

## OUR ADVERTISING SECTION

A SUCCESSFUL modern periodical must be a happy three-cornered partnership. The points of this triangle are the readers, the advertisers and the publishers. For the price paid for his subscription the reader expects, and is entitled to, a publication which fits his particular needs, whether it be a magazine of general interest or, as in the case of PENCIL POINTS, a journal edited to meet the special requirements of a large group of men identified with a profession. The advertisers, in order that their investments may yield a profit, must be sure of reaching the market for the commodities they offer on a fair and equitable basis. The publishers, if they are to prosper and remain in business, must receive a fair return on their capital invested and for the personal services which they give to the enterprise.

The first step in developing a sound and enduring periodical is to secure a good representative circulation in the particular field which is covered by the particular editorial point of view chosen. The second stage is to offer the use of this circulation at a fair price to manufacturers desiring to tell their sales stories to the readers of the paper. In the case of PENCIL POINTS a large and representative circulation among all groups identified with the profession of architecture has been developed, an edition of upwards of 14,000 copies now being required to cover the subscription list, sales through the news companies and book stores, to fill orders for particular copies and for service and checking copies to the advertisers and the advertising agents.

In this issue we are presenting in the advertising section the advertisements of 146 different firms who offer their products or services for the consideration of our readers. They endeavor, of course, primarily to sell their merchandise, but it is also true that many of these firms have constantly in mind the giving of valuable information which will be useful to the profession but which may not be reflected at once, or at all, in the volume of business done. A broad spirit of co-operation for the general good of the building industries is being manifested by the majority of firms using the architectural press for advertising purposes. They are glad to furnish material which will be helpful to the student and the working draftsman, as well as to the employing architect and specification writer. Many of them

offer in their monthly advertisements attractive items of printed matter which are in themselves valuable to those who apply for them as well as valuable to the issuing firm from a sales standpoint. This development has been very marked during the past few years and is an excellent indication of the broad merchandising policy being followed by those far-seeing manufacturers who are human beings as well as good business men.

We are proud of the advertising section of PENCIL POINTS and we want every reader of this paper to know that we never intentionally publish the advertising of any manufacturer who is not worthy of their confidence and patronage. While the growth of the advertising section makes it possible for a publisher to extend his reading pages and present to the readers more and more interesting and valuable material, it is not our intention to exploit the purchasing power of the architectural profession either by publishing the advertisements of unreliable firms or by expanding the advertising section beyond reasonable limits.

Just a word as to the quality of the material appearing in our advertising pages. Many firms are having their advertisements prepared either by or under the guidance of trained architects, renderers and draftsmen. Much of the material appearing in these pages is not only attractive but, if properly studied and used, of immediate value to the men preparing specifications or working out the details of buildings over the drafting-board. Still further progress can and, we believe, will be made in this direction, and we ask our readers to co-operate with us and with our advertisers in order that the average standard of the advertisements appearing in our pages may be still further raised. We shall be glad to receive communications either criticising or expressing approval of any of the advertisements we publish. If anyone has an idea for improving the advertising section in any respect we shall be most pleased to receive it.

Let us repeat that the future success of PENCIL POINTS is intimately bound up with the quality of service rendered to the advertisers as well as the subscribers and we want the advertising section to be just as interesting and valuable to the profession as the editorial and other reading pages.



PENCIL POINTS



*Drawing by H. Van Buren Magonigle.  
Design Submitted by Mr. Magonigle in the Indianapolis War Memorial Competition.*



# MASTER DRAFTSMEN, X

## HAROLD VAN BUREN MAGONIGLE

MR. MAGONIGLE won the Gold Medal of the Architectural League of New York in 1889. A few years later the publication of some of his line drawings caused attention to be again attracted to his work. Draftsmen who remember the line drawings of the details of Madison Square Garden and the Erechthion that were published during the early nineties in the *Architectural Review* know what they knew, then, that the initials "V. B." which parted Harold and Magonigle must have stood for *Van Buren*. For it was certain that that was the "middle name" of anybody with the infinite capacity to go through the swat of putting in all the detail with such degree of perfection from start to finish. With the publication of those drawings, the plates in Buhlmann and in my copy of Vignola lost caste. The paragon of line drawing of architectural detail became Magonigle's drawings. That was thirty or more years ago, but I have yet to see anything of the kind to surpass them. The earlier drawings of Madison Square Garden were made while Mr. Magonigle was in Boston where he went on purpose to win the Rotch Travelling Scholarship which he annexed to his honors in 1894. Before that he had spent a few years in the office of McKim, Mead and White and, earlier still, some time in those of Charles C. Haight and Vaux and Radford. The drawings of the Erechthion were made while he was abroad on the scholarship. These drawings show personal qualities of imagination, feeling, and temperament seldom observable in work done mainly with the T-square and triangle; but when mouldings or much ornament is drawn the character of the man behind the draft is as evident in his line as in his handwriting. From his very early work onwards the character displayed in Mr. Magonigle's drawings is at once emotional and sincere. As with his designs his drawing is

marked by an individuality much more easily detected than explained. Such influences as other men have exerted upon his work are to be found only in a collective sense. They may be said to be French and Roman but not of any individual Frenchman or Roman, nor of any particular style. He has

selected his own path and created and developed a style of his own. One that holds to high scholarship and thoroughness of workmanship and achieves originality in spite of itself rather than on purpose of seeking it.

After his sojourn of two years in Italy, Greece, France and England he returned to New York, re-entered the office of McKim, Mead and White and, in 1897, began practice as an architect. During two years he was associated with Evarts Tracy in the firm of Tracy and Magonigle and another two years as head of the office of Schiekel & Ditmars. The past twenty-three years he has practised alone, except for a short association with Mr. H. W. Wilkinson. As a designer of important monuments he has achieved a leading position among modern

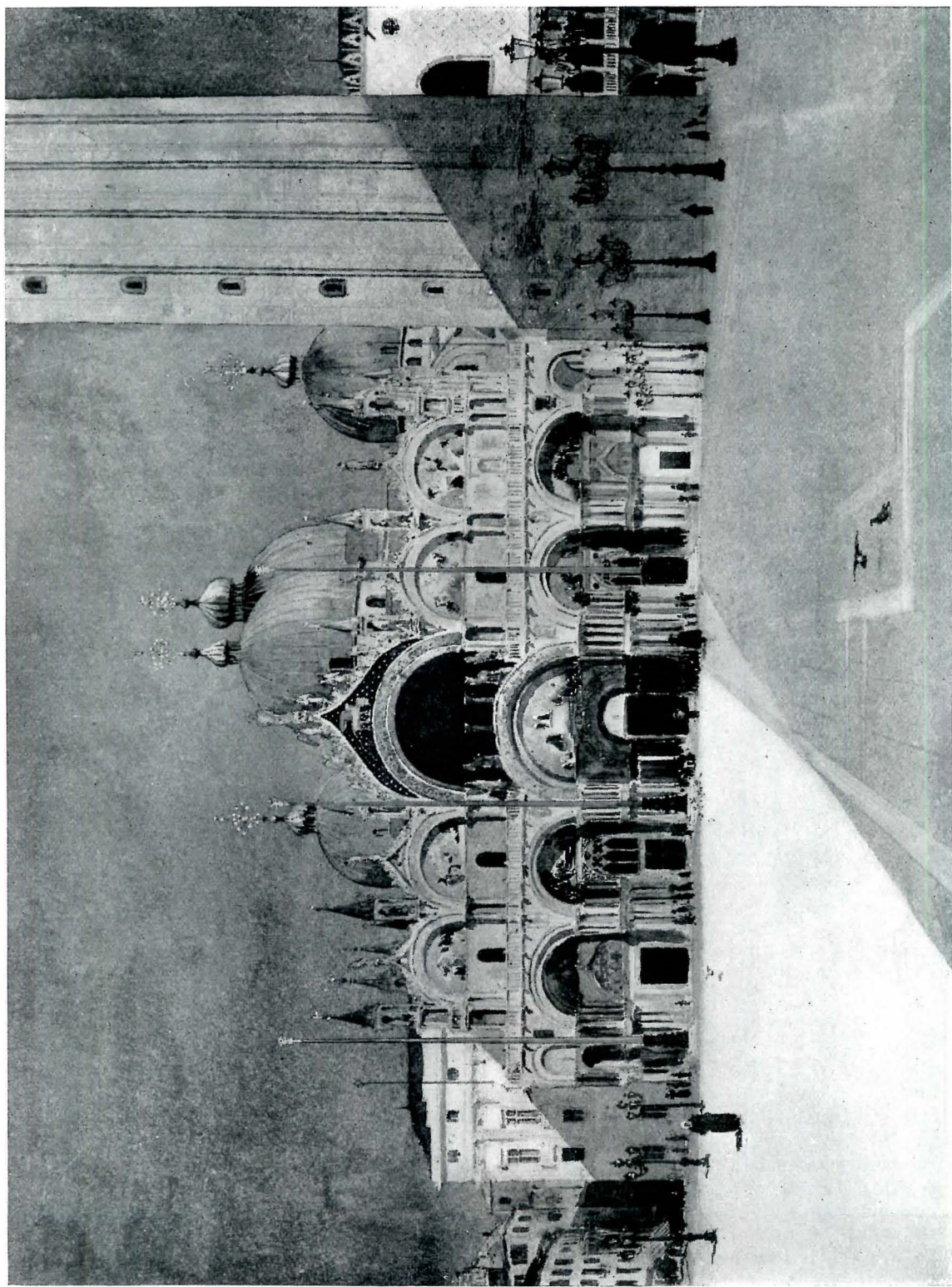


*Harold Van Buren Magonigle.*

architects. His "Maine" and "Firemen's" monuments at New York; McKinley Monument at Canton, Ohio; Schenley Fountain, Pittsburgh; Peace Memorial at Kansas City and his winning design for the Robert Fulton Memorial Watergate at New York are works of architecture distinctly American. They are of a kind of architecture that will survive and find place in architectural history, and are, therefore, worthy of the excellent representation which Mr. Magonigle gives them in his masterly drawings.

The economic and social conditions of our times and country tend to separate the artist from his best possible endeavors, by calling upon him to accept inferior assistance in order to produce work quickly, thus forcing him to become a business man leading, or trying to direct, others in the production





*Water Color Drawing by Harold Van Buren Magonigle.  
St. Mark's, Venice.*



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*Drawing by Harold Van Buren Magonigle.  
Rosette in Frieze of Temple of Vespasian, Forum Romanum. Portion of Drawing Reproduced at  
Actual Size of the Original.*





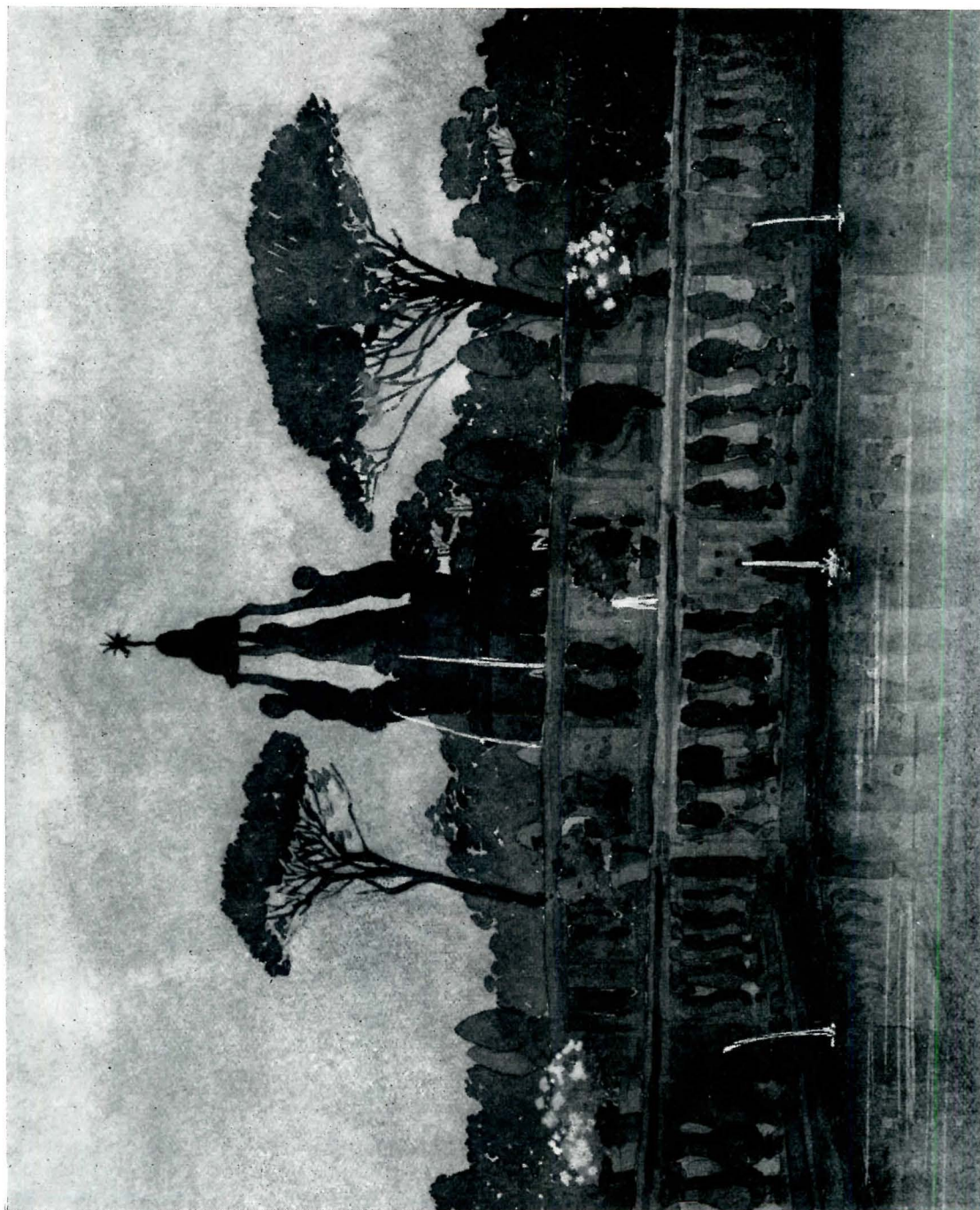
*Drawing by Harold Van Buren Magonigle.  
Seal of the American Institute of Architects.*





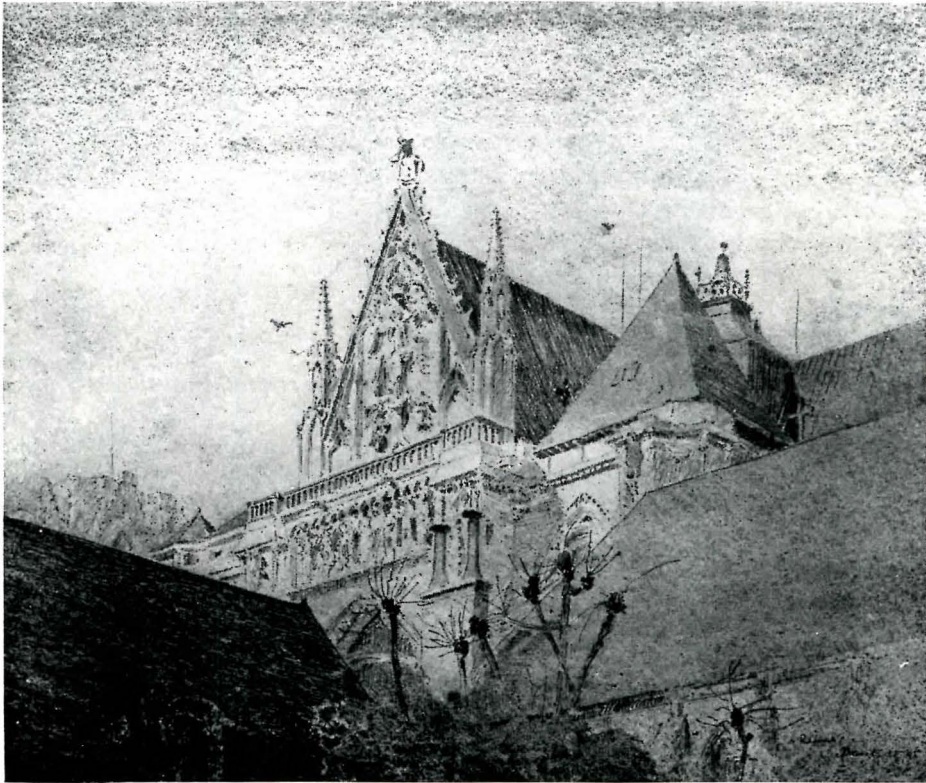
*Pencil Drawing by H. Van Buren Magonigle.  
Choir Stalls, Amiens.*



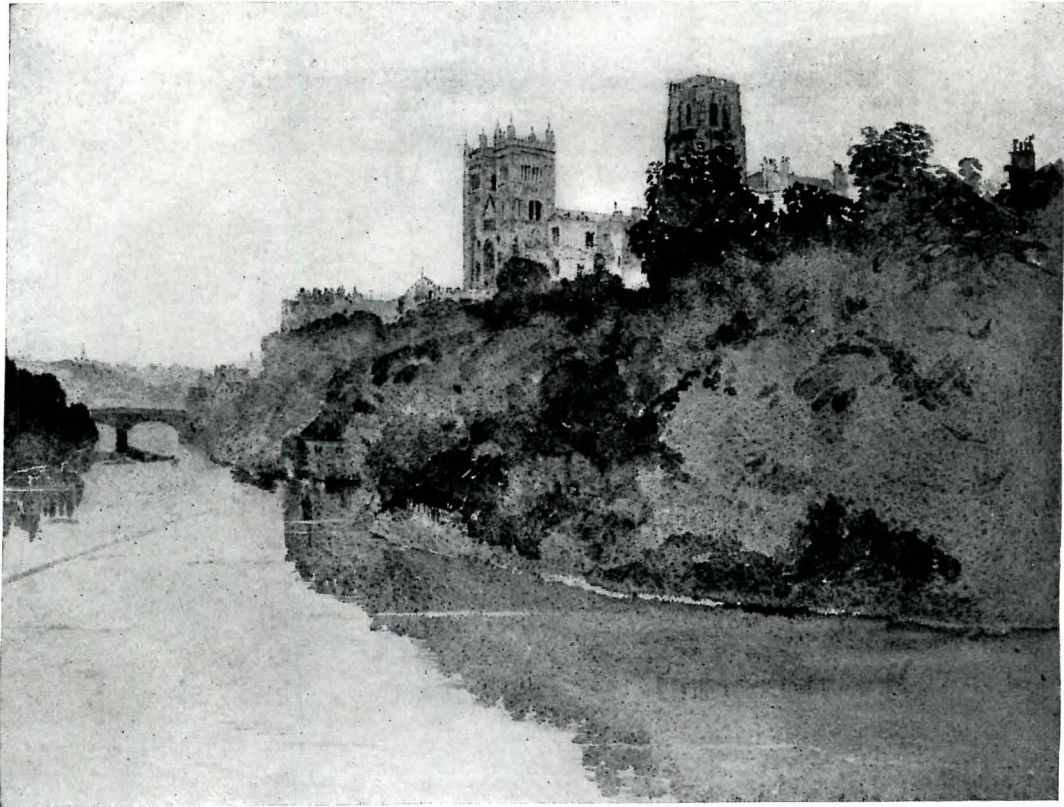


*Water Color Drawing by Harold Van Buren Magonigle. Villa Lante.*





*Reims.*

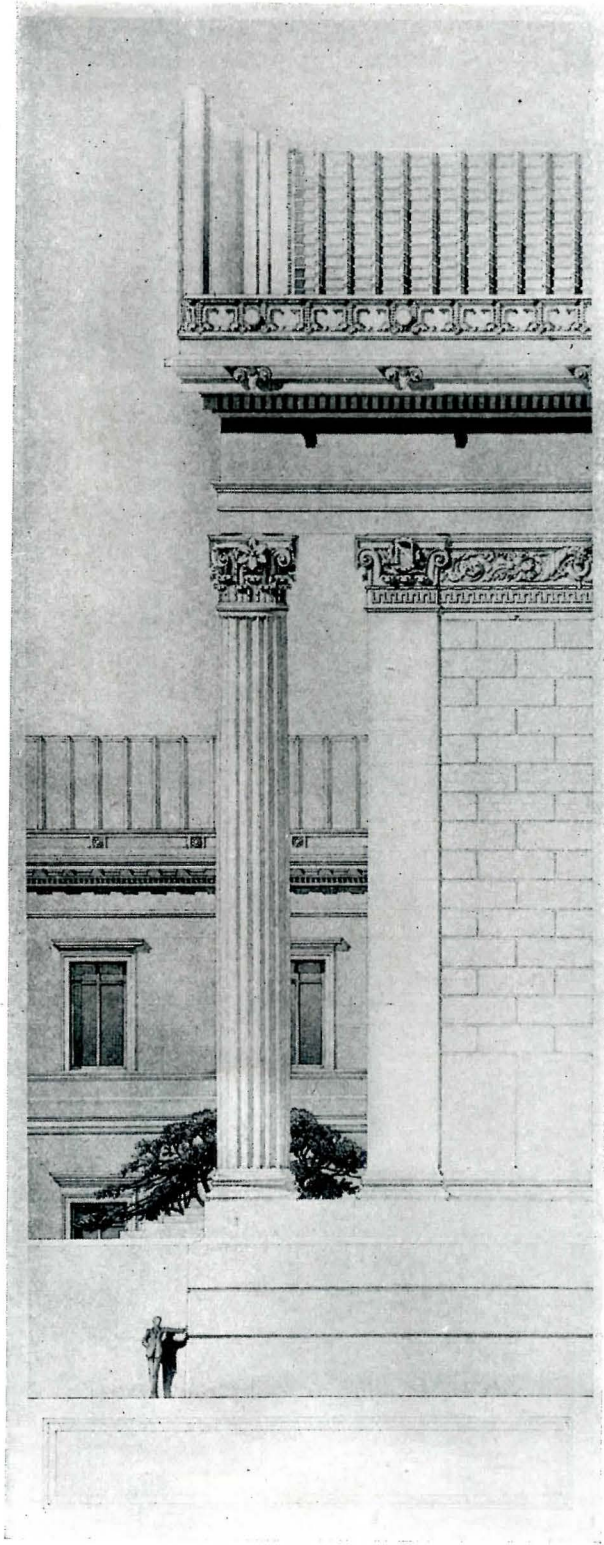


*Durham.*

*Water Color Drawings by Harold Van Buren Magonigle.*



## PENCIL POINTS



*Drawing by Harold Van Buren Magonigle.  
Portion of Design Submitted by Mr. Magonigle  
in the Nebraska State Capitol Competition.*





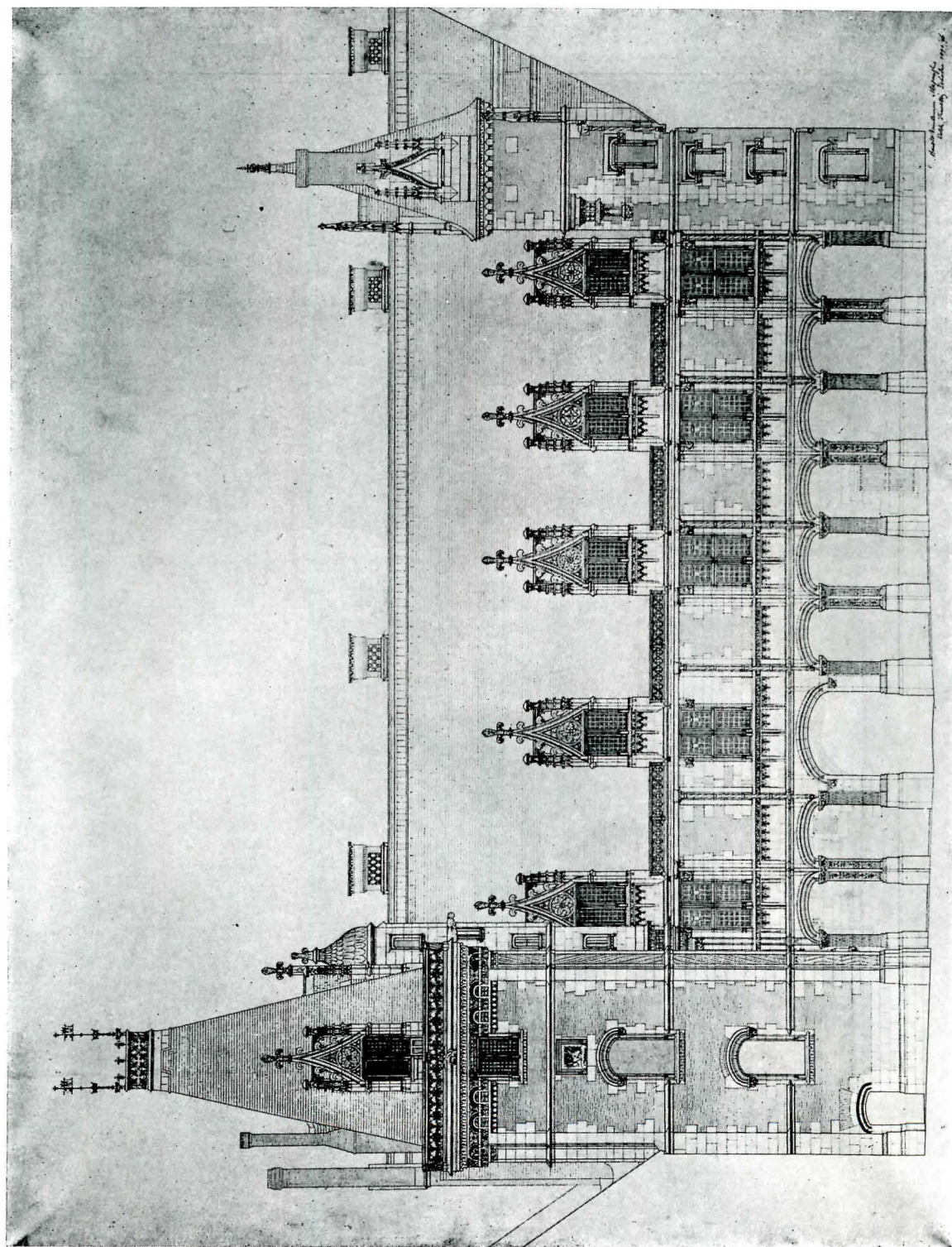
*Drawing by H. Van Buren Magonigle. Portion of Elevation of Mr. Magonigle's Design Submitted in the Nebraska State Capitol Competition.*





*Drawing by Harold Van Buren Magonigle.  
Loggia di S. Paolo in Florence. Portion Reproduced at Actual Size of the Original Drawing.*

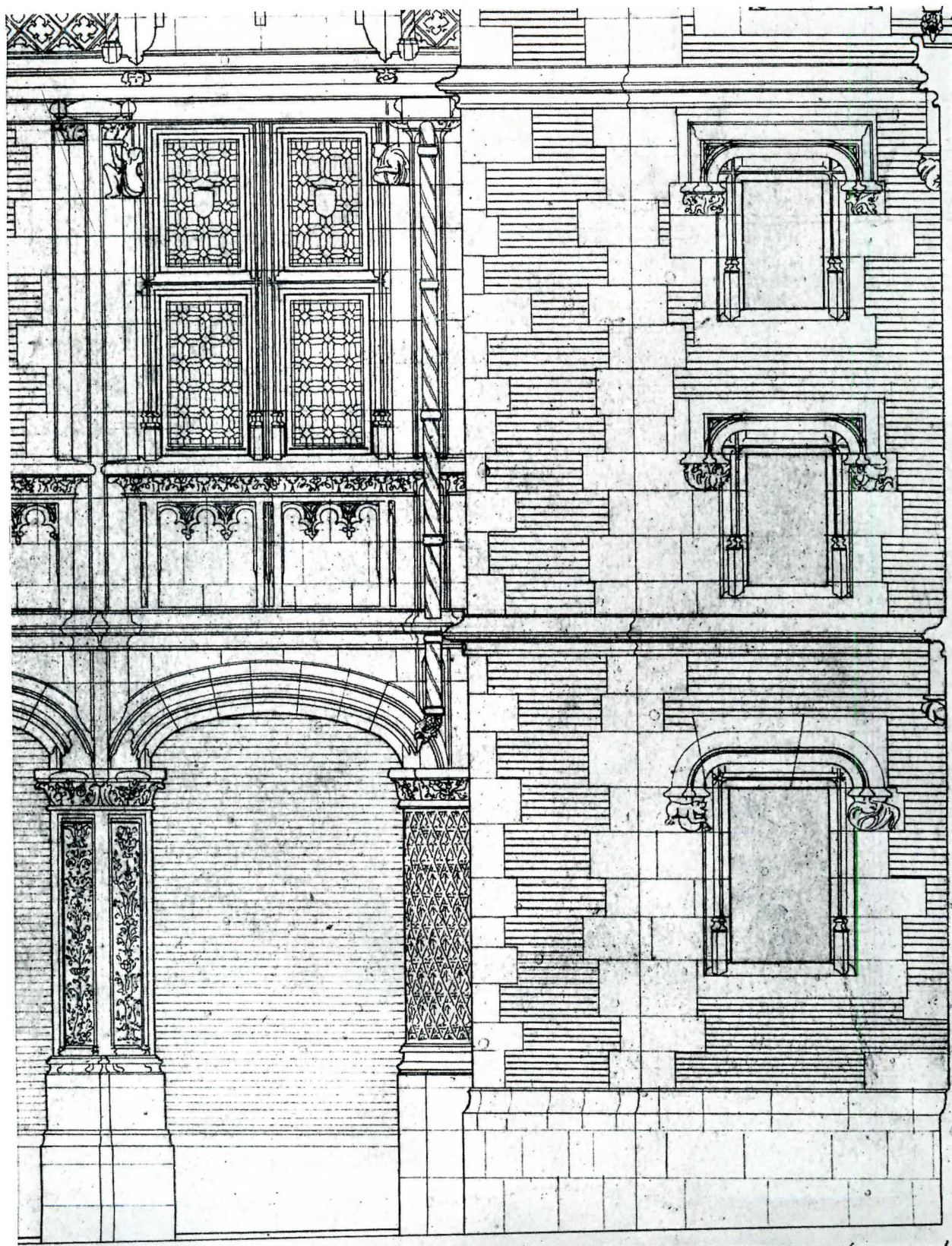




*Drawing by Harold Van Buren Magonigle. Louis XII Wing, Chateau of Blois.*

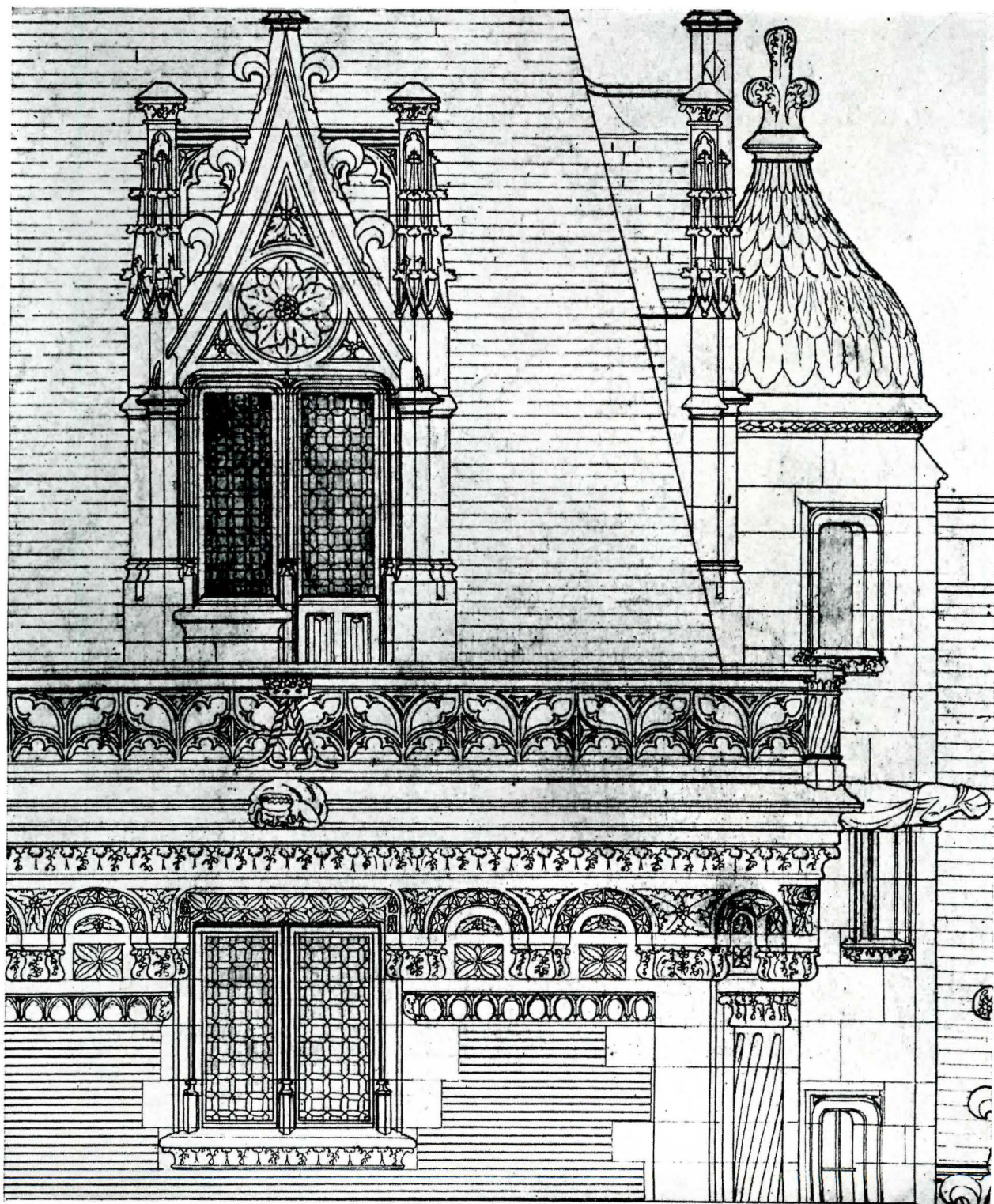


PENCIL POINTS



*Drawing by Harold Van Buren Magonigle. Portion of the Louis XII Wing, Chateau of Blois, Reproduced at the Actual Size of the Original Drawing.*

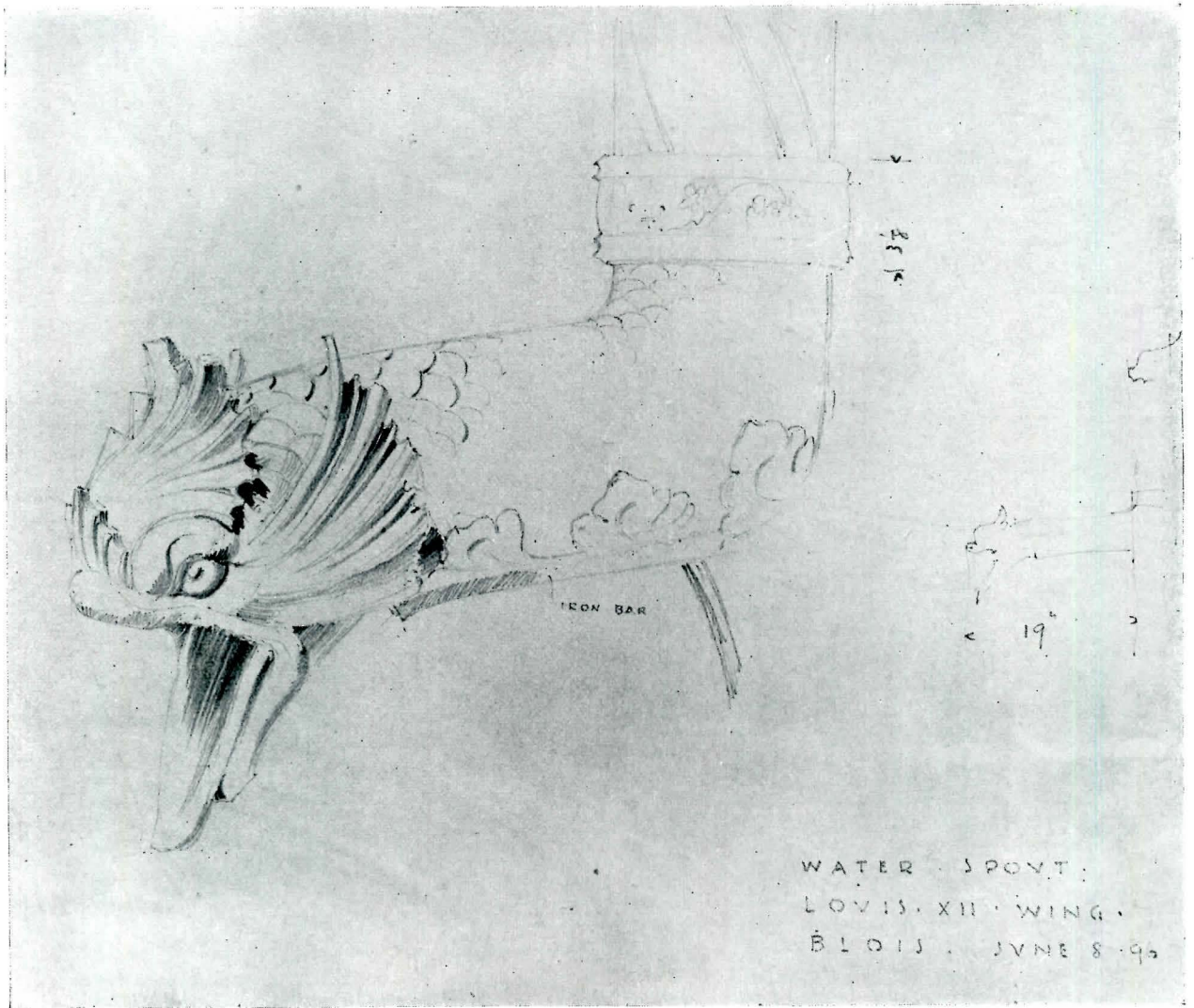




*Drawing by Harold Van Buren Magonigle. Portion of the Louis XII Wing, Château of Blois. Reproduced at the Actual Size of the Original Drawing.*

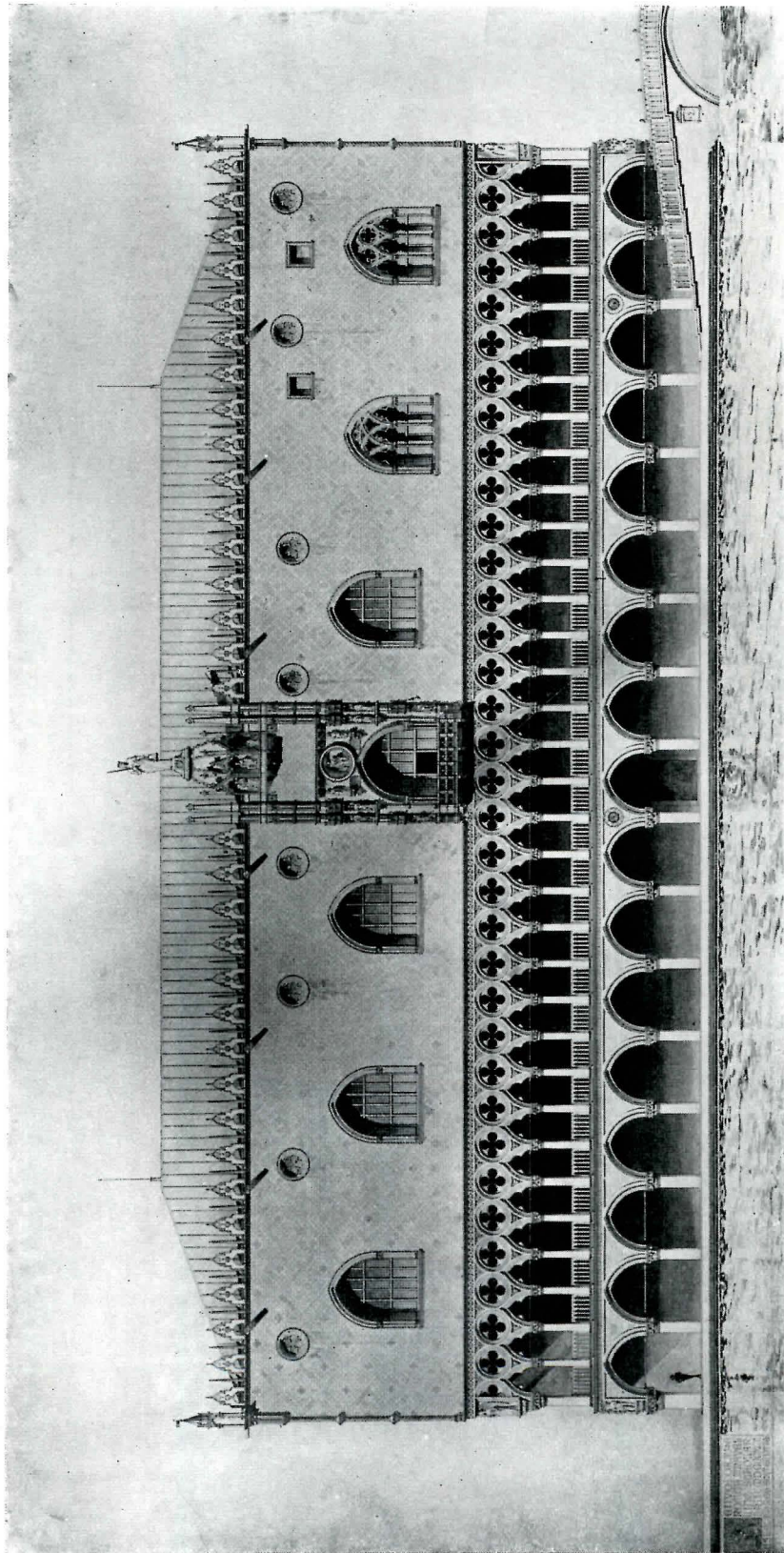


PENCIL POINTS



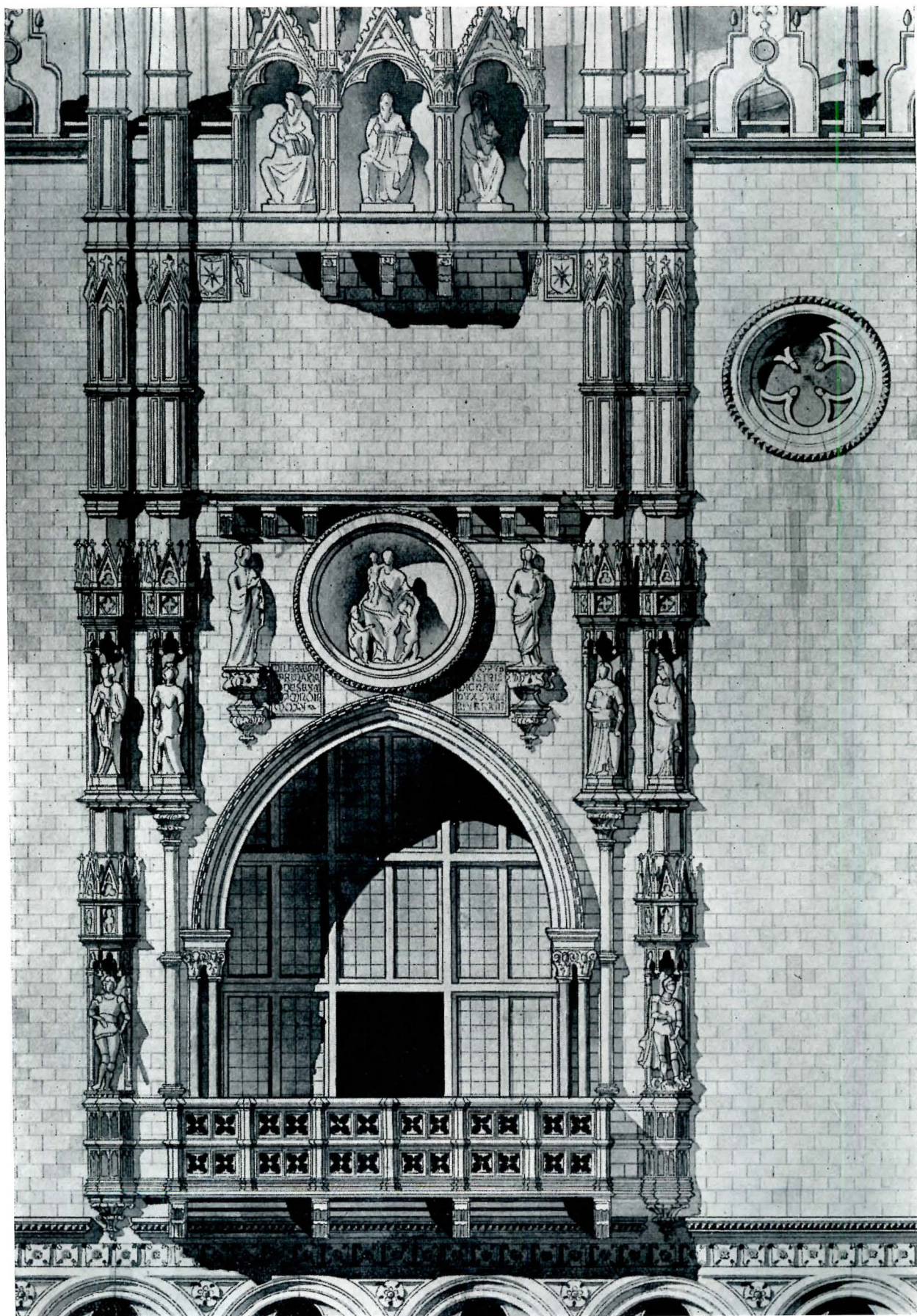
*From Mr. Magonigle's European Sketch Book. Water Spout, Louis XII Wing, Chateau of Blois.*





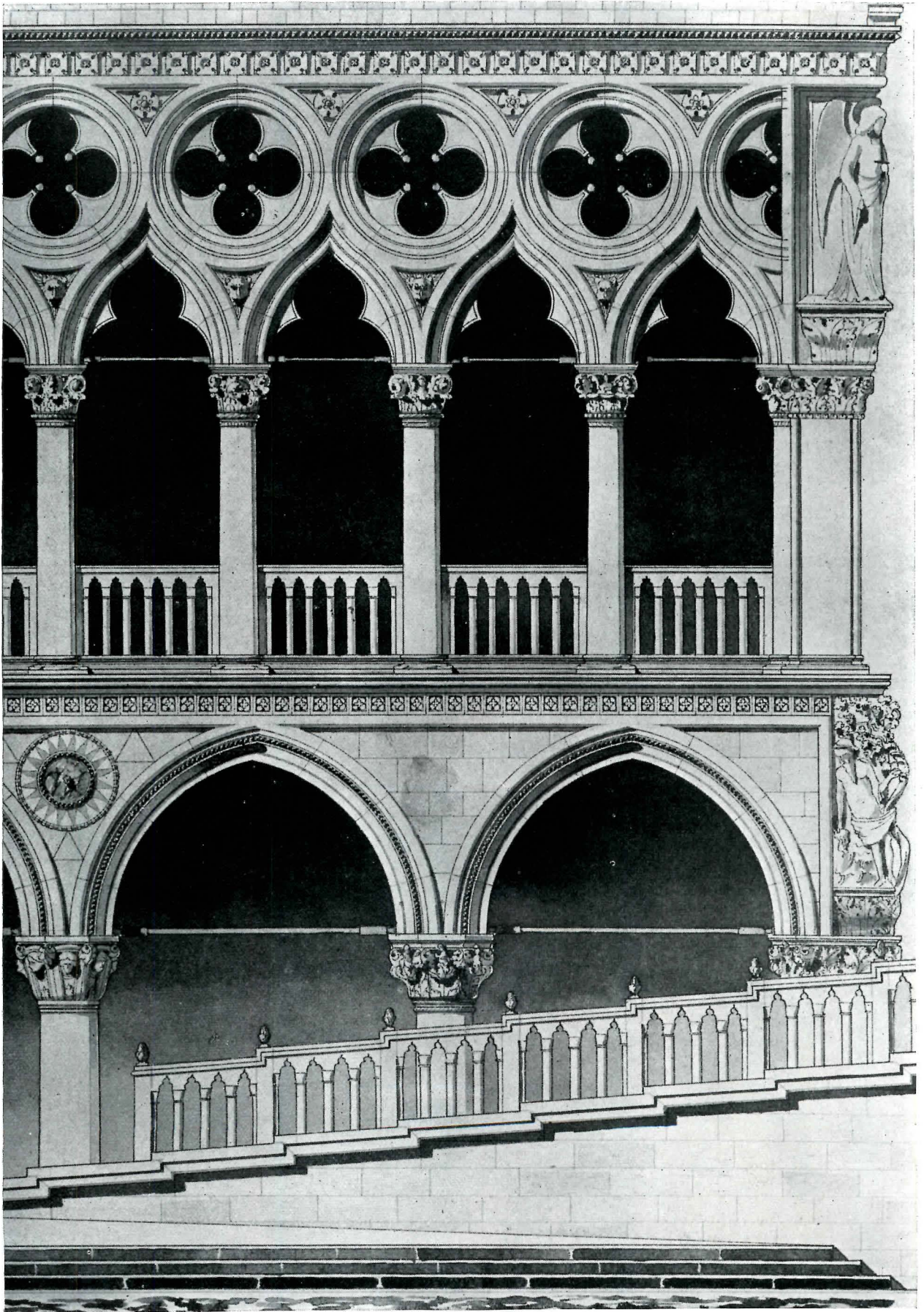
*Drawing by Harold Van Buren Magonigle, the Doge's Palace.*





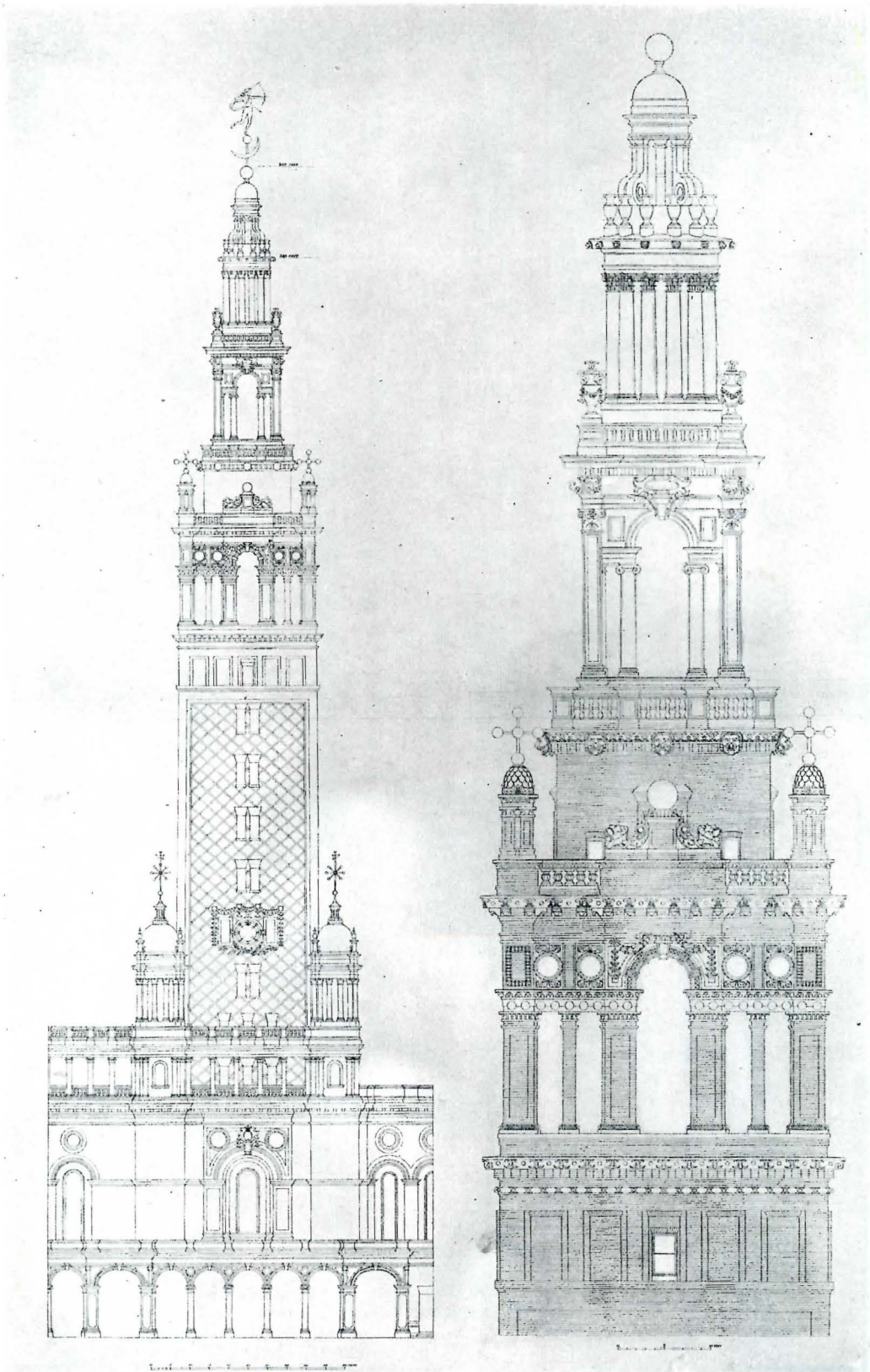
*Drawing by Harold Van Buren Magonigle. Portion of the Doge's Palace. Reproduced at the Actual Size of the Original Drawing.*





*Drawing by Harold Van Buren Magonigle. Portion of the Doge's Palace. Reproduced at the Actual Size of the Original Drawing.*

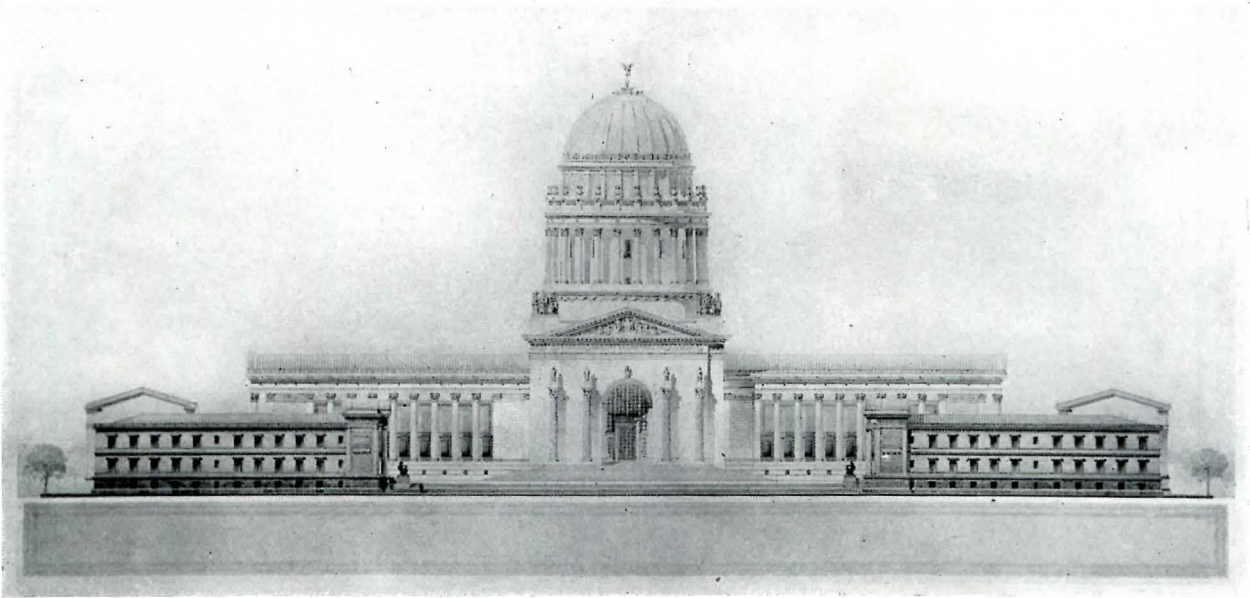




*Drawing by Harold Van Buren Magonigle. Elevation of the Tower of The Madison Square Garden, New York. McKim, Mead & White, Architects.*



## PENCIL POINTS



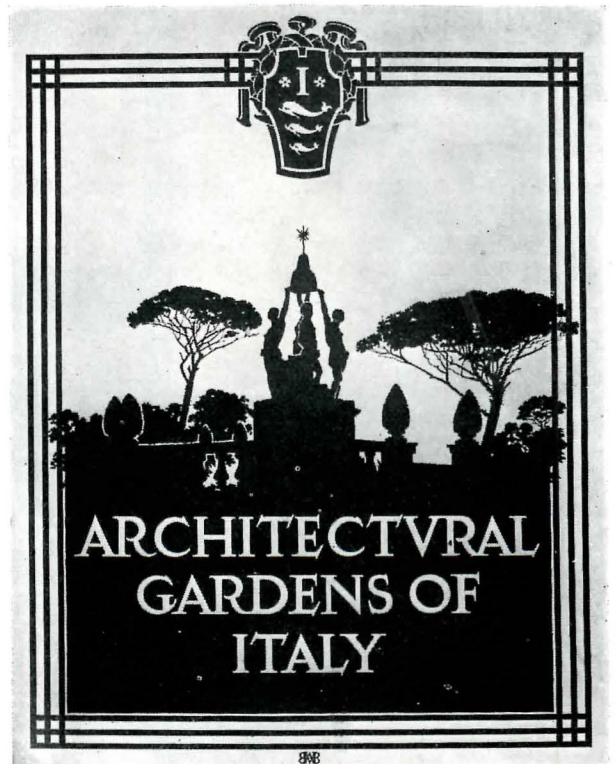
*Drawing by Harold Van Buren Magonigle. Design submitted by Mr. Magonigle in the Nebraska State Capital Competition.*

of work up to the best standards of their abilities instead of his own. The time demanded to take care of "business-like" correspondence and "attention" to business people—especially those who do not understand that "art is long"—distracts the architect from work of greater value and diminishes his own true use and value to his clients.

But such conditions may be overcome, and are mastered, when the artist cares enough about the quality of his work to limit that which he will undertake to only as much as he finds time to personally design. And to "personally design" means that which he personally *draws*. The more drawing the designer can do the better the result will be (provided, of course, that the designer or architect is as able as such assistants as he can employ!). Mr. Magonigle carries this principle very far; and of his designs, not only are the *general* masses and *general* ideas of the plans his, but also the complete working out of every important detail. Here we find an architect of the kind that produced the great works of the Renaissance in Italy, skilled in the contributory decorative arts of painting and ornamental sculpture and able to show by clear, forceful draftsmanship—whether by line, brush or modelling tool—just what it is that he desires to bring into existence. Occasionally a large part of detail drawing has to be done by architects of more

than ordinary abilities through lack of verbal expressiveness—but in this instance no such reason holds good, for Mr. Magonigle has shown literary talent of no mean order in the papers, articles and books he has written. Quite the best articles I have ever read—at least so far as any benefit was con-

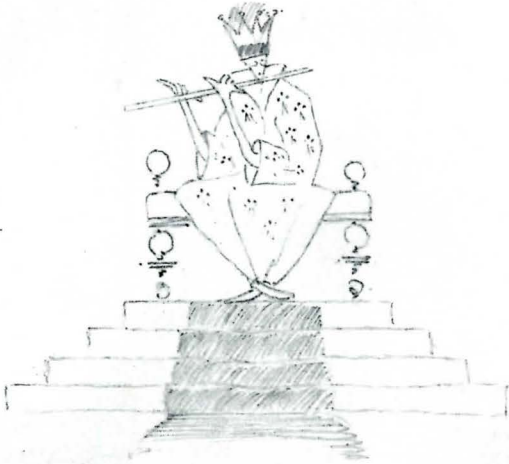
*\*We owe it to Mr. Swales and to ourselves and our readers to observe that Mr. Swales' articles on the "Technique of Rendering," which have appeared in PENCIL POINTS (one remains to be published) were originally written before Mr. Magonigle's book was published. When this book came out Mr. Swales revised his manuscripts in order to avoid duplication. The articles as revised, therefore, supplement Mr. Magonigle's book by specific examples with illustrations of technique at the actual size of the original drawings.—ED.*



*A Cover Design by Mr. Magonigle.*



## PENCIL POINTS



*A Bit from One of Mr. Magonigle's Sketch Books.*

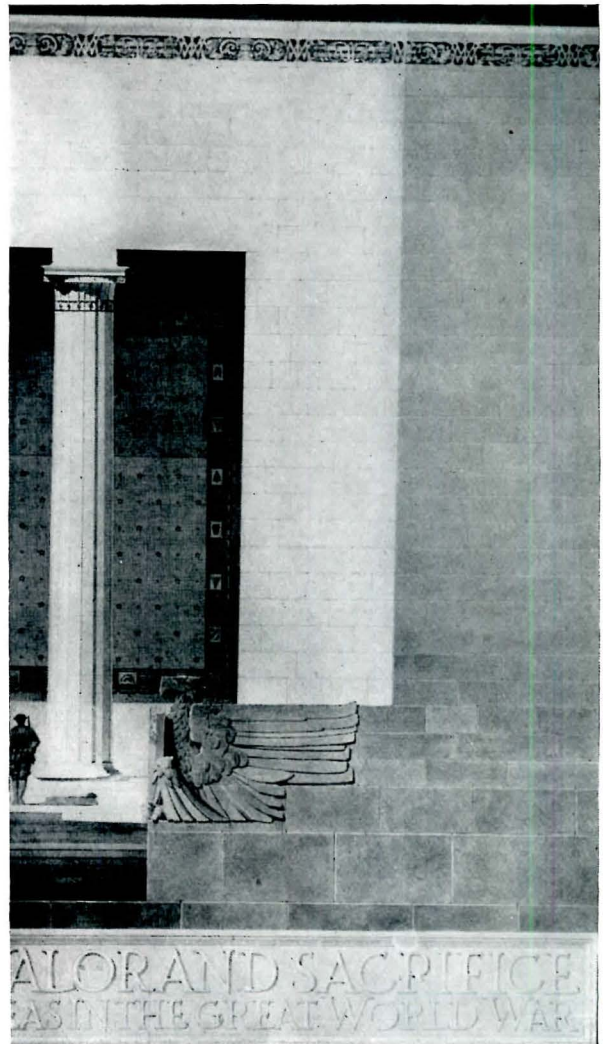
cerned—upon making working drawings were some that he wrote several years ago, and published in the old *Brickbuilder*. \*His book on *Architectural Rendering in Wash* is, as I have stated in other articles, a useful guide which is as necessary to the young draftsman's equipment as his scale or compasses. As Mr. Thomas R. Kimball has so well stated in his preface to that book, it "presents its author in the diverse capacities of architect, draftsman, painter and writer. Incidentally it suggests other qualifications of this many sided personality . . . . . Posterity will come in for a great acquisition in that through this work there will be recorded what otherwise might one day join the 'lost arts,' for architectural rendering is today at its zenith, indisputably an art in itself, and a great one."

More than most other of the subjects of this series of articles, Mr. Magonigle has stressed the value of academic training and rendering. This he has not done to the exclusion of free expression in drawing and sketching; but both by his works and writings has done a great deal to prove that the two methods—free and academic—are supplementary, in the work of the architect. Freedom is helped by academic theory and experience, and is not, as some would have us believe, "shackled" by it. The naturally brilliant artist may train either at school or by his own method or system, but train he must, to ever acquire a valuable means of self-expression.

The great number of draftsmen who are not exceptionally fitted for the field of art, must inevitably train with redoubled energy and determination to gain any recognized place in it. To those who have not the advantage of the direct advice and personal assistance of a good teacher, Magonigle's works and writings are of incalculable worth. Thoroughness is *sine qua non* with him—and that is something that none of us can afford to ignore

though the tendencies of the times call for little enough of it in current practice. Such attention to the finer side of architecture and service to its function as a fine art has developed an unusual, even rare, practice on Mr. Magonigle's part. He has produced no cheap or speculative buildings. His practice in architecture, like his drawing, is of a solid substantial character. His spare time has been filled in with making studies for things attractive to the high mentality and temperament of an artist. The design of furniture, book and magazine covers, seals, pottery, typography, page illustration, even to the beautifying of the advertising pages of magazines, water color sketches, oil paintings and various process work. Anything and everything that can interest or appeal to the brilliant draftsman he has taken into his field of work. What a large field it is!—but how well he has kept it free from all things "cheap" or vulgar!

FRANCIS S. SWALES.



*Drawing by H. Van Buren Magonigle. Portion of Design Submitted by Mr. Magonigle in the Indianapolis War Memorial Competition.*



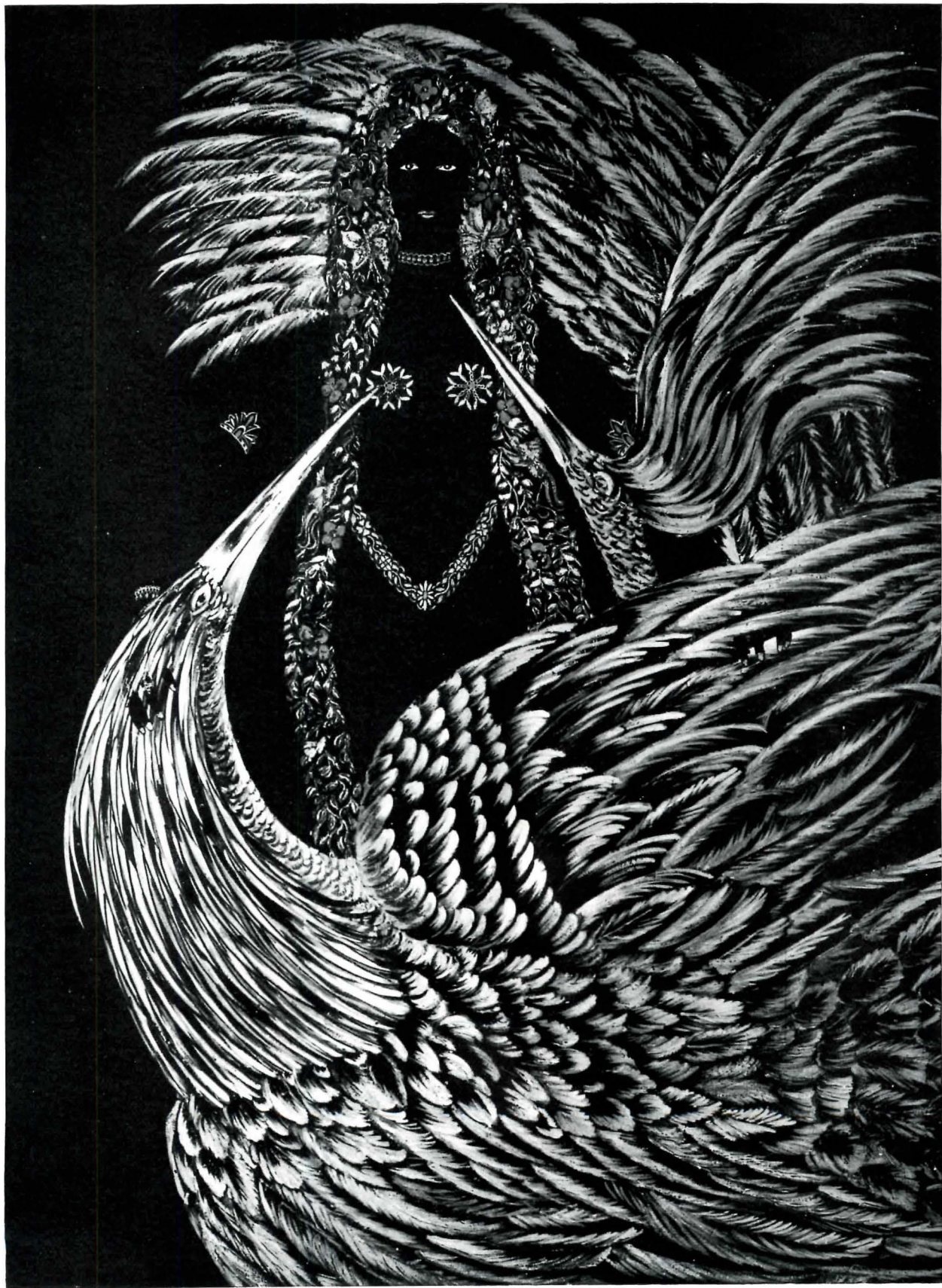


PENCIL DRAWING BY THEODORE de POSTELS  
THE CATHEDRAL OF ST. JOHN THE DIVINE, NEW YORK CITY



On the other side of this sheet is reproduced a pencil drawing by Theodore de Postels which gives an unusually effective and pleasing presentation of the design for the completion of the Cathedral of St. John the Divine, New York. This view emphasizes the commanding position of the Cathedral on the rocky heights above Morningside Park and gives full value to the great spire over the crossing, showing the towers of the west front as well as the other parts of the building in their proper relation as parts of the whole design.



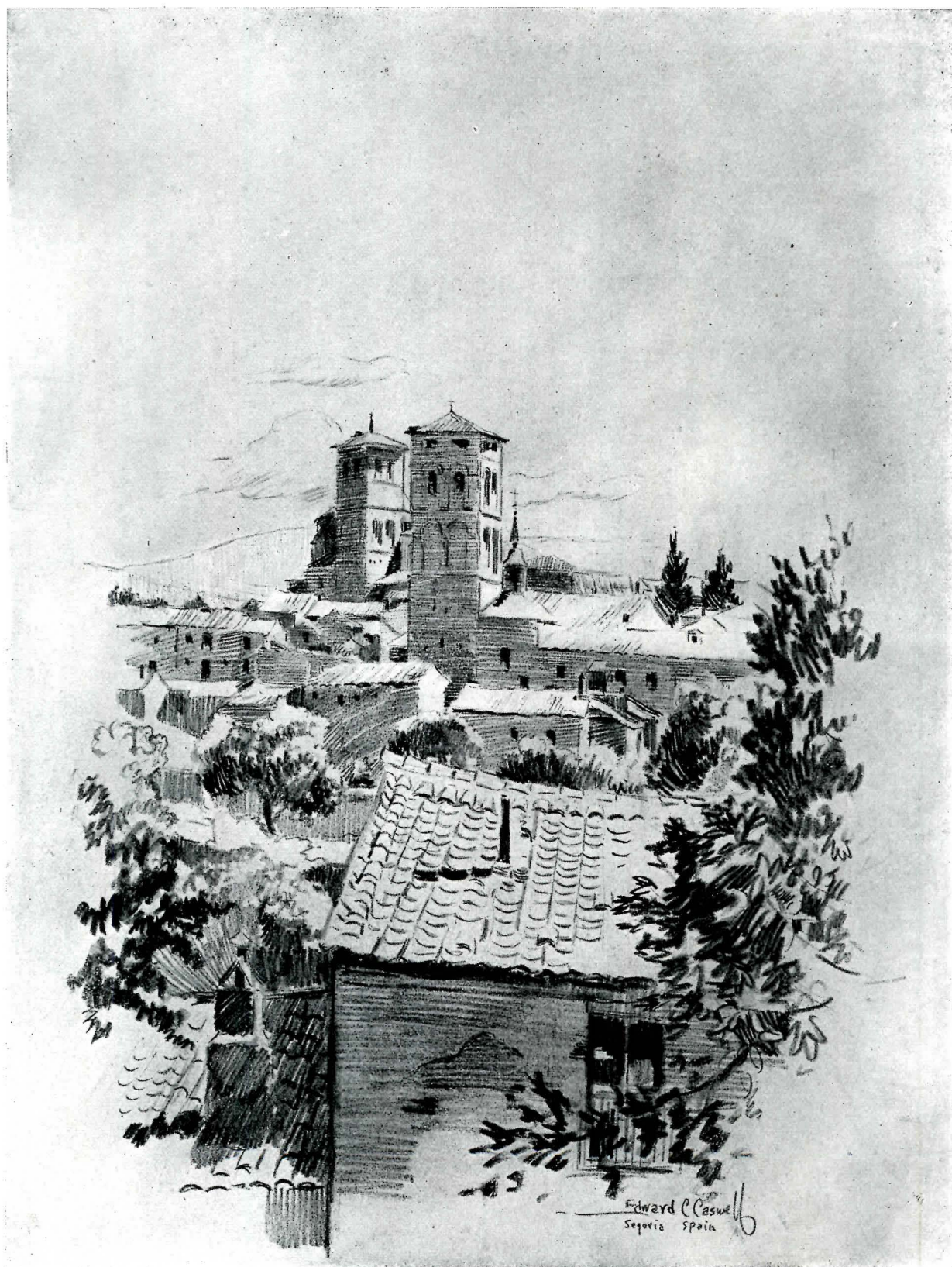


"LEDA," PAINTED SCREEN BY ROBERT W. CHANLER




*The painted screen, the design of which is shown on the other side of this sheet displays not only one of the most interesting of Robert W. Chanler's compositions but reveals the artist's mastery of his brush in the firm, vibrant lines of the plumage of the birds, particularly. The technique is especially worthy of study.*





PENCIL DRAWING BY EDWARD C. CASWELL  
SEGOVIA, SPAIN

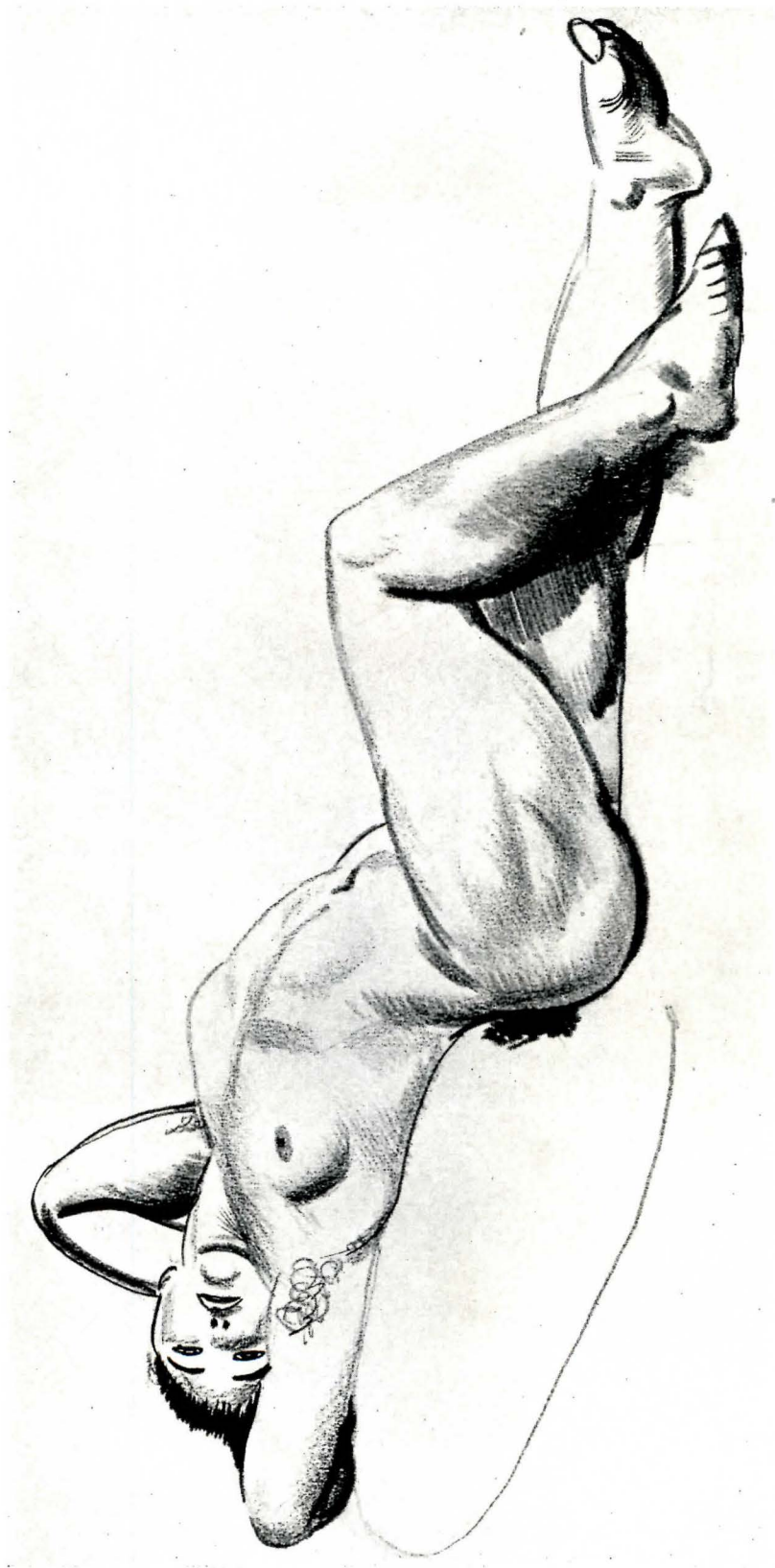




*Another of the delightful sketches made by Mr. Caswell on his trip through Spain last summer is shown on the other side of this sheet. The freedom of drawing, the openness and spontaneity are well suited to the expression of the spirit of the subject. Other sketches by Mr. Caswell will be found on plate pages of recent issues of this journal.*



PENCIL POINTS



STUDY BY GEORGE BELLOW'S



*One of the best of George Bellows' life studies is reproduced on the other side of this sheet. Note the strength of the drawing and the effectiveness with which the salient characteristics of the pose have been presented, for instance the lift and firmness of the chest, the way in which the abdomen has been retired back of the mass of the upper leg, the sense of completed movement in the arm thrust under the head, all done with the greatest simplicity.*



# DESIGN IN THE DRAFTING ROOM, II

BY JOHN C. BREIBY

IT IS interesting to look back through the history of art, observing at each period how it was always the beautiful handmaid and companion of utility and how as each step of progress was taken their companionship became more and more close. Through different periods of history one has perhaps lagged a little behind the other, but at all times have the companions of utility and art expressed in truthful manner the characteristics of their creators; the more perfect their companionship and union, the more clearly will be reflected the contentment of mind and works of organized society.

This is an age of commercialism and practicality, but also the age for opportunity to combine utility with adornment and beauty. How can this be accomplished, may be asked? By making the one harmonize with the other and each express a combined meaning of unity.

Perhaps some of the "temperamental designers" will chafe a little under the yoke of having to meet practical and commercial conditions, in believing that this will necessitate the stepping aside from old traditions. This should not be so nor have old traditions lost any of their charming and inspiring influences. What is more restful and refreshing than to look over some old architectural book? It is impossible to impress too strongly the need of this for mental stimulus and architectural health, do this frequently, actually live with the work portrayed. Many draftsmen are so occupied with the daily "hum drum" of life and neglect to take advantage of this tonic. The writer knows many draftsmen and has observed how marked is the

difference in the attitude and work between those who take delight in and make the effort to refresh the memory often with a book of reproductions, and the draftsmen who are contented only to think architecture when paid for the time. The most successful doctors are the ones who are constantly in

touch with the profession and daily renew their efforts to be on the look out for fresh sparks to kindle the flame, lighting and showing the way to new and unexplored regions.

The practice of architecture is a profession and everyone engaged with it should uphold its dignity and its value for the practical purposes and the lofty benefits derived in beautifying the housing of the individual and collective society, the architect with his assistants should always be on the alert for unexplored paths for the use of materials and their possibilities for architectural usefulness.

It is for the good of design in the drafting room that everyone engaged in the work appreciate good

design no matter how practical his individual inclination may be. To keep in closer touch with design always keep "an eye to the weather" and watch for suggestions. Even in the daily journeys, notice some street intersection and the surrounding buildings or other parts which may stand out, good or bad; observe the architectural solution or if there is need for one, imagine a problem to solve, if possible sketch. Advice need hardly be given to take active interest in architectural or sketch clubs if such are available. The architect and draftsman must make himself and work known through the constant use of the pencil—this is the first and

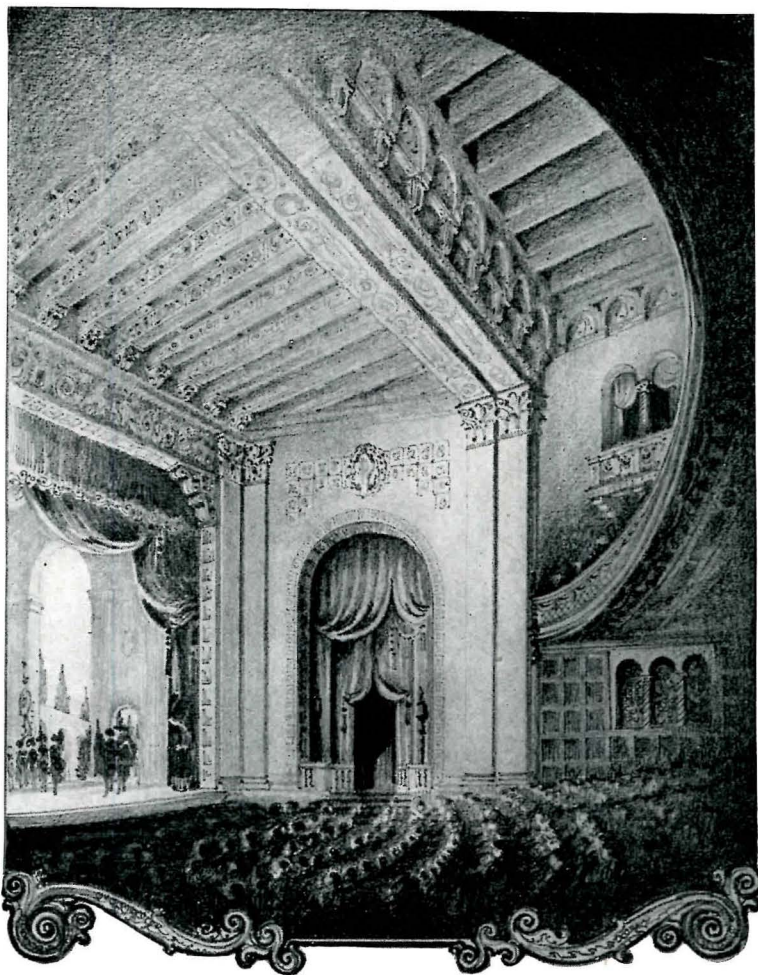
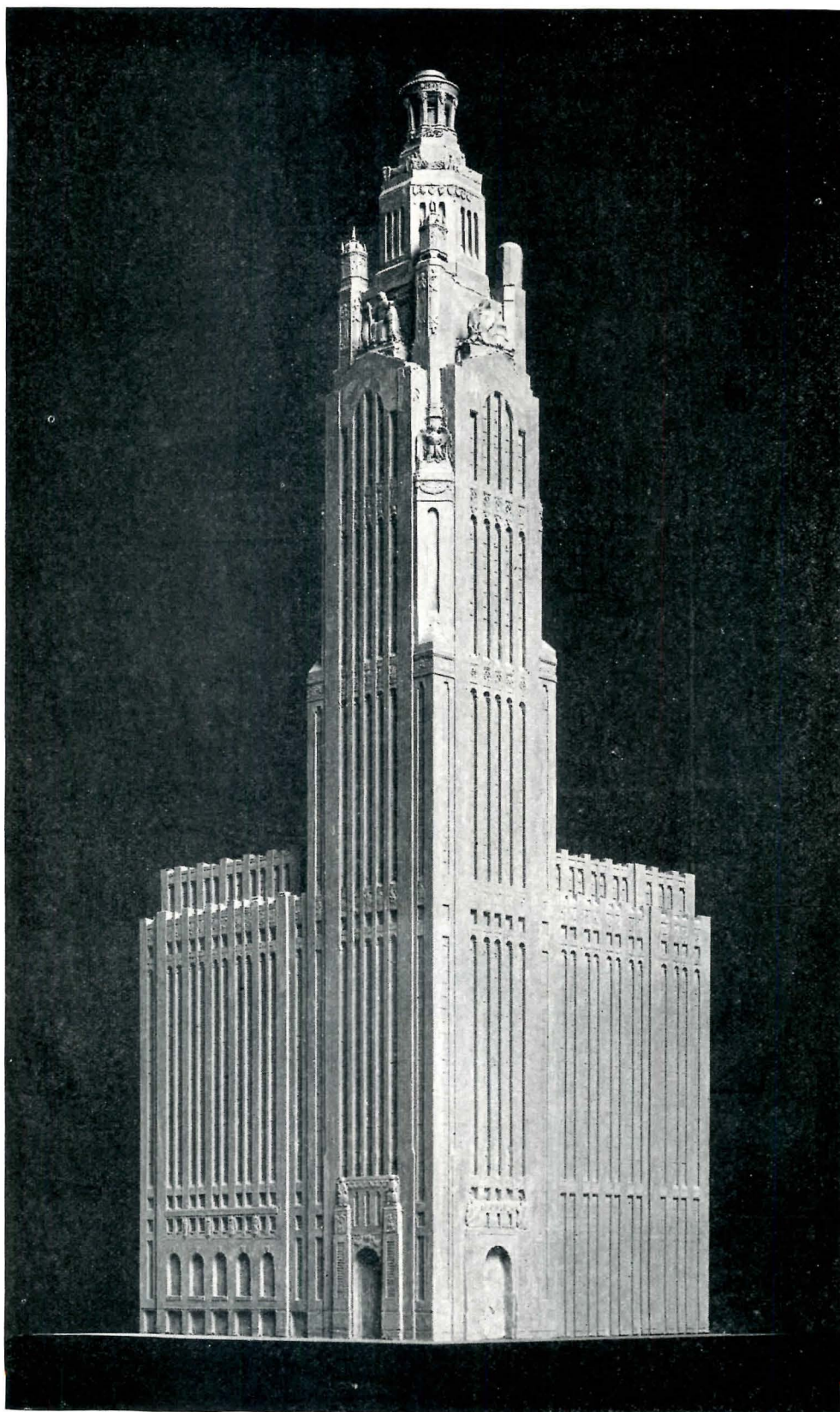


Figure 5. Interior of "The Playhouse," Detroit, Mich.  
C. Howard Crane, Architect, Elmer George Kiehler,  
Ben A. Dore, Associates, Detroit.

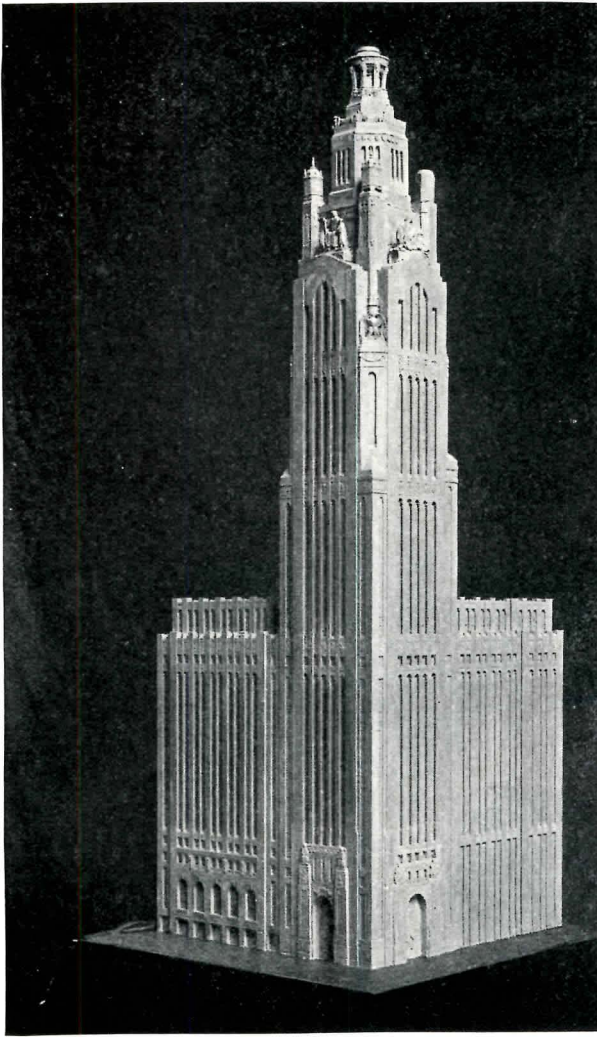




*Fig. 1. Building taken at an Angle of 45° at the eye level of a man standing on the street. Model shown on this and other pages by Maxwell H. Keck, architectural sculptor. C. Howard Crane, Architect, Elmer George Kiehler, Ben A. Dore, Associates, Detroit.*



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*Figure 2. Building taken at an Angle of 45° with the eye level raised to half the height of the building.*

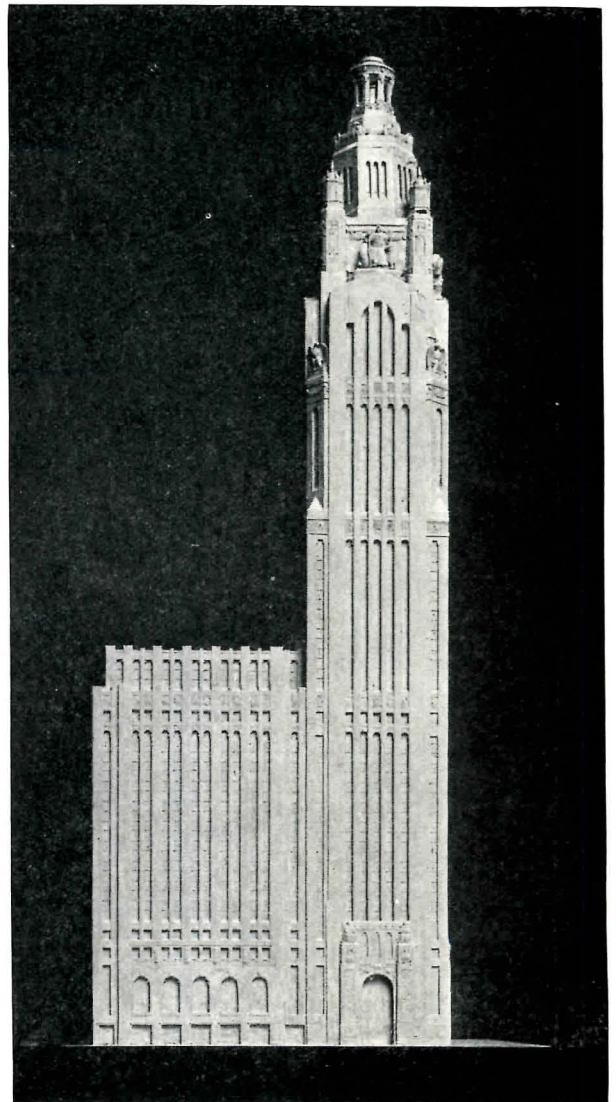
most important work, but behind that pencil must be architectural knowledge—and that is vast—alas the individual can master so little, but that part must be mastered well. There has been no famous architect who has not at all times taken lively, active interest in design in the drafting room. A difference must be observed between some successful architects and all famous architects. Some successful architects flare up into prominence with some particular large job or jobs and that is all. A famous architect will perhaps rise rapidly and achieve prominence, but will live forever as a star of the first magnitude. The difference is that the first kind withdrew from keen interest in actual draftsmanship while the famous will always draw.

In the organization of architectural offices economy is an important factor and it is in the drafting room where profit can be made or wasted (the practical and remunerative side of the profession must be considered). As drawings are merely instruments of service for use in obtaining ultimate permanent results, their making is always an over-

head cost and the sails must always be trimmed to avoid waste.

A danger lies in the commonly expressed phrases "leave it to the modeler or shop drawings" or that "this can be taken care of at the job," this particularly applies to the large-scale drawings or full size details. Truly enough, much of the work is a matter of repetition or showing work of standard types. To make drawings showing such work in laborious representation is a waste of time and energy. Great care should be exercised, however, in what portion of the work should be left to the modeler or to shop drawings for definite results affecting practical results or design. Poor execution or design will re-act against the architect and not against the modeler or shop.

The period has changed and the progress of architectural design is constantly undergoing new



*Figure 3. One side of the Building with the onlooker standing in the street.*



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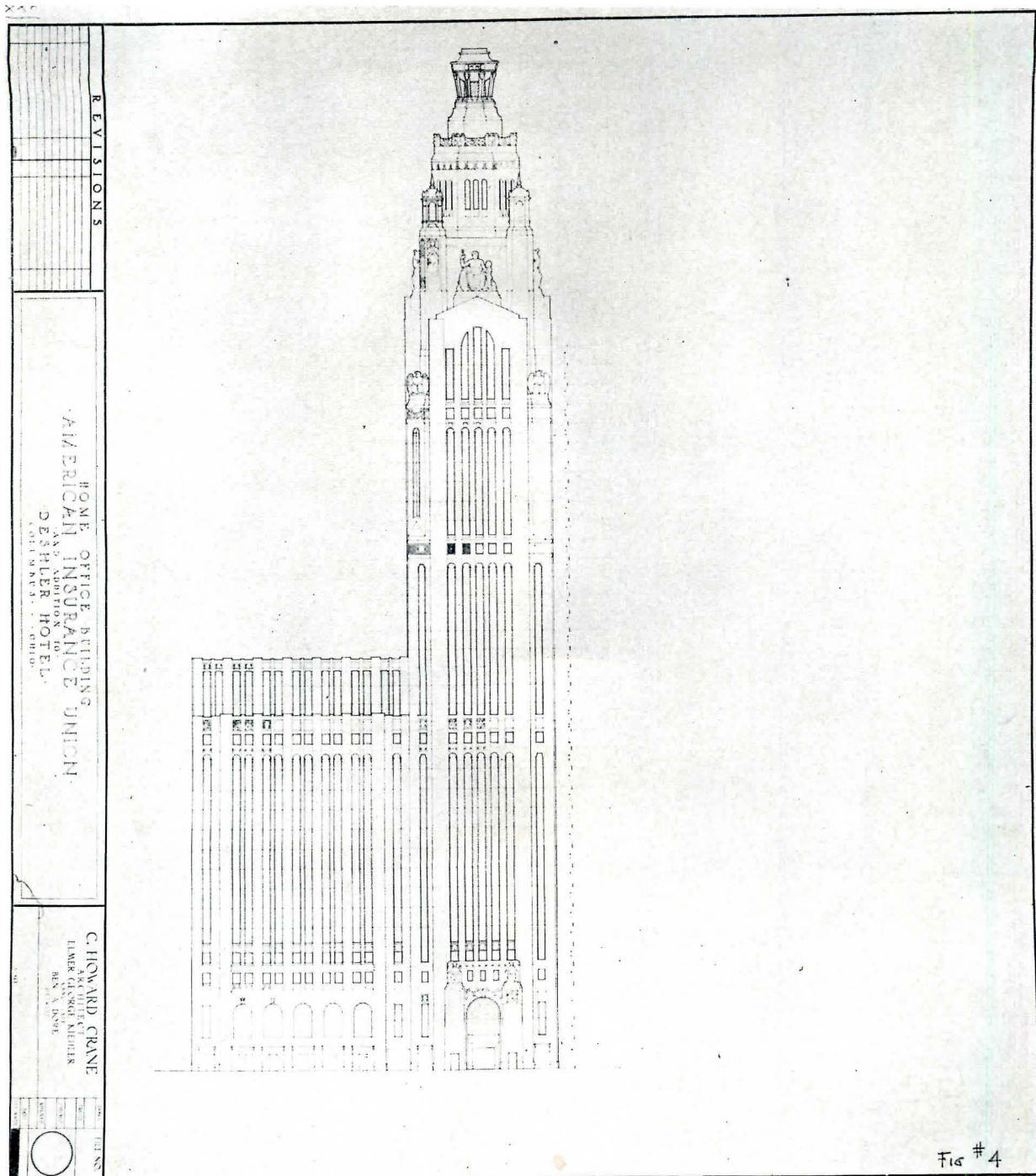


Figure 4. Working Drawing Elevation for Building Shown in Views of Model on page 78 and 79.  
 C. Howard Crane, Architect, Elmer George Kiehl, Ben A. Dore, Associates, Detroit.



# PENCIL POINTS

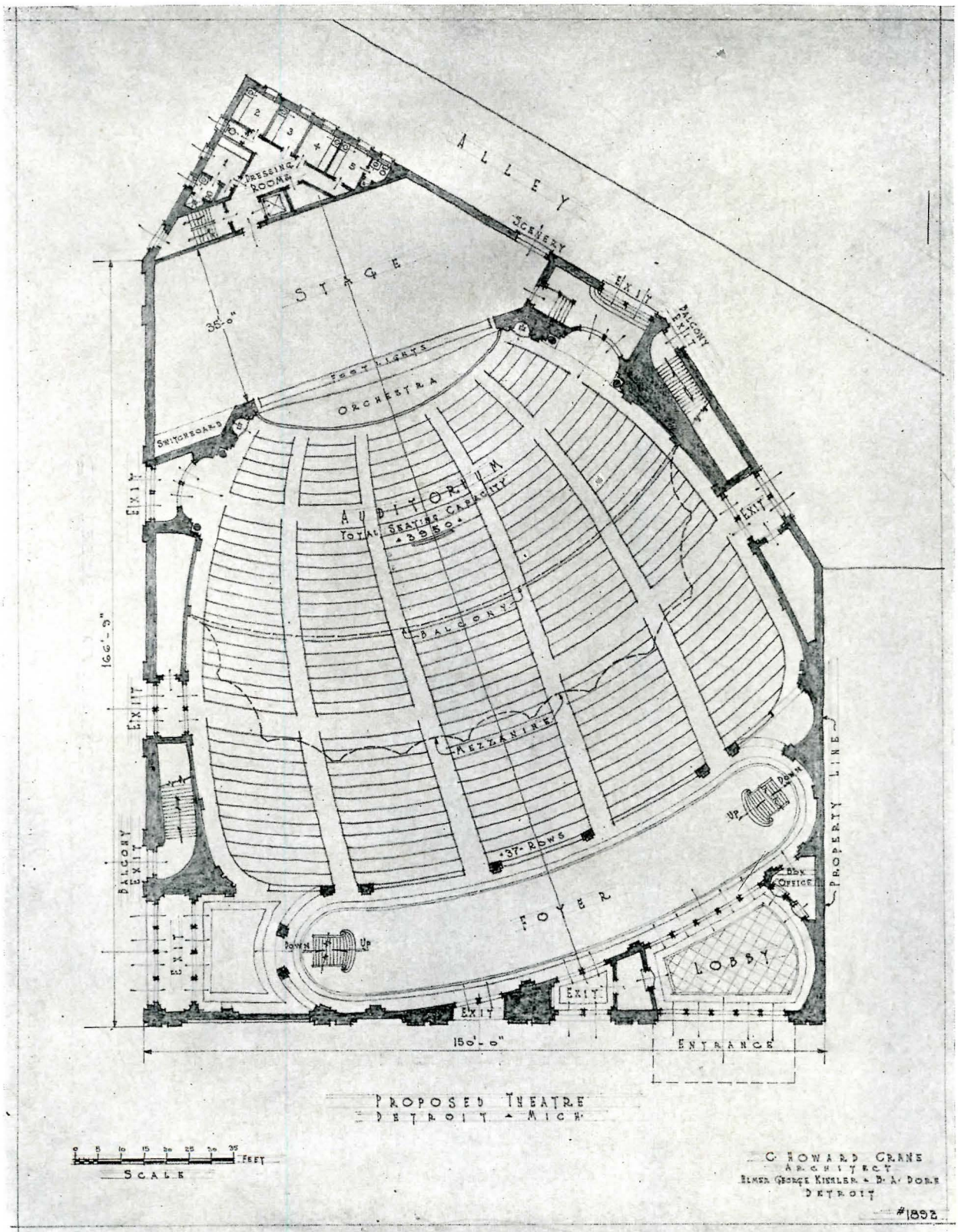


Figure 6. Study for a Proposed Theatre to be erected in Detroit, Mich. C. Howard Crane, Architect.  
Elmer George Kiehler, B. A. Dore, Associates



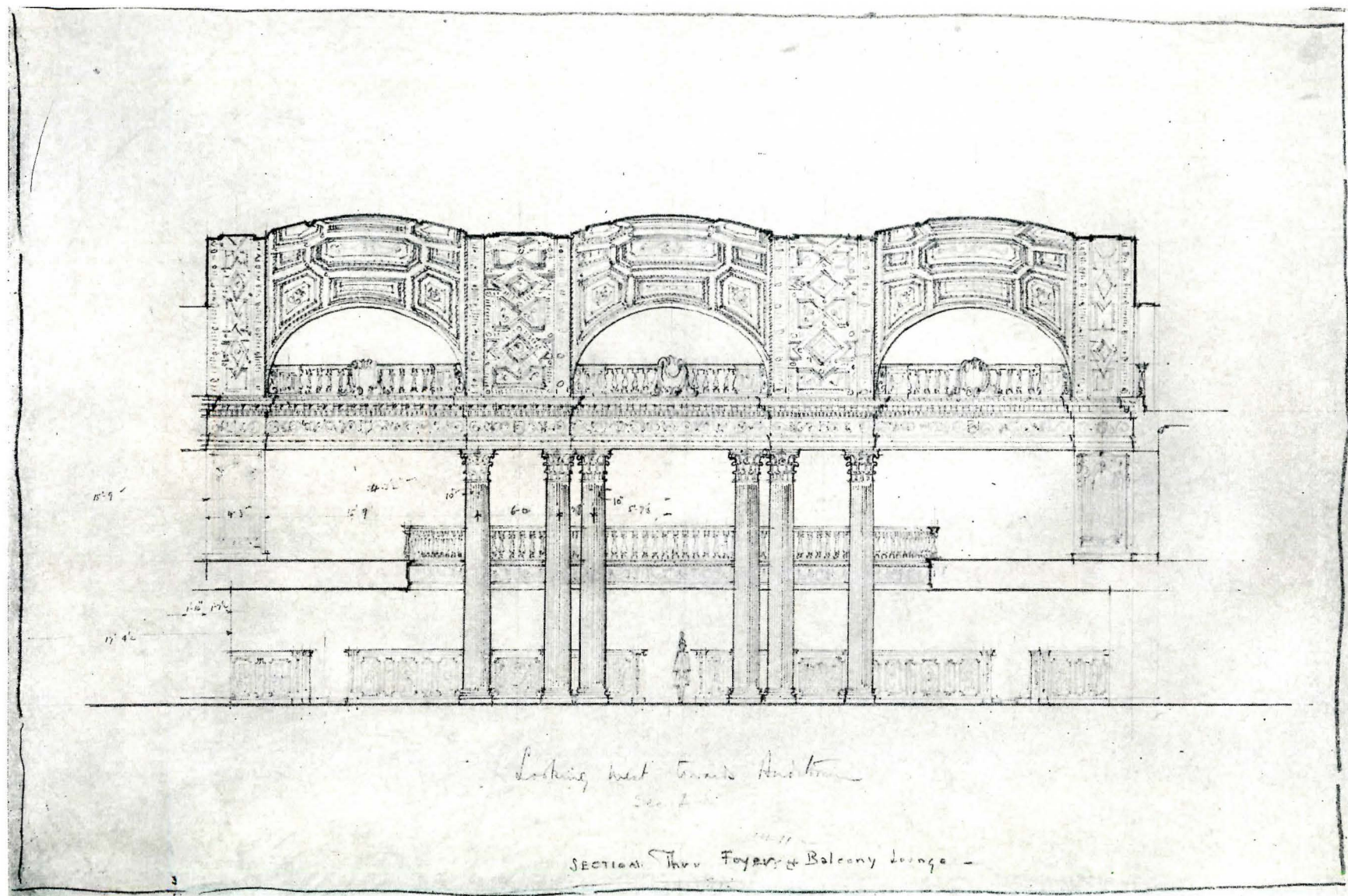


Figure 7. Design Study for Auditorium. C. Howard Crane, Architect, Elmer George Kiehler and Ben A. Dore, Associates, Detroit, Mich.



## PENCIL POINTS

development, perhaps it may be said that the age for using marble and stone as structural materials has passed, steel and concrete have taken their places. Lavish, extravagant use of material is prohibitive and not in the taste of the time, the days of idleness, powdered wigs and silken knee breeches are gone. Comfort and beauty, even luxury is desired but it may not be obtained from sources of over taxation and heavy burdens laid upon the national backbone. The workers of today are equal heirs to all beauties and comforts of home and education. The works of good architecture are equally theirs in sharing the benefits resulting therefrom and in partaking of its enjoyments.

Rules cannot be set for good design in the drafting room. Sketches and drawings must be made quickly, neatly and intelligently in order that they may be understood, not only as drawings but also for the sake of the work which will result. The client must be able to understand, the contractor must know how to execute the work or unhappiness will be the outcome. Design in the drafting room is the beautiful bridge by which the architect spans the stream from the shore of architectural inspiration and conception to the side of building construction and permanent

architectural achievement and it joins the hands of the two companions, Utility and Art.

In the February issue of *PENCIL POINTS* were shown the development and progress in the design of a building now being erected in Columbus, Ohio. Some mention was made of the value in having a scale model studied in conjunction with studies by drawing. This phase of co-ordinated study should be encouraged, its value cannot be over-estimated. In this issue three photographs of the scale model are shown illustrated by Figures 1, 2, 3. Figure 1 shows a view of the building taken at an angle of 45 degrees at the eye level of a man standing on the street. Figure 2 is a view taken at 45 degrees with the eye level raised to half the height of the building and Figure 3 shows one side of the building with the onlooker standing on the street. The benefit obtained from model study is obvious. If the reader will observe the design of the elevation from Figures 1, 2, 3 illustrated in the February issue and the photograph illustrated herewith it is clearly seen how step by step the design has taken structural form, horizontal tie bands brought out giving a feeling of desired lateral strength without disturbing the slenderness of vertical design.

(Continued on page 91)

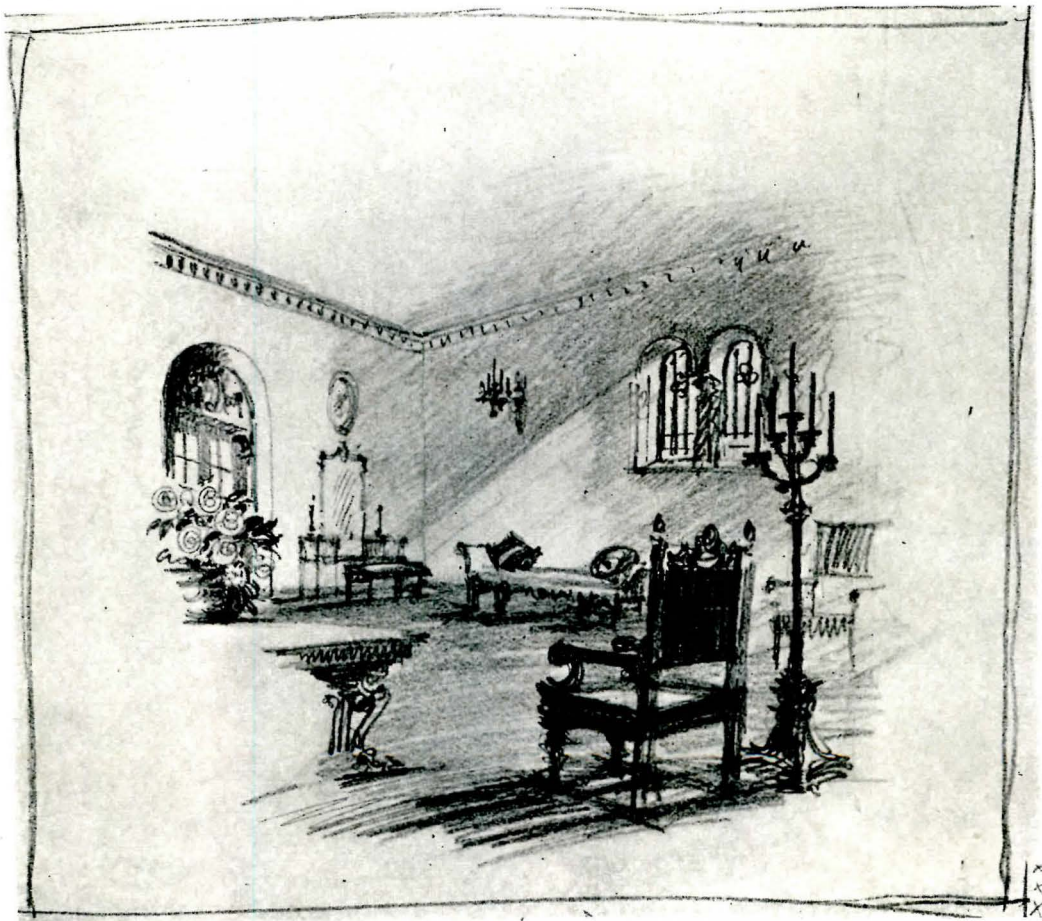
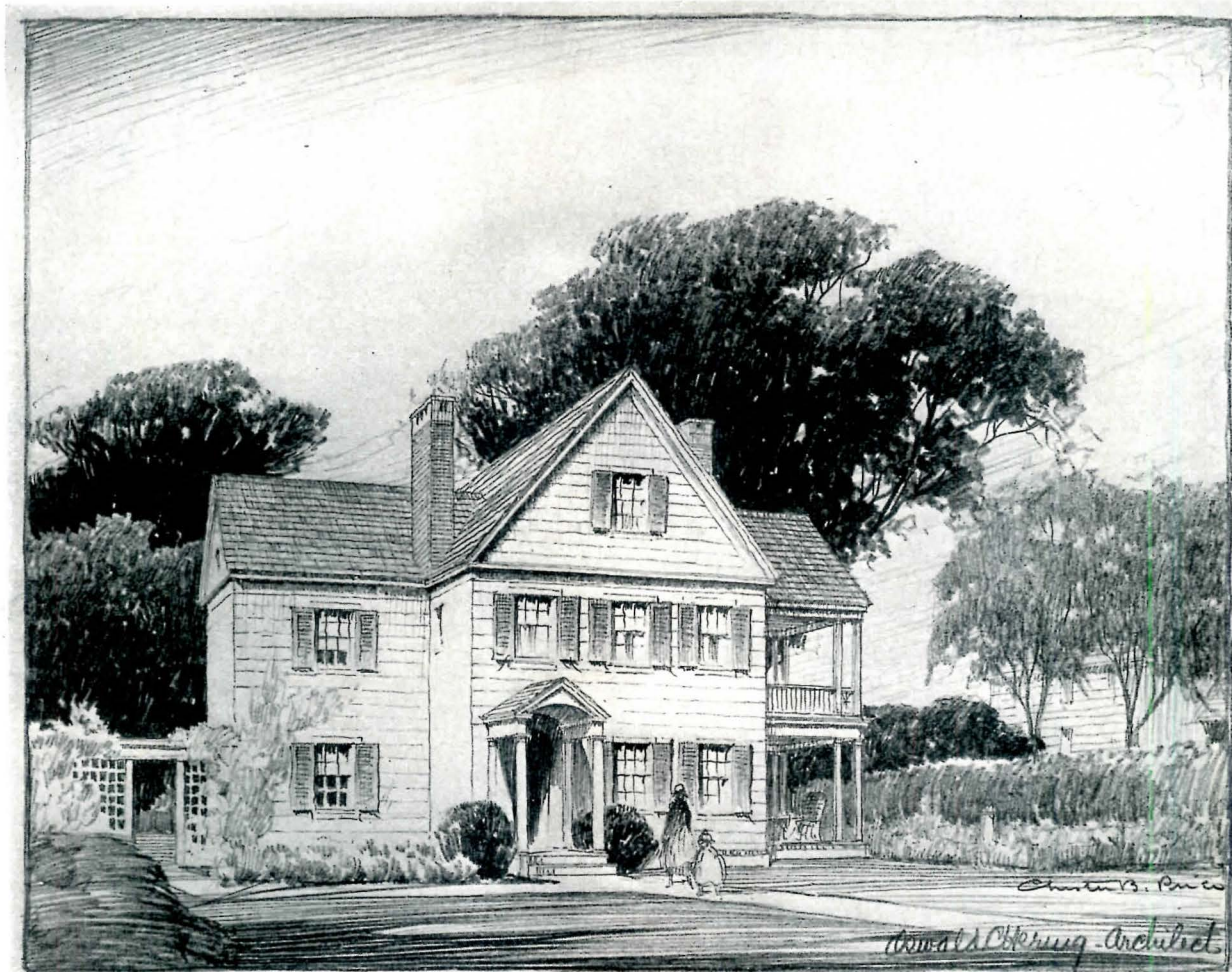


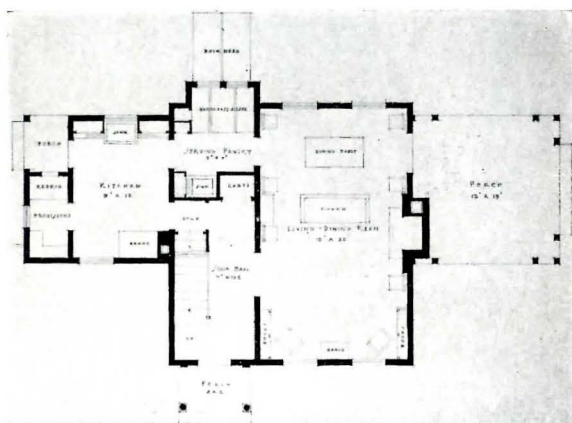
Figure 8. *Talking Sketch, Lounge in "The Playhouse."* C. Howard Crane, Architect.  
Elmer George Kiehler, Ben A. Dore, Associates, Detroit, Mich.



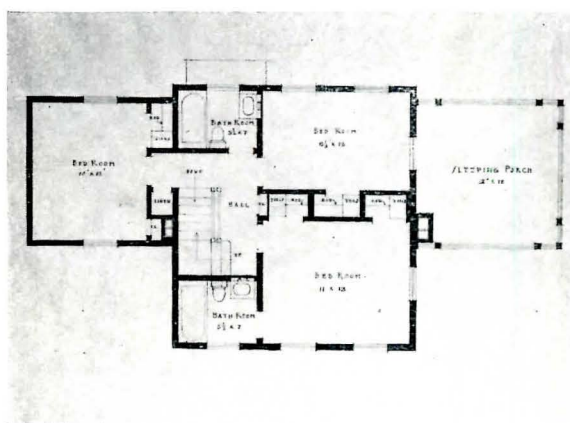
# PENCIL POINTS



*Rendering by Chester B. Price.*



*First Floor Plan.*



*Second Floor Plan.*

*A Suburban House. Oswald C. Herring, Architect.*



# PENCIL POINTS

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## THE AMERICAN ACADEMY IN ROME

FROM letters recently received by C. Grant LaFarge, Secretary of the American Academy in Rome, from Frank P. Fairbanks, Professor in Charge School of Fine Arts, we quote the following items:

"Two of our sculptors have been developing interesting sketches for War Memorials. Stevens, senior sculptor, has presented his idea for the setting of his heroic figure of America for the Belleau Wood cemetery. His figure, which has hitherto seemed cramped with a reminiscent quality, now carries more freedom of spirit with a consequent approach to a successful feeling for the American theme he has chosen. Alvin Meyer, second year sculptor, has projected a scale model for a proposed monument to be presented to Italy by the American Government to commemorate the American lives sacrificed on Italian soil during the World War. Meyer is convalescing satisfactorily and his industry seems unabated.

Marceau, Newton and Deam have kept very close to their studies carrying on their last month's work.

Floegel, senior painter, has been traveling. Bradford, second year painter, is continuing his work on his third year composition, a Descent from the Cross. Finley, first year painter, has been occupied with the Italian language, sight-seeing, fresco painting and life drawing.

About two weeks ago the senior painter of last year, Frank Schwarz, came down to Rome from Anticoli with his triptych of an Adoration in tempera. The composition has twenty-seven figures; character studies of the peasants of this famous center of Roman models, naturally abound in the work, but their application in this instance only serves the more to carry the painter's expression of a very quiet and dignified spirit of religious devotion. Of the success of this work, a first essay in tempera painting, we very freely admit having an exalted opinion. The few people who have seen the panels, both lay and technical-minded, especially the latter, have been compelled to linger before them because of the apparent mastery of drawing and pigment as well as the arrangement of color and composition. Schwarz sails for New York January 8th.

Gustav Holst, the English composer, is visiting the Music Department at the Chiaraviglio for about three weeks. Mr. Holst, who has recently been awarded the Howland Prize of Yale University, is the composer of "The Planets," the "Hymn of Jesus," and last year's success at Convent Garden, "The Perfect Fool." He has just been commissioned to write a Choral Symphony for the forthcoming Leeds Festival, and is also engaged on a new opera for Convent Garden, "The Boar's Head."



S. BRECK PARKMAN TROWBRIDGE

S. BRECK PARKMAN TROWBRIDGE died of pneumonia after a very brief illness on January 29th, at his home in New York City. Mr. Trowbridge was born in New York, May 20, 1862. He is a graduate of Trinity, Columbia University School of Architecture, School of Classical Studies at Athens, Greece, and the Ecole des Beaux Arts, Paris. After Mr. Trowbridge's graduation in 1886, he was sent out by the Archaeological Institute to superintend the erection of the American School of Classical Studies in Athens. Upon his return to New York he was for four years in the office of George B. Post. Mr. Trowbridge was a member of Troop A, also served as first lieutenant, 12th Inf., N. G. N. Y.

Mr. Trowbridge was appointed by Pres. Roosevelt, Chairman of the National Council of Fine Arts; also he was an incorporator, vice-president and trustee of the American Academy in Rome; Fellow of the A. I. A.; Member of the Nat'l Institute of Arts and Letters, Nat'l Academy of Design, Architectural League of New York; Society of Beaux Arts Architects and many other organizations both in this country and abroad.

Mr. Trowbridge has been associated with Mr. Livingston, as Trowbridge & Livingston, architects, for thirty years and as a member of that firm has erected, among other notable buildings, the Bankers Trust Company Building, the Addition to the New York Stock Exchange and the banking house of Messrs. J. P. Morgan & Company, all on the corners of Wall, Broad and Nassau Streets, now known as the Financial Center, the Chemical National Bank, the Empire City Savings Bank, the St. Regis Hotel, the mercantile building of Messrs. B. Altman & Company, 34th St. and Fifth Ave., and the Mellon National Bank in Pittsburgh, the Palace Hotel in San Francisco, and the Bank of America now under construction on Wall, William and Pine Streets; also has completed plans for the thirty-three story office building to be erected for the Equitable Trust Company on the site of the present Mills Building on Broad and Exchange Place; also designs for the Mitsui Bank of Tokio, the construction of which will shortly be begun.

We quote from an appreciation by Pres. D. Everett Waid: "Due praise will be given to Trowbridge for his ability, his public spirit and his generosity. But one phrase comprehends all of these—he was an architect and a gentleman."



## NEW YORK ARCHITECTURAL CLUB



ARNOLD W. BRUNNER

ARNOLD W. BRUNNER died of pneumonia at his home, 1 Lexington Avenue, New York, on February 14th. Mr. Brunner was born in New York, Sept. 25, 1857, and was educated at the public schools here and in Manchester, England. From 1877 to 1879 he studied at the Massachusetts Institute of Technology and for many years has practiced architecture in New York City.

The large majority of Mr. Brunner's works were of a public character, or of semi-public character, institutions, colleges and hospitals. Among Mr. Brunner's important works are the Stadium of the College of the City of New York, the School of Mines at Columbia University, Mt. Sinai Hospital, both the original group and more recent buildings the Jewish Maternity Hospital at 108th Street and Fifth Avenue, New York; the new group for the Jewish Hospital in Brooklyn; the proposed new Union Temple, designed to seat two thousand people with a community house containing complete equipment; the new group for Denison University at Granville, Ohio. The Chapel building of this group is completed and two of the dormitory buildings are now in process of construction. Mr. Brunner was also appointed architect for the new building to be erected adjoining the Jewish Theological Seminary at 123rd Street near Broadway, New York. Mr. Brunner was an enthusiastic designer and an expert in city planning. His practice was general though he is perhaps best known as the architect of well known public institutions.

## COMPETITION FOR SMALL FIRE-RESISTIVE HOUSES

THREE thousand two hundred (\$3,200) dollars will be awarded in prizes by the United States Gypsum Co., for designs for two small houses. The competition is open to all architects, draftsmen and architectural students and is divided into two classes: Class A—five room bungalows; Class B—six room, two story dwellings. The competition has been instituted to introduce a new form of fire-resisting, permanent and economical construction through the use of Structolite Concrete construction and to make available a large variety of architecturally good small house designs in fire-safe construction to meet requirements in all sections of the country. If an announcement of this competition and a booklet giving Structolite Concrete Details and data have not been received, a request to United States Gypsum Co., 205 West Monroe St., Chicago, Ill., will bring them.

GETTING the club properly launched on a good practical basis is quite a long tedious job. It is being handled by a representative group of eleven men who are known as the Committee of Eleven with Mr. George A. Flanagan, of Donn Barber's office, as chairman. To this body is entrusted the steering of a safe and sane course toward the goal of our ambition—A Club House—Our aim is to bring together the thousands of men in the architectural profession and its allied industries in the bonds of Fellowship and to foster various activities such as social, athletic and educational features in a rational manner.

A prospectus is now being prepared which should be ready for distribution early in March. It will set forth our object and plan of financing in a clear, concise manner and pave the way for a whirlwind campaign to raise funds for the club house.

*Architectural Bowling League Division*

The five man tournament for the season of 1924-25, ended Friday evening, February 6th, but as the Averages Committee has not yet submitted its report we can only announce at this time that the team from the office of Cass Gilbert was the winner of the trophy. A glance at the scores also shows that each man on the team has bowled over 200 during the tournament.

A complete report on averages and high scores, together with a list of the trophies and medals to be presented at the annual dinner in April will appear in that month's issue of PENCIL POINTS.

Owing to the increase in the number of teams participating as compared to last year and the scarcity of suitable alleys it has been decided to omit the two man tournament this year. The three man tournament, however, started off Monday evening, February 9th as scheduled and is now in full swing.

N. T. VALENTINE, Secretary.  
Hotel Shelton, New York City.

## PERSONALS

LESLIE A. LIBBY, ARCHITECT AND CONSTRUCTION ENGINEER, has removed his offices to 502-3 Press Building, 22 Monument Square, Portland, Maine.

FRANZ C. WARNER, ARCHITECT, has removed his offices to 506-10 Bulkley Bldg., Cleveland, Ohio.

JESSE LOUIS BOWLING, Architectural Engineer, has removed his offices to Suite 276 Arcade Building, St. Louis, Mo.

R. H. SHREVE AND WILLIAM F. LAMB have removed their offices to 331 Madison Avenue, New York, and will continue to practice under the firm name of Shreve and Lamb, Architects.

JAMES HOLT, ARCHITECT, has opened offices at 132-134 Market Street, Paterson, N. J.

SOREY & VAHLBERG, ARCHITECTS, have removed their offices to Braniff Building, Third and Robinson, Oklahoma City, Okla.

HAROLD MACKLIN AND WALTER FAUGHT have formed a partnership for the practice of architecture under the firm name of Macklin & Faught with offices at 145 Brevard Court, Charlotte, N. C.

ROYAL BARRY WILLS has opened an office for the practice of architecture at 8 Beacon St., Boston, Mass.



The Leoni W. Robinson Memorial Medal Awarded by the Architectural Club of New Haven for Excellence in Architecture.





HAROLD HEATH DAVIS

**H**AROLD HEATH DAVIS who was awarded first prize in the Small Brick House Competition recently conducted by The Architectural Club of New Haven, Inc., for prizes amounting to \$600.00 provided by The Connecticut Brick Manufacturers Association is a native of Middletown, Conn.

Mr. Davis obtained his elementary education and was prepared for college in the public schools of his home city. In 1916 he entered Syracuse University and was graduated with the class of 1920, Department of Architecture.

Soon after his graduation Mr. Davis entered the office of Charles Scranton Palmer, architect, New Haven, Conn., where he has had a broad experience on both public buildings and in domestic practice and still continues these associations.

Mr. Davis has been one of the directors of The Architectural Club of New Haven, Inc., for the past four years and at present is its treasurer. He is also a member of the Connecticut Chapter, American Institute of Architects.

#### ARCHITECTURAL CLUB OF NEW HAVEN

**C**ONNECTICUT architects contributed 212 exhibits to the sixth annual exhibition of The Architectural Club of New Haven, Inc., which was held in the Trumbull Gallery, School of Fine Arts, Yale University, from April 14th to March 1st.

A notable feature of this exhibition was the section devoted to a showing of the work of Yale graduates who are practicing architecture. Among others who sent examples of their work were such well known architects as: Allen & Collens, Boston; Grosvenor Atterbury, New York; Edwin H. Clark, Chicago; Walter B. Chambers, New York; Nathan Harris, Newark; Edward C. Dean, New York; William E. Parsons, Chicago; Delano & Aldrich, New York; Howard Shaw, Chicago; Henry Killam Murphy, New York; Philip Goodwin, Louis R. Metcalfe, Charles N. Lowrie, landscape architect, Woolsey & Chapman, Harvey Stevenson, C. Frederick Mosle, Sheldon K. Viele, all of New York, and Bennett, Parsons & Frost, Chicago. The Yale section contained 122 exhibits many of which will be sent to the League exhibition in April.

Among the Connecticut architects who were represented in the exhibition were: W. F. Brooks, Hartford; Walter T. Arnold, Meriden; Walter P. Crabtree, New Britain; Leonard Asheim, Bridgeport; Brown & Von Beren, New Haven; Theodate Pope, Hill Stead, Farmington; Norton & Townsend, New Haven; Joseph W. Northrop, Bridgeport; Charles Scranton Palmer, New Haven; Edward B. Caldwell, Bridgeport.

R. W. Foote, New Haven; Whiton & McMahon, Hartford; Orr & del Grella, New Haven; Charles Wellington

Walker, Bridgeport; Jacob Weinstein, New Haven; Harold Hayden, Bristol; Philip Sellers, New Haven; Lorenzo Hamilton, Meriden; Gray & Lawrence, New Haven; William T. Troy, Bridgeport; Alfred W. Boylen, New Haven; Richard Williams, Hamden; Lester J. A. Julianelle, New Haven; Samuel Lea Snodgrass, West Haven; Shiner & Appel, New Haven; Frederick A. Davis, Jr., landscape architect, New Haven.

In the department of allied arts was shown examples of the work of Channing Cabot, artist, Michele Martino, sculptor, Albert R. Borho, decorator, Mrs. Norman L. Torrey, worker in batik, all of New Haven, and Louis A. Gudebrod, sculptor, Meriden.

Because of limitations of space but a few industrial exhibits were shown. These were contributed by The American Brass Co., Waterbury; The Decorative Stone Company, and the Economy Concrete Company, both of New Haven.

A section of the exhibition was devoted to showing the designs made for the small brick house competition which was conducted in connection with this show for prizes amounting to \$600.00 given by The Connecticut Brick Manufacturers Association.

R. W. Foote, architect, New Haven, served as professional adviser for this competition, and George H. del Grella, architect, New Haven, Charles Wellington Walker, architect, Bridgeport, and W. F. Brooks, architect, Hartford, were the jury of award. Judgment of the designs was made February 5, as follows: first prize, \$300.00 to Harold Heath Davis; second prize, \$200.00, H. Story Granger, both of New Haven; third prize, \$100.00 to William T. Troy, Bridgeport.

In its report the jury stated that the designs were extraordinarily good and because of this the three honorable mentions were made: first mention, to David N. Plumb; second mention, Robert L. Waldorff, both of New Haven; third mention, Ernest A. Sterling, New Britain.

The 1925 Yale Scholarship which provides two years tuition in the architectural department, Yale School of the Fine Arts, to a Connecticut architectural draftsman of two years office practice was awarded to Walter Cochran, New Haven.

The Architectural Club of New Haven has established a medal of honor in memory of the late Leoni W. Robinson who was generally conceded to have been dean of the profession in Connecticut, for several years prior to his passing, and who was also the club's first president. This medal will be awarded to a Connecticut architect for excellence in architecture for the first time this year, judgment having been made from work shown in this exhibition. Announcement of the award will be made at a dinner held February 25, too late to be reported here.

The medal, made by The Gorham Company, has for its obverse the reduction of a bas-relief portrait made by Louis A. Gudebrod as a memorial for the club. This portrait, in bronze, was first shown in this exhibition.

While the past exhibitions of The Architectural Club of New Haven have been largely local in character the advent of Yale men in architecture gave this year's show a national quality. It is said to be the first time that the work of the alumni of a major American university has been gathered for exhibition and it has been freely predicted that this precedent will be followed by the other large universities. The exhibition was so planned as to be in progress Alumni Day, February 22, and it proved to be an element of unusual interest to the hundreds of graduates who made their annual pilgrimage to their Alma Mater.

The fact that these Yale architects had been invited to participate in this exhibition evidently had an excellent effect on the exhibitors from Connecticut, for never before in the history of the club's exhibitions has the work submitted been so uniformly good or so well presented. Architects and critics who viewed the exhibition pronounced it equal to the big metropolitan shows in all but extent of numbers.

Beside the Yale men there were a few exhibitors from out of the State and they included Clarence Fowler, landscape architect, New York, and Charles J. Connick, designer and worker in stained and leaded glass, Boston.

Attendance has naturally increased each year from the first modest attempt made by the club six years ago. This year the attendance was very much larger than ever before, large numbers of visitors having come from the several cities of the State.





BRUCE BROWN

**B**RUCE BROWN, recently awarded an architectural scholarship at the University of Toronto, was born in Toronto and received his early education at the University of Toronto Schools. He graduated in 1917 and enlisted and served with the Canadian Expeditionary Forces in Siberia. Returning in 1919 he entered the Department of Architecture in the School of Practical Science at the University of Toronto. After four years admirable work he graduated with honors in 1923. He was awarded the Travelling Scholarship by the Ontario Government and the Silver Medal by the Ontario Association of Architects. He traveled for a year in England, Italy and France and finished by spending three months studying at the Fontainebleau School in France.

## BOSTON ARCHITECTURAL CLUB

**T**HE Boston Society of Architects (local chapter of the Institute) and the Boston Architectural Club gave a joint housewarming party on February 3rd. The Society now occupies headquarters in the building which has long been owned by the Club, and the occasion of the party mentioned was the first general use of the building by the two organizations since the completion of alterations undertaken by them jointly. The alterations, although chiefly utilitarian have greatly enlarged the possibilities of the building.

At the housewarming a dinner was given to all members most of whom wore medieval costume. After dinner some members of the Society lighted the Seven Lamps of Architecture after the interpretations of Mr. Ruskin and there were several short speeches by former officers. Mr. Louis C. Newhall, treasurer, in welcoming the Society, represented the Club. Mr. Charles D. Maginnis took charge as president of the Society, and the ceremony of lighting the Seven Lamps of Architecture, conducted by Mr. C. Howard Walker, was carried out by the following architects: James Ford Clapp, William R. Greeley, J. Lovell Little, Robert

P. Bellows, Charles G. Loring, William G. Perry and William D. Austin.

On the 24th of February the Club gave its annual costume ball which was this year entitled "Bal Russe."

## "SELLING ARCHITECTURE"

**T**HIS is a dreary, foggy February day, as I sit at my desk thinking of the recent letters which you published under "Selling Architecture," yet I am inclined to feel optimistic,—the world (Architectural) still appears roseate and I feel a sense of gratitude that as yet architecture has not taken a place beside "Wrigleys," "Djerkiss" and "Non-Skid Tires" on road-side billboards.

Your correspondents exhort us to take courses in salesmanship, to sell our wares on the street corner and in the daily newspaper, to become contractors and "what-nots," everything but what we are because we have been all wrong from the start. Can it be possible that we have labored all these years upholding our professional ethics and proudly proclaiming the noble art of architecture now to be told we are wrong in premise and in practice and must start over; have we been barking up the wrong tree and now must ungracefully climb down to seek refuge from the dogs of commercialism? O tempora! O mores!

It is rare indeed when construction of magnitude is carried on without architects' services and the fact that millions of dollars are expended each year in building construction under the direction of architects proves, not a lack of confidence on the part of the public but implicit faith in our business ability and a realization of the necessity for our services. When skepticism does exist, it seems to me, it is due to lack of confidence in an individual and not in the profession at large.

It is true that a small percentage of construction is carried on without architectural services but it is relatively small. There will always be the "penny wise and pound foolish," those anxious to get something for nothing or at a reduced price without regard for quality.

Isn't "advertising for architects" in the broad sense of advertising a lot of "poppy-cock"? Haven't we just grown out of the neolithic period of architects' pamphlets and the specification folder with advertisements on the back? We have seen the rise and fall (I understand they are diminishing in number) of construction firms who advertise architectural services, and we still have architects who advertise, as a perusal of our daily newspapers will show. Have these advertisers raised the standard of architecture or increased public esteem regarding architects? Are they getting all of the business and erecting all of the buildings or are they by their methods lowering the standing of the profession rather than inculcating confidence and esteem in the public for architect's services?

Advertising and salesmanship methods will not sell architecture. Completed work and satisfied clients will and not printed foibles and campaigns of salesmanship. Architecture will sell just as automobiles, radio sets and vacuum cleaners sell, when there is a public demand for it. Let us advertise—YES, but through educational work,—for a greater appreciation for all things good and beautiful, for the good of all and the title will return tenfold.

And who can doubt but that this educational work is going on when we see the tremendous improvement in public and private buildings and especially in small residential work; on the stage; in the movies; in all art and everyday activities. Are our present methods wrong?

H. STORY GRANGER,  
Secretary and Treasurer,  
Connecticut Chapter, A.I.A.

## THE AMERICAN SOCIETY OF LANDSCAPE ARCHITECTS

**T**HE New York Chapter of The American Society of Landscape Architects will hold their Second Annual Exhibit of Garden Photographs from March 17th through April 18th in the Arden Gallery, 599 Fifth Avenue, New York. Notable works of sculpture suitable for the garden and specially designed furniture, executed by skilled artisans, will also be displayed.

CLARENCE FOWLER,  
Secretary, New York Chapter,  
15 East 40th Street, New York.



SAINT LOUIS ARCHITECTURAL CLUB

THE St. Louis Architectural Club conducted a spelling match at the Club's headquarters, 514 Culver Way, on February 5th, and we have received the following account of the meeting from John A. Bryan, President of the Club:

"The captains of the teams, Mr. Ernest C. Klipstein, of the firm of Klipstein & Rathmann, and Mr. Louis La Beaume, of the firm of La Beaume & Klein, divided evenly the members present and sat them down in rows of chairs facing each other in the center of the Assembly Hall of the Club. Whenever the umpire called out "next," a chair with its occupant slid back towards the wall to the tune of "Slide, Kelly, Slide," the favorite form of razzing from the others in the game.

"The words given out for spelling were, for the most part, architectural terms, and of these "anthemion" brought about the most casualties. Strange to say, the words which proved to be too much for the Captains were of Oriental flavor, and not strictly architectural,—"Mohammedan" being Mr. Klipstein's Waterloo, while "caravansary" was a knock-out for Mr. La Beaume.

"The contestants finally simmered down to Alfred Norrish, of the Klipstein Klan, and Frederick Hammond of the La Beaume Lancers. Norrish fumbled "entasis" which Hammond spelled correctly and carried off the prize. Norrish is a graduate of the School of Architecture in Washington University, and since his return from Europe recently has formed a partnership with Theo. Steinmeyer and Walter Sehr; while Hammond, also a graduate of Washington University, has, since his return from Europe two years ago, been in the office of Jamieson & Spearl.

"Strange to relate, this contest was the first of the Club's activities in recent years that has attracted the attention of the daily newspapers. A press row was provided for the reporters from the *Globe-Democrat*, *Post-Dispatch* and the *Star*, and those papers all devoted considerable space to accounts of the contest the following day.

"Contributing much to the fun of the occasion were the remarks made to the umpire from the side lines. When he announced to Mr. Klipstein that his first word would be a choice of two words which though of the same pronunciation and of equal interest to architects were nevertheless spelled differently and carried different meaning,—one being "arris" meaning an edge formed by the meeting of two concave surfaces, and the other being "heirress" meaning a woman who had inherited wealth—Mr. Klipstein said that he would "take the woman with the money." When the word "jackadaisical" was given, the member accosted asked for its definition; and Carl Trebus ventured the remark that it meant "the attitude of a draftsman." To the architects present this remark seemed pertinent, while to the draftsmen it seemed unkind; but Mr. Trebus, through his long association with the Otis Elevator Company, is one of those Associate Members who can afford to be independent in their comments.

"It is confidently hoped that specifications and plans emanating (another word that bowled them over) from the St. Louis offices in the future will carry fewer misspelled words than heretofore, and show a deeper appreciation of the life work of Noah Webster."

A FREE EMPLOYMENT SERVICE FOR READERS OF PENCIL POINTS

(Other items on pages 110 and 118)

**Wanted:** Architectural draftsmen with at least three years' experience, whose natural ability tends toward design, wanted immediately for work in Hazleton, Pa., 4½ hours ride from New York City. Write giving full particulars to Peter B. Sheridan, Marble Bank Building, Hazleton, Pa.

**Wanted:** A young architect of good address, to interview Architects in order to interest them in a useful product for building purposes. Asbestos, Shingle, Slate & Sheathing Company, Ambler, Penna.



Announcement of the Xmas Follies of the San Francisco Architectural Club late in reaching us but so attractive we had to use it.

SAN FRANCISCO ARCHITECTURAL CLUB

"Just a few words from the San Francisco Architectural Club to inform you that we are still on the map and going strong. We are highly appreciative of the great work that Pencil Points is doing for the individual draftsmen and all the architectural clubs throughout the country and we regret that we have not kept you better informed as to the progress and activities of our club. We feel that other clubs are interested in our welfare even as much as we are interested in theirs.

"Our club has just passed through a very active and prosperous year and is keenly looking forward to an even more progressive and interesting year. Our membership is growing constantly—our atelier is the best in the West as shown by the medals, first mention placed, first mention and other awards received in the Beaux Arts work,—and our entertainment committee is upholding the reputation of the club for staging clever and varied programs that keep the social life of the club very much alive.

"I am enclosing a programme of our annual Christmas jinks together with a review and photograph of the same. It may not be suitable for publication but you will see that it gives some idea what a crowd of architectural draftsmen can do in the way of amateur theatricals when they are pleasure bent and have club spirit behind them.

"The club now has a publication committee and we are going to see to it that the whole world knows there is a San Francisco Architectural Club and that it is *some* club. You will hear from us again.

"With the very best wishes for the continued and ever increasing success of PENCIL POINTS, the draftsmen's best friend, we remain

Sincerely,

The San Francisco Architectural Club,  
by LAWRENCE H. KEYSER.



## PENCIL POINTS

### ATELIER HIRONS COAST-TO-COAST TRAVELLING EXHIBITION

THE "Traveling Exhibition," that absurdly large name for a jumble of studies-en-atelier and three Paris Prize "projets rendu," is off to a flying start. After numberless hitches and delays the regular itinerary has commenced and will be continued as follows, subject to one or two possible deflections and corrections.

—Feb 11	Princeton University, (N. J.)
Feb. 11-21	Syracuse University, (N. Y.)
Feb. 21-28	Atelier Rectagon, (Buffalo, N. Y.)
March 1-11	Penn State College, (Penn.)
March 11-18	Geo. Washington University, (Washington, D. C.)
March 18-25	Howard University, (Washington, D. C.)
March 25-April 4	Alabama Polytechnic Institute, (Auburn, Ala.)
April 4-14	No. Carolina State U. (Raleigh, N. C.)
April 14-24	Ohio State U. (Columbus, O.)
April 24-May 3	U. of Illinois, (Urbana, Ill.)
May 3-13	U. of Kansas, (Lawrence, Kansas.)
May 13-23	Atelier Denver, (Denver, Colo.)
May 23-June 2	Montana State College, (Bozeman, Mont.)
June 2-12	State College, Washington (Pullman, Wash.)
June 12-22	U. of Washington, (Seattle, Wash.)
June 22—	Allied Architectural Club of Los Angeles, (Calif.)

The collection which weighs only about 40 lbs., boxed consists of the Paris Prize, "projets rendu," of Rudolph de Ghetto and Richard Banks Thomas in 1923, and that of Andrew F. Euston in 1924, besides 200 studies made and kept in chronological order by R. B. Thomas, showing the development from the esquisse to the final rubbing studies, and a number of the studies for the projets of de Ghetto and Euston. The exhibition is made possible through the efforts of the Atelier Hirons and the generous co-operation of Messrs. de Ghetto, Thomas and Euston in loaning their drawings. Each school is under obligation to forward the collection of the proper date prepaid to the next stopping point, but that is the only expense involved. For any information, communications may be addressed to Richard Banks Thomas, 516 Fifth Avenue, New York City.

### THE ARCHITECTURAL SKETCH CLUB OF CHICAGO

(Formerly The Chicago Architectural Club)

THE life-class is now in full swing and, under the guidance of Claude Woodruff the pencil-pushers are rapidly increasing their knowledge of human anatomy. Mr. Woodruff is engaged during the day as an instructor at the Chicago Academy of Fine Arts. The class meets every Tuesday evening from seven to ten.

The structural class, which is given annually, is now under way with an enrollment of thirty. This class is for the purpose of reviewing the Engineering Studies in preparation for the State Board Examinations for Architects.

Mr. Wm. Hooper, who is a practicing Architect and Engineer, instructs and covers a very practical and thorough course in Strength of Materials, Steel and Wood Construction, Graphic Statics, Reinforced Concrete, and includes some Specification and Slide Rule work.

The class meets twice weekly from 6 to 7 P. M. in the club rooms. The entire course covers twelve weeks and is completed just prior to the examinations.

This instruction is not limited to members of the Club.



The Cathedral of St. John the Divine

N. Lowell 1925

Etching by N. Lowell.  
The Cathedral of St. John the Divine.

### THE PRINCETON ARCHITECTURAL PRIZES

A FUND for annual prizes and other special purposes has been established in the School of Architecture of Princeton University, by friends of the School. Mr. E. James Gambaro and Mr. Charles H. Dornbush were the prize holders for the year 1924-1925.

Two competitive prizes, of \$800 each, are announced for the year 1925-1926, to be known as The Princeton Architectural Prizes.

The purpose of these prizes is to place at the disposal of experienced draftsmen of unusual ability, who desire to complete their professional training by contact with the academic side of architecture, the advantages to be found in the School of Architecture, the Department of Art and Archaeology, and the Graduate School of Princeton University.

The winners of The Princeton Architectural Prizes, although not enrolled as undergraduate or graduate students, will be permitted to reside in the Graduate College during the year of their tenure. Rooms and board may be obtained from \$480 up, for the academic year. The Prize-men will be exempt from charge for tuition.

For application blanks, and regulations governing the Competition and award address The Secretary, The School of Architecture, Princeton University, Princeton, N. J.

### THE MILWAUKEE ARCHITECTURAL CLUB.

OUR New Year's Eve dinner and dance was a success and was attended by about 42 couples.

A bowling party was held Friday evening, Jan. 30, 1925. These bowling parties will probably be held the first and third Tuesday of the month hereafter.

Sunday morning sketch classes will be formed, in addition to the Saturday afternoon sketch classes which are now being held.

Local design problems, similar to those issued by the Beaux-Arts Institute are issued every two weeks and prizes will be donated by local contractors and material men.

PETER H. PETERSEN, Secretary.



## PENCIL POINTS

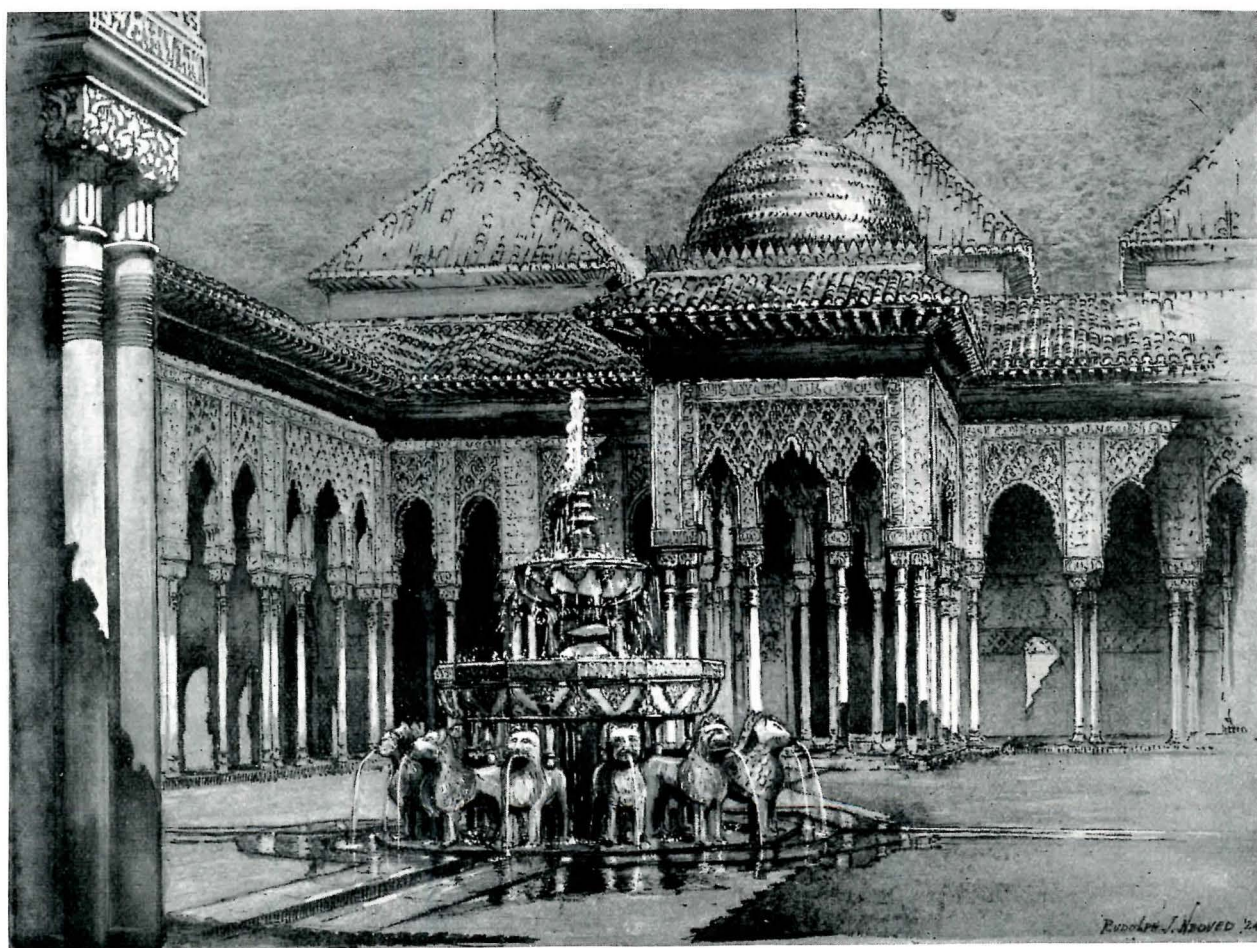
### UNIVERSITY OF LOUISVILLE

**A**LTHOUGH the University Archi-Arts Society of the University of Louisville has been organized for nearly six months, it was on February the eighth that it took its first step towards a permanent organization. This was in the shape of a meeting with architects and draftsmen of the city for the purpose of showing the work and aim of the club. The drafting room was decorated for the occasion with an exhibit of drawings of the class. The meeting began with a light supper that was not only to show our hospitality to our visitors, but also to give them a better chance to get acquainted with each other. The meal was made even more pleasant by music from the radio. The supper was followed by several piano solos and by talks from the different architects that attended. Each speaker encouraged the club in its work and pledged his support to its undertakings in the future. Messrs. D. X. and J. C. Murphy announced that they would institute several prizes for the best averages at the end of the year in the different classes of work. After the meeting was over, the men gathered around the piano and ended the evening by singing some old familiar songs. When all the people had dispersed and the room was empty once more, there entered into the heart of every member the feeling that the evening was a success, and that the work must and will go on.

Respectfully submitted,  
ROBERT W. HUNN, Jr., Sec.

### THE ARCHITECTURAL EXPOSITION

**E**VERY draftsman as well as every architect who can possibly attend the big architectural show to be held in the Grand Central Palace, New York, April 20th to May 2nd inclusive, should be among those present. This paragraph is addressed particularly to men located outside of the Metropolitan District, for it is assumed that all local men will attend. In our pages for the past few months space has been devoted to the subject of "selling architecture." This exposition, to our mind, bids fair to eclipse all efforts heretofore made to bring the architectural profession and the interested general public together to their mutual advantage. Not only will the exposition itself be of great interest to us all, but in addition to the various exhibits from this and foreign countries which will be on view, the annual show of the Architectural League of New York will be held at the same time and place as well as the big convention of the American Institute of Architects. Never before has anything on the same scale been done in this or any other country. So why not make a special effort to participate in this event and to be an active part in the movement which is bound to exert a significant influence upon American Architecture.



*The Court of the Lions, Gouache Drawing by R. Nedved.*



## PENCIL POINTS

### LAYING OUT AN APPROXIMATE ELLIPSE

THE further information on the drawing of an ellipse supplied by Egerton Swartwout in response to an inquiry from a reader who wished a more detailed description of a method mentioned in one of Mr. Swartwout's articles in a recent issue of PENCIL POINTS is of so much interest that it is printed below together with the letter of inquiry.

Editor of PENCIL POINTS:—

IN the October issue of PENCIL POINTS there appeared an article by Egerton Swartwout on Working Drawings, the Contract Set, in which he used several drawings from the National Victory Memorial or George Washington Memorial. After carefully studying the drawings I am unable to work out the system used in the development of the ellipse shown. He gives the location of the centers used but I am unable to figure out how he found these centers at the start.

This is the most perfect ellipse I have ever seen drawn with a compass and would like to learn how to use this system of laying out the points. If you can supply me with this information I certainly will appreciate it.

Yours very truly,

(Signed.) JAMES S. DOUGLASS, JR.

William K. Hagan & Son,  
Architects & Engineers,  
First National Bank Building.

Editor of PENCIL POINTS:—

THE method of laying out the ellipse referred to by Mr. Douglass is described in an article published by David C. Coyle, C. E., in the American Architect and Architectural Review of April 12, 1922. Mr. Coyle made the computations and located the centers given in the drawing referred to by Mr. Douglass. Mr. Coyle says in his article that this method is applicable to an ellipse of usual proportions, namely the length not more than twice the width. I had occasion to lay out another ellipse for a large elliptical fountain in which Mr. Coyle was good enough again to lay out the dimensions in the same manner but as this ellipse was slightly narrower the result was not particularly good. In the case of the George Washington Memorial I have laid out the ellipse a number of times at different scales and it works to a hair, the difference between the curve so obtained and a true ellipse being absolutely negligible.

Yours very truly,

EGERTON SWARTWOUT.

*Laying Out An Approximate Ellipse*

*By David C. Coyle.*

AN ellipse of the usual proportions, i. e., with length not more than twice the width, may be imitated so closely with circular arcs that the eye cannot detect the difference. The advantage of the compound curve lies not only in greater ease of drafting, but in the simplification of all the computations relating to its dimensions. This latter factor may be an important one where a structure is built of elliptical form of steel or stone which will require detail shop drawings.

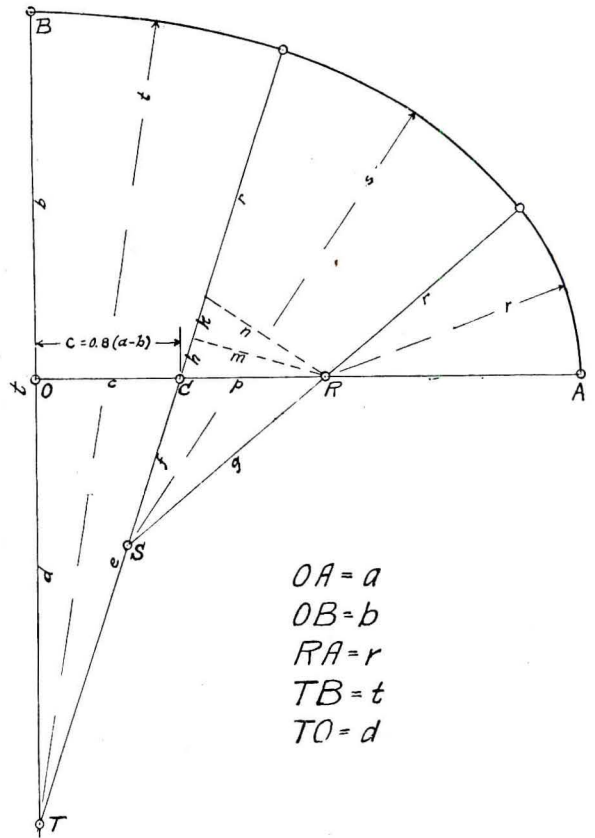
The usual rules for drawing such a curve give a resulting oval which is easily recognized as a false ellipse. This is due to the fact that the radii used are the maximum and minimum radii of curvature of the true ellipse. Their arcs touch the ellipse only at the ends of its minor and major axes and as the curve leaves this point of contact it becomes more and more widely separated from the true ellipse. The intermediate radius is obtained by guesswork.

The semi-major axis being  $a$ , the semi-minor axis being  $b$ , then the maximum radius of curvature is  $\frac{a^2}{b}$

and the minimum radius is  $\frac{b^2}{a}$ . Instead of these values, the following may be used:

$$t = \frac{0.04 b^2 + a^2}{1.04 b} = \text{Maximum radius.}$$

$$r = \frac{0.04 a^2 + b^2}{1.04 a} = \text{Minimum radius.}$$



The resulting circle of radius  $r$  goes through the points  $x = 0.915a$ ,  $y = \pm 0.41b$ , as well as through the point of tangency  $x = a$ ,  $y = 0$ . Similarly the circle of radius  $t$  goes through  $x = 0.41a$ ,  $y = 0.915b$ , all of these being points on the true ellipse.

Theoretically it is now possible to compute an intermediate radius  $s$ , such that its arc will be tangent to the other two arcs and also will pass through one point on the ellipse. The computations however are more elaborate than the result warrants. One may obtain the same effect, so far as the eye can detect, by assuming the distance  $c = 0.8(a-b)$ .

The foregoing computations need be only approximate; a variation of two or three per cent will not visibly affect the resulting curve. The position of the point  $S$  must be accurately located for it is fixed when the three points  $R$ ,  $T$  and  $C$  are fixed.

For establishing the position of the point  $S$  the following method avoids the use of trigonometry:

$$d^2 + c^2 = e^2; m = \frac{dp}{e}; h = -\frac{cp}{e}$$

$$k = t - c - r - h$$

$$g = \frac{n^2}{2k} = \frac{m^2 + k^2}{2k}; f = g - h - k.$$

These lengths  $f$  and  $g$  having been accurately computed, all the necessary co-ordinates are easily found by proportion. The figures may be checked by making a careful layout of the curve, when the circular arcs should exactly meet.

\*With Gunzvald Aus Co., Consulting Engineers, New York City.

\* Reprinted through the courtesy of The American Architect.



## DESIGN IN THE DRAFTING ROOM

(Continued from page 81)

The entire composition reads a commercial building, steel skeleton structure, clothed and enhanced by suitable materials for design. All this was wonderfully aided by model study, widths and depths of piers determined, set back stories and steps in tower fixed and each detail mass grouped in proportion to the entire building.

Figure 4 shows a working drawing elevation in the state of preparation for the building of which the model was prepared. While this is the final step (not considering scale and full size drawings and models) of design in the drafting room it will be seen how difficult it would be to read relative surfaces, projections, etc., the draftsman knows, however, that the drawing is correct from previous study and knows that the contractor will use this drawing as an instrument to accomplish the finished work which has been foreseen and forethought.

Figure 5 shows an interior perspective of "The Playhouse" erected in Detroit, Mich. Perhaps this might be termed an explanatory drawing. It was prepared to enable the client to see the interior effect of the house. The light effect is obtained from the illuminated stage; the underside of the balcony is in deep shadow. It is very good to develop the ability to prepare sketch perspectives, so much can be told to those unaccustomed in reading line drawings.

Figure 6 shows a study sketch of a theatre to be erected in Detroit. It is interesting to note what can be done with an odd shaped plot. This is practically a free hand sketch and much is told. Another interesting point is the way of bringing the fire exits from the balconies inside the building lines, taking advantage of the curved walls of the auditorium.

Figure 7 shows a working design sketch study. Section indicating the upper lounge and rear foyer of main floor

as seen from the auditorium. Many dimensions have been determined, ceiling vaulted, decoration of arches, etc., etc. This is not a working drawing, but is the final study, before "going on cloth." The work for which this and many other interesting studies are being made is for the State Theatre now under construction in Detroit, Mich.

Figure 8 shows purely a talking sketch indicating or suggesting the interior treatment for the lounge in "The Playhouse." A draftsman should be ready to make such suggestions, it is very necessary and a part of the work. The little sketch illustrated counts well for what it is meant, light entering the windows on the right, strong contrast for indication of chair, the door spot placed at center right, etc.

To be able to make suggestions on talking sketches is invaluable and much labor and effort can be saved in explanation. In summing up, to maintain and further develop the high standard of architecture those who are engaged with design the drafting room must constantly draw and draw well.

(To be continued)

## THE STUDENT AFFILIATION PLAN OF THE BROOKLYN CHAPTER

THE student affiliation plan of the Brooklyn Chapter of the American Institute of Architects is being put into effect and an unusually well made booklet on the subject has been prepared for distribution. The plan, as previously stated in these pages, offers to all the younger men in the profession in the territory the social, educational and professional advantages of affiliation with the Chapter. Information may be had by addressing Lester B. Pope, Chairman, Committee on Education of the Brooklyn Chapter of the A. I. A., Pratt Institute, Brooklyn, N. Y.



Cass Gilbert's Team of the Architectural Bowling League, Champions for the Season 1924-1925. Standing, left to right: Joseph Weiss, Cass Gilbert, Jr., Cass Gilbert, Joseph Mohn. Seated: Henry P. Zerfass, Fred Spickel, Henry G. Poll, Captain, Rex D. Read and Paul Zabriski.



# HERE AND THERE AND THIS AND THAT

CONDUCTED BY RWR

A SKETCH wins the prize for the most meritorious contribution appearing in this department for February, and it goes to Mr. Meade A. Spencer, New York.

HERE is where our British cousins come into action and we are glad of it. The letter from Mr. Millman amuses us a lot and here it is:  
Dear Sirs:

I have just received an epistle from you entitled—"Who'd a Thunk It?" I have endeavored to decipher this (believe an Englishman) and can only see one meaning—you wish me to renew my subscription! Dear Sirs, Before you start the National Debt collecting business in such a durned hurry, just wait for the mails. I sent my 3 dollars to you at the beginning of this month (January).

By the way, when you've cooled down after this I've something to tell you.

There's a lot too much of the banquet advertising in R.W.R.'s col. It's a drafting magazine, not a cook's magazine! and that's that.

Then there's another thing. Why in R.W.R.'s name put in a lot of bowling teams? I ask you.

Now I'm going to congratulate you on No. 1 of PENCIL POINTS for this year. I like your Master Draftsman Series—but what about a few of the old 'uns, Piranesi, eh? Can't you illustrate some if it—sure! come on—do!

Let's have more drawings, loads of 'em, and articles on how to draw—and don't forget what I said about snuffing the banquet business.

Good-bye!

JOHN H. MILLMAN.

I hope you've found that 3 dollar cheque by now—s'elp me.

Of course it takes the mails longer to get from here to

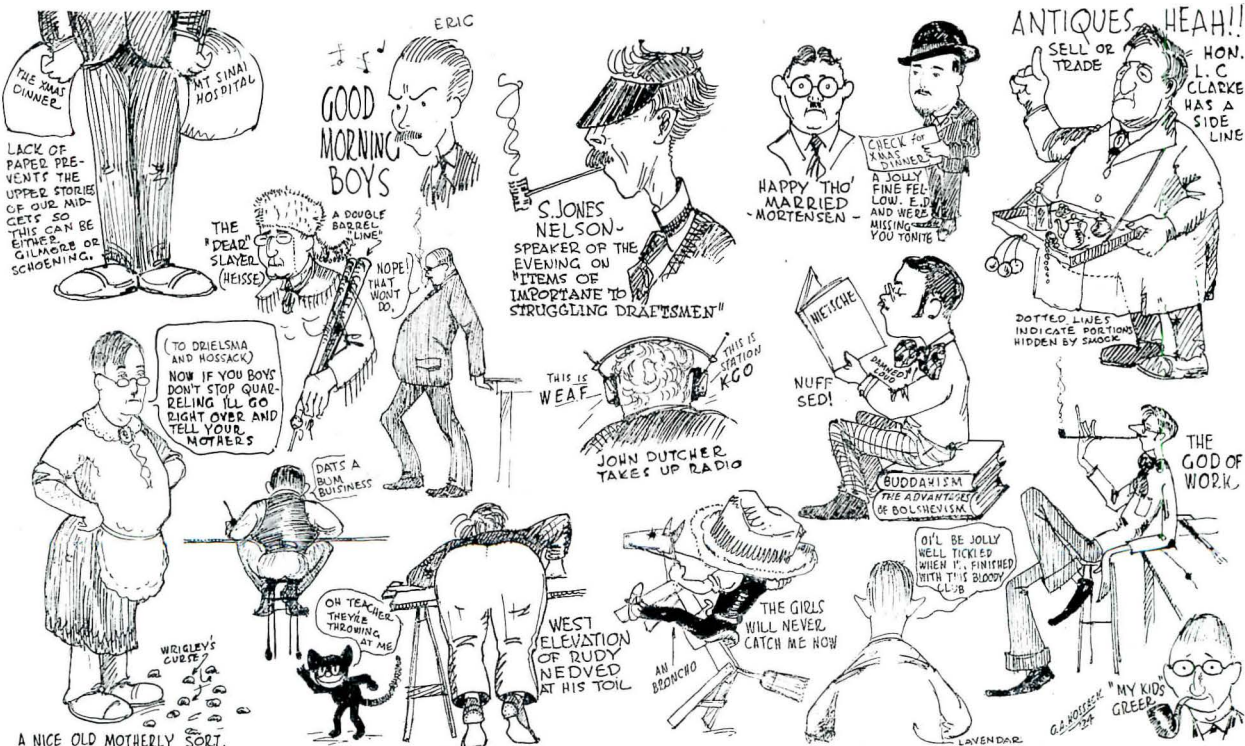
London and back than is consumed by a round trip, let us say to Brooklyn or Yonkers, which accounts for the fact that Mr. Millman's check did not reach us until our communication to which he refers had been mailed. We simply cannot understand why anyone should hesitate an instant in renewing his subscription so we do not wait very long before sending a second invitation. It is true, as Mr. Millman says, that we have been publishing a lot of posters and news about banquets and similar doings quite without realizing the preponderance of such material. This is probably because an office party or a dance or something of the sort inspires someone to do a cartoon, and naturally many of these find their way to us. Has food been too extensively featured? What does the draftsman think about when he is not drafting, (and when he is)? Has anyone anything to say on the subject?

AND now we hear from architect and PENCIL POINTER Ernest Stevenson, Port Elizabeth, South Africa. Here is his letter.

"My very hearty congratulations for everything you do. You are alive and interesting as well as amusing and it is refreshing to be amused and instructed at the same time. Don't take any notice of the gentleman who objected to your fun pages—he doesn't know how much he'd miss them because they are there. Hope you will be able to read this. Best wishes."

It makes us blush a little, but we are getting used to that. Having learned many years ago to decipher our own chirography with fair success we have no trouble in reading the writing of anybody else.

Now we really want to hear more often from our subscribers who are located at a distance. All parts of the



Cartoons from "The Annual Brose," Get-Together of the Office of Schmidt, Garden & Martin, Chicago, Ill.



## PENCIL POINTS

British Empire are represented and we would like to see sketches or any other interesting material they may care to submit to this department. And we don't hear very much from Canada. Draftsmen of America are greatly interested in what their brothers in the profession located in other parts of the world are doing.

The sketch published on Page 87 of our February issue was submitted by Mr. Merritt F. Farren. We regret the error in the spelling of his name.

The sketches presented this month certainly take the cake for variety in size and proportion. We have tried to make a well balanced layout of this material and it cannot be done. So we beg our readers to consider each sketch on its merits and don't be too hard on the editor who, to quote the late Henry Bacon, "has done the best he could with the material at hand."

R. B. Wills announces that he has opened an office for the practice of architecture at 8 Beacon Street, Boston, Mass. Thus does one of our faithful contributors stretch his wings and square away on the big job of life. Our best wishes go with him!!

Kenneth E. Legg, 1499 State St., Salem, Oregon, is anxious to secure copies of PENCIL POINTS for August and September, 1920. He will pay a good price for copies in good condition.

Fred J. Woodward, 1423 Harvard St., Washington, D. C., has copies of 1922 PENCIL POINTS complete which he will sell for \$3.00.

A. Wetter, 4042 No. Keystone Ave., Chicago, will sell PENCIL POINTS for 1924 complete.

Our free employment service is doing very well, thank you, having found suitable men for architects who needed them in all parts of the country and having located over a thousand draftsmen in positions. Here is an extract from a letter typical of many we have received.

"Also discontinue my advertisement as through same I have made a splendid connection in this city at a decided increase in salary. My ad in your publication was only one of a multitude of schemes which I used to make a connection and was the only one which brought anything worth while.

"For all of which I thank you."

We like this part of our work and hope that all architects desiring men as well as draftsmen seeking positions will advise us of their needs.

Renting Agent: "And of course the Laving-alcove is equipped with the new Super-Luxuria fixture."

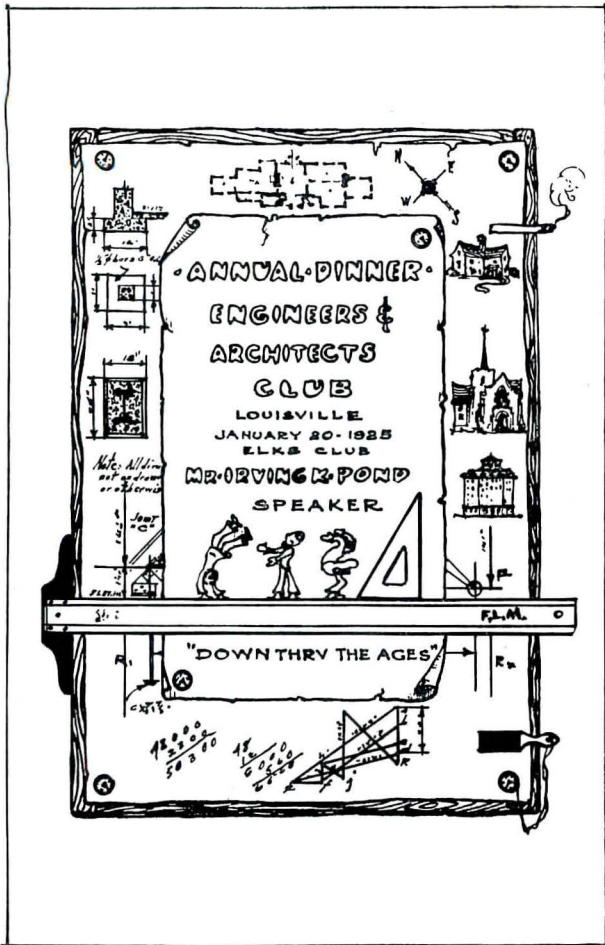
House Hunter: "And what is that?"

Renting Agent: "Telephone and radio combined with the bath tub, with built-in receptacle for tumbler and ash tray!"

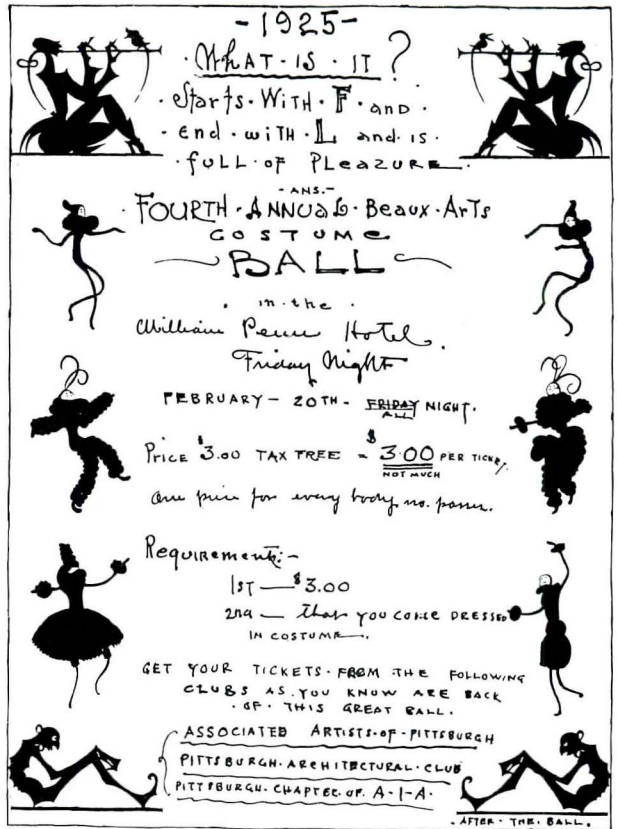


*The Competition Drawing, by R. B. Wills, Boston.*

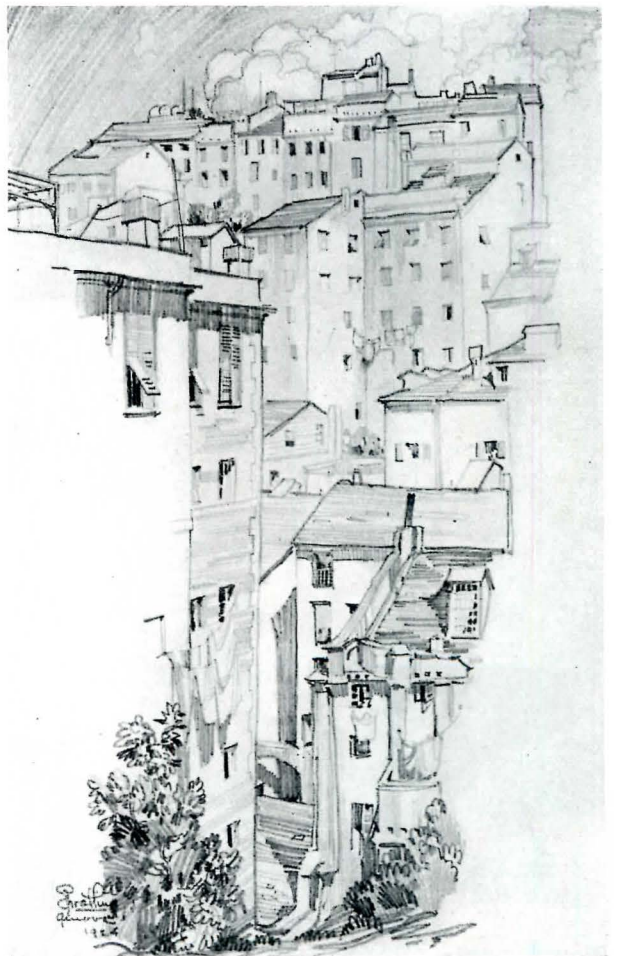




Program of Annual Dinner of the ENGINEERS AND ARCHITECTS CLUB of Louisville, at which Mr. I. K. Pond was speaker. The little figure on the T-square represents Mr. Pond's well known tumbling and gymnastic powers. The frontispiece was designed by Mr. Frederick L. Morgan.



Poster announcing Beaux Art Ball held in Pittsburgh, February 20th.



By Wm. P. Spratling.



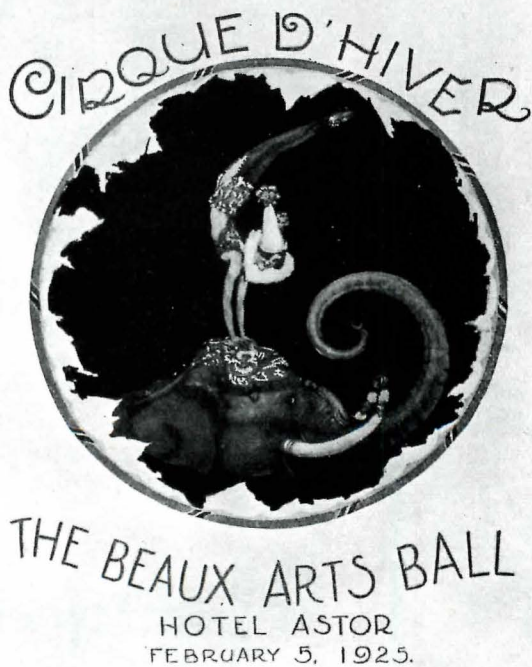
By George D. Conner.



## PENCIL POINTS



*Sketch by Wm. P. Spratling, made at Rouen.*



*Drawing by Willy Pogany for the Cover of the Program of the Beaux Arts Ball, held on February 5th in New York.*

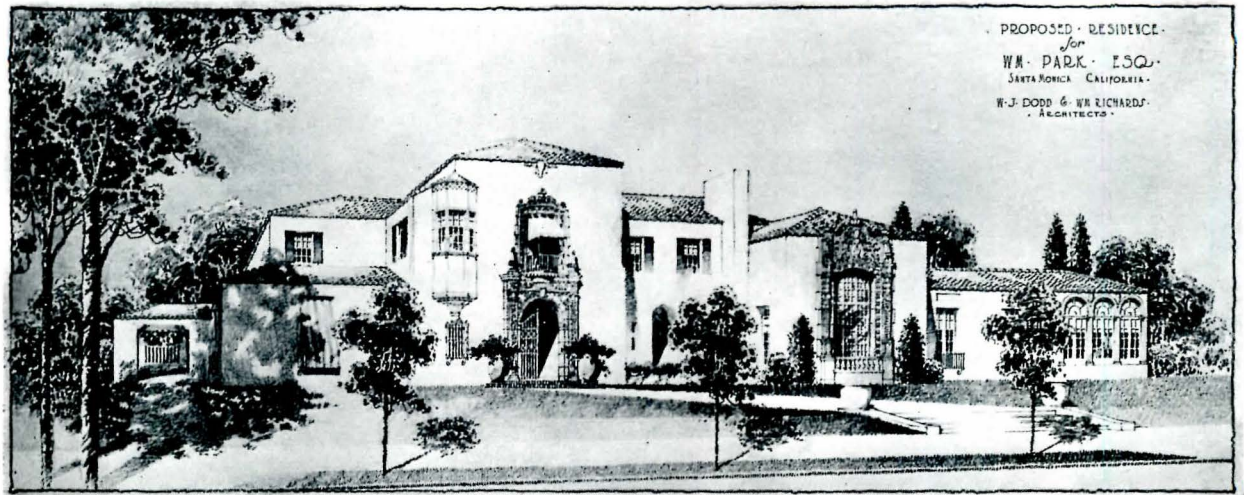
**Teachers Wanted:** For the school year beginning September 8, 1925, the Department of Architecture of the University of Cincinnati is desirous of filling the following new positions:

1 Assistant Professor of Architecture, (Major work in Design); 1 Assistant Professor of Architecture, (Major work in History of Architecture); 1 Assistant Professor of Architecture, (Major work in History of Medieval and Modern Art); 1 instructor in Freehand Drawing. Address applications or inquiries for further information to the Dean of the College of Engineering and Commerce, University of Cincinnati, Cincinnati, Ohio.

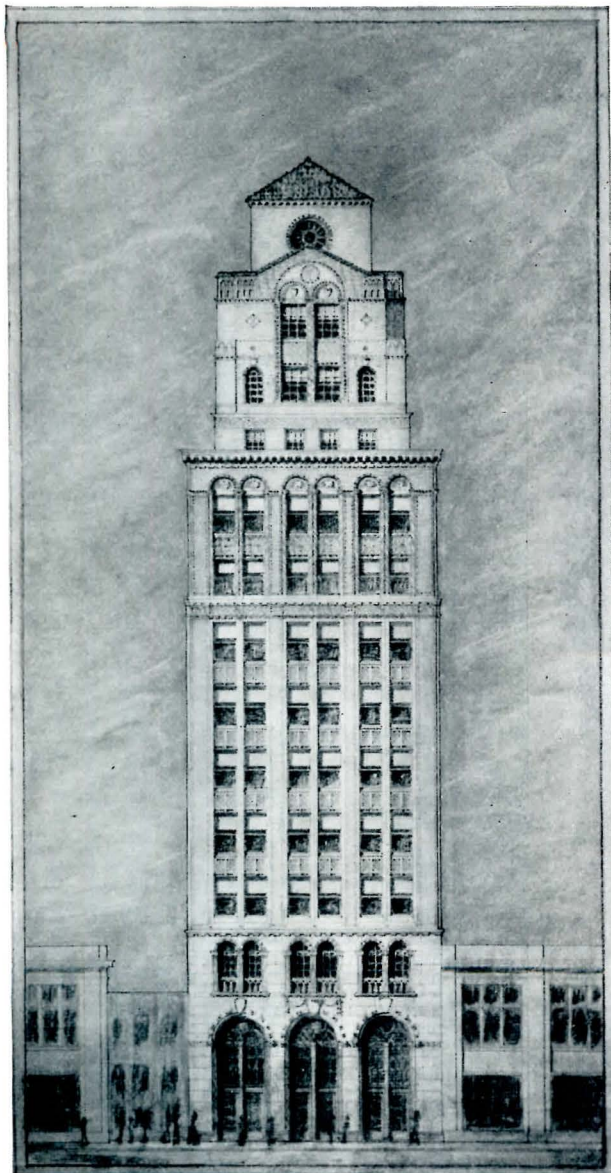




## PENCIL POINTS



*Rendering by Norman D. Alpaugh, Los Angeles.*



*Rendering by Joseph Jogerst. Bank and Office Building for Detroit, Mich.*



*Pencil Sketch on brief paper by George D. Conner, Chicago. Half timbered houses at Lisieux.*



FULL SIZE DETAILS FROM TRACINGS  
 IRON SCROLLS  
 CHURCH OF  
 S. M. SORDANI  
 ROME  
 1871

DETAIL OF SCROLL SHOWING  
 CONNECTION TO PANEL  
 DETAIL OF SCROLL SHOWING  
 CONNECTION TO PANEL

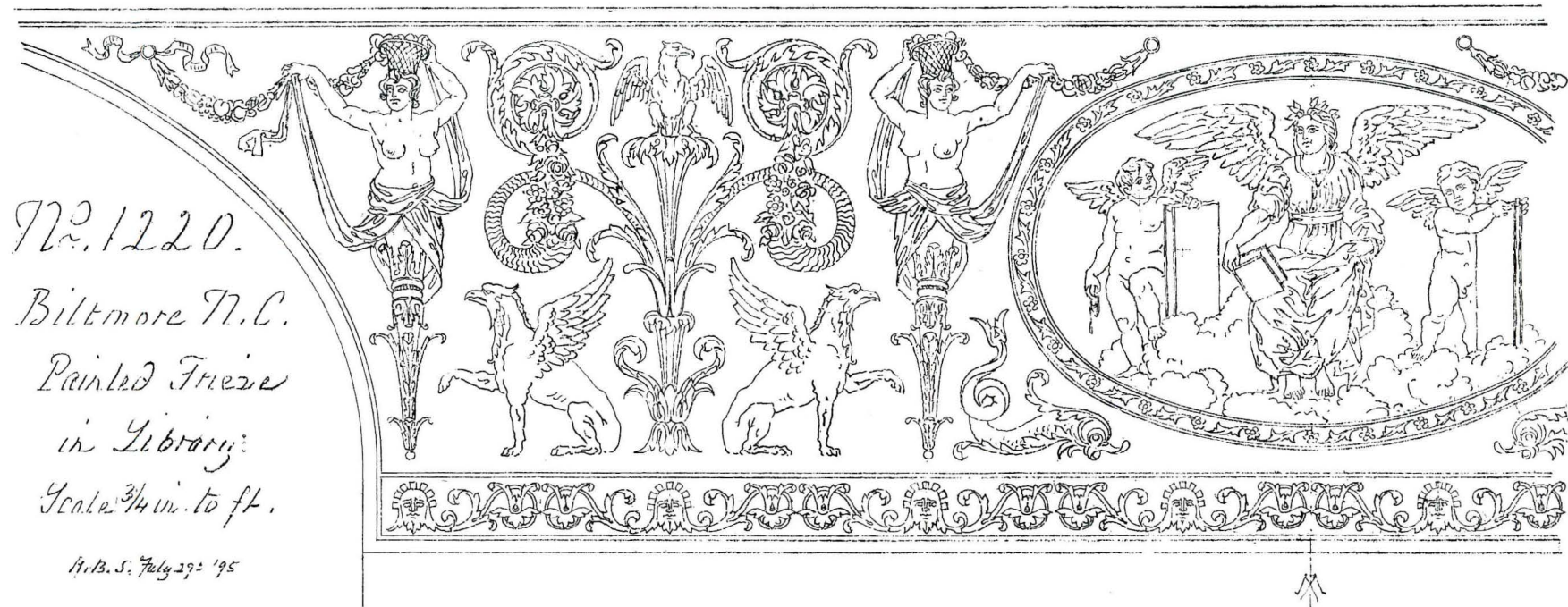
SECTION  
 1/2" = 1'

10/22/14

Scale of 3/16" = 1'

97





*Design for Painted Frieze in the Library of the Home of George W. Vanderbilt, at Biltmore, N. C. Hunt & Hunt, Architects.*



# THE SPECIFICATION DESK

## *A Department for Specification Writers*

### SPECIFICATIONS

By W. W. Beach

#### PART V.

#### THE MAKE-UP OF A SPECIFICATION

**A**N architect's general attitude toward the whole function of a specification is bound to be reflected in his production of such documents.

They can be treated either as a necessary evil to be disposed of as quickly as possible, or as an important but much neglected part of the office output; or they can be made to bear testimony to the care and attention to details of a well-directed organization.

In the progress of job after job through the workshop of any architect, it is inevitable that the specifications will be a repeated re-hash of those which have gone before. And, hovering in the back of the mind of every architect who has done much specification writing lies the hope, more or less well-defined, that, some day, enough of the body of the specification can be standardized and printed so that the adapting of the residue to each new building will not be the arduous task involved in preparing an entire specification for each one.

Whether or not this is feasible in any office is interdependent upon so many qualifying circumstances as to demand consideration from all angles and will be subject for a later chapter.

Choice of a form of compilation for one's specifications need be made dependent solely upon the size and character of work to be produced. We are confining our major dissertation to the specifications for a building costing something over a hundred thousand dollars. For such a structure as well as for those larger, we have pointed out the desirability of separating the subject-matter under various headings. These are tentatively listed in Part II.

It remains then to determine whether we will assign to each subject the least possible space, making for the utmost brevity, *en toto*, or whether we will have for our objective a comprehensive document from which nothing has been omitted which should have been introduced to make the thing complete.

There are arguments supporting either procedure.

Of course, a happy medium would be most desirable and certainly there is no good reason for deliberately making one's contract documents unnecessarily voluminous.

There are things to be said in favor of issuing skeleton drawings to bidders, leaving all detailing to the future. One reason given the writer by a firm of apartment house architects was "We are doing this work so cheap that we can't afford to spend very much for drawings and specifications. Our contractors know about what we expect anyway."

But is that architecture?

(It might not be amiss here to make mention of a certain phase in "Selling Architecture" which makes itself manifest in competing for services. This phase is a common one and well exemplified by the following experience. The writer was invited to appear before a church building committee and was employed at the A. I. A. rate, but signing of a contract was held up until the committee could check up his charge with that of others. The committee was told that it would have to spend twenty-five per cent more than the appropriation and the building could easily have been put up for that amount. But came another firm who took the work for half-price and with the assurance that the work could be done within the appropriation. It actually cost double the intended amount and solely because of careless planning and poorly written specifications. The church paid a thousand times what good architectural service would have cost and the committee was kept busy explaining how terribly their architects had misled them and how untrustworthy is the whole fraternity.)

Abbreviated specifications are as unsafe as abbreviated drawings. It is safer by far to make them too complete than to make too much effort to curtail.

Perhaps the most desirable form of specification is that wherein each major division is again sub-divided as to descriptions of materials and workmanship. This is at once applicable and advantageous in all divisions except that of excavating which is a matter of labor only.

The next succeeding division naturally starts with an elucidation of concrete, which subject is almost invariably treated in two parts, first disposing of the cement and aggregates before proceeding to direct the manner of their mixing and placement.

One has merely to carry the same scheme logically through the entire specifications and thus produce a sensible, complete, well-balanced document.

Pursuing the plan of making each division independent in itself, needing only the addition of the General Conditions and Supplementary General Conditions to complete the basis for a contract, it is necessary to definitely state, under the title of each division, just what is comprehended therein. The title itself can, in no case, be considered sufficiently inclusive or conclusive.

There follows then, after the division heading, a reference to the General Conditions and a statement of the items included under the heading, thus:

#### DIVISION C, FOUNDATIONS AND MASONRY

NOTE. The Contract and General Conditions of these specifications, including the Supplementary General Conditions, govern all parts of the work and are parts of and apply in full force to these specifications for Foundations and Masonry. The Contractor shall refer thereto as forming integral parts of his contract.

##### ART. 1. SCOPE OF WORK.

(A) THE ITEMS under this Division include:

- (1) All concrete foundations, including their reinforcement.
- (2) All common and face brickwork.
- (3) All waterproofing and dampproofing.
- (4) Such other work as is herein set forth.

These statements will serve to inform the interested party, in a general way, about what he may expect to find in this division but, for work of any size, these brevities should be elaborated. This can be done by making the foregoing more explicit or by following the first article by another wherein each subject, major and minor, is definitely enumerated without being described.

Inasmuch, however, as these enumerations are not complete specifications, the architect must guard against their being improperly interpreted as such. We proceed accordingly:

##### ART. 2. GENERAL DESCRIPTION.

NOTE. Under the headings in this Article, there is given for convenience of Contractors a brief mention, not necessarily complete, of the work included in this Division, full description of which will be found in the following specifications, beginning with Art. 3.

(A) CONCRETE FOOTINGS shall be provided under all walls, piers and columns of main building, boiler house, coal room and boiler stack. Reinforcement shall be furnished for footings, where called for.

(B) CONCRETE FOUNDATION WALLS shall be - - - and so on.

Article 3 immediately follows the General Description and is a complete specification of all materials needed to complete the work of this Division.

A peculiarity of specification writers (but which is, of course, not peculiar at all) is that each is most explicit and meticulous in describing those things of which he has most intimate knowledge, whereas those with which he is not on such close terms are likely to be somewhat slighted. Such weakness must be watched and carefully guarded against. A safe rule is to master the subject before attempting to go into its minutia as is demanded of one who presumes to specify it.

(To be Continued)



## LABORATORY SPECIFICATION AND CONSTRUCTION HELPS

By OTTO GAERTNER

*(Continued)*

REGARDING the outlets and connections inside the hood, much depends upon the kind of work and experiments to be done. Among the outlets required for some of the work may be gas, electric with direct and alternating current, vacuum, compressed air, hydrogen, sulphide and water. Depending upon conditions and the location of the hood, the outlets may be left beside the hood or in the apron and the gas, electricity, et cetera, may be brought into the hood by means of removable tubing or wiring passing through small openings at the bottom of the hood. The controlling valves and switches may be at the outlets or if the outlets are inside the hood, they may be placed in the apron. If there is sufficient draft in the ventilating flue from the hood, the small openings at the bottom of the hood will not be objectionable and they will permit air to enter the hood so that the fumes will be taken into the flue with the air rather than be permitted to escape into the room.

The enclosed hoods are sometimes made of wood and glass but soapstone or asbestos lumber and glass are more commonly used. They are built up of one inch thick soapstone, if soapstone is used. If wood and asbestos lumber are used these materials are respectively seven-eighths of an inch and one eighth of an inch thick. Sometimes the frames and main members are made of asbestos lumber of the sizes mentioned and the remainder is made of thinner material. In all cases the sash for closing the front is made of hard wood, preferably oak. The hood may have only one working space of about four feet in width or it may have any number. The working spaces may be separated by means of partitions but usually they are not. Each space, however, has its own lifting sash with mullions between it and the adjacent ones.

First the soapstone slab bottom or counter shelf is set with its top thirty-seven inches from the floor and then box mullions are erected to hold the weights of the lifting sash which is generally seven-eighths or one and one-eighth of an inch thick. Then the sides are fitted in and the fronts are applied. The sash opening in the front is generally made about twenty-eight inches high and the front above the sash opening generally extends about a foot higher after which the front slants back to the wall at any convenient angle. The top of the hood at the wall, however, should be at least eight feet high so as to have ample space to hold fumes before they find their way into the exhaust flue. The slanting part of the front has as much glass in it as possible and so have the sides. If the hood is made higher, the vertical part of the front may also have glass in it. All the glass should be wired glass; that which is to be looked through should be clear and polished, but that which is on the slant may be what is known as rough wired glass. The mullions must extend high enough above the vertical part of the front to enable the sash to lift high enough to leave the entire sash opening clear for working.

If the hood is a long one it should have several exhaust flue openings rather than one large one. The openings may be taken to a single flue provided that the flue is large enough and has sufficient natural or forced draft. Also there should be some way of taking off heavy as well as light fumes. Sometimes an elongated opening placed vertically in the rear wall of the hood will do, but it must be so arranged that the draft will not affect a Bunsen burner flame. When the hood is a long one and only one exhaust opening can be provided, the opening should be located near the center of the hood. Sometimes a baffle plate is set on the back wall to avoid this and at the same time to distribute the draft so as to more uniformly draw out the fumes and so as not to leave some parts of the hood unventilated. Such a baffle plate should be placed perhaps two or three inches clear of the wall and so as to be several inches from the top and bottom of the hood. The sides of the plate will reach to the sides of the hood. If soapstone is used for the baffle plate, it should be seven-eighths of an inch thick, fastened at the ends and have the bottom rest on the bottom slab by

means of extension pieces about four inches wide at the ends and center. If asbestos lumber is used for the baffle plate it may be of one-quarter inch or heavier stock, and being lighter in weight, depending upon its thickness, it may not need to rest on the bottom slab. This will leave the bottom slab clear for cleaning purposes. All asbestos lumber should be specified to be put together with countersunk brass screws with the heads covered with acid-proof cement.

If the baffle is thin and of a large area, it may be necessary to fasten it throughout its surface by means of blocking between it and the wall behind it in order to keep it straight and even. Such blocking should be of the same material and should be circular or have rounded edges so as to cause the minimum amount of friction with the fumes going to the exhaust flue opening. All edges and offsets in the flue opening should also be rounded for this reason. The amount of air for ventilating the hoods may vary. The writer knows of fume hoods without enclosing sash and having baffle plates as described above, which are operated with from fifty to seventy feet of air per minute passing over the counter shelf. In these cases the hoods are from four feet to eight feet wide and the ventilation of fume hoods takes care of the special ventilation in the laboratory rooms through the hoods with satisfactory results both for the hoods and for the rooms. Sometimes accessible sheet metal flap dampers are placed in the fume hood exhaust flues so that when the fans connected with the hoods are not in operation there will not be any back draft caused by the general ventilating of the rooms.

This is especially necessary if a separate room where hoods are provided for experiments using hydrogen sulphide, as the odor of these fumes is very difficult to be disposed of. A good way to overcome this is to have ventilation from the laboratory adjoining this room to pass through the hydrogen sulphide room by means of louvers in the door or grilles through the walls. There should only be access to this room through the laboratory adjoining it and not from a hallway. Special apparatus must be used to produce the hydrogen sulphide and a soapstone sink with soapstone shelves over it must be specified of ample size to accommodate the apparatus as well as a cabinet to hold the chemicals. The piping from the apparatus to the hoods should be of lead with small lead tube outlets in the hoods provided with shutoffs. The exact type of outlet is best left to the instructor in charge of the work as there is a large difference of opinion regarding the best types.

For specification purposes it may be stated that terra cotta tile flues twenty inches square have been successfully used for open front fume hoods with openings two feet ten inches high and eight feet long; flues thirteen and one-half inches square have been successfully used for hoods with openings two feet ten inches high and four feet long. The same proportions have been used for hoods of sizes between those mentioned. For the twenty inch square flues, the openings to the flues are generally about eighteen inches wide and twenty-eight or thirty inches high. For the thirteen inch square flues the openings to the flues are generally about eighteen or sixteen inches wide and twenty-four inches high. Having given the area of the flue, the size of the opening to the flue and the clearance between the back of the baffle plate and the wall should be so proportioned as to give at least the same air passage as the area of the flue. That is, a twenty inch square flue would have an inside area of about three hundred and twenty-five square inches. The flue area divided by the perimeter of the opening would give a least dimension of three and one-third inches clearance for the baffle plate. As spaces become narrower it is best to add a small percentage to allow for the additional loss by friction.

The length of the baffle plate and its distance from the wall being decided upon, its distance above the top of the counter slab and its distance below the top of the hood may be determined in the same way. Usually these distances are easily attainable in the detailing of the hood and they should be made a minimum of two inches to allow for easy cleaning. Conditions in respect to the hoods and their ventilation vary so, that it is best to study each condition carefully, weigh the facts with the best theory and practice and then to decide or modify the design as may be necessary to coincide with the judgment of the designer or those who are to use the equipment.

*(To be Continued)*



## PENCIL POINTS

### A SCHEDULE OF MATERIALS

**T**HE accompanying Schedule of Materials may be of interest to draftsmen and specification writers. It is brought into use when the drawings are far enough advanced to establish materials and finish and serves as a summary for the usual array of notes which appear as a set of drawings during their development. (See the *Schedule printed on page 102.*)

It also serves as a positive check for draftsman and specification writer when drawings and specifications are completed.

The Schedule may be made up in pencil on tracing paper for each job or a printed form made with sufficient headings and sub-divisions to cover a variety of operations. Prints are made for the draftsman and specification writer and changes noted in red as they occur.

The form may be elaborated and more finely subdivided for the various materials, such as stating the kinds of tile, marble, plaster, wood, etc., and further developed for exterior materials and finish.

The schedule is particularly useful in the specification work of a club house or a hotel where there is a great variety of rooms and finish and where notes or drawings are difficult to keep track of during the months of work between the start and completion of the drawings.

It has been found useful at times to incorporate the Schedule as part of the working drawings and specifications and specially valuable where the drawings were at a scale too small to make clear and legible material notations.

The main purpose of this schedule is to render possible a complete harmony between drawings and specifications and to eliminate errors of omission or duplication. When the schedule is agreed upon and checked against the drawings and specifications upon their completion one can be reasonably sure that errors have been reduced to a minimum.

ARTHUR M. DUNCAN.

### PUBLICATIONS OF INTEREST TO THE SPECIFICATION WRITER.

*Any publication mentioned under this heading will be sent free, unless otherwise noted, upon request, to readers of PENCIL POINTS by the firm issuing the publication. When writing for any of these items please mention PENCIL POINTS.*

**Greenhouse Studies.**—Series of renderings by Vahan Hagopian which will include plans, elevations, sections and structural features of all types of glass enclosures, solar bathing rooms, glass enclosed swimming pools, aviaries and children's glassed-over play houses as well as green houses of various types. A suitable binder will be furnished with the first mailing. Lord & Burnham Co., 30 East 42nd St. New York City.

**Textone.**—Handsomely illustrated brochure with color plate showing treatments of surfaces from Greek, Spanish, Early Italian, Early English, Gothic, Modern European, Colonial and Moorish houses. Textone specifications and seven samples of attractive textures reproduced in original colors in full relief. 8½ x 11. United States Gypsum Co., 205 West Monroe St., Chicago, Ill.

*Published by the same firm Oriental Stucco. Companion volume, same style, on exterior stucco with illustrations drawn from ancient and modern houses. Specifications and directions for use of Oriental stucco.*

**What Color for the Roof?**—New Brochure illustrated with colorplates showing Multicrome roofs with nine full page color plates showing attractive designs of small houses of varying types. A copy of the Richardson harmonizer is included as a guide in the selection of the best combination of house and roof colors. Richardson Company, Lockland, Cincinnati, Ohio.

**Architect's Handbook of Wiring Devices.**—A. I. A. file No. 31-C-7. Covers subject of modern wiring devices in condensed form. Compiled by an architect for architects. 8½ x 11. Hart & Hegeman Mfg. Co., Hartford, Conn.

**Jenkins Valves.**—Four convenient handbooks classified according to types of buildings. The series covers hotels, apartment houses, clubs, auditoriums, theatres, industrial plants, office and loft buildings, banks and stores, public buildings, schools, churches and community houses. Jenkins Brothers, 80 White St. New York City.

**Atlantic Terra Cotta.**—Monthly magazine for architects and draftsmen, Vol. 7 No. 6 is on the subject of Polychrome Terra Cotta illustrated with plates of early Italian examples. Detail of construction. Atlantic Terra Cotta Co., 350 Madison Ave., New York City.

**Color in Architecture.**—Brochure just off the press with 12 full page color plates after original color renderings by Rudolph De Ghetto. Also many other engravings illustrating the text, which is by Mr. F. S. Laurence. A valuable addition to the architect's library. 60 pp. 9 x 12. The National Terra Cotta Society, 19 West 44th Street, New York City.

**Concrete Data for Engineers and Architects.**—Technical bulletin covering important factors in making good concrete. Standard filing size. Portland Cement Association, 111 W. Washington St., Chicago, Ill.

**A Skylight That Ventilates.**—Data sheet with drawings and specifications. Standard filing size. American 3 Way-Luxfer Prism Co., 1303 So. 55th Court, Chicago, Ill.

**Graver Water Filters.**—Bulletin No. 501. Covers the subject of pressure filters both horizontal and vertical types. Complete tables of sizes and capacities. Standard filing size. Graver Corporation, East Chicago, Indiana.

**Anti-Slip Treads.**—Data sheets with drawings showing application of various types for different uses. American Abrasive Metals Co., 50 Church St., New York City.

**Dahlstrom Conduco Base.**—Covers subject of electric wiring distribution in the modern building. Full size details covering all applications. Specifications. 8½ x 11. Dahlstrom Metallic Door Co., Jamestown, N. Y.

**Cabot's Insulating Quilt.**—Catalog with detail drawings covering subject of heat insulation in modern buildings. Standard filing size. Samuel Cabot, Inc., 141 Milk St., Boston, Mass.

**Murphy's Blue Print Manual.**—Covers subject of space saving appliances for the apartment, hotel and home. Blue prints and complete data of all types of installations. Standard filing size. Murphy Door Bed Co., 22 West Monroe St. Chicago, Ill.

**Armstrong's Linoleum Floors.**—Detailed specifications and complete descriptions, 4th Edition. Loose-leaf portfolio with color plates, detail drawings and complete data for the specification writer. Standard filing size. 8½ x 11. Armstrong Cork Co., Lancaster, Pa.

**Sewage Ejectors and Pumping Machinery.**—Looseleaf handbook for architects, specification writers and engineers. Covers subject completely with technical data, many drawings, specifications, tables, etc. 8½ x 11. Yeomans Brothers Co., 1433 Dayton St., Chicago, Ill.

**Electric Elevators.**—Looseleaf binder and series of bulletins and blue prints covering the subject of elevators of all types for all uses. Watson Elevator Co., 407 West 36th St., New York City.

**Indiana Limestone Details and Data Sheets Nos. 9 and 10.**—Covers cornice details as applied to the steel frame construction. Standard Filing Size. 8½ x 11. Indiana Limestone Quarrymen's Association, Box 784, Bedford, Indiana.

**Stage Lighting Handbook, Catalog K.**—Complete reference of all equipment required in the lighting of theatres and other auditoriums, window displays, etc. 130 pp. 6 x 9. Universal Electric Stage Lighting Co., 321 West 50th St., New York City.

**Kewanee Boilers.**—Large catalog No. 80 covers boilers, garbage burners, hot water heaters, storage and pressure tanks and cast iron radiators. Standard filing size. arranged for architects, specification writers and engineers. Kewanee Boiler Co., Kewanee, Ill.

**Universal Safety Treads.**—Data sheet with practical information covering all types of safety treads for use in all types of buildings. Also data sheet specifically covering anti-slip metal tread type. Universal Safety Tread Co., 40 Court St., Boston, Mass.

**Underground Conduit for Steam and Hot Water Pipes.**—Looseleaf portfolio 6-A covering entire subject of carrying steam and hot water underground with minimum loss. Diagrams and complete specifications. Standard filing size. Ric-Wil Co., Cleveland, Ohio.

**Capitol Smokeless Boilers.**—Booklet for the specification writer containing complete information, also Capitol Boilers, Square Type, and Capitol Boilers, Winchester Type. Covers subject of these lines completely. United States Radiator Corp., Detroit, Mich.

**The Right Pencil in the Right Place.**—Booklet illustrating and describing complete Koh-I-Noor line with remarks on the selection of the proper pencil for all kinds of work. Koh-I-Noor Pencil Co., Inc., 34 East 23rd Street, New York City.

**Terra Cotta Specifications.**—Document covering the manufacture, furnishing and setting of Terra Cotta. Prepared in consultation with the Structural Service Committee of the A. I. A. and the Bureau of Standards. Standard filing size. National Terra Cotta Society. 19 West 44th St., New York City.

**Willson's Building Directory.**—Blue print 30 x 45 showing details, sections with complete data carried on the drawing for the information of draftsmen in detailing directory and bulletin boards for all uses. The Tablet & Ticket Co., 1015 West Adams St., Chicago, Ill.



SCHEDULE of MATERIALS															SHEET NO. ....																										
CLUB HOUSE					HUDSON, N.Y.					CONTRACT NO. 207.																															
MT. MERINO COUNTRY CLUB.										Date, NOV. 4, 24																															
NEWMAN & TRAVOR					ARCHITECTS,					CLAYTON, N.Y.																															
AMD.		FLOOR & BASE					WAINSCOT		WALLS		CEILINGS																														
Issued To - J.W.C. Plans.		CEMENT	TILE	WOOD	CORK	COMPO. TILE	TILE	WOOD	CEMENT	PLASTER	FACE BRICK	WOOD PAN.	PLASTER	ORN. PLAST.	WOOD PAN.	CORNICE PL.	WATER PROOF FLOOR	PCT. MLD.																							
" " M.A.C. SPEC.																																									
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Room No.	FIRST FLOOR																																								
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102	LIBRARY																		.	.	.	X	.		X		.		X	.											
103	LOUNGE																		.	.	X	.	.					X	.	X	.	.									
104	DINING RM																		.	.	X	.	.		X		X		.	.	X										
105	OFFICE																		.	.	.	X	.				X		X	.											
106	KITCHEN																		.	.	.	.	X			X	.	E.B.		X											
107	PANTRY																		.	.	.	.	X			X	X			X											
108	BILLIARD RM																		.	.	.	X	.						X	X	.	X	.								
109	LOCKER RM. - M.																		X	.	.	.	.			X	X			X											
110	LOCKER RM. - W																		X	.	.	.	.			X	X			X											
111	TOILET RM. - M																		.	X	.	.	.	X	.		X			X					X						
112	TOILET RM. - W																		.	X	.	.	.	X	.		X			X					X						
113	GOLF SHOP																		X	.	.	.	.	.				X		X											
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206	MAIN PORCH																			X							.	X						X		X					
207	TOILET ROOMS																			X				X			X			X						.					
208	BATH ROOMS																			X				X			X			X					X						
209	CLOSETS																			X				.	.	.	X	.	.	X	.	.	.	.	.	.	.	.	.	.	

A Schedule of Materials.  
(See Text on Page 101.)