

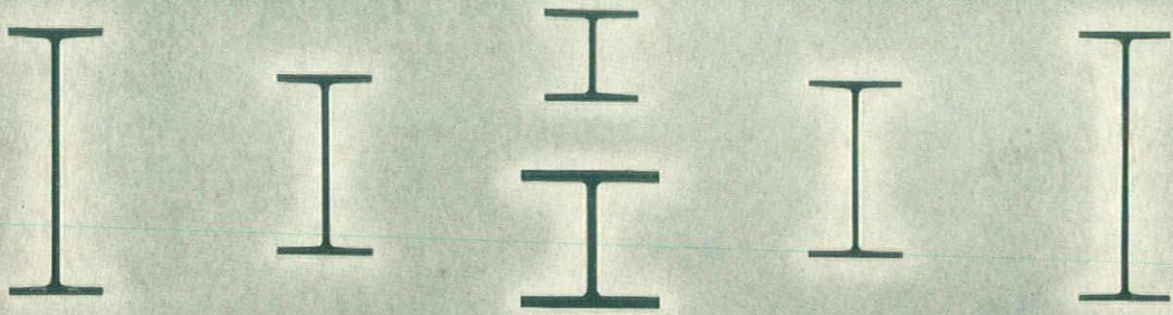
The Triborough Bridge, New York
Trinity Chapel — Maginnis & Walsh
Three Small Houses, by
Kilham, Hopkins & Greeley
William W. Wurster
Richard J. Neutra

PORTFOLIO
OF SIGNS

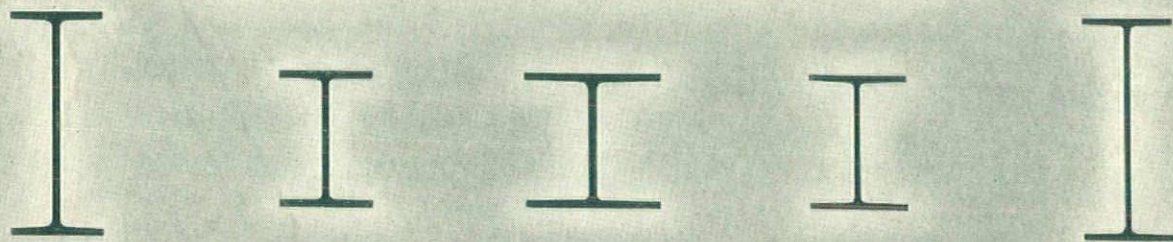
ARCHITECTURE

AUGUST, 1935
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bring marked economies in the
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BETHLEHEM'S wide range of light sections greatly simplify the problem of working out economical designs for structural steel.

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GENERAL OFFICES: BETHLEHEM, PA.

Architects: **WARREN & WETMORE**

Collaborators on Decoration: **W. & J. SLOANE**



BOARD OF DIRECTORS' ROOM, NEW YORK CENTRAL RAILROAD, NEW YORK CENTRAL BUILDING

ASKED to design an appropriate Board of Directors' Room for the New York Central Railroad, Warren & Wetmore rose admirably to the occasion with this impressive example of comfort, dignity and fineness. Concerning some of the many interesting problems they faced, Warren & Wetmore particularly comment: "At the suggestion of one of the New York Central executives, we imported burled oak from Sherwood Forest, Nottinghamshire, England, of Robin Hood fame. Walls, ceilings and doors are all of this wood, beautifully patterned in its natural color. It was necessary to find a very large rug and one particularly adapted to requirements. Several were car-

ried from Sloane's and placed on the floor, one beautiful rug being chosen which shows in this photograph. The room was planned around the portraits of the three Vanderbilts, Commodore Cornelius, William H. and William K. . . . The Contract Department of W. & J. Sloane cooperated with us in the design of this room in a most helpful spirit."

* * *

The full facilities of W. & J. Sloane, available to architects through its Contract Department, include furniture, draperies, office partitions, wall-covering or floor-covering, carpets, and collaboration by Sloane consultants with architects on the decorating and furnishing phase of any project.

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HARRY HAKE & HARRY HAKE, Jr.

SPECIFY *Wrought Iron* ON ITS SERVICE RECORD

WHAT a heritage one generation of architects passes on to the next! Inspiration, high ideals . . . and a wealth of experience. And how fortunate when a man can pass this inheritance on to his own son. Such is the case with Harry Hake and Harry Hake, Jr.

One part of this wealth of experience which we wish to call to your attention is the use of wrought iron in certain corrosive pipe services where its record proves it the right material to use . . . where its long life, dependability, and economy are outstanding. Illustrated are

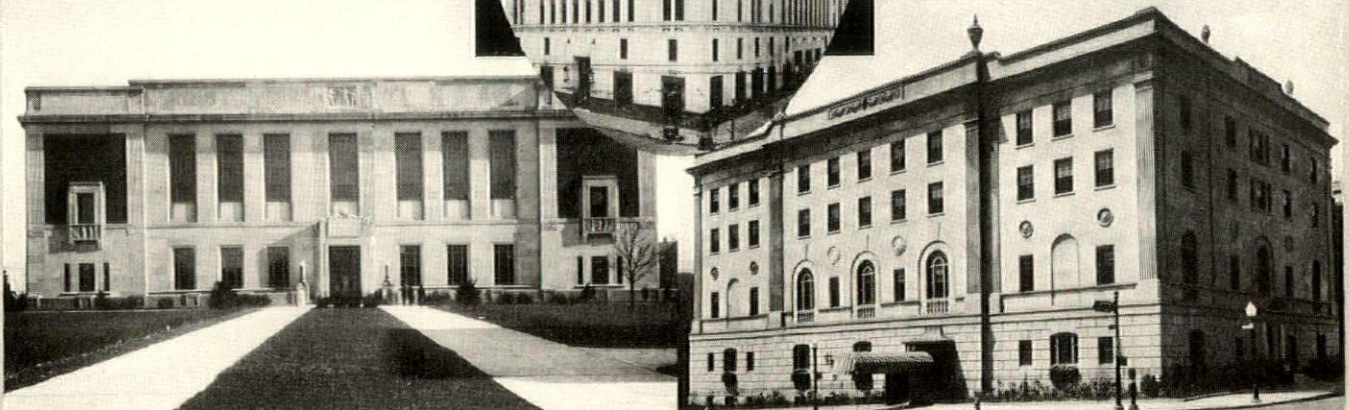
buildings in which this experience is reflected. Note the services for which wrought iron is used.

Examples of
"PIPE PRESCRIPTION"
HARRY HAKE
& HARRY HAKE, Jr.
Cincinnati Architects



This engineering procedure of basic pipe selection on service records is standard practice in the offices of leading architects and engineers. In our files are specifications for new buildings and service records of old buildings to back them up, which illustrate this procedure. If you wish to review this data ask a Byers Engineer or write our Engineering Service Department at Pittsburgh.

A. M. Byers Company, Established 1864. Pittsburgh, Boston, New York, Philadelphia, Washington, Chicago, St. Louis, Houston.



● Genuine Wrought Iron Pipe was specified in these buildings for cold water and drinking water lines; waste lines, vents and drains 2" and under; brine refrigeration lines; medium and low pressure steam lines 2" and under; all vac-

uum and medium pressure heating return lines and a number of other corrosive services. LEFT—University of Cincinnati Library. CENTER—Cincinnati & Suburban Bell Telephone Building. RIGHT—Queen City Club, Cincinnati.

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



ARCHITECTURE

REG. U. S. PAT. OFFICE

THE PROFESSIONAL JOURNAL

VOL. LXXII
No. 2

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AUGUST
1935

THE BUILDING TREND

By E. L. Gilbert

IN PRESENTING the June, 1935, statistics of building construction, it becomes apparent that the generally upward trend has been continued. Residential building particularly shows a healthy tone, with other divisions indicating a prolonged improvement. The figures given below represent a composite of building activity for the entire United States, conveniently worked out on a per capita basis to reveal quickly the relative values involved for the current month, the same month last year, and June, 1933. The chart of totals for each year to date is likewise arranged.

MONTH OF JUNE (DOLLARS PER CAPITA)

CLASSIFICATION	1933	1934	1935
New Residential . . .	\$.30	\$.29	\$.54
Commerical, Industrial, etc.46	.39	.53
Other Work49	.80	.68
Totals	\$1.25	\$1.48	\$1.75

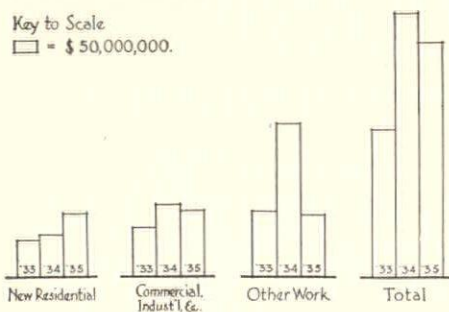
Building Material Prices, U. S. Dept. of Labor,

end of June 75.9 87.8 84.9

* Index numbers based on 1926 = 100.

YEAR TO DATE

Key to Scale
□ = \$50,000,000.



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ARCHITECTURE is published monthly, appearing on the 28th of the month preceding date of issue. Price mailed flat to members of the architectural and allied professions, to any address in the United States, \$3 per year in advance; to all others, \$6; add \$1 for Canadian postage and \$2 for foreign postage. Single copies, \$50. Advertising rates upon request. Entered as second-class matter, March 30, 1900, at the Post-Office at New York, N. Y., under the Act of March 2, 1879.

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THE BULLETIN - BOARD

NEW YORK UNIVERSITY AWARDS

NEW YORK UNIVERSITY has announced that Sidney L. Katz, Brooklyn, has won the annual graduate scholarship competition of the School of Architecture and Allied Arts. Paul V. Stryker, Cincinnati, was placed second.

The winner of the competition receives a sum of money equal to the tuition fee for a year of graduate study at the School of Architecture, enabling him to pursue studies leading to the degree of Master of Architecture.

The problem was the design of a small country courthouse in a small southern city.

The judges: Robert D. Kohn, Chester H. Aldrich, Ralph T. Walker, and Archibald M. Brown.

STEWARDSON SCHOLARSHIP AWARD

THE Managing Committee announces the award of the John Stewardson Memorial Scholarship, limited to students or practitioners of architecture in the Commonwealth of Pennsylvania, to George C. Rudolph, graduate student in the Department of Architecture of the University of Pennsylvania and Theophilus Parsons Chandler Fellow for the year 1934-1935. The appointee receives an allowance of \$1,000 for the study of architecture in travel, either in this country or abroad. Mr. Rudolph has sailed for Europe and will visit France, England, Holland, Germany, Italy, and Spain.

The Managing Committee commended as having special merit the work and discussions of Mr. Joseph Wigmore, Jr., of the T-Square Club Atelier of Philadelphia, and Mr. William V. Flynn of the Carnegie Institute of Technology of Pittsburgh.

MARIETTA CITY HALL COMPETITION

HOWARD DWIGHT SMITH, architectural advisor for the Memorial City Hall competition in Marietta, Ohio, announces that the following supersedes the preliminary information published in our last issue.

There will be two stages, approximately sixty days each, beginning about August 20, 1935. The first stage will require simple drawings at small scale and will be open to A. I. A. members in good standing

any time since January 1, 1933. The second stage will be open to six chosen from first stage. Construction cost will be about \$250,000 at 47½ cents per cubic foot, but cannot proceed without: (1) favorable action by PWA on grant and loan on application now pending; (2) favorable vote of city electorate on a bond issue August 13.

The jury: Charles St. J. Chubb, Dwight James Baum, and John P. Schooley, all architects, with one lay member to be announced later.

The prizes in the second stage are, first, commission for services at 5 per cent; second, \$1,000; third, \$750; fourth, \$500.

Prospective competitors should apply to the architectural advisor before August 10: Howard Dwight Smith, Department of Architecture, Ohio State University, Columbus, Ohio.

A COURSE IN SITE AND TOWN PLANNING

THE School of Architecture at Columbia University will open a new studio of Site Planning, beginning with the fall semester of 1935. The studio will be conducted by Henry Wright, who has been acting as Town Planning Advisor to the faculty since February, 1935.

It is expected that, during the first year, the work will be divided between two groups: one of younger students, the other of advanced and graduate students. Eventually, as in the other studios in the school, the Site Planning group will be made up of students in all stages of advancement.

The course will give primary attention to training in site planning and civic design, and will be a part of the curriculum of the School of Architecture. It is intended for students regularly matriculated in the school, and will supplement the courses in architectural design; work in the course being credited toward an architectural degree.

In order to provide adequate facilities and staff, the school intends to limit the number of undergraduate students in this studio.

CRANBROOK

THE Cranbrook Academy of Art announces that the first year of its Postgraduate Architectural Department, under the direction of Eliel Saarinen, will begin in the fall of 1935. The limitation of the num-

ber of students in this department to a small group makes an intimate contact between the students and the staff possible. As each student is working on his individual problem every other student is benefited through the work and criticism of his associates.

Each applicant must be either the holder of an architectural degree or practising architect or draftsman who can submit the necessary qualifications, showing special ability, aptitude, and ambition. Instruction is available to both men and women with no restriction as to age or nationality. Courses in painting and drawing are under the direction of Zoltan Sepeshy; those in ceramics, under Marshall Fredericks. There is an opportunity also for students who wish to study with Carl Milles, sculptor, who has been in residence at Cranbrook since 1930.

Application blanks and further details may be obtained from the Executive Secretary, Cranbrook Academy of Art, Bloomfield Hills, Mich.

NEW MORTGAGE INSURANCE RULES

ACTING Federal Housing Administrator Stewart McDonald has announced the new administrative rules and regulations governing the mutual mortgage insurance plan under the amended National Housing Act, which rules went into effect June 24.

Chief among the changes are the following:

Reduction of the maximum interest rate allowed on all classes of insured mortgages to a flat 5 per cent per annum. This is the maximum. Lower interest rates may be charged by the lending institution.

Reduction of the insurance premium on all classes of insured mortgages to a flat one-half of one per cent per annum.

Refund in the form of credit to all mortgagors who have been paying insurance premiums at the old rate of 1 per cent per annum on certain classes of mortgages.


Administrator McDonald said the procedure for obtaining mutual mortgage insurance also has been greatly simplified, both for the present or prospective home-owner and for the financial institution extending the mortgage loan.

One of the immediate effects of the revised regulations, in the opinion of Mr. McDonald, will be an added

(Continued on page 12)



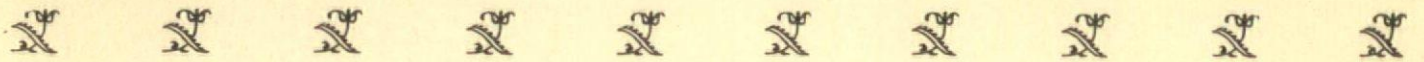
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Colour in Everyday Rooms

BY BASIL IONIDES

“**N**O ONE agrees with his neighbour about decoration, though he may admire the efforts of others, and so it is impossible to lay down rules about what is good taste and what is bad, but there is a great deal that is really common sense, and not taste, and that is the theme that I have tried to work on in this book.”

So says the author in his foreword. In the text he treats his subject under the following chapter heads:

- Colour Outside the House
- The Decorative Treatment of Very Light Rooms
- Colours for Dark Rooms
- Concerning Blinds and Shades
- Lighting Rooms
- Surfaces and Suitable Materials
- Colour in Odd Places
- Things Out of Place and Badly Mixed
- Good Things that Are Gone and Might be Revived
- Pictures: Their Frames and Their Colour Effect in a Room
- Commercial Decoration
- Continuity in Decoration

The book is profusely illustrated with photographs of distinguished examples — including a frontispiece in color.

NEVER be funny in public—especially on the outside of the house, as this will need more living down than is easy.

NEVER put a white house on top of a hill unless you wish to annoy those who see it.

FEW objects — or people, for that matter — look their best in a strong light.

PALE colours cannot be seen without light.

BRILLIANT colour is never gaudy in a dark room.

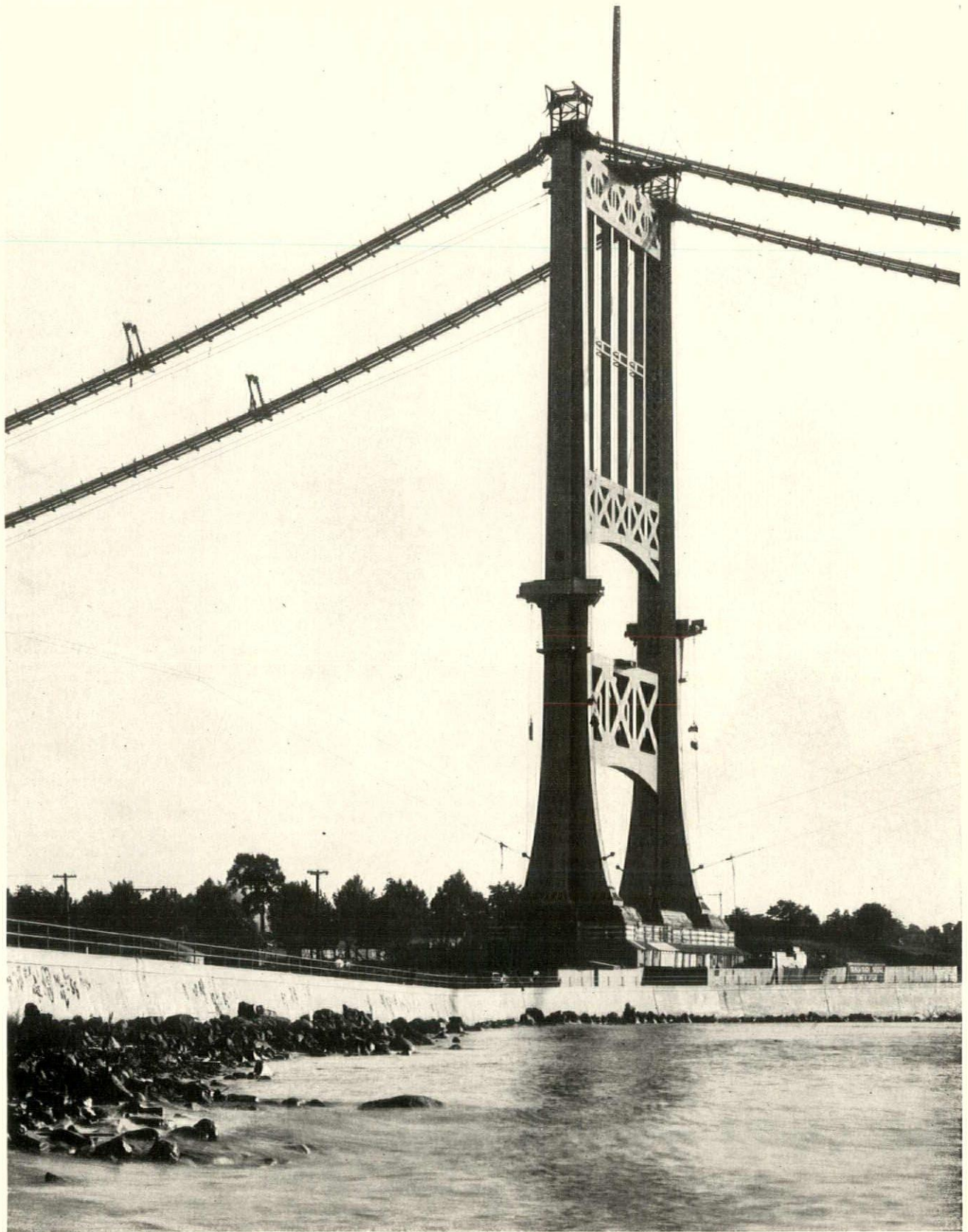
IT is possible to enhance or to dull any object by its adjacent colouring.

A SHABBY frame will ruin a good picture, and a too smart one may do so also.



Price, \$3.75

CHARLES SCRIBNER'S SONS, New York
ARCHITECTURE AND ARCHITECTURAL BOOKS



Richard Averill Smith

TOWER ON THE ASTORIA SIDE
TRIBOROUGH BRIDGE, NEW YORK
(See article on pages 62-70)

ARCHITECTURE

❖ VOLUME LXXII

AUGUST, 1935

NUMBER 2 ❖



Rebuild America

B Y H O R A T I O B . H A C K E T T

ASSISTANT ADMINISTRATOR

FEDERAL EMERGENCY ADMINISTRATION OF PUBLIC WORKS

AN effective initial program to blot out the slum from the American scene is well under way. For the first time, the old futile cries deploring the continued existence of these blighted areas have been transformed into terms of action. The wistful dreams of the past have given way to a vigorous, detailed program of slum clearance and rehousing which has engaged the resources of the Federal Government.



The Housing Division of the Public Works Administration has been charged with the task of rehabilitating slum areas and rehousing their dwellers at rentals they can afford, in homes which conform with decent, modern ideals. An opening wedge has been made: walls of the first all-federal housing projects are now rising from sites from which slums have been extirpated. The Advisory Committee on Allotments has recommended that approximately \$250,000,000 of the 1935 relief appropriations be devoted to an extension of the ambitious program inaugurated two years ago by the PWA.

This recognition by the Federal Government of its responsibilities in insuring decent

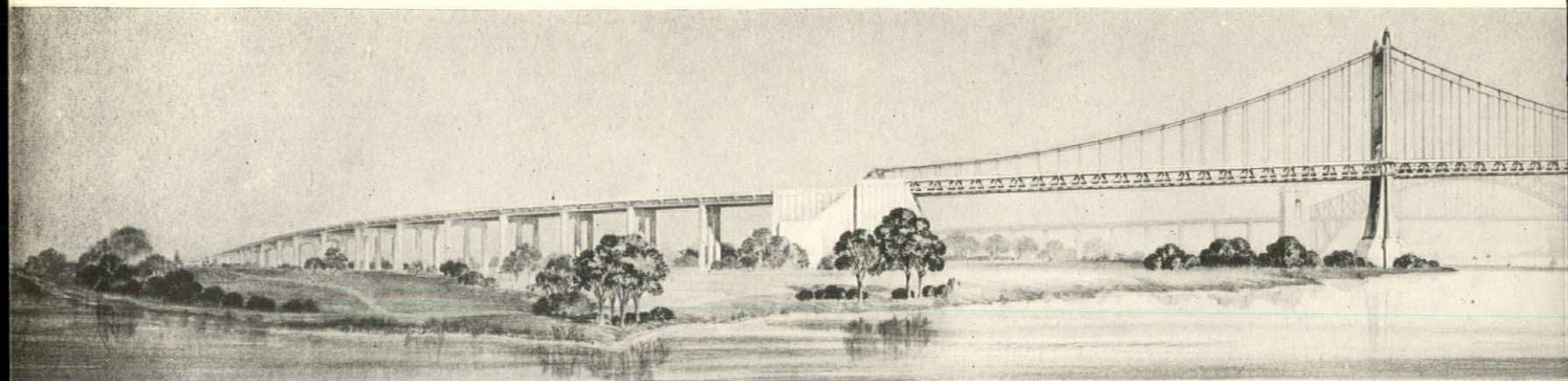
living conditions for its under-privileged citizens may be viewed as opening a new era in the design and building of American dwellings.



We suffered the existence of urban slums even after we were fully convinced of their grave social and economic consequences. In like manner we accept complacently sub-standard accommodations even in the buildings in which our more fortunate citizens make their homes. The slum must be abolished, but at the same time there should be some general improvement in all types of American homes.

The PWA housing program may be a powerful influence in the rebuilding of America. The establishment of new and higher living standards for those citizens lowest in the economic scale may result in growing impatience and dissatisfaction among the citizens of higher economic status, may generate a widespread movement away from obsolete building standards and toward better designed and better constructed homes. If and when this new and welcome sentiment appears, architects and builders must be ready to meet it.

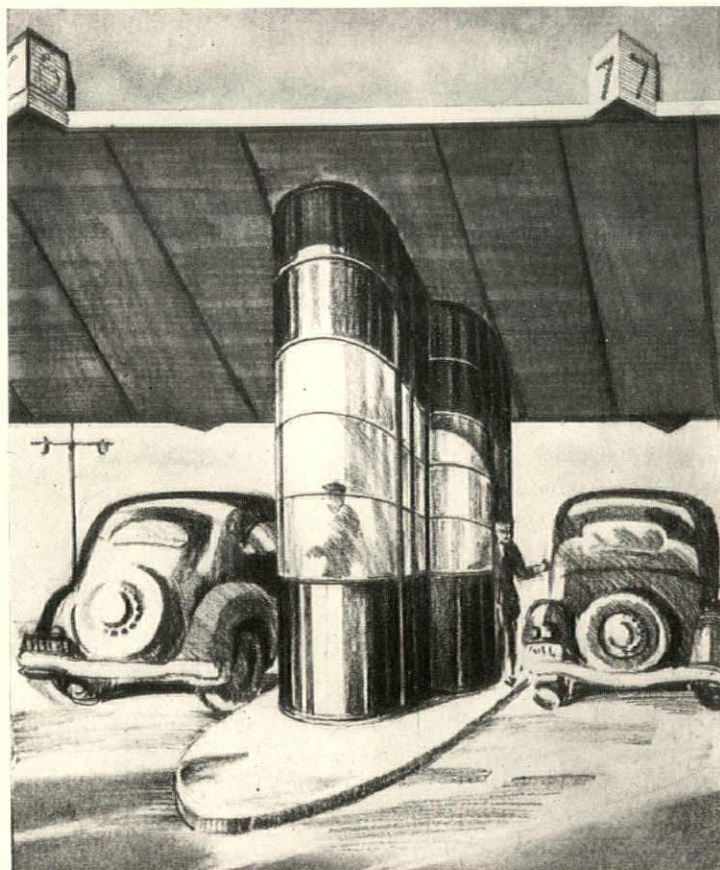
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ALEXANDER THE GREAT, when confronted with the problem of untangling the mysterious Gordian knot—or facing disaster—faced realities instead and cut it to the quick with his sword. That legend, translated into modern terms, is the *fait accompli* of the architects and engineers who designed the impending Triborough Bridge system, at the junction of East and Harlem Rivers.

Take ten lanes of traffic from a metropolis numbering 9,000,000 souls, feed it from diverse points of the compass into three arterial highways converging upon a common center in mid-stream, and behold! a knot more formidable than Alexander ever encountered.

Study of toll booth. Rendering by A. G. Lorimer



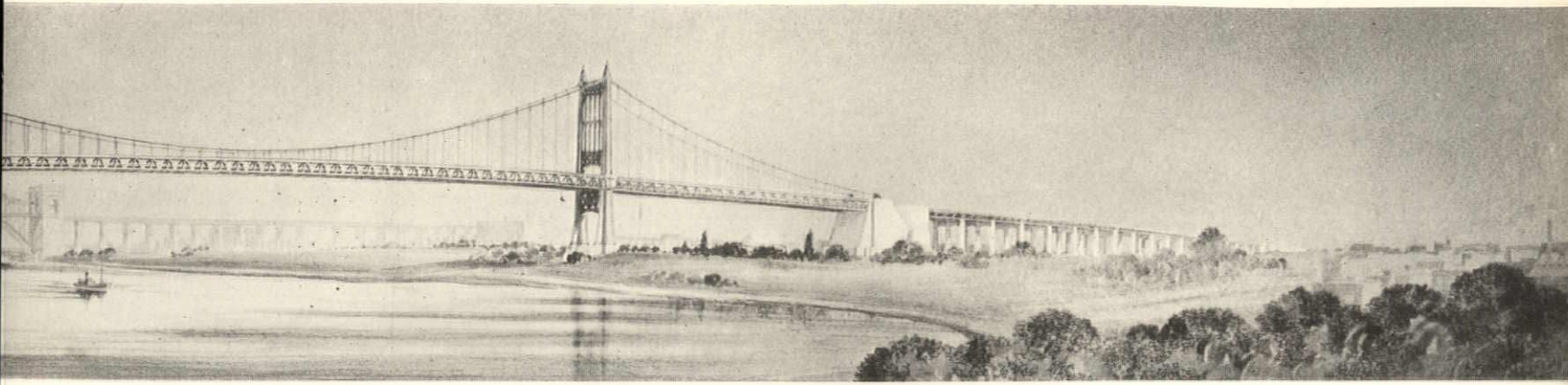
ROBERT MOSES, Executive Officer of the Commission
 O. H. AMMANN, Chief Engineer
 ALSTON DANA, Engineer of Design
 AYMAR EMBURY II, Architect
 WILLIAM GOPIN, Assistant Architect
 A. GORDON LORIMER, Architectural Designer

To have found a solution whereby the interchange of traffic, regardless of its direction, is accomplished without requiring the crossing of a single traffic lane at grade, or the passing of more than one toll booth—and to have made this possible by means of a structure of outstanding architectural merit—is in itself an accomplishment of the first magnitude. Yet such details are but incidental to the colossal task shouldered by the Triborough Bridge Authority designers.

Less courageous souls would have been content to introduce the Randall's Island negligible traffic to the new system at some secondary point along the way. Instead it enters ingeniously at the very heart of the vortex, which is typical of the manner in which the whole problem has been approached. No feature of the undertaking was thought too minute for the most careful consideration and study. All the usual picayune details have been swallowed up in the expressive plastic of Mr. Embury's architectural style. The unity of scale retained throughout is remarkable, and in a large measure is due to the rhythmical accenting of surface planes with V-cut grooves in the concrete.

One is aware that the architectural form has been dictated by structural requirements and economic considerations, as interpreted by minds of the subtlest æsthetic balance. Consider how the slender steel pylons, incorporating floodlights in the area of the toll deck, evolve out of masonry abutments with an organic simplicity and power that belie the transition.

◀ ARCHITECTURE ▶
 AUGUST, 1935



TRIBOROUGH BRIDGE

By Anson Bailey Cutts

Throughout the bridges and their seventeen miles of planned approaches, this balance between structural horizontality and the predominately vertical lines of secondary features has been scrupulously maintained, which is no small attainment when we consider the complex nature of the project.

From Randall's Island giant "traffic-sorter" and "toll-gatherer," stretch out three steel and concrete viaducts, linking The Bronx, Queens, and Manhattan respectively, by means of bridges which would rank individually as major engineering and architectural feats were they not integral parts of a unified mechanism.

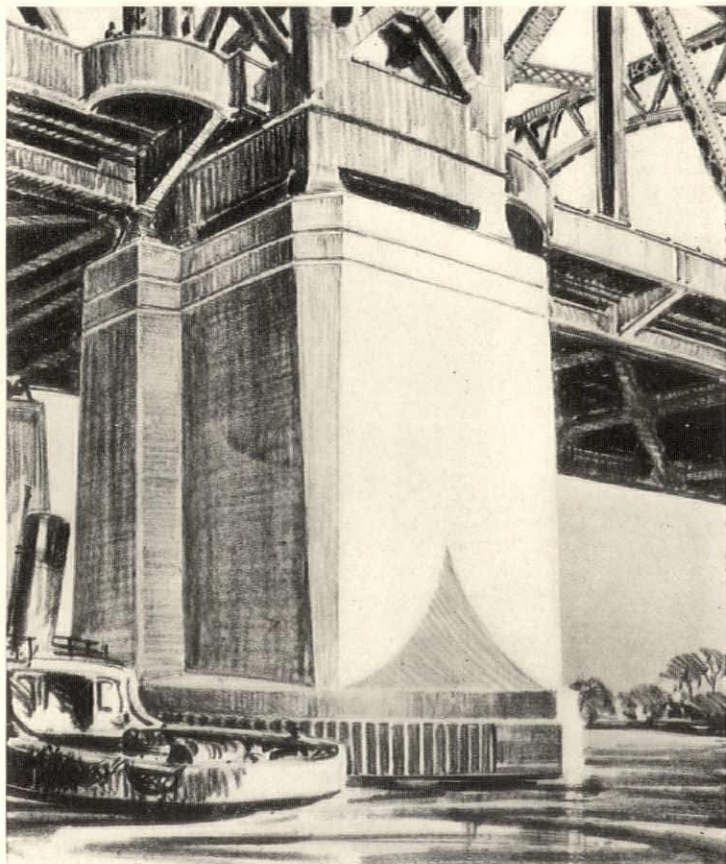
Most impressive of these is the great suspension unit straddling the East River from Ward's Island to the Queens shore (in company with the Pennsylvania Railroad's Hell Gate Bridge). This graceful span of 1380 feet between 300-foot towers is 120 feet longer than Brooklyn Bridge, and the architectural treatment of its various features, even down to the girder plates, bespeaks the closest possible cooperation between architect and engineer.

I recall no other example of steel suspension towers possessing a comparable architectural quality. Their cellular construction consists of two tower legs connected by bracing below the roadway, at the vehicle portal, and near the top. Silicon steel was used in the legs and carbon steel in the bracing members—a total of 5,500 tons. Cast-steel saddles for support of the cables will be fixed in position so that all stress variations in the latter, resulting from loading or tempera-

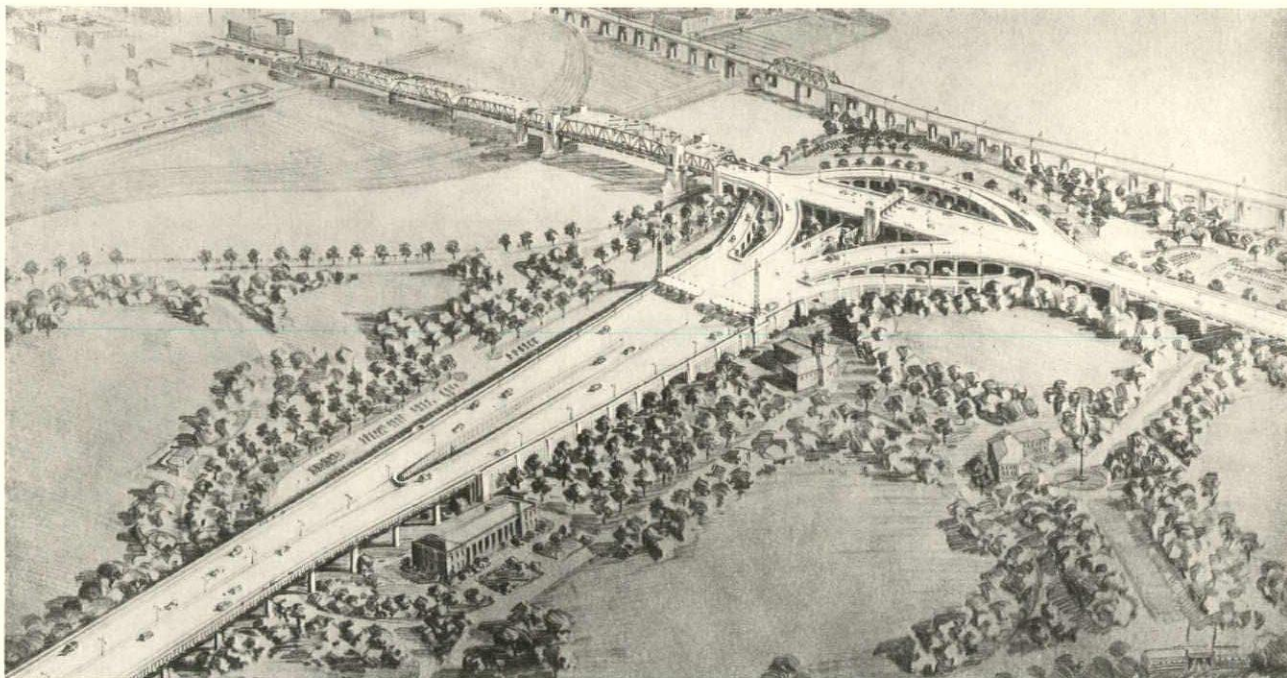
ture, will be met by the deflections of the towers.

The deck is suspended 135 feet above the water level from two cables 20 $\frac{3}{4}$ inches in diameter and 98 feet apart. An eight-lane roadway of concrete slabs, and a substantial center aisle, will rest upon the steel cross beams and supports, being flanked by sidewalks which cantilever out from the stiffening trusses at the level of the top chords. In all of these features, the hand and mind of the architect no less than of the engineer are in evidence. The pull of this tremendous weight is adequately suggested by the unique concrete anchorages designed to express, not only in their structure but in their surface treatment, the magnitude and direction of stresses and strains to which they are

Detail study of the Harlem River piers. Rendering by A. G. Lorimer



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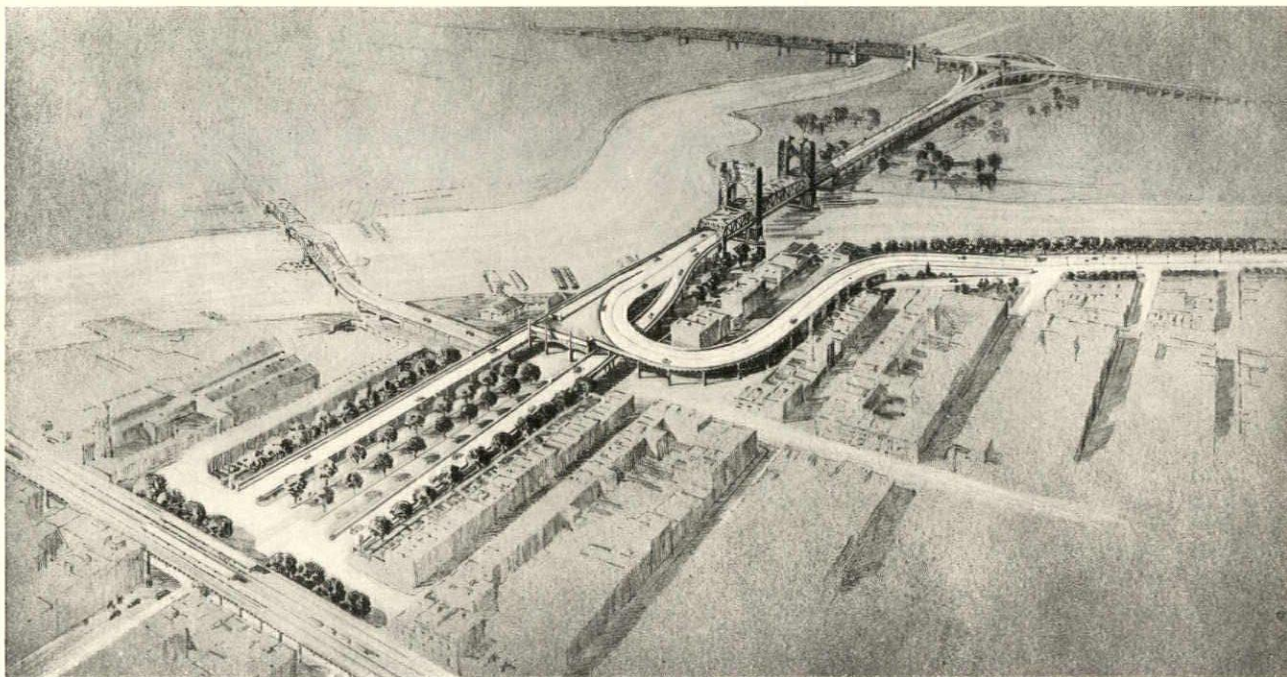


Bird's-eye view of Randall's Island junction. Rendering by A. G. Lorimer

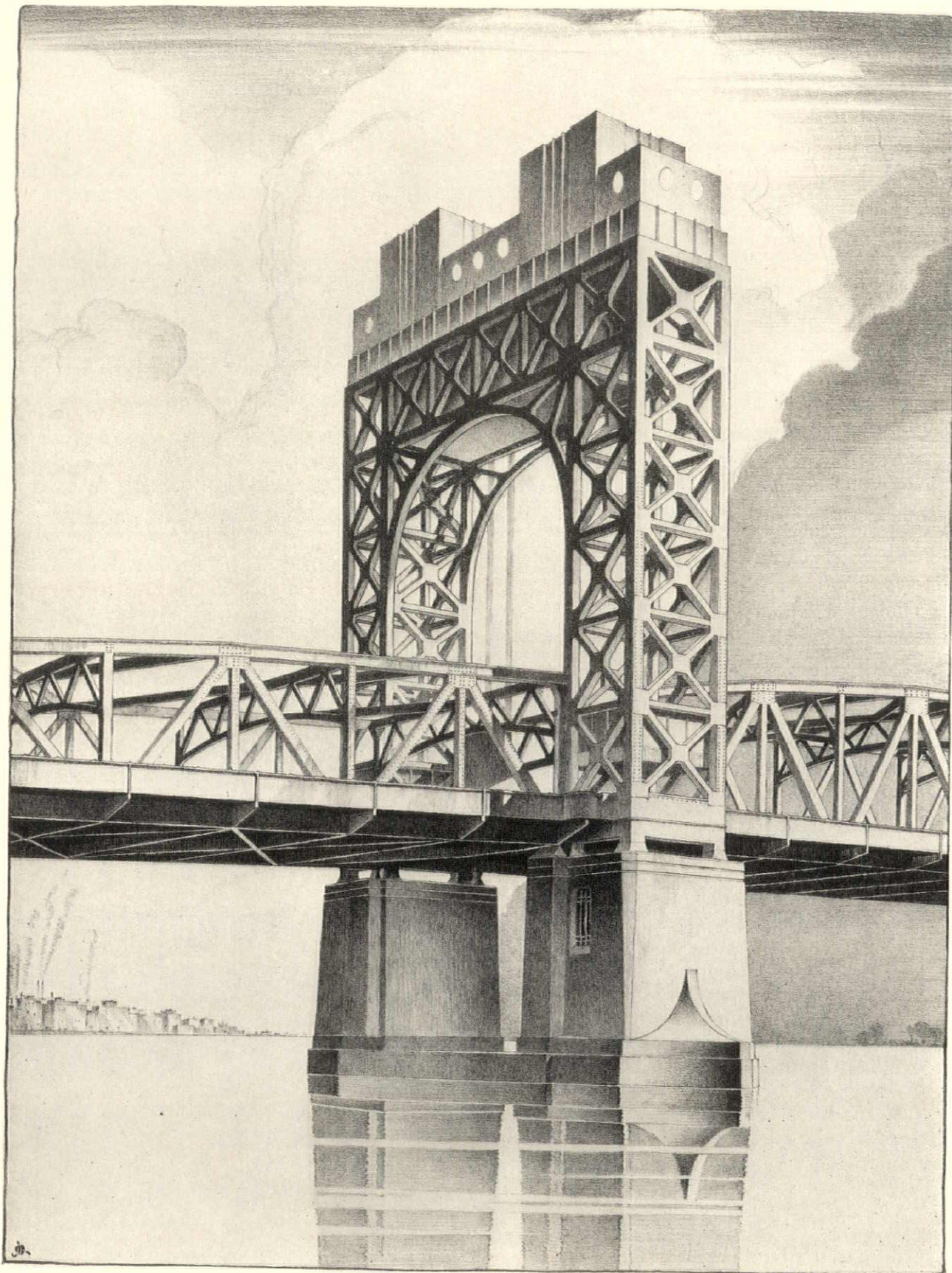
subjected—cable pull, splay of encased strands, resistance to overturning. A series of 4-inch wide V-cuts on the various planes will heighten this effect, while providing expansion joints to minimize cracking.

Already a regiment of handsomely proportioned octagonal concrete piers is lining up

Bird's-eye view of Manhattan approach, showing connections to 125th Street and East River Drive. Rendering by A. G. Lorimer

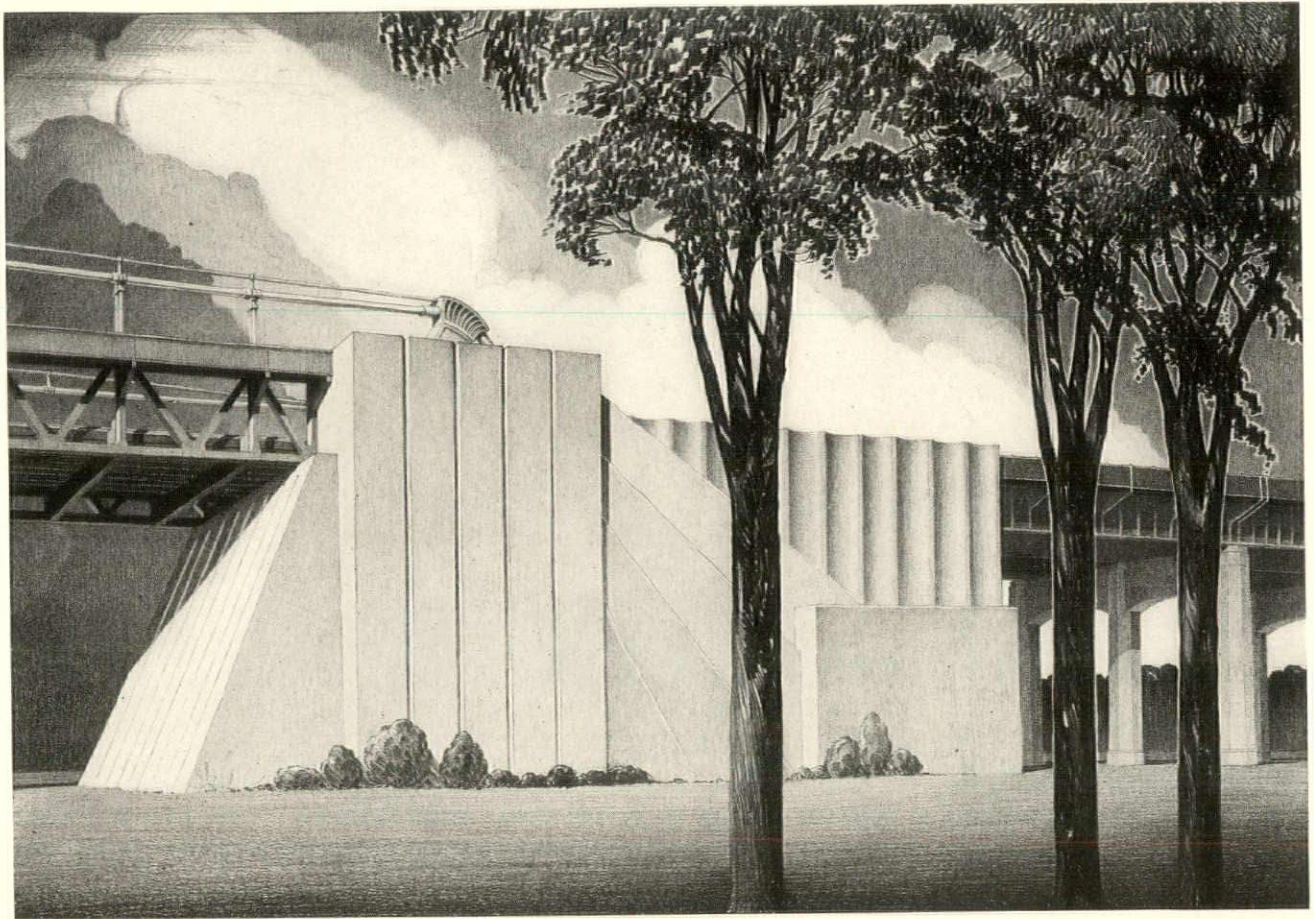


across the islands in rows of three, as if to sentinel some Royal Route of the future. On their shoulders will rest the steel burden of the eight-lane elevated highway and bridge approach. They lead through the Randall's Island junction down to the Harlem River, where another major link in the chain will be located, a three-span steel bridge containing the largest—and probably the handsomest—vertical-lift span in the world. Constructed entirely of steel on piers of concrete, its two towers, like triumphal arches,



Lithograph by John Richard Rowe, showing the lift span of Triborough Bridge

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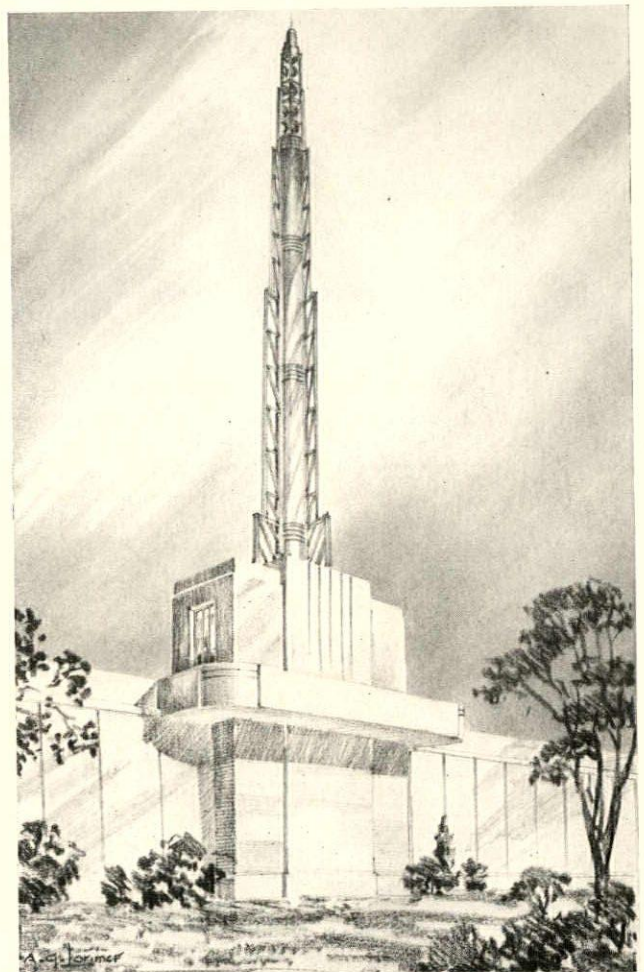
*Lithograph by John Richard Rowe,
of anchorage, Triborough Bridge*

*Study of floodlight tower for toll
area, Randall's Island*

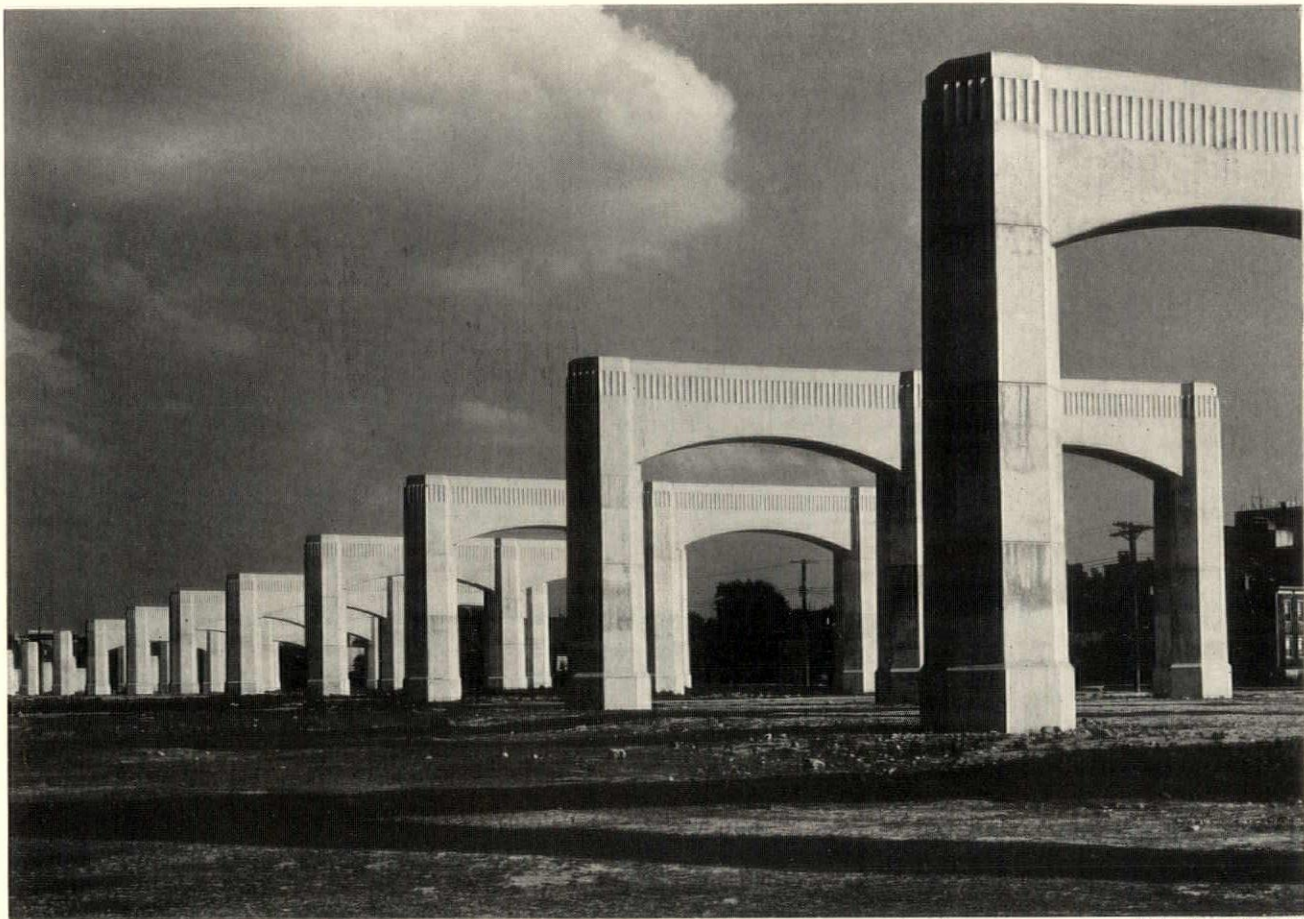
will hoist 20,000 square feet of roadway 135 feet above water level to facilitate the passage of high-masted river craft beneath. Although this is the largest span of its kind, it is not the heaviest, due to the use of asphalt plank pavement laid on steel plate, which is considerably lighter than the usual concrete flooring.

Constituting the third viaduct branch, that over Bronx Kill and adjacent railway yards, the eight lanes of Bronx traffic will thread seven steel truss spans, the longest of which could be readily converted into another and even larger vertical lift should the occasion arise and the Kill be made navigable.

The comprehensive bird's-eye views prepared by the architects make it apparent to any one that Triborough is more than a bridge, it is a veritable "rendezvous of bridges." Eight supplementary highway spans will punctuate six and one-quarter miles of parkway between the river crossing and St. Michael's Cemetery on

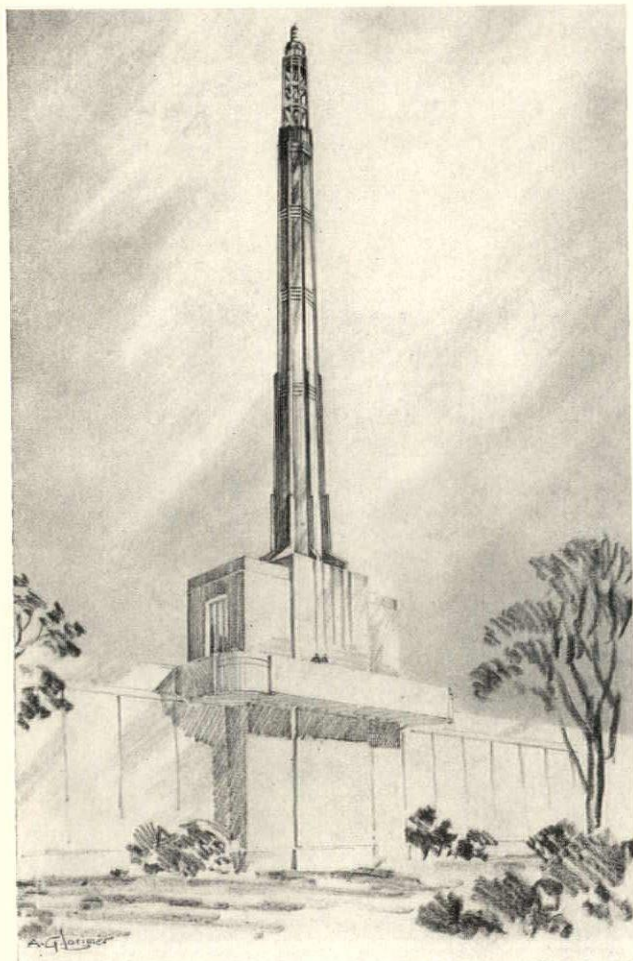


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Richard Averill Smith

*The arches for the Queens approach
as they now appear*



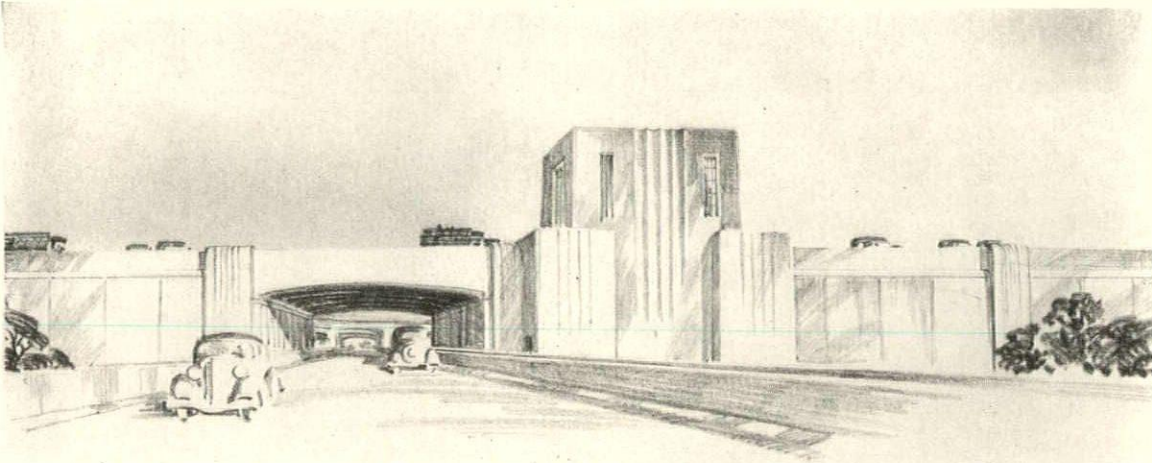
*Study of floodlight tower for toll
area, Randall's Island*

the Queens side alone. This connection will consist of two 42-foot-wide depressed roadways separated by a safety aisle and flanked by retaining walls with a series of vertical expansion grooves, V-cut at the surface for decorative reasons. Above these, two supplementary marginal roadways will parallel the Harlem riverfront. Manhattan's scenic connection running southward from the bridge will provide two riverside roadways, separated by a landscaped wall, approximately a mile and a half in length. At intervals will be placed the new lamp-posts, which are as functional and economical as they are decorative.

Over on the Bronx arm, a connection as long as that in the Borough of Queens consists of parkways and the unification of Southern Boulevard, Whitlock Avenue, and Eastern Boulevard as far as Pelham Park. The outlying entrances to these several connections are to be appropriately marked with decorative pylons.

« ARCHITECTURE »

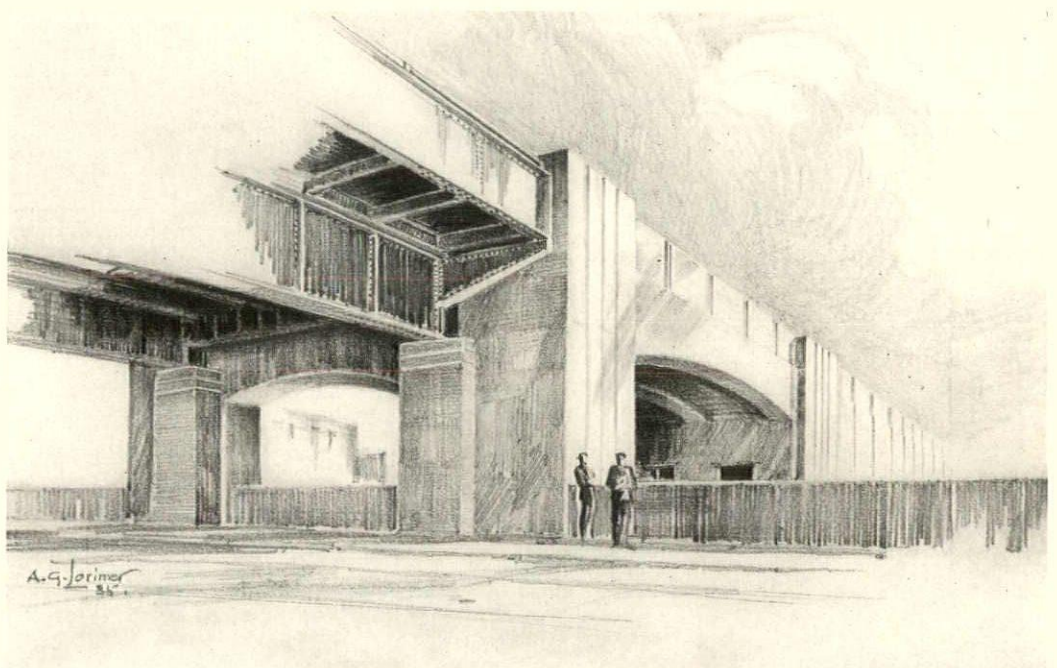
AUGUST, 1935



A. G. Jorimer '35.

STUDY OF JUNCTION
RANDALL'S ISLAND.

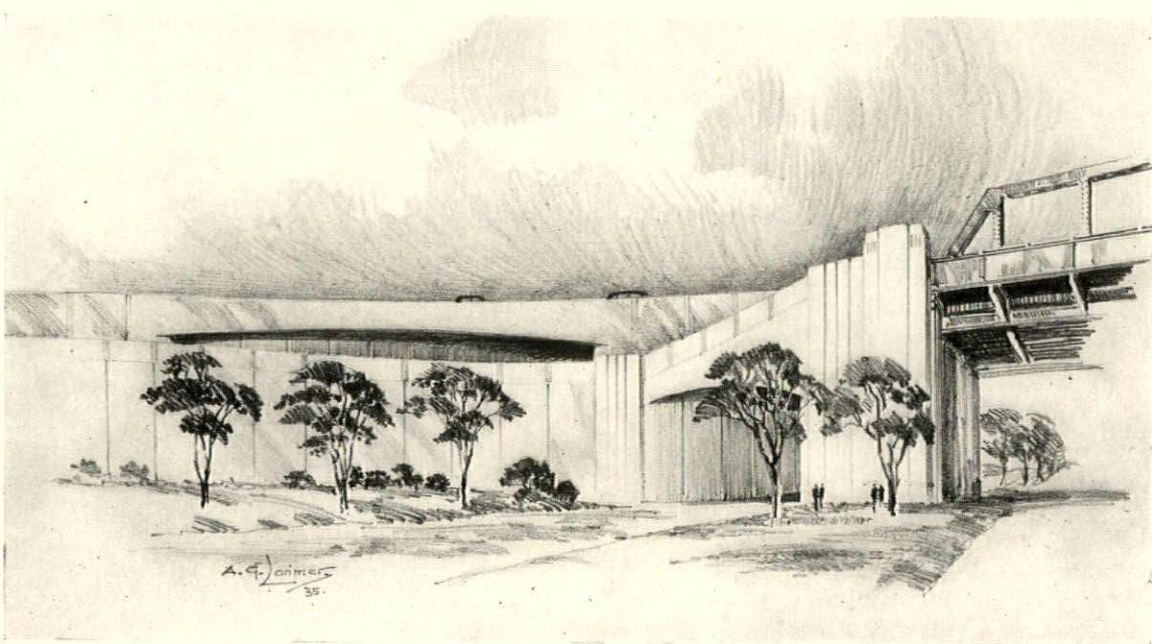
*Study of junction
on Randall's Isl-
and*



A. G. Jorimer '35.

*Preliminary study
of the connection at
125th Street*

*Study of the junc-
tion abutment at
Bronx Kills cross-
ing*



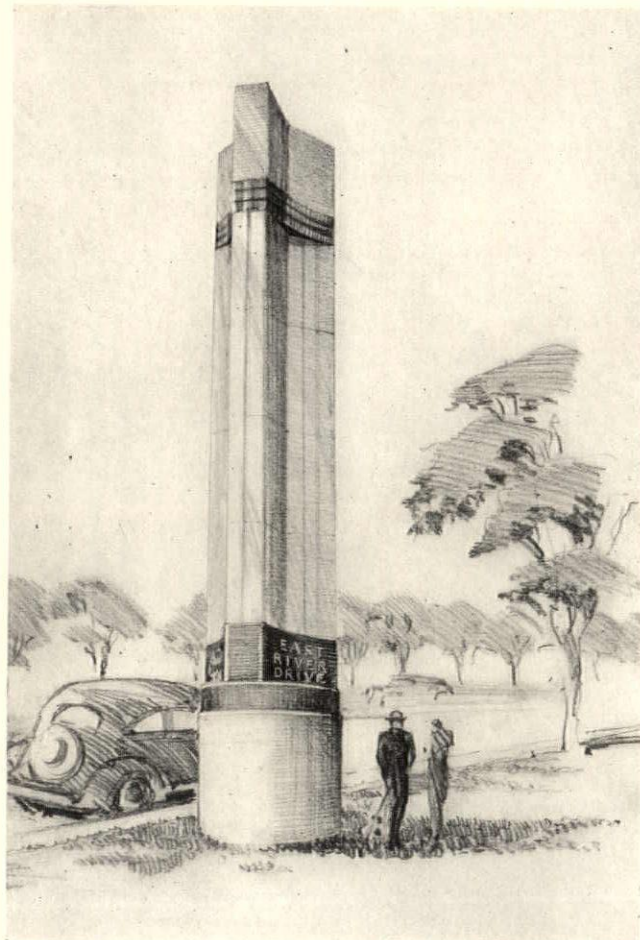
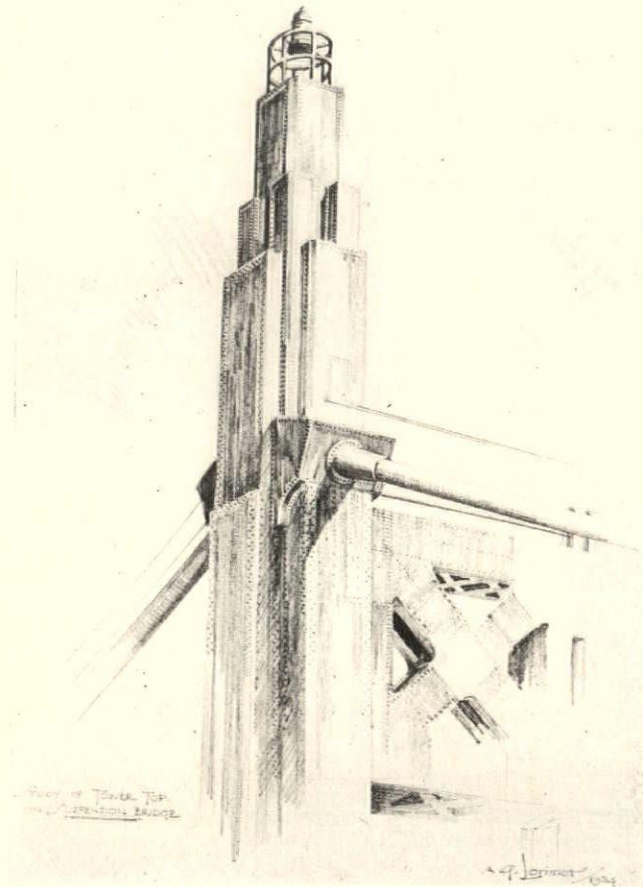
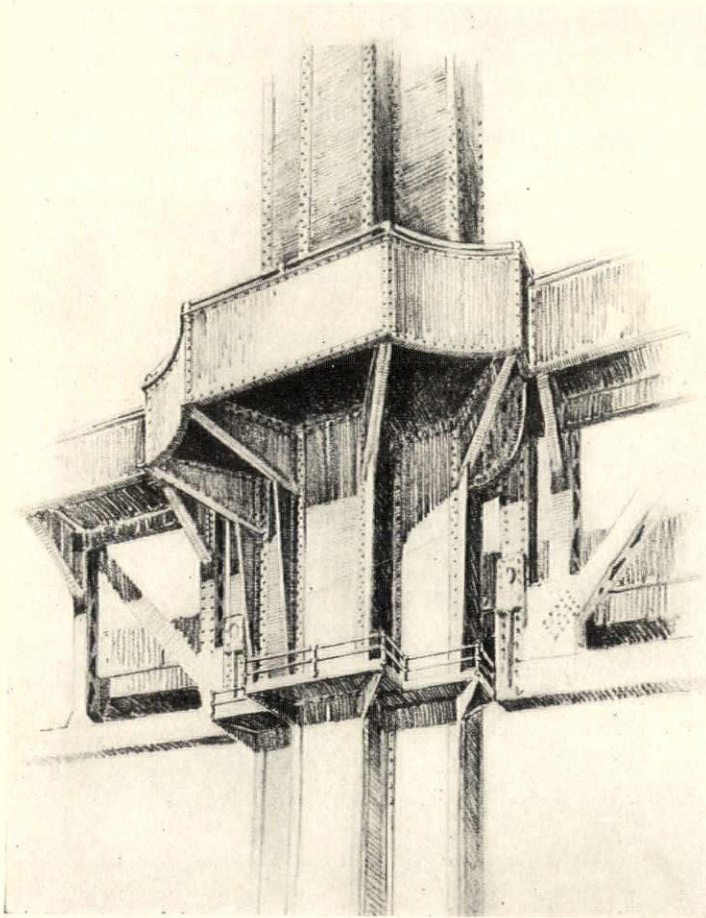
A. G. Jorimer '35.

Study of tower top on suspension bridge

For this purpose interesting studies have been made. Flanking the center aisle of Grand Central Parkway, at the Long Island end, will stand two simple masonry structures of cenotaphic proportions; whereas those for the New River Drive on Manhattan are conceived as clusters of three, symbolizing the multiple nature of the bridge.

For this integration of parkways and approaches with the Triborough project, we have

Study of tower balcony on suspension bridge. Rendering by A. G. Lorimer



Mr. Robert Moses to thank. Upon assuming the position of executive officer, it was his vision that changed the original localized conception of a viaduct into an elaborate park and highway system. Through him also was negotiated the vital Federal grant of \$8,000,000, with an additional loan of some \$35,000,000 against future tolls. Of course, there are other specialists too

Study of pylon at commencement of East River Drive. Rendering by A. G. Lorimer

◀ ARCHITECTURE ▶
AUGUST, 1935



Study of pylons on Grand Central Parkway at St. Michael's Cemetery

numerous to mention, who are playing important rôles in the Triborough drama. For the building profession, however, one fact should be of paramount significance. With a breadth of vision and a spirit of co-operation that is rare indeed, the architects and engineers have worked together as a team. From the beginning of activity in 1933, Mr. Embury and his assistants, William Gopin and A. Gordon Lorimer, were taken into the confidence of the engineers. An outstanding result of this pooling of interests has been the high æsthetic quality of the engineering. Traditional embellishment finds no place on the Triborough structures, and gone is the inadequate building scale of previous designs.

"We set only the broad limits within which sound engineering could be performed," ex-

plained Mr. Dana, "and we left the composition of masses and details to the architect. We were fortunate indeed in having one with such a sincere appreciation of the engineer's point of view." To which Mr. Embury replies that no amount of sympathy on his part would have availed much without such concessions as the engineers made from the beginning. And this attitude of give-and-take animates the entire staff down to the lowliest draughtsman.

However much it may owe to FERA funds, to co-operation of city Park Commission, and individual enterprise, the perfect functioning of Triborough Bridge will be a monument, first of all, to the perfect functioning in unison of those who brought it into being—the architects and engineers.

Aerial view of Triborough Bridge and its connections. Rendering by Spoffard. The bridge shown to the left of Triborough is the Hell Gate Bridge of the Pennsylvania Railroad





In point of architectural style, the Chapel acknowledges no obligation to any definite tradition. The architects found it agreeable frankly to fuse certain Byzantine elements with a reticent type of Renaissance

The high altar, as will be seen on the next page, is set within a baldachin supported by four Brescia columns. The enframing walls of the semi-circular sanctuary are of gray Sienna marble

Photographs by Paul J. Weber

MAGINNIS & WALSH, ARCHITECTS

Trinity College Chapel, Washington, D. C.

« ARCHITECTURE »

AUGUST, 1935



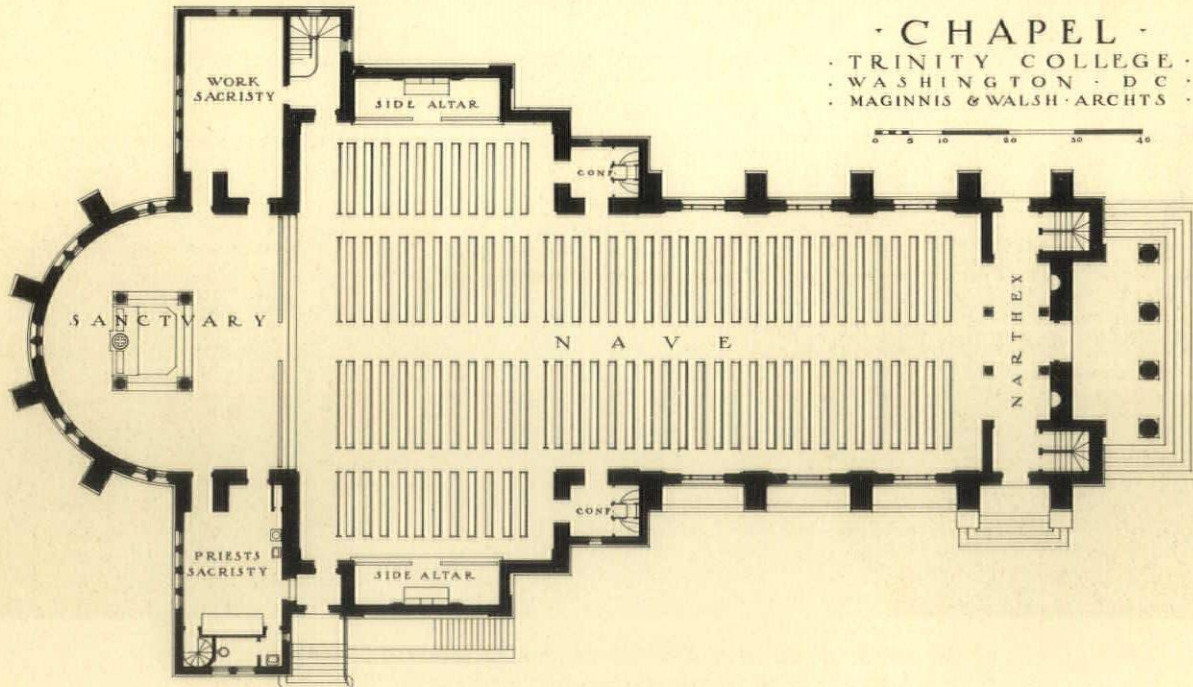
In the vault of the apse the "Coronation of the Blessed Virgin" by Bancel LaFarge is in mosaic, executed by the Ravenna Mosaic Company

« ARCHITECTURE »
AUGUST, 1935



Kentucky limestone is used for the exterior walls, the roofs being of a Mission type of tile

The Chapel has a seating capacity of nine hundred





Walls are faced inside with Briar Hill stone, the arrises in Botticino marble, and the vault of acoustic tile. Gold is used sparingly on the ribs

◀ ARCHITECTURE ▶
AUGUST, 1935



Architectural sculpture, including the tympanum, is by Ernest Pellegrini. There is a particular sort of vitality in the design, stimulated by the fact that even the ornamental elements at the top of the buttresses are functioning at high efficiency.

The Stations of the Cross, which may be seen in preceding photographs of the interior, are carved in alabaster by Albert H. Atkins

« ARCHITECTURE »
AUGUST, 1935



*One of the side altars, of which there
is one at the end of each transept*

« ARCHITECTURE »

AUGUST, 1935

THE other day I picked up a copy of *The Architectural Forum* issued in the spring and concerning itself with the matter of community housing. The number very trickily covers the development of home and housing in America, beginning with the young surveyor, George Washington, and working down to modern village planning with modern houses designed around garages and blossoming with dinettes, bathettes, kitchenettes, sub-living-rooms, electric refrigerators, air-conditioning, and all modern conveniences and lack of them.

The Forum's treatment of the subject is sane and holds a mirror up to conditions as they exist. But the reflection of the conditions as they do exist is something for us to blush for.

The little birth-control houses that are printed as examples of what can or could be done to meet the requirements of the situation are shameful both from the architectural and the sociological point of view.

They are atrocious architecturally, for the most part, because they represent an archaic, degrading idea. You can't take the constricted warrens of the cliff-dwellers, put electrical appliances and air-conditioning therein, add a garage and a tiled bathroom, and have a home.

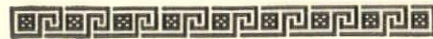
Nobody has a cat in the house nowadays, but if, in the type of house pictured in *The Forum*, one had a cat, there would not be a spot anywhere where one could swing it around by the tail.

There isn't room for a cat. As a matter of fact, there is hardly room for any living thing. The houses are merely filing spaces in which the man and wife assigned thereto may be found at such time as they are not travelling about in the automobile, for which a large part of the house structure is set aside.

There is no suitable place wherein friends may be entertained about a cheerful fireside or where they may be invited to sit down and eat and sup in a cheerful environment.

Who wants to be jammed into a Pullman alcove to be fed? Who craves a party in a living-room where, if you stretch out your legs, you have them in the garage or the bathtub?

Hospitality is dead in such a house, and without hospitality culture is very sick. These restricted, cramped houses are the homes of serfs, whereto they retire to sleep,



The Reflecting Pool

Erwin Bateman Morris

to cram their food, to care for bodily needs and requirements. Mind and soul are not considered.

They are the houses that go with a knowledge of birth control. There is no place for a child or children, no place upon the floor for them to crawl about, no place later for them to pore in privacy over their sums, no place where boys and girls of similar age may be invited in to grow up with them. Rather, the boys and girls are encouraged to go out and leave more room in the house. Go out and stand around on sidewalks or in the corner drug stores.

The influences of the home do not exist, because the houses are built without room for such influences. Later when the girls become of marriageable age, the courting is done in automobiles and night clubs where youth makes its own rules.



I HAVE said that *The Forum* was merely holding up the mirror to the state of mind of the country. I think it is questionable whether an architectural magazine should concur in that state of mind.

If the populace has arrived at the mental condition where it is willing to build houses, each of which has one-half devoted to automobile storage and the other to the processes of living, the architectural profession should not commend them or appear to second the motion. Architects should stand firm on the principle that if a house is to be built, it should not be a hovel but a place of residence.

In the old days houses were built by the moderate-income person with the belief, or at least the hope, that there would be the equivalent in present currency of five hundred or

six hundred or seven hundred dollars a year available for amortization. That five or six or seven hundred is now required to supply, maintain and replace the family automobile.

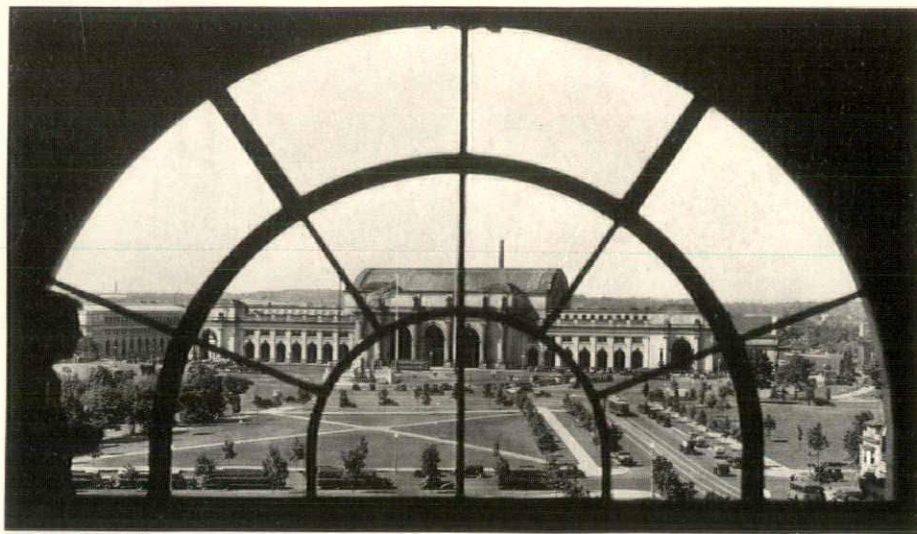
The house as a residence—to provide the influences of the home and the cultural uplift of companionship—is crowded out of the budget. All that seems to be possible is to take the idea of a constricted apartment and set it out with its own roof on a little dab of land and call it a house.

There is a little pamphlet written by Axel Oxholm and recently published by the Department of Commerce, on the Stockholm housing scheme. The theme of this development is "small but mine," and yet the houses are homes—two-story structures with possibilities for decent privacy, for room to move about, for courtship, for the children to play, for the having and keeping of friends.

There used to be a time when there was a living for many architects in the poetic occupation of designing homes. The automobile manufacturers now take most of that portion of the family income which used to be available for home buying. The homes for architects to design are smaller. It is a shame, architecturally and sociologically. And the architects ought to say: "If that's the kind of dump you want to live in, go to it. But don't go yelling around that it is either architecture or civilization."

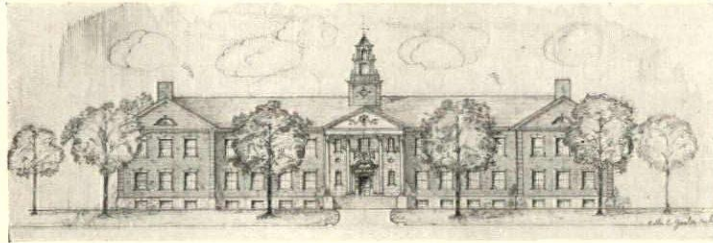
WALTER MELLOR conceived the idea of having at his house a reunion of the 1904 Architectural Class from Pennsylvania, of which he and I were members. Dave Allison, Henry Hibbs, Leicester Holland, Fred Bigger, Henry Wood, were also in the marvellous gang. The class has always conceded that it is the greatest architectural unit that was ever graduated from any university, although Dr. Laird complained that he had "forgotten why." We explained that the main reason was that we were the first class for which Paul Cret was critic, and we taught him all he knew. Within the inspiring walled garden and pleasant house in the true Mellor-Meigs tradition, we had a big time. I have seldom, if ever, experienced another alumni gathering at which youth was actually renewed.

Architectural News in Photographs

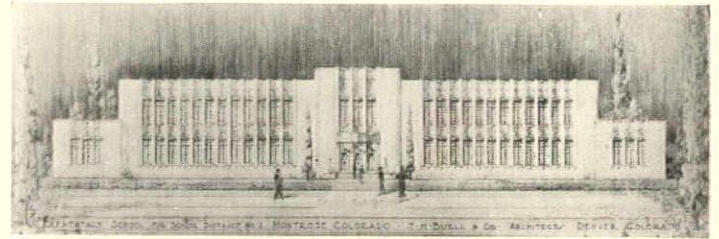


© Harris & Eving

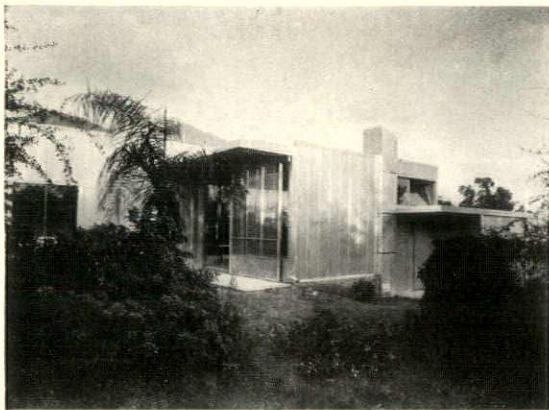
Union Station, Washington, as seen from a window in the Senate Office Building, looking across the newly parked plaza



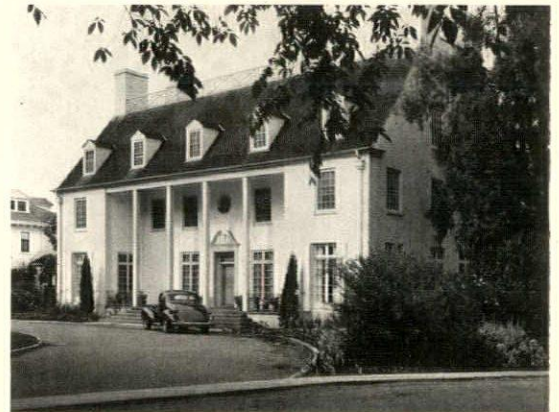
Front elevation of a civic center building for the Town of Windsor, Conn., settled in 1633. Collis E. Goslee, architect



A new elementary school building to be erected in Montrose, Colo. Cost, approximately \$75,000. T. H. Buell & Company, architects



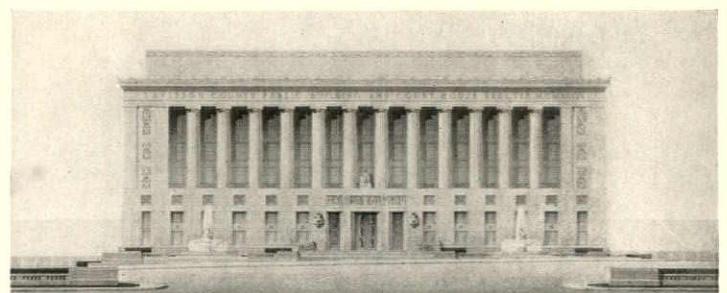
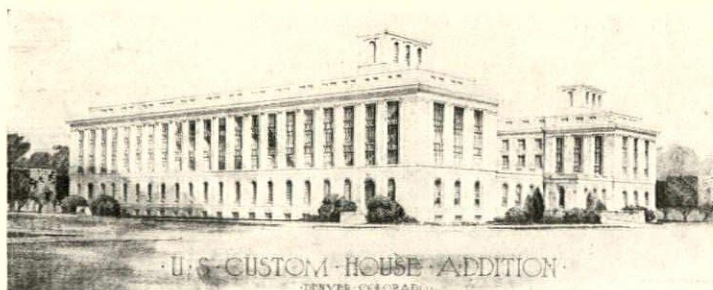
House of William Beard, Altadena, Calif., for which Richard J. Neutra, architect, was awarded the Gold Medal for 1934 by Better Homes in America



The Kappa Alpha Theta House at Stanford University, Palo Alto, Calif. John K. Branner, architect

An addition to the United States Custom House, Denver, Colo. The original building was designed by the Supervising Architect's Office; the addition by Temple H. Buell and George M. Musick, associated architects

Winning design in an invitation competition for the Davidson County Public Building and Court House, Nashville, Tenn. Emmons H. Woolwine; Frederic C. Hiron, associated architects





Bourne Bridge across Cape Cod Canal, at Bourne, Mass. Winner of Class A prize, 1934, A. I. S. C. Fay, Spofford & Thorndike, engineers



Douglas County Bridge, near Omaha, Neb. Winner of Class C prize, 1934, A. I. S. C. Designed by Assistant County Surveyor of Douglas County, Neb.



Group for Marymount College, Tarrytown, N. Y., of which the Science Building on the right has been built, and the center building, Butler Hall, is about to be built. F. B. & A. Ware, architects

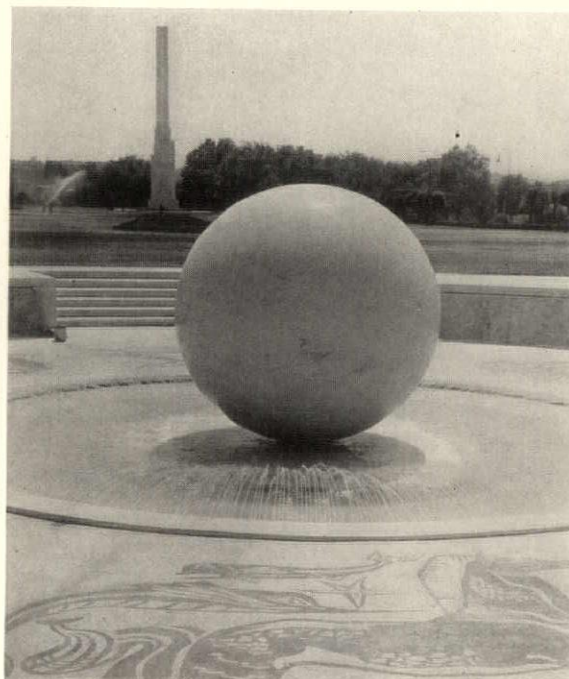


The erection of an Earley polychrome pre-fabricated house, Meridian Hill Park, Washington, D. C.

Another windowless department store for Sears, Roebuck & Co., Chicago. Nimmons, Carr & Wright, architects



The new fountain in the Foro Mussolini, Rome. Mario Paniconi & Giulio Pediconi, architects. The marble ball is three meters in diameter



Czecho architecture is opening up its façades with more glass area—a new restaurant and hotel in Prague



Rearrangement of Napoleon III's stable courtyard in the Louvre provides greater spaciousness for Renaissance sculpture



Courtesy of the Italian Tourist Information Office

BOOK REVIEWS

PHILIP WEBB AND HIS WORK. By W. R. LETHABY. 234 pages, 5 by 7½ inches. Illustrations from photographs and drawings. Printed in Great Britain. New York: 1935: Oxford University Press. \$2.50.

An architect who is known, partly at least, because of The Red House, which he designed for his friend, William Morris; a pre-Raphaelite whose personal history is perhaps less important than the group of interesting men who were contemporaries and immediate predecessors: Pugin, Sir Gilbert Scott, George Edmund Street, Alfred Waterhouse, Richard Norman Shaw, Edward W. Godwin, Richard Phené Spiers, and others.

LANDSCAPE PAINTING. A Method for Students. By FRANK FORREST FREDERICK. 22 pages, 6 by 9 inches. Illustrations from photographs and drawings. Pamphlet binding. Trenton, N. J.: 1935: The School of Industrial Arts. 75 cents; 50 cents each for five or more copies to same address.

A brief, but carefully presented, course in painting for students, in which the author lays some stress upon the value of using color in a turpentine varnish medium for architectural subjects.

SIX WAYS TO FIGURE RADIATION. Edited by HAROLD L. ALT. 64 pages, 3¾ by 6½ inches. Illustrations from plans and diagrams. Chicago: 1935: Domestic Engineering Co., 1900 Prairie Avenue. \$2.

A handbook bringing together six standard and widely recognized methods of figuring radiation, together with comment on the variations, advantages, and disadvantages of each method.

PLANNING PROBLEMS OF CITY, REGION, STATE AND NATION. 151 pages, 6 by 9 inches. Philadelphia: 1934: William F. Fell Company. \$3.

A collection of the papers presented at the Twenty-sixth National Conference on City Planning at St. Louis, October 22 to 24, 1934. The meeting was sponsored jointly by the National Conference on City Planning and the American Civic Association, and brought together a large gathering of authorities well qualified to speak upon their respective branches of the subject.

AMERICAN SOCIETY OF HEATING AND VENTILATING ENGINEERS GUIDE, 1935. Vol. 13. 1019 pages, 6 by 9 inches. Illustrations from graphs, plans, and diagrams. New York: 1935: American Society of Heating and Ventilating Engineers. \$5.

A handbook of service for the profession, containing reference data on design and specification writing, based on the transactions of the society, investigations of the research laboratory and co-operating institutions, and the practice of members and friends of the Society.

HOUSING PROBLEMS AND POSSIBILITIES IN THE UNITED STATES. By FRANK WATSON. 100 pages, 5¼ by 7 inches. Illustrations from charts and graphs. New York: 1935: Harper & Brothers. \$1.25.

The author, who has been closely connected with Federal work in Washington, with the RFC and the FHA, clears away some of the fog surrounding this national problem of building shelter.

GARDEN DESIGN. The Principles of Abstract Design as Applied to Landscape Composition. By MARJORIE SEWELL CAUTLEY. Foreword by WILLIAM EMERSON. 312 pages, 7 by 9¼ inches. Illustrations from photographs and drawings, including color chart. New York: 1935: Dodd, Mead & Company. \$5.

Mrs. Cautley, who is responsible for the landscaping of several important large-scale housing projects, in addition to many private estates, also teaches her profession at the Massachusetts Institute of Technology. One should not be misled by the subtitle, for the book is intensely practical, full of working suggestions, planting lists, and the like. Mrs. Cautley goes beyond most published planting lists in giving some attention to the texture of the material as well as its form, color, and period of blooming. The book should be useful not only to students and laymen, but to the members of the author's own profession.

JONES' ESTIMATING TABLES on Air Requirements and Duct Sizes for Heating and Air Conditioning. By ERNEST F. JONES. 68 pages, 5¾ by 8¾ inches. Illustrations from diagrams. Chicago: 1934: Domestic Engineering Co., 1900 Prairie Avenue. \$2.

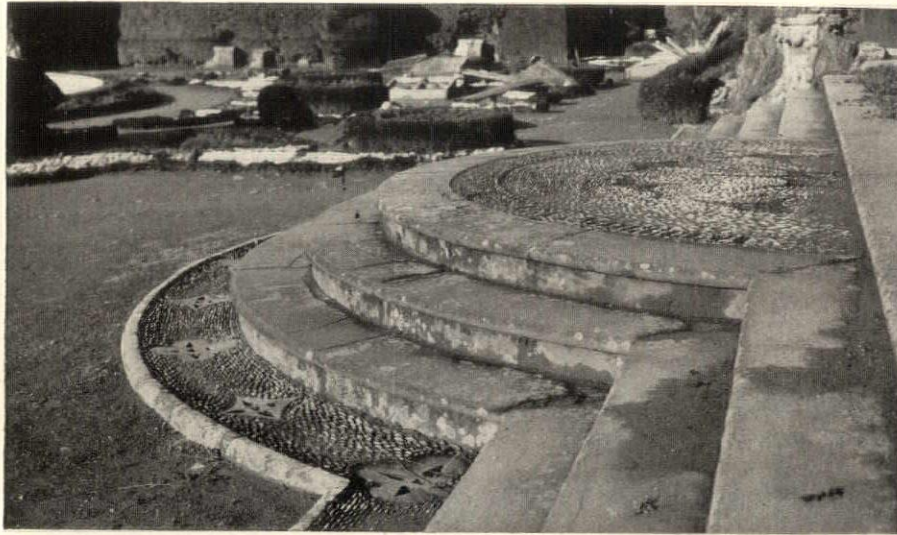
Bringing together the new data upon which the requirements for forced air heating and air conditioning can be estimated. There are tables of duct, register and riser sizes. The book does not cover summer cooling.

THE HOUSE FOR MODERN LIVING. Arranged by the Editors of *The Architectural Forum*. 141 pages, 9¼ by 12¼ inches. Illustrations from drawings and photographs. Pamphlet binding. New York: 1935: Harcourt, Brace & Company. \$1.50.

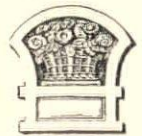
A record, for the public, resulting from the General Electric Company's architectural competition held early this year. In addition to the prize winners, there are forty-eight selected entries and seven prize houses from the 1935 Better Homes in America competition.

EXPERIMENTS ON EXTERIOR WATER-PROOFING MATERIALS FOR MASONRY. Research Paper RP771. By DANIEL W. KESSLER. 27 pages, 6 by 9¼ inches. Illustrations from diagrams and photographs. Pamphlet binding. Washington: 1935: U. S. Department of Commerce, Bureau of Standards. 5 cents.

Villa Collodi



Lucca, Italy



GARDEN STEPS

FROM A COLLECTION OF PHOTOGRAPHS IN THE OFFICES OF WILLIAM PITKIN, JR., AND SEWARD H. MOTT, LANDSCAPE ARCHITECTS

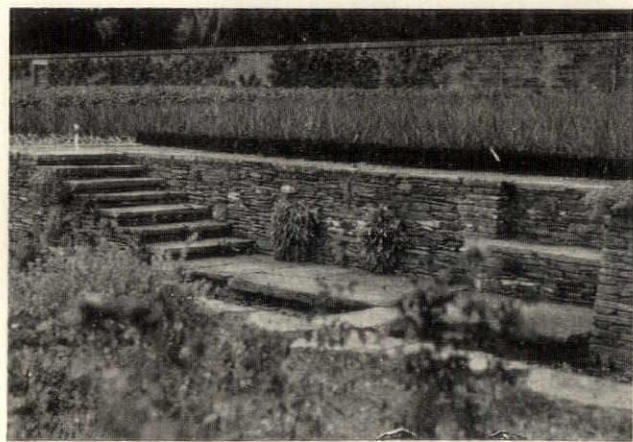
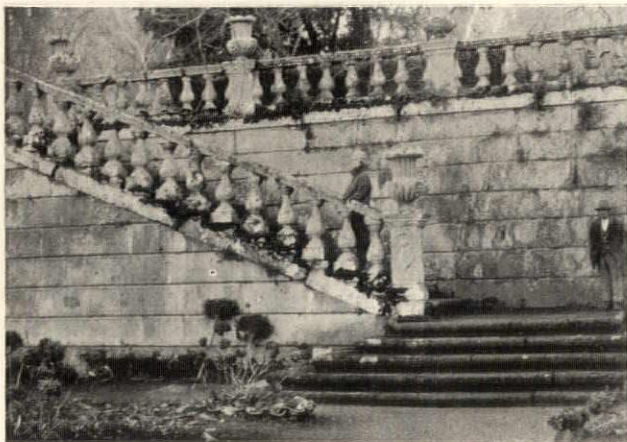


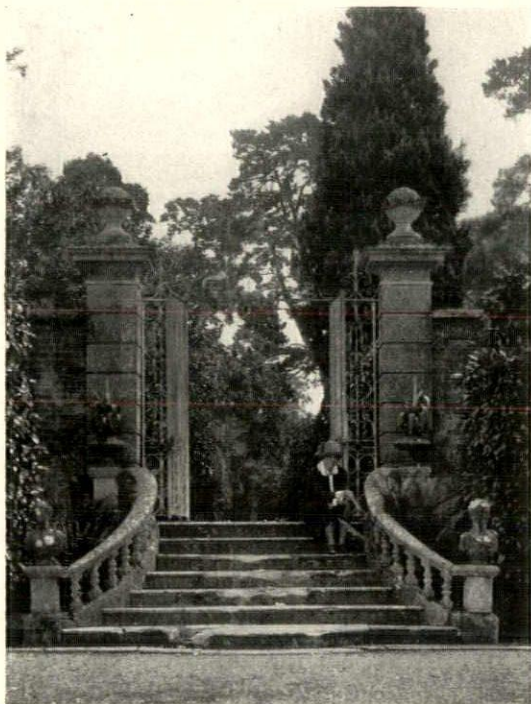
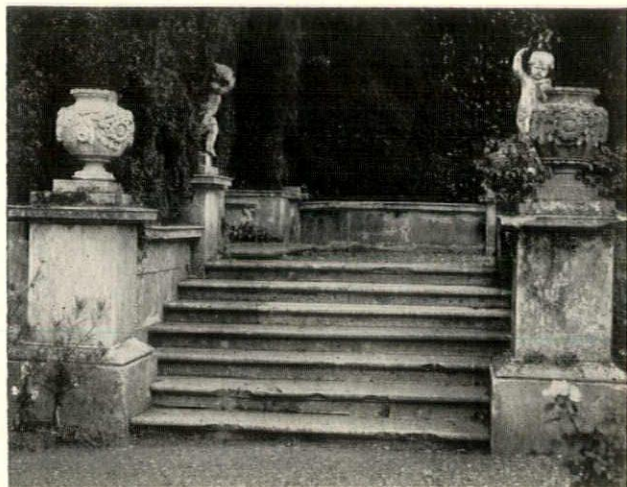
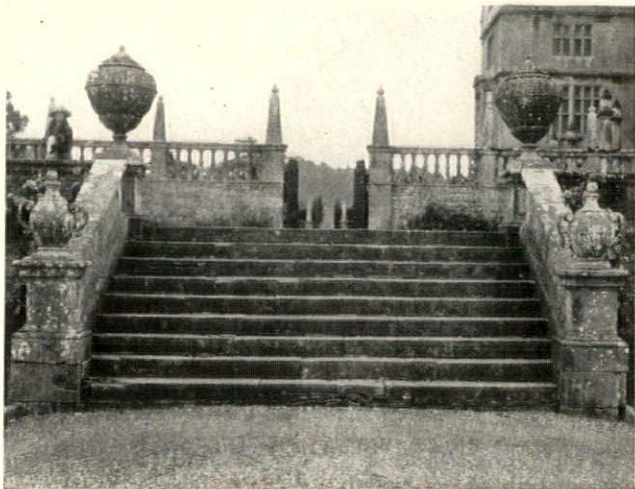
Caparola, Italy

Villa d'Este, Tivoli

Below at left: Villa Lante, Italy

Below at right: In the garden at "Hestercombe." Sir Edward L. Lutyens, architect





Above at left: "Montacute," Somerset, England

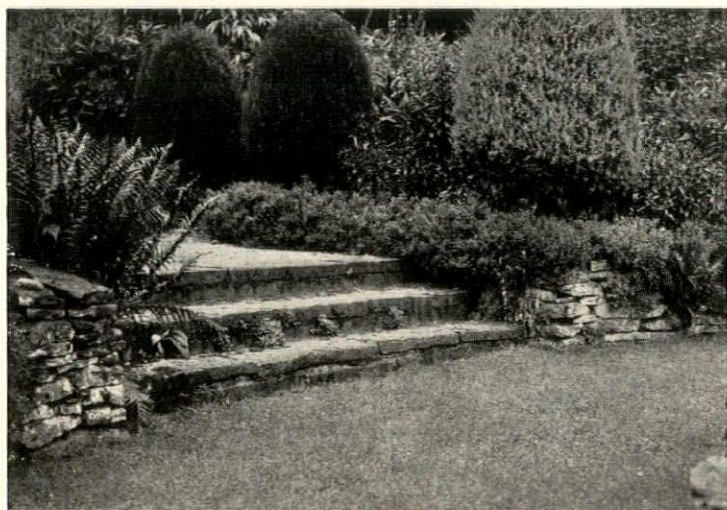
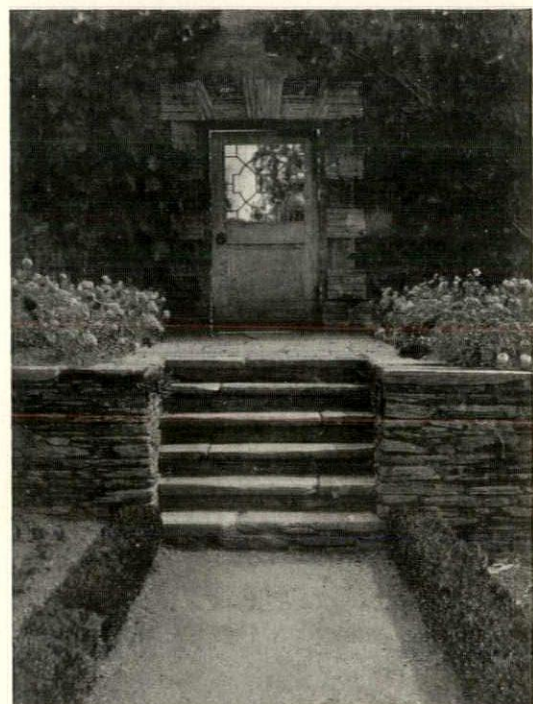
Above at right: Wilton House, Wilts, England

Leading from a gateway in an English garden

"Hestercombe." Sir Edward L. Lutyens, architect

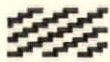
Below at left: "Westbrook," England. Designed by Thackeray Turnet

Below at right: In England—the stonework laid up with soil pockets



THE debate still waxes fiercely as to whether the architect can render his professional service on small houses, and if so, how. The details which engage his conscientious attention are just as numerous in the small house as in the larger one. In fact, some problems that are minor ones in the construction of the large house often become major considerations in the small one. The mere element of time consumed in getting around to many small jobs—for there must be many commissions of this small size in progress simultaneously if the architect is to live—is a discouraging factor. Another difficulty lies in the fact that the contractor who does this small work usually has no organization; even though willing and conscientious, he has to be nursed, and there is no one to do the nursing but the architect.

It would be easy to prolong the list of special difficulties in small-house practice and to decide at the end that the game is not worth the candle. Unfortunately, however, we are not dealing with an abstract question, but rather with a set of inexorable facts. The reader, like the author, is probably an architect who heretofore has enjoyed a more lucrative practice but is now faced with the necessity of adjusting himself to execute the work that is available at the moment—and moreover the small-house problem is unquestionably an interesting one to solve. So let us consider *how* to do this type of work rather than whether or not it is worth attempting.



The solution of the problem certainly does not rest with those in the profession who think the architect should not soil his hands with anything other than pencil dust. It means hard work, tact, patience, and ability to administer the business as well as the ability to design. In other words, the margin of profit, in the construction of small houses, is not sufficient to make it worth while for the architect to handle this class of work as he has been accustomed to handling larger work, and have a well-organized contractor take care of all the so-called dirty work.

Since neither the architect nor the contractor can afford a heavy overhead, it is quite evident that a compact but efficient organization is necessary. The starting point is,

Supervising the Small House

By *Alton L. Craft*

therefore, in the architect's office. An architect can have systems and forms galore, but if the handling of details isn't done promptly and correctly, a large part of the supervision work is wasted. Forms, on which to write up each job, are found to be useful. As the inspection is made, the field report is made up and the requests for letters, etc., to be written and details to be drawn are noted thereon. The report is mailed in to the office and a copy is retained in the field. When the report reaches the office it is received by a man who is an executive secretary—one who knows accounting and construction work. He immediately confirms all verbal instructions, criticisms, etc., prepares contracts or makes 'phone calls as may be required. From this report the office knows what detail drawings are required in the field, and the executive secretary prepares a memorandum advising the field man what has been done about these matters. With this memorandum, copies of all letters, contracts, etc., are mailed to the field man, all on the same day the report is received.

Requisitions for payments to contractors present a new problem to the architect in small-house work. The contractor, being a mechanic himself and working eight hours each day on the job, cannot understand why he should write his requisition and mail it to the architect. He looks to the architect in the field for his money and usually doesn't bother about it until it is time to pay his bills. The accountant, however, insists that he must have an invoice before he makes an entry in the owner's memorandum account. The architect must recognize these conflicts and realize the underlying principles of both. On one hand he has a working contractor doing a good job at a low price; if he disturbs the habits of this man, prices will go up on the next job. On the other hand, the architect has in his own office an

accountant who is methodical and must remain so. A note on the daily report, that the mason is entitled to a payment, satisfies the accountant, the mason gets his money promptly, and he remains loyal and happy. Before approving the payment, however, the architect must know the status of the mason's account, this being especially important because an over-payment is more serious than no payment. In this work, again let it be said, the margin of safety is small. To get around this difficulty the architect should have a copy of all requisitions in his field file at all times.

Moreover, he should have in his field file copies of all change orders, whether they represent addition, deduction or no price change. These change orders are usually prompted by notes on the field report, but it often occurs that they originate in the office.

Oftentimes the so-called working contractor will deny having received copies of details or other documents pertaining to his work. To offset this convenient habit, it is well to have him sign a receipt upon receiving such documents. This receipt is returned to the office, a notation on the field report serving as a check at the office and a reminder in the field.

To expedite the distribution of forms and copies thereof, various colors are used to indicate their proper destination. Thus, the owner's copy is white, the contractor's copy is pink, the office copy yellow, and the field man's copy is blue. This enables quick identification and saves many seconds of valuable time.



In the matter of new business we have found that a similar method of handling leads, and especially when the lead results in a new client, is valuable. The field man can often follow up leads in outlying territory. He is given a blue lead card. If it develops into a new job, the office requires preliminary data, about which all architects are familiar. However, with the small house there is no time for another firm member to take a day off and go for this information. Moreover, the field man is perhaps better fitted to obtain essential facts quickly.

This data is vital to the writing of specifications, and the field man, let us say, performs this function.

SINCE the days of that era, now long beyond recall, when architects as a class were among those who held their heads high in the scheme of things, the architect has found it necessary to reduce his office space. As things progressively went from bad to worse during a depression which stifled the building industry, the architect gradually retreated before it, each year relinquishing space commensurate with the decline which evidenced itself in the volume of business. On each such successive retrenchment, more and more of the office and drafting paraphernalia was placed in storage, until so much of it was put away that, were he to be awarded a contract of even modest proportion, it became doubtful whether it could have been prosecuted with any degree of efficiency.

The office of T. H. Buell & Company was no exception. The large drafting-room had, subsequently to their vacating it, been subdivided into smaller offices by the owners of the building; even should business improve to the extent that would warrant its occupancy again, it was no longer available. So many new

What Price Office Space?

TEMPLE H. BUELL, DENVER ARCHITECT, CONTEMPLATES THE WIDE VARIATIONS IN SPACE REQUIRED AND COMBINES A REMODELLING JOB WITH A NEW SET OF OFFICES

enterprises were coming into Denver with the revival that it was questionable whether adequate quarters could again be obtained by them either in that building or in any other of the same character, without a large outlay of expense. The cost of changing partitions, etc., would have to be amortized over the period of the lease they negotiated, and have to be charged directly to overhead. Moreover, the advisability of entering into a long-term lease, in the light of past experience, was also a moot question.

Analyzing the situation, it became increasingly evident to them, what so many companies in correlated lines of endeavor had found, that it was unsound economically to occupy space in the higher-rental buildings. Once this premise had been established, and then only after much deliberation, they began

a search for a location in the vicinity which would in no way endanger the prestige which they felt they had established in the community, where the same amount of space which they had formerly occupied could be obtained at a figure they felt the business could afford in times such as the present. It must be a place where they would not have to jeopardize their office efficiency by reducing their floor area in periods of declining business, and where they would be in a position to take advantage immediately of a favorable upswing.

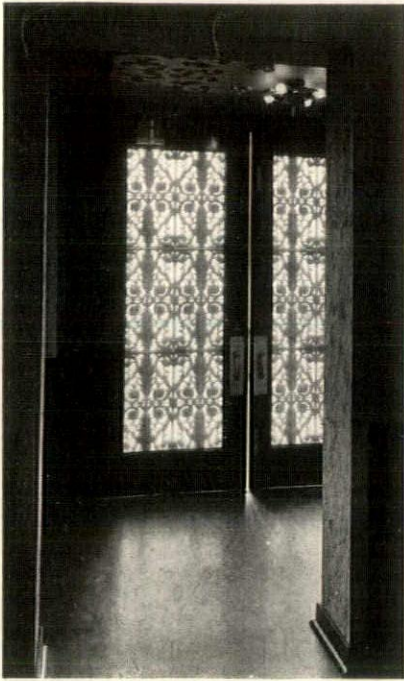
After considerable investigation, a building was found only three blocks from their previous office, and situated on one of the most important intersections in the city. This, because of its dilapidated and run-down condition, was no longer in demand, and its rentals had declined to an extent where the property had, for several years, been unable to pay taxes and interest. Although in dire distress, and with foreclosure imminent, the owners were either unable or unwilling to modernize it, although patently it was the solution of their difficulties. Through inquiry it was found that the title to this corner could be obtained at a nominal figure. The holders of the first mortgage were willing, rather than to foreclose, to increase their incumbrance of the property should some one be found who was in a position to improve and modernize the structure.



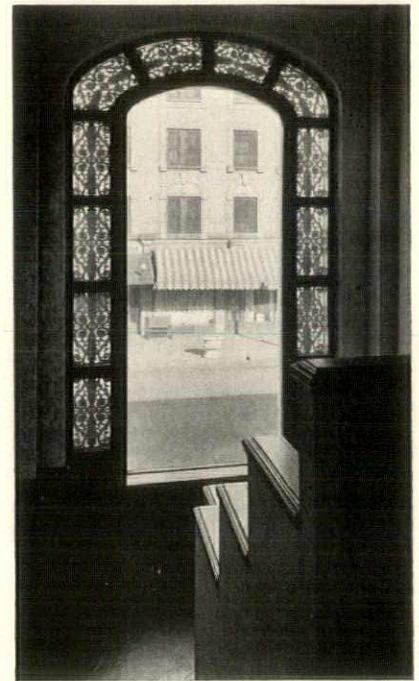
Obsolescence had carried the building below the economic danger line



As remodeled, without much structural change, it afforded rentable store and office space in addition to the Buell offices



*A corner of the library
The drafting-room is shown below*



Inside the entrance The stair lobby

It was on this basis that T. H. Buell & Company consummated the deal, agreeing to defray such additional expense which might be incurred. Their doing so was justified by the fact that five of the six stores on the ground floor, which were provided for in the work of remodelling, were leased advantageously within thirty days after completion, and a large proportion of the space on the

second floor, exclusive of that part which they had reserved for themselves, has since been occupied.

Even allowing the usual percentage for vacancies and depreciation, as well as for the fixed charges, such as taxes, interest and amortization which must be met, their enterprise was rewarded in providing a home for them which will permit as much expansion as they feel the

business would justify for the next ten years, at a reasonable rental.

In addition, their offices are laid out in a manner permitting the maximum efficiency from an operating standpoint, as well as being of a much more lavish nature as far as appointments are concerned than they felt they could afford with the large rent they were paying previously.



A Proportional Scale for Rectangles

By Rutherford Boyd

A COUPLE of lines with the T-square, two more with the triangle, and there between your thumbtacks you have—just another rectangle! Once the blank stare of a new-born rectangle meant something—you picked it up and breathed life into it as you worked with it. But now it stares back, blanker than ever before—sides so straight, so parallel, and right angles, four of them, so full of rectitude. Much too familiar. Too many—the whole family of rectangles, long, square, and short. No skill, no special aptitude to draw these shopworn shapes! You have to put everything into them: and in return they remain indifferent and inert.

Yet they are all of a deceptive simplicity: there is nothing naïve about their complete abstraction, their remoteness from nature. We forget the long span of our achievement since first we made rectangles. We seem to have lost that sense of their shape, we no longer can feel in them that constant pulse of their proportion, that beats out rhythm in rectangles. Not the pulse of our thoughts that will animate it—rather the changeless identity of its own shape, its own proportion.



With that word—proportion—we may recapture thrilling perceptions of the past when these shapes so interested the ancients that they endowed them with human attributes, even with magic and mystery. Knowledge to them was still so brightly new, not yet embalmed in printed axioms and theories. They experimented, they worked out each problem; in practice it became a part of them, of their experience. We who must accept so much as finished, now lay out rectangles by the inch or the foot and forget, in thinking of their size, that distinctive element of their shape, proportion.

Look again at that form before you: experiment and become acquainted with some of the proportional power in that rectangle of your selection. It may be any shape (except the square), such as that shown in Fig. 1. Do not measure it in inches—think of it only in its proportion of one side to the other. With its constant angles, it is in its dimensional ratio that proportional identity exists in each different rectangle.

First draw lightly the two diagonals,

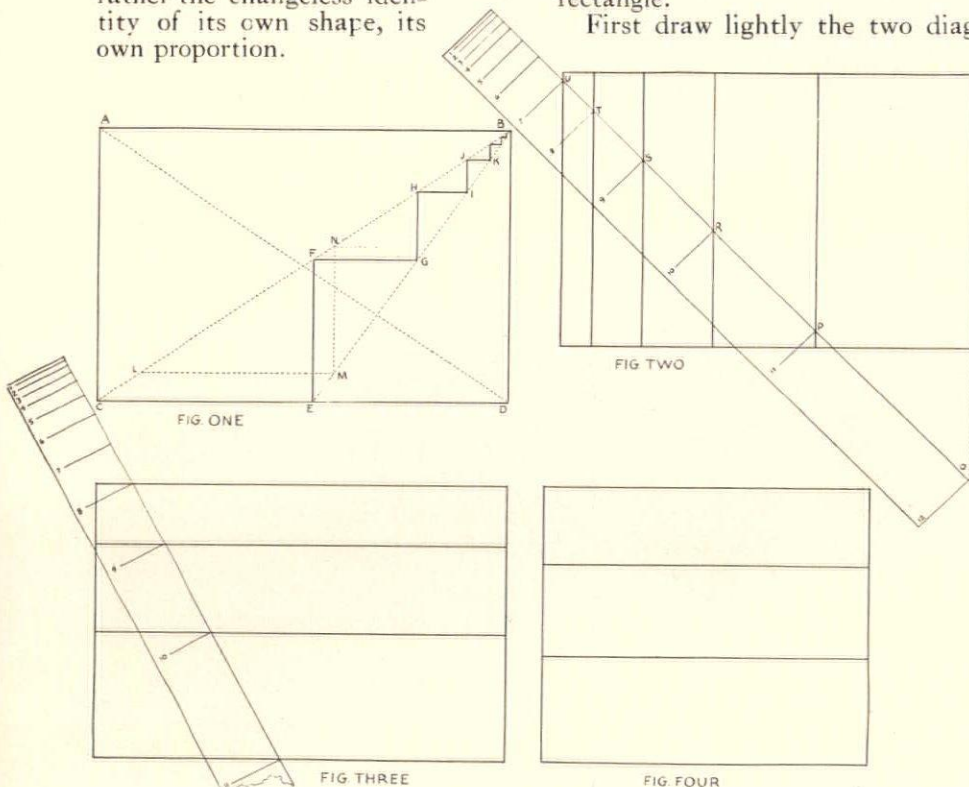
then from one corner draw a line BE perpendicular to the opposite diagonal. From E draw EF perpendicular to CD , then each successive "step" at right angles between the two lines CB and BE . These "steps," CE , EF , FG , GH , etc., are in the same proportion taken in their order, as the sides of the rectangle DC and CA . Then use a straight-edged thin cardboard or stiff paper, tick off accurately these steps in order on your "proportional scale," which applies only to a rectangle of this shape. A better scale can be made of sheet celluloid or other transparent material, if the rectangle is one that you will be using again and again, as indicated across Fig. 2. Here we have twelve steps, or terms, in this scale of proportion. You may obtain a larger scale in this same proportion by continuing the steps in Fig. 1 between the two dotted lines extended beyond the rectangle, or a smaller scale, beginning at any point L and constructing LM , MN , etc. In practice, however, you must work with only one size scale within the rectangle.

In Fig. 2 is developed a sequence of five vertical spaces. Place your scale across the rectangle so that any five parts extend exactly from side to side of your figure: in this case the five-scale parts 6 to 11 are too short, and 7 to 12 too long, so extend the side as far as O and accurately mark off the parts at P , R , S , T . The verticals through these points set up in the rectangle a sequence of five areas in the proportion of the scale.



Fig. 3 shows a sequence of three horizontal parts obtained by slanting the scale so that 8 and 11 coincide with top and base. Mark off 9 and 10 from the scale and draw horizontals through them. The same result is constructed if parts 9 to 12 are used with the scale at a greater slant to the base.

In Fig. 4 we use a shorter rectangle of the same height to demonstrate the proportional contrast in these shapes. We construct a sequence of three parts here, precisely similar in relation to this rectangle to



those parts in Fig. 3. As the two sides of the shorter rectangle are nearer to each other in length, so are the terms in the sequence of the scale of this shape.



This is the obvious method of developing a space with this device, but most occasions demand a more varied treatment. Fig. 5 shows a tentative division, by the dotted freehand horizontal lines through *A*, *B*, *C*, placed "by eye" wherever you like. The rectangle might be, for instance, an interior wall in elevation. Place your scale over the largest part slanted to fit it exactly as the dotted line shows from *A* to *B*, equalling the part 12 of your scale. Draw lightly a line through the rectangle on this slant and by trial note the nearest parts on your scale to your sketched-in divisions. You obtain a new sequence of 5, 12, 9, 3. Now on a stiff paper straight edge accurately transfer from the scale these parts in order. Place this temporary scale to exactly coincide with top and base and follow the usual method to divide your rectangle. When you see the result you may decide to change one or more parts. In Fig. 6 we have increased 9 to 10 on our temporary scale and this consistently decreases the other parts through 5, 12, and 3, as drawn. This is a significant contrast in proportional themes, and experiments of this kind will amply repay your study.

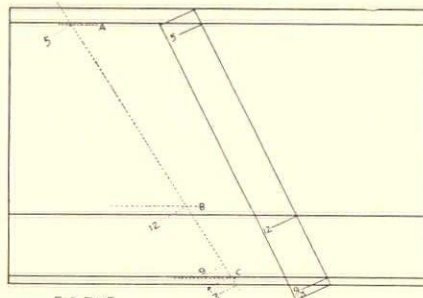


FIG FIVE

So far we have applied proportion in one direction only in each diagram. In Fig. 7 we continue the arrangements shown in Fig. 5 with the four heights in a sequence of 5, 12, 9, 3. Suppose we sketch in a symmetrical arrangement as shown by the dotted verticals *B*, *C*, *D*, *E*, *F*, *G*, as being what we roughly desire in vertical divisions. Mark off your centre at *H* by the diagonals. Exactly at right angles to the slope of your scale lay off lightly the new slope for your other sequence. Mark off along this slope the nearest equivalents, as before, and in this case you arrive at a sequence of 3, 8, 3, 11, 8, 3, 11, 8, 3. The eleventh term overlaps to the extent of the third term, so that the entire sequence of eleven parts is defined as you complete your diagram.



Fig. 8 shows a more informal arrangement in which we begin with horizontal approximations. We indicate with dotted verticals our first "guesses," as at 9, 8, and 12. Develop a temporary scale, as before, in this sequence: accurately mark it off on the proper slope, as shown above the dotted slope. Then at right angles draw the other slope for your scale and develop from your "sketch" positions the final divisions at 8, 12, 5, 6.

The square will not produce a scale by this method: in fact, for any short rectangle, as in Fig. 9, another

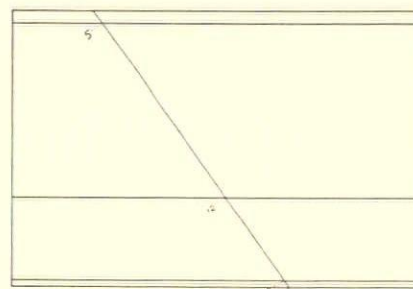


FIG SIX

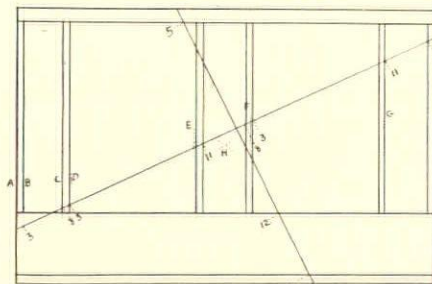


FIG SEVEN

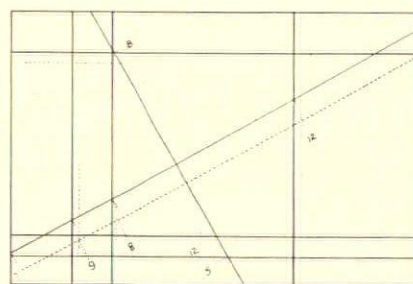


FIG EIGHT

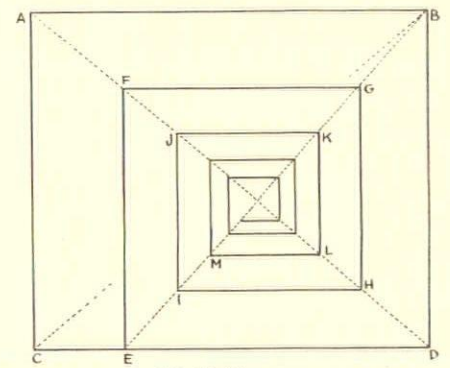


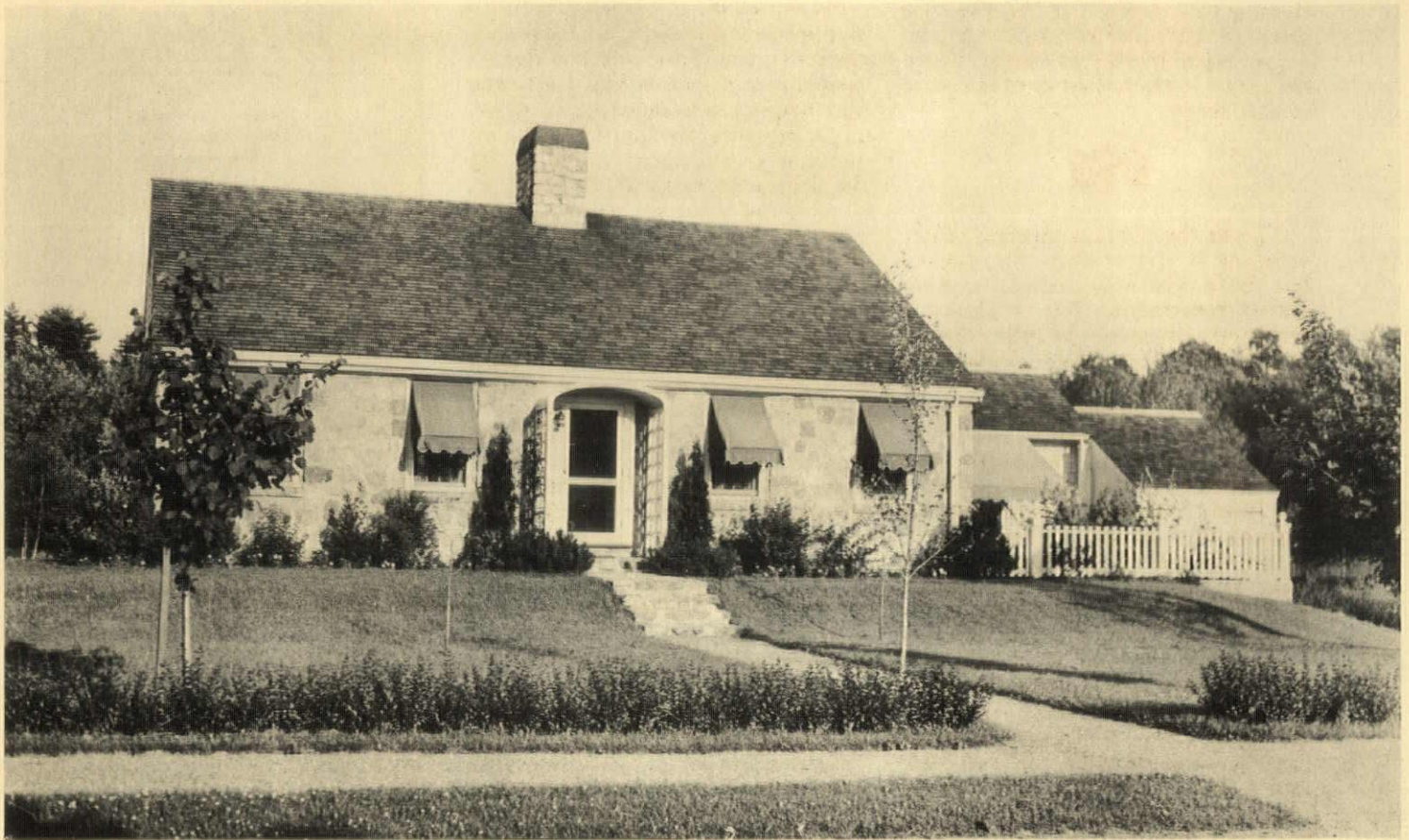
FIG. NINE

construction should be used, since the steps in your scale would be too small for practical use, as the distance *CE* indicates. Draw diagonal *AD* and its perpendicular *BE*. From *E* draw *EF*, then *FG* at right angles to intersect *BE* in *G*. And in this manner proceed as far as convenient, developing *GH*, *HI*, *IJ*, *JK*, etc. Lay off these lengths as before, and you have your proportional scale for this rectangle.

This is a practical, working demonstration, but the entire method is capable of "elegant" proof. Remember, your horizontal and vertical scales must be plotted exactly at right angles, whatever their slope in the figure. You will soon observe, when you fit your first sequence accurately, that the other sequence at right angles will have slight remainders or discrepancies. This is the case in most rectangles—there are notable exceptions to the general run of rectangles that are relatively more highly organized in proportional relations. In these their "scale" will function perfectly—but that is too technical to develop further in these pages.



It is true that this device of a proportional scale is a drafting-room short cut, but it will also stimulate the designer to a keen perception of a proportional unity, while he integrates into his shape the proportions that belong to that rectangle. Of course if you happen to be that rare being with an infallible sense of proportion, you are probably beyond all this! But if you can perceive that proportion is innately of the form within which you work, then your selections and discriminations in design must be in accord with this abstract scheme of space. For you this knowledge will mean more power.



HOUSE ON AMHERST ROAD
WELLESLEY, MASS.

Kilham, Hopkins & Greeley
ARCHITECTS

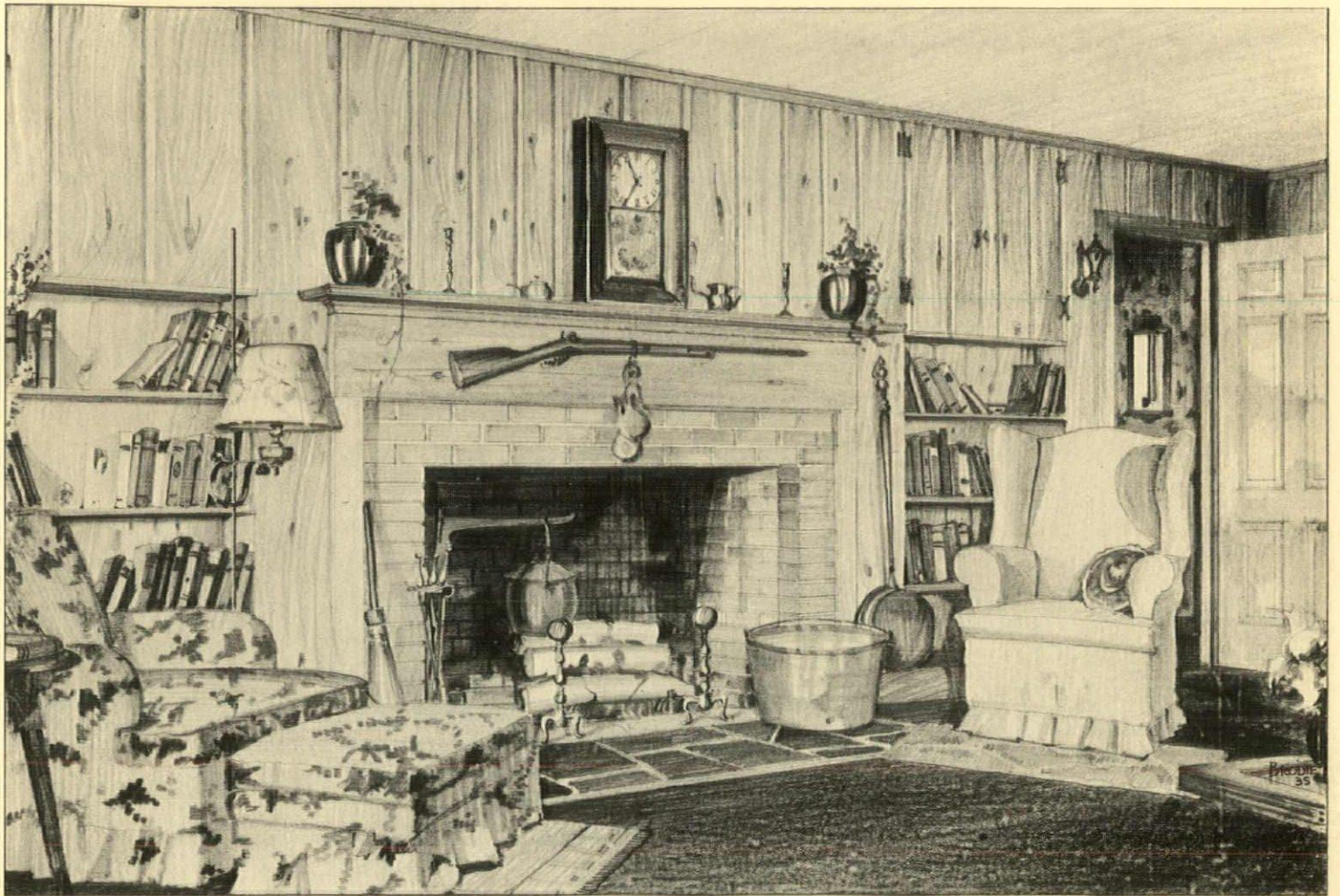
“If you ask us how I know that this is a good house, our first answer is that it sold long before it was finished; second, that it is being copied; third, that it is practically all meat and no bone; and fourth, that it is built of local stone, which is used all too little in small New England houses.”

—KILHAM, HOPKINS & GREELEY

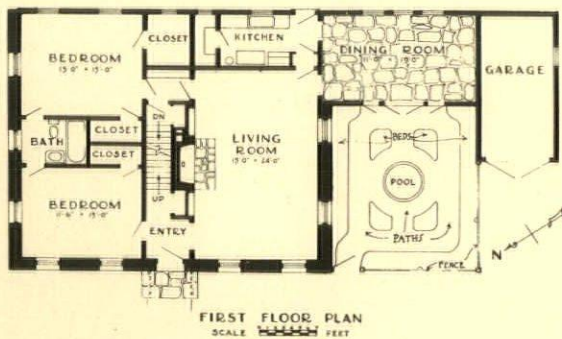
In view of the fact that the architectural profession will unquestionably devote more of its energies during the next few years at least to the design of the small house, we have asked one hundred architects to send us, each, the best small house that he has designed. These will be published from time 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

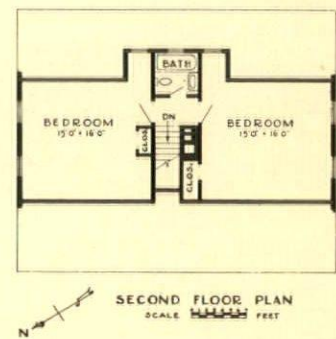
« ARCHITECTURE »
AUGUST, 1935



The house contains in a simple and compact form a rather large amount of accommodation. Living-room, dining-room, and terrace form a section of living quarters that is perhaps unique. In equipment, there are all the usual modern conveniences, including automatic oil heat



The plan is a variation of the central-hall type, but departs from it rather radically in the use of half of the first floor for bedroom space, and in the extension of the living quarters about a small fenced-in garden





The whole group is enclosed in its compound wall, with high trees at the north only, so that there is no shadow cast on the living area. The place is maintained as a contrast with the city and professional life. All planting dependent upon water was eliminated. A paving of redwood blocks was used in the yard so that this may be used for the daily life of the place—and incidentally, it obviates planting in this area

FARM HOUSE OF MRS. WARREN GREGORY
SANTA CRUZ MOUNTAINS, CALIFORNIA

William Wilson Wurster

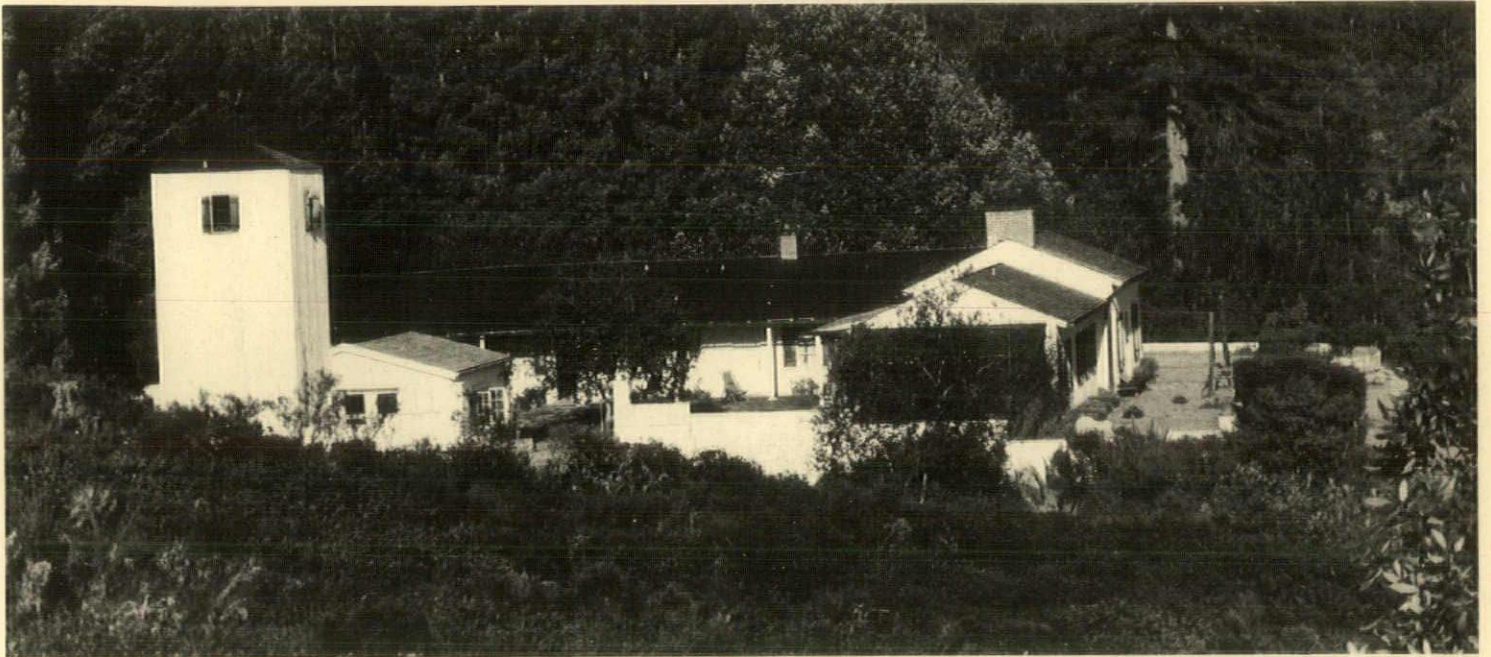
ARCHITECT

“This was a happy job from start to finish, for utmost co-operation lifted it far higher than any one of us could have brought about. Both the actual plan and appearance are not too ‘busy’ for really simple living.”

—WILLIAM WILSON WURSTER

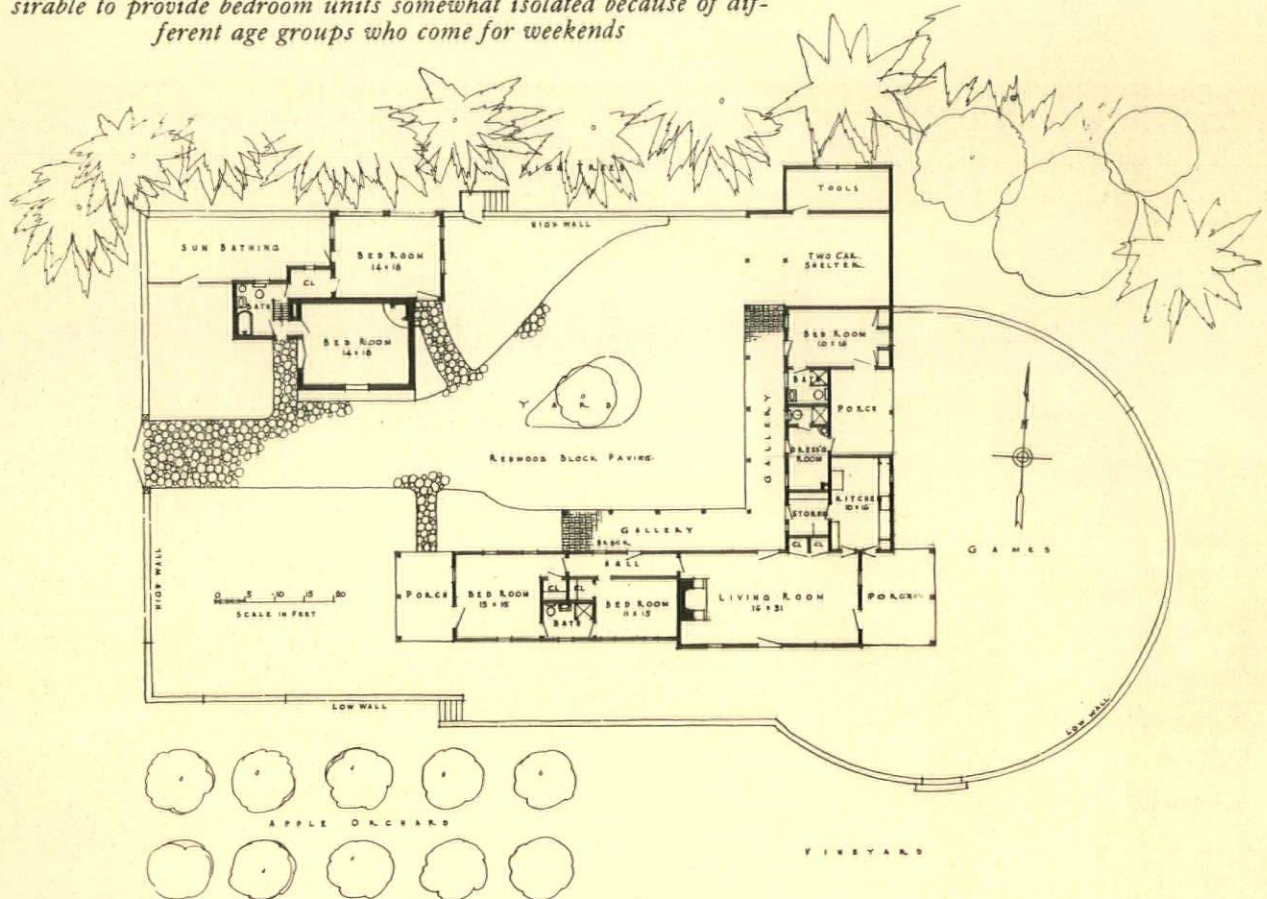
ONE HUNDRED SMALL HOUSES

« ARCHITECTURE »
AUGUST, 1935



For the outside walls rough vertical boards are used, simply whitewashed. On the roof, untreated cedar shingles have weathered very dark in color. The outside trim is painted white with solid shutters of the natural redwood

Domestic help comes from the neighboring mountain farms, so no provision was necessary for service sleeping quarters. It was desirable to provide bedroom units somewhat isolated because of different age groups who come for weekends





The house is not lived in continuously, and can be securely closed by the solid redwood shutters

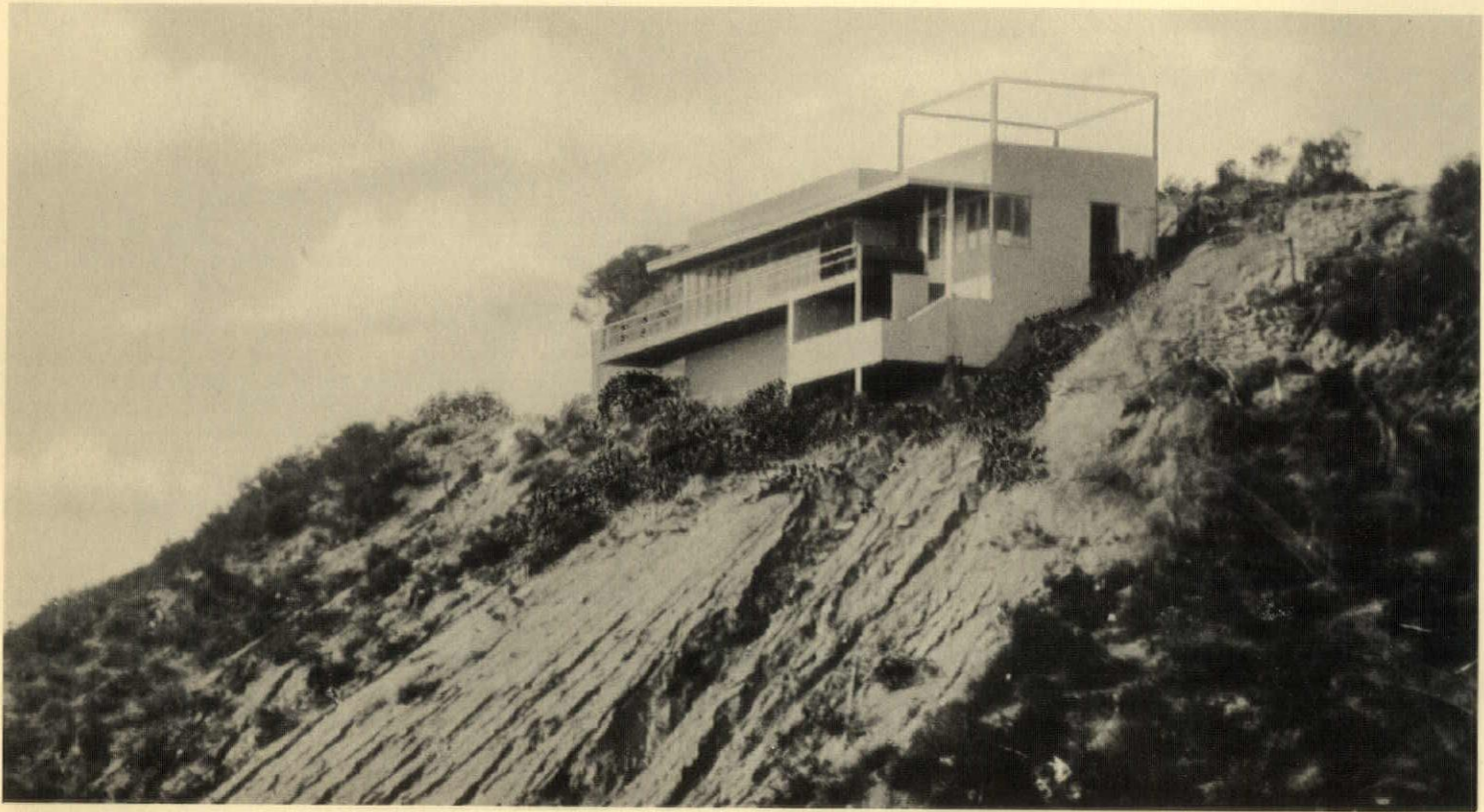
The paving of redwood blocks is not of the usual squared type, but rather, thick slices of the native trees





The interior of the house is finished in the simplest possible manner with boards placed vertically, and painted white with cold-water paint. This same paint is applied over the chimney and fireplace brick. For the floor, 12 by 24 in. wood slabs are laid in a basket-weave pattern

ARCHITECTURE ➤
AUGUST, 1935



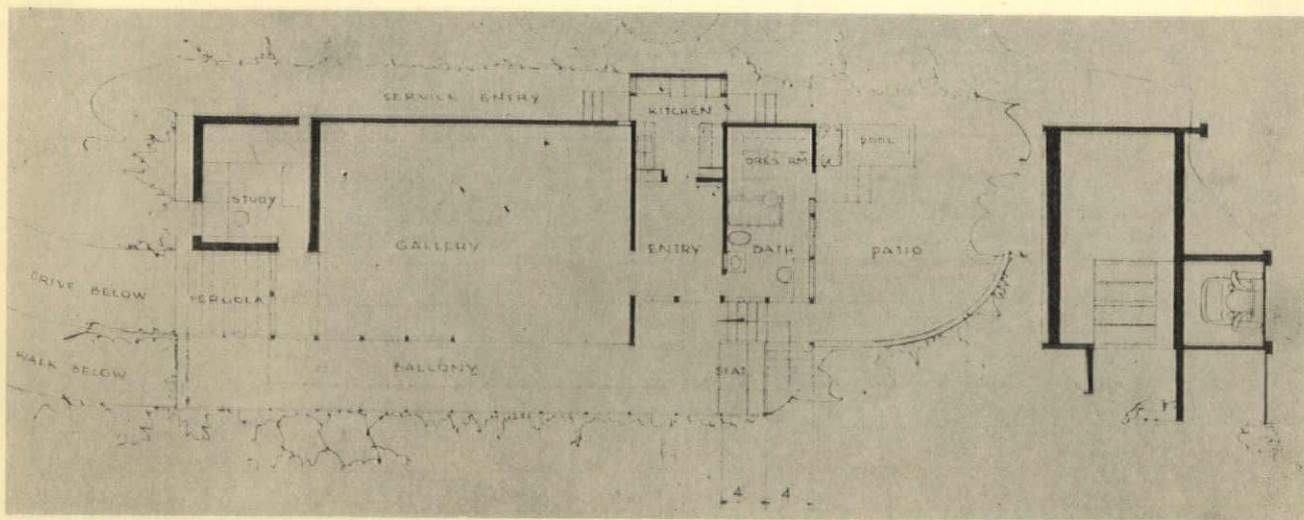
HOUSE OF MME. GALKA SCHEYER
SANTA MONICA MOUNTAINS, CALIFORNIA

Richard J. Neutra

ARCHITECT

GREGORY AIN, COLLABORATOR

"All the houses which I was privileged to detail were happy work to me. Still this mountain house gladdened my heart beyond the rule, because it offered proof that it may take but moderate means to fulfill even peculiarly interesting requirements."
—RICHARD J. NEUTRA

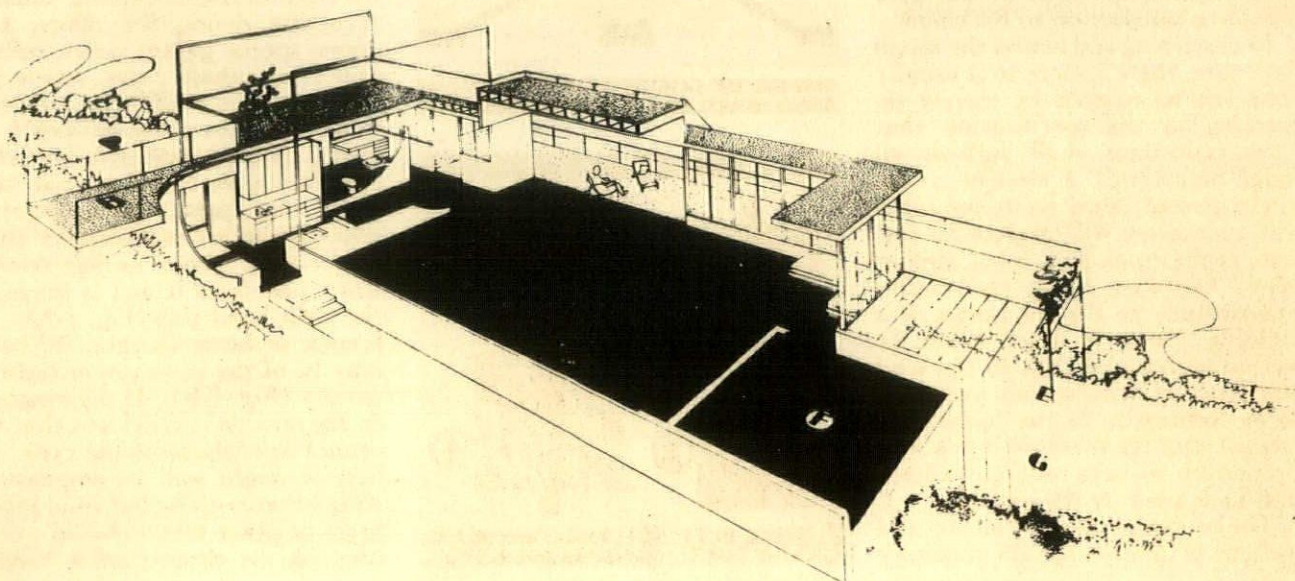


ONE HUNDRED SMALL HOUSES

« ARCHITECTURE »
AUGUST, 1935



Mme. Scheyer's house stands upon one of the highest peaks of the Santa Monica Mountains, overlooking the Pacific Ocean. The main room, as shown here, opens in a continuous glass area upon a long balcony. It will be noticed that this glass area and the balcony are sheltered from too much light by an overhang. A portion of the glass area consists of a door opening, sixteen feet in width, which is closed by one easily operated sliding-door panel of steel and plate glass. The house contains the owner's collection of modern paintings, and for this reason the color scheme throughout is of a very light neutral gray. There is a fireproof workroom and storage space of concrete and wire glass





Better Practice

By *W. F. Bartels*



HARDWARE AND GLAZING

1—HARDWARE

BECAUSE the architect is held completely responsible for the design of a house he should, therefore, also select the hardware, that it may contribute to the ensemble rather than detract. Hardware plays an important rôle, both in use and appearance. He must be careful not to economize falsely in his selection. No one can gainsay the fact that the hardware on an entrance door creates either a favorable or unfavorable impression of the house. Likewise, the rest of the hardware is important, from the largest to the smallest item. Some architects incorporate in the specification the phrase that "the contractor will allow the sum of \$— for the hardware, which is to be selected by the architect or owner." Unless the architect has gone over the matter very thoroughly, this seems to be sidestepping an issue which deserves more consideration. It would seem advisable that the architect should go into more detail as to the hardware requirements, or at least give them some serious thought. The hardware of a house is seldom changed and must render continuous service; it is a risky practice to allow a lump sum, which the client may be averse to spending near the completion of the job. It is up to the architect to see that only such hardware is used as will give complete satisfaction to his client.

In describing and listing the rough hardware, there is more to it usually than can be covered by merely remarking in the specification that "the contractor shall furnish all rough hardware." Unless he is definitely pinned down to it, too often this contractor will neglect to furnish bridle irons and other similar heavy hardware which contributes substantially to the soundness of a building. Also, it might often be well to go into detail as to the kind and types of nails, screws and bolts to be furnished. If the building is located near the seashore it is a wise precaution to have only galvanized iron nails used on the exterior.

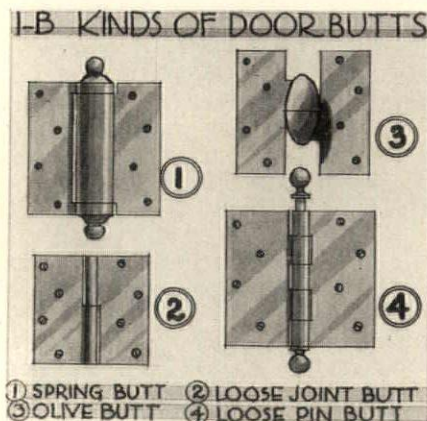
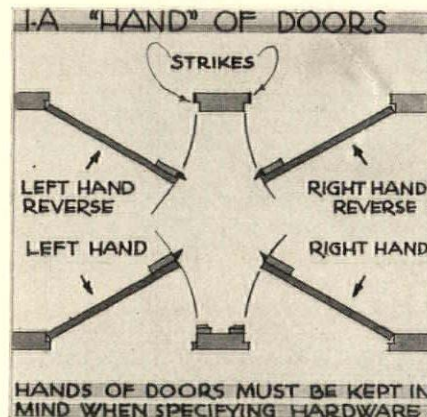
The architect should call for and include in his listing all necessary



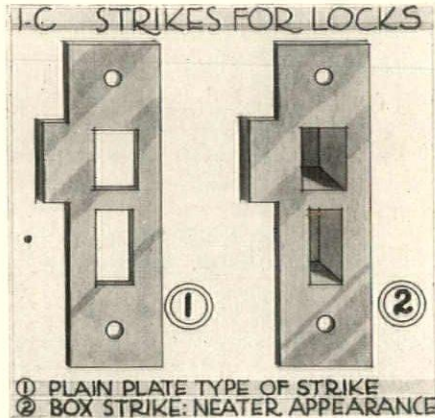
items to make the hardware specification complete. This will include sash fasteners, pulleys, butts, locks, kick plates, push bars, door checks and stops, anti-panic bolts, coordinating devices for astragal doors. It will also include hardware to be supplied for other trades, such as hinges for kalamein or metal doors. Likewise, regulation government mail boxes, with push buttons for the bells, should be included if they are needed. The architect should make it clear what is expected in the line of master keys as well as grand master keys, and to see that they are furnished. Something often forgotten, and yet of the utmost importance, is an emergency key for bathrooms, and while it may seem

that this latter is important only for hotels and other public places, it is an absolute necessity in private homes in case children lock themselves in or a person faints while in the bathroom. Where the hardware contractor is to furnish window-stop adjusters, bookshelf hardware and like items, they should be specifically stated. Safety bolts for window-cleaners are generally furnished by this contractor and supplied to the window man or other subcontractor. The architect should not hesitate to describe explicitly the type of hardware he desires, whether it is to be of solid brass or bronze, plated or some other finish. On alteration work many architects are prone to specify that if the existing hardware "operates" or "matches" it may be re-used. This is rather an indefinite way of describing the scope of new hardware required, and in all probability will lead to bickering later on. The little additional time needed to inspect the work and ascertain what may or may not be suitable to be re-used is well worth while.

It is well for the architect to insert a paragraph in his hardware specification summing up the items which are not to be included, but which might be mistakenly included by a zealous hardware man in his bid if not specifically omitted. Such items might include the hardware for elevator doors, exterior windows, revolving doors, fire doors, toilet doors, special garage doors, refrigerator doors, shaft doors, access panels, etc. It is readily seen that the individual manufacturer in each case would probably prefer to furnish his own hardware for all special items. It is important, when specifying door hardware, to remember that a "right-hand" door swings outward when one faces it and is hinged on the right-hand side (Fig. 1-A). The hinges, or butts as they are called, may be of the loose-pin or tight-pin variety (Fig. 1-B). If the hinges are on the outside it is evident that they cannot be of the loose-pin type. And here it might well be emphatically stated that nothing but solid bronze, brass or other metal should ever be used on the exterior of a building.

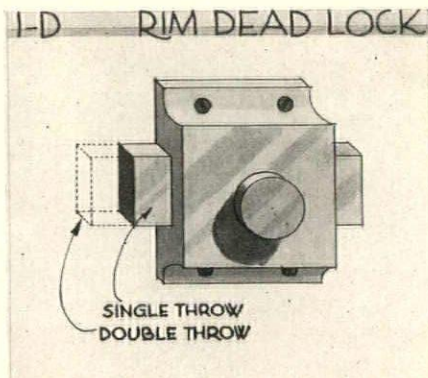


Any other type will only result in stained paint work and unattractive appearance. Particularly is the latter admonition true about exterior hardware used at the seashore, where the life of plated hardware on the exterior is very short. Ornamental butts may play an important rôle in



the exterior decoration of doors. Interior butts or hinges are generally plain, but the monotony may be relieved by using "olive" butts if desired (Fig. 1-B). Where butts are to be painted, they should have cut-outs so that the paint will not be scraped off when the door is opened and closed.

One of the more important things to remember is that all exterior



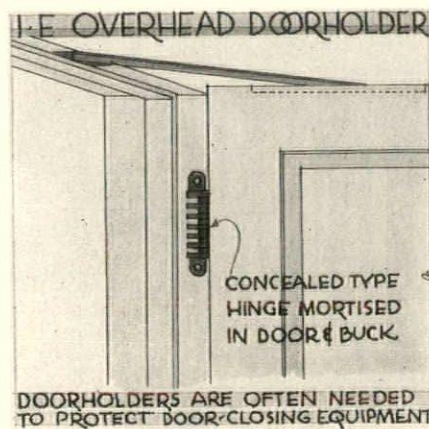
doors should get at least one and one-half pairs of butts, and that any door over 3' wide or 7' high should get one and one-half pairs. On a light interior door one pair may be acceptable, although one and one-half pairs are more desirable. Some architects like to use friction hinges to prevent doors from slamming.

Locks are important for obvious reasons. They run the gamut from

the simple mortise lock and bit key used on interior doors, to the complicated cylinder lock of the large office buildings. A popular lock for the private dwelling is the so-called "jimmy-proof" lock, which gives protection equal to the strength of the door. Rabbeted locks may be obtained for double doors but, of course, must be specifically called for.



Wood door stops should not be used even on the cheapest type of work, but a metal stop with rubber top should be securely fastened to the floor or base. The knobs used on

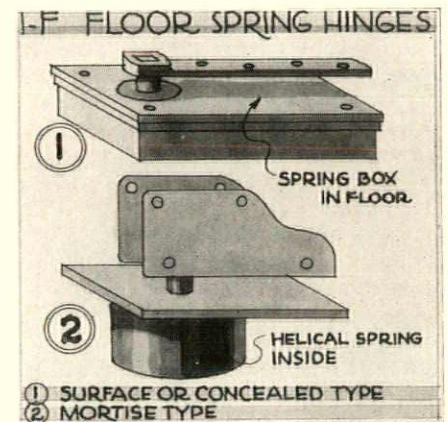


the doors should be put on shanks of the screw type to keep them from rattling. While slightly more expensive than the ordinary type, they are well worth while. Along with these, box-strikes should be used to give a more finished appearance to the hardware (Fig. 1-C). Glass knobs are acceptable and are highly ornamental, but only the best grades should be used, because they are too likely to be twisted off at the first necessity to use a little force. The bolt of the locks should be of sufficient size so that any shaking or jarring of the door will not throw it from the box-strike (Fig. 1-D). Care must be taken by the architect to see that the door-checks are of sufficient size to operate successfully the door to which they are to be attached. Door holders may be of the floor or overhead type, the latter being the more convenient to operate. Where locks are used in such places as fire towers, it is well to have the stops work by key so that the doors cannot be reopened from the outside.

It might be well to call attention to applied metal numerals that are to be put on the door. These numbers should be of solid material, and not the type that will cheapen the appearance of the door within a year or two.

Cabinet hardware should be definitely decided upon when the work is started, because in many cases it will depend upon whether the doors are to be of the flush or raised type. Concealed hinges are often desired in cabinet work, and may be obtained even for heavy doors (Figs. 1-E, 1-F). Where bullet catches are installed in cabinet work, the catch should be put in the jamb of the cabinet rather than in the door so as to avoid marring the outside edge of the woodwork (Fig. 1-G).

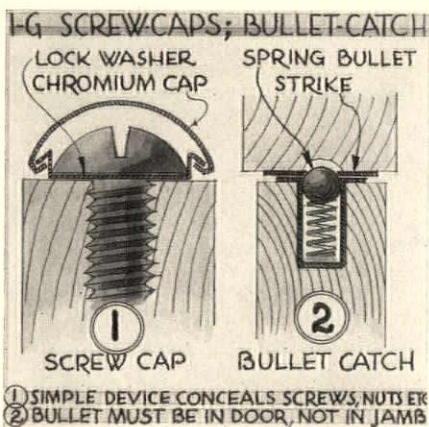
The hardware for a window may not seem important until it is brought to the client's attention by a sash cord breaking within a short time, or by the window rattling, due to faulty catches. Sash lifts, if used, should be deep enough so that one is enabled to lift the window by



means of his fingers. In many cases they are shallow and difficult to use. The bar type is sometimes preferable (Fig. 1-H). Pole catches should be provided for high sash. Sash pulleys are made of many materials and combinations of materials, but if lasting service and satisfaction are expected they should not be of stamped materials, but should be cast, preferably in bronze or brass.

The type of the wheel groove will depend upon whether chain or cord is to be used (Fig. 1-J), and here a word about sash cord might not be amiss. It is well for the architect to be wary of any coated sash cord, or one which when cut consists chiefly of filler. These cords will

soon wear out and the labor to replace them will be far more costly than the most expensive sash cord that could be installed at the outset, not to mention the fact that the cord in all likelihood will break just after the decorating is completed, thus necessitating its being done over again. Most manufacturers of reliable cord have a system of marking their product which prevents any other being substituted for it. Likewise they are always willing to recommend the size cord to be used when the weight of the sash is given them. Window chain is furnished in galvanized, sherardized, copper-coated, or solid bronze. This too must be selected in reference to the weight of the sash—obviously the heavier the sash the heavier the chain necessary to support it. There are on the market several types of sash-balances which do away with the cord or chain. But with new devices of this type, many builders seem to prefer to see them tried out over a period of time before adopting them.



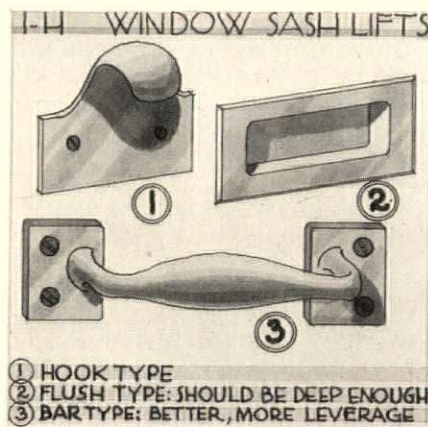
Hardware for lavatories is usually special, and is generally furnished by the manufacturer of the door and other lavatory accessories, except in the case of the private dwelling.

Garment racks and carriers for the closets are now considered a necessity for the modern equipped home and should be included under the item of hardware (Fig. 1-K). Also included should be such special items as shoe racks and hooks for the closet. The latter should be solid brass, to prevent any rust getting on the clothes hung on them, and be screwed to a substantial strip. Caps are now obtainable to cover screw heads; these fill a much-needed want for places where head

screws were formerly necessary but were undesirable in appearance. These tops may be furnished in both the removable and non-removable type.



When doors are hinged, the butts should be so placed that the door will swing evenly at any angle to which it is opened. The strike plates should be placed so that any settling of the door will not interfere with its being properly latched. It is not advisable to use loose-pin butts on transoms, inasmuch as they might work loose and thus allow the sash to fall.



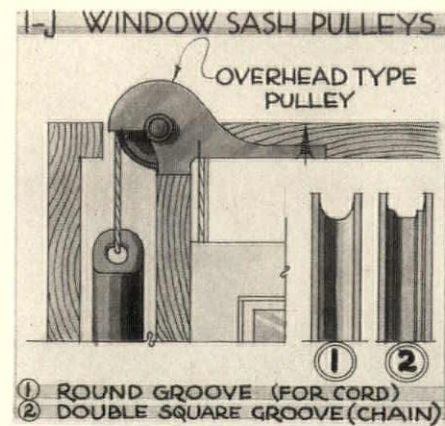
Door knobs should be centered on the stile, and if the stile is narrow it may be advisable to use a lever handle instead of a knob, so that one's knuckles will not be scraped when operating it. Toilet-door hinges, if of the spring type, should not be so keyed as to have too great a tension—this would cause excessive banging of the door against the glass or marble partition and eventually damage the latter.

The window pulley should be so installed that the vertical tangent of the pulley is directly over the center of the weight box. This gives freedom of movement to the weights. If this is not possible, or if the space is too restricted, then the overhead type of pulley should be substituted (Fig. 1-J).

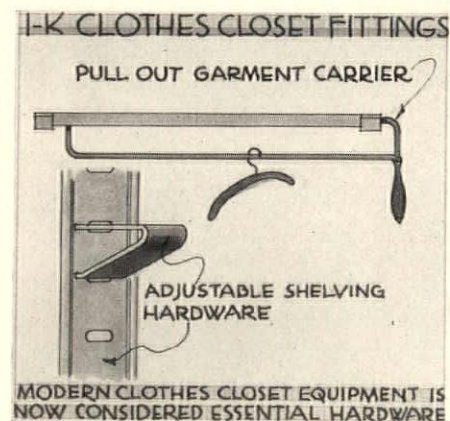
2—GLAZING

Before starting out to write the glazing specification, the architect should familiarize himself with the grades of glass generally used. There are two qualities generally used in ordinary sheet glass, called A and B.

These are both furnished in double strength and single strength. A heavy sheet glass, weighing about 39 oz. and about $\frac{3}{16}$ in. in thickness, is too often substituted by the unscrupulous glazier for plate glass. Inferior qualities other than A and B grades are made, but their use

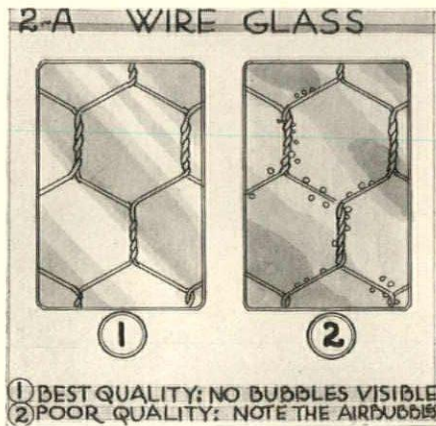


should be avoided. Likewise a better grade is made, called AA, but the difference between this and the A quality would hardly be noticeable to the layman, and as a rule the added expense would hardly be justified. Many old specifications called for glass to be glazed with the convex side out, but modern glass may be put in either way, because the method of manufacture has changed.



The architect should call specific attention to places where he desires to use other than clear glass, such as Florentine glass in bathrooms and dressing-rooms; also any particular type of lighting in which it may be necessary to use a special type of glass, such as diffusing glass. The specification should definitely state the grade and type of glass to be used. In many cases the glass for

skylights, vault lights and cabinets will be furnished "by others," being a special type of glass or being furnished with the skylights or cabinets. The architect should call for



the glass to be properly protected after it has been inspected to his satisfaction and approved by him. It should be properly protected by any of the methods preferred, such as by being covered with soap, muslin or other means.

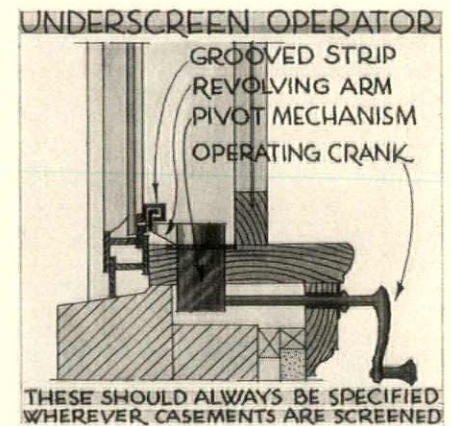
When specifying glass, the architect should bear in mind that in many cases small panes of glass not only look better but are safer. When using large sheets of glass, particularly plate glass, the wind pressure that may be exerted upon the sheet should be taken into consideration. Wire glass is supposed to be furnished in only one quality for

glazing purposes, but all too often the architect may find that the glass furnished looks like anything except glazing quality. The wire should be in the middle of the sheet thickness and should run the length of the sheet; hence it is important that in specifying wire glass, the width of the sheet should be given first. Wire glass should be nearly clear of bubbles around the wire (Fig. 2-A). While it is impossible to obtain a large perfect sheet, nevertheless excessive bubbles are sufficient reason for condemning the glass where it is exposed to public view.



Windows, particularly metal ones in which glass is to be set, must be firm and should not subject the glass to bending. Where glass is set in between window moldings these should not be toe-nailed to their support because to do so would in all probability cause too much pressure on the glass and would eventually result in its cracking. Where large sheets of glass are set in metal frames, they should be upon blocks made of leather, soft wood, or laid so that they may have a firm and adequate support and yet be free to move for the necessary expansion and contraction. In setting glass in wood the glazing rabbet should be "cut" with oil before inserting the glass, so that the wood will not absorb the oil from the putty and leave

the latter in a dry, mealy condition. On steel sash a special putty containing litharge should be used. When setting large sheets of glass, it must be remembered that the sup-



There are, however, combinations of steel sash and screen that have their own oversill operators

porting structure must take the strain, not the glass. Provisions must be made for the safe cleaning and for the ventilation of the glass, as well as for replacement should the latter become necessary.

The architect should provide for an inspection of all glass work soon after it is installed in the windows, and, upon satisfactory acceptance, the glazier should be relieved from replacing any broken glass at his own expense, unless such breakage is due to faulty setting or any other similar fault.

For the convenience of those who wish to refer occasionally to specific sections of the Better Practice series, these were published as follows:

BRICKWORK	FEBRUARY, 1934	PLASTERING	MARCH, 1934
CARPENTRY	SEPTEMBER, 1934	PLUMBING: (A) ROUGHING	OCTOBER, 1933
CLAY PRODUCTS, CINDER AND GYPSUM BLOCKS	JULY, 1934	PLUMBING: (B) WATER SUPPLY	NOVEMBER, 1933
DAMP-PROOFING, WATER-PROOFING AND CALKING	JULY, 1935	PLUMBING: (C) HOT WATER; COVERING; PLANS	DECEMBER, 1933
DOORS AND WINDOWS	JUNE, JULY, 1935	PLUMBING: (D) CHIEFLY ABOUT FIXTURES	JANUARY, 1934
EXCAVATION	JUNE, 1934	ROOFING	JANUARY, 1935
FLOORING	AUGUST, 1934	STEEL AND MISCELLANEOUS IRON	FEBRUARY, 1935
GRANITE, STONE, MARBLE AND SLATE	MARCH, 1935	TILING	APRIL, 1934
HEATING	NOVEMBER, DECEMBER, 1934	WALL BOARD	MAY, 1935
PAINTING	APRIL, 1935		



Automobile Service Stations

*Sherman Oaks
Service Station*



*Van Nuys,
California*

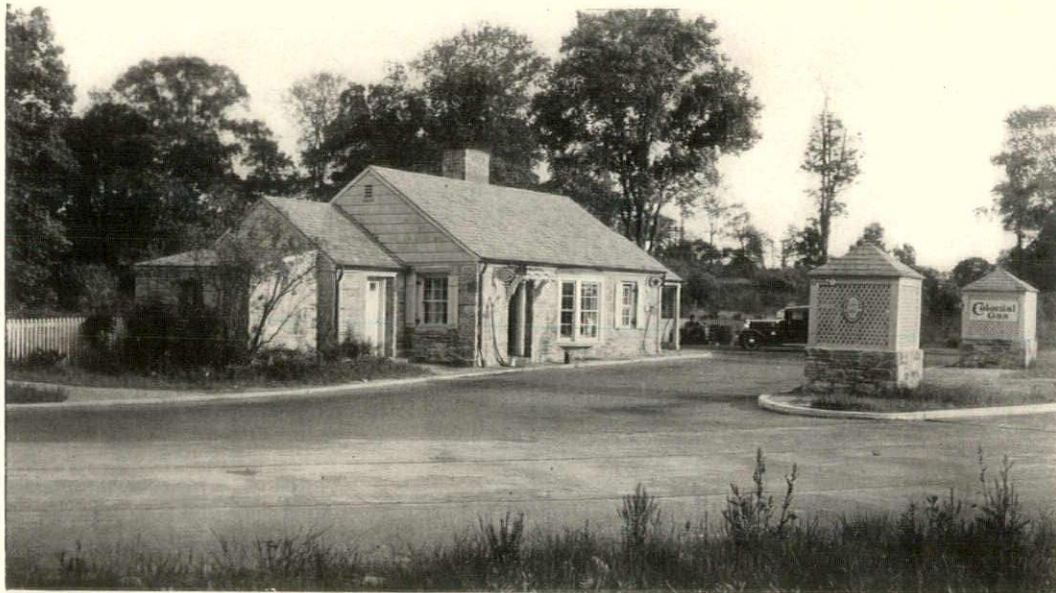
At top of page, a service station in Greenwich, Conn., which was designed to preserve the Japanese ginkgo tree in the center

A service station in Copenhagen, Denmark, utilizing a small corner plot. C. U. Lütichau, architect



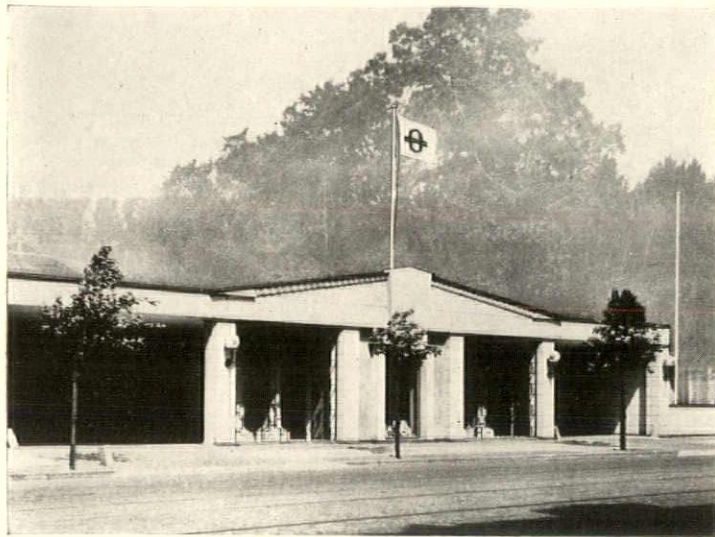
« ARCHITECTURE »

AUGUST, 1935
101



A service station in the Westchester County (N. Y.) Park System. Penrose V. Stout, architect; Gilmore D. Clarke, landscape architect

Below, at Watertown, Mass. Parsons & Wait, architects



A larger service station in Copenhagen, Denmark. C. U. Lüttichau, architect



A service station on a Long Island Parkway located between the two lines of traffic

Saturday, June 1.—William A. Edwards and I left Milwaukee early this morning, driving west to Madison, Wis. It so happens that the Mayor of Madison, James R. Law, is an architect—the only architect mayor in the United States, so far as I know. Mayor Law dropped all affairs of state and drove us over his domain. We saw recreational areas and parked boulevards, some partly completed and some in use. We saw many efforts to utilize, for the benefit of this community of sixty thousand, the lake front, and particularly the terminals of streets leading down to the lake. Finally we ended up at the airport, got into a four-seated plane, and went up to see Madison from the air. The city, which is not only a state capital, but a university town, is particularly favored in its geographical location on a long strip between two lakes, the center of the strip dominated by the dome of Wisconsin's capitol.

After lunch with Mayor Law at the Wisconsin Club, Edwards and I drove on to Chicago with a vivid impression of Madison that will not soon be blurred in our memories.

Sunday, June 2.—Wandered about Chicago in an effort to find out what has been building in recent months, and concluded that the bulk of the activity has consisted in a dressing up of Michigan Boulevard, the shop fronts of which indicate that the leaven of rebuilding America has here been actively at work.

Monday, June 3.—A brief stop in Pittsburgh on the way east revealed that Charles Klauder's Tower of Learning has come off its stilts and is resting serenely upon a masonry base. Mr. Mellon's Research Laboratory looks even more like a sub-treasury than the photographs had indicated, with some of the finest monolithic limestone columns in captivity.

Lunched with some men of the steel industry who told me that, despite the collapse of NRA codes, steel, at least, would carry on under the existing agreements as to hours, prices, and other minor achievements of the agreements.

Wednesday, June 5.—The New York Chapter met at luncheon today for its annual meeting, at which Ralph Walker turned the gavel over to Hobart Upjohn, the incoming president. It seemed a particularly fitting thing that the third generation of Upjohns should be represented in the presidency of the chapter, as the other two have been—a situation possibly unique in American architectural history. It is evidence of this kind that makes us realize occasionally that America is building a tradition of her own.

The meeting turned out to be a rather spirited discussion as to the merits and demerits of a recent attempt on the part of the Chapter to obtain from its mem-



The Editor's Diary



Madison, Wis., from the air, with the Capitol in the foreground

bers an indication, by ballot, of the names of ten architectural firms best fitted by experience and reputation to do city work. Such an indication had been requested by the Mayor to aid him in keeping these appointments out of the political arena. Much to my surprise, there was a strong feeling on the part of some that the Chapter should not so express itself—an attitude that would seem to have no parallel in the professions of law and medicine. It seems likely that if the medical fraternity were asked for its collective opinion as to who would be the best man to operate on the Mayor in an emergency, the outstanding names would have been forthcoming. Just why the architects, being presumably best informed as to the qualifications of their own members, should not give the city a list from which those in authority would choose, seems not at all clear. Nevertheless, the Chapter, in a meeting at which the numbers gradually dwindled away, voted not to submit the results of the ballot opinions.

Thursday, June 6.—Edward S. Hewitt was telling me today that the speculative builder is active again, on Long Island at least, putting up cheap houses with all the glistening gadgets to help

sell them. One of these promoters recently engaged an architectural draftsman of Hewitt's acquaintance to put on each house "an art front," at one hundred fifty dollars per front.

Saturday, June 8.—We were bewailing recently the lack of the proper State laws to permit the standardized insured and amortized first mortgage, as provided by Title II of the National Housing Act. Up to the middle of March, however, thirty-three states had passed enabling legislation, with the result that applications for these insured mortgages have been increasing at the rate of 25 per cent each week over the preceding week. The average amount is about \$4,500. One-third of the applications are for new construction, the other two-thirds, for refinancing of existing mortgages.

Monday, June 10.—Better Homes in America seems to have its head way up in the clouds. I see that they have just dedicated a model suburban home in northern New Jersey, and the significant fact is that it is valued at about twenty thousand dollars. It would seem that Better Homes in America might busy itself to better advantage with homes of a size more nearly within the reach of 90 per cent of the population.

Tuesday, June 11.—The President's dictum that the work-relief money must be spent on those objects in which the bulk of it goes into wages is unassailable. The hasty conclusion, however, that many seem to draw from this is that building falls outside of that category, too much being required for materials in proportion to the amount spent for labor. This is, of course, an absurdity on the face of it. Just because a material comes to the building site as a finished product is no indication whatever as to the proportion of labor and materials that have gone into it previously. I think the figures must be available somewhere—and I must try to find them—tracing back a breakdown between labor and raw materials in all of the various branches of building. At least, it is obvious on the face of it that the cost of clay, or iron ore, or limestone, or timber, must be an exceedingly small part of the fabricated cost of the materials into which these things go. Road building, water works, and the like, have been much favored of late as giving a favorable ratio of labor to material in their making, but I venture to believe that building, if properly broken down, would show a far more favorable ratio between labor and material.

Wednesday, June 12.—An interesting feature in the Industrial Arts Exposition, now being held at Rockefeller Center, New York City, is an organ without pipes. The manual is similar to the usual two-bank one, excepting that the

stops are not so prominently in evidence. The tones originate, not by the passage of air through the pipes, but electrically. Based on the well-known premise that a musical tone is given its character through harmonic over-tones, this instrument provides an infinite number of character tones through the combination, in varying degrees of power, of a group of harmonic controls.

Friday, June 14.—Up to the moment the accepted manner of removing moisture from air in air-conditioning procedure has been to lower the temperature of the air so as to condense the moisture out of it. Dr. F. R. Bichowsky and Gilbert Kelley, of Toledo, have suggested another way of removing the water—by passing the air through a strong solution of lithium chloride. The surplus of water that accumulates in this solution is thereupon boiled out of it. So little heat is required to do this that the cost of dehumidification by this method promises to interest the air-conditioning engineers.



Saturday, June 15.—It has long been a matter of conjecture among students of low-cost, large-scale housing whether the principle of condemnation would be upheld by the courts. The point, of course, is that land can rightfully be condemned for public use. Is low-cost housing public use? Is it not rather private use for the reason that no other members of the public enjoy its benefits excepting those who pay rent therein?

Nevertheless, the Supreme Court of New York, on April 12, speaking through Charles R. McLaughlin, upholds the right of the New York City Housing Authority to condemn slum land for government-financed low-rental housing. "That the land covered by this petition is to be used by a limited portion of the public is without question. The court holds, nevertheless, that the use here is a public use, *i.e.*, to abolish disease-breeding slums for the benefit of all the people of the State, and to furnish 'a limited portion of the public' (readily ascertainable) living quarters which will prevent disease. The people of the State of New York have the right to take back their land for such a purpose."

Monday, June 17.—R. A. Miller told the chemists a short time ago that one small ill-shaped opaque relic, much like a bead in character, but definitely of glass, has been assigned to date approximately 4000 B.C., and is the oldest known example of the glassmaker's art.

Wednesday, June 10.—Philip Sawyer was telling me today that London's water consumption per capita per day is about thirty gallons, while New York's

is three hundred, and that of the modern Athenian is three. These figures may be somewhat outdated, but probably are not far from the present ratios. This brings up the old question of whether water should be as free as air, or whether it should be paid for at meter rates. New York City has the theory that it should be as free as air—almost. We do pay a water tax, but not on a basis of the amount used. The New York theory is that we have the water supply and the pipes, so that the water might as well be running through the pipes as standing in the reservoir, which theory, when water is plentiful, is not such a bad idea.

Thursday, June 20.—The American Institute of Decorators has been holding its fourth annual convention here in New York. One of the subjects discussed was the proper definition of a decorator—"A decorator is one who, by training and experience, is qualified to plan, design and execute structural interiors and their furnishings and to supervise the various arts and crafts essential to their completion."

Incidentally, Donald Deskey championed modernism in a debate in which Henry F. Bultitude sponsored the traditional. The game was probably called on account of darkness.

Saturday, June 22.—Boston has a problem with its Bulfinch state house not unlike the Federal Government's problem with the Capitol. More space is needed, which in its provision offers a threat to the integrity of a beloved architectural landmark. Dr. Cram, I hear, is urging upon the Massachusetts Governor the necessity of adopting the plan that will not only leave intact the golden-dome Bulfinch monument, but will avoid elbowing it out of its serene isolation. Of course, the trouble is that Boston had this problem once before, and at that time tacked on a couple of wings which robbed the earlier building of a great deal of the spaciousness its setting possessed.

Monday, June 24.—Edward J. Grant, registrar of Columbia University, is somewhat perturbed over the fact that enrollment in engineering and architectural courses has fallen during the last five years about 25 to 35 per cent, as a result of unemployment in these fields. It seems quite possible that within three or four years there will be a dearth of engineers particularly, and to a lesser degree, of architects, not only on account of the fact that we are training less men, but also because a great many of the profession have sought and have found other employment during these lean years. It is interesting to note that in the same period the medical schools show an increase in enrollment.

Tuesday, June 25.—I see that the Berlin police has issued orders that before

any new building can be erected, or an old one altered, the Air Protection League must be consulted on the possibility of constructing a bomb-proof cellar in the structure.

Thursday, June 27.—At a meeting of the New York Chapter, A. I. A., today, the certificates of Fellowship were handed to Alfred Fellheimer, Frederick A. Godley, Philip L. Goodwin, and Henry S. Waterbury.

Henry Wright was considerably exercised over the attitude of the recent convention with respect to housing the low-income groups. He found it most discouraging that the two points most stressed in the discussions were: fees, and how the architect can make these small houses better looking—both minor considerations in comparison with the sore need of the people of America for better technical assistance in building their shelter.

Friday, June 28.—If the architect needs any more evidence pointing to the fact that the profession has in the past been serving a very thin upper crust of the population, another item may be found in this fact: the Real Property Survey, made recently, shows that, for families occupying rented properties, the average annual income was \$1050 in 1933—a decline of about one-third from 1929; for home-owning families the average income was less than \$1500 in 1933. These, it may be emphasized, are averages. In sixty-one cities, 56.2 per cent of the tenant families received incomes in 1933 of less than \$1000, and 30.8 per cent received incomes less than \$500. The problem of supplying these people with decent housing looms large.



Saturday, June 29.—Louis J. Horowitz, who for twenty-five years has been either president or chairman of the board of Thompson-Starrett Company, says that building is being retarded because of an artificially high wage scale. The cost of living since the period 1916-18 has undoubtedly risen, but not in any such ratio as indicated by the difference in wage rates per eight-hour day of that period as compared with 1935. Bricklayers who got \$6.50 now get \$12; carpenters, \$5.50—\$11.20; electrical workers, \$5—\$11.20; laborers, \$3—\$7.10; plumbers, \$6—\$12; plasterers, \$6.50—\$12; painters, \$5—\$9. (The present wages of electrical workers and painters are for a seven-hour day instead of the original eight hours.)

Mr. Horowitz thinks that if organized labor really thought the significance of these facts through, they would reduce the official schedules with the purpose of bringing about a fairly continuous employment instead of intermittent employment for short periods.

NUMBER 106 IN A SERIES OF COLLECTIONS OF PHOTOGRAPHS
ILLUSTRATING VARIOUS MINOR ARCHITECTURAL DETAILS

ARCHITECTURE'S PORTFOLIO OF SIGNS

*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
PATIOS
TREILLAGE
FLAGPOLE HOLDERS
CASEMENT WINDOWS
FENCES OF WOOD
GOTHIC DOORWAYS

❖ 1931
BANKING-ROOM CHECK DESKS
SECOND-STORY PORCHES
TOWER CLOCKS



*Below are the subjects of
forthcoming Portfolios*

Chimney Offsets
SEPTEMBER

Window Heads
(EXTERIOR, ARCHED)
OCTOBER

Unusual Brickwork
NOVEMBER

Shutters and Blinds
DECEMBER

Fireplaces
(MEDITERRANEAN TYPES)
JANUARY

Pediments
FEBRUARY

*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—Continued

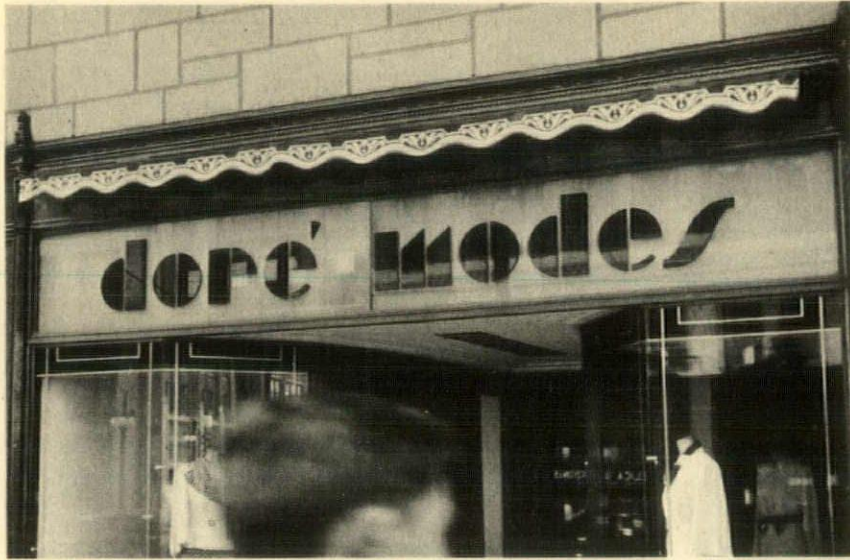
ALTARS
GARAGE DOORS
MAIL-CHUTE BOXES
WEATHER-VANES
BANK ENTRANCES
URNS
WINDOW GRILLES
CHINA CUPBOARDS
PARAPETS

1932 ❖
RADIATOR ENCLOSURES
INTERIOR CLOCKS
OUTSIDE STAIRWAYS
LEADED GLASS MEDALLIONS
EXTERIOR DOORS OF WOOD
METAL FENCES
HANGING SIGNS
WOOD CEILINGS
MARQUISES
WALL SHEATHING
FRENCH STONWORK
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 NICHEs
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
OVERDOORS, INTERIOR
BRICK CORNICES



Glass on glass



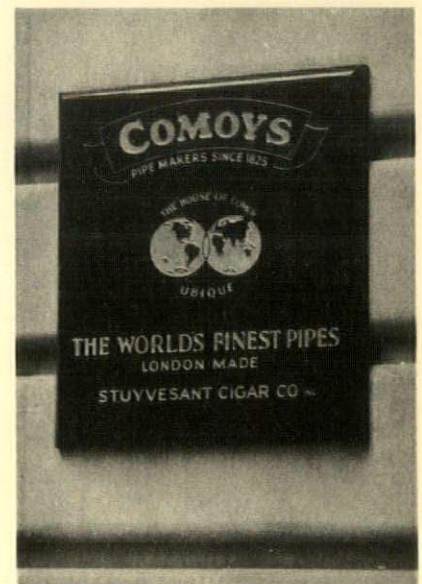
Bronze on marble



Bronze against black glass

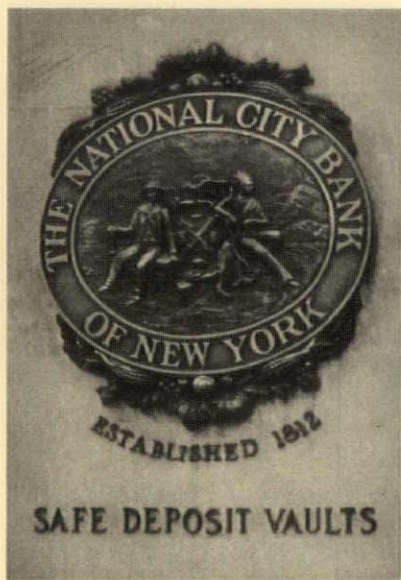


Stainless steel against black glass



Etched black glass

Aluminum, lighted in relief



Bronze on limestone

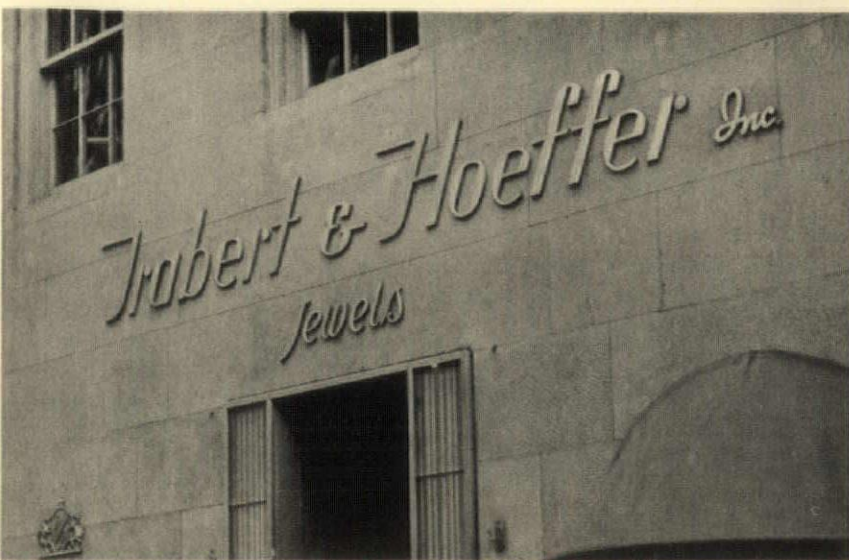
Bronze against black glass



White enamel fill on bronze



Stainless steel on limestone





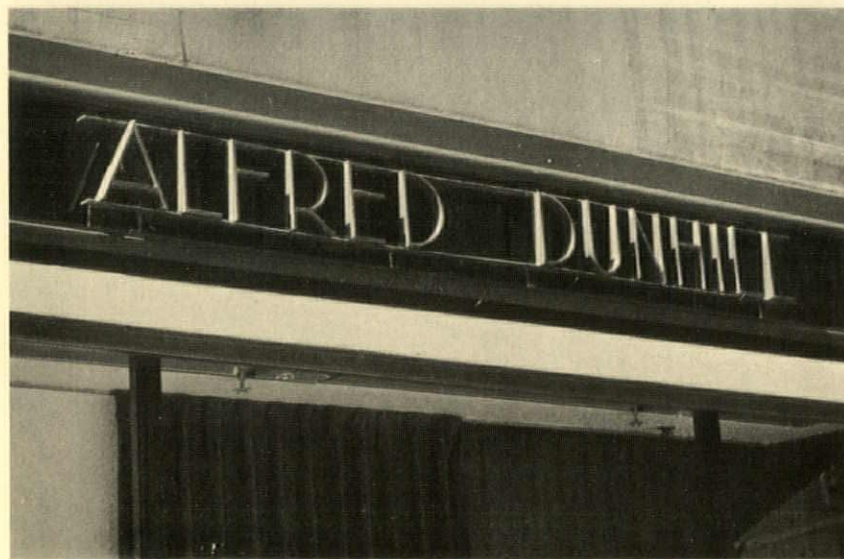
Hector O. Hamilton



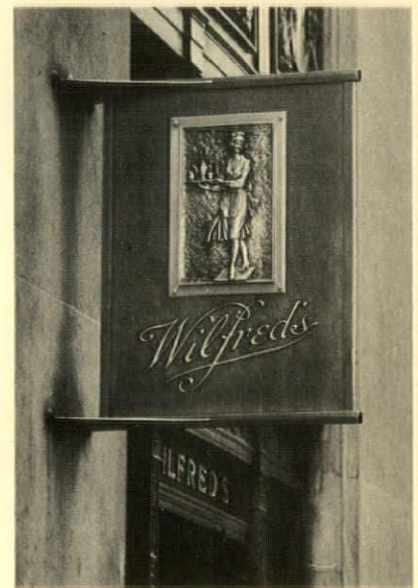
Graham, Anderson, Probst & White



Stainless steel against bronze

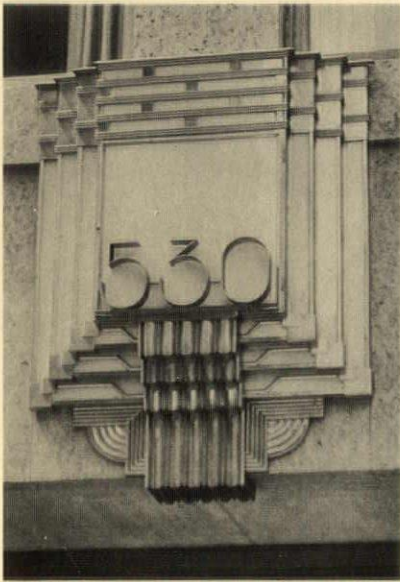


Brass repoussé and bronze



Bronze against black glass

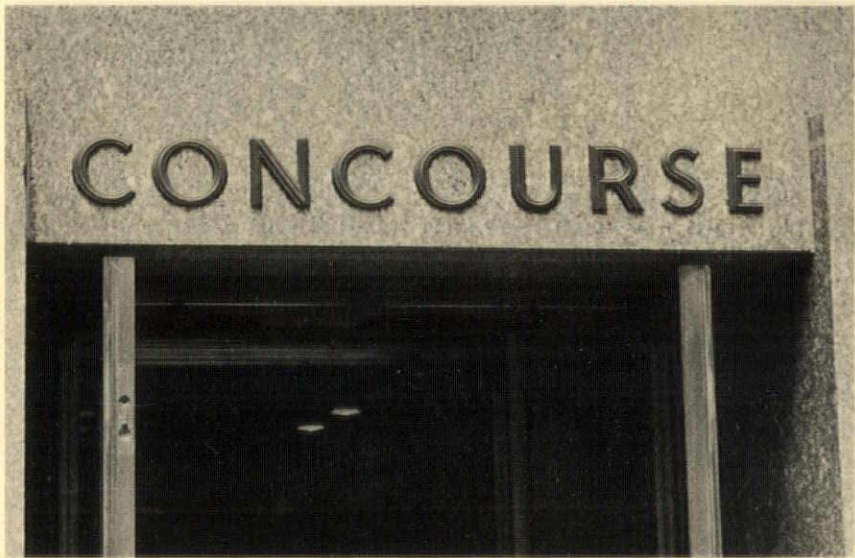
Bronze on black glass



The Firm of Ely Jacques Kahn



Bronze on polished granite

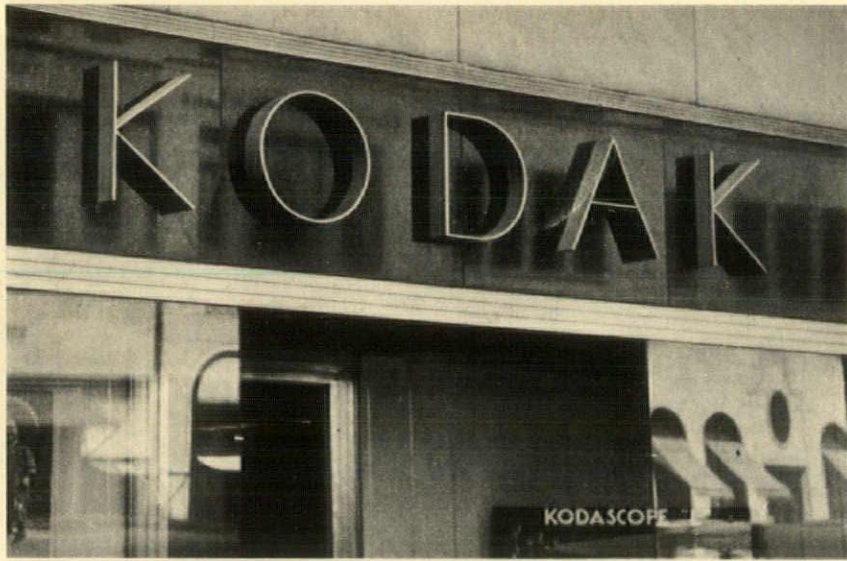


Cast bronze

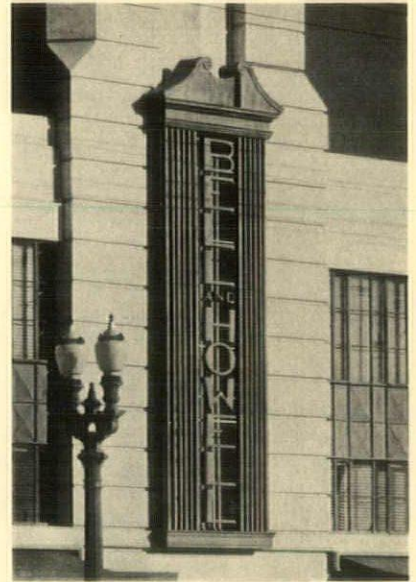


Color against white metal

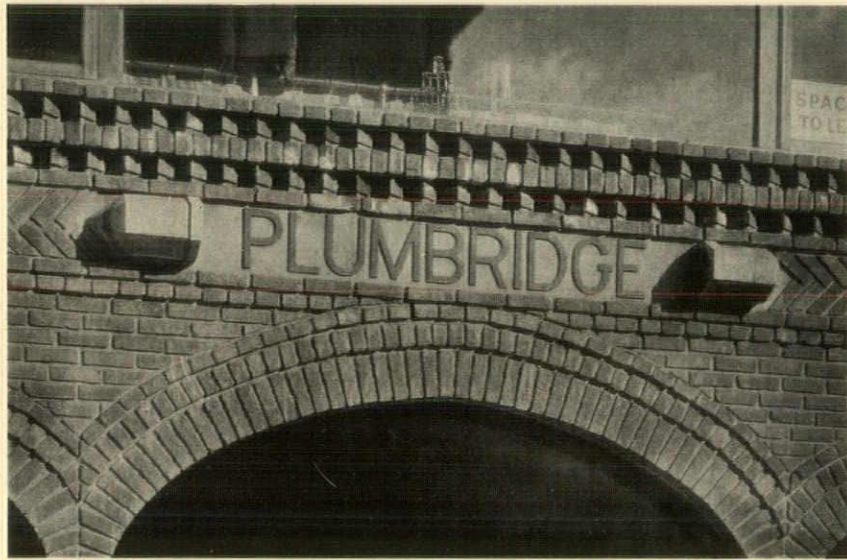




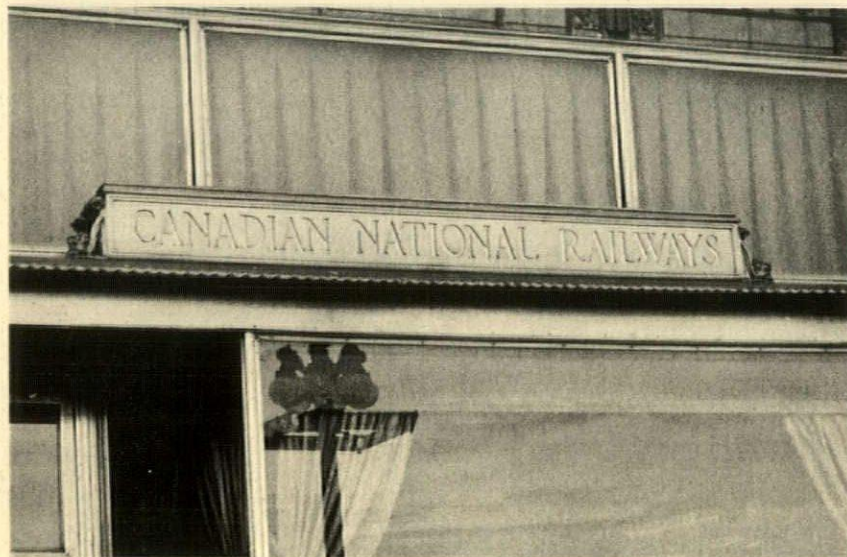
Stainless steel against dark marble



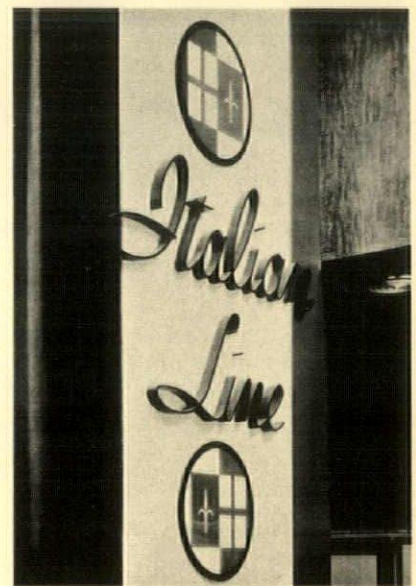
Marshall P. Wilkinson



Hughes & Hughes



Cast phenolics in color



Stencilled bronze

Dark bronze on dark glass



Cut-out metal on glass on a Paris shop



Cast bronze



Polished chrome letters on satin-chrome background

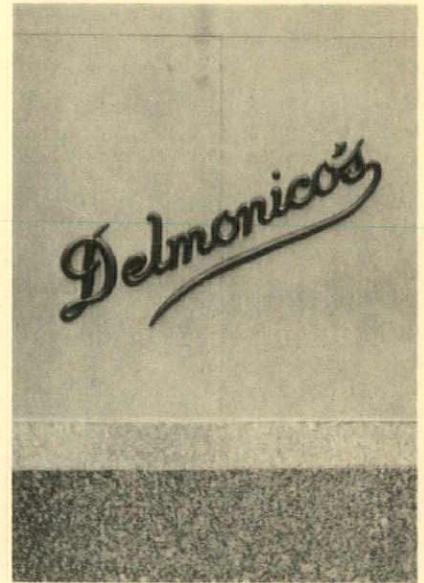


Bronze, lighted from rear





*Pierced limestone
Aymar Embury II*

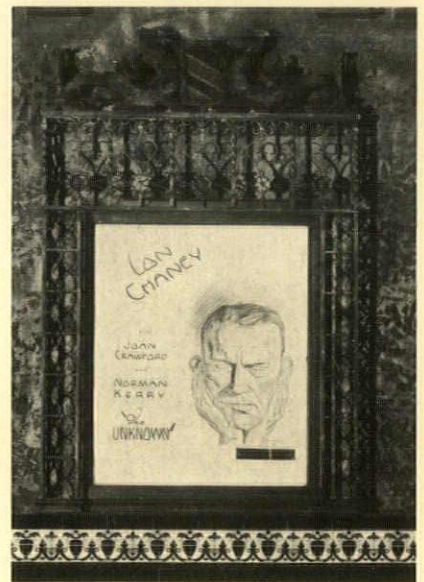


Bronze on limestone



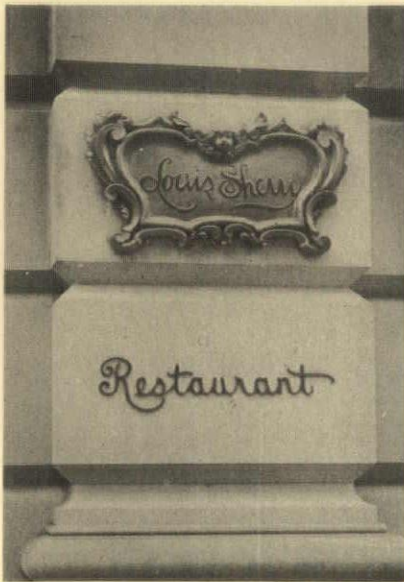
*A Paris café
N. Vidal*

*Wrought iron
R. E. Hall & Company*

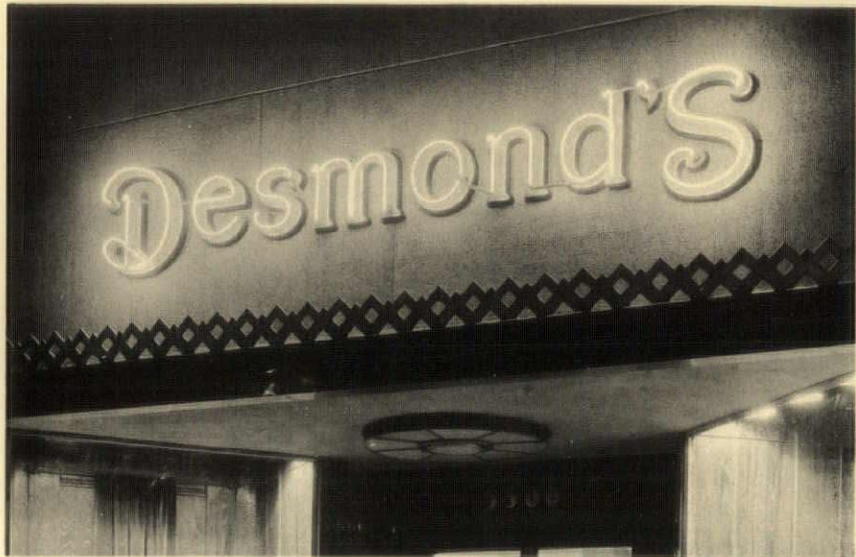


Robert Orr

G. S. Underwood



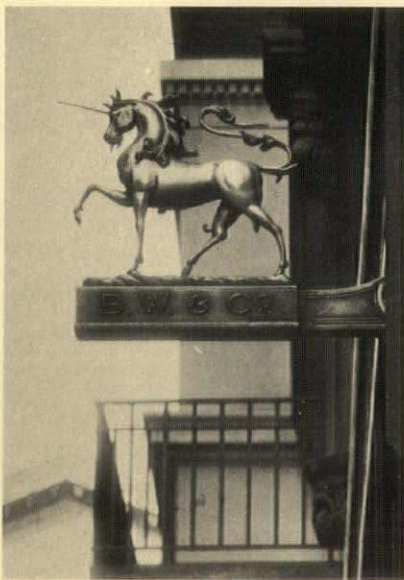
Painted metal; bronze letters below



Starrett & Van Vleck



Cast bronze



Polished bronze against dark bronze





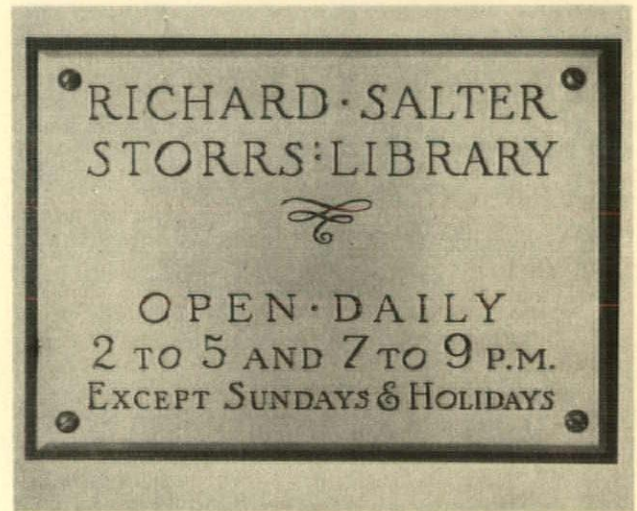
Cast bronze, interior lighting



Polished chrome plating on white marble

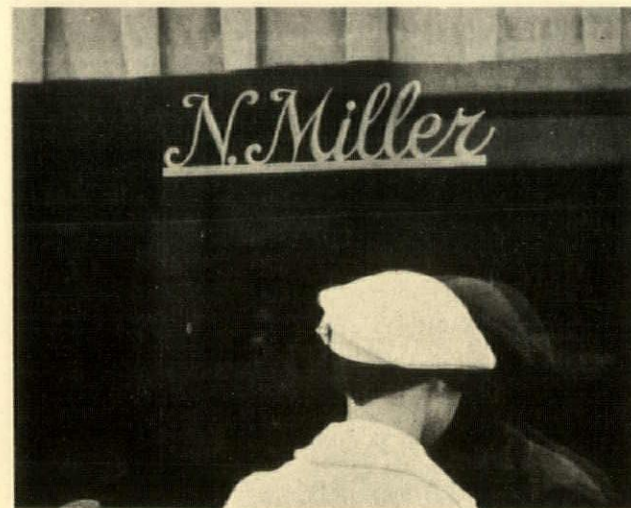


Cast bronze with vitreous enamel inlay

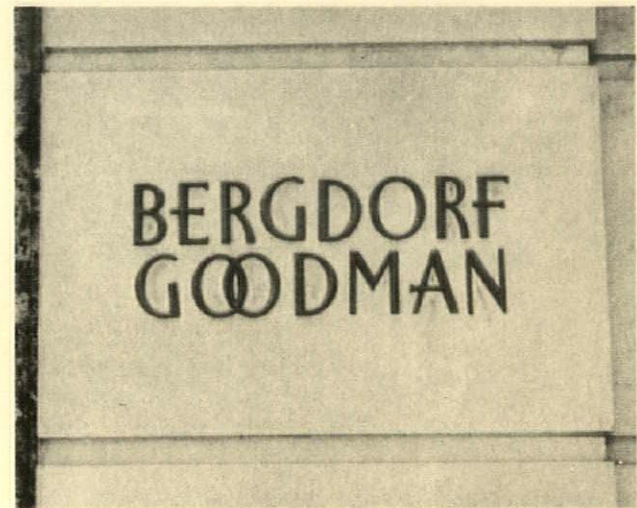


Brass plate; black-enamelled incised letter

Chrome plating back of glass

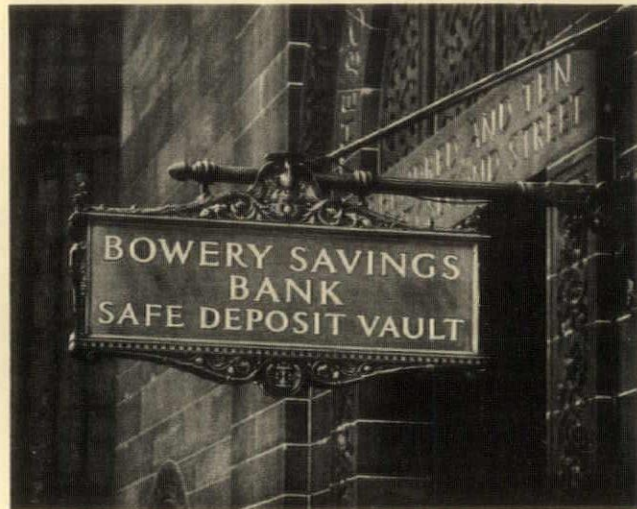


Green bronze on light marble





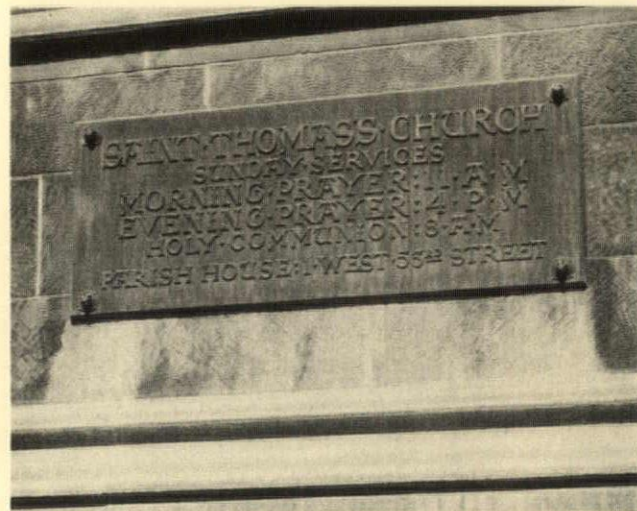
Polished bronze on dull bronze



Bronze and glass, interior lighting



Stainless steel stencil



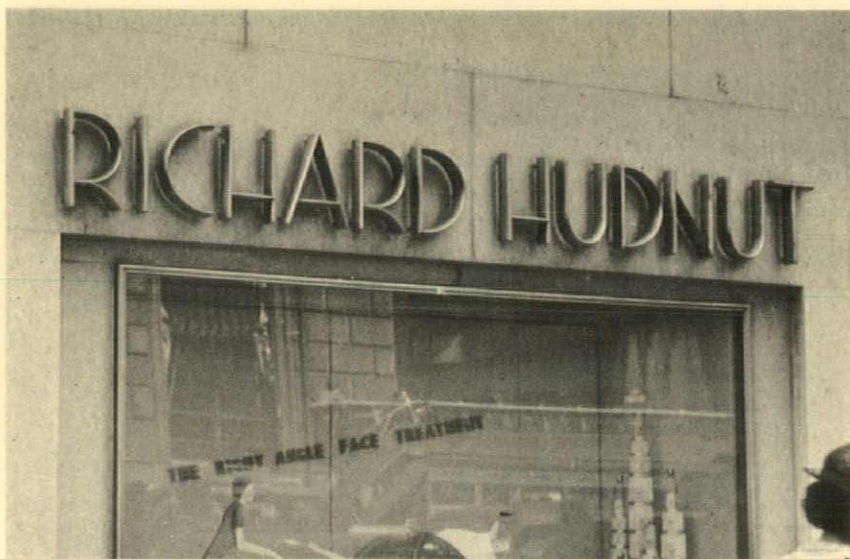
Cram, Goodhue & Ferguson

Glass on glass, lighted from inside

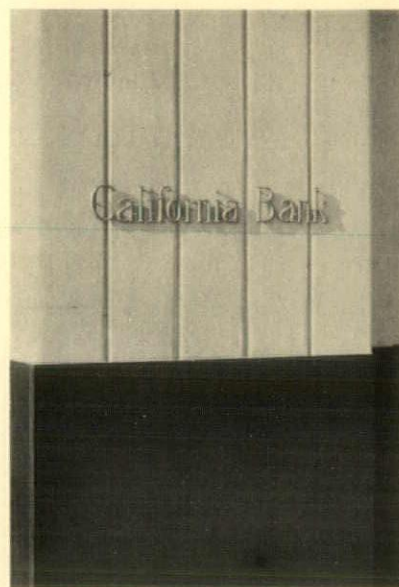


Polished bronze on dark bronze

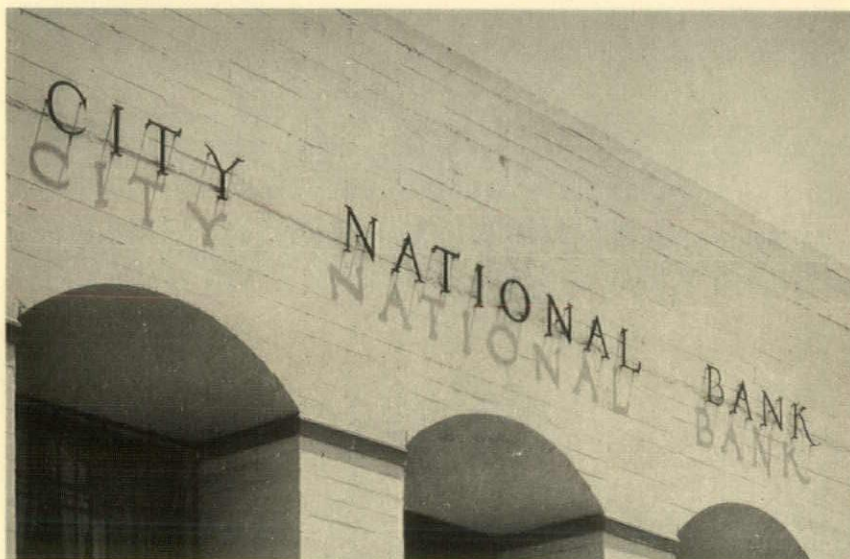




*The Firm of Ely Jacques Kahn;
Eliel Saarinen*

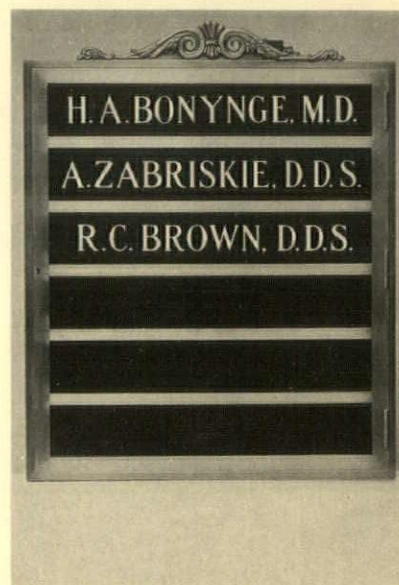


John and Donald B. Parkinson



Harbin F. Hunter

Glass and bronze, interior lighting



Stainless steel on dark marble

Free-standing metal against white background



Bronze letters on limestone



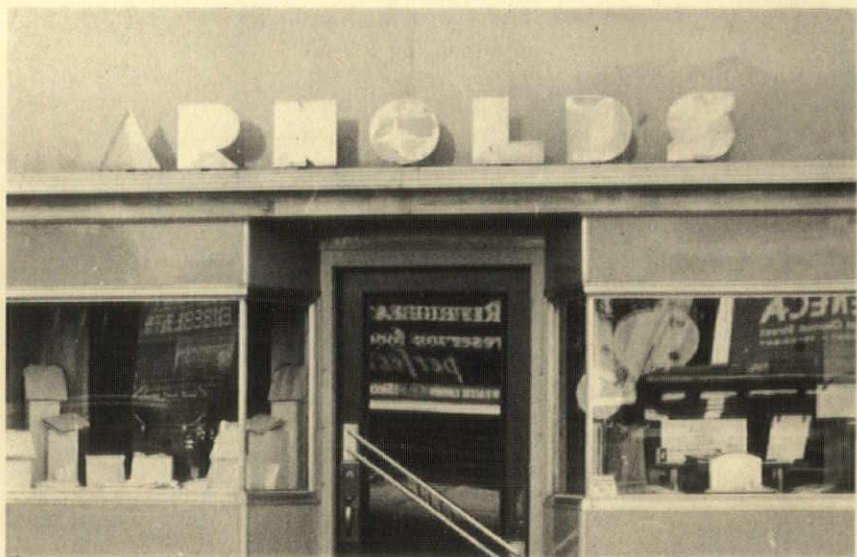
Metal letters on flat rods



Polished bronze against sanded background

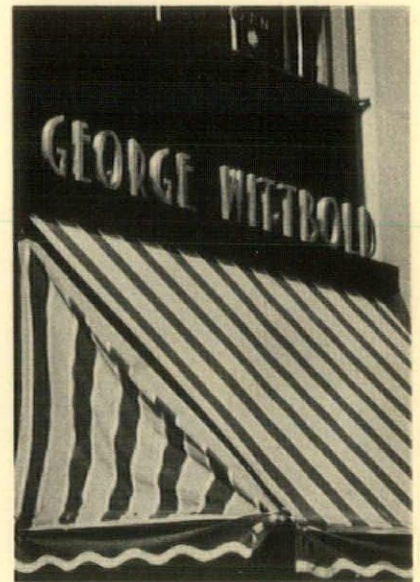


Free-standing white metal

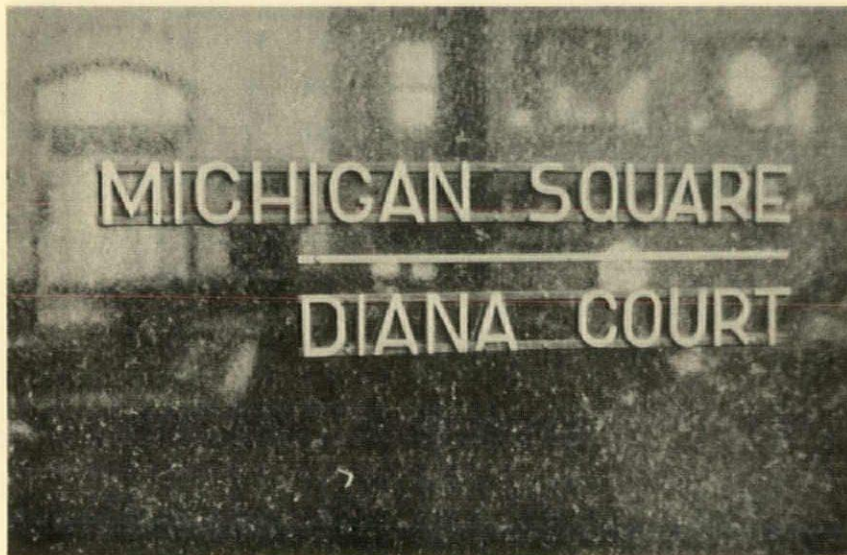




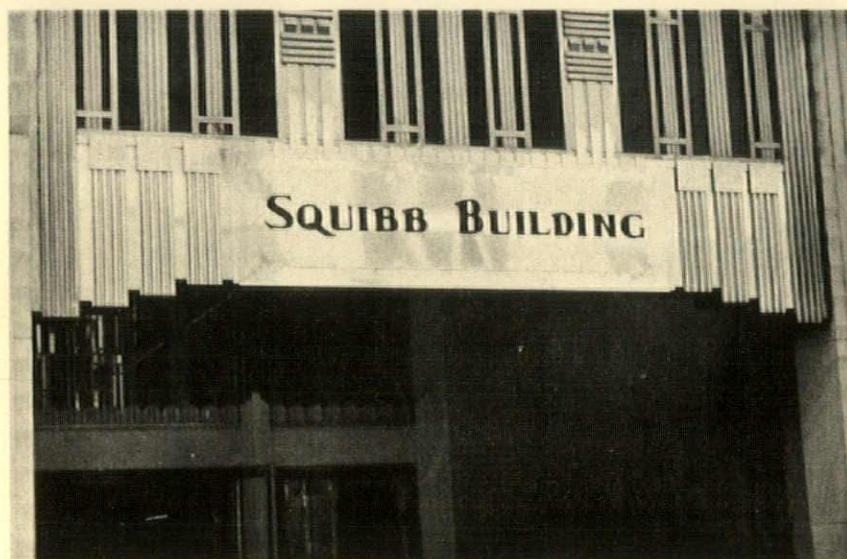
*White bronze stencil and glass,
interior lighting*



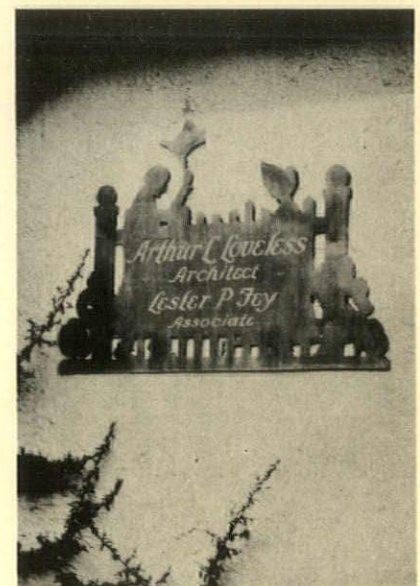
Philip B. Maher



*White metal on strips applied
to glazed terra-cotta*

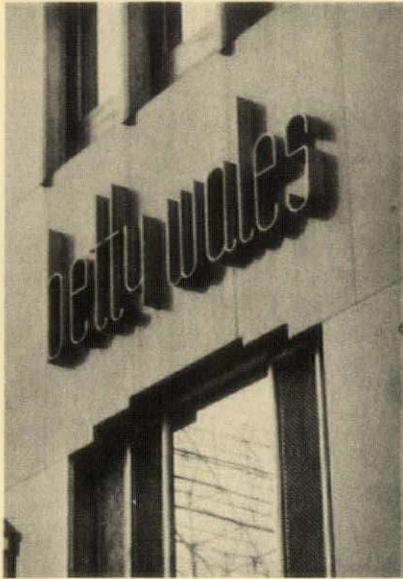


Cut-out lead



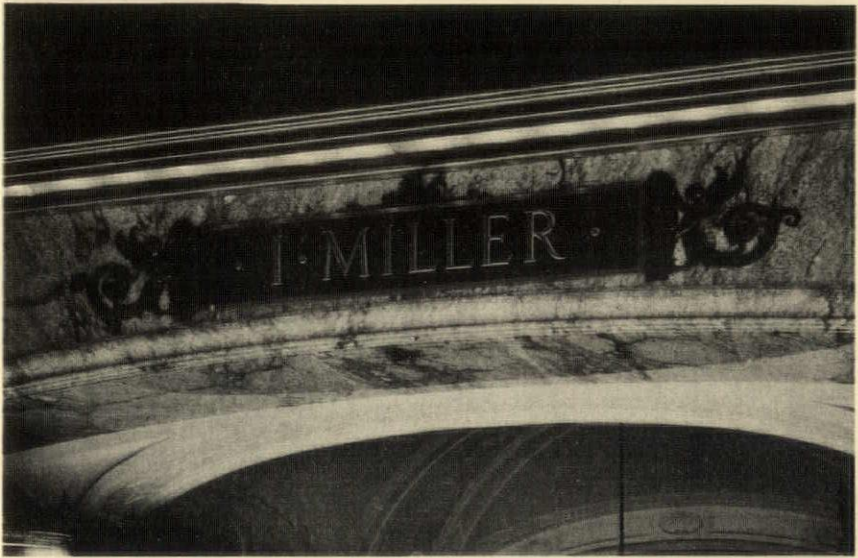
The Firm of Ely Jacques Kahn

*Cut glass
The Firm of Ely Jacques Kahn*



Bright bronze on limestone

Louis H. Friedland



Cut-out lead

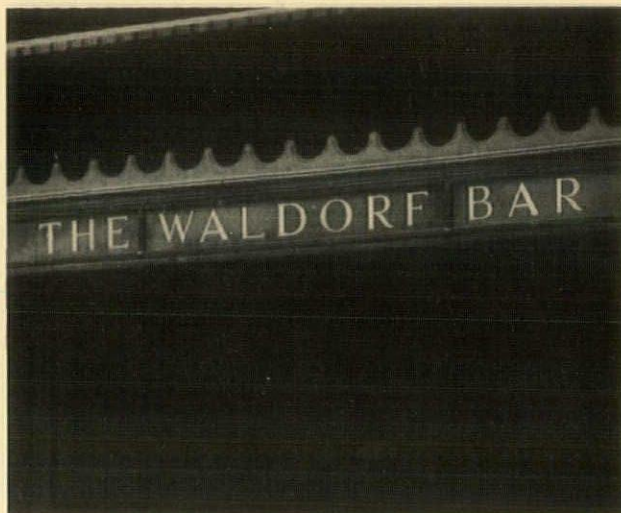


Bronze and marble





Glass on glass



Stencilled bronze, interior lighting



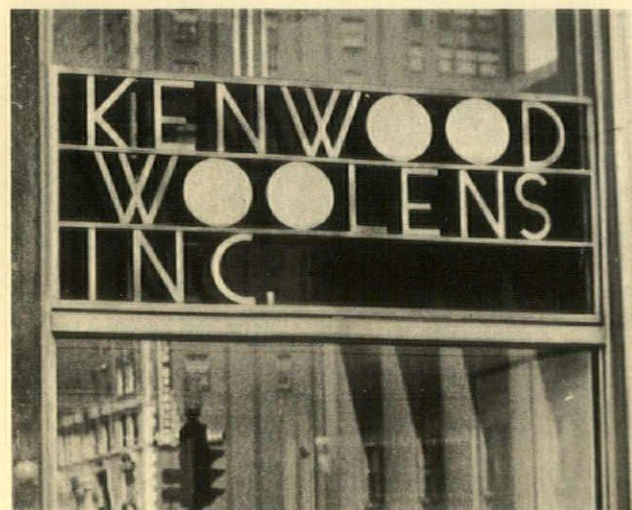
*White and blue terra-cotta
Thomas W. Lamb*



Color with colored glass

Free-standing bright metal against dark background

Starrett & Van Vleck

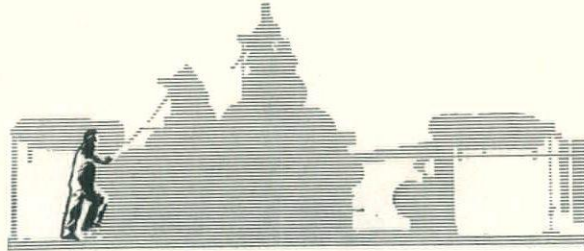


AUGUST, 1935

Building Products' News

Revised Regulations Covering Federal Housing Administration Loans up to \$50,000.00 are now available. It is to your advantage to be thoroughly posted. Shall we send you a copy?

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.

LIGHT EVERYWHERE FROM ANYWHERE

G. 81. The "Diamond H" Type "H" automatic, remote control switches, described in the Hart Mfg. Co.'s folder, are particularly recommended to architects where there is value or safety in flooding with light, at the flick of a finger, a floor, an entire building, or the grounds and several buildings together. In this folder you will find a diagrammatic layout of a typical installation, together with full information regarding these switches.

NEW GLASS

G. 82. A new glass that bends like a sheet of steel and breaks into small fragments, like rock candy, which do not cut or scratch, is one of the latest Libbey-Owens-Ford Glass Company products. It is described in a bulletin, available upon request, as the world's hardest glass. Heat treated in an electric furnace until plastic, a blast of cold air is then suddenly directed against the glass. This develops high compression on the outer wall of the glass, while the interior is under tension in the opposite direction. This glass will support tremendous weight, can be twisted or bent, and will resist breakage to an unbelievable degree. The makers say that its possibilities in building and construction activities are interesting and endless.

"22 LOW COST CONCRETE HOMES"

G. 83. Published by the Portland Cement Association, suggests twenty-two new designs for all types of small concrete masonry homes. Modern and formal styles are included for cottage, bungalow and two-story dwellings, four to six rooms in size. Floor arrangement and front elevation sketch illustrate each design description. To further illustrate the type of homes anticipated by the plan suggestions, the booklet includes a seven-page pictorial section showing recently built concrete masonry homes; concrete for home interiors; and concrete for garden and landscape use.

MANOR CASEMENTS

G. 84. An attractive thirty-two-page catalog presents the J. S. Thorn Manor Casements, with specifications, detail drawings, and interior and exterior photographs of actual installations. The J. S. Thorn Company of Philadelphia will be glad to send copies to interested persons.

"UNIT STRUCTURES"

G. 85. Bulletin U-30 describes an entirely new development in the construction industry, according to the producers, Unit Structures, Inc., of Peshtigo, Wis. Their roof structures are timbers made up of laminae united under high, uniform unit pressure. The laminae are forcibly curved and glued into a solid timber of required shape, with the decided advantage over full-sized timbers that the grain follows one principal stress plane. U-30 goes into the matter in great detail, with diagrams, photographs and dimensions.

DRAWING AND SKETCHING MATERIALS

G. 86. A supply of the Koh-I-Noor Pencil Company's new sixteen-page booklet, describing all the numbers in their line useful to draftsmen, artists and students, is now ready. Copies of this catalog are available to any one who will write for it.

DUPLEXALITE

G. 87. Catalog DP184 of the Miller Co., Meriden, Conn., covers the complete line of Duplexalite lighting fittings for commercial and residential application. All of the units shown are designed in accordance with best lighting practice and the line has been broadened to meet a wider application. Photographs of the various models are presented, accompanied by drawings of the inside construction, specifications and installation data.

MARK TIME

G. 88. Two types of switches are presented for the home: first, one which operates in the same manner as an ordinary switch but which, on the off operation, provides a timed interval before the light actually goes out; second, a type which is equipped with an automatic return toggle whereby the light is automatically shut off after the lapse of a pre-determined interval. This second type also has a lock feature so the light may be switched on until such time as the lock is released. M. H. Rhodes, Inc., New York, have prepared a circular on the MARK TIME switch which gives full details.

ROBERTSON KEYSTONE BEAM STEEL FLOOR

G. 89. "New Life for Buildings" is the title of the H. H. Robertson Co.'s latest brochure. This presents the Robertson Steel Floor System which assures 100 per cent electrical provision in any type of building and at the same time provides a stronger, better-appearing floor. The floor is composed of parallel cellular steel beams six inches apart, each of which has ample capacity to carry more than the number of wires usually carried by ordinary underfloor ducts.

YORK VAULTS

G. 90. A folder of specifications, illustrations and installation data on the York Fire-proof Vault Doors will be sent you by the York Safe & Lock Company upon request. This is a complete record of vault doors for your files.

ELEVATORS AND DUMBWAITERS

G. 91. The new Sedgwick general catalog is ready for distribution. This reference compilation, interesting to owners of every class of building, draws upon the experience which the Sedgwick Elevator Company has gained from many thousands of installations during forty-three years of specialization in the design, manu-

facture and installation of elevators and dumbwaiters. The catalog contains a wealth of detailed information, illustrations, specifications, dimensions and typical layouts.

GRACE AND ENDURANCE

G. 92. The International Nickel Co., Inc., of New York, will send to interested persons two new pamphlets which they have recently prepared showing, pictorially, some nickel-silver plumbing fixture installations in modern buildings. Solid nickel silver plumbing fixtures add to the fineness of a beautiful interior and their beauty is enduring and satisfactory over years of hard and exacting service, according to the company who makes them.

AIR CONDITIONING

G. 93. A set of new bulletins on York air-conditioning and refrigerating equipment, which was introduced a few weeks ago, has just reached us. Two types of equipment are described: first, the 10, 15, 20 and 25 horsepower Freon condensing units for commercial refrigeration and air conditioning; second, the larger series of horizontal type air conditioners for year-around conditioning in restaurants, hotels, retail stores and office buildings.

PLANNING MODERN INTERIORS

G. 94. The purpose of this booklet is to aid you in the planning of modern Celotex Interiors. The products of the Celotex Company of Chicago may be used to harmonize with any

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existing plan in color, design or decoration. Descriptions of various treatments, designs, colors and finishes and typical installations are graphically set forth.

SAFE-T-SHOWR

G. 95. The Doran Co., Seattle, Wash., have just entered the national field with their SAFE-T-SHOWR and have sent us a bulletin. This thermostatically controlled shower blends hot and cold water, delivering and automatically maintaining water at any temperature within its range that the user may select. Prices, types and roughing-in dimensions are included in the bulletin.

COOLING AND DEHUMIDIFYING COILS

G. 96. For air conditioning are presented in Bulletin 91 by the Fedders Mfg. Co., Buffalo. The bulletin includes specifications, diagrams, ratings, and a psychrometric chart with instructions for its use. This will be sent upon request.

METALLIC ZINC POWDER

G. 97. With the rapidly increasing use of Zinc Dust paint among industrial paint buyers, we feel that you will want the New Jersey Zinc Co.'s most up-to-date booklet on the subject. This brochure describes the uses of Zinc Dust paints, contains photomicrographs and typical installations, and is a complete reference manual on the subject.

ENGINEERING DATA

G. 98. A new book, designed to simplify the selection of belting, hose and other mechanical rubber goods, has been compiled by the B. F. Goodrich Company. It contains twenty-one pages of useful information and describes over two hundred rubber items. Illustrated with more than one hundred different diagrams and photographs, this book will be of great value as a guide. Supplementing the information on conveyor belting, hose, rubber lining and many other products, are glossaries, tables and technical data of wide general interest.

ILGATTIC SYSTEM

G. 99. The heart of this cooling and ventilating system is the Ilgattic fan which is installed in the attic space in an end wall or,

where the roof is flat, in a penthouse on the roof. The fan is controlled by a two-speed switch located in any convenient spot in the house. In the cool of the evening, the fan is started and inside of a few minutes, according to the ILG Electric Ventilating Company, all the hot air of the house is drawn up from every corner and swept out through the attic. The company has prepared descriptive and illustrative material on this cooling system and will be glad to send you the booklet, complete with diagrams and size requirements.

SHOWERS AND FIXTURES

G. 100. K-1 is the code number of a complete catalog of showers and fixtures for schools, colleges, institutions, industrial plants, etc. It is divided into seven parts: valve construction, showers, shower heads, bath fixtures, lavatory and sink fixtures, flush valves, and, lastly, shower data and tables. Also included is an imposing list of typical installations by the Speakman Company, Wilmington, Del., makers of these products.

BETTER CONCRETE

G. 101. This latest booklet in the "Incor" series on the "Incor" 24-hour cement, sent us by the International Cement Corp., has been prepared by that company in response to a demand for a simple, non-technical and straightforward discussion of good concrete fundamentals. This will be forwarded to any of our readers upon request.

FOLDER-WAY PARTITIONS

G. 102. Richards-Wilcox, Aurora, Ill., makers of sliding-door hardware, are ready to send out their new catalog A-63. In this are found illustrated and described several methods of handling partition doors and particular attention is called to the fully automatic electric FoldeR-Way partition. With this arrangement the doors open and close automatically and when closed rest tight against the floor. It is a deluxe installation and one which has been perfected

by the R-W Company. The last pages of the book are devoted to school wardrobes and contain specifications and details of several types.

PORCELAIN STEEL MODERN BUSINESS UNITS

G. 103. The Porcelain Steel Buildings Company, a division of White Castle System, Inc., Columbus, have prepared a color booklet showing eleven Modern Business Units in porcelain steel, with floor plans and dimensions. Also included is the diagram of the typical construction of porcelain steel buildings. We think this will prove of great interest to you.

ALCOA ALUMINUM AND ITS ALLOYS

G. 104. To meet the rapidly growing demand for information concerning the properties of aluminum, the Aluminum Company of America has prepared a ninety-two-page book of general and specific information. It is profusely illustrated and contains thirty-nine tables as well as an index.

PROTEXALL NO. 5

G. 105. This is a colorless liquid which waterproofs by penetration and by forming a coating. It can be applied in any way suitable to the user; either by spray, brush or immersion; and it is an all-year-round product as it will not congeal or become heavy, no matter how cold the weather. The Protexall Company of Philadelphia will send you their descriptive bulletin on this new product, which includes the coverage per gallon for various materials.

STREAMLINE WATER COOLERS

G. 106. Give you twenty important advantages, according to the Westinghouse Electric and Manufacturing Company, Mansfield, Ohio, in their new folder. This piece of publicity illustrates two of their models, the Micarta Cooler and the Dulux Cooler. May we have a copy of the folder sent you?

ARE YOU THOROUGHLY FAMILIAR WITH REVISED REGULATIONS COVERING F. H. A. LOANS UP TO \$50,000.00? DO YOU WISH A COPY?

ADVERTISERS' LITERATURE

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A. 324. Burnham Boiler Corp. Economy with Burnham Oil-Burn- ing Boiler	14	A. 341. Sloane-Blabon Battleship Linoleum	3d Cover
A. 325. Byers Company, A. M. Genuine Wrought Iron Bending Pipe	4	A. 342. Taylor Company, The Halsey W. Sanitation for Schools	14
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ARCHITECTURE

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OLD HEIDELBERG

Architects: Graham, Anderson, Probst & White

CARPET

COUNSEL

by the BIGELOW WEAVERS



Old Heidelberg Inn on Randolph Street, Chicago. At left, the main dining room, for which a special carpet was designed by Bigelow.

OLD HEIDELBERG INN is one of Chicago's most unusual and popular restaurants. We, at Bigelow, had the pleasure of serving as Carpet Counsel on this interesting project.

Mr. Alfred Shaw, of Graham, Anderson, Probst & White, says that his firm spent a good deal of time looking for a carpet in character with Old Heidelberg. The final choice was a special carpet by Bigelow and, according to Mr. Shaw, its effect in place has justified the selection.

Old Heidelberg's owners say this carpet is satis-

factory from the point of view of wearing quality.

This is just one example of Bigelow service in creating special carpets to meet special needs. But it typifies our ability to understand the architect's problem — to go to work on it intelligently — and to come through with exactly what is wanted.

The next time you face a carpeting problem, won't you let us study it with you? Contract Department, Bigelow-Sanford Carpet Co., Inc., 140 Madison Avenue, New York, N. Y.



THE BULLETIN - BOARD *Continued*

(Continued from page 6)

acceleration in the volume of mortgage insurance business of the administration. In view of the fact that the volume of business under Title II is increasing so much more rapidly than was anticipated, it has been considered sound to reduce the rate of the insurance premium in order to reduce the cost of insured mortgages to homeowners.

The large volume of business handled by the administration is shown by the following weekly figures of mortgages submitted with fees paid for inspection and appraisal:

April 1.....	\$2,483,000
April 8.....	2,875,500
April 15.....	3,364,800
April 22.....	4,130,600
April 29.....	6,975,200
May 6.....	5,984,500
May 13.....	5,907,200
May 20.....	8,139,800
May 27.....	5,204,600
June 3.....	7,085,000
June 10.....	7,391,400

Bringing these figures up to June 21, the total was \$82,111,354. Contracts for insurance mortgages on that date totaled \$34,136,574; 35 per cent of which total was for new homes.

NEW YORK PUBLIC LIBRARY'S REQUEST

THE New York Public Library lacks the issues of ARCHITECTURE noted below. These numbers are all out of print, but in view of the importance of having a complete file in the Library, Mr. H. M. Lydenberg, director, makes public this need. He would appreciate the courtesy of any of our readers who, having no longer need for their copies of these issues, will send them to the Library. Correspondence and shipments should be addressed to The Director, The New York Public Library, Fifth Avenue, and 42d Street, New York City.

Vol. I, No. 1; Vol. I, No. 3 to Vol. II, No. 9, inclusive; Vol. V, No. 26 to Vol. V, No. 30; Vol. VI, No. 32 to Vol. VI, No. 36; Vol. VII, Nos. 38 to 41; Vol. VIII, Nos. 44 to 47; Vol. IX, No. 51; Vol. X, No. 60; Vol. XI, No. 1; Vol. XII, Nos. 2 to 6; Vol. LXIII, No. 4.

BUILDING PERMITS

BUILDING permit values in June established a new peak since November, 1931, according to Dun & Bradstreet, Inc. Reports from 215 cities of the United States show a total estimated cost of permits issued last month amounting to \$52,702,353, against \$49,327,248 for

May, or a gain of 6.8 per cent. The seasonal movement for this period calls for practically no change. The June total represents an increase of 84.1 over the same month of last year when permits equalled \$28,621,565.

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

Groups:	June, 1935	June, 1934	Change P. Ct.
New England.....	\$4,079,667	\$3,240,880	+ 25.9
Middle Atlantic...	18,066,756	10,120,477	+ 78.5
South Atlantic....	6,077,672	3,489,764	+ 74.2
East Central.....	8,062,013	3,749,392	+115.6
South Central....	4,895,773	2,366,817	+106.9
West Central.....	2,635,910	1,611,238	+ 63.6
Mountain.....	997,913	506,386	+ 97.1
Pacific.....	7,886,043	3,545,011	+122.5
Total U. S.....	\$52,702,353	\$28,621,565	+ 84.1
New York City....	\$13,076,671	\$5,522,337	+136.8
Outside N. Y. C....	\$39,625,682	\$23,099,228	+ 71.5

With the improvement registered in June, the building construction industry during the first half of 1935 reached the highest level since 1931.

In comparing this year's total with the depression low of \$140,420,513 during the first half of 1933, the current figure represents an increase of 80.4 per cent. Following is the comparison for June and the first six months of the past nine years:

	June	Six Months	Compared Previous Year
1935.....	\$52,702,353	\$253,273,658	+51.3
1934.....	28,621,565	167,384,523	+19.2
1933.....	34,098,384	140,420,513	-40.3
1932.....	32,173,221	235,446,971	-66.3
1931.....	89,543,442	609,272,302	-20.9
1930.....	151,047,894	885,066,139	-50.1
1929.....	218,835,481	1,773,620,273	-15.5
1928.....	323,983,272	1,801,576,268	-0.6
1927.....	317,656,761	1,813,891,283

NEW YORK BUILDING SCHOOL MOVES

THE New York Building School, formerly in the Grand Central Terminal Building, announces its new quarters at 67 West 44th Street, New York City, where it will continue its courses in building design and review for State examinations, under the direction of L. M. Bernfeld and William A. Hoffberg.

THOMAS M. KELLOGG, 1862-1935

THOMAS MOORE KELLOGG, architect, died July 8, at his home in Chestnut Hill, near Philadelphia, after an illness of six weeks.

Born at Laurel, Md., Mr. Kellogg attended Baltimore City College for a year, and later the Massachusetts Institute of Technology.

He was for a time in the office of McKim, Mead & White. With John

Hall Rankin he founded the architectural firm of Rankin & Kellogg in Philadelphia forty-eight years ago. Some of the better-known work of the firm was the Inquirer Building, the Providence Trust Company Building, Camden Safe Deposit Company Building, First Methodist Church of Germantown, Pa., Indianapolis Post Office, administration buildings of the Department of Agriculture in Washington, and the Marine Corps Depot at the Philadelphia Navy Yard.

Mr. Kellogg was a Fellow of the American Institute of Architects and a former president of the T-Square Club of Philadelphia.

GEORGE KELLER, 1843-1935

GEORGE KELLER, architect, said to have been the oldest living member of the American Institute of Architects, died at his home in Hartford, Conn., July 7.

Mr. Keller had retired from active practice in 1914. He was the designer of the Garfield National Memorial in Cleveland; Monumental Hall and the gateway, Soldiers' Home, Danville, Ill.; and the monumental gateway at the Military Home in Dayton, Ohio. The best known of his work was the Gettysburg Memorial, at the dedication of which Lincoln made his famous address.

PERSONAL

Vitale & Geiffert, Gilmore D. Clarke, landscape architects, with offices at 101 Park Avenue, New York City, announce that Michael Rapuano has been taken into the firm as their associate.

Ernest R. Gilbert, architect, announces the opening of his office for the general practice of architecture at 110 North 7th Street, Richmond, Va.

Ernest T. Friton, architect, announces his return to the private practice of architecture, with offices in the Security Building, St. Louis, Mo.

Daniel Perry, architect, has opened new offices for the practice of architecture, at 1213 Main Street, Port Jefferson, N. Y.

Robert Helmer, architect, announces the removal of his office from Springfield Gardens, N. Y., to 1180 Fulton Street, Brooklyn, N. Y.

Julius Boenisch, architect, announces the removal of his office to 3380 Fulton Road, Cleveland, Ohio.

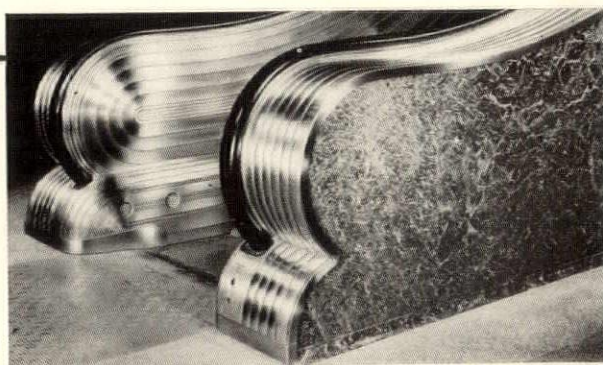
*Architects: Reinhard and Hofmeister; Corbett, Harrison and McMurray; Hood and Fouilhoux.
Consulting Engineer: Clyde R. Place. Builders: John Lowry, Incorporated.*



Offer more than one ground floor in your plans

HERE'S an idea that's taking hold — the converting of second floors or basements into ground floor space by installing Escalators. It is a plan that is particularly appealing for office and mercantile buildings, since it provides twice the space for shops and the good rentals that accrue to owners from long-time leases. It is one that can be worked in existing buildings as readily as in new structures. The cost of amortization, interest, power, and maintenance is so moderate on this type of Escalator installation, it will be found that in many cases the increased rentals make it a splendid investment.

We ask you to note this type of Escalator installation in the two photographs on this page. Here is shown the Otis Escalator installation in the International Building, Rockefeller Center, New York City. These Escalators furnish first-floor

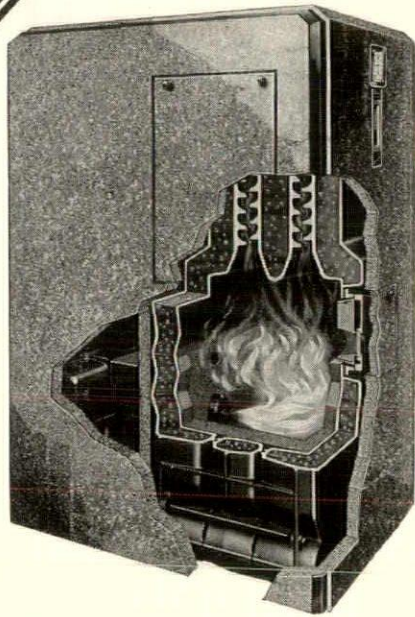


convenience to both the second floor and the concourse. Note modern design and finish. And the mechanical features are just as modern as the beautiful balustrading. In fact, these Escalators move so silently, you can hardly hear them.

A new transportation idea — and transportation that is as modern as the idea.

OTIS ELEVATOR COMPANY

How to save at least 15% on Oil Heating



One thing this boiler does, is cut down the loss in heat lag, that has always meant such a fuel loss in oil heating.

Isn't it so, that it is about an even break so far as fuel cost is concerned, between oil and coal? Knowing such to be the facts, you doubtless will be loath to accept our claims for a Burnham Oil Burning Boiler that saves 15%.

Don't know as we blame you. It does sound a bit like exaggeration. The actual truth of the matter is, it more often than not, saves 20%.

Whether or not you believe such a saving is possible, still it is going to be hard for you to ignore the cold facts we have. Not facts based on laboratory tests. But real firing-line ones. Facts backed by names and addresses which you can easily use and find out for yourself. Glad to send the names. Also printed matter.

Burnham Boiler Corporation
IRVINGTON, NEW YORK

Representatives in All Principal Cities of the United States and Canada

Don't
be misled
THERE IS ONLY
ONE

Nearly a half billion square feet of Old Reliable Hyloplate Blackboard is now giving satisfactory performance the world over.

OLD RELIABLE
HYLOPLATE
TRADE MARK
BLACKBOARD

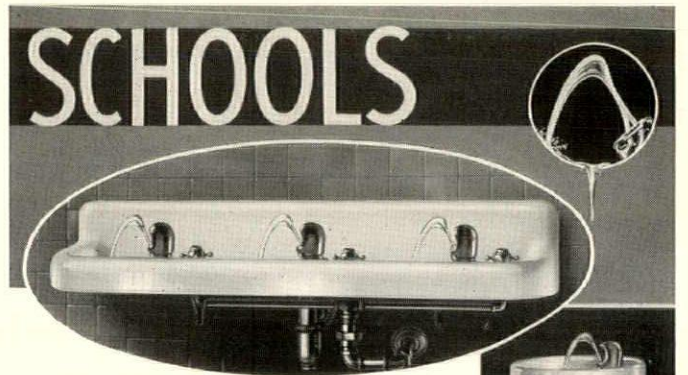
Old Reliable Hyloplate has been the standard of high quality in blackboards for so long, that the name "Hyloplate" often is the general term applied to all composition blackboards. There is only **ONE OLD RELIABLE HYLOPLATE** . . . insist upon the **GENUINE**.

HYLOPLATE has a velvety writing surface that never wears slick or reflects light to cause eye-strain. It takes crayon with crispness, and registers a clear, uniform mark that is easily read and erased.

In the interests of economy and satisfaction in performance, insist upon **OLD RELIABLE HYLOPLATE FOR YOUR NEW SCHOOLS**.

Send for A. I. A. File 25-b-12 which gives Blackboard details, specifications and drawings. Address Dept. H870.

WEBER COSTELLO CO.
MANUFACTURERS - - - CHICAGO HEIGHTS, ILL.



.. appreciate their many advantages

You could list many reasons for the continued preference of school authorities for Halsey Taylor Drinking Fountains, but most important of all is **SANITATION**. The drinking mound is always maintained at uniform height, due to a practical two-stream projector. Automatic stream control — another feature — means that water never varies regardless of line pressure changes. Of course, the Halsey Taylor line offers you a wide variety of designs to suit every purpose and to meet your building budget! Write.

The Halsey W. Taylor Co.
Warren, Ohio

SPECIFY **Halsey Taylor**
DRINKING FOUNTAINS



If you were a SURGEON you would use the Best Tools available.

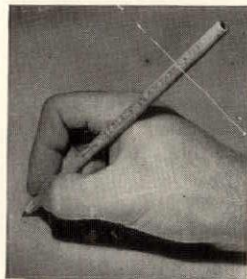
WHY should you be less particular about the tools you use in your own profession? The difference between the average drawing pencil and the famous A. W. Faber "Castell" is no more than 5c at most. That trifling difference gives you the finest drawing pencil on the market—the world's standard of quality.

"Castell" Brings Out Talent

You will be impressed with its outstanding superiority from the first moment you use it. "Castell" is unusually smooth. It is free from grit and hard spots. It does not flake or crumble.

"Castell" gives inspiration to your work—it is so versatile (18 degrees), so perfect in performance that it automatically makes you do better work. It brings out your latent talent and gives you tone effects that you never had with another pencil. If you are heading for real recognition in your craft, take "Castell" with you—it will ease the way.

It is no secret that "Castell" is the overwhelming favorite of the Masters of your craft. To be a Master do as the Masters do—use "Castell".



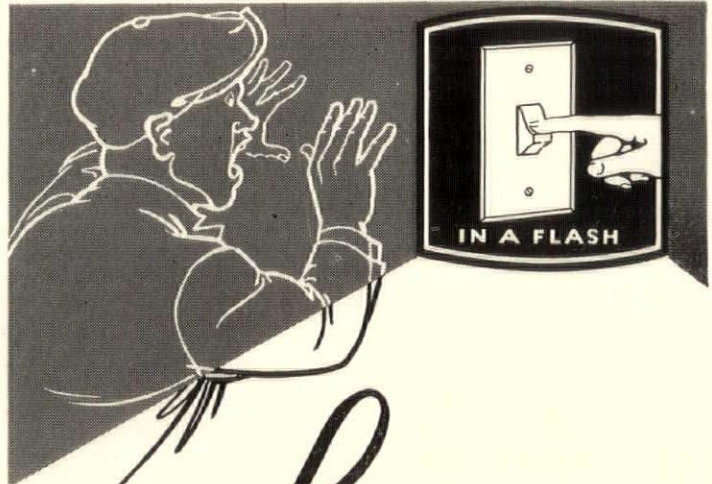
Jet Black (No. 7730)

Designed for sketching and marking purposes. The soft, black thick lead gives you rich, smooth strokes without gloss. Ideal for students, artists, editors, proofreaders, etc. Round, thick lead, yellow polish, stamped in silver.

Castell
DRAWING PENCILS

Made in Bavaria in 18 Degrees

A. W. FABER, NEWARK, N. J.



LIGHT

STOPS THE LAWBREAKER

In the hours of night, when the burglar, the prowler and the kidnapper are abroad, light—clear, sight-giving light—puts intruders to flight quicker and more directly than the law.

Operative at finger touch from the master's bedroom or other convenient locations, "DIAMOND H" REMOTE CONTROL SWITCHES instantaneously floodlight the entire floor, the building, a group of buildings—even the grounds!

Whether the threat is in human form, or a type of natural disaster, "DIAMOND H" SWITCHES dispel—in a flash—the gloom that harbors the threat.



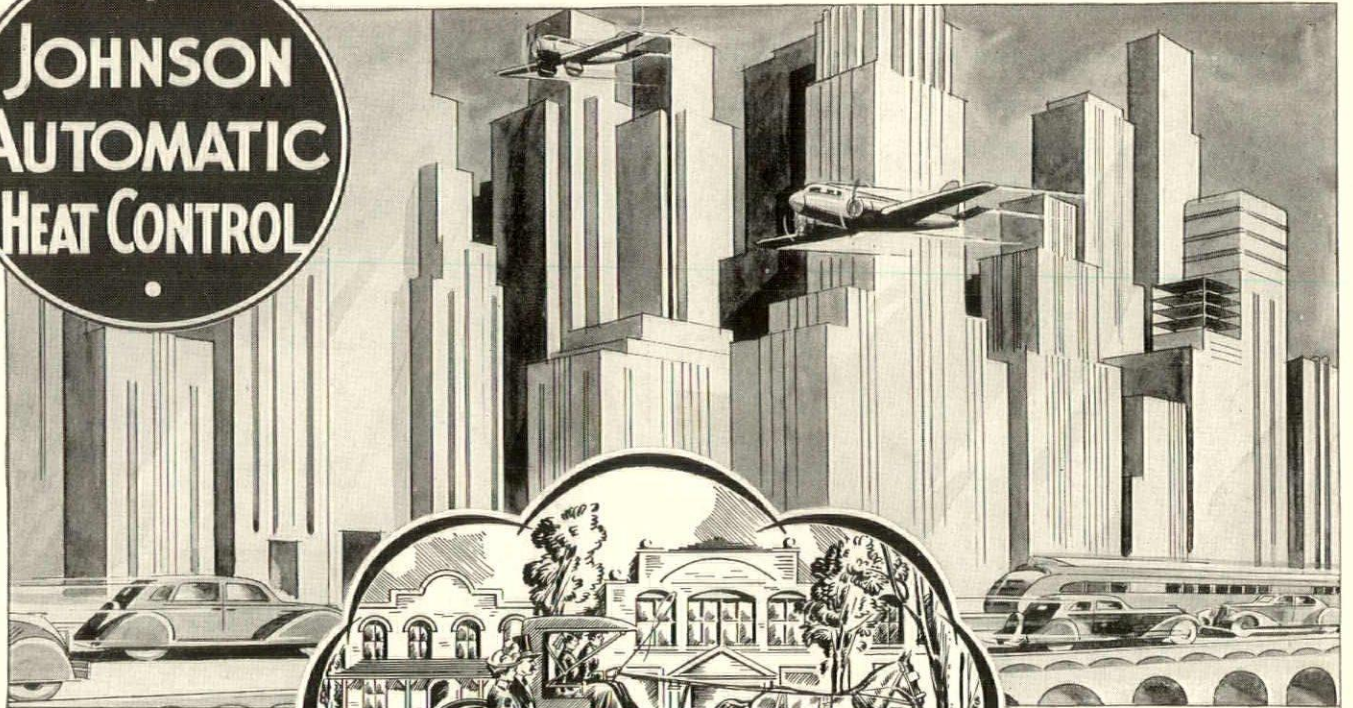
Architects are invited to utilize the free co-operation of "DIAMOND H" engineers in adapting these switches to their clients' needs.

Write for Bulletin 10A

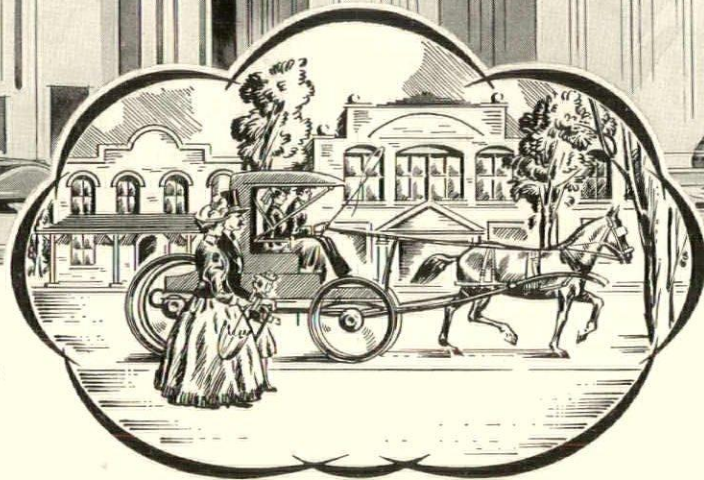


Describing These Type H Switches

THE HART MANUFACTURING COMPANY
HARTFORD, CONN.



1885



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FIFTY YEARS DEVOTED TO THE PROMOTION OF COMFORT, HEALTH AND ECONOMY

For half a century, the Johnson organization has devoted its entire effort to the manufacture, installation, and improvement of the Johnson System of Temperature and Humidity

Control. Through all those years the Johnson Service Company has been the leader in the development of automatic control apparatus for heating, ventilating, and air conditioning.

SPECIAL PROBLEMS are not new to Johnson Service Company engineers and installation men. Whatever the means adopted to accomplish heating, cooling, humidification, and dehumidification, there are Johnson devices, tried and tested, to secure the particular effect desired. A back-ground of fifty years of continual development and progress is assurance to architects, engineers, and contractors who refer automatic control problems to the Johnson Service Company. Their clients, the building owners, benefit by the experience of a nation-wide organization devoted to just this one line of business. The Johnson Service Company never has failed to execute any contract entrusted to it.

JOHNSON SERVICE COMPANY - - MILWAUKEE, WIS.

BRANCH OFFICES IN ALL PRINCIPAL CITIES

INCORPORATED: NOVEMBER 1885



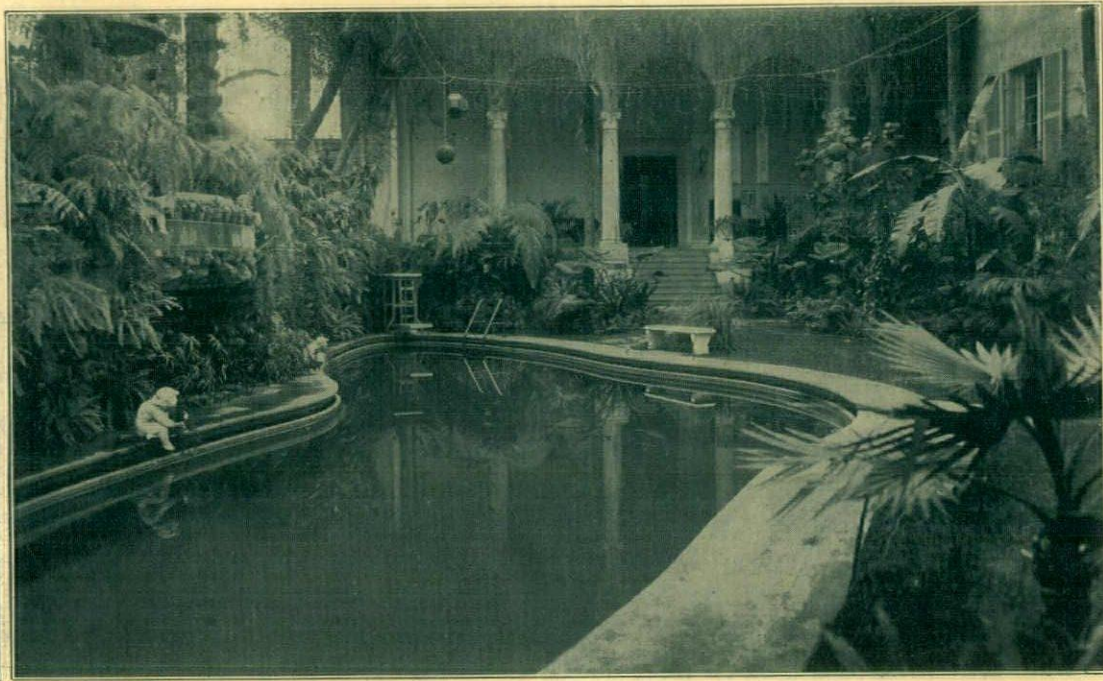
Bar of the exclusive Lawrence Beach Club, Lawrence, L. I. The floor is Sloane-Blabon Battleship Linoleum—blue with a white circle enclosing a red anchor. Furniture and walls are pine; curtains, dark blue and white; ceiling, lacquer red, which harmonizes with the anchor in the center of the floor.

IN planning the bar of the Lawrence Beach Club, the architects, Henry Otis Chapman, Jr., and Harold W. Beder, were faced with the problem of creating a room that would combine comfort, beauty and utility and at the same time weather the deprivations of salt air. To quote Mr. Chapman: "We had to design a very simple interior and one which would withstand the salt air and dampness. We also had the problem of wet bathing suits. For the floor Sloane-Blabon Linoleum was used, not only to withstand the severe wear but also for the effect."

/ / / / /

The Lawrence Beach Club is but one of many recent outstanding Sloane-Blabon installations. We shall be glad to send you a list of others and any information which may be helpful to you in solving your linoleum problems. Write W. & J. Sloane Selling Agents, Inc., 577 Fifth Ave., New York.

SLOANE-BLABON LINOLEUM



When this ARCHITECT built his own pool he specified CHLORINATION

Every endorsement of chlorination—by word or action—is tribute to the residual sterilizing action that insures drinking water standards for swimming pool disinfection. Chlorination is the one method successful above all others.

Just as 15,000 accurate and dependable W&T chlorinators have solved other problems of water sterilization and swimming pool disinfection, just so readily will W&T equipment solve your problem.

MR. BENJAMIN H. MARSHALL, prominent Chicago architect, has this to say of chlorination in general—of W&T equipment in particular:

"The pool is located in a glass enclosed tropical garden and completely surrounded by growing vegetation, but your equipment has at all times been able to control growths of algae which otherwise would be very prevalent. My original decision to use the chlorination process was based upon authoritative recommendations that this was the most satisfactory method of pool disinfection.

"The method and your equipment having proved eminently satisfactory and adequate, I have since been pleased to specify your equipment for several pools which I have had occasion to build in connection with my practice."

"SWIM IN DRINKING WATER"

WALLACE & TIERNAN CO., INC.

Manufacturers of Chlorine and Ammonia Control Apparatus

NEWARK, NEW JERSEY



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