ADMINISTRATION

IF there are a great many people in the country, including architects and builders, who are confused in their minds as to which of the various divisions and subdivisions of the government dealing with the problem of housing, surely their bewilderment is to some extent excusable because of the considerable number of such agencies. Before plunging into the subject matter of this article, therefore, it will be necessary to engage in a little orientation.

Be it known, then, that the Federal Housing Administration, operating under the National Housing Act of 1934, is engaged in a program which has for its ultimate aim nothing less than the development of a nation-wide system of home mortgage financing, based on the employment of private rather than public funds and the general use of the long-term fully amortized mortgage, standardized as to terms and conditions, and as to minimum requirements for sound planning and construction of the mortgaged property. It is otherwise distinguished from most of the governmental agencies dealing with housing, primarily by the broad scope of its operations and by the fact that it is designed to be a permanent part of our financial structure. In some sense it is to occupy, along with the Federal Home Loan Bank System, a position in the field of home mortgage financing analogous to that of the Federal Reserve System in the field of commercial banking.

The National Housing Act itself is made up of five parts designated as "Titles." Only the first three of these are under the jurisdiction of the Federal Housing Administration. Title IV deals with the insurance of accounts in building and loan associations and is administered by the Federal Home Loan Bank Board, while Title V contains amendments to previously existing legislation designed to make the new law more effective.

Of those portions of the Act which are to be the subject of the present discussion, Title I has to do with a unique plan of installment

credit insurance, whereby the owners of real property of all kinds may borrow from banks and other financial institutions the sums necessary to carry out modernization and improvement, including remodeling of structures. This part of the program has been in operation since last August, and is no doubt thoroughly familiar to the readers of ARCHITECTURE, especially since thousands of community Better Housing Campaigns are going on all over the country.

Title II contains provision for mutual mortgage insurance, which is the basic feature of the long-range program of the Administration, looking to the development of the home mortgage financing system already referred to. I shall endeavor to make clear the principal elements of this insurance plan a little later on. Here brief mention should be made of the provisions of Title III of the Act, for the establishment of national mortgage associations. These are to be privately owned and operated institutions, chartered and supervised by the Federal Housing Administration. Their principal business will be to purchase insured mortgages from those wishing to sell them in any part of the country, thus providing a nationwide market for such mortgages. Funds for this purpose will be procured from the sale to the public of debentures issued against the security of the insured mortgages. Establishment of the associations may be expected to take place when the volume of insured mortgages for sale reaches sufficient proportions to permit profitable operation. Meanwhile, marketability of the mortgages is well assured by the willingness of insurance companies, State workmen's compensation funds, and the like, to buy them.

As already indicated, the essential purpose of the insured mortgage plan is to bring about the general use of the long-term fully amortized mortgage conforming to standardized terms and conditions. These terms and conditions themselves, in conjunction with the added safety deriving from the insurance, are of such a nature that they should cause the insured mort-

gage to be preferred over any other type of instrument by everybody concerned in the financing of home ownership.

Without attempting to cover all the technical aspects of the plan, its salient features may be described as follows: In the first place, the mortgage must be a first lien on residential property, consisting of from one-family to four-family dwelling units. The only other type of property eligible consists of multiple-dwelling projects classified as low-cost housing, which will be discussed later. The borrowing home owner must be a person of good character and possessed of adequate income or earning power to make the payments on the mortgage as they fall due.

The mortgage itself, in amounts up to \$16,000, may be for as much as 80 per cent of the appraised value of the property, and it may run for as long as twenty years. It must be fully amortized, providing for regular monthly payments on principal and interest, well within the means of the borrower, sufficient to pay it off by the time it falls due. It must also provide for the monthly payment of mutual mortgage insurance premiums, estimated on the basis of actuarial calculations to be sufficient to cover all losses and expenses of administration. To the foregoing payments must be added sums sufficient to take care of all taxes and special assessments if any, and fire or other hazard insurance.



Perhaps the most important condition attached to the plan is the provision of the law that "no mortgage shall be accepted for insurance under this section unless the Administrator finds that the project with respect to which the mortgage is executed is economically sound." Inasmuch as the economic soundness of any project financed by a long-term mortgage will depend largely upon such considerations as neighborhood planning and zoning, and design and construction of the property, administration of the insured mortgage plan will necessarily require the enforcement of the highest possible standards in these respects. Manifestly, the architects of the country must be relied upon as the principal influence in carrying out this important part of the program.

Space does not permit here any detailed description of how the mutual mortgage insurance operates. It will be sufficient to remember, though, that the plan functions in a manner

which is essentially simple, notwithstanding its apparent complexity. Since it follows the mutual principle, the borrowing home owner pays only its actual cost. Any sums paid as premiums in excess of cost are reimbursed through cancellation of the principal of the mortgage before maturity.

In the event of default and foreclosure, the lending institution collects the insurance by turning over the property to the Federal Housing Administration in exchange for a high-grade debenture, and then steps out of the picture. The property is held and managed by the Administration until it can be sold in a favorable market. When this takes place, the price realized is used first to clean up the principal of the mortgage and to take care of foreclosure and other expenses; but whatever sum is left is turned over to the last owner of the property.

This is only one of the many advantages of the insured mortgage plan to the home owner. Among others is the substantial money saving which comes from elimination of the frequent renewal fees incident to the usual sort of short-term mortgage, and especially from getting rid of the exorbitant charges usually involved when secondary financing is required. Since the borrower may obtain up to 80 per cent of the appraised value of the property on an insured first mortgage, second mortgages or other junior liens are unnecessary. Even more important to most home owners is the freedom from anxiety concerning renewals. The mortgage never falls due until by regular monthly payments it is fully liquidated. Still another advantage of great importance lies in the appraisal standards of the Federal Housing Administration. Even though inexperienced in judging real estate values, when supplied with the expert judgment that will be available, the prospective home owner can go ahead with confidence in the sound value of the property he plans to buy or build.

Both under the terms of the National Housing Act itself and under the regulations which have been laid down, the insured mortgage plan is particularly well adapted for the financing of new residential construction. On the basis of plans and specifications submitted, the Federal Housing Administration is prepared to give commitments to insure mortgages on the property when completed. With such a commitment in existence, it should be a simple matter to obtain the temporary financing required, in the form of construction loans from

commercial banks. Notes securing such loans, where there is a definite agreement to make a mortgage loan for at least an equivalent amount upon completion of construction, are eligible for rediscount at the Federal Reserve banks, thus being in a class with the most desirable paper a commercial bank can have.

Commitments may be obtained not only by individual home owners, but by operative builders of integrity and financial responsibility, either for properties contracted in advance to be sold, or for those which are to be sold later or held and rented. Projects involving any of these methods may be submitted either to an approved lending institution or directly to one of the field offices of the Federal Housing Administration. Architects and builders who are contemplating such projects are cordially invited to visit the offices of the Administration and talk over their plans, even though these are of a preliminary nature.

One of the most important phases of the Federal Housing Administration program is based on the provision in the law permitting the insurance of mortgages on low-cost housing projects. Such insurance may be granted in amounts up to \$10,000,000 for each project, and the term of the mortgage is not limited to twenty years, nor to any particular percentage of the appraised value of the property.

Low-cost housing projects may be sponsored or owned either by private limited dividend corporations or by various types of federal, state or municipal authorities. Complete discretion is vested in the Administration to decide what may properly be considered as low-cost housing.

The Administration wishes to encourage the construction of modern dwellings in all places where an effective demand for them exists. "Low-cost housing" may be taken to mean housing designed for the accommodation of a number of families, so as to provide high standards of efficiency and amenity in plan, ample light and air and open space, at a cost which is low because of supervision of the items of cost, and which, though making reasonable allowances for all services entering into the project, eliminates excessive commissions, charges and profits.

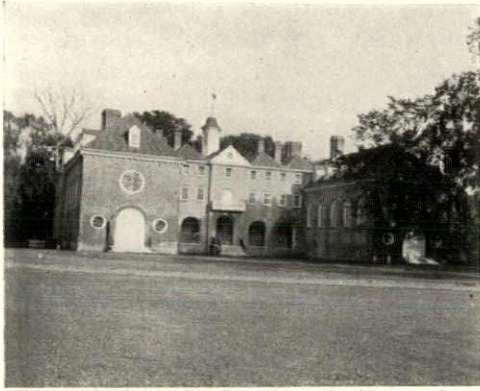
Before concluding this discussion, I should like to point out that the development of the new system of home mortgage financing is proceeding as rapidly as its careful administration will permit. In our Washington headquarters,

we are fully equipped with all the various services required to carry out every phase of the program. In particular, we have organized technical and appraisals divisions which are prepared to make studies and investigations of the economic soundness of housing projects, with a degree of thoroughness and on a scale never before attempted in this country. We have established insuring offices in sixty of the principal cities of the country, and each office is fully equipped to do business on the basis of principles laid down by the headquarters in Washington.

Of particular interest to architects is the analysis which our research division is making of the actual housing situation in American cities. Starting with the Real Property Inventory, made in sixty-four cities by the Bureau of Foreign and Domestic Commerce as a Civil Works Administration project, the data were studied and found at the outset to be of great value in launching the modernization phase of our program. Subsequently Professor Ernest M. Fisher, of the University of Michigan, took charge of the analysis and began to put the Real Property Inventory data into graphic form. The first city to be analyzed was Peoria, Ill. Upon a large map of this city were superimposed transparent sheets containing symbols which revealed the important facts concerning the property in each block. It was thus possible to visualize conditions which could not be so effectively pictured in any other manner.



Thousands of financial institutions in all parts of the country have already been approved to act as mortgagees under the insured mortgage plan. Applications for the actual insurance of mortgages are coming into the various field offices in increasing numbers, and in the great majority of cases the insurance is being granted. Many applications are for the refunding of old mortgages. This is as it should be; for the great mass of frozen mortgages which are still depressing the real estate market must first be rehabilitated before new construction can reach the volume required to meet the housing shortage which is fast becoming acute. Widespread understanding and adoption of the insured mortgage plan will provide the best possible assurance, both for continued revival and for the kind of orderly progress in building that will eliminate the danger of a boom and its subsequent collapse.



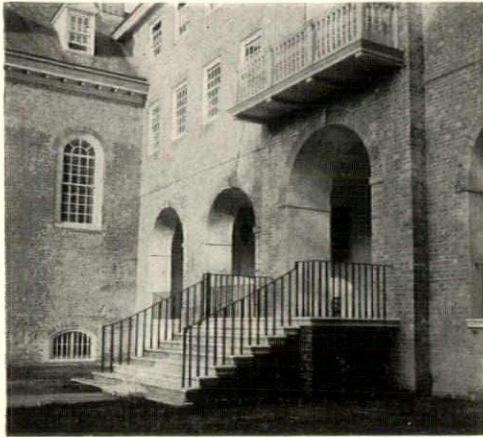
Rear of the recently restored Christopher Wren Building at William and Mary College



Reconstruction of the earlier Capitol



In the court of the Raleigh Tavern



Connecting arcade of the Wren Building

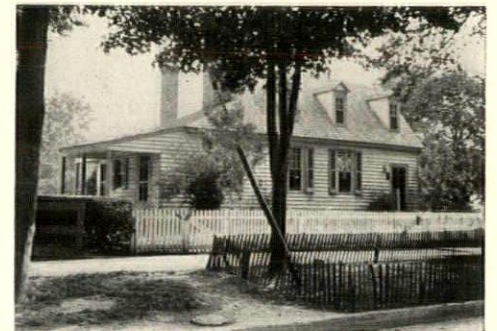
An Architect Rambles

DWIGHT JAMES BAUM MAKES CAMERA NOTES OF THE ROCKEFELLER RESTORATION

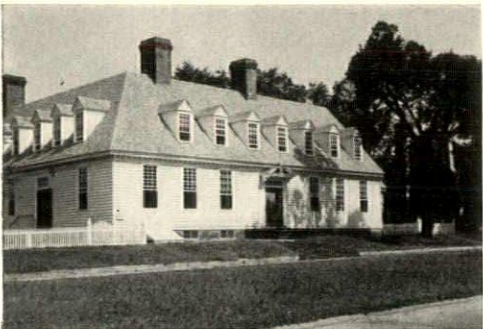
A lovely old house with typical chimney



Well-head in the court of the Raleigh Tavern



A small house with charming roof lines

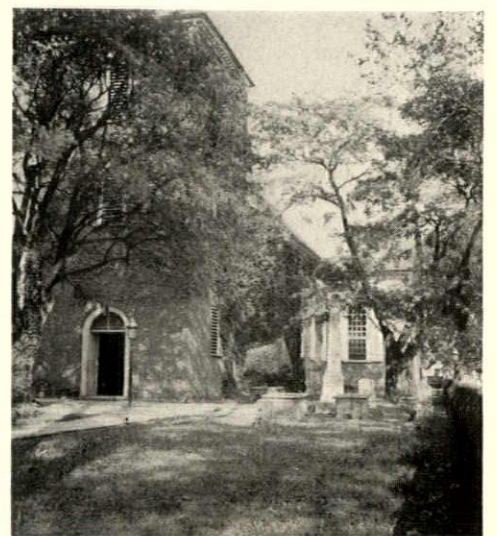


William and Mary campus and the president's house

The restored Raleigh Tavern, built in 1742

The president's house, William and Mary College

Inside the yard of Bruton Parish Church

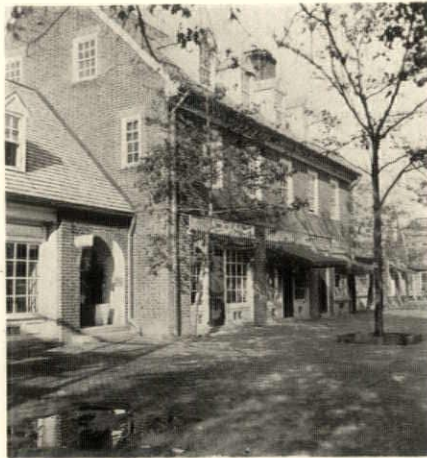


« ARCHITECTURE »

JUNE, 1935



The Whythe house on the Palace Green



A row of the new shops



A restaurant (the lower building with the curved bays) in the shopping center

About Williamsburg

PERRY, SHAW & HEPBURN, ARCHITECTS
OF THE RESTORATION



Office of the Coke-Garrett house

Garden entrance to the Governor's Palace



The old post office in the shopping center



A typical early house of Williamsburg

Another typical house with its lovely chimney

Front of the Governor's Palace, and an old coach

A range of buildings restored with great charm



Gateway to the Coke-Garrett house office



« ARCHITECTURE »
JUNE, 1935

ARCHITECTS have chafed at the slowness of many of the building trades—have resented the fact that there was no more modern or better means of accomplishment—and yet have neglected, or at least partly so, a trade which not only has proved its success but now adds lower costs to its achievements.

Pipe welding has made a big contribution to our industrial history and now lacks only the architect's helping hand to do the same (or even more) for modern building. Procedure has been simplified, technical difficulties overcome, and high costs reduced. No one will deny the fact that the ideal piping system would be one where there was one continuous pipe without joints, breaks or other interruptions. Welding comes the closest to fulfilling this as is possible at the present time.

Welding has been used extensively and with marked success on large outdoor pipe lines. In buildings, welding has been used for tank work, boilers, and boiler repair work, but only sparingly for piping.

There is no logical reason why welding cannot be used for every type of piping used in a building. For steam lines it is ideal. All expansion loops may be made of bent pipe. There is no danger of leakage at the joints, caused by the continual expansion and contraction of the pipe. Changes can be easily made.

Friction is a costly item—not only in human relations and in automotive parts, but in piping as well. Hence it can readily be appreciated that in a hot-water system the water will circulate more easily, and probably at a lower temperature, where welding has been used than where there are pipe fittings to constrict the flow. In refrigerating work of any sort, welding is a necessity. Whether the pipes are of iron, steel, or brass, when used for domestic water purposes, welding may be used to advantage, due to recent discoveries.

Some years back, oil producers decided that welded pipe was better than threaded pipe because its smooth interior offered less friction to flow than did pipes with fittings. Besides this there was eliminated the ever-present problem of leakage. Because the life of a gasket is relatively short, it must occasionally be renewed. This is eliminated by welding. In a header where there are a number of outlets, it is particularly desirable that there be as

Welding, a Neglected Tool

By *Winsor F. Briggs*

little interference with the flow as possible, and it cannot be said that reducers are not more easily made by welding than with fittings. In speaking of fittings it must be borne in mind that the pipe and the interior of a fitting do not present a straight, smooth surface. In the so-called "drainage fittings" the ideal is more nearly approached, but still not entirely so.

There is also the thread-cutting problem to be considered. When a thread is cut on a pipe, about 50 per cent of the pipe wall is cut into, thus leaving only a fraction of the pipe's original strength and thickness intact. If all this threaded area were put in the fitting, there might be some justification for hoping that the fitting reinforced the pipe sufficiently to make up for the reduced thickness. But seldom is a pipe seen that has its threaded portion entirely in the fitting. And this is not the least of the undesirable features. When the pipe is cut it means that the outer protective surface of the pipe is destroyed, and whether this be galvanizing or only mill scale, an exposed surface is immediately created, to be attacked by rust. This is particularly the case where the pipe is exposed to moisture or other deteriorating influences.

Properly welded pipes also have the added advantage that under working conditions there is less likelihood of leaks at joints than with the threaded pipe. Any movement in the threaded pipe brings the danger of a leak at the joint. It will be seen that this is not true where a pipe is properly welded. Too often pipe "dope" covers up minor defects; these will not become evident until a movement in the pipe has broken the "dope" and allowed the gas or liquid to trickle out. It might be thought probable that undue stresses in the pipe or weld might develop, but if the metallurgy of iron is studied it will be seen that the very nature of the iron and of the weld

will prohibit such troubles as this.

Pipe welding reduces the cost of covering, as well as of insuring permanent tightness. The covering of large joints is always an expensive item and takes considerable time, because the joints must always be so made that they can be opened up should it be necessary to remove gaskets or tighten fittings. Then, too, in welding there should be little or no worry due to changes, because the mechanic on the job can make any necessary changes which the designer wishes, and seldom does it interfere with the adjoining work. An item that should appeal to the contractor, as well as to the architect, is that in welding it is not necessary to bother with thread protectors, cutters, stocks, dies, wrenches or tongs. All these are subject to wear where pipe is used, and are expensive to replace. Besides, large pipe is difficult for the average contractor to handle by himself. Generally he must have certain pipe cut outside his own shop, which involves still more expense. The scrap and waste on a welded job is negligible, affording a further saving.

It will be found eventually, in all likelihood, that where the architect installs a welded job the insurance will be lower because there is less possibility of property loss by joint leaks.

Welding has come to the fore in recent years not only because of its inherent economical qualities, but because means have been developed to test its qualities and to prove them to a heretofore unbelieving public. It is understood, of course, that a proper weld will have as much strength, if not more, than the pipe it holds together. This strength can be determined by a sample piece put in a portable machine which is available for testing. Then, too, the larger companies furnishing welders' supplies maintain a service bureau which gives every aid possible to the welder and his work.

Where welded lines are connected to boilers and other appliances which it may be necessary occasionally to disconnect in order to repair them, it is well to join the welded line to them by means of a union, so that in case of repairs the appliance can be removed.

Welding rods are as important as their chemistry is interesting, and none should be used except those recommended by the makers for the particular work involved.

« ARCHITECTURE »

JUNE, 1935

A WHILE ago one of the most indispensable adjuncts of the architect was a reducing-glass, through which he would squint and make up his mind whether the design or sketch or rendering had that useful quality called unity. Or else he would just squint.

I don't know whether they use that kind of thing any more as a general thing. I did see one the other day, but the person peering through it did not seem to be deriving the old-time comfort from it. Perhaps it is this contemporary influence, whereunder, instead of starting with a great nosegay of ideas and eliminating down to a unity, you start right out with the unity and see whether it will stand any ideas without losing its contemporary spirit.

Well, at any rate, it used to knock the stuffing out of many a well-detailed and well-presented scheme to put it on the far side of a reducing-glass. I was thinking of that quality the other day when I was, in effect, putting a reducing-glass on the whole city of Washington.

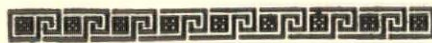


I was approaching the good old capital from skywards (for in spite of the fact that what little savings there have been over a very long time are in stock of the Pennsylvania Railroad, I can readily be persuaded into the disloyalty of going aloft) and I had the heart of the city before me of a size to be conveniently held on my two hands.

It was possible to realize then that our good old town-planner L'Enfant, and Robert Mills who seconded his motion, had done a very understanding job. There appeared that beautiful and spectacular strip of carpet laid from the Capitol to the Lincoln Memorial and, nicely placed upon it, the startlingly possessive and controlling Washington Monument.

The design checks. It is glorious, wonderful. And I think the whole *parti* is given focus and an extraordinary sense of splendid precision by that tall simple finger, whose shadow daily writes its autograph upon the Mall.

The genius of the man Mills impresses itself more and more on the person familiar with Washington. There are other architectural achievements which wreath his memory, but the Monument has become a part of our history. As a patriotic symbol it has linked itself in the



The Reflecting Pool

Edwin Bateman Morris



minds of our citizens with the eagle and the Capitol dome.

There is, in the Congressional Cemetery in Washington, an unmarked grave which is the last resting place of Robert Mills. A movement has been started in Washington, from several sides, to have placed a marker or memorial upon that grave.

I can hope that the movement will gain force and strength. The genial Edward Bruce, of the Treasury Department's Division of Painting and Sculpture, has been giving the matter considerable thought, and he is a good ally for any project.

There is a possibility, of course, that some of the four-billion-some-odd-million relief bill will be made available for the employment of painters and sculptors. If so, what could be more appropriate than for one of the sculptural projects to honor an architect?

It is to be hoped that architectural support for this idea will grow. I think Mr. Bruce would be glad to have backing for the scheme.



Of course, over the grave of Christopher Wren, in the famous church of his designing, is the phrase which according to my ageing memory runs, "Lector, si monumentum requiris circumspice." Anyway, it

means, "Reader, if you seek a monument, look around you."

Therefore, in Washington, it might well be said that the seeker of a monument for Mills has only to look toward the centre of the city. Still, it would be a fine, sentimental thing to have for his grave, instead of an unmarked stretch of greensward, a monument evolved by a skilled and sympathetic hand.

Mr. Magonigle, in his vibrant and alive "Upper Ground," states that Edwin Bateman Morris is a "persuasive apologist for the Government view as at present exemplified, and Lord knows it needs apologists."

A while ago the cry in the wilderness was that the Supervising Architect's Office ought not to be permitted to design buildings because of its inferior personnel. Since then there have been taken into its blood stream such men as Klauder, Embury, Shepley, Mayer, Ellett, Keibon, Cheney, Rich, Bessell, Karcher and others of a distinguished company. Still the office needs to be apologized for. Where to go now for talent! Mars, perhaps. Or that planet of beauty, Venus.

The thought is growing in A-I architectural circles, seemingly, that after all it isn't quality of architectural designs that matters so much as the financial method of obtaining them.



THE Procurement Division of the Treasury, which embraces the Supervising Architect's Office—a thing that few persons do—is headed by Admiral Peoples, and is located in the Federal Warehouse, a concrete pile, so far away that the Southern Railroad runs a sleeper thereto from Union Station, and a more-or-less Government Cafeteria has to be provided to prevent wholesale starvation.

Into this cafeteria the other day came a distinguished and intellectual person. "Admiral Peoples?" said some one, and others agreed, until a moment later another person entered who actually was the admiral. The first individual turned out to be C. C. Zantlinger, visiting architect in Washington *in re* the Department of Justice Building.

It shows the innate courtesy of the native-born Philadelphian. In Rome, he not only does as the Roman, he *looks* like him.

BOOK REVIEWS

THE STORY OF AMERICAN FURNITURE.

By THOMAS HAMILTON ORMSBEE. 276 pages, 6 by 9 $\frac{1}{4}$ inches. Illustrations from photographs and drawings. New York: 1934: The Macmillan Company. \$4.50.

Thomas Ormsbee knows antique furniture as David Harum knew a horse. He writes here not for the curators of museums nor for the sophisticated collector, but rather for those who have little real or fancied knowledge of the subject. Mr. Ormsbee's chapter on "Detecting the Genuine" is in itself worth far more than the cost of the book.

INDEX TO A.S.T.M. STANDARDS AND TENTATIVE STANDARDS.

As of January 1, 1935. 142 pages, 6 by 9 inches. Paper covers. Issued by the American Society for Testing Materials, 260 South Broad Street, Philadelphia, Pa.

THE DESIGN DEVELOPMENT OF INDIAN ARCHITECTURE. Part I.

By CLAUDE BATLEY. 15 pages and 16 plates, 11 $\frac{1}{2}$ by 15 inches. Illustrations from drawings. In heavy paper portfolio. Printed in Great Britain. London: 1934: John Tiranti & Company. 15 shillings.

Professor Batley, of the Government School of Art, Bombay, has given us in effect the beginnings of a Vignola of Indian architecture. There are numerous works on the subject, but most of them are either limited to small and none too distinct photographic reproductions, or else are beyond the student and practitioner because of their rarity and cost. Moreover, Indian architecture can never be fully grasped from sources that are solely photographic. The excellent plates from measured drawings were made, for the most part, by Indian students of architecture in Bombay.

OUTLINE OF TOWN AND CITY PLANNING.

A Review of Past Efforts and Modern Aims. By THOMAS ADAMS. Foreword by FRANKLIN D. ROOSEVELT. 368 pages, 6 by 9 inches. Illustrations from old prints, plans, and photographs. New York: 1935: Russell Sage Foundation. \$3.

A readable introduction, for architect, layman, and student of the subject, to the history of city planning in all ages. Mr. Adams' long experience, both in practical work and in a visiting and consulting form, gives him a background and a sense of balance concerning his subject that is unique.

LUMBER GRADE-USE GUIDE FOR SOFTWOOD AND HARDWOOD LUMBER IN BUILDING AND GENERAL CONSTRUCTION.

Loose-leaf folder with 15 pamphlets containing 216 pages, 8 $\frac{1}{2}$ by 11 inches. Illustrations from photographs. Washington: 1935: National Lumber Manufacturers Association, 1337 Connecticut Avenue. \$1.50.

With the rapid movement toward more specific grading that has taken place within the last few years, the architect's problem of choosing the right

wood for the right use has grown vastly more complex. This manual represents an effort to bring into convenient form all of the information regarding suitability for structural use, adaptation to special uses, and particularly the distinctions between market grades of wood for structural purposes or finish. A valuable feature is the use of photographs showing a group of eight or ten boards side by side, rather than a single one which could not possibly be fully representative.

CONVICTIONS AND CONTROVERSIES.

By RALPH ADAMS CRAM. 262 pages, 6 $\frac{1}{4}$ by 9 inches. Boston: 1935: Marshall Jones Company. \$2.50 plus 15 cents postage.

This is a selection of addresses, lectures, magazine articles, culled from Dr. Cram's expressions of the last fifteen years. They are by no means all architectural in nature. Most of them are essays on a wide variety of other subjects. Among them, however, it is particularly interesting to find "The Mystery of Sakkarah" in which Dr. Cram muses upon the possibilities revealed when the late Cecil Firth dug the sands of Egypt away from the Step-Pyramid of Sakkarah, tomb of Pharaoh Zoser. Here is an essay that will keep any architect up and awake longer than the most harrowing bit of fiction mystery.

ENGLISH VILLAGES AND HAMLETS.

By HUMPHREY PAKINGTON. Foreword by E. V. KNOX. 120 pages, 5 $\frac{1}{2}$ by 8 $\frac{1}{2}$ inches. Illustrations: drawings by SYDNEY R. JONES; photographs by WILL F. TAYLOR and others, some in color. Printed in Great Britain. New York: 1935: Charles Scribner's Sons. \$2.75.

THE HEART OF SCOTLAND.

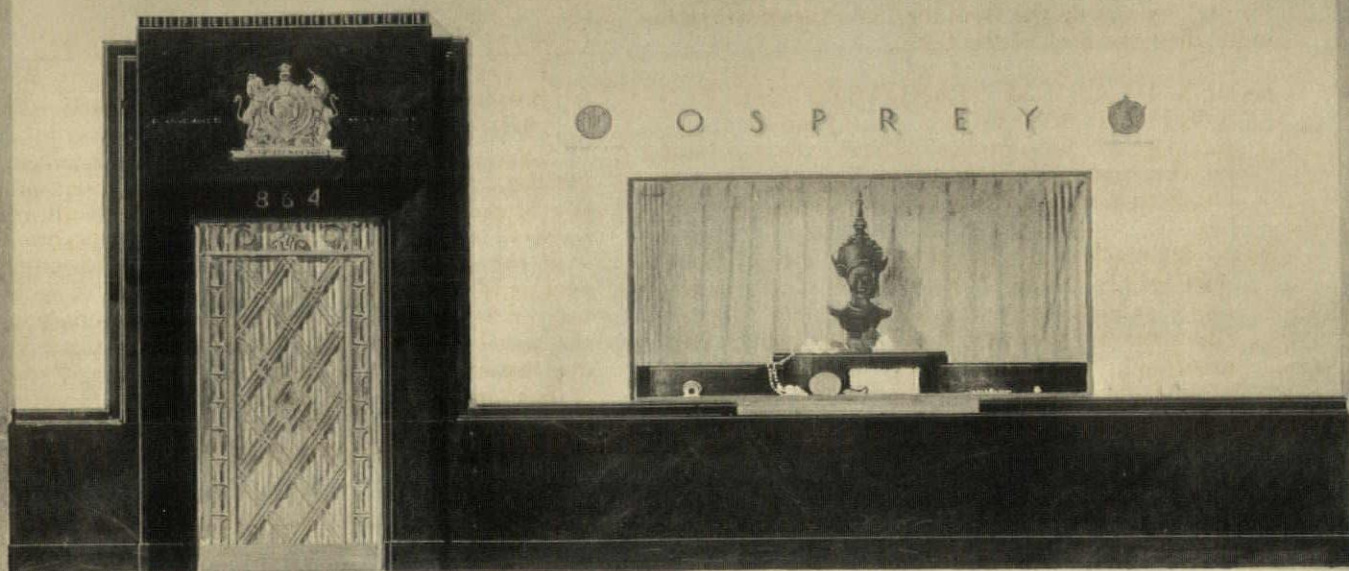
By GEORGE BLACK. Foreword by ERIC LINKLATER. 115 pages, 5 $\frac{1}{2}$ by 8 $\frac{1}{2}$ inches. Illustrations from drawings by BRIAN COOK, and photographs; frontispiece in color. Printed in Great Britain. New York: 1935: Charles Scribner's Sons. \$2.75.

Here are two new volumes uniform with the series that has come to be known as the English Countryside Series. They are not travel books, yet they will interest the traveller. They are not histories, yet the trend of history is woven into their fabric. They bring to the reader, through particularly fine photographs and pen drawings, the very flavor of the lands with which they deal: not only in appearance, but in the character of the peoples, their activities, and community life.

DESIGN AND MEDIEVAL ARCHITECTURE.

By HELEN ROSENAU. 42 pages, 6 by 9 inches. Illustrations from early prints, drawings and photographs. Printed in Great Britain. London: 1934: B. T. Batsford, Ltd. \$1.00.

Dr. Rosenau concerns herself in problems relating to some of the more obscure phases of the subject—as orientation, and the mediæval architect's status and methods.



W. K. STURGES, YALE UNIVERSITY

The above design received the unanimous vote of the jury for the Emerson Prize, and a First Medal. William Van Alen, who wrote the critique, says of it: "The entrance is built of rich materials, well designed and of dignified and pleasing proportions. The show window, which is a simple opening in the wall surface, is effective as it would not detract from the display, and thereby enhances the effect of the merchandise in the window"

Shop Front

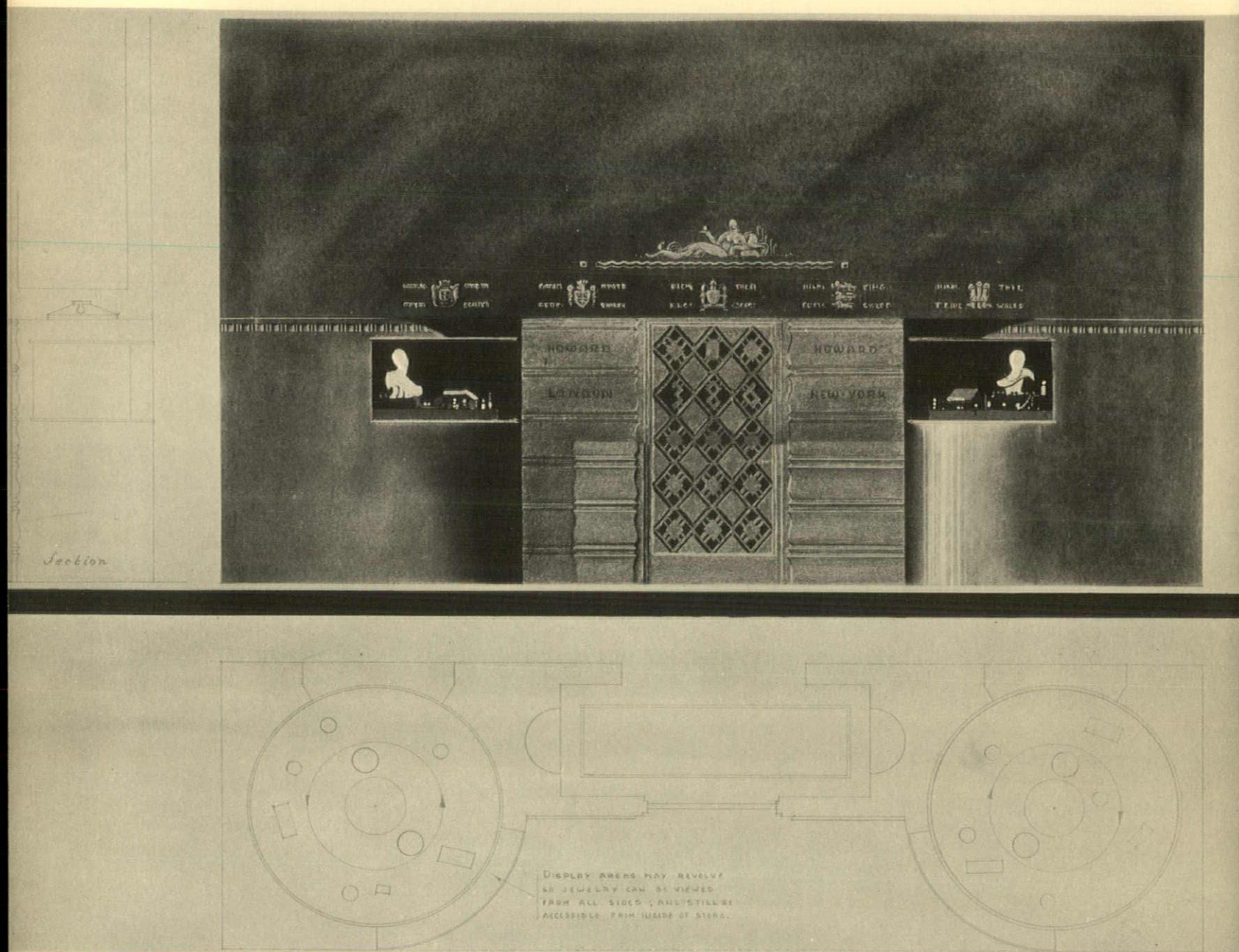
FOR A JEWELER OF INTERNATIONAL REPUTATION

THE EMERSON PRIZE

RESULTS IN A PROBLEM SET BY THE BEAUX-ARTS INSTITUTE OF DESIGN
—A PROBLEM NOT UNCOMMON IN EVERYDAY PROFESSIONAL PRACTICE

« ARCHITECTURE »

JUNE, 1935

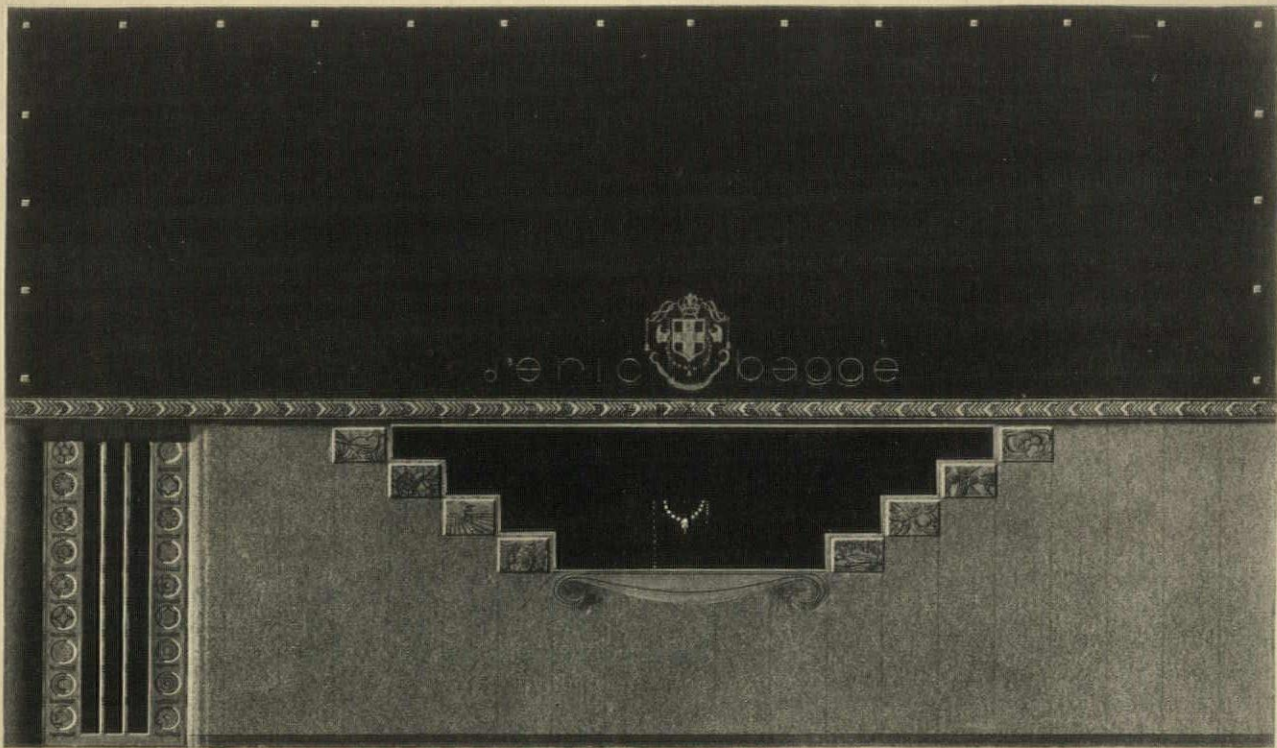


E. F. IVERSEN, NEW YORK UNIVERSITY

The jury's spokesman, William Van Alen, calls this "a well composed composition, with show windows of an ingenious design. The materials were not clearly expressed, and the effectiveness of the entrance would have been improved if it were higher." Awarded a First Medal

« ARCHITECTURE »

JUNE, 1935
328



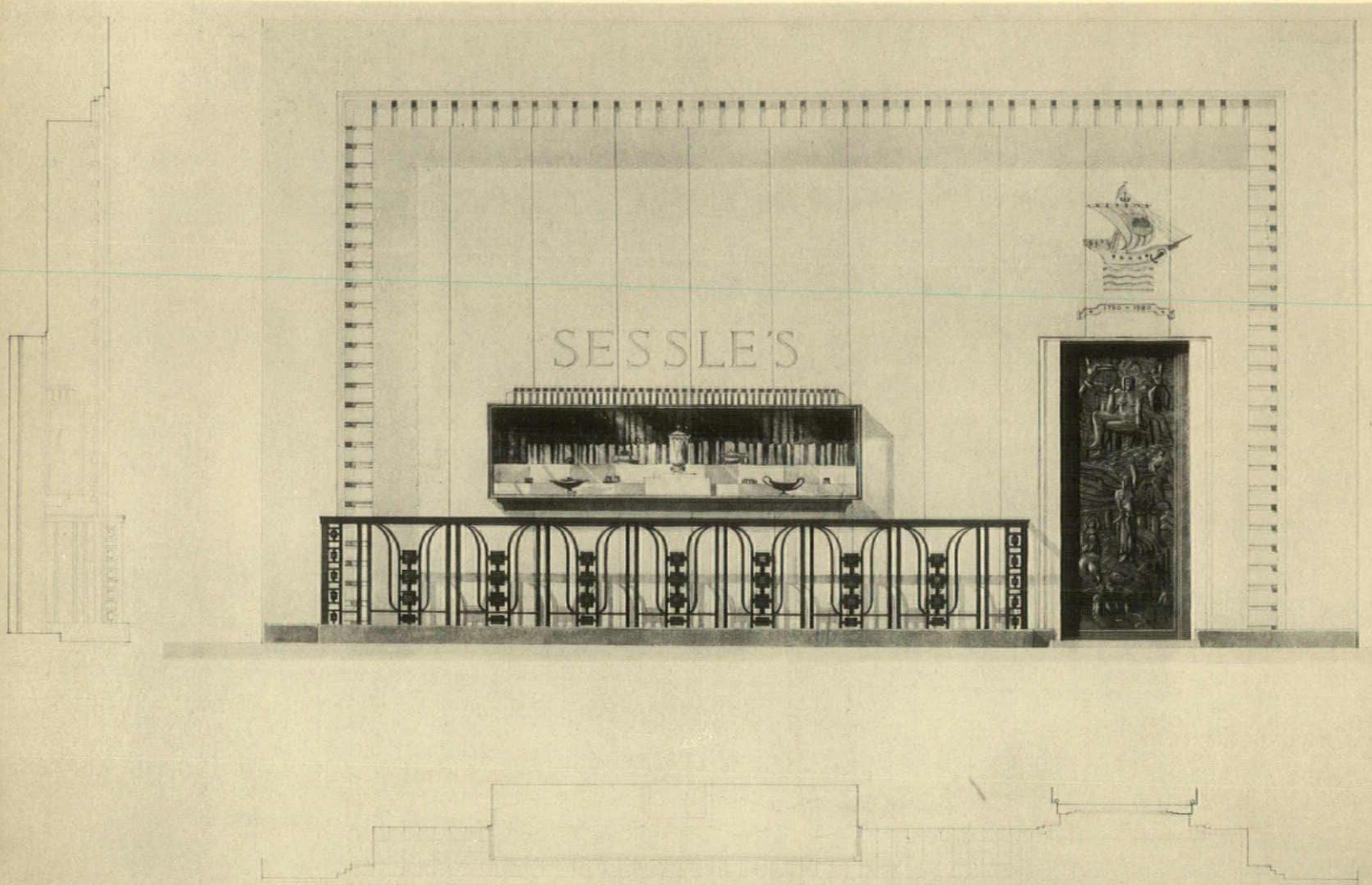
THE EMERSON PRIZE

F. H. LIEBMANN, NEW YORK CITY

*From the critique: "A well composed front with a most attractive and practical show window. Entrance not sufficiently dignified and too far to one side."
Awarded a First Medal*

« ARCHITECTURE »

JUNE, 1935

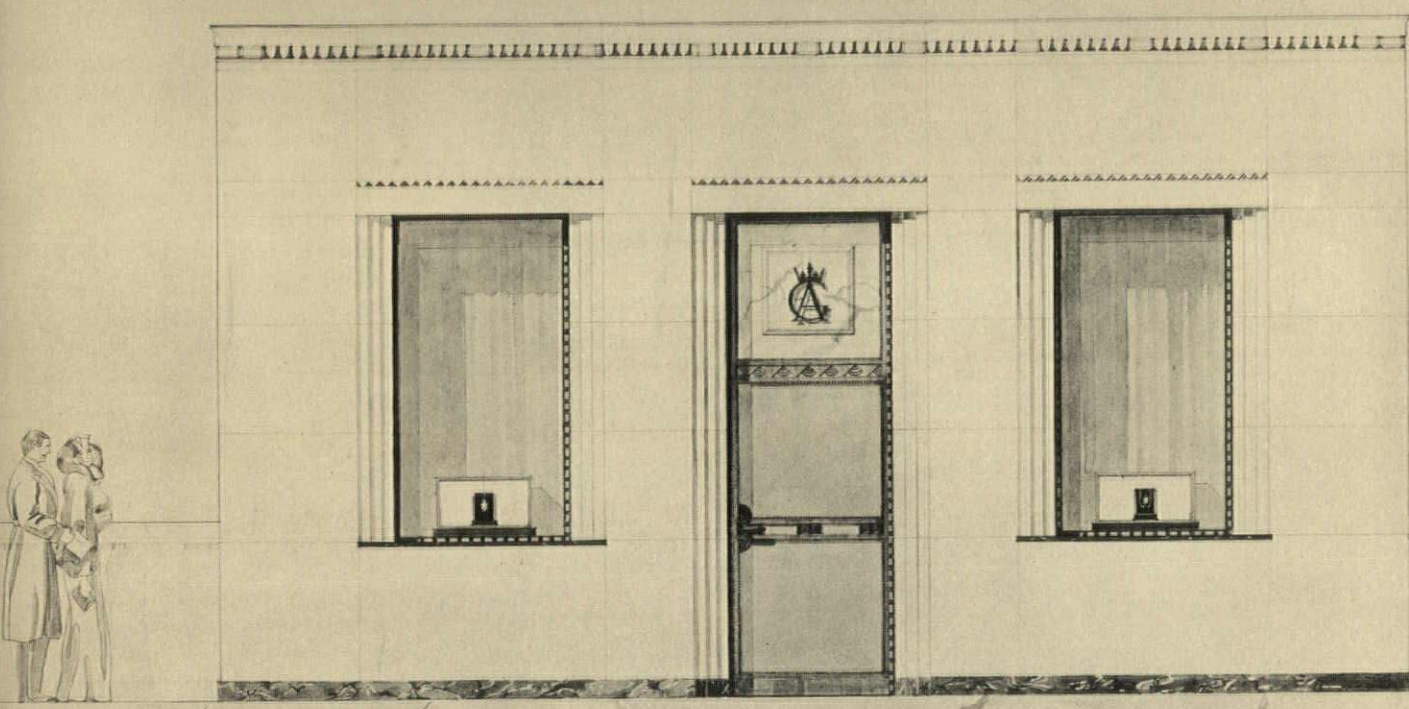


H. SPIGEL, UNIVERSITY OF PENNSYLVANIA

From the critique: "A clever plan, with a recessed front and a projecting show window protected by a railing. A solid panelled entrance door is impractical, as visibility is essential." Awarded a First Medal

« ARCHITECTURE »
JUNE, 1935

2nd Medal



W. L. NEWBERRY, UNIVERSITY OF NOTRE DAME
Awarded a Second Medal

The problem: "Property in exclusive districts of our large cities is in such demand that only those selling products of the finest quality can profitably do business in these regions. Even such firms restrict themselves to shops of small frontage, generally built of the best materials and distinguished in design."

"Such a shop front, for a jeweler of international reputation, is the subject of this design. It has a frontage of exactly 25 feet, not on a corner, and shall not exceed 15 feet in height above the pavement."

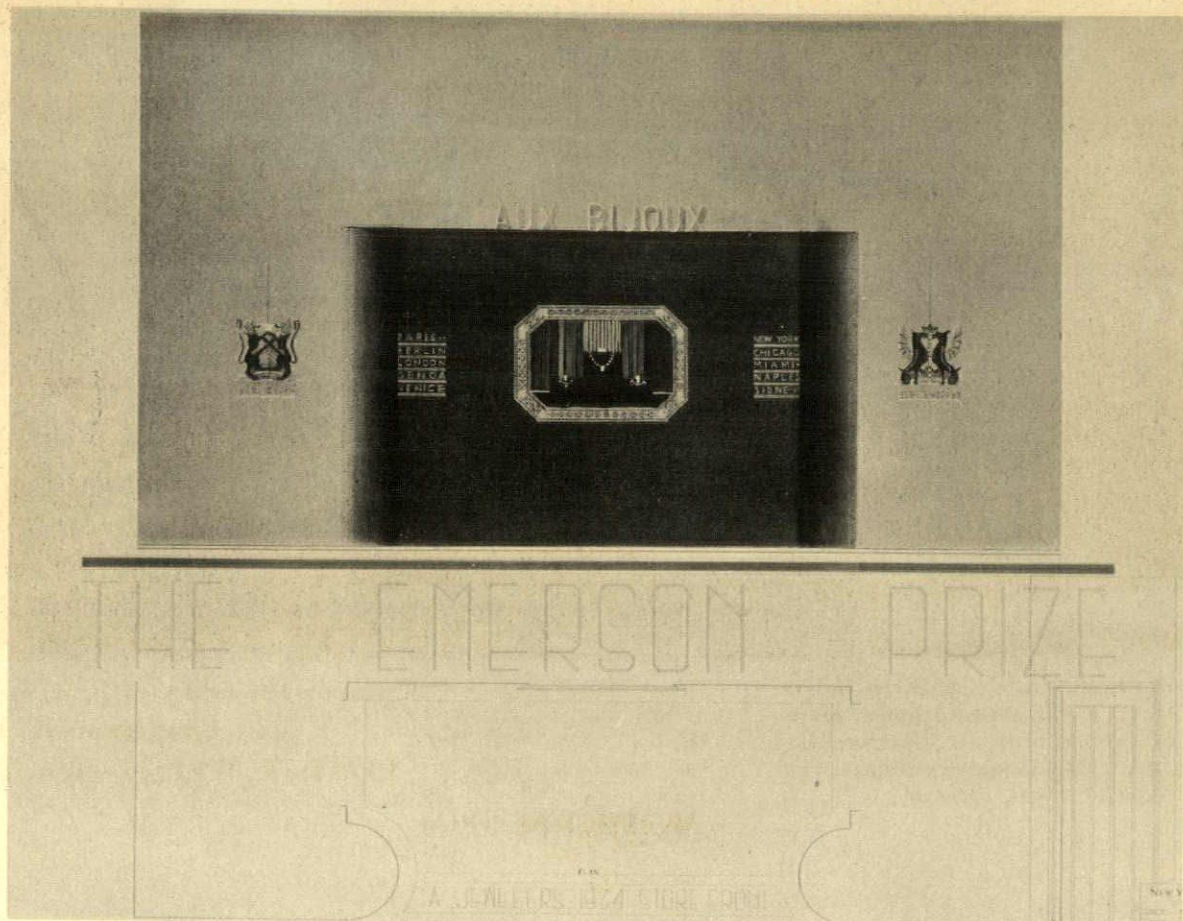
"The frontage shall include an entrance display window and should be so designed as to express both the character of the firm and the quality of the wares"

« ARCHITECTURE »
JUNE, 1935



F. A. VOGEL, NEW YORK UNIVERSITY. Awarded a Second Medal

M. J. SKLOOT, NEW YORK UNIVERSITY. Awarded a Second Medal



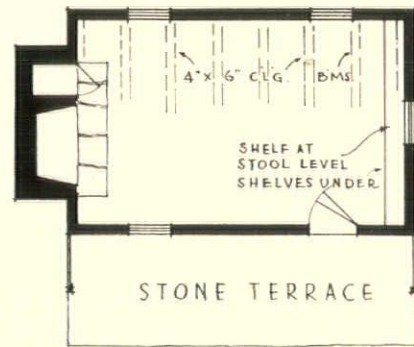
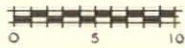
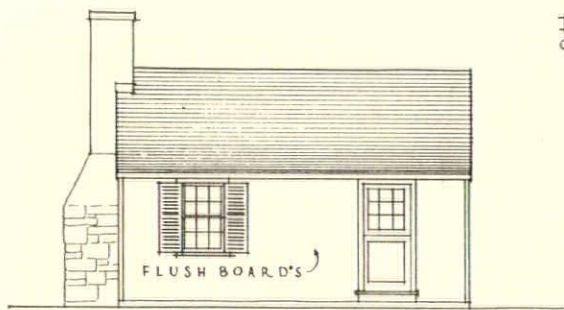
FAVORITE FEATURES



Many of the architect's creations fail to measure up to his expectations. Here is one of a series, however, that satisfy, in a measure, the designers themselves
(Scale details overleaf)

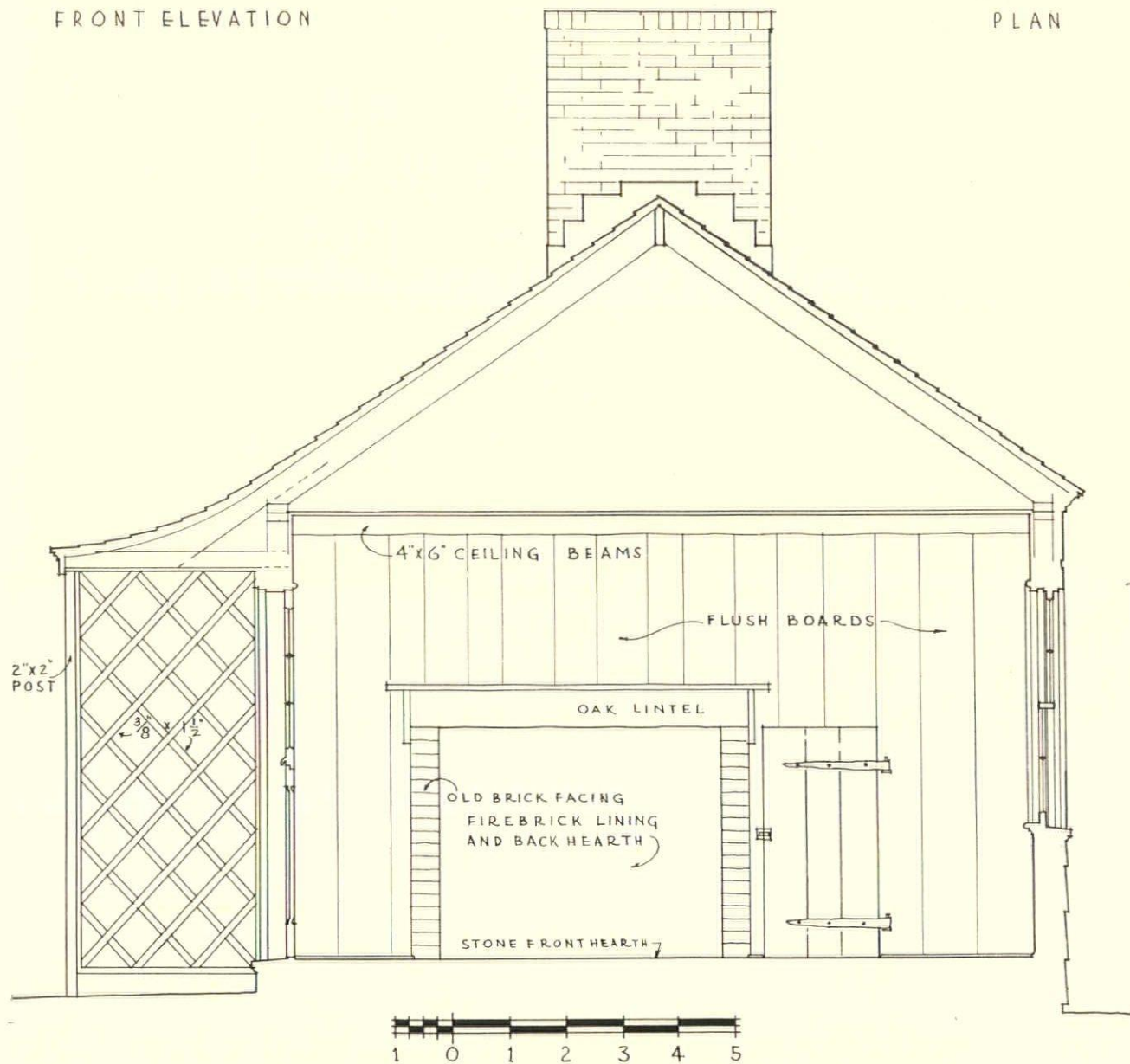
Office on the estate of P. R. Levi,
Charleston, W. Va.
LEWIS E. WELSH, ARCHITECT

« ARCHITECTURE »
JUNE, 1935



FRONT ELEVATION

PLAN



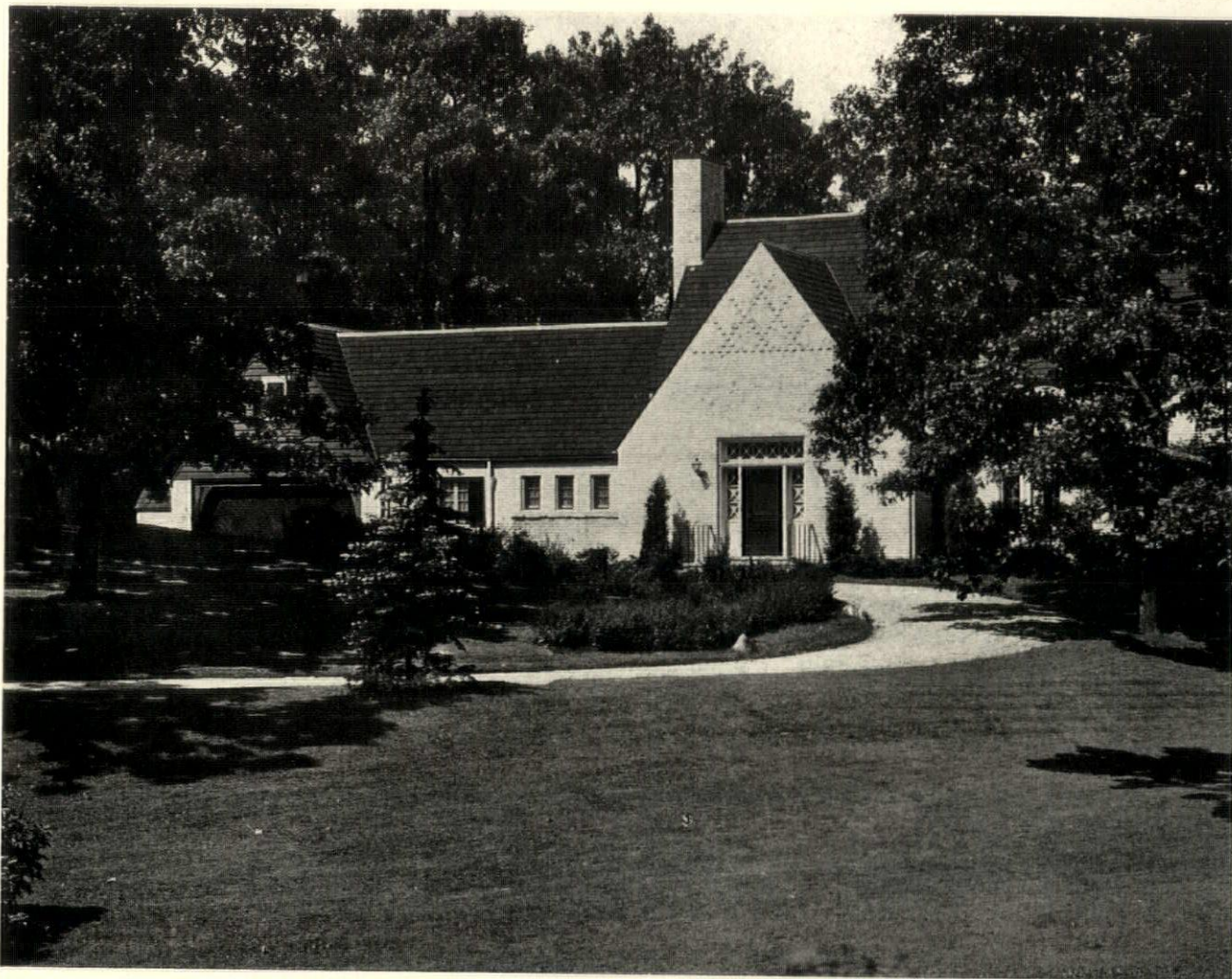
Office on the estate of P. R. Levi,
Charleston, W. Va.

LEWIS E. WELSH
ARCHITECT

« ARCHITECTURE »

JUNE, 1935

334



HOUSE OF MISS VIVIAN ASHUM
CRYSTAL LAKE, ILL.

Pierre Blouke

ARCHITECT

"The Ashum residence was designed to include all essential features for a small country estate. Constructed principally of local material, simple in design, taking advantage of topography, orientation and view, it represents, in my mind, an appropriate solution for this purpose, and within reasonable limitations as to cost."

PIERRE BLOUKE

In view of the fact that the architectural profession will unquestionably devote more of its energies during the next few years at least to the design of the small house, we have asked one hundred architects to send us, each, the best small house that he has designed. These will be published from time to time during the coming months, and should prove a source of information and inspiration in this field.—Editor.

O N E H U N D R E D S M A L L H O U S E S

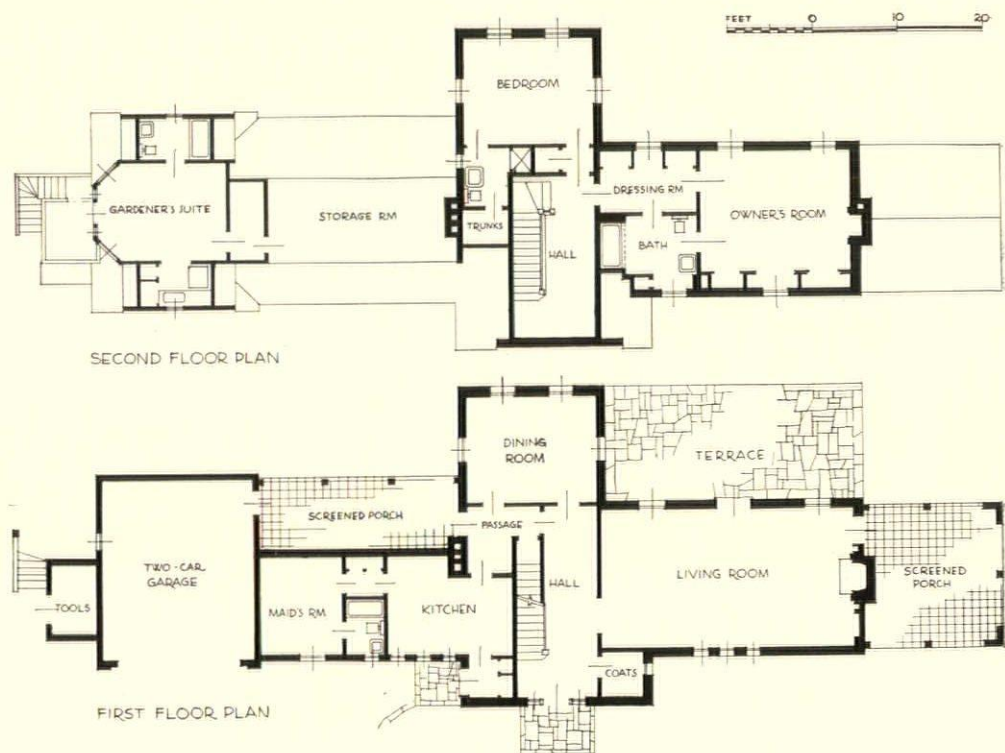
« ARCHITECTURE »

JUNE, 1935

335

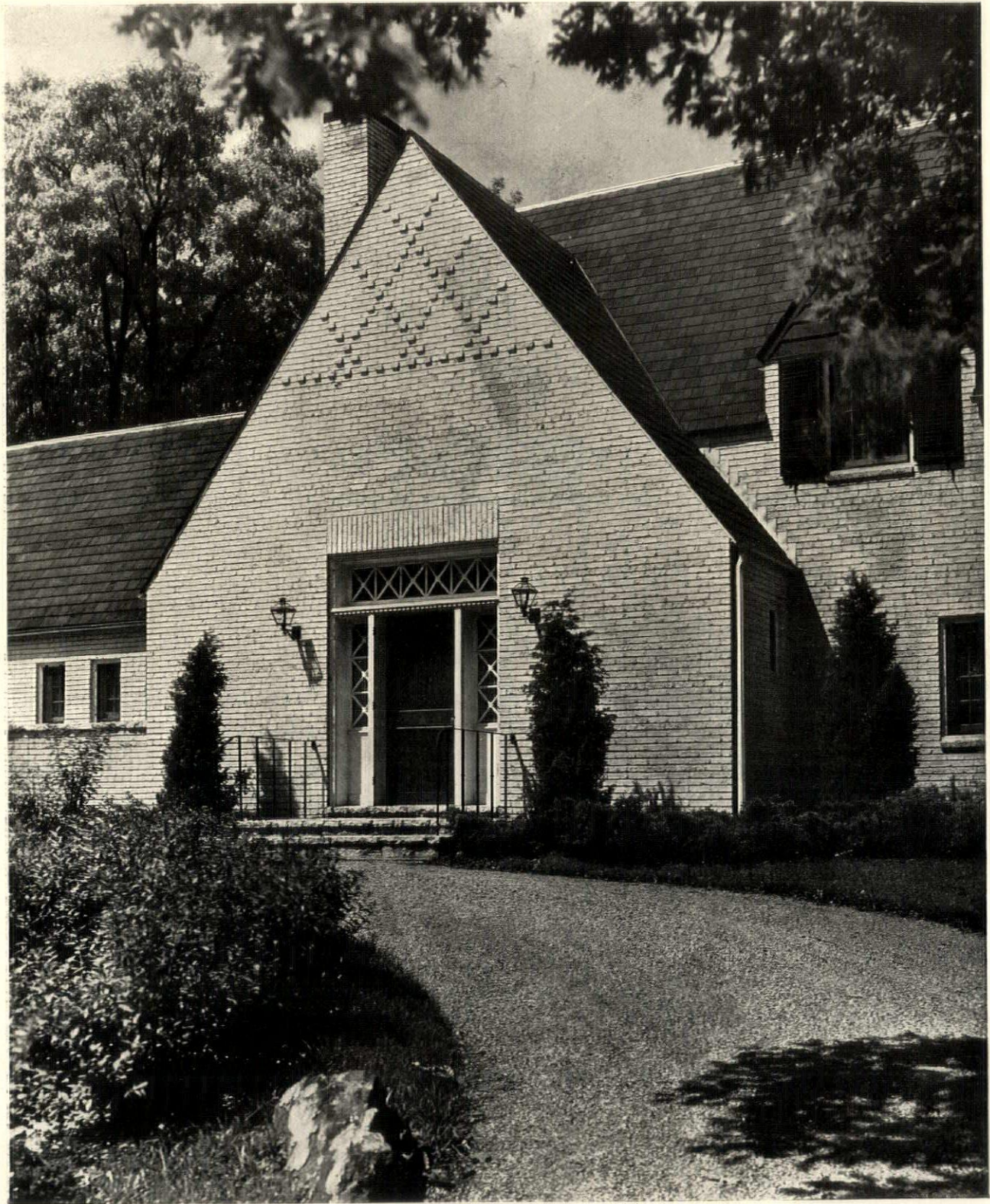


Fireplace end of the living-room, paneled in knotty spruce. A solid door, instead of the usual glazed door, leads to the screened porch. The entrance front faces east; the garden front, west, overlooking a valley



« ARCHITECTURE »

JUNE, 1935



Entrance detail. Outside walls of the house are of common brick, painted ivory; roof is of extra large wood shingles, stained dark brown; window and door trim is painted ivory, doors of natural pine; blinds and siding are painted dark brown

« ARCHITECTURE »

JUNE, 1935



In the dining-room, above, knotty spruce is used for the trim, in an antique finish. Interiors of the corner cupboards are painted an antique green, and the Directoire wallpaper is figured in red and green on a ground of the same color as the wood trim



At left is shown a detail of the living-room—the side-wall door to the terrace. The family consists of a mother and daughter, with quarters provided for a maid and a gardener



This house was designed primarily to demonstrate the possibilities of a very small house built around the idea of combining living-room, dining-room, and kitchen. Exterior is of concrete blocks in random ashlar, painted; roof of asphalt shingles

A CONCRETE HOUSE COSTING \$2500

Frank Harper Bissell

ARCHITECT

Photographs by Bert Clark Thayer

"This little house has so far been my best effort in the designing of a small house; because of the economy and permanence of its design and construction it can be possessed by a large number of our people and it will grow old with grace."

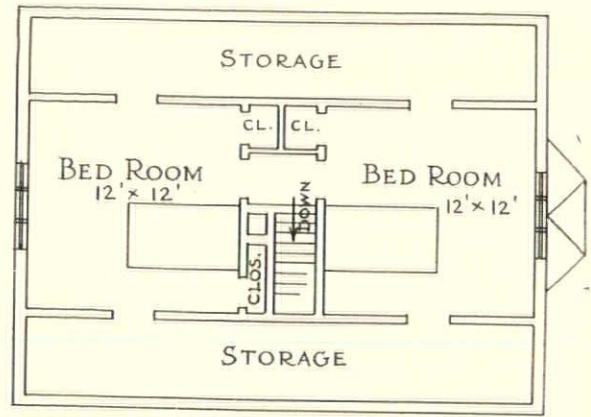
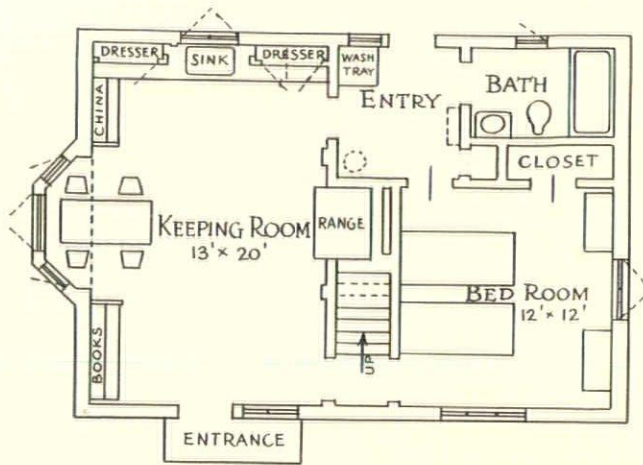
FRANK HARPER BISSELL

O N E H U N D R E D S M A L L H O U S E S

« ARCHITECTURE »

JUNE, 1935

339



The central brick-recessed range is not an ordinary one—it serves for cooking, water heating, and for warm-air heating of the whole house. In principle the plans build upon the fundamental simplicity of our early settlers' houses, but with the added amenities of today

There is no cellar, the first floor being a concrete slab, marked off in squares. Window-sash are of steel. A water-proof cement paint is used on the concrete blocks, thin enough so as to preserve the appearance of articulated masonry





If we could only restrain the urge to "keep up with the Joneses," it could easily be demonstrated that, with a very restricted budget, it is possible to weave together the everyday practical demands of housekeeping with a considerable measure of the environment that contributes to gracious living.

In the "keeping room" the dining-table has a bay of its own and is not unpleasantly in evidence at times other than when the meals are served. Glazed cupboard doors here give place to wood-paneled doors, behind which the food supplies are less distracting. The sink in front of the end window is covered when not in use by a section of the countershelf

◀ ARCHITECTURE ▶
JUNE, 1935



Trim is reduced to a minimum, and the partitions, joists, simple battened doors, and other elements make no pretensions to anything beyond their rugged honesty

Odors from cooking are carried off through the copper ventilating hood, reinforced by a small fan if necessary. A folding screen hides the range when that seems desirable

« ARCHITECTURE »

JUNE, 1935

342

1—FRAMES AND TRIM—WOOD

ONE window may look just the same as another to the average passerby, but to the architect and the skilled builder they will be as different as day and night. It is probably far easier for the builder to erect a good window than it is for the architect to design one. Many points in the physical erection of the window must be considered, as well as the co-ordination of the trades having to do with them. The grade of material entering into a window frame, as well as the trim and sash, should be given serious thought. Too often it is believed that the material comprising this work is all of the same quality, or at least of the same general grade, in a particular section of the country. This is far from the case. It seems that the larger the city the more species and varieties of wood from which many manufacturers turn out their sash and trim—always trying by one scheme or another to fabricate a product which will be under their competitor's price and which they will be able to palm off upon an ignorant purchaser. Far too often, cheaper grades of pine are used where white pine or other wood is called for. The better manufacturers use no subterfuges, but clearly state that their material is "clear" or "No. 1," and in many cases it probably will be found that the No. 1 offered by these honest dealers is superior to the so-called "best" product which is offered by a concern less jealous of its integrity.

One of the desired results in building a house is so to construct it that it will enjoy long life free from ailments. Among the details which will contribute to this in windows, is that both the frames and sash be

Better Practice

By *W. F. Bartels*

DOORS, AND WINDOWS

fitted together with a linseed oil paste of white lead. Another item which will add considerably to their life, is that the frames and sash be primed either before or immediately upon their arrival at the job.

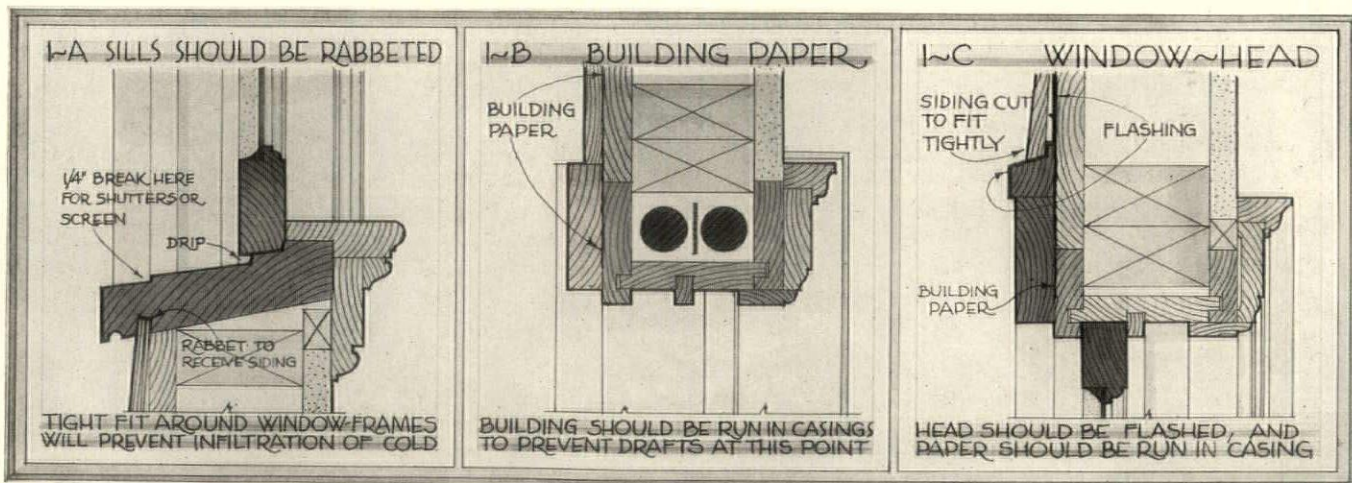
As the window frames are being set in a masonry wall by the carpenter, it is well to have the mason foreman check each window frame, giving him the authority to have the carpenter reset any frame which is not plumb, square, or parallel to the face of the wall. This will eliminate the mason's building in any frame which is not square, plumb or parallel to the face of the wall and then laying the blame on the carpenter. The sills should be rabbeted for the clapboards or shingles on the outside, thus insuring a tighter fit (Fig. 1A). It must be borne in mind that the tighter the fit, not only of the sash, but also of the frame and all its members, the less cold air infiltration and consequent heat loss will there be. To further this object, whether it is a frame, stucco, or veneered job, the building paper should be run under the casings to prevent drafts (Fig. 1B). Particularly is this true over the head of the window, where any carelessness is sure to show and result in a breeze coming in over the top of the window (Fig. 1C). It is also necessary that proper flashing be put over the head of the window, so that the weather will not beat in there (Fig. 1C). In

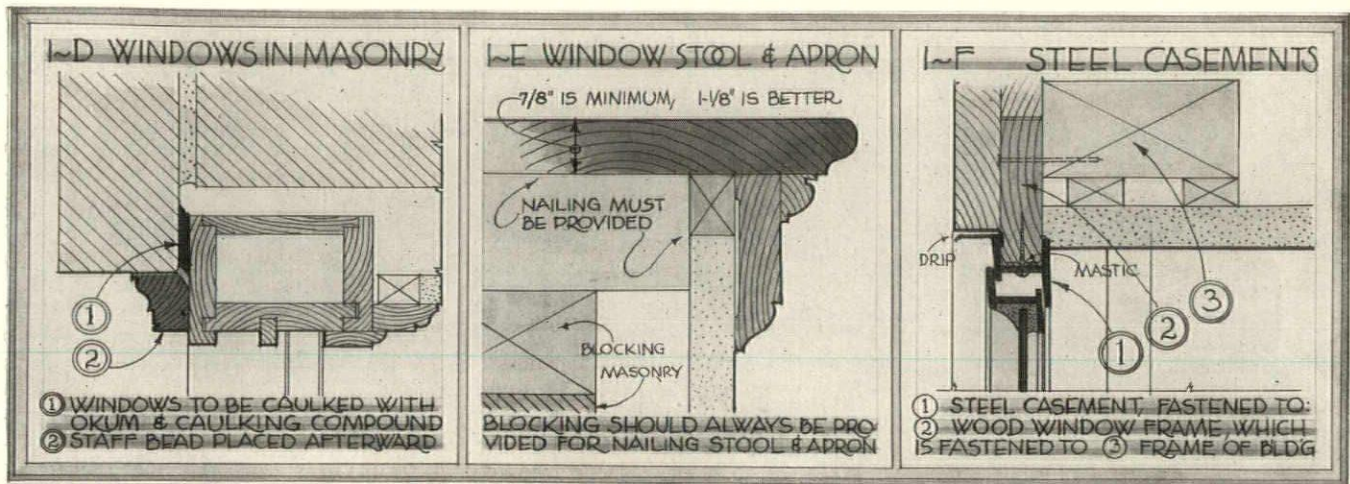
brick walls the staff beads should be left off, or only attached lightly, until the okum and caulking compound has been used (Fig. 1D).

Unless specifically called for, too often frames are not blocked up properly from the rough sill or brick work, with the result that there is little or nothing solid to nail to when the stool and apron are put in place (Fig. 1E). It is well for the architect to call for the size of the various parts of the frame to be used, always keeping in mind the standard sizes available in his district and not deviating from them. Seven-eighths-inch and 1 1/8" stools are generally obtainable, but it is more desirable that the latter be used. Aprons of 3/8" are satisfactory. Both aprons and stools should be molded. Very often it is desirable to have the top of the stool of some particular veneering which will be more resistant to hard wear and hard usage than paint or varnish. The reveal jambs must be considered—whether they are to be of wood, plaster or other material. The window stops are important and should be made adjustable with washers and screws, so that with little difficulty any small shrinkage in the sash in the future may be taken up.

It might seem, at first glance, that the frames for casements are simple, and they are if properly made and erected. But no amount of yanking or pulling on casement sashes afterwards will overcome faults due to poor anchorage, untrue frames, and inadequately secured frames for this type of window. Deflection in a lintel where wood or steel frames are used may cause the head so to deflect that opening or closing the sash is impossible.

Particular care must be exercised





with lintels over fixed frames. Particularly is this true over wide openings, where there may be considerable deflection. One builder replaced a plate-glass window three times before it dawned upon him that the deflection of the lintel on his fixed frame caused the glass to crack.

Where doublehung metal windows are used, the gauge of the metal which constitutes the window should be given careful attention and properly specified. If the window is of costly metal such as bronze, the architect must make sure that it is all bronze, and that the contractor does not "understand" that only part of it is to be bronze. The setting of these windows is substantially the same as those of wood. It is not desirable to slush in with mortar between the outside of the frames and the brick walls because this space should be left for caulking. In fact it might be well to call for a strip to be put in at this point so that it is certain that proper room and depth is left for the caulking com-

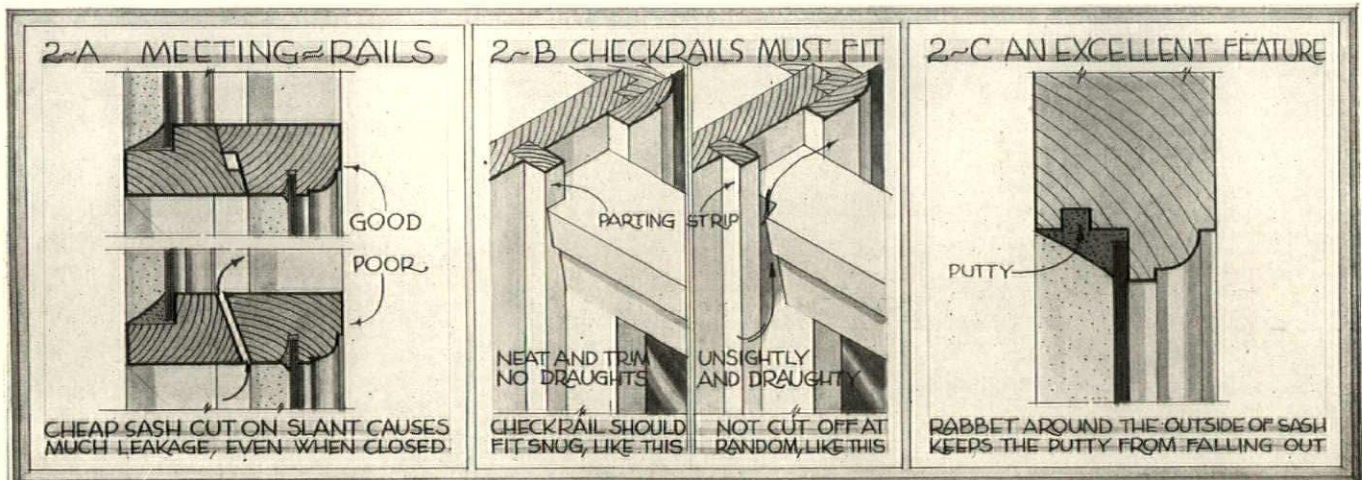
pound. It is probably reasonable to assume that in buildings over five or six stories in height metal windows are generally used, and here another factor presents itself to the architect and must be taken care of by him. In order that he comply with the law and keep the window heights a certain distance below the ceiling and at the same time obtain the necessary window space, it often necessitates his making the sill lower than he would prefer to have it. With this low sill there is the ever-present danger that with the window open somebody may slip or fall out. To prevent such an accident, many of the better metal windows have locks or catches on the lower sash to prevent their being raised high enough for a person to fall out.

Steel casements are deservedly popular, but if not properly installed will not give perfect satisfaction. They must be properly anchored and so set that they are not entirely dependent upon a thin line of caulking to keep out the blustering wind. The caulking is difficult and expen-

sive to do properly, but upon it depends the success of the window. Probably one of the best ways to set these casements is to fasten them to a piece of wood frame and then in turn secure this frame to the framework of the house (Fig. 1F).

2—SASH

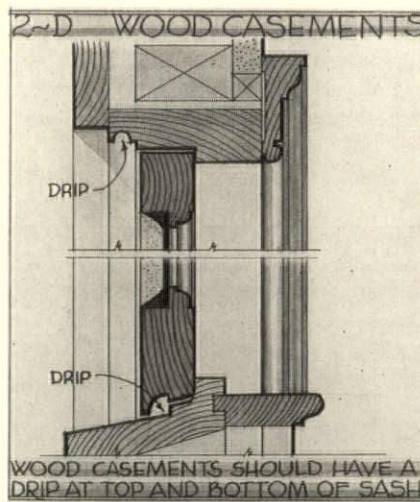
Before deciding upon the kind of sash, the architect will have to weigh the architectural benefits as compared with the costs of one over one, one over six and six over six, as the lights are called in the trade. The cost of these will not only be in the sash themselves but will be reflected to some extent in the painting. The glass, of course, will be only slightly less, due to the additional labor involved, but the cost of replacement will be considerably less. As has been stated before, the sash should be well fitted. To obtain this result it is better, if the sash be wood, that they be obtained from the same mill that produces the frame—otherwise a slight variation in either may re-



sult in loose and rattling windows. The check rails should not be just cut on a slant, as is done in the cheaper type of sash, but should be fitted so that when the sash are locked there will be no air leakage at this point (Fig. 2A). The edges of the check rail should be tight against the parting strip and the carpenter should be forbidden to cut them at random as is too often done (Fig. 2B). Most manufacturers go to great lengths to produce windows which will give permanent satisfaction—some even cutting a rabbet to keep the putty from falling out (Fig. 2C). So it is incumbent upon the architect that he lend every assistance, so that when the sash are hung they will not only be attractive, but will also hang steady and will be easy to work and operate.

Casement sash, while attractive, present a problem which the architect must consider before installing them. If the sash swing in they present difficulty in keeping out the weather. If they swing out they are difficult to screen, although the improvement in roller screens and other special types has minimized this problem. The obtaining of a tightly fitting casement is a difficult matter, particularly after a year or so has elapsed, although some of the special hardware is of great aid in this matter. The architect should remember that wood casements must have heavy stiles in order to prevent warping as much as possible. Drips must be provided both at the bottom and the top to keep out the weather (Fig. 2D). There is also the problem of cleaning to be considered. Many casements present a difficult problem in this respect.

In the installation of metal casement windows, the sash should be



kept locked to the frame until the sash are ready for glazing and the surrounding work (such as trim and plastering) has been completed. This precaution will prevent any part of the sash being bent by the workmen. In considering which type of casement to use, due thought should be given not only to the weight but also to the strength and shape of the elements entering into construction of the casement. Casement windows of today provide a great variety of types, with fixed and ventilating sections, so that almost any part of the casement may be opened or closed, to present more ventilating surface than would a doublehung window of the same area opening.

Doublehung windows of metal allow greater glass area than when of wood. Coupled with this is their resistance to fire when properly glazed. The thickness, type and gauge of the metal going into various parts of the window should be considered by the architect. The

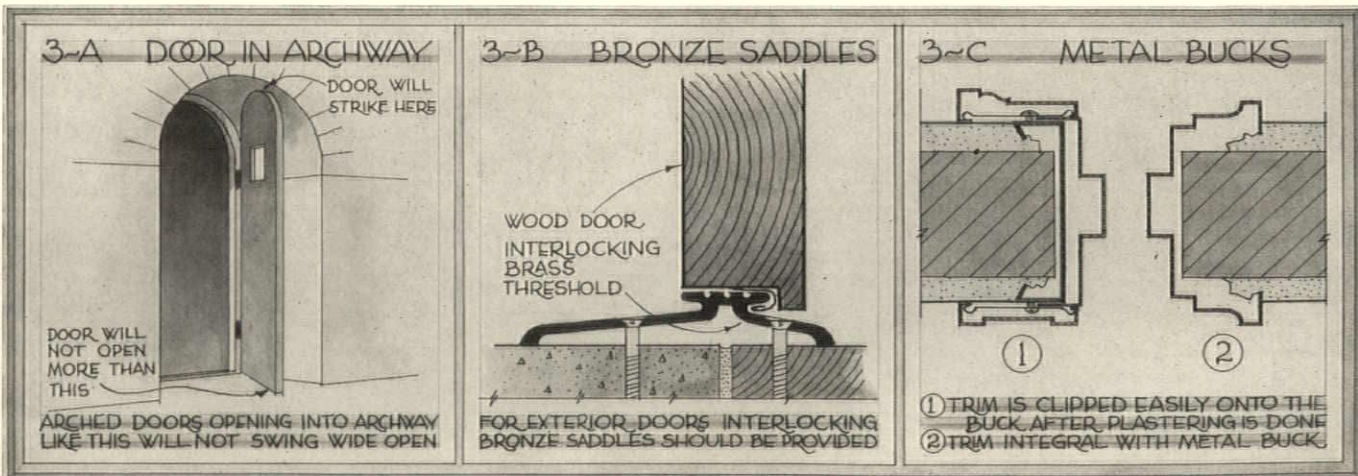
sills, of course, should be heavier than the sash, if the hollow metal type is used, as it will be readily seen the sill must withstand more severe weather than the remainder of the window. The type selected will in a large measure depend upon the personal preference of the architect, although great care should be exercised in the matter of the workmanship and construction of the sash.

3—FRAMES AND BUCKS

Door frames must be true and square if the doors are to fit properly and without later spending considerable labor on fitting. This means that the jambs must be plumb and properly blocked out—not by one or two pieces of wood, but by at least three or four pieces of blocking. Jambs for interior doors should preferably have the stops glued on at the mill. Jambs for exterior doors should be rabbeted. This will include an exterior rabbet for the screen door. Where there is an arched masonry opening, the architect must exercise particular care, because a screen or storm door put on the exterior of a jamb (when the jamb is near the inside face of the wall) will not open (Fig. 3A).

The entire jamb should be adequately caulked. The door, whether it swings in or out, will of course have a drip. It is advisable that a metal saddle with weatherstrip features be provided for the exterior doors (Fig. 3B). The jambs should be of such thickness as to eliminate any doubt as to their ability to carry the door without sagging.

Where interior doors have mitred trim, one interesting feature might be noted. An open joint at the top of the mitre indicates too much dampness, and will generally be



noticeable in a new house only. An opening at the bottom of the mitre shows dryness. This will be apparent where houses have had an opportunity to dry out. The architect might well remember this and substitute flat trim over large openings, such as for double doors or large trimmed openings, so that the mitres will not shrink and crack open due to dryness.

Screen doors should not be flimsily constructed and of a single-panel type if they are expected to last any length of time. It is more desirable that they have substantial stiles and have several horizontal rails so that they may stand up under constant usage. Besides, the stiles should be of adequate size, so that regulation hardware may be installed instead of the kind commonly used on narrow-styled doors, which is the cause of many pinched hands and fingers when using the handle. Screen doors deserve better design than they generally receive. General observation leads to the conclusion that the architect seldom if ever gives them any thought, yet for half the year they cover a door on which he has lavished careful consideration. Fanlights should be carefully worked out, as they probably will be poorly fitted unless the architect specifically calls attention to this point.

The widths of doorways is an important item for the architect to consider, inasmuch as they will have an important bearing on the type and size and furniture one may get into a living-room. Closet doors, bathroom doors, etc., may, of course, be much narrower without any inconvenience.

Steel bucks offer a decided advantage in houses, inasmuch as they present no problem of shrinking or swelling while the house is damp. Once set plumb and square, there will be no worry that a change in weather conditions will affect them either before or after the door is hung. The steel bucks are generally made from ten to sixteen gauge, and are made integral with their trim. Many bucks are made so that the trim may be clipped on later by means of a spring. This gives the plasterer a little more leeway (Fig. 3C).

4—DOORS

Many architects spend considerable time and effort in obtaining a desired kiln-dried door and then allow it to be delivered on a damp

job. The doors should be protected against dampness both before they are hung and afterwards, and it is particularly desirable in the case of veneered doors to see that protection is afforded to the top and bottom edges of the door. Exposed doors which are to be painted should receive a priming coat immediately upon their delivery to the job.

Doors of today vary in construction as well as in grade. They may be made of solid stiles and rails with solid or veneer panels, or the stiles and rails may be built-up cores finished with a veneer, or the solid stile may have a veneer of hardwood. If the stiles and rails are of one piece they will most likely be mortised and tenoned, while a built-up door will be put together with dowels. Either one is satisfactory when properly made. The solid cores are generally pine or chestnut.

The thickness of the veneer varies with each manufacturer. An important item though, is the glue used in making it adhere to the core of the door. This, of course, is an item concerning which the architect has little knowledge and practically no control, hence he must depend upon the manufacturer. Once more it is emphasized that dealing with a reputable manufacturer will pay dividends. Using different veneers on the opposite sides of a door is very likely to cause the door to warp, as the co-efficient of shrinkage will, of course, not be the same for both woods. Hence this is one argument for those advocating a thin veneer, which will have less pull on the door than would a thick one. On all exterior doors the architect should specify that a weather-proof glue be used. Flush doors are gen-

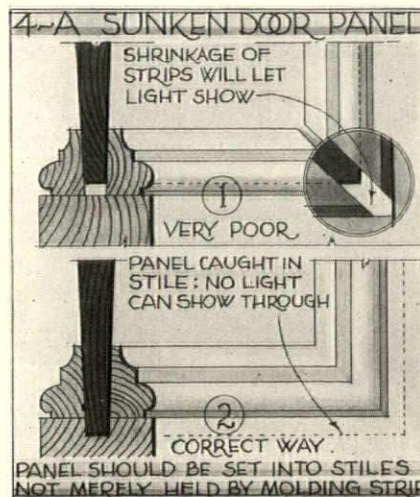
erally made up of stiles and rails with the panels filled in. The architect should bear in mind that the construction of such a door will very likely be much stronger if there be two or three intermediate rails. On both the panelled and flush door it is essential that a $\frac{3}{4}$ " strip of hardwood be run on the edges of the door. Flush doors should, of course, never be less than $1\frac{3}{4}$ " in thickness. The figure on the veneer will, of course, depend upon the way the wood is cut, and upon the veneer depends the cost of the door in most cases.

Where to use a veneered or a solid panel will, of course, depend on the size of the panel. Laminated veneered panels will shrink less than solid panels. A thin panel is not desirable, and no less than a $\frac{5}{8}$ " panel should be used in any case on a large door. Where a flush panel is used, the flush surface should be as close to the stile as appearances will permit, so that there will be no danger of twisting and warping because of water lodging along offsets. In the regular sunken panel it is possible to have the panel set in the frame rather than to have it just caught by moldings. This will eliminate possible rays of light coming through the corner mitres, if the panel is short, as well as provide a more substantial door (Fig. 4A). In the better class of work it is desirable to have the panel stained or primed before it is put in. This will eliminate the line of natural colored wood around the molding, which occurs if the panel shrinks.

Generally, interior doors are either $1\frac{3}{8}$ " or $1\frac{3}{4}$ ". The former may be used for closets but the latter are more desirable and should be used throughout, their added cost being but very little. In no case should a door over 2' 8" x 7" be less than $1\frac{3}{4}$ " in thickness. A door may be called for of certain size and, upon delivery to the job, the architect finds it is smaller than he called for. This is due to the fact that mill sizes run a shade under what might be termed standard measurements. If the architect desires a certain finished size he should then specifically call for it to be this size "when finished," or as the English say, to "hold up" to that size.

The subject of Doors and Windows will be concluded in the next issue, in which Mr. Bartels will discuss also the intricacies of Damp-proofing, Water-proofing and Caulking.

—EDITOR



◀ ARCHITECTURE ▶

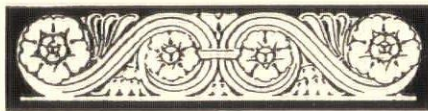
JUNE, 1935

Tuesday, April 2.—Dean Gauss of Princeton was talking at luncheon today on the rise and fall of civilizations. He made the point that, roughly speaking, each of the great civilizations we recognize has occupied about five hundred years in its rise and fall. While some students of this broad subject profess to believe that the progress of a civilization can be measured by certain arbitrary indices such as: the wealth per unit of population; the amount of oil or coal consumed or utilized per unit of population; the number of arrests per thousand of the population in a given period—the theory being that as civilization rises and becomes more complex it finds more laws necessary, and therefore, an increasing breakage of these laws. Dean Gauss places very little dependence upon such indices, but does contend that every successful civilization has a dominating thought, ideal, or inspiration higher than the individual, leading the people to something above the capabilities of any individual. Of course, religion has usually been this dominating and uplifting ideal. It seems quite evident that religion is less dominant in our own time, and that possibly the thing we most aspire to is the full dinner pail, which the Dean thinks is hardly enough of an inspiration to raise a people above themselves. Incidentally, if we consider our present civilization as starting with the Renaissance, we seem to be nearing the end of the five-hundred-year period. Parenthetically, a declining birth-rate is nearly always a concomitant of the fading of a civilization. Dean Gauss does not apparently believe that we are about to leap into chaos, but he does feel that if our civilization is to go higher we must conceive and inculcate an idea or an ideal of sufficient power to induce, if necessary, martyrdom and complete abnegation, as in other high plateaus of history.



Thursday, April 4.—I went over near the Hudson River today to a big scenic studio to see one of two great murals which Charles B. Falls is painting for the Ford Building at the San Diego Exposition. Somewhat reminiscent in general form and size of his huge murals in the Electricity Building at the Chicago Fair, this pair, some forty feet tall, also bends around great pylons, flanking the main entrance door from a rotunda to an outdoor exposition court. Asia and America are the two themes. They are carried out in a rather high key of color, strongly accented with silver and gold.

Saturday, April 6.—I have an idea that architects interested in large-scale housing are losing a trick by not taking advantage of Title III of the National Housing Act. Rates and conditions governing the insurance of mortgages on



The Editor's Diary

low-cost housing projects are individually determined, and are considerably more liberal than those of the other three phases of the FHA program. Where a project has unquestionably a community value, the secured mortgage may have a face amount equal to the entire value of the project. Generally speaking, however, the land must be held free and clear, and in addition there should be a working capital equal to 3 per cent of the total cost—this, of course, in a limited-dividend corporation.

Monday, April 8.—Architectural magazines come daily to my desk from all parts of the world. Almost without exception these are filled with the extremely modernistic sort of thing, to the exclusion of all other types of work. One would think, to judge from these alone, that the world had gone modern with a vengeance. America, in these foreign periodicals, is always represented by the extreme modern example and by nothing else. I am wondering whether the readers of these magazines in their own countries are getting the impression that we build nothing else over here. And yet, even the shortest tour around this country, or any other, reveals the fact that this work has had such a limited acceptance in its experimental form that one finds it only with difficulty. A visitor from Mars, reading the architectural journals of the world, and then looking about him at the reality, would find it puzzling that the press is so unrepresentative of what is actually being built.

Tuesday, April 9.—The series of analytical studies being issued from time to time by the Housing Study Guild of New York seems to be a particularly valuable contribution. One, for example, that has just come to hand, explores with painstaking thoroughness the changes in rentals as they vary with the heights of buildings—that is, the number of stories. It reveals, for instance, that an eight-story building costs thirty-seven cents more in rent per room per month than a four-story walk-up. Of course, one must not immediately jump to the conclusion that, therefore, the eight-story building should not have been attempted, for there may be local or social reasons in its favor outweighing the rental cost.

These studies are sharp tools for the architect, and any one handling them

without a full realization of what they do and what they do not do, is very likely to be cut. The whole problem of housing comprises so many factors, that the designer ignoring any one of them is caught in trouble.

Just as an example, in the large cities the general contractors are better equipped to build the tall building than the low one, and therefore, can do it more cheaply. In smaller cities the reverse is probably true.

Here is another curious fact: for the New York area it appears that a four-story building results in the lowest rent—lower even than for the two-story flat, which, of course, drops out janitor services.

Wednesday, April 10.—I hear rumors that there is some thought, at least, in Washington as to the decentralization of the Supervising Architect's Office. In the absence of any official statement, these rumors should be taken with a large pinch of salt. They go on to say that while decentralization is under consideration, the principle of competition is not, which, if anything like the truth, is bad news. Decentralization without competition would leave the profession decidedly worse off than it is now, in that there would be many agencies capable of distributing architectural jobs, and through many diverse political sources instead of one source as at present. Decentralization without competition does not solve the problem.



Thursday, April 11.—There is an obvious danger in drawing sweeping conclusions from the results of the small-house competitions we have been and are having. The unthinking observer is likely to say: "This is the result of the combined architectural brains of the United States, as filtered through a group of eminent judges. Therefore, it must represent the trend of the times." The recent General Electric competition, it will be recalled, seemed to indicate that radical departures in planning, an almost entire absence of roofs, and a supermechanized house was just ahead of us. Of course, the fact is that the program and the personnel of the jury were the governing factors. In the competition now in progress, sponsored by *Pencil Points* and The Iron Fireman, we are likely to find a far different result. For one thing, the program subtly points to a more conservative type of house, and the jury, announced in this case beforehand, leads me to believe that the winning designs will probably be quite unlike those premiated in the first-mentioned competition.

Saturday, April 13.—It has been said that expenditures for housing are, as a rule, in inverse ratio to incomes—those

earning the least paying the highest percentage of their income for shelter. This generally accepted fact is emphasized in a survey recently made by the United States Department of Labor. The survey examined the cost of living in general, and it appears that the ratio of rents to total expenditures is 7.1 per cent higher for those on relief than for families with regular incomes. In other words, it would seem that relief agencies penalize those whom they assist by subsidizing landlords at the expense of necessary food and clothing for which this money might otherwise be expended.

Monday, April 15.—And still the conferences on low-cost housing follow one another in rapid succession. The Georgia School of Technology is sponsoring one at Atlanta on May 3 and 4. The city of Cincinnati joins with the American City Planning Institute, the American Civic Association, the American Society of Planning Officials, and the National Conference on City Planning in a conference in that city on May 20, 21, and 22, at the Netherland Plaza. I suppose there is a certain amount of real action emanating from these conferences, but offhand I should say it was in the ratio of about one to one thousand.



Tuesday, April 16.—Spent an hour with Frank Lloyd Wright, looking over his model of "Broadacre City" at the Exposition of the Industrial Arts, just opened in Rockefeller Center. The large model and the details at larger scale represent an amazing piece of model making, aside from their value as a contribution to design. Mr. Wright tells me that he has developed, among the students at Taliesin who made these models, an acceptance of abstracts in model making only with some difficulty. The fact, however, once accepted, is stimulating. The representation of scientifically forested areas on the small-scale model, and the representation of trees, shrubbery, vines, flowers, and the like on the larger-scale models are very far from naturalism, and at first glance not fully convincing. In a few moments of observation, however, one succeeds in banishing from his mind the tradition of naturalism, and accepts these abstract forms for what they represent. The conception, as a whole, is one of these tremendously broad ideas which, as the fruit of a powerful imagination, should serve as a stimulus and high spot in our efforts to rebuild this country in which we live.

Thursday, April 18.—The New York Chapter, A. I. A., has joined with the National Housing Administration and *The New York Evening Post* in a cooperative publicity campaign to stimulate the improvement and remodelling of the local business and apartment properties. The newspaper, on its part, will

publish a four-page section each Saturday night for sixteen weeks. Two pages of this will be edited and illustrated by a committee of the Chapter, the other two pages being devoted to advertising. The editorial contribution of the Chapter members is to consist of perspective sketches of improvements as striking examples of the need for rehabilitation and improvement—a sort of "before and after" contrast. The *Post* and the Chapter will operate a clinic for this type of work, and in this way it is hoped to bring merchants and owners who are interested in these possibilities into touch with the architects who have contributed the sketches.



Saturday, April 20.—It is very disturbing news to hear that there is a strong movement on foot to remodel the United States Capitol. For years, of course, there has been talk from time to time about the inconsistency of the east front, in that the shell of the dome projects slightly over the front wall, to be supported apparently by the rear edge of the portico. This aesthetic defect—it is not a structural defect—forms the entering wedge for the remodelling scheme. The proponents, moreover, are strengthened by Walter's own report, submitted after the building of the dome and wings, in which he said that the extension of the central building to the east becomes an architectural necessity.

It will be remembered that in 1904 Congress got mildly excited about this matter, and engaged Carrère & Hastings to make a report. That firm submitted two schemes, recommending one in which the east front of the central portion was brought out some twelve feet beyond the edge of the dome.

The present movement, however, contemplates very much more than that: the carrying out of the east front of the main building and its connections with the wings to a sufficient depth to gain a whole new set of committee rooms across the east front and a through corridor behind these. It contemplates, also, the substitution of marble for the painted sandstone on the walls of the central mass, both on the east and west fronts, ostensibly to save the cost of painting the sandstone every four years.

It seems to me that this would be one of the most unpardonable mistakes of our generation. We all know of the slight aesthetic defect in this overhang of the dome, but where is the work of art which has no minor defect? Here is the most outstanding architectural landmark coming down from the early days of our republic. The original building was the central portion only, designed by Dr. Thornton. After the burning of the Capitol by the British in 1814, the restoration was undertaken by Bulfinch, who designed the central porticos on the east and west sides of the central build-

ing. The interior was credited chiefly to Latrobe. Shortly after the Civil War, Thomas U. Walter replaced Bulfinch's low dome by the present one, adding the north and south wings for the House and the Senate. Here then is the work of three of our great architects, Thornton, Bulfinch, and Walter, a work which has acquired in the heart of every American a significance and an affection that is unique. Rebuilding this monument on lines that we flatter ourselves are more consistent, would seem to be very nearly the height of conceit and arrogance. We have few enough monuments to touch these early days to treasure. We are admittedly in the midst of a transitional period in architecture, the fruits of which are of very questionable merit. Let us at least have the decency not to meddle with works of art that have won the esteem and affection of generations.

Monday, April 22.—The Construction League has been pleading before the Senate Finance Committee which is investigating NRA. The Construction League's position is to the effect that so much good has been achieved and appears in prospect as a result of the Code, that it should be continued. On the other hand, the voice against the continuation of the Code is that of the real-estate interests, and particularly the land-development organizations. The latter interests want a new set of rules for real-estate operations as applied to the construction of speculative buildings. Just why there should be two different sets of rules for those building the bulk of our construction and those dealing with speculative building, is not clear.



Tuesday, April 23.—Professor Walter C. Voss, of Massachusetts Tech, speaking before the American Chemistry Society, says that although clay bricks have been made and used for about seven thousand years, we still do not know the phenomena that occur when brick and mortar meet.

Wednesday, April 24.—I was delighted to see that the National Academy of Design had raised to the rank of academician, William Mitchell Kendall, architect, now senior member of the firm of McKim, Mead & White.

Friday, April 26.—Today at lunch, Rutherford Boyd spoke to the art directors of the city concerning his experiments and researches in the realm of abstract form. Photographs of some of these results have been on exhibition at The League for two weeks. On other pages of this issue will be found some of these illustrations, with a concise statement of their purpose and meaning by the man who carved them out of plaster blocks.

NUMBER 104 IN A SERIES OF COLLECTIONS OF PHOTOGRAPHS
ILLUSTRATING VARIOUS MINOR ARCHITECTURAL DETAILS

ARCHITECTURE'S PORTFOLIO OF OVERDOORS, Interior

*Subjects of previous portfolios are listed below
at left and right of page*

❖ 1926
DORMER WINDOWS
SHUTTERS AND BLINDS

❖ 1927
ENGLISH PANELLING
GEORGIAN STAIRWAYS
STONE MASONRY TEXTURES
ENGLISH CHIMNEYS
FANLIGHTS AND OVERDOORS
TEXTURES OF BRICKWORK
IRON RAILINGS
DOOR HARDWARE
PALLADIAN MOTIVES
GABLE ENDS
COLONIAL TOP-RAILINGS
CIRCULAR AND OVAL WINDOWS

❖ 1928
BUILT-IN BOOKCASES
CHIMNEY TOPS
DOOR HOODS
BAY WINDOWS
CUPOLAS
GARDEN GATES
STAIR ENDS
BALCONIES
GARDEN WALLS
ARCADES
PLASTER CEILINGS
CORNICES OF WOOD

❖ 1929
DOORWAY LIGHTING
ENGLISH FIREPLACES
GATE-POST TOPS
GARDEN STEPS
RAIN LEADER HEADS
GARDEN POOLS
QUOINS
INTERIOR PAVING
BELT COURSES
KEYSTONES
AIDS TO FENESTRATION
BALUSTRADES

❖ 1930
SPANDRELS
CHANCEL FURNITURE
BUSINESS BUILDING ENTRANCES
GARDEN SHELTERS
ELEVATOR DOORS
ENTRANCE PORCHES
PATIO
TREILLAGE
FLAGPOLE HOLDERS
CASEMENT WINDOWS
FENCES OF WOOD
GOTHIC DOORWAYS



*Below are the subjects of
forthcoming Portfolios*

Brick Cornices

JULY

Signs

AUGUST

Chimney Offsets

SEPTEMBER

Window Heads

(EXTERIOR, ARCHED)

OCTOBER

Unusual Brickwork

NOVEMBER

Shutters and Blinds

DECEMBER

*Photographs showing interesting
examples under any of these head-
ings will be welcomed by the Edi-
tor, though it should be noted that
these respective issues are made up
about six weeks in advance of
publication date.*

1931 ❖
BANKING-ROOM CHECK DESKS
SECOND-STORY PORCHES
TOWER CLOCKS
ALTARS
GARAGE DOORS
MAIL-CHUTE BOXES
WEATHER-VANES
BANK ENTRANCES
URNS
WINDOW GRILLES
CHINA CUPBOARDS
PARAPETS

1932 ❖
RADIATOR ENCLOSURES
INTERIOR CLOCKS
OUTSIDE STAIRWAYS
LEADED GLASS MEDALLIONS
EXTERIOR DOORS OF WOOD
METAL FENCES
HANGING SIGNS
WOOD CEILINGS
MARQUISES
WALL SHEATHING
FRENCH STONEMWORK
OVER-MANTEL TREATMENTS

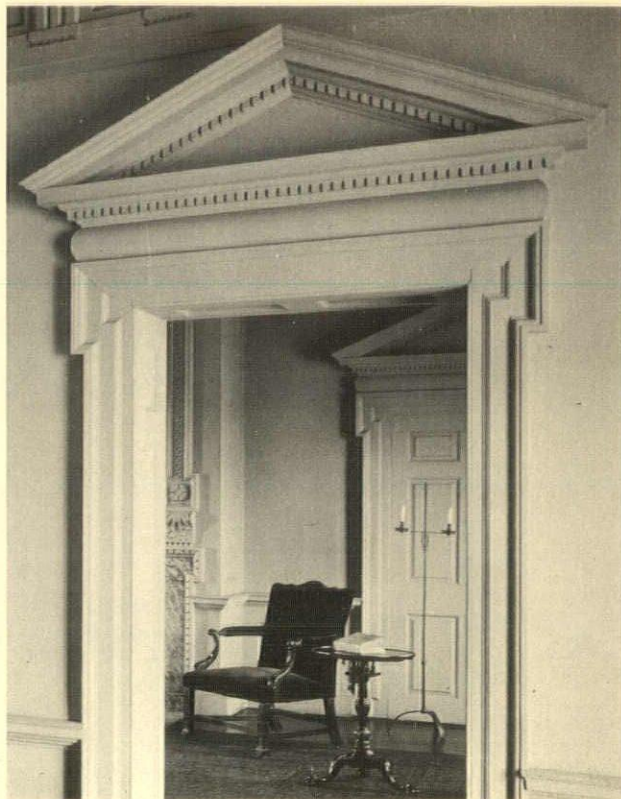
1933 ❖
BANK SCREENS
INTERIOR DOORS
METAL STAIR RAILINGS
VERANDAS
THE EAGLE IN SCULPTURE
EAVES RETURNS ON MASONRY
GABLES
EXTERIOR LETTERING
ENTRANCE DRIVEWAYS
CORBELS
PEW ENDS
GOTHIC NICHE
CURTAIN TREATMENT AT
WINDOWS

1934 ❖
EXTERIOR PLASTERWORK
CHURCH DOORS
FOUNTAINS
MODERN ORNAMENT
RUSTICATION
ORGAN CASES
GARDEN FURNITURE
WINDOW HEADS, EXTERIOR
SPIRES
BUSINESS BUILDING LOBBIES
ROOF TRUSSES
MODERN LIGHTING FIXTURES

1935 ❖
CIRCULAR WINDOWS,
GOTHIC AND ROMANESQUE
TILE ROOFS
MOLDED BRICK
DORMER WINDOWS
ENTRANCE SEATS



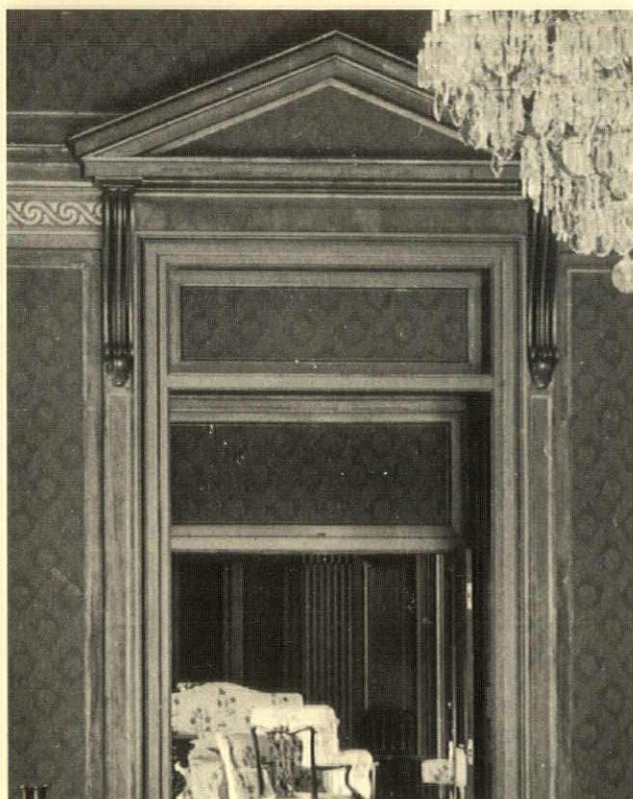
*Academy of Fine Arts,
Siena, Italy*

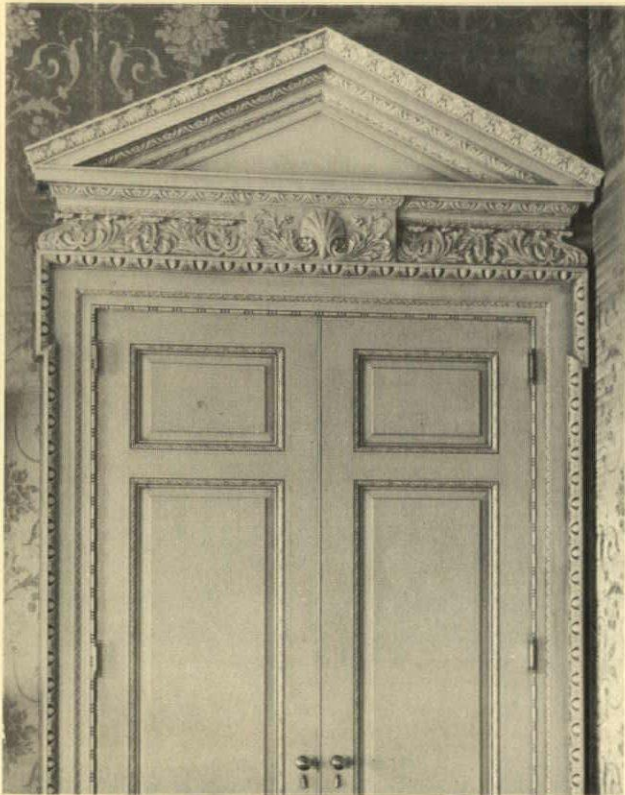


*Mount Pleasant Mansion,
Philadelphia*

*Longwood, Pa.
E. William Martin*

*Atlanta, Ga.
Hentz, Reed & Adler*





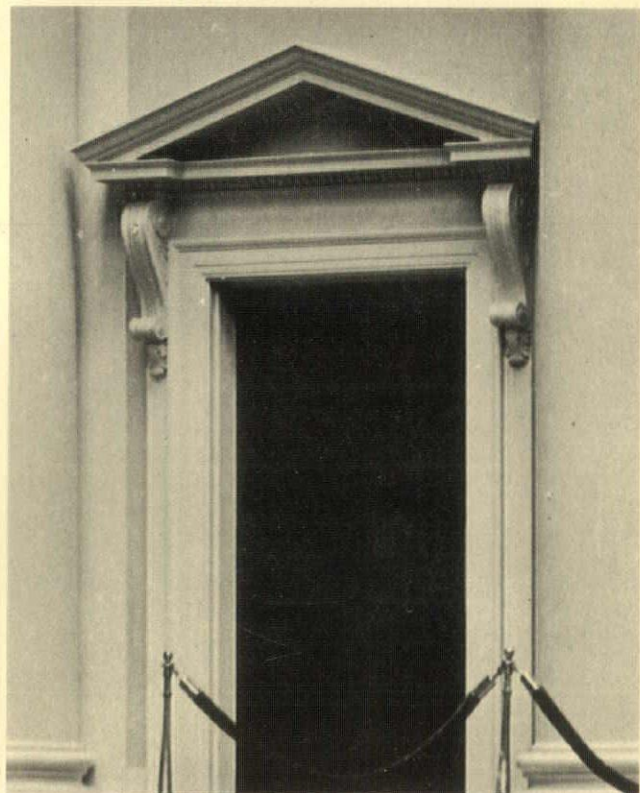
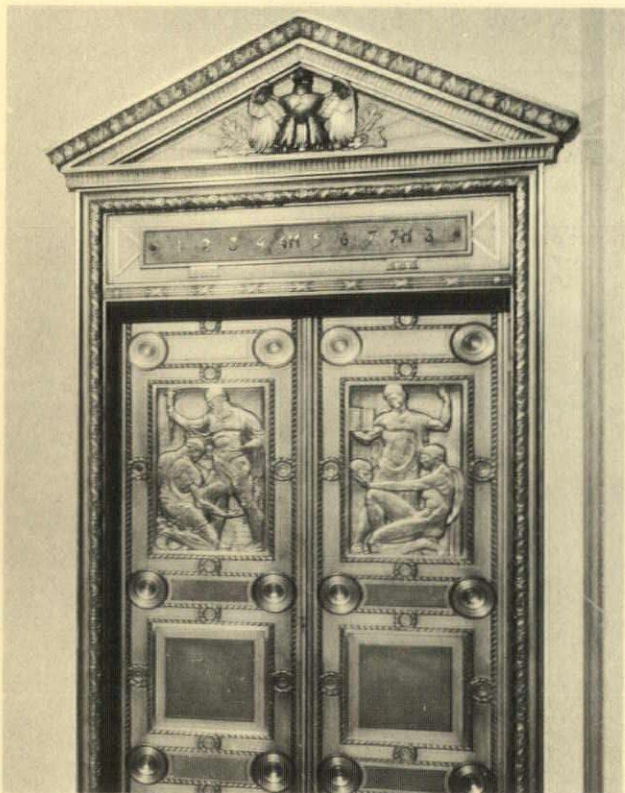
Great Neck, N. Y.
Greville Rickard



St. Croce,
Florence

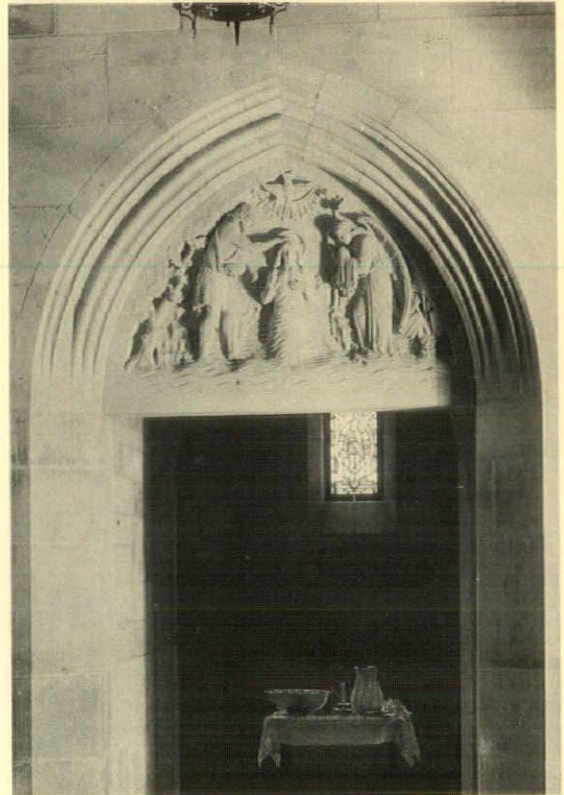
New York City
Max Hausler; Joseph H. Freedlander

Washington, D. C.
Office of John Russell Pope





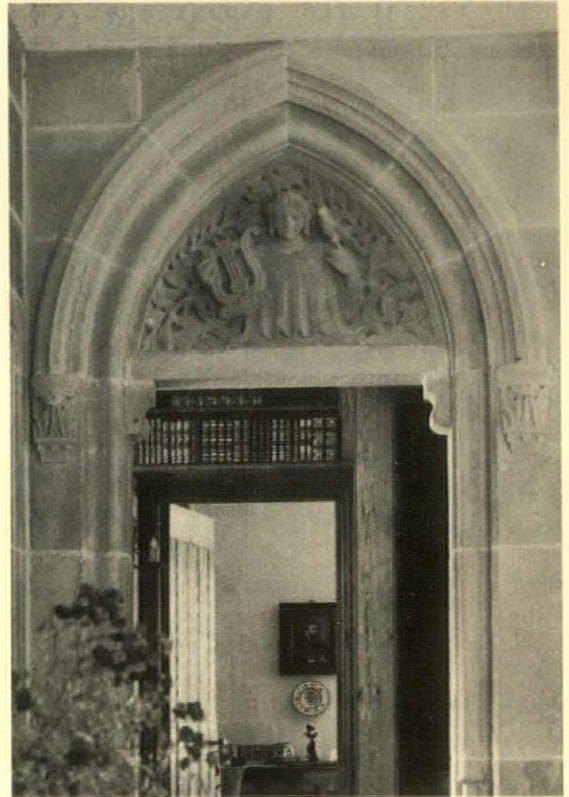
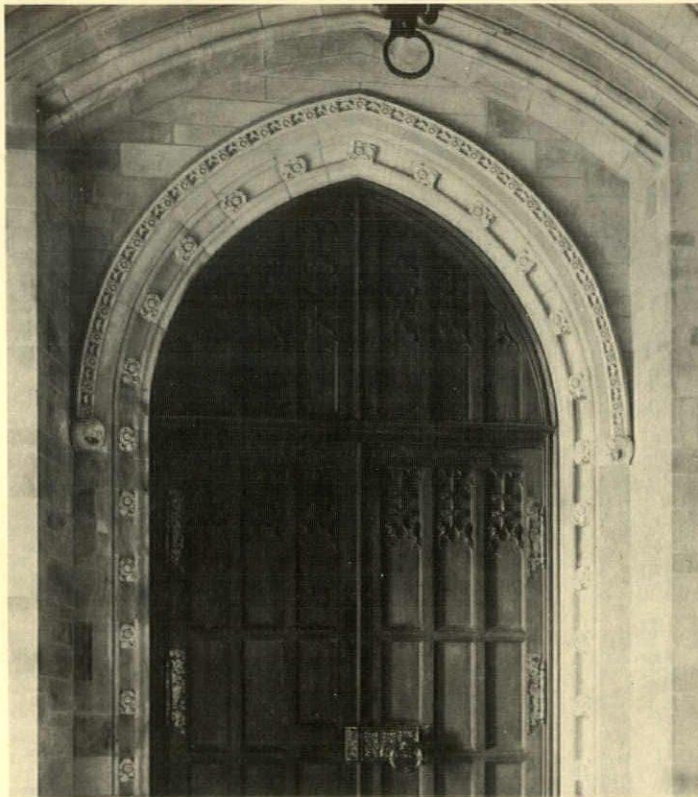
*National Museum,
Florence, Italy*

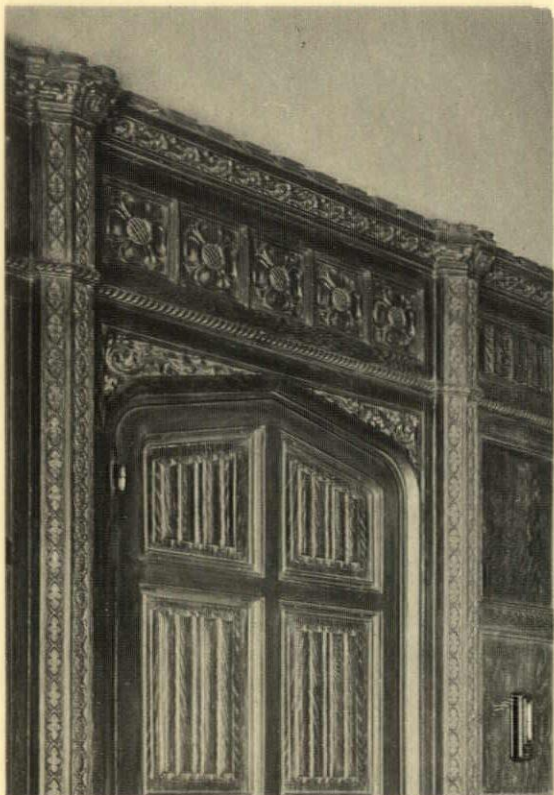


*East Orange, N. J.
Maginnis & Walsh*

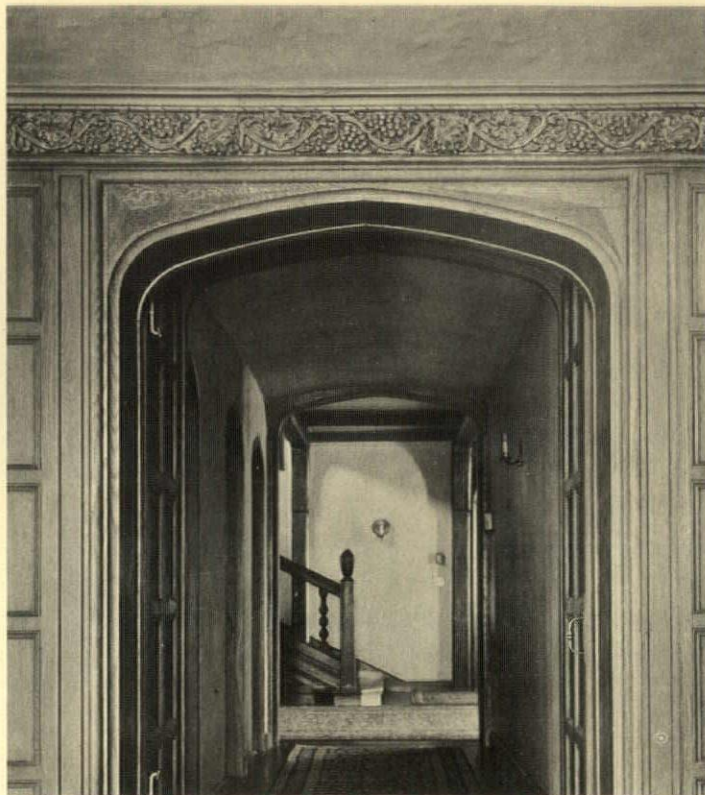
*Princeton, N. J.
Cram & Ferguson*

*Princeton, N. J.
Alfred Hopkins*





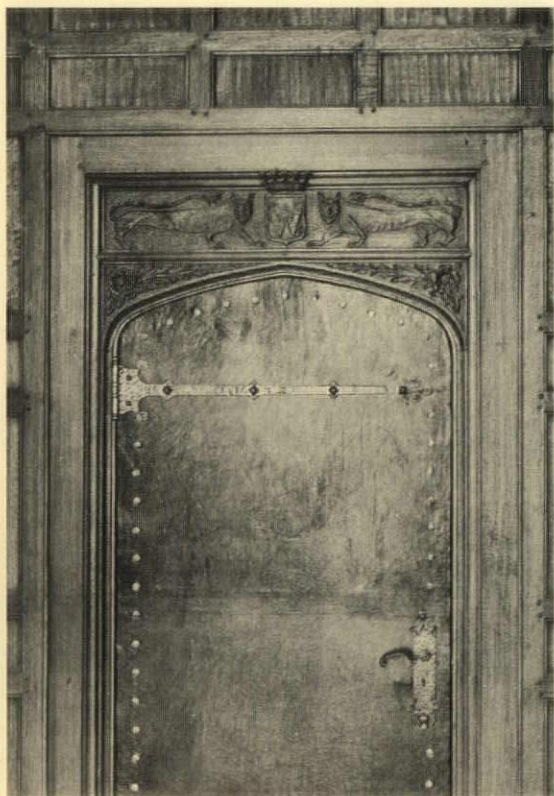
*New York City
Ludlow & Peabody*



*Greenwich, Conn.
Greville Rickard*

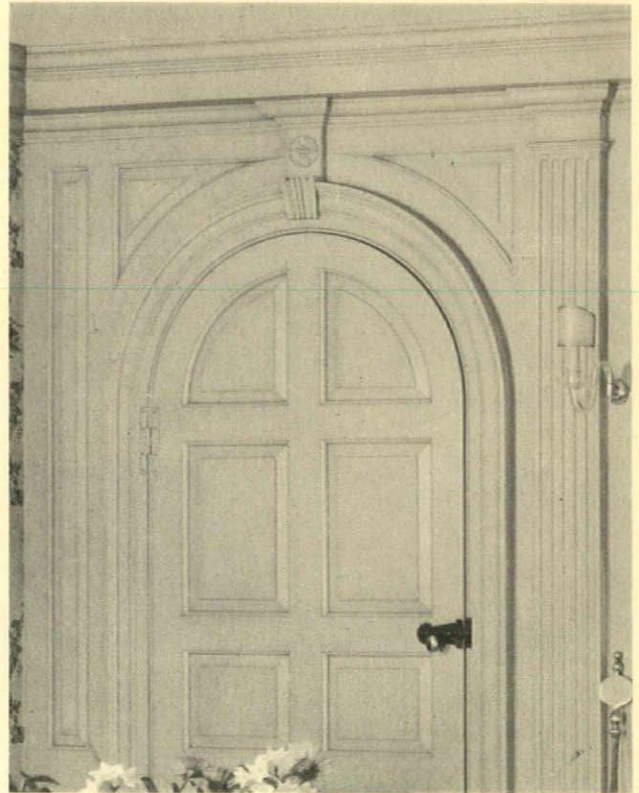
*New York City
Warren & Wetmore*

*Ann Arbor, Mich.
York & Sawyer*





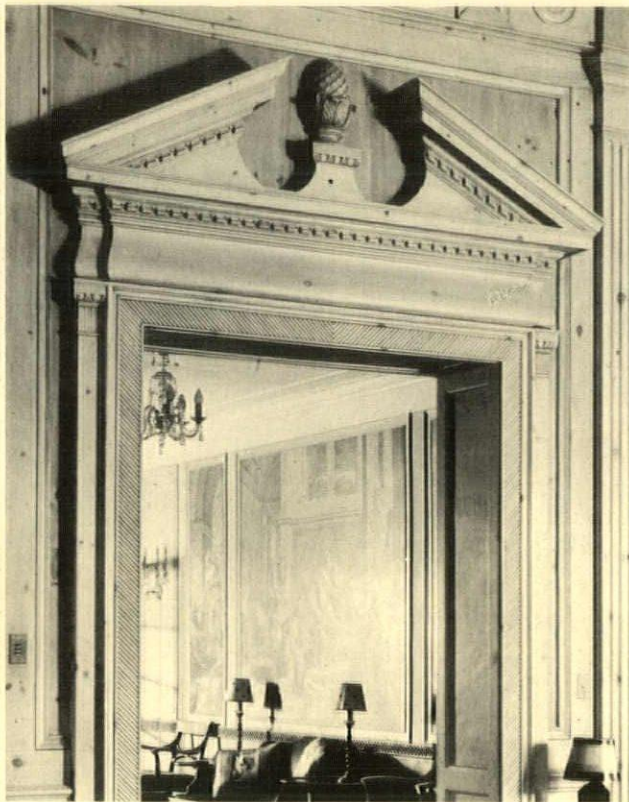
*Boston, Mass.
Little & Browne*

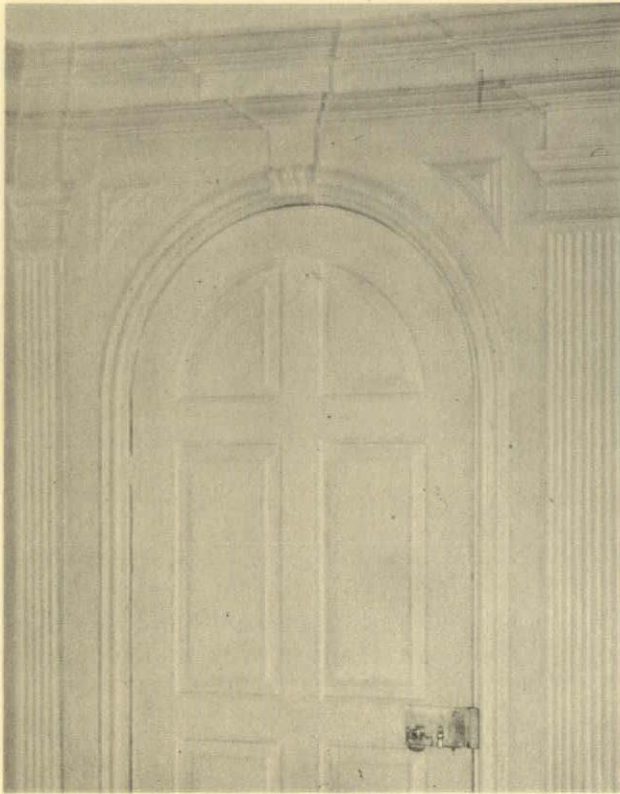


*Manhasset, N. Y.
Roger H. Bullard*

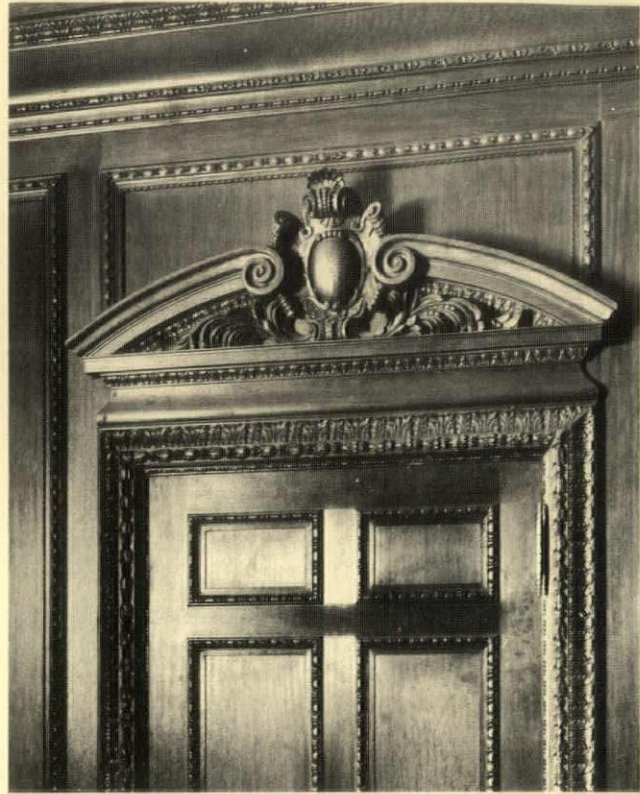
*Charlotte, N. C.
Aymar Embury II*

*Atlanta, Ga.
Hentz, Adler & Shutze*





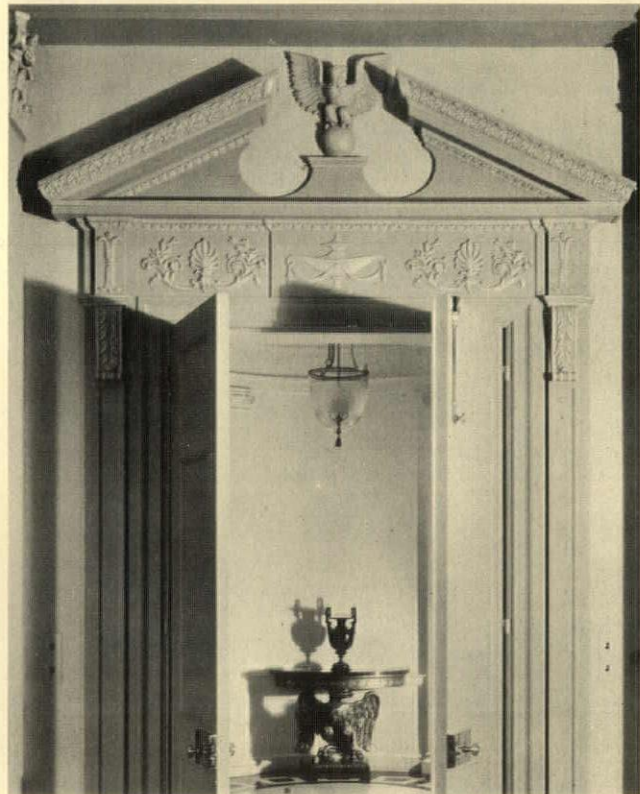
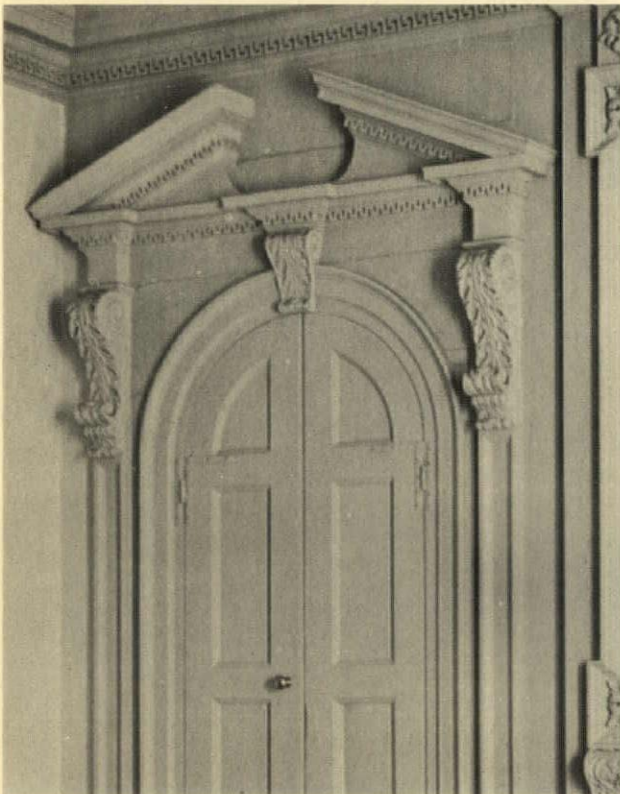
*Orne House (c. 1730)
Marblehead, Mass.*

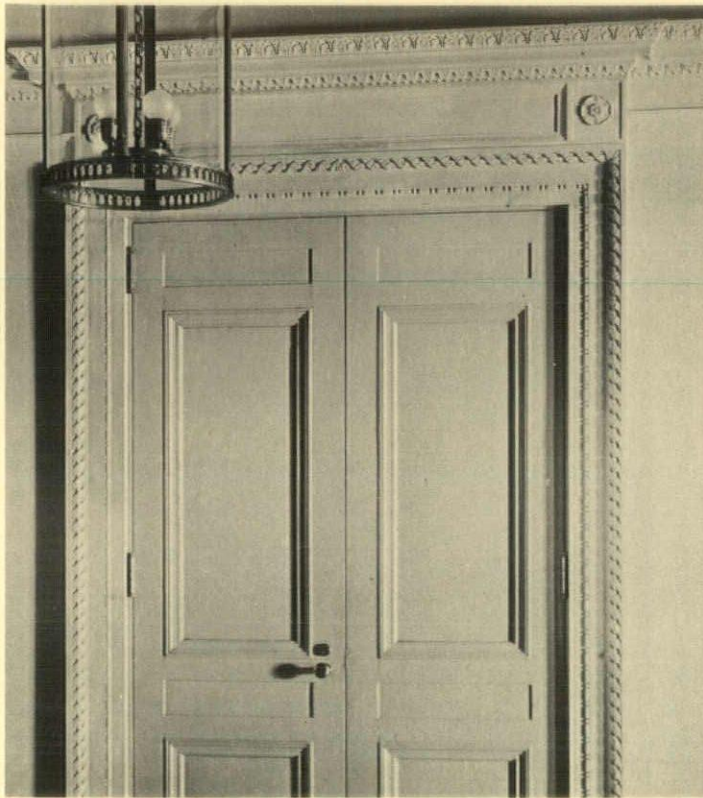


*New York City
Cross & Cross*

*Mount Pleasant Mansion,
Philadelphia*

*New York City
Schultze & Weaver*





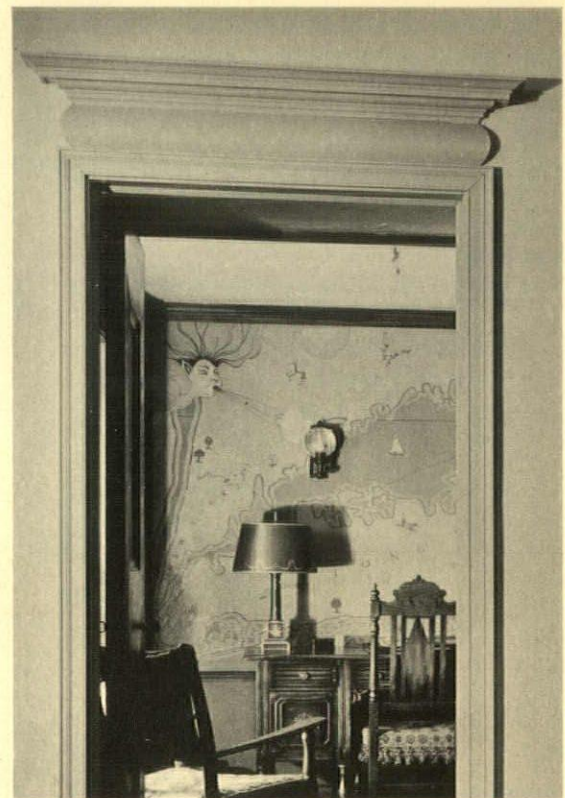
*New York City
McKim, Mead & White*

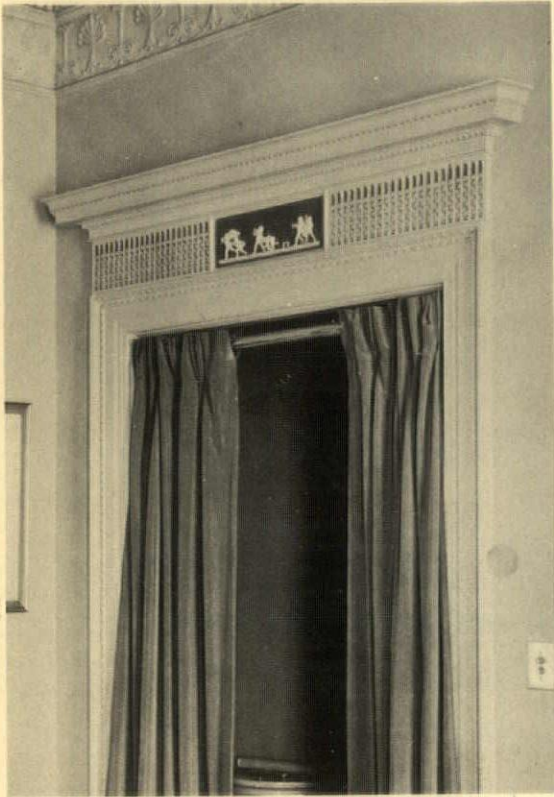


*New York City
Mott B. Schmidt*

*Middletown, N. J.
Charles H. Higgins*

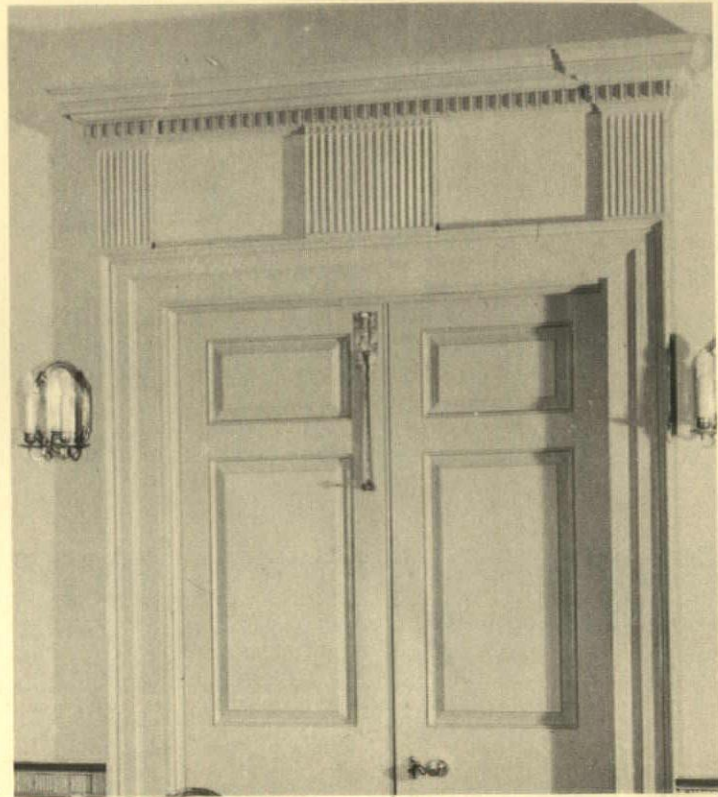
*Scarsdale, N. Y.
Verna Cook Salomonsky*





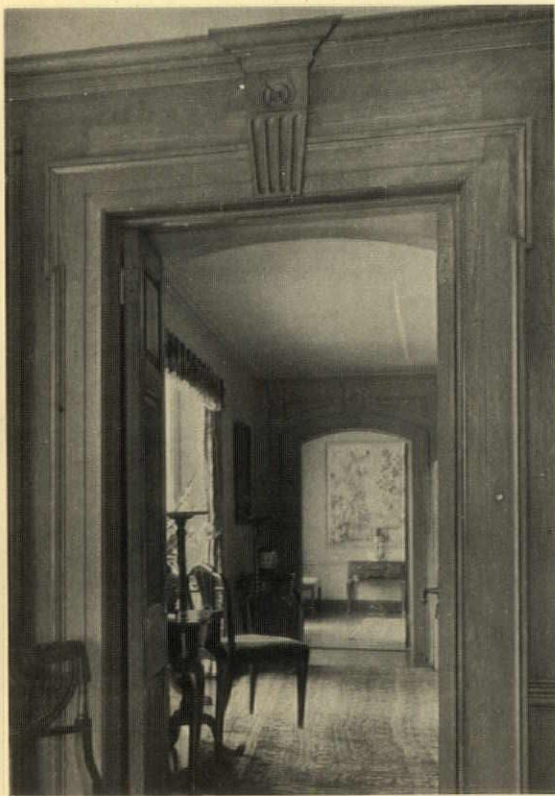
An Adam Adaptation

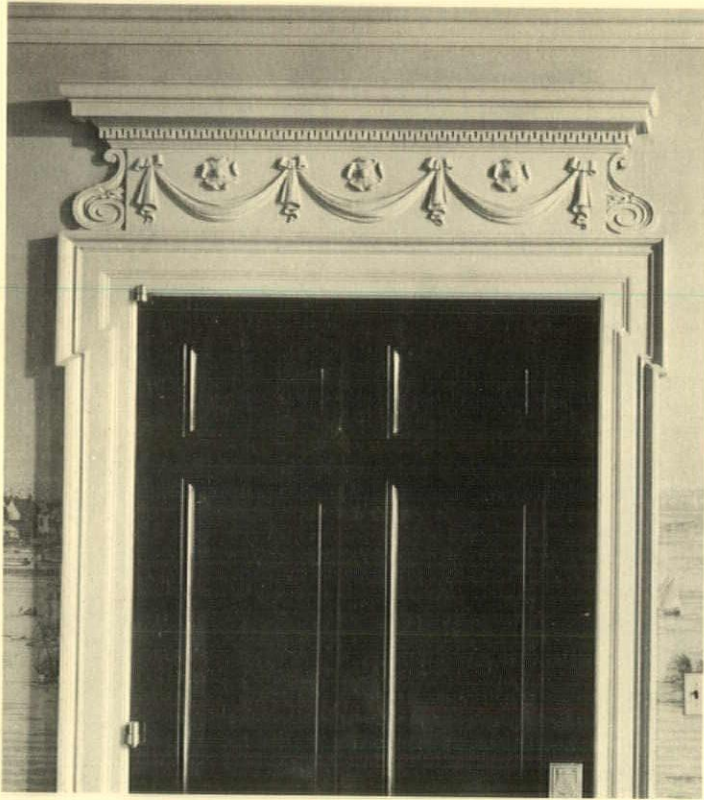
*Brookville, N. Y.
Bottomley, Wagner & White*



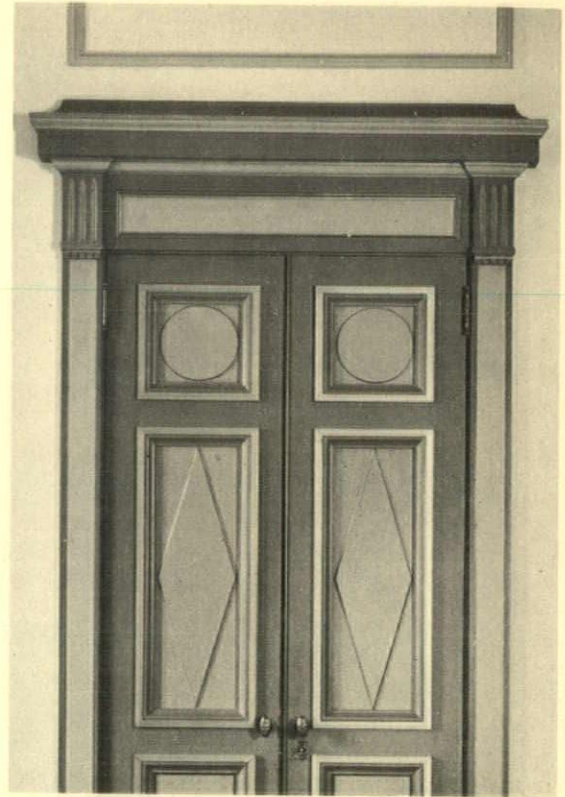
*Scarboro, N. Y.
Aymar Embury II*

*Now in Museum of Fine Arts,
Boston, Mass.
Samuel McIntire*





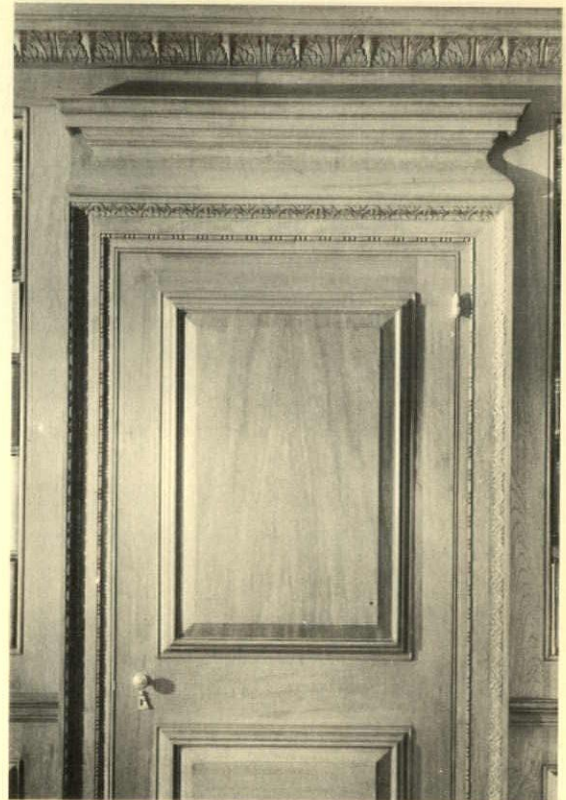
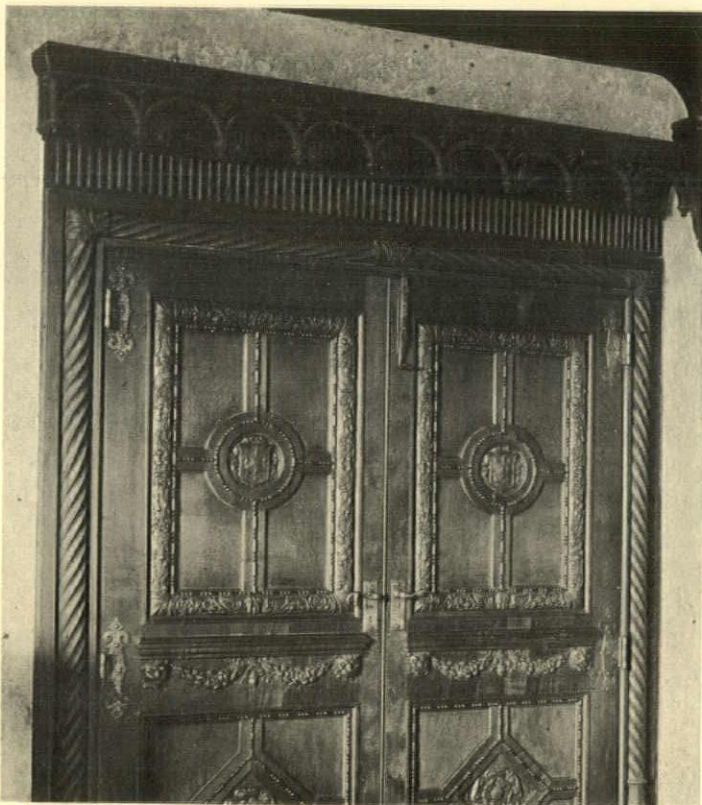
*New York City
Cass Gilbert*

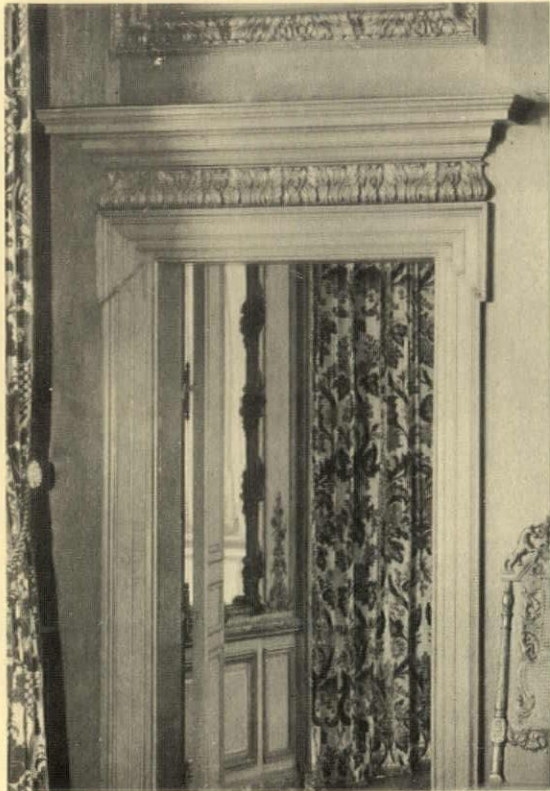


*Smithtown, N. Y.
Rodgers & Poor*

*Portchester, N. Y.
Dwight James Baum*

*Great Neck, N. Y.
Evans, Moore & Woodbridge*





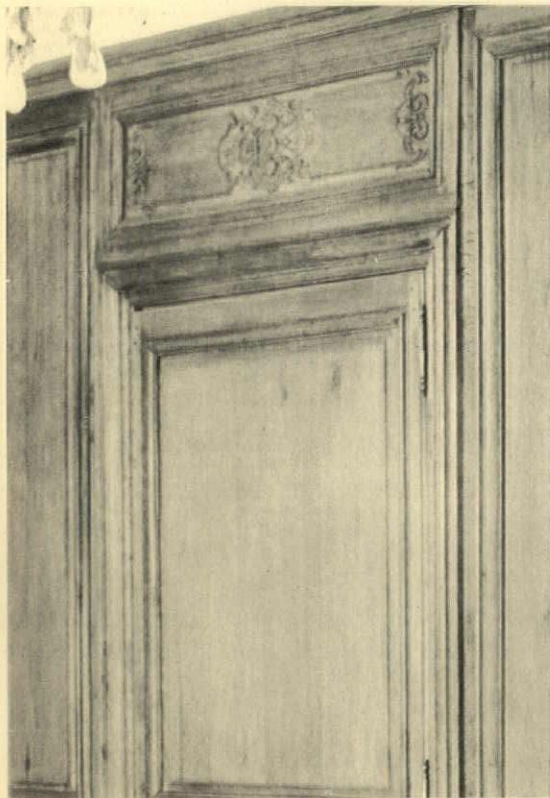
*Hamilton Palace, Lanarkshire, Scotland
Now in Museum of Fine Arts, Boston, Mass.*

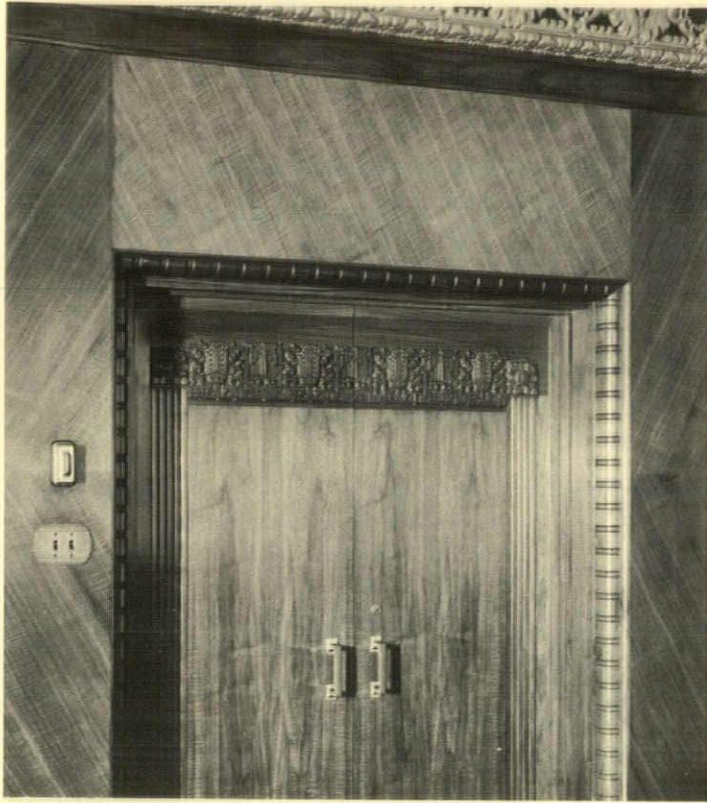


*New York City
Mott B. Schmidt*

*Chateau de la Muette, Passy, France
Now in Museum of Fine Arts, Boston*

*Zurich, Switzerland
Now in Toledo (Ohio) Museum*





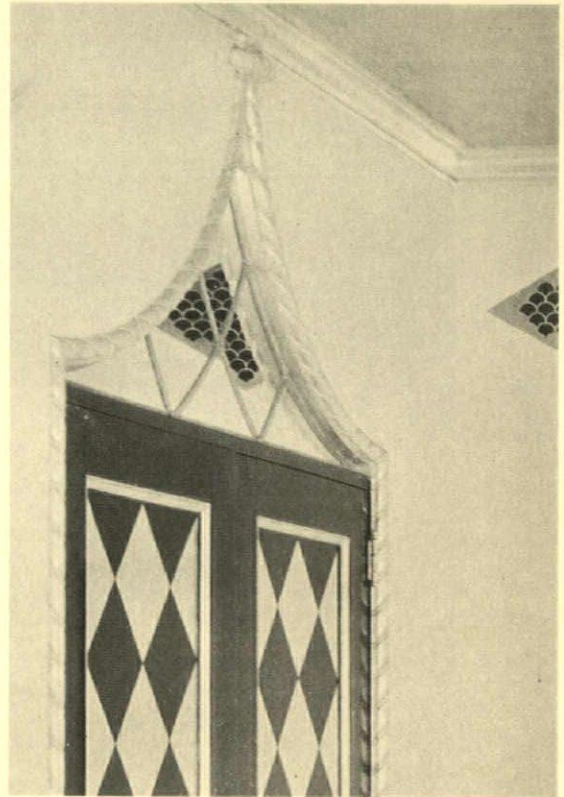
*Los Angeles, Calif.
Samuel Lunden ; John and Donald B. Parkinson*

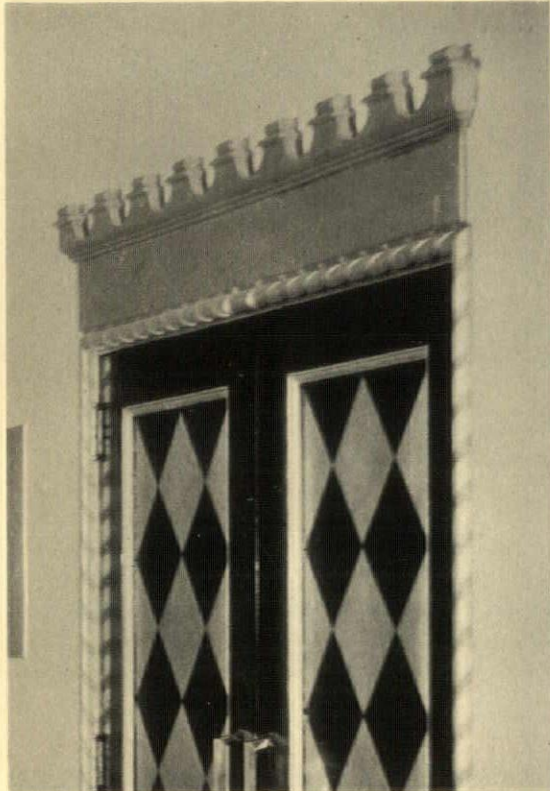
*New York City
Arthur Loomis Harmon*



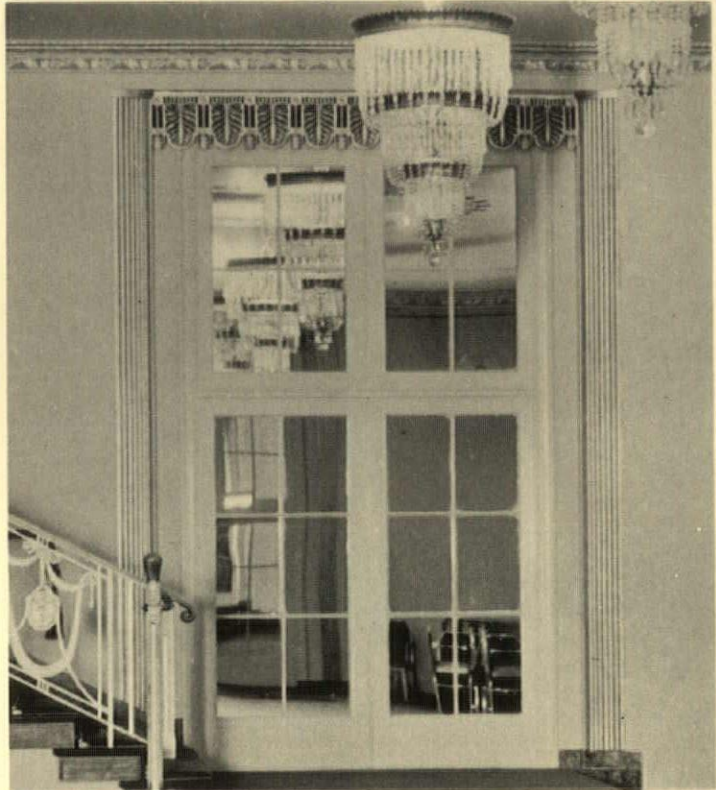
*A Chinese Adaptation
Boston, Mass.*

*Kalamazoo, Mich.
Aymar Embury II*





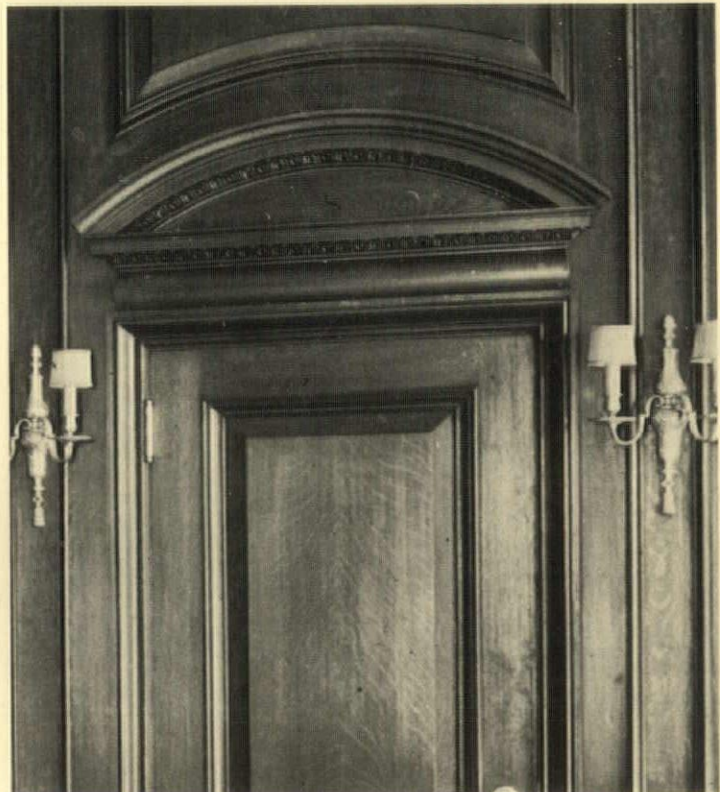
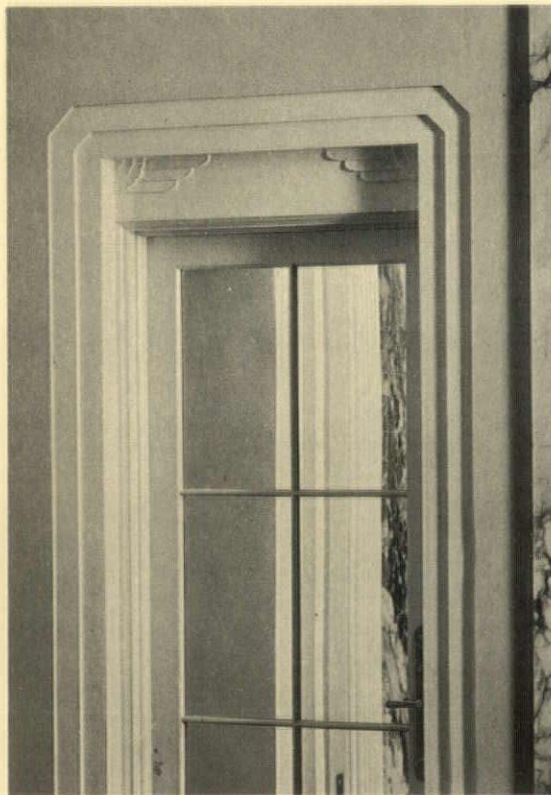
*Kalamazoo, Mich.
Aymar Embury II*



*New York City
Schultze & Weaver*

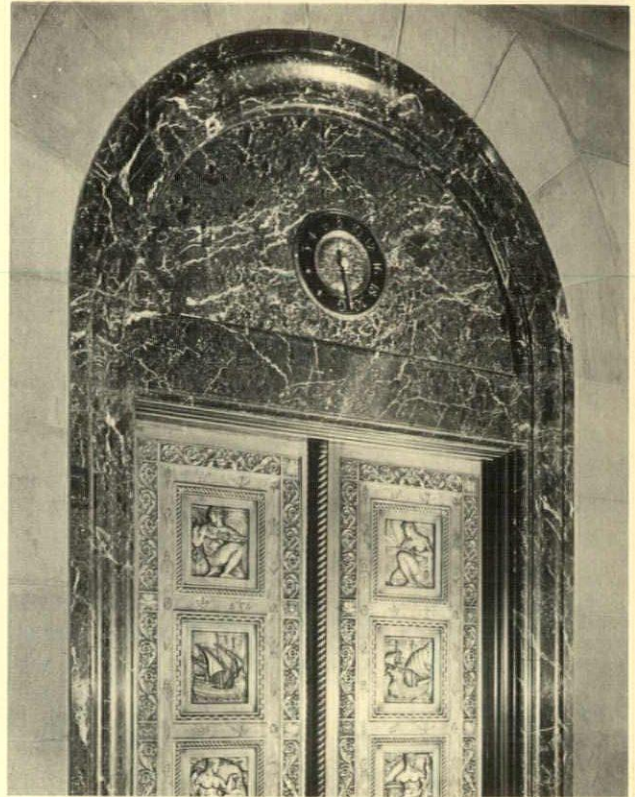
*New York City
Schultze & Weaver*

*New York City
Warren & Wetmore*





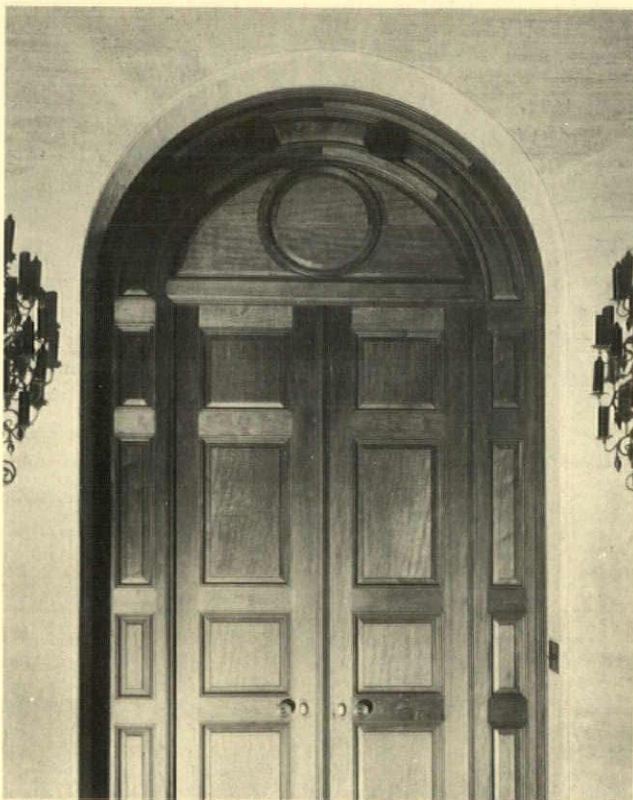
*Detroit, Mich.
Smith, Hinchman & Grylls*

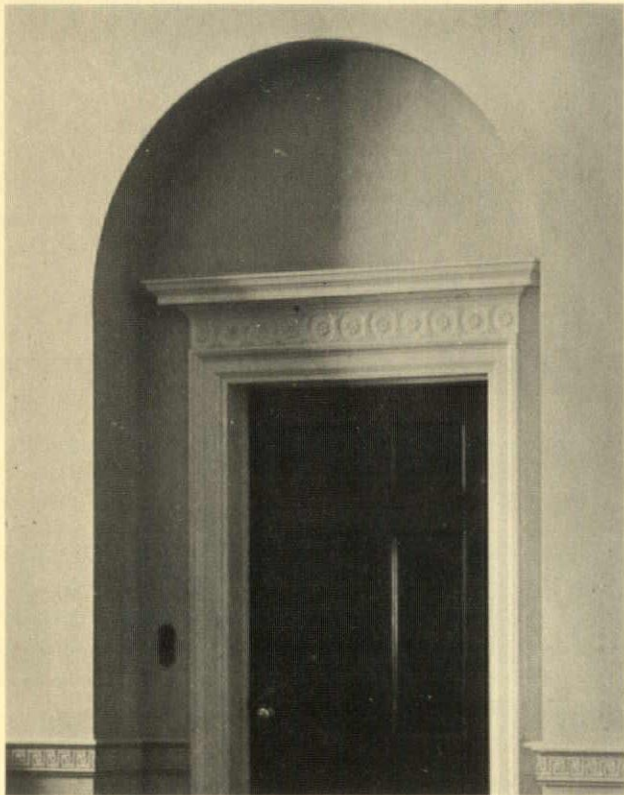


*Montreal, Canada
York & Sawyer*

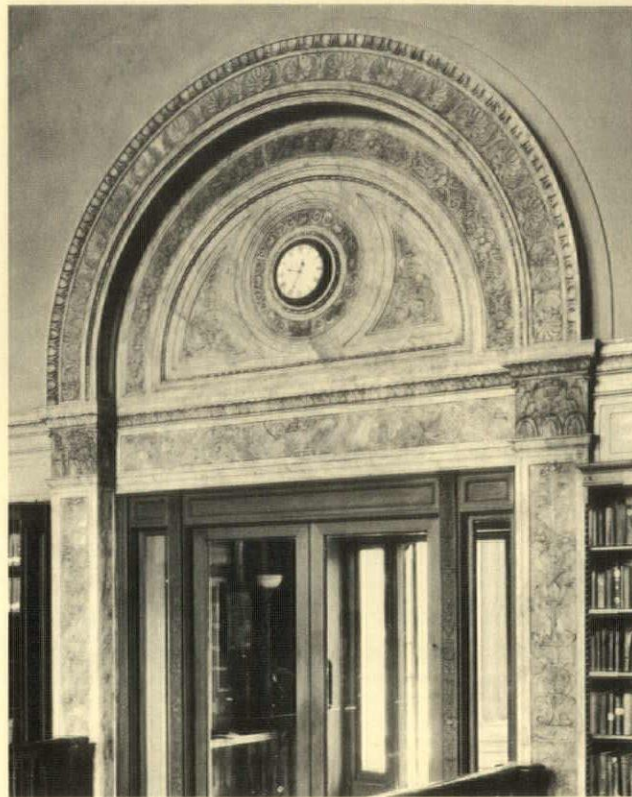
*New York City
Frederick J. Sterner*

*California
Gordon B. Kaufmann*





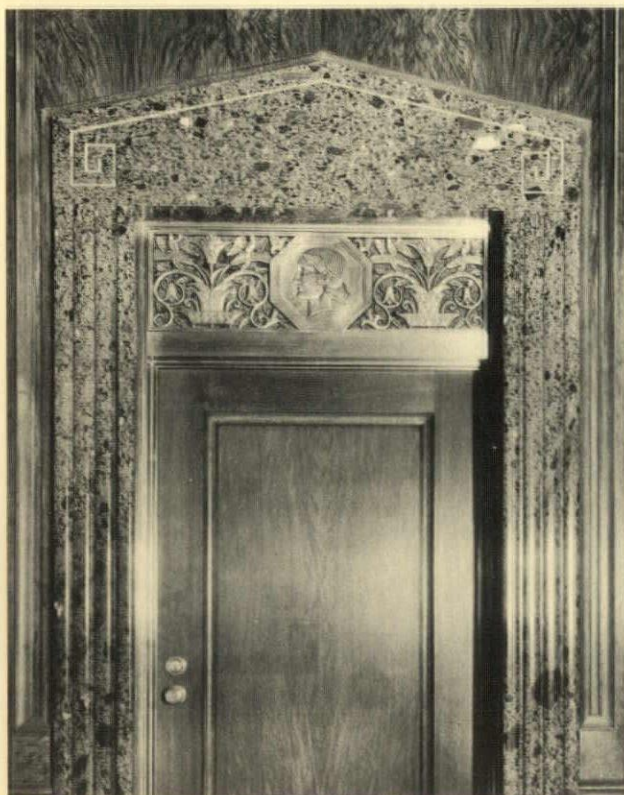
*Washington, D. C.
Office of John Russell Pope*

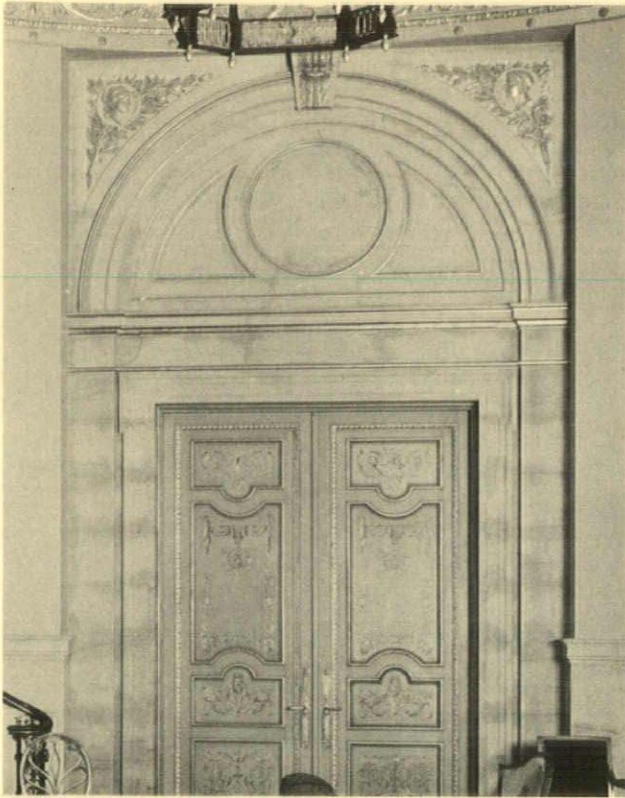


*Camden, N. J.
Walter T. Karcher & Livingston Smith*

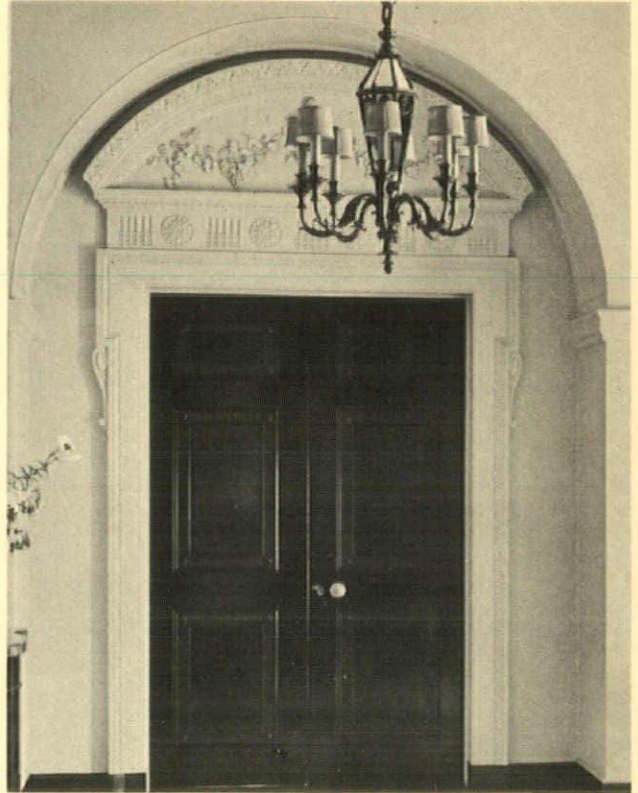
*New York City
Cross & Cross*

*New York City
Robert Von Ezdorf*





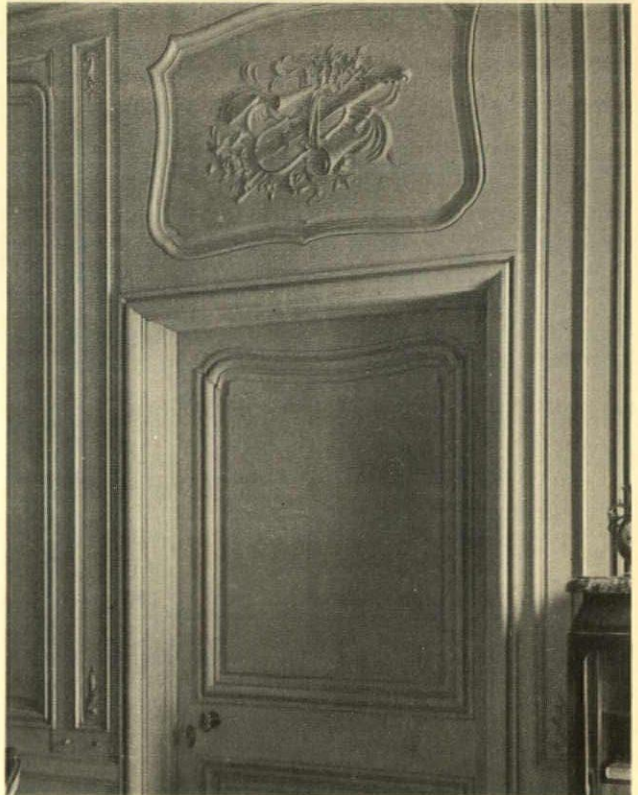
*New York City
Schultze & Weaver*



*Grand Rapids, Mich.
Walker & Gillette*

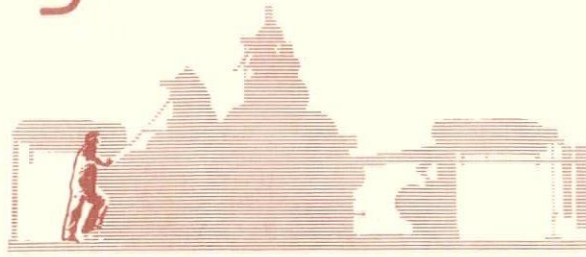
*Washington, D. C.
Office of John Russell Pope*

*York, Me.
Office of John Russell Pope*



Building Products' News

USE prepaid card in lower corner so ARCHITECTURE can keep you up to date on new products. Fill in file numbers of the items desired and we will see that your request is complied with.



TO keep its readers posted on the latest news, ARCHITECTURE includes on this page every month a selected list of data and literature describing the varied news of building products.

THE MIAMI WALL DESK

G. 26. Is a combination writing-desk and dressing-table, recessed into the wall just as is a bathroom cabinet, and adapted to use in homes, hotels and apartments. It is made entirely of heavy-gauge steel, fitted with an electric light, mirror and inkwell, and the writing top is polished plate glass. The Miami Cabinet Division of The Philip Carey Company have prepared a colored bulletin, complete with specifications, installing and wiring instructions, which they will be glad to send you.

THE HEART OF THE QUIET MAY

G. 27. This attractive booklet not only describes the features of Quiet May construction but also illustrates them with clever photographs. The May Oil Burner Corporation tells how the ordinary type of coal-burning boiler may be converted to an efficient oil-heating system through the application of its Ther-MAY-lator and EconoMAY Inserts. Here is the whole story for those who wish to look carefully into the field.

FOUR-COLOR PENCIL

G. 28. NORMA takes the place of four ordinary colored pencils and shifts with trigger-like speed from one color to another with a flick of the thumb on the writing hand. NORMA is guaranteed against mechanical defects and is the perfect mechanical pencil for architects, engineers, contractors, draftsmen and builders as it saves much valuable time. The Norma Pencil Co., of New York City, will send their new colored folder, containing prices, to interested persons.

NATIONAL STEEL OIL-BURNING BOILERS

G. 29. The National Radiator Company sent us a folder, in color, showing their new boilers. One young woman who saw pictures of the boiler jacket, designed by Lurelle Guild, exclaimed: "It looks like an evening vanity!" It is a beautiful job, and also very practical, as the front and back of the jacket are removable to provide easy access to the burner and control. A unique and highly desirable feature of the new boiler is the fact that it is shipped completely assembled, ready for installation.

HEAT ACCELERATION

G. 30. The Minneapolis-Honeywell Regulator Co. have sent us a new, educational booklet in which is an unbiased discussion of the facts as regards the latest developments in room temperature control. We believe that you will find this catalog interesting and its charts and diagrams of great value.

MURALART

G. 31. Is a woven cloth wall covering whose surface has been sealed, beautified, and armored by a number of applications of pyroxylin. It is manufactured by E. I. du Pont de Nemours & Co., Inc., who have prepared a catalog, now ready for distribution, giving a complete de-

scription of the product, letters of recommendation from interior architects, and pictures of installations.

PORTABLE AIR CONDITIONER

G. 32. A portable, air-cooled air conditioner, especially intended for single room applications, has been announced by the York Ice Machinery Corp. Special features include provision for positive introduction of fresh air into the conditioned space and sound absorption by a heavy felt lining on all metallic parts and a heavy inner lining of sound-absorbing material within the decorative casing.

1935 GAR-WOOD MODEL R

G. 33. Previously the Gar-Wood Model R Boiler-Burner unit was manufactured only in one size but now, due to popular demand, a larger size has been built with a capacity of 750 sq. ft. of net steam radiation. Also, the original unit has been redesigned and its capacity increased from 450 to 475 sq. ft. of net steam radiation. Full information will be supplied by the Gar Wood Industries, Inc.

MULTIGRIP

G. 34. A new steel floor plate, recently announced by the Illinois Steel Company, has been presented in a new folder which will prove of great interest. It is called Multigrip and the design has been developed by long experimentation to assure the highest degree of skid resistance from every angle, comfort under foot, and easy cleaning.

VESTIBULE AND AUTO CLOSE DOORS

G. 35. The Jamison Cold Storage Door Company's Bulletin No. 109A, with pictures, diagrams, specification charts and installation instructions, describes their Vestibule Door Unit, a combination of the standard, heavily insulated Cold Storage Door and the Auto Close Door, which operate together by means of a gravity-actuated two-way cam in conjunction with an unlatching bar attached to the back of the Cold Storage Door, allowing automatic opening from the inside.

BAR AND TAVERN DECORATION

G. 36. The Formica Insulation Co. has a folder showing modern bar and taproom installations of Formica and containing color inserts to show the designs and color combinations possible by the use of this stainproof, heat-resisting and almost scarproof material. Construction details are also included in this catalog.

TEXTURE WALL FINISHES

G. 37. Blue Diamond Texture Finishes are of two types—Plastic Finish for application by brush or trowel to any type of surface, old or new, and Texture Plaster, to be applied by trowel over a base coat of brown plaster, providing the finish plaster coat and the decorative finish in one economical operation. These finishes are furnished in twelve beautiful tints and white. Some of the effects obtainable are illustrated in a full-color folder published by the Blue Dia-

mond Service Corp., who are always glad to assist architects, decorators and others in adapting their finishes to special requirements.

ABSORBEX FACTS

G. 38. A piece of literature just received from Thermax, of Pittsburgh, is intended primarily for the architect interested in the subject of acoustics or sound control for all types of rooms, combined with fire-proof construction. A bold presentation has been made of Construction Details and Absorption Coefficients which will appeal to those who want *basic facts*.

THE RAPID STRIDES

G. 39. Being made by prechromed copper and copper alloy sheets into new manufacturing fields is the keynote of the May issue of the Copper & Brass Research Association's Bulletin. Predominant among the newest items to turn to prechromed copper, according to the bulletin, are metal marquees. Not only are the chromium surfaces impervious to tarnishing but the bright, reflective finish casts a blaze of light on the sidewalk and street that is readily discernible at night from a distance. Other new uses of this material are shown, including the new white metal chandeliers in the reception-room of Postmaster-General Farley's office in Washington and a page devoted to the use of copper for awnings—in both residential and commercial building.

REPLACEABLE AIR FILTER

G. 40. Designed to reduce power costs in the operation of air-conditioning equipment by establishing uniform resistance for the air flow has just been put on the market by the American Radiator Co. Three models are offered, one for

FIRST CLASS
PERMIT No. 703
Sec. 510 P. L. & R.
NEW YORK, N. Y.



BUSINESS REPLY CARD

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Charles Scribner's Sons, Publishers
Scribner Building — 597 Fifth Avenue
New York, N. Y.

Service Bureau

high efficiency industrial applications, another for ventilating or air-conditioning systems where outside air has to be cleaned, and a third for use where a major part of the air filtered is recirculated air. Write for full details.

SIMP-L-ON FURRING SYSTEM

G. 41. Simplon Products Corp. has prepared a new circular describing their method of steel wall furring and showing two new details, the Simp-L-On shield for use in concrete walls and the channel clip used to attach 3/4" vertical channels to the Simp-L-On V-strip, a development brought about by a demand from architects.

CORK TILE FLOORING

G. 42. Cork Tiles, products of the United Cork Companies, are non-conductors of heat or cold, are quiet, sanitary, resilient, non-absorbent, comfortable to walk on and the diversity of their color tones makes it possible to install a floor pleasing to the eye and in harmony with the general decorative and architectural schemes. The new catalog shows designs and installations.

ETERNIT TIMBERTEX

G. 43. The charm and beauty of weathered cypress, together with the ageless durability of Portland cement and asbestos fibers are ingeniously combined in the new Ruberoid product, Eternit TimberTex Asbestos Cement Shingles. A folder, showing the tapered American Method Shingles and the Dutch Lap Shingles, in colors, is ready for distribution.

ARCHITECTURAL GLASS

G. 44. Corning-Stauben have a lovely catalog of architectural glass, beautifully printed, giving the history of glass, architectural glass today, glass technology, illustrations, sectional designs, specifications and installation diagrams. It is the most complete book on architectural glass we have yet seen and is available to interested members of the profession.

ELECTRIC TIME AND SAFETY EQUIPMENT

G. 45. The Standard Electric Time Company's file folder contains complete information on electric time systems for schools, industrial plants, public and private buildings, on electric stop clocks, on synchronous type program clocks and on hospital signalling systems.

DELCO FINANCE PLAN

G. 46. A new folder has been prepared by the Delco Appliance Corp., manufacturers of the Delco-Heat Oil Burner, explaining their new finance plan which includes installation charges and free service for one year. It also shows a cross-sectional drawing of the unit, as well as letters from satisfied users.

SPANDO WATERPROOFING

G. 47. This water-proofing, a product of the Cheney Co., Winchester, Mass., consists of a continuous layer of three-ounce copper bonded to a five-ounce canvas which is saturated and coated with asphalt and surfaced with crushed mineral. A complete descriptive folder is available, with detail drawings, sizes and specifications.

KEYSTONE

G. 48. The Keystone Roofing Manufacturing Co., York, Pa., have sent us folders on their New Brick Siding, Hexo Thatch Shingles and Cover Strip Roll Roofing, containing sizes, specifications, installation instructions and colors. Useful for modernization jobs.

RUSTLESS METAL DOORS

G. 49. By Kawneer are reviewed in a new catalog. These are especially good for commercial and public buildings, as well as in connection with Kawneer Store Fronts for shops and stores of all kinds, as they require no painting or re-fitting and will not warp, swell, shrink or sag. The catalog shows photographs of installations, diagrams of details and charts of standard types, sizes, and prices.

BETHANIZED WIRE FOR FENCES

G. 50. The Anchor Post Fence Co., of Baltimore, has adopted Bethanized wire for both fence fabric and barbed wire. The coating is applied to the bare wire by means of a newly developed electrolytic process that deposits zinc in perfect uniformity to all parts of the wire surface and no tears or drops can possibly form. Accelerated corrosion tests show that this new wire has longer life than has previously been

possible with the conventional hot-dip galvanized product. The company will gladly furnish full details upon request.

THE GARFIRE GUN

G. 51. Consists of a pump gun and a fire extinguishment compound projector, both made of substantial materials, with exterior shell of brass. Its operation is extremely simple: a turn of pump handle to unlock it and free it for pumping—a freeing of projector nozzle opening by pushing aside the spring clamp which keeps nozzle normally closed—and pumping which shoots a cloud of dry compound at the flames, killing them instantaneously at contact and insulating the burning objects. This gun is the latest product of the Garrison Engineering Corp., Waterbury, Conn., who will send you their descriptive literature, with prices and instructions for use, upon request.

AN AID TO BEAUTIFUL INTERIORS

G. 52. An architectural file, No. 28d2, has been prepared by the Joseph Benn Corp., Grey-stone Mills, R. I., describing the uses of Benn's Mohair in interior decorating, its strength, soft texture, durability, ease of cleaning, and low cost. They also include a sample of their drapery fabric.

COMBINATION TANK COVER AND SHELF

G. 53. The Scovill Safety Shelf provides more bathroom shelf space by fitting right over the top of any size wall-hung tank. It is made of brass, heavily chromium-plated to stay everlastingly bright, and is fitted with a rounded, raised safety rim. The Scovill Mfg. Co., Water-ville, Conn., are the manufacturers of this handy two-in-one cover.

GARAGE DOOR HARDWARE

G. 54. Tip-top Hardware, for converting standard garage doors of the swinging, folding and sliding type into a one-piece, upward-acting door, has been announced by the Kinnear Mfg. Co., of Columbus, Ohio. A special arrangement makes the door weather-tight and burglar-proof. Write for the new booklet describing pictorially this new door hardware.

ADVERTISERS' LITERATURE

	PAGE		PAGE
A. 290. Bigelow-Sanford Carpet Company Carpeting Problems Solved	15	A. 299. Newport Rolling Mill Company, The GOHI Pure Iron-Copper Alloy	20
A. 291. Byers Company, A. M. Genuine Wrought Iron Plates and Sheets	8	A. 300. Otis Elevator Company Modern Elevator Practice for Hos- pitals	17
A. 292. Faber, Inc., A. W. "Castell" Drawing Pencils	19	A. 301. Portland Cement Association Distinctive Textures at Low Cost	3d Cover
A. 293. Faber Pencil Company, Eberhard Samples of Micromatic Van Dyke Pencils	5	A. 302. Sloane, W. & J. Decoration in the Home	3
A. 294. General Electric Company Under-Floor Wiring Systems 4th Cover		A. 303. Taylor Company, The Halsey W. New Fountain Catalog	18
A. 295. Iron Fireman Mfg. Company Don Graf Data Sheets	18	A. 304. Vonnegut Hardware Company Von Duprin Self-Releasing Fire and Panic Exit Latches	2d Cover
A. 296. Johnson Service Company Automatic Temperature Control	10	A. 305. Weber Costello Company Sterling Blackboard	18
A. 297. Libbey-Owens-Ford Glass Company "Modernize Main Street" Competi- tion	6, 7	A. 306. Youngstown Sheet & Tube Com- pany	11
A. 298. Medusa Portland Cement Company Medusa "White" For Individuality	19		

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THE BULLETIN - BOARD *Continued*

(Continued from page 4)

Mention to Fred A. Thompson, Jr., of Iowa State College.

The problem was to design a steel grade-crossing-elimination bridge carrying a highway over a railroad and another highway parallel to the railroad. In addition to giving the students certificates of award, the first prize carries a cash compensation of \$100 and the second prize \$50.

THE VEGLIANTE MEMORIAL AWARD

UNDER the terms of the will of the late Anton L. Vegliante, architect and charter member of the Architects League of Northern New Jersey, an annual award consisting of the income of the sum of \$5000 is awarded to some member of the league who has distinguished himself during the preceding year in the architectural world, or who because of his achievements and accomplishments merits such an award.

By unanimous action and vote of a membership meeting, this award was made to Clarence H. Tabor, Jr., architect of Ridgewood, for the year 1934.

FHA

IT is interesting to learn that under the Modernization Credit Plan of the Federal Housing Administration, the number of insured loans made to property owners reached a total of 93,713 transactions on February 15. The average amount spent on each job was found to have been \$421.

NEW HARDWARE ASSOCIATION

THERE has been formed, following a meeting in the city of Chicago, the National Association of Contract Builders' Hardware Distributors. Its object is to encourage more careful study of the builders' hardware distributors' economic function; to clarify the various channels of distribution; to bring into closer contact the relationships of manufacturers and distributors; to search out and secure adoption of such better business methods as will result in more economical merchandise distribution; to encourage uniformity of trade practices and the reform of commercial evils, and to promote and maintain such friendly cooperation among builders' hardware distributors as will advance their mutual interest and extend their usefulness by more efficient service

to the consuming public, and such other activities as may from time to time be deemed advisable.

J. H. Dumbell of Pittsburgh is president; I. S. Eshleman of New York City, and J. R. Raymer of St. Paul, Minn., vice-presidents; L. B. Hunter of Boston, secretary; J. T. Barlow of Chicago, treasurer. The Association's office is at 225 Federal Street, Pittsburgh.

INTERNATIONAL CONGRESS OF ARCHITECTS

THE Permanent International Committee of Architects has accepted the invitation of the Italian Section of the National Fascist Syndicate of Italian Architects, to hold in Rome this year the Thirteenth International Congress of Architects. The opening will take place at the Capitol, Rome, on September 22, and the meetings will be held at the Institute of Architecture, Valle Giulia. Visits and excursions in Rome and to the new centres of Littoria and Sabaudia, as well as to other Italian towns, will be organized to give the members of the congress an idea of the constructive and architectural activities of new Italy, as well as the inheritance of the past. Congress members will enjoy special railroad and sea reductions for their journey to Rome and these minor trips. For further information apply to the Secretary's office, Lungotevere tor di Nona N. 1, Rome, Italy.

HENRY I. OSER,
1865-1935

HENRY I. OSER, architect, died March 20, at his home in New York City. Mr. Oser was born in Kiev, Russia, came to this country as a youth, and studied at Columbia University. His studies included preparation for the law, but, although he passed his bar examinations, he never practised.

From 1911 to 1918 Mr. Oser served as engineer for the Department of Buildings, City of New York, and during the war he was engineer in charge of construction for the Housing Division of the Emergency Fleet Corporation.

Mr. Oser was a member of the American Society of Civil Engineers.

CLARENCE FOWLER,
1870-1935

CLARENCE FOWLER, landscape architect, died suddenly on May 16 in St. Luke's Hospital, New York City, of a stroke of apoplexy.

Mr. Fowler was president of the New York Chapter of the American Society of Landscape Architects, of which he had been a life member since 1914. Among the large estates and gardens he planned and developed are those of Winthrop W. Aldrich, William D. Guthrie, Walter P. Bliss, George B. St. George, Paul Stuyvesant, J. Spencer Weed, and Oliver D. Filley.

Born in Cambridge, Mass., he received his education at Exeter Academy, in a special course on landscape architecture at Harvard, and in the office of H. Langford Warren, Boston architect. Early in his career he was landscape gardener for the military post at Fort Monroe, Va.

PERSONAL

Albert Mayer, architect, announces that he is now practising architecture at 31 Union Square West, New York City.

William Bordeaux, architect, has reopened his office for the practice of architecture at 629 Northwest 7th Street, Miami, Fla.

Frank J. Forster, architect, announces the removal of his office to 19 East 47th Street, New York City.

The firm of Haralson & Nelson, architects, has been dissolved. All work at present under contract will be carried out by that firm. Joe J. Haralson has formed an association with Ralph O. Mott under the firm name of Haralson & Mott, and will continue the practice of architecture at 229 Merchants Bank Building, Fort Smith, Ark. E. Chester Nelson will continue his practice with offices at 427 Merchants Bank Building, Fort Smith, Ark.

L. A. Des Jardins, architect-engineer, announces the removal of his office to 101 Colorado Avenue, Trinidad, Col.

Brinley & Holbrook, landscape architects and engineers, have moved their principal office from New York City to the Savings Bank Building, 21 South Street, Morristown, N. J.

Information is wanted of Harry Silverstein, who deserted his wife and two children from their home in New York City in May, 1929, and since that time has neither communicated with them nor sent any contribution towards their support. Mr. Silverstein is a native of London, England, is forty-one years old, has dark hair, dark eyes, is an architect by occupation. Kindly communicate with the National Desertion Bureau, 67 West 47th Street, New York City.

What is modern elevator practice for hospitals?

THROUGH our experience in designing and installing hospital elevator equipment, we have found that there are certain fundamental specifications common to all of these institutions. Installations must be rugged in construction to insure uninterrupted service, minimum cost of maintenance, ease of making replacements, and freedom from major repairs. And they must be smooth and quiet in operation. Other than these, the elevator problem varies with the needs of the institution and each installation should be designed for the building it is to serve. The following will be helpful in determining the type of equipment needed in a specific building.

SPEED varies from 100 feet per minute for the small, private institution to 800 feet and over for the large medical center. Rapid and smooth acceleration and retarding characteristics are of utmost importance, since hospital elevator service usually requires almost constant stopping and starting at the various floors.

CAPACITY varies from 2500 pounds to 4000 pounds. In general, 3000-pound capacity is ample for normal requirements. This corresponds to the requirements for elevators with platform size of 5 feet 6 inches by 8 feet as laid down by the American Standard Safety Code. This platform size is almost a necessity for the accommodation of wheel chairs, stretchers, or beds.

CONTROL—Type of control has changed considerably in recent years. Various types of automatic button control are available. In the smaller and medium sized hospitals, collective automatic control is used. And in the highest type of institution, automatic signal control gives best service. On the higher speed elevators, two-way self-leveling (Otis micro-leveling) is available—a very necessary thing in institutions where patients are transported from floor to floor.

The collective controls are arranged for service with an attendant when service demands require it—and so have that advantage as well as the merit of self-service

by the passengers when traffic is such that no attendant is needed.

QUIETNESS of hospital elevators is assured by use of sound-proofing of machines and controllers, and by using rubber-tired hangers and especially designed door-operating equipment.

CARS designed to harmonize with architectural treatment of building are available. They include such special features as a sanitary coved base, ventilating fans, rubbing strips to prevent defacement of interior by wheeled vehicles, and other important refinements.

In the larger types of hospitals, there should be separate service elevators to carry food carts and laundry, and to meet other service requirements. Dumb-waiters of the

automatic, push-button type are feasible for the smaller institutions.

In summing up the elevator requirements for hospitals, these points are important:

1. Dependability—to insure uninterrupted service.
2. Adaptability—the proper equipment for each institution.
3. Reliability—this can be determined beforehand by inspection of similar installations.
4. Tranquillity—freedom from undue noise.
5. Rapid but smooth service.
6. Ample-sized cars.
7. Automatic control system and self-leveling.
8. Proper maintenance by the manufacturer to insure freedom from shut-downs and needless repairs.

These items enumerated above give merely the general outline of transportation requirements for hospitals. For an expert analysis of a specific institution, either in existence or in the blue-print stage, consult the nearest Otis office. We shall be glad to submit recommendations covering your requirements. There is no obligation for this service.

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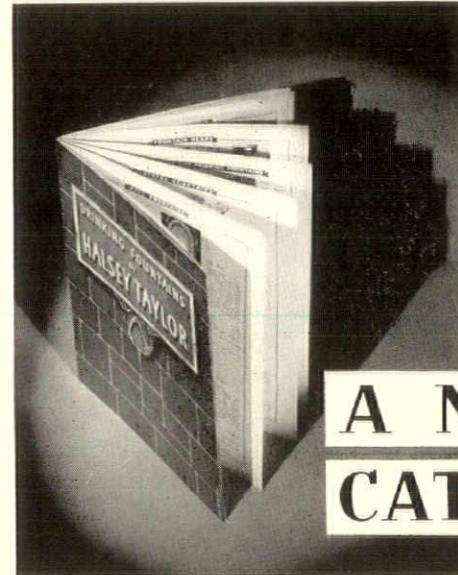
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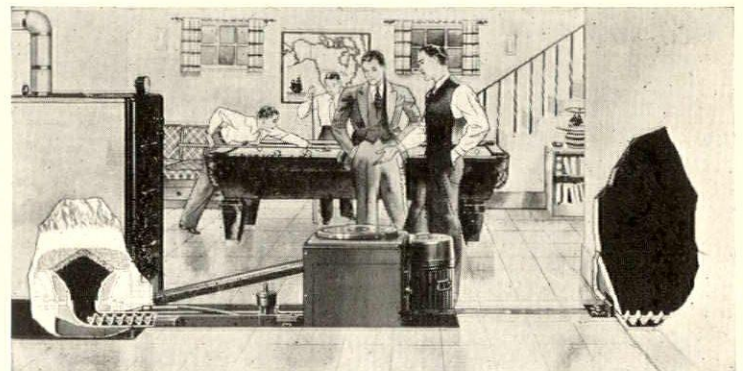
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VOLUME LXXI
JANUARY THROUGH JUNE
1935

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INDEX

The pagination of the volume is divided as follows: Jan., 1-60; Feb., 61-120; Mar., 121-180; Apr., 181-244; May, 245-304; June, 305-364

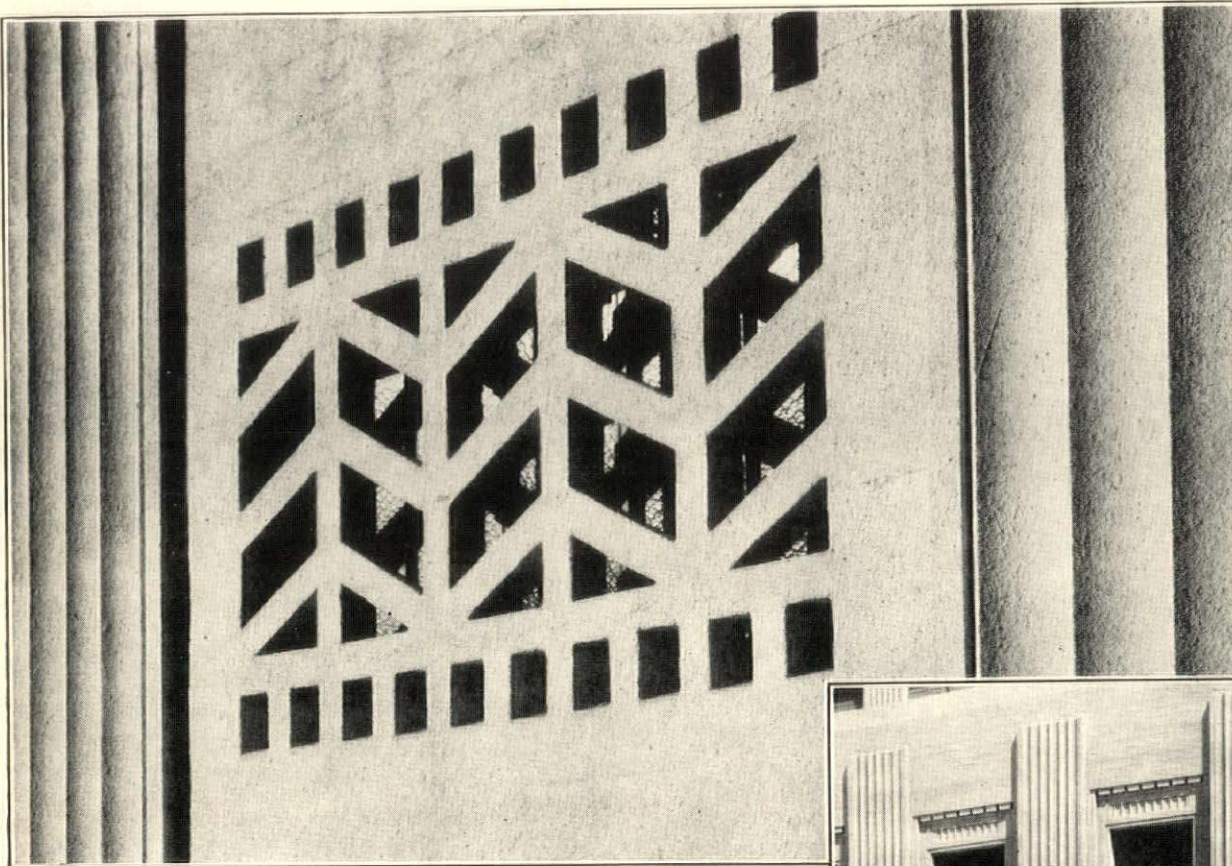
- Acadia National Park, Lodge and Gate, Mount Desert, Me.; Grosvenor Atterbury, archt.; John Tompkins, assoc.: 127
- Aiken, Robert, sculptor: Supreme Court Bldg., Washington, D. C.: 81
- Air Terminal, Underground, devised by Dr. W. W. Christmas; Harvey W. Corbett and Francis Keally, archts.: 270
- Airport, Miami, Fla.; Delano & Aldrich, archts.: 195
- Apartments, Rebuilding New York's, by Morgan Farrell: 121
- Architect and His Job, The, by B. Charney Vladeck: 283
- Architect Rambles About Williamsburg, An; Dwight James Baum: 322
- Architect's Place in the Housing Program, The, by Miles L. Colean: 319
- Architectural News in Photographs: 80, 270
- Architectural Observer, The: 161, 211
- Armstrong, John Wright: Pencil drawing, Ondárroa, Spain: 75, 76
- Art Museum Installations, St. Louis, Mo.: 19
- Ashley, Frederic M., John C. Austin, archts.: The Griffith Planetarium, Los Angeles: March *Frontis*.
- Atterbury, Grosvenor, archt.; John Tompkins, assoc.: Lodge and Gate, Acadia National Park, Mount Desert, Me.: 127
- Austin, John C., Frederic M. Ashley, archts.: The Griffith Planetarium, Los Angeles: March *Frontis*.
- Banwell, Roy W., assoc.; W. Pope Barney, archt.: Housing in the Virgin Islands: 1
- Bar, Benjamin Franklin Hotel, Philadelphia, Pa.; Lyman W. Cleveland, interior decorator: 80
- Bar, Men's, Waldorf-Astoria, New York City; Schultze & Weaver, archts.: 80
- Barney, W. Pope, archt.; Roy W. Banwell, assoc.: Housing in the Virgin Islands: 1
- Bartels, W. F.: Better Practice: Roofing: 25. Steel and Miscellaneous Iron: 83. Granite, Stone, Marble and Slate: 149. Painting: 221. Wall Board: 265. Doors and Windows: 343
- Baum, Dwight James: An Architect Rambles About Williamsburg: 322
- Better Practice, by W. F. Bartels: Roofing: 25. Steel and Miscellaneous Iron: 83. Granite, Stone, Marble and Slate: 149. Painting: 221. Wall Board: 265. Doors and Windows: 343
- Bissell, Frank Harper, archt.: Concrete House Costing \$2,500, Westport, Conn.: 339
- Blake, Theodore E., archt.: Setting for memorial to Thomas Hastings, The New York Public Library: 189
- Blouke, Pierre, archt.: House of Miss Vivian Ashum, Crystal Lake, Ill.: 335
- Book Reviews: 101, 162, 210, 272, 326
- Boyd, Rutherford: The Controls Over Design: 311
- Briggs, Winsor F.: Welding, A Neglected Tool: 324
- Broadcasting Auditorium, W G N, Winning design for, Tribune Tower, Chicago; Ernest A. Grunsfeld, Jr., archt.: 81
- Bullard, Roger H., archt.: House of Harold S. Willis, Great Neck, N. Y.: 87. House of Arthur L. Willis, Flushing, N. Y.: 90. House of Morris L. Beard, Flushing, N. Y.: 91. House of Paul G. Pennoyer, Locust Valley, N. Y.: 94. House of Albert R. Crone, Phillipse Manor, N. Y.: 95. House of Mrs. Sarah T. Richmond, Glen Head, N. Y.: 96
- California Pacific International Exposition, San Diego: 270
- Charlotte Country Club, The, Charlotte, N. C.; Aymar Embury II, archt.: 133
- Circular Windows, Gothic and Romanesque: A Portfolio of: 45
- City Hall Park, New York City, Proposed reconstruction of; Department of Parks, New York City; Gilmore D. Clarke, consulting landscape archt.: 271
- Clarke, Gilmore D., consulting landscape archt.: Proposed development of Riverside Park, New York City: April *Frontis*.
- Cleveland, Lyman W., interior decorator: Bar, Benjamin Franklin Hotel, Philadelphia, Pa.: 80
- Clubs and Society Buildings: R. I. B. A., London: 69. The Charlotte Country, Charlotte, N. C.: 133
- Clute, Eugene: Luminous Tubes for Lighting: 65. Daylight to Order: 203
- Colean, Miles L.: The Architect's Place in the Housing Program: 319
- Concrete—Cast and Tooled, Sculpture in; Raymond Couvignes, sculptor: 11
- Controls Over Design, The, by Rutherford Boyd: 311
- Corbett, Harvey W. and Francis Keally, archts.: Underground air terminal devised by Dr. W. W. Christmas: 270
- Court House and Post Office, Pittsburgh, Pa.; Trowbridge & Livingston, archts., with Supervising Architect's Office: 81
- Couvignes, Raymond, sculptor: Sculpture in Concrete—Cast and Tooled: 11
- Critique of the Hosiery Workers' Housing Development in Philadelphia, A, by Albert Mayer: 189
- Critique of Knickerbocker Village, A, by Albert Mayer: 5
- Daylight to Order, by Eugene Clute: 203
- Delano & Aldrich, archts.: Post Office Department Bldg., Washington, D. C.: 80. Airport, Miami, Fla.: 195
- Demonstration bungalow, Seattle, Wash.; George W. Groves, archt. for alterations: 82
- Department of Parks, New York City; Gilmore D. Clarke, consulting landscape archt.: Proposed development of Riverside Park, New York City: April *Frontis*. Proposed reconstruction of Madison Square, New York City: 271. Proposed reconstruction of City Hall Park, New York City: 271
- Design, The Controls Over, by Rutherford Boyd: 311
- Design the Living-room to be Livable? Why Not, by C. John Marsman: 253
- Detlie, John Stewart: Drawing, The Griffith Planetarium, Los Angeles: March *Frontis*.
- Doors and Windows: Better Practice, by W. F. Bartels: 343
- Dormer Windows: A Portfolio of: 225
- Drawings from Spain, by Philip H. Giddens: 29
- Eberlein, Harold Donaldson: Housing in the Virgin Islands; W. Pope Barney, archt.; Roy W. Banwell, assoc.: 1
- Editor's Diary, The: 37, 103, 163, 213, 287, 347
- Ellett, Thomas H., designing archt., with Supervising Architect's Office: Bronx Post Office, New York City: 285
- Embury II, Aymar, archt.: The Charlotte Country Club, Charlotte, N. C.: 133
- Emerson Prize, The; Shop Front for a Jeweler: 327
- Entrance Seats: A Portfolio of: 289

INDEX—ARCHITECTURE—VOLUME LXXI

- Executive Offices, Additions to, The White House, Washington, D. C.; Eric Gugler, designing archt., with National Park Service: 81
- Farrell, Morgan: Who Is the Owner?: 61. Rebuilding New York's Apartments: 121
- Faulkner, Waldron, archt.: House of Waldron Faulkner, Bronxville, N. Y.: 279
- Favorite Features: 17, 77, 215, 333
- Forster, Frank J., archt.: House of Dr. Franklin Edgerton, New Haven, Conn.: 273
- Foster, William Dewey, designing archt., with Supervising Architect's Office: Station M Post Office, New York City: 80. College Station Post Office, New York City: 285
- Geerlings, Gerald K., archt.: An Office Lobby in a Loft, New York City: 102. Wall Board Comes of Age: 181
- Giddens, Philip H.: Drawings from Spain: 29
- Gill, Harrison: Why Is the Small House Small?: 141
- Grandstand, Santa Anita Racetrack, Calif.; Gordon B. Kaufmann, archt.: 271
- Granite, Stone, Marble and Slate: Better Practice, by W. F. Bartels: 149
- Griffith Planetarium, The, Los Angeles; John C. Austin, Frederic M. Ashley, archts.; from the drawing by John Stewart Dettlie: March *Frontis*.
- Grilles, Wood, of La Guaira, measured and drawn by R. Newton Mayall: 259
- Groves, George W., archt. for alterations: Demonstration bungalow, Seattle, Wash.: 82
- Grunsfeld, Jr., Ernest A., archt.: Winning design for W G N Broadcasting Auditorium, Tribune Tower, Chicago: 81
- Gugler, Eric, designing archt., with National Park Service: Additions to Executive Offices, The White House, Washington, D. C.: 81
- Hastings, Thomas, Memorial to, The New York Public Library: 188
- Hayden Planetarium, American Museum of Natural History, New York City; Trowbridge & Livingston, archts.: 271
- Hershey Hotel, near Harrisburg, Pa.; D. Paul Witmer, archt.: 81
- Hillside from the Air: May *Frontis*.
- Hillside Housing Development, The, by Henry H. Saylor: 245
- Hillside Housing Development, The, New York City; Clarence S. Stein, archt.: 245
- Hosiery Workers' Housing Development in Philadelphia, A Critique of the, by Albert Mayer: 189
- Hotels: Men's Bar, Waldorf-Astoria, New York City: 80. Bar, Benjamin Franklin, Philadelphia, Pa.: 80. Hershey, near Harrisburg, Pa.: 81
- House Small?, Why Is the Small, by Harrison Gill: 141
- Houses: Ranch, California: 17. Of S. Lloyd Moore, Frankford, Pa.: 33. Of Louis C. Rosenberg, Fairfield, Conn.: 39. Living-room Bay, of G. T. Vought, Montclair, N. J.: 77. Demonstration bungalow, Seattle, Wash.: 82. Of Harold S. Willis, Great Neck, N. Y.: 87. Of Arthur L. Willis, Flushing, N. Y.: 90. Of Morris L. Beard, Flushing, N. Y.: 91. Of Paul G. Penoyer, Locust Valley, N. Y.: 94. Of Albert R. Crone, Phillipse Manor, N. Y.: 95. Of Mrs. Sarah T. Richmond, Glen Head, N. Y.: 96. Of C. G. Novotny, Scarsdale, N. Y.: 145. South Loggia, of A. C. Magnus, Montecito, Calif.: 215. Of Stuart O'Melveny, Lake Arrowhead, Calif.: 217. Of Dr. Franklin Edgerton, New Haven, Conn.: 273. Of Waldron Faulkner, Bronxville, N. Y.: 279. Of Miss Vivian Ashum, Crystal Lake, Ill.: 335. Concrete, Costing \$2,500, Westport, Conn.: 339
- Housing Development, The Hillside, New York City; Clarence S. Stein, archt.: 245
- Housing Development in Philadelphia, A Critique of the Hosiery Workers', by Albert Mayer: 189
- Housing Program, The Architect's Place in the, by Miles L. Colean: 319
- Housing Project, Model of West Side, Chicago, Ill.: 270
- Housing in the Virgin Islands; W. Pope Barney, archt.; Roy W. Banwell, assoc.; by Harold Donaldson Eberlein: 1
- Housing, Rental Differentials in Low-Cost, by Albert Mayer: 97
- Insurance, Obsolescence, by J. C. Knapp: 15
- International Air Terminal, Miami, Fla.; Delano & Aldrich, archts.: 195
- Iversen, E. F.: Shop Front for a Jeweler: 328
- Janssen & Cocken, archts.: Mellon Institute, Pittsburgh, Pa.: 81
- Johnson, Office of Reginald D., archt.: South Loggia, House of A. C. Magnus, Montecito, Calif.: 215. House of Stuart O'Melveny, Lake Arrowhead, Calif.: 217
- Kamphoefner, Henry L., archt.: Music pavilion, Sioux City, Ia.: 271
- Kaufmann, Gordon B., archt.: Grandstand, Santa Anita Racetrack, Calif.: 271
- Keally, Francis and Harvey W. Corbett, archts.: Underground air terminal devised by Dr. W. W. Christmas: 270
- Kebbon, Eric, designing archt., with Supervising Architect's Office: Post Office and Court House, Tallahassee, Fla.: 286. Sub-Station W Post Office, New York City: 286. Sub-Station Y Post Office, New York City: 286
- Klauder, Charles Z., archt.: Proposed Physics and Chemistry Bldg., Wellesley College, Wellesley, Mass.: 270
- Knapp, J. C.: Obsolescence Insurance: 15
- Knickerbocker Village, A Critique of, by Albert Mayer: 15
- Larson, Godfrey E., archt.: Proposed North Park College Memorial, Chicago, Ill.: 271
- Liebmann, F. H.: Shop Front for a Jeweler: 329
- Lighting, Luminous Tubes for, by Eugene Clute: 65
- Lodge and Gate, Acadia National Park, Mount Desert, Me.; Grosvenor Atterbury, archt.; John Tompkins, assoc.: 127
- Loft, An Office Lobby in a, New York City; Gerald K. Geerlings, archt.: 102
- Low-Cost Housing, Rental Differentials in, by Albert Mayer: 97
- Luminous Pylon as an Architectural Element, The, by W. M. Potter: 305
- Luminous Tubes for Lighting, by Eugene Clute: 65
- MacMonnies, Frederick, sculptor: Memorial to Thomas Hastings, The New York Public Library: 181
- Madison Square, New York City, Proposed reconstruction of; Department of Parks, New York City; Gilmore D. Clarke, consulting landscape archt.: 271
- Manhattan Forum, from the drypoint by Chester B. Price: Feb. *Frontis*.
- Marsman, C. John: Why Not Design the Living-room to be Livable?: 253
- Mayall, R. Newton: Wood Grilles of La Guaira, measured and drawn by: 259
- Mayer, Albert: A Critique of Knickerbocker Village: 5. Rental Differentials in Low-Cost Housing: 97. A Critique of the Hosiery Workers' Housing Development in Philadelphia: 189
- Mellon Institute, Pittsburgh, Pa.; Janssen & Cocken, archts.: 81
- Memorials: To Thomas Hastings, The New York Public Library: 188. Proposed North Park College, Chicago, Ill.: 271
- Miami Airport, The; Delano & Aldrich, archts.: 195
- Mills, Robert, archt.: The Washington Monument: Jan. *Frontis*.
- Molded Brick: A Portfolio of: 165
- Morris, Edwin Bateman: The Reflecting Pool: 79, 209, 325
- Museums: Art, St. Louis, Mo.: 19
- Music pavilion, Sioux City, Ia.; Henry L. Kamphoefner, archt.: 271
- National Park Service: Additions to Executive Offices, The White House, Washington, D. C.—Eric Gugler, designing archt.: 81
- Newberry, W. L.: Shop Front for a Jeweler: 331
- North Park College Memorial, proposed, Chicago, Ill.; Godfrey E. Larson, archt.: 271
- Obsolescence Insurance, by J. C. Knapp: 15
- Office Buildings: Post Office Department Bldg., Washington, D. C.: 80
- Office Lobby in a Loft, An, New York City; Gerald K. Geerlings, archt.: 102
- Office on Estate of P. R. Levi, Charleston, W. Va.; Lewis E. Welsh, archt.: 333
- Ondárroa, Spain, from the drawing in pencil by John Wright Armstrong: 75, 76
- Organ pipes; designed by Votteler Holtkamp Sparling Organ Co.: 80
- Overdoors, Interior: A Portfolio of: 349
- Painting: Better Practice, by W. F. Bartels: 221
- Peabody, Arthur, state archt.: Carillon Tower, University of Wisconsin, Madison: 80
- Perry, Shaw & Hepburn, archts. for restoration of Williamsburg, Va.: 322
- Physics and Chemistry Bldg., proposed, Wellesley College, Wellesley, Mass.; Charles Z. Klauder, archt.: 270
- Planetarium, Hayden, American Museum of Natural History, New York City; Trowbridge & Livingston, archts.: 271
- Portfolios: Circular Windows, Gothic and Romanesque: 45. Tile Roofs: 105. Molded Brick: 165. Dormer Windows: 225. Entrance Seats: 289. Overdoors, Interior: 349
- Post Office and Court House: Pittsburgh, Pa.: 81. Tallahassee, Fla.: 286
- Post Offices: Kensington Station, Brooklyn, N. Y.: 80. Station M, New York City: 80. Department Bldg., Washington, D. C.: 80. And Court House, Pittsburgh, Pa.: 81. Springfield, O.: 153. Bronx, New York City: 285. Morris Heights Station, New York City: 285. College Station, New York City: 285. Flatbush Sub-Station, Brooklyn, N. Y.: 285. Station A, Brooklyn, N. Y.: 286. West Farms Station, N. Y.: 286. Sub-Station W, New York City: 286. Sub-Station Y, New York City: 286. And Court House, Tallahassee, Fla.: 286
- Potter, W. M.: The Luminous Pylon as an Architectural Element: 305

INDEX—ARCHITECTURE—VOL. LXXI

- Price, Chester B.: Drypoint, Manhattan Forum: Feb. *Frontis*. Proposed development of Riverside Park, New York City: April *Frontis*.
- R. I. B. A. in London, New Home of the; G. Grey Wornum, archt.: 69
- Racetrack, Grandstand of Santa Anita, Calif.; Gordon B. Kaufmann, archt.: 271
- Ranch House, California; Palmer Sabin, archt.: 17
- Rebuild America: Back of June *Frontis*.
- Rebuilding New York's Apartments, by Morgan Farrell: 121
- Reflecting Pool, The, by Edwin Bateman Morris: 79, 209, 325
- Rental Differentials in Low-Cost Housing, by Albert Mayer: 97
- Rich, Lorimer, designing archt., with Supervising Architect's Office: Kensington Station Post Office, Brooklyn, N. Y.: 80. Morris Heights Station Post Office, New York City: 285. Flatbush Sub-Station Post Office, Brooklyn, N. Y.: 285. Station A Post Office, Brooklyn, N. Y.: 286. West Farms Station Post Office, New York City: 286
- Riverside Park, New York City, Proposed development of; Drawing by Chester B. Price; Dept. of Parks, New York City; Gilmore D. Clarke, consulting landscape archt.: April *Frontis*.
- Roofing: Better Practice, by W. F. Bartels: 25
- Rosenberg, Louis C., archt.: House of Louis C. Rosenberg, Fairfield, Conn.: 39
- Sabin, Palmer, archt.: Ranch House, California: 17
- Salomonsky, Verna Cook, archt.: House of C. G. Novotny, Scarsdale, N. Y.: 145
- Saylor, Henry H.: The Hillside Housing Development: 245
- Schools and Colleges: Carillon Tower, University of Wisconsin, Madison: 80. Mellon Institute, Pittsburgh, Pa.: 81. Proposed Physics and Chemistry Bldg., Wellesley College, Wellesley, Mass.: 270. Proposed North Park College Memorial, Chicago, Ill.: 271
- Sculpture in Concrete—Cast and Tooled; Raymond Couvegnes, sculptor: 11
- Schultze & Weaver, archts.: Men's Bar, Waldorf-Astoria, New York City: 80
- Seats, Entrance: A Portfolio of: 289
- Shilling, W. K., archt.: Post Office, Springfield, O.: 153
- Shop Front for a Jeweler—The Emerson Prize, Beaux-Arts Institute of Design: 327
- Skloot, M. J.: Shop Front for a Jeweler: 332
- Small House Small?, Why Is the, by Harrison Gill: 141
- Spigel, H.: Shop Front for a Jeweler: 330
- Steel and Miscellaneous Iron: Better Practice, by W. F. Bartels: 83
- Stein, Clarence S., archt.: The Hillside Housing Development, New York City: 245
- Sternfeld, Harry, archt.: House of S. Lloyd Moore, Frankford, Pa.: 33
- Stevenson, Harvey & Eastman Studts, archts.: Living-room Bay, House of G. T. Vought, Montclair, N. J., 77
- Sturges, W. K.: Shop Front for a Jeweler: 327
- Supervising Architect's Office: Kensington Station Post Office, Brooklyn, N. Y.—Lorimer Rich, designing archt.: 80. Station M Post Office, New York City—William Dewey Foster, designing archt.: 80. Post Office and Court House, Pittsburgh, Pa.—Trowbridge & Livingston, archts.: 81. Bronx Post Office, New York City—Thomas H. Ellett, designing archt.: 285. Morris Heights Station Post Office, New York City—Lorimer Rich, designing archt.: 285. College Station Post Office, New York City—William Dewey Foster, designing archt.: 285. Flatbush Sub-Station Post Office, Brooklyn, N. Y.—Lorimer Rich, designing archt.: 285. Station A Post Office, Brooklyn, N. Y.—Lorimer Rich, designing archt.: 286. West Farms Station Post Office, New York City—Lorimer Rich, designing archt.: 286. Post Office and Court House, Tallahassee, Fla.—Eric Kebbon, designing archt.: 286. Sub-Station W Post Office, New York City—Eric Kebbon, designing archt.: 286. Sub-Station Y Post Office, New York City—Eric Kebbon, designing archt.: 286
- Supreme Court Bldg., Washington, D. C.; Robert Aiken, sculptor: 81
- Tile Roofs: A Portfolio of: 105
- Tompkins, John, assoc.; Grosvenor Atterbury, archt.: Lodge and Gate, Acadia National Park, Mount Desert, Me.: 127
- Triangle, Constitution Avenue, Washington, D. C.: 16
- Trowbridge & Livingston, archts.: Hayden Planetarium, American Museum of Natural History, New York City: 271
- Trowbridge & Livingston, archts., with Supervising Architect's Office: Post Office and Court House, Pittsburgh, Pa.: 81
- University of Wisconsin, Carillon Tower for, Madison; Arthur Peabody, state archt.: 80
- Vladeck, B. Charney: The Architect and His Job: 283
- Vogel, F. A.: Shop Front for a Jeweler: 332
- Votteler Holtkamp Sparling Organ Co.: Organ pipes: 80
- Wall Board: Better Practice, by W. F. Bartels: 265
- Wall Board Comes of Age, by Gerald K. Geerlings: 181
- Washington Monument, The; Robert Mills, archt.: Jan. *Frontis*.
- Welding, A Neglected Tool, by Winsor F. Briggs: 324
- Welsh, Lewis E., archt.: Office on Estate of P. R. Levi, Charleston, W. Va.: 333
- West Side Housing Project, Model of, Chicago, Ill.: 270
- W G N Broadcasting Auditorium, winning design for, Tribune Tower, Chicago; Ernest A. Grunsfeld, Jr., archt.: 81
- Who Is the Owner?, by Morgan Farrell: 61
- Why Is the Small House Small?, by Harrison Gill: 141
- Why Not Design the Living-room to be Livable?, by C. John Marsman: 253
- Williams, H. Cobbett, interior decorator: House of C. G. Novotny, Scarsdale, N. Y.: 145
- Williamsburg, An Architect Rambles About; Dwight James Baum: 322
- Windows, Circular, Gothic and Romanesque, A Portfolio of: 45
- Windows and Doors: Better Practice, by W. F. Bartels: 343
- Windows, Dormer: A Portfolio of: 225
- Witmer, D. Paul, archt.: Hershey Hotel, near Harrisburg, Pa.: 81
- Wood Grilles of La Guaira, measured and drawn by R. Newton Mayall: 259
- Wornum, G. Grey, archt.: New Home of the R. I. B. A. in London: 69



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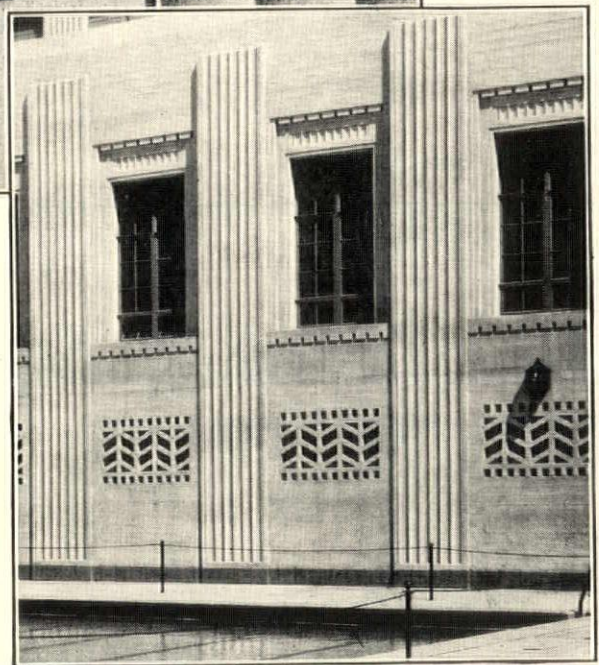
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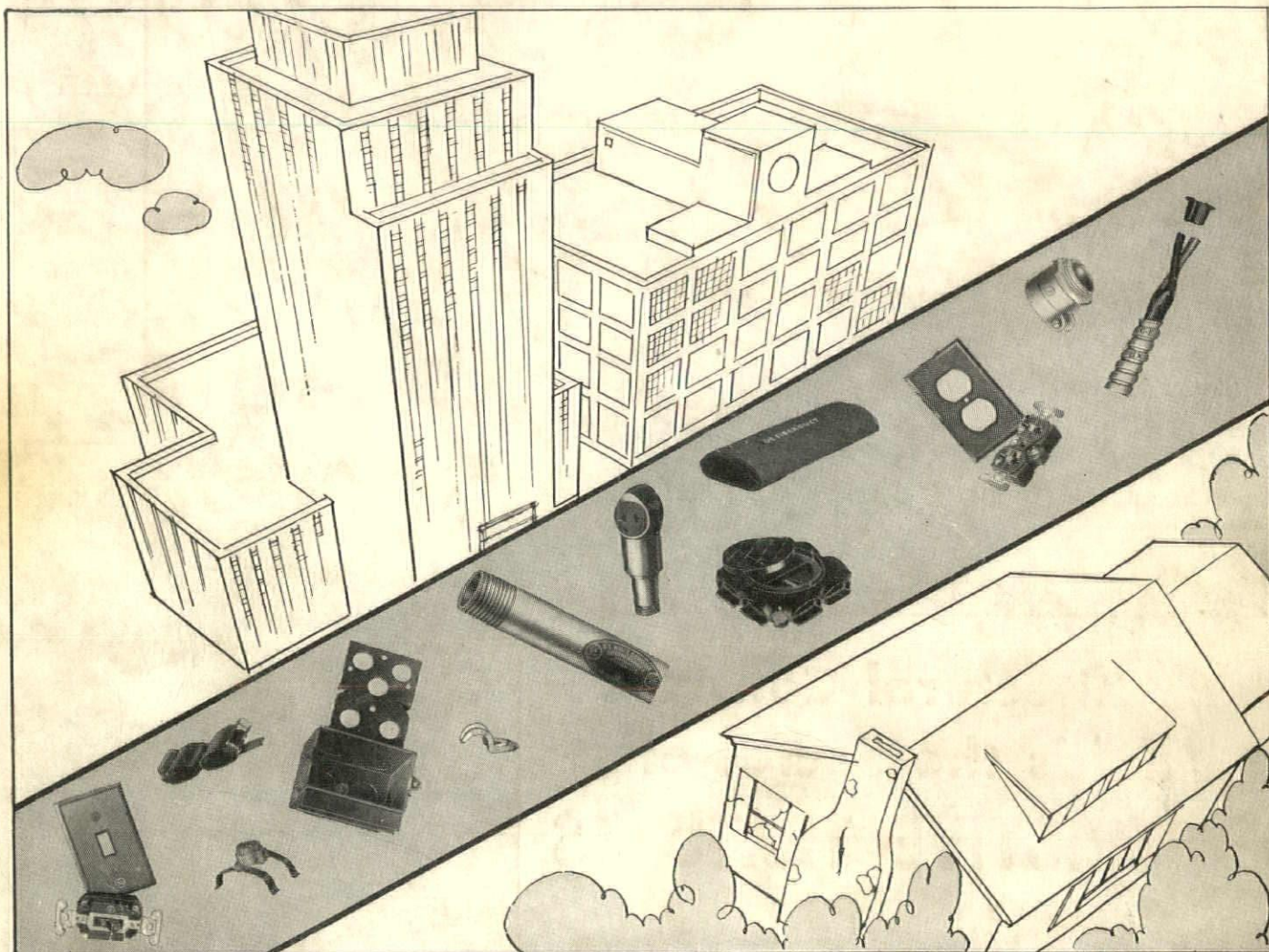
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