

THE AMERICAN ARCHITECT

VOL. CXXVIII

DECEMBER 5, 1925

NUMBER 2486

ART and FALSIFICATION

BY WM. ROGER GREELEY, A. I. A.

THE older the discussion, the greater need to inject into it new factors or at least new imagery. The age-old dispute as to the nature of art continues into our day; whether it is imitative or creative—whether it “Holds the mirror up to nature” or “Gives to airy nothing a local habitation and a name.” How can this question be summarized and made graphic enough to present a convincing appeal to the intelligent reading public of our time? It must be by a wide consideration of all the arts, and an apt comparison of imitation and creation, and the aesthetic, social and commercial values of each.

The first point at issue is the attitude of mind or the intent of the artist. Cannot a unanimity of opinion be reached on this point? Is there any doubt that from the earliest days of cave drawings down to the present moment the artist's idea has been imitation? His inspiration has been the object in nature. His desire for expression has arisen because of his interest in this object, and has resulted in an attempt to depict it as he saw it. At first his implements were rude, and his hand unskilled. The resulting works of art were imperfect representations of the natural objects. As the pages of history were turned, implements became more and more nearly adequate and artistic skill in their use increased. Finally, in our own day, mechanical instruments have been developed to such a marvelous degree that we are able with trifling effort to make an accurate and perfect record of a natural object—and instead of the cave-man's scratches and scrawls we have the colored photograph; instead of the totem pole the life mask and the thumb print; instead of the lay of the last minstrel the newspaper, and the dictaphone.

In this progress from crude imitation to perfect mimicry, what has happened to art?

Just so long as the imitation was the attempt of an individual to express what he himself saw, the result was a product of his insight as well as his eyesight: it was tinged by his sentiments and transformed from what it actually was to what he felt it to be. It expressed, in other words, his reactions and emotions with respect to it, and as an expression of emotion in terms of beauty it was art.

How different in essence from the mechanically achieved mimicry of today, which expresses no

emotion, conveys no human interpretation of nature! The photograph is an accurate map in light and shade of the natural object. It tells nothing of what that object meant to man. It is a cold and complete record by a lense and an emulsion, and it has nothing to do with art. In a minor way, of course, it may reflect the artist's (photographer's) ideal in the subject selected, the time of day, and the intensification or the blurring of the image; but all this is incidental to the mechanical process itself, and its mechanical result.

The point is that no artist, however painstaking and deliberate, can, in the nature of the case, depict an object as it actually is. He will see it with human eyes which endow it with individual human qualities. No two artists could see it exactly the same. The “artist's privilege” to select what is relevant and discard what is not, is not wholly a privilege—it is a necessity. From the point of view of absolute mimicry, it is a limitation. From the point of view of art, it is the very essence of creation. Emerson expresses it from the mystic's angle,—

“He builded wiser than he knew:

The conscious stone to beauty grew.”

When it comes down to specific points the conviction is widespread that a photographic portrait is greater art than one painted with brush and canvas. There is a feeling that the photograph tells the truth, where the painted portrait does not. Part of this prejudice can be forgiven because of the mediocrity and incapacity of the majority of portrait painters, but the major part cannot. The photograph, it is true, is a perfect map of the physical face—the skin and its blemishes, the features and the hair; all in the immutable form of expression caught by the camera. This is perfect imitation as far as the physical aspect is concerned, and so far only. Every real living countenance derives its charm from a certain mobility and vivacity which light it up from moment to moment and give the personality and soul of the individual expression. The camera is not interested in soul or spirituality, or character or even vivacity. It is a map-machine. It gets only one instantaneous glimpse of a face. Now the artist sees the face in its varying moods, with all its vitality and wealth of expression. He instinc-

(Copyright, 1925, The Architectural & Building Press, Inc.)

THE AMERICAN ARCHITECT

tively discerns its character, and each stroke of his brush is actuated by human understanding as well as by technical skill. The artist is constitutionally incapable of recording all the inconsequential and distracting elements that the camera is obliged to register. His vision sees only the beauty embodied in his model, and he paints it as he sees it, oblivious of the dross.

And so when the portrait is finished it becomes a part of our heritage—an element in civilization—an inspiration to mankind.

There is not money enough in any treasury in the world to buy the "Mona Lisa" that hangs in the Louvre. And yet there are a thousand portraits as true or truer to nature hanging in the galleries of Europe—of little value. They are facile reproductions of the physical countenances of this person and that; but the "Mona Lisa" is an artist's dream. It is the conception of the eternal feminine in the imagination of one of the greatest minds of history. It is art,—but it is not artificial or unnatural or falsified. It is what Leonardo actually saw with a penetrating eye for beauty, an eye that discerned every grace and charm of line and every harmony of color, and that was blind to blemish and discordant spot, an eye in fact quite color-blind to ugliness. But this faculty of selection was supplemented by another faculty that far surpassed it,—the instinct for human understanding—the gift for expressing emotion. The artist looking at the face which he was painting, saw not alone the beauty that was there, but he saw the human feeling:—it may be the yearning, or it may be the adoration. He saw and was able to paint a hint of the soul that animated the features.

Wordsworth wrote of the non-artist's eye—

"A primrose by the river's brim
A yellow primrose was to him,
And it was nothing more."

and of the artist's eye—

"Sees in the meanest flower that grows
Thoughts that lie too deep for tears."

Corot saw nature in coolest tints of green—Constable saw the same nature in warm greens and browns. To Monet it vibrated with emerald and purple. Each painted what he saw, and we, viewing each, regard Corot with that wonder that spring dawn inspires; Constable with the exultation at the full warmth and mellowness of summer afternoon; Monet with rapture at the pageantry of nature's changing show. So strong is the appeal, and so stimulating to our sense of delight in beauty, that we are willing to pay a fortune for a small canvas by one of these masters. The commercial value, it is true, is enhanced by the collector's zeal, but this is a minor factor.

There is a feeling that the cost of painting is

high because there is only one copy of each canvas, whereas a photograph can be had in any number of copies. This theory cannot stand before the fact that photographers often destroy plates after having printed a few copies, but with no startling effect upon the price and that many photographs are lost entirely but without upsetting the world of art, as would the loss of a single painting. Neither will it explain the fact that an engraving of which any number of prints may be struck off, still maintains a value far in excess of the more accurate photographic picture.

Furthermore, as a significant index of the relative values of art versus nature imitated, is the fact that most of the photographs that we hang in our homes to look at continually are photographs not of nature, but of art. We not only prefer art to imitation, but we prefer the imitation of art to the imitation of nature.

Photographs of real women with real babes have been made, representing madonnas, but we pass these by, preferring to have photographs of paintings of madonnas.

This is not peculiar to sacred art. How many people cherish photographs of real horses, compared to those who have a copy of Rosa Bonheur's "Horse Fair?" How many have mechanical reproductions of lions compared to those who boast a Barré or other sculptured figure of the King of Beasts? Who would exchange the Hermes of Praxiteles or the Apollo of the Belvedere for the most exact replica of the figure of Sandow or of any other of the world's great athletes? These copies of the human form have no artistic appeal, and are almost unknown, and when made are without charm.

Is there any choice between a bust of Washington from Houdon's chisel, and a death mask of the same face, with all the accuracy and verisimilitude of the latter?

The analogy in literature is furnished graphically enough in the court trial. Take the stenographic record of the most interesting trial that can be selected from history's pages, and you will read the true human story, unfalsified, and unchanged in any way. As in the case of the photograph and the death mask, you will have a trustworthy reproduction of facts with all their natural beauty untouched—unspoiled—by art.

Compare such an account, replete and accurate, with a court scene from literature, tinged with the artist's bias, warped, if you will, by his peculiar literary style, and his over-weening imagination. The trial of Effie Dean is such an account, by an artist-narrator. The trial scene in "The Merchant of Venice" is another, familiar to all. Why do we read it again and again, and have it on our library shelves ready to hand, instead of transcriptions of actual court records, of which we have none? Surely not because of

THE AMERICAN ARCHITECT

rarity. That argument always fails. There are millions of copies, costing only a few cents each, and available in every part of the world, whereas court transcriptions are hard to get, and cost considerable sums. The fact stands out plainly that the artistry makes the one thing a priceless treasure forever, while mere careful truth cannot lend to the other anything but a transient news value.

If other illustrations can emphasize this obvious truth, there are plenty at hand. One of the most inspiring bits of natural life in England, for example, is the skylark. It is full of interest for all, even for those who have never seen it and must learn of it only through reading about it. What do they choose to read? Is it the accurate description of a competent ornithologist, as given in a handbook of birds of the British Isles, and accompanied by a diagram or photograph making absolutely clear the nature of this thing of joy? It is not. What they choose to read is rather a wild enraptured apostrophe by Shelley—

"Hail to thee blithe spirit,
Bird thou never wert,—"

It is a poem wholly untrustworthy in statement, the very second line, if not also the first, being a falsehood. Yet it is read by millions, and is the principal source from which the world gets its idea of this wonderful bird, and its pleasure in that idea. It is of priceless value, yet it is common and cheap, scattered over the land in myriad copies, easy for all to possess, whereas the technical description of the bird is hard to find and costly to purchase.

A cemetery is a thing not particularly attractive to many. The writer had occasion to try to promote a more beautiful type of burying ground than that with which we are all familiar, and obtained fine photographs, careful descriptions, and model regulations. It was hard to arouse anything but the slenderest and most limited interest in this cemetery idea. Another description, however, of a personal and artistic nature, is read in every city and town in the English speaking world. Thomas Gray, when he described a country churchyard, gave his imagination rein, expressed emotions that arose within him at the sight of the lonely graves,—emotions that found a response in every human breast—and so made—not a true accurate description of the natural facts, but an emotional portrayal of what this graveyard seemed to him to be and to mean.

Such is the case for literature, as for painting

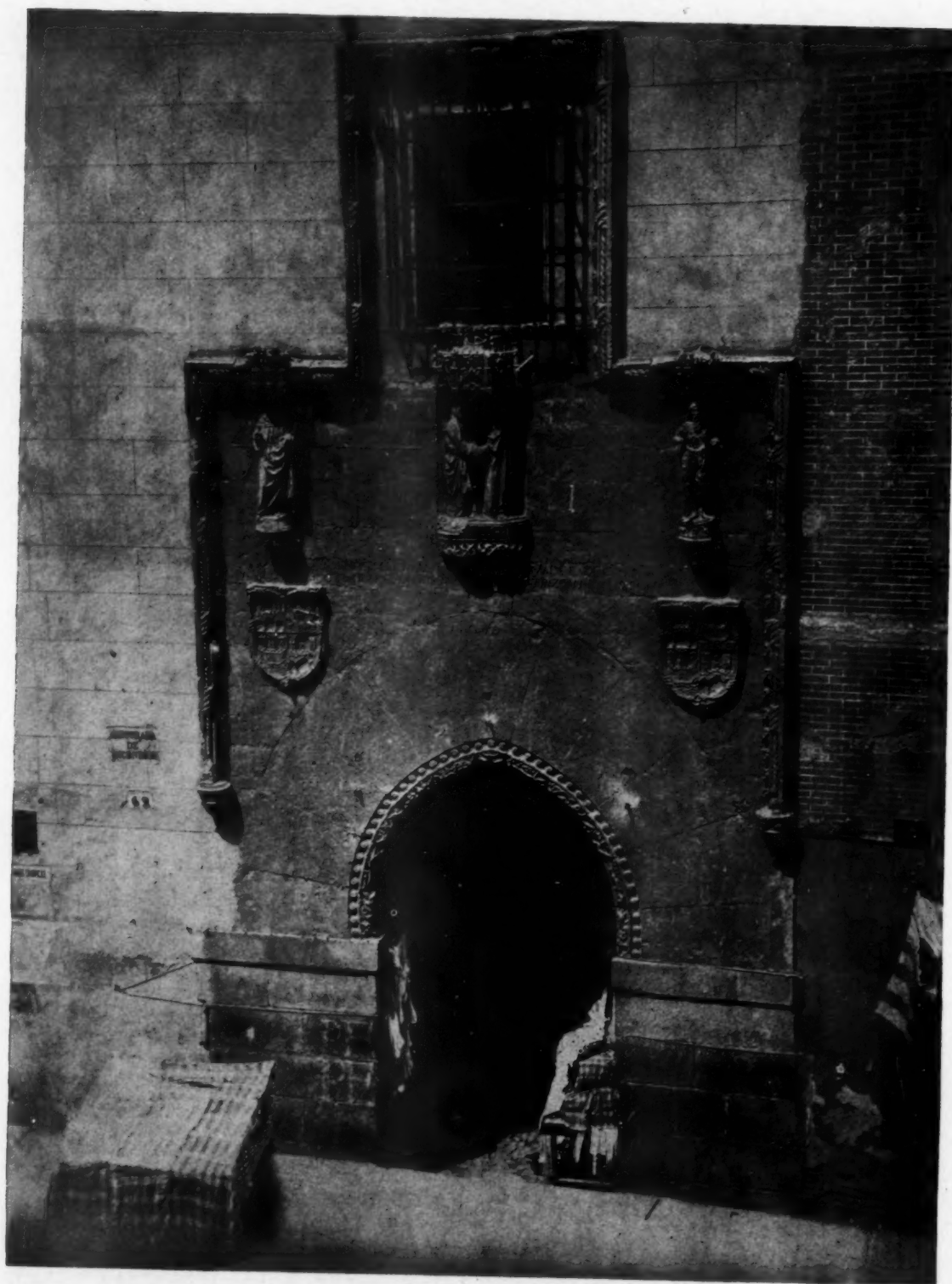
and sculpture. Of the other fine arts, music, happily, does not often even try to imitate natural sounds. When it does it is usually by way of a joke or is a *tour-de-force* to amuse the tired business man or the child with a phonograph.

Architecture, the most complex of the fine arts, nevertheless is governed by the same laws. In all the long ages of building, there is nowhere upon the face of the earth a beautiful building that expresses merely the scientific truth of its purpose, without embellishment or emotional purpose. No more thoroughly scientific structure was ever planned than the Gothic Cathedral of France, but the architecture never stopped with this logical exposition of balanced thrusts and resolved forces. Upon that reasoned skeleton, were the clothes of fancy, the foliage in stone, the grotesque gargoyle and adored saint, so that the whole building breathed an air of exultation in nature, and of reverence for what was held sacred.

Why is it that so often a severe building, bristling with truthfulness, is made beautiful by a vine? It is not to add to the truth, but conceal it. The soft uncertain form of the vine veils in a pleasing mystery the otherwise offensive definiteness and uncompromising matter-of-factness of the structure. It is not that the vine has a beauty in itself surpassing that of architecture.

No one would tolerate a vine upon the National Capitol at Washington, or upon the Boston Public Library, or the Woolworth Building, or the Choragic monument of Lysicrates, or the Taj Mahal, or the Petit Trianon, or the birthplace of Shakespeare. Where there is already architectural poetry embodied in the building it may be ruined by the confusing presence of a vine. The proper function of the vine is to drape the nakedness of architectural literalness. And so in all the field of human communication, whether by the written word or by delineation, by the mould of form, by the builded structure, or the combination and sequence of sounds, one principle holds, and it is this:

Human attention is secured and human emotion aroused only by an appeal that is itself human. Pure nature in its impersonal manifestation leaves us cold. The emotion of the artist to express to others the rare beauty which he finds in the sunset, and the delight of the layman to discover that emotion and that beauty in the artist's work—these are the values which enrich human communication, and transcending imitation as a living thing transcends a corpse, make art a vital force.



LA LATINA, MADRID
DETAILS OF SPANISH ARCHITECTURE

SEEKING AESTHETIC WORTH IN INDUSTRIAL BUILDINGS

BY PROFESSOR PETER BEHRENS

English Rendition by Arthur Woltersdorf, F. A. I. A.

PROGRESS in technology has reached a plane in material civilization beyond any recorded in past history. Everywhere this is seen in production. Eliminate modern technic and its restless advance and modern life is hardly conceivable. This development has likewise gripped modern commerce. With commerce in possession of manufactured products, it makes itself their master and accommodates itself to their expression,—their means. Hence it is apparent that big business, demanding attention, acquires the impressive aspect common to modern commerce.

It is unnecessary to cite New York City as a shining example. In Europe, particularly in Germany, this is most clearly substantiated. Consider only the new office buildings in Hamburg and the great department stores scattered throughout Germany. In these buildings a new expression of values through daring construction is recognizable. But, since a new impetus cannot remain narrow, realizing merely the object of the thought, it at the same time seeks form to express and elucidate the object and hence it is evident that these buildings are influenced by a will for new artistic form. Indeed, it is the added aesthetic worth that gives value to the enlisted strength. Bulk, quantity alone is not impressive for the scale is soon lost. It is the indeterminable, distinctive character, not declaring itself as calculable result, that makes the lasting impression.

Granting commerce must consider outward appearances, one might, nevertheless, assume manufacture independent of this in its immediate surroundings. Industry has but to produce at the

lowest price what trade and commerce are in need of. Nevertheless, since trade cannot dispense with the industrial spirit, so manufacturers require mercantile insight for appraising artistic impulses. Manufacturers no longer produce, as formerly, cheap and poor products, for today a great problem has been assigned them. Their frequent admirable achievements are but means to simplify our existence,—to make it more comfortable, less costly, more pervasive, and these accomplishments

have as a final purpose the creation of higher cultural standards. Was not the invention of printing one of the first signs of the new day, a means of spreading unlimited education, thus trending toward a higher cultural awakening? If this is also the mission of modern industry, its destiny cannot remain without influence and expression. It is inconceivable that one alive to the "Zeitgeist," susceptible in his private life to education and art, should not desire to efface the boundaries separating that life from the periods devoted to pecuniary profit.

It is foreign to present day existence and therefore an unwise speculative venture to run counter to the economic tendency of the times. Such opposition fails to understand the artistic development of our epoch. It does not see the hygienic and social needs; it does not grasp the technical victories leading to a body forming an alliance with the modern aesthetic viewpoint in every field of art.

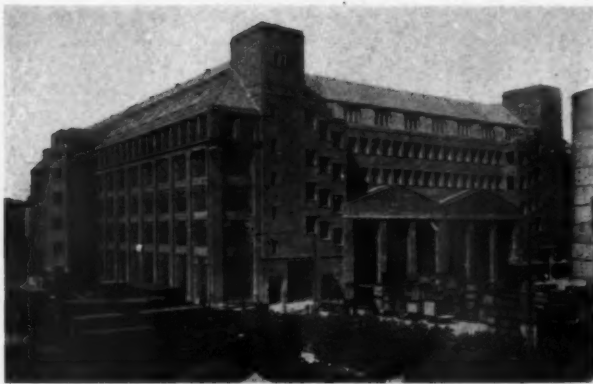
In the matter of form for each industrial plant, it is a problem to create character from the being,—the essence of the object; to evolve a type. All art in past epochs manifests itself today in retro-



CHEMICAL PLANT, LUBAN

HANS POELZIG, ARCHITECT

THE AMERICAN ARCHITECT



ALLEGEMEINE ELECTRICITÄTS GESELLSCHAFT, LOCOMOTIVE WORKS, BRUNENSTRASSE, BERLIN

PROFESSOR PETER BEHRENS, ARCHITECT

spect as noble where it is typical of the then existing conditions. In other words, all demands of an artistic and technical nature are recognized, supported, even elevated to a principle and given visual expression.

Now as to the placement of buildings! In this the process of manufacture is paramount. The disposition of trackage will govern building location. By stepping back the buildings, portals and driveways are well accommodated; at the same time liberal loading courts must be provided and thus contact is made with an outstanding principle of city planning. Because of the practical necessity of recession, the group acquires an effective silhouette and due to the necessary arrangement of courts, a requirement of that old master of city planning, Camillo Sitte, is complied with. Sitte pronounces plazas enclosed by building units one of the most essential elements in creating artistic effects in city planning. It is only necessary to have had the opportunity for comparison between layouts directed from a purely practical viewpoint by an understanding mind, and those created by chance or time's accretions, granted an equal expenditure in money and equivalent materials, to find an astounding difference in the impression created.

The same thing applies to the interior layout of factory buildings. The sequence of production dictates the juxtaposition of rooms and buildings. Supervision, ease in handling and movement of the product, ready transfer of tools, machinery and trucks require open and unobstructed and well lighted spaces. The workers' space must be as light and roomy as possible. Placing stair towers and elevators along outside walls is recommended, thus obtaining a more impressive architectural effect while the interior effect is heightened by

vistas through adjoining work rooms. The exterior becomes picturesque through the repetition of window openings confined by projecting stair towers crowned by the elevator penthouses. As light is essential to the production of good work, large windows are a requisite and they must dominate the design. They must not impress as large holes but rather as hospitable openings rhythmically arranged.

The problem of fenestration becomes of greater importance in a large steel structure than in a brick or stuccoed factory. Here the window surface is more dominant than the structural members of steel. The advantage of this construction lies in its rigidity without bulkiness. Steel so used has the quality of an effacing material. Just here is the danger to architectural effect. Buildings and bridges arose of

steel construction that looked like thin scaffolding of rods or threadlike frames. Architecture's problem is, however, to confine space; it envelopes. Architecture is the creation of a body. Means exist for achieving framed or enclosed spaces and organic harmony even with steel and glass. Given steel structural members and glass on the same plane, bonded surfaces result that are reinforced by the strongly projecting elements such as buttresses and roof trusses, thereby creating contrasting shadows and an effect of organization. Where ties and piers are not composed of lattice work but rather of solid walling, repose, both within and without, is added, thus materially enhancing the effect. Complete wall enclosures are structurally justifiable since even sheet metal becomes a carrying element.

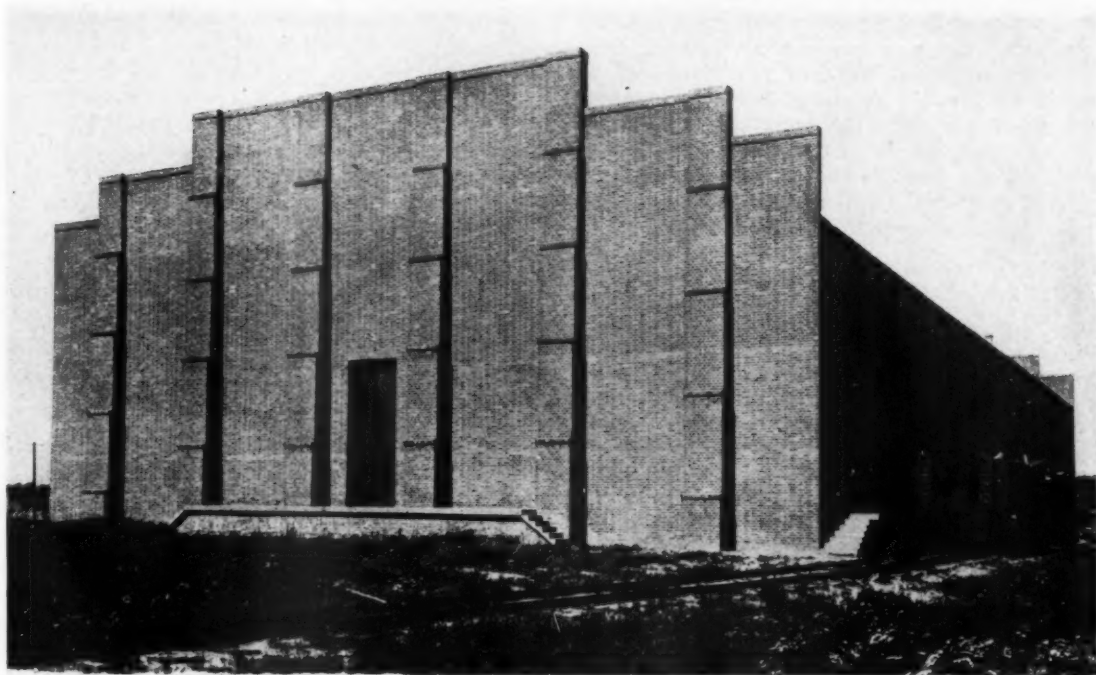
The method of lighting is most important in lending an effect of liberality to large spaces. Neither high side lighting creating a black zone suspended at the apex of an enclosed space and



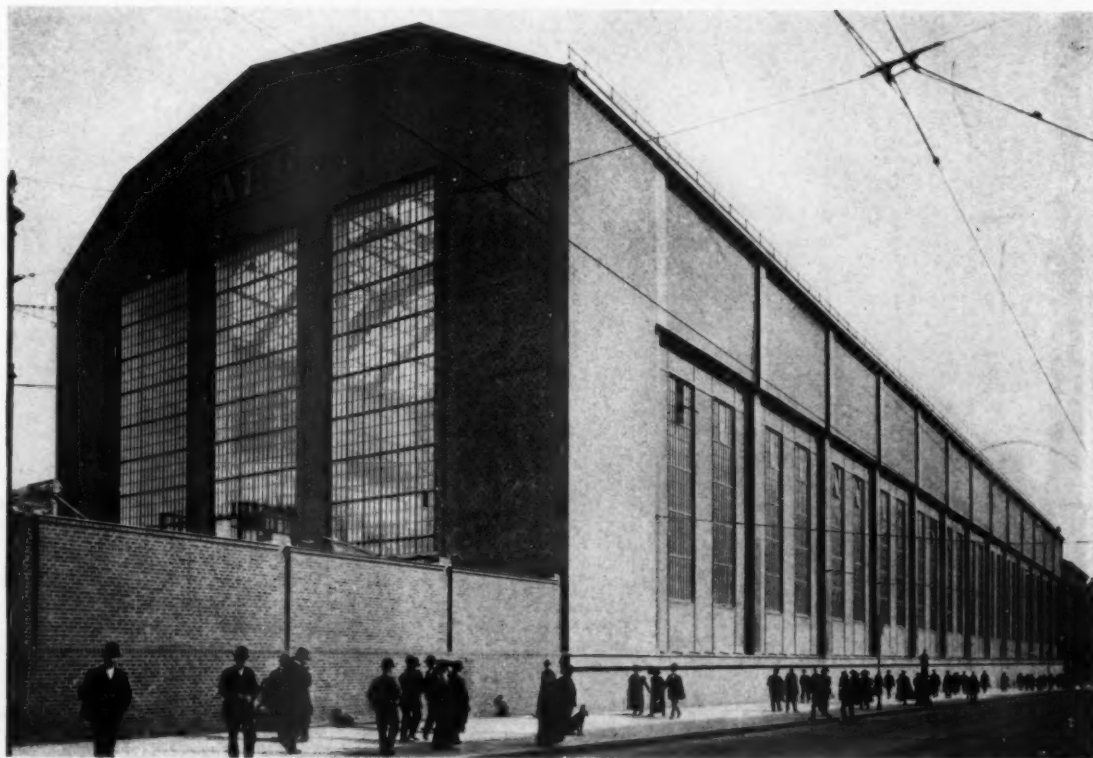
ALLEGEMEINE ELECTRICITÄTS GESELLSCHAFT, LOCOMOTIVE WORKS, BRUNENSTRASSE, BERLIN

PROFESSOR PETER BEHRENS, ARCHITECT

THE AMERICAN ARCHITECT



STOREHOUSE FOR RAW MATERIALS, AT HANOVER—HANS POELZIG, ARCHITECT



ALLEGEMEINE ELECTRICITÄTS GESELLSCHAFT HEAVY MACHINE SHOP, BERLIN

PROFESSOR PETER BEHRENS, ARCHITECT

THE AMERICAN ARCHITECT

having a darkening effect, nor light through superimposed hip shaped skylights producing alternating strips of daylight and darkness, but rather continuous top light extending the full length of the space below will give an even illumination. The latter plan facilitates ventilator openings and the placement of radiation. Unpierced structural members need not be insisted



SMALL ELECTRIC MOTOR MANUFACTURING PLANT,
BERLIN

PROFESSOR PETER BEHRENS, ARCHITECT

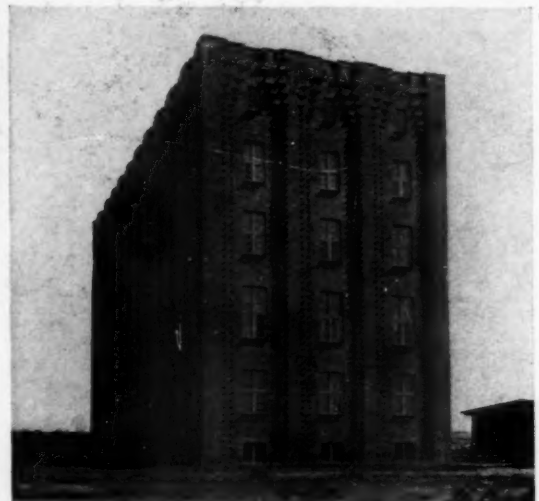
upon. Where lattice girders are desired, it is possible to combat the dissipating effect of recurring units by insisting upon the repetition of the same angles and the same symmetrical figures. Particularly important is this where girders are multiplied and undercutting occurs. In this way superposed structural elements produce the effect of order and repose. These are measures causing no increased cost. With buildings whose function lies in utilizing every possible means of production, luxuriousness is out of place. Neither structurally nor in the choice of materials is extravagance permissible; but, recognizing the meaning of such plants as the cultural structure of our time, what is there to prevent the devotion of adequate care and thoughtful spiritual labor so that artistic worth may be born and developed?



GAS WORKS, POSEN

HANS POELZIG, ARCHITECT

It is never a question of materials that determines artistic worth. It is apparent that in periods of economic stringency, such as occurred in the middle of the last century, Schinkel erected buildings recognized as the last manifestation of the style of the day, though he was restricted to the simplest of materials. It is a question of artistic ability. Given but ordinary materials, powerful impressions may be won through the method of handling, through color combinations,



WESTERN FACADE OF AN OFFICE BUILDING IN HANOVER

HANS POELZIG, ARCHITECT

through contrasts, but above all through recognizing and emphasizing essential characteristics.

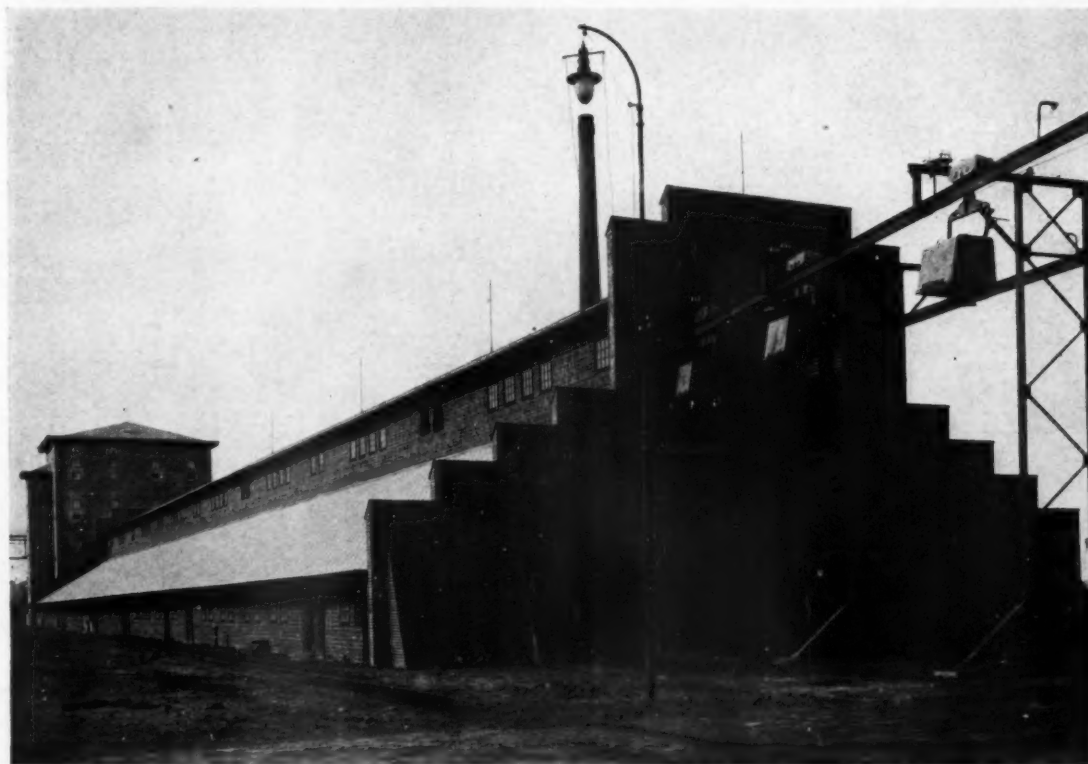
And industry, too, in our time, has reason to show consideration for workers' surroundings and quarters for administration. It is an old, not only sentimental, well established fact that workers

THE AMERICAN ARCHITECT

in hygienically unrepachable workshops, in bright and friendly surroundings produce more and better work than those in smoky shacks. The spirit of the surroundings and buildings is reflected in the labor and this is of added importance today since we must depend on quality to play a part in the markets of the world. A further reason why it behooves industry to guard the impression she makes is the fact that he who seeks quality seeks it where its manufacture seems most fitting. It is accepted that objects win recognition often, less through thorough test of their composition not easily understood, than through appear-

ances; but even more through the place of production and the character of the enterprise. For this reason, also, architecture and architectural engineering are unquestionably of great importance as qualities to be sought in manufacturing.

This concludes the series of three articles relating to modern German architecture, its tendencies and its promise for the future. THE AMERICAN ARCHITECT is indebted to Dr. Edmund Schueler, of Berlin, for securing them for publication and to Arthur Woltersdorf, F. A. I. A., for translation.—The Editors.



STOREHOUSE FOR RAW PHOSPHATES, CHEMICAL PLANT, LUBAN—HANS POELZIG, ARCHITECT

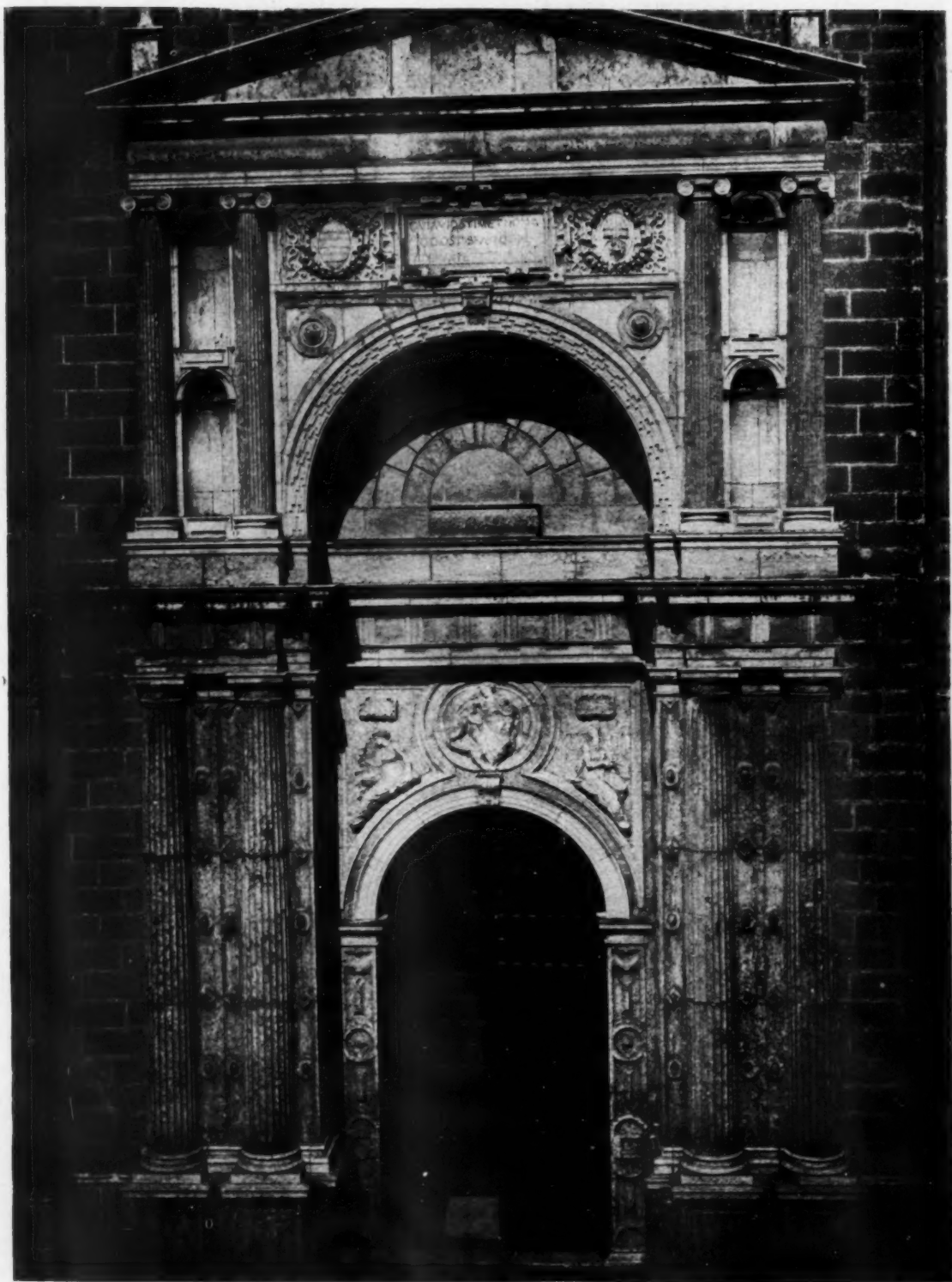
DISCOVERY OF TWELFTH CENTURY ARCHITECTURE

A MILE from Barnham, England, is the ancient village and church of St. Mary Barnham. The squire, in the course of excavations undertaken in connection with the construction of an organ chamber and vestry for the church, has laid bare one of three arches of extraordinary beauty and freshness, belonging to the twelfth century, states a recent issue of *The Architectural Review*, London.

The oldest part of the church is partly Saxon and partly Norman, while the eastern end dates from the twelfth century. The church was reduced to ruins during the Civil War in the seven-

teenth century. It was hastily patched up after the war, and the remnant of the old fabric, which has now been revealed, was hidden. It is a piece of architecture of great beauty, which ought to be preserved before it is too late. With this end in view the vicar managed, with the help of local charities, to collect the nucleus of a small fund (under £100), but a far larger sum would be needed.

If any archæologist will visit Barnham he will see how lovely a building the mediæval church was and how poor and mean its present condition has become. The vicar, the Rev. R. Barrett, will gladly supply photographs and information to any who are interested.

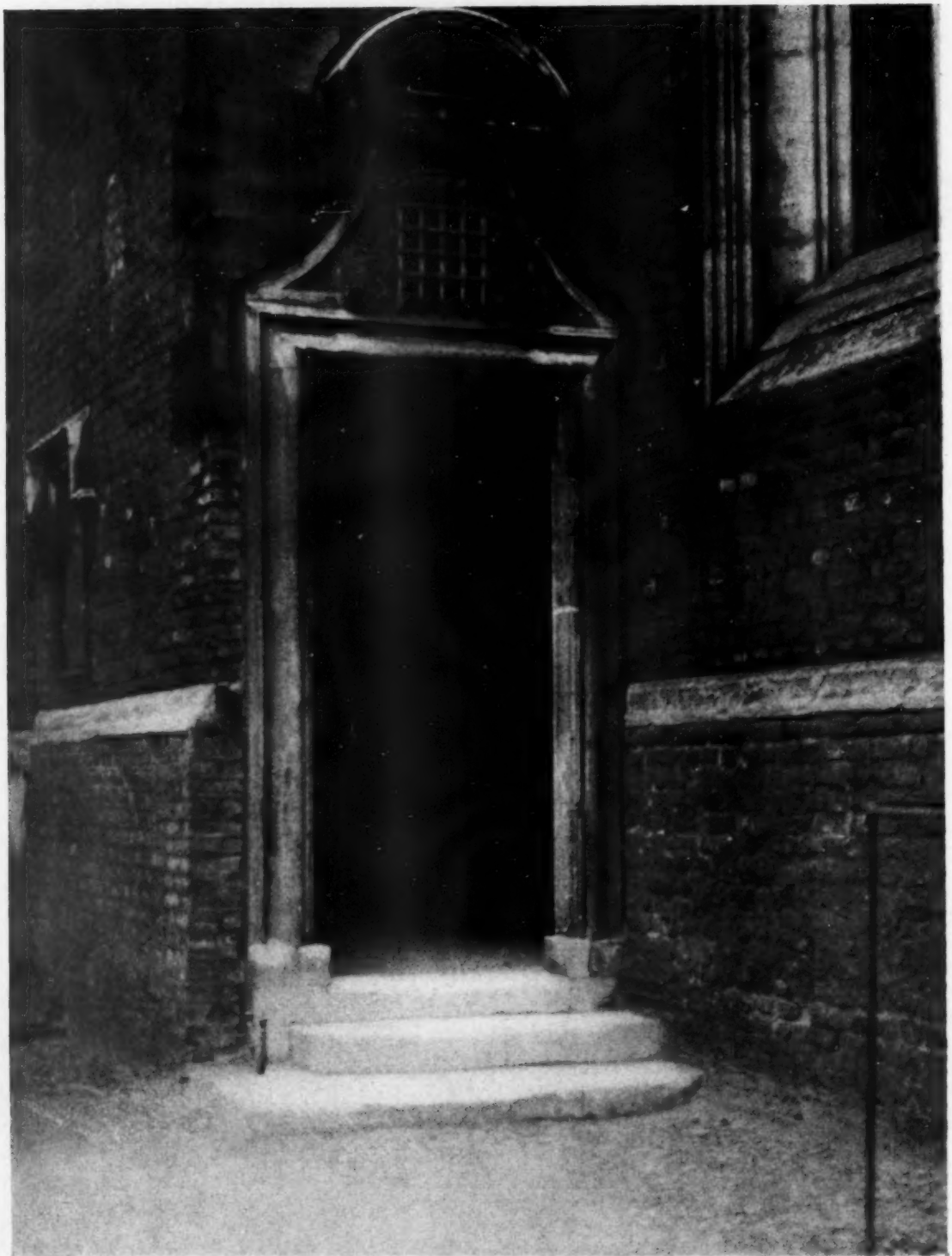


ENTRANCE TO A CHAPEL, SEVILLE
DETAILS OF SPANISH ARCHITECTURE



"WORKING PHOTOGRAPHS"

ONE OF A SERIES MADE IN ENGLAND BY JOHN RUSSELL POPE, F. A. I. A.



ST. JOHN'S COLLEGE, CAMBRIDGE, ENGLAND

"WORKING PHOTOGRAPHS"

ONE OF A SERIES MADE IN ENGLAND BY JOHN RUSSELL POPE, F. A. I. A.

EDITORIAL COMMENT

ANNOUNCEMENT HAS been made in a recent issue of the New York *Herald-Tribune* of the proposed erection in this city, of a Seamen's Church Institute. The building, as shown in a well rendered sketch, covers approximately an entire block frontage and is about eighteen stories high. The rendering is displayed across two columns of space and the appended description runs to half a column.

From this description we learn that Admiral Sims will lay the cornerstone, that Bishop Manning will preside and that a Mrs. Hobart will sing a hymn. We are further told about the perfection of the plan to meet all the complex requirements of the Seamen's Institute. Attention is also directed to the beauty of the design and we have in much detail a list of the various committees in charge of the work, and in conclusion, a fulsome list of the distinguished people who have wired congratulatory messages to the committee, but nowhere in the entire report is there mention of the architects whose design is very fine and who have evidently given more thought to all the problems involved and more effort to effect a perfect structure than any one of the illustrious people whose newspaper mention throws the architects into the shadow.

We are aware that similar conditions have been commented on many times, and it is, perhaps, futile to ask the proper committee in any of our architectural organizations to get in touch with the promoters of similar enterprises and see to it that the men who made them possible get the recognition that is due them.

Incidentally, we may state that we have learned on application that the architects of the building are Warren & Wetmore.

IN A RECENT ISSUE of a popular weekly journal whose circulation is said to be in excess of three millions a week, there have appeared advertisements of a well known silver plate company, that are worthy of commendation.

One of the greatest deterrents to the advancement of the highest craftsmanship in this country has been the submergence of the craftsman's identity by the company or individuals that employ him. In the advertisements referred to, the craftsman who has evolved certain patterns of design, is pictured in his working clothes and at his bench, and accompanying the illustration are his name, term of service and some laudatory remarks as to his ability as a craftsman.

The true artistic person never rests content

with a money reward for his labor. It is the commendation and approval of his peers that is, to him, the greatest incentive for an increased effort. When these conditions are better understood among employers and the craftsman elevated to his proper position in the mechanical arts, just so soon will there be a marked improvement of craftsmanship in this country.

We have already noted a fine spirit on the part of the building trades to give certificates to men whose work has passed the highest criticism, and this movement together with the one we have already referred to, will elevate craftsmanship to its highest artistic perfection.

* * *

TWELVE AND A HALF CENTS out of every dollar of the combined income of the American people during the past year went into taxes, according to a study in taxation made by the National Industrial Conference Board. The total burden of federal, state and local taxes has nearly doubled in proportion to national income since 1913, rising from 6.9% in 1913 to 12.5% in 1924, also showing an increase over the preceding year, 1923, when the total tax burden amounted to 11.8% of the national income.

While the increase of taxation in proportion to national income in 1924 in part was due to increased state and local tax levies, it was in part, however, also due to a decrease in national income during that year. The national income in 1924 is estimated at \$63,000,000 as against \$65,000,000 in 1923, representing a decrease of 3% for the year. Expressed in dollars of current purchasing power, the national income in 1924 was almost double that of 1913; deflated to take into account the decline in purchasing power of the dollar since 1913, the national income in 1924, in terms of "1913 dollars" was \$39,000,000 as against \$32,000,000 in 1913.

While the average gain in population, according to census figures has been about 1½% annually, federal, state and local taxes together have increased at so fast a pace that, according to the Conference Board's computation, the total per capita tax burden has risen from \$22.73 in 1913 to \$70.97 in 1924, or more than trebled. The same is true of the average tax burden of each gainfully occupied person in the United States, which has increased 208.8% from 1913 to 1924, from \$59.25 to \$182.94. Measuring the tax burden per family, the social unit, the Board finds that it has nearly trebled, having risen from \$102.12 in 1913 to \$304.23 in 1924.



CHURCH OF ST. SATIRO, MILAN
DETAILS OF SPANISH ARCHITECTURE



RENDERED DRAWING



THE COMPLETED BUILDING
CLUB HOUSE FOR CHAMBER OF COMMERCE, JOLIET, ILL.
D. H. BURNHAM & COMPANY, ARCHITECTS

(See description and plan on back)

THE AMERICAN ARCHITECT
December 3, 1925. Plate 320

CLUB HOUSE FOR CHAMBER OF COMMERCE, JOLIET, ILL.

D. H. BURNHAM & COMPANY, ARCHITECTS

JOLIET is primarily an industrial town and lacking in usual club facilities. The quarters formerly occupied by the Chamber of Commerce were used to a great extent as a social club where the members could dine and could avail themselves of facilities for playing cards and billiards, and could meet socially. So, at the outset, the new building was planned not only to provide adequate quarters for the business offices of the Chamber but also to serve as a social and recreational club and also to provide a large hall. This hall is to be used for the frequent banquets of the Chamber of Commerce and rented to other organizations for large functions, and is also planned to be used for social gatherings and dances.

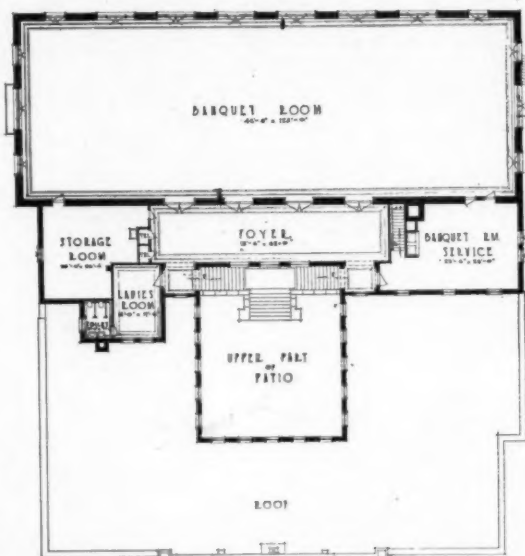
The location of the building is in a neighborhood which provides no attractive outlook, so that the idea of a central patio or garden at once suggested itself to the architects and was enthusiastically endorsed by the Chamber members. This patio is covered with a skylight so that it is a delightful place in Winter as well as in Summer, full of sunlight and the sound of the fountain and the singing of birds. The pavement is rough stone, with large areas left for planting of flowers, palms and ferns. In the center is a stone fountain with colored tile inserts, and surrounding the patio on three sides is a portico, separated from it by an arcade.

Surrounding this portico are the principal rooms, such as the lounge, card room, ladies' room, and dining rooms. This gives these rooms a pleasing outlook into the patio as well as windows in the outer wall, thus assuring plenty of light and air, with cross ventilation in Summer time. The dining rooms have large openings toward the patio, with no doors, so that one looks directly into the patio from any seat in the room.

On the side of the patio opposite the entrance a wide flight of steps ascends to a foyer extending across that side of the patio and having arched openings giving a view into the garden below. Opening off this foyer, on the second floor level, is the large banquet hall, in which a thousand

people can be served from a service pantry on the same level.

Below the banquet hall are the business offices, having a separate side entrance, the billiard room, and the kitchen and storage.



PLAN OF SECOND FLOOR

The spirit of the building is Spanish and Italian, with rough plaster walls of a light grayish-pink color. The interior walls are plain palm-finished plaster of a warm amber tint. The ceiling panels are colored in bright blues and greens. An unusual feature is a moonlight effect which can be thrown into the patio from a single blue light at the top of the skylight. This light is housed in a fixture with a circular frosted glass bottom so that it resembles the moon when looking up from the pavement below. Contrasted with this moonlight in the patio is the colored light from the lanterns hung around the portico and in the foyer above the stairs.



VUE EN PATIO

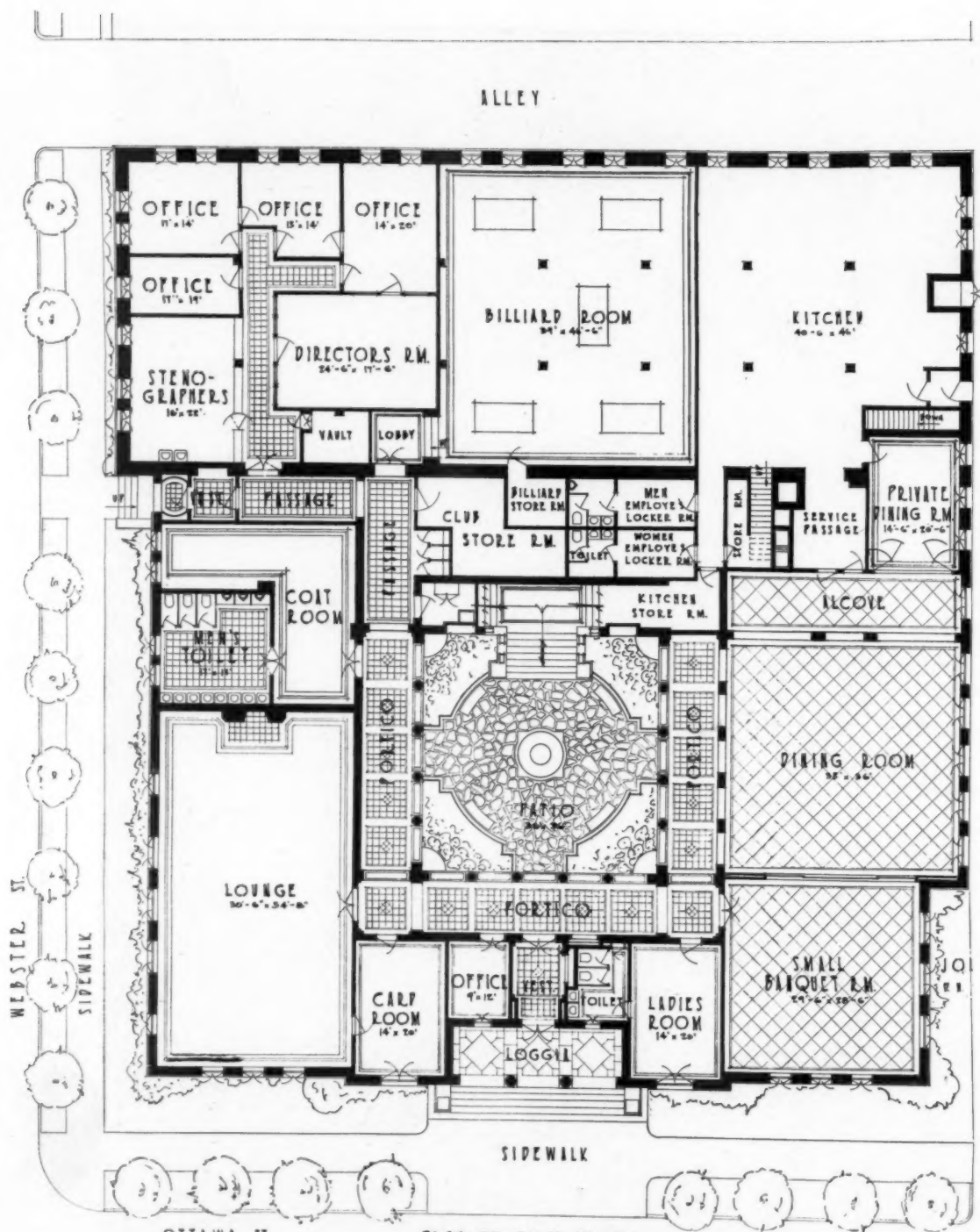
CLUB HOUSE FOR CHAMBER OF COMMERCE, JOLIET, ILL.

D. H. BURNHAM & COMPANY, ARCHITECTS

(See plan on back)

THE AMERICAN ARCHITECT
December 5, 1925, Plate 321

72-V.C.O.
7-3-25



OTTAWA ST.

PLAN OF FIRST FLOOR

CLUB HOUSE FOR CHAMBER OF COMMERCE, JOLIET, ILL.

D. H. BURNHAM & COMPANY, ARCHITECTS

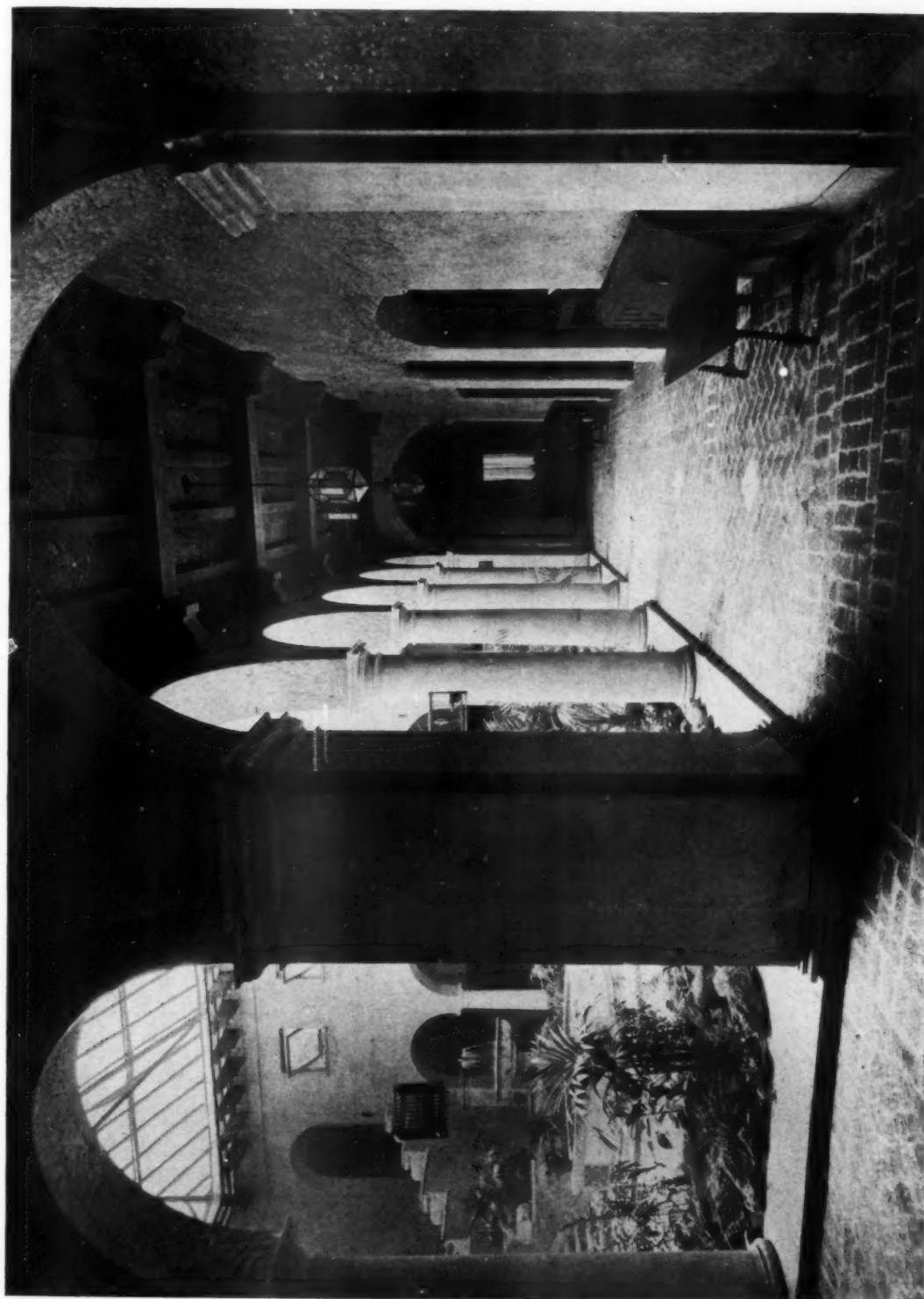


VIEW IN PATIO

CLUB HOUSE FOR CHAMBER OF COMMERCE, JOLIET, ILL.

D. H. BURNHAM & COMPANY, ARCHITECTS

THE AMERICAN ARCHITECT
December 5, 1925. Plate 322



PORTICO

CLUB HOUSE FOR CHAMBER OF COMMERCE, JOLIET, ILL.

D. H. BURNHAM & COMPANY, ARCHITECTS

THE AMERICAN ARCHITECT
December 5, 1925, Plate 323



FOYER



BANQUET ROOM

CLUB HOUSE FOR CHAMBER OF COMMERCE, JOLIET, ILL.

D. H. BURNHAM & COMPANY, ARCHITECTS

THE AMERICAN ARCHITECT
December 5, 1925. Plate 324

Handwritten text, possibly a signature or date, oriented vertically.



DINING ROOM AND SMALL BANQUET ROOM



LOUNGE

CLUB HOUSE FOR CHAMBER OF COMMERCE, JOLIET, ILL.

D. H. BURNHAM & COMPANY, ARCHITECTS

THE AMERICAN ARCHITECT
December 5, 1925. Plate 325

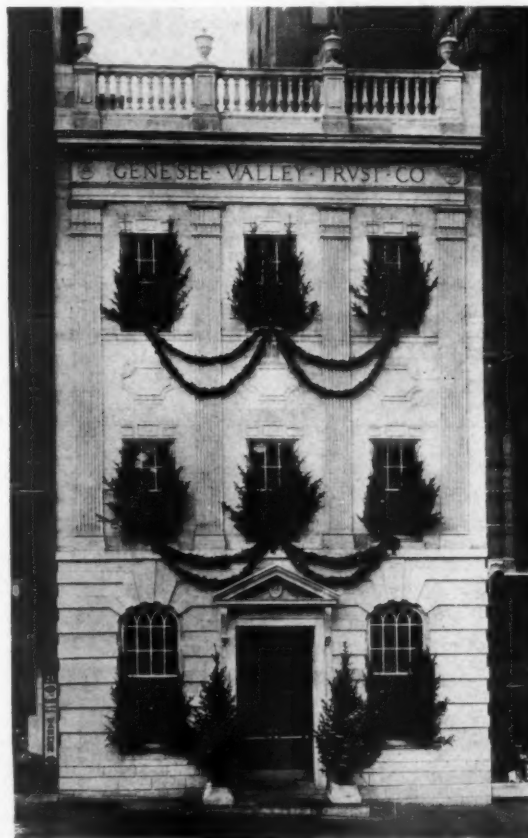
INTERIOR ARCHITECTURE

The GENESEE VALLEY TRUST COMPANY, ROCHESTER, N. Y.

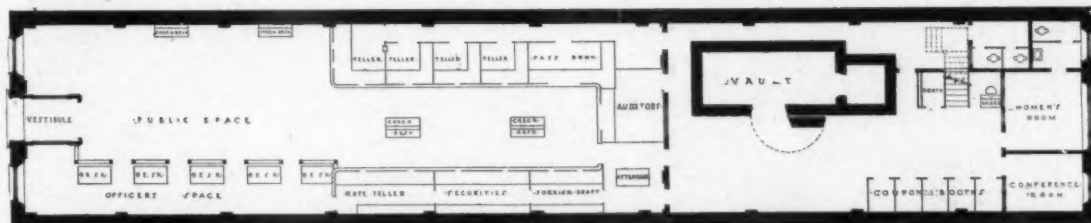
GORDON & KAELBER, Architects — ARDEN STUDIOS, Decorators

THE application of the principles of interior architecture, by which the interior design becomes actually the architecture of the interior, was responsible for the successful solution of a vexatious problem in interior design which resulted from a necessarily ill proportioned floor plan in the new building of the Genesee Valley Trust Company at Rochester, New York. A wall, cutting off the vault and safe deposit department from the public banking space, was erected, and the screen enclosing the tellers' cages followed around the line of this new wall. A door, allowing access to the vault, at the right of the auditor's desk, was introduced and designed as a part of the banking screen. In this way the awkward proportion of the plan was concealed without any inconvenience to the proper functioning of the bank. The design of the interior is dignified in every respect and ap-

propriate to a bank. While the severity of the scheme is frequently relieved by ornamentation, the ornament always serves a structural purpose, and thus can always be accounted for. Moreover, there is a unity in the design of certain of the ornament which is conducive to general harmony in the scheme. For example, the ornamental iron supports for the check desks are repeated almost identically as balusters supporting the rail in front of the officers' desks; and again these same balusters are introduced into the design of the banking screen. A similar motive is included in the design of the lighting fixtures. Such a repetition of detail is based on one of the principles on which architectural and decorative design is founded. The unrest and lack of harmony, which are so conspicuous in a scheme where these principles are entirely ignored, are missing here, and are replaced



EXTERIOR OF THE BUILDING



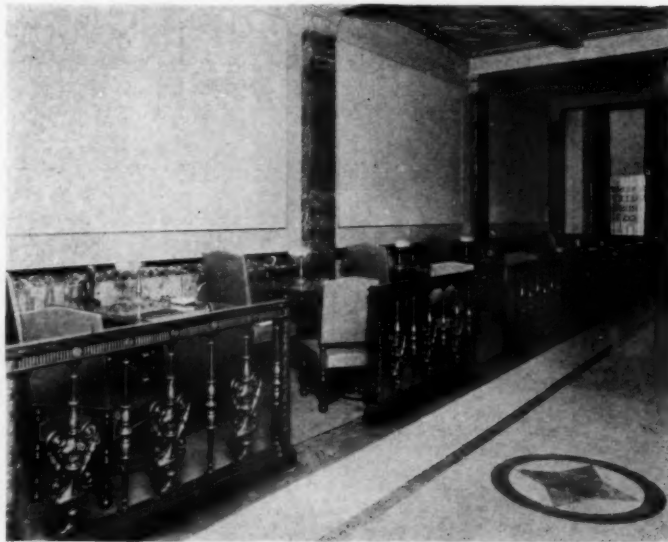
FLOOR PLAN OF THE GENESEE VALLEY TRUST COMPANY, ROCHESTER, N. Y.

GORDON & KAELBER, ARCHITECTS

THE AMERICAN ARCHITECT

by an interest in the design generally, in the knowledge that these various elements are actually integral parts of the harmonious whole, and are not alone simply disconnected isolated units in a decorative scheme.

Black and gold marble pilasters set at equal intervals against the walls, surmounted with gilded caps, carry ceiling beams, the intervening wall



THE OFFICERS' QUARTERS AT THE RIGHT OF THE PUBLIC SPACE

and ceiling spaces being panelled in simple lines with sufficient ornament to relieve the severity of the treatment. The stiles of the wall panels are treated with ornament in relief, as are also the coffers and soffits of the ceiling beams. In every case, the ornament is decorated in various shades of deep blue and terra cotta and gold leaf. The wrought iron



GENERAL VIEW OF THE INTERIOR SHOWING THE CHECK DESKS IN THE PUBLIC SPACE AND THE BANKING SCREEN SURROUNDING THE TELLERS' CAGES, IN THE DISTANCE

THE AMERICAN ARCHITECT

work of the check desks, the railing and the banking screen are painted black, with certain ornamental members touched off in gold. A dado follows around the walls, forming the counter line of the tellers' desks, of black and gold marble, set with panels of old Convent Siena. The floor is of travertine marble, inlaid with a border and medallions of verde antique marble, and the background of the ceiling is of deep ivory. The lighting fixtures, of the semi-indirect type, which hang from the ceiling, are of metal, finished in antique gold and silver, with panels of amber glass. The vestibule which

projects into the public banking space is designed in keeping with the general scheme. The face toward the street is of iron, ornamented with gold, while that toward the bank is of dark walnut.

To the right of the public space are the officers' quarters, separated by a low rail supported by iron balusters, to the design of which reference has already been made. The furniture for these offices has been designed and selected to conceal, as far as possible, the atmosphere of commercialism. The desks and the frames of the chairs are of walnut, and the chairs are covered with blue leather, studded with



LOOKING THROUGH THE PUBLIC SPACE TOWARD THE VESTIBULE FROM THE TELLERS' CAGES



GENERAL VIEW OF THE INTERIOR IN WHICH IT IS EVIDENT THAT THE DECORATIVE INTEREST IS PURELY ARCHITECTURAL OR STRUCTURAL, AND, WHEREVER ORNAMENT IS USED, IT CAN READILY BE ACCOUNTED FOR

THE AMERICAN ARCHITECT

antique brass nails. Deep blue carpet is laid on the floor. The ladies' department, at the right of the entrance, although having the same architectural treatment as the general banking quarters, of which it is actually a part, is furnished so that it gives an air of femininity, without in any way marring the dignity which the bank must maintain. The marble floor is immediately given warmth by a Chinese rug in rich gold, blue and green, for which Orientals are famous, and the window, as is the one on the opposite side of the entrance, is hung simply with deep blue antique brocade. The furniture here also is of walnut, in design affecting the Queen Anne period, the armchairs covered in blue figured damask and the side chairs in plain blue velvet. The desks are fitted with sets of brown leather with gilt decoration, and iron lamps, touched off in gold, with pleated paper shades.

The design of the interior of this bank is worthy of consideration, first, for its appropriateness to the purpose to which the building is put. Dignity and solidity are ever apparent, while

security is evidenced in the use of materials. Second, for the embodiment of harmony in design, the repetition of motives has already been pointed out. Third, for its capability in concealing an awkwardly shaped plan. This, too, has been referred to. And, fourth, for the elimination of commercialism wherever possible without destroying its main intent. The treatment of the ladies' department and the furnishing of the officers' quarters are evidences of that. In addition to all this, the bank makes a strong appeal through its color scheme which, though dignified and simple, never lacks interest. The design of the interior of this bank exemplifies well the modern idea of personal contact between officials and customers. Old-time banking institutions used to pride themselves on the secrecy with which the business was carried on. Now personal contact with its customers is one of its strongest selling points. It is for this very reason that officers' desks are almost invariably located directly in the banking quarters, separated from the public space by a rail, always accessible to customers.



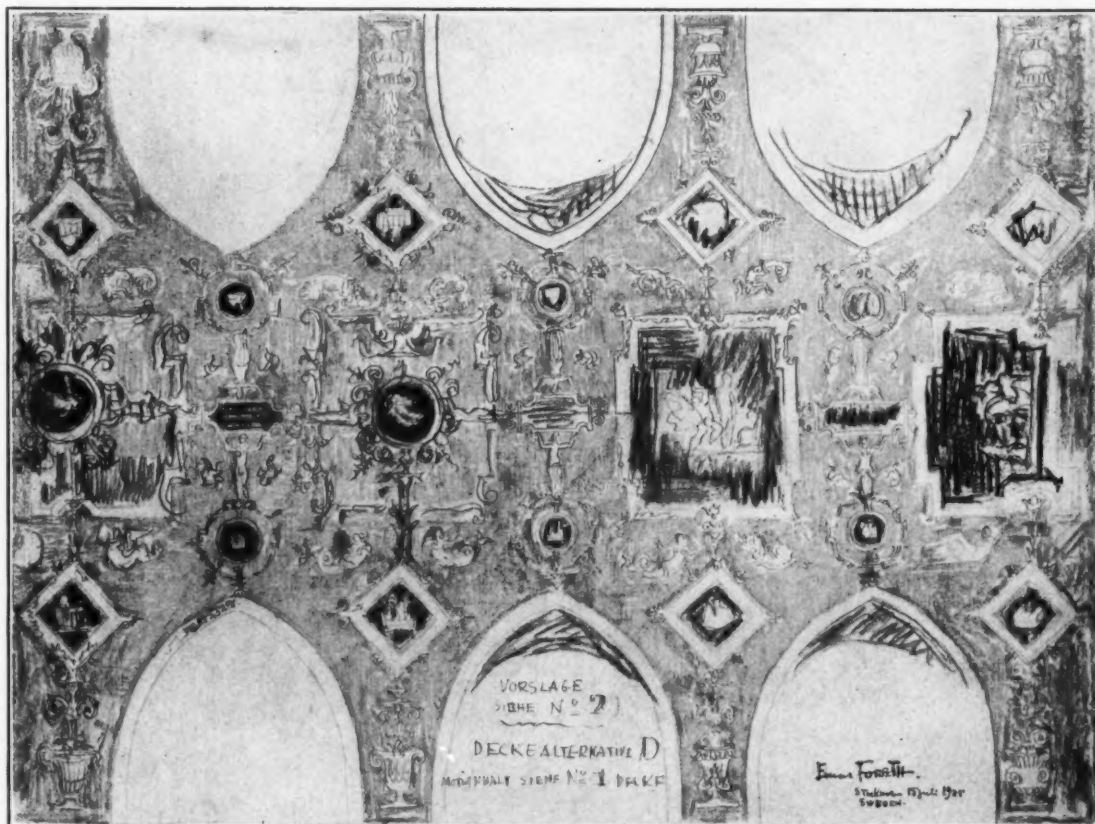
THE LADIES' DEPARTMENT IN WHICH THE DIGNITY AND SEVERITY OF THE ARCHITECTURAL DESIGN ARE RELIEVED BY FURNISHINGS SUGGESTIVE OF FEMININITY

RENDERING INTERIOR ARCHITECTURE

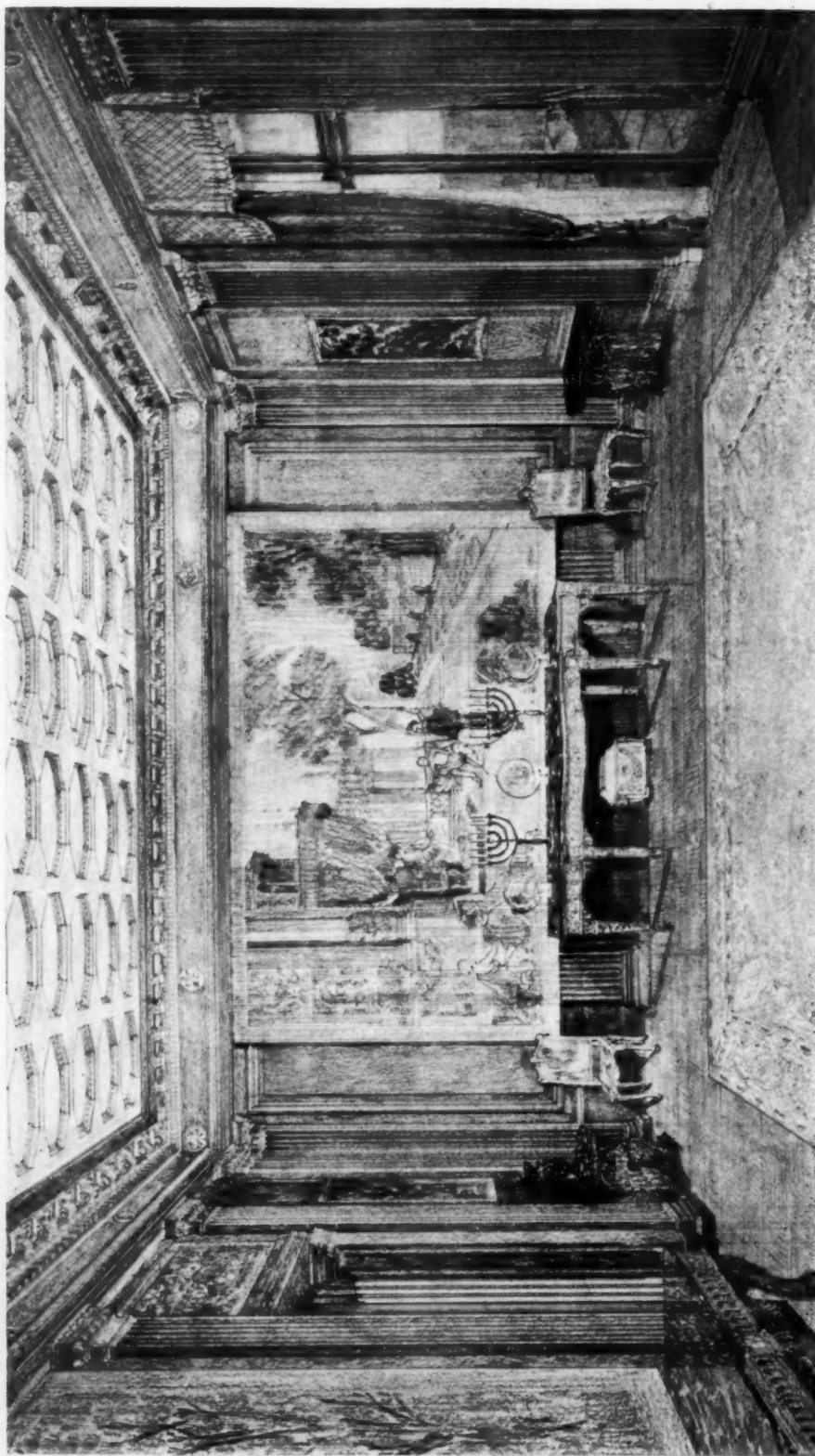
THE sketches herewith reproduced are preliminary studies in pencil and colored crayon for the decoration of a cove ceiling in mosaic. No attempt at detail is made. In this stage, it represents a study in mass and dark and light, more than in line. It is interesting, however, in that it gives an effect which few sketches, much more carefully and accurately worked out, seem to produce. It is often much easier to visualize the finished work from studies like these than from drawings that are worked out accurately in detail. The greatest fault



with perspective sketches generally is that the renderer fails to appreciate the size of the angle of vision. To get a view of that portion of the ceiling which is shown in these studies, for example, the eye could not detect detail. General effect only would be discerned. Sketches like these actually mean much more than those carefully worked out in detail. It is very evident that the artist had designed the ornamentation with the idea that it shall accentuate and stimulate the architecture. Ornament should be always so designed. Architecture and decoration are thereby unified.



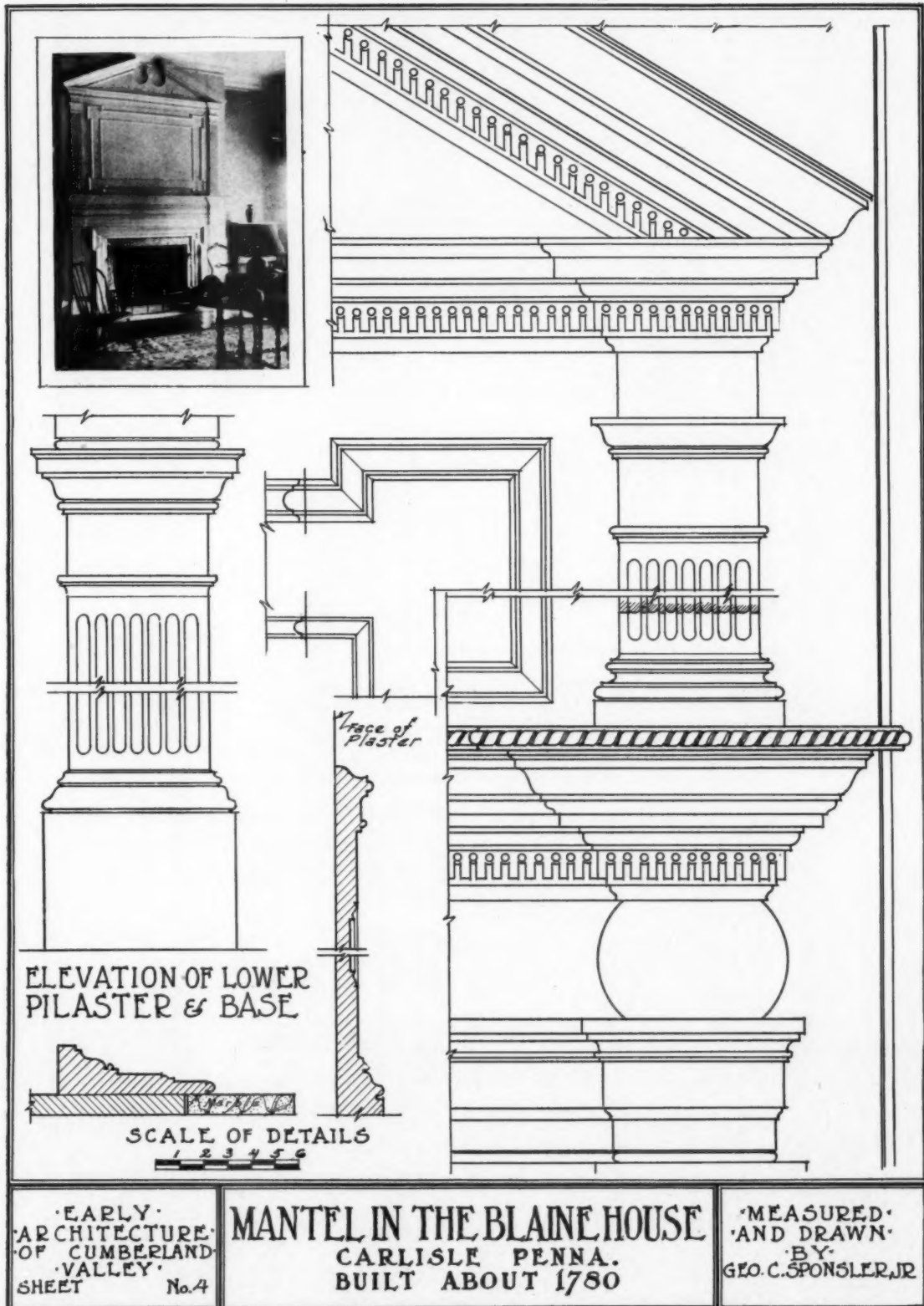
REPRODUCTIONS OF ORIGINAL SKETCHES MADE BY EINAR FORSETH, SWEDISH DECORATIVE ARTIST, FOR THE MOSAIC TREATMENT OF AN ART MUSEUM IN THE UNITED STATES. THE SKETCHES, PREPARED FOR RAVENNA MOSAICS, INC., ARE EXECUTED IN PENCIL AND COLORED CRAYONS

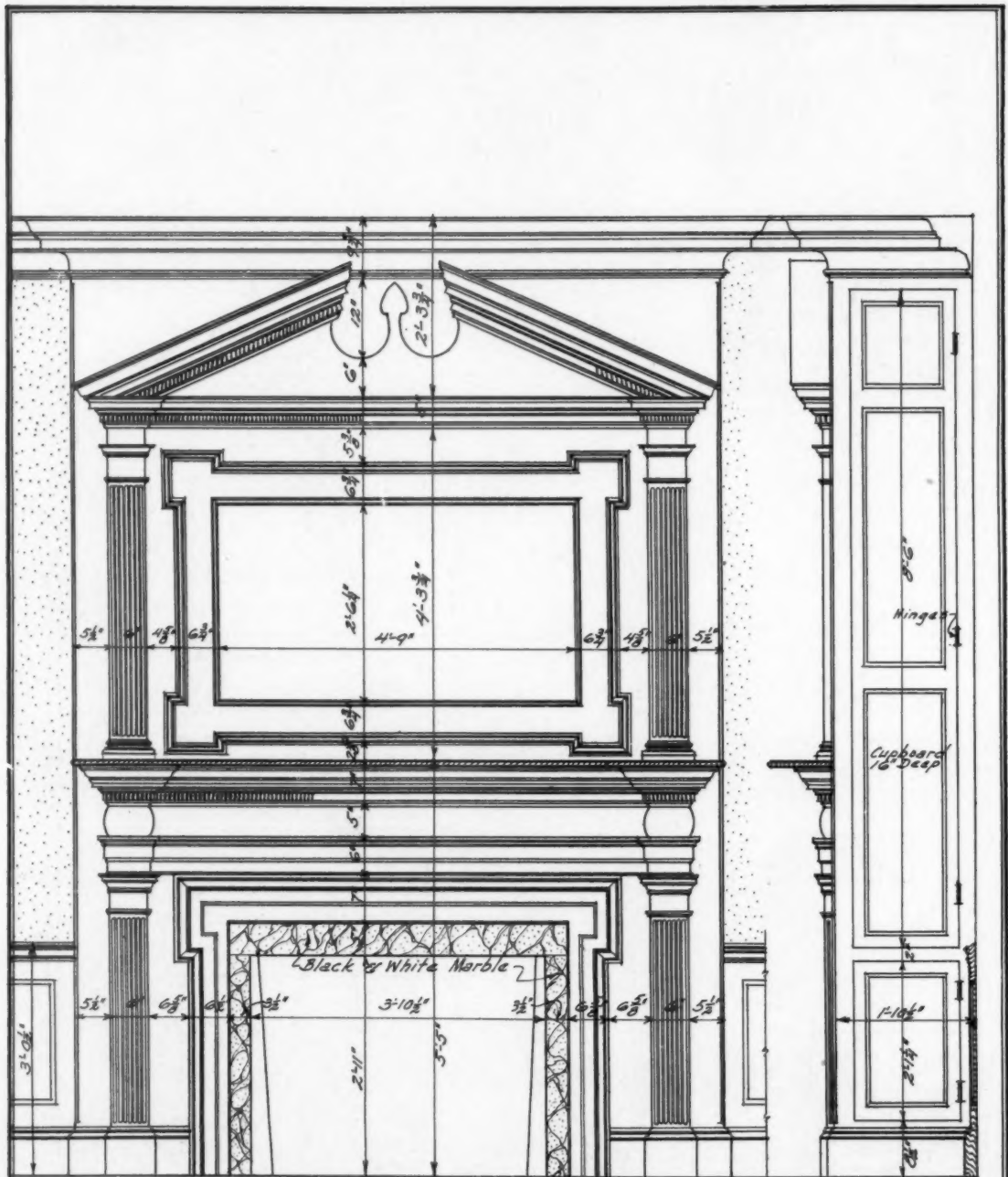


REPRODUCTION OF A PERSPECTIVE SKETCH SHOWING THE ARCHITECTURAL AND DECORATIVE TREATMENT AS SUGGESTED, AND LATER EXECUTED, FOR THE DINING ROOM IN A HOUSE AT PURCHASE, N. Y.

DESIGNED AND RENDERED BY ROBERT VON ESDORF OF THE FRANCIS H. BACON COMPANY, DECORATORS

This sketch, the original of which is in pencil and colored crayon, is intended to convey to the client the general idea of the room completely decorated and furnished. Details have been carefully suggested, and it has been made easy for the client to understand by the shadows which are shown, cast from the light through the doors at the right. The accuracy with which the scale of the furniture has been suggested and produced makes it possible for even one who is not accustomed to read plans and elevations to visualize readily the dimensions and proportions of the room. A sketch can portray nothing more than that





FRONT ELEVATION

END ELEV.

SCALE 1/2" EQUALS ONE FOOT

EARLY
ARCHITECTURE
OF CUMBERLAND
VALLEY
SHEET No 3

MANTEL IN THE BLAINE HOUSE
CARLISLE PENNA.
BUILT ABOUT 1780

MEASURED
AND DRAWN
BY
GEO. C. SPONSLER JR

ENGINEERING and CONSTRUCTION

CONCRETE COLUMN DESIGN

BY C. A. WILLSON*

IN 1916 a committee of prominent engineers representing the American Society of Civil Engineers, the American Society for Testing Materials, the American Railway Engineering Association, the American Concrete Institute, and the Portland Cement Association submitted to their constituent organizations a set of recommendations pertaining to the design of reinforced concrete structures. This committee has been called the Joint Committee. Because of its personnel and the societies which were represented, the recommendations contained in this 1916 report came to be regarded as a standard of good practice in design.

Early in 1920 a new Joint Committee was formed which was charged with the preparation of specifications for concrete and reinforced concrete. In preparing them the report of the former Joint Committee was to be used as a basis with such modifications as would make the new report agree with current practice. In addition it was to include such new data as marked advances in the art. The report of this committee was submitted in the form of tentative specifications on June 4, 1921, and after discussion and modification was submitted in the form of standard specifications on August 14, 1924.

From the standpoint of the designing engineer one of the most pronounced differences between the 1916 and the 1924 reports occurs in the part regarding the design of reinforced concrete columns with spiral reinforcement. In this article a comparison between the methods of design of spiral columns recommended in the two reports has been made. The main purpose of this article is to present diagrams to facilitate the design of spiral columns based on the 1924 report.

In the 1916 report the spiral column formula reads as follows

$$P = A f_c [1 + (n-1)p]$$

in which P = total load in pounds

A = area of core enclosed within the spiral hooping in sq. in.

f_c = unit stress in lb. per sq. in.

n = ratio of moduli of elasticity of steel to concrete

p = percentage of longitudinal steel

In this report the unit stress f_c for spiral columns could be 55% greater than that allowed for plain concrete piers. This latter value was

taken at 22.5% of the ultimate strength of the concrete, making f_c for spiral columns equal to 35% of the ultimate strength. The value of n was assumed to be 15 for concrete having an ultimate strength of 2,000 lb. per sq. in., 12 for 2,500 lb. concrete, and 10 for 3,000 lb. concrete. It was recommended that the spiral steel be equal to 1% of the volume of the core and that the area of the longitudinal steel be not less than 1% nor more than 4% of the area of the core. Three graphs of this formula for three different concrete strengths are shown on Diagram 1.

In the 1924 report the formula reads as follows

$$P = A_c f_c + n f_s p A \quad (1)$$

$$\text{with } f_s = 300 + (0.1 + 4p) f_c \quad (2)$$

in which f_c = ultimate strength of the concrete in lb. per sq. in.

A_c = area of concrete core exclusive of steel

Formula (1) may be reduced to

$$P = A f_c [1 + (n-1)p]$$

$$\text{or } P = A [300 + (0.1 + 4p) f_c] [1 + (n-1)p]$$

with f_c = 2000 lb. per sq. in. and n = 15

$$\begin{aligned} P &= A [300(0.1 + 4p)2000] (1 + 14p) \\ &= A (500 + 8000p) (1 + 14p) \\ &= A (8000) (14) \left(\frac{8000}{8000} + p \right) \\ &= (14 + p) = 112,000 A (.0625 + p) \quad (3) \end{aligned}$$

Similarly with f_c = 2500 lb. per sq. in. and n = 12

$$P = 110,000 A (0.050 + p) (0.091 + p) \quad (4)$$

and with f_c = 3000 lb. per sq. in. and n = 10

$$P = 108,000 A (0.050 + p) (0.111 + p) \quad (5)$$

The values of n for the three different concrete strengths given have the same values according to the 1924 report as in the 1916 report. The range in the percentage of longitudinal steel is increased from 1% to 4% in the earlier report to 1% to 6% in the later report. Whereas formerly it was recommended that the spiral steel be made equal to 1% of the column core volume, now it is recommended that the volume of the spiral steel be made equal to one-fourth of the volume of the longitudinal steel. Three graphs of this 1924 formula for the three different com-

*Engineer, office of State Architect of Wisconsin, Madison, Wisconsin.

binations of f_c^1 and n are shown on Diagram 1, along with the graphs of the 1916 formula.

It may be noted that with concrete having an ultimate strength of 2,000 lb. per sq. in. the new formula is more conservative than the old one

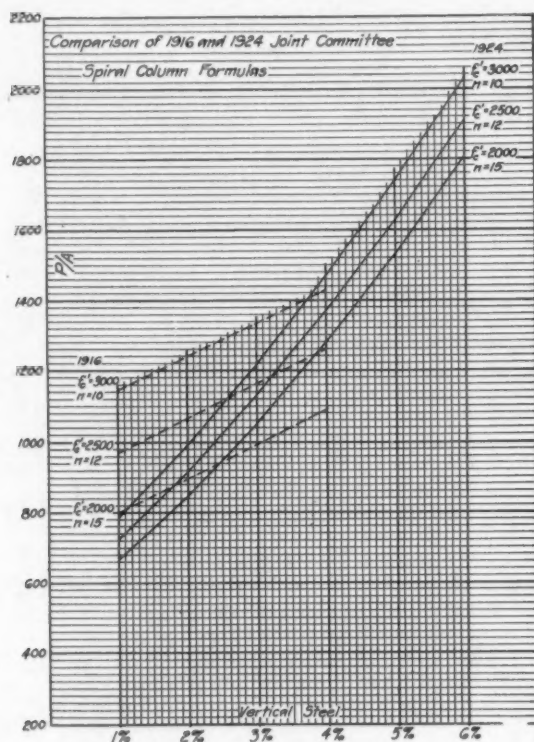


DIAGRAM 1. THE RELATIONSHIP BETWEEN P/A AND PERCENTAGE OF VERTICAL STEEL FOR DIFFERENT CONCRETE STRENGTHS IN THE 1916 AND 1924 FORMULA

when the percentage of longitudinal steel is less than 2.50%, and that it is more liberal when the percentage of longitudinal steel exceeds this value. Concrete having an ultimate strength of 2,500 lb. per sq. in. the graphs of the two formulas cross when $p = 3.21\%$, and with the strongest concrete considered here, the graphs of the two formulas cross when $p = 3.75\%$. It should be borne in mind that for all values of p less than 4% the amount of spiral steel for a given value of p will be less with the new ruling, in this connection, than with the old one.

A comparison of the column core diameter and percentage of longitudinal steel for a given load between the 1916 and the 1924 formulas is shown in Diagram 2. This diagram is based on the use of a concrete of medium strength with $f_c^1 = 2,500$ lb. per sq. in. and $n = 12$.

In Diagrams 3a to 3f inclusive are shown six diagrams based on the 1924 formula using three different strengths of concrete. With $1\frac{1}{2}''$ of protection outside the spiral these diagrams cover

a range of columns varying from 12" to 30" in outside column size. These diagrams were prepared by substituting different values of p and A in equations 3, 4 and 5, and solving for the corresponding values of P .

Diagrams 3a to 3f are based on the use of columns having a length less than 40 times the least radius of gyration of column core. Since only spiral columns, and hence round column cores, are being considered here, the radius of gyration equals one-fourth of the diameter of the column core, or $40R$ equals $10D$, where D is the diameter of the column core. For columns having a length in excess of $40R$ or $10D$ the permissible working load shall be determined by the formula

$$\frac{P^1}{P} = 1.33 - \frac{h}{120R}$$

where P^1 = total safe axial load on long column

P = total safe axial load on column of same section with length less than $40R$

R = radius of gyration of column core.

The influence of column length upon allowable safe load is shown below.

$$\begin{aligned} h = 40R = 10D & & P^1 &= (1.33 - 0.33)P = P \\ 50R = 12.5D & & & (1.33 - 0.42)P = 0.91P \\ 60R = 15D & & & (1.33 - 0.50)P = 0.83P \\ 70R = 17.5D & & & (1.33 - 0.58)P = 0.75P \\ 80R = 20D & & & (1.33 - 0.67)P = 0.67P \end{aligned}$$

After the core diameter and percentage of longitudinal steel have been found the area of longitudinal steel may be obtained quite readily by referring to either Diagram 4a or 4b. Data for these diagrams were secured by solving the simple formula $A_s = pA$. Each diagram has been provided with six vertical scales from which the number and size of reinforcing bars for a given area of steel may be read directly without taking off the actual area of steel.

The last item of interest is the size and pitch of the spiral steel obtained from Diagrams 5a and 5b. Data for these diagrams were secured in the following manner

Let p^1 = percentage of spiral steel
 p = percentage of vertical steel
 A_s^1 = area of spiral steel
 D = core diameter
 s = pitch of spiral
 A = area of column core

Then in a cylindrical portion of column core having an area, A , and a height, s , the percentage of spiral steel is expressed as follows

$$p^1 = \frac{A_s^1 D \pi}{sA} = \frac{A_s^1 D \pi}{sD^2 \pi} = \frac{4A_s^1}{sD}$$

$$\text{also } p^1 = \frac{p}{4}$$

$$\text{therefore } p = \frac{16A_s^1}{sD}$$

or $\frac{A^1}{s} = \frac{pD}{16}$

Diagrams 5a and 5b have vertical scales in order that the size and pitch of spiral can be determined directly when a certain column diameter and percentage of vertical steel is given.

Illustrative Problem:—Design a column having an effective length of 12' for a load of 500,000 lb. using concrete having an ultimate strength of 2,500 lb. per sq. in.

From Diagram 3d it is evident that a wide range of designs is possible. Designs will be made for 20" and 25" core diameters. In both cases the effective length is less than 10 times the core diameter so the loads given on this diagram may be used without modification. With a 20" core diameter 4.85% of vertical steel is needed, while with a 25" core diameter 2.50% of vertical steel is needed.

From Diagram 4b with a 20" core diameter and 4.85% of vertical steel, twelve 1 1/8" square rods most nearly fulfill the requirements although sixteen 1" square rods or ten 1 1/4" square rods would be satisfactory. With a 25" core diameter and 2.50% of vertical steel, eight 1 1/4" square rods are the minimum allowable area of vertical steel. Other selections are sixteen 1" round rods, thirteen 1" square rods, and ten 1 1/8" square rods.

The spiral reinforcement for these two sizes of columns may be determined from Diagram 5b. The Joint Committee specified that the pitch of the spiral should never exceed 3" nor should it exceed one-sixth the core diameter. With the 20" column core and 4.85% of steel the diagram indicates that 3/8" round spiral, 1 3/4" pitch is satisfactory, while 1/2" round spiral, 2 1/2" pitch almost furnishes enough steel. For the 25" column core and 2.50% of steel 3/8" round spiral, 2 3/4" pitch evidently is the most satisfactory.

Illustrative Problem:—Design a column having an effective length of 12' for a load of 200,000 lb., using a concrete having an ultimate strength of 3,000 lb. per sq. in.

Starting with Diagram 3e, designs will be made for 12" and 16" core diameters. In the first case the effective length equals 12D or 48R and there-

fore $P^1 = (1.33 - \frac{48R}{120R})P = 0.93P$. Hence

the column must be designed for a load equal to 200,000 lb. divided by 0.93 or 215,000 lb. If a core diameter of 13" had been selected the effective length would be 144" divided by 13", or

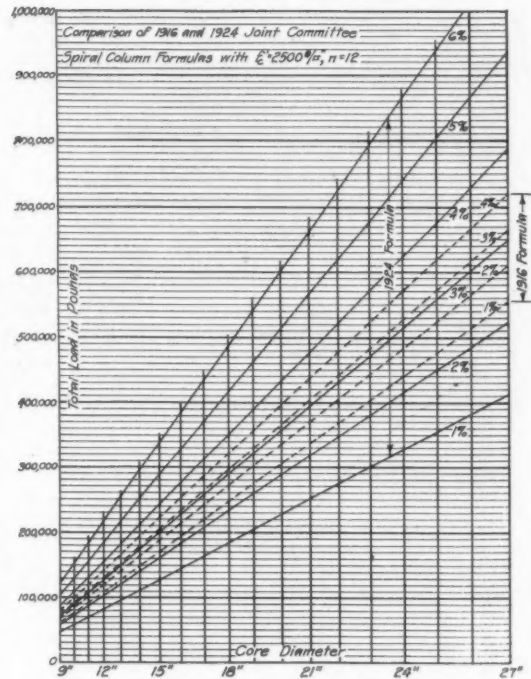


DIAGRAM 2. THE RELATIONSHIP BETWEEN THE TOTAL LOAD AND THE DIAMETER OF COLUMN CORE FOR DIFFERENT PERCENTAGES OF THE VERTICAL STEEL IN THE 1916 AND 1924 FORMULA

$11.08D$ or $4 \times 11.8 = 44.32R$. Then $P^1 = \frac{44.32R}{120R}$

$(1.33 - \frac{44.32R}{120R})P = 0.96P$. In this case the

column would be designed for a load of 200,000 lb. divided by 0.96 or 208,000 lb. Returning now to the column selected, the 12" core diameter with a 215,000 lb. load, it is seen that 5.60% of vertical steel is needed. In the case of the 16" core diameter the effective length is less than ten times the core diameter, and the diagram may be used without modification, and it is found that about 2.03% of vertical steel must be used.

Referring to Diagram 4a for the 12" column core and 5.60% of steel, eleven 7/8" round rods furnish the minimum allowable area of steel. For the 16" column core and 2.03% of steel, seven 7/8" round rods should be used.

From Diagram 5a it is evident that for the 12" column the minimum spiral reinforcement will consist of 3/8" round spiral, 1 3/4" pitch while for the 16" column 1/2" round spiral, 2 1/4" pitch may be used. In neither of these cases does the pitch exceed the requirements of the Joint Committee.

See following five pages for working diagrams for designing

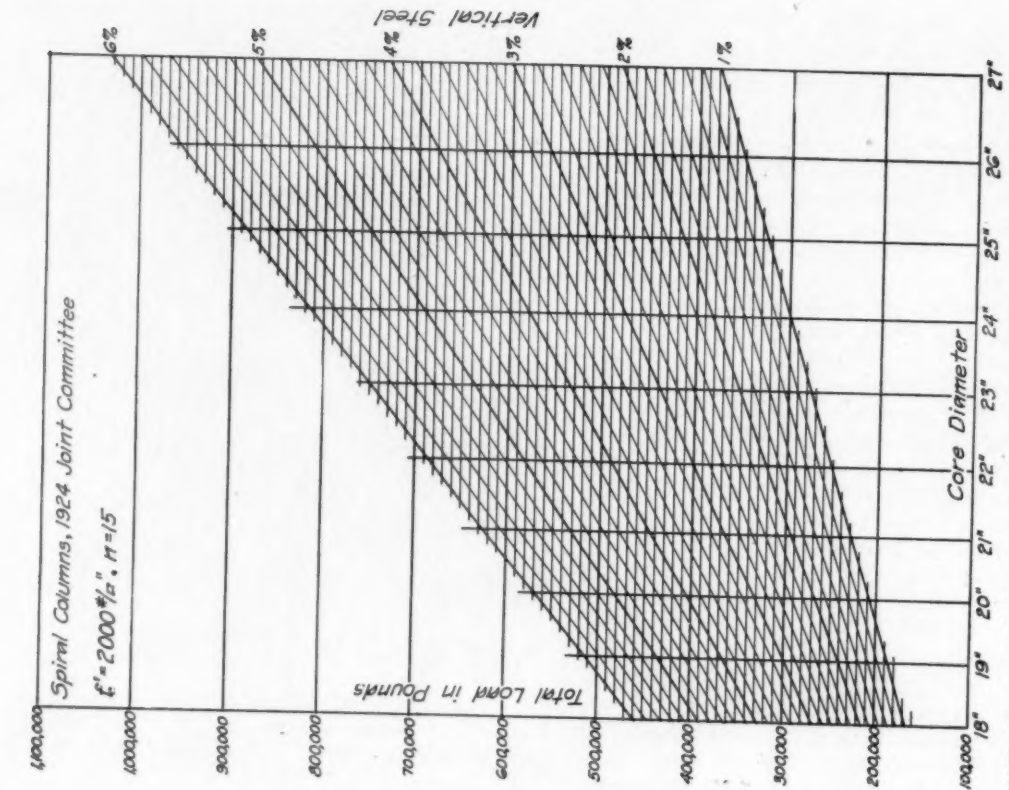


DIAGRAM 3a. WITH GIVEN LOAD, ASSUME THE DIAMETER OF THE COLUMN CORE AND READ THE CORRESPONDING REQUIRED PERCENTAGE OF VERTICAL STEEL FROM THE DIAGRAM

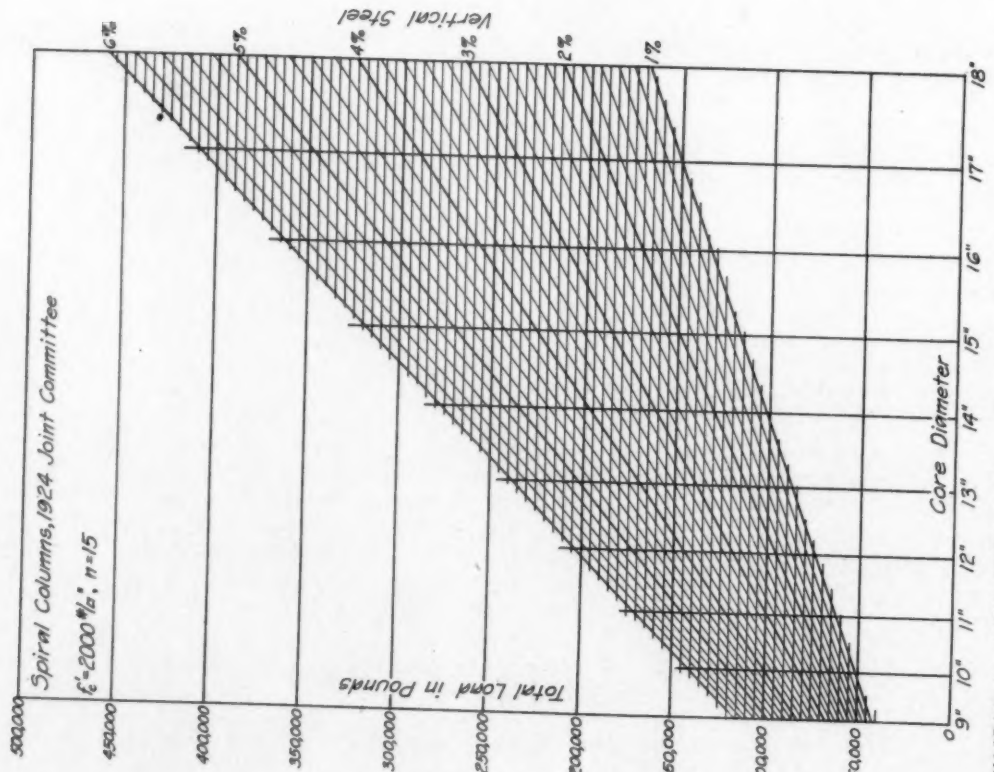
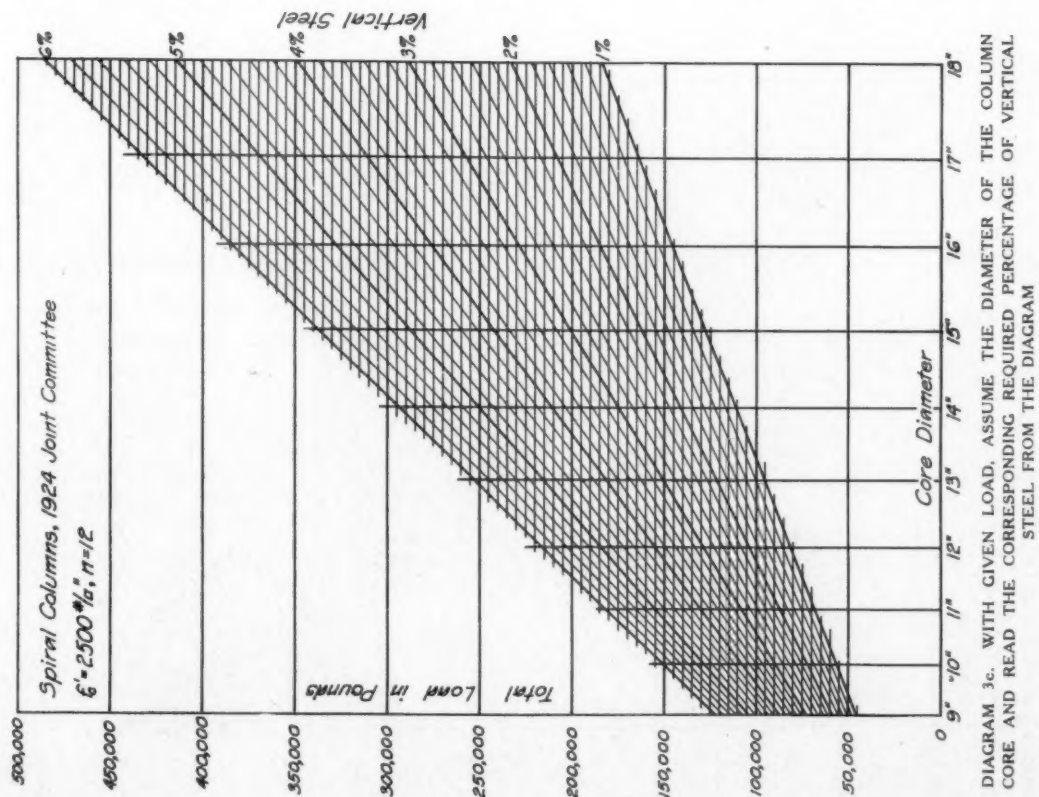
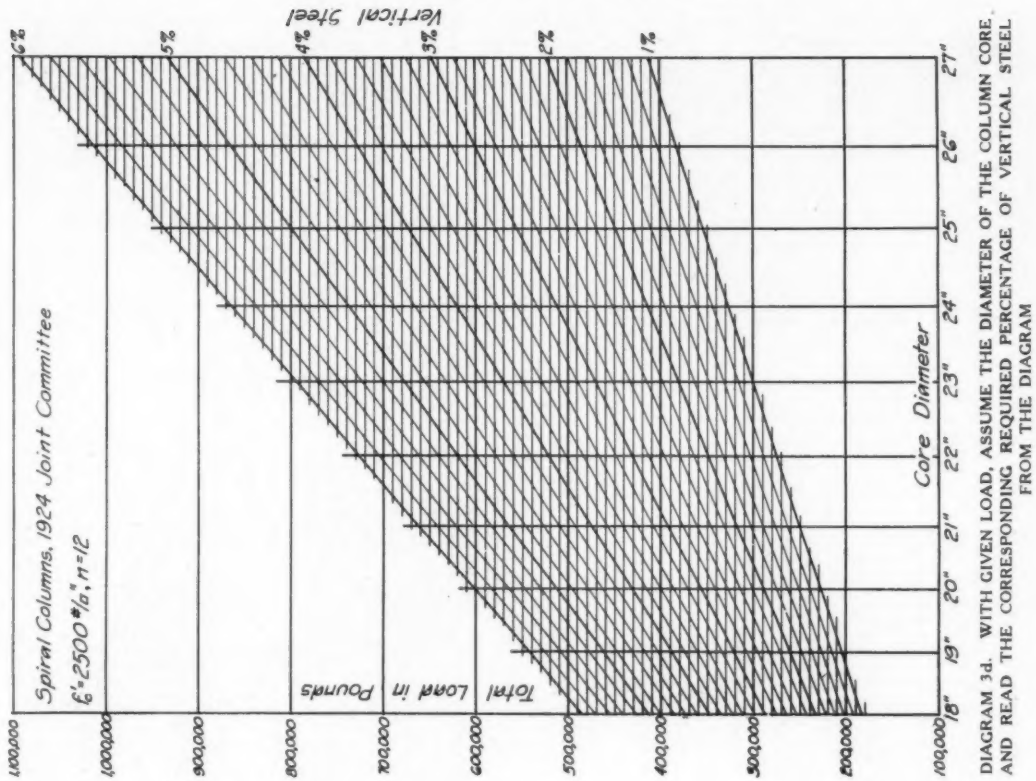


DIAGRAM 3b. WITH GIVEN LOAD, ASSUME THE DIAMETER OF THE COLUMN CORE AND READ THE CORRESPONDING REQUIRED PERCENTAGE OF VERTICAL STEEL FROM THE DIAGRAM



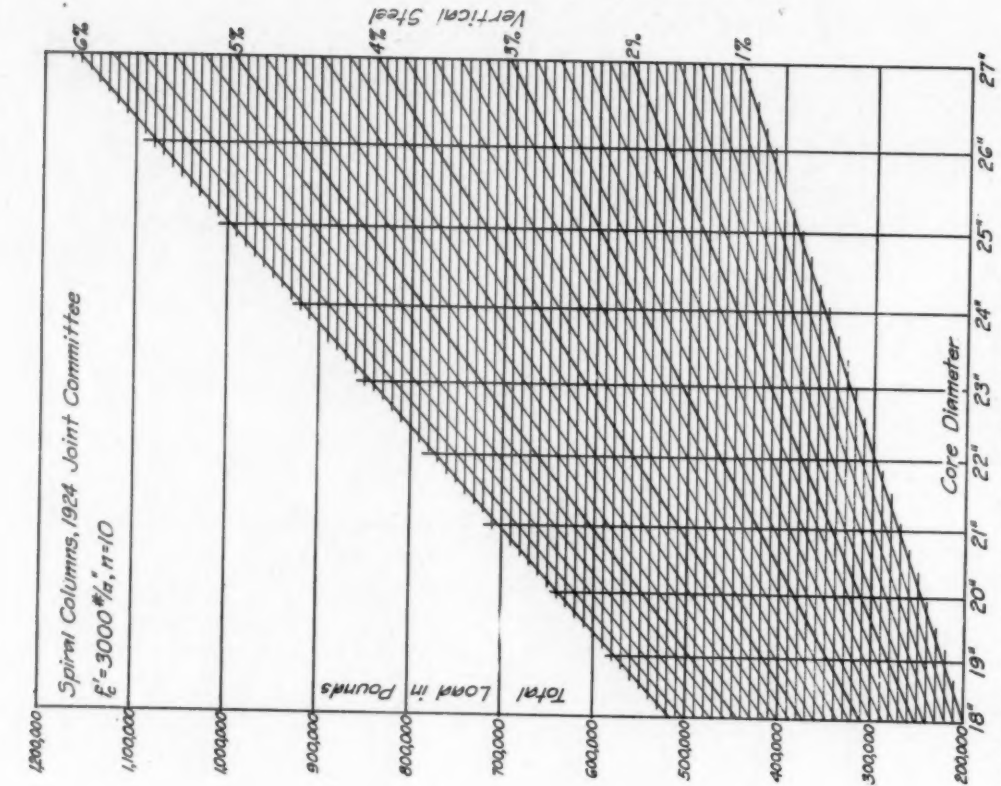


DIAGRAM 31. WITH GIVEN LOAD, ASSUME THE DIAMETER OF THE COLUMN CORE AND READ THE CORRESPONDING REQUIRED PERCENTAGE OF VERTICAL STEEL FROM THE DIAGRAM

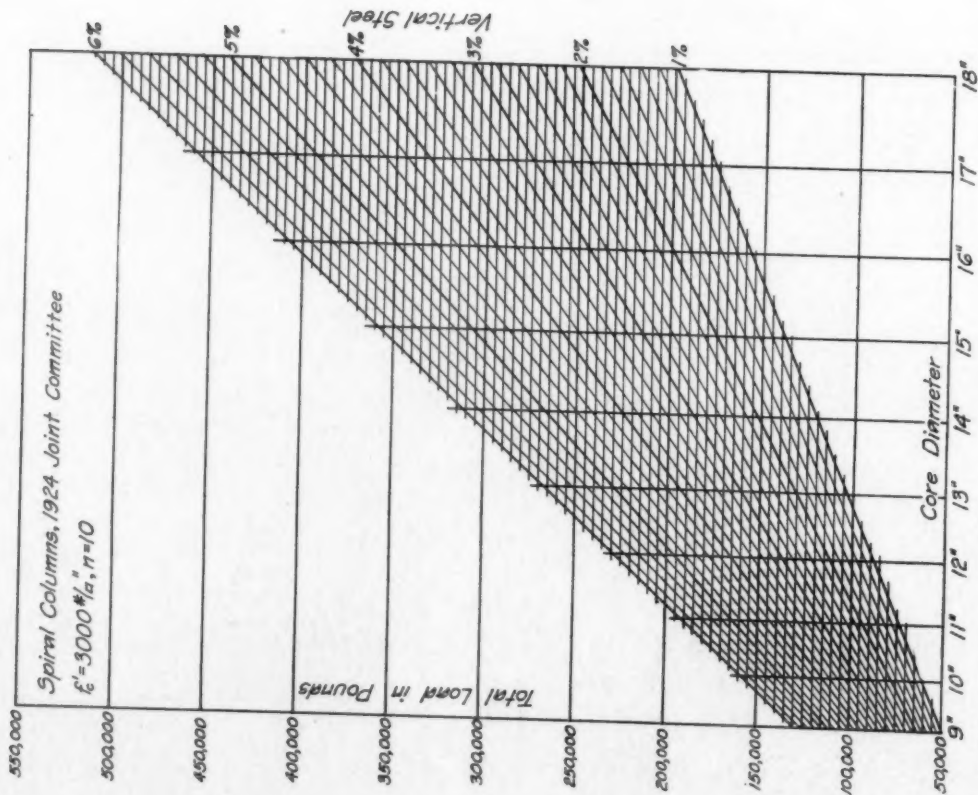


DIAGRAM 30. WITH GIVEN LOAD, ASSUME THE DIAMETER OF THE COLUMN CORE AND READ THE CORRESPONDING REQUIRED PERCENTAGE OF VERTICAL STEEL FROM THE DIAGRAM

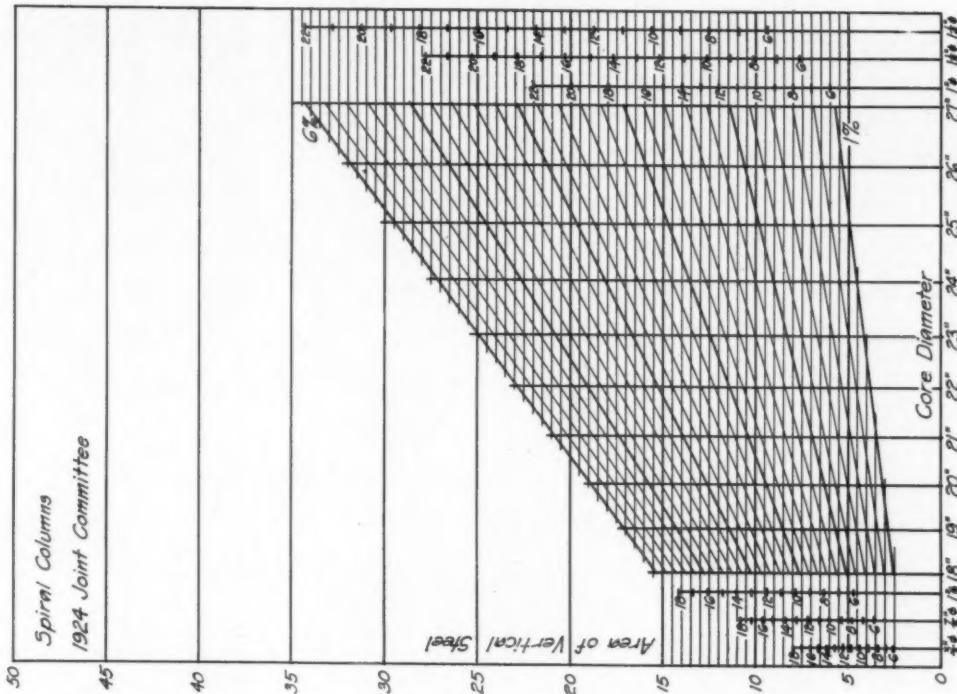


DIAGRAM 4b. WITH THE DIAMETER OF THE COLUMN CORE AND THE PERCENTAGE OF VERTICAL STEEL DETERMINED, THE REQUIRED NUMBER AND SIZE OF VERTICAL RODS MAY BE FOUND FROM THIS DIAGRAM. WHILE THE AREA OF VERTICAL STEEL MAY BE DETERMINED ALSO FROM THIS DIAGRAM, THIS IS MERELY INCIDENTAL INFORMATION AND IS NOT NECESSARY FOR THE SOLUTION OF A PROBLEM IN DESIGN

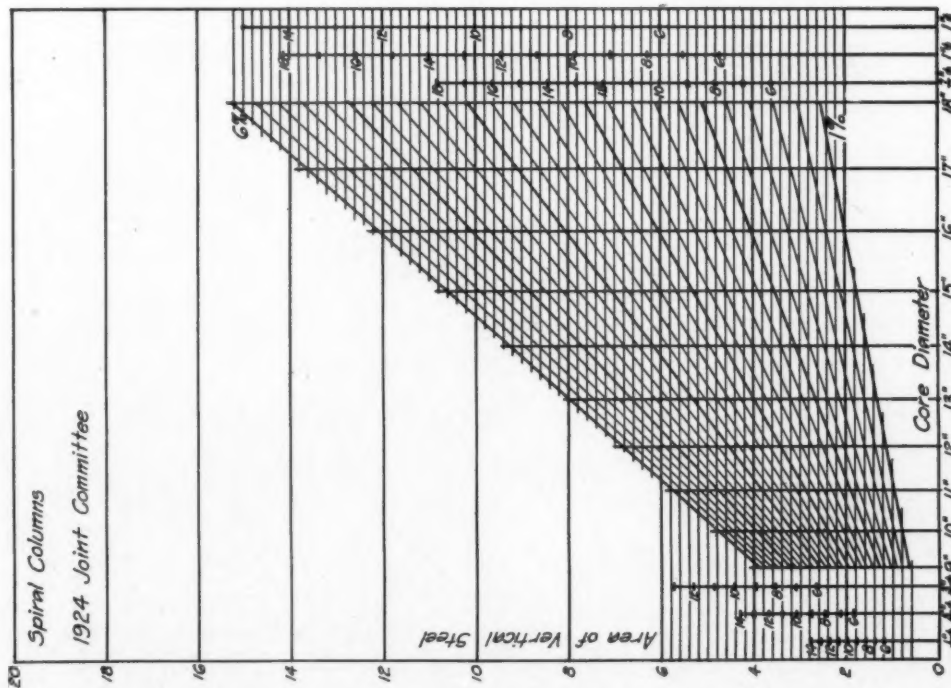


DIAGRAM 4a. WITH THE DIAMETER OF THE COLUMN CORE AND THE PERCENTAGE OF VERTICAL STEEL DETERMINED, THE REQUIRED NUMBER AND SIZE OF VERTICAL RODS MAY BE FOUND FROM THIS DIAGRAM. WHILE THE AREA OF VERTICAL STEEL MAY BE DETERMINED ALSO FROM THIS DIAGRAM, THIS IS MERELY INCIDENTAL INFORMATION AND IS NOT NECESSARY FOR THE SOLUTION OF A PROBLEM IN DESIGN

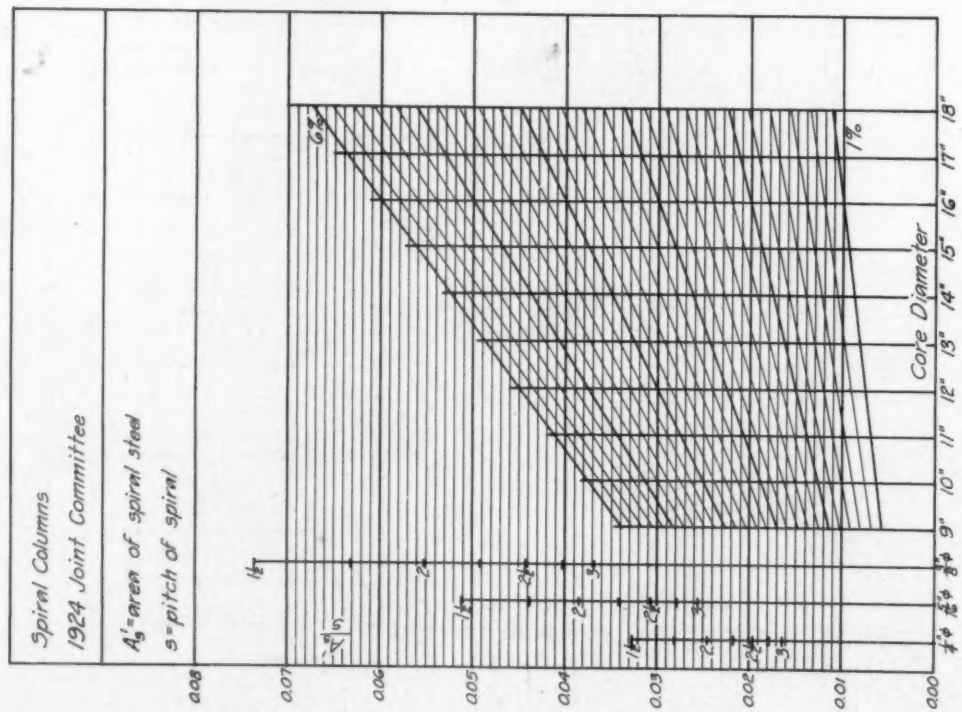


DIAGRAM 3a. WITH A GIVEN CORE DIAMETER AND PERCENTAGE OF VERTICAL STEEL THE SIZE AND PITCH OF SPIRAL MAY BE OBTAINED FROM THIS DIAGRAM. THE ACTUAL VALUE OF A_s/s IS OF NO IMPORTANCE SINCE THE SIZE AND PITCH OF SPIRAL MAY BE READ DIRECTLY FROM THE OTHER VERTICAL SCALES

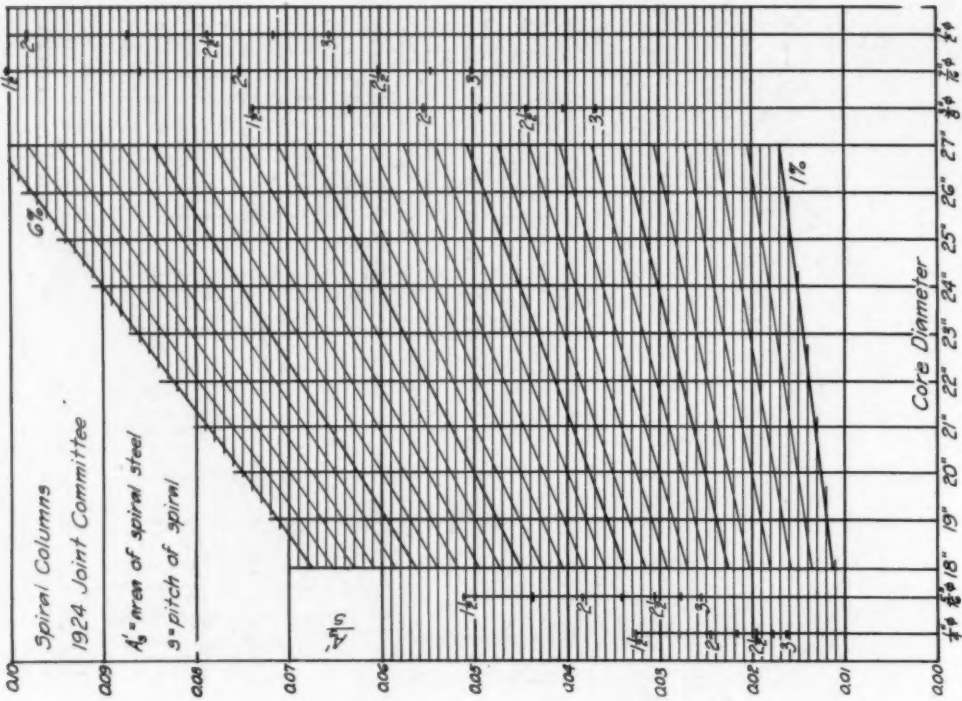
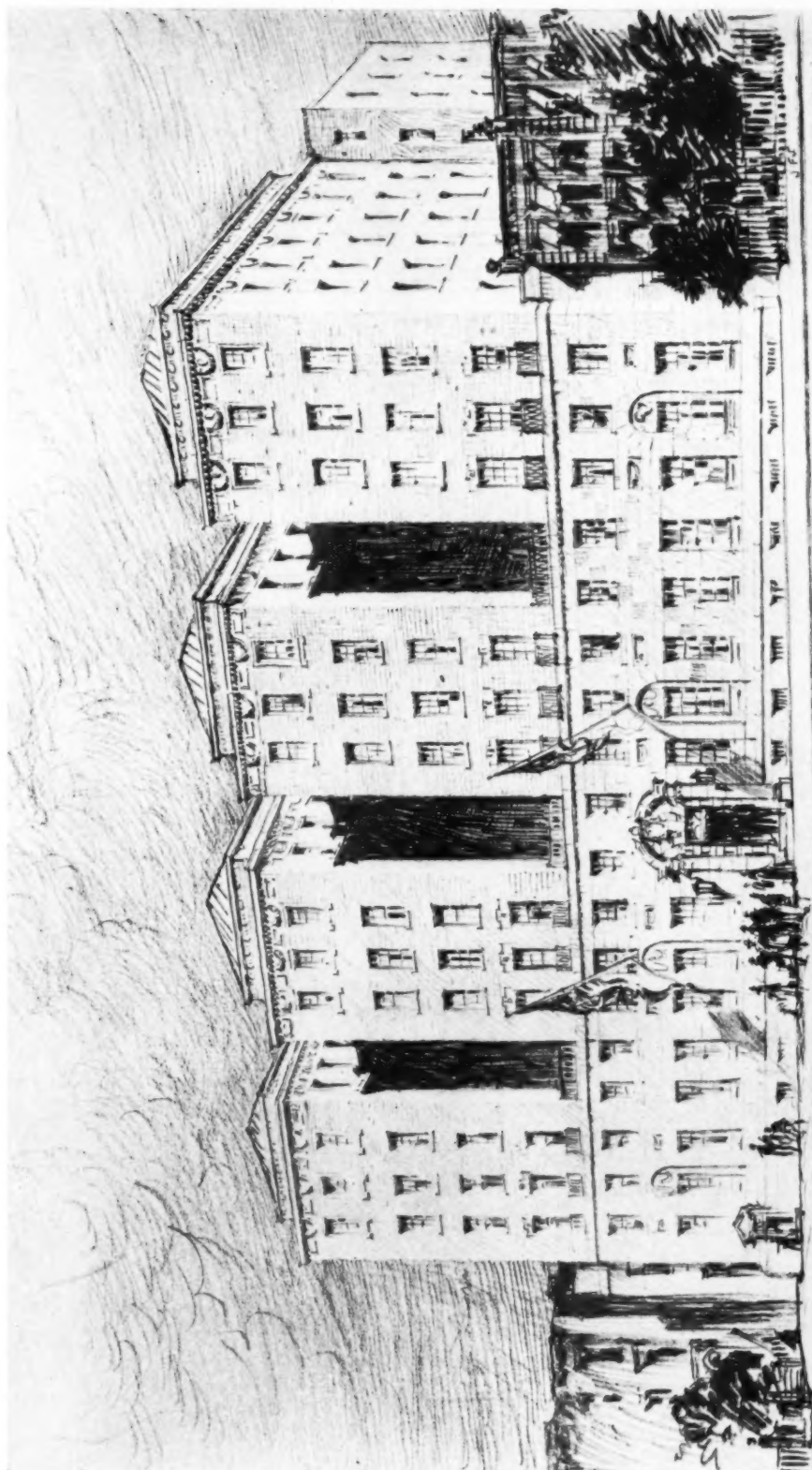


DIAGRAM 3b. WITH A GIVEN CORE DIAMETER AND PERCENTAGE OF VERTICAL STEEL THE SIZE AND PITCH OF SPIRAL MAY BE OBTAINED FROM THIS DIAGRAM. THE ACTUAL VALUE OF A_s/s IS OF NO IMPORTANCE SINCE THE SIZE AND PITCH OF SPIRAL MAY BE READ DIRECTLY FROM THE OTHER VERTICAL SCALES



JOHN F. JACKSON
ARCHITECT

PROSPECT PARK BRANCH YOUNG MEN'S CHRISTIAN ASSOCIATION

PROSPECT PARK (BROOKLYN) BRANCH, Y. M. C. A.

JOHN F. JACKSON, ARCHITECT

(See description on back)

THE AMERICAN ARCHITECT
December 5, 1925. Plate 326

PROSPECT PARK (BROOKLYN) BRANCH, Y. M. C. A.

JOHN F. JACKSON, ARCHITECT

THE new building of the Prospect Park Branch of the Brooklyn and Queens Young Men's Christian Association will be located on the site of the old building and other property acquired which gives a frontage of one hundred and sixty-five feet on Ninth Street. It will be a six story, basement and sub-basement, fireproof structure. The exterior is of late Georgian architecture. The first two stories and the trimming of the windows are of Indiana limestone. The main cornice is of ornamental terra cotta and the four bedroom wings are faced with a warm, gray tapestry brick. The light courts face the street, a southeastern exposure, thus allowing sunshine at some part of the day to enter almost all the bedrooms.

The Department of Physical Education is provided with most modern equipment. There are separate locker rooms for men, for boys and for the business men's club, each with shower baths adjoining and conveniently located near the swimming pool. The swimming pool is 20 x 60 feet and supplied with water which is continually filtered and sterilized. The gymnasium is large enough to be sub-divided so as to permit of two large groups using the floor at the same time.

The social rooms of the Men's Division which include a large living room, reading room and billiard room with beamed ceilings, large open fireplaces and comfortable easy chairs suggest an air of warmth and hospitality. The billiard room has six tables.

The building has two hundred and sixty bedrooms for resident members. An infirmary is provided with a nurse in attendance to care for minor illnesses of members living in the building.

The rooms provided for the boy members are unusually attractive. There is a large game room, a feature of which is an old English ingle-nook fireplace. Another social room has a reading nook alcove and fireplace. There are other smaller rooms for club meetings, one of which is a complete reproduction of an Adirondack log cabin with a stone flag floor and gray field stone fireplace.

The banquet room seats three hundred and can also be used for various meetings, lectures, and amateur dramatics. This room and the cafeteria are so arranged as to be served from one kitchen. There is also a small group dining room which may be used for committees of church, civic, fraternal or Y. M. C. A. groups desiring to have luncheon or dinner committee meetings.

The mechanical equipment provides for ventilation and refrigeration plants and a laundry for table linen, bedding and gymnasium suits.

The building is designed to accommodate a membership of three thousand five hundred.

The accompanying illustrations have all been reproduced from the original sketches made by the architect.



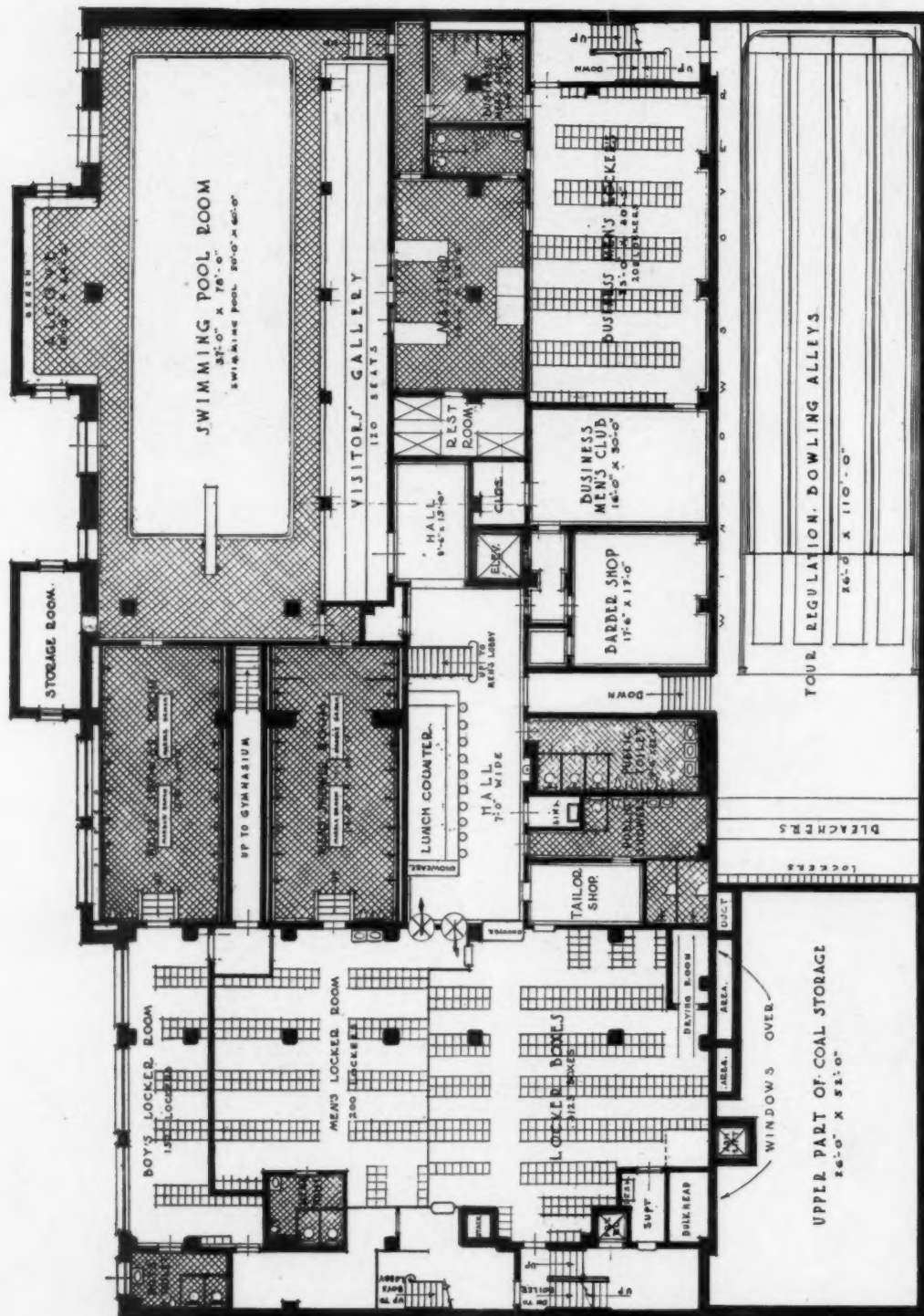
Main Entrance Doorway

PROSPECT PARK (BROOKLYN) BRANCH, Y. M. C. A.

JOHN F. JACKSON, ARCHITECT

(See plan on back)

THE AMERICAN ARCHITECT
December 5, 1925. Plate 327



BASEMENT PLAN
 PROSPECT PARK (BROOKLYN) BRANCH, Y. M. C. A.
 JOHN F. JACKSON, ARCHITECT

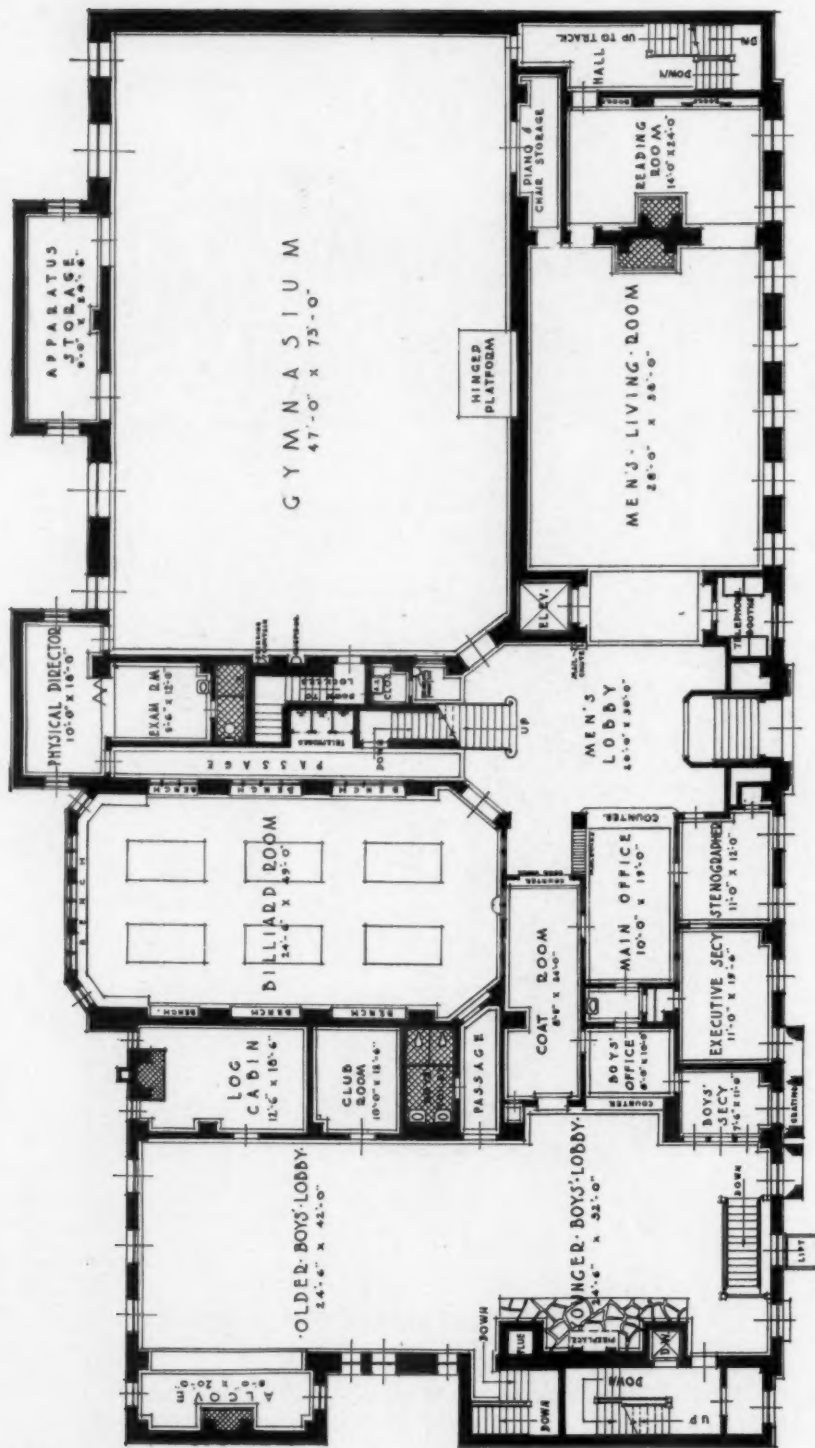


PROSPECT PARK (BROOKLYN) BRANCH, Y. M. C. A.

JOHN F. JACKSON, ARCHITECT

(See plan on back)

THE AMERICAN ARCHITECT
December 5, 1905. Plate 328



FIRST FLOOR PLAN

PROSPECT PARK (BROOKLYN) BRANCH, Y. M. C. A.

JOHN F. JACKSON, ARCHITECT

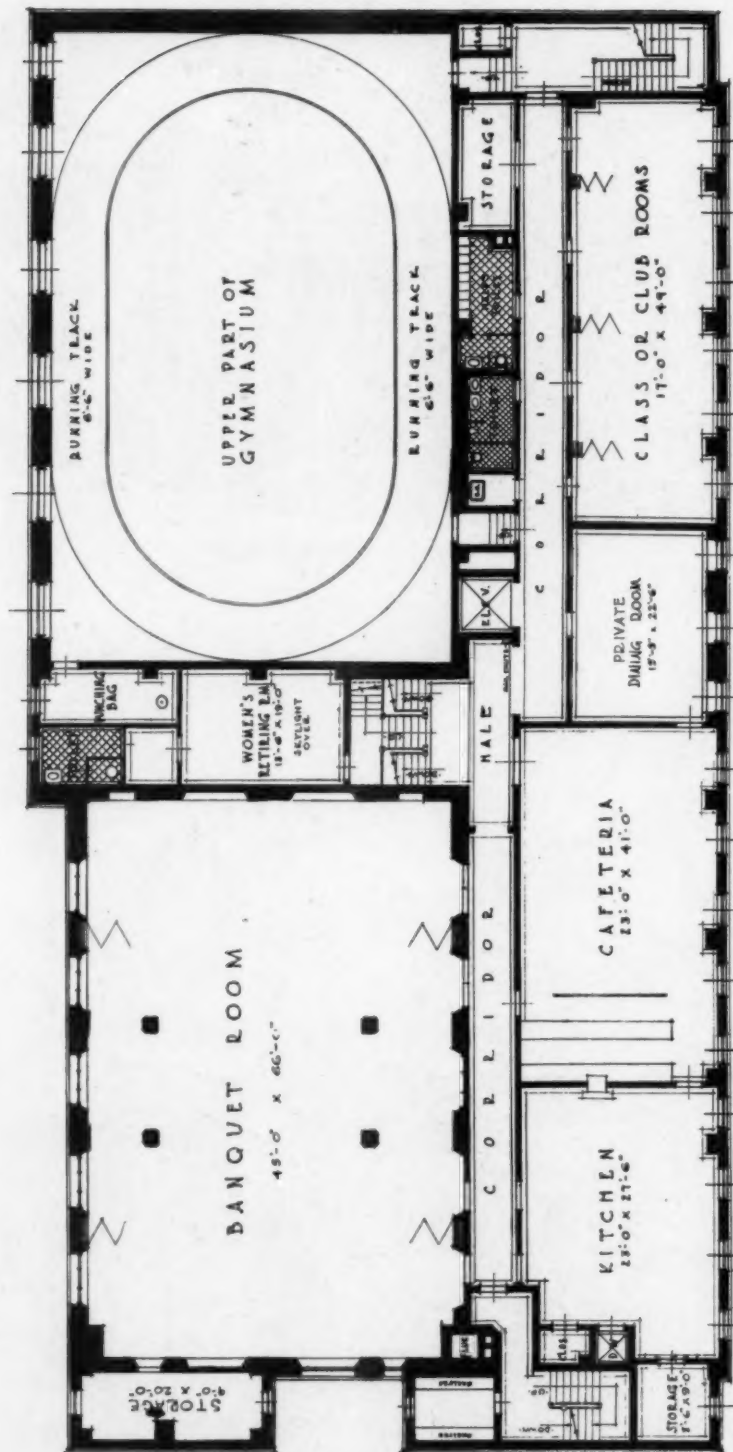


PROSPECT PARK (BROOKLYN) BRANCH, Y. M. C. A.

JOHN F. JACKSON, ARCHITECT

(See plan on back)

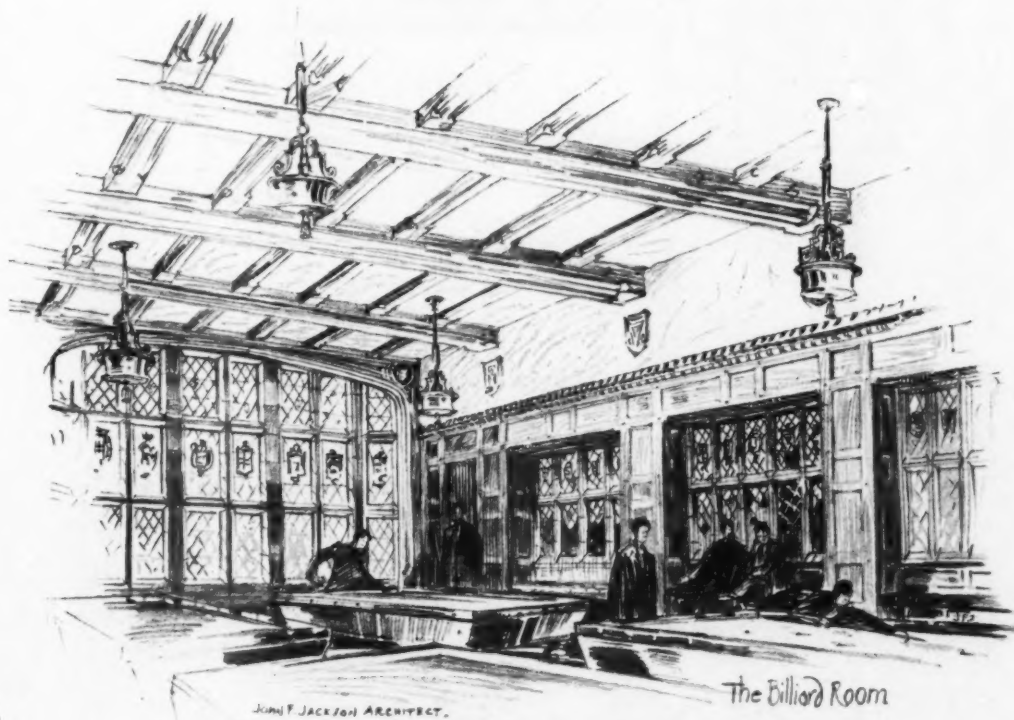
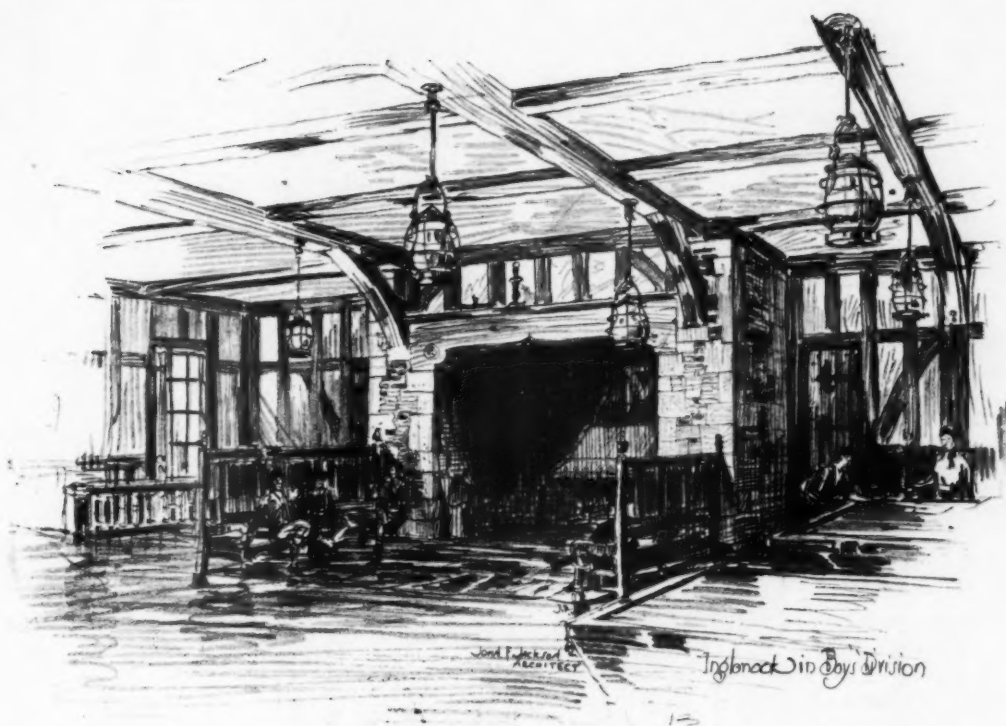
THE AMERICAN ARCHITECT
December 5, 1925. Plate 329



SECOND FLOOR PLAN

PROSPECT PARK (BROOKLYN) BRANCH, Y. M. C. A.

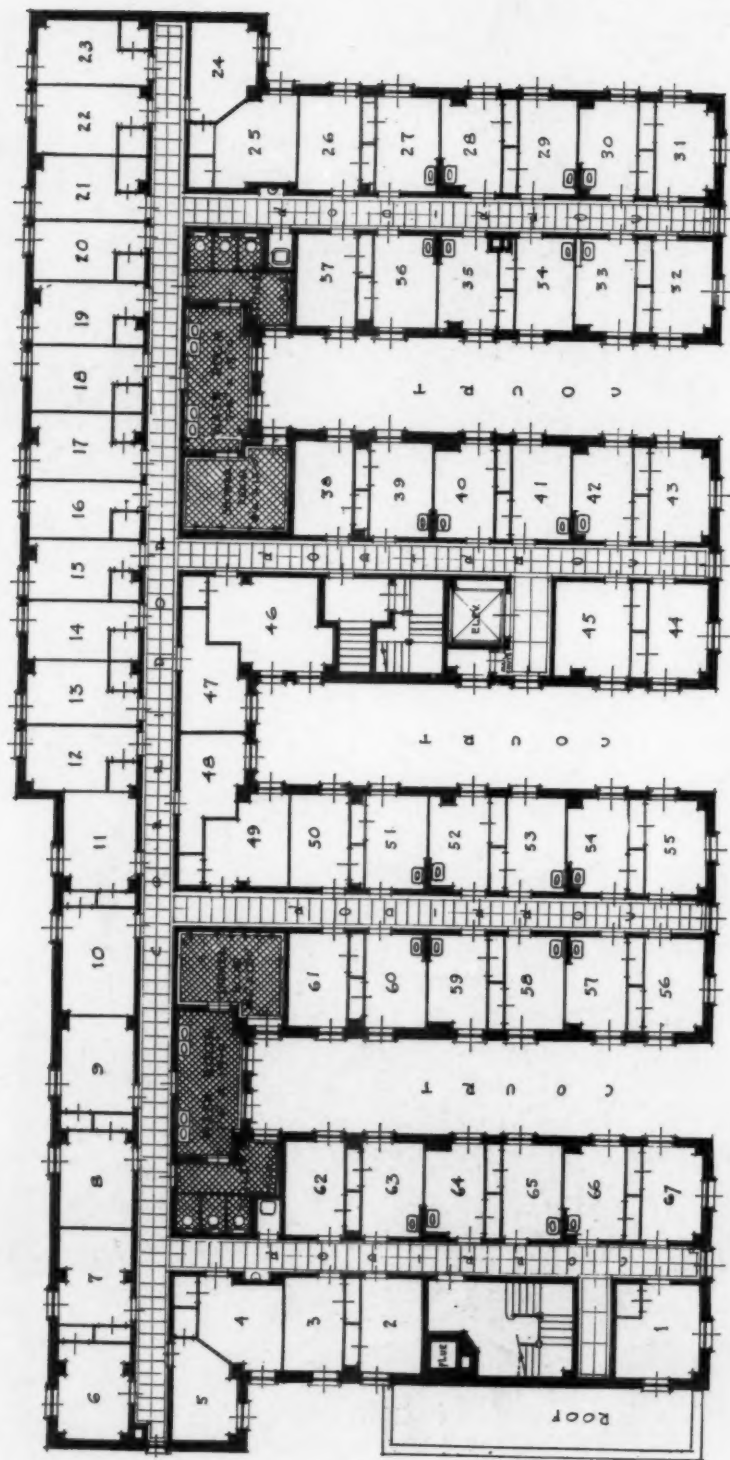
JOHN F. JACKSON, ARCHITECT



PROSPECT PARK (BROOKLYN) BRANCH, Y. M. C. A.

JOHN F. JACKSON, ARCHITECT

(See plan on back)



TYPICAL BEDROOM PLAN
 PROSPECT PARK (BROOKLYN) BRANCH, Y. M. C. A.
 JOHN F. JACKSON, ARCHITECT



PROSPECT PARK (BROOKLYN) BRANCH, Y. M. C. A.

JOHN F. JACKSON, ARCHITECT

The LAW as to ARCHITECTURE

BY CLINTON H. BLAKE, Jr., of the New York Bar

IN the September 9 issue, I quoted a letter which raised a question with respect to the computation of an architect's fee. The architect had agreed to perform the work for 4% of the total cost in accordance with the Institute form of contract. The first bids were high and were rejected, the owner having the right to reject all bids. Changes and substitutions in specifications were made, the job refigured, the contract awarded and work completed. The architect claimed that his fee should be computed on the bids originally received and rejected. My view was that the architect's charge should be based upon the actual cost to the owner of the work under the accepted bid and that in addition the architect would be entitled to authorized extras and to a reasonable compensation for the changes in the plans and specifications which he had made. This was on the assumption, of course, that the changes which had been made were not so essential and sweeping as to change the entire character of the work or necessitate the drafting of entirely new and different plans and specifications.

I have now received from an architect a letter expressing some disagreement with my view on this point and suggesting a different solution. Inasmuch as a discussion of questions of this character is always of interest and benefit to the practicing members of the profession, I quote the letter.

"I have always followed with interest your articles in architectural magazines. I am a little opposed to the solution of the architect's fee question in the recent issue of THE AMERICAN ARCHITECT, and I am therefore taking the liberty of writing.

"I think the charge should have been 3/5 of 4% based upon the first bids plus a reasonable charge for changes and modifications that produced the second bids; and the remaining 2/5 charge based upon the cost of the construction work.

"This presumes of course that the architect kept reasonably within the original program in designing the work that produced the original bids. Do you not think the above suggestion the more logical of the two?"

The point of view of the writer of the foregoing letter is quite understandable, but I think that it is based upon a misconception of the intent and legal interpretation of the Institute contract and of the rights which the courts will accord an architect thereunder. My reply to this letter makes clear my feeling with respect to this and was as follows:

"It is quite true that under The American Institute of Architects contract the architect is entitled to three-fifths of the basic fee upon completion of the specifications and working drawings, based on the estimated cost of the work. On the other hand, it is equally clear under paragraph 6, that the amount which he is to receive in the aggregate shall be the basic rate computed on the actual cost of the work. The preliminary payments made when the studies,

working drawings and specifications are completed are on account of the total fee. Your solution would be a correct one in a case where the whole scheme is changed and the architect is required to prepare new plans and specifications for an essentially different type of building and layout. To adopt your fee, however, in the ordinary case would be to place the client at the mercy of any unscrupulous architect or of any incompetent architect. The ordinary client has no conception of what the work called for by the plans and specifications will cost. It would be manifestly unfair and unreasonable to state that in every case the client must pay three-fifths of the basic rate on the first bids received, no matter what they may be, in cases where new bids at a greatly reduced amount can be taken without altering the general scheme and character of the building as given by the client to the architect originally. For example, if an architect, through incompetence, carelessness or bad faith, were to include in the specifications requirements for steel or other construction which were quite unnecessary, the first bids received, and based on these specifications, might be in an amount far in excess of the actual cost of the work as carried out after the specifications had been altered and the work resubmitted to bidders. No court, I think, would adopt a construction of the Standard Contract which would make this situation possible. If the architect is paid the reasonable value of the work incident to the modifications and changes in the plans and specifications and is also paid the full amount of the agreed basic charge on the actual cost of the work as finally carried out, he cannot, in my opinion, reasonably expect or ask for more, provided always that the changes and modifications are not so radical as to necessitate an entirely new scheme and essentially different plans for those first requested by the client."

The following reply was received from the architect:

"I have your interesting letter in reply to my comments on your recent article in THE AMERICAN ARCHITECT. Of course, I was only commenting upon a normal case where the difficulty involved no question of dishonesty or incompetence.

"If the architect was instructed to delineate the client's program of space and material requirements without any cost allowance fixed in advance, the client should pay (3/5) for the drawings on the bids obtained plus the cost of changing and reducing the space and material features in order to reduce the bids, and then pay for the remaining service (2/5) on the basis of the revised cost of the work.

"If, however, which I understand was not the case, the client had fixed a cost limit during the program stage or the preliminary stage, the architect could be held to the duty of bringing his working drawings within reasonable proximity of that allowance.

"And I speak primarily of a new building project where the program can readily include a tentative cost; the preliminary work, an approximate cost; and the working drawings, a definite cost, all reasonably within the scope of one another. If the owner's requirements are mounting up to a greater construction cost, this will come out somewhere in the first two stages if these successive stages are properly observed in carrying out the designing work.

"If, on the other hand, it is a case of alteration work or additions and extensions to buildings, it is frequently impossible to get the construction cost at all established until the major part of the designing work is done. In such a case, the owner should pay for the work even if it meant nothing more to him than the impossibility of proceeding, in which respect the architect's negative advice is frequently just as valuable and just as difficult of arriving at as is the negative advice in, I may say, your own or any other profession."

THE AMERICAN ARCHITECT

My comment on the foregoing letter was as follows:

"Thank you for your note of the 22nd. I realize how you arrive at your conclusion. I do not believe, however, as a practical matter, that in the event of a legal contest, the court would allow the architect to recover on the basis of the rejected preliminary bids, unless the revised plans are so radically different as to constitute in effect a new and quite different layout and scheme. Otherwise, the preliminary three-fifths payment might be figured upon the bids received, but in the last analysis the full amount paid would be only the basic fee on the actual cost of the work as carried out, plus a fair allowance for the time given in making the revisions of the plans."

To which the architect replied as follows:

"I have your letter of October 24th. If the client, as you say, is to pay for the revisions *backward* to his cost decision, he should also pay for the wasted work *forward* of his cost decision."

"If the architect is at fault, the client should pay neither charge. However, in the case indicated, it appeared to be a not infrequent case of the client overreaching himself on his space and material requirements."

"The moral is that the cost should be given equal importance with the building requirements in all discussions and conferences. It is frequently unpleasant but nevertheless necessary."

I might, perhaps, add that I am always glad to receive letters such as the ones which I have quoted and to have the benefit of an expression of differing points of view on architectural problems. The more these problems are discussed and seriously analyzed and considered by the members of the profession, the less occasion there will be for misunderstandings and legal controversies.

LEGAL DECISIONS

IN a case cited in a recent issue on the question of substantial performance, another interesting issue was involved. The contract provided that the work should be performed to the satisfaction of the owner and architect and accepted by the architect. In a suit by the contractor for the balance of the contract price, the owner defended on the grounds, among others, that it did not appear that the contract had been performed to his satisfaction or to the satisfaction of the architect, and that there had been no acceptance by the architect and that no certificate of acceptance had been given. The trial court found that the contract had not been performed to the satisfaction of the owner, but that it had in fact been "performed in such a manner as should be satisfactory to any reasonable person."

It appeared that the original architects specified were discharged during the work. No architect was substituted in their place, although another architect was employed by the owner as "advising architect." There was no agreement, however, between the owner and the contractor that this advising architect should be substituted or that any other architect should be substituted in

the place of the architects who had been discharged. It appeared, also, that the contract provided that the contractor should keep careful and complete records of work installed, including drawings showing "every important detail of the system," and that these records and drawings should be delivered to the owner before final acceptance. They were furnished to the owner, but in certain particulars they were inaccurate.

The court found, as a matter of fact, that the inaccuracies were unimportant; that no damage was sustained by the owner, by reason of them, and that the owner never expressed any dissatisfaction with the records given him or demanded other or additional records. The court held, with respect to the question of these records, that strict compliance with the contract provision had under the circumstances been waived by the owner. The court held, with respect to the defense that the approval of the architect was required, that the discharge of the architects named in the contract and the failure to substitute others in their place, with the consent of the contractor, resulted in terminating the requirement that the architect's approval should be secured.

The court further held that the stipulation in the contract to perform to the satisfaction of the owner (as distinguished from the stipulation that the work should be done to the satisfaction of the architect) should not, under the circumstances, prevent a recovery; that it would prevent a recovery, if the contract involved matters dependent on "fancy, taste, sensibility or judgment of the other party," but that it would not prevent a recovery where "the question is merely one of operative fitness or mechanical utility," as is the case in contracts for the erection of buildings. The court decided that the fact that the work had been done in such a manner that it could be held to be performed in a manner which should be satisfactory to a reasonable person, was sufficient, and that the contractor could recover.

Haverty Company v. Jones, 197 Pacific 105.

AN action was brought for damages for failure to proceed with the work with reasonable diligence and in accordance with an agreement that certain improvements would be made within ninety days from an agreed date. It appeared that it was necessary, in order that these should be made, that the approval of the Municipal Building Department of the City of New York should be secured. The court held that in such a case the defendant has the right for the purpose of showing reasonable diligence in proceeding with the work to show delays occasioned by the Building Department or by inspectors of that Department having charge of the work.

Davies v. Clark, 159 New York 392.



HOUSE OF R. B. MOSER, SHAKER HEIGHTS, CLEVELAND, OHIO
CHESTER N. LOWE, ARCHITECT—L. H. SCHOFIELD, ASSOCIATE ARCHITECT



HOUSE OF R. B. MOSER, SHAKER HEIGHTS, CLEVELAND, OHIO
CHESTER N. LOWE, ARCHITECT—L. H. SCOFIELD, ASSOCIATE ARCHITECT

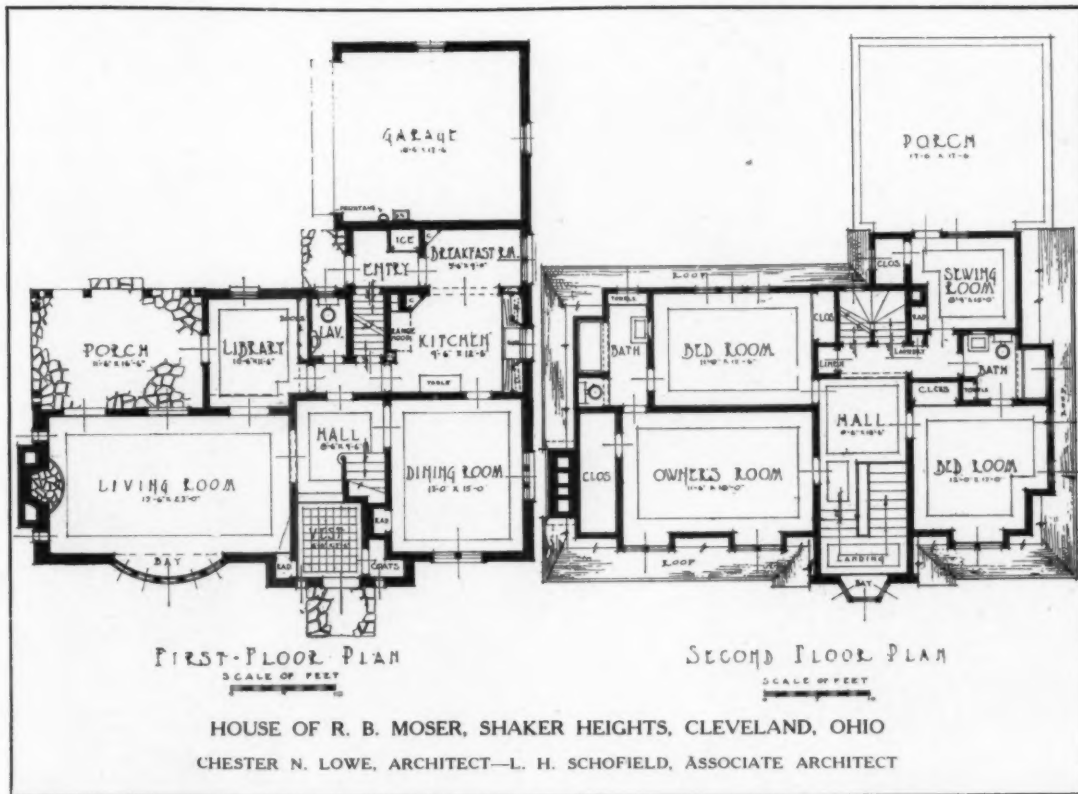
THE AMERICAN ARCHITECT

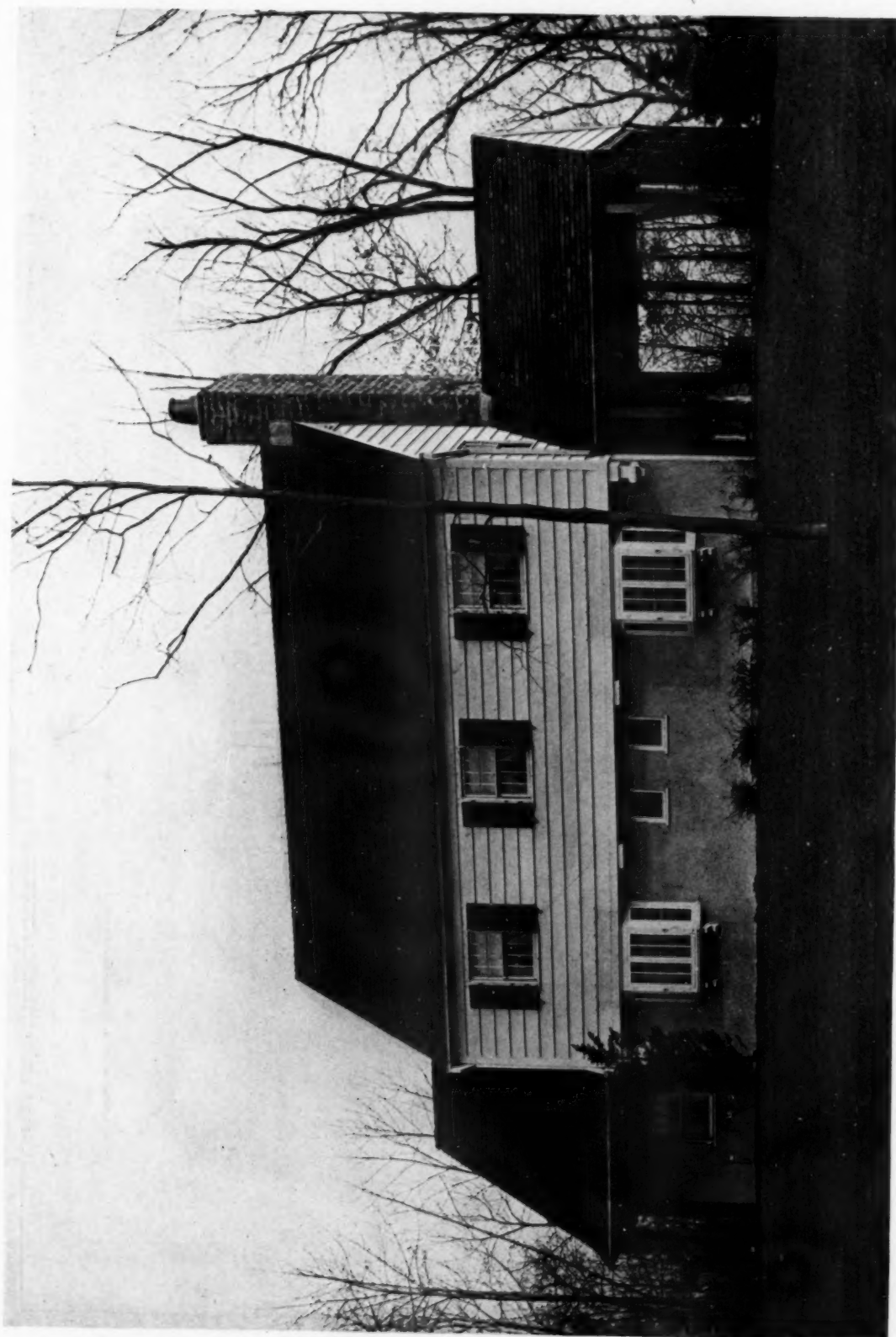


HALL

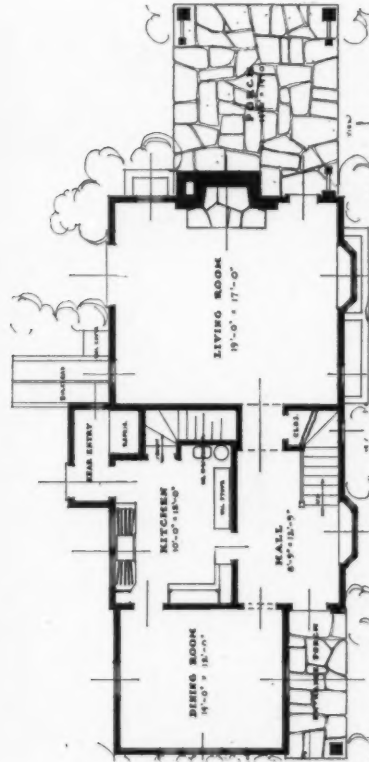
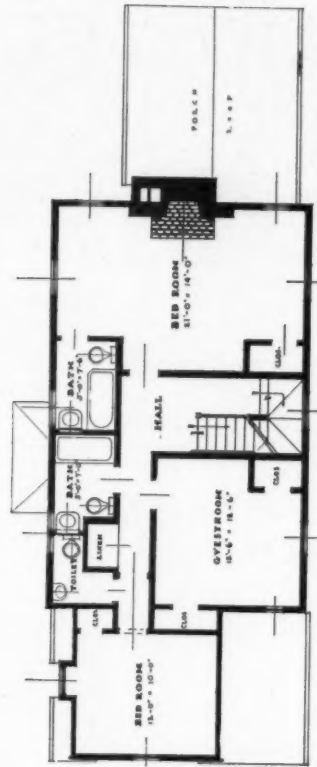


LIVING ROOM





HOUSE OF H. A. GROESBECK, JR., CHAPPAQUA, N. Y.
MELVIN PRATT SPALDING, ARCHITECT



HOUSE OF H. A. GROESBECK, JR., CHAPPAQUA, N. Y.
MELVIN PRATT SPALDING, ARCHITECT



HOUSE OF H. A. GROESBECK, JR., CHAPPAQUA, N. Y.—MELVIN PRATT SPALDING, ARCHITECT

ERECTED in 1922, under general contract, and cost, including extra work done, \$14,500.80, or at the rate of \$.51 per cubic foot.

This house was inspired by the English and early American type of overhung second story house, the horizontal effect thus obtained being further augmented by the lines of the entrance wing and porch. This long effect was desirable, the site being high yet horizontal in profile, when viewed from the road. This seemed to be the best solution considering the size of the house and first floor circulation desired by the owner.

A rather happy combination of materials was obtained in the white clapboarded second story over a slightly tinted stucco below. The rear first story wall is vertically boarded. Battened shutters are painted a blue green. The roof is a very dark moss green. The chimney is of flush pointed horizontally laid stone with wide joints. Porch floors are built of broken flagstone laid with wide mortared joints. Porch posts are made of solid

cypress. The construction of the house is frame.

The first floor and halls except the kitchen are rough uneven finish over rough plaster, color a warm buff. This work, done by artists, produces an effect in color and texture which is decidedly harmonious with the early Colonial atmosphere of the whole house. Where this is used, very simple trim and all woodwork is stained dark brown and floors are stained dark, shellaced and waxed. The rest of the house is smooth plastered, bedrooms finished with quaint Colonial paper; baths, maid's room and kitchen painted. Here the woodwork is ivory white, egg shell finish.

The hardware and lighting fixtures, the latter designed by the architect, are simple and in keeping with this type of house.

An interesting feature of the interior is the arched opening effect from the entrance hall to the living room, giving, upon entering the house, a rather pleasing vista through to the fireplace.



HOUSE OF JAMES F. JORDAN, PATERSON, N. J.—CHARLES H. BENJAMIN, ARCHITECT

THIS house is of frame construction. The exterior is covered with 24" random width shingles, heavy butts, exposed 10" and painted white. Shutters are painted a pale green. Roof is covered with exposed slate. Gutters, box type lined with tin. Flashings, snow guards and leaders, copper.

The floor of front entrance porch and walks leading to same are tapestry brick laid herringbone pattern, with joints of white cement. Other porch floors are concrete with red cement finish, divided into squares.

Front entrance door of the "Dutch" type cut in half.

The chimney is built of hollow tile, stuccoed. The cap is limestone.

The foundation walls are of brick. Exterior walls above grade are faced with six range tapestry brick, laid with a Flemish bond in white cement mortar.

The exterior foundation walls and basement floor are waterproofed with a membrane system of waterproofing.

The interior trim, except in dining room, is whitewood, finished with enamel paint tinted to an ivory color. Dining room is trimmed with mahogany, stained and rubbed with oil. The ceiling is beamed, painted white, and the ceiling is beamed.

The living room has a beamed ceiling and the fireplace is faced with black and the hearth is of quarry tile. Mantel of wood. The fireplace in solarium is built of tapestry brick from floor to ceiling.

The staircase has quartered oak treads, mahogany hand rails and turned balusters of whitewood.

Entrance hall cornice and dado of whitewood.

Interior doors are red gum with one panel, finished with mahogany stain and rubbed. The door to coat closet and one door in each bedroom are glazed with bevelled mirror.

Flooring in first story is white quartered oak with walnut strip border and second story flooring is plain white oak, all flooring with wax finish.

HOUSE OF
JAMES F. JORDAN,
PATERSON, N. J.

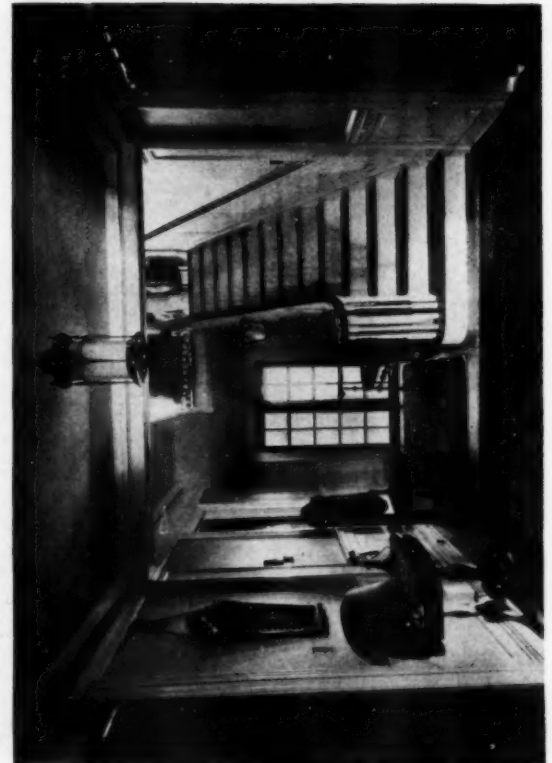


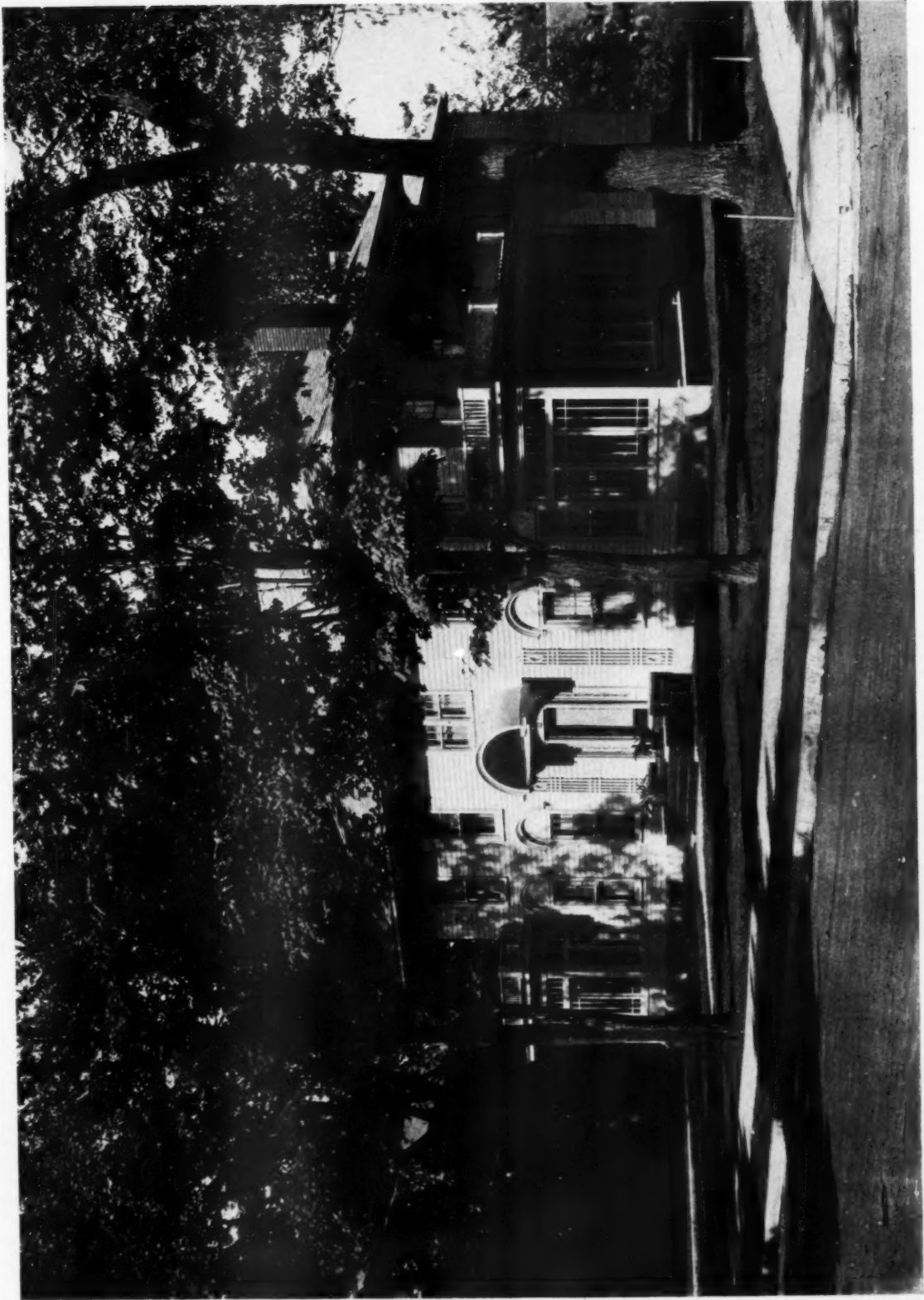
CHARLES H. BENJAMIN,
ARCHITECT

Walls and ceilings are plastered over wood lath, with hard finish coat, except solarium which has a sand finish. Floor and walls of vestibule are finished with faience colored tile. Kitchen walls are tiled full height to ceiling. The ceiling is of stamped metal painted white, and the floor is covered with linoleum. The second story bathroom have tiled floors, walls and ceilings. The second story toilet room and third story bathroom have tiled floor and wainscot 4'-6" high. Closets as built-in accessories are used in connection with tile work. Medicine cabinets of white enamel were installed in each bathroom. Painted metal lath was used in back of all tile work. All the walls and ceilings of the various rooms are covered with canvas and finished with flat oil paint.



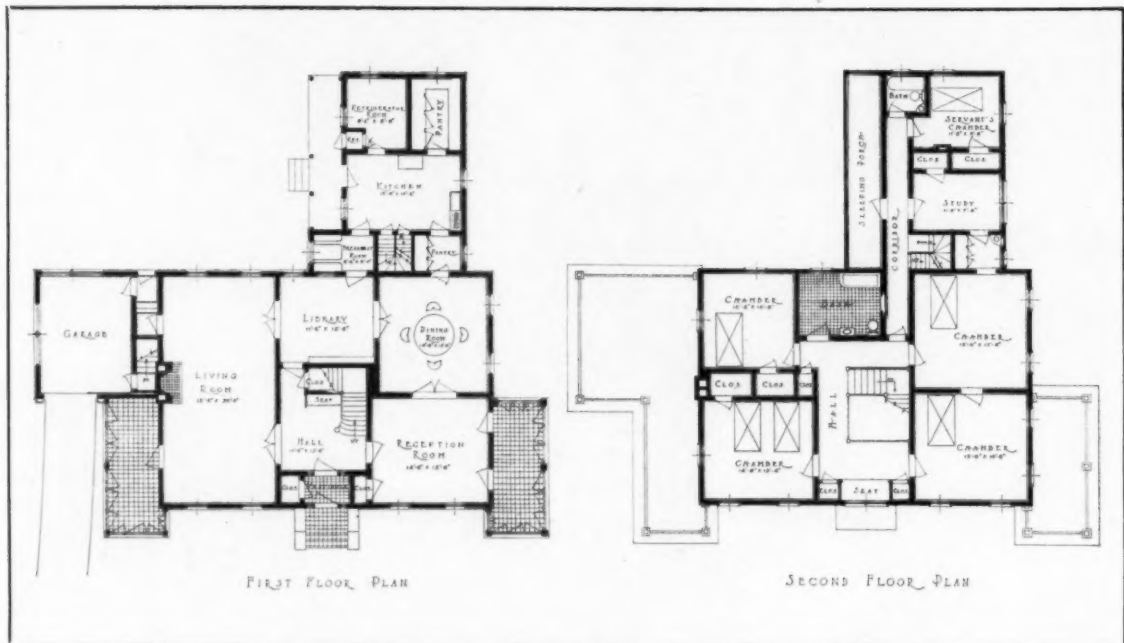
The kitchen has a built-in refrigerator with electric icing machine. Plumbing fixtures are porcelain, and the bath tubs are of the built-in type. All the hot and cold water supply pipes are brass. The house is heated by means of a vapor-vacuum pressure system. A rotary ash receiver was installed under boiler. A hot water storage tank system is used for the hot water supply, with return circulation loop. The tank is connected to a water heater which is attached to the steam boiler for heating the water. An instantaneous gas heater was also installed as an auxiliary system. All electric wiring was done in conduit.





OWN HOUSE OF D. D. KIEFF, ARCHITECT, WATERTOWN, N. Y.

THE AMERICAN ARCHITECT



OWN HOUSE OF D. D. KIEFF, ARCHITECT, WATERTOWN, N. Y.

AN interesting house designed by the architect for his own occupancy. The general color effect of the exterior is ivory white. The surrounding forest growth trees afford pleasing effects of light and shadow, both during Summer and Winter months.

House was built in 1924 at a cost of approximately 34¢ per cubic foot.

Exterior wall covering is pine clapboards; wood frame construction with concrete foundations.

Roof is covered with tile shingles laid in variegated colors.

Wood trim in the interior painted white; mahogany staircase and oak floors.

Partitions are of metal lath and plaster.

Heating is by hot water, oil burner.

Standard plumbing with bathrooms fully tiled.

THE GARAGE

The garage is of fireproof construction with fire doors leading to the house. It is heated by the general system of the house.

Car entrance doors are automatically operated.



Kitchen, pantry and breakfast room in the home of Mr. C. T. Southwick, Great Neck, Long Island, demonstrate the usefulness and beauty of Gold Seal Inlaid. The floors above are Belflor Pattern No. 7103-1. The dining-room and study also have floors of Belflor.



C. Arthur W. Coote, Architect

Picturesque beauty and livableness in a Long Island home

An interesting study—this handsome new residence in Great Neck. Its Tudor type of architecture fits congenially into the wooded landscape of the North Shore. And the heavy "thatched" roof adds individuality and primitive charm.

In the interior, the sturdy sincerity of Old English homes is preserved. Tiled walls in the kitchen complement delightfully the soft blue and gray of the *Gold Seal Inlaid* floor. The pantry and breakfast room also have this colorful linoleum floor.

Architects, builders and home owners are realizing more and more the effectiveness of *Nairn Gold Seal Inlaid* in every type of modern home. The serviceability of these floors is attested both by the reputation of Nairn for quality goods and by the Gold Seal money-back guarantee. Their first cost is moderate, their upkeep is negligible.

CONGOLEUM-NAIRN INC.

Philadelphia
Atlanta

New York
Minneapolis

Boston
Cleveland

Chicago
Dallas

Kansas City
Pittsburgh

San Francisco
New Orleans

NAIRN GOLD SEAL INLAIDS

TRADE MARK

Specifications of most products advertised in THE AMERICAN ARCHITECT appear in the Specification Manual

SEMI-ANNUAL MEETING, PRODUCERS' RESEARCH COUNCIL AFFILIATED WITH the AMERICAN INSTITUTE of ARCHITECTS

THE semi-annual meeting of The Producers' Research Council, was held in Chicago November 10 and 11. Members of the Chicago Chapter, A.I.A., and the Illinois Society of Architects were invited to attend the sessions, and a number of them were present.

Mr. Harn, Chairman of the Council, mentioned in his opening address, two objectives of the Council, the first the bringing together of architects and producers and the second the individual service which the Council can render its members through the Scientific Research Department of the Institute, and in turn render service to the architects through the same agency.

Mr. Wheelock welcomed the members of the Council and said that he considered the Council not as individuals but as a group working for the architects and endeavoring to help get rid in the future of some of the troubles of today. He felt that the organization was of mutual benefit, and brought out the fact that the Council was also working along the lines of standardization.

Mr. Jillson welcomed the Council and expressed a hope for the success of the efforts being made for co-operation with the Institute.

Reports were rendered by the Membership Committee, the Bulletin Committee, and the Educational Committee, the latter dealing particularly with the subject of films, lectures and lantern slides of an industrial nature, for which a plan of co-operation is being worked out, whereby they may be available for Chapter meetings and Collegiate Schools of Architecture.

At the afternoon session N. Max Dunning, Chairman of the Structural Service Committee, A.I.A., and Technical Director of the Scientific Research Department, A.I.A., gave an instructive talk on the movement during the past few years and possible future activities. He said in part that the trend of the times makes it necessary for an architect to become more of a business man, and the business man realizes more and more the need of co-operation with a man with a contemplative mind and a detached point of view; that the possibilities of close co-operation between the Institute and the Council were very great and were hardly fully realized, even by those who have been most active in co-operation; and that a complete understanding of each others problems would be of the greatest benefit to the building industry by promoting better construction and workmanship.

Mr. Coulton, of the Tyler Company, mentioned that all those interested in the movement should not stand aside and wait until the program is completed but that every effort should be made to produce immediate results.

After a dinner at the Club House, the mem-

bers of the Council were invited to attend a Joint Meeting of the Chicago Chapter on that evening. Mr. Wheelock, after the regular business of the Chapter had been disposed of, turned the meeting over to Mr. Dunning, who further outlined to the architects the purpose and work of the movement.

Mr. Harn gave further information relative to the Council's work. Dr. G. C. Mars, of the American Face Brick Association followed with an address on Humanity, Ethics, and Comparison between Artistic and Commercial Temperaments.

George C. Nimmons, Chairman of the Educational Committee, A.I.A., outlined the tentative program of films and lectures submitted and upon which action will shortly be taken. LeRoy E. Kern, Technical Secretary of the Scientific Research Department, explained fully the work which is being done by that Department in conjunction with the Producers' Research Council.

Brief comments by Irving K. Pond and B. H. Jillson completed the evening meeting.

The second day session was opened with a discussion on Promoting the Use of Standard Specifications, by Mr. Kern, and a discussion by Samuel Warren, of the Atlas Portland Cement Company on the Responsibility of the Architect in seeing that Specifications are Followed. The general discussions of this day were participated in by all members and the architects who were present.

RESTORATION WORK AT WESTMINSTER ABBEY

MUCH hidden beauty in the fabric of Westminster Abbey is slowly being revealed by the workmen engaged in restoration work, states *The Architectural Review*, London, and the many visitors who are daily shown over the Cathedral are finding that the transformation of the building from its present soot-covered condition into a state in which the original cream-colored stone may be seen gives a new grace to the architectural beauties of the edifice. The portion of walls which has so far been cleaned is on the southern side of Henry VII's Chapel, near the entrance to the Poets' Corner. The work now being accomplished must bring home to the public the devastating effects of smoke on our beautiful buildings, and may have the effect of strengthening public opinion in favor of more strenuous efforts to secure smoke abatement.

Progress is also being made with renovation work in the interior of the Abbey, and the work of cleaning the Chantry of Henry V is more than half finished.



THE Elk's Building, Portland, Oregon, illuminated by seven Pyle-O-Lyte projectors—five 23 inch, and two 14 inch. Each of these projectors uses a 1,000 watt lamp, making a total power consumption of 7 kw. per hour, which is an extremely low figure considering the illumination provided.

Bulletins describing the new No. 2375 Pyle-O-Lyte projector will be sent on request, and our engineering staff is at the service of architects considering architectural floodlighting installations.

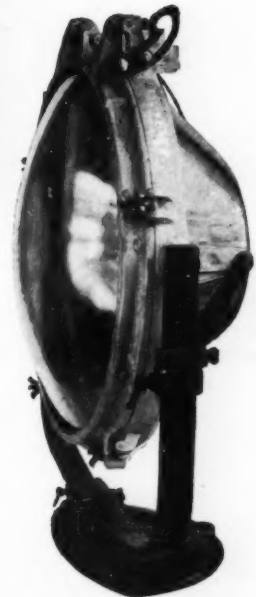
Floodlighting should be considered when the plans are drawn.

The Pyle-National Co., Floodlight Headquarters
General Offices and Works: 1334-1358 N. Kostner Ave., Chicago, Ill., U.S.A.

Canadian Agents:
 The Holden Company, Ltd.
 Montreal, Winnipeg, Vancouver, Toronto

Export Department:
 International Railway Supply Co.
 30 Church Street, New York City

Specifications of most products advertised in THE AMERICAN ARCHITECT appear in the Specification Manual



New type No. 2375 Pyle-O-Lyte. Send for bulletin with complete description and tables of performance.

AA12-6E-RTG

HALL OF REMEMBRANCE CEREMONIES

THE unveiling of the bust of Augustus St. Gaudens in the rotunda of the library of New York University on November 17 last, was made the occasion of an imposing ceremony which marked the formal acceptance by the National Academy of Design of the pantheon to artists created some five years ago at the University, and which has since become known as the Hall of Remembrance.

The ceremony was part of the Centennial Celebration held by the Academy. The President of the Academy, Edwin H. Blashfield, delivered the principal address, and a distinguished company of painters, sculptors and architects was present. Chancellor Elmer Ellsworth Brown of the University and W. Francklyn Paris, artist and writer, also spoke.

The Hall of Remembrance is not to be confused with the Hall of Fame, with which it has no connection whatever. While the Hall of Fame harbors the effigies of Americans having achieved immortality in every field of human endeavor, the Hall of Remembrance only opens its doors to Americans having distinguished themselves in the arts. Already the busts of George Inness by Hartley, of William M. Chase by Polasek, of Clinton Ogilvie by Bartlett, of J. Q. A. Ward by himself, of Carroll Beckwith by Brewster, of Frank Duveneck by Grafley, of Henry K. Brown by Bush-Brown, and of Walter Shirlaw by Bartlett have been installed.

The St. Gaudens bust is by John Flanagan, friend and pupil of the great sculptor. Another former pupil of St. Gaudens, Frederick MacMonnies, is now at work on a bust of Whistler which is soon to join the distinguished company of painters and sculptors memorialized in the Hall of Remembrance. Eventually there will be sixteen busts set upon either side of the majestic Connamara marble columns supporting the dome of the library building.

The idea of turning this rotunda into a temple to the fine arts originated with W. Francklyn Paris, well known as an architectural decorator and critic, and it is upon his initiative that the eight busts already installed were presented to the University. Mr. Paris was also active in raising the funds for the memorial bronze gate to the library in which a dozen sculptors joined as a tribute to the library's architect, the late Stanford White. He also took an active part in the reviving of the Chair of Literature of the Art of Design which the University had created ninety years ago when it called to this chair Samuel F. B. Morse, the founder of the National Academy of Design. The St. Gaudens Committee consisted of: Cass Gilbert, Chairman; Thomas Hastings, Charles Keck, George W. Maynard, Paul Wayland Bartlett, Edward G. Kennedy, Daniel Chester French, Frederick J. Wiley, Herbert Adams, Herman A. MacNeil, Charles W. Hawthorne, Janet Scudder, Lawrence G. White,

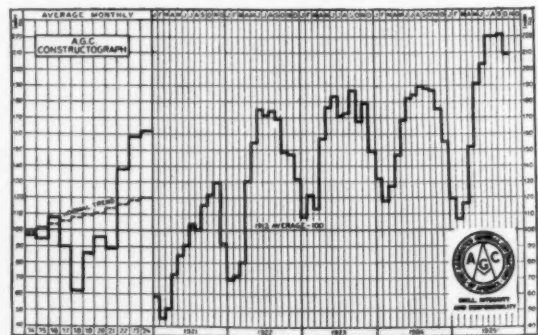
Andrew O'Connor, Oswald Garrison Willard, James Earle Frazer, Will H. Low, Matilda A. Brownell, Robert I. Aitken, and A. A. Weinman.

SEASONAL DECLINE IN CONSTRUCTION

THE seasonal decline in construction operations has made its appearance, according to conclusions drawn from statistics compiled by the Associated General Contractors of America. The decline is robbed of some of its significance this year, however, because the volume of construction still holds an abnormally high position close to the record-breaking heights it reached during the Summer.

Though the volume of construction performed during October was five per cent smaller than the amount shown for September, it was great enough to set a new record for the month.

VOLUME OF CONSTRUCTION



The total volume of construction performed during the first ten months of 1925 exceeds by eight per cent the figure for the corresponding period in 1924.

The average of construction costs in the principal building centers declined one point during October, reaching the lowest position occupied since the Spring of 1923 and registering a drop of five points since July. The scale based on 1913 costs, shows the index figure for October to be 209.

The average of wages declined two points during October, reaching the index number, based on 1913, of 224. Although the month saw numerous small fluctuations in prices paid by contractors for the basic construction materials, the average of prices remained unchanged in October.

September was the seventh consecutive month in which contracts awarded exceeded by a considerable margin all previous records for a corresponding month. The total volume of contracts awarded during the first nine months of 1925 was thirty per cent greater than the volume awarded during the first nine months of 1924. The volume of building permits issued during September was seven per cent smaller than the August volume.

The total of concrete surface pavement awards,

For this fine Residential Hotel Stanley was selected

The architects for this beautiful residential hotel gave serious thought to all necessary conveniences for the guests.

To permit the doors to swing easily and quietly Stanley Ball Bearing Butts were selected.

The servidors are equipped with BB241 size 5 x 4", the wood doors with BB241 size 4 x 4".

The kalamein doors are equipped with Stanley half surface butts, No. BB173 size 5".

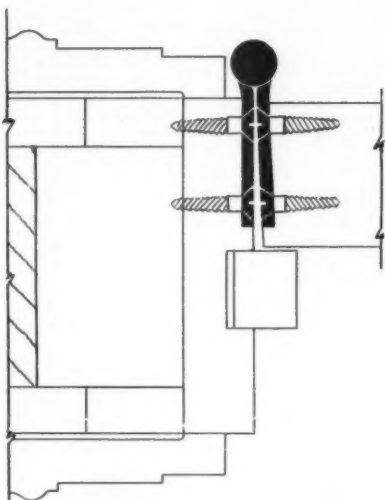
THE STANLEY WORKS

New Britain, Conn.

New York
Los Angeles

Chicago

San Francisco
Seattle

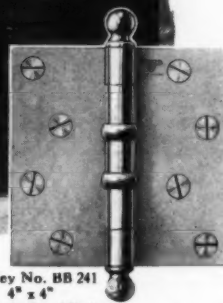


Detail of typical
corridor door.
Scale, one-half full size.



Wade Park Manor, Cleveland, Ohio

Architects: George B. Post & Sons
New York, Cleveland, Kansas City, Mo.



Stanley No. BB 241
4" x 4"
Wrought Steel Ball
Bearing Butt

STANLEY

BALL BEARING BUTTS



© THE STANLEY WORKS

Specifications of most products advertised in THE AMERICAN ARCHITECT appear in the Specification Manual

including streets, alleys and roads, for the first nine months of 1925 was eighteen per cent greater than the corresponding volume in 1924.

BIDDING PLANS FOR STRUCTURAL STEEL DEFINED

A JOINT committee of the Structural Steel Board of Trade, Inc., and the structural engineers of New York City have defined bidding plans only on which the members of the Structural Steel Board of Trade, Inc., will submit lump-sum bids after November 1, 1925. This action results from the determination of the steel fabricators to refuse to make ton-price bids after that date, as noted in THE AMERICAN ARCHITECT of September 9. The following definition has been adopted by the Structural Steel Board of Trade for bidding plans on which its members will submit proposals.

FIRST: That all plans be prepared according to the best engineering practice showing all labor and material of the various classifications required and specifying the conditions under which the work is to be performed.

SECOND: That all plans shall show a complete design, with sizes, sections, and relative location of the various members, with floor levels, column centers, and offsets figured, and shall also show the character of the work to be performed with sufficient dimensions to permit of the making of an accurate estimate. Plans to be made to scale not less than one-eighth of an inch ($\frac{3}{8}$ ") to the foot and large enough to convey the information adequately.

THIRD: That wind bracing and special details when required shall be shown in sufficient detail regarding rivets and construction to permit of an accurate estimate of the cost.

FOURTH: That specifications shall definitely enumerate all the items to be included in the estimate, and, in all respects not covered by the specifications, the Code of Standard Practice of the American Institute of Steel Construction shall govern.

FIFTH: That inspection be called for in specifications under "Inspection." That amount of money to be included be specified, and that the inspector be appointed by the engineer.

Engineers	{	H. G. BALCOM, <i>Chairman</i>
		C. J. JEPPIERSEN
		S. F. HOLTZMAN
Contractors	{	J. L. HAY
		J. LOEWENSTEIN
		G. LUND

New York is not alone in the need for better bidding plans for structural steel. It is a condition common to other cities. In fact inadequate bidding plans are not confined to structural steel. A general movement among architects, engineers and contractors toward better and more definite plans and specifications will be an important advance toward the goal of reduced construction costs. The architect and the engineer are the producers of the plan. Would it not be better for them, through their organizations, to establish defined bidding plans than to be forced to such an action by the arbitrary and justly assumed action of contracting organizations? This should be done in the fine co-operative spirit that prevailed in the New York instance, and it should be initiated by the architects and engineers

COMBINATION HOLLOW TILE AND CONCRETE SLABS

THE part that hollow tile actually plays in combination tile and concrete slabs, has been a mootable question. Primarily the tile was used to displace concrete in order to reduce the weight of the slab and at the same time provide a continuous, flat ceiling. As a factor in slab strength the tile was disregarded. It was reasonable to suppose that the tile did function as a strength factor but its actual behavior under load stress was not accurately determined.

A comprehensive series of tests of combination tile and concrete slabs has been concluded at the Bureau of Standards under the direction of Douglas E. Parsons and Ambrose H. Stang in collaboration with F. J. Huse, chief engineer of the Hollow Building Tile Association "Tests of Hollow Tile and Concrete Slabs Reinforced in One Direction," Technologic Paper of the Bureau of Standards, No. 291. Superintendent of Documents, Government Printing Office, Washington, D. C. Price 25 cents.

A sufficient number of tests were made to clearly establish the following points: (1) the value of the tiles in resisting bending and shearing stresses, (2) the effect of the physical properties of the tiles, (3) the effect of mortar in the cross joints between the tiles. A few all-concrete beams of the same gross area were also tested for comparative purposes.

It was found that the side shell and the interior vertical ribs of the tile acted with the concrete and the same applies to the top of the tile in connection with the concrete tile covering. A formula for design is developed in which the ratio of the modulus of elasticity of the concrete and the tile is a factor. The value of the tile is quite considerable and in designing slabs of this type, cognizance should be taken of this factor in the interest of complete utilization and good engineering practice. This bulletin should receive the careful study of architects and engineers.

HEATING AND VENTILATING EXPOSITION TO OPEN IN NEW MADISON SQUARE GARDEN

ANNOUNCEMENT was made in the last issue of a heating and ventilating exposition to be held in the new Madison Square Garden, New York, early next year. We are now advised that a change of dates has been made and that the exposition will be held from March 17 to March 23, 1926, inclusive, instead of in February as originally stated.

For information as to floor plans, etc., address the National Exposition Company, Inc., Suite 334, McAlpin Hotel, New York.

The PUBLISHERS' PAGE

WE believe that our subscribers are going to be agreeably surprised by our next issue on January 5, 1926. This is our Golden Anniversary Number which marks our completion of fifty years of publishing and service to the architectural profession. No pains have been spared to make this Anniversary Number a milestone as befits this occasion in the life of this journal. Conditions have changed in fifty years. Remarkable developments have occurred both in the world at large and in the building field. The practice of architecture has passed through a period of evolution to meet American conditions. New materials, devices and construction methods have been introduced. Old materials have been put to new uses.

For months our editors have been busily engaged tracing the story of the building industry during the past five decades, gathering together interesting facts, articles and reminiscences of the practice of architecture during this period. The illustrative material has been selected to show at a glance the progress which has been made. We are confident that the Golden Anniversary Number will form a valuable addition to the working libraries of all practicing architects both here and abroad.

Evidence received from time to time that this birthday number of *THE AMERICAN ARCHITECT* has aroused interest outside of our official family has been most encouraging. Warren R. Briggs, F.A.I.A. of Stratford, Conn., has recently written us as follows:

"As an original subscriber to your valued journal I am deeply interested in the forthcoming issue that will mark its Golden Anniversary for not only have I always been closely identified with its progress, but have been on intimate terms with all the leading architects of the past fifty years who have contributed to its success. Strange to relate, in its first volume there is an illustration of a house designed by me when associated with W. W. Lewis of Boston * * *

"I sincerely hope that the Golden Anniversary Issue will be a success in every way."

* * *

In this issue we are presenting what we believe to be a rather unusual and valuable report on the conditions of various materials after thirty-five years of use as disclosed upon the demolition of Madison Square Garden. This investigation was participated in by representatives of various organizations in addition to a member of *THE AMERICAN ARCHITECT* staff. This journal originated the idea in connection with this particular building with a view of disclosing the conditions found during the process of destruction of the Garden and to stimulate interest in similar and perhaps more complete and comprehensive sur-

veys of such buildings throughout the country as may meet a similar fate in the future.

Investigations of this nature are bound to disclose one or more interesting facts relative to the construction of buildings and the uses of different materials under certain conditions. Facts disclosed at the time of demolition of any structure must surely add to our store of knowledge of building construction, and there is still much that we can learn.

A large part of this issue is given over to recalling the history of the site upon which Madison Square Garden was built as well as something of the story of the building itself; the conditions of various materials, and especially the condition of the steelwork. While Madison Square Garden has been widely illustrated, we have ventured to republish many views of this famous New York architectural landmark as a fitting conclusion to the history of this amusement center. This journal may be numbered among those who assisted in opening the story by publishing many illustrations of the structure in the early 90's.

* * *

Correspondence addressed to this journal on any particular subject frequently forms one basis upon which to judge the value of our efforts to be of service to our subscribers. The Specification Manual issued each year by this paper is always responsible for numerous inquiries for further details on various subjects connected with building construction. Inquiries range from specific questions on various standard materials to devices required to meet conditions not usually encountered in the average building. Again we receive letters offering friendly constructive criticism of the specifications included in this volume. These are welcomed and received in the spirit in which they are sent. They offer us a guide in making the next edition of the Manual of greater value to the architectural profession. The Specification Manual is intended to be a helpful service to the profession. Any suggestions which make this of greater service to those we seek to help are gladly received.

THE AMERICAN ARCHITECT is more than a publication, it is a service organization. Letters from architects to members of this organization lead us to the conclusion that we are in no small measure successful in rendering a definite tangible service to architects. One architect writes as follows:

"I am using the Specification Manual which you have sent me and, like its predecessor, I find it of considerable assistance."

If we can help you we shall greatly appreciate the opportunity.



MADISON SQUARE GARDEN, NEW YORK, ERECTED 1890, DEMOLISHED 1925

McKIM, MEAD AND WHITE, ARCHITECTS

THE AMERICAN ARCHITECT