

THE AMERICAN ARCHITECT

FOUNDED 1876

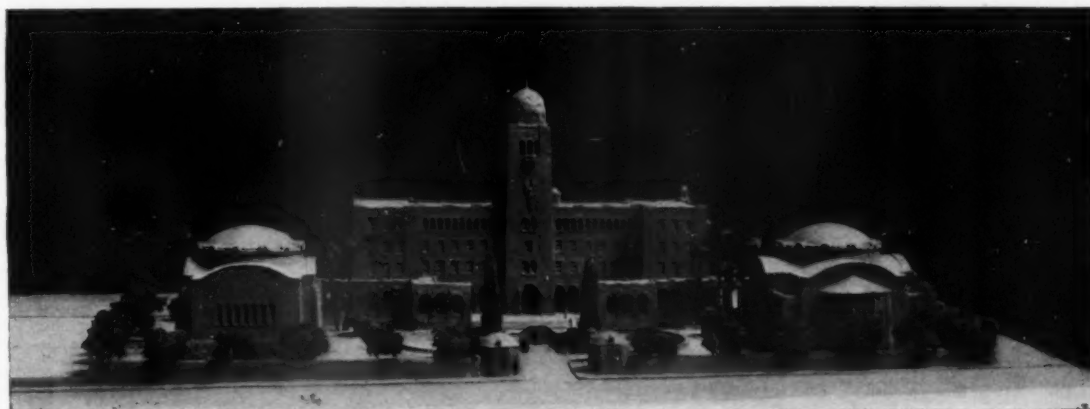
FORTY-SECOND ANNUAL EXHIBITION OF THE ARCHITECTURAL LEAGUE OF NEW YORK

BY A FELLOW OF THE AMERICAN INSTITUTE OF ARCHITECTS

WHEN one tries to recall the days of the founding of The Architectural League, and visualize the first exhibition held in 1881 in the rooms of the Salmagundi Club in New York City, and compares architecture of those times with the tremendous vitality of today, one appreciates that we are living in a golden era, that architecture has become the dominant art of the world, and that our country has the greatest of all opportunities. And then when one surveys the forty-second exhibition of The Architectural League now being held in the Grand Central Palace, New York, it is made manifest, as never before, that the most notable development in architecture the world has ever seen, has been brought to its present state chiefly by the skill, the vision and the opportunities of architects practicing in our larger cities and with the unusual opportunities, largely in New York. This distinctive achievement,

the new manifestations, the real successes are naturally where opportunity is largest. As represented at this exhibition, it is primarily a display of the work of our metropolis, and it is proper that this should be admitted. Architecture is not to be judged by its average, nor by what it does as a daily task or as a means of earning its livelihood, but rather by its imaginative conceptions, its dreams of the impractical, its vision which takes shape only when fancy is let loose and can evolve without considerations of money, lot lines, zoning restrictions or cubic feet. And the dominant note of this exhibition is its boldness, its reaching out far beyond material limitations, its portrayal of Pegasus hitched to a steel skeleton and soaring to the heavens.

First let us recognize that this exposition has a most admirable setting. The interior architecture of the Grand Central Palace has disappeared, and in



MODEL FOR GROUP OF Y. M. C. A. BUILDINGS AT JERUSALEM, PALESTINE

ARTHUR LOOMIS HARMON, ARCHITECT

(Copyright, 1927, The Architectural & Building Press, Inc.)



PLANTING EFFECT, "ROLLING HILL" FARM, EAST
NORWICH, L. I., N. Y.

CLARENCE FOWLER, LANDSCAPE ARCHITECT

place we find a series of carefully proportioned rooms, thoroughly in scale with the exhibits, with ceilings not too high, walls of a soft neutral gray, ceiling lights ever giving effect of daylight and ample length and breadth permitting ever the most ambitious exhibits to be seen from a proper and effective distance, without crowding and without skying. On the main floor is most of the architectural work, which is helped out amazingly by surrounding series of booths for special exhibits of the allied arts and crafts, while the two upper stories are occupied by school work, manufactures, decorations, etc. On each story, there are examples of sculpture, painting, glass, landscape work, etc. The whole exhibition is built around the showing of architecture, but everything is closely and properly related to the mother art and affords a very notable illustration of the close union of the allied arts and industries. Never before can we recall so fair and liberal a recognition of what architecture owes to its craftsmen.

A word should also be said for the year book which illustrates this exhibition. It is well edited, the illustrations are typical and very complete and include the decorations, landscape work and sculpture as well as the architecture, while that much neglected but very essential factor, the advertising section, is in some respects quite as valuable for reference purposes as the more strictly professional sec-



MEN'S DORMITORY, HARTFORD, CONN., THEOLOGICAL SEMINARY

ALLEN & COLLENS, ARCHITECTS

tions. Indeed some one must have steered the advertisers to select so wisely the buildings advertising their wares. If we must have advertisements with the year book, which is questioned by The American Institute of Architects, this is most certainly a right way to do it.

There is here so much that is excellent that it is hard to choose, but space compels a restriction of this review to the exhibits of architecture, and most of the buildings we find here set forth, are so big, so smashing in emphasis of the modern tendencies that any mere ordinary work might pass unperceived. The modern tendencies are at once apparent. Time was not so very long ago when most of the drawings in such an exhibition would be in pen and ink, with few photographs and no models. Instead we find very little line work, a great deal of careful rendering and some painting in oils, as the very effective picture of the new Telephone Building; and the preference is for a picturesque mass treatment, wherein detail as such hardly counts. The few models shown are most complete and elaborate, such as the details of the Philadelphia Art Museum and the interior of the Elks Building, Chicago, which illustrate how much care is given to our work today, for these models are real studies and not mere show pieces for exhibition.

In a way, this exhibition could be called an elaboration of the tower scheme of design. Indeed one



THE BARNES FOUNDATION, MERION, PA.

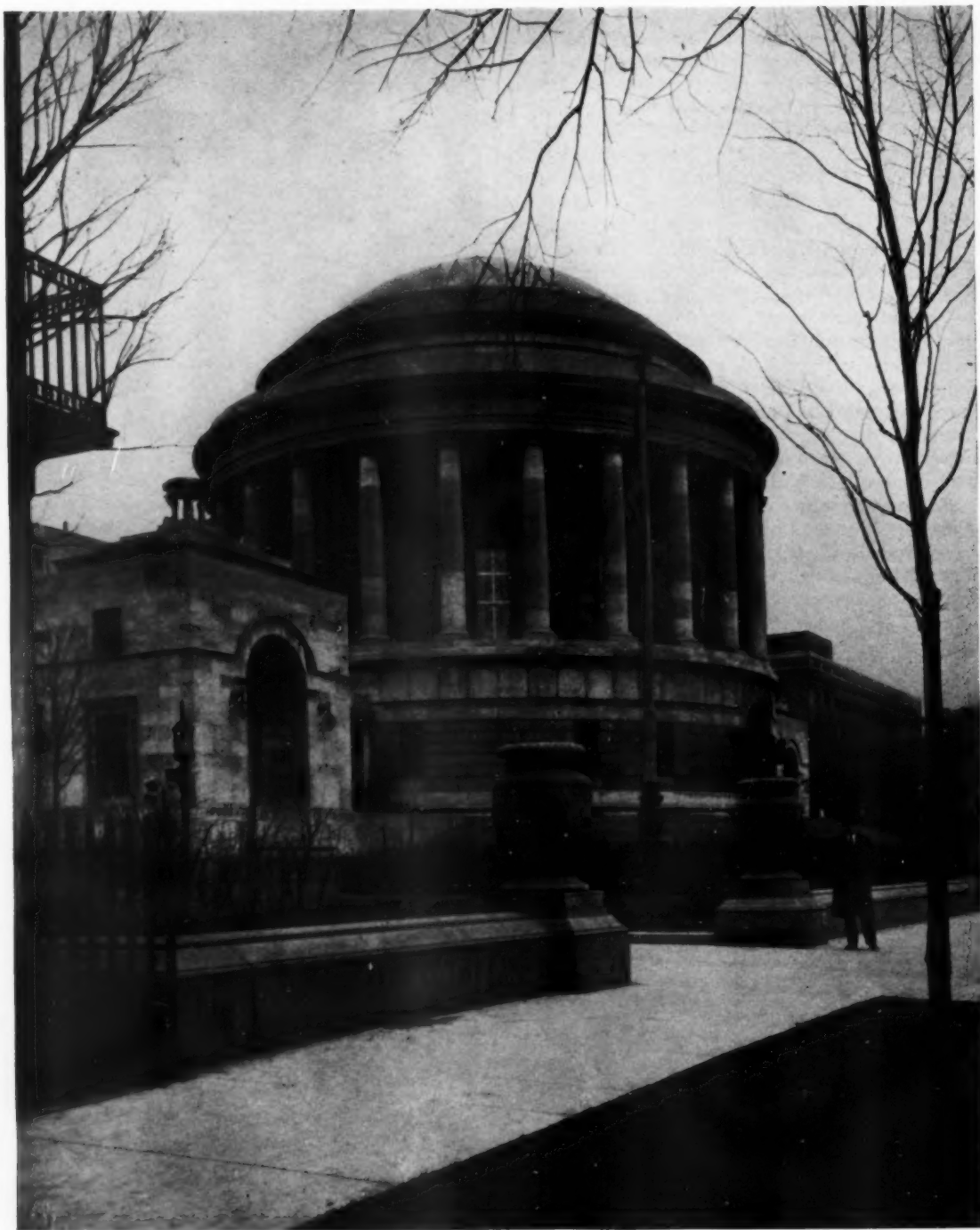
PAUL P. CRET, ARCHITECT

booth is wholly given to a display of beautiful sketches by Vernon Howe Bailey of the towers of New York, and they are many and growing more



WOMEN'S DORMITORY, HARTFORD, CONN., THEOLOGICAL SEMINARY

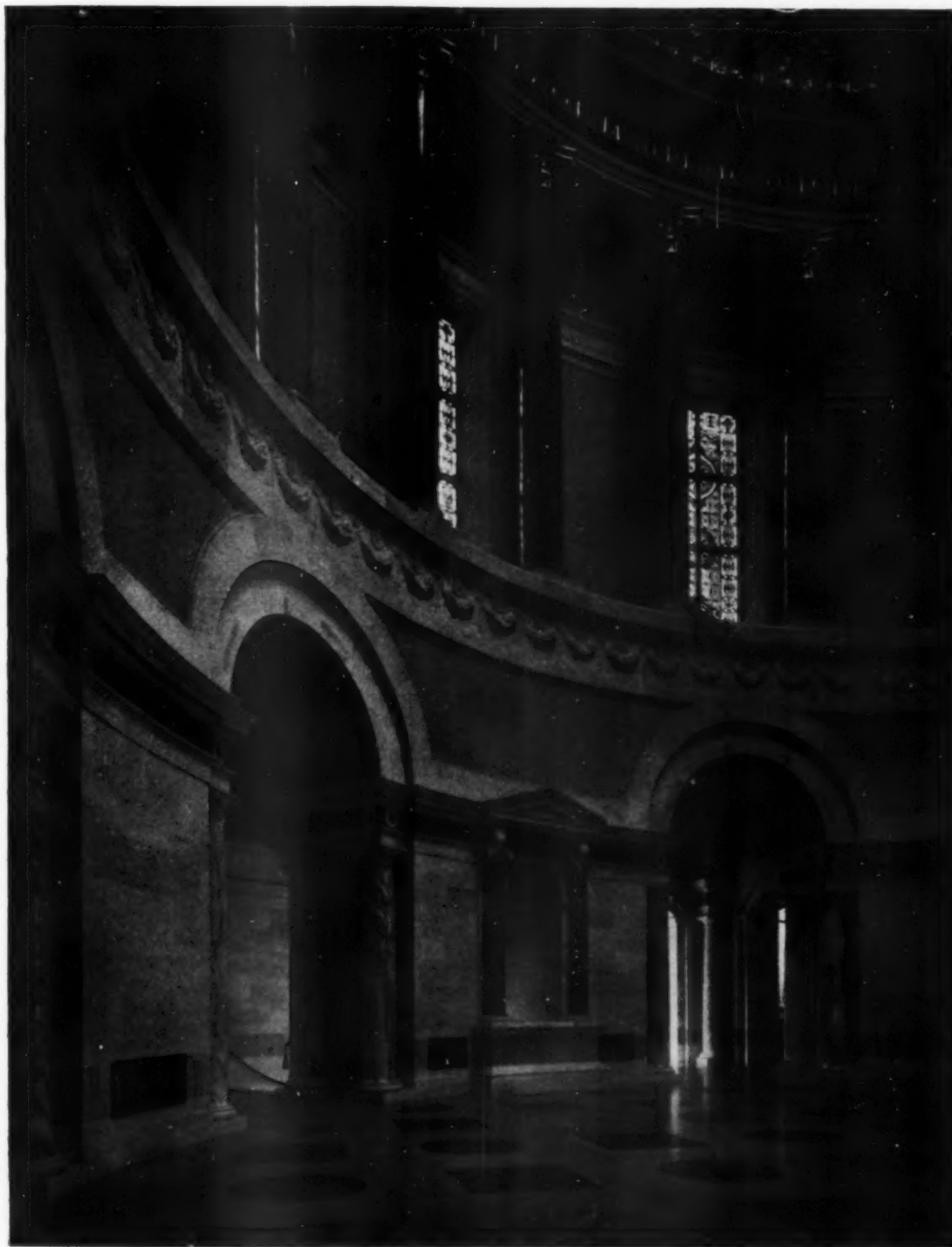
ALLEN & COLLENS, ARCHITECTS



ELKS NATIONAL MEMORIAL HEADQUARTERS BUILDING. CHICAGO. ILL.

EGERTON SWARTWOUT, ARCHITECT

(Forty-second Annual Exhibition, The Architectural League of New York)



ELKS NATIONAL MEMORIAL HEADQUARTERS BUILDING, CHICAGO, ILL.

EGERTON SWARTWOUT, ARCHITECT

(Forty-second Annual Exhibition, The Architectural League of New York)



PEDIMENT OVER REAR ENTRANCE, PHILADELPHIA MUSEUM OF ART

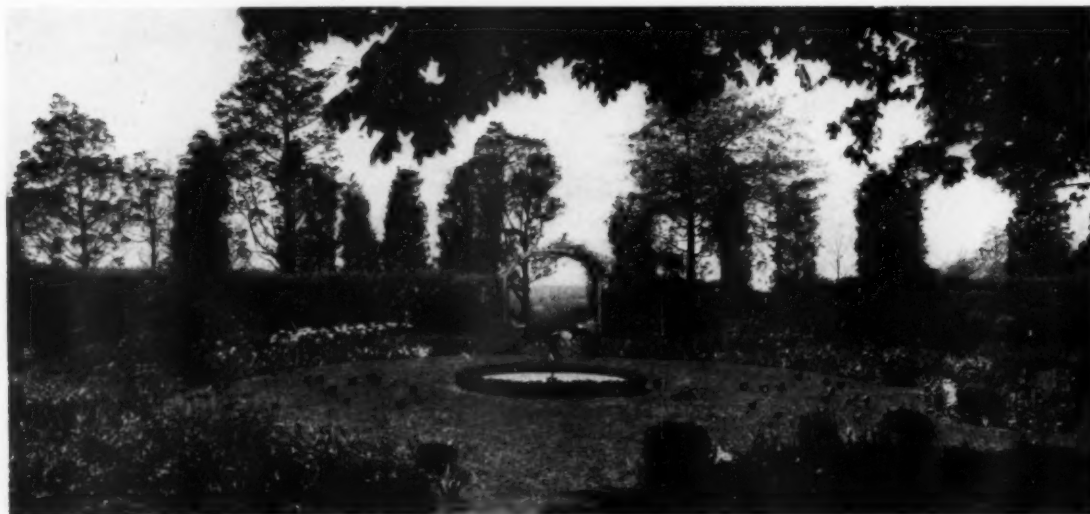
BORIE, ZANTZINGER & TRUMBAUER, ARCHITECTS

C. P. JENNEWEIN, SCULPTOR

numerous and overpowering every day. The tower type has come to stay, thanks to the zoning law and architectural ingenuity. It is interesting to note how this tower type has developed away from all our old formulas for tall buildings. Mass is the prime consideration. Windows become mere incidents not to be taken seriously, really only to add texture to what has to pass for wall surface. Cornices, mere horizontal accents. Material lost in the mass. Color a monotone. Detail chiefly a ripple at strategic points of the design, though of itself elaborated in very effective manner, and always showing up well in photograph. And each of these bewildering towers seems to have been evoked at one stroke, dashed off as a sudden inspiration, and yet we know that when they are really successful they represent an amount

of careful, intelligent study such as our forebears never dreamed of. A casual run through this exhibition might lead one to think that architecture had taken the bit in its teeth and run away with itself in defiance of everything academic, and we insensibly count the stories, wonder at cubic feet, ask how quickly was it built and does it pay, and only on second thought do we begin to appreciate that these tall buildings mark the greatest development of architecture, beside which the pyramids are but child's play and St. Peter's a bungling, chain bound structural failure.

But the exhibition is not lacking in academic work, and the older language has not lost its flavor. The Philadelphia Art Museum is poles apart from the tower spirit. The plan is thoroughly reminiscent,



THE CIRCULAR GARDEN, "ROLLING HILL" FARM, EAST NORWICH, L. I., N. Y.

CLARENCE FOWLER, LANDSCAPE ARCHITECT



PEDIMENT (THE EAST), PHILADELPHIA MUSEUM OF ART

BORIE, ZANTZINGER & TRUMBAUER, ARCHITECTS

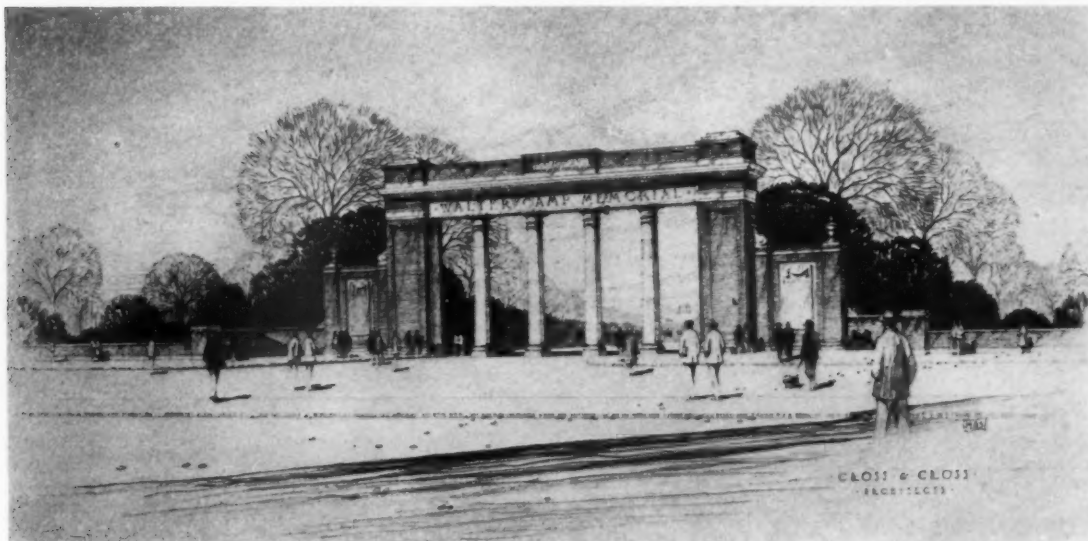
JOHN GREGORY, SCULPTOR

as befits an art gallery, the design is along all the tried and accepted lines, and the details are classic in their purity. But,—and it is a very emphatic but,—there is a great deal more that was not inspired by any academy and which could hardly be imagined anywhere except in America. Color is used in a strong, passionate way which is strikingly original and immensely effective, none the less original for being inspired by our scanty knowledge of early Greek polychromy. With pediments given a ground of solid Prussian blue, with mouldings not merely picked out, but fearlessly painted in blue, vermillion, emerald green, gold and rich sienna, with color added to the delightful wrought iron work,—as it should be:—with painted statues put where they do the most good, and with details which seem to think in strong color, the effect of this remarkable group when complete, if anything like the drawings and full size models here shown, will be a wonderful revelation of what can be evolved by the spirit of

today, reviving the beauty of old Greece and using the vocabulary of the Academy. And the subjects of the decorative groups—"The Arabian Nights," "The Rose of Sharon" to name only two—show how an academic conception can admit of the highest poetry and imaginative license, with the architecture being the richer therefor.

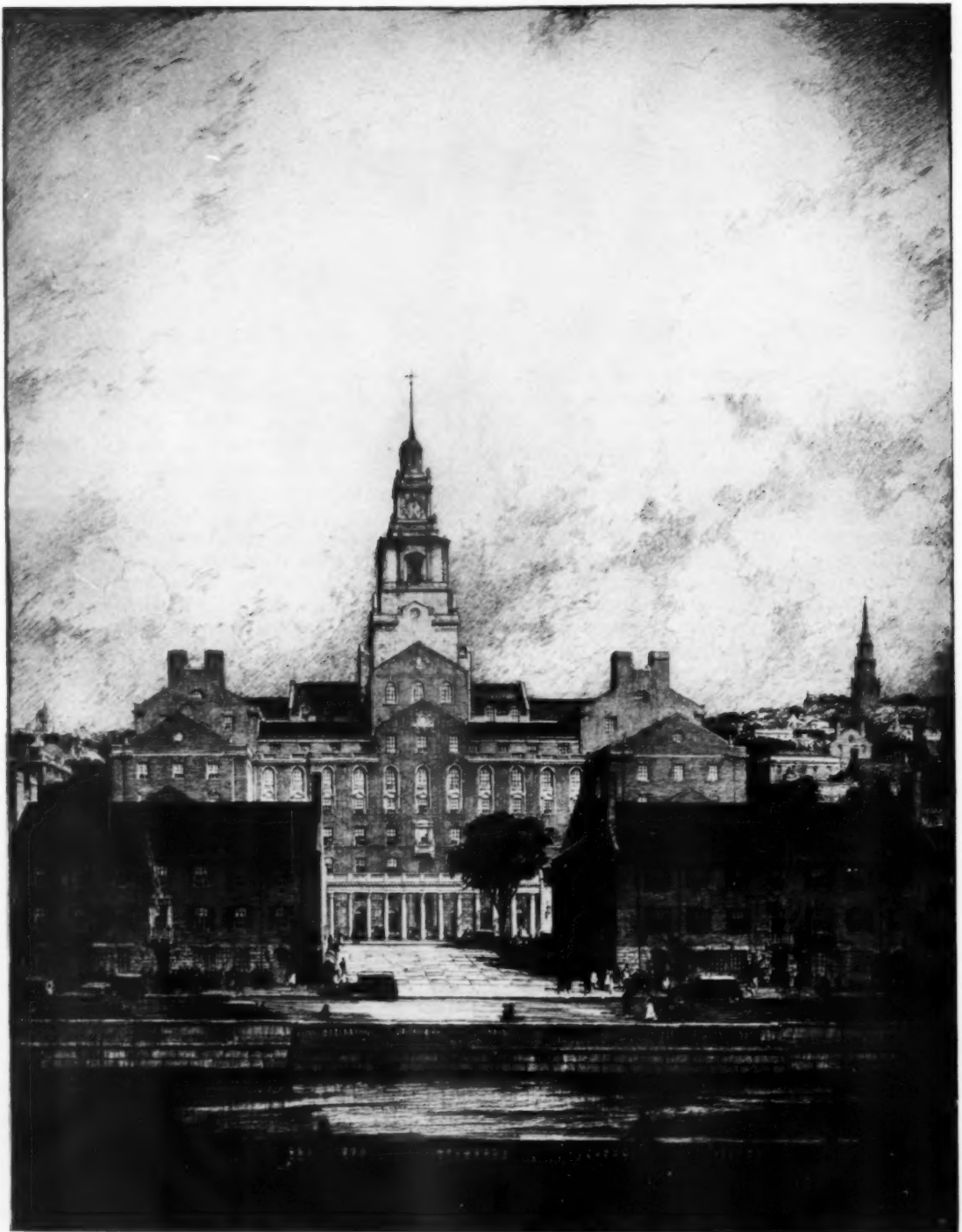
There is also shown the highly academic and orthodox design for the Roosevelt Memorial at Washington, a bit of perfect rendering and a very satisfying use of the Doric colonnade, the extreme of classic excellence, just as the Ziegfeld Theatre, by the way, is an extreme in quite another direction. The academic type as represented here is as restrained, proper and correct, as the tower type is let's go, and as free as the air it shoots up into. But in both is the fine discriminating spirit which we like to think is a special appanage of American art.

Then there is a very creditable showing of purely monumental design, such as the New Britain Veter-



WALTER CAMP MEMORIAL, NEW HAVEN, CONN.

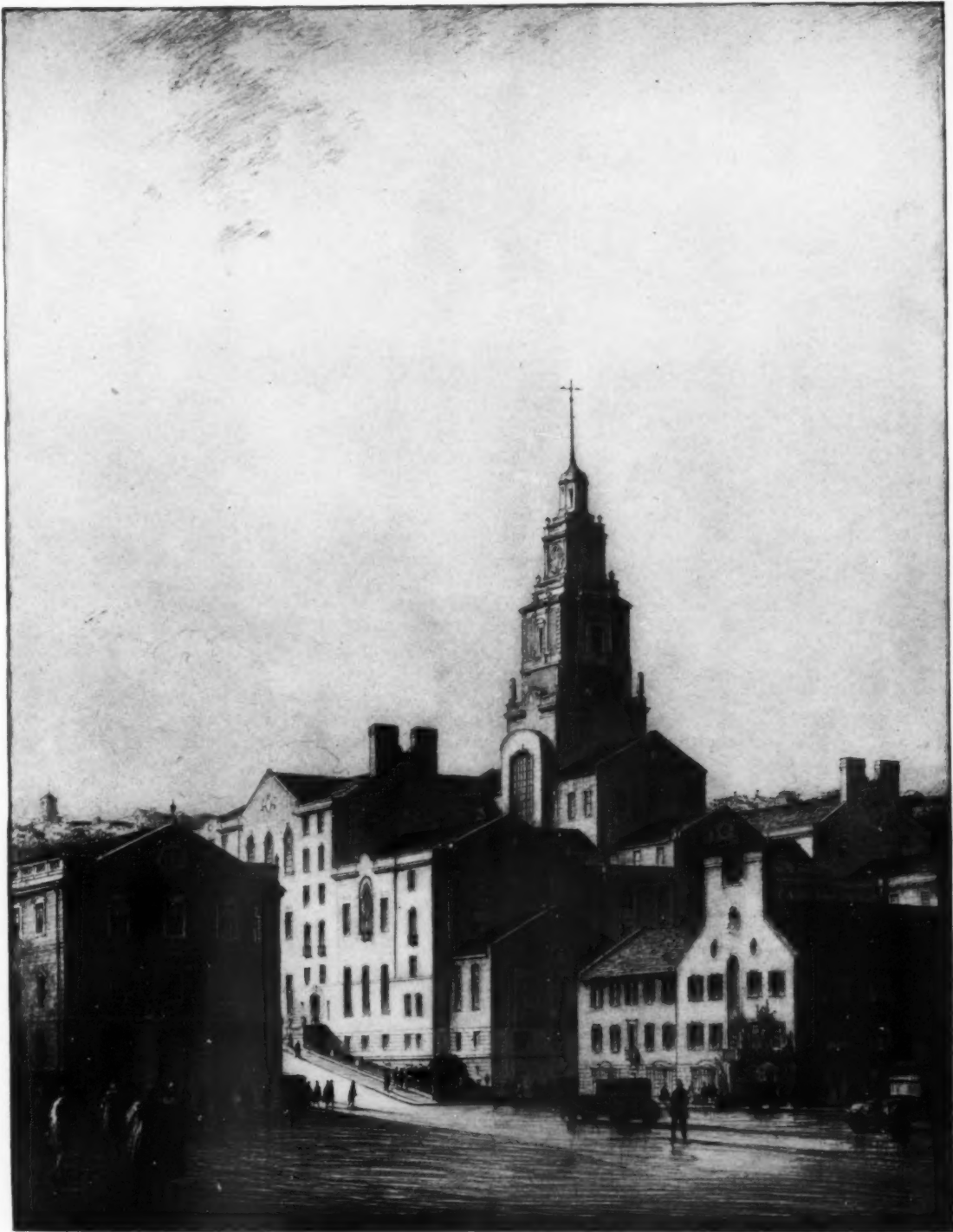
CROSS & CROSS, ARCHITECTS



PROPOSED COUNTY COURT HOUSE, PROVIDENCE, R. I.

JACKSON, ROBERTSON & ADAMS, ARCHITECTS

(Forty-second Annual Exhibition, The Architectural League of New York)



PROPOSED COUNTY COURT HOUSE. PROVIDENCE. R. I.

JACKSON, ROBERTSON & ADAMS. ARCHITECTS

(Forty-second Annual Exhibition, The Architectural League of New York)



COUNTRY CLUB, TUXEDO, N. Y.

JOHN RUSSELL POPE, ARCHITECT

ans' Memorial, a plain fluted shaft, Doric in its simplicity, without abacus or cap, serving as support for a heroic eagle. After all, the simplest designs are usually the most satisfactory and nothing could be more effective than this quiet, restful monolith. And on a more ambitious scale is the Indiana World War monument. But one cannot avoid a feeling that even our monuments are essentially buildings, and we have not yet learned their individuality as abstract creations. The Roosevelt Memorial may be copied in some ambitious city into a public library or a court house, or even a high school, and the Indiana design may be pirated for a Masonic

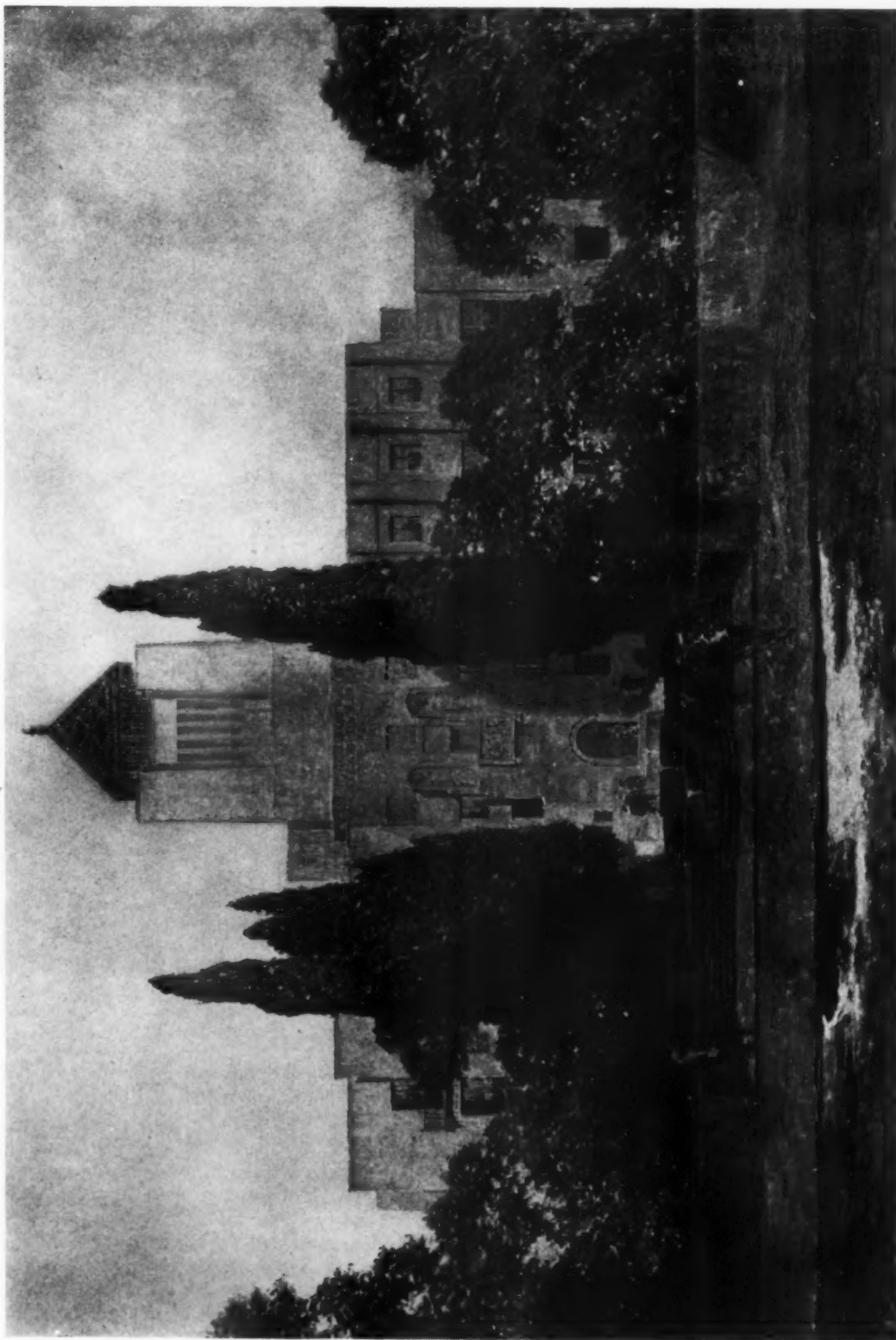
temple or a railroad station, and not all of our architects would know the difference. The real monumental spirit has not yet arrived. Practical business still casts its shadow over all we do. All the more glory, then, that the tower type of business building has been so successful.

There are other good things here. Plenty of them. Hood's Scottish Rite Temple for Scranton is a real creation. He has taken the old Scotch castle, as dour a subject as ever came out of the land of oatmeal cakes and mist, has preserved the heavy wall surfaces, proportioned them effectively, crowned masses of Gothic detail about the central portal, given



MODEL OF MASONIC TEMPLE AND SCOTTISH RITE CATHEDRAL, SCRANTON, PA.

RAYMOND M. HOOD, ARCHITECT



PUBLIC LIBRARY, LOS ANGELES, CALIF.
BERTRAM GROSVENOR GOODHUE, ARCHITECT—CARLETON M. WINSLOW, ASSOCIATE ARCHITECT
(*Forty-second Annual Exhibition, The Architectural League of New York*)

just the right accent in his openings, and the result is Scottish, is a temple, and is real architecture. Then in a different vein is Cret's bridge over the Delaware at Camden,—not too much engineering, not too little architecture, a worthy treatment of a difficult problem. And at another extreme is the fascinating study in model for a Y. M. C. A. building at Jerusalem,—Oriental all through though done by an American architect—a most delightful inspiration.

There are some things we miss, which should have place in such an exhibition as this. None of the more recent collegiate buildings of Yale or

of Chicago, which shows what can be done by simple intimate treatment, also on the grandiose scale some new studies for the New York Cathedral of St. John the Divine, and well chosen photographs of the Church of the Sacred Heart at Washington, but we have here essentially a manifestation of art applied to practical purposes, art which can be used as well as admired, art which has flowered right here in New York and is still going. And the future is very hopeful. And this exhibition is certainly inspiring. These skyscrapers, after we know them and study them and catch their spirit, do not crush us, but like a chariot of fire catch us up to a heaven



MODEL FOR PEDIMENT GROUP, STAMBAUGH AUDITORIUM, YOUNGSTOWN, OHIO

HELMLE & CORBETT, ARCHITECTS — GAETANO CECERE, SCULPTOR

Princeton are in evidence. None of the huge railroad stations of late years appear. The motion picture houses, that remarkable development of the past five years, are conspicuous by their absence. Why is it, by the way, that the big film companies so seldom enlist the ideas of the architects who admittedly stand at the head of the profession?

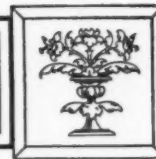
This exhibition presents sharp contrasts,—the highly traditional, and the most modern of modern. Even the religious work is but slightly represented though there are some choice bits like Shaw's Church of the Disciples of Christ for the University

of enthusiasm so that tomorrow we may indeed go back to designing shop fronts, or factories, or even five thousand dollar houses with a new conviction that we can be a part of this wonderful development, that we can dream towers and classic monuments and even paint them with the vivid colors of Greece and of New York.

And then as we leave the exhibition and go to Park Avenue, and see its deadly skyline, and muddy colors and dull monotony of ideas, we can thank the Lord for the forty-second exhibition of The Architectural League of New York.



EDITORIAL COMMENT



AMONG all the notices of the Architectural League Exposition that have appeared in the daily press, we have not noticed a single adverse criticism. Undoubtedly there has never been an exhibition of architecture to compare with it. We shall attempt no special reference to the various exhibits. The leading article in this issue by a special contributor, and the various illustrations very thoroughly set forth the features in detail. It is to the fine spirit of co-operation on the part of the League and its special committees that we desire particularly to refer.

It has been generally acknowledged all over the world, where the language of architecture is spoken, that there has been developed in this country types that are outstanding innovations. Not only have we invented,—if that's the correct word,—distinctive types, but we are already making fast progress in polychromy after the best recognized methods. As stated by our special contributor, it is natural to look for this high development in our larger cities and perhaps in New York to the greatest extent. Claiming certain merit is all very well, but proving it is much better. The League set about the huge task of supplying evidence of this fact and it could not have been better done.

The amount of work incident to assembling and presenting this vast exhibition,—it runs through three floors,—was enormous. Yet in all the various arrangements there was a certain artistic element that shows how well the committees knew what they set out to accomplish and how well they knew how to do it. We have knowledge gained by actual contact with League exhibitions over a period of twenty years. Each year the League's efforts have been substantial tributes to the historic architectural accomplishment of its time. Each year have these showings of architecture been more truly representative, and each year have they done more to advance the education of the general public.

We note in our relations to the profession at Institute conventions and architectural exhibitions all over the country, the best team spirit, the utmost submergence of self, the most self-sacrificing effort. President Trowbridge and his hard working collaborators have practically given their entire time to the perfection of this League exhibition during a period of two months.

It is a pity that the life of an exhibition so very educational should last only through the brief span of two weeks. About the time that the general public becomes aware that there is an opportunity to learn how the city and the town are becoming more

and more distinctly beautiful, this exhibition will be dissipated.

AN outstanding feature during the two weeks of the League exposition was a series of conferences. These were unusually well attended. The topics discussed were vital and of large educational value.

The conference on Modern Architecture as a Problem in Form and Color, is reprinted in this issue. The debate between Harvey Wiley Corbett, Stephen F. Voorhees and Henry H. Curran will appear in a succeeding issue. The subject is The Value of the Skyscraper in Modern Business. As far as space will permit, there will appear in succeeding issues extended summaries of other and equally interesting conferences and debates.

The cold and formal method usually pursued in functions of this sort, was, as a rule, abandoned at these meetings. While in most cases, the speaker came prepared with a carefully written argument to be read to the meeting, it more often happened that as the speakers warmed to their topics, they laid aside their papers and proceeded extemporaneously.

We may no longer contend that the architect is handicapped in this country for lack of skilled co-operation on the part of the craftsman. Craftsmanship as displayed at this exposition has reached a place so high that architects may receive the most perfect collaboration. While many men and firms had beautifully prepared exhibits, the real progress of craftsmanship was to be better studied in the thousands of exhibits of buildings, and notably in the work of men and firms that received the various medals that the League offers every year.

And it is, we feel, largely due to the steadily consistent effort of the League, who has encouraged by its influence and advice, all the various crafts whose work so largely contributes to the success to which architecture in this country has attained, that craftsmanship in the United States has during the past five years more steadily advanced than during any past period.

IRON in its various forms is essential to civilization as it exists today. Its use is coincident with almost every human activity. This is especially true of the building industry. Structural steel has had a most potent influence on the development of modern architecture.

Structural steel shapes have been made only during a single generation and improvements in their

design and production have been hard pushed by the insistent demands of architecture. It is not surprising that it has been accomplished in a rather promiscuous manner. Producers had to feel their way due to a lack of prophetic understanding of the progress that was to be made in engineering science and the art of building.

In accord with the inevitable laws of evolution, a new series of structural shapes has been designed by the Carnegie Steel Company which is a distinct advance in structural steel production.

Architects and engineers can well afford to read with care the description of these new shapes given elsewhere in this issue.

MEDAL AWARDS BY THE ARCHITECTURAL LEAGUE, FOR EXCELLENCE IN ARCHITECTURE AND ALLIED ARTS

THE medal of honor in architecture was awarded to Ralph T. Walker and McKenzie, Voorhees & Gmelin, the firm with which he is connected, "for their notable contribution to modern architecture," the Barclay-Vesey Building, popularly called the Telephone Building, fully illustrated in our issue of November 20, 1926. In presenting the award, Alexander B. Trowbridge, President of the League, said: "The jury believes that a result has been achieved expressive of a high degree of skill and good taste in both mass and in interesting detail. A quality of excellence is to be observed in the various rooms, indicating a consistent thought, followed by unremitting care in execution."

Mr. Trowbridge announced that the firm McKenzie, Voorhees & Gmelin was the first firm of architects to follow a suggestion in a by-law of the League for the firm receiving the architectural award to nominate the man who had most to do with the winning design.

The silver medal for general architectural work was awarded to Bertram G. Goodhue (deceased), and B. G. Goodhue Associates for a series of exhibits included under that designation in this year's exhibition.

The silver medal for intimate work was awarded to Frank J. Forster for the house of Karl Keffer at Scarsdale, N. Y.

Honorable mention for intimate work was awarded to Marion S. Wyeth and Frederick R. King for the house of Harris Hammond.

The medal of honor in decorative painting was awarded to James Monroe Hewlett, architect and

mural painter, for his two cartoons entitled "The Discovery of the Connecticut Valley by Adrian Block and Thomas Hooker," which designs are intended to be woven into tapestry.

The medal of honor in sculpture was awarded to C. Paul Jennewein for the distinguished character of his sculpture and ornament for the Philadelphia Museum of Fine Arts.

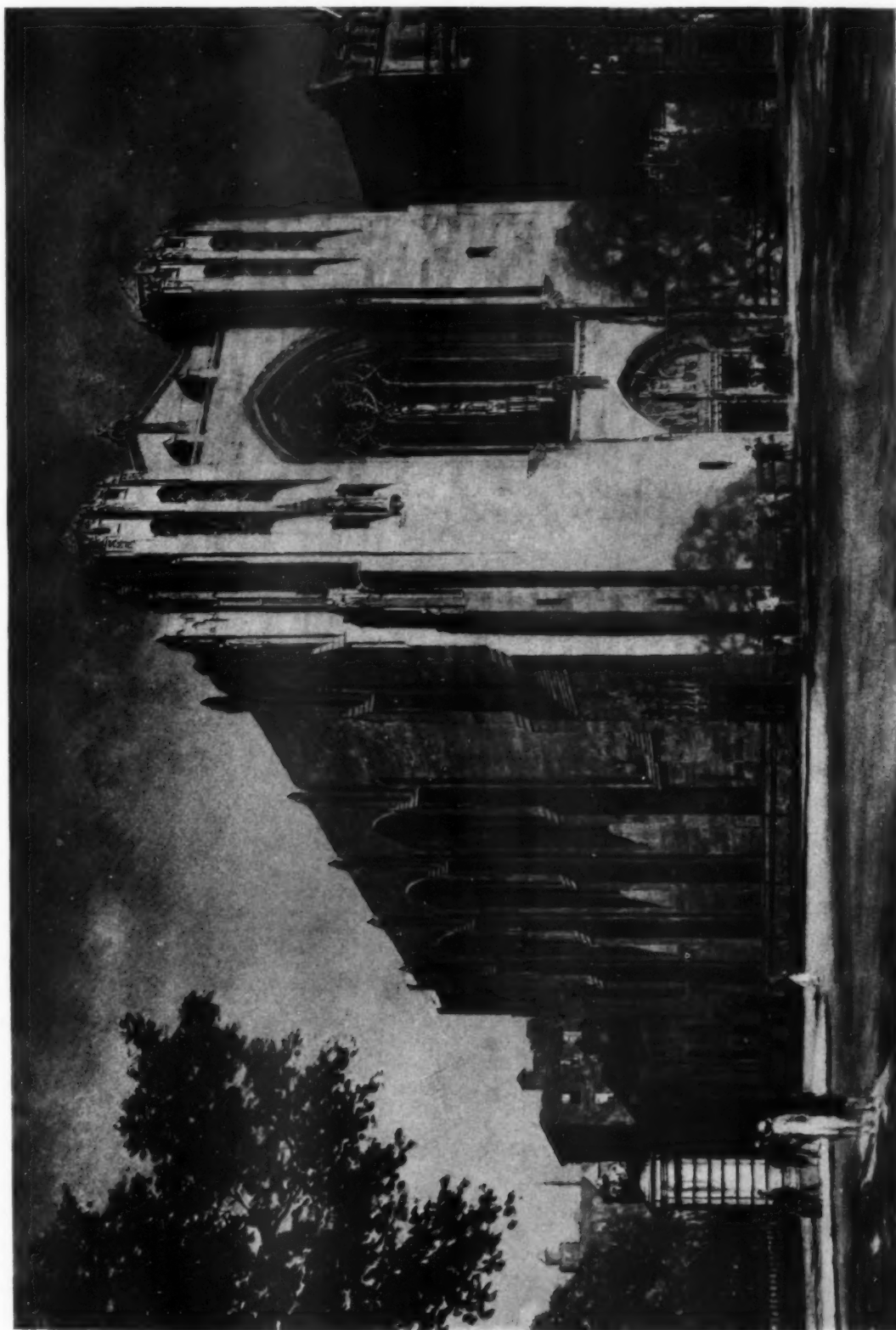
The medal of honor in landscape architecture was awarded to Bremer W. Pond for his exhibit.

The medal of honor in design and craftsmanship in native industrial art was awarded to Hunt Diedrich for two glazed plaques.

The Michael Friedsam Medal was awarded to Frederic Carder of Corning, N. Y. This medal, the gift of Colonel Michael Friedsam, is awarded annually to an individual who has contributed in a marked degree toward the development of art in industry.

The Avery Prize for sculpture was awarded to Olympio Brindesi for his figure entitled "Bird Bath." This prize, amounting to \$50, is awarded annually to a sculptor under thirty years of age, and tradition has it that the prize is given for small rather than large pieces of work. This prize was established by Samuel P. Avery in memory of his son, Henry O. Avery.

Presentation of the awards was preceded by colorful pageantry when League officers, past medal winners and current winners marched into the Grand Central Palace in their regalia and took their places in front of a replica of a corner of the Philadelphia Museum of Art.



CHURCH OF THE HEAVENLY REST, FIFTH AVENUE, NEW YORK
MAYERS, MURRAY & PHILLIP (BERTRAM GROSVENOR GOODHUE ASSOCIATES), ARCHITECTS
(*Forty-second Annual Exhibition, The Architectural League of New York*)



CHURCH OF THE HEAVENLY REST, FIFTH AVENUE, NEW YORK

MAYERS, MURRAY & PHILLIP (BERTRAM GROSVENOR GOODHUE ASSOCIATES), ARCHITECTS

(Forty-second Annual Exhibition, The Architectural League of New York)



THE UNITED CHURCH, BRIDGEPORT, CONN.

ALLEN & COLLENS, ARCHITECTS

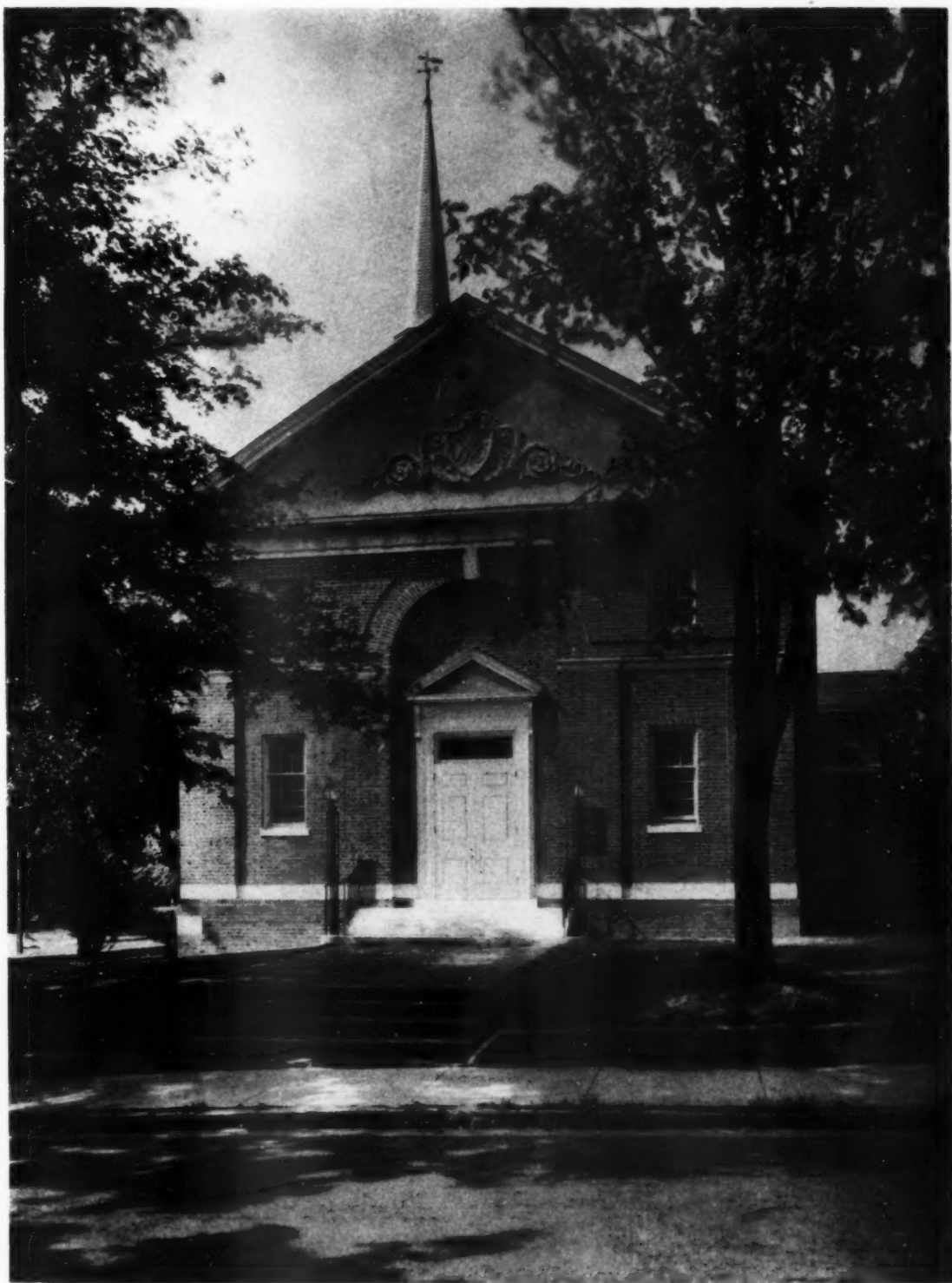
(Forty-second Annual Exhibition, *The Architectural League of New York*)



HOUSE AT GREENWOOD, VA.

DELANO & ALDRICH, ARCHITECTS

(Forty-second Annual Exhibition, The Architectural League of New York)



CHURCH AT GREENSBORO, N. C.

HOBART UPJOHN, ARCHITECT

(Forty-second Annual Exhibition, The Architectural League of New York)



HOUSE OF W. W. SIEBERT, GREAT NECK, L. I., N. Y.
FRANK J. FOSTER, ARCHITECT, 1927 WINNER OF LEAGUE SILVER MEDAL FOR INTIMATE WORK
(*Forty-second Annual Exhibition, The Architectural League of New York*)



ZIEGFELD THEATRE, NEW YORK

JOSEPH URBAN, ARCHITECT

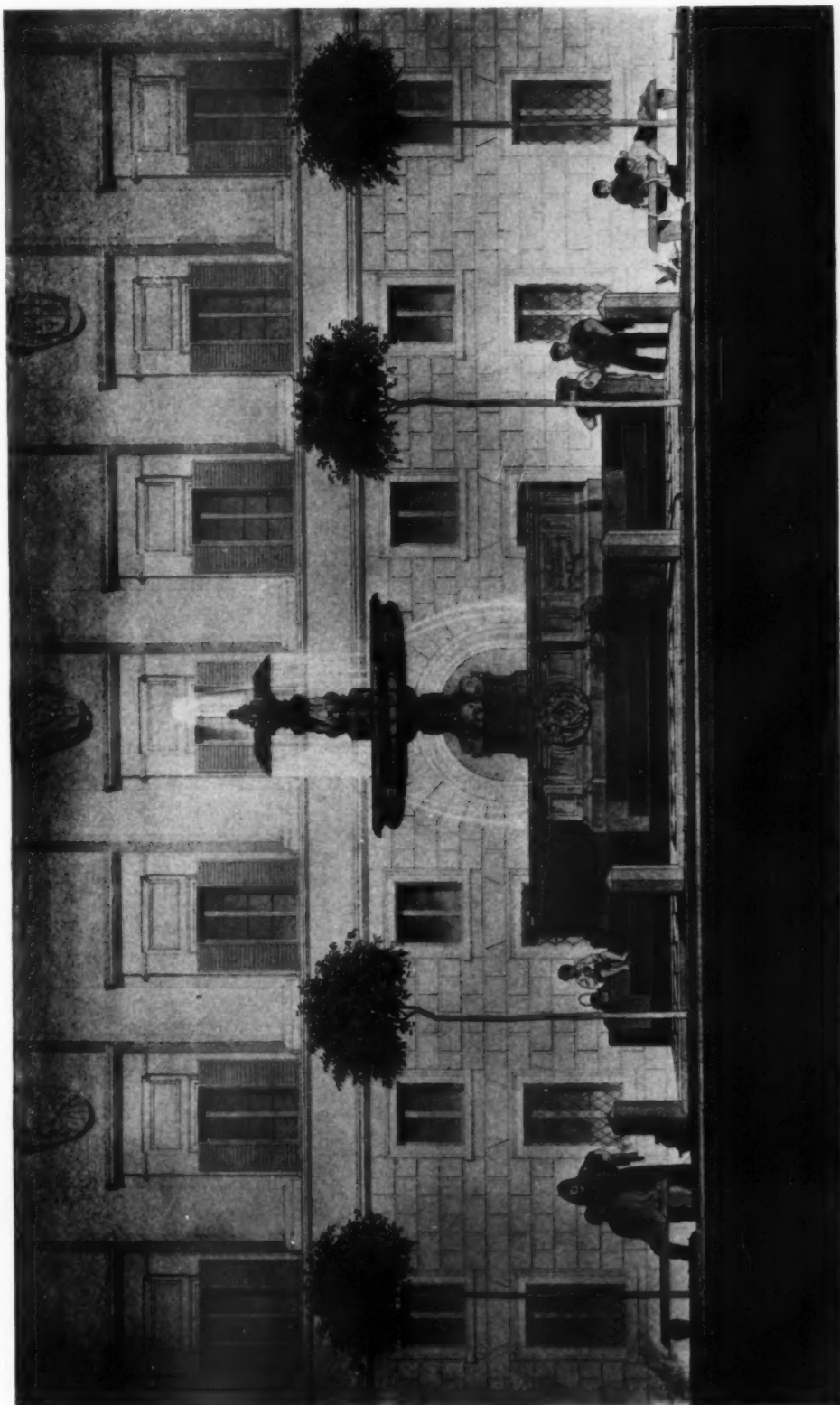
(Forty-second Annual Exhibition, The Architectural League of New York)



HOUSE OF K. E. KNOBLOCH, STAMFORD, CONN.

BUTLER & PROVOST, ARCHITECTS

(Forty-second Annual Exhibition, The Architectural League of New York)



ARTHUR F. DEAM, DESIGNER
(Forty-second Annual Exhibition, *The Architectural League of New York*)



GATE LODGE ON ESTATE OF N. F. BRADY, ROSLYN, L. I., N. Y.

J. Y. RIPPIN, DESIGNER

(Forty-second Annual Exhibition, The Architectural League of New York)



INSIDE STAIRS TO SECOND FLOOR, GATE LODGE ON ESTATE OF
N. F. BRADY, ROSLYN, L. I., N. Y.

J. Y. RIPPIN, DESIGNER

(Forty-second Annual Exhibition, The Architectural League of New York)



HOUSE OF ALLEN TOBEY, SCARSDALE, N. Y.

JULIUS GREGORY, ARCHITECT

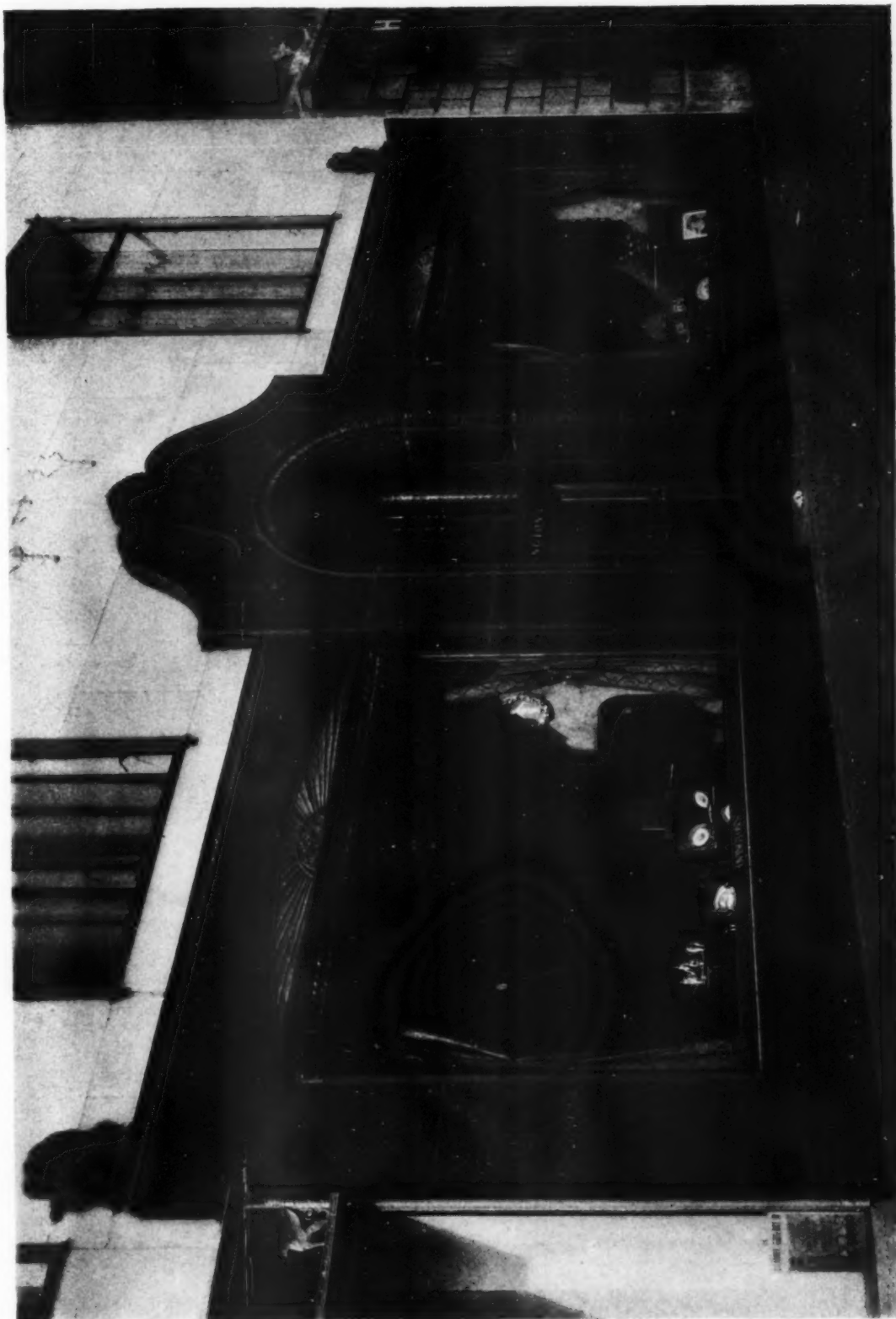
(Forty-second Annual Exhibition, The Architectural League of New York)



STUDIO OF BENJAMIN H. MARSHALL, WILLMETTE, ILL.

BENJAMIN H. MARSHALL, ARCHITECT

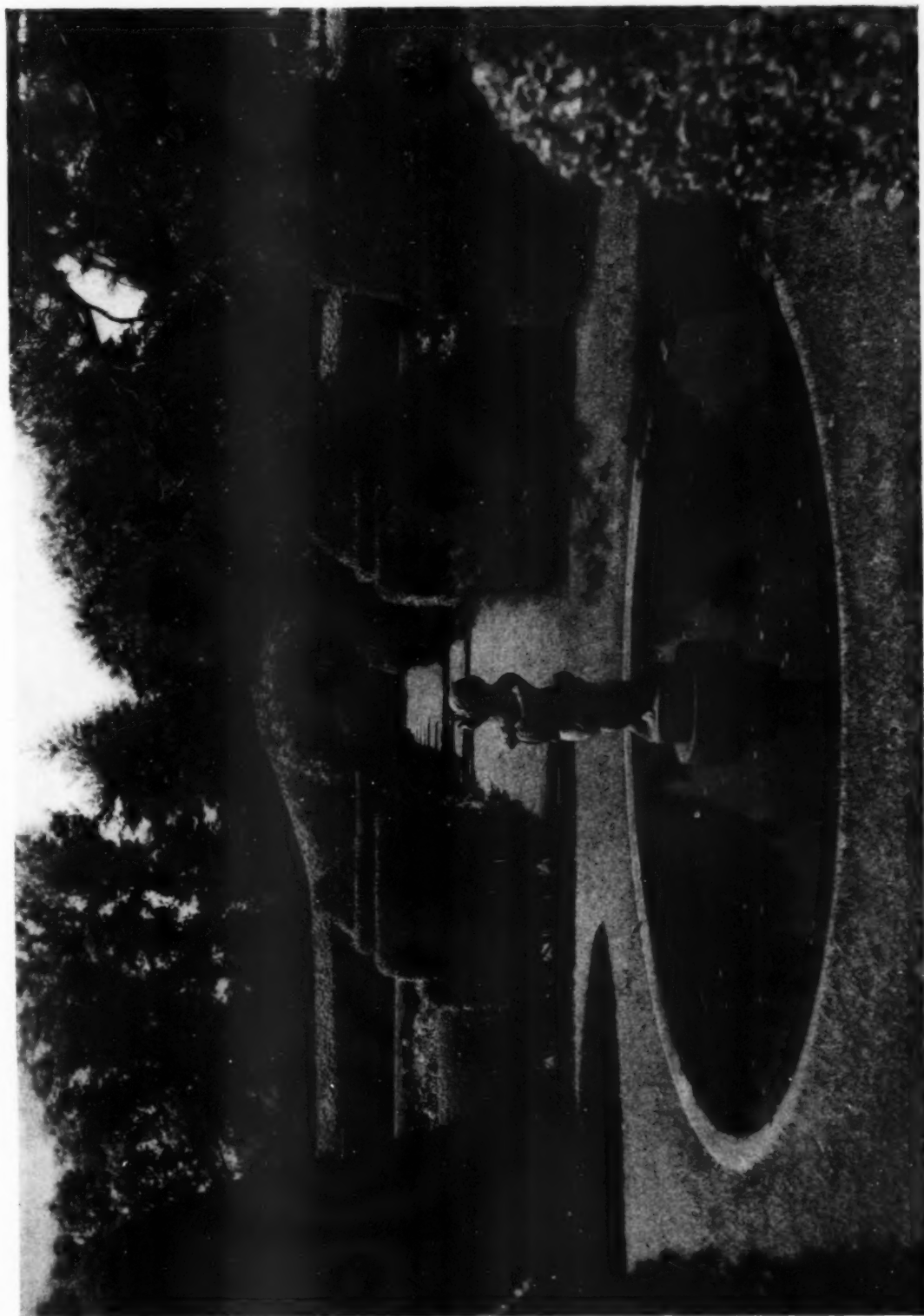
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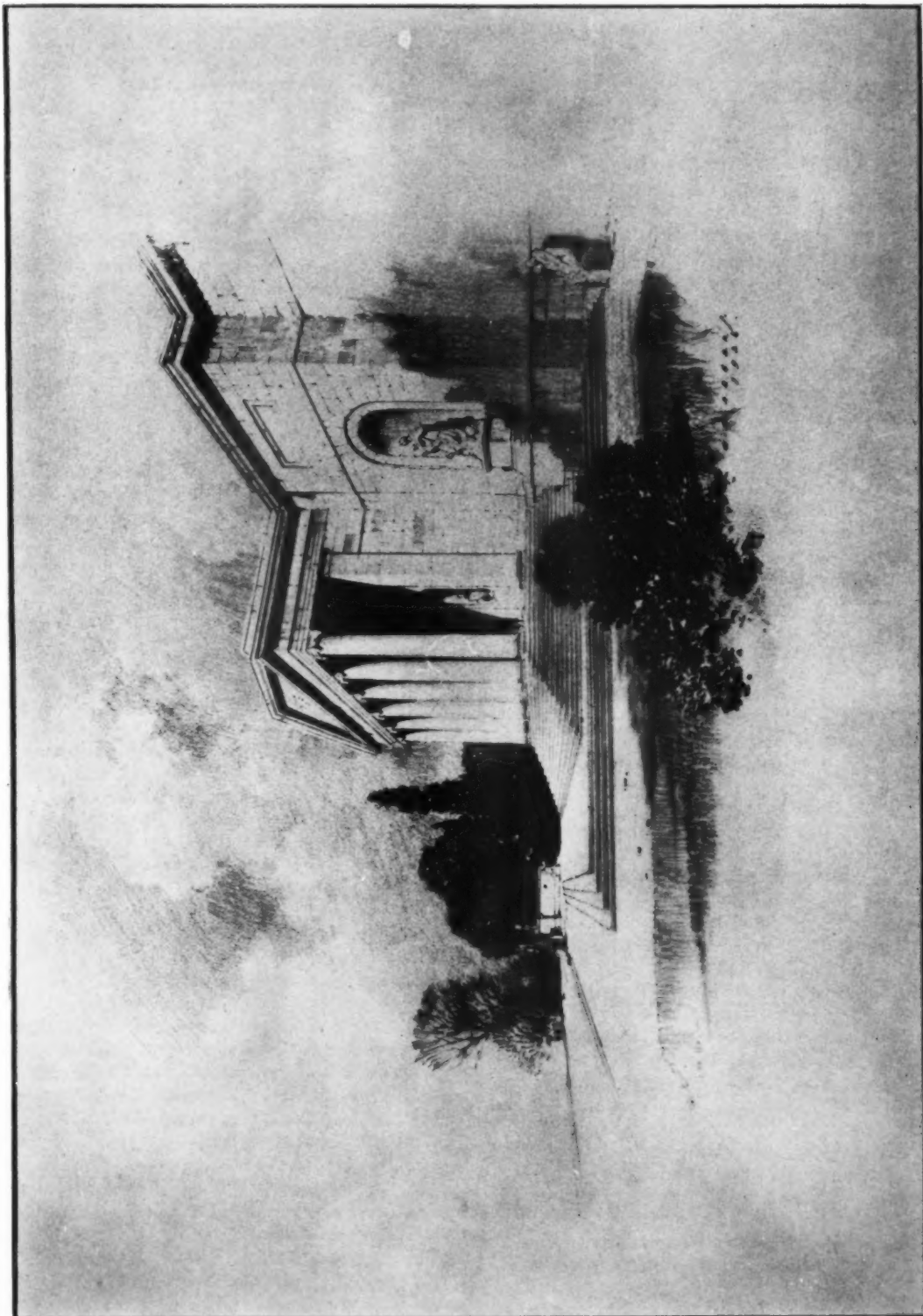
OVINGTON'S SHOP, TOBEY BUILDING, CHICAGO, ILL.

HOLABIRD & ROCHE, ARCHITECTS

(Forty-second Annual Exhibition, *The Architectural League of New York*)



"THE HEDGES," SCARSDALE, N. Y.
CHARLES WELLFORD LEAVITT & SON, LANDSCAPE ARCHITECTS
(*Forty-second Annual Exhibition, The Architectural League of New York*)



BALTIMORE ART MUSEUM, BALTIMORE, MD.

JOHN RUSSELL POPE, ARCHITECT

(Forty-second Annual Exhibition, *The Architectural League of New York*)

ARCHITECTURE AS A PROBLEM IN FORM AND COLOR

A SYMPOSIUM HELD AT THE ARCHITECTURAL LEAGUE OF NEW YORK

FEBRUARY 24, 1927

H. VAN BUREN MAGONIGLE, F. A. I. A., *Chairman*

MR. MAGONIGLE'S PAPER

WE are to discuss Architecture As a Problem in Form and Color: that is what all architecture fundamentally is—a problem in form and color—but this is so deeply overlaid nowadays by deposits of other matter, so obscured by accretions sometimes relevant, sometimes not, that these essentially simple terms upon which the entire art of building, as an art, is based, are frequently lost sight of in our daily practice, and it is therefore well to restate them from time to time lest they be altogether forgotten, and building as an art, vanish utterly away. Happily, architecture is a living art in America; like all living, growing things it changes under our eyes; scarcely do we say "it is thus" than we say "it is no longer so: it is thus." Many of these changes are superficial—surface differences, like the changes of complexion a lady might consider appropriate for exposure to daylight or night light, the structure under the complexion remaining the same. There are changes of structure going on also, of course, slower to reveal themselves as of real import. The terrific pace at which the popular architect is obliged to practice, with the pressure of the practical and technical and mechanical aspects of his work, forces these latter to the fore; and leisure for the study of the appropriate form and color that alone can make a thing of use into a thing of beauty is all too often lacking.

Some persons may question the validity of our thesis altogether, and say that architecture is primarily a sociological problem, or primarily an economic problem, or a structural problem, or primarily a problem in anything else you please, and deplore a reversion to anything so old-fashioned as a return to the old, old spirit in which some of us believe the masterpieces of our art must have been conceived and produced; I can only say that this afternoon form and color are to have their innings and cordially invite such persons to make the best of it.

We shall deal with architecture from the point of view of the creative artist, not that of the collector, compiler and arranger of forms hoary with age out of the dear dead past, sanctified to our daily use by old custom; not in any case shall we consider "Architecture as a Problem in the Best and Easiest Way to Crib from the Historic Styles" or "Architecture as a Problem in Revenue Production with Some Reflections Upon Costs and Rent Roll;" nor shall we prate about "Architectural Beauty as a Financial Asset to City, State and Nation." These

themes are all beside our mark. We may take it for granted that if there is money in it someone will find it out. And we shall take it for granted that any city, state or nation that does not cherish and foster beauty for its own sake as a spiritual necessity is not only poor, but poverty-stricken, in something more precious than money.

As we proceed you will see that our approach to architecture is that of the artist whose joy and whose duty are to confront the problem I have stated in a spirit of openminded inquiry and high resolve to create a work of beauty through a harmonious disposition and use of form and color, quite careless whether the disposition and that use have the sanction of either fashion or thoughtless habit; to find a just balance and relation between all the elements that may be summoned to the service of beauty, in architecture, in painting and sculpture, in the divers arts of design and craftsmanship, and in the living and the inert forms with which the landscapist works.

We are to forget for an hour or two the architect as a professional man with all the cares and pre-occupations that beset him on that side, and remember him only as an artist with a problem in form and color to solve.

When a man sits down with a new building to design and squares his elbows to the task; when, after he has begun to feel that he has so moulded the requirements of the program in accommodation, circulation, and the like, that they show promise of satisfaction in a practical sense, he draws a deep breath and proceeds to have some fun—and this fun, this pleasure, consists in expressing the functions and purpose of the structure by the blacks of voids, the whites of solids, and the grays of ornament with the accent and accompaniment of color; he passes his resources in review; in pigment or ceramics, or burnt and colored clay, or marbles veined and tinted, or mosaics in glass, marble, stone or tile, in the black and silver tracteries of wrought iron, the gleam of brass, the mellow resonance of deep tones, bronze, the glory of stained and painted glass, the fine austerities of stone. The gold and brown of leather tooled in silver and glazed in splendid hues call to him for chairback and screen, for walls, and the backs and sides of friendly books; grave tapestries and gay fabrics in silk and wool beckon him and press their claims to notice, with the grain and texture of beautiful woods and mellow in tone and enriched with lacelike carvings. Floors, walls and ceilings spread before him their infinite possibilities

of treatment. The wizardry of light itself is his to wield if he will. The sumptuous and the austere, the delicate and the rugged, the exquisite and the ugly, are his to summon out of that dim limbo where the spirit of creation lives and moves and all obscurely works.

What a challenge to the imagination! How humble he must be, and how studious in choice and treatment, in the presence of such riches, to control them, to avoid equally the bizarre, the noisy, the vulgar, or the dry, the juiceless, the lifeless. What superb instruments are his to play upon, what an orchestra to submit to the baton of his conductorship! Awake to the sense of his resources, the architect moves steadily toward the use of real color; at last we are freeing ourselves of the Puritan oppression, the bleak and grim and joyless doctrines that have weighed down the American genius and have had their chilling effect by contact upon even those whose open joy it is that no drop of Puritan blood creeps through their veins. Better far to risk that blatant, the vulgar and discordant, than to lose through timidity a rich and warm and colored frame and background for our lives. For, after all, time with his servants, is the great harmonizer; the sun, the air, the mists and the rain, the frosts and snows and the good old dirt, soften and blend and reconcile all tones in an ultimate harmony, and who knows! our worst mistakes may become by their kindly alchemy, our best successes.

How well prepared is the average young architect to deal with a problem of such complexity, with material of such diversity. Not very well, I fear. The education of the artist is ridiculously inadequate and incomplete and until it is placed and maintained on a better and higher plane we shall continue to be less than half trained.

The plight in which the average architect finds himself when he is confronted for the first time with the necessity of using color or sculpture is one of exquisite embarrassment, pathetic, unnecessary because avoidable. The mere rudiments of these two principal sister crafts, to say nothing of the technique of bronze and iron and textiles and ceramics, are almost unknown to him. He has been taught plan perhaps, design in the general sense perhaps; he has a dim idea of detail, not as light-and-shade-producing elements of design but as Greek akroteria, Roman capitals, Romanesque grotesqueries, Renaissance rinceaux. He shies violently at the thought of using animal or figure sculpture, usually because he can't draw them and what he cannot draw he avoids or ignores. As for color, if it became necessary for him to mix a tone for a house painter or direct the man how to get it, he would probably pass away; and of the mysteries of preparation, of undergrounds, of glazing, or of the higher mysteries of color harmony or contrast, he is as innocent as an unspanked child of the difficulties and diversions of

life. His time at school or college or office has been so taken up with the study of what we call architecture that these matters are a closed book to him, despite the fact that his elders for these many years should have been perfectly aware that he should be prepared to meet them. How, without such preparation, can he be expected to be the director of a work of form and color he must be if he is to call himself by that high title, Architect! How can he stamp every piece of his work with that character which makes it unmistakably his and which expresses his vision of form, his task in color, his predilections in tone and key and value!

Sooner or later a man has to face the question whether he is to be an architect, that is to say a constructive artist, or a business man. That is the hour when he must weigh his own gifts in the balance and choose his course. The man who has an artistic bent will do well to remember that he can hire better business men than he is to attend to that side of his work. And the business man, alas, may also reflect that he can buy designers by the score, to whose work he can sign his name and upon whose talents he may pose as an architect before the world.

Also, may it not be that he might make a better landscapist or sculptor or painter or craftsman than he would either architect or business man if he ever had the chance to find out? Consider the training of the artist in the days of the Renaissance in Italy. Frequently, usually apprenticed to a goldsmith whose craft embraced all the arts of design, a lad entering the *bottega* of a master goldsmith would learn to draw, to grind and mix colors, to paint, to model in wax and clay, to set gems, to work in gold and silver and enamels, to master the technique of repousse and damascening and the secrets of bronze casting and chasing, to carve wood and inlay it, decorate it and gild it, learn the principles of mechanics and engineering as they then were known, and the elements, at least of architecture. The lines of specialization now so sharply drawn were quite unknown, and yet there was just as much to learn about art then as now. No architect was jealous of painter or sculptor if one should design a building. He would have held them untrained were they not competent to do so. A man became with such a training, an all-round, thoroughly equipped artist. Inevitably his principal bent declared itself later and he devoted himself more or less closely to one or two or three of the fields of artistic creation.

To my mind, a work of architecture is as personal a creation as any work of sculpture or painting, should be so complete a thing, so much all of a piece, so much the creation of one mind, so entirely the expression of an individual impulse, in which the sculpture is one with the architecture and the architecture is modulated to meet the sculptural form in harmony; in which the color is as necessary to the effect of the structure as the stones of which

it is built; that I look back with the longing and regret toward the training of the artist of the Renaissance. Some architects are making essays in sculptural form in color in the hope of getting a result closer to their vision than seems possible otherwise. One catches echoes of the hilarity, or scorn, or indignation, with which such essays are regarded by some of our brothers of the brush and chisel. But whatever their opinion of such efforts, they must at least concede the architect's indefensible right to get his work done in the way he wants it done. Charles Whitaker said to me the other day, "I am not interested in *who* does architecture. Let the plumber do it if he can. I only ask that it be good architecture." Our friends the painters and sculptors may retort "Nor do we, as to painting and sculpture, we only ask that it be good sculpture, good painting." As to which may it not be said that if it does for his building exactly what the creator of the structure wants, then and then only is it good sculpture or good painting—for that particular purpose. It might be, as sculpture or as painting, beautiful in itself as an unrelated work—but if it is not architectonic and in perfect harmony with the building, it is not good sculpture or good painting. And the architect, the creator, and he alone is the judge, and his the disappointment and the sorrow and the pain if he fails to make a beautiful thing of the whole. Trying to be Michael Angelos? Yes, let us all try to be that composite of fire and energy and lofty vision, of vast dreams, of distinction of soul, sculptor, painter, architect, poet—if we can. In such a union of qualities and of aptitudes will be found, in my belief, the masters of the future in the art of architecture.

I have been led to wonder whether we have not all accepted rather blindly, listening to the Victorian voice of authority, the Greek theory in the relation of sculpture and architecture; that theory, broadly applied, leads rather to a disunion than a fusion of the two. The Gothic hypothesis is much nearer to union than the Greek. And should we not seek unity rather than union? When, as a young practitioner, I first began to use figure sculpture with architecture I was puzzled and baffled in my attempts to reconcile the definite, crisp lines and surfaces and masses of architecture of a strongly classical type with the free and naturalistic forms of the sculpture then available. Such sculpture with such architecture always seems applied; it is not integral with the structure. It is mantelpiece sculpture. On the other hand, the attempts of the French of that day to effect fusion seemed in most cases lamentable; merely to embed a lady with sweeping naturalistic draperies in pedestal or pylon or stele did not seem like a solution of the problem. I now believe that if we are to use sculpture and architecture together so as to produce an effect of perfect unity, so perfect that we could not imagine either

existing independently of the other, both must be subjected to a similar process of modification. Architecture must become more plastic—which does not mean more mushy. We shall, we architects, have to bid farewell to some of our most honored personal note—for it is perfectly certain that sculpture, human, animal, or vegetable, must cease to be naturalistic, be highly stylized, strongly conventionalized, to fit it for use with the stark lines and masses of architecture. It is not necessary to make it what is called Gothic to effect this, nor grotesque. Nor need it be the affected imitations of an imitation we have been afflicted with for some time—archaistic-archaistics in the primitive Greek mode. What I mean is a true conventionalization of living forms to fit them for union with structural architectural forms; they need lose no vitality in the process; Robert Aitken's work in the Liberty Memorial and Lee Lawrie's in the Nebraska Capitol are abundant proof of that. Sculpture may breathe all the serenity and purity of form of the classic and yet be what it is of the highest importance it should be—of our own time, among our own place in the history of civilization.

I believe that many of our disappointments in the effect of our stone carving result from an imperfect technique in making the models. We must, I fear, accept for the time at least the dearth of the carver who can mount the scaffold and carve an impromptu in stone as the medieval carver could—and indeed as some men used to do in New York. I have tried very hard to persuade some of the clever modellers, of whom there are so many in this city, to work down from a surface or a contour, and carve the form out of the solid rather than build up the form upon a background or armature, but without success. Their training is all against it. They seem unable to visualize the form imprisoned and to release it by cutting away the surplus material. The result of their training is that our carved ornament almost everywhere has the character of the modelled, the built-up form, not that of carving at all; in fact there are countless examples in carved work of the most meticulous imitation of the technique of modelling. I have pleaded with these good fellows to prepare a mass in plaster, sketch a general outline upon it and carve the form with chisels, without avail. They will try, good-naturedly but doubtfully, and in the end one gives up rather than waste the time of a good man trained in the wrong school for stonework. Give him a job to be executed in plaster or in bronze and he is a wonder-worker in the technique required—yet even here, in plaster one sighs for the craftsmanship that wrought those marvels of Græco-Roman times in fresh wet plaster on wall and vault, clearly improvisations of the artisan who was also a creative artist.

Our traditions in architectural color were given

their earlier direction through a number of influences—in New England particularly by the Puritanical dread of anything beautiful or warm or joyous in this world, reserving all the fun for the next; in Pennsylvania by the self-imposed restraints of the Quaker sect; and further South, in the more genial atmosphere of the Cavalier settlements, by the taste prevailing in France and England from the early 17th century through the 18th—a taste for shades of white and pale tones of color in architectural decoration; the 19th century may be said to have been without any conviction in the matter until toward its close when our eyes were turned toward Italy and color as color began to interest us. These traditions made us timid about it; and it is only within a decade and under the constantly shifting direction of feminine taste that the frame of our daily life has become gayer, chiefly, I think, through the textile crafts; and color is flooding in upon us pure and fresh and strong. The simple and primitive notes of Southeastern Europe seem to awaken responsive chords here. I am glad to see it even when it is not very well done.

As a leader of this sextet I must not make the important noises—but just as one sees the conductor occasionally take up his violin and play a little obligato, just so I venture to make myself heard on all the matters we are dealing with as a group. Therefore may I throw out the suggestion: that there is a scale of color as well as of form and that this principle is not always either known or observed by either painter or architect; a tone that in a tiny boudoir would be tender, subtle and intimate, would be bleak, cold, chalky and washed out in a great audience chamber. Another: that for every building we should adopt a key—light and airy and graceful, rich and full and dignified, or majestic, or austere, and hold to that key throughout both in form and color; and it is obvious that if austerity is the note of the architecture, the airy and graceful note in color is quite out of place—and here is where the guiding hand of the architect is sorely needed—and here is where, if he be not competent to direct the entire work, there will be a lamentable disharmony.

One sees many violations of these two simple principles, just as one sees evidence of ignorance or imprudence in the kind of color it is possible to use successfully out of doors, as well as the way to use it—as to which, since I must be brief, I would remind you that the best work of the Della Robbia family is the earliest when they worked in two colors only, white and blue, the relief all white, the backgrounds all blue; and that as the sons and nephews began to improve upon papa and the uncles and use many colors and particularly to color the relief, their work became seriously worse and worse. It seems to me this episode in the history of art indicates an entire system of design in the

joint use of form and color in its best expression.

May we not look forward with hope to a revival of the use of color in sculpture? The undoubted fact that horrors will supervene should not restrain the hand of the true artist. It is wonderfully beautiful, very humanizing, when it is done as, for instance, Mr. Adams does it. Pure form seems to puzzle and disturb many people who miss the usual color, and repels them from sculpture. Here again, as in the union of architecture and sculpture, may I suggest that merely to color sculpture will not do; the form must be prepared with the definite intention of receiving color, and for the color, just as with the union of sculpture and architecture, the right convention must be thoughtfully sought and found. Infinite tact is required, for color may deny or consume or modify form to such an extent that unity is destroyed; and in the case of a group the choice and disposition of color may be such as to destroy not only the value of units as masses but the sculptural rhythm of the whole, and confuse instead of clarifying.

In the art of landscape design might we not seek unity more than we seem to, between house and garden or between monumental building and its setting? Here again form and color play their interdependent parts in the creation of a perfect harmony. A building is not always white nor always gray; it is not always rigid in outline nor is it always free. Do we sufficiently study the possibilities of color harmony between the building and the living forms we plant about it through the changing seasons? We are careful in our planting programs to insure harmonious recurrent bloom, but is it at all times and seasons harmonious with the strong dominant note of the building so light-heartedly provided by architect or client to be anathema to the landscape man? And as to form: do we sufficiently seek harmonious relations in line and mass between the building and the terrain it is to be, frequently without extensive modifications, built upon? I was struck, in Japan last year, with what seems to be a notable and vital difference between their landscape design and ours. I do not mean the difference between formality and informality, symbolism and lack of symbolism. I believe we might extract from it something that would enhance the beauty of our own created landscape without any footless attempt to make it Japanese. Ours seems to exist to look at. Theirs seems designed to be in. A maple with us is a ball of foliage, solid, almost impenetrable. The Japanese maple is so trained and trimmed as exquisitely to *enclose a space* into which we may enter and find welcome. A plantation with us too often seems to be obviously to shut out some ugliness, or intended to be a kind of scenic backdrop into which one no more thinks of wandering than one thinks of walking in the painted woodlands of the stage. Our evergreens are

planted solidly to protect from the wind or to provide green masses to see from the windows in Winter. The pines of Japan are treated each one like a gracious and beautiful personage. They too enclose forms, intangible, elusive, lovely. One never thinks of trying to penetrate a plantation of evergreens here, close packed as they are, but in Japan you enter and the pines whisper new and beautiful secrets to you.

Do we architects design in sympathy with an already established natural landscape? Do we try to harmonize our lines and masses with it or do we decide offhand, in the office, to do Spanish this time, or Majorcan, or whatever our latest purchase for the library suggests, regardless of a definite character already possessed by the existing setting—and by setting I include the entire countryside as well as that of the particular *morceau* where the house is to stand? Do we? We do not.

As to the divers arts and crafts that fill life with so many beautiful things, I would have the young architect familiarize himself with the technique and the processes and the tools of all of them. Unless he does, he cannot design intelligently in them. He must know the possibilities and limitations of all these crafts. He may learn more about the technique and the ornament proper to wrought iron from the armor collection in the Metropolitan Museum of Art than ever entered his philosophy. One stroll through these marvels should banish iron eggs and darts from the diet of the architect forever.

For every craft—I am ashamed to utter such a platitude to such an audience, and yet on every hand one sees the obvious truth ignored—for every

craft there is a technique appropriate to the material worked in and the tools possible to use, each producing its own beauty in its own way. And it is unintelligent to transfer the technique of iron, bent and beaten and twisted by hand and cut into with cold chisels and files, to bronze, melted and cast in a mould. Yet it is done every day, even now, in a decade that prides itself upon its sophistication and intelligence.

The New York Chapter of the Institute intends, as a part of its new program of education, to attempt to persuade the practicing architects of this town to see to it that every man in their offices visits the shops of different crafts at least every month, so that he may see how things are done. For here is one of the serious defects in the training of the architect—he does not know how things are made. We are all of us too much the office man.

As I wrote this paper I found myself straying from form to color and back again; this was, as I think, inevitable, but it does not make for clarity: I have done what I could to keep them in categories, however vague the outlines. If you have done me the honor to follow me closely so far, you may perhaps feel that we might have taken for our subject not "Architecture as a Problem in Form and Color" but "The Artist as a Problem in Education." For all our problems and all the problems of the world come back for solution to the basic necessity for education; only by and through it shall we learn how to live and work—but I become conscious that I am again riding my hobby; so, like Lady Godiva on a certain famous occasion, I shall canter to my class.

THE PAPER PRESENTED BY HERBERT ADAMS

Past President, NATIONAL ACADEMY; Past President, NATIONAL SCULPTURE SOCIETY; Past President, ARCHITECTURAL LEAGUE OF NEW YORK

IN treating this somewhat formidable subject, I shall simply try to relate, as best I can, the sculptor's position and point of view.

Insofar as architecture is a problem in sculptured form and in color, it would seem only logical that there should be the closest sympathy and mutual understanding between the architect, the painter, and the sculptor. As we all know, this idea was emphasized with great force at the Chicago Exposition. From that time to this, there has been constant effort to bring about better work in the arts we practice. While progress has been made in this direction since the World's Fair at Chicago, the advance has been rather slow, and there is still room for much improvement.

In loyalty to my profession, perhaps I should say that this slow motion is all the fault of the architect; that he has not given the sculptor more than half a chance; that the question of the originality of the design or the beauty of the sculpture has meant very little to him; that the most he has cared about has been just a spot of light and dark for the buildings which he designs.

But in all candor, I must confess that I feel the sculptor himself is often at fault. He often fails to visualize the problem as a whole. Perhaps the architect, wrongly, as I think, sometimes considers it enough for us if we understand merely our own particular part. But we ourselves are far from blameless. As we do not have to concern ourselves

with those endless practical questions of construction and utility which the architect must consider, one might expect that we would have no trouble in keeping in mind the effect of the whole, while executing our sculpture as part of an architectural problem. As a matter of fact, we sometimes find it difficult not to rivet our attention too exclusively on the sculpture alone, especially when our own work is involved. We get so interested in the execution of our particular part that we lose sight of the design as an ensemble. Instead of studying to make our work an essential and harmonious element in the general effect, we content ourselves with simply creating a good piece of sculpture.

If this is true, and if the architect sometimes feels that we are dull, perhaps, in understanding his problem and adapting our work to it, I hope that he will be patient, using his skill and resourcefulness to help us take the larger view. He should remember that our inheritance, so to speak, and our training as sculptors have not been such as to best foster this co-operation, or the ability to visualize an architectural problem in its entirety.

Probably none of our living sculptors have been influenced by our pseudo classicism of the early 19th century. (although oddly enough, we do occasionally see some newly fledged sculptor's work which looks as if it were harking back to that chilly period). Most of us were brought up in the school of realism, of ardent study from the nude model. We have been supported, to no small extent, by commissions for realistic portrait statues. Thus our education and our experience have not been, to say the least, best calculated to help us take the architect's point of view.

Until rather recently, there was no question as to the course of study we should pursue. Get to Paris as soon as possible, draw and model from life morning, noon, and night, pray that some day we might model like Rodin. And by the way, without intending any disparagement to this great artist, how much did the tremendous influence which he had on students of sculpture for twenty years or more, help them to co-operate with the architect?

At present, however, there are happily all around us influences which must tend to broaden the student's outlook in regard to his work, and which must help him to co-operate more intelligently with artists in other fields. Not that the path of the would-be sculptor is today without pitfalls. With all those modernistic theories which sound so wonderful, even if incomprehensible, it must be perplexing for the young student to decide on his course of study and training. I fear that many a talented youth will be lost in the bewildering fog of words and theories.

However, it is undoubtedly a splendid thing to have it emphasized that sculpture is something besides mere representation.

In many ways, it is very regrettable that more students of sculpture do not have, today, the opportunity of working in a sculptor's studio, before starting out for themselves. Aside from the advantage gained from close contact with a maturer mind, such an experience is most valuable because there is so much to be picked up in the mere matter of craftsmanship in a studio which one can never get in a school. But of course, there is no such thing as an apprentice nowadays. Piece work, and the automatic machine have helped youth to put a value on its time, fantastically out of proportion to its usefulness to the sculptor.

If a boy is strong enough not to become thoroughly tainted by the commercialism of the ornament modeller's shop, there is undoubtedly, in a practical way, much for him to learn in such a place,—much that would later on be of great value to him. But the impressions and habits of youth sink deep, and only the strongest can have much of this experience without a permanent cheapening in ideals.

Mr. Magonigle has referred to the kind of sculpture which is cut out of the structure itself, (so to speak) and which is more closely identified with, and essential to, the design as a whole, than when the sculpture is rather in the nature of something applied or added to a building. As Saint-Gaudens used to say, "It doesn't matter so much what you do, as how you do it." To me, this structural approach suggests a very interesting and important phase of our art, and one which seems particularly well adapted to the modern type of architecture and construction.

Is there not an opportunity here for us to develop something at once distinctive and beautiful? I believe there is, if we can rise to the occasion; but to do so, will require a most serious effort of our best talent.

Because a work is highly conventionalized or stylized (call it what you will) in its treatment, depending, for example, more on the pattern, and the masses of light and dark than on subtleties of modelling, it does not by any means follow that it requires any less of an artist. On the contrary, to achieve results that are worth while, the more we simplify, the more knowledge we need to do it wisely and effectively. I fear there is some danger of the whole movement falling into disrepute through cheap and incompetent interpretations.

It may look easy, it may seem to be something anyone can do if he has a certain facility of execution and plenty of nerve, but the truth is, this is a kind of sculpture that calls for exceptional talent, and great knowledge of form and design.

Today, we cannot effectively copy the Gothic or Romanesque. We know too much. If we attempt such copying, our work is either insincere or stupid, and looks it. But, we should be able to convention-

alize the various forms of life, both plant and animal, keeping in mind the decorative aspect, and producing something that is live and beautiful and adapted to our architecture and our times. I would emphasize the constant return to nature and to life for our inspiration. He who depends too largely on his own knowledge and fantasy will soon fall into dull repetition of himself and others, while nature is everywhere teeming with fresh suggestion.

The addition of color to sculpture is to me a most alluring study. I never see one of those beautiful old Oriental or Italian pieces of colored sculpture but that I want to try it myself. And I remember with greatest pleasure the shimmer of color which Stanford White, by means of terra cotta, gave to Dr. Parkhurst's church, now destroyed. I believe that used in the right way, in the right place, polychrome sculpture in connection with architecture has an important significance.

I realize, however, that it is something which is not to be undertaken without the most careful consideration. It demands serious study, and co-operation by the architect, painter, and sculptor.

Where to draw the line between realistic and purely conventional coloring,—how to avoid cutting up and destroying the composition by the addition of color,—how to estimate correctly the effect of the color when the work is seen in place, in the final material,—these are some of the questions which must be settled largely by experiment with the particular problem in hand; because the effect is so dependent on position, distance, and material, that actual trial will be the only safe guide. We are all awaiting with great interest the completion of the Philadelphia Museum of Art, with its touches of full color in architectural details, and its polychrome pediments. This is our first example of an important permanent public building in which polychromatic sculpture is extensively employed.

It is also interesting to note that the sculpture is to be in terra cotta, glazed. I have long felt that in spite of the enormous shrinkage and hazard of the kiln, terra cotta has been left too largely in the purely commercial field. With the knowledge of clays and firing which our terra cotta people now have, it could often be used to great advantage in the more serious sculpture because it is a material which in quality and tone has an effect all its own, and sometimes more in harmony with the surroundings than either bronze or marble would be.

But we need a really good, live, nonabsorbent casting material,—a material which we can handle as we do plaster of Paris, but one which possesses life and durability, and can be modified in color.

I am told by chemists who have had much to do with developing the so-called synthetic porcelain now used in dentistry that in their opinion it is perfectly possible to produce such a material. It would demand expert research work to develop such a ce-

ment, and to devise the practical methods of manufacture. So, until some business man sees this as a likely field for investment, or until some good angel to the plastic art comes along, we shall probably not have at our command an ideal casting cement.

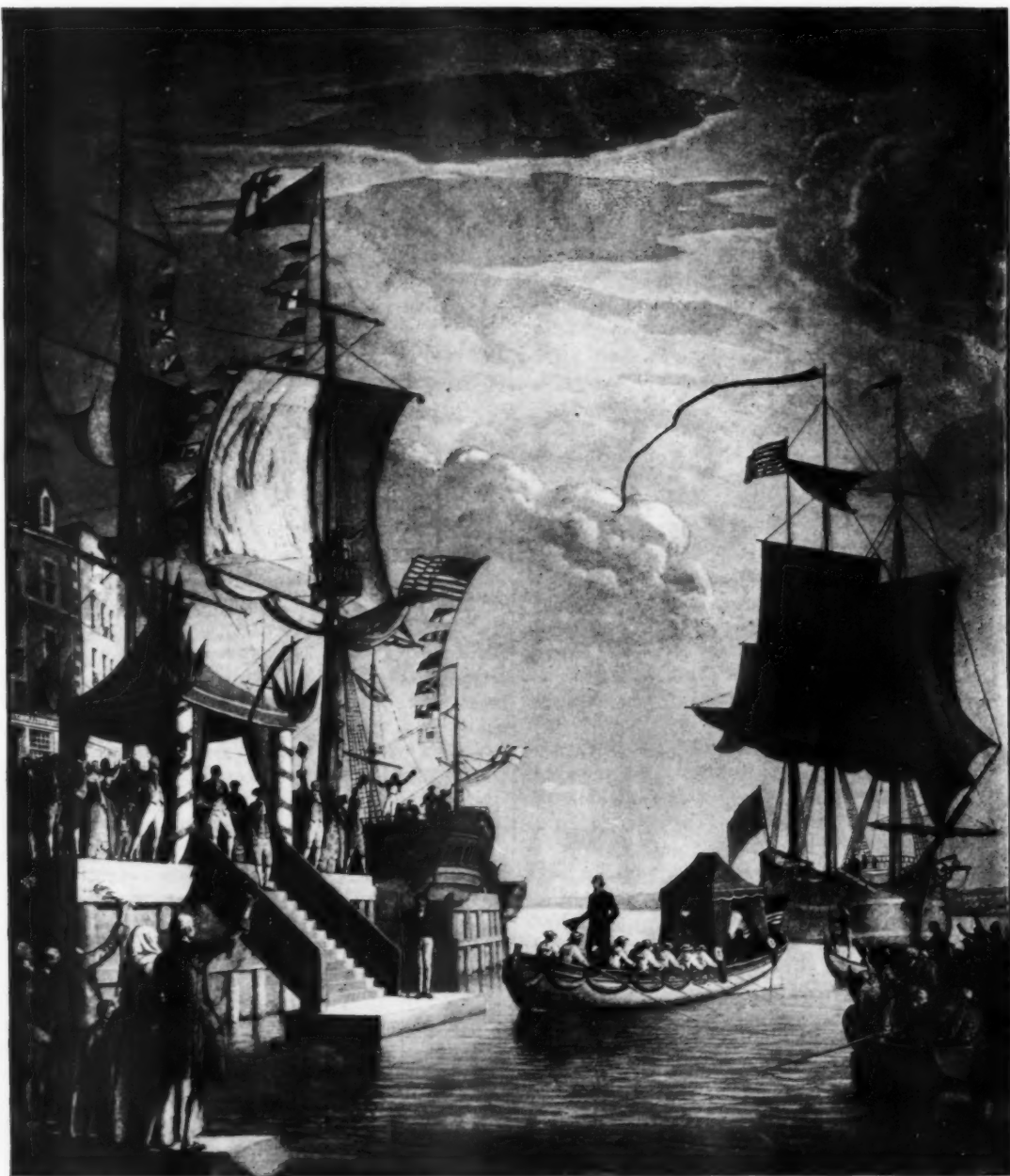
In passing, I would call attention to the importance of providing for the proper lighting of sculpture. It is no exaggeration to say that half of the sculpture in our buildings (yes, even in our art museums) is lost or ruined by poor lighting. Until we stop to think that the effect of sculpture is wholly dependent upon the play of light and shade over its surface, we do not realize how vital the lighting is. Whenever sculpture is contemplated for the interior of a building, the question of the lighting it will have, both natural and artificial, should be carefully considered, and made known to the sculptor before his models are made.

Of course, it is not always feasible to plan for an ideal lighting. But, if the sculptor knows in advance what light his work is to receive, and then executes it in a similar light, many disappointments will be avoided. Possibly a careful study of the architect's drawings would reveal to the sculptor the facts as to the lighting conditions. But I would suggest that the architect make sure that the sculptor *does* understand these conditions, and is not, for example, executing his models in a top studio light, if the work is eventually to be seen in a low side light, and perhaps with a reflection from a light-colored floor.

And, just as we sculptors may fail fully to grasp the lighting of an interior from a survey of the blueprints, so it is with an architectural problem as a whole. We are so accustomed not only to thinking but actually working in three dimensions, that we may not always get from a flat mechanical drawing or even from an accomplished rendering just exactly the picture the architect has in his mind of his finished work.

The architect himself sometimes gets a surprise when he sees his drawings actually developed. I well remember the exclamation of a young architect some years ago, when he saw in my studio a scale model correctly interpreted from his drawings, "Why, I had no idea it was going to look like that!"

In conclusion, let me repeat that although the sculptor may be playing only one part, and perhaps an unimportant part, in an architectural ensemble, it is nevertheless a first requisite that he play in key, in order to weld his work with the whole. Nor should the architect, on his side, suppose that as soon as he has left his blueprints on the sculptor's modelling-stand, his conception of the problem is in the sculptor's mind, and his responsibility in the matter is over. On the contrary, he may find that it has only just begun. Not every day are masterpieces of sculpture produced, ready to be set up, complete in place, at the appointed hour.

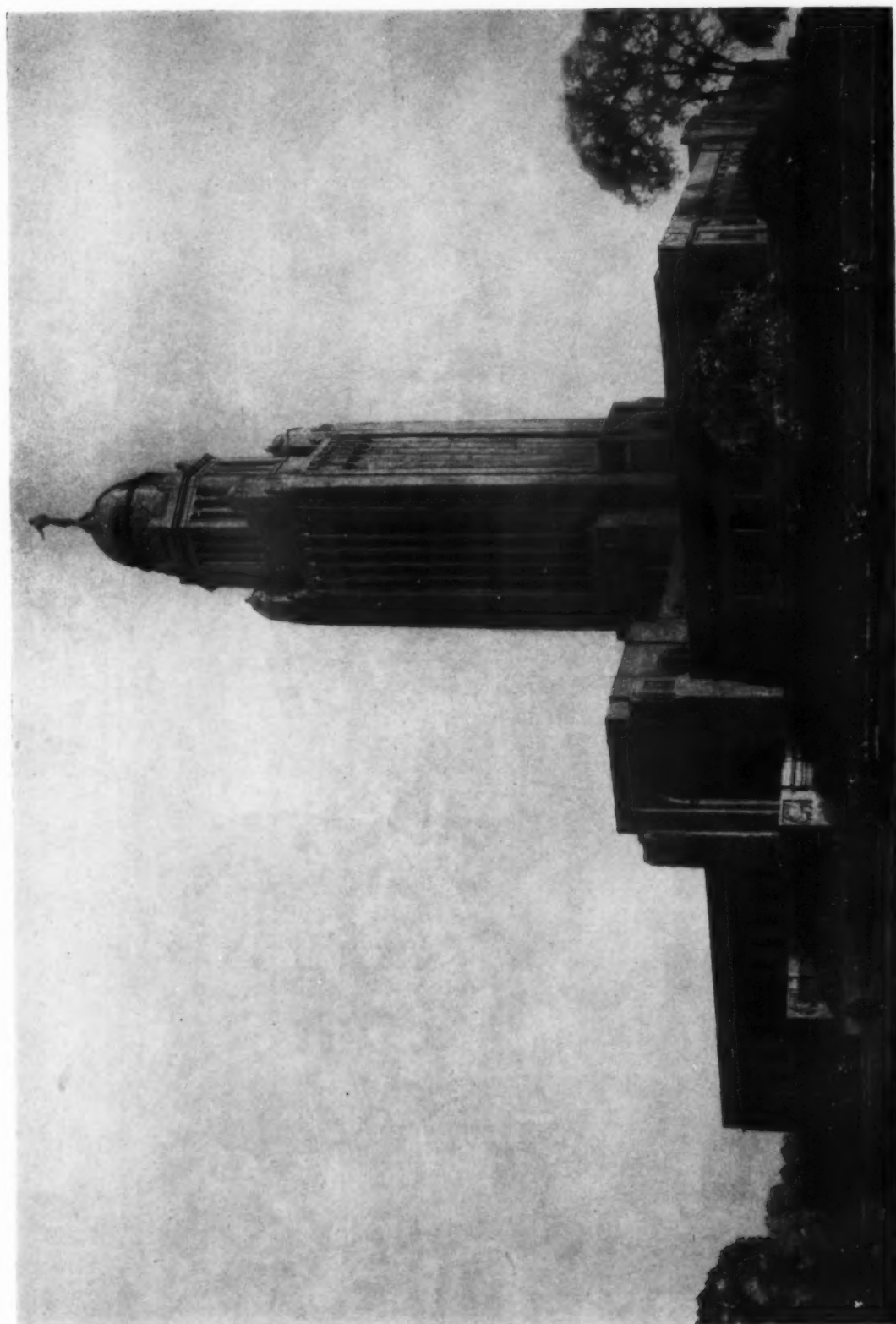


WASHINGTON LANDING AT THE FOOT OF WALL STREET FOR HIS INAUGURATION IN APRIL, 1789
CENTRAL PANEL IN MAIN BANKING ROOM OF SEAMEN'S BANK FOR SAVINGS, NEW YORK

BENJAMIN WISTAR MORRIS, ARCHITECT

ERNEST PEIXOTTO, PAINTER

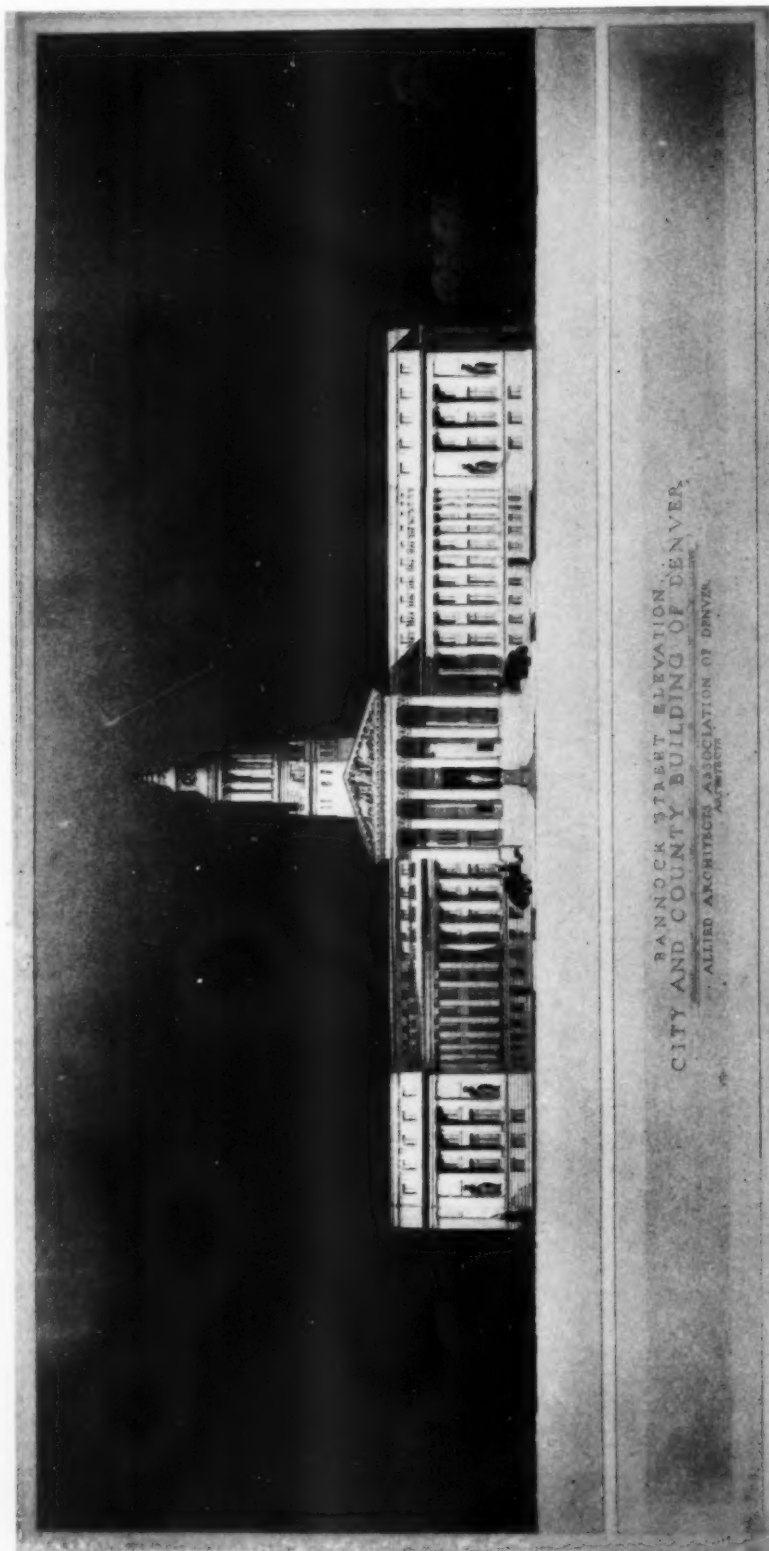
(Forty-second Annual Exhibition, The Architectural League of New York)



STATE CAPITOL BUILDING, LINCOLN, NEBRASKA

BERTRAM GROSVENOR GOODHUE, ARCHITECT

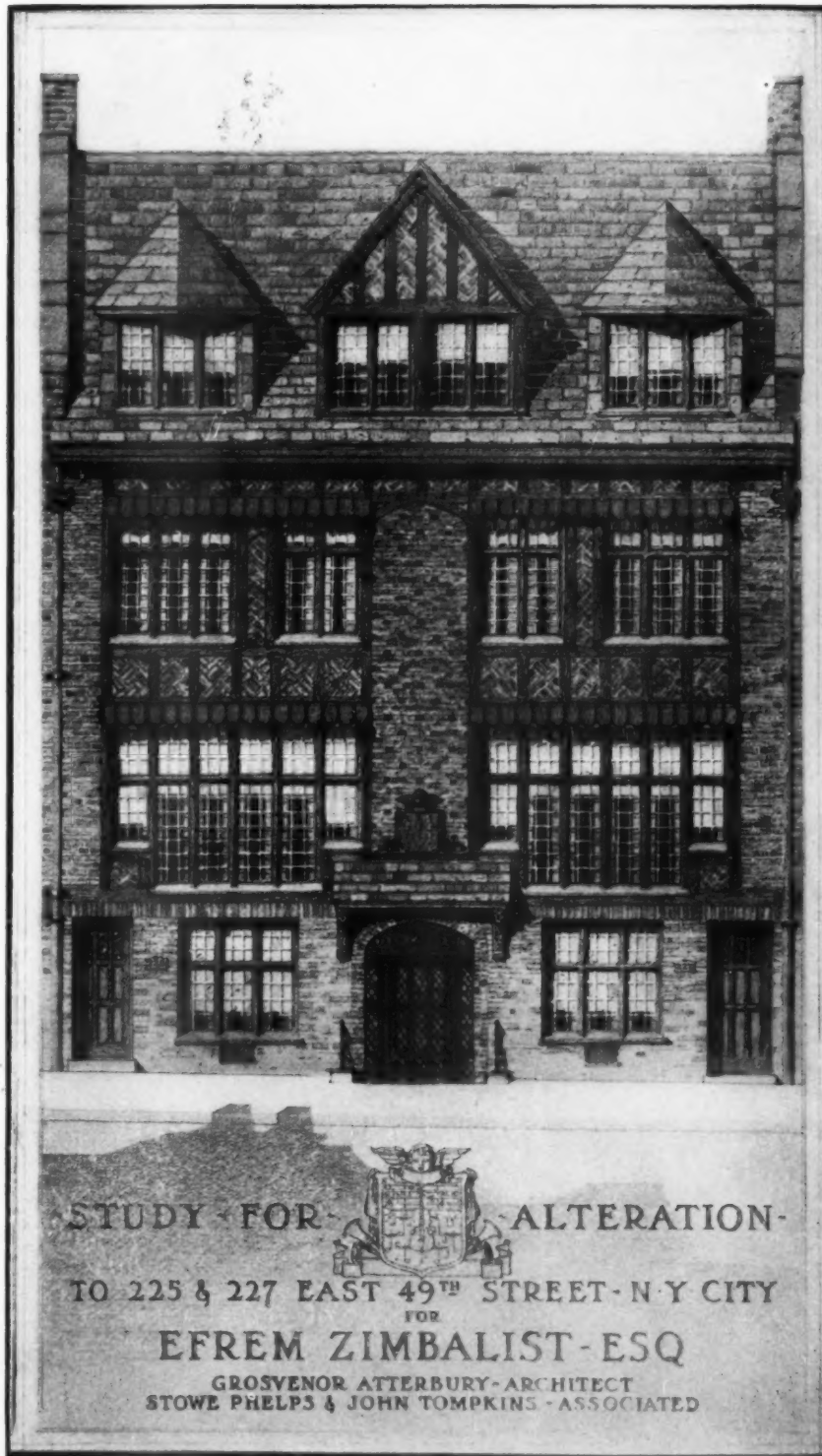
(*Forty-second Annual Exhibition, The Architectural League of New York*)



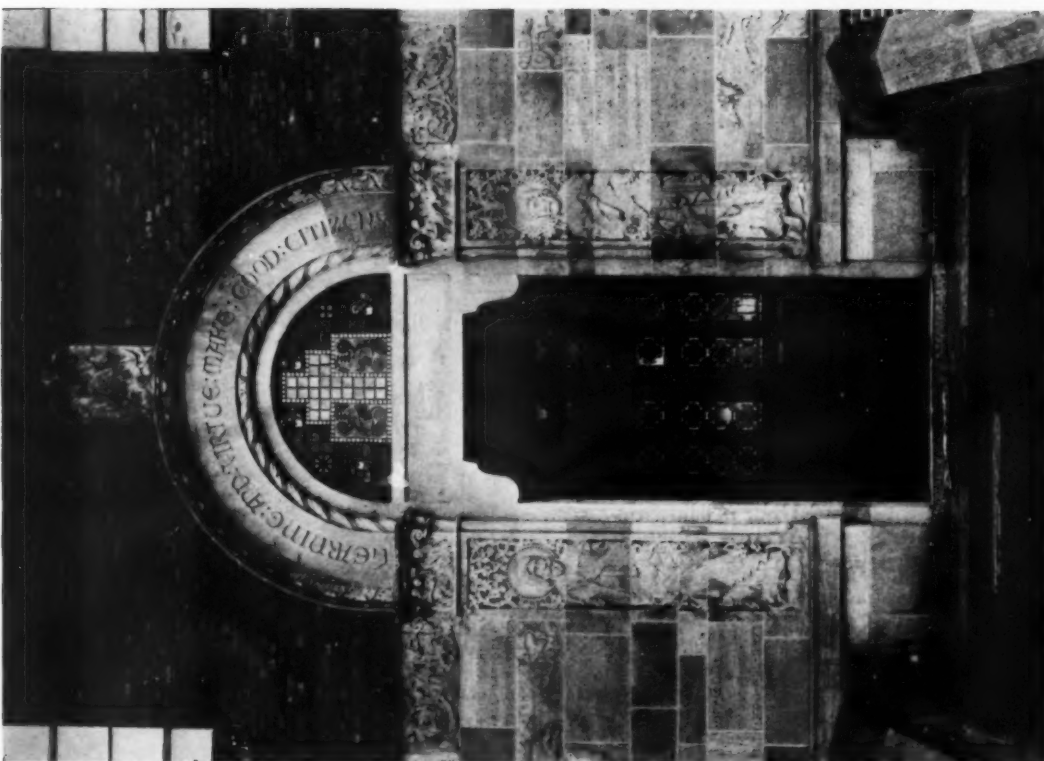
BANNOCK STREET ELEVATION,
CITY AND COUNTY BUILDING OF DENVER,
ALLIED ARCHITECTS ASSOCIATION OF DENVER,
ARCHITECTS

BANNOCK STREET ELEVATION, CITY AND COUNTY BUILDING, DENVER, COL.

ALLIED ARCHITECTS ASSOCIATION OF DENVER, ARCHITECTS
(Forty-second Annual Exhibition, *The Architectural League of New York*)



(Forty-second Annual Exhibition, The Architectural League of New York)

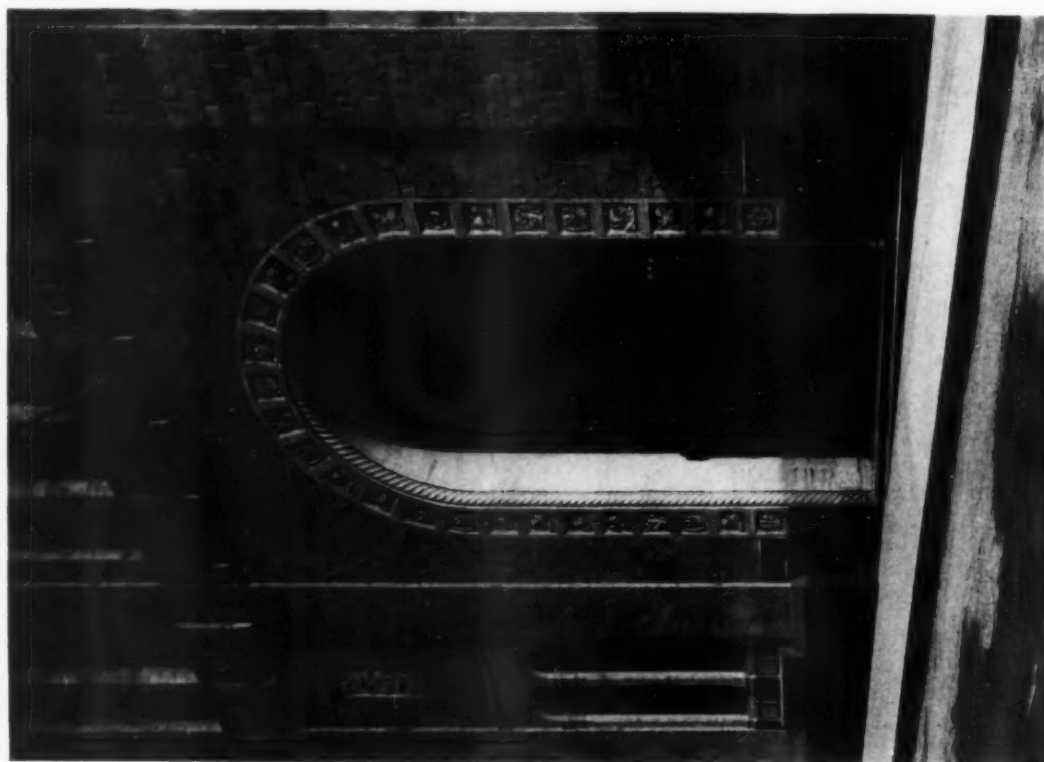


MAIN ENTRANCE

ST. VINCENT'S HOME FOR BOYS, BROOKLYN, N. Y.

McGILL & HAMLIN, ARCHITECTS

(Forty-second Annual Exhibition, *The Architectural League of New York*)



MAIN ENTRANCE

SEAMEN'S BANK FOR SAVINGS, NEW YORK

BENJAMIN WISTAR MORRIS, ARCHITECT

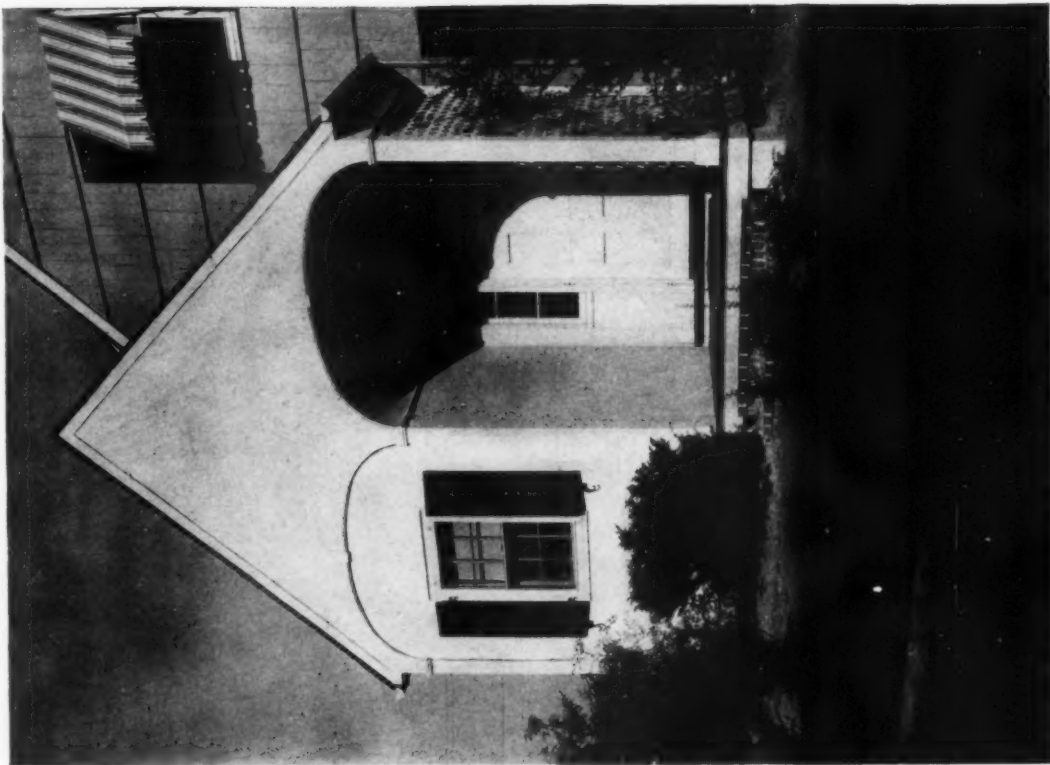
(Forty-second Annual Exhibition, *The Architectural League of New York*)



HOUSE AT SUNNY RIDGE, HARRISON, N. Y.

JULIUS GREGORY, ARCHITECT

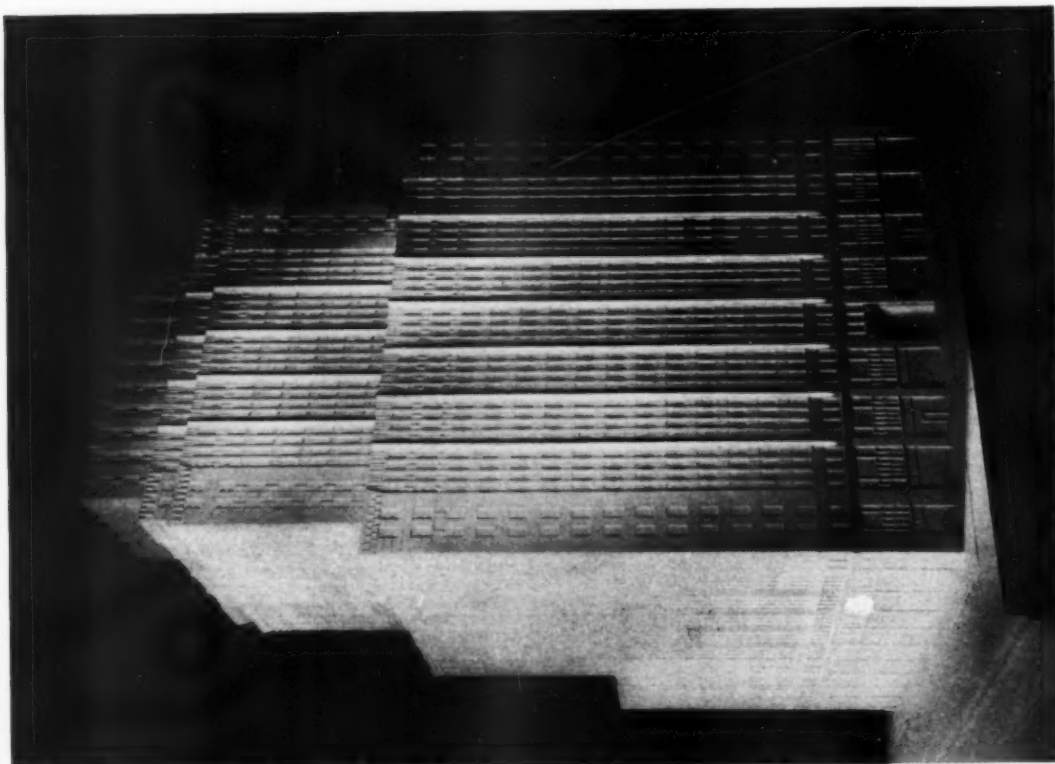
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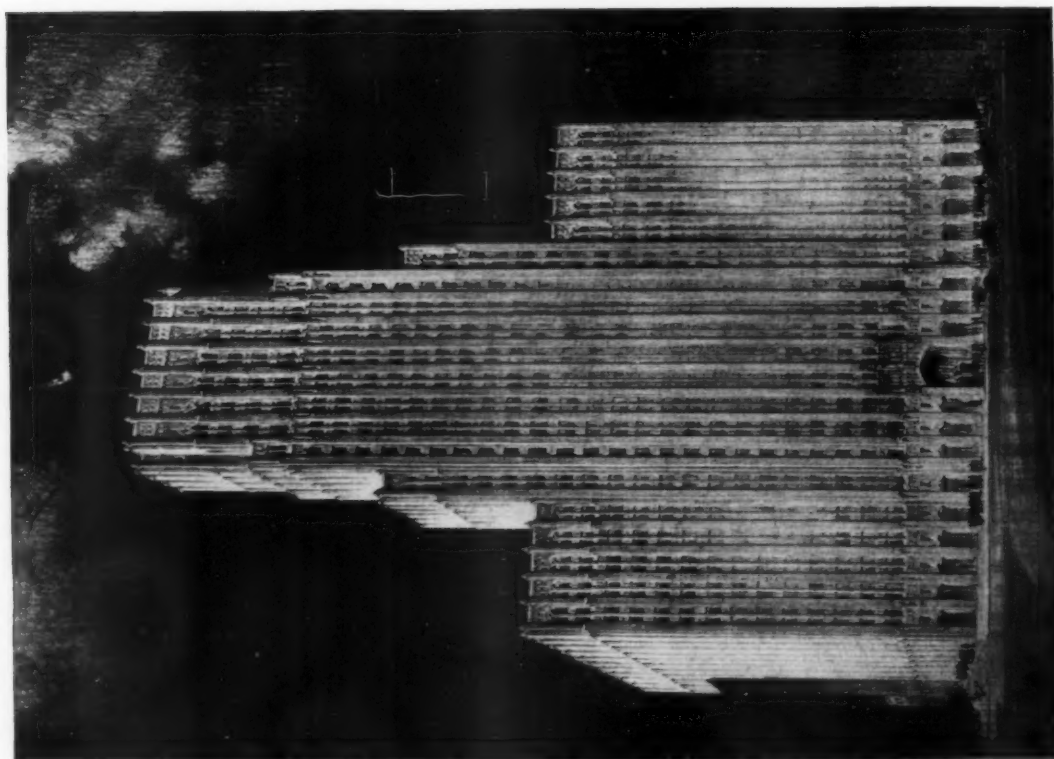
HOUSE OF B. W. SEAMAN, HEMPSTEAD, L. I., N. Y.

GEORGE ROGER THOMPSON, ARCHITECT

(Forty-second Annual Exhibition, The Architectural League of New York)



MODEL OF BUILDING AT NO. 2 PARK AVENUE, NEW YORK
BUCHMAN & KAHN, ARCHITECTS
(Forty-second Annual Exhibition, *The Architectural League of New York*)



RUSS BUILDING, SAN FRANCISCO, CALIF.
GEORGE W. KELHAM, ARCHITECT
(Forty-second Annual Exhibition, *The Architectural League of New York*)



ENGINEERING AND CONSTRUCTION



THE DELAWARE RIVER BRIDGE

PAUL P. CRET, *Architect*—RALPH MODJESKI, *Engineer*

By CLEMENT E. CHASE, *Principal Assistant Engineer*

A BRIDGE has, from earliest times, stirred man's imagination. When his resources were limited to hand-tools and such materials as could be quarried or hewn, he built simply and directly. If the structure stood, he praised his gods—if it fell, he exorcised the devils and began again. The guild of those who held the secrets of the craft was honored among their fellows. The title of its leader, Pontifex Maximus, or chief of the pontifices, took on wider

significance—as a builder of spiritual bridges.

Then came iron and steel; stress sheets; standardized metal shapes, (all alike within their allowable 2% of variation). Also book and shop trained engineers to build the trussed frameworks needed to carry communications over the rivers to the ends of new empires. Working under self-made captains of industry of the new world, spurred on to make a dollar go the farthest and to get there the quickest,



LOOKING TOWARD CAMDEN, N. J.

they built for the most part safely, with cast iron owls on bridge portals thrown in for good measure of beauty. Some showed imagination—and their bridges are in use today. Others built to the mathematical requirements of the little locomotives or wagons in use—and lived to see a second, sometimes a third rebuilding, by others, to keep pace with the wheel loads of a growing commerce.

The last frontier of the continent has been reached. Another generation is taking hold—somewhat more critical as to the form and fitness of its works. There is more wealth, a greater spread of taste and

knowledge, and a broader realization that a civilization expresses itself in its structures even as in its writing, music or painting. And so the building of a metropolitan highway crossing over a great river, conducted as the joint enterprise of two old and cultured states, affords the opportunity for an expression of that dignity and enlightenment.

The new bridge over the Delaware River at Philadelphia is a broad boulevard, 128 feet wide overall, carried over the harbor in a single span of 1750 feet and at such a height as to offer no obstruction to the navigation of the port. It has been built by a joint

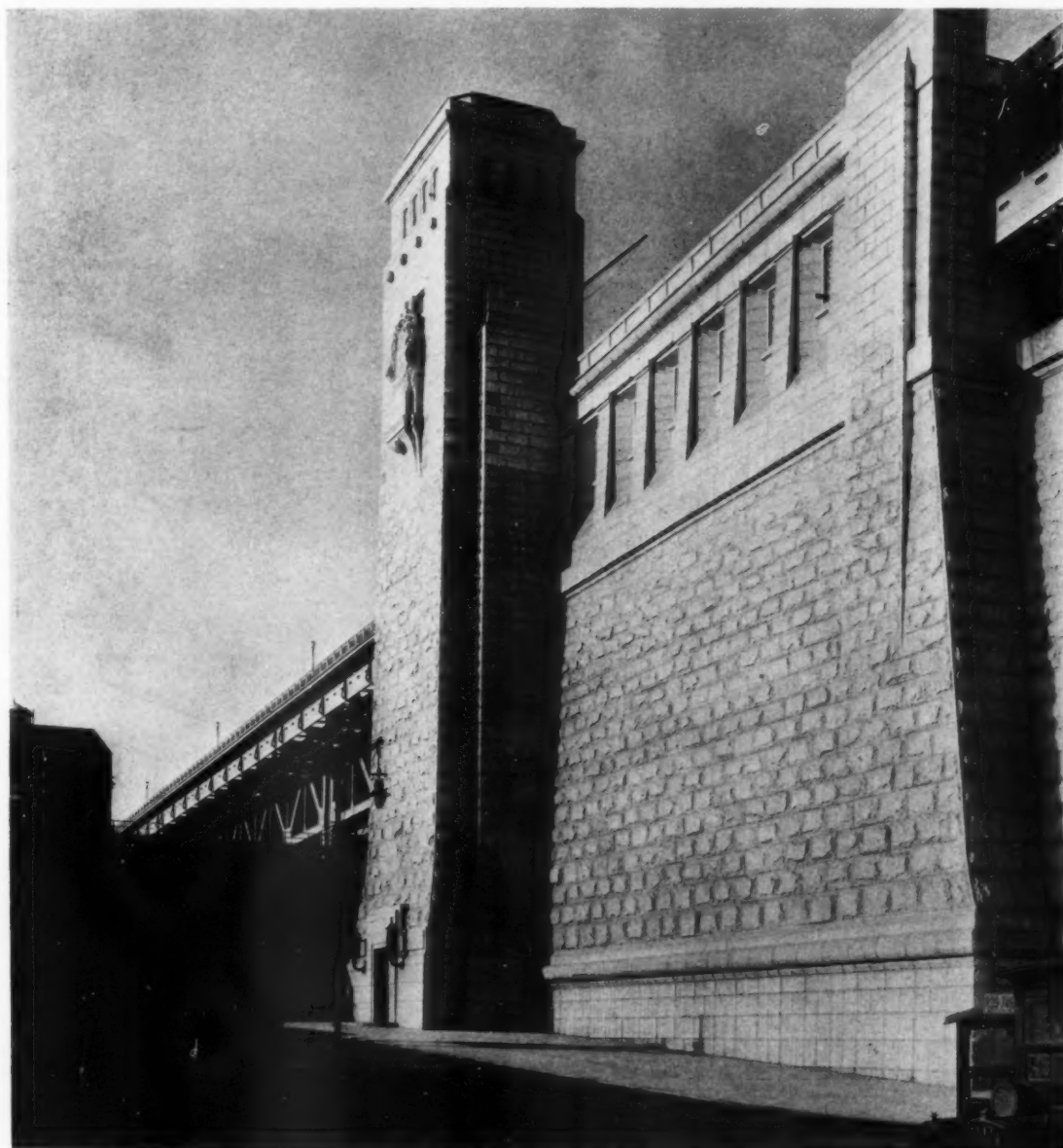


OVER LAND, STEEL TOWERS AND STURDY TRUSSES BRING THE ROADWAYS DOWN TO CITY STREETS

commission of the States of Pennsylvania and New Jersey at a cost slightly above \$36,000,000, contributed by the two states and the City of Philadelphia. Its opening has resulted in doubling the number of vehicles crossing the river. The tolls collected in the first six months have not only covered all operation and maintenance costs, but all interest charges for the period as well. With but a natural and normal growth in its use, there will be a sufficient margin after such charges to refund the entire investment within seventeen years. When this is done tolls will be no longer charged. The signifi-

cance of this is that a structure, built with generous roadways and track spaces; with no skimping of the finest of engineering materials; with every portion designed for appearance as well as for strength; with broad plazas and approaches cut through twelve million dollars worth of city property—is yet such a good investment that it will carry and retire its own cost of construction and operation.

A suspension bridge, like an arch, is a form of engineering construction that is in its elements intelligible to every layman. Not so ancient a form as the arch, it has its roots, nevertheless, in an era when



HEROIC COATS OF ARMS OF THE TWO CITIES AND STATES WERE THE WORK OF LEON HERMANT, SCULPTOR



THE ROADWAY PASSES UNDER AN ARCH OF STEEL AT EACH TOWER. ELSEWHERE THERE IS NO CONSTRUCTION OVERHEAD. SIX LINES OF VEHICLES AND FOUR OF RAPID TRANSIT AND TROLLEY CARS CAN MOVE ABREAST



THE FOOTWALKS OUTSIDE THE CABLES AND TRUSSES AFFORD A PROMENADE HIGH ABOVE THE HARBOR. RIVETS WITH COMMONPLACE FUNCTION OF BINDING PLATES AND ANGLES ASSUME PLEASING PATTERNS OF SYMMETRY

construction had of necessity to be simple, sparing of material, and direct in its solution. The curve of the carrying cable is a line of beauty readily appreciated by trained or untrained observer. The burden borne by the main towers is obvious and the eye looks for the expression of sturdiness and strength. The anchorages are patient giants, passive participants in an endless tug-of-war, holding securely the cable ends.

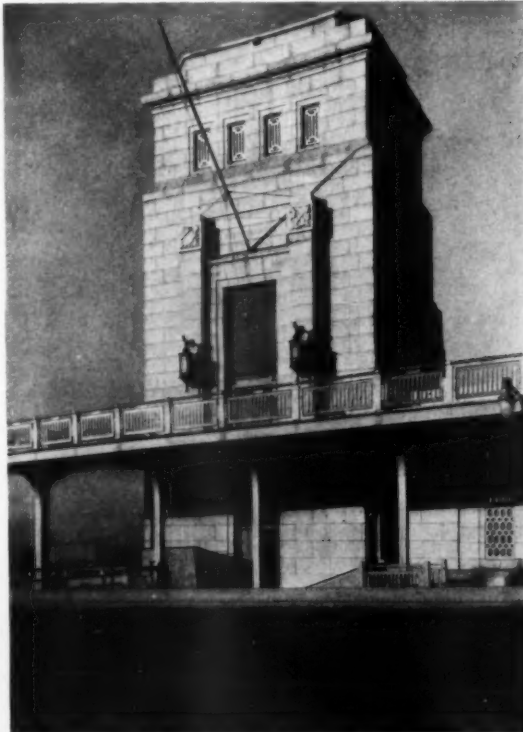
There is engineering controversy, from time to time, over the construction elements that should be used in great suspension bridges. The public hears discussed with great partisanship the merits and demerits of wire cables and eyebar chains, of stone towers and steel towers, of granite and concrete masonry. These are matters to a great degree unsolvable by any process of calculation. They yield the correct answer only to careful analysis based on broad experience. Equally difficult are the decisions as to the form and ornamentation to be given the structure to secure enduring beauty. To these must be brought trained taste, with skill in planning and visualization.

Time is the acid test for structural beauty. If based on certain fundamentals, not too well known or easily definable, the work of the present will take its place among the prized possessions of a succeeding generation. If built to narrowly conceived requirements of economy or merely decorated with unrelated ornament, it will survive, if it long escapes the wrecker, to share a place with those bridges, buildings or monuments that cause a succeeding generation to doubt the taste of their elders.

Some of man's work grows better with age and association. Charles Mulford Robinson could write at the beginning of the century, "The Brooklyn Bridge is impressive in its span and in its metal-work; but of its looming towers no man feels proud." And twenty-five years later those massive stone towers have so endeared themselves to the artistic eye that one is asked why they cannot be used on all suspension bridges. Well, we now know

that for a structure of the proportions of the Brooklyn Bridge (and the same holds true for the bridge over the Delaware) stone towers are structurally wrong. The towers for such spans must bend with every change of load. After the towers of the Brooklyn Bridge have flexed an inch or so, if the load is not then balanced, the cables must slide over their saddle bearings. Disquieting headlines tell of the cables slipping on the venerable bridge. The steel towers of the Philadelphia-Camden bridge are de-

signed so that they might be safely bent twenty inches to or from the river without overstrain in any part. At one stage of the erection they were deflected back about sixteen inches and later twelve inches the other way. Such motion harms them no more than it would a Toledo blade. Laterally, the towers were so braced that they could withstand the impact of a stray dirigible at their top. And all the while they must carry the vertical load of nearly thirty-five thousand tons which they receive from the cables. These are the engineering considerations. They impose certain requirements of slenderness and sufficiency of bracing, combined with the essential strength as columns. With major proportions established, the detail designing of the towers was a combined labor of the engineers and archi-



SIMPLICITY AND DIGNITY, WITH SPARING USE OF APPLIED ORNAMENT, CHARACTERIZE THE GRANITE TOWERS OF THE ANCHORAGES. THE RAILING PANELS ARE IRON CASTINGS HELD BETWEEN STEEL POSTS

tests of the Joint Commission over a period of six months.

So with the other parts of the structure. The choice of wire for the cables was purely an engineering selection of what was considered the most suitable, all-around, tension member. The wire is of such quality that each square inch has a strength of 225,000 pounds. The loads require each cable to be 30 inches in diameter of 18,666 individual wires, tightly bound together and wrapped. But aesthetic considerations alone determined that the curve of the cables should be unbroken from end to end, and not be eclipsed by the line of the stiffening trusses.

The anchorages required certain masses of masonry for stability. The disposition of those masses

was in part a matter of calculation, but their form and proportion were again a matter of blending engineering and architecture, of expressing function in form. The two great buttresses in front of each anchorage are required for stability, to transmit certain reactions to the foundations. The masonry towers, toward the rear, carry stairways and elevators. Their location and form were not fixed by structural demands. They were placed at the rear to emphasize the weight required at that part of the anchorage. The needs of the elevators fixed their height. Their form and ornamentation with sculptured coats-of-arms of the two states and the two cities followed naturally out of the prominence given by position and loftiness.

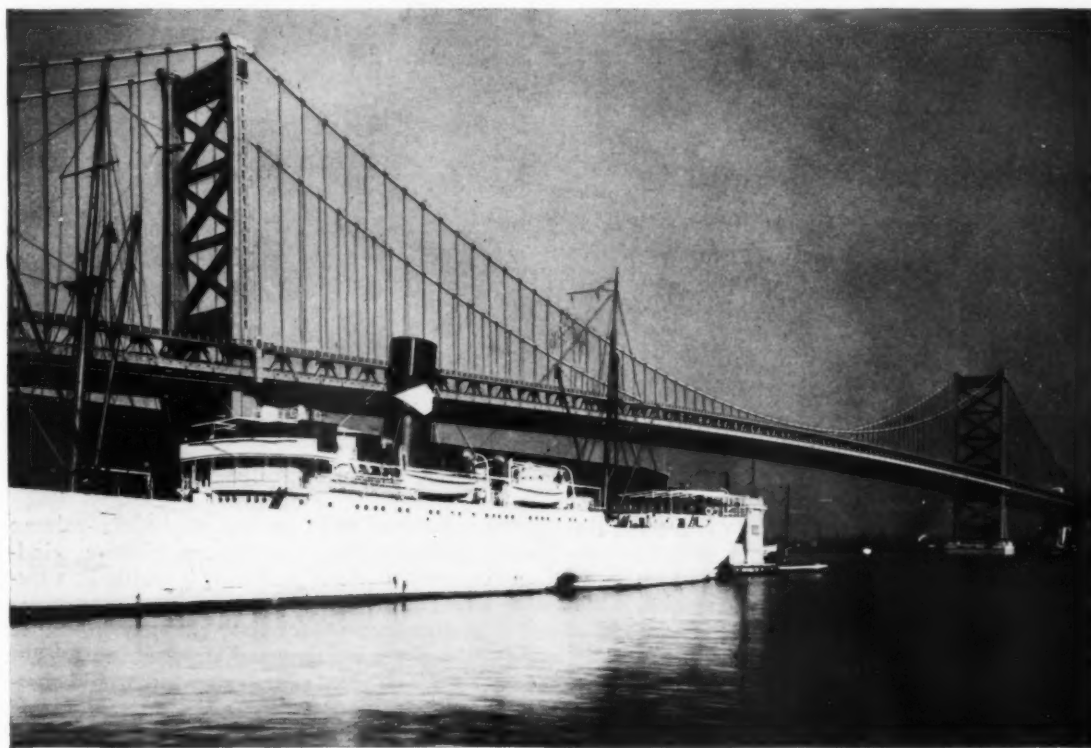
Such balancing of technical and aesthetic considerations requires sympathetic co-operation between engineer and architect for the happiest results. The engineer, upon whom rests the final responsibility for the sufficiency and safety of the structure, must have at heart its need for beauty and sympathetic understanding of the principles that give that qual-

ity. The architect, trained to visualize his work in three dimensions, sensitive to beauty in ornament as well as in proportion, must have a sense of the fitness of structural parts for structural duty.

The first Transactions of the Institution of Civil Engineers of Great Britain in 1836 carried the following note concerning one of the associates of the fathers of British engineering, Mylne by name:

"Born in Edinburgh, in 1734—died in 1811—Robert Mylne may be looked on as the last practitioner of note, who combined in a considerable degree the avocations of the engineer and the architect. The professions have since become almost entirely disjoined, but the study of architecture ought still to form a branch of the engineer's early discipline, for though utility and strength are no doubt the main objects of his practice, the works are few that may not be benefited by the application of taste, without sacrificing those essential characteristics."

Until we produce men thoroughly trained in both professions, from whom fortune and the school of experience can develop a master of engineering and architecture, nothing is more hopeful for our great structures than the sympathetic collaboration of the two branches of an ancient house.



THE DELAWARE RIVER IS BRIDGED BETWEEN PHILADELPHIA, PA., AND CAMDEN, N. J., BY A SINGLE SPAN ONE-THIRD OF A MILE IN LENGTH—THE LONGEST SUSPENSION SPAN YET BUILT

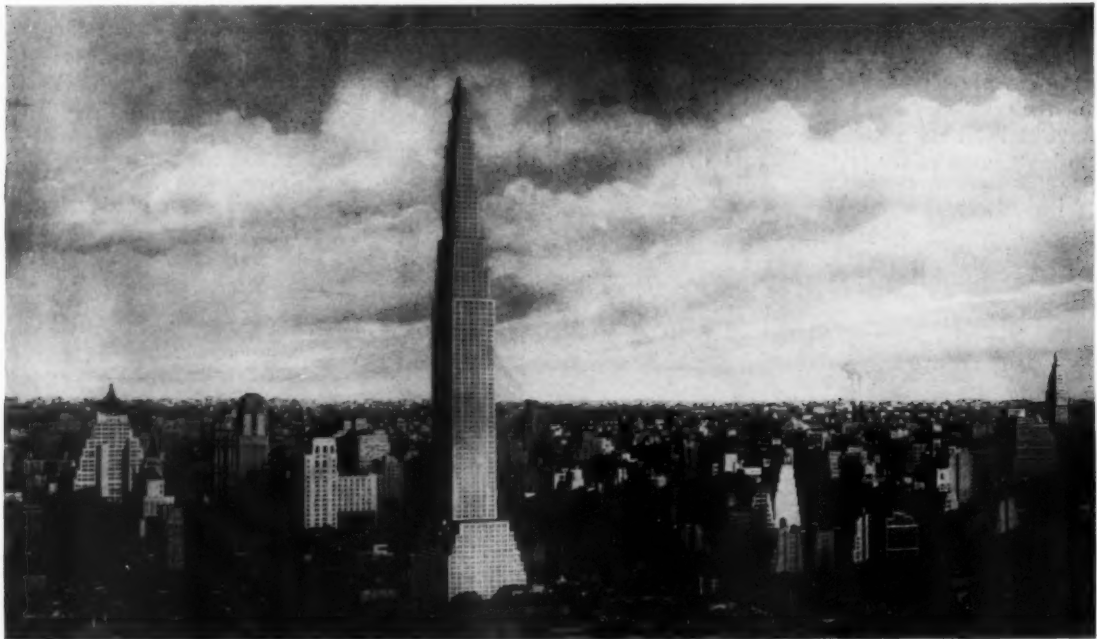
SCIENTIFIC PAPER OF THE BUREAU OF
STANDARDS

THE following Scientific Paper of recent publication by the U. S. Department of Commerce, Bureau of Standards, may be obtained from the Superintendent of Documents, Washington, D. C.

Transmission and Absorption of Sound by Some Building Materials, by E. A. Eckhardt and V. L. Chrisler, Scientific Paper No. 526, 27 pages, price 15 cents. This paper describes the method used in the Bureau's laboratory for measuring the relative sound-absorbing properties of different materials and gives the relative values for a number of plaster panels and a number of other materials.

PRODUCERS' COUNCIL

THE Board of Directors of The American Institute of Architects approved the action taken by the Producers' Research Council at its last semi-annual meeting. At that meeting it was decided to drop the word "Research" from the title, thus changing the name to "Producers' Council." This action was taken because it was believed that the use of the word "Research" did not properly apply to the purpose and work of the Council. This action having been approved by the Board of Directors of the Institute, The Producers' Research Council will hereafter be known as The Producers' Council, affiliated with The American Institute of Architects.



LARKIN TOWER BUILDING, NEW YORK CITY—JOHN A. AND EDWARD L. LARKIN, ARCHITECTS

PLANS were recently filed at the Manhattan Bureau of Buildings for a 110 story skyscraper designed by John A. and Edward L. Larkin. If the plans are approved and the building erected, it will be the tallest structure in the world. The height of the tower above the sidewalk is stated to be 1,208 feet or 224 feet higher than the Eiffel Tower. The required ground area is approximately 50,000 square feet. The structure would provide a total floor area of 1,450,000 square feet or 950,000 square feet of net rentable floor area. The estimated cost of land and structure is \$22,500,000. Those responsible for the project apparently have given it intensive study. Recent newspaper accounts state that many innovations in both structural framing and vertical transportation system are planned. The engineers have applied for patents on

what is believed to be an improved girder-column connection that also provides an effective wind-bracing system. Another feature is said to be a special arrangement of columns.

The plans provide for sixty elevators located in the center of the building and arranged in banks of ten. Two high speed express elevators would operate to the 82nd floor. Four shuttle cars would serve the portion of the tower above the 82nd floor. Double decked cars for the high rise elevators are being designed to increase the carrying capacity. It is estimated that 30,000 cubic yards of earth and 50,000 cubic yards of rock excavation will be necessary. Concrete for footings would amount to 25,000 cubic yards. Approximately 40,000 tons of steel would be required for structural framing of this mass of masonry, steel and glass.

A NEW SERIES OF CARNEGIE ROLLED STEEL BEAM AND COLUMN SECTIONS

A NOTEWORTHY STEP IN THE EVOLUTION OF STRUCTURAL STEEL PRODUCTION

THE standardization of a product which results in savings in cost to the consumer and simplification in design to the architect and engineer is one which will attract their attention and favorable reception. This is because these two things—reduction of building costs and designing costs—are for many reasons desirable.

In the field of fabricated structural steel these two things have been assured by the new rolled steel beam and column sections now made available by the Carnegie Steel Company. A brief description of these new sections, illustrated by the accompanying diagrams, is given.

That these new sections are not a haphazard product will be made evident by a brief review of American beam practice. Forty years ago the largest metal beam section rolled was 15" deep, this size having supplemented the previous 12" maximum, not because it was part of a consistent series but because new mills had been built that could produce a 15" beam. In 1889 a yet larger mill was built capable of producing beams 20" deep, and this size was added to the list, again not because it belonged in an orderly sequence but because it was the largest size then producible. Soon after 1890 a 24" size was added for similar reasons, and an 18" section was interpolated between the 15" and 20" sizes. In 1896 standardization was reached with regard to beam sections, the American standards, 8" and larger, then comprising 8, 9, 10, 12, 15, 18, 20 and 24 inch sections.

About 1908 a new type of mill made possible the production of still deeper beams, and 26", 28" and 30" beams were offered, together with an interpolated 22" depth. Shortly thereafter sections 21" and 27" deep were produced. Last year the range below 12" was amplified by the production of new joist beam sections having very narrow flanges and light weights.

Thus we find the ranges below 12" and above 18" fully covered with a profuse variety of depths, stepping not over 2", but strangely enough the important range between 12" and 18", in which occurs the greatest normal tonnage demand, was left with only one intermediate beam depth, 15", with 3" steps above and below it.

A type of mill recently devised by the Carnegie Steel Company has made it possible to produce a new series of beam and column sections which are designed according to a logically developed scheme. With the experiences of the past and the needs of the present before them, the designers have evolved a comprehensive schedule which has the two merits

first mentioned, a resultant saving in cost to the consumer by eliminating waste caused by an unscientific progression of sizes and weights, and to the architect and engineer by vastly simplifying the work of designing.

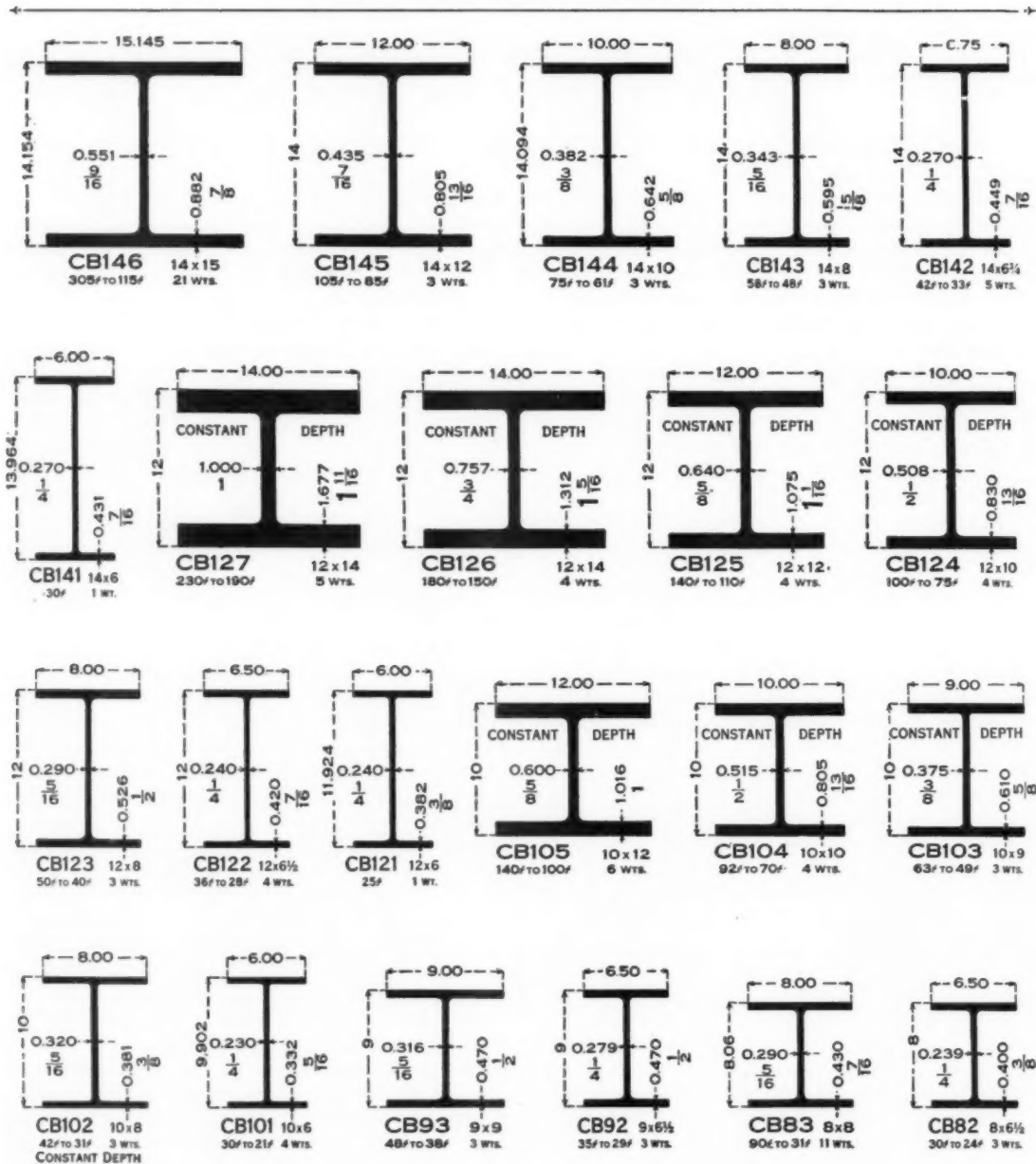
Under date of January 1, 1927, the Carnegie Steel Company issued a pamphlet announcing the placing on the market of the new series of beam and column sections, under the name of "Carnegie Beam Sections." These sections range from 8" to 30" in depth, from 6" to 16" in width and from 21 to 305 pounds per linear foot in weight. They appear to exceed previous maxima in two respects, maximum weight per foot by $16\frac{1}{2}$ pounds, and maximum width by one inch. The series includes a total of 41 sections with 161 weights.

Several novel features characterize these Carnegie Beam Sections, some entirely new and others new as regards American practice. The innovations apply notably to contour, range and column design.

The general contour of all sections, for all uses whatever, is similar and marked by the absence of any internal flange slope, the flanges being of uniform thickness throughout their width. This characteristic increases the strength by increasing its sectional area as far as possible from the neutral axis, permits simple connections and facilitates fabrication. It also makes possible the interchangeable use of sections, for example, as either beams or columns and thereby reduces the variety of sizes that need be carried in stock, permits a quicker cycle of rollings, and allows a large degree of standardization in shop methods and tools.

It is interesting to note that all of the section depths of the new series correspond very closely with a progressive series in which each depth is 15 per cent greater than the preceding depth. The designers of the series state that this geometrical symmetry is of practical value, in that it permits the use of a consistent series of thicknesses and weights so arranged that the section strengths progress by steps having close and approximate regular ratios of increase. This orderly progression should enable the designer of a structure to select, in any part of the range, an efficient section very close to his requirements, and to thus eliminate the waste of unnecessarily heavy sections. Convenient charts and tables are given in the pamphlet above referred to, which are intended to assist the designer to readily select a beam section of the depth and strength required.

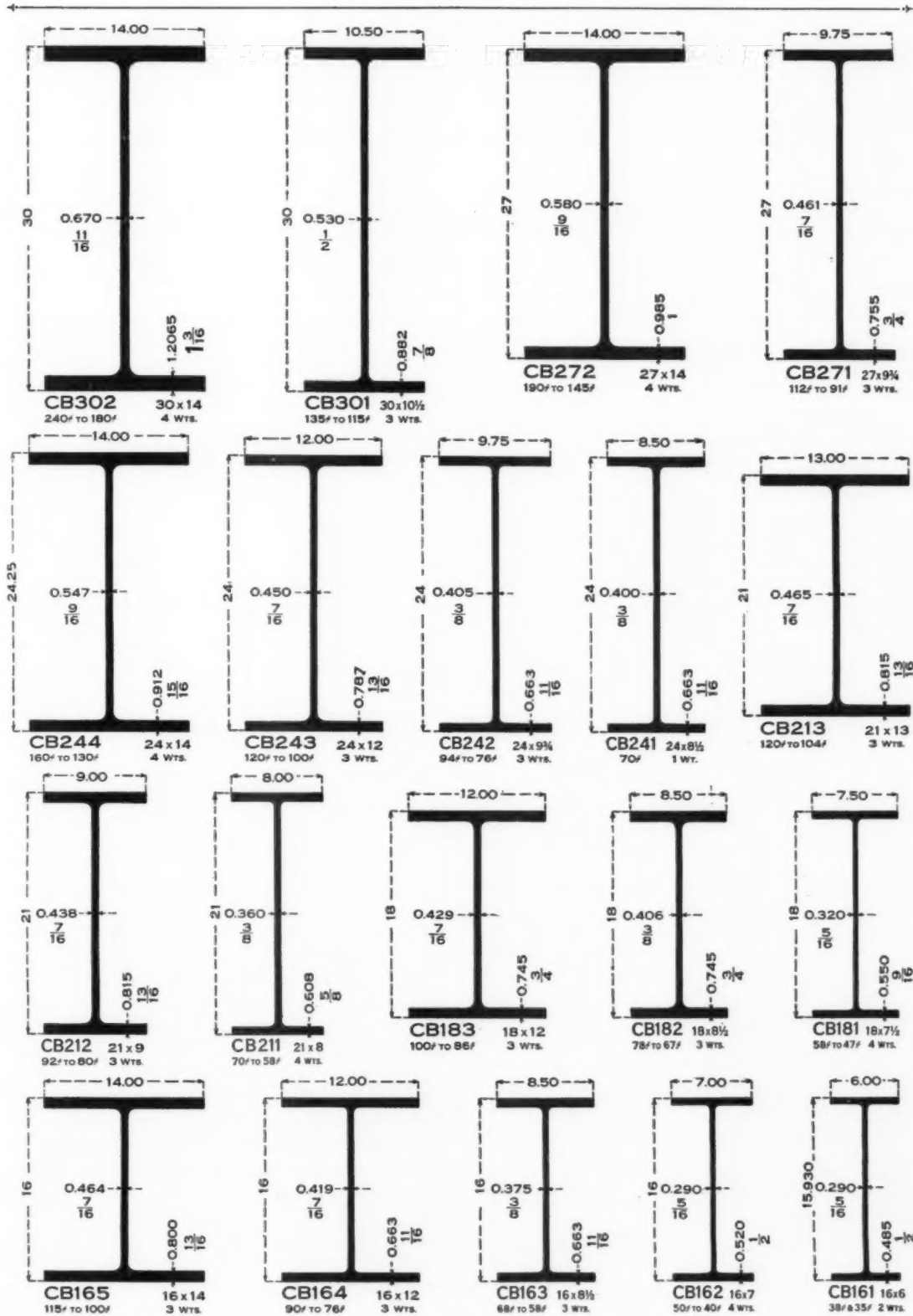
Architects especially will appreciate the adaptability of these new sections to architectural requirements. Thus the series includes intermediate groups



THE DIAGRAMS SHOWN ABOVE AND ON THE FACING PAGE ARE MADE TO THE SAME SCALE AND INDICATE RELATIVE DIFFERENCES IN SIZE AND PROPORTIONS OF THE NEW SERIES OF STEEL BEAM AND COLUMN SECTIONS. THE SECTION DEPTHS CORRESPOND VERY CLOSELY WITH A PROGRESSIVE SERIES IN WHICH EACH DEPTH IS 15 PER CENT GREATER THAN THE PRECEDING DEPTH. THIS GEOMETRICAL SYMMETRY PERMITS THE USE OF A CONSISTENT SERIES OF THICKNESSES AND WEIGHTS SO ARRANGED THAT THE SECTION STRENGTHS PROGRESS BY STEPS HAVING CLOSE AND APPROXIMATE REGULAR RATIOS OF INCREASE. THE SELECTION OF EFFICIENT SECTIONS VERY CLOSE TO LOAD REQUIREMENTS WILL ELIMINATE THE WASTE OF UNNECESSARILY HEAVY SECTIONS

CARNEGIE BEAM SECTIONS

DIAGRAMS SHOWING MINIMUM DIMENSIONS IN INCHES
AND RANGE OF WEIGHTS PER LINEAL FOOT



of sections, wider, heavier, and stronger than the minimum for each depth that will be found suitable for use as beams where limitations of depth or maintenance of flush ceilings are important features. Uniformity in fireproofing and finish is also enhanced, for example, by the use of minimum weights of the 10", 12", 14" and 16" sections which have a 6" uniform width.

As columns, two novel features characterize the new series, namely, excess of width over depth and constant depth. It has heretofore been the practice to make H-column sections square at their minimum weights—that is, with the same depth and width. The new series contain column groups whose minimum weight sections are considerably wider than their depth. Thus there are groups 10" deep and 12" wide, 12" deep and 14" wide, 14" deep and 15" wide. This innovation permits a disposition of metal that results in great strength about the critical minor axis, combined with a minimum diameter of fireproofing and finish and thereby increases the usable floor area, an especially desirable feature in multi-story buildings.

Groups of column sections having a constant depth are not entirely new to the structural industry. A few years ago there was placed on the market a series of fabricated plate-and-angle columns known as the "A. B. Co. Constant Dimension Columns" which achieved, and still retain, great popularity; but the new "Carnegie Beam Sections" are believed to be the first series that combines the advantages of constant depth with the economy of a rolled as compared with a built-up section.

The advantages resulting from the use of constant depth column sections appear principally in the symmetry of beam, girder and spandrel framework connecting to the columns at successive floors of a multi-story building, whereby multiple production methods can be utilized that result in substantial savings in drafting room, fabricating shop and erection. The simplification of details on the columns themselves, including the avoidance of fillets under splices, is also advantageous. To the architect and general contractor constant depth is valuable in that it permits of greater uniformity in fireproofing and finish.

Sections of constant depth type are offered in two depths, 10" and 12" respectively. The 10" groups comprise weights ranging from 31 to 140 pounds per linear foot, which are adequate to take care of an ordinary 12 story building, from basement to roof. The 12" groups comprise weights ranging from 75 to 230 pounds, which in conjunction with the 10" groups will take care of an ordinary 18 story building.

In addition to the major innovations described

above, the new Carnegie Beam Sections have a number of novel features which aim to enhance the efficiency and adaptability of the series.

Fillets are parabolic instead of arcuate in form, thereby combining maximum spread with minimum area, and their areas are properly included in the calculated weights and properties of the sections.

All section weights are expressed in whole pounds, thus avoiding the annoyance of fractions. The heavier column weights in the 12" groups end in zero, and stagger with those in the 14" groups which end in five, thus enabling a designer to change sizes with a minimum waste of metal.

The catalog weights correspond within one-tenth of a pound to roll dimensions expressed in thousandths of an inch, but in order to conform to structural steel practice, tables are given in the pamphlet that round all dimensions to the nearest sixteenth of an inch.

The designer will appreciate the manner in which the tables are arranged with a view to expediting his work, in that all information regarding any section is visible without turning the page. Left-hand pages give data primarily required for design, while corresponding right-hand pages relate primarily to data needed for detailing.

The pamphlet shows the profiles and properties of Carnegie Beam Sections arranged for application under any building code or specification. It is understood that this edition will shortly be supplemented by a series of local editions, which, in addition to the data already published, will contain tables showing the allowable loads to which the sections may be subjected, either as beams or columns, in accordance with the building codes of several of the principal cities in the United States. Another edition will cover similar loadings under the Standard Specifications of the American Institute of Steel Construction, Inc., which is intended for communities that have adopted those specifications, and yet another edition will cover similar loadings in accordance with the requirements of the American Railway Engineering Association. The several editions are to be bound separately as a safeguard against confusion in their use—a truly comprehensive program and one which cannot fail to simplify the work of the architect and structural engineer.

It may require some effort on the part of the architect and structural engineer to familiarize themselves with this new series of beams and columns but it is formulated in such a logical manner that its characteristics will be readily grasped and it will be easily put into use. It is well worth the most serious consideration. The accompanying diagrams illustrate the range of the series.

INTERIOR ARCHITECTURE

TENDENCIES IN INTERIOR ARCHITECTURAL DESIGN AS SUGGESTED BY THE EXHIBITION OF THE ARCHITECTURAL LEAGUE OF NEW YORK

JUDGING by the photographs of interiors on view at the exhibition of The Architectural League of New York, which closes today at the Grand Central Palace, it may truly be stated that a distinctive American style of interior architectural design is nearer a reality today than ever before. There are again exhibited many attempts to reproduce old period rooms and to express old period ideas in



LIVING ROOM IN HOUSE OF ARTHUR KNOX. NEW YORK

TAYLOR & LEVI, ARCHITECTS



DOUBLE DOORS HAND CARVED IN OAK BY MARK FENDERSON. THE DOORS ARE MOUNTED IN HAND WROUGHT IRON HARDWARE. THEY ARE LOANED BY CHARLES KECK FOR WHOM THEY WERE DESIGNED



DETAIL OF WROUGHT IRON GRILLE IN RESTAURANT AT 28 EAST 63RD STREET, NEW YORK
HENRY S. CHURCHILL, ARCHITECT
DESIGNED AND EXECUTED BY EDGAR BRANDT

modern materials and by modern methods. One visiting architect, referring to the unsuccessful results so often attained in this manner, remarked that it is pathetic to see such lack of ambition in modern designers of interiors. Yet, taken as a whole, there is evidenced a greater tendency to create than has ever been shown before. Many of the interiors are original. There are evidences here and there of the influence of various periods, but this is to be approved rather than deplored.

Perhaps one sees suggestions of old Spanish oftener than any of the other historic periods and styles. Rough textured walls, brilliantly colored tiles and rich painted decoration, any one of which recalls the Spanish, are frequently seen. Wrought iron, too, is still popular. There is evidence in many of the interiors exhibited of a sympathetic co-operation between designer and craftsman which for many years was lacking in this country. This is,

perhaps, one of the most encouraging features of interior architecture of the present day. Then, too, there is reason for jubilation in the fact that the design of the interior today is so often considered as presenting a problem in architecture. This is seen in the structural significance in many of the designs.

The design of the interior of the house of Charles E. Mitchell, of which Walker & Gillette are the architects, is based firmly on the fundamental principles of architecture. It illustrates perfectly the idea that the articles in this department are continually stressing, that the decorative features of an interior are or should be architectural in character and should be developed as a part of the architecture. In the music room of the house of Mrs. James H. Perkins, the architect, William F. Dominick, has made an interesting and decorative design by featuring visible construction. The living room in the house of Arthur Knox, Taylor & Levi, architects, illustrated



OVERMANTEL DESIGNED BY SALVATORE LASCARI. H. K. GUSTAFSON, SCULPTOR

on another page, is representative of that group of which it may be said that its design was strongly influenced by the Spanish. It is certainly true that designers of interiors in this country have learned an important lesson through the present popularity of the old Spanish style. They have learned that construction is the basis of design; that a room must be well planned to be well designed; that visible construction may lend unusual decorative interest to an interior, and that hearty co-operation between craftsman and designer is necessary to the successful completion of a scheme.

These prevailing tendencies are not limited to the design of interiors of private houses, as the examples

to which reference has been made might seem to suggest. Even in the more monumental buildings there is evidence of decided Spanish influence.

The majority of mistakes made by the present day interior architect is due to lack of logic in his designs. So much of the so-called decorations in a room, for example, have no reason for being. Ornament is frequently applied without any regard to its fitness. If the designer would develop his interior logically and not devote his entire attention to retaining the character of some particular style or period—and failing in the end to accomplish that—his designs would be more successful and our progress in architecture much further advanced.



SHRINE OF ST. ANTHONY, CHAPEL OF ST. VINCENT'S HOME FOR BOYS, BROOKLYN, N. Y.

HENRY J. MCGILL & TALBOT F. HAMLIN, ARCHITECTS



GENERAL INTERIOR VIEW OF THE UNITED CHURCH, BRIDGEPORT, CONN.

ALLEN AND COLLENS, ARCHITECTS



THE STUDIO OF BENJAMIN H. MARSHALL, WILMETTE, ILL. BENJAMIN H. MARSHALL, ARCHITECT



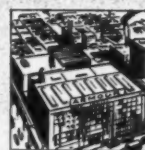
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BOOK NOTES

THE DOMESTIC ARCHITECTURE OF THE EARLY AMERICAN REPUBLIC—THE GREEK REVIVAL*

BY HOWARD MAJOR, A.I.A.

MOST of us have become so accustomed to thinking of the term "Colonial" as designating all of the work produced in this country up to the beginning of the Civil War that we forget a manifestation which is peculiarly American in its type, developing without the inspiration of English precedent, was the prevailing style north, south, east and west after the War of 1812 and only began to disappear with the first mutterings of our Civil War in 1850. This is the style which is somewhat vaguely termed "The Greek Revival." Its origins go back to Stuart and Revett in 1762, and while it was the fashion throughout all of the country in the early years of the last century, it was particularly developed in the south, and strangely enough, also had many manifestations in Michigan, though at that time the State was still in the pioneer period. This so-called Greek Revival is very admirably set forth in the volume under consideration. It is a work including a frontispiece in color, 256 illustrations selected very discriminatingly and accompanied by several thoughtful chapters, which give the literary details, so to speak, of this interesting manifestation of architecture. It is commonly stated that this style originated with Thomas Jefferson, but there were many others who contributed to it, including such architects as Latrobe, Mills and Hoban; such educated and travelled masters as Maj. L'Enfant, Thornton and Bulfinch; and such craftsmen as McComb, McIntyre and Asher Benjamin. The oldest existing example of this house is in Fairfield, Conn., erected about 1790. Though at first a certain similarity of development can be traced back to the English work of Stuart and Cockrell, it was really an indigenous development here and especially after the War of 1812 this country seemed to have broken away from English tradition and to have taken up very cordially the ideas of the French Emigré and to have received additional inspiration a few years later from the war for Greek independence. The best of this work seems to be in the south. There are isolated examples all through the Atlantic seaboard, but it was a lavish style patterned manifestly after the Greek and Roman temples but with a preference for Greek details, and also marked by the use of large columns supporting pedimented ends with a single roof carried right through from front to rear, and flanking wings on somewhat smaller scale. It is pity the style has gone out of fashion. The work was thoughtful, carefully proportioned and was thoroughly appropriate to the demands of the time. The book gives very complete and fasci-

nating examples of the Greek revival in various portions of the country and is thoroughly to be commended for its manner of presentation, its subject matter and its choice of examples.

C. H. BLACKALL.

BUILDING FOR RELIGIOUS EDUCATION

IN THIS volume the authors explain why it is that the church building is taking on a new shape, showing that this is not accidental, but logical and inevitable, in order to conform to the demands of a new psychology and an enlargement of the functions of the church.

The renaissance in church architecture which has been apparent throughout the country for the past few years is based on the growing conviction that the church school must be a real school, and that school presupposes a school building and adequate school equipment. The book will be indispensable to church building committees, church school workers and pastors, for the building of a church plant today is a very complex and difficult undertaking, requiring the assistance of expert advisers who have made a throughgoing study of the whole situation. The authors have shown how a church may be built economically, uniquely, suitably and beautifully. They show why the nature of the church's program must determine the character of its building, making it necessary to build a program on the basis of a survey, and then to develop a plan around the program. Furthermore they present specifically the steps that need to be taken by a church contemplating the erection of a new building or the remodelling of an old one. They describe the procedure that will be effective in the raising of money, giving the results of most valuable experience in connection with this perplexing problem.

Dr. Tralle is widely known as a specialist in religious education. He has the ability of popularizing his subject without losing scientific accuracy. His grasp of the fundamental values of the Christian religion and his ability to inspire as well as to inform, have given him a most conspicuous place among leaders in the field of religious education.

Mr. Merrill is recognized as one of the leading architects of the country, and as an outstanding specialist in church architecture. He is in great demand as a lecturer on architecture in religious schools.

Building for Religious Education. By Henry Edward Tralle, M.A., Th. D., and George Ernest Merrill, A.I.A., Full Cloth, 187 pp., size 6 x 9 inches. Price, \$2.00. New York: The Century Co.

*Published by J. B. Lippincott Company, Philadelphia and London.
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CEMENT, CONCRETE AND BRICKS

THE second edition of *Cement, Concrete and Bricks*, by Alfred B. Searle, an English book published in the United States by the D. Van Nostrand Company, has recently been received. The preface sets forth the purpose of the volume so well that we quote from it in part.

"Of all building materials which are not found in a state of nature, the most important are, unquestionably, cement, concrete and bricks. The first of these includes a large variety of materials used to bind together particles of stone, sand, and other naturally occurring materials; the second—used in a broad sense—includes all kinds of artificial stones made by cementing various materials together without the aid of heat, and the last—bricks—includes an even larger number of different articles, distinguished by their general form and by the fact that heat has been used to render their shape permanent. * * * It is important, in considering the chemical and other properties of these three typical building materials, to observe the genetic relationship between them. * * * With these facts in mind the purpose of the present volume is to show the intimate relationships which exist between cement and bricks (with concrete as a relative of both), and at the same time to indicate some of the directions in which a further study of any of these materials will be likely to prove of value."

The second edition includes many revisions of the first edition published more than ten years ago. On cement, the various chapters cover raw materials, methods of manufacture, chemical and physical changes, and testing. Concrete is treated as to its components, preparation, special properties, testing, and reinforced concrete. In a similar manner bricks are discussed as to raw material, methods of brickmaking, chemical and other changes in drying and burning, and properties, with chapters devoted to siliceous bricks and basic and neutral bricks.

The author, Alfred B. Searle, is a lecturer on brickmaking under the Cantor Bequest, consulting expert in the cement and clay products industries, and the author of several books on brick and concrete.

Cement, Concrete and Bricks. By Alfred B. Searle. Published by D. Van Nostrand Co., New York, 441 pp. Illustrated, size 5½ x 9 inches, bound in blue cloth. Price \$6.00.

SHIP MODEL MAKING

A FEW months ago we reviewed in these pages, a book on how to make worth while models of decorative ships. In the course of that review, we took occasion to commend in the highest terms the very excellent and comprehensive manner in which the author, Captain E. Armitage McCann, set forth in detail just how to construct a Barbary pirate felucca and a Spanish galleon.

We have now before us Volume II of this series in which Captain McCann describes how to make a model of the American clipper ship, *Sovereign of the Seas*. We have carefully read this work, and having had some years of very practical experience on deep water clipper ships all over the seven seas, we feel competent to declare that there has never

been issued a more complete guide to model making of ships of this type than the present one.

Ship models are generally recognized as highly desirable features of decoration, but they are only interesting and only picturesque when they carry out in all their details, the lines of hull, the proportioning of spars and the correct leading of rigging of those wonderful creations of the shipbuilder's art that during the late 60's and early 70's dominated the freight carrying sea traffic of the world.

A feature of Captain McCann's book is a series of carefully made drawings giving the spar and rigging plan with all dimensions carefully set forth and hull lines with measurements and contours so that even the novice may construct one of these models with complete accuracy.

We emphasize what was said in the previous review, that there can be no more fascinating work than in the making of ship models. Heretofore it has been necessary to hunt down information from many sources and to be met with difficulties that were unsurmountable. All these matters have been cleared up in Captain McCann's book. We recommend it to architects as a guide to ship model making that will give a very wonderful return in the development of mechanical skill and consummation of an artistic result.

Ship Model Making—Volume II. How to Make a Clipper Ship. By E. Armitage McCann, Master Mariner. Eighty-six illustrations and two large plans. Full cloth; 150 pages, size 6 x 9 inches. Price \$2.50. New York, Norman W. Henley Company.

NEW BOOKS OF INTEREST TO ARCHITECTS

Small Manor Houses and Farmsteads in France. By Harold Donaldson Eberlein and Roger Wearne Ramsdell, with an introduction by Leigh French, Jr.

AN appreciative contribution to our knowledge of those phases of French domestic architecture hitherto insufficiently familiar. Explanatory text by the authors and 254 halftone reproductions. Philadelphia and London, J. B. Lippincott Company. New York, the Architectural Record Company. Price \$15.

Houses, Cottages and Bungalows. Edited by Frederick Chatterton, F.R.I.B.A.

AN interesting and complete series of modern English cottages and bungalows, with accompanying plans. The book has considerable suggestive value as the author has made careful selection. It has 110 pages and is 9½ x 12 inches in size. Published by The Architectural Press, 9 Queen Anne's Gate, Westminster, S. W. 1, London. Price in England, 7/6.



Interior, St. John's Chapel, St. John's, Ill., Helmle & Helmle, Architects.

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APPOINTMENTS TO BOARD OF DIRECTORS OF THE PRESS OF THE A.I.A.

WILLIAM EMERSON, F. A. I. A., and First Vice-President of The American Institute of Architects, has been appointed to the Board of Directors of the Press of the A.I.A., to fill a vacancy caused by the resignation of Milton B. Medary, Jr., of Philadelphia, President of the A.I.A. Mr. Emerson is Chairman of the Committee on Foreign Relations of the A.I.A. and Professor of Architecture at the Institute of Technology, Boston.

Likewise, William Harmon Beers, Chairman of the Committee on Public Information, A.I.A., has been appointed to fill the vacancy caused by the resignation of Egerton Swartwout.

THE AMERICAN INSTITUTE OF ARCHITECTS ESTABLISHES AWARD FOR FRENCH STUDENTS

A TRAVELING fellowship in the United States for French architects has been established by The American Institute of Architects under the auspices of the French Ministry of Education. The annual value of the fellowship, the donor of which is Julian Clarence Levi of New York, is \$1,500.

The fellowship will continue for an experimental period of three years, and will be administered by a committee of the Institute, consisting of Mr. Levi, Chester Holmes Aldrich, Harvey Wiley Corbett and Lawrence Grant White, all of New York.

The fellow will spend part of his time in travel and part in employment in the offices of American architects.

ANCIENT STADIUMS UNSURPASSED BY THOSE BUILT IN AMERICA

ALTHOUGH the United States has the largest stadiums built in modern times, and frequently fills them to overflowing, the records set by the ancients in this respect have not been surpassed, states the *New York Times*. There are ten stadiums in the country at present, each with a seating capacity of 50,000 or more. The largest of these are the Yale Bowl, with a capacity of 80,000; the Grant Park Stadium at Chicago, holding 100,000, and the stadium at the Sesquicentennial in Philadelphia, which has held the record-breaking crowd of 140,000.

In contrast to these, the famous Greek stadium of Olympia, where the Olympian games were held, seated 45,000 at most. A larger stadium was built at Athens, whose capacity was claimed to be 69,000, although some records place it at 47,000. These stadiums were, in most cases, originally built of wood, and later rebuilt with marble at enormous expense. Some of the largest were built several centuries B. C. and were rebuilt and used continuously until 1150 A. D. and even later.

The great stadiums of the Romans did not appear until a comparatively late date. They were at first built of wood, anticipating the "bleachers" of modern American baseball parks. Julius Caesar was probably the first to erect stadiums on a large scale to the delight of the populace. The stadiums grew rapidly in favor, and in 81 A. D., during the reign of Domitian, a stadium seating 30,000 was built on the Palatine Hill. The track in the stadium was exactly 600 Greek feet, or 606 feet 9 inches in length.

The most familiar of the Roman amphitheatres, the Coliseum, is elliptical in form, the longer axis being 615 feet and the shorter axis 510 feet. The arena measures 281 feet in length, with a shorter axis of 177 feet. It is believed to have accommodated at one time 87,000 people, including the standees, who were numerous. Some reports place the original seating capacity at 45,000.

The largest structure in history for accommodating assemblies of spectators was doubtless the familiar Circus Maximus at Rome. The original structure was built as early as 329 B. C. It was made of wood and was burned in the fire which Nero is reported to have fiddled at. It was rebuilt with more durable material. According to the historian Pliny, it had a seating capacity of 250,000 and was often crowded to capacity. Some writers of ancient Rome place the capacity of the Circus as high as 485,000.

FAMOUS PAINTINGS DETERIORATE FROM STEAM HEAT, EXPERTS SAY

MODERN extremes of temperature, mostly attributable to steam heat, are seriously damaging many of the world's masterpieces of painting, in the opinion of Albert Flament, a distinguished French painter. His statement has been confirmed by art experts and curators of Paris galleries.

Many of the famous "Old Masters" that for centuries have retained their freshness of color, are beginning at last to be affected by artificial heat, which causes cracking and discoloration, it is said. The Renoirs, the Monets, the Degas, the Henners, are already going and posterity will inherit only shadows of the canvases of the masters of today and of the past, according to M. Flament, who made his observations after a recent visit to the Louvre and the other great galleries.

"The 'Embarquement Pour-Cythere' has recently turned from blue to brown," he said. "Leonardo da Vinci's masterpiece, the 'Gioconda,' which we know to have been a piece of exceptionally brilliant coloring when it left his hands, is now nothing more than an outline in tints that remind one of gingerbread. And nearly all that metamorphosis has taken place within the last few years.

"At the Luxembourg, the 'Femme Au Gant' of

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Carolus Duran is already covered with a mass of tiny, fine cracks. There is nothing in that gallery whose age alone could even be said to explain its fading or discoloring, and yet almost all, including the most celebrated pictures, are already decaying."

It would, of course, be difficult to say whether tobacco smoke and steam heat are the sole causes of the change that has come over the pictures, or that they would be better preserved in galleries left completely unheated. But it is undeniable that many of them survived almost such a state for several hundred years in perfect preservation. The Italian primitives, the Botticellis, the Lippi Filipinos, etc., since the rearrangement in the Uffizzi Gallery in Florence, are in better condition than most of the Old Masters elsewhere. Uffizzi, with its primitive little stoves scattered here and there, is almost as cold as a cellar.

There is talk in Paris of a "duty to coming generations," and of the necessity of setting up a body of experts to consider the situation scientifically and see what can be done.

THE CHURCH SCHOOL BUILDING

THE above is the title of a 32 page monograph published by the Bureau of Architecture of the Methodist Episcopal Church with offices at 1701 Arch Street, Philadelphia, Pa., and 740 Rush Street, Chicago, Ill., and distributed at fifty cents a copy.

The booklet describes the departmentalization plan now considered so essential to any successful program of religious education, and contains 29 cuts illustrating department and class rooms and floor plans, although illustrations of rooms are featured rather than plans.

A MUSSOLINI TOWER

UNDER the auspices of the Fascista Society of National Propaganda a scheme has been launched for building, as a war memorial at Milan, Italy, a tower that shall surpass the Eiffel in height and in interest of structure. This tower is to bear the name of Mussolini, and will be called the Tower of Victory. At the summit it is intended to install a powerful "wireless" station and an astronomical observatory. The base of the tower will serve as a war museum. It is expected to be completed by 1928.

A CHURCH TO BE GIVEN AWAY

HORNCastle in Lincolnshire, with a population of 3,500, has two churches, St. Mary's, now used as a parish church, and Holy Trinity, which was built in 1847 and has been closed for public worship since 1920, when it was decided to hold all the services at St. Mary's. The church is now tenanted by a number of birds, who get access to it through the broken windows. The Church Coun-

cil has decided to offer the church to some parish which will pay for its removal with a view to re-erection and give a donation fund toward St. Mary's. A building of the date of 1847 is unlikely to offer many architectural attractions in this year of grace and improved standards of design, but it is quite possible that some neighboring parish needing a church may be glad to avail themselves of the opportunity of "doing things cheaply."—*The Architect and Building News*, London.

VICTOR HUGO CHATEAU IN RUINS

THE old chateau near Paris where Victor Hugo spent the first years of his married life, has finally given way to the ravages of time. It now lies a mass of fallen masonry and dilapidated rafters, a sad commentary on the neglect and public indifference which this historic old building has unfortunately experienced.

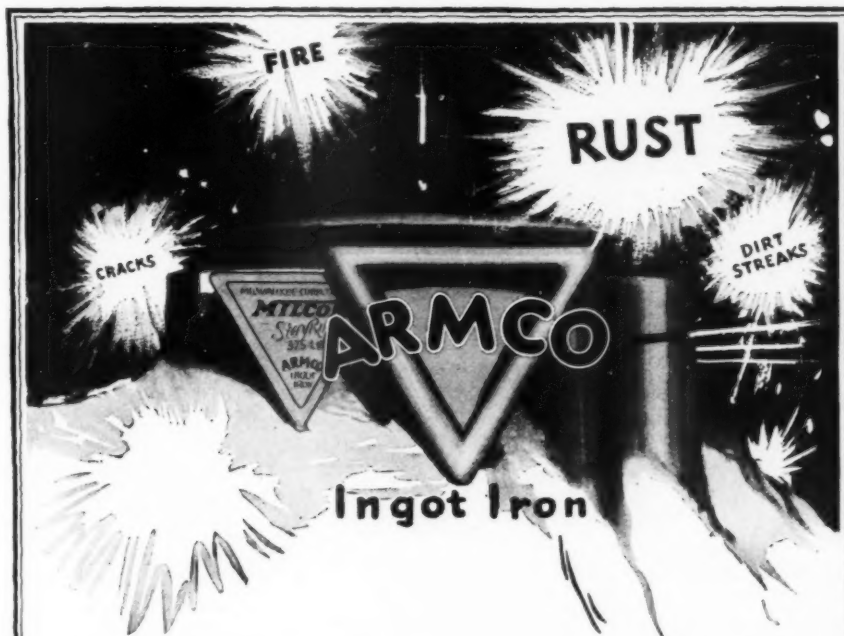
This "Victor Hugo's chateau," as the place was known in its later days, is situated at Gentilly about two and one-quarter miles to the south of Paris, on the road to Limours. The origin of its construction is attributed to Blanche of Castille in the thirteenth century, and many romantic figures in French history have found shelter within its walls.

As its rapid deterioration became more and more apparent in recent years, an effort was made to have the chateau of Gentilly listed as an historical monument, and as such subject to the perpetual care of the French state, but owing to the vast number of other places in France having prior claims the suggestion was allowed to repose in one of the pigeon-holes of the Ministry of Fine Arts. The recent collapse of two floors and the old pepperpot tower of the chateau, rendered any further intervention on the part of the Commission for the Preservation of Old Paris completely out of the question.

FRENCH CHATEAU TO BE SET UP IN THIS COUNTRY

THE Chateau de Courcelles, now standing between Le Mans and La Fleche, is about to be taken up stone by stone, shipped to America and rebuilt, with all its historic chapel and painted panelling. The chateau is in ruins and a fortune would have been needed to make it as habitable as it was after two fortunes were spent in its construction between 1640 and the end of the seventeenth century. Francois Mansard, the well known French architect, designed it.

The chapel, with its wonderful marble roof, has been honored and sung by authors. It has figured in many novels since that period. It is intended to rebuild the chapel without any modifications and as much of the chateau as is possible.



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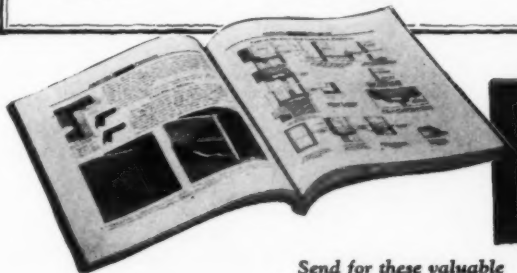
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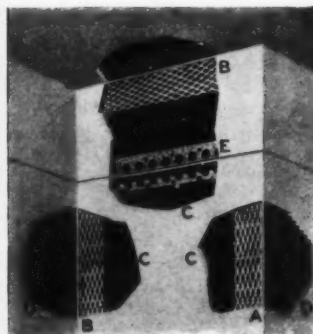
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ROMAN FORT NEAR FALKIRK

DURING recent excavations at the village of Laurieston, near Falkirk, England, the site of a Roman fort, workmen have brought to light a large bath, thought to have been a part of the Governor's house, and also portions of the "plant" of the Roman system of central heating by means of hot air. The bath was large enough for swimming and was built of hewn stones. It was surrounded by concrete paths. All the masonry was in good condition.

JAPAN TO BUILD UNDERSEA RAILWAY

DEFINITE plans have now been adopted for the construction of the Japanese Government railway tunnel under the Moji-Shimonoseki Straits, according to a report from Consul Henry B. Hitchcock, Nagasaki, made public by the Department of Commerce. Work was to have commenced during 1924 or 1925 but the funds authorized for the purpose were diverted to other uses as a consequence of the earthquake of 1923. Under the present plan work is to begin during 1928, and the tunnel is to be finished by 1933. The total cost is estimated at 20,000,000 yen (\$10,000,000).

SAXON CHURCH AT KINGSTON

THE site of a Saxon church where seven kings—amongst them, it is believed, Ethelred the Unready—were crowned, has been discovered at Kingston, as a result of excavations carried out in the graveyard of All Saints' Parish Church, Kingston, states *The Builder*, London. It was found that the Saxon church stood immediately to the south of the south transept of the present church, and the excavations show that its walls were 2½ ft. thick. The floor was covered with tiles, some of which dated back to 1050, being similar to those in Waltham Abbey, which was built by Harold, the last Saxon King of England. It is believed that the original roof was of wood, which was replaced or covered with tiles.

A WORLD-FAMOUS MONUMENT

SIR BANISTER FLETCHER, Vice President of The Royal Institute of British Architects, in a recent lecture on the Parthenon, Athens, reviewed the historical events and the final victories of the Greeks over the Persians, 480 B. C., which led to the building of this world-famous temple. Pericles, the great administrator, determined to give material expression to the national exultation by erecting a votive temple to the champion goddess, Athena, who had given them the victory, and architecture and sculpture were called to the service of the State. The Acropolis rock at Athens, no longer wanted as a

military fortress, became the enclosure sacred to the gods.

The lecturer referred to the fine gleaming marble, from which it is possible to call forth the delicate and exact forms so specially characteristic of this most marvellous of all Doric temples. Thus could architects and sculptors create the harmony and symmetry of design in column and architrave, roof and pediment, moulding and ornament, frieze and metope, color and sculpture which go to the making of the Parthenon.

By the aid of very interesting lantern views the lecturer described the details of the delicately-carved frieze of the Panathenaic procession, which vibrates with Athenian life, a ceremony vividly brought to mind by this sculptured panorama, which gives added value to this historic building, whose ruins now speak but dimly of its former glory.—*The Builder*, London.

ARCHITECTURE

THE Prince of Wales has a happy knack of getting right to the root of a subject in the short space of an after-dinner speech, states *The Builder*, London. His remarks—that we cannot escape from architecture, be it good or bad; that an architect cannot build a town hall without a definite commission to do so; and that there is no point in starting to build unless there is a function to fulfill—embrace a complete philosophy of the position of architecture and the architect in the social state.

WORSHIP OF THE ANTIQUE

A DISTINGUISHED architect once said in our hearing that he sometimes wished all the old furniture, buildings and pictures could be banished altogether for a time, so that we might get into the way of appreciating and encouraging modern art. Something of this feeling is echoed in Sir John Lavery's comments on his recent visit to New York, in which he stated that even the conditions of certain phases of modern art had produced a vivifying influence of some real value. He went on to say that modern art institutions did more for the spread of æsthetic knowledge than all the real or spurious old masters in the world. It is curious how the mere remnants of some old work in a cottage will inspire people to purchase it and build up into it something as nearly like the old as they can. The one small remnant of veritable antiquity is enough to idealize the whole affair. It is well to know that the real values of old buildings are properly appreciated, but all modern artists have a genuine ground of complaint that the public weigh their efforts very lightly.—*The Builder*, London.



Fudor Stone Roofs are especially planned, in every instance, to harmonize not only with the type of architecture of the building, but also with the surrounding landscape. Hence they inevitably blend gracefully, charmingly into the picture.

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WEST PAWLET, VERMONT

Architects' Service Department: 101 Park Avenue, New York City

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NEW YORK STATE LEADING IN CONCRETE PAVING

APPROXIMATELY 44,000 miles of concrete roads are at the disposal of motorists in the United States. This includes pavements built during 1926 which totaled nearly 6,000 miles.

New York led the States for 1926 concrete paving, having built 563 miles of this type of road. Michigan ranked second with 526 miles, with Illinois placed third with 477 miles. While these figures are unofficial, they are based on actual construction work done during the year.

Illinois has more concrete pavement than any other State, aggregating 5,434 miles. Pennsylvania comes second with 3,987, followed by New York, 3,972; California, 3,868; Michigan, 2,994; Wisconsin, 2,290; Indiana, 2,240, and Ohio, 2,141 miles.

CO-OPERATIVE HOME BUILDING INCREASES IN U. S.

A RECENT development in the field of co-operation is the building and ownership of homes which is being carried out by various co-operative societies in the United States

An article in a recent number of *The Monthly Labor Review*, issued by the Bureau of Labor Statistics of Washington, D. C., shows that there are at least forty societies which are building houses for their members on a non-profit basis.

The cost of the property controlled by thirty-two societies included in the present study amounted to more than \$4,000,000, while several large-scale projects are now under way in New York City.

One of the principal savings in this type of co-operation is cost of financing, as frequently the building society has been able to borrow funds, at favorable interest rates, and without commissions, from other co-operative societies.

COLOR AND TEMPERATURE

IF you would have a cool house during the Summer months, consider its color, says *The Straus Investors Magazine*.

This is neither a superstition nor a fad, but an actual fact, long studied by scientists and finally reduced to figures and demonstration. Experiments were recently made by a Washington laboratory that showed conclusively that the temperature of the interior of structures during the Summer months will depend to a marked extent on the color of the exterior surface. Most uncoated structures will be warmer in Summer than those painted in white or a light tint.

In a cool Fall day the difference of 10 to 20 degrees Fahrenheit seems of little importance, but in the Summer, under a broiling sun, those figures

may represent the difference between comfort and misery.

The experiments which brought the matter of color and temperature to a showdown were conducted with metal containers, wood panels and iron panels, all painted different colors. Thermometers were inserted deeply into the ends of the panels and containers and readings taken regularly. All panels were exposed when the official temperature of the air was 82 degrees Fahrenheit.

In this way the temperature of all materials and all colors was taken under the same conditions and the results listed in the accompanying table. It will be noticed that darker colors are as much as 10 degrees warmer than the lighter ones.

TABLES SHOWING TEMPERATURES OF SOME BUILDING MATERIALS

	Air in metal structure. Degrees F.	Interior of wood panel. Degrees F.	Interior of iron panel. Degrees F.
Not painted.....	102	114	126
Painted white.....	102	104	106
Painted cream.....	103	110	110
Painted aluminum....	104	114	114
Painted orange.....	107	118	118
Painted red.....	108	126	122
Painted gray.....	110	122	120
Painted blue.....	108	120	122
Painted green.....	109	124	126
Painted black.....	114	130	130

This fact is especially useful in planning the color schemes of new houses, many of which tend to alleviate the most intense Summer heat. An unshaded house painted white will be far cooler in Summer than one painted brown or some other dark color.

PERSONALS

Pringle & Smith, architects, announce the removal of their offices to the Norris Building, 223 Peachtree Street, Atlanta, Ga.

Christian W. Brandt, architect, has moved his office from 1114-15 Kresge Building to 1016-17-18 Francis Palms Building, Detroit, Mich.

H. Vernon Lee, architect, announces the removal of his studio from 80 Hanover Road, Mountain Lakes, N. J., to 518 Main Street, Boonton, N. J.

Arthur Dahlstrom, architect, is now located in his new offices at 206 Architects and Engineers Building, 1200 Second Avenue South, Minneapolis, Minn.

THE PUBLISHERS' PAGE

ANNOUNCING A NEW AND VALUABLE DEPARTMENT

THERE is presented on this page a slightly reduced reproduction of the head of the cover page of a publication issued by THE AMERICAN ARCHITECT more than twenty years ago. Topical Architecture was a separate and distinct publication from THE AMERICAN ARCHITECT. It was edited and compiled by the late William Rotch Ware, and was discontinued at the time he retired as editor of this journal, of which he was the founder. Undoubtedly, many of the older subscribers to THE AMERICAN ARCHITECT will have in their library or in their office files, copies of Topical Architecture, as they will doubtless have felt regret that its publication was suspended and a valuable feature discontinued.

AMERICAN ARCHITECT a section of not less than four pages confined to a single topic or detail of architecture. These sections will be printed on art paper by the new offset process, and will constitute Part II of each issue of this journal. The main or regular section of the journal will hereafter be known as THE AMERICAN ARCHITECT—Part I, and no issue will be complete unless it contains Part I and the newly added feature of Topical Architecture—Part II.

It is the wish of the publishers to make this feature as valuable as possible, and they will be very glad to receive from subscribers suggestions as to topics to be illustrated.



REPRODUCTION OF A PART OF THE COVER OF A MAGAZINE, TOPICAL ARCHITECTURE,
PUBLISHED BY THE AMERICAN ARCHITECT UP TO 1906.

The idea was to present monthly a group series of illustrations confined to a single architectural topic. In fact, this publication was perhaps the forerunner of the special or topical issues of architectural journals today.

In an extended number of interviews with architects and draftsmen, with reference to the value of such a publication, we have received almost unanimous assurance that it would be a useful feature and one that would add importance to the journal publishing it.

For these reasons, and in order to make THE AMERICAN ARCHITECT of the greatest possible value to its large number of subscribers, it has been decided to resume, in a more modern form, the publication of this feature. In our issue beginning April 5th, we shall present to every subscriber of THE

Further, there will in future appear in each issue a more complete and comprehensive presentation of material that will be of value to the men in practice in the smaller cities and towns throughout the country. This feature, originated in the first instance by THE AMERICAN ARCHITECT and generously copied by its contemporaries, has been very warmly commended. It will be a distinctive section in each issue.

With the departments of Engineering and Construction, Interior Architecture, and the Law as to Architecture, together with the new feature of Topical Architecture and the reconstruction of our department of Minor Community Architecture, it is believed that THE AMERICAN ARCHITECT will be the most comprehensive, the most valuable and the most helpful architectural publication in its field.



THE HARKNESS QUADRANGLE, YALE UNIVERSITY, ON A RAINY DAY
WORKING PHOTOGRAPHS—SERIES II
FROM THE ORIGINAL NEGATIVE BY DWIGHT JAMES BAUM, ARCHITECT

THE AMERICAN ARCHITECT