PENCIL POINTS

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This Month and Next

Francis S. Swales will resume, next month, his series, started in March, on *The Architect and the Grand Plan* and will discuss in part 2 the history of planning cities in their entirety. Before going on in later installments to a consideration of the problems of today, Mr. Swales feels that a survey of the city planning of the past is essential as a foundation upon which to proceed. Some of the principles used in the past and which have stood the test of time will be shown to be still good today.

Lawrence Wright, a talented young English draftsman and designer, first became known to us by contributing to our Here & There & This & That department, at odd times in the past, several beautifully executed color block prints. Attracted by the evident skill of the artist as shown by these prints, we investigated and found that his work in various mediums made him an admirable subject for an article. Consequently, in May, we will have the pleasure of reproducing a number of his drawings and designs in conjunction with an article by his friend, Page L. Dickinson. We are sure that our readers will find his work of great interest.

Those who read Mr. Baskerville's discussion of contemporary styles in this issue will gain a good foundation from which to begin next month the reading of *Impressions of Modern Architecture*, a series of three lectures by Professor William Ward Watkin of Rice Institute, Houston, Texas. In the midst of the present confusion in the field of architectural design it is important that the young designer should develop for himself a sound philosophy and what Professor Watkin has to say will go far towards clarifying the existing confusion.

In March, 1930, we inaugurated the practice of starting off each issue of PENCIL POINTS with a reproduction of a fine architectural print—etching, drypoint, or lithograph. The first twelve of these frontispieces were so well liked that we decided to continue them for another year. This month we present a boldly dramatic lithograph by Ernest Born, one of a group of striking views of New York recently done for A. C. & H. W. Dickens, to be sold as fine prints. Last month's subject was chosen from among several recent drypoints by Chester B. Price and was, incidentally, the first of his prints ever to be published. We regret that the process of reproduction, good as it is, was unable to do full justice to this subject and that a great deal of the quality of the original was lost. Enough was held, however, to indicate that Mr. Price is to be reckoned with henceforth as an architectural print maker as well as a renderer.

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PARK AVENUE, LINCOLN BUILDING
FROM A LITHOGRAPH BY ERNEST BORN
Courtesy of A. C. and H. W. Dickens

PENCIL POINTS

Volume XII April, 1931 Number 4

Indirect Advertising for Architecture

By Natt Piper

Editor's Note:—*This is the second in a series of short articles written to aid architects to gain a merited recognition. The ideas advanced may or may not be original, but it is important and timely for architects to use these and other constructive ideas in individual missionary work.*

During the past year or so, architects have entered into many controversial arguments about group advertising, and much has been said on both sides of the question whether or not to advertise, collectively, by means of radio, newspapers, or other paid mediums. But for a moment let us leave this problem, momentous as it may be, to discuss a different kind of advertising: a type that has not received the thought or attention that it deserves, and which, for want of a better term, may be called indirect advertising; a type that has the merit of being without monetary cost to the architect, and with results that will become more satisfactory as time goes on.

It is probable that indirect advertising is best promoted through the newspapers and other publications. Newspapers, especially, stand ready to publish articles about architecture, or the architect's work, IF the said articles carry news value of interest, while magazines require less news interest and ask for more pictorial interest. But how often the architect is disappointed when he reads the reporter's "story." He believes that the newsgatherer has entirely lost the salient points; has garbled perfectly good architectural terms; has neglected to praise the architect sufficiently. When a glaring example of this occurs, however, it is often the architect's own fault. In giving the story he has not thought at all of the reporter's frame of mind. He has hastily jumped to the conclusion that his "name in the paper" was the important thing.

To give out a story hastily and without deliberation is poor business. The important thing is to study out the architectural news value and human interest. If you do not do this, the reporter will stress only the cost of the building; what the lot sold for; and the important firms that will occupy the building—all good enough in news value, but NOT in architectural news value. Just before calling a reporter, or before he calls you, make a few notes. It is essential that you provide notes and make proper suggestions, for you cannot expect this of the reporter. Beware of too much self-praise. Boast, rather, about the style you are using; tell where you got the inspiration to use this style and cite prominent contemporary or historical buildings in a similar style. Tell how the stone for the building is cut to your details, hundreds of miles away. Tell how the owner realizes that good design is an investment safeguard. Stress every point to impress the public that good architecture pays and that it results only from study.

Another example of this type of advertising is the use of construction signs. Still another is the use of neat brass plates, placed after completion. Many of us believe it is best to sign buildings thus. A plate on the side of a building will be noticed by hundreds.

In larger cities contact may be made with the rotogravure editor, who will give close attention to your story, and to the pictures that must accompany you in your visit to him. Ordinarily these pictures must be of good architecture in general, for, true to newspaper tradition, he will not give any one man a page. But captions, calling attention to good architectural detail, will be welcomed. Take large, glossy enlargements, because the roto force is impressed with large prints.

A group of architects can make arrangements to hold photographic exhibitions of executed work. Place them in the library galleries or in the halls of the high schools. Have all prints matted uniformly and hung attractively. Do not exhibit too many and, if the show is to hang for a month or more, change the entries and the arrangement every two weeks.

Lectures are a splendid means of advertising the profession indirectly. They may be lectures evolved by a Speakers' Bureau, with lantern slides, or more informal talks on architectural subjects by an individual.

In all public and semipublic contacts, advertising or otherwise, we must emphasize that ours is the only profession devoted to the best and most artistic in building. Though we have also full and sufficient knowledge of engineering and other factors, stress the idea that the architect is a businesslike, creative artist.

It has been proven that when architects enter too aggressively into the fields of finance, construction, and investment, they lose caste, and unwittingly develop a competition that is unethical and very damaging. In all direct or indirect advertising, let us sell to the public our real talents rather than our assumed capabilities. If one of us has interested himself and succeeded in real estate operation, let him take out a license and enter that business; he will make a greater success there because of his architectural training.

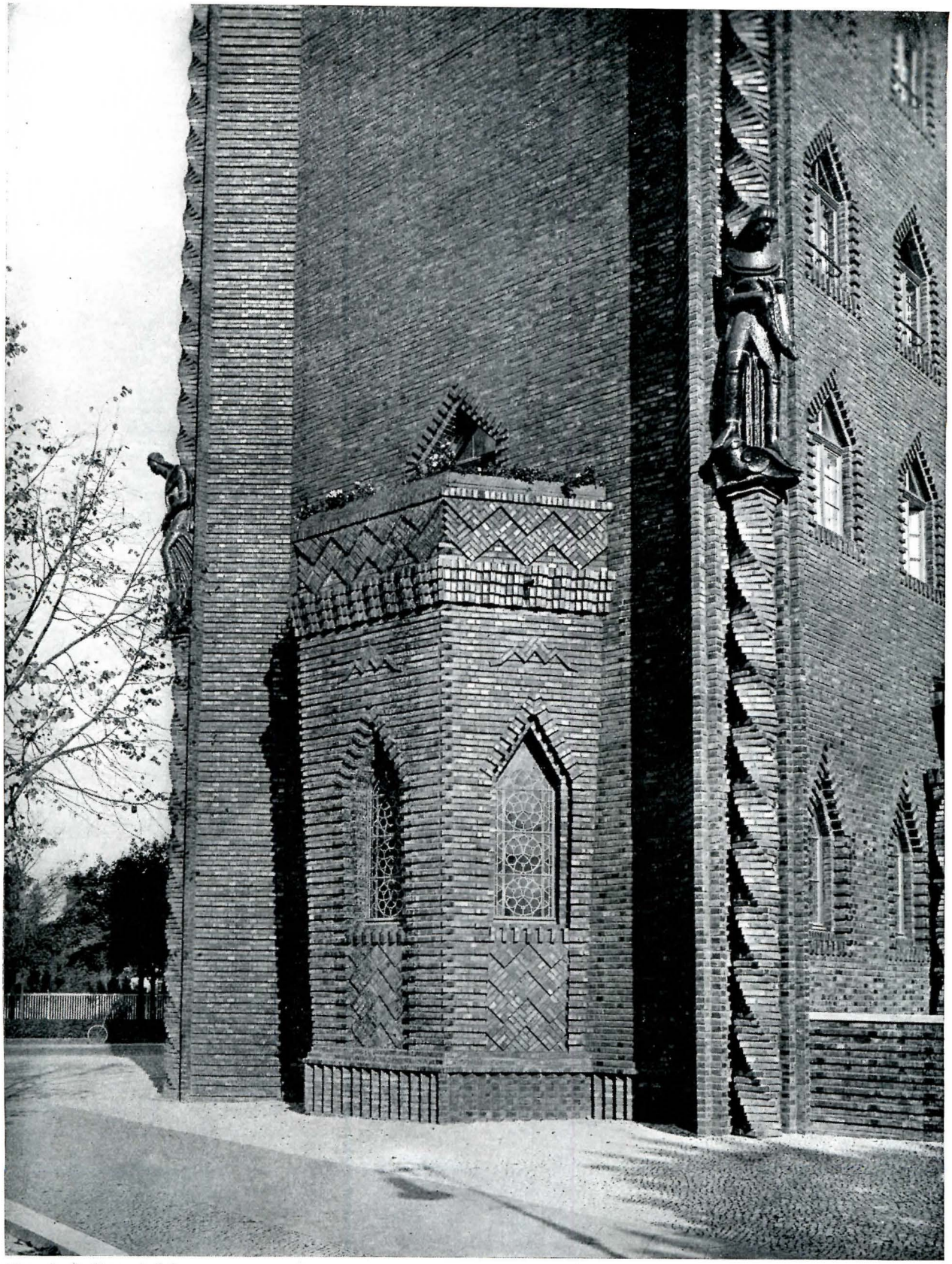


Photo by B. Kenneth Johnson

DETAIL OF EVANGELICAL CHURCH, BERLIN, GERMANY

FRITZ HÖGER, ARCHITECT

Contemporary Styles

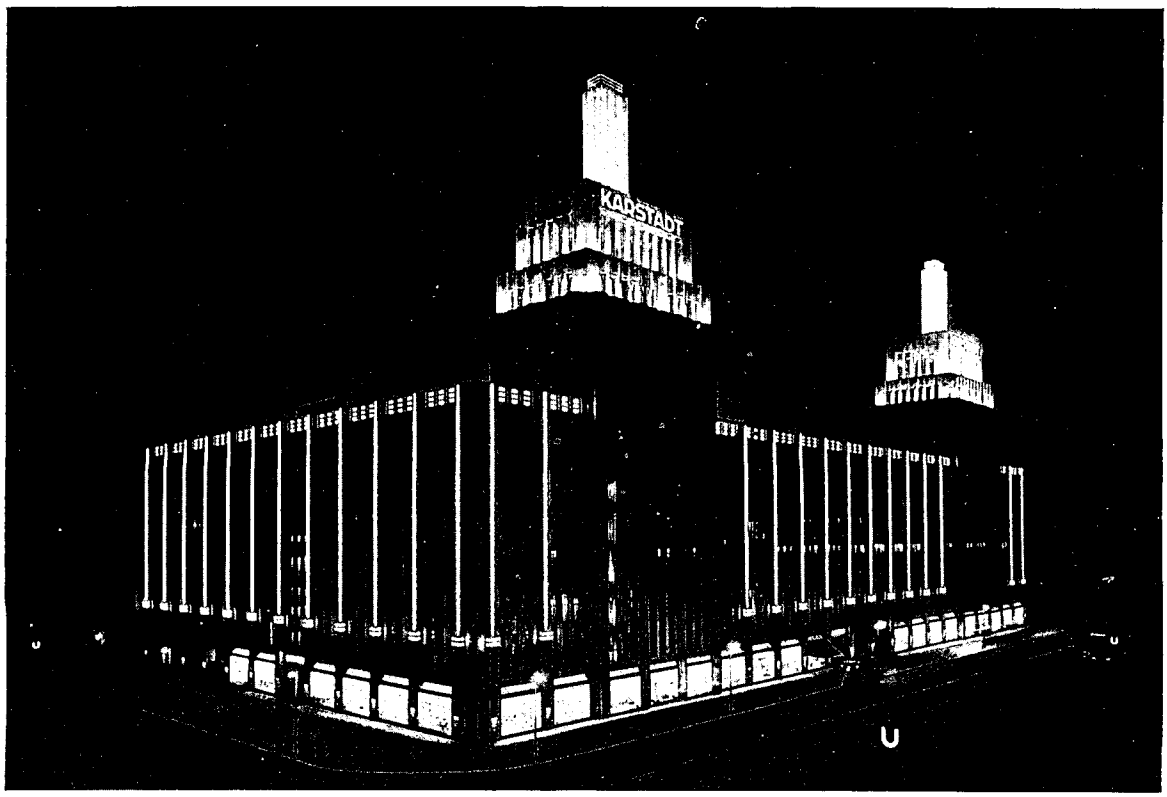
A Brief Discussion of World Architecture of the Present Day

By H. Coleman Baskerville

Among architects who take a serious interest in the artistic trends of the Twentieth Century, there is apt to be discussion of the relative merits of contemporary styles of architecture. Although in this time of rapid communication, it is impossible for one school to function in ignorance of its fellows, nevertheless the psychology, economic condition, and supply of material of one nation differ so widely from those of its neighbors that they are certain to produce distinct styles of architecture. It is, therefore, not amiss to consider these styles under the light of comparative criticism, in an attempt to classify them, to discover the significance of each in the Twentieth Century world, and to glean from each those elements that will assist American architects to solve their own problems.

Beyond doubt it was in Germany that the living spirit of modernism first made itself manifest in architectural form. And these forms began in the same way that all great artistic movements begin—that is to say, they did not begin at all. They were evolved and not invented. The contemporary German architecture is the direct and progressive development of the traditional national style. Very definite use of modern forms may be traced back as far as 1900. The rationalization and purification of these forms has proceeded in a steady, systematic Teutonic manner ever since. By 1914, this style was so well along its way to crystallization and so much a part of the national consciousness that, although the war halted all but necessary construction, the development of the German creative mind continued throughout the period.

As soon as the Treaty of Versailles was concluded, Germany went to work. As Lord Rothermere said in the *Daily Mail*, Germany may have lost the war (certainly a moot point), but now she set herself to win the peace. Her phenomenal success is apparent to the most casual visitor. Guns were beaten into tractors and multiplied in the process. At the outset she was hampered by French occupation of the Ruhr, but this obstacle was removed in the course of time, and production increased by leaps and bounds. Heavy taxation reduced the internal buying power and released produce for export. Capital was borrowed from the



NIGHT VIEW OF THE KARSTADT DEPARTMENT STORE IN BERLIN

KARSTADT DEPARTMENT STORE, BERLIN

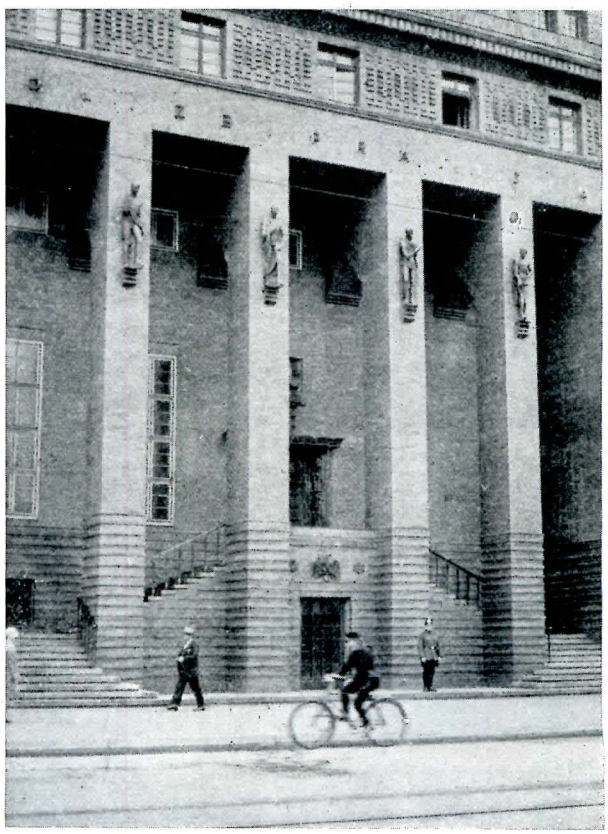
United States, and German brains, thoroughness, and energy completed the miracle.

On this rich soil of commerce, modern architecture grew and flourished and brought forth an hundredfold. Factories, apartments, exposition buildings, railroad stations sprung up throughout the republic. And they were all modern—some good and some bad, of course, but all modern. Not just because they wanted to build in the modern style, but because to the German mind at that period of its development any other style was impossible. Modern architecture had ceased being to them that fad designated by the English word "modernistic" and had become simply and solely *architecture*.

The first consideration in the study of any style should be the character of the people who create it. Fortunately, the broad characteristics of the German race are easily perceived. Their first law is law, and logic is their meat and drink. It would not be surprising to find them making love with a slide rule. The only limit to their soul-destroying efficiency is the number of dotted lines that have to be filled in—but one must admit that even this is done with admirable dispatch. They are thorough in their undertakings and thrifty in their habits to a degree utterly beyond the grasp of the American or even the British mind. Naturally tall, strong, fair-haired, and good-looking, they insult their heads with clippers and their waistlines with beer. Surely a large proportion of their poetry has its foundations (and good, solid foundations at that) in Münchener. Although not given to bursts of devouring energy or to much talk of the Glory of Labor or the Hymn of Work as is the habit of the American and the Italian, the German can certainly turn out more work, day in and day out, than the man of any other nationality. He is hardly ever brilliant, but he is always logical, and he is eternally doing something.

At the end of the war the Germans found themselves in urgent need of housing. The solution of this problem was undertaken by the erection of huge workmen's apartment houses, which attempt to furnish modern comforts with a minimum of expense. For the new industrial activity factories were required, and, since in Germany the architect and the engineer are one individual, these were all designed by men of æsthetic training. Department stores, railroad stations, hotels, exposition buildings, remodeled shop fronts, and finally even churches followed rapidly. A few small houses were built but no large ones, as private fortunes were destroyed by monetary deflation.

The limitations imposed upon the execution of this program were principally financial. There was not a pfennig to spend on decoration. From top to bottom, the building had to pay dividends. It was necessary to employ the cheapest permanent material, which in Germany was usually concrete. This was mostly left bare, and interiors became painfully plain. Much nickel and brass was used, and metallic color applied to the walls. Hardware and lighting fixtures were forced to assume the importance that sculpture had formerly held. Ceilings were generally low to save cubage. The dominating lines in exteriors were horizontal rather than the accustomed vertical, and



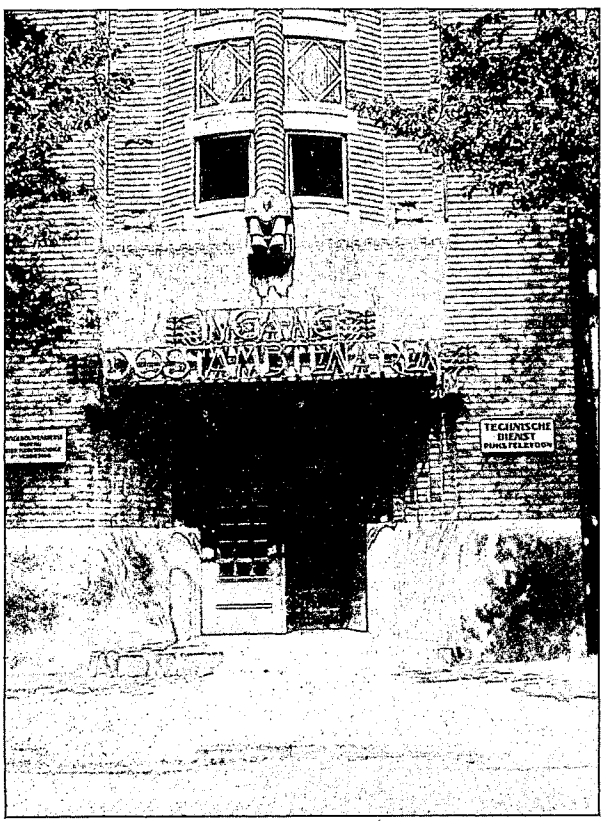
POLICE HEADQUARTERS, BRESLAU, GERMANY

grouped parellel lines were often used for emphasis. Color was employed with some violence.

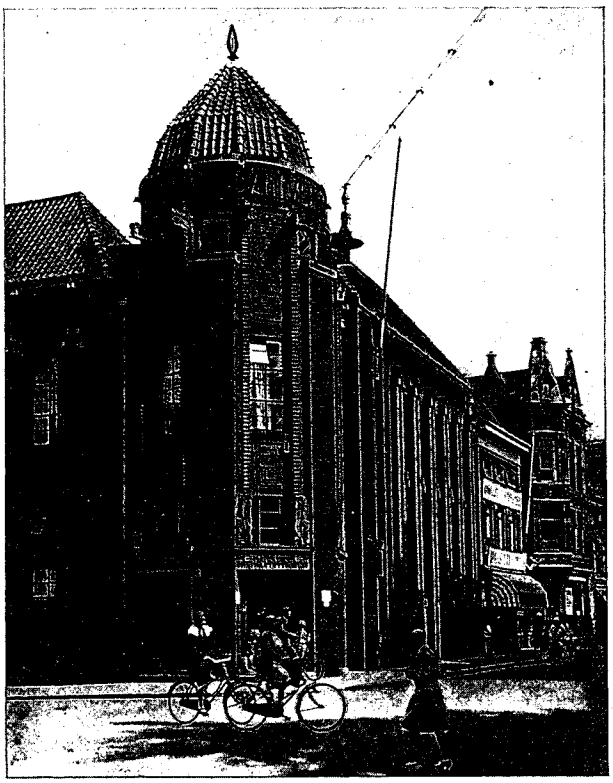
German taste is so far removed from American taste that we are apt to condemn their work for its ugliness—or, rather, for what we consider ugliness. In fact, there is little German architecture of any period whatever, that does not make the average American begin to blame last evening's lobster. At the same time, it is usually possessed of penetrating logic, economy, and imagination. Their use of lighting coupled with color seems to solve the difficult problem of modern decoration. Last of all, it must be remembered that no art can hope to do more than to express its own civilization. That German architecture surely does. In it are clearly set forth the character and history of a great people—but a people entirely foreign to our methods of thought and living.

Holland is similar to Germany in many ways, and its architecture is more closely related to the German than to any other. Like the German, it was evolved over a period of twenty years or so, and its origins may be traced back much further. Unaffected—or, rather, even enriched—by the war, they have developed their style more completely than the Germans. The Dutch are no longer in the throes of transition. Their style has arrived. They have chosen their new vocabulary of form, and are now exerting their energies toward the ultimate refinement of those forms.

The Dutch are a self-contained race. Usually slow, methodical, and hard working, they are capable of rare brilliance and occasional well controlled bursts



POST OFFICE, HAARLEM, HOLLAND
J. CROUWEL, ARCHITECT



A BANK IN HAARLEM, HOLLAND
J. CROUWEL, ARCHITECT

of enthusiasm. Trade is a natural gift with them, and their colonies have proved a source of great wealth. Nowhere in Holland is poverty apparent to the traveler, and many bags of good broad gold lie in their stolid counting houses. There exists a sense of essential solidity.

The types of modern buildings in Holland correspond very closely to those in America. There are office buildings, stores, banks, hotels, apartment houses, theatres—everything considered necessary for a thriving American city, except small houses. These are replaced in large part, as in Germany, by the great workmen's apartment houses. The Teuton does not seem to possess the passionate yearning for individuality that is such a driving force in American life.

In Amsterdam there is probably more modern work than in any other city in the world. Its principal characteristic is that it is built almost entirely of brick. This material has been handled in a most effective and masterful manner. In the fashioning of brick ornament an amazing variety of patterns have been evolved. Other ornament is executed in bronze, wood, and stone, and its form is largely of marine origin. The skyscraper has found little favor, and buildings are horizontal in mass and composition. Perhaps the fundamental difference between Dutch and German is that the Dutch is more sane and less daring.

At the end of the war, France suddenly awoke to the existence of modern German architecture. The *École des Beaux Arts*, which had been plowing along in the supreme confidence of mosaic plans and elevations festooned with more or less stationary cherubim

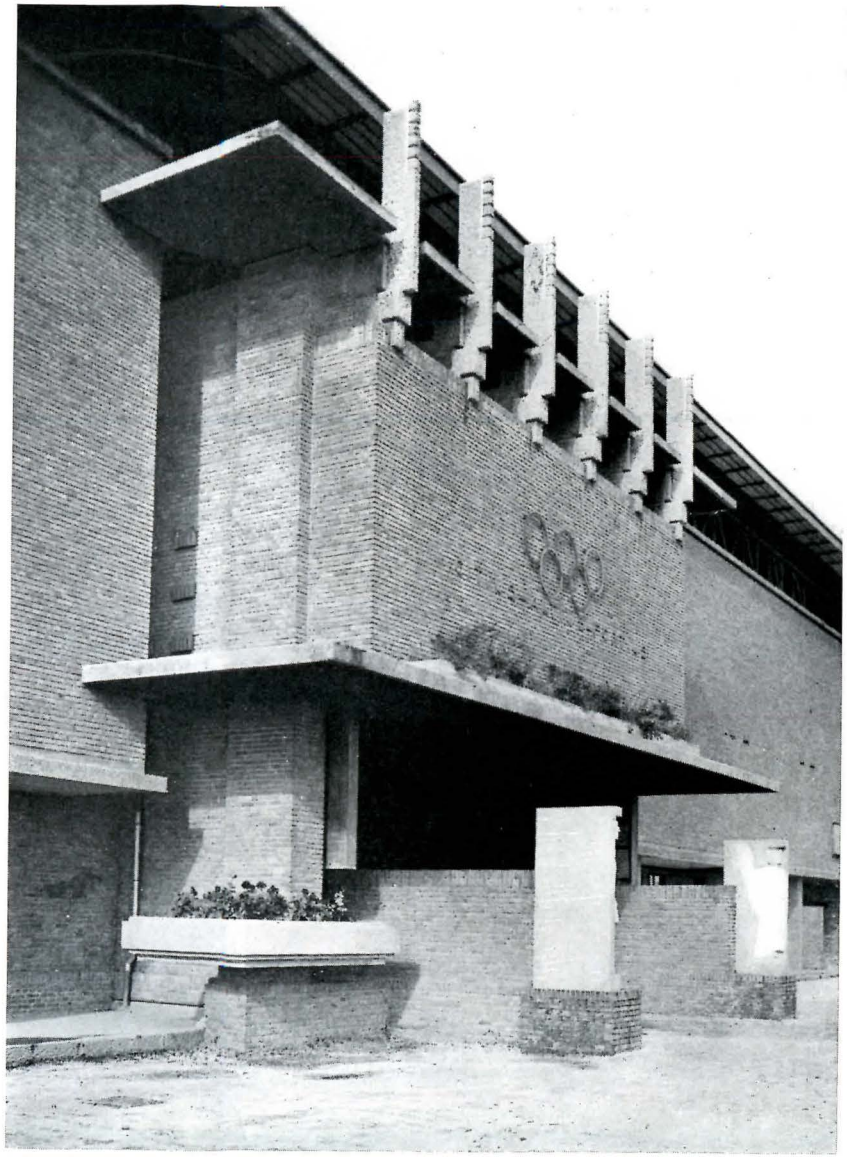


Photo by B. Kenneth Johnson

STADIUM AT AMSTERDAM, HOLLAND

JAN WILS, ARCHITECT

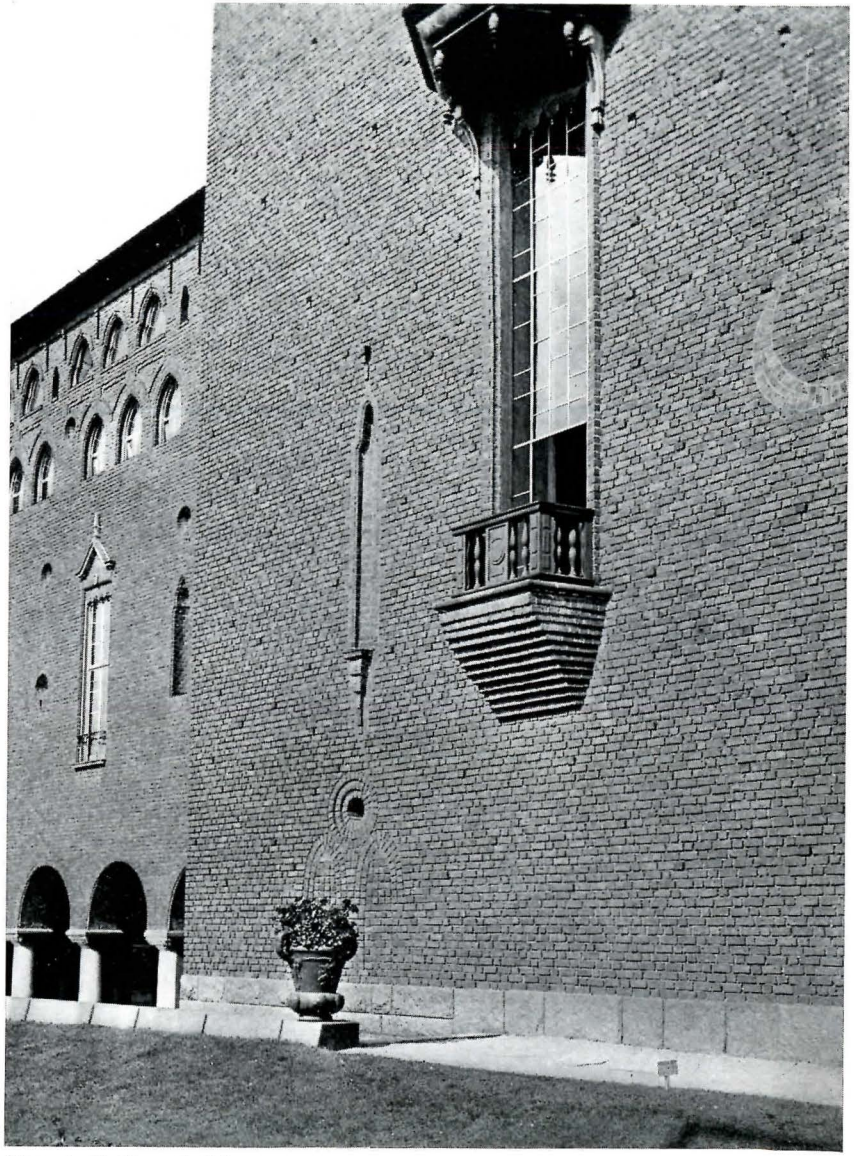
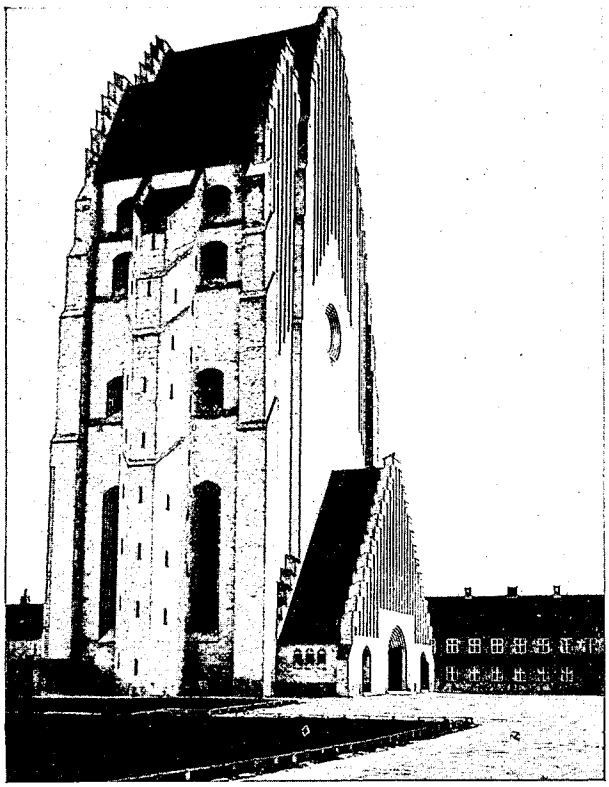


Photo by B. Kenneth Johnson

CITY HALL, STOCKHOLM, SWEDEN

RAGNAR ÖSTBERG, ARCHITECT



GRUNDTVIGSKIRK, COPENHAGEN, DENMARK
P. V. JENSEN KLINT, ARCHITECT

EINSTEINTURM, POTSDAM, GERMANY
ERICH MENDELSOHN, ARCHITECT

and seraphim, realized one fine morning that the Germans and the Dutch had developed a whole new system of form, of which the École knew nothing. Frantic activity resulted, and they set themselves with characteristic enthusiasm to develop a style of their own from those parts of Teutonic architecture which were compatible with Gallic taste. Combined, of course, with additions, corrections, and footnotes. The Exposition of Decorative Arts in Paris in 1925 was the result, and modern architecture has been firmly established in France ever since.

Naturally, the style evolved was in accord with the character of the French people; a character that is perhaps discussed more than any other in the world. Excitable, enthusiastic, clever beyond all other nations, but guilty of few moments of sanity, selfish to miserliness at one moment and throwing away their lives for an idea at the next, making a religion of gayety but subject to periods of suicidal depression, they inevitably developed a brilliant but contradictory style.

The housing condition was not as bad in France as it was in Germany. The devastated area was rebuilt out of the American loan so rapidly that no time was given to design it. Apartment houses and a few churches were built from necessity, and theatres, casinos, and shop fronts were built from force of fashion. For the new style had overnight become chic. The new forms spread to women's clothes and cigarette lighters and cocktail shakers. The long-haired boys in Montparnasse took up the cry, and all the bally-hoo of *l'Art Moderne* was on.

A great deal of work resulted, some of which was just froth and some was darn good. For the first time in Twentieth Century architecture a sort of taste comprehensible to our sensibilities was allowed to govern design. A profound influence was exerted by le Corbusier, who had studied in Germany. The French style was certainly pleasanter to look at than the German, but it was not so completely logical, and it had an impermanent, paperish look about it. It was unable to avoid ornament and proceeded to hang a lot of frills on the chaste and brutal German. Stucco became the principal exterior material, and all sorts of spirals and volutes and random assortments of geometrical forms sprouted in likely places.

The bulk of modern Scandinavian architecture falls into three divisions: Swedish, Danish, and Finnish. Although the history of these nations is closely associated, and they can all understand each other's languages, there are distinct differences.

It is difficult for the author to give an unbiased opinion of the Swedes, because personally he prefers them of all the peoples of Europe. There seems to exist a bond between Swedes, Australians, and Americans that makes it possible for them to understand each other no matter where they meet or under what conditions. The Swedish are strong and clean, thrifty and energetic, intelligent and reserved, scrupulously honest and unfailingly reliable. The only adverse criticism generally spoken of them—that they are cold-blooded—is hard to believe.

Modern buildings in Stockholm are not very numer-

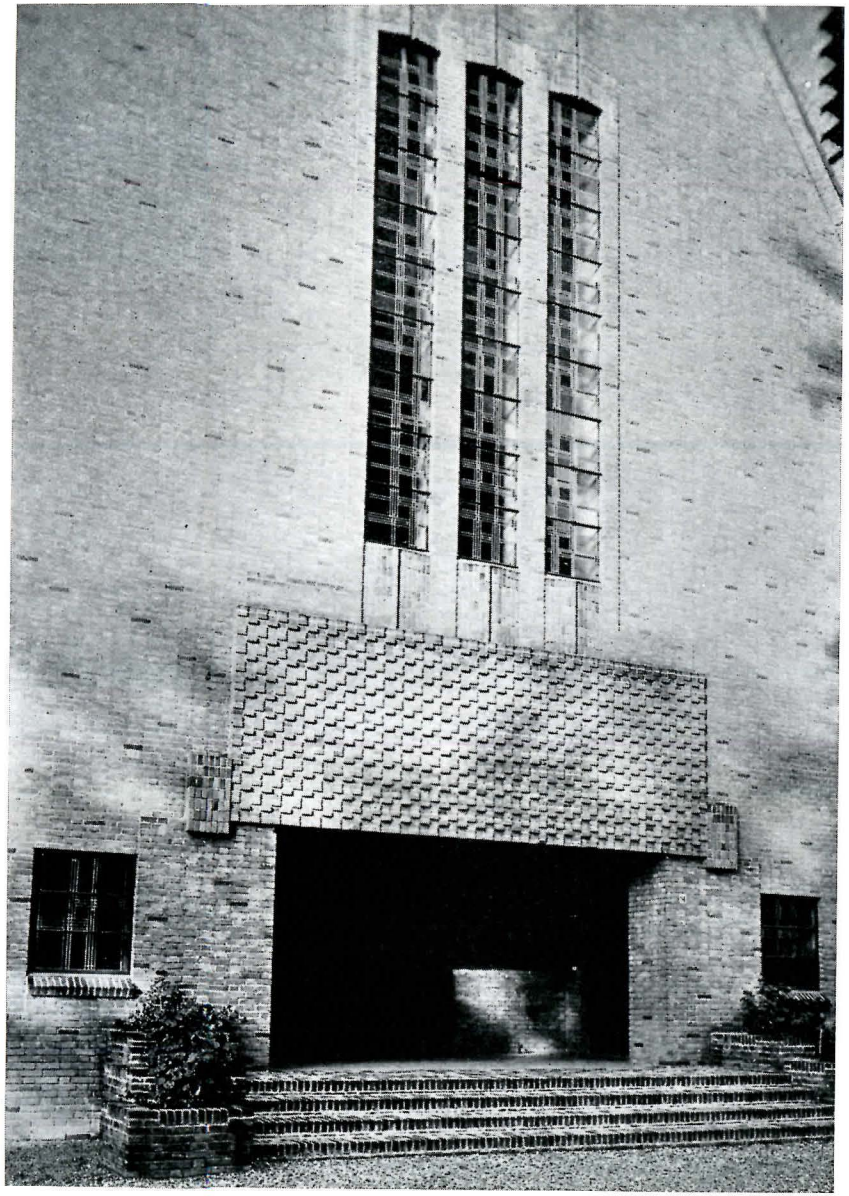


Photo by B. Kenneth Johnson

JULIANA CHURCH, APELDOORN, HOLLAND

GEBRÜDER MENSINK, ARCHITECT

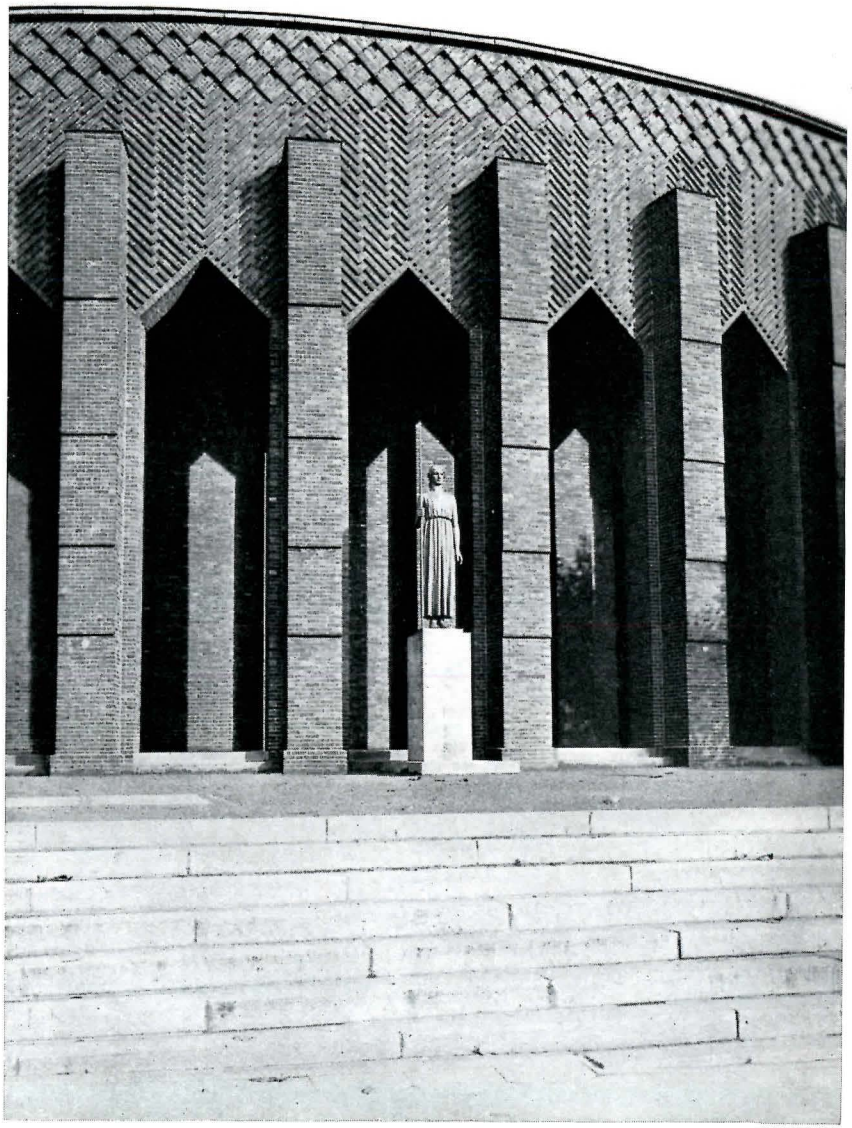


Photo by B. Kenneth Johnson

DETAIL OF PLANETARIUM, DÜSSELDORF, GERMANY

WILHELM KREIS, ARCHITECT

ous, in reality being limited to some half dozen. But their quality is high enough to make recompense for its scarcity. The principal structure is the famous City Hall by Ragnar Ostberg. In this one magnificent building are included all the fine qualities of Swedish architecture.

Primarily, the City Hall is not modern. That is to say, it is not modern in the same sense as the modern architecture of other countries. It does not attempt a single new form. But it is modern in the sense of having been completed in 1923 and in being (according to the judgment of the author) the most living, virile thing constructed in Europe since Chartres Cathedral. Professor Ostberg, instead of discarding traditional forms, has improved upon them and imparted to them a new and poignant meaning. There is not one bit of ornament in the whole huge building that has not some definite significance in the history of Stockholm. And although the Swedish forms are predominant and constitute the unifying element of the whole composition, the architect has not hesitated to mix in any style that suited his fancy. There is a strong flavor of Venice about the great waterfront arcade, and an equally strong one of Florence about the Blue Court. Some of the interiors have even a decided English Georgian look to them, and the gilded pinnacles on the roofs are oriental indeed. The masonry is of a rich cherry brick, and the exterior woodwork is either white or green with gold accents. Throughout the building is exercised a most subtle but daring color sense, culminating in the grand diapason of the Golden Hall—a vast room whose walls and ceiling are completely covered with gold mosaic. In a successful revolt against Twentieth Century machine-made art, the architect has made everything a trifle out of square. Openings do not center over each other, one of the long row of columns is hexagonal, the dolphins over a door in the Blue Court both face to the right, none of the axes in the garden carry through, nothing is symmetrical and everything composes. It is a complete collection of all the things we were told in college not to do. Through all this medley there persists a powerful sense of single-minded purpose, of strength and clear thought, of a clean masculine sort of sweetness, and of a shy mysticism.

Danish architecture falls halfway between Swedish and Dutch. The Danish longings to be violently modern are combined with lasting traditions of a seafaring past. Judging from an exhibition of drawings seen in Copenhagen, it would appear that the Danish designs lack maturity, in comparison with American standards. It was surprising to find that this exhibition was not entirely of student work. The actual buildings are not many, and all are cramped by a feeling of north country leanness. The most spectacular example is the unfinished *Grundtvigskirk* in Copenhagen. Although decidedly impressive from in front and powerful in scale, the idea of an organ façade proves a bit silly considered in the cold light of reason.

Finnish architecture differs considerably from its Scandinavian cousins. Fundamentally, the difference is racial, the Finns being originally of Magyar extraction. Their language (which is very difficult and not much used) bears this out, as it is similar in syntax and roots to Hungarian. Physically, the people are shorter, stockier, darker than the Swedes.

Finnish enthusiasm for contemporary architecture is almost entirely due to the splendid work of one man: Eliel Saarinen. His railroad station at Helsingfors is perhaps better known to Americans than any other modern European building. It is certainly logically evolved in both elevation and plan. Unfortunately, it is not as impressive in actuality as it is in a photograph. It is not very large, and its mechanical preciseness, although impeccable in theory, is rather tiresome in fact. The interior suffers from cheap materials.

Finnish architecture serves as the connecting link between the European and the American Styles. Saarinen's epoch-marking design for the Chicago Tribune Competition was the real beginning of our Twentieth Century American architecture, and his subsequent work in the United States has been a constant inspiration to our architects. He it is, more than any other one man, who is responsible for the simple vertical grouping of windows in our tall buildings. For this reason, Finnish architecture seems to us more reasonable and in better taste than that of any other foreign school.

The origins of modern architecture in America have been derived largely from a study of foreign contemporary styles. The influence of Finnish work has been considerable. The French influence, through our traditional affectionate connections with the *École des Beaux Arts*, has made itself felt even more. The war caused an intense antagonism to all things made in Germany—a feeling which is only now beginning to be modified—that effectively precluded all use of Teutonic forms.

Two men, however, in America had the wit and the nerve to embark on work of a modern character on their own initiative, and long before the people of the country were prepared to accept this sort of design. Of all architects in the United States, Frank Lloyd Wright is probably most admired in Europe. Certainly his work is fully illustrated in all foreign publications, and is too well known in this country to require comment here. The other man was Bertram Grosvenor Goodhue; a dreamer, a visionary, and an ardent mediævalist. Throughout his life he strove to interpret the Middle Ages to the American people. At first he was content to translate the forms, then he learned to translate the feeling, and finally, in the last years before his tragic death, he translated the thought. He approached the Twentieth Century State Capitol with the same clear-minded simplicity with which the stone master of the Middle Ages approached the Cathedral. In a letter to Paul Cret, he wrote:

"I hold that while architecture should represent a decent reverence for the historic past of the art, that we should only ignore our rightful heritage for the most compelling reasons, and that one of these compelling reasons is the modern invention of the steel frame, or reinforced concrete, construction: that this form of construction does abrogate practically all

PUBLISHERS' BOOTH, COLOGNE EXPOSITION

R. RIEMERSCHMID, ARCHITECT

Imitation marble, black top with gold letters, metal and glass spire.

known forms—at least definite constructive forms such as columns or arches; that it is not enough that a building should be beautiful, it must also be logical."

So much for the beginnings of the new movement in the United States. The influences which have acted upon its development are those which have moulded our national character; mass production, superlative speed, enthusiasm that balks at no problem of size or construction, unequaled engineering genius, hard work and hard materialism, a sufficiency of money, a certain amount of honesty mixed with the most complete lawlessness the world has ever known, an utter lack of thrift, and an impulsiveness that leads us to do many things first and think about them afterward.

The greatest and most typical development of our architecture is the skyscraper. Springing from a necessity imposed by real estate values in Manhattan, it offered a problem that fired the American imagination. The first step was the solution by shelf angles of the structural difficulties of fastening masonry curtain walls to a steel frame. The next step was the proof, in the Woolworth Building by Cass Gilbert, that a vertical treatment of the resulting mass was more satisfactory and unifying than a horizontal treatment. Then set-back laws were enacted to prevent these vast structures from taking light and air from the street below and from their neighbors. These laws forced a return to three-dimensional design (practically unknown since mediæval times and the beginning of the use of drawings for the erection of buildings), for a pyramid can be seen from all sides, whereas a row of tightly packed cubes can be seen from only one. It also produced a mass that refused to be fitted into any of the traditional stylistic envelopes. It forced an approach from a standpoint of pure logic and absolute design. It mercilessly exposed those architects who copied their elevations out of books.

Results have been good. The mass of the tall building is to many of us the most inspiring creation of our age. It is a vast concept boldly realized. It is coldly logical, it brings in dividends, and it satisfies the spirit. In detail, it hardly analyzes so well. We still want to embroider a machine with exotic sculptural growths here and there. In the more recent work, fortunately, this shows signs of giving place to greater simplicity and to the use of geometrical forms much more in keeping with such a mathematical civilization.

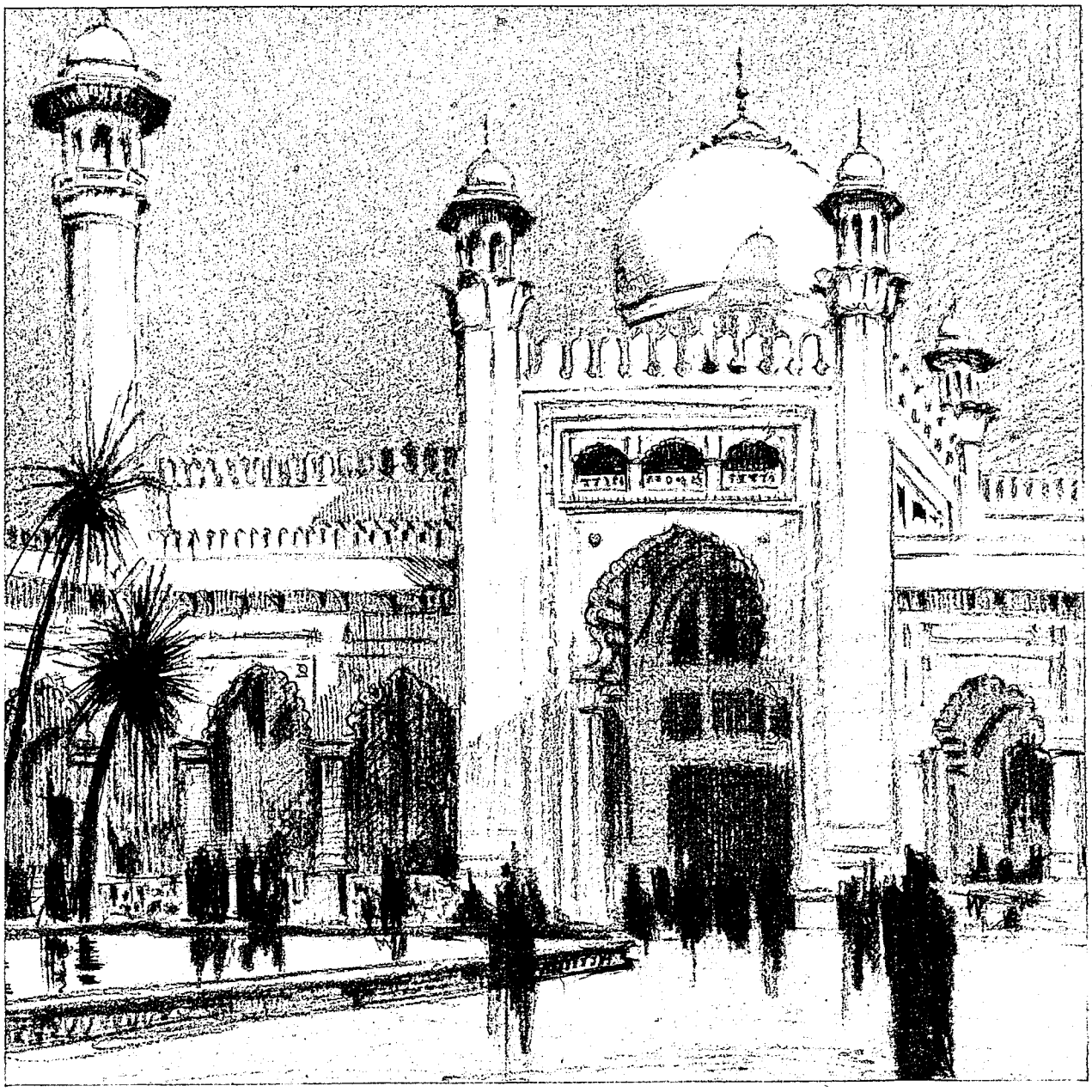
But in the private residence we have failed most miserably. Our only excuse is that it is the hardest of all problems to solve in the new style. But solved it must be, for living conditions have changed in the residence as well as the office. The difficulty lies in making the modern style soft enough and intimate enough to live in. A man may prefer to have his business letters mimeographed, but he hardly wishes his children produced that way. Just as surely as that we gather in ever-increasing numbers for the transaction of our affairs, just so surely do we desire privacy and individuality for the organization of our families. Ralph Walker says, in the publication of the Metropolitan Museum of Art which deals with the 1929 Exhibition of Contemporary Design: "The business of a room is first to enclose and house the body, and then to afford escape for the spirit through the mind." To accomplish simultaneously these two things is difficult in our new style, but accomplished they must be. The time has passed for building nice little fifteen-thousand-dollar houses with four bathrooms, two telephones, an oil furnace, a radio, and a garage in the "Mission Style" or the "English Style" or the "Colonial Style."

If these styles are so readily interchangeable, it is perfectly evident that no one of them is essentially right. No one of them solves the problem *absolutely*. To solve the problem absolutely, a new type must be evolved by the exercise of logic applied through the medium of taste. In it there must be no element that does not perfectly fulfill its function, and no element that is harsh or ugly. Let us hope that we shall soon discover this ideal.

Editor's Note:—*The photographs used with this article, unless otherwise noted, were contributed by the author.*

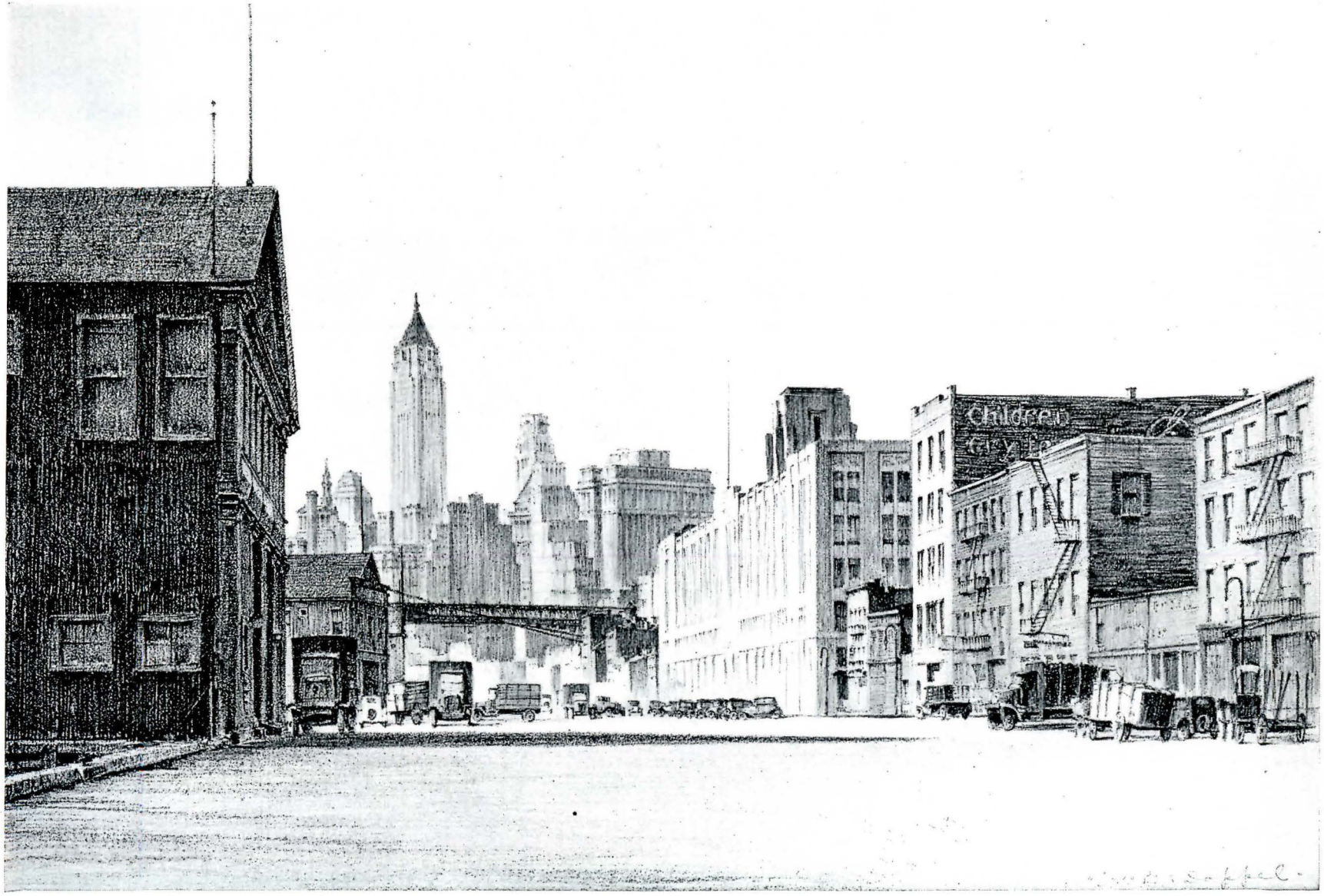
A Portfolio of Sketches

Done with Various Techniques by Divers Artists and Grouped Here as a Stimulus to Outdoor Sketching



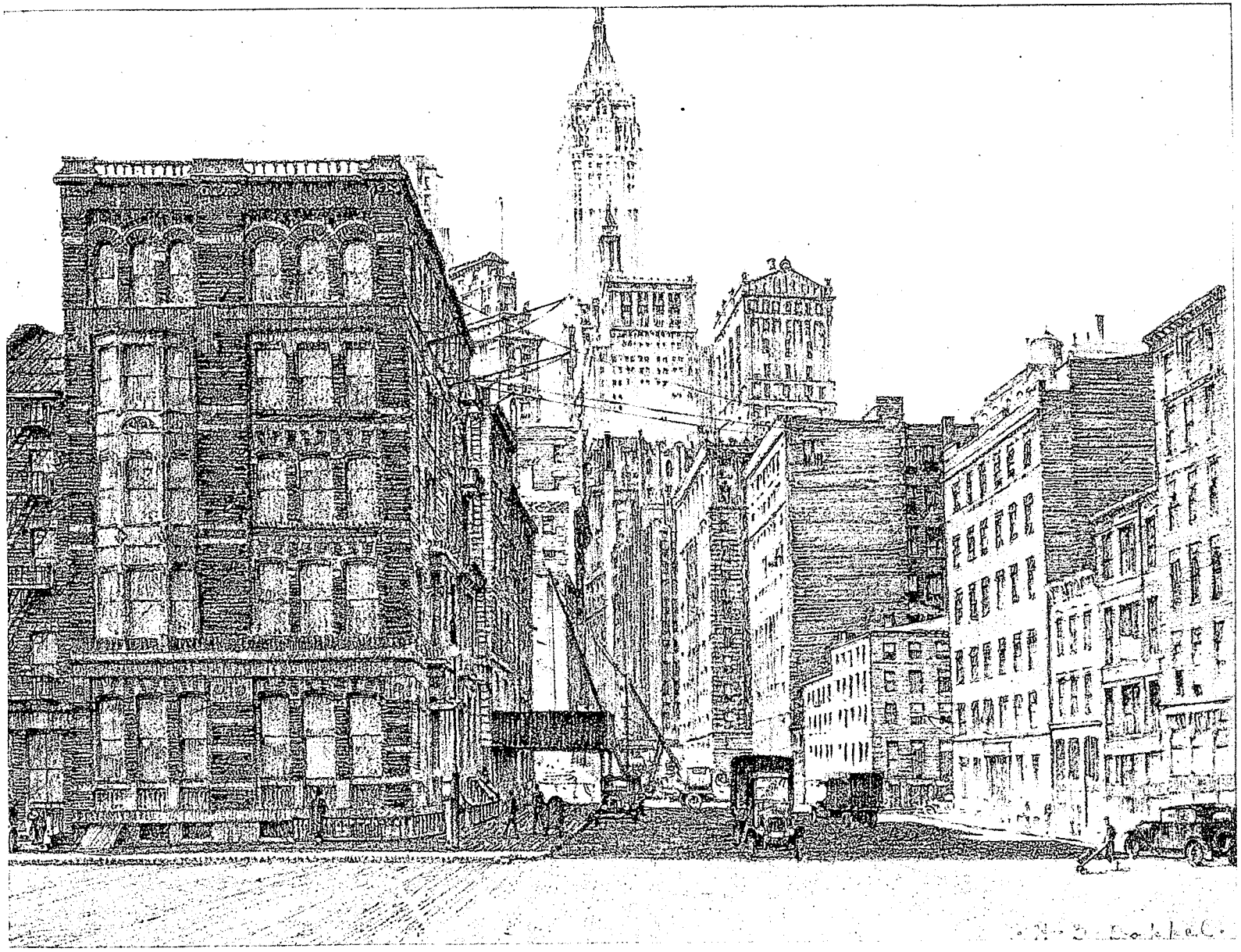
FROM A PENCIL DRAWING BY OLIVER BEDFORD

WEMBLEY EXPOSITION



FROM A PENCIL DRAWING BY H. B. DOPPEL

VIEW FROM UNDER MANHATTAN BRIDGE AT SOUTH STREET, NEW YORK

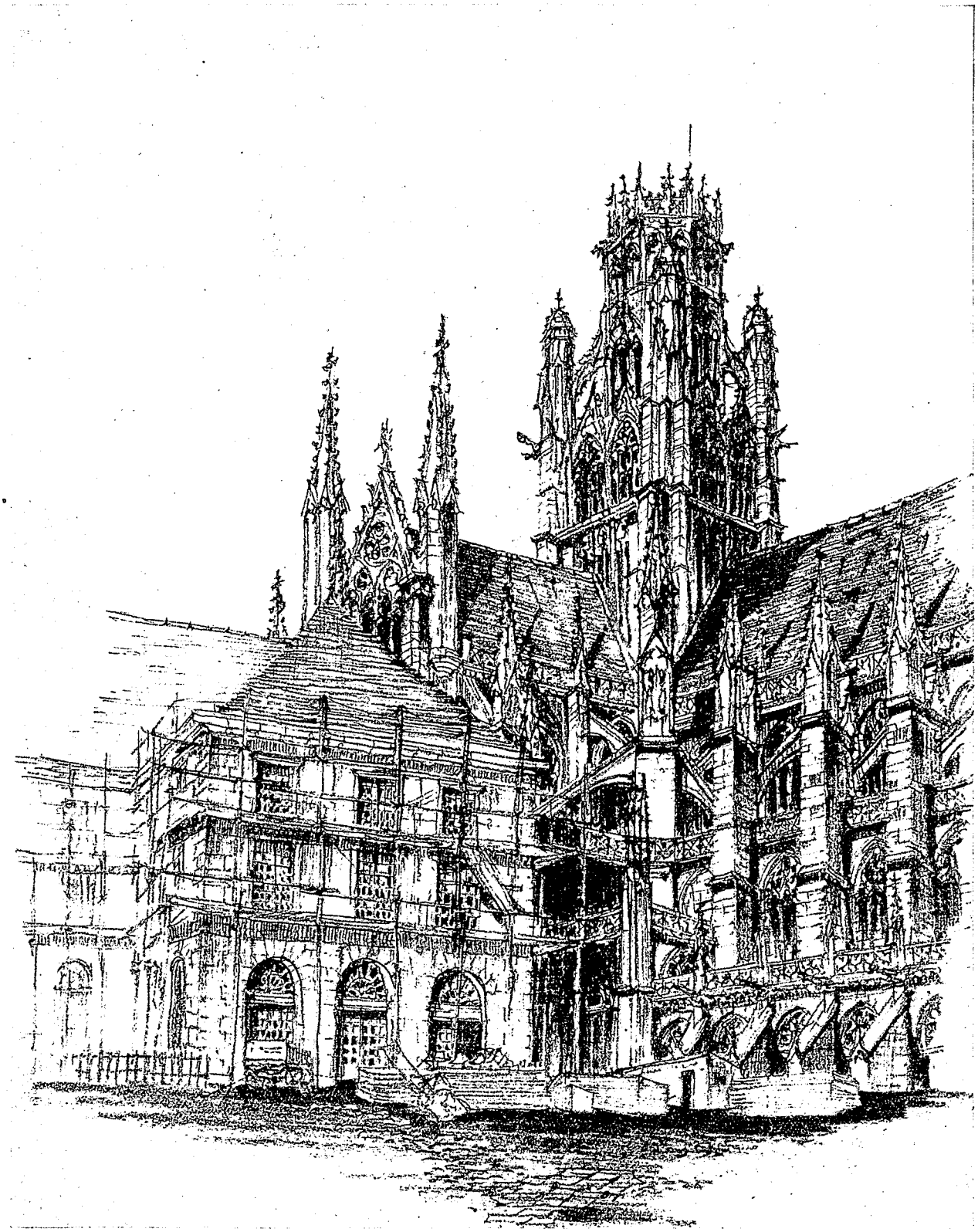


FROM A PENCIL DRAWING BY H. B. DOPPEL

VIEW FROM FOOT OF WALL STREET AT EAST RIVER, NEW YORK

PENCIL SKETCHES BY HAROLD FIELD KELLOGG

BACK STREET IN FLORENCE AND BATHS OF DIOCLETIAN, ROME



FROM A LITHOGRAPH BY JEROME ROBERT CERNY
"ROUEN"

FROM A PENCIL DRAWING BY ERNEST D. ROTH

PIAZZA SAN FIRENZE—FLORENCE

FROM A WATER COLOR SKETCH BY VERNON HOWE BAILEY

DUOMO NUOVO AND DUOMO VECCHIO AT BRESCIA

"LOUVAIN"—PENCIL SKETCH BY EUGENE F. KENNEDY, JR., OF BOSTON
MADE WHILE TRAVELING AS HOLDER OF THE ROTCH TRAVELING SCHOLARSHIP

PENCIL SKETCH BY F. V. CARPENTER
"WOOLWORTH BUILDING, NEW YORK"

FROM A PENCIL SKETCH BY LEROY E. KIEFER
"CHARTRES"

The Geometry of Architectural Drafting

16—Circles Without Centers

By Ernest Irving Freese

Editor's Note:—*This article, which is copyrighted, 1931, by the author, continues the series begun in August, 1929*

In the drafting room, numerous cases occur in which long-radius arcs must be laid down on the board either for the purpose of full-sizing some detail in connection therewith or of which they form a part, or for the purpose of laying out property lines, plot plans, landscaping developments, etc. Where the center point of such an arc falls beyond the limit of the board, it is always inconvenient and often impossible to "nail" this center point so as to enable the required curve to be described therefrom with a string or tape line. Occasionally, arcs of long radius may be drawn on the floor or wall, but, even so, the drawing must then be finished on the board, thereby rendering the center point unavailable for further use. Wherefore, it becomes essential to the "fully equipped" draftsman not only to know how circular arcs can be drawn *without* utilizing the center point, but also to have knowledge of the contingent geometry related to such cases.

In preceding Parts of this work, all geometric operations related to circles and circular arcs have been performed upon those arcs assumed to have been previously drawn with some sort of a *compass*. In this Part, however, it is assumed that the required arc must be drawn by means *other* than some sort of a compass. This condition develops some expeditious geometrical constructions peculiar to *plotted* arcs only, and, though exceedingly useful, have never before been adequately, if at all, presented. The following portrayal becomes the first real exposition of this important component of drafting room geometry.

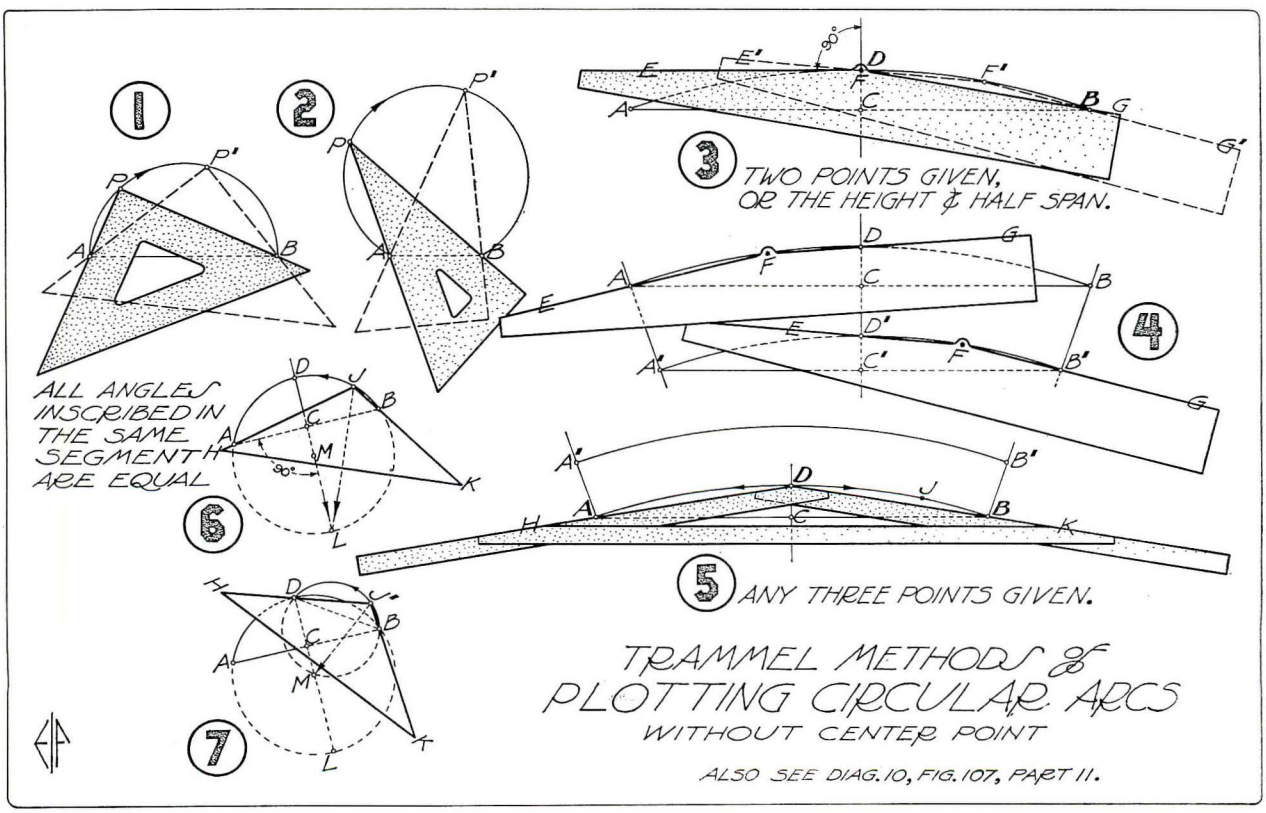


FIGURE 143

Figure 143:

Diagrams "1" and "2" illustrate in a simple and ready manner the basic geometric principle upon which practically all usable methods of plotting circular arcs are founded. Drive two common pins into the board, as at *A* and *B* in either Diagram. Revolve one of your triangles in such a manner as to be in constant touch with these two pins. Then the vertex, *P*, of the moving triangle, will describe a circular arc of which *AB* is the chord, or *span*, and *APB* is an inscribed angle. Clearly, *the inscribed angle is always the same*, regardless of the variable location of its vertex. And the angular extent of the segmental arc will always be 360 degrees minus twice this inscribed angle. The 90-degree angle of your triangles will therefore describe a semicircle of which the chord *AB* becomes the diameter. So will a steel square—or any other kind of a square. The 30-degree angle of the triangle indicated at Diagram "2" will describe an arc of 300 degrees of which the chord *AB* is equal to the arc's radius or to one side of an inscribed hexagon. Actually, of course, the points of your working triangles are blunted, and are therefore rendered unsuited to the production of precise geometric results; but they serve admirably to illustrate the principle and, as a matter of fact, can, for sketch purposes say, often be advantageously so employed to avoid the unlimbering and setting up of the beam compass.

At Diagram "3," of Figure 143, *CD* is the given height, and *CB* is the given half span, of a required arc. Lay off these relative distances on a separate strip of heavy detail paper or thin cardboard, and draw thereon the chord line *DB* and the tangent line *DE*, the latter being perpendicular to the center line *CD*, as shown. Then, with a razor blade or sharp pen knife . . . . but *not* the shears . . . . and using the *lower* edge of your T-square as a guide, cut the strip on the two lines *DB* and *DE*, making the two cuts each somewhat longer than the distance *DB*, and leaving a little excess paper about the *indented* crown point *D*. You now have made a very efficient and convenient trammel by means of which this required arc, or the reverse of it, or any other arc concentric therewith and subtending the same angle, can now be quickly plotted. On your drawing, place pins at the points *D* and *B*—or needle points if you prefer—and move the trammel so that its two working edges, *EF* and *FG*, will be in constant touch with the pins at *D* and *B*, respectively. Then the indented point *F*, of the trammel, will trace the exact circular course of the arc from *D* to *B*, or locate any number of points therealong through which it may then be drawn. One position of the trammel is shown in dotted lines, the point *F'* marking a point on the required arc. If you object to mutilating your drawing with pin holes, then adopt the slower process of aligning the trammel edges by eye, instead of by pins or needles, with the respective points *D* and *B* before marking the points defining the needed arc. However, it is mainly in full size detailing, or on layouts at large scale, that the necessity for *plotting* an arc occurs; hence, ordinarily, the pin holes in the drawing will be of no consequence. Diagram "4" shows the same trammel used for the opposite half of the arc, and also for another concentric arc *A'D'B' subtending the same angle*. Make *DD'*, on the center line, equal the required distance apart,

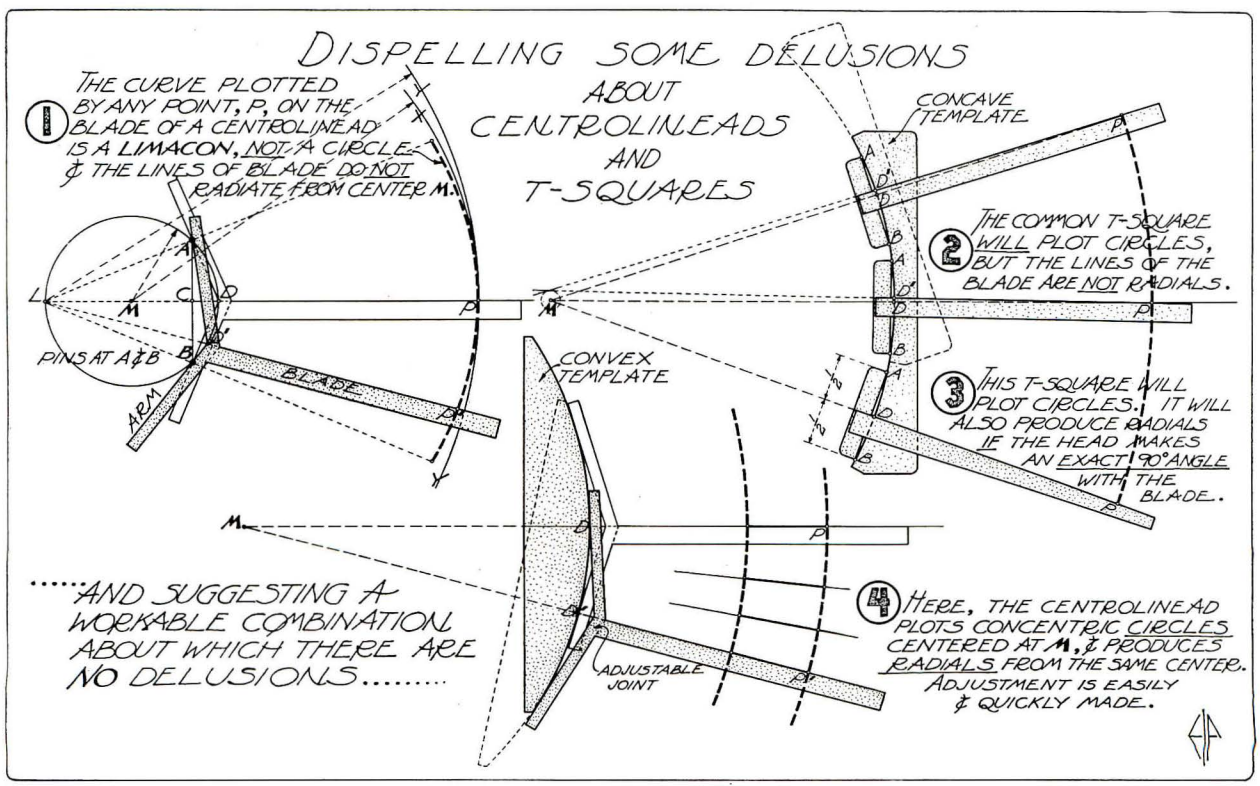


FIGURE 144

and make AA' and BB', on *radials* drawn through A and B, equal the same given distance. This locates the pin points for the second arc, which is here the lower one. If the conditions are just the reverse, just reverse the locating process. This Diagram brings out an expeditious fact that is seldom realized; namely, that the *same* trammel can be used for plotting any number of arcs of differing radii provided said arcs subtend the same angle from the same center, that is, *provided they occur between the same pair, or a similar pair, of radials*—anywhere. I'll show, a little later, how to produce these radials under any given conditions. Now, suppose you want to continue the arc already plotted. Well, just remember the fact that a *circular* arc is a line of *uniform curvature*, and that any given radial becomes a hinge about which, and in the same relative position to which, any already plotted points can be revolved to establish farther points—including other "pin points" for the trammel. That's all you need to know. Now do some "discovering" yourself!

Diagram "5," of Figure 143, illustrates the familiar "nailed together" trammel sometimes used by carpenters or masons to swing long-radius arcs. On occasion, it may prove of use in the drafting room, though it's a clumsy rig to manage on a drafting board. Any *three* points on the line of the proposed arc determine and fix the vertex angle ADB or AJB. In this case, however, the pins or *nails* are placed at the spring points A and B, and the point D describes the arc of which AB is the *full* span and CD is the height. The joint at D could easily be arranged to hold a pencil, and the arc could thus be drawn mechanically instead of by eye through plotted points. This contrivance is sometimes seen illustrated with another member secured thereto in such a manner that one edge of this member bisects the angle at the vertex of the trammel. The assertion is then "authoritatively" made that the edge of this member will always point to the center of the circle which passes through the three given points A, D and B; that is, that this edge can be used for the drawing of radials or joint lines.* This heretofore periodically perpetuated fallacy is exploded at Diagram "6," so that "any child" can see that the bisector JL, of the trammel angle, does *not* always point to the center M of the circle but that it always *does* point to the diametral point L occurring on the *circumference* of the circle and directly opposite the crown point D. On the other hand, if the pins be placed at D and B—as has been illustratively done at Diagram "7"—the bisector of the trammel angle *will* point to M, but this point will *not* be the center of the arc or circle described by the point J' of the trammel. Diagram "7" should certainly make this clearly evident. To sum up the situation, I also shall now make an "authoritative" assertion; namely, *there is no way in which a member can be rigidly attached to a trammel of this type for the purpose of drawing radials directed to the center of the arc described by the trammel.* And Diagrams "6" and "7" are incontrovertible proof of *this* assertion. And another proof is the 2500-year-old discovery that "every angle inscribed in a semicircle is a right angle."

Kidder's handbook contains this fallacy which Mr. Freese here rectifies.

Figure 144:

More delusions dispelled. And in such an unmistakable manner that verbal emphasis becomes superfluous. The combination shown at Diagram "4," however, fosters no delineatory delusions—this rig will plot circles and produce radials to order—it is especially expeditious where a *multiplicity* of radial lines and long-radius arcs are required. The convex template merely shortens the radius by a distance equal to *its* radius. Attach the template to the board so that its arc is normal to the given center line, or radial, DP; align the blade of the centrolinead with this radial line; swing the adjustable arms into touch with the template arc; tighten the screws and go to work. Thin "plywood" makes an ideal template: it can be easily and accurately made, and holds its shape.

Figure 145:

The two diagrams of this Figure depict a simple method of plotting circular arcs by squarely intersecting lines. At Diagram "1," let CD be the given height, and let CB be the given half span, as laid down

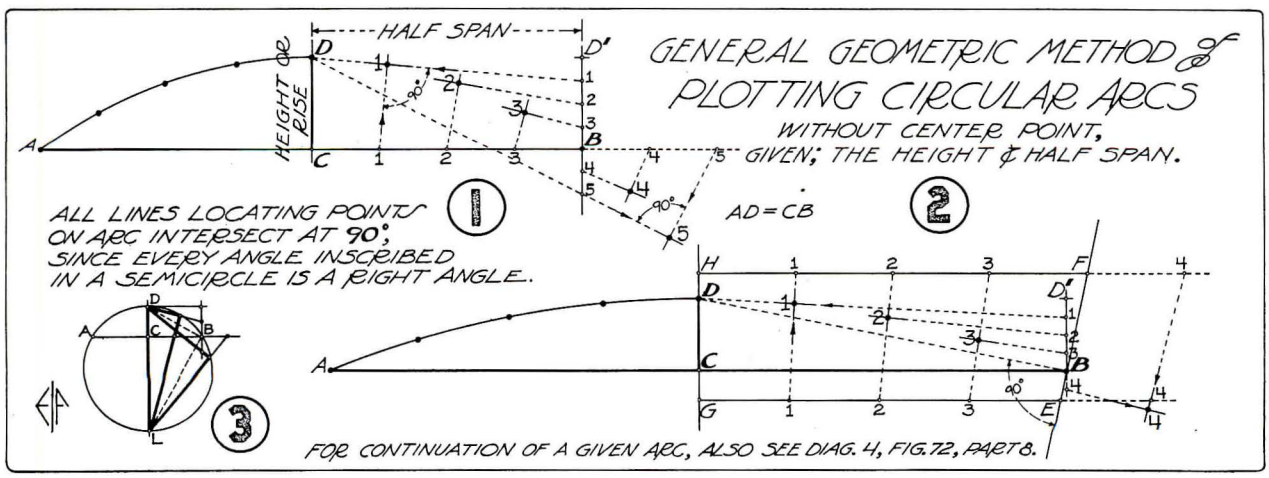


FIGURE 145

on the board. Make *BD'*, perpendicular to *CB*, equal *CD*. Divide this height and the half span each into the same number of equal parts—any number. From the points on *D'B* draw lines directed to *D*. From the points on *CB* project lines perpendicular to the similarly-numbered lines of the first set. The crossings mark points on the course of the required arc. The Diagram also indicates how the arc may be continued by an analogous extension of the same process. Diagram "2" is a generalization of the method of Diagram "1." Through *B*, of Diagram "2," draw *EF* perpendicular to the imaginary chord *BD*. Then, *anywhere* between the two lines *EF* and *GH*, and limited thereby, draw *GE* and *HF* parallel with *CB*. Then, as before, make *BD'* equal the given height *CD*. Now, divide the *three* lines, *D'B* and the parallels *GE* and *HF*, each into the same number of equal parts. Cross the two indicated sets of lines, as shown, to locate points on the arc. Again, the method of continuation is here also indicated. Diagram "3" shows why these simple constructions are geometrically exact. Right here, however, is the place to call attention to the often-overlooked fact that the plotted points on the *arc* are not *equally* spaced: they mark the exact course of the arc, true enough, but they do not divide it in the manner in which the preliminary construction lines are divided. It is, however, often exceedingly convenient to employ a construction that will not only *plot* the required arc but, at the same time, that will also *divide* same by *the plotted points* into any number of equal or proportionate parts desired or required. In this way, the necessity of locating required points on the freehand-drawn portions of the arc between plotted points is eliminated, and, instead, the *required* points utilized to *plot the arc*. The following Figure records the author's method of doing this, and is based on the system of graphical cyclometry developed in Parts 14 and 15 heretofore.

Figure 146:

As before, *CD* is the given height, and *CB* is the given half span. On a radial through *B*, make *BN* equal 60 units, or 5'-0", at any convenient or suitable *scale;* and make *NP*, perpendicular to *CB*, equal 119 units, or 9'-11", at the *same* scale. Draw any line, *C'B'*, paralleling *CB* and limited by the lines *BP* and *CD*, the latter lines being prolonged if necessary or desirable. Divide *CB* and *C'B'* each into the same number of equal or proportionate parts that you desire the proposed arc to be divided. Connect the correspondingly-numbered points by straight lines. Now, the vertex, *F*, of either of the indicated trammels, will cross these lines at the required *division-points* of the arc, thereby dividing the latter, by said points, in the same ratio as the straight lines *CB* and *C'B'*. Or, without the advantage of a trammel, the required plotted division-points can yet easily be located as shown at Diagram "2," and is accomplished as follows: The cyclometric set of lines connecting *CB* and *C'B'* is gotten as before, and the prolonged chord line then drawn through *D* and *B*, and also a prolonged tangent, *DV*, is drawn through *D*, as shown. Now, with the beam compass centered at *D*, and with a radius as great as convenient, draw an arc, *SQ*, limited by the aforedrawn chord and tangent lines as shown. Make *QR* equal 5'-0" at *any scale*, and make *RZ*, parallel with *CB*, equal 9'-11" at the *same scale*. Draw any two parallel lines, *TU* and *VW*, perpendicular to the tangent, and limited by this tangent and the line *QZ*. Then divide *TU* and *VW* each in the same *ratio* as the analogous parallels *CB* and *C'B'*. Lines projected through the corresponding division-points of *VW* and

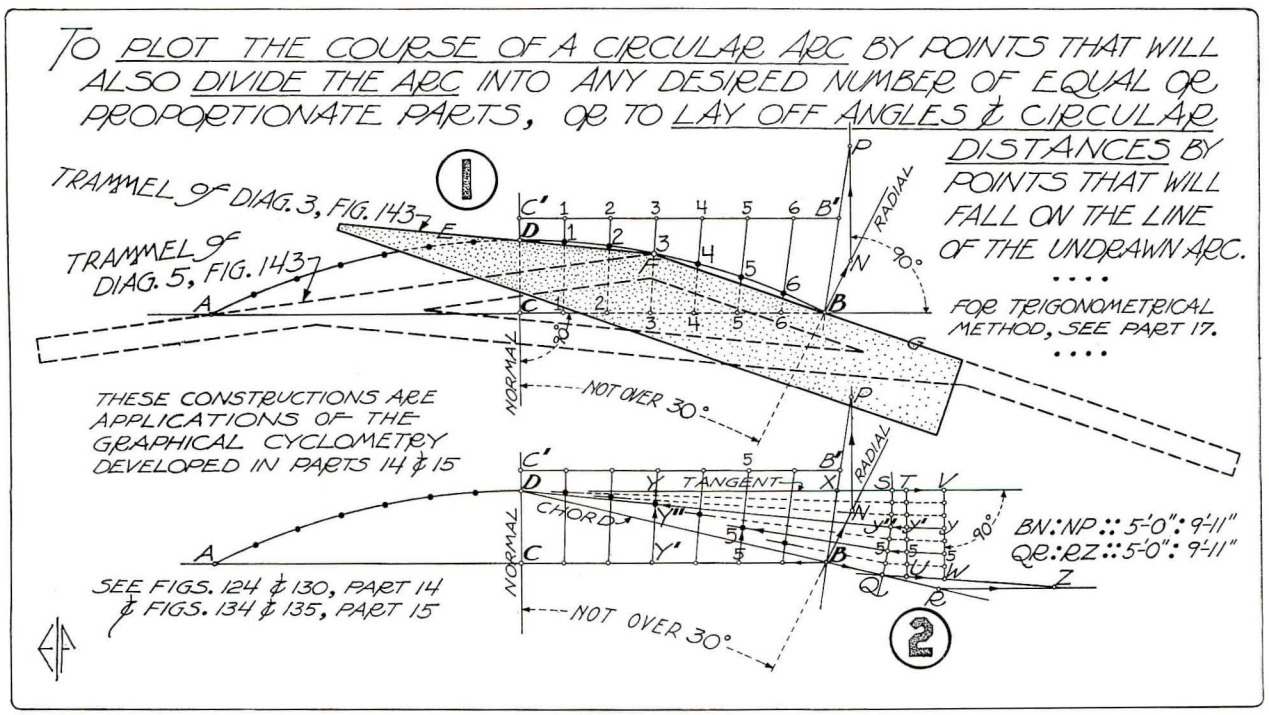


FIGURE 146

TU will now divide the drawn arc *SQ* in the same ratio. Hence, from the points thus located on *SQ*, project radials to *D* to cross the first set of lines at the arc-points required. Obviously, this construction renders available, for *plotted* arcs, the cyclometric operations developed in Parts 14 and 15 for arcs already drawn. Suppose here, for instance, that you must lay off an angle by a *plotted* point that will fall on the line of the yet-undrawn arc. First, you could lay off a relative height and half span corresponding with an assumed but definite angle. Then you could divide this definite angle in the same *ratio* it bears to the required angle; etc., etc. I've given you an actual worked-out example of a case of this kind at Diagram "6" of Figure 150, which will be explained later. Again referring to Diagram "2" of Figure 146, say you must locate a plotted point occurring at a given distance from *D*, in *feet and inches*, on the line of the undrawn arc *DB*. All right: lay off the given distance as *DY* on the *tangent DX* (which *tangent*, as you know, is the *graphical development* of the imaginary arc *DB*). Then divide *CB* at *Y'* in the same *ratio* as *DX* is divided at *Y*. Then divide the drawn arc *SQ*, at *y''*, in this same ratio, by first so dividing the parallel lines *VW* and *TU* at the points *y* and *y'*. The two oblique coordinates, *y''D* and *YY'*, will cross at *Y''*, which point is not only *on* the arc, but is also at a definite given distance from *D*, which given distance, stretched out in a straight line, is *DY*. Instances could be multiplied indefinitely: but to the student or draftsman—or student-draftsman—or draftsman-student—who has followed this work so far, instead of changing his mind and deciding to be a bricklayer, other useful applications of this remarkable cyclometric construction will become obvious.

Figure 147:

You have seen that, in order to *plot* an arc of known radius either with a trammel or geometrically, at least two points on the course of the arc must be fixed, and that a radial line through one of these points must also be given or assumed; that is, the *height* and *half span* of the required arc must first be laid down on the board. But it often happens that a portion of an arc of large radius must be plotted, and that a coordinate height and half span for this portion must be determined in order to plot the arc, since the full height and span of the total arc would be too great to come within the limits of the board. Figure 147 gives several methods of determining the needed points, the length of radius, only, being known. Diagrams "1" to "4," inclusive, utilize the geometric fact that the angle formed between any chord and tangent drawn from the same point on the arc is always equal to one half the central angle subtended by the full chord. These Diagrams are replete with all the information required. And at Diagram "5" are given, graphically, fourteen couplets of rectangular coordinates in *exact fractional parts of the radius*. No, these are *not* approximations: they are exact relative values given in *commensurable* terms—which will certainly surprise many draftsmen, and will just as certainly cause a few "mathematicians" to lift an incredulous eyebrow, for it is seldom realized that the "*equation of the circle*" can be solved in terms commensurable with the

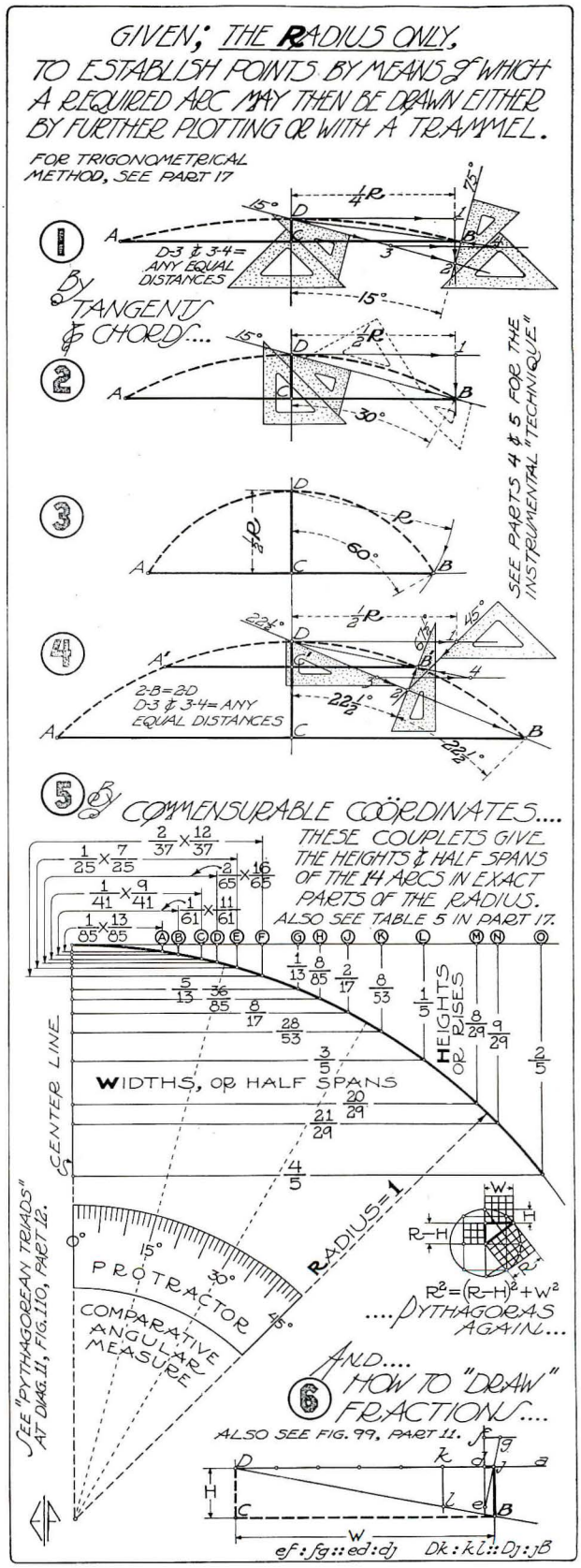


FIGURE 147

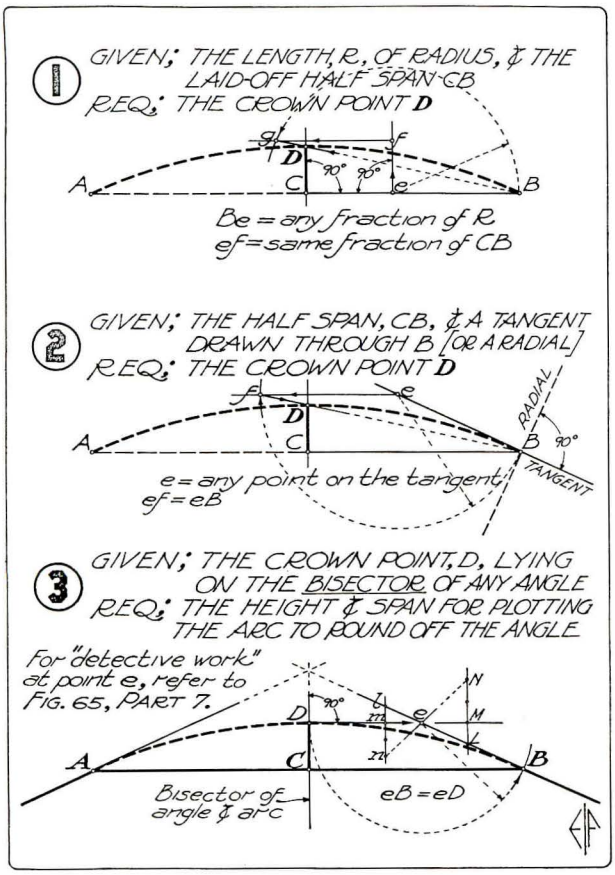


FIGURE 148

radius, that is, in *integral roots*. As a matter of fact, there are an infinite number of such solutions. Anyhow, with the fourteen rectangular couplets given at Diagram "5," of this Figure, one can usually be there found that will fix a commensurable rise and run for any required portion of an arc of known radius. At Diagram "6" is given an accurate and expeditious method of laying off these fractional parts. The method can, of course, be applied in general where fractional parts require graphical determination. In the case shown as an example, let the known radius of a required arc be 16′-2″, and let it be required to lay off a related height and width, or *rise and run*, *CD* and *CB*, such that the resultant plotted arc will have a spread of about six feet, full size, so as to come within the limits of the eight-foot detail board and allow of full-sizing some particular structural or architectural feature of which the thus-limited required portion of the long-radius arc forms a part. Here then, the coordinate width *CB* of the required portion of the arc must be about six feet. The radius is 16′-2″. Hence, the width *CB* should be about 3/8ths of the radius. The nearest approach to a width-ordinate of this relative fractional value, from Diagram "5," is 5/13ths, which, with its coordinate height of 1/13th, makes the couplet "G" available for determining the points by means of which the required portion of the arc can be plotted. Now, 5/13ths of 16′-2″ is 5/13ths of 97/6ths, which is 6 feet plus 17/78ths of a foot. So, lay off *Dd* equal to 6 feet, assuming *D* as a point on the arc, and drawing a perpendicular through *D* as a radial. Then, perpendicular to *Dd*, lay off *de* equal to 1 foot. From *e*, collinear with *d*, lay off *ef* equalling 78 units at any convenient *scale*, and, perpendicular to *ef*, lay off *fg* equalling 17 of the *same* units. Draw *ge*, crossing *Dd*, prolonged, at *j*. Now, it is plain to be seen that, because of the direct proportionality of the similar triangles *efg* and *edj*, the distance *dj* is 17/78ths of *ed*. But *ed* is 1 foot: you *made* it 1 foot. Hence, *dj* is 17/78ths of 1 foot —nothing else! Not hard to do—is it? You can "draw" any ungainly or outlaw fraction whatsoever by this method. Now, since *Dd* is 6 feet, then *Dj* must be the required width of 6-17/78ths feet. Next, you will find that the required coordinate height of 1/13th the radius becomes exactly 1/5th the span width *Dj*. So, instead of making *jB* equal 1/13th the radius, make it 1/5th of *Dj*, which is the same thing, but easier. This way: Lay off *Dk* equalling 5 feet—merely because it's easy to take a fifth of, which fifth, laid off perpendicular to *Dk*, is *kl*, one foot. Now project *Dl* to cross a perpendicular "dropped" from *j*. This locates *B*. Hence, using the thus-established rectangular height coupled with the previously-found coordinate width, you can go ahead and plot that required arc by any of the methods heretofore shown, *and it will be an arc of 16′-2″ radius*. Queer—no one ever thought of that before.

Figure 148:

Here, other conditions are given from which the required points for plotting an arc can be determined. It is all very simple—and uncommon. You—in the drafting room—will sometime find use for it all. Read the drawing: it's all there. Applications are to follow.

Figure 149:

The methods of drawing radials and tangents to arcs of inaccessible or "lost" centers, heretofore given in Part 7 at Figure 69, and in Part 8 at Figures 71 and 72, can not be applied to *plotted* arcs, since the line of the latter arc *between* plotted points is indefinite, and since the plotted points are not, ordinarily, equally spaced along the line of the arc. Hence, the three Diagrams of Figure 149 are here given as part of the contingent geometry having to do with plotted arcs in particular. Of course, if the plotted points *are* equally spaced, a radial, or *joint line*, through any one of them is merely a *perpendicular* to the chord connecting any two such plotted points that are equidistant from the plotted point in question: and a tangent through said point is merely a line *parallel* with said chord. Also, even though the points are *not* equally spaced, if any *two* radials are known, then a radial through any other plotted point can readily be produced by the method of directing a line to the inaccessible intersection point of two other lines—shown in Part 7 at Figure 67. But here, at Figure 149, it is assumed that but *one* radial is given—the initial one, or center line of the arc—and that the plotted points defining the course of the arc are *not* equally spaced. This represents the most commonly-occurring case of

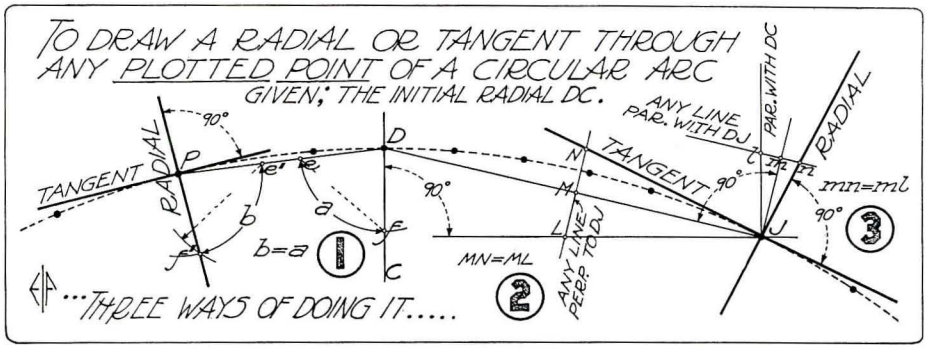


FIGURE 149

plotted arcs. At Diagram "1," let the plotted point, *P*, be a point through which a radial or tangent is needed, and let *DC*, containing the known or fixed arc-point *D*, be any given radial or center line of the plotted arc. Connect *PD*, and make the angle *b* equal to the angle *a*. This materializes the *radial*. And the *tangent* will be perpendicular to it—always. This is the easiest-sounding way of all, but it may require the use of the beam compass to procure precise results, that is, if the drawing is "full size" as here assumed. At Diagram "2," *J* is the given plotted point. Draw *JD* and *JL;* then double the angle *LJD* which produces the tangent *JN*. And a radial through *J* will be at right angles to this tangent. At Diagram "3," the angle *lJm* is doubled, in the manner shown and noted, thus yielding a radial. And the tangent through the same point will lie at 90 degrees to this radial.

Figure 150:

There's nothing "hypothetical" about these practical applications. They are taken from actual drafting-room work—off the big detail board. The figured dimensions given in the Diagrams are the actual full size distances handled in the original layout of these comparatively-minute reproductions. Each Diagram here given will be explained fully, so that the actual "problem" confronting the draftsman—as well as the "solution" of it—will be clearly appreciated. Only enough of the actual "detail" is here shown to make the "geometry of the case" apparent. Just remember that.

At Diagram "1," of Figure 150, the points *A* and *B* are fixed on the board from dimensions picked from, or scaled from, the working plans. It is required to "full size" the rafter sweep, which here also forms the ceiling line of an alcove. Draw *AB*, and bisect it at *C;* then draw a perpendicular to this chord through *C*. The half span, *CB*, is now known, and the tangent *T*, drawn through *B*, is given. Hence, the problem becomes that of Diagram "2," Figure 148; namely, to find the crown point *D* preparatory to plotting the required arc. Take note that the radius of this arc need not be known . . . it is fixed by the conditions of the case . . . one arc only will satisfy these conditions. Prolong the tangent *TB*, which is here the upper edge of the main rafter, and mark off *Be* equalling any definite distance, and then, parallel with *BC*, mark off *ef* equalling *Be*. Project *f*, collinear with *B*, to cross the center-line-radial at *D*, which latter is the *crown point* of the required arc. Hence, the arc can now be plotted by any of the methods previously shown. The concentric arc representing the underside of the rafter can be plotted in the same manner by making *BB'*, on a radial drawn through *B*, equal the depth of rafter, which is here the same as *DD'* on the radial through *C*. Note that the radial through *B* can be drawn directly, since the tangent through this point is here *given*. Again, the concentric arc could, in this case, be drawn optically tangent to a series of small circular arcs centered at the plotted points, *U*, *V*, *W*, etc., of the first arc *ADB*, the radius of the small plotting arcs being, naturally, made equal to the depth of the rafter.

At Diagram "2," of Figure 150, a full size detail section of a lantern-crowned dome is required. The point *B*, where the base of the lantern meets the roof line of the dome, is governed by the design of the base moulding, since the given dimension, from the center line of the dome, reads to the face of the lantern pedestal, *not* to the face of its base moulding. Hence, in detailing, *B* is taken as the *starting* point, that is, the base moulding is first designed, and, working backwards, the center line of the dome is then fixed on the board at the given distance of 3′-4″ from the face of the pedestal as shown. It is now necessary to lay down the curves of the dome, not only to locate point *X*, but also to detail correctly the entire structural and architectural junction of shell and lantern. In other words, the controlling arcs of the dome must now be plotted before the drawing can be further developed. And the only other known dimension is the *radius*, as noted. Well, here's how: Perpendicular to the center line, project *B* to *C;* whence, *CB* becomes the laid-off half span of a portion of the required arc, the radius also being known. So the "problem" is *now* to locate the crown point *D*, which is the problem illustrated at Diagram "1" of Figure 148. Hence, at any convenient *scale*, the larger the better, make *Be* equal the outer radius, which is here 13′-9″. Then, at the *same* scale, and at right angles to *Be*, make *ef* equal the now-known laid-off half span *CB*. This process makes *Be* the same fractional part of the radius as *ef* is of *CB*. Now draw a line through *f* parallel with *CB*, and, with the beam compass centered at *e*, revolve *B* to *g* as shown. The crossing of the projector *Bg* with the center line of the dome now locates the required crown point *D*. Hence, using the related height *CD*, and half span *CB*, the arc *DB* can now be plotted either in this position and then transferred to position *BJ* with a tracing of it inverted by revolving the same about the long radial *BH'* as a hinge, or the arc *BJ* can be plotted directly by making *BH* equal

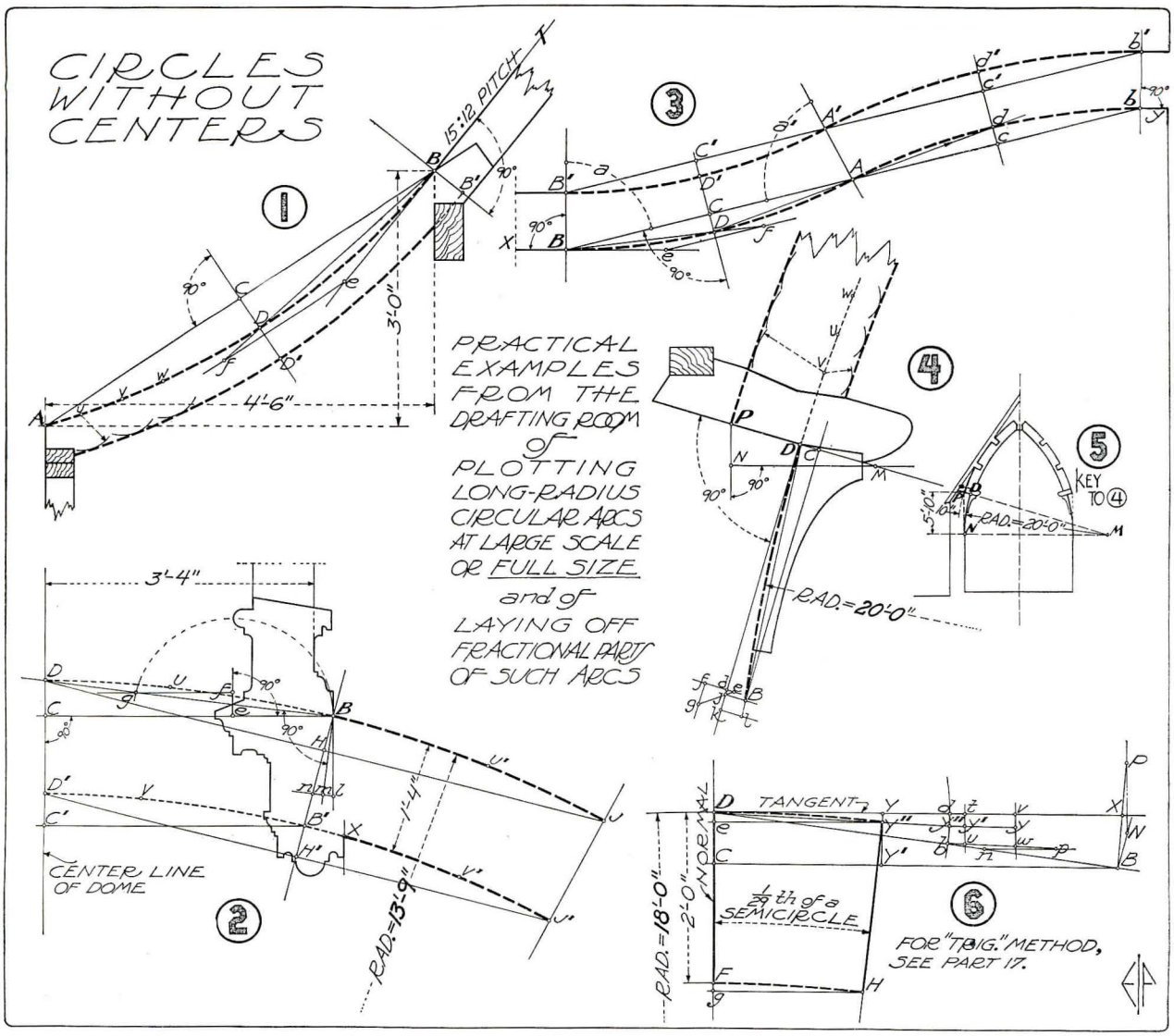


FIGURE 150

DC, and making *HJ* then equal to *HD*, thus establishing the *same relative height and half span* for plotting the arc in this position. In either case, however, a radial through *B* is essential. This is here produced in accordance with the method shown at Diagram "3" of Figure 149, like this: Draw *Bl* (of Diagram "2," Figure 150) perpendicular to *BC*, and draw *Bm* perpendicular to *BD*, and draw *any* line *ln* parallel with *BD* and crossing the first two as shown. Then make *mn* equal *ml*, which fixes the required radial *Bn*. Now make *DD'* and *BB'* each equal the thickness of the shell, which is here 1'-4". Draw *B'C'* perpendicular to the center line of the dome: whence, *C'D'* and *C'B'* become a *related height and half span* by means of which the necessary portion of the *inner* arc of the dome may be plotted, thus governing the detail of the ring moulding and fixing the essential point *X*. If only a portion of the arcs *BJ* and *B'J'* are required—say the portions *BU'* and *B'V'*—it will suffice to plot merely the portions *BU* and *B'V*, on *tracing paper tacked over the drawing*, and then transfer these by inversion, making the *traced* radial drawn through *B* exactly register in point and line with the same radial occurring on the drawing underneath. This simple process is especially advantageous if the board is of such limited extent that a required arc can not be drawn in place directly. For, once *any relative height and half span* are established, for *any* portion of an arc of known radius, the part needed can be plotted *anywhere* and then transferred to where it's required.

The case shown at Diagram "3," of Figure 150, finds application in numerous ways: to the plotting of the curve of a driveway, a walk, or a street; a Colonial pediment; an "eyebrow" dormer; a rafter, brace or bracket. It typifies any case where a long-radius "ogee" curve is required to tangentially connect any two offset straight lines *XB* and *yb having the same direction*, whether these lines are real or imaginary. First, connect the given points, say *B* and *b* of the Diagram. Then divide *Bb* at *A*, in the direct ratio of the radii of the two arcs forming the required reverse curve. If you want the radius of the arc *BDA* to be twice the radius of the arc *Adb*, then make *BA* twice *Ab*, that is, make *BA* two thirds of *Bb*. If the radii

are *given*, follow the same system. In the Diagram, point *A* bisects *Bb*, hence, the radii are here assumed as equal for this particular curve *BDAdb*. Now bisect *BA* at *C*, and draw the perpendicular *CD* prolonged both ways. The contingent "problem" is now the one illustrated heretofore at Diagram "2" of Figure 148; namely, to locate the crown point *D*, given the half span *CB* and a tangent *XB* prolonged through *B*. Make *Be*, on the tangent, and *ef*, on a line paralleling *BC*, any equal distances. Then *Bf* is the bisector of the angle formed between the tangent and chord: hence, the required crown point *D* lies at the crossing of this bisector with the radial, or center line, drawn through *C*. Wherefore, the arc *BDA* can now be plotted, since its height *CD* and its half span *CB* are determined. And if a curve concentric therewith is wanted, it also can be materialized from the further information conveyed by this Diagram—all of which has heretofore been fully exemplified. If the point *A* had been anywhere except at the center of *Bb*, then the height *cd*, of the component arc *Adb*, could be established in the same manner as for the first arc. Or, the height *cd* could be established by simple graphical *proportion*, since *CD* is to *cd* as *CA* is to *cA*: in other words, by projecting a line from *D*, through *A*, to meet the center line of the other arc at *d* as there indicated. You see, the point *A*, of reverse curvature, merely resolves the compound curve into its two simple *proportionate segments*, that's all—and you will discover that the radial *AA'* makes the same angle with *bb'* as it does with *BB'*, that is, this radial *AA'* is common to *both* arcs of the reverse curve, and to *all* arcs concentric therewith, and, if prolonged in both directions, would pass through the remote centers of these arcs.

At Diagram "4," of Figure 150, it is required to "full size" the rafter plate section and bracketted corbel indicated and dimensioned on the key cross section of Diagram "5," the latter being a portion of the scale working drawings from which the governing or available dimensions are procured. To lay this out correctly at full size it becomes necessary to fix the relative slope of the radial *PM*, on the detail board, and also to plot the long-radius curve of the wall, which curve is the required line of the back of the bracket. On the detail board, assume a point *P* as the same point of the key diagram: the known starting-point from which are to be evolved the other necessary points and lines of the proposed full size detail. From the key diagram it is seen that the "pitch" of the radial *PM* is 5′-10″ in 20′-0″, since the given figured dimensions establish these two distances as the rectangular coordinates of point *P* relative to the center *M*. Hence, in the full size layout, make the vertical distance *PN* equal 5′-10″ at any convenient *scale*, and make the horizontal distance *NM* equal 20′-0″ at the *same* scale. The slope of the resultant radial *PM* is then bound to be correct, since the triangle *PNM* of the full size layout is similar to the triangle *PNM* of the key diagram. Next, lay off *PD* equal to 10″, which is a given dimension. Now, since the point *N*, of the key diagram, is so far removed from point *P* as to throw it off the board when laid off full size, it can not be utilized as the crown point by means of which to plot the required portion of the arc of the wall line unless, as has been noted, it be plotted in another place and then transferred. Otherwise, the problem must be solved either by resorting to mathematical calculation or by one of the simpler graphic methods given at Figure 147. The latter alternative is here adopted; that is, the point *D*, from which the arc here dates, is now assumed as the fixed crown point, on the radial *PM*, of a required arc having a radius of 20′-0″, and then a related height and half span is determined upon that will come within the limits of the board and so allow of the arc being directly plotted in proper position. It becomes evident, however, from an inspection or test of the key diagram, that another arc-point removed even 15 degrees from point *D* would still not come within the available space on the board, which space, in this case, say, is about 3′-6″ in extent. In other words, there is room on the detail board for laying off a half span, *CB*, of only about 3′-0″. This is 3/20ths of the radius. Hence, the commensurable couplet "A," of Diagram 5, Figure 147, having a half span of 13/85ths of the radius, and a height of 1/85th the radius, or 1/13th the half span, can be used to locate point *B* for plotting the required portion of the arc. So, make *Dj*, perpendicular to *PM*, equal 13/85ths of the radius, and make *jB*, perpendicular to *Dj*, equal 1/13th of *Dj*. Then *B* is *another* point on the line of the required arc, which latter can now be *plotted*. So, with the radial *PM* and the arc *DB* materialized, you'll now be able to complete the detail as you choose. However, before leaving this Diagram, I want to emphasize the surprisingly facile and accurate system of "drawing" fractions heretofore instanced in explanation of Diagram "6," Figure 147, and which was used in the graphic determination of the distances *Dj* and *jB* of Diagram "4," Figure 150. So, this being a "practical" example, I shall show you just exactly how these "ungainly" fractions were laid off on the full size drawing of which Diagram "4," Figure 150, is a greatly reduced reproduction. The known radius is 20 feet; and 13/85ths of this is 3 *feet* and 12/17ths of an *inch*. The 3 *feet* is the distance *Dd*, full size. At right angles to *Dd*, an *inch* was laid off full size, which is *de*. Then, at ¼″ *scale*, *ef* was made 17 feet, and, perpendicular to *ef*, and at the *same scale*, *fg* was made 12 feet. A straightedge aligned with *g* and *e* fixed *j*, thus making *dj* equal the required additional 12/17ths of a full size inch. Wherefore, *Dj* became 13/85ths of 20 feet, as required. And the coordinate distance *jB*, required to be 1/85th of 20 feet, which obviously is 1/13th of *Dj*, was laid off like this: At 3″ *scale*, *Dk* was made 13 feet, and, perpendicular to this line, *kl* was made 1 foot at the *same scale*. The T-square, aligned with *l* and *D*, fixed point *B* on the perpendicular drawn from *j*, thus making *jB* equal 1/13th of *Dj*, as required. So that's it—again. And this entirely general and simple means of handling outlaw fractions *graphically* is all based on that one marvelous property of similar triangles, without which, the flourishing science of geometry would still be unborn. I refer to

the property of *linear proportionality*, which same is the very principle upon which the drafting scale itself is constructed. If you ever succeed in getting that fact inculcated in your cranium—you won't have to be *told* how to do a lot of things: you'll *know* how. But, I'm still assuming that you *don't* know—which assumption, by the way, is the basic principle upon which books are written, especially *geometries!*

Now, I'll finish this Part with another actual drafting-room example; this being one of the most remarkable bits of graphical "cyclometry" ever invented to contravene trigonometrical computation. The example is typical, and is based on the combined method of plotting and division shown in Figure 146 at Diagram "2," and it also utilizes the method shown at Diagram "1," Figure 147, for determining a definitely-limited angular extent of an arc of long radius. The scale working drawings indicate a carved stone semicircular arch ring having 29 equally-spaced voussoirs. The radius of the extrados is 18′-0″, and the radial depth of the ring is 2′-0″. It is required to "full size" the outline of one of the arch stones for the purpose of detailing the decoration thereon. First, since the radius, only, of the entire semicircle is known, draw any prolonged line *DX*, as at Diagram "6" of Figure 150, and call this a *tangent*. Then draw another prolonged line *Dg*, perpendicular to the tangent, which perpendicular then becomes a *radial*, that is, a line normal to the proposed arc. Make *DF* equal 2′-0″, the depth of the arch stones. Then *DF* is the center line of one joint. We must find the center line of the next succeeding joint, then, so that the angular distance between the two will equal 1/29th of a semicircle, said semicircle having a known radius of 18 feet. By the method given at Diagram "1," of Figure 147, locate the 15-degree point, *B*, for an arc of this radius. Now, since the thus fixed imaginary arc *DB* subtends a central angle of 15 degrees, a system of *relative measurement* is at once made available by means of which the line *Y″H* can be definitely placed: for 1/29th of a *semicircle* is 1/29th of 180 degrees, and 1/29th of 180 degrees is 12/29ths of 15 degrees, and the extent of a 15-degree arc, of the given radius, is already established by point *B*. So, calling into play the graphical cyclometry heretofore developed in Parts 14 and 15, lay off *BN*, on the radial drawn through *B*, equal to 60 units of any convenient magnitude, and lay off *NP*, perpendicular to the tangent, equalling 119 of the same units—whatever they may be, scale inches or decimals. Connect *B* and *P*, locating *X* on the tangent. Also draw *BC* parallel with the tangent, which is perpendicular to *DF*. Now make *DY* equal 12/29ths of *DX*, and make *CY′* equal 12/29ths of *CB*, and draw the connecting line *YY′*. Then the required arc-point *Y″* will lie *somewhere* on this line. And the "somewhere" is found as follows: Draw the chord *DB* and, with the beam compass centered at *D*, and with a radius as great as convenient, draw the arc *db* limited by the chord and tangent. Make *bn*, on the chord, equal any 60 units, and make *np*, parallel with the tangent, equal 119 of the *same* units, and draw the line *bp*. Also draw any two lines, *vw* and *tu*, perpendicular to the tangent, and limited by this tangent and the line *bp*, or limited by any prolongation of said lines. Now make *vy* equal 12/29ths of *vw*, and make *ty′* equal 12/29ths of *tu*, and draw the slicing line through *y* and *y′* cutting the drawn arc *db* at *y″*. Now, the line *y″D* will cross *YY′* at the required point *Y″*, which is the "somewhere" made definite! In other words, it is a point removed 1/29th of 180 degrees from *D*, on the line of the undrawn arc *DB*. So, by drawing a prolonged radial through *Y″*, and making *Y″H*, thereon, equal *DF*, the center line of the *other* joint is determined in position and magnitude. Then draw *Y″e* and *Hg*, each perpendicular to *DF*. Whence, the heights and coordinate widths of the upper and lower bounding arcs of the voussoir are thus determined, and can therefore be plotted by any of the methods hereinbefore shown. And by laying off the width of half a joint from the center lines *DF* and *Y″H* of same, the other bounding lines of the stone are yielded, and you can now go ahead and "*carve*."

OLD LADY THATSCH'S CHIMNEY

THE OUTSIDE STAIRWAY

TWO OLD SUNDAY HOUSES IN FREDERICKSBURG, TEXAS—SEE ARTICLE BY SAMUEL E. GIDEON OPPOSITE

Sunday Houses in Texas

By Samuel E. Gideon

Editor's Note:—*The coming convention of the American Institute of Architects in San Antonio, Texas, makes this article of particular interest to the delegates, many of whom may have an opportunity to inspect at first hand the quaint old town of Fredericksburg with its pioneer architecture. The photographs were all taken by the author.*

Fredericksburg, Texas, less than one hundred miles from Austin, the capital of the state, and approximately the same distance from San Antonio, was founded, in 1846, by German immigrants who fled the political persecution and turmoil of their native land, where conditions brought on by the French July revolution of 1830 made life for them unbearable.

A colonization scheme was sponsored in 1842 by an organization of German noblemen, who, for a consideration, made an agreement with each immigrant to provide transportation for him from the place of landing to the grant in Texas; to furnish him with a rude dwelling and to give to each single man one hundred and sixty acres of land and to the head of each family three hundred and twenty acres of land.

A HALF TIMBER HOUSE OR FACHHAUS

The Fachhaus is built up of frame timbers and the open panels thus formed are filled in with stone, brick, or tiles.

The collapse of the organization in Germany brought many hardships to the men, women, and children who made up this group of immigrants. Many of these were persons of education, culture, and refinement and the ride in oxcarts, over the three hundred miles of rough country to the grant, harassed by unfriendly Indians and confronted by pestilence and famine, was a terrible experience for them and many perished by the way as a result of the exposure.

LARGE BLOCKS OF AMBER-HUED STONE

With an outside stair leading to the second story.

Upon reaching the grant each man was given a town lot and ten acres of surrounding land, instead of the promised one hundred and sixty or three hundred and twenty acres.

The surviving immigrants lost no time in getting down to work and found some compensation, for the hardships they had experienced, in the beautiful virgin country and the fertile soil. Log and adobe houses of simple dimensions were at first erected, and that there were masons and artisans of no mean ability among the colonists is attested by examples of their work still extant.

AN OLD LOG CABIN

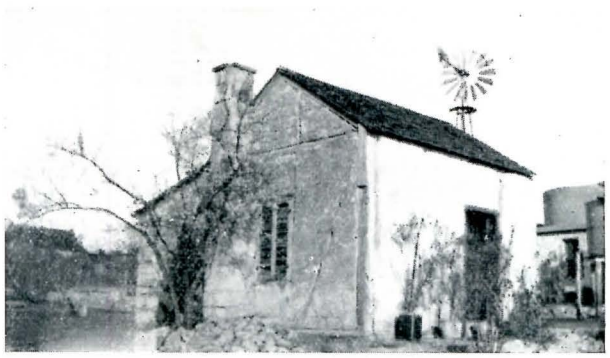
With more recent stone addition. The windows are quite modern.

Later, stone houses were built with thick walls, heavy handmade doors, and small, deep recessed casement windows. Then there were houses of the "Fachwerk" type, houses whose frames or skeletons are built of oak timbers, doweled together with wooden pins instead of nails, the spaces between the uprights and braces filled in with stone, sometimes adobe, and the whole whitewashed or plastered over. Both types, as well as the log house, are to be found in town and country and are extremely picturesque, particularly the stone house which is built of large, shaped blocks of amber tone, laid up with wide, white mortar joints. The chimneys of the houses were always generous.

The farmers early realized that it was to their ad-

ONE OF THE OLD, OLD HOUSES

The brackets under the roof are unusual.



A SUNDAY HOUSE OF OAK TIMBERS AND ROCK

Its ruggedness softened by potted plants.

vantage to join forces with the townsmen to secure the best available preachers and teachers, and they minimized the inconvenience of having to go to town for church, and for the schooling of their children. A territory for twenty miles around cooperated in this.

Before the use of the automobile, the farmers came to town Saturday afternoon to do their "trading," remaining throughout Sunday for divine service and returning to the farms some time Monday morning. Hotels were scarce, but, even so, the frugal farmers did not choose to spend their money in that way, especially if their families were large, so when they did not camp under the trees or in camp yards, they often visited town relatives or friends. Word came to one of these farmers that his town kinsman no longer welcomed his visits so he declared that he would build himself a "Sunday House," which he forthwith did. The idea became popular and "Sunday Houses" appeared on side streets, in the neighborhood of churches, on cheap lots on the outskirts of the town, and some within the churchyard itself, since the churches took to the idea as being a good business proposition.

CROWN SALOON, FREDERICKSBURG

Echoes of the past! Note the exterior stairway and "lean-to" roof. The stones are of a rich amber color and the joints are wide and white.

At first, the Sunday Houses, of which many still exist, were one-room affairs of wood or log or stone. Generally the roof is gabled, serving as sleeping quarters for the children, usually the older boys. The attic is reached by an outside stairway, though occasionally from the inside by means of a perpendicular ladder against the wall, as in barns. The reason for the outside stairway was to conserve space and, also, to insure that the boys returning late at night might not disturb the older people below.

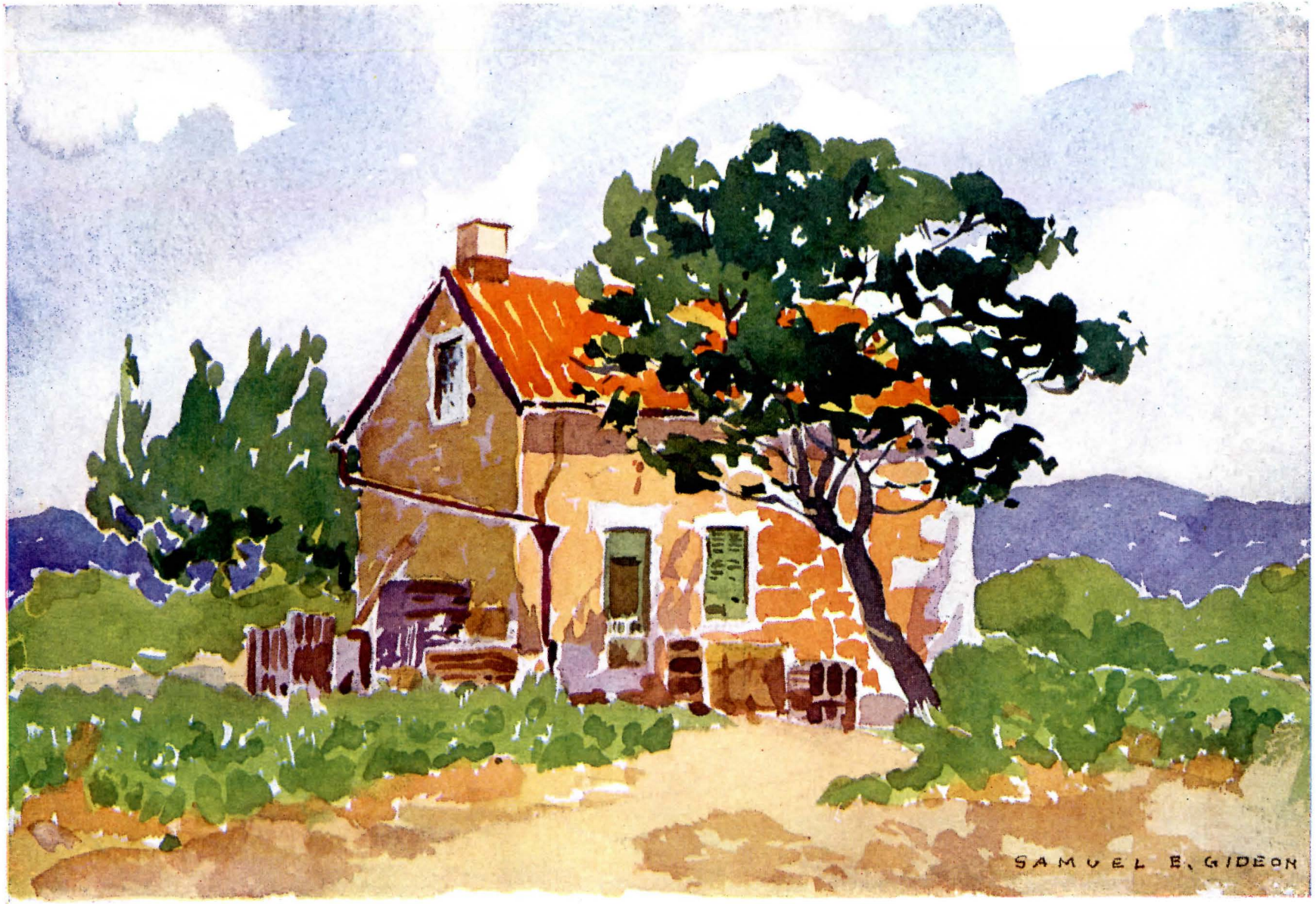
Though there are many single-room "Sunday Houses," many have been added to as the family grew or in the advent of the house becoming a permanent residence. Sometimes these added-to houses resemble a saw-tooth from the side—perhaps the first room was

A SAW-TOOTH SUNDAY HOUSE

Grown up as the family increased.

TWO OLD SETTLERS AND THEIR RESIDENCE

Formerly a Sunday House.

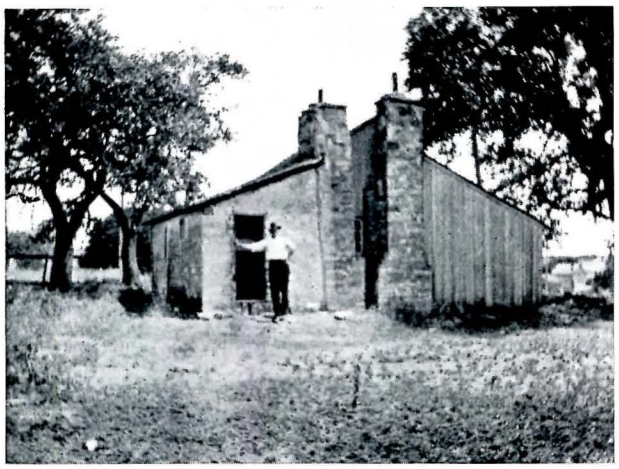


OLD HOUSE NEAR FREDERICKSBURG, TEXAS

FROM A WATER COLOR SKETCH BY SAMUEL E. GIDEON

PENCIL POINTS SERIES
of
COLOR PLATES

This straightforward and pleasing little water color sketch has been reproduced with little reduction in size, the original having measured 9¾" x 6½". It is one of many by Mr. Gideon of similar subjects and is illustrative of the old houses of Fredericksburg, Texas, such as are shown with his article in this issue. The color is used with freedom and with a charming forthrightness.



A CHIMNEY FOR EACH ADDED ROOM
One room of stone, the other of wood.

A POST OAK LOG FENCE, SPACES FILLED WITH STONES
The house is built in a similar manner

of logs, the next of half timber, and the next of rock.

As has been mentioned before, Sunday Houses are used for the convenience of the farmer's family while attending divine service Sunday morning and Sunday school, which begins at two in the afternoon. In the days of slower transportation, they were used when a German play came to town or during a holiday season of several days, when someone in the family needed medical attention, or when a child made his "First Communion," on which occasion an older sister usually kept house during the period of preparation.

In the old days, two-seated, double team phaëtons were used to bring in the family and provisions, which were piled in as best they could, with feed for the horses in or under the vehicle. Nowadays, the automobile has almost entirely supplanted the two-seated, horse drawn vehicle.

Frequently many people occupy these one-room houses which are usually severely simple and meagerly furnished. The food on the week-end is generally prepared at the farm and brought in pans and boxes, as the Sunday House has only the simplest means for warming food.

A strange tidiness to Fredericksburg's swept yards is due to the fact that grass is not permitted to grow because of an old-time fear of snakes. Though the Sunday Houses are immaculate inside and out, weeds are permitted to grow in their yards and this helps to identify a Sunday House. On week days the drawn shades, closed blinds, doors, windows and gates give to the house a deserted look, but on Saturday afternoon or early Sunday morning, all is bustle until church time; after church the Sunday meal is eaten. In the afternoon, while the women clean up and gossip indoors, the men sit in tilted-back chairs on the porches, discussing the crops and politics, and the children go to Sunday school which is conducted in German.

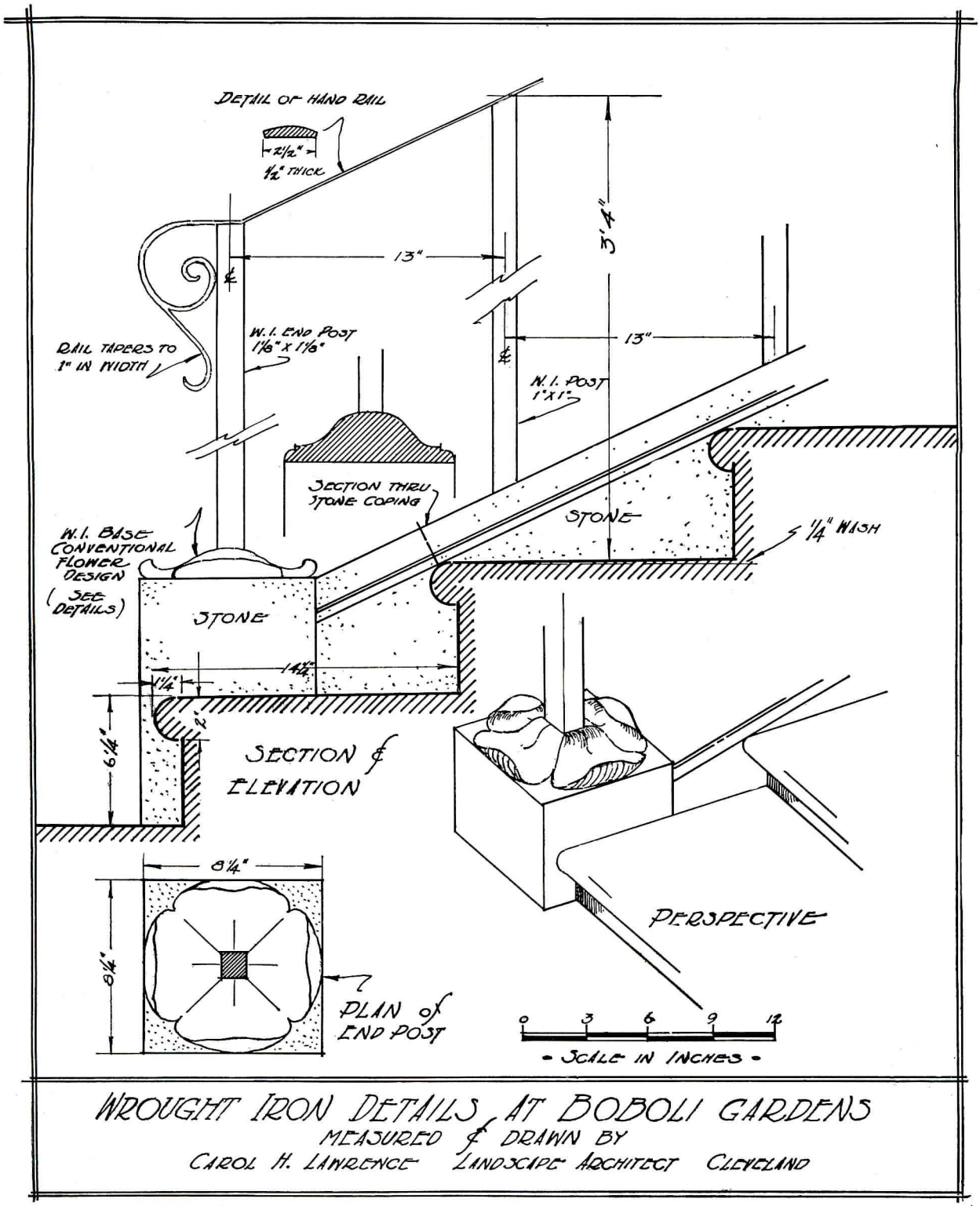
German is almost universally spoken in Fredericksburg and its vicinity. One hears an occasional English word which has a German accent and frequently the tongues are mixed, as "wasser-melon" for watermelon, "bone-kopf" for bone-head, "krick wasser" for creek water, etc. The older people speak better German and much better English than the children.

Though some of the Sunday Houses were not built originally as Sunday Houses, but were residences acquired for that purpose, some Sunday Houses have been made into permanent dwellings and rooms have often been added. Old couples, tiring of farm life, have come into town to live where, on week-ends, they welcome their children and grandchildren.

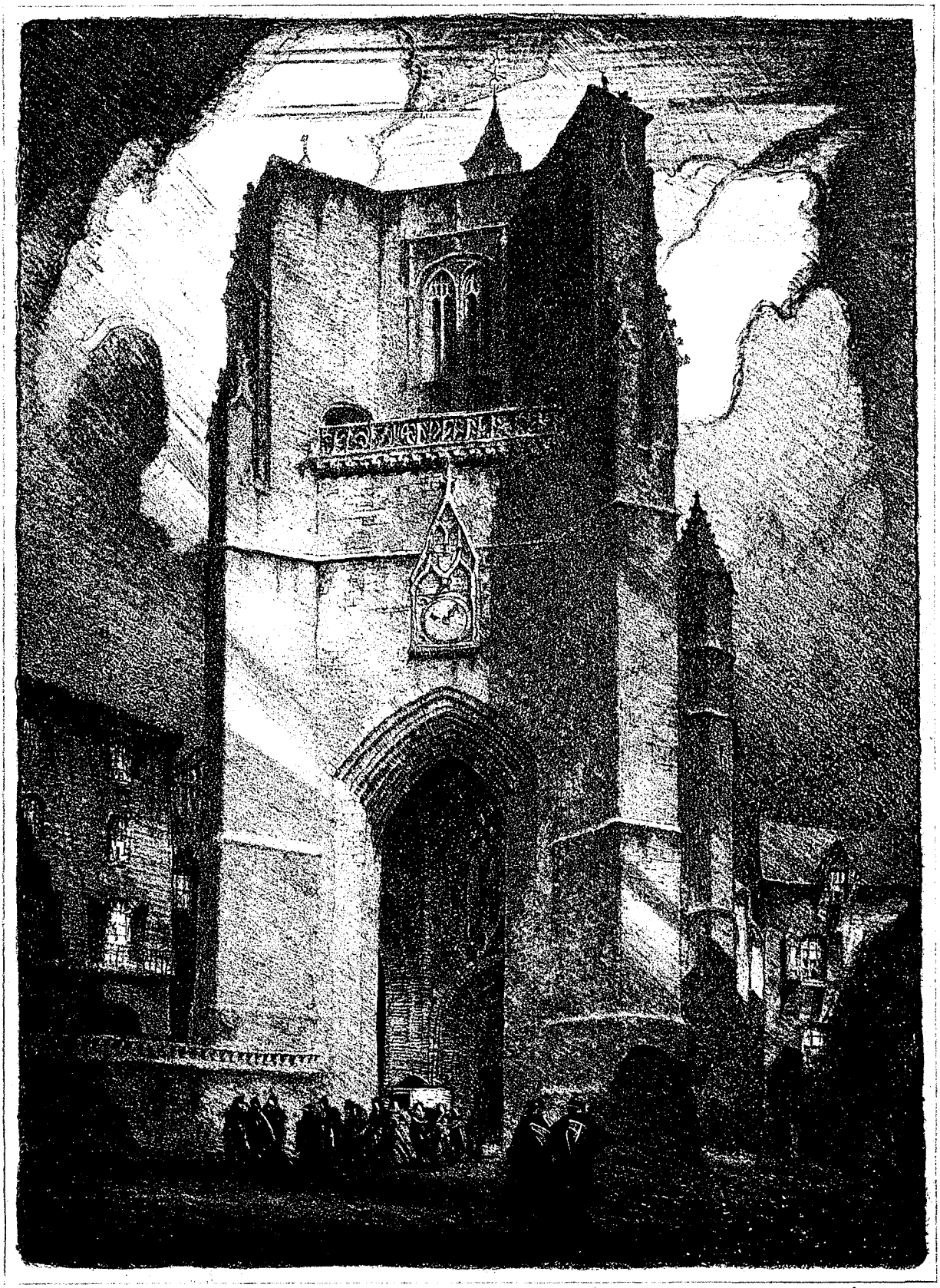
In Texas and elsewhere in this country, it is the belief that the Sunday House is unique to Fredericksburg, but there is a similar institution in Middletown, Connecticut, in use as early as 1660 and called "Sabba Day Houses." Using the language of A. B. M. in the *Christian Science Monitor*—"It was thought sinful to build a fire in the Lord's House and Sabba Day Houses were primarily built for the people coming to church, to be used for them to get warm at the large fireplaces therein.

"There were also accommodations for simple cooking. Sometimes when they were built with two stories, the lower floor was used for the horses."

The Sunday Houses of Fredericksburg and the older houses in that community are splendid examples of indigenous architecture—they are frank and truthful expressions of material and purpose—there is no ostentation. Had modern Fredericksburg shunned modern unnecessary innovations and conserved more of her antiquity and traditions, she would have rivaled our historical New England townships in interest for the tourist, for the antiquarian, and for the historian. As it is, there is much that is left of quaintness and interest.



MEASURED DRAWING BY CAROL H. LAWRENCE

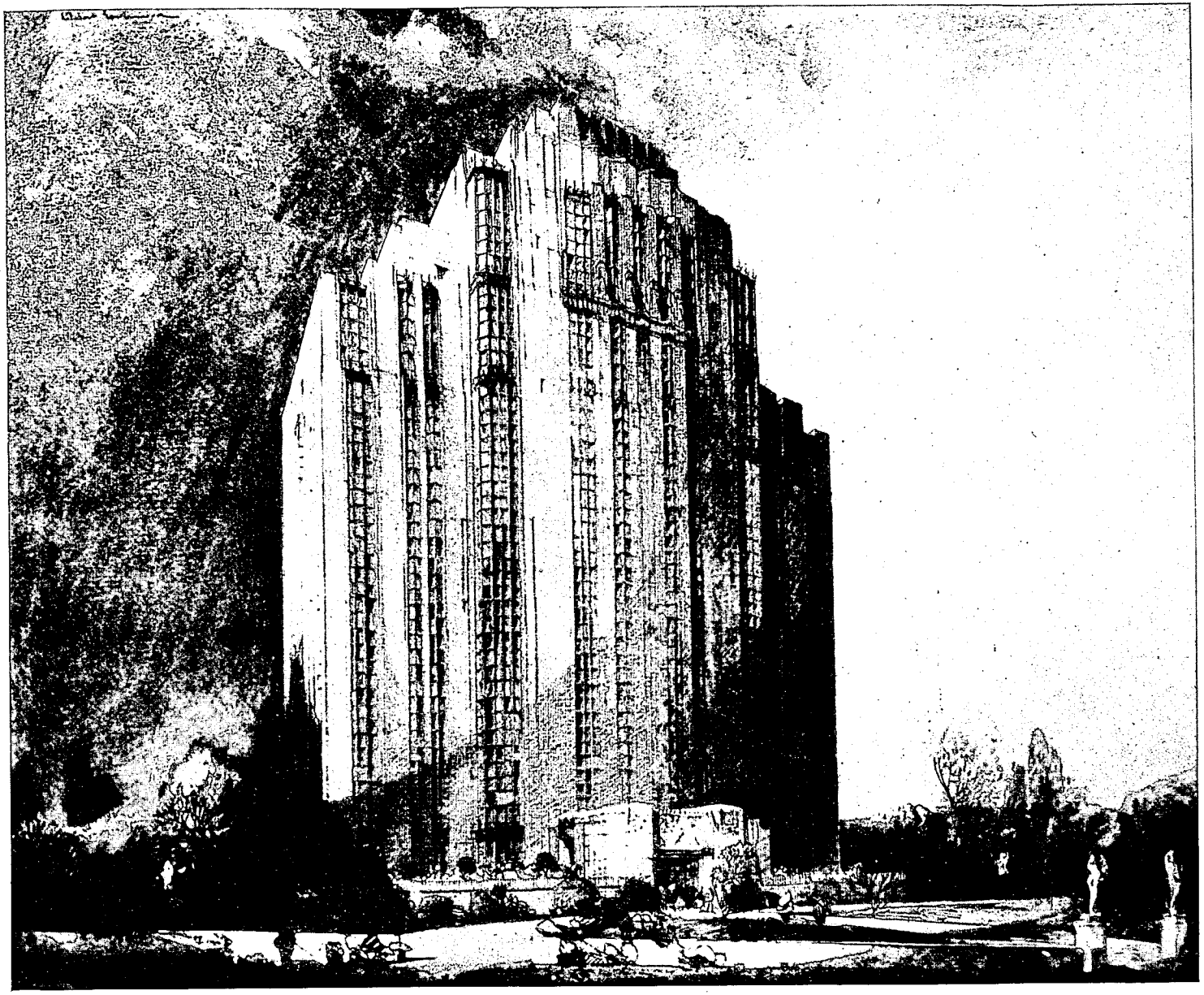


FROM A LITHOGRAPH BY JOHN RICHARD ROWE
"VILLEFRANCHE-EN-ROUERGUE"

PENCIL POINTS FOR APRIL, 1931

VOLUME XII NUMBER 4

It has been a long time since we have had the pleasure of presenting any of the lithographs of John Richard Rowe. This particular example is one of his latest and was drawn on stone. The original measures 10¼" x 14¼".



FROM A CHARCOAL AND COLORED PENCIL RENDERING BY ROBERT LOCKWOOD

APARTMENT HOTEL, LELAND BRYANT, ARCHITECT, LOS ANGELES

PENCIL POINTS FOR APRIL, 1931
VOLUME XII NUMBER 4

This plate shows a rendering by Robert Lockwood of Los Angeles whose work formed the subject of an article in the July, 1930, issue of PENCIL POINTS. *This drawing was done with the effective freedom which distinguishes all of his work in no matter what medium.*

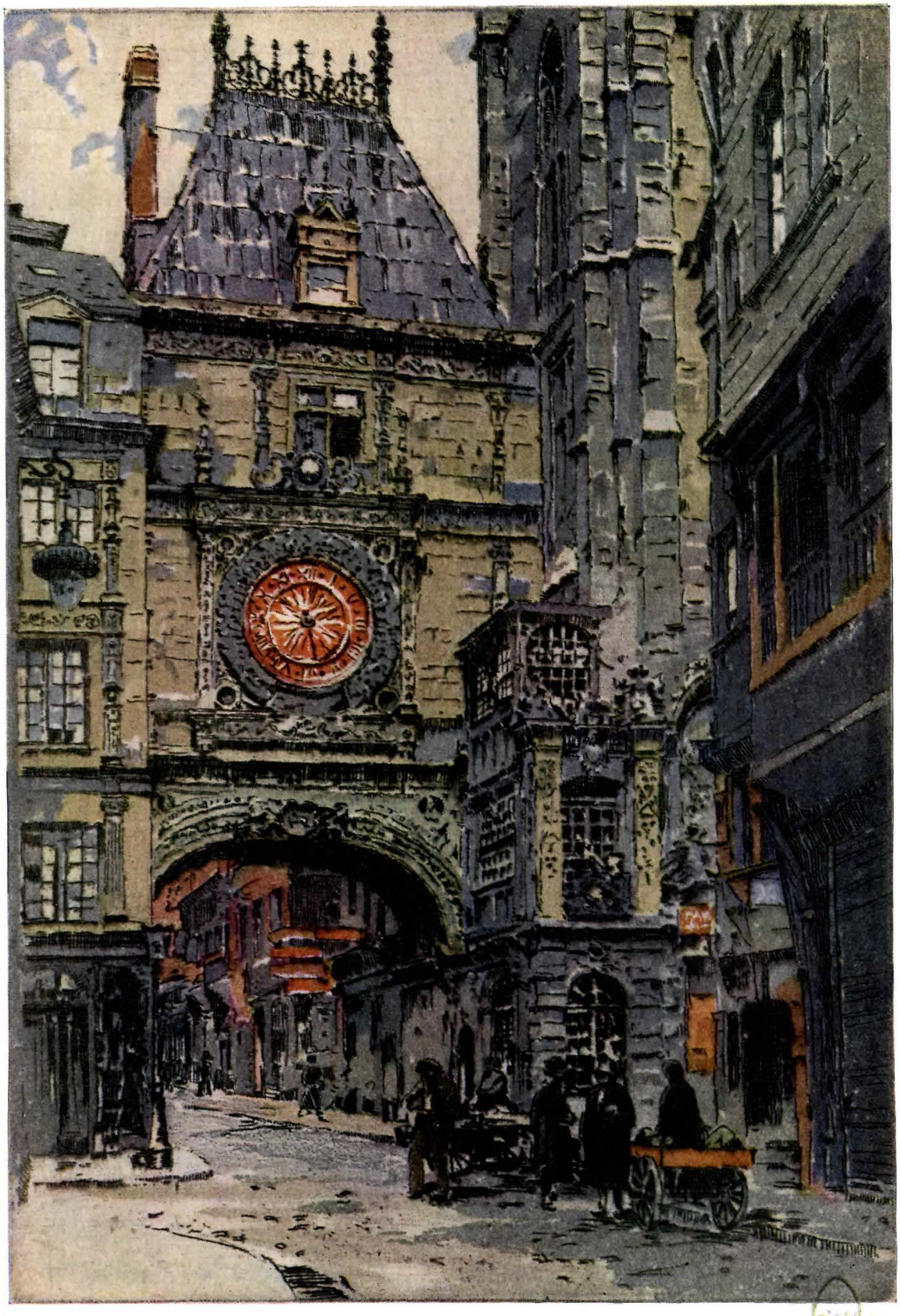
FROM A PEN-AND-INK DRAWING BY HENRY P. KIRBY

IMAGINATIVE COMPOSITION

PENCIL POINTS FOR APRIL, 1931

VOLUME XII NUMBER 4

On this plate is shown another imaginative pen-and-ink drawing by that master, Henry P. Kirby. It is presented through the courtesy of Arthur M. Duncan of New York who lent us one of the original series of reproductions made by the Cutler Manufacturing Company for distribution to architects. Another of these drawings by Mr. Kirby was printed as a plate in November, 1930.

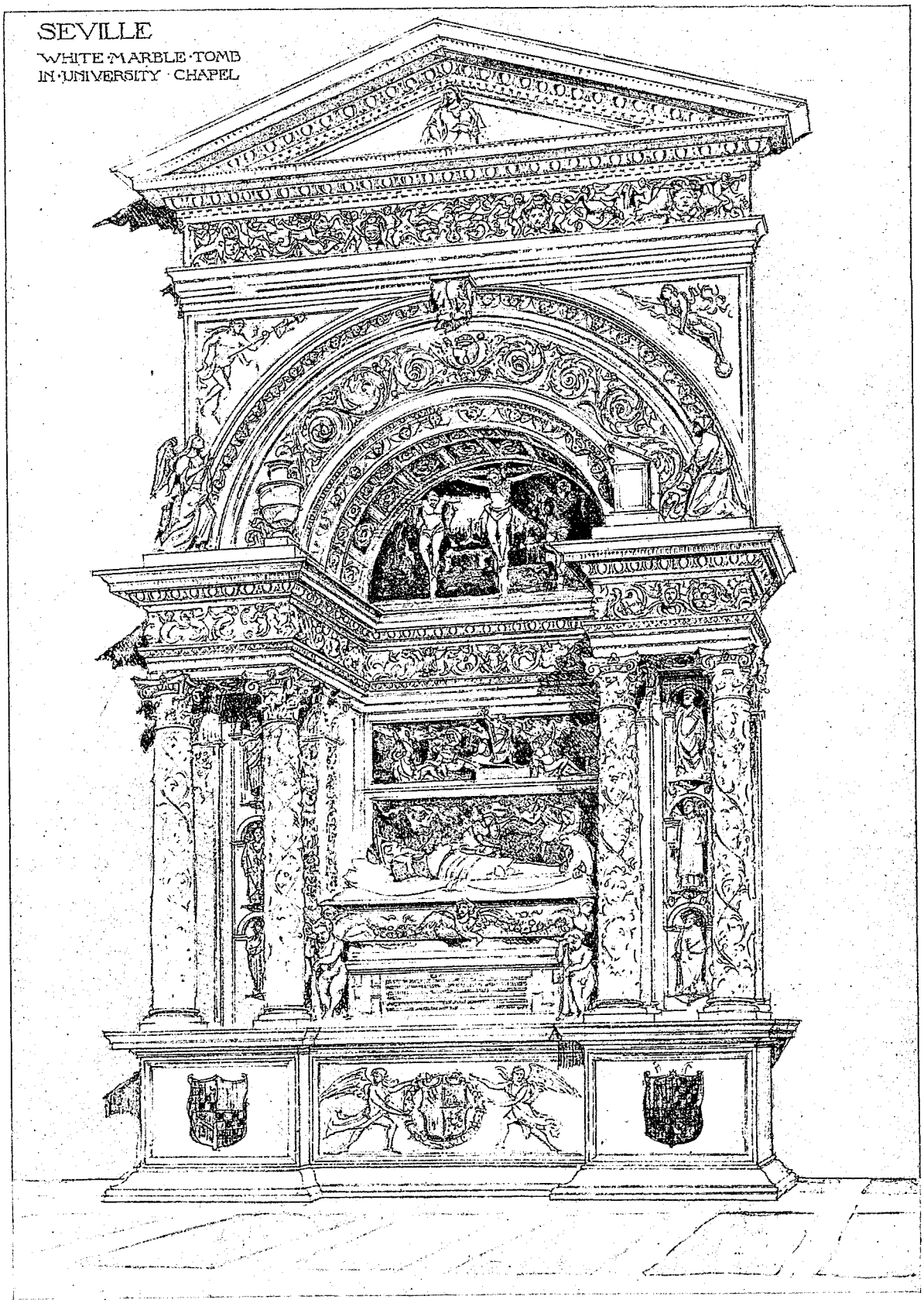


CLOCK TOWER, ROUEN

FROM A COLOR ETCHING BY HANS FIGURA

PENCIL POINTS SERIES
of
COLOR PLATES

The colored etching is not likely to be used often by the architectural renderer but this particular example will be of undoubted interest as a fine piece of color composition. Hans Figura, the artist who made the print, is well known on the Continent and is noted for his fine sense of color harmony and his skill at pictorial composition. This print, which measured 6½" x 9½", was reproduced through the courtesy of the Randolph Collection, New York.



RENAISSANCE ARCHITECTURE AND ORNAMENT IN SPAIN

A PLATE FROM THE WORK BY ANDREW N. PRENTICE

PENCIL POINTS FOR APRIL, 1931

VOLUME XII NUMBER 4

"The University Chapel at Seville contains the tombs of the great Medina-Celi family, whose ancestor, Don Pedro Enriquez, founded the Casa de Pilatos. His tomb is reproduced on Plate XXVI. It was executed by an Italian artist, Antonio Charona, in 1519, and is built against the high nave wall of the chapel; the width at the base is eighteen feet. The material is a beautiful white marble, parts such as the panels under the arch, representing the Crucifixion and the Resurrection, being colored and gilded."

A. N. PRENTICE.

The Function of an Architect in Relation to his Client

By Arthur C. Holden, A. I. A.

Editor's Note:—*This is the second of a series of talks given before the Junior League of The New York Society of Architects and was presented at their December meeting. These talks are under the direction of Louis E. Jallade and have been arranged for the purpose of presenting topics of interest to architects and draftsmen. The first of the series, by Theodore Irving Coe, was printed in our February issue.*

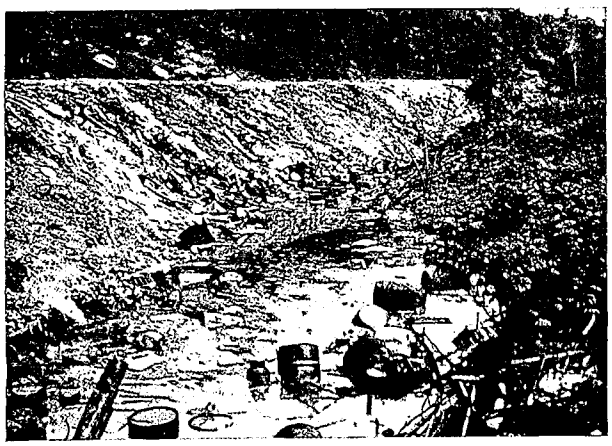
After all what is the function of an architect with relation to his client? The architect has his own conception, the individual client has his conception of it, and the public, perhaps, has quite another conception of it.

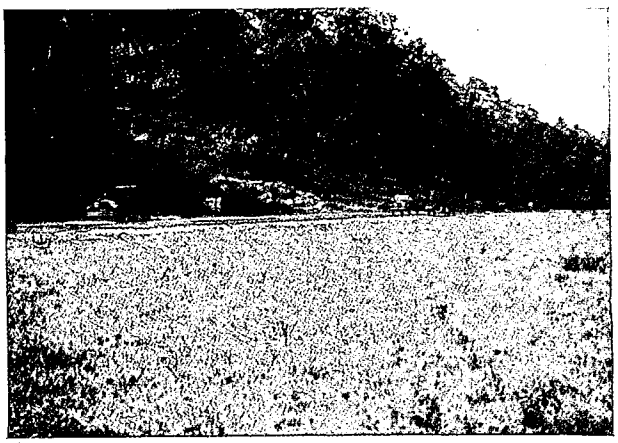
I once had a personal experience which brought home to me vividly just what the public thought of architects. When the United States went into the World War there was a call sent out from the Brooklyn Navy Yard for college-trained men and I was one of a small group who were taken in. I have never forgotten my first contact with a shop superintendent who looked me up and down and said: "Oh, you're an architect. You're one of those fellows that draws what is it? Ionic things." If you have ever given much thought to what the public conception of an architect is you have probably gotten just such a rude awakening as I had.

I have often wondered if the public ever thinks about us at all. Certainly over the great mass of the United States the public has hardly any contact with the people who call themselves "architects." In some of our cities the great inarticulate public is beginning to get an idea that the "architect" is somehow responsible for the towers that he can see if he happens to be riding on a ferry boat. Let me state, that the people who ride on ferry boats are the people who get the biggest kick, so to speak, out of our New York architecture.

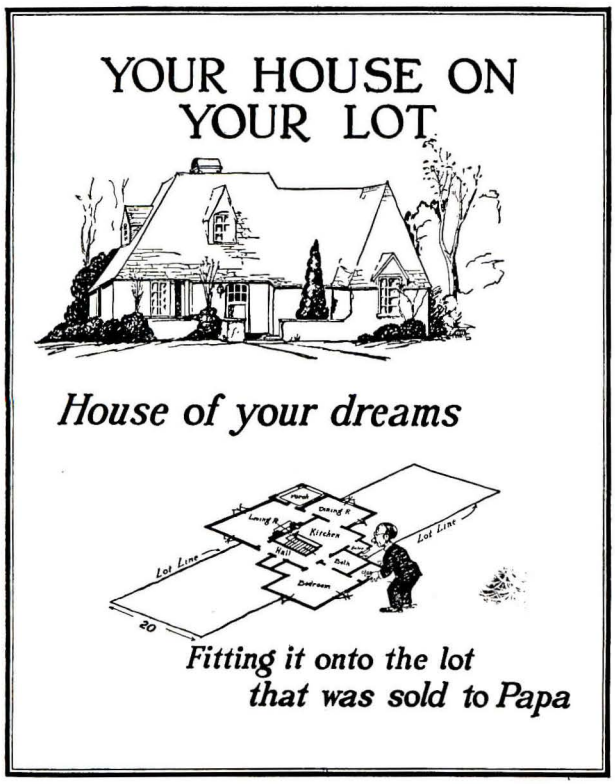
The public has a very decided idea of how the doctor and the lawyer fit into the scheme of life and the grocer and the farmer, but when they come to think of their homes they generally think in terms of carpenters and masons rather than architects. They may have a vague idea that homes just get built and don't have to be designed and I think that is pretty true of most homes. In the year 1929 out of a total of just less than three billions spent in construction, well over a third of it went into residential work. In value, the nearest approach to the residential classification was the commercial building. For every $7 that went into commercial buildings $11 went into residences. Well, what about monumental buildings? Public buildings, religious and memorial buildings, and utilities including railroad stations and bridges—$2.50 was spent in those things for every $11 spent in residences. That leaves a great opportunity for the architect who is trained to draw Ionic columns. What is the public looking for and how do we, as architects, fill the bill? I think that has a great deal to do with any discussion of the function of the architect and his relation to his client.

We have to look for our clients among the public and we are not trained in a way that leads the public to think we are able to be very useful to them and so our clients are not perhaps the public, but someone who feels that he needs some Ionic columns drawn, if any such person exists in this day and age. Let's think a moment. Whom do people go to when they want things built? Well, they go to a man whom they think of as a builder. If you can get a building built, like the Woolworth building, that sticks up above a whole city without rivals for a reasonable





An instance of the method used by a landscape architect in "getting over" his story to the public. Photographs published by the Westchester County Park Commission showing the site of the proposed Saw Mill River parkway before work was commenced and after completion.



Lots are usually made 100 feet deep and as narrow as possible. The man who buys has up to now troubled himself very little about the shape of his lot. The gentleman in the picture is mad because his house won't fit his lot. When people get mad about it *before* buying, Subdividers will take more pains to please the public.

This and the poster on the opposite page are examples of the educational work which it is necessary for the architect to do with the general public. They are from the "Primer of Housing" by Arthur C. Holden, published by the Workers' Education Bureau.

period of time, a considerable number of people will learn that you are the architect of that building and you are likely to be consulted. You're an architect.

That also applies to a residence that has both charm, good taste, and above all things is economical. It has to be economical or it is going to scare everybody off except the very wealthy.

There is a hidden meaning in the fact that the great bulk of people want economical homes. They somehow have the impression that they have been paying too much for the sort of thing they have been getting. They have the impression that the person to whom they ought to go to get their homes is a person who has some money to spend. Of course, this person must have some knowledge of the building industry, must be known as having produced some homes with his money, but if he has done that he is the kind of a person to turn to to get a home. He is not necessarily called an architect. The public doesn't think about the design part of it. What the public worries about is paying just as little money as possible at the time, and paying slowly, either in rents or deferred payments. The public isn't looking for architects. It is looking for credit that will get it homes. This is true of the type of public that is looking for the average small house and it is also true in an analogous way of the man who provides multiple homes in the shape of apartments. He, too, is looking for credit if he hasn't got it himself. He is looking for a builder who has credit and who will put up a house which will be sufficiently heavily mortgaged so that the prospect of paying for it will be as far removed as possible.

Many times a man who feels he wants an apartment and has the money he wants to put in it doesn't see any reason for having either a builder or an architect and he just goes out and builds.

As a result, what do our cities look like? We architects know. Go to any convention of the A.I.A. and hear the greybeards talking about the decline of beauty, the wild ideas of the young men, cooperation with the allied arts, architecture as a fine art, the cheap commercialism that sweeps away all our beautiful buildings, and you will get some idea of what the architect thinks about our American cities and incidentally you will get some idea of what the public must think of the architect if it keeps on destroying his works and disregarding the value of his services at the rate that you hear it talked about at such a convention of the A.I.A.

Perhaps the root of the trouble is what the architect thinks about himself and what he thinks his mission is. Perhaps there was a day when it wasn't very essential to consider the homes in which the public lived. The king or the prince, oh yes! He had to have a palace, but the people—certainly it was perfectly easy to forget about them in the civilization that flourished along the banks of the Nile. We haven't much idea of where the people in the great age in Greece lived although we know something about their temples and it isn't until we come to the days at Rome that we get much idea of what a private home was like. If it hadn't been for Mt. Vesuvius that covered up Pompeii and a few other Roman cities we wouldn't have much idea of that.

But we find some evidence here that the people who did the building of these buried cities knew something about their job and that the city was laid out according to a plan which meant something more than just a gridiron of streets.

It is a very different thing, however, to compare our standards of living with the standards of living of the Roman days or even of the days of the Renaissance. In both of these periods every luxury was given to the rich and the rabble was the rabble and could be forgotten about, until it got hungry. We, in the United States, make some pretense of providing the present standard of living for all men. Today our effort is concentrated not on cathedral building, not on the building of great public baths. Our job is the building of homes for people to live in. We aren't thinking about our job. Sometimes we forget even that we are engaged in the building of cities that it ought to be a delight and convenience to live in. We live from hand to mouth and think about whether or not we can scrape up a fee to pay for our bread and butter. Perhaps we miss things because our noses are too close to the grindstone. Great as was the growth of the population of Roman times and even great as was the expansion of population at the time of the Renaissance, before the advent of the Black Death, the world has never known an expansion of population such as has taken place in the 19th and 20th centuries. It is small wonder that home building and city building is our problem.

The architects of Greek and Roman times and of the Renaissance were in the forefront because they knew and understood the problems of their day and they were the men who were naturally called upon to solve them. The public is anxious at the present moment to find out who

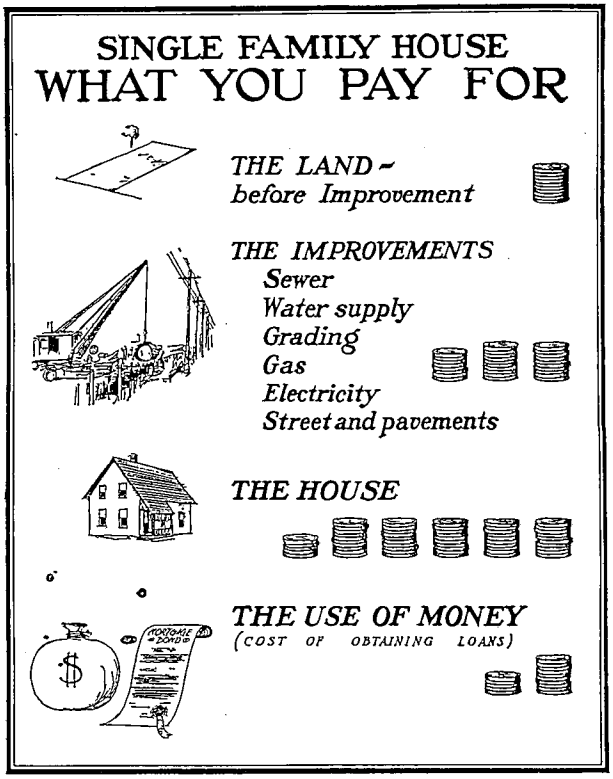
does understand the problems of our day. A year and a half ago we thought the bankers did. We are pretty sure they don't today. Where do the architects fit into the scheme? Are we concerned with the future of the country, the development of its economic, social and industrial life, or are we hirelings, skillful with the pencil, who know little besides how to draw lines on a drawing board?

I am certain that the vision of our profession is hopelessly narrow and I can say this without belittling the achievement of many architects as individuals. For we architects do enjoy as a clientele a limited section of the public. I think it was for a discussion of the relation of the architect to the client whom he has been fortunate enough to capture, that you came here today and I can assure you that there is plenty of room for discussion right there. It is the narrow field. Those of us however who have had clients know that the first handicap an architect is under is the poor opinion that the individual client has of the profession at large.

I want to make this perfectly clear. Your client may come to you feeling the utmost confidence in you, because he has been told by some friend that you are a genius. But during the course of his relation with you he is going to mingle a good deal among his friends and he is going to talk a good deal about his problems of building and what not. You will find by the questions he asks you that he is ready at any moment to believe almost anying he is told or to follow almost any advice he is given by people in almost any walk of life. Your profession hasn't sold itself to the public and it doesn't recognize you as an architect, as belonging to the group of men with a body of knowledge behind them and an understanding of how to use it for the public purposes. I think almost the reverse is true of the architectural profession as compared to the medical profession. The public has a pretty high opinion of the medical profession and respects the progress that it has made, although it may disregard the advice of an individual doctor. But the public has almost no opinion of the architectural profession, although individuals may have a very high opinion of individual architects. Of course, this will be a wavering opinion, shaken from time to time because of the fact that, after all, you are an architect.

Well, let us say that your client has engaged you. What do you do? You hand him a contract blank which is the accepted form of the A.I.A. and which says in a good many words that your client is going to pay you a percentage of the cost of something when neither you nor he have any idea of how much it is going to cost. Then there is set down in various paragraphs all sorts of warnings that the client may have to pay more money for this or that service—such as other professional consultants, extra time or extra cost—and there is practically nothing as to what you as an architect are expected to do for the client. There is an implication that you are going to make some drawings, but it even says in the contract the drawings belong to you as architect and not to the client.

The first task you have on your hands is to find out what the client wants. He will tell you that he knows exactly what he wants and you will be supposed to smile and assure the client that you understand and that you think the whole idea is wonderful. That is all right for a starter, but you have to be a clever man, and you are supposed to be a trained man, and you have to keep drawing the client out so that he will tell you more and more, and pretty soon you will realize that he is telling you many conflicting things such as that the home that he wishes to have built for himself is to be built as sturdily as Cæsar's palace but is to be perfectly simple and is to cost less than your first cousin's house where he went to dinner three weeks ago.

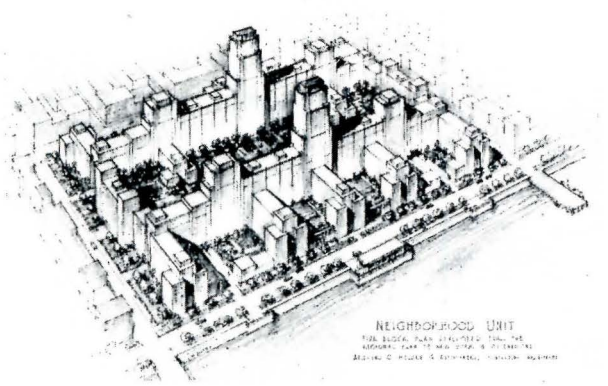


Each coin shown represents $50.00. Notice that the bonuses paid to get money cost half again as much as the original land. Notice that the improvements cost at least 2½ times as much as the original land. Notice that the land plus the improvements, plus the cost of getting the money cost almost as much as the completely finished house.

The architect has to explain to his client that money spent on construction does not represent the entire investment and that one of the reasons for shoddy construction is that in too many cases money is wasted by the uneconomic development of land and the resultant high cost of money.

As you draw him out you will find that he is hiding behind a mask and that the thing that he says on his lips is a word picture. It is your business to make it a reality. You have to hold a mirror up and show this man what he really wants. That is perhaps the hardest thing in the world to do. You have to keep yourself calm and collected, you have to understand human nature and the differences as well as resemblances in people. You can't tell him point blank that all people are alike, when you know he thinks he is unique. After you have been dealing with a number of clients you will realize that they all go through certain psychological states alternating between enthusiasm and discouragement, making decisions and changing decisions.

There are open-minded clients and close-minded clients. Rich people are used to having "yes-men" about them and you, as an architect, should not be merely a "yes-man" because you will have to take your client's needs and mold them into something that is tangible and possible. It is your job to discover, too, *what he can afford*. I don't mean by this what he can afford without going broke. I mean you have to find out the value of money to the particular client and how much money it is eco-



The architect cooperates with the Regional Plan Association to envisage how people might live. The message of the drawing is that efficient planning would make self-contained parks possible within neighborhood unit developments.

nomical and reasonable for him to invest in a particular project, and you have to think of his project as related to the rest of the community. This is true in residential work as well as in commercial and public work. Perhaps the most essential reason that many of our beautiful architectural monuments of the past hundred years are being swept away is that they are unrelated to their environment, consequently they cannot survive.

The preliminary function of an architect is primarily investigation, analysis, and weighing, but this preliminary function does not cease with the arrival of preliminary conclusions, in fact much of it does not begin until the work is far advanced.

The second function of the architect is the creative function, taking the ideas of the preliminary conclusions and putting them into understandable and practical form. He has to mold the preliminary ideas so that they work from the point of view of economics, practical use, and æsthetics. At the same time the architect must call on his body of technical knowledge for the transformation of the idea, the concept of the building, into solid materials. Most of our architects are trained in this one department. They learn, either through the school or through the drafting room, how to make drawings which call for certain materials in a building. Those of them who have been to school, and even those who have not, pick up the accepted method of covering the outside of the building with some sort of ornamentation which is currently thought to be stylish. Just at present the vogue is for leaving the capitals off columns, for using a lot of black marble, curious angles, and any kind of line that was *not* used by the Greeks and Romans.

The selection of materials is one of the most important and far reaching of all the duties assigned to the architect and it is really the one function where the architect is given the freest choice. The client is untrammelled because of his beautiful ignorance except insofar as he has been educated by the Saturday Evening Post. He will insist on brass pipe and have you use as much Celotex as possible. Otherwise he will merely express a preference for what he sees on the exterior, i.e. brick, shingles, or what not.

It is the architect's duty to keep apprized all the time and to understand the latest construction methods and to know how to build. He has to be constantly in touch with practical builders, he has to be familiar not only with the merits of materials, but their availability and market prices. Specification writing is as much a creative work as drawing. Specifications must be *thought out*. They cannot be pulled out of a card index. A specification which is over-written may mean that the whole project will be uneconomic and consequently will never become a reality.

Into the architect's specifications must go detailed descriptions of the intricate mechanical equipment for plumbing, heating and electric light and power and there must be provision for many mechanical devices—conveniences which have done so much to simplify living and increase its cost!

After the conception of the plans and specifications the architect asks for proposals from builders. He should know in advance, however, what the range of these proposals will be and he must be reasonably sure that they will meet the owner's budget. The architect must know the capabilities and characteristics of different builders. Frequently it is wise to have men who do different types of work figure the same job, but the architect must make clear to the owner that even from the identical specifications different builders will not produce exactly the same house. The man who presents the cheapest figure is not always the cheapest. Sometimes if a man known for a higher quality of workmanship comes within a reasonable range of the low figure it is preferable to select him. The architect, too, must work with the contractor through the entire list of subs and he must go over, with all who have submitted proposals, suggestions for changes in plans and specifications to take the utmost advantage of the market for materials and labor. In some cases this may not be necessary, but the architect must be constantly ready to turn the mass of information that he receives to the advantage of the client.

After the letting of the contract the architect assumes a new role. He is no longer only consultant to his client. He is judge as well in the contractual relations which his client has with the builder. He must remember above everything that he, himself, the builder and all of the subcontractors are experienced in the building industry. It is their job to work together so as to reduce waste to a minimum. In most cases, however, the owner has only a limited experience with the building industry. He doesn't understand that a change in instructions or contract, affecting one small element of his building, may affect many other trades in turn. One of the most difficult as well as the most human things that the architect has to do is to interpret the men on the job, that is both contractors and workmen, to the owner. An owner may be excused if he kicks up his heels and makes trouble. He isn't in the building industry, but the narrow-minded or opinionated architect or a narrow-minded or opinionated builder are alike inexcusable. They have to know their jobs and they have to make allowances, and in no small amount is their success dependent upon their getting along with others.

Above all things an architect must be scrupulously fair. He must not only be fair, but he must so conduct himself that both the owner and the contractor think he is fair. In other words, he must inspire confidence. If he lacks courage he cannot do this.

Well, after all, what is the architect and what is his relation to his client? To express it in as few words as possible it is this: First of all, he must be a man who understands the life of the day, with a true conception of his part in it; second he must be a man who thoroughly understands the art of building and by that I mean under-

stands the use of materials and the tools that we have to put them together as well as the art of design. He must know how to plan and arrange, he must know how to model his masses, he must know how to do detail, he must know something about color, but above all things he must understand how to put materials together. In the third place, the architect must be a diplomat and be able to handle men for the execution of a specific job. To succeed he must be the type of man to inspire confidence.

We have many architects who have succeeded singly in all of these qualifications and with the help of magazines we are increasing as a profession our proficiency in the second department. What our profession lacks most is leadership of the type that will make us, as a profession, stand for something in the eyes of the public. This is the biggest job which we, as architects, have before us. There are individuals who are making a gallant effort in this direction, but there are too many old-school architects in the saddle. There is too much talk about returning to the "good old days." Too many of us architects have been wearing horse blinders and looking with admiration at individual buildings. What we need to do is to look at the whole need of the nation for building and planning and then set out to make ourselves the type of men who can solve the problems that confront our nation.

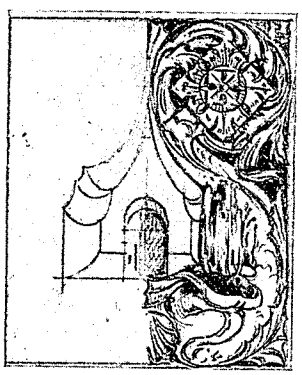
Comments of Louis E. Jallade in Summing up Mr. Holden's Talk

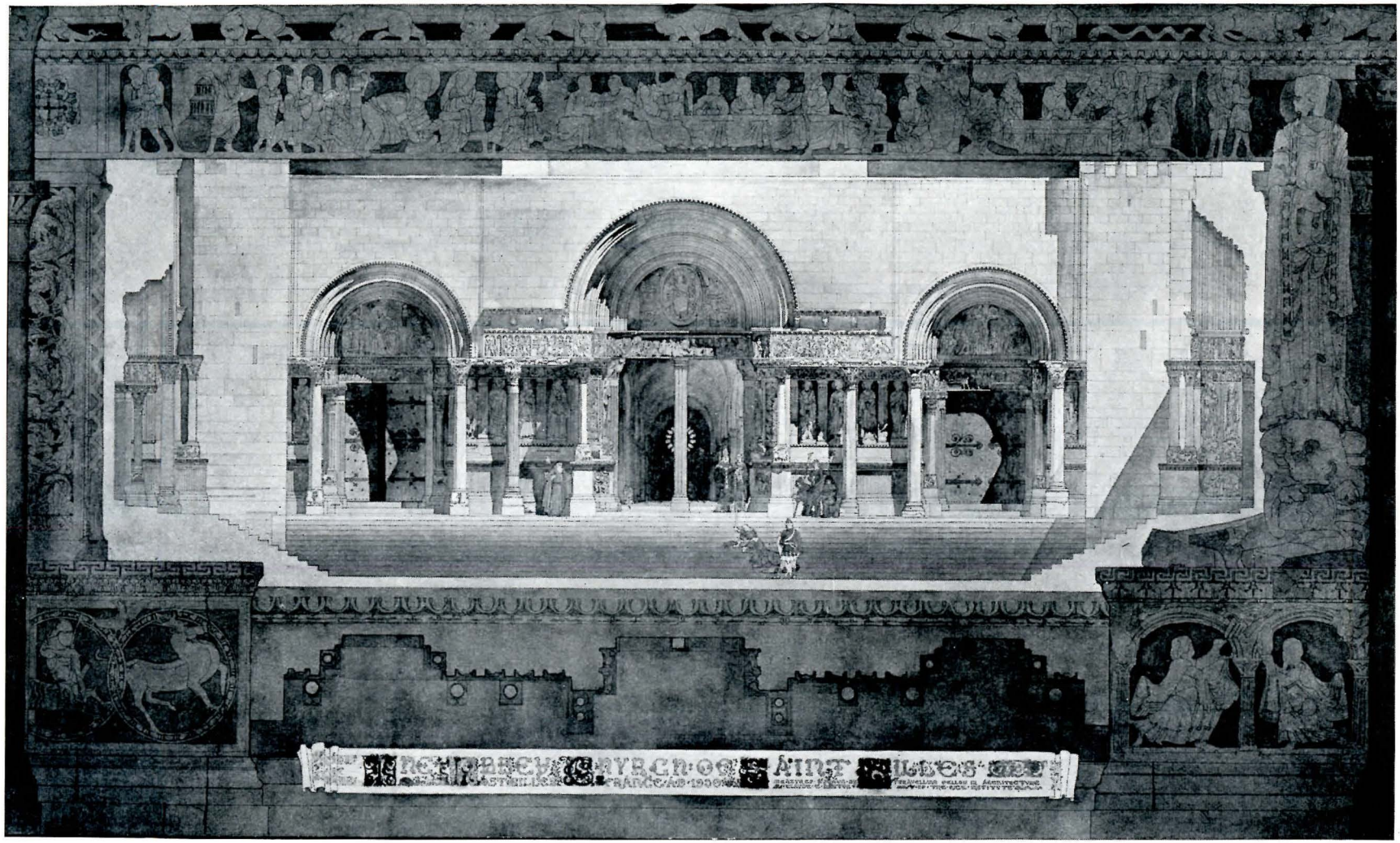
"Mr. Holden has very ably presented one of the many problems confronting an architect. It might be summed up in one of his statements—'the architect must understand the problem of our day.' Some time ago a lawyer representing some rather large interests in Pennsylvania addressed a group of graduating students at the Hun School. (None of these students, excepting my son, were architectural aspirants.) This lawyer, in bringing forward the problem of the modern day which these students would meet, used as an example the profession of the architect. He said, 'The successful architect of today finds himself in the position of a business administrator rather than that of the do-all artist of years ago. The modern architect finds it is necessary for him to meet and trade with businessmen, to look like them, talk like them and think as they do, and use the same measuring stick. The architectural problem has become so complex that it is no longer possible for any man personally to know all of the things and do all of the things that enter into a building. But he must know enough about each of these specialty items so he may be able to select intelligently the various experts employed for the particular problem, to weigh and judge the information they give him and to correlate the whole job.'

"The lawyer was looking at the architectural profession as I like to see it—a combination of good taste, good judgment, and good business. I say, the architect before drawing a line should be able to pass judgment as to whether the problem before him is sound from many points of view. We architects have a weakness. We like to draw, and if a client says 'I have a piece of property' our first instinct is to draw something on paper to see what it will look like, when the last thing we should ever do is to draw a line. The first thing to be done is to reason—shall we or shall we not draw a line; has the owner underrated or over-rated the possibilities of that particular project; how much will it cost to complete and is it too much or too little; what will its operation cost be and how about the income; what has been the cause of failures or the success of other buildings of this type? In other words, move your head first, your drawing board last.

"So much for the creative side. Now for executive ability. The architect must so run his office that the plans are finished on time; that the estimates come in under the appropriation; that the specifications are written so there are no disappointments, and the building operation carried on so it is finished on time. You probably say in the back of your mind, 'that is what we hire a builder for—to finish on time.' The architect could take a place behind the builder—following rather than leading. It is a question of personality after all, but I see the architect being next in order in the procession, directly next to and behind the man who is spending the money.

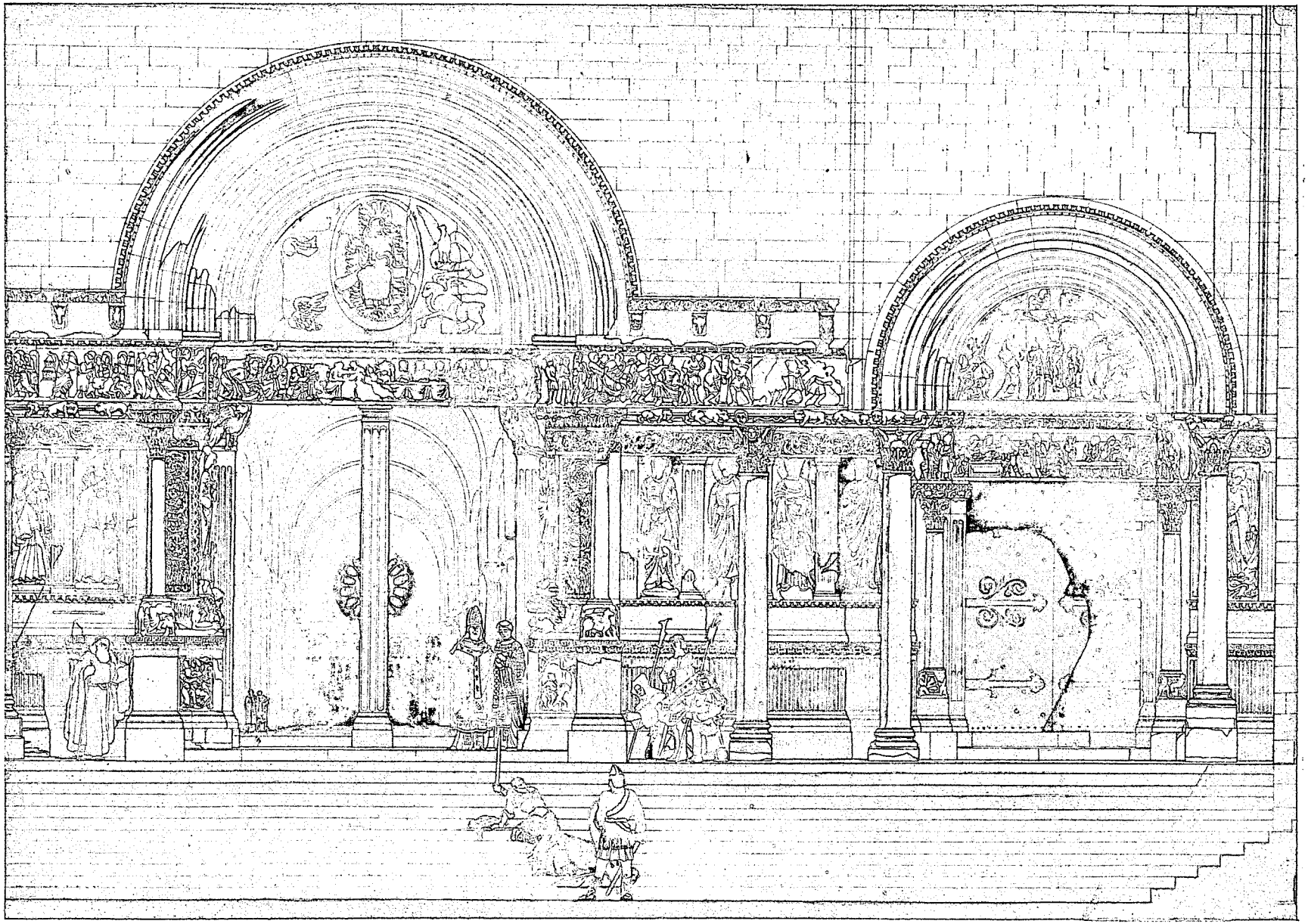
"The architect must be a man of refinement. He must meet his client on an equal footing because he must live the kind of a life that is expected to be lived in the buildings he designs. In other words he is designing through his personal experience. If, in addition to this, he is an administrator, then he clearly rises out of the class of the real estate promoter, the builder and the engineer."





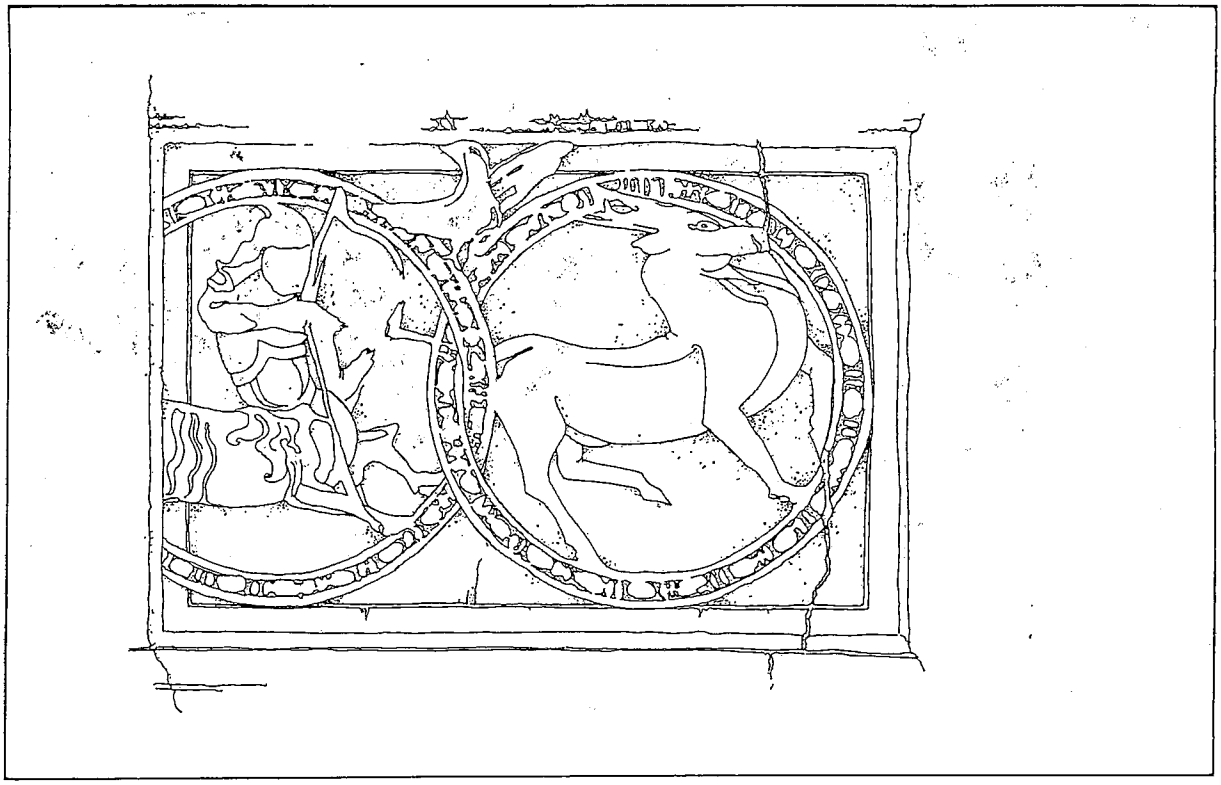
MEASURED AND RENDERED DRAWING BY CLAUDE E. HOOTON, TRAVELLING FELLOW IN ARCHITECTURE OF RICE INSTITUTE

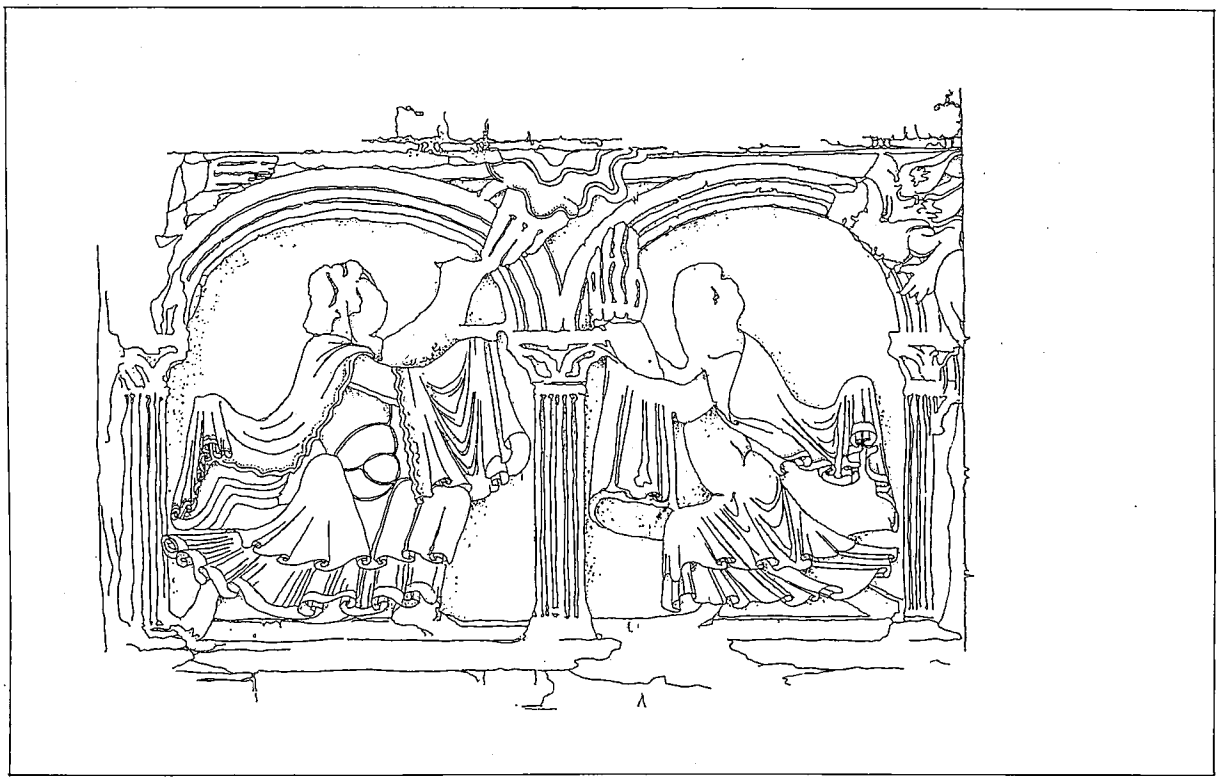
The original drawing measures 56" x 33" and is a beautiful example of draftsmanship. A detail, at larger scale, is shown opposite. The subject is, of course, the familiar Abbey Church of St. Gilles, France, one of the most important of Romanesque monuments.



DETAIL OF RENDERING BY CLAUDE E. HOOTON SHOWN ON FACING PAGE—RICE INSTITUTE ENVOI

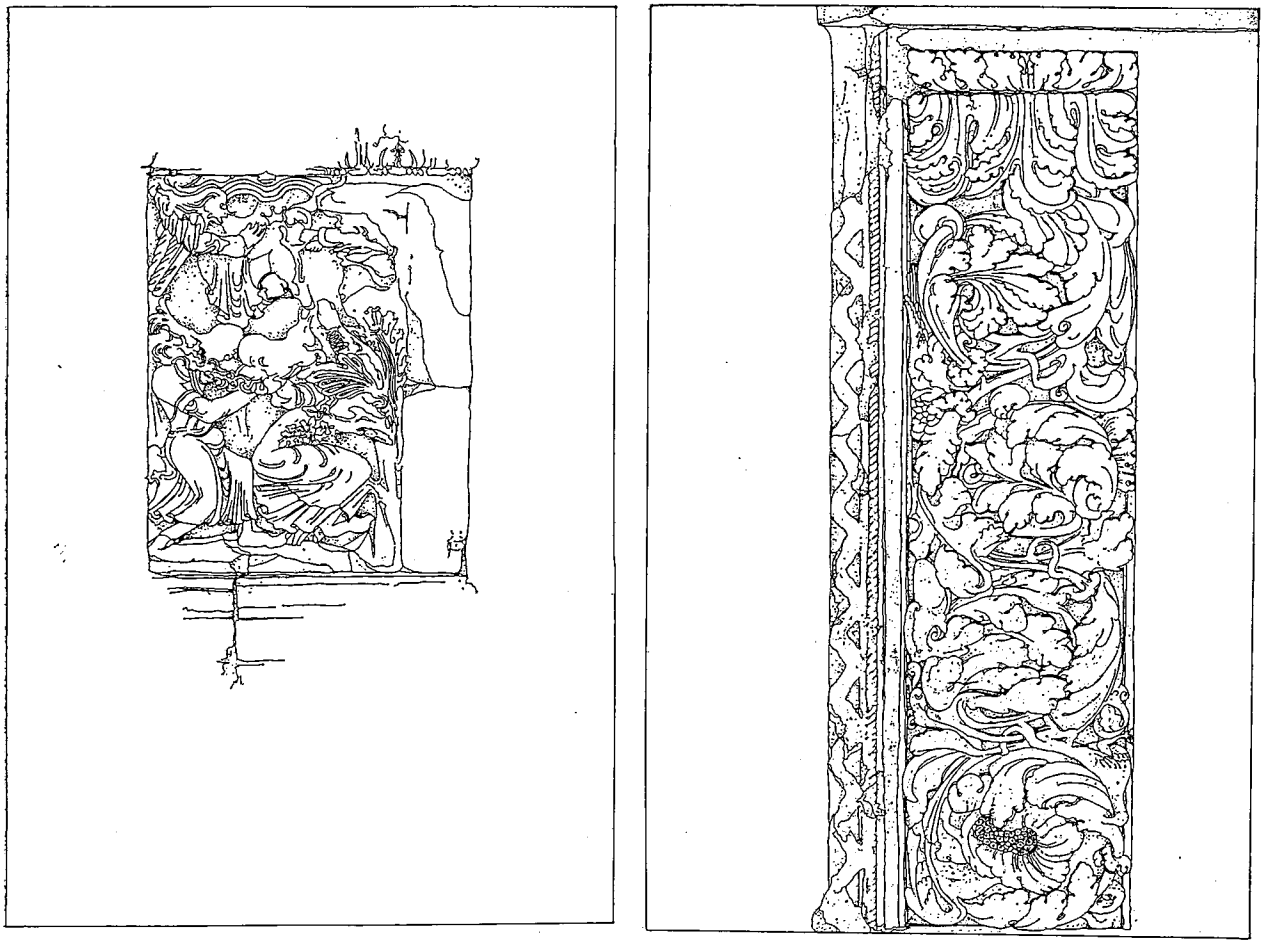
This portion of the drawing has been reduced to approximately two-fifths of the original size.





TWO OF THE MANY DETAIL STUDIES OF ST. GILLES BY CLAUDE E. HOOTON

MADE WHILE COLLECTING DATA FOR THE RENDERED ENVOI SHOWN ON PAGES 296 AND 297



DETAIL STUDIES OF ST. GILLES DRAWN IN PEN AND INK BY CLAUDE E. HOOTON

SEE FINISHED RENDERING ON PAGES 296 AND 297 OF RICE INSTITUTE FELLOWSHIP ENVOI

Further Discussion of House Design

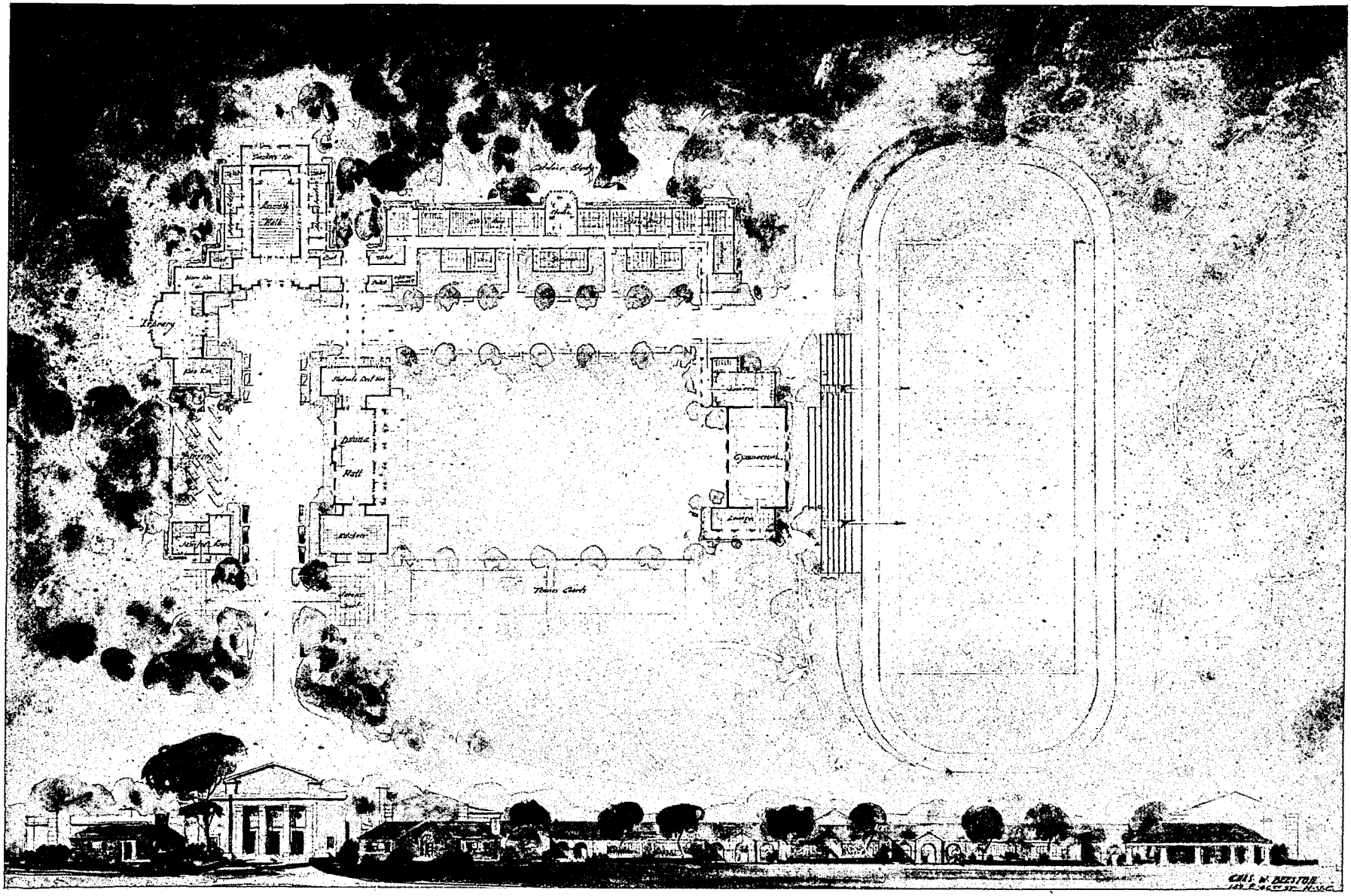
From E. V. Austin of Houston, Texas

This is in part an acclamation and otherwise a criticism of Hedley B. Sevaldsen's article "The Philosophy of House Design," printed in your February, 1931, issue. Of course we in the south are reminded constantly that solutions of the problems peculiar to our geographical location are shown absolutely no consideration in any competition sponsored by any group in any other section of the United States. Not that they should be, any more than the problems peculiar to any other section which are more familiar to those judging the competition. This does enter into the judgment though, no matter how unconsciously it may do so. A competition should be judged solely on how well the design fulfills the mandates of the program, keeping in mind the only justification for an architect—the beautification of purely utilitarian objects—yet this is not often the sole consideration. The fact that our peculiar solutions are ignored in competition judgments, where others are not, may in some measure account for my amusement, rather than any other emotion of what appears to be resentment of the judgment of your 1930 competition.

Mr. Sevaldsen has made many remarks there that I agree with emphatically, and especially those criticizing the unsympathetic, coldly hard, mechanical, and wholly inartistic creation premiated in your latest competition. Such an house would find favor with an exceptionally small minority of home seekers since in my opinion it wholly ignores the essential feature of beauty. It, to my mind, is more the concept of an engineer than an architect.

Mr. Sevaldsen, however, devotes more thought in his condemnation of what he calls "southern exposure." He goes defiantly ahead and glaringly overlooks the very foundation on which Norman-Bel Geddes bases his prediction. It is readily apparent to those who care to see that the growing tendency is to garden the small plot of earth that some of us succeed in acquiring during our span of years, and block out unsightly "ashcans, clothes-lines," etc., both our own and our neighbors, with shrubbery screens, placed to serve most effectively. In the past ten years I have been the author of some seven hundred houses but it has only been in the last two years that any have taken into consideration the plot landscaping possibilities, except, of course, the larger, more comprehensive ones. Recently this has become of such outstanding general interest that there is not a small house or household magazine that does not carry from one to three articles in each issue pertaining to landscaping the small house sur-

(Continued on page 74, Advertising Section)



PRIZE WINNING DESIGN FOR "A COUNTRY DAY SCHOOL," BY CHARLES W. BEESTON

COMPETITION FOR THE GUY LOWELL MEMORIAL SCHOLARSHIP FOR 1931

GUY LOWELL MEMORIAL SCHOLARSHIP AWARDED

The Guy Lowell Memorial Scholarship for 1931 has been awarded to Charles W. Beeston, of New York, for his design for "A Country Day School." Wayne Soverns, a former student at Massachusetts Institute of Technology, was placed second. The drawings submitted by Paul F. Eaton, Clarence H. Williams, of M. I. T., Ralph A. Jeffers, formerly of Technology, and William H. Scheick, of Urbana, Illinois, were commended by the judges. The Jury was composed of H. P. Richmond, Chairman, Gordon Allen, Robert P. Bellows, H. W. Gardner, and Neils Larson.

Sixty-four drawings were submitted in the competition.

THE PROBLEM

A Country Day School

A Country Day School for boys, easily accessible to a large center of population, on fifteen acres of attractive country. The problem is to house the following requirements for a Country Day School of 200 day pupils preparing for college.

Required

Assembly Hall or Auditorium of 2400 sq. ft. floor and gallery—used for plays, etc., which parents might attend; gymnasium of 400 sq. ft.; cafeteria or dining hall of 2000 sq. ft. with kitchen, serving room, pantries, etc.; 10 classrooms, roughly 550 sq. ft.each; 6 seminar or small classrooms of 400 sq. ft. each; *(classrooms are the size called for but only seat about half the number of students that a standard classroom seats).* Library and workrooms of 2000 sq. ft.; 1 studio of 800 sq. ft. used for several purposes but does not necessarily have to be top lighted.

Together with these principal requirements, provision should be made for ample checking and locker rooms, three rooms for administration, rest rooms and toilets for both students and teachers and also provision for resident janitor with his living quarters. The entire cubage should not exceed 800,000 cubic feet. The whole problem is to give to the housing of these elements as much attraction and charm as possible thereby differentiating it from the suburban high school of institutional character.

The winning design is shown opposite and that placed second on the following page. The scholarship provides $1,000 for six months' travel and study abroad. This was the fourth competition to be held in memory of Guy Lowell, who believed thoroughly in the importance of travel and study abroad and who was a generous and sympathetic friend of all students.

A PERMANENT BUILDING ARTS EXHIBIT

The Building Arts Exhibit, Inc., has been established in the Builders' Exchange Bldg., Cleveland, Ohio, for the purpose of providing the building industry with facilities for a joint presentation of their products to the consumer in the most economical and effective manner. The plan is to furnish a center for the producer to exhibit and for the architect and prospective builder to use for the mutual benefit of all. Its scope is far-reaching and includes everything that makes for better homes and better living. The architectural display is sponsored by the Cleveland Chapter of the American Institute of Architects.

The Exhibit has adequate financial backing to insure permanence and ability to carry out its program as conceived. A well thought out and carefully conceived program has been arranged to keep the display of interest to the public and of the greatest value to its patrons.

CHARLES W. BEESTON

Charles W. Beeston, winner of the Guy Lowell Memorial Traveling Scholarship for 1931, was born in England in 1904. He received his early architectural training in Canada and at the age of twenty went to Detroit for further study and work. Later, he went to New York to continue his studies and entered the Atelier Hirons. Here he received five medals in Beaux-Arts work and obtained a diploma. Mr. Beeston wishes to express his appreciation to Mr. Hirons for his criticisms and advice.

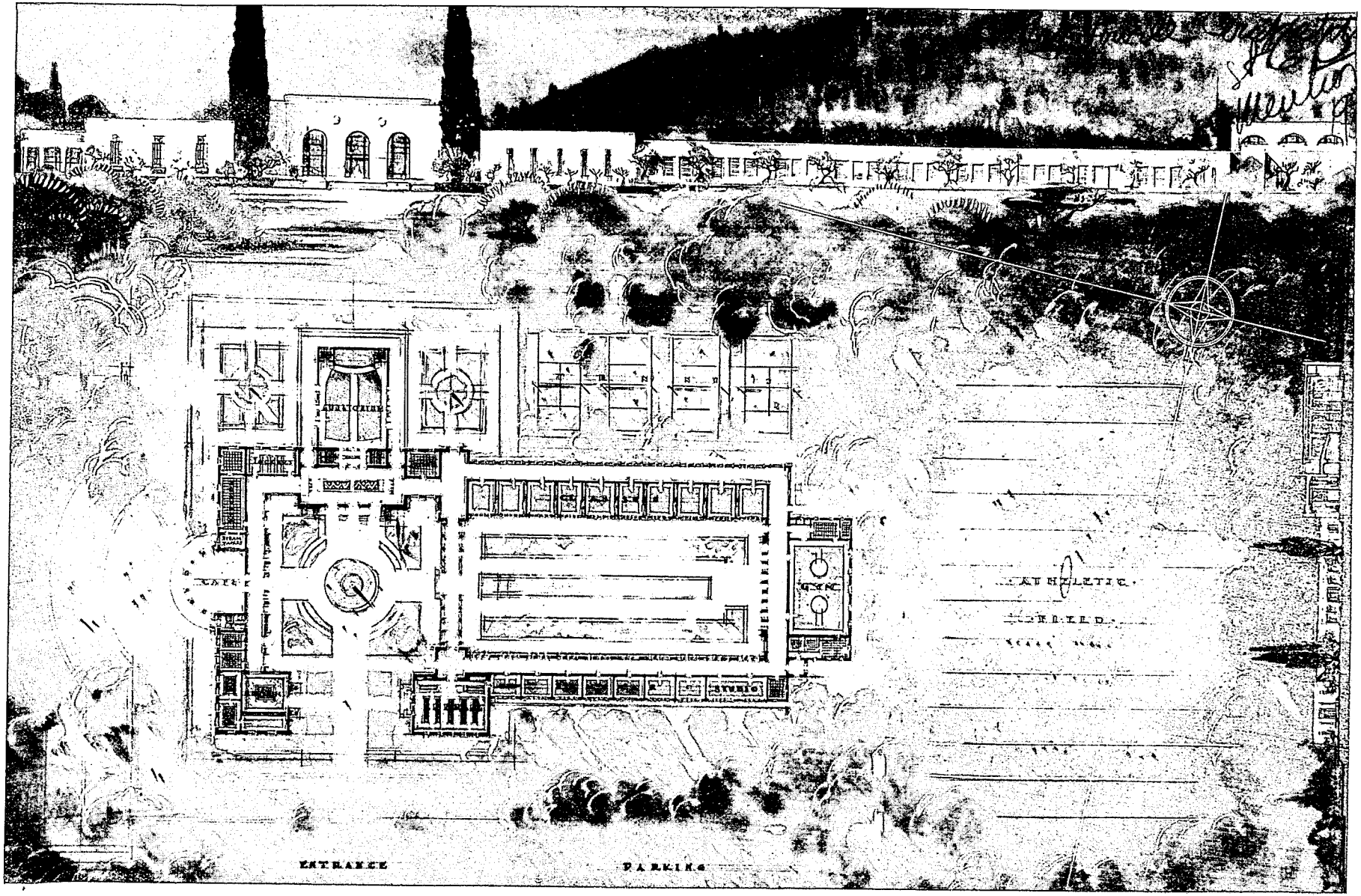
In 1927 Mr. Beeston traveled in Europe, studying and sketching. He went abroad again in 1929, devoting his travels to the study of modern buildings in Germany, Holland, and Scandinavian countries.

At the present time Mr. Beeston is in the office of Morris and O'Connor, New York architects, where he has been employed for the past five years. He plans to sail about May 1st. Mr. Beeston's winning design is shown opposite.

BEAUX-ARTS BALL AT SYRACUSE

Sigma Upsilon Alpha, architectural society of Syracuse University, announces its third annual Beaux-Arts Ball on April 10, 1931, to be given for the College of Fine Arts. A "Fête in Atlantis" has been selected as the theme. The ballroom at Drumlin's Country Club will represent a scene near Neptune's Palace. Everyone attending is to be in a costume pertaining to the theme.

The society welcomes the alumni of the department at this time.



PLACED SECOND—DESIGN FOR "A COUNTRY DAY SCHOOL," BY WAYNE SOVERNS

COMPETITION FOR THE GUY LOWELL MEMORIAL SCHOLARSHIP FOR 1931

(See text on preceding page)

J. HILTON KELL

J. Hilton Kell is the winner of The Henry Gillette Woodman Scholarship (University of Pennsylvania). Mr. Kell has written his autobiography which follows.

"Born — June 16, 1903, McAlester, Indian Territory (now Oklahoma). Followed trail of poor but honest parents to St. Louis, Madison, S. Dakota, and various points in Kansas too numerous to mention. Father — Presbyterian minister. Mother — Presbyterian minister's wife (very remarkable woman by the way, went to college with me and graduated in the same class). Graduated with first honors Emporia High School (Kans.) 1920. Graduated from Kansas State Teachers College of Emporia, Kansas, 1924, degree B. S. in Education; Member Kappa Delta Pi, national honorary fraternity in education. Tonsils removed 1923. Taught in high school at Elmdale, Kansas, year of 1924-25 where I directed the school orchestra and glee clubs between sessions of marking algebra and physics papers. Was an assistant instructor in the chemistry laboratory of the college for two years while attending same, also sang (?) in the glee club and played in school orchestra. Attended two military training camps and received medal for best all-round something or other in the second year course, Fort Des Moines, Iowa, August, 1923. Played banjo and violin with a traveling dance orchestra in Oklahoma the summer before matriculating at the University of Penna., Oct., 1925, just in time to see the last of Mr. Crét's active participation in the school.

"Worked like hell till Feb., 1929, receiving degree B. of Arch.—in meantime being presented with various favors from faculty including assistant instructor design, 1927-8, Chapter member Society of Sigm XI, assistant instructor in history of painting, sculpture, historic ornament, 1928, Architectural Society (after quite a struggle), Tau Sigma Delta and promises of several medals, etc., etc., critic of Analytique, T-Square Club, 1930-31.

"Logist in Stewardson Competition, 1930 (why think about it). First interest in 'art' while framing pictures in a gift shop to pay my expenses through college and high school. Worked on night shift at an ice plant one summer to get money to enter college. Worked (from time to time)—Thomas, Martin and Kirkpatrick, Harry Sternfeld, and Paul P. Crét.

"Particularly indebted to Paul P. Crét, boss and critic on Stewardson, Harry Sternfeld, patron, and John F. Harbeson, general overseer of my fate.

"Engaged to various worthy damsels from time to time but at present safely engaged in growing a geranium in a bachelor apt., and so on and etc., far into the night."

Mr. Kell has received the 1st (gold) Arthur Spoyd Brooke medal for Architectural Design (1929); Faculty Medal University of Pennsylvania for excellence in all subjects; A.I.A. Medal at University of Pennsylvania (1928-29); 2nd Crét Prize (1927-28); 2nd Frank Miles Day Prize (1925).

GEORGE G. BOOTH TRAVELING FELLOWSHIP

The Competition for the George G. Booth Traveling Fellowship in Architecture has been announced. The income from the fellowship fund is $1,200, which under present conditions of exchange is a good stipend for about a year abroad. The competition is open to unmarried men whose thirty-first birthday comes after April 11, 1931.

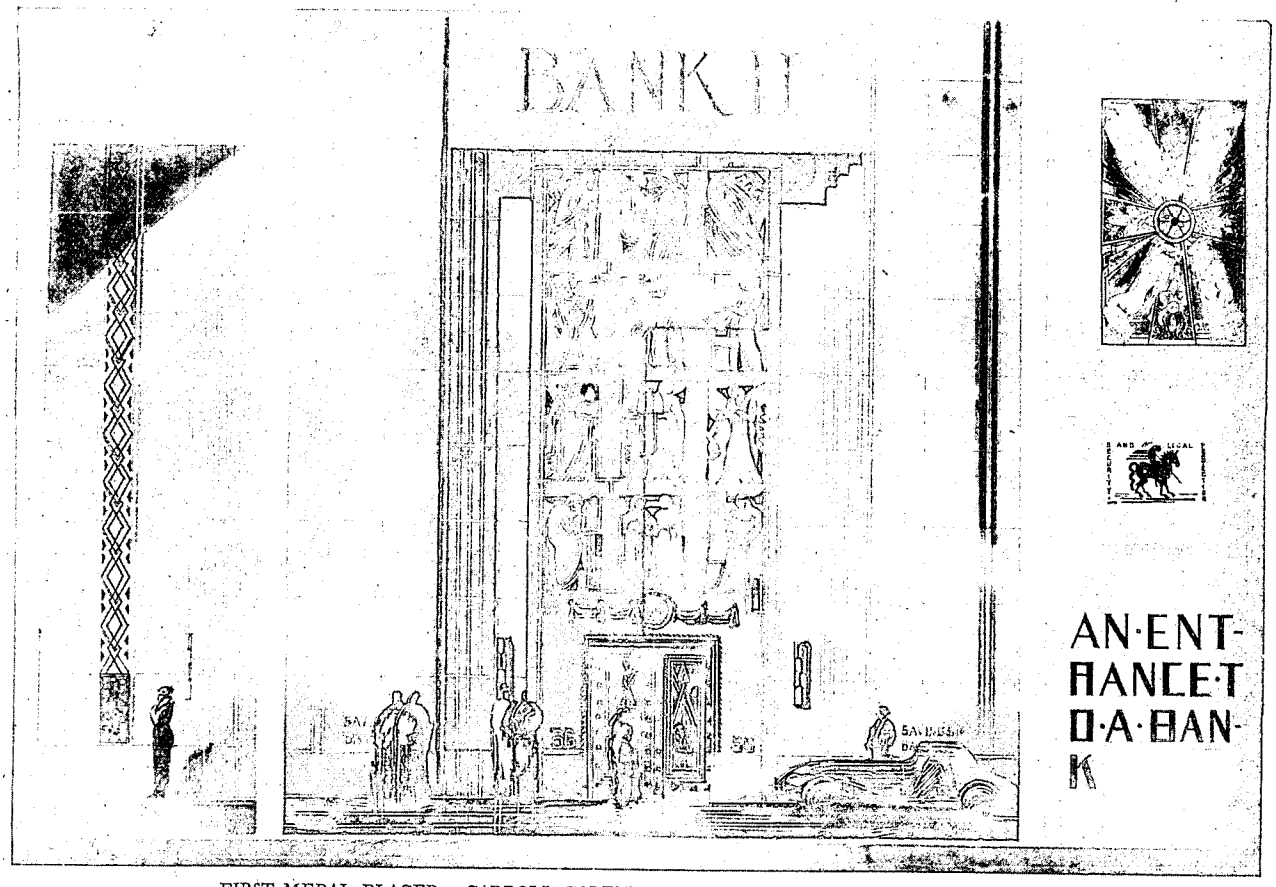
Candidates should be graduates in architecture of the University of Michigan or should have completed in residence substantially the last two years of the four-year course. Candidates who are employed will probably find it necessary to give up their office work during the duration of the competition in architectural design, since this will be based on a time-limit problem. Candidates resident in Michigan will come to Ann Arbor; those living elsewhere should, before applying, arrange with a local architect in order to make the preliminary sketch in his office under his general supervision.

The program will be handed to candidates on April 11, when the preliminary sketch is to be made. The problem is to be developed during the two weeks beginning Monday, April 13.

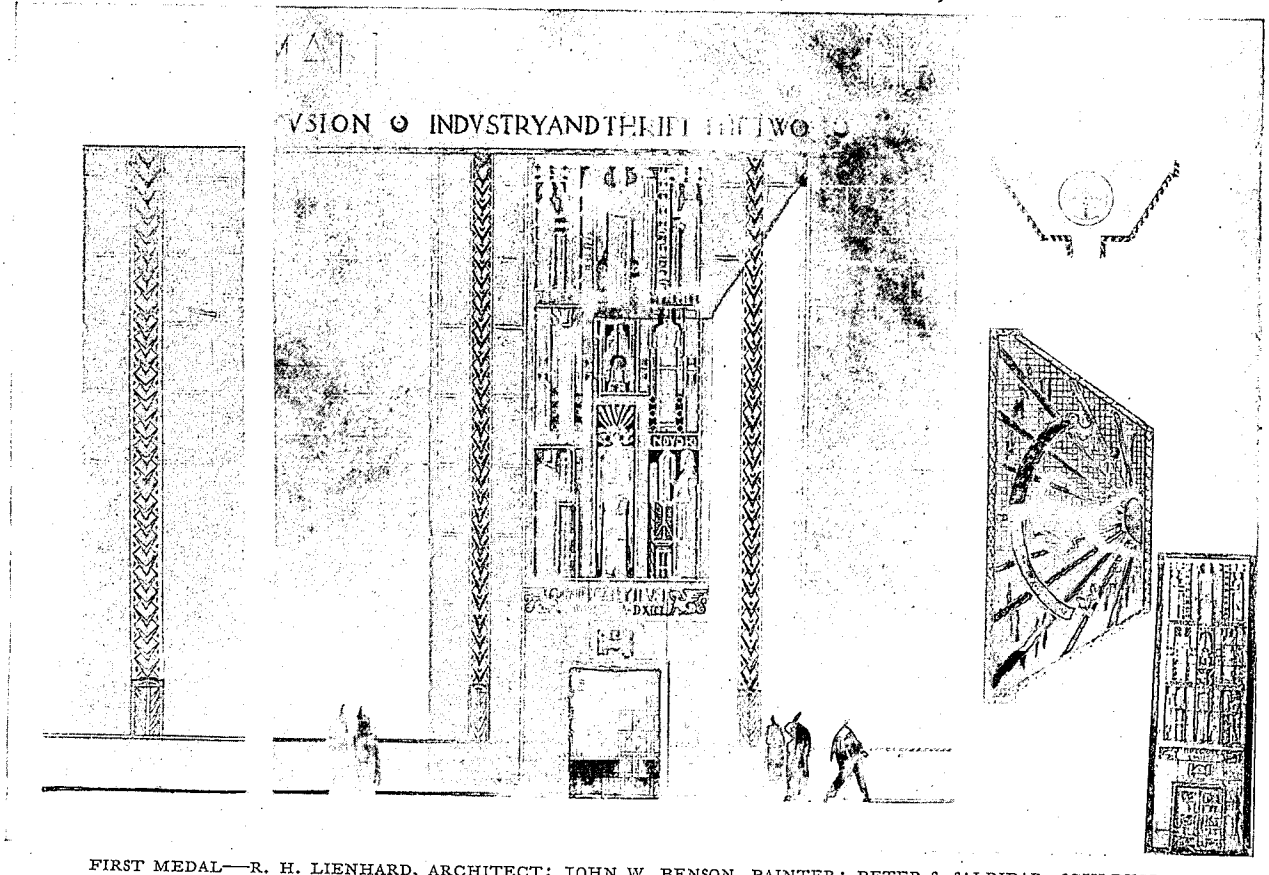
All drawings must be made by the competitor without criticism or help, while the preliminary sketch is to be made without the use of reference material. All competitors will have the same amount of time after receipt of the program. For candidates living in other states the programs will be sent to and given out by the architect acting as local representative of the University of Michigan.

The completed drawings are to be sent in a mailing tube with the registered post office or express receipt dated as indicated in the program.

Those intending to compete should write as soon as possible to Professor Emil Lorch, College of Architecture, University of Michigan, Ann Arbor.



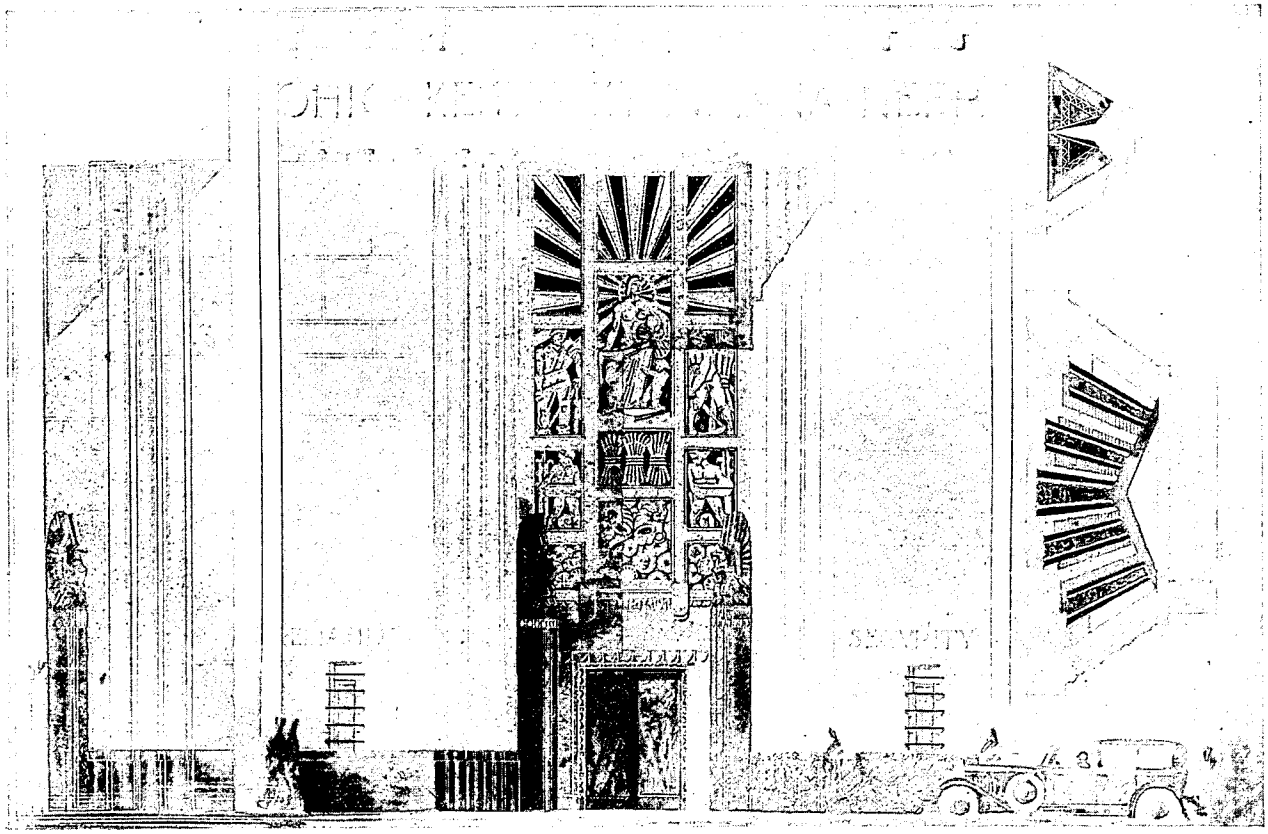
FIRST MEDAL PLACED—CARROLL COLETTI, ARCHITECT; T. S. COTELLO, SCULPTOR



FIRST MEDAL—R. H. LIENHARD, ARCHITECT; JOHN W. BENSON, PAINTER; PETER S. SALDIBAR, SCULPTOR

DESIGNS FOR AN EXTERIOR ENTRANCE OF A LARGE BANK

COLLABORATIVE PROBLEM, SPONSORED BY ALUMNI ASSOCIATION OF AMERICAN ACADEMY IN ROME



FIRST MEDAL—T. R. NELSON, ARCHITECT; N. EDELBAUM, PAINTER; F. E. EDELBAUM, SCULPTOR

Collaborative Problem of the Alumni Association, American Academy in Rome

One of the fundamental aims of the American Academy in Rome is the fostering of collaboration in the arts of architecture, painting, and sculpture. With a view to encouraging such collaboration among students in the various Art Schools of this country, the Alumni Association of the American Academy in Rome sponsors each year a competition which is open to any group of students in art schools, ateliers, or to those employed in offices or studios.

The problem this year was the *Exterior Entrance of a Large Bank* and is given in detail as follows:

"This is the era of powerful combinations of banking institutions, which fact is naturally reflected in the grandeur of their business quarters. Such a bank proposes to erect new headquarters. The problem is to design the exterior entrance motif in a large multi-story building located on a wide street. The motif shall take the form of a large cavity in the street façade, giving three walls, ceiling and floor to be treated. This cavity shall be 12′ deep from outer wall face of building, by approximately 25′ wide by 30′ to 40′ high. It may be treated as one large opening or may have columns in the front wall of the building. The floor is on a level with the sidewalk —without steps. The rear wall shall contain monumental doors of bronze or other metal appropriately enframed in the material of the main façade—granite or marble. Any wall of the cavity may or may not contain windows, as it is assumed that the interior is not dependent on the street façade for lighting. The designer is left free as to style and other materials entering into the general design.

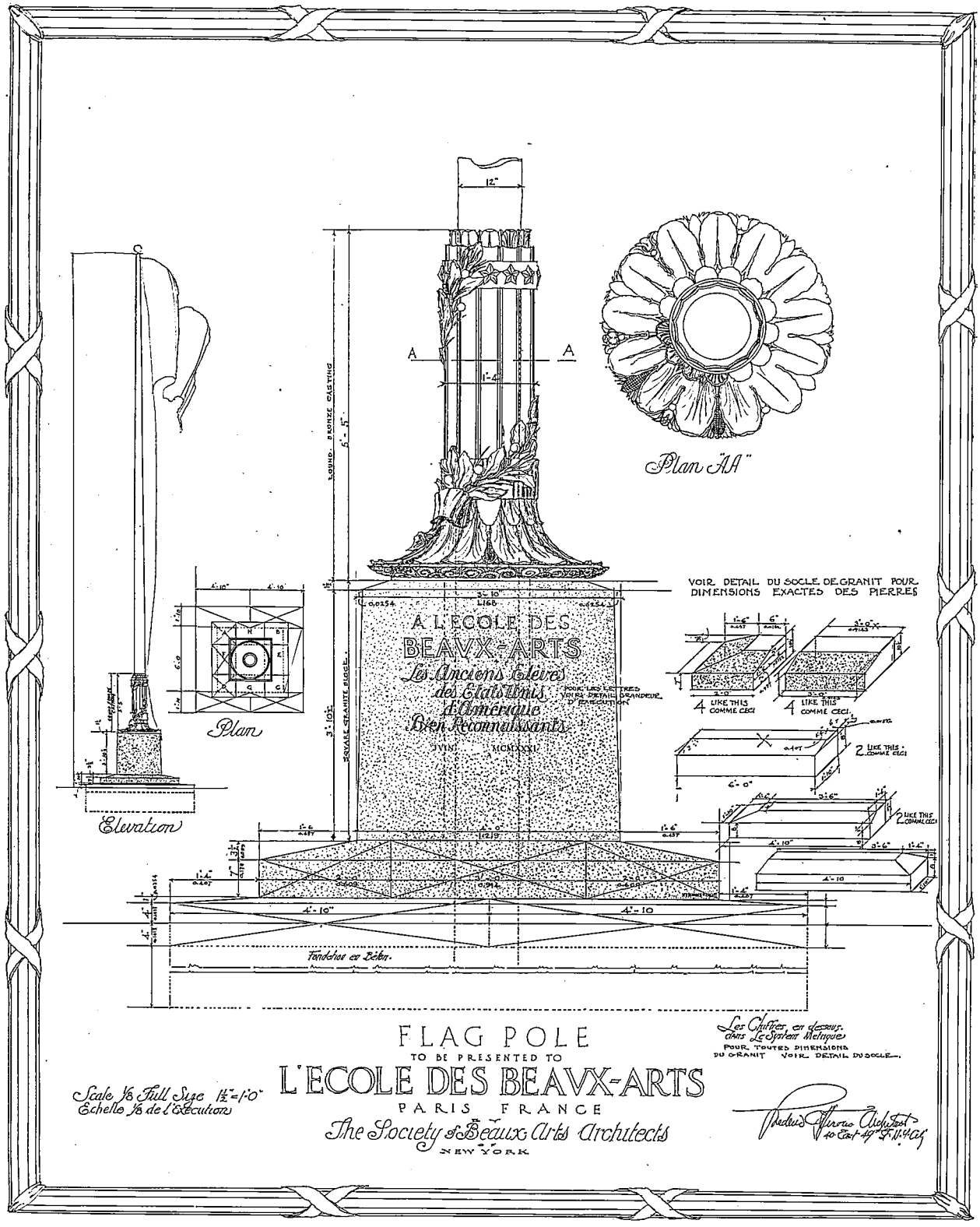
"It is mandatory, however, that architecture, mural decoration, and sculpture all be existent in the design. Architecture should embrace the motif described and 6′ or 7′ at each side and over the motif. Mural decoration may be in stained glass, mosaic, metals, inlays in any chosen material, or by painting. Sculpture may be in relief or in free standing figures or groups, but portrait busts or figures are not desired. Any or all of the above materials may be incorporated in any amounts the designer desires. Sketches of mural painting in color, or sculpture in plastiline are desirable, but not mandatory."

The drawings were presented in water color.

Six schools were represented in the competition: Yale School of Fine Arts, University of Pennsylvania Architectural School cooperating with the Pennsylvania School of Fine Arts, Cornell University, Syracuse University, Armour Institute of Chicago, and the Carnegie Institute of Pittsburgh.

The Jury of Awards, chosen from the trustees and alumni of the Academy, consisted of Messrs. Chester W. Aldrich, Edgar Williams, George Koyl, and James K. Smith, Architects; Herman MacNeil, Charles Keck, Gaetano Cecere, and Thomas H. Jones, Sculptors; Barry Faulkner, Ezra Winter, and Robert K. Ryland, Mural Painters.

(Continued on page 310)



DESIGN FOR FLAGPOLE AND BASE TO BE PRESENTED TO THE ECOLE DES BEAUX ARTS BY THE SOCIETY OF BEAUX-ARTS ARCHITECTS

FREDERIC C. HIRONS, ARCHITECT

(See text opposite)

D. KNICKERBACKER BOYD IN PRIVATE PRACTICE

David Knickerbacker Boyd, who has contributed generously of his time and energy to the welfare of the architectural profession and the building industry for over thirty continuous years, recently announced his withdrawal from such altruistic endeavor in order to devote his future to the work of his firm of Boyd, Abel, and Gugert, Architects, and to his own private enterprise as writer, lecturer, consultant and structural standardist.

He has long been identified with many achievements both in the practice of Architecture and as a public servant in matters affecting civic betterment within the construction field such as community planning, apprentice training, recognition of the workman, continuity of employment, and the numerous technical problems affecting stabilization and economics.

As the founder of the Philadelphia Building Congress and its President for eight years and since last June, when Joseph J. Greenberg was elected President to succeed him, and Mr. Boyd was elected Director of the Congress, it will be a keen surprise to his many friends and admirers to learn of his withdrawal from this activity which was so much a part of his recent life.

Few architects can boast of such long and devoted service to the cause of the profession and the industry which supports it. His friends will all wish him the fulfillment of numerous crowning years of achievement in direct service to his clients to which he now returns after so long absenting himself from his personal well-being and his chosen vocation.

SOCIETY OF BEAUX-ARTS ARCHITECTS TO PRESENT FLAGPOLE TO ECOLE DES BEAUX ARTS

The Society of Beaux-Arts Architects will present to the Ecole des Beaux Arts in Paris a commemorative flagpole as a mark of affection, appreciation and respect which the American students have for the old school and its administrators. The presentation ceremony will take place in Paris during the early part of June, at which time an exhibition will be held in the Salle Melpomene showing the best of the students' work in America, the result of some twenty years' application of the Beaux-Arts system in the universities and schools of the United States.

The presentation will be an important ceremony and the Beaux-Arts Society will be represented by seventy delegates, who will leave New York on May 21 and be back there on June 20. An entire ship has been chartered for the expedition.

The French Government will invite the delegates to a function at the Colonial Exposition which opens May first and from all indications it is expected that the affair will be international in importance.

The flagpole and base were designed by Frederic C. Hirons, as shown by the drawing opposite.

"ATELIER"

William Edwin Rudge has announced that beginning with the April issue the London *Studio* magazine will be published by him in the United States under the new title *Atelier*. Except for the titles, both the English and American editions will be identical.

The price of *Atelier* will be 75c. a copy or $7.50 a year. For convenience in reference the pagination of the London *Studio* magazine will be followed, and each issue will carry volume and number designations for both magazines. Vol. I, No. 1, the April issue of *Atelier*, will be Vol. CI, No. 457, of the London *Studio*. Editorial Offices will be at 475 Fifth Avenue, New York.

LIONEL MOSES

1870 — 1931

Lionel Moses, who had been associated with the firm of McKim, Mead and White for the past 44 years, died February 19, 1931, at his home in New York, after a long illness.

He was born April 16, 1870, in New York, and was educated at the Brooklyn Polytechnic Institute and in Europe. Most of his recent architectural work was in the building of country houses, and such buildings as the D.K.E. Fraternity house at Amherst College. He was associated with Stanford White in the building of the New York Players' Club and several of the Columbia University buildings. He was a member of the American Institute of Architects, the Architectural League, the Sons of the American Revolution, and the Crescent Athletic Club. During the war he was Assistant General Manager of the U. S. Housing Corporation.

In the annals of sport, Mr. Moses will be remembered as one of the foremost American players of lacrosse. He attracted national attention in 1890 as a member of the Staten Island Athletic Club's team, which won the American championship. Later he played brilliantly with the Crescent Athletic Club and in 1897 he went abroad with this team, selected to represent the United States in international play. Their record in 13 games was so successful that this combination is still considered by many sporting authorities as the greatest lacrosse team ever assembled in America. His associates on this famous team were Cyrus C. Miller, James Garvin, John P. Curry, Embury McLean, Edward Jewell, Harry Parsons, Dr. Malcolm Rose, Dr. J. E. Leighton, Charles H. Roberts, Hugh McConnachie, Charles de Cassanova, and Giles Whiting.

Mr. Moses was a great-grandson of Isaac Moses, associate of Robert Morris and leading patriot among New York shipowners in pre-Revolutionary days, who contributed largely to the cause of independence by mortgaging his ships to raise money and by carrying supplies for the colonial armies. On his maternal side Mr. Moses was a great-grandson of Rev. Gershom Mendes Seixas, for fifty years rabbi of the oldest Spanish-Portuguese synagogue in New York City, and an original trustee of Kings College, now Columbia University.

Mr. Moses was married April 15, 1917, to Shirley Maduro, who survives him, together with three children, Lionel, Jr., Felix, and Richard.—*Giles Whiting.*

COLLABORATIVE PROBLEM OF THE ALUMNI ASSOCIATION, AMERICAN ACADEMY IN ROME

(Continued from page 307)

The first four awards all went to the Yale School of Fine Arts, the winning teams being as follows: 1st Medal placed, No. 49, Messrs. Coletti, architect, and Cotello, painter; 1st Medal, No. 34, Nelson, architect, N. Edelbaum, painter, F. E. Edelbaum, sculptor; 1st Medal, No. 20, Lienhard, Benson, and Saldibar; 2nd Medal, No. 29, Julianelle, Azaro, and Milici.

The criticisms of the Jury were as follows:

No. 49. First in its coordination of the three arts; decoration of the door and composition immediately around it is not up to the standard of the remainder of the design; door itself not adequate. Excellent in rendering.

No. 34. Excellent relation of architecture, painting, and sculpture; pleasing in scale throughout; fine rendering.

No. 20. Excellent relation of the three arts; detail of the doorway itself not as good in drawing as in photograph of model; ornament too small; ceiling design unrelated to doorway and lacks interest.

No. 29. Space considered too small for introduction of columns, though color and pattern are interesting; overdoor would have been more interesting in sculptural relief instead of in painting.

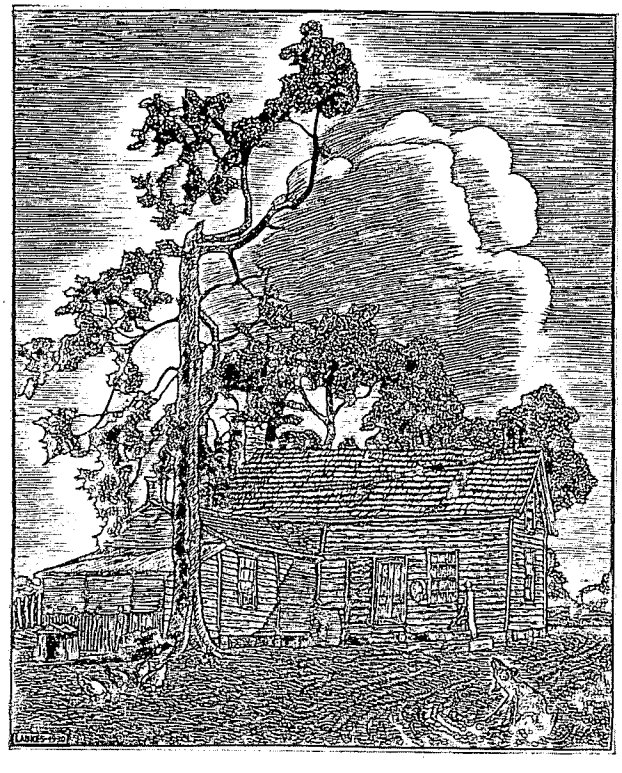
The Jury felt that No. 49 (1st Medal Placed) exhibited the best collaboration of the three arts and was otherwise the most consistent in composition, draftsmanship, and general presentation. The composition immediately around the door did not attain the standard set by the remainder of the design, while the door itself seemed inadequate and perhaps commonplace.

Design No. 34 (1st Medal) exhibited an excellent relation of architecture, murals, and sculpture, pleasing scale, and a fine solution of the problem, but with more mechanical feeling in its sculptured grille than No. 49.

Design No. 20 (1st Medal) presented the same good qualities as those already mentioned, but with less relation between ceiling design and the rest of the composition. Account was taken of the fact that the sculptured grille over the door was better represented in the photo of the model than in the drawing, which showed a certain mechanical quality also exhibited by No. 34.

Design No. 29 (2nd Medal), with columns in the opening and a rich background with maps in color, was highly commended, but the Jury felt the aperture too narrow for the introduction of columns and that the colored map feature would have been far more interesting if it had been in relief.

It is noteworthy that the three designs placed first were all identical in motif and general expression.



"FARMYARD," WOODCUT BY J. J. LANKES
SHOWN IN "THE FIFTY PRINTS OF THE YEAR"

THE ARCHITECTURAL CLUB OF LONG BEACH

The Architectural Club of Long Beach has been more or less active during the past year and its activities have been increasing since the first of 1931.

The Club has been instrumental in having the plans for the one-million-dollar Federal Building for Long Beach rejected by local authorities as being inappropriate from a design standpoint for its local setting, and not in accordance with the accepted traditions of the country. Since the rejection of the plan prepared by the Supervising Architect, the Architectural Club of Long Beach has been authorized by the Secretary of the Treasury to prepare revised plans and elevations acceptable to local authorities.

The Architectural Club has also been the means of forcing many violators of the State Law Regulating the Practice of Architecture to cease their practice, and is at present engaged in a battle to sell the officials of the City of Long Beach on the idea that the services of an individual architect are to be preferred to an Architectural Department maintained by the City, as well as upon the fact that the minimum standard fee for architectural services is 6% in place of the 3%, which has been offered to architects by this city.

The Architectural Club is at present preparing for its second biennial competition for the best buildings erected within the City of Long Beach during the past two years. Certificates of Merit are awarded by the Architectural Club of Long Beach to the Owner, the Architect, and the Contractor for each building selected as the best among five different classifications, with from three to five awards in each class. The restrictions are that the building must have been designed by a Certified Architect of Long Beach and must have been erected within the city limits of Long Beach during the past two years. An exhibition of all entries submitted in the competition will be held during the month of July in one of the local libraries.

The Architectural Club of Long Beach has interested itself in the Long Beach Symphony Orchestra. The President of the Architectural Club for 1931 is also the President of the Symphony Orchestra organization.

At the last regular dinner meeting of the Club, held at the Lafayette Café, addresses were given by Architect Robert H. Orr of Los Angeles, President of the State Association of California Architects, and by L. G. Scherer, the Secretary of the same organization.

The Officers of the Architectural Club for 1931 are: Hugh Davies, President; Cecil Schilling, Vice-President; and Joseph H. Roberts, Secretary and Treasurer.

HERE AND THERE AND THIS AND THAT

CONDUCTED BY E.L.C.

This department conducts four competitions each month. A prize of $10.00 is awarded in each class as follows: Class 1, sketches or drawings in any medium; Class 2, poetry; Class 3, cartoons; Class 4, miscellaneous items not coming under the above headings. Everyone is eligible to enter material in any of these four divisions. Good Wrinkle Section: a prize of $10.00 is awarded for any suggestion as to how work in the drafting-room may be facilitated. No matter how simple the scheme, if you have found it of help in making your work easier, send it in. Competitions close the fifteenth of each month so that contributions for a forthcoming issue must be received by the twelfth of the month preceding the publication date in order to be eligible for that month's competitions. Material received after the closing date is entered in the following month's competition.

The publishers reserve the right to publish any of the material, other than the prize winners, at any time, unless specifically requested not to do so by the contributor.

THE PRIZES in our competitions this month have been awarded to:

Class I—Gordon H. Kunz, Boston, Mass.
Class II—Hannah B. Espie, Forest Hills, L. I.
Class III—John A. Strommer, Eggertsville, N. Y.
Class IV—Vennis L. Schafer, Chicago, Ill.

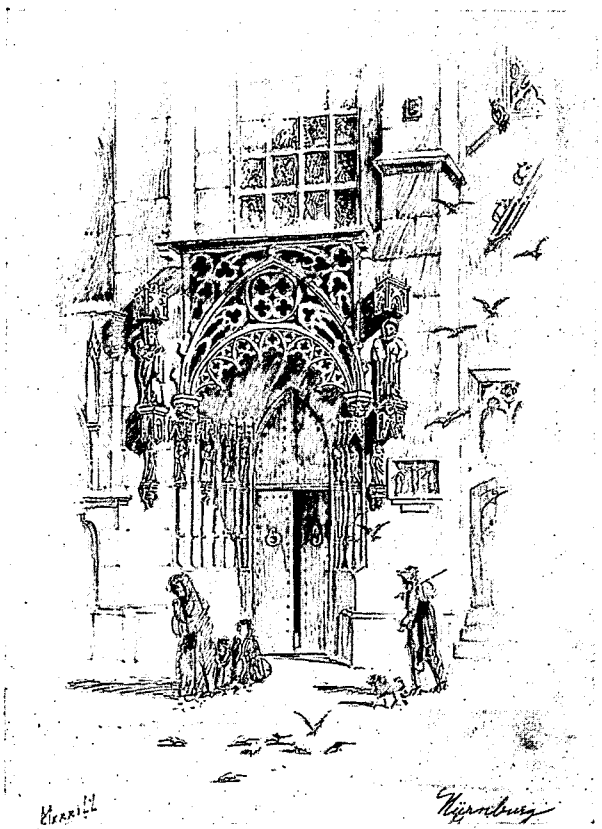
On the next page you'll find reproduced a portrait of our old friend A. C. H. He needs no introduction to HERE & THERE readers as his "stuff" has appeared in this department since its inauguration. We're going to try to present a series of photographs of contributors to this department. We therefore request that when possible you'll enclose your snapshot with any contribution you send us. Look among your belongings now, select your most handsome picture and send it in.

WE ARE ALWAYS glad to hear from our readers and wish to thank Mr. Beck for his expression of opinion, which is printed here:

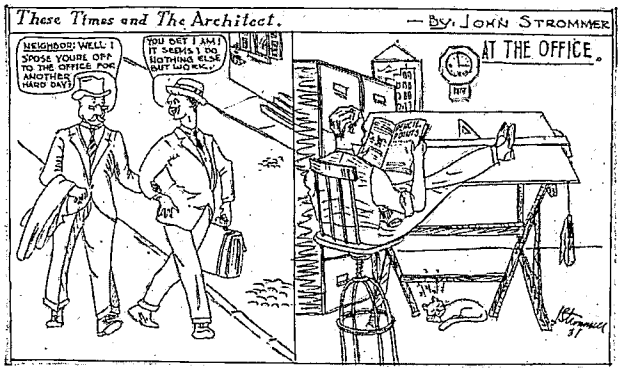
"I got to rite dis here ladder to you too let you no vat I tank about a artikel I seen in Pensel Points in last Yanurary. It must of been ritten by som dam fule who dident no what he was talkin about. Vat I meen is the story bout a feller who done a pyramid or som fule ting. You find heem on page 19.

"I don tak yur dam magasine and Im glad I don. I get it offen anoter feller in the offis. He taks it. If I took it Id tel you to qwit sending heem rite now, and Ill tell you wy. Dis hear feller Warner, the movie acter in Hollywood, he tries to mak out in dis hear story uv hisn that out uv fiv fellers he had on a building com the 4 skandies

"CHARTRES," PENCIL SKETCH BY GORDON H. KUNZ
(PRIZE—*Class One—March Competition*)



SKETCH BY W. RALPH MERRILL, OF DALLAS, TEXAS
Nürnburg, Germany



BY JOHN A. STROMMER, OF EGGERTSVILLE, N. Y.

(PRIZE—*Class Three—March Competition*)

was all krooks an they had a hones mick for a chairman to keep the 4 sweedish fellers strate.

"Now, I no tousands of sweedish fellers an tak it frum me effry dam I offem is strate but who effer herd uv a hones Irisher? Im askin you? They're all cops an gangsturs an bums. An if you cum out here to Chicago, Ill sho sum offem to you so you kan cee for yurself.

"An Ill sho you som dam fine fellers at the sweedish club. You kan yudge them too. Not none uv tem is krooks. An you kan tell that cok-ied acter in Hollywood for me that he better fin out wat hes talkin bout be4 he starts chutin off his big mout in yur magazine.

"That's all I got 2 say this tim.

"Yurs truely, W. BECK."

THE REPRODUCTION below was made from a negative photostat of the original which was done in black ink applied with a brush and an atomizer. Fine woodcut and white line effects may be obtained in this way.

FROM A DRAWING BY VENNIS L. SCHAFER

"Wrigley Building, Chicago"

(PRIZE—*Class Four—March Competition*)

A. C. H., WHO HAS MADE PILES OF MONEY PENNING PILES OF POEMS FOR "PENCIL POINTS"

A PRACTICAL HOLDER FOR THE INK BOTTLE

By Frank W. Bentley, Jr., of Missouri Valley, Iowa

(PRIZE—*Good Wrinkle—March Competition*)

A GREAT MANY homemade devices are used to hold the ink bottle and to keep it from slipping or sliding on a sloping board. Most of them are elaborate affairs to serve the purpose. A very simple and practical little method of taking care of the small bottle is to procure one of the common soft rubber caster cups which can be purchased at any dime store for a nickel. With a sharp knife deepen the recess in the top, cutting down and squaring the hole so the bottle will fit in snugly. The soft rubber cup enlarges the base area and keeps the bottle from being easily upset, the soft rubber also affording an adhesiveness which will prevent it from slipping or sliding on an inclined board or other surface.

THE SPECIMEN of melancholia printed below was sent in by Edward V. Taylor, of Columbus, Ohio.

SOLILOQUY IN AN OFFICE VESTIBULE

Incinerate my whole kaboodle
Or dose me well with strong aperients—
But drive those dread words from my noodle,
"We've hired a man with more experience."

DRAWING BY WILLIAM B. CRAM, NORWALK, CONN.

ON READING H. N. CASSON, ECONOMIST

By Hannah B. Espie

(PRIZE—*Class Two—March Competition*)

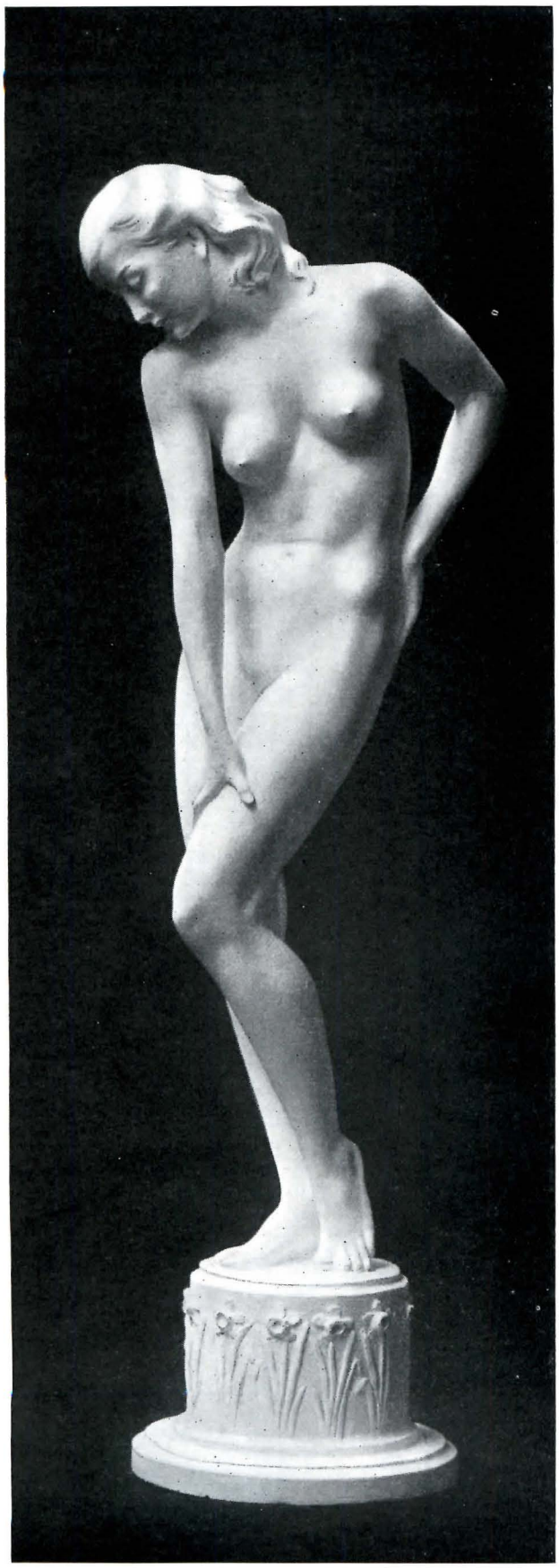
Now, is the time to build or buy.
The pessimist asks "What?" and "Why?"

Well, real estate is always good,
And Herbert Casson says we could
Restore a lost faith, make times brisk,
If we would pay and take a risk.

And more. I'll put it into rhyme—
That now, as once upon a time,
There is a chance to reap, create
A fortune. When in '73
Frick bought coke ovens, Carnegie
Bought steel and steel—for thirty cents
Each got a dollar's worth, and hence
They did not moan, "I-wish-I-had."
Each was a man and not a cad,
And without fear, with level heads
They bought. Behold! Their oyster beds!

Man can retrieve a fortune lost,
But shattered hopes and nerves are tossed
Upon a sea, as helpless cripples,
Who make those lost-ambition ripples
That all around today we see—
And in ourselves, to a degree.
Depression is not far and wide—
It's in the head and not outside.
Untie the purse strings, don't delay
To build or buy or boost today.

"Hey wuzza matter with youse guys? You been at this building for two weeks and it ain't up yet!"



GARDEN FIGURE, HARRIET FRISHMUTH, SCULPTOR
"REFLECTIONS"

PRATT ARCHITECTURAL CLUB

The Second Annual Dance of the Club was held on February 14th at the Architectural League in New York. Thirty couples were present and voted the affair the "best ever." In view of present business conditions it was felt that the attendance was gratifying.

The Club is cooperating with the Placement Bureau recently organized at Pratt Institute by Mr. J. C. Boudreau, Director of the School of Fine and Applied Arts, with the purpose of gathering and tabulating information concerning Pratt men who are seeking positions or interested in bettering their position. Coordinated with this will be the work of placing this information before employers, both in and out of the profession to aid them in securing the right man for the right job.

A revised Directory of Architectural Alumni is contemplated to be issued this year, and as a number of addresses of graduates are at present unknown, the Club would appreciate hearing from any Pratt man who is not receiving notices regularly.

Plans are under way for the Fifth Annual Spring Dinner and Meeting which is expected to be held on May 6th. Announcements will be sent out confirming the date and giving full details. A large crowd is expected to help celebrate the rounding out of the fifth year of our club activities.

A LETTER ON THE PUBLICITY QUESTION

It is with great pleasure that I have read the PENCIL POINTS presentation of the article "The Indiana Society of Architects Does Something About Publicity," in the March issue.

The actual putting into effect of this program by the Indiana Society of Architects certainly is a shining and brilliant example of the practical, actual and definite accomplishments which may be attained by the cooperative effort of architects, builders and material men, and their solution of a problem which PENCIL POINTS has given considerable space to. It is indeed an example which may well be followed by other organizations.

This and the accomplishment of the Architects' League of Hollywood some time ago in issuing their booklet, "The Architect's Cost and Profit," are to my mind two major accomplishments toward stimulating a sorely needed public appreciation and understanding of the worth and services of an architect; far transcending any previous organized effort on the part of architects or their organizations and in marked contrast to what has supposedly been done for the profession as exemplified in the activities of various stock small house design competitions and wholesale plan distribution schemes and many other design competitions ranging from kitchen sinks, bathrooms, and what not.

Here then is a practical plan actually being put into effect. It behooves the architects and their organization to sit up and take notice and to get busy.

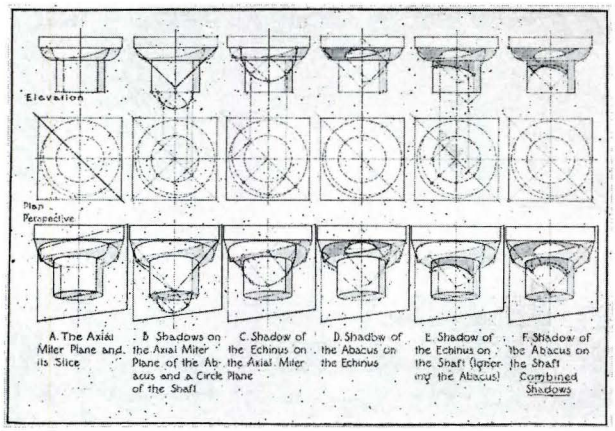
Cordially yours,

(*Signed*) HARRY LUCHT.

ARCHITECTS' LEAGUE OF NORTHERN NEW JERSEY

At the last regular meeting of the League, Assembly Joint Resolution No. 3 was endorsed and its passage urged upon the Ways and Means Committee. This bill provides for the study and preparation of a model uniform building code for the municipalities of this State. It is also endorsed by the Building Inspectors' League.

THE DRAFTSMAN'S LIBRARY



STEPS IN CONSTRUCTING SHADOWS FOR TUSCAN ORDER

From "Shades and Shadows for Architects."

Modern Architectural Sculpture, by W. Aumonier; 160 plate pages, 10¾" x 14½"; price $20.00; published by Charles Scribner's Sons, New York.

This book, which is, by the way, one of the handsomest we have had the pleasure of reviewing for some time, provides a splendid collection of sculpture as it is being done in the world today. A goodly portion of it is architectural in character but every piece shown, and there are about 400 illustrations, should be of real interest to the architectural man. It is refreshing to see so many fresh ideas vigorously expressed. As we go about the world we may see here and there isolated and widely separated examples of such freshness of thought in design, but when they are gathered together, as in this volume, the effect is overwhelming. The editor, W. Aumonier, is himself a sculptor, "trained in the school of Tradition" but one who evidently appreciates the significance of the modern movement in his art. We recommend his book to all, but particularly to those, if there be any, who have been blinding their eyes to the development of a serious modern art.

Colonial Ironwork in Old Philadelphia, by Philip B. Wallace; 147 plate pages, 9½" x 12½"; price $15.00; published by the Architectural Book Publishing Company, Inc., New York.

An extremely useful and well presented collection of photographs and measured drawings of the Colonial ironwork of Philadelphia is contained in this volume. The subjects are intelligently selected and were photographed evidently by one who had the needs of the architectural designer in mind. There are many fine examples of balcony railings, stair railings, fences, gateways, foot scrapers, and other minor products of the iron craftsman's art. Both wrought and cast iron are included. The lack of an index may hamper the user of the book to a certain extent but if he is thereby forced to thumb over its pages in search of what he is looking for he will perhaps become better acquainted with its contents in general—and that will do him no harm.

Shades and Shadows for Architects, by Buck, Ronan, and Oman; 130 plate pages, 9" x 12"; price $3.00; published by the McGraw-Hill Book Company, Inc., New York.

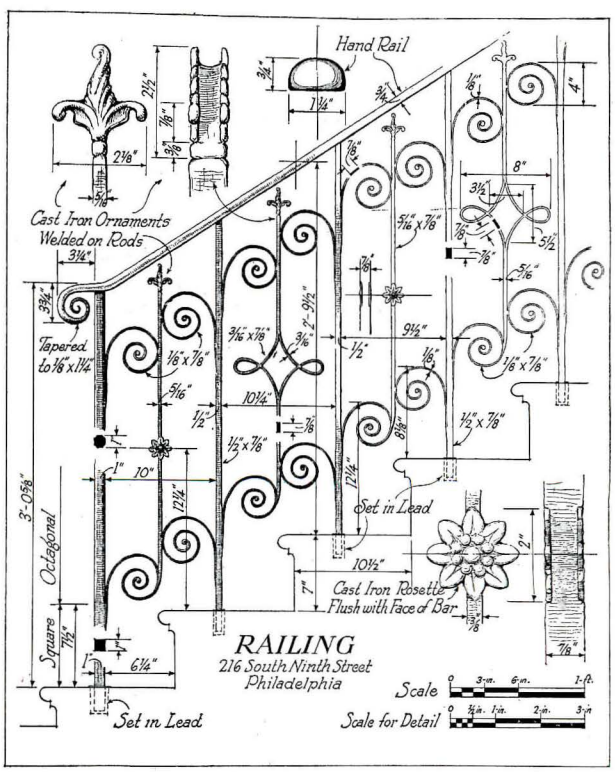
Reviewed by George E. Merkel

The architectural student should welcome this clearly written and illustrated text dealing with all the essentials of the subject. The Authors say in the Preface: "In a text addressed explicitly to beginning architectural students, we have assembled those graphical problems which constantly arise in architectural work with the solutions which will actually be used on presentation drawings."

The methods illustrated are "only those based on the simplest procedures in descriptive geometry." They are easy to follow, even in those parts dealing with the more technical discussions and illustrations, for the authors hold to a minimum of construction lines, plotted points, and unnecessary discussion. The student may easily turn to a discussion of his particular difficulty, as the text has been uniformly divided into titled or numbered sections, with subheads.

Each of the basic methods are taken up chapter at a time, with a general discussion of procedure and principles, followed by problems employing these methods. The authors have compiled a set of twelve full size outline plates to be used as study sheets, which may be obtained from the publishers. The sheets are not only excellent practice but are valuable to keep as future reference.

In brief the text embraces all that a young architect ought to know about shades and shadows.



AN OLD PHILADELPHIA STAIR RAILING

From "Colonial Ironwork in Old Philadelphia."

American Theatres of Today, Volume Two, by R. W. Sexton; 164 pages, 9¼" x 12¼"; price $13.50; published by the Architectural Book Publishing Company, Inc., New York.

Mr. Sexton has, in this second volume of his work on theatres, provided an excellent addition to the rather meagre list of books on the subject. It will be welcomed by many architects and designers who want to have in their libraries reference books which give reliable and up-to-date information. The text practically amounts to a symposium to which a designer, a planner, a decorator, an electrical engineer, an acoustician, a mechanical engineer, and a theatre man have contributed articles on their particular specialties. A checking list, a number of typical details, interior and exterior detail photographs and plans of theatres large and small from all sections of the country serve to complete the volume. Our guess is that it will be an unusually useful work, frequently turned to by the architect and his assistants.

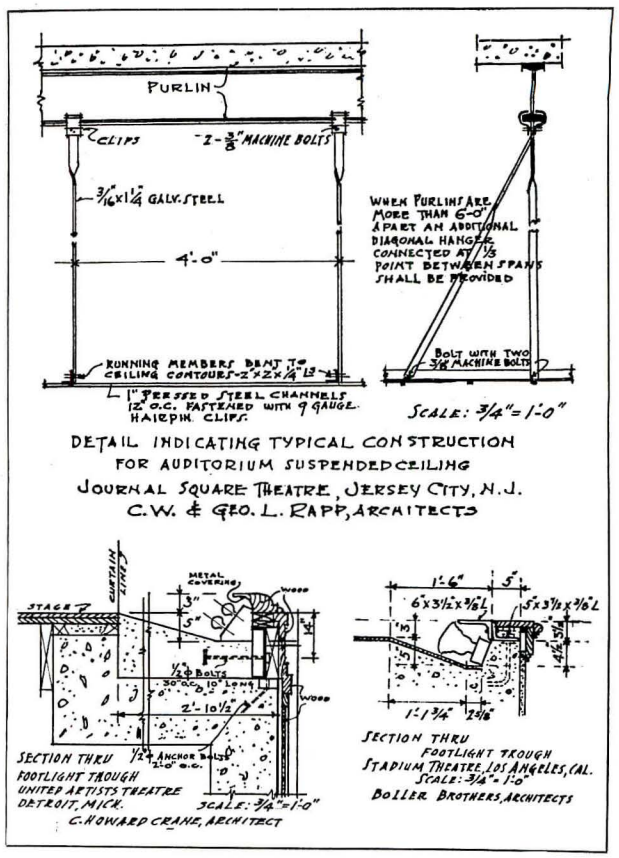
Light Frame House Construction; 206 pages, 5¾" x 9"; price 40 cents; issued by the Federal Board for Vocational Education, in cooperation with the National Committee on Wood Utilization, Washington, D. C.

This book is intended mainly as a source of information for carpenter foremen, journeymen, and apprentices who will find in the publication answers to numerous problems met in the construction of frame houses. It will also be of interest to the architect who does small residence work. He may conceivably learn something from it, but even if he is already thoroughly conversant with the details of good practice in frame construction, it will do him no harm to check up on this source of information provided by the government for the workers who are to execute his designs.

Little Churches of France, by Albert A. Chadwick; 125 plates, 11" x 15"; price $15.00; published by Harper & Brothers, New York.

Mr. Chadwick has, in this book, provided a very useful reference work to be used in connection with the architecture of small churches. The plates are in loose-leaf form so that they are readily available for use in the drafting room. The churches shown are, of course, all mediæval, either Romanesque or Gothic, and are scattered geographically over all France. There is much that is susceptible of adaptation to American church requirements but in anticipation of this sort of use for his book the author gives a word of caution, viz.: "In adapting them to present-day work it should be remembered that they are essentially vaulted buildings, built of honest stone honestly laid, and that the ornament is honestly a part of the building, not something plastered on." There is a text section at the beginning of the portfolio in which the author discusses the buildings shown and traces the development of the church plan.

SOUTH PORCH, THOR, PROVENCE
From "Little Churches of France."



TYPICAL THEATRE DETAILS
From "American Theatres of Today."

The Yearbook of the Boston Architectural Club; 159 pages, 10¼" x 13¼"; introduction by C. D. Maginnis; price $5.00; published by the Boston Architectural Club, Boston, Mass.

This year's publication of the Boston Architectural Club is a useful collection of photographs and drawings of metalwork of historical and contemporary styles. The designer will find in it many suggestions for his own work. A number of the drawings have been reproduced from earlier publications and we could wish that the editor of the volume might have let us know the names of the original authors or draftsmen to whom we are indebted for so many fine interpretations of the work of the smith. The illustrations are well selected and cover a wide range of metalwork design. The volume is a worthy addition to the many fine yearbooks already produced by the club.

Painting with Pencils; 24 pages, 8½" x 11"; price $1.00; published by Eberhard Faber Pencil Co., Brooklyn, N. Y.

A useful manual in which is described the technique to be employed in using colored pencils to achieve water color effects. Colored illustrations make the text clear.

THE SPECIFICATION DESK

Whys and Wherefores of the Specification

6—Granite—Limestone—Bluestone

By Philip G. Knobloch

These specifications are based on a building having the entire exterior of granite ashlar and trimmed with limestone. The amount of limestone required being small, it was included under this heading. Bluestone is also included under this heading.

GENERAL

General Conditions of the Contract of the American Institute of Architects, current edition, shall form a part of this Division, together with the special conditions, to which this Contractor is referred.

SCOPE

The work under this Contract shall include all labor and materials for the furnishing, delivery, and setting of all cut Indiana Limestone, Bluestone, and Granite, in accordance with the drawings No. . . . to . . . inclusive and No. . . . to . . . inclusive, and as hereinafter specified.

Under *Scope* the Architect often lists the various elevations, entrances, windows, etc., where the material is to be used. This is unnecessary unless there is some special condition to be considered that cannot be shown clearly on the drawings. To attempt to list completely the many places where the materials are to be used is a waste of time. If the drawings are complete, which of course we assume they are, reference in the specifications to the plans and details is sufficient.

It is better to have the specifications contain only that which is not practical to show on the drawings. Do not clutter up the specifications by describing some detail that could be drawn and so provide clearer and better information. Show, somewhere, profiles of mouldings, cornices, etc., that are reasonably clear and can be read and never specify that a certain piece of ornament should be furnished "as will be detailed later." Unless this information is obtainable on the drawings it will be utterly impossible for a contractor to estimate on what "might be" later detailed. In a set of specifications that we recently saw there were several such paragraphs. This "Architect" specified that a cornice (no scale drawing of the cornice) was to be run around the vestibule of corridor as would be detailed later. . . . Nowhere in the specification was there anything mentioned about stone bonding and thickness of stone, only a clause that "stone ashlar shall be bonded to wall in a satisfactory manner and as approved by the Architect." Such specifications are incomplete and absolutely worthless, and might just as well not be written. Incidentally, they are a sure guarantee of plenty of trouble with extras which are ever to be avoided as much as possible.

REQUIREMENTS FOR GRANITE

All granite shall be of compact structure, hard, and practically non-absorbent, and equal in durability and strength to the best granite of the kinds required. (Granite to be————granite to match the existing granite in present adjoining church.)

In submitting estimates, the Contractor shall state the name of granite and quarry upon which his proposal is based.

All the granite shall be selected to meet the requirements of these specifications and shall be absolutely sound and free from seams or other defects which would impair the appearance and strength of it. Exposed surfaces shall be free from spots, stains, discolorations, knot formations, spalls, chips or other defects, which would impair the appearance of the work, except that in inconspicuous places a reasonable number of knots or texture variations inherent to the particular granite specified may be permissible if samples showing the maximum of such characteristics be submitted to and approved by the Architect.

REQUIREMENTS FOR LIMESTONE

All limestone specified or shown on drawings shall be————Indiana Oolitic Limestone building stock, free from all defects that would materially impair its strength, durability and appearance and within the range of variation of color and texture represented by two samples approved by the Architect.

REQUIREMENTS FOR BLUESTONE

Shall be Hudson River, fine grain, hard and dense and free from all defects.

FINISH

a. GRANITE

Rock face ½" projection from die line. Similar to granite of present building and laid the same with the exception that smaller units are desired.

b. LIMESTONE

With the exception of mouldings, stone is to have a saw cut finish. Stones to be laid that saw cuts vary in direction to the adjoining piece.

c. BLUESTONE

Smooth, as is usual, for step or platform.

Finishes specified are naturally applicable to this job. Finishes are many and varied and each finish should be clearly specified so that there is no confusion. As finishes vary in texture they also vary in cost. It is advisable when in doubt to consult a stone company and discuss in detail the costs, both as to appearance and production.

CUTTING AND SETTING DRAWINGS

This Contractor shall prepare and submit to the Architect, in duplicate, complete cutting and setting Shop

COLOR RENDERING BY HUGHSON HAWLEY—MUNICIPAL CENTER FOR ROANOKE, VIRGINIA

EUBANK AND CALDWELL, INC., ARCHITECTS

Drawings, illustrating all granite or cut stone work included in this Division.

These drawings shall be based upon and follow the Contract drawings and all scale and full size details prepared by the Architect consistent with the Contract drawings, as the developments thereof and reasonably inferable therefrom, except where it is agreed that changes shall be made.

The Cutting and Setting drawings shall be modified and revised as may be required by the Architect for the purpose of more perfectly carrying out the intent and meaning of the Architect's drawings and specifications and to provide for essential details in connection with other materials with which the granite or cut stone comes in contact. When these drawings have been approved by the Architect they shall govern the execution of the work.

The Architect's approval of these drawings shall not be construed as relieving the Contractor from the responsibility for errors of the Stone Contractor contained in them.

Upon the cutting and setting drawings being approved, the Contractor shall supply the Architect with two additional prints of each drawing, and such additional prints as may be required to secure the cooperation of other trades, at the cost of reproduction. He shall furnish copies of Setting and Cutting drawings to the Setting Contractor.

Each piece indicated on these drawings shall bear a corresponding number marked on the back or bed with a non-staining paint.

For the inexperienced it is well to have the advice and guidance of a competent stone company. Their representative will explain what type of cutting can be accomplished by machinery and what must be cut by hand. He will be able to advise as to what amount of hand carving may be done on the building and yet stay within the stone budget. Often sandblast carving may achieve the result desired at a lesser cost than hand work; the same with lettering. Sandblasting can be used to great advantage for cut lettering. The specification writer will gather much valuable material in this way, and in a surprisingly short time will be able to estimate approximately the possibility of using certain amounts and kinds of carved work.

Bond and Thickness

Alternate courses shall bond at least four inches with the backing except where shown otherwise. No stone shall have less than 4" bed. Anchors required.

Projecting Courses

All projecting stones shall have beds in the wall at least one inch greater in depth than their maximum projection, except where shown on Contract drawings as anchored to the structure and so provided for in the approved Cutting and Setting drawings.

Moulded Courses

Moulded projecting courses, unless shown on Contract drawings and approved Cutting and Setting drawings as secured suitable anchors or structural supports, shall have not less than four-sevenths (4/7) of their cubic contents inside the face of the wall.

Models

No models required. Full size and large scale drawings will be furnished by the Architect and they will suffice in conjunction with the Stone Contractor's drawings.

A word about models. It is advisable to use models whenever possible. In the case of these specifications the ornament was such that drawings were sufficient, but this is not the rule. Confer with the Sculptor and decide on an amount that will cover the cost of making and shipping plaster models for the ornamental and carved stone work. Insert that amount in the specifications as a lump sum to be included in the contract. The model, being a reproduction of the carving as it will be when completed, provides the carver with a picture to follow. He has all the various dimensions before him. In addition, the model shows just what texture is required for the finished work. It is well if the Sculptor could visit the work and offer his criticism or suggestions and should be so stated in the specifications.

Carving

All carved and ornamental parts of granite and cut stone, as far as possible, to be executed at the Cutting yard.

All carving shall be executed by skilled workmen faithfully reproducing the details in form, feeling, character, and detail, and shall be recarved or retouched until satisfactory to the Architect.

The division between stone cutting and carving shall be based on the principle that work which the Architect can draw with rule, compass or French curve is stone cutting, and work which can only be drawn free hand is carving.

Cutting

All granite and cut stone shall be cut accurately to shape and dimensions and full to the square with jointing as shown on the approved cutting and setting drawing. All exposed faces shall be true and out of wind. Arrises must be sharp, true, and continuous with adjoining arrises.

Joints shall be located exactly where shown on cutting drawings, unless changed by written instruction of the Architect. Any uncertainty as to jointing is to be referred in writing to the Architect for decision. Joints shall be ¼" in thickness unless otherwise specified or indicated on Contract drawings.

Beds for granite shall be horizontal and shall be cut full and square for a distance of at least 2" back from the face, from which point they may fall off not to exceed 1" in 12" and shall be reasonably free from large depressions and cuppings, which might impair stability of the work.

Joints in granite shall be dressed at right angles to the face for at least 1½" back, from which point they may fall away not to exceed 1½" in 12".

Backs of granite stones may be scabbled or split to approximate vertical surfaces which shall not vary more than 1" in 12" from the true vertical, nor vary more than 1" either way from the thickness called for on the approved cutting and setting drawings.

Beds and joints, other than for granite, shall be dressed straight for the full thickness of the stone and, unless otherwise indicated, at right angles to the face.

When the best accepted practice required that the granite or cut stone specified or selected be laid on its natural or quarry bed, it shall be cut to lay in this manner.

Back Checking

Granite or cut stone coming in connection with structural work shall be properly back checked. Pieces resting on structural work shall have beds shaped to fit the supports, in accordance with approved cutting drawings.

Raised Seats

In all cases where other work is built upon stones having a wash, raised seats and lugs to form level beds shall be provided.

Door Sills

Door sills shall be cut in single stones extending to inside face of doors with wash. Sills shall be cut with

beveled thresholds and seats for frames or prepared for metal saddles as detailed.

WINDOW SILLS

Window sills shall be cut as shown on plans, elevations, and details. Sills in granite openings to be slip sills; all sills flush with granite wall face.

CORNER STONE

Shall be of granite, honed face, incised lettering, containing hole for lead box. Box by Sheet Metal Contractor. Corner Stone will be set on a Sunday and Contractor shall provide Mason and Helper and provide necessary rigging for the setting.

LEWIS HOLES

Lewis holes and lifting anchors shall be cut in all stones weighing more than one hundred pounds. These holes and anchors shall not be placed closer than two inches to finished faces.

HOLES FOR DOWELS, ANCHORS, ETC.

Holes for sinkages shall be cut in all stones to receive anchors, cramps, dowels, etc., called for under this specification or included on the approved cutting and setting drawings.

CUTTING FOR OTHER TRADES

This contractor shall carefully examine the structural diagrams and do all cutting, checking, and fitting necessary to make the granite or cut stone clear the structural work, or provide for its proper support and anchorage thereto, as shown on approved cutting drawings.

He shall also examine the Mechanical Drawings (Heating, Ventilation, Plumbing, Electrical, etc.), and do any cutting and fitting of granite or cut stone necessary to permit the proper installation of work in these trades.

This Contractor will also be required to cooperate with all other trades whose work comes in contact with material furnished under this Division.

A sufficient number of skilled fitters shall be kept on the work to do the necessary field cutting as and when required, as the stone is set.

LOADING AND PROTECTION

All granite and cut stone shall be carefully loaded on cars or trucks, protected from injury during shipment and delivered in a reasonably clean condition. Granite shall be boxed or crated, using substantial material.

This paragraph is very important and should be followed to the letter when the material arrives at the building. Placing the stone on the ground or neglecting to provide sufficient protection will absolutely result in stains that will be impossible to remove. In unloading stone care must be taken so that all mouldings, arrises, and faces are not marred in any way. Careless handling will chip and snip the stone. These stones must be replaced which means added expense and delay. Paragraphs such as these are often omitted as unimportant but should trouble arise due to just such neglect it will not be a simple matter to insist upon reparation if it is not in the specifications.

DELIVERY

All granite or cut stone furnished under this Division shall be delivered promptly as ordered, and in the sequence in which it is to be set.

The delivery of granite or cut stone shall be f.o.b. cars or f.o.b. trucks at the building site. In either case the material shall be handled throughout by competent workmen and by such methods as will guard against soiling, mutilation, or snipping. The material shall be stored on planking set so as to be entirely clear of the ground. Arrises shall be protected from damage and all surfaces kept free from dirt, dust, soot, mud, grease, or other discoloring matter.

SETTING GRANITE AND CUT STONE

WATER

Water used for concrete, mortar, and grout shall be clean and free from organic materials, strong acids or alkalis, or water used by city, town, or village for drinking purposes.

SETTING MORTAR

All granite or cut stone shall be set in carefully prepared non-staining mortar composed of one (1) part of non-staining cement to three (3) parts of sharp, clean washed sand, with the addition of one-fifth (1/5) part of mason's hydrated lime. No non-freezing compound shall be used in setting mortar. Stone Contractor shall furnish and mix cement and sand required for his work.

Non-staining mortar should be used where prevention of stains is desired. In addition the backs of all stone should be parged with a ½" coat of non-staining mortar to prevent the backing up masonry from staining the stone. The ordinary gray Portland Cement Mortar will cause stains impossible to remove.

HOISTS

This Contractor, as a part of this Contract, shall furnish and operate all necessary hoisting plant required in the execution of work in this Division, or, in lieu of plant, arrange for the use of and pay the cost of operating the General Contractor's equipment.

SCAFFOLDS

All scaffolding and planking, except hanging scaffolds used exclusively by this Contractor, will be provided by the Carpentry Contractor.

CENTERS

Except where specifically noted, all centers required for setting granite or cut stone will be furnished, set, and removed by the Carpentry Contractor. This Contractor, however, as a part of this Contract, shall cooperate in the locating of centers and, when ready for striking, shall remove all wedges so as to relieve them of their load.

This Contractor to furnish Woodworking Mill with template of stone arches over doorways so that millwork will fit correctly with stone.

Under this paragraph we clearly define just what we expect in cooperation between the trades involved. This eliminates confusion or refusal to cooperate. Remember the smooth-running job is based on cooperation.

ANCHORS, CRAMPS, AND DOWELS

This Contractor shall provide and place all anchors, cramps, and dowels necessary to the secure erection of the work. All anchors shall be of iron, galvanized or coated with hot asphalt after they have been bent to shape. Cramps or dowels shall be of brass or bronze, of size required to secure the stone properly. Anchors for ashlar shall be ¼" x 1¼" x 8" long hooked at each end 1¼".

SETTING

All beds and vertical joints shall be of a maximum width of ¼" except where otherwise indicated. Mortar shall be raked out ½" from the face of the stone to allow for pointing, and the granite or cut stone shall be sponged off along all joints.

Splashing exposed faces with mortar shall be avoided

and any splashing shall be immediately removed with a sponge and clean water.

The entire back of all granite or cut stone shall be plastered by this Contractor with not less than ½" coat of setting mortar before backing up same. Where the granite or cut stone occurs as a facing applied direct to previously erected structural members, both back of granite or cut stone and face of structural work shall be plastered with setting mortar and the space between grouted, to insure a thoroughly filled back joint.

The ends only of sills shall be set in a full bed of mortar, balance of sill to be left free until pointed.

Steps shall be set with a slight pitch to the front.

Where granite or cut stone extends down to or below the finished grade, the first course shall be set on a layer of an approved non-staining impervious material, applied by this Contractor.

Heavy stones or projecting courses shall not be set until the mortar in courses underneath has hardened. All projecting stones shall be securely propped until the work above has been built.

All cornices and projecting bolt courses shall be set with vertical joints dry. These joints shall be caulked on the exterior profile with dry rope and shall then be filled solid from above with a mortar grout. Grout for granite or cut stone shall be composed of one part of non-staining cement and one part of fine, white sand, mixed in small quantities, stirred vigorously until used, and of as thick consistency as can be poured into joints.

The setting of sills in full mortar beds is bad practice. A full bed will produce a cracked sill where the adjoining masonry sets and takes its final position. After the masonry is completed then the sills should be pointed up solid.

Lead Pads and Buttons

Where required in connection with the setting of heavy stones and projecting courses, in order to arrest the squeezing out of mortar beds, tipping or uneven setting of the stone, and wherever required in connection with stone bedded on structural members, to prevent cracking or spalling from unequal pressure, this Contractor shall provide and install lead pads or buttons. These pads or buttons shall be made of soft, sheet lead, either round or octagonal in shape, and of same thickness as mortar joints. They shall be set not less than one inch back from the face of the stone, and have the mortar bed spread around them.

Backing Up

Shall be done by Mason Contractor, who shall keep abreast of the stone work at all times.

Under masonry specifications we have fully covered the backing up and have noted that the Contractor must cooperate with the Stone Mason.

Temporary Covering

The walls shall be fully protected at the top during the entire process of the work. This Contractor shall cooperate with and assist the General or Masonry Contractor who will provide covering with tarpaulin and boards or with waterproof paper and boards. The protecting material shall be free of all matter which will in any way discolor the stone.

The covering of unfinished walls prevents water soaking in case it should rain during the night. The water seeping through the wall will bring discoloration and stains on the facing and will often cause efflorescence. This is one of the causes of efflorescence, a white powdery discoloration on stone or brick work.

Protection

Stone work, such as sills, steps, or other projecting work, to be protected by wood boards furnished and installed by Carpentry Contractor.

Under Carpentry we explained in detail the importance of protecting the projecting stone.

Replacements

Defective, broken, spalled, patched, or otherwise damaged granite or cut stone shall not be delivered to or set in the building and shall be removed from the site and replaced by perfect material, unless permission is given by the Architect to set same. All such stone, approved for use, shall be repaired or recut in a manner satisfactory to the Architect. The cost of replacement or recutting shall be borne by the manufacturer or setter of the material who is at fault, unless the fault shall be proven to be caused by others beyond the control of manufacturer or setter.

Pointing

All face joints shall be raked and brushed out clean ½" in depth, carefully removing all loose mortar so that pointing will be continuous, and after a thorough wetting of the stone, be pointed flush with mortar, consisting of one part stainless cement, two parts clean, white sand and sufficient cold lime putty to make as stiff a mixture as can be worked.

Cleaning Down

The face of all granite or cut stone under this Contract shall be thoroughly cleaned upon completion with an approved cleaning compound applied vigorously with stiff fibre brushes. After cleaning, the exposed surfaces shall be drenched with clean water.

Present Corner Stone

Remove present corner stone and reset in vestibule inside wall as directed by the Architect.

This is an item that does not often occur in new work. In this instance the present building was removed and replaced by the new one. The Committee decided, for sentimental reasons, to preserve the original corner stone and have it reset in the new building. Conditions such as these, however small, must be covered and not forgotten.

Cover seemingly unimportant items so that there is no chance of a possible misunderstanding with a resulting extra. Extras are unsatisfactory to all concerned.

EIGHTH ANNUAL MEETING OF THE PRODUCERS' COUNCIL

Formal notice is hereby given that the Eighth Annual Meeting of the Producers' Council, Inc., will be held at San Antonio, Texas, April 13th, 14th, and 15th, 1931. Place and hour of assembly with other particulars will be given later.

The opening session, April 13th, will be a joint session with the American Institute of Architects, to be devoted in part to several questions of major importance which arise in the topics to be discussed—"Cooperation in the Building Industry" and "What Shall We Do to Place Quality Competition Above Price Competition?"

Mr. A. P. Greensfelder, of St. Louis, newly elected President of the Associated General Contractors of America, who has been invited by the Institute to be a guest at its own convention, has been asked to participate in the joint session with our group and, if able to be present, he will also be invited on behalf of the Council to be the guest of the Council at its Annual Dinner and any of our

(Continued on page 74, Advertising Section)

SERVICE DEPARTMENTS

THE MART. In this department we will print, free of charge, notices from readers (dealers excepted) having for sale, or desiring to purchase books, drawing instruments, and other property pertaining directly to the profession or business in which most of us are engaged. Such notices will be inserted in one issue only, but there is no limit to the number of different notices pertaining to different things which any subscriber may insert.

PERSONAL NOTICES. Announcements concerning the opening of new offices for the practice of architecture, changes in architectural firms, changes of address and items of personal interest will be printed free of charge.

FREE EMPLOYMENT SERVICE. In this department we shall continue to print, free of charge, notices from architects or others requiring designers, draftsmen, specification writers, or superintendents, as well as from those seeking similar positions. Such notices will also be posted on the job bulletin board at our main office, which is accessible to all.

SPECIAL NOTICE TO ARCHITECTS LOCATED OUTSIDE OF THE UNITED STATES: Should you be interested in any building material or equipment manufactured in America, we will gladly procure and send, without charge, any information you may desire concerning it.

Notices submitted for publication in these Service Departments must reach us before the fifth of each month if they are to be inserted in the next issue. Address all communications to 419 Fourth Avenue, New York, N. Y.

THE MART

Frank C. Orr, 1139 6th Street, San Diego, Calif., has for sale the following copies of PENCIL POINTS: December, 1930, 3 copies; January, 1931, 7 copies.

Ralph H. Cameron, Majestic Bldg., San Antonio, Texas, would like to obtain issues of PENCIL POINTS for January, 1926; and May and July, 1927. He has the following issues for sale: April and December, 1925; February, March, August, September, 1926; October, 1927.

W. D. Hunter, 95 Laurel Place, New Rochelle, N. Y., desires a copy of the July, 1930, PENCIL POINTS.

Keith F. Schwinley, 1711 H Street, N. W., Washington, D. C., would like to obtain the following copies of the *White Pine Series of Architectural Monographs:* Volume II, Numbers 1, 3, and 6; Volume III, Number 1.

James A. Kaltenbrun, 1921 E. 87th Street, Cleveland, Ohio, has for sale a copy of *Monograph of McKim, Mead & White*, good condition, original price $30. Make offer.

Sunset Subscription Agency, 631 South West Bldg., Los Angeles, Calif., has for sale the following issues of PENCIL POINTS: April, June, July, August, September, and October, 1925; February, April, June, August, and October, 1926; July and December, 1929.

Architectural practice for sale, including all equipment, past records, library, etc. Location about ninety miles southwest of Chicago, office established 25 years. Will consider sale of equipment alone if someone desires to open office elsewhere. Address Ernest L. Stouffer, 256 Administration Bldg., University of Illinois, Urbana, Ill.

John Zeedick, Jr., 2334 Braddock Ave., Swissvale, Pa., is desirous of obtaining the following copies of *The Bulletin of the Beaux-Arts Institute of Design:* November to October, inclusive, of each of the following volumes —Vol. I, 1924-1925; Vol. II, 1925-1926; Vol. III, 1926-1927; also February and June, 1928; January and November, 1929; January, March, November, and December, 1930; January, February, and March, 1931. Will pay high price.

Prentice Sanger, 280 Madison Ave., New York, has for sale a large transit, serial No. 5819, purchased around 1915. It has been overhauled and put in good condition, not used since 1926. Can be seen at the above office.

A. S. Kennedy, 313 S Street, Lincoln, Nebr., has the following for sale or exchange: *Study of the Orders* with 58 plates in portfolio, 11″ by 15″, with textbook 7″ by 9″, well illustrated with Greek and Roman works, in good shape. Also *Architectural Record*, bound by volumes, advertising removed, from 1917 to present date. Will exchange for one of Leon V. Solon's works on Polychromy or something of interest to a designer and artist.

Ernest R. Watkins, Farmers' Trust Bldg., Anderson, Indiana, has for sale all copies of PENCIL POINTS from June, 1920, to the present date.

Architect desires space in architect's office, with use of reception room and service, rent to start May 1st or earlier. Inquire Room 1018, 247 Park Avenue, New York. Phone, WIckersham 2-0569.

PERSONALS

ANTHONY F. PESSOLANO has been admitted to the practice of architecture in the State of New Jersey. His address is 230 Wahl Ave., Inwood, L. I., New York.

GORDON ROBB, ARCHITECT, has moved his office from 14 Beacon Street to 87 Beacon Street, Boston, Mass.

HENRY R. PARMLEY, ARCHITECT AND ENGINEER, has opened an office at 526 Judge Bldg., Salt Lake City, Utah.

JOSEPH C. LONGUEVILLE, ARCHITECT, and THEODORE J. SCOTT have moved their offices from 1616 Chelsea Road to 938 Huntington Drive, San Marino, Calif.

WM. R. MCCOY, ARCHITECT, has opened an office for the general practice of architecture in Room 35, Third National Bank Bldg., Mt. Vernon, Ill.

CHARLES WELLFORD LEAVITT AND SON, CIVIL AND LANDSCAPE ENGINEERING, have removed their offices from 285 Madison Avenue to the Chrysler Building, New York.

MAURICE R. THOMAS, ARCHITECT, has opened an office at 208 Liles Bldg., Anniston, Alabama.

LESTER A. CRAMER, ARCHITECT, formerly of the firm of Cramer & Wise, has opened his own office at 6363 Hollywood Boulevard, Los Angeles, Calif.

SHIRLEY OWENS AND FILLMORE HARTY, ARCHITECTS, and CYRIL LEWIS, INTERIOR DECORATOR, have opened a studio for the practice of Architecture and Interior Decoration at 469 Park Street West, Dearborn, Michigan. Mailing address, Box 102.

LOUIS B. HUESMANN has moved his offices from Lyndhurst, N. J., to 13-15 Orient Way, Rutherford, N. J. The firm name is now Huesmann, Dynes, Osborne.

HOLLER & KLEINHENZ, ARCHITECTS, have moved their office from Brooklyn, N. Y., to the Guaranty Title Bldg., 89-64 163rd Street, Jamaica, N. Y.

EMPLOYMENT SERVICE ITEMS WILL BE FOUND ON PAGES 78 AND 80, ADVERTISING SECTION

In these Eldorado sketches, appearing every month in *Pencil Points*, Ernest Watson skilfully demonstrates what can be accomplished with a creative imagination aided by a skilfully created pencil. For opacity of line, for responsiveness, for uniformity, for correctness of grading, its leads make Eldorado "the master drawing pencil." Architects, write for samples to Eldorado Sales Department of the Joseph Dixon Crucible Company, Jersey City, New Jersey.

EIGHTH ANNUAL MEETING OF THE PRODUCERS' COUNCIL

(Continued from page 231, Editorial Section)

own sessions on succeeding days. We hear that Mr. Greensfelder is a very progressive man and forceful speaker and look forward to his presence as marking the beginning of the effort to establish the cooperation of architect, producer and contractor, which was comprehended in the appointment last spring of a joint committee of the Council and Institute under Mr. Dunning to initiate this movement.

This feature of the program will result in relegating to subsequent days' sessions, the minor or strictly routine matters of Council work, confining the presentation of reports on the first day only to those of first importance and necessary moment to the day's proceedings.

Incidentally we hear that the Institute may adopt the admirable precedent at this meeting of relegating details largely to meetings of the committees which are directly concerned, leaving more time for the consideration of important issues and contacts likely to develop better mutual relations and team play. While having no official confirmation of this the spirit of it is evident in the arrangements for the joint session and otherwise. It illustrates that the Institute, while departing in no sense from former professional standards, is moving forward rapidly under enlightened leadership to a function which should bring it the hearty support of all professional and other related elements in the construction field.

Edwin Bergstrom, Treasurer of the A.I.A., in a speech to the Twelfth Annual Convention of the Associated General Contractors of America in San Francisco, January 28th, endorsed the affiliation of the Council with the Institute, as did Harvey Wiley Corbett, in his address to members of the Producers' Council Club of New York, February 4th.

FURTHER DISCUSSION OF HOUSE DESIGN

(Continued from page 301, Editorial Section)

roundings. Its appeal is markedly noted in all the latest small house competitions even though no plot is mandatory. And those men dealing in real estate and promotion of subdivisions are meeting the demand by increasing the front footage of their units, though the area may remain the same. This, as all of us know, allows much greater possibilities than those present in the narrow-front unit.

Mr. Sevaldsen is correct when he states that none care to be "flushed" by unexpected guests. This is prevented by the prize design, which to my mind is the only redeeming feature it possesses. Surely it is possible in most plans to have at least one window of the living room facing the street to avoid such instances of embarrassment.

It is also as surely possible to have our garage screened from the eyes of passers-by or a secluded service court provided even though the garage may be placed at the front of the house. And I may ask what provision is made at the present time, even though the garage is at the back of the house, for the privacy of the man who likes to play with his car? One of the essential duties, among others, of a garden wall is to act as a screen. There is no reason then why a wall whose sole service is a screen should be called a "sham." It would be just as logical to call any interior wall of the house a sham, for they are solely and essentially screens masking private activities. The automobile is not as obnoxious to our senses as the antiquated horse and carriage were and the garage has lost the characteristics which placed the old stable in an outlying position from the house. Since most small home owners do not have chauffeurs there is no reason that has not been overcome by modern design and construction why it should not be given a position of easy accessibility from the living quarters.

Mr. Sevaldsen mentions our modern mechanical equipment in his article, presumably as an argument against "southern exposure." To use his own argument, why use artificial means when natural ones are at hand if we care but to use them. It is true that great strides have been made in mechanical equipment and such equipment is really essential in large apartments and in urban locations where tall buildings, plan economy, and numerous other reasons prevent the use of natural means.

And then, what is more natural than to entertain our friends in our and their "Sunday best" where we may have the soothing beauty of nature, though it is man assisted, in our garden rather than be interrupted incessantly by passing traffic with its attendant dust, noise, hurry, and inquisitiveness. To my mind, Mr. Sevaldsen has not yet awakened to the fact that architecture, even house architecture and, more so, even small house architecture, is progressing and I believe with Norman-Bel Geddes that remarkable changes will appear within the next ten years.

FREE EMPLOYMENT SERVICE

(Other items on pages 78 and 80)

POSITION WANTED: Young lady, 21, experienced in technical dictation and thoroughly familiar with secretarial work. Or will do typing of specifications, etc., etc., at very reasonable rates. Telephone, Ashland 4-9331.

POSITION WANTED: Connection or position as superintendent for architect or builder on ornamental plaster and stucco work. Knowing also metal lath construction, general shop drawings and estimating. Box No. 437, care of PENCIL POINTS.

WANTED: Landscape draftsman for work at Baton Rouge, Louisiana. Box No. 438, care of PENCIL POINTS.

POSITION WANTED: Architectural draftsman, 8 years' experience, planning, detailing, designing and rendering of apartments, residences, and country houses. Neat worker and capable of making working drawings from sketches to full size details. Box No. 439, care of PENCIL POINTS.

POSITION WANTED: Designer-draftsman, thoroughly familiar with all styles and modern architecture. Sketching, designing, detailing, working drawings, perspectives and renderings in all mediums. Box No. 440, care of PENCIL POINTS.

POSITION WANTED: Architect, designer, draftsman, seeks post as executive or contact man, casual or part time considered. General experience and institutional designer. Genial personality. Box No. 441, care of PENCIL POINTS.

SPACE FOR RENT: Space in large studio with two skylights, especially good for renderer or letterer. Chance for odd jobs. Telephone, Bogardus 2330, 1193 Broadway, Room 38, New York, N. Y.

FREE BOOKLET ON FLOOR DESIGN

The Goodyear Tire and Rubber Co. of Akron, Ohio, has still a limited number of copies of the Design Edition of Rubber Flooring News which will be sent to architects and designers upon request. The publication includes reproductions of the prize winning and mention designs submitted in the competition held by the company last year. These designs are very useful as reference material in connection with geometric floor covering layouts and are worth having in the drafting room.