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**The New Government Architecture Bill.** The bill, of which full particulars were given last month, is now before the House of Representatives, having been favorably reported upon by the Committee on Buildings and Grounds. It will greatly aid its passage through the Senate if a large number of individual indorsements of the bill from architects can be presented, and to this end we would suggest that such be sent to President D. H. Burnham at the earliest possible moment.

**Baltimore Court-house Competition.** We devote considerable space in this issue to the late courthouse competition in Baltimore because of its importance from the standpoint of design. It is the first time that so many of the best architects in the country have together studied the problem of a courthouse, and the results are interesting. It is to be regretted that McKim, Mead & White did not submit designs, but, through the kindness of Mayor Latrobe and the Building Commission, we are enabled to give a number of the most interesting studies submitted. As to the general plan pursued by the commission in securing designs and selecting one, it is difficult to either approve or condemn. It is evident that the intention of the commission was to secure a first-class design and that the mode of procedure recognized as correct by the profession was given due consideration. Any failure to carry out this plan should probably be laid to local influences and environment, and as the attitude of the selected competitors is one of complaisance and the commission seem pleased with the accepted design, criticism can be waived, though the method may not be recommended to future boards.

**Annual Meeting of Ohio Chapter A. I. A.** The annual meeting of the Ohio Chapter of the American Institute will be held at Put-in-Bay, Lake Erie, on August 16. In the following circular letter Secretary Kramer urges a full attendance of members:

OHIO CHAPTER A. I. A., OFFICE OF THE SECRETARY,
AKRON, Ohio, July 28, 1894.

DEAR SIR,—In accordance with the By-Laws of the Ohio Chapter A. I. A., the regular time for holding the annual Chapter meeting is the third Thursday of August.

At the last annual meeting, held in Columbus, August, 1892, Put-in-Bay was selected as the place for holding the next session. On account of the World's Fair, held in 1893, the meeting of the American Institute of Architects and the World's Congress of Architects, the last of July, 1893, it was deemed inadvisable to hold regular meeting in 1893. Afterward, on a canvass of the membership, it was determined to defer said meeting until our regular session for 1894.

Therefore, you will consider this as regular notice that the next annual convention of the Ohio Chapter of the American Institute of Architects will be held, commencing Thursday, August 16, 1894, at 2 P.M., in the parlors of the Beebe House, Put-in-Bay Island, Lake Erie, Ohio.

As there has been no meeting of the Chapter for two years, all members should arrange their business so as to enable them to attend and devote a couple of days to matters of mutual interest and benefit. Matters of special importance will be brought before the Chapter for attention and action. Members who were appointed on committees and have not yet reported, should be prepared to do so.

Let us make this an exceptional meeting as regards attendance. Come early and come prepared to take part. Let each member prepare a paper on some subject that will be of mutual interest.

To secure accommodations, members contemplating attending should advise H. Beebe & Son, Put-in-Bay, as early as possible, of their intention, together with number in party. Special rates will be secured.

GEORGE W. KRAMER, Secretary.

While the meeting takes place at one of the most enjoyable summer resorts in the country, and these surroundings may attract many, the fact that there is much earnest work to be done should not be lost sight of.

## MECHANICAL HEATING AND VENTILATION.

BY M. C. HUYETT.

SECOND PAPER.

TABLES and data in text-books — so-called — on heating and ventilating are based on *experiments*, not practical working plants, and are of no value whatever in proportioning a mechanical system. "Sanitary experts" attached to health commissions, and some architects, manifest their ignorance of fundamental principles by advocating that ventilating flues "should have the exit openings near the ceiling, for the reason that the temperature of the air in the room being at 70° Fahr., and air expelled from the lungs being about 98°, the foul product of respiration will first rise and later descend to the breathing line in its travel toward floor line exits." In part that is true when "natural means" for ventilation is used, and is the result of lack of volume of air supply to give diffusion, and lack of pressure of air delivered above breathing lines with travel downward and toward exit openings.

The facts are, carbonic dioxide in weight is 1.5, as compared with 1 for pure air, and falls because of its weight; applying their theory the lighter gases would pass upward and outward with the warmest and most pure air, while carbonic dioxide and cooled vapor of water — the most poisonous results of respiration and transpiration — following the natural law of gravity will remain in the room, and to which can be added the cold transmitted by glass exposures and leakage inward about window sashes; with that condition sufficient heating, good ventilation, and an equable temperature *is impossible*.

Under "natural conditions" the heat-force—is always applied at or near floor lines, causing *ascending air currents;* with mechanical heating and ventilation, properly applied, the heat inlets are placed above head lines and the exit to ventilating risers

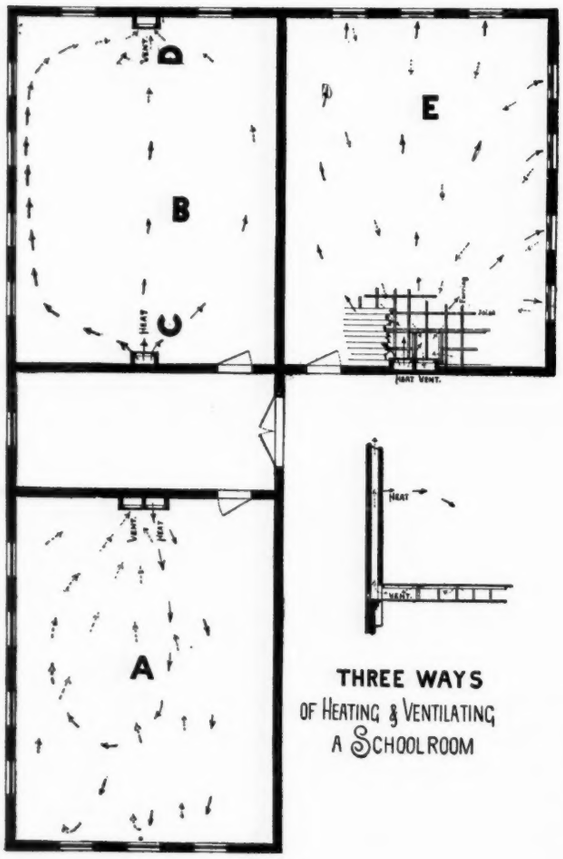


FIG. 1.

at floor lines, so that the large, constant, controllable volume of pure air presses the foul product downward and outward with as much certainty as water will drain out of a pail if a hole shall be made in its bottom. VOLUME GIVES DIFFUSION, PRESSURE DISPLACEMENT, and GRAVITY settles the question as to which stratum of air shall first and continuously be displaced.

"A" shows ventilating flues as ordinarily applied; with direct heating it does not matter WHERE the ventilating flues shall be placed, *they do not ventilate* — "no more air can be exhausted than the quantity admitted," and no provision is made for air inflow.

"B" shows a correct placing of flues for indirect heating — natural or mechanical — if floor surface exit opening shall be used; the travel of the warmed air will be from "C" toward "D," and will give diffusion. The main objection to that plan is the fact that cold transmitted by glass exposures and which leaks inward

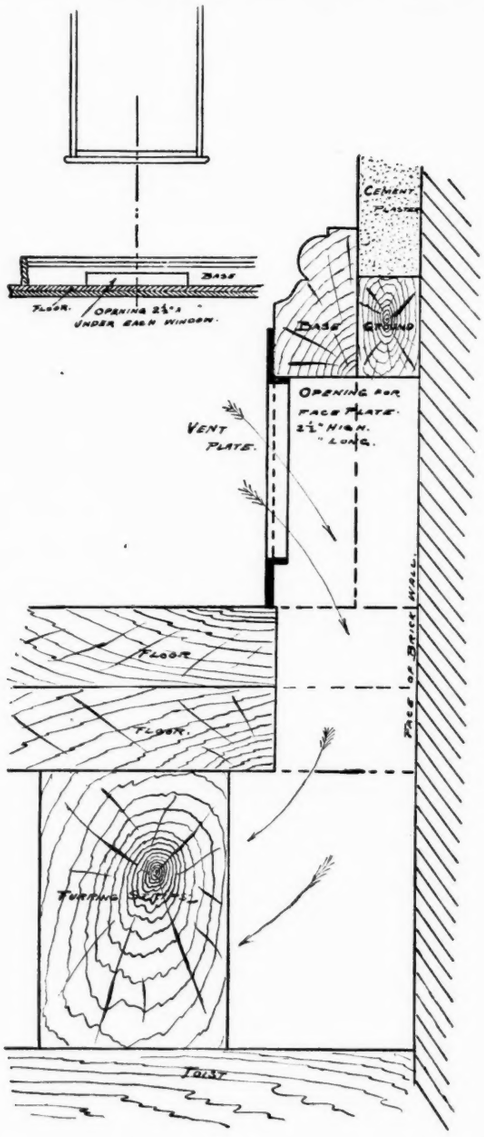


FIG. 2.
Detail of displacement openings and ventilating space under floors; double floor is not arbitrary.

about sashes falls to floor lines and travels toward the exit openings, exposing the feet and legs of occupants to cold drafts unless the air at and above the breathing line shall be overheated. "A" is the worst possible plan for displacement with any indirect system.

"E" shows the most sensible, efficient, and economical system for displacement possible. When applied, the ventilating riser can be placed at will, the only essential being that where joists do not end in the wall in which the riser is placed, a "trimmer" must be set back six or eight feet with two joists extending therefrom to the wall in which the riser is placed, for reservoir, in order that

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its sides shall give free inlet for air to gather for entering the opening placed between the ceiling and joist line. When this application is made, cold transmitted by glass surfaces, and cold air which leaks inward about sashes, *is displaced where transmitted* and passes outward under floor lines without contact with the occupants. If heat shall enter at the south end of a room and the wind be from the north, the warm current will travel toward the points of displacement and be diffused; it means at least ten per cent lessened fuel bills, increased comfort, and healthful conditions.

HOW MUCH VENTILATION?

"Pure air, pure water, wholesome food, comfortable clothing, cleanliness of person and cleanliness of surroundings are essential hygienic conditions without which there can be no promise of individual or public health;"* except the first element they are conditions which pertain to home life to a greater degree than at any time in the past, and would strengthen and add to the longevity of human life, but for the fact that in schoolrooms, churches and public halls the seeds of disease and future enfeebled constitutions are being sown by means of overheating, cold drafts, and impure air the result of insufficient ventilation.

What quantity of pure air shall be supplied, and how shall the requirements be measured, must now be determined. We determine the quantity of food required by the quantity consumed, approximately a measurable quantity; with greater accuracy we may determine the required volume of air supply, using as a basis the quantity of air breathed and thus vitiated and the volume additional which this breathed air will contaminate.

"The average individual exhales at each respiration nearly one cubic inch of carbonic dioxide with which is associated other poisonous matter; the addition of this one cubic inch to the carbonic gas already contained in the air increases the quantity to three cubic inches—the maximum degree of impurity which can be tolerated by the system without danger, and thus renders that quantity of air unfit for further respiration.

"It thus appears that with each breath each individual contaminates 5,000 cubic inches, approximately three cubic feet. As a person breathes about twenty times a minute the amount of air required by each individual per minute is three times 20, or 60 cubic feet; multiplying this result by 60 gives 3,600 as the number of cubic feet of pure air required by each person to replace air which has been contaminated by the process of respiration in one hour.

"If this quantity is not obtained, the proportion of organic impurities increases until the air becomes so intensely poisonous as to be productive of serious disease."† In schoolrooms the breathing space is, as a rule, limited to less than 200 cubic feet per pupil; for 200 cubic feet, Dr. Parkes gives 2,800 cubic feet as the quantity required for the first hour and 3,000 cubic feet per pupil per hour thereafter.

Charles H. Haswell is accepted as standard authority world-wide; in his handbook, page 84, he states: "An average-sized man will exhale from his lungs and body from .6 to .7 of a cubic foot of carbonic acid per hour. Assuming, then, that there are four volumes of carbonic acid in 10,000 parts of air, and that a man in a room with a lighted lamp or candle furnishes from 1.2 to 1.4 cubic feet of acid per hour, there will be required to maintain the air at the required conditions for one person, the allowable pollution of it being six volumes in 10,000, fully 3,000 cubic feet of fresh air per hour." By experiments made in Paris it was shown that there were required from 2,400 to 3,120 cubic feet of air per hour.

No person will use food or water which has been in the mouth of another person, yet the neglect to supply the known quantity of pure air for ventilation forces people to breathe air which has been time and time again in contact with the mouth or nostrils and throat and lungs of hundreds of persons more or less diseased; it is not pleasant contemplation, but the condition is an existing fact.

INSUFFICIENT VENTILATION.

"TWENTY-FIVE SOUTH DAKOTA MEMBERS SERIOUSLY ILL, AND TWO HAVE DIED.

"SIOUX FALLS, S. D., March 7.—Twenty-five members of the legislature are seriously ill here. Two have died during the session, and one today is reported on his deathbed. The general ailment is pneumonia. Inadequate ventilation in the statehouse, which permits of a multitude of drafts, has caused the whole trouble. The legislature adjourned this morning, having failed by one vote to carry the bill for resubmission of the prohibition amendment." . . . . . .

But cause is not removed, and effect continues to add to death's victims.

"DURBOROW AND OTHERS OF VENTILATION COMMITTEE CALL ON CAPITOL ARCHITECT.

"Special to the Chicago *Daily News*.

"WASHINGTON, D. C., June 21.—Representative Durborow and his colleagues on the committee on ventilation and acoustics have made up their minds to oust Col. Edward Clark, architect of the capitol.

"Yesterday Mr. Durborow, accompanied by several members of the committee, called on the architect and requested his resignation, but he declined to comply with their wishes and the committee has decided to report a resolution requesting him to resign.

"The reason for requesting the architect to resign is the bad sanitary condition of the capitol. Recently the committee of which Mr. Durborow is a member made a careful personal inspection of the capitol building and found that the basements were stored with musty old documents in a state of neglect, and that the air ducts and ventilating pipes were choked with filth, causing deleterious ventilation and an unwholesome and poisonous atmosphere to flow into the house of representatives. These facts were set forth in a report made to the house and occasioned considerable surprise.

"Architect Clark has served in his present capacity since 1865, succeeding Thomas W. Walter, the architect who superintended the construction of the two wings of the capitol. Mr. Clark himself had been Walter's assistant and as such had charge of a number of important pieces of government work."

"WASHINGTON, D. C., June 8, 1894.—The day's proceedings in the house were enlivened by Mr. Walker's (Rep., Mass.) complaint of the poor ventilation of the house and the incapacity of the architect of the capitol."

That is a specimen of telegraph dispatches yearly from Washington and certainly is a *severe criticism of the ability employed* by the United States government. It would be just as reasonable to employ a heating and ventilating expert to make detail drawings and specifications for an elaborate capitol building as to have an architect make the plans, estimates and specifications for an elaborate modern sanitary heating and ventilating plant.

From the capitol at Washington down to the latest completed large public building, with but few exceptions, the history is alike, "*unsatisfactory*"—*cause* remains and *effect* continues; notwithstanding these facts, in the next public building, or school, *like cause will be incorporated and like effects produced.*

Call in a heating and ventilating engineer before the final adoption of plans.

CALL IN THE DOCTOR.

When a person is sick the doctor is called; when a surgical operation is necessary the surgeon is called; when electrical appliances are needed the electrical expert is called in for consultation; when an elaborate steam plant is to be installed a mechanical engineer is retained; but when heating and ventilating apparatus is required any "jack-at-all-trades"—steamfitter—is considered competent (?), or at best the plans and specifications are made by persons who have had *no practical experience with the details of construction and application;* flues for ventilation are planned and built, but they *do not ventilate;* the general public—the sufferers—condemn the building, while *the guilty maker of the conditions escapes the just indignation.*

(*To be continued.*)

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THAT select and small body of Frenchmen who take their entire intellectual food from the *Journal Officiel* were thunderstruck a few days since to read the report of Deputy Armand upon a petition addressed to the Chamber of Deputies by a certain inhabitant of a small town in the department of Loire-Inferieure. This petition begged for nothing less than the entire rebuilding of the city of Paris according to a plan which he therewith submitted to the chamber!! What grave and what immense defects the author of this modest petition could see in Paris (which most of the civilized world finds quite satisfactory) we are unaware, nor shall we probably ever know, since the deputies were not enlightened by Mr. Armand, who only condescended to devote three lines to the subject.—*La Semaine.*

*John Avery, M.D., President Michigan State Board of Health.

†J. H. Kellogg, M.D., of Michigan State Board of Health.

## DIRECT METHODS IN ARCHITECTURAL PERSPECTIVE.

BY CHARLES E. ILLSLEY, A.M., C.E., ARCHITECT.

### CHAPTER X.

ROOFS, GABLES, DORMERS, CORNICES.—PROBLEM XV, FIG. 144.

TO design in perspective a building 10 feet front by 22 feet deep, with hip roofs and gables, the front end of the building being in the picture plane. Here S and $\frac{D}{2}$ (Section 133) are used, the latter alone being in sight. The point S is beyond the limits of the cut at the left.

The front wall, A B F E, is in elevation. The perspective plan is here drawn above the base line at a c e d, as follows: Extend the horizontal a c to b, making a b 11 feet long to scale. Draw normals from *a* and c, and from b draw a diagonal toward $\frac{D}{2}$. This will intercept a d at a distance, a d perspectively equal to twice a b (Section 133), i. e., equal to 22 feet. Draw the horizontal d e to complete the perspective plan a d e c. Through e erect a vertical to intercept normals from E and F. This completes E F C D, the side wall.

156. To draw the eaves line, extend E A to f, making A f equal the true projection (to scale) of the eaves. Through the middle of A f draw the diagonal D A f′ to meet in f′ a normal from A. Draw an indefinite horizontal f′ h; this is the line of the front eaves. Were Vr available, a diagonal from Vr through E would meet f′ h in h, the left-hand corner of the front eaves. To find h without the aid of Vr, draw a normal from any convenient point on A E, as g its center, and through the middle of E g draw a diagonal toward $\frac{D}{2}$ to meet the normal g g′ in g′. E g g′ forms two sides of a square, consequently its diagonal E g′ is he diagonal of a square, and therefore it is the miter line at E which will terminate the eaves line f′ h at h. Draw the indefinite normal h h′.

157. To draw at D the miter line which terminates the eaves line h h′, the vanishing point for this miter line (which is the same as for the miter at A), being too distant for use, we again resort to the construction of an auxiliary square of any convenient dimension at D. For this two methods are shown to enlarged scale in the special diagram above D. At the point 1 draw an indefinite horizontal 13; also an indefinite diagonal 32 $\left(\text{toward } \frac{D}{2}\right)$ and at 4, the middle of 13, draw a normal 47 to meet the diagonal in 7. Draw through 7 the horizontal 576 and through 3 the normal 36. The half-distance (Section 133) being used, the normal 47 = twice 43, i. e., 47 = 13. But in perspective 15 = 47 = 36, since these are normals intercepted by the horizontals 13 and 56. Consequently 1365 is a square and 16, its diagonal, is the miter line required.

Or, draw an indefinite normal 12, and find its middle 5 by constructing on 12 any perspective rectangle, as shown, and finding the center at the intersection of its cross diagonals. Draw the diagonal 273 to $\frac{D}{2}$; also the horizontal 576 and the normal 36. The half-distance being used, 12 = twice 13, wherefore 15, the half of 12 = 13; 1365 is therefore a perspective square.

Either of these methods may be used at D.

158. To draw the front gable. Lay off its true width at A i on A E and draw the normal i i′, which locates the left corner i′. At k, the middle of A i, erect a vertical k k′ to the true height of this gable, draw the normals k l (to meet h f′ in l) and k′ l′, to meet the vertical l l′ in l′, the apex of the gable. Join i′ l′ and l′ f′; also join A k′ for the line where the gable meets the front wall.*

159. The side gable is at the middle of the side wall, found by the cross diagonals intersecting at o, where is erected a vertical o o′. Produce F E to o″, making E o″ equal the true height of this gable. Draw the normal o″ o′ to transfer this height to the vertical o o′, which rises through the middle of the gable. Draw the indefinite horizontal x′ o′ v. This makes the ridge of the side gable.

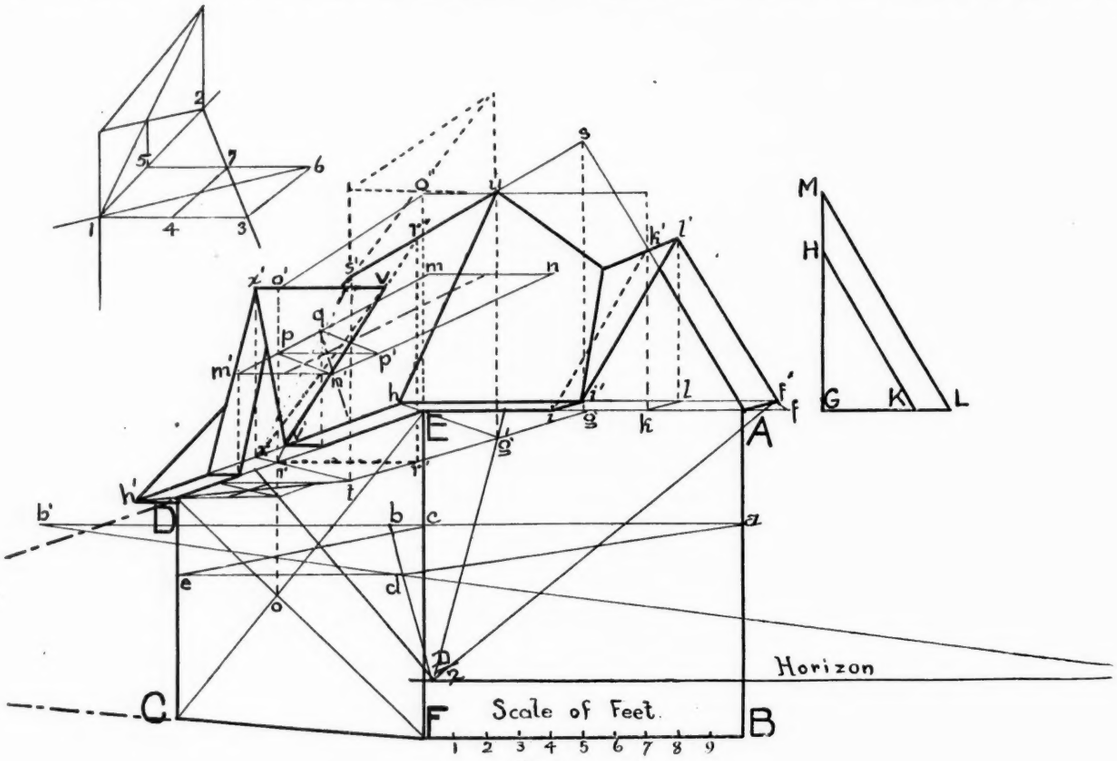



FIG. 144.

Both gables have the same slope. At the right draw G K H, the half of the front gable, produce G H to M, making G M equal to the true height of the side gable, and draw M L parallel with H K. This construction gives G L the half-width of the side gable. Set this off at any convenient point in the picture plane as at m n, draw normals m m′, n n′, draw through p, the intersection of m m′ and o o′, the horizontal p p′ to meet n n′ in p′, find the middle of p p′ and through it draw the diagonal q n′ $\left(\text{toward } \frac{D}{2}\right)$; also the horizontal m′ n′. The half-distance being used, n′ p′ = p p′. But, p p′ and m′ n′ being horizontals, p p′ =

*In all planes which do not recede, i. e., which are parallel with the picture plane, lines may be halved, etc., with the dividers. Were the angle of the gable lines given, the gable could be drawn directly to its true angles as soon as the points i′ and f′ were found. But gables are usually given by their height and span, not by their angles.

m′ n′, and n′ p′ = m′ p, whence p p′ n′ m′ is a perspective square. By like reasoning the normal p q = p p′, consequently p q = m′ p. But p p′ is the half-width of the gable at the distance o o′, and since m′ p and p q both equal p p′, it follows that m′ q = the full perspective width of this gable. Project q and m′ upon D E and draw horizontals to meet the eaves line h h′ as shown.†

From p drop a vertical upon D E at r, draw a horizontal r x to meet h h′, erect a vertical x x′, drop verticals on D E from q and m′, draw horizontals as before to meet h h′, join the points so located, which are the termini of the gable, with x′, and from the foot of m′ draw a line toward o′ to mark the meeting of wall and gable.

160. It remains to draw the valley line v v′ and to complete the ridge x′ v. Conceive a vertical plane passing through the ridge of this gable; it will be parallel with the picture plane and its trace upon the horizontal plane at the level of the eaves D E A will be a horizontal r r′. The ridge of the main roof is normal to the picture plane (Section 74). If we conceive a vertical plane to pass through this ridge it will be perpendicular to the vertical plane through the ridge of the gable, and its trace upon the horizontal plane D E A will be the line g t. The traces r r′ and g t cross at r′, the plan of the point r″, where the vertical plane through x′ v would cut the main ridge. The point where this plane meets the eaves line h h′ is x. Joining x and r″, we have the line in which the vertical plane through x′ v would cut the main roof if there were no gable. Produce the horizontal x′ v to meet x r″ in v, the point where the gable ridge meets the main roof, and draw the valley from v to v′.‡

161. To draw the ridge of the main roof. Erect at g the vertical g s. This being in the picture plane, lay off on it at s the true height of the main roof, and draw the indefinite normal s s′. Since a hip roof is intended, the plan of the points u and s′ will be at the intersections of g t, which may be considered the indefinite plan of this ridge, with the miter lines already drawn at E and D. These lines meet g t at g′ and t, whence verticals will meet s s′ in u and s′, which are the points required. Complete the hips by joining u h, u f′ and s′ h′. The miter lines E g′ and h′ t may be considered to be the plans of the hips u h and s′ h′.

Since the right side of the front gable coincides with the right side of the main roof, its ridge, which is a normal, will terminate upon the left hip of the main front roof. Having drawn this ridge, join its end with g for the valley between gable roof and main roof.

While the detailed description of Problem XV is somewhat extended, the operations described are in fact brief and rapid. It is to be observed that the design of this roof has been completed to required dimensions entirely in perspective, without any preliminary plan or elevation.

*(To be continued.)*

## THE ORIGIN OF GOTHIC ARCHITECTURE.

BY C. BRYANT SCHAEFER.

THE ornamental arts are a continuous development from certain primary forms or motives. The originals, or the derivatives, were made by primeval man as a means of delineating certain sensations or experiences that were newly discovered by him, or of which he became mentally conscious for the first time. It was the opening of a new field of exercise for human endeavor. The architectural art is a divine record of the progress of humanity. The soul speaks in art that of which the mind is unconscious. That which is known, the past, is detailed by knowledge; that which is not known, the future, is expressed by the soul in the poetries.

The first diagramatic illustrations made by man proceed at once upon diametrical paths of development. One of these is literal representation and the other illiteral. The former is the systematic progress that develops into alphabets. The latter is the cultivation and expression of faith. It is ornamental as opposed to the useful. In the course of man's advance in development he establishes an ideal that is beyond his comprehension. Both courses of progress are finally directed upon this imaginary ideal, which has become a standard that draws them together until literature and art are united in poetical expression. This is a combination from which a higher consciousness may begin a repeated development in a similar manner. That portion of humanity which has labored in the progress acquires a new comprehension. The delinquent ones continue the progress under changed circumstances.

Greek art marked a final possibility of man's mental growth. Beyond their refinement of what is known as classic detail of ornament the designer cannot go. Neither can mind exceed in their philosophical comprehension. Modern intellectual development is simply a repetition of their progress in the development of their reasoning powers. Owing to other circumstances facts are more varied, but mental power is not now any more comprehensive. Greek ornamental derivatives originated in the representations of material sensations. By discipline a state of involuntary exercise was arrived at in both the literal and illiteral branches of development. They were finally united in translating the Greek ideals of faith. This combination in poetry and sculptured architecture was a mental exhibition of their ideas of the one supreme power. From this apex of development the new and higher process of emotional growth began. The completion of the intellectual circuit made a higher plane available. The work proceeded upon that plane, and they who had not obtained full mental growth had additional labor to perform. The mentally perfect gradually disappeared with the disappearance of faith.

The higher experiences which the world entered upon nineteen centuries ago was emotional expression by its mastery and comprehension. It was the beginning of a power as much superior to the intellect as the mind is superior to the physical man. Gothic architecture and ornament is the natural expression of a progress of this new growth. Gothic art and all art, it must be remembered, is the opposite of religion, as commonly understood. The modern symphonic drama is its culmination, and bears the same relation to this new sphere of exercise as the Pantheon, created by the Greeks, did to their accomplishment. The old philosophical process, best represented then by Socrates, accompanies it as the natural mental condition of the present.

The principal orders of architecture are Mohammedan, the feminine; Grecian, the masculine; and Gothic, an expression of both. Roman, Romanesque, Byzantine and many other styles are variations upon the principal themes. The Eastern and the Greek schools of design have their points of departure. The Gothic form of architectural expression appeared in Europe with its detail already developed into architecture. All things have a first cause. If the origin of Gothic ornament is not in Europe it must be in some other country. If not on this earth, it must be on some other planet. Art is unconscious development, and cannot differ from the usual system; neither can it deceive. Even a study of the Chinese language in relation to architectural ornament will prove this same rule. Classic ornament began in the delineation of material sensations. Owing to a necessarily higher condition, Gothic ornament must have begun in a delineation of mental sensations. From this point development would finally arrive at the control of emotional expression in a distinct medium without the intervention of thought.

According to all authorities, the architecture and ornamentation of Central America is without precedent or connections. It had its isolated beginning and progress until the extinction of its practitioners. It is independent of the fundamental characteristics of other styles. The origin of Central American art is so undoubtedly recent that it must be the beginning of this superior plane of experience; the world as a whole never presents opportunities for degeneration; that is natural law. Only one opening is left here for a point upon which to attack the subject. The ornamental forms had their beginning in the illustration of mental facts or conditions first realized. Language was too imperfect a means of demonstrating the circumstance. Language fails when the emotions are stirred, and such was the case here in its primeval form. Through their emotions an influence acted upon their

† The true dimensions must be laid off somewhere in the picture plane, then properly transferred (by normals or otherwise) back to the plane in which the respective members lie. Caution must be had as to lines which may appear to intersect in the drawing, but which in space lie in wholly different planes, so that they could not meet. Such, for example, are the lines E F and a d; they appear to cross, but in reality a d is far behind E F. The intersection of lines is determined by tracing their planes. For example, F o″ is known to be in the plane of the side wall in which lie the normals C F, D E, etc. Hence the normal m m′ lies in the same plane. The vertical o o′ is in the same plane by construction. Therefore it is certain that m m′ and o o′ will cross in reality as well as in appearance.

‡ In this particular case, the point r″ being at the middle of the main ridge u s′, it could have been found at once, after u and s′ had been determined, by constructing any perspective rectangle upon u s′, as shown, and drawing its cross diagonal. But this method would apply only when, as here, the side gable was at the middle of the roof, while the method given above is general, applying to gables in every position.

minds, and their impressions were pictured in clay. The first erections may have been temporary, and afterward more or less permanent. Gradually they were adapted to use, and the means of expression became architecture with new decorations.

The ornamental motives of Central America are derived from figures of the Latin cross, the shepherd's crook, the fish, the stairs of ascent, and the reptile. The latter is a representation of an eel that once inhabited the waters of the neighboring seas. It is distinguished by a dorsal fin upon the head. In their representations it has the rattles of the rattlesnake. The trinitarian character of man or their deities is indicated in various manners. The representation of sound waves plays an important part, and under circumstances that indicate that interpretation. One rebus may read that a people divided are united by the voice of God. The cessation of tribal hostilities, a short time before the Spanish invasion, seems to have been under the influence of this idea. Their manner of offering human sacrifice by cleavage may also have been its corruption. All ideals are debased by mistaken religions. Taking the matter as a whole they were affected by Christian notions. So much for the original derivatives.

Literal developments in this case was imitative representation of nature, and finally conventionalization. The tooth ornament, beak-heads, and ball and star moldings of Gothic art were here invented. The cruder forms correspond to inexplicable characteristics of Irish architecture. The Norman detail with its nebule embellishments is a perfect continuation of the transatlantic ornaments. The pointed arch also has its beginning in pictorial use. The dates of execution assist in establishing the consecutive growth of this art from one country to the other.

The illiteral development of Central American architecture is the expression of the artist-sense, feeling. It is the underlying power in humanity, the control of which leads to emotional expression. It is the truth in æsthetics and the quality of character. The architecture of the North American Isthmus is dignified and serious. In pyramidal development, in stairs and terraces, a desire for attainment and ascent is expressed. The emotional expression of the pyramids of Egypt is concealment, here it is proclamation. They strove for a closer contact with that higher knowledge or sense that was dimly beginning in their consciousness. Their work abounds with that feeling that prompts an effort for greater height. Emotional influences control the mind, and thence the labor of the hand. Their work as a whole was under the influence of a longing to surmount. That is also the emotion of the Gothic cathedral: aspirational ascent.

Architectural ornamentation expresses the esoteric growth of man. He is not conscious of this until it bursts upon him after accomplishment. There may be more truth read from ornamentation than appears upon the surface.

Mohammedan, and then Greek, and finally the cathedral architecture flourish upon the purity of their original inspirations, even though one may seem comprehensively above the other. Modern art, in proportion to the successful adaptation of precedents to exigencies, expresses the sincerity with which humanity endeavors to approach the truths of life. That recovery is the mainspring which will begin the transformation of the coming world of thought and art. Man is slow in believing what is understood with difficulty. Truth is never proven so quickly as by those who try to disprove it. The fact of the origin of Gothic architecture can be better demonstrated by such as have the leisure for archæological research.

## NEW PUBLICATIONS.

USES OF COMPRESSED AIR. By Addison C. Rand. Cloth; 134 pages; with 94 illustrations from original photographs; price, $1. The Republic Press, New York.

This interesting volume is said to be the only complete treatise on the uses of compressed air in existence. The author, Mr. Rand, is abundantly qualified to discuss the subject, as he is an experienced constructor of air compressors, and has made a personal study, supplemented by a liberal use of the camera, of all the various uses of compressed air as employed in this and foreign countries. To the reader who takes up Mr. Rand's little volume with the expectation of finding it a commonplace description of trade methods, there will come an agreeable surprise. Seldom have we seen a purely mechanical work so interesting. From introduction to finish it charms and enlightens the lover of invention and the student of mechanical contrivance. Scientific terms have been avoided, and the author has endeavored to describe the principal uses of air in common-sense language. The devices mentioned include the air lift pump for artesian wells, the air brake, railway gate motor, air locomotives and street railway motors, appliances for unloading cars and operating shops, torpedo guns, transportation tubes, the air brush, icemaking and refrigerating, the pneumatic tire, and many other less familiar uses. But the author makes special mention of the fact that the most important application of compressed air in the past has been to rock drills in tunnels and mines, and that America can claim, at Hoosac Tunnel, the first general application of the rock drill. At Niagara Falls 7,250 feet of tunnel was excavated in six months, and in locations permitting the use of shafts at frequent intervals a tunnel ten miles in length can be constructed as quickly as that of one mile.

## OUR ILLUSTRATIONS.

The illustrations other than photogravure in this number are from those presented in the Baltimore Courthouse Competition. The announcement of the building committee and the interesting report of Professor W. R. Ware is as follows:

### ANNOUNCEMENT.

On June 1, 1894, Professor Ware sent to the Building Committee ten designs numbered 16, 20, 21, 24, 35, 37, 39, 41, 57, 72, accompanied with his report, which is hereto appended. On June 29, 1894, the committee determined that design No. 57 was, "on the whole," the most satisfactory solution of the problem submitted to the competing architects, and a telegram was sent to Professor Ware requesting that the envelope belonging to this design should be opened and the name therein communicated to the committee in order that the author might be appointed architect of the building "if, in their judgment and that of their professional adviser, they were warranted in so doing."

Owing to Professor Ware's absence from New York an answer was not received until July 2, when it was learned that J. B. Noel Wyatt and William G. Nölting, of Baltimore, practicing as Wyatt & Nölting, had submitted this design. On July 13, Messrs. Wyatt & Nölting were formally notified of their selection as architects of the new courthouse and of the readiness of the committee to execute an agreement with them in accordance with the provisions of the programme of instructions.

It has since been ascertained that the authors of the nine other designs, forwarded by Professor Ware, are:

No. 16—Shepley, Rutan & Coolidge, of Boston, Chicago and St. Louis.
No. 20—J. L. Wees & A. Guissart, of St. Louis.
No. 21—Carrére & Hastings, of New York.
No. 24—Van der Bent & Ross, of New York.
No. 35—Whitney Warren, of New York.
No. 37—D. Despradelle, of Boston.
No. 39—Benson & Brockway, of New York.
No. 41—Boring & Tilton, of New York.
No. 72—De Witt Taylor Kennard, of Chicago.

On ....., 1894, Professor Ware further reported that he had selected designs numbered .., ... .., ... .., as the five best among the Baltimore designs. The authors of these designs who will receive a premium of $400 each, offered by the instructions, are:

No. 3—Laferty, Poole & Sutton, 20 East Lexington street.
No. 44—T. Buckler Ghequier, 227 St. Paul street.
No. 57—Wyatt & Nölting, 301 North Charles street.
No. 62—Joseph Evans Sperry, Central Savings Bank building.
No. 73—J. A. & W. T. Wilson, 5 East Lexington street.

The ten designs submitted with Professor Ware's report as the best and the five premiated designs from Baltimore will, under the consent heretofore obtained from their authors, be publicly exhibited in the American Building, Baltimore, from July 30 to August 4 inclusive, between the hours of 10 A.M. and 5 P.M. Permission has also been given to THE INLAND ARCHITECT of Chicago, to publish the ten best designs.

As soon as practicable all of the designs will be returned to their respective authors, to whom the thanks of the Building Committee are hereby tendered.

FERDINAND C. LATROBE, Mayor,
JAMES HODGES,
HENRY D. HARLAN,
JAMES E. TATE,
ROBERT H. SMITH,
FRANK N. HOEN,
FELIX AGNUS,
AUGUSTINE J. DALRYMPLE,
*Building Committee.*

BALTIMORE, July .., 1894.

### REPORT.

Of the seventy-nine designs sent in on April 9, only forty-one appeared on examination to demand serious consideration; the others were so obviously inferior that it would have been a waste of time to examine them in detail.

Of these forty-one, one showed a building of five stories and three mezzanines; eight of four stories and two or three mezzanines; thirty-two of three stories and, in general, two mezzanines.

Ten showed a height at the center of the eastern front of about one hundred feet, more or less; twenty of between a hundred and ten and a hundred and twenty, and the rest of about a hundred and twenty-five feet.

The total area covered was in general between sixty and sixty-five thousand square feet, with open areas varying in number from one to eight, and covering from five to ten thousand square feet. But in half a dozen of the designs, the space covered was reduced to sixty or even fifty thousand square feet. Some of the four-story designs had even as little as thirty thousand, but these were built with external areas, and were of the form of a cross, with two or three arms.

In respect of arrangement and accommodation, about half of these designs exhibited a central hall, giving access to the principal courtrooms. In the other half, there was no central hall, the public as well as the more private rooms being reached by corridors.

In ten of these the entrance was in the first story, access to it being gained by external flights of steps. In the others, the principal doorways were in the basement, but in ten of these large flights of steps immediately within led up to the main story.

Most of the designs afford good passage across the building in the main story, as required. In almost all the designs the most important courtrooms are lighted on opposite sides, as desired, but in only ten or twelve are all the courtrooms lighted in this way.

In point of style one-third of the exteriors may be said to be treated in the Roman, or Italian manner; another third, in some variety of French or Spanish renaissance. The rest are either Greek, or in that modern French style, which has the name of Neo-Grec. Only half a dozen of the whole eighty show any trace of Gothic, or other mediæval influence.

About a dozen or fifteen, if erected substantially as shown, would give a dignified and appropriate public building. The good plans are not so numerous, though almost all manage in one way or another to fullfil the requirements of the Programme of Instructions. The best plans do not in general go with the best elevations.

In cubic contents, the different designs present an extreme variation from less than four million cubic feet to more than ten. These greater dimensions characterize the designs which show the largest number of stories, and the greatest waste of space in halls and corridors.

The great difference of level between the east and west ends of the site has been met by the different competitors in different ways. Some have given their building a basement story at the western end, involving a double or even triple basement on Calvert street, and throwing up the main story to a great height above the ground; others have put the main story on the level of St. Paul street. In some of them there is a break in the design, the western end being a half story, or a whole story, above the eastern end.

The ten designs herewith submitted are those which in my judgment show the best plans, irrespective of the elevations, and the best elevations, irrespective of the plans, as well as those which show the best "all 'round" solution of

the problem, taking plan and elevation together. These ten designs are numbered 16, 20, 21, 24, 35, 37, 39, 41, 57, 72.

These ten designs fall into four groups, three of which show a central hall, giving access to the principal rooms, which are distributed around it. This seems at first sight the best arrangement.

In the first group, comprising numbers 16, 24 and 72, this hall extends to the basement, with the main doors in the basement story. In the second group, comprising numbers 20, 35 and 41, the central hall is entered in the first story, by doorways at the top of a flight of external steps. In the third group, comprising numbers 37 and 39, there is a basement entrance with a flight of steps immediately within, leading up to the central hall. The fourth group comprises numbers 21 and 57. There is no central hall.

I.

Of the three constituting the first group, in which the main entrance is on a level with the Calvert street sidewalk, numbers 72 and 24 are distinctly better in plan than No. 16.

DESIGN No. 72.—This design shows a basement and sub-basement, both above the level of Calvert street, and two high stories and a low one, above. The second story contains a mezzanine on the north and south sides.

In the basement is a commodious passage across the building from Lexington street to Fayette street.

In the sub-basement is a driveway for vans leading into a prisoners' yard.

The main entrance is into the sub-basement by a single door, and is level with the Calvert street sidewalk.

Immediately within is a flight of stairs leading up to the basement story. Small staircases on either side, and a grand staircase at the further end of a large central hall give access to the stories above.

There is a similar central hall open from the first story to the roof, and partially lighted by areas at the sides. (In this are eight elevators.)

In the first story there are two rear entrances on a level with St. Paul street, but no side entrances.

There are eight areas, each about thirty feet wide. The two at the eastern end are larger above than below, being partly occupied in the lower stories. The two at the western end seem larger in the first story than above.

In the first and second stories are three courtrooms, one large and two small, all admirably lighted by windows extending the whole length of the long sides of these rooms, and opening upon these areas.

In each of these stories are two or three other courtrooms, lighted upon one side only, which open upon the street. In the third story is the Supreme Bench, lighted upon opposite sides, and Circuit Court No. 2, lighted on one side only.

The seven larger courts are well placed and well lighted. The six smaller courts are inconvenient of access, and lighted only on one side.

The smaller and more private rooms are on the outer walls, lighted from the street; some of them are in a mezzanine above the second story. They are from twenty to twenty-five feet deep.

The Calvert street front shows a plain basement, with two stories of windows.

The first story also is treated as a basement, the principal order, with columns, entablature, and attic, occupying the second and third stories. This order is in the so-called Neo-Grec style, and is much too small, as well as too high up, to be an effective feature. The main doorway is also much too small.

The height over the main entrance is about a hundred feet. The building covers the whole lot, measuring about sixty-five thousand square feet; of this, about nine thousand is taken up by areas, or about fourteen per cent. The cubic contents is something over five and a half million cubic feet.

The scheme is well adapted to being built part at a time, in which case the grand staircase would probably have to be replaced by a temporary structure.

DESIGN No. 24.—This design shows a principal building toward the eastern end of the lot, with a wing of smaller dimensions, which constitutes almost a separate building, upon St. Paul street.

The principal building consists of a basement above the level of Calvert street, and three stories. The first and second stories are high, and contain mezzanines.

In the basement is a large central hall, but the passage across the building from Lexington street to Fayette street does not pass through this hall, but somewhat indirectly through corridors. There is no transverse passage in the first story, and there is no driveway for vans leading into a prisoners' yard.

The main entrance is into the basement through three doors a few steps above the level of Calvert street.

The main staircase is at the western end of the central hall. Smaller stairs inclosing elevators and near the entrance lead to the private end of the courts above.

The central hall is, in the stories above, confined to a small lobby between the main stairs and the Criminal and Superior Courts, from which corridors pass round the building. In this lobby are two elevators, and near the front of the building two others. In the first story is a rear entrance on the level of St. Paul street.

There are two open areas, 28 by 48 feet, which run the entire height of the building, and a small one between the main building and the addition, to light the stairs.

In both the first and second stories are three or four courtrooms, one large and two or three small. The large ones are lighted on opposite sides from the areas; the small ones from one or from two sides, from the street. In both stories of the western wing are two additional courtrooms, lighted from the street. In the third story is the Supreme Bench, lighted upon opposite sides from the areas.

The three principal courtrooms are conveniently placed, but the small ones all open upon corridors in common with the service rooms, and some of them, especially the Court of Common Pleas in the second story, are at an inconvenient distance from the main stairway.

The smaller and more private rooms are from twenty-five to thirty-five feet deep, and are situated on the outer walls in the two principal stories, and their mezzanines. They are lighted from the streets.

The Calvert street front shows a plain basement and first story, with a Corinthian order in the second, and an attic in the third. In the central portion of each front a larger Ionic order is carried through the second story and attic, and bears a pediment. The square central portion occupied by the large courts is surmounted by a dome which is not visible from the street, and is made no use of within. This design is one of the most dignified and appropriate of all those submitted.

The height over the main entrance is about ninety-five feet. The main building covers a square of two hundred feet. Of this, about 27,000 square feet is taken up by the areas, or about six per cent. The cubic contents is something over three and one-half million cubic feet, including the addition.

The additional courts required are accommodated in a wing only two stories high, measuring 80 by 120 feet, and connected with the main building by a double corridor which passes on either side of the main staircase. This scheme is particularly well adapted to being built part at a time.

DESIGN No. 16.—This design shows a basement on a level with Calvert street, lighted from sunken areas, with two high stories and one low one above. The first and second stories each contain a mezzanine floor. There is apparently a cellar or sub-basement extending under the whole of the building.

In the basement is a twelve-foot passage, running across the building from Lexington street to Fayette street. There is a small space for the prison van, opening directly upon Lexington street; this is in immediate connection with the male and female lockups, which are not well lighted. There is no prisoners' yard.

The main entrance into the basement is by a single door through the vestibule, on a level with the Calvert street sidewalk. Immediately within are steps which lead to a large central hall, which is open up to the first story mezzanine, and is covered with a glazed roof. A large staircase at the farther end leads to the first story, and four smaller staircases, each inclosing an elevator, give access to the stories above.

There is upon the first story a public corridor running around this hall. Above the hall there is a large open area lighting similar corridors in the upper stories.

In the first story, there is a single entrance on a level with St. Paul street, and in the basement is a side entrance, giving direct access to the first story, and to the Criminal Court by a flight of steps.

There is but one area, which is large and central, measuring 60 by 100 feet in its greatest dimensions. In the four corners of this area are disposed the four smaller staircases.

In both the first and second stories are three courtrooms; a large one in the front, lighted from one side, and two small ones lighted from two sides in the northwest and southwest corners. In each of these stories there are one or two other courtrooms, lighted from one side only; in the third story is the Supreme Bench, lighted from adjacent sides.

All the courts are lighted from the street, five of them receiving some additional light from the interior area through windows high up on the wall and behind deep galleries. The courtrooms are sufficiently accessible from the corridors and passages, but the main staircase does not lead to the main courts, which are at the opposite end of the building.

The smaller and more private rooms are disposed along the outer walls, and many of them are thirty or forty feet deep, and lighted only at one end. Some of these rooms are in the mezzanines of the first and second stories.

The Calvert street front shows four Ionic columns, surmounted by a pediment, beneath which is a somewhat inadequate doorway. The rest of the building shows piers or pilasters of the same order. The whole is crowned by a low attic, with a balustrade above. The whole is eminently suitable and dignified.

The height over the main entrance is about a hundred feet. The building covers only a part of the lot, being only two hundred and sixty feet long, and leaving an open space upon St. Paul street forty feet wide. This space is occupied by a sunken area giving light to the rooms of the basement, which is accordingly as large as the stories above.

The total area covered is about 52,000 square feet. Of this, 5,000 feet or about ten per cent is taken up by the central area. The cubic contents is nearly five million cubic feet.

This scheme is particularly well adapted to being built part at a time.

II.

Of the three designs, which constitute the second group, in which the Calvert street entrance is in the first story at the top of the flight of steps, No. 35 is distinctly better in plan than either 20 or 41.

DESIGN No. 35.—This design shows a basement, a high first story, with a mezzanine, a low second story and a third story mainly in the roof.

In the basement is an ample passageway across the building; this is practicable for vehicles, giving them access to four open areas, two of which are adjacent to the male and female lockups.

The main entrance upon Calvert street leads into the first story, up a wide flight of steps, where is a high porch, within which is a vestibule with small courtrooms on either side. Beyond is a central hall with two stairways on each side. Similar halls are in the second and third stories above. These are all lighted by areas at the sides. Near the entrance are two elevators. Two rear entrances are shown on the first story, entering on the level of St. Paul street. There is no side entrance above the basement.

There are six areas, square, and about forty feet across. In the first story are five courtrooms, in the second seven, and in the third is the Supreme Bench. These are of three different sizes, corresponding with the requirements of the programme. They are all lighted on opposite sides, and nine out of the thirteen are lighted entirely from internal areas. They are all directly accessible from the central hall.

The smaller and more private rooms are on the external walls, and are only sixteen feet deep. They are reached by corridors, which the public have no occasion to enter. The separation between the more public and the more private uses of the building is complete.

The eastern, or Calvert street front, shows a high basement, rusticated, with coupled windows. Above is a high story, with large round-headed windows and pilasters carrying a full Doric entablature, with broken pediments at the corners. Above this is a high attic, occupying the second story, which again carries broken pediments, straight and curved. The third story is in a low steep roof with small dormers, which seem insufficient to light it. But it has good sized windows upon the areas within.

The portico at the top of the steps is on a larger scale, a single order with a couple of Corinthian columns rising to the top of the second story, and a high attic above occupying the third.

The height of the main wall is only sixty-four feet, and that of the portico at the entrance only eighty feet. The top of the main roof is the same, and the higher roof that covers the central hall is only ninety-six feet to the top. The western third of the building is only two stories high and has no basement, and the cornice upon St. Paul street is only forty feet from the ground.

The building is set back about fifty feet from Calvert street, and measures accordingly only about 275 by 200 feet, or 55,000 square feet; of this nearly ten thousand square feet is occupied by areas, or nearly twenty per cent. Taking an average height of eighty feet, this makes the entire cubic contents but little over three and a half million cubic feet.

In plan, this design is distinctly the most simple and orderly, as well as one of the most convenient, and, so far as concerns the courtrooms, one of the best lighted. It is well adapted to being built part at a time, since the Criminal and Superior Courts could be made temporarily to occupy the western half of the central hall between the two middle areas. In cubic contents it is almost the smallest of any. But this advantage is gained by considerable loss of external dignity. The exterior needs further study.

DESIGN No. 20.—This design shows a basement, two high stories with mezzanines and a low story above. There is no transverse passage in the basement, but there is a driveway for vans leading to a prisoners' yard, and a corridor in the first story leading from Lexington street to Fayette street.

The main entrance is into the first story by a flight of exterior steps and through a single door. Within is a long central corridor, lighted by areas. The main stairs are placed in a double flight at the farther end of the corridor, where they somewhat obstruct the entrance to the principal courtroom.

There are four small stairways, one in each corner of the building. A transverse passage leads to the service corridors behind the courtrooms and to entrances upon Fayette street and Lexington street. There is also a rear entrance on the first story, on a level with St. Paul street. Four elevators are shown, two near each principal entrance.

There are four open areas, each about thirty-six feet wide. In the first and second stories the large courtroom is placed at the western end of the main corridor, and is lighted on opposite sides from areas. Four smaller courts open laterally from this corridor, and are lighted on opposite sides from areas and from the streets. These ten courts are well placed and well lighted, but there are two others, one in the northwest corner of the second story and one in the mezzanine above, which are poorly placed, and there is no Supreme Bench, unless the courtroom in the southwest corner of second mezzanine story is intended for this purpose.

The smaller and more private rooms around the outer walls of these stories and in mezzanines are lighted from the street. They are about twenty feet deep.

The Calvert street front presents a central mass ninety feet high to the top of the attic, with short wings thirty-four feet long and about seventy feet high. These wings and the side elevations, to which they conform, are designed on a somewhat smaller scale than the central mass. This consists of a high basement, chiefly occupied by steps and surmounted by colossal piers, carrying a very heavy cornice and attic. Between the piers are smaller columns, forming a sort of triple portico or shallow loggia. This must cut off considerable light from the courtrooms in the second story. The architectural treatment, which exhibits a somewhat extreme example of the Neo-Grec style, does not commend itself. The building looks clumsy and overloaded.

The main lines of the front are set back about ninety feet from Calvert street, reducing the size of the building to 260 by 200 feet, or 52,000 square feet.

The open areas occupy about eighty-two hundred square feet, or sixteen per cent.

The total cubic contents is about four and a half million cubic feet.

DESIGN No. 41.—This design shows a basement on the level of Calvert street, with a sub-basement below and two high stories above.

At the corners the building is only two stories high, but in the center is a third story of cruciform plan, above which is a fourth story, which runs east and west. There seem to be no mezzanines.

In the basement is a driveway through the building. It is contiguous to the lockup and to the prisoners' rooms.

The main entrance enters the first story by three doors within a four-columned portico at the top of a flight of steps. These doors lead into a large vestibule, which extends across nearly the whole front. A central corridor leads to a similar entrance from St. Paul street. From this corridor open three courtrooms, lighted from opposite sides. Additional courtrooms are in the northwest and southwest corners upon St. Paul street, lighted from three sides.

There are five courtrooms in the second story, over those below, and two others, both of which are lighted only on one side. The Supreme Bench is in the third story, running up into the fourth. The more private rooms, which are not well separated from the more public ones, are from twenty to thirty feet deep.

There are two staircases at each end of the main corridor and near the entrances. In the middle of the north and south fronts are other staircases giving access from the driveway below. There are no other side entrances.

The center of the Calvert street front is recessed forty feet. In this recess stands the portico, above which rises a high attic, crowned by a gable. This attic is nearly a hundred and ten feet high to the eaves. The eaves of the north and south fronts are ninety feet from the ground, and those of the rest of the building, seventy-five.

Except the recesses on the east and west fronts, the building covers very nearly the whole lot, measuring about fifty-three thousand square feet.

The cubic contents seems to be something over four and a half million cubic feet. This scheme, which in its general composition is one of the most picturesque and effective of all those presented, is fairly well adapted to be built part at a time.

III.

The third group comprises numbers 37 and 39, in which the entrance is in the basement, with a flight of stairs immediately within, leading up to the first story.

DESIGN No. 37.—This design shows a basement and sub-basement both above the level of Calvert street, and three high stories above. The basement, first and second stories all contain mezzanines on four sides.

In the sub-basement is a triple passage, which passes across the building, and a driveway for vans leading into a prisoners' yard.

The main entrance is through a single, but large, doorway, on a level with the sidewalk and the basement.

An ample vestibule incloses a wide flight of steps, leading up to the spacious central hall of the basement, whose lateral arms reach to Lexington street on one side and to Fayette street on the other. There are eight elevators, two in each corner of the hall, and at the western end are two large staircases, with a passage between them which leads to the St. Paul street entrance. There is a similar central hall above, open from the first story to the roof, and partly lighted by areas at the sides.

In the first story is a central entrance, on a level with St. Paul street, but there are no side entrances above the basement.

There are four areas, each about forty-two feet wide and one hundred feet long.

In both the first and second stories there are five courtrooms, one large and four small, all admirably lighted upon opposite sides by windows extending the whole length of the long sides of the rooms and opening upon these areas over the roofs of long narrow corridors. In the third story and in the basement the Supreme Bench and two other courtrooms are lighted in the same manner.

All the courts are well placed and their general arrangements are convenient for the public service.

The smaller and more private rooms are on the outer walls, with independent means of access, and are well separated from the more public thoroughfares. They are lighted fairly well from the street and are about sixteen feet deep throughout.

The Calvert street front shows a low sub-basement, a high basement and five ranges of windows above, four of which are in the height of colossal pilasters, the fifth in a sort of frieze, above which a thin cornice crowns the wall. At the entrance still larger piers run up to the height of all seven stories, carrying a similar frieze and cornice, but on a still larger scale, a hundred and forty feet from the ground. The whole is in the modern French style.

This design is admirable in the general features of the plan, which has a great resemblance to that of No. 35, but it exhibits, to my mind, both in plan and elevation, but little taste and judgment in respect to its architectural treatment.

The height of the main cornice is about one hundred and twelve feet. The building covers the whole lot, measuring about 65,000 square feet. Of this, about 15,400 feet is taken up by open areas, or nearly twenty-five per cent. The cubical contents is about seven and a half million cubic feet.

This scheme is well adapted to being built part at a time, in which case the grand staircase would probably have to be replaced by a temporary structure.

DESIGN No. 39.—This design shows a basement on a level with Calvert street, and three high stories. The first and second contain mezzanines over a portion of the north and south sides.

There is an entrance for vans in the basement.

The main entrance is into the basement by a single door. Immediately within is a flight of steps leading to a long central hall in the first story, which is lighted from the top. This central hall is cruciform, and has an entrance on the level of St. Paul street, and small side entrances from Lexington and Fayette streets.

The principal stairways, each inclosing three elevators, are in the corners, and are removed as far as possible from the entrance. Four smaller stairways are placed on either side of the tranverse portion. Only the exterior rooms with corridors and the transverse central portion extend into the upper stories.

There are accordingly two large areas above the first floor, each 108 by 90 feet; under which is the long portion of the hall, four semi-circular courtrooms opening therefrom, and eight small areas or light-wells of irregular shape.

Three of these semi-circular rooms contain the smaller courts, the principal court being at the eastern end of the hall, lighted on one side from the street.

The principal court in the second story is above that in the first, but is entered at the ends, and is lighted on opposite sides from the street and from the area.

There are also in this story three smaller courts lighted on two sides, and two lighted on one side from the street, all opening from corridors.

The Supreme Bench is in the southeast corner of the third floor, lighted on two sides from the streets.

The smaller and more private rooms, from twenty-five to thirty feet in depth, are on the outer walls, lighted from the street, and opening upon the corridors; some of them are in mezzanines.

The Calvert street front shows a rusticated basement with a plain small door in the center. The first story also is treated as a basement, upon which rest pilasters, running through the second and third stories, and bearing the main entablature, with a pediment over the central pavilion.

The face of these two basements is slightly beveled. The building has steep roofs.

While the plan has little to recommend it, the composition of the façades, both on the front and on the sides, is among the most elegant and simple of all those submitted.

The height over the main entrance is about one hundred feet. The building covers the whole lot, measuring about 65,000 square feet; of this about 1,600 square feet is taken up by areas in the basement and first floor; and about 18,000 feet in the second and third, or twenty-seven per cent.

The cubic contents is about five million cubic feet.

The scheme is fairly well adapted to being built part at a time.

IV.

The other two designs, No. 57 and No. 21, are examples of the treatment which employs no central hall, but gives access to all parts of the building by corridors and passages. It is a natural result of this disposition, as may be seen in these examples, that there is no obvious separation between the parts of the building intended for public use, and those devoted to the more private service of the officers of the courts. These two designs have been selected from the designs of this class because of the excellence of their external treatment.

DESIGN No. 57.—This design shows a basement, sub-basement and three good stories above. The first and second stories have mezzanines.

There is no direct passage across the building, either in the basement or in the first story. There is a driveway for the prisoners' van in the sub-basement, convenient to the lockups in the basement. There are also, in the basement, side entrances with stairs leading up to the floor above.

The main entrance is into the basement by a triple doorway, a few steps above the Calvert street sidewalk. Within is a long transverse vestibule, containing three staircases. There is another entrance into the first story from St. Paul street, near which are two staircases.

The middle of the building is occupied in the first story by four areas, and four courtrooms, with their dependencies. These are surrounded by a wide corridor, which gives access to all parts of the building. There are two additional courtrooms at the western end. In the second story are two courtrooms, with their dependencies, in the middle of the building, two at the eastern end and two at the western. The Supreme Bench is placed in the third story, directly over the entrance.

The smaller rooms on the outer walls are twenty feet deep.

The destinctive feature of this design, as is plainly shown by the section, is that the open areas are much larger in the upper stories than in the lower, so that the mass of rooms in the center of the building is extremely well lighted.

Ten of the courtrooms are lighted on opposite sides, the other three on adjacent sides.

The exterior shows a Corinthian order, raised upon a double or triple basement. The main cornice is well managed, and the colonnade and portico above it form a striking and dignified feature. The building covers the whole lot. It is well adapted to being put up part at a time.

Although this design lacks the imposing feature of a central hall, the entrance vestibule, with the staircases adjoining it, form a dignified and effective combination.

DESIGN No. 21.—This design shows a main building, nearly square, with additional accommodation in the rear built around a large open yard on the level of St. Paul street.

In the main building is a basement slightly above the level of Calvert street, two principal stories, which have different levels at the eastern and western ends, and a third story which is lofty in the center.

The additional portion extends only as high as the second story.

The first and second stories have mezzanines on the north and south sides.

In the basement is a passage across the building from Lexington street to Fayette street.

The entrance for vans is into an open yard in the rear, from which the prisoners descend to the basement.

The main entrance is into the basement through five ample doorways, three of which enter a vestibule with stairways to the right and left, and two lead to the corridors.

There are two smaller stairways surrounding elevators, near the side entrances, and two more, midway, go only to the first floor.

There is a flight of stairs leading from the yard upon St. Paul street to the rear level of the first floor.

There are four areas in the main building only nineteen feet wide, besides the rear yard, 90 by 60 feet.

In the first floor there are five courts, one large and two smaller in the main building, with two others in the additional portion. Two are lighted on opposite sides from the narrow areas, two on two sides from the street and one on one side from the street.

The second story courts are the same, with a sixth, lighted on one side from the street. In this story the lobby before the principal court disappears, and the doors open on a seven-foot corridor, at some distance from the stairways.

The Supreme Bench is in the central portion of the third floor, lighted from opposite sides.

The smaller and more private rooms are on the outer walls of the main stories and mezzanines. They are from twenty to forty feet in depth.

The Calvert street front shows a rusticated basement with large windows and five large doors in the central feature, which slightly projects.

Upon this base rests a two-story Corinthian order, bearing the main cornice and an attic. The central portion above the doorways is richly treated with columns, between which and below the windows are a species of pedestal in front of which are statues.

The plan has little to commend it, but the façade is pleasing and dignified.

The height over the main doorway is something over one hundred feet.

The building covers the whole lot, measuring about 65,000 square feet; of this 9,400 feet is taken up by areas, or about fourteen per cent.

The cubic contents is something over five million cubic feet.

The scheme is well adapted to being built part at a time.

Although no one of these designs appears to be, as it stands, perfectly satisfactory in respect both of plan and elevation, it will, in my judgment, be practicable to reach a perfectly satisfactory result, if a design can be found that at the same time shows a convenient arrangement of the rooms and inspires confidence in the professional resources of the author, so that he may fairly be trusted, with further study, to produce a satisfactory exterior.

If this cannot be done, the committee may reach a satisfactory conclusion by selecting a good plan of which the elevation is unsatisfactory, and a good elevation which goes with an inferior plan, with a view of combining the two in the hands of that one of the two authors who inspires the most confidence in his capacity to effect a successful result. WILLIAM R. WARE.

NEW YORK, June 1, 1894.

*Photogravure Plate:* Residence of W. I. Clark, La Grange, Illinois. Frank L. Wright, architect.

PHOTOGRAVURE PLATES.

*Issued only with the Photogravure edition.*

Old St. Peter's Church, Philadelphia.

Interior Old St. Peter's Church, Philadelphia.

Residence of H. A. Blair, Chicago. Charles S. Frost, architect.

Palmhouse and Stable of George M. Pullman, Chicago. S. S. Beman, architect.

Residence of George H. Mitchell, Hinsdale, Illinois. Shepley Rutan & Coolidge, architects, Chicago.

Residence of John A. Lynch, Chicago. Jenney & Mundie, architects. A plate showing entrance is also given.

*Omission.*—The two views of Art Museum at the Stanford University, Palo Alto, California, published in our July number, were designed by architects Percy & Hamilton, San Francisco, Cal.

## ASSOCIATION NOTES.

NATIONAL SCULPTURE SOCIETY.

The following circular has been issued by the National Sculpture society to sculptors and artist-artisans:

37 WEST TWENTY-SECOND STREET, NEW YORK, April 1, 1894.

The National Sculpture Society wishes to announce that it will hold its second annual exhibition of sculpture during the coming midwinter.

It makes this announcement now to give artists time to prepare for it.

The unexpected success of the last exhibition, which brought together works from St. Louis, Chicago, Cincinnati, Pittsburgh, Philadelphia, Worcester, Milton, Boston and Paris, as well as from Brooklyn and New York, justifies the belief that the next exhibition will be even more successful.

The date, place and conditions of holding this exhibition will be announced in October.

A jury of the society will pass upon all entries.

Works which have been shown at a public exhibition in New York during the decade 1884-1894 will not be accepted. All other works are eligible.

As before, large space will be given to all branches of art in which form is a factor, such as the work of the lapidary, medalist, wood-carver, ivory-carver, ceramist, glass-worker, iron-forger, gold, silver and copper smith, terra cotta worker, etc.

It is hoped artists working in such lines will take special pains to make this department a success.

Cost of transportation to and from gallery will be at the expense of the artist. Cost of handling in gallery will be assumed by the society.

As an encouragement of ideal sculpture for the household, the society contemplates selecting, by a majority vote, the best statuette suitable for bronze reproduction, and offering a limited edition to its members and friends on subscription. The details and conditions of this statuette competition will be given in the October announcement.

It is hoped that sculptors and artist-artisans will, at their earliest convenience, inform the secretary of the society of the nature of the works they intend sending, and the exact dimensions of such objects.

F. WELLINGTON RUCKSTUHL, Secretary.

The executive council consists of—J. Q. A. Ward, president; Richard M. Hunt, first vice-president; Richard W. Gilder, second vice-president; Charles De Kay, treasurer; F. Wellington Ruckstuhl, secretary.

## MOSAICS.

AN almost immediate demand has sprung up for the new Tiffany enameled brick, the company having shipped quantities of them to several adjacent states, and as far east as Pennsylvania. They will also be used in the new Hale building in this city. We are informed that the contract of the Tiffany Company for enameled brick for the Marquette block is for between 125,000 and 200,000, instead of "several thousand," as inadvertently stated in a recent issue.

THE new illustrated catalogue of the Empire Fireproofing Company, of Pittsburgh and Chicago, covers the subject of fireproofing in every particular. Floors, ceilings, partitions, roofs, furring, lathing, column and beam coverings, floor deafening, etc., etc., are fully illustrated and described. Their new End Construction Arch differs from any other in use, the tiles being so made as to allow one to lap over the other, making it absolutely impossible for any of the tiles to slip down. They also manufacture hollow tiles of various sizes for segmental arches where great strength is required. The variety of partition work manufactured by this company is surprising. It varies from the 3-inch hollow partition used largely for insulating walls to the standard 6-inch partition of approved pattern. The Empire Fireproofing Company also manufacture and keep in stock terra cotta goods of all kinds and sizes, as also vitrified salt-glazed sewer pipe, wall coping, chimney tops, flue linings, etc. Their extensive factories are located at Empire, Ohio, and Brazil, Indiana.

## BUILDING OUTLOOK.

OFFICE OF THE INLAND ARCHITECT,
CHICAGO, August 10, 1894.

Quite a number of favorable trade symptoms have manifested themselves during the past few days; but builders, architects, engineers, contractors and manufacturers are not over-well pleased with the results of seven months of this year. Considering the obstacles overcome there is no ground for discontent. The long depression has created necessities in every branch of production, which will develop a demand that will be felt in every part of the country. Enormous crops seem assured, but farmers and planters are faced with the lowest prices ever known. There is a vague feeling that these low prices are caused by shrewd financial manipulation, a suspicion which, if demonstrated to be a fact and a truth, would quickly intensify and strengthen the grumbling discontent of the great body of producers everywhere. Regarding actual trade, manufacturing and industrial conditions, it is proper to say that there is a moderate improvement, that prices continue at their lowest, that new enterprises are entered upon with extreme prudence, that enterprise, while alert and anxious, is prudent and even fearful. The conditions of the past year have not been broken, but there are evidences of a change, the chief of which is the depleted condition of yards, bins, shelves and warehouses. A year or more ago, manufacturers, railroad men and business men generally began to slow down, and if they have ceased to do so it is only very lately. The feeling is abroad that there is danger of pursuing this conservative policy to extremes and that a reaction of moderate dimensions is probable within a month or two. There is more building being undertaken, more manufacturing done. Shops are busier. Our local steel and lumber markets show that large requirements have been quietly covered within two weeks. In eastern centers the same tendency is noticed. Prices are phenomenally low, money is phenomenally cheap, but, outside of certain channels, as hard to get as when more abundant. There is a vast volume of business awaiting the signal gun. But while all this is true, it would be unwarranted to expect a sharp expansion of trade, for several reasons. The country has entered upon an era of permanently low prices. It is too soon to borrow trouble as to what organized labor will do next year. This much can be said, that with compactness and force of organization comes a more conservative management and line of conduct. There are evils to be removed, and we have a thoroughly aroused public intelligence engaged in this work. Midsummer finds us better equipped for the conditions now facing us than we were six months or a year ago.

## SYNOPSIS OF BUILDING NEWS.

Architects are invited to furnish for publication in this department monthly or occasional reports of their new work before the letting of contracts. Reports of buildings costing less than $5,000 are not published.

**Chicago, Ill.**—Architects Curry & Foster: Are working on plans for the Industrial School for Girls, to be erected at South Evanston; it will be three-story and basement, 45 by 76 feet in size, with four wings 45 by 74 feet each; it will be constructed of pressed brick, stone and terra cotta, and all the sanitary and modern improvements; the design shows a beautiful building.

Architect W. S. Smith: For Charles Capper, a two-story residence; to be erected at Beverly Hills; it will be of frame with stone basement, have all the modern improvements, furnace, etc.

Architect L. T. Shipley: For R. S. Martin, on Campbell avenue near Armitage avenue, a two-story and basement flat building, 24 by 64 feet in size; to be of pressed brick and stone front, have all the sanitary improvements, furnaces, etc. For D. S. McMullen, at Evanston, a two-story, basement and attic residence, 42 by 61 feet in size; to be of frame with stone basement, have hardwood interior finish, electric light, hot-water heating. For R. B. McMullen, at Evanston, remodeling residence; new plumbing, hardwood finish, gas and electric fixtures.

Architect H. R. Wilson: For William Best, at Forty-fourth street and Drexel boulevard, a three-story residence, 28 by 90 feet in size; to have a stone front, hardwood interior finish, electric light, hot-water heating, etc. For Albert Barnes, at Decatur, Illinois, a two-story, basement and attic residence, 34 by 57 feet in size; to be of frame with stone basement, have hardwood interior finish, furnace, etc.

Architects Dixon & Brookes: For Charles F. Stewart, three two-story residences, 50 by 65 feet in size; to have stone fronts, hardwood interior finish, the modern sanitary improvements, furnaces, etc.

Architect Niels Buck: Made plans for four two-story flats, to be erected on Paulina street and Woodside avenue; to be of pressed brick and stone fronts, have all the sanitary improvements, mantels, gas fixtures, furnaces, etc. For John Riddell, a two-story frame flat building, to be erected at Burlington street, Cuyler; to have brick basement, the sanitary improvements, mantels, gas fixtures, steam heating, etc. Also, made plans for a two-story and basement store and flat building, 27 by 65 feet in size; to be built at the corner of Roscoe boulevard and Perry street. Also, making plans for a two-story residence, to be erected at the corner of Paulina street and Belleplaine avenue.

Architect John P. Hettinger: For J. P. Brice, a three-story store and flat building, 25 by 90 feet in size; to be erected at West North avenue near Humboldt Park; to be of stone front, have pressed brick on the side, all the modern sanitary plumbing, mantels, gas fixtures, etc. Also, made plans for remodeling three three-story houses on West Harrison street near Leavitt street; new plumbing, mantels, etc.

Architect W. J. Van Keuren: Made plans for addition to Grace Episcopal Church, at Oak Park. Also making plans for a two-story flat building, 30 by 53 feet in size; to be erected at Austin, for A. J. Sweeney; to have all the sanitary improvements, gas and electric fixtures, etc.

Architects Bell & Marble: For D. Hequenbourg, on Fullerton avenue, near Halsted street, remodeling residence; will put on new front, rear and sides, new plumbing, gas fixtures, mantels, heating, etc. Also making plans for six four-story flat buildings, 25 by 70 feet each; to be erected on Ashland avenue and Polk street; to have stone fronts with carved ornamentation, hardwood interior finish and mantels, gas and electric fixtures, etc. For A. W. Hester, at Arlington place, a three-story residence, 33 by 50 feet in size; to have a stone front, gable roof, hardwood finish, mantels, gas fixtures, combination heater, etc.

Architect G. W. Maher: For A. B. Towers, at Newport avenue, a two-story basement and attic residence, 34 by 68 feet in size; the first story to be of Darlington sandstone and the rest of frame; to be in the Colonial style of architecture.

Architect E. M. Newman: For W. Walkup, at 688 Fullerton avenue, a three-story flat, 25 by 90 feet in size; to be of stone front, have all the improvements, mantels, furnace, etc.

Architect Alfred Smith: For C. F. Unrath, at Adams street, near Garfield Park, a three-story and basement residence, 32 by 77 feet in size; to have a stone front, hardwood finish, mantels, all the modern sanitary improvements, etc.

Architects Ruehl & Gatterdam: For Anton Hofherr, a two story, basement and attic residence, 25 by 65 feet in size; to be erected on Calumet avenue, near Fifty-fourth street; to be of stone front, have all the modern sanitary plumbing, mantels, etc.

Architect H. G. Fidelke: For W. K. Gore, two two-story residences, to be erected at Forty-eighth street, near Vincennes avenue; to be of pressed brick and stone fronts, have the modern sanitary improvements, electric and gas fixtures, hot-water heating etc. For John Lubeck, on Ione place, near Vincennes avenue, a three-story flat building; to be of pressed brick and stone front, have sanitary improvements, mantels, etc. For same owner on Forty-eighth street, near Vincennes avenue, two two-story residences; to have stone fronts, all improvements.

Architect J. A. Thain: For D. E. Brush, at 4415 Michigan avenue, a two-story, attic and basement residence, 30 by 80 feet in size; to have a stone front, hardwood finish and mantels, gas and electric fixtures, hot-water heating, etc. For Leo Strauss, on Prairie avenue, near Twenty-ninth street, remodeling residence; will put in new plumbing, gas fixtures, marble and mosaic work, painting, etc. For Peter Hayden, at 45, 47 and 49 Lake street, remodeling building recently burned; will put in new plumbing, gas fixtures, elevators, steam heating, etc.

Architect H. M. Hansen: For Jacob Strom, at 1509 Oakdale avenue, a three-story and basement flat building, 25 by 69 feet in size; to have a stone front and porch, all the modern plumbing, gas fixtures, etc

Architect Julius Speyer: For John O'Connor, at 1533 West Monroe street, a three-story flat building, 25 by 90 feet in size; to have a raindrop stone front, hardwood finish, mantels, gas fixtures, steam heating; cost $15,000.

Architect George Grussing: For J. S. Cally, at 897 Walnut street, a two-story and basement flat building, 24 by 65 feet in size; to have a stone front, the sanitary plumbing, mantels, gas fixtures, furnaces, etc. For John Mills, on Adams street, a two-story and basement flat building, 25 by 67 feet in size; to be of stone front, have all the improvements, ornamental grills, furnaces, etc.

Architects Huehl & Schmid: For William Schick, on Burling street, near Wrightwood avenue, three two-story flats, 72 feet front by 64 feet deep; to be of stone front, have hardwood finish and mantels, gas and electric fixtures, modern plumbing, etc.

Architect Joseph Bettinghofe: For Mrs. Barbara Mark, on the northwest corner of Mohawk street and north avenue, remodeling three-story and basement store and flat building; the interior will be taken out and rebuilt; the attic finished up and new plumbing, mantels, gas fixtures, etc., put in.

Architect William Strippleman: For T. J. Sage, a two-story flat building, to be erected on Adams street near West Fortieth street; to be of stone front, have the sanitary plumbing, gas fixtures, laundry fixtures, mantels, etc.

Architects Flanders & Zimmerman: For Joseph Plummer and Walter Green, two two-story residences, 30 by 45 feet in size; to be built at Glencoe; to be of frame with stone basement, have the best of modern plumbing, hardwood interior finish, mantels, gas and electric fixtures, furnaces, etc. For Judge Clifford, at 1720 Wabash avenue, a four-story store and flat building, 25 by 90 feet in size; to have a stone front, hardwood finish, the modern sanitary

plumbing, steam heating. For J. M. Coleen, at 4737 State street, a four-story store and flat building 25 by 90 feet in size; to have a pressed brick and stone front, modern plumbing, electric light, steam heating.

Architect W. H. Lamson: For H. L. Wheatley, a three-story store and flat building, 40 by 125 feet in size; to be erected at the corner of Addison and Commercial streets; to be of pressed brick and stone, have all the modern sanitary arrangements, gas fixtures, mantels, steam heating, etc.

Architects Faber & Pagels: For J. Hebert, on North Halsted street, a four-story and basement apartment house, 66 by 90 feet in size; to be of stone for the first story and the rest of pressed brick with stone trimmings, galvanized iron bays and cornice; all the modern sanitary improvements, mantels, gas fixtures, laundry fixtures, etc.

Architect O. L. McMurray: Making plans for a two-story and basement school, 40 by 68 feet in size; to be of pressed brick and stone front, have plumbing, furnace, etc. For F. F. Noleman, a two-story basement and attic residence, 32 by 53 feet in size; to be erected at Centralia, Illinois; to be of frame with stone basement, have cypress interior finish, mantels, gas fixtures, furnace, etc. For Prof. Fernando Sanford, a two-story basement and attic residence, 34 by 56 feet in size; to be erected at Palo Alto, California, for the Leland Stanford University; to be of frame with stone basement, have hardwood interior finish and mantels, the best of plumbing, electric fixtures, hot-water heating, etc.

Architect W. L. Klewer: For C. H. Bilson, a two-story store and flat building; to be erected at the corner of Robey street and Lawrence avenue; to be of pressed brick and stone front, have all the modern plumbing, mantels, gas and electric fixtures.

Architect D. A. Lapointe: For C. J. Magee, at the corner of Fulton street and St. Louis avenue, a three-story and basement flat building, 50 by 106 feet in size; to be of pressed brick and stone front, have hardwood interior finish and mantels, gas and electric fixtures, laundries, etc. For F. H. Hebbard, at Winchester avenue south of Ogden avenue, a two-story and basement barn, 55 by 72 feet in size; to be of brick construction, have the modern conveniences, also ninety-eight stalls.

Architect F. W. Fitzpatrick: For Mrs. Tourtellotte, on West Adams street between Forty-third and Forty-fourth streets, a two-story flat building, 50 by 67 feet in size; to have a stone front, all the modern sanitary conveniencies, gas fixtures, ranges, fireplaces, mantels, electric wiring, furnaces, etc.

Architect D. S. Pentecost: For T. C. Will, a two-story residence, 25 by 42 feet in size; to be erected on Hiawatha avenue, La Vergne, Illinois; to be of pressed brick and stone front, have all the sanitary improvements, mantels, gas fixtures, hardwood interior finish, laundry arrangements, furnace. For A. H. Darrow, southwest corner of Monroe and Campbell streets, remodeling a three-story residence, 48 by 50 feet in size; pressed brick and stone front, sanitary plumbing, mantels, electric wiring, hot-water heating.

Architect J. M. Hoskins: For Mrs. E. J. Eaton, at 855 Warren avenue, a three-story flat building, 25 by 72 feet in size; to be of Portland stone front, have all the modern plumbing, gas fixtures, electric wiring, mantels, steam heating. Also for two-story and basement flat building, 25 by 68 feet in size; to be erected on Fulton street, stone front, sanitary plumbing, mantels, gas fixtures, etc.

Architects Elmendorf & Park: For J. S. Lamb, on Park avenue east of Homan avenue, a two-story residence, 25 by 65 feet in size; to be of stone front, have hardwood interior finish, mantels, gas and electric fixtures, ranges, fireplaces, the best of plumbing, furnace, etc. Also made plans for a two-story flat building, 23 by 54 feet in size; to be erected at Lexington street west of Garfield boulevard. To be of stone front, have all the modern plumbing, mantels, gas and electric fixtures, furnaces, etc.

Architect E. J. Nichols: For Charles Swanson, at 81 Walnut street, a three-story and basement flat building, 25 by 52 feet in size; to be of pressed brick and stone front, have the sanitary improvements, gas fixtures, mantels, furnaces, etc.

Architects Perkins & Selby: Have completed drawings for the ten-story "Temple of Music," to be erected on Van Buren street between Wabash avenue and Michigan avenue. It will be of pressed brick and terra cotta front, of fireproof construction, have hardwood finish, marble, mosaic and tile work, steam heating, electric light, elevators and all the necessary conveniences; the cost will be about $200,000. It will be used for musical purposes exclusively, excepting a recital hall occupying most of the first and second stories which will be used on Sunday mornings as a church by the Swedenborgian society. This society will also occupy offices in the building. The hall will be one of the finest and best adapted to its purposes of any in the country and will have accommodation for five hundred people. The first floor will have two stores, one on each side of the entrance. The upper stories will be used for studios. The partitions will be made soundproof, and by special methods of construction sound will be prevented from penetrating into the public halls. The old Swedenborgian church now on the ground is being torn down and building will be commenced as soon as the ground is clear.

Architect Karl L. Lehman: For Oppedale & Urheim, at 935 West Division street, a three-story flat building, 24 by 62 feet in size; to be of stone front, have modern plumbing, mantels, gas fixtures, hot-water heating, etc.

Architect L. G. Hallberg: For George Straith, a two-story, basement and attic residence, 28 by 53 feet in size; to be erected at Birchwood Beach; it will be of handsome stone front, have hardwood interior finish and mantels, gas and electric fixtures, hot-water heating, etc.

Architect R. W. Dahlgren: For M. Swanson, a three story flat building, 24 by 60 feet in size; to be erected at Buckingham Place; to have a neatly designed stone front, hardwood interior finish and mantels, gas and electric fixtures, laundries, steam heating, etc.

Architect E. H. Turnock: For H. C. Seaman, on Ione Place near Forty-ninth street, between Vincennes avenue and Grand boulevard, two two-story residences; to have very pretty stone fronts, hardwood interior finish and mantels, the best of modern plumbing, gas fixtures, heating, etc. For Samuel Myers, at Highland Park, a two story residence, 35 by 50 feet in size; to be of frame construction with stone basement, have hardwood interior finish, mantels, gas fixtures, sanitary plumbing, laundry fixtures, furnace. For Kentland Improvement Company, a two-story hotel, 48 by 104 feet in size; to be of pressed brick and stone front, have the modern sanitary improvements, gas fixtures, steam heating, etc.

Architects Goudie & Hoffman: For Dr. John W. Wirth, at Madison avenue and Seventy-first Place, a two-story store and flat building, 50 by 65 feet in size; to have a front of pressed brick with stone trimmings, mantels, gas fixtures, sanitary plumbing, etc. Also making plans for a two-story flat building, 26 by 46 feet in size; to be erected at the corner of Leland avenue and West Ravenswood Park, Ravenswood; to be of pressed brick and stone front, have sanitary plumbing, mantels, gas and electric fixtures, furnaces, etc.

Architect J. J. Egan: Is completing drawings for the Home For the Aged, to be erected on the northwest corner of Fifty-second street and Prairie avenue, for the Little Sisters of the Poor; it will be a handsome building, 140 by 120 feet in size, four stories and cellar; the fronts will be of pressed brick and stone, the interior to be finished in oak, with marble wainscoting, etc. All the latest improvements will be put in, such as electric lighting and steam heating. It will contain a chapel 75 by 30 feet in size and 30 feet high, also domitories, offices, etc. Accommodations will be provided for three hundred, besides necessary accommodations for the Sisters.

Architect F. R. Schock: For Norton Brothers, at Maywood, a two-story factory, 243 feet square; to be of common brick with red pressed brick and terra cotta trimmings; to be of mill construction; this will be the most complete building of its kind in the country; in the center will be a court eighty feet in size; also will have buildings for electric light plant, engines, boilers, dynamos, etc.; steam heating, pumping works, water towers, etc. Same architect made drawings for a semi-detached two-story residence, 75 by 40 feet in size; to be erected at Grand boulevard near Forty-eighth street, for Mrs. H. G. Woodward; to be of Roman brick with St. Lawrence marble trimmings, have hardwood interior finish, electric light, hot-water heating, etc.

Architect Otto A. Kupfer: For Fred Grunst, a three story and basement stone front flat building, 21 by 54 feet; all improvements. For Mrs. M. Roach, a three story and basement stone front flat building, 25 by 56 feet. For the German Evangelische Friedens Gemeinde, of Blue Island, Illinois, a brick and stone church and schoolroom, 34 by 66 feet; tower and spire to be 100 feet high; to have electric lighting, furnace heating, plumbing, etc.; cost, $10,000. For Mr. Fred Jebens, at Blue Island, Illinois, a two-story and basement stone front, store and residence, brick building, 26 by 62 feet, on South Western avenue; to have galvanized iron bays and cornice, steam heating, electric lighting and sanitary plumbing; cost, $6,500. For William Hirsch, a three-story and basement stone front, residence and flat building, 25 by 68 feet, on Garfield boulevard; to have all modern improvements, gas lighting, steam heating, cement and tile floors, mantels and sanitary plumbing; cost, $12,000.

Architect C. R. Adams: For Dr. F. J. Burr, at Rogers Park, a two-story basement and attic residence, 28 by 44 feet in size; to be of frame, with stone basement, have hardwood finish, mantels, gas fixtures, the sanitary plumbing, furnace. For Ferdinand Bunte, a two-story attic and basement residence, 25 by 48 feet in size; to be erected at Rogers Park; to be of frame with stone basement, have all the improvements, furnace, etc.

Architect Ira C. Saxe: For Mark Baskerfield, on the northeast corner of Commercial avenue and Leland avenue, Ravenswood, a two story and basement flat building, 48 by 57 feet in size; to be of buff Bedford stone front, hardwood interior finish and mantels, the best of modern sanitary improvements, laundries, gas and electric fixtures, electric bells, speaking tubes, window screens, concrete floors, furnaces.

**Cleveland, Ohio.**—Architects Coburn & Barnum are preparing plans for a winter residence, to be built on the east coast of Florida, for Mr. C. W. Bingham, of Cleveland. It will be two stories, frame, shingle roof, and will be fitted up in a simple, plain finish, with plumbing, wood mantels, etc.; to cost about $7,000. Figures are now being taken on a frame Baptist church, by the same architects; building will be erected at the corner of Pearl and Library streets; slate roof, plumbing, furnace heat, pews, chairs, pulpit furniture and organ will be required; cost about $6,000. They also report a double frame residence building, on Wilson avenue, for Mr. P. J. Donovan; cost $7,000. They are also preparing plans for a brick Baptist church to be built at the corner of Bridge and Dare streets; probable cost $10,000.

Architect W. D. Benes has two frame residence under process of construction on Grace avenue in Lakewood, Ohio, and is now taking figures on a double frame dwelling, to be built on Case avenue, for Mr. James Cole; probable cost $7,000.

Architect J. W. Russell reports: Additions and alterations to a store building on Cedar avenue, for Dr. R. S. Hubbard; a frame residence on Hough avenue, for Willson Brothers, and a frame residence on Euclid place, for Dr. Jamin Strong.

Architect W. W. Sabin has a stone church to be built in Euclid, Ohio, and a brick church to be built on Gordon avenue, city; they will cost about $10,000 apiece.

Architects French & La Chance report: A frame residence for J. E. Terry, to be built on Russell avenue; all modern improvements, slate roof, bells and electric lights, hot-water heat; 37 by 60 feet in size; cost $5,000. For Robert Duffy, they report a three-story brick block, impervious brick front, on River street; living apartments on second floor; gravel roof, galvanized iron, and iron front with the brick; probable cost $12,000.

Norcross Brothers, contractors for same, of Worcester, Massachusetts, have just broken ground for a fifteen-story building on the north side of Euclid avenue between Bond and Erie streets; building will be 129 feet front on Euclid avenue, 250 feet deep to Vincent street, and 127 feet wide on Vincent street; the fifteen-story part will only extend back 60 feet; it will be 212 feet from the sidewalk to the top of the cornice; the first two stories will be used as storerooms; the one side of the entrance will be occupied, March 1, 1895, by H. R. Hatch & Co., dry goods, and elegant store fittings will be required; the main part of the building will be used for offices, and the top floor will be fitted up for a first-class restaurant; the offices and restaurant will be reached by four elevators; the New England Company, of which Samuel Chandler, Cleveland, is secretary, and Asahel Strong, Cleveland, treasurer, is putting up the building; Shepley, Rutan & Coolidge, of Boston, are the architects; probable cost between $400,000 and $500,000.

Architect A. H. Granger reports: House nearly completed on Kensington street, for Mrs. M. J. Kline, hardwood, furnace, plumbing, etc; cost $5,500. For H. G. Dalton, a frame residence on Genessee street, 62 feet 6 inches by 33 feet 6 inches in size; hardwood mantels, hot-water heat; cost $8,500. For D. J. Norton, a frame and shingle residence, 29 by 45 feet in size; Colonial; everything modern.

**Denver, Colo.**—Architect J. J. Huddart: For Mrs. H. W. Warren, a two-story brick dwelling, size 36 by 42 feet; cost $5,000. For W. C. Madison, a two-story residence, size 29 by 47 feet; brick; cost $5,000.

Architects Van Brunt & Howe, Kansas City, Missouri: For Union Depot Company, remodeling depot; three-story brick and stone at a cost of $72,000.

Architect Fischer: For George Tritch, a two-story business block, size 50 by 110 feet; brick; to cost $12,000.

**Detroit, Mich.**—Architects Mason & Rice: For D. J. Campau, a stone and brick residence, to be built on Jefferson avenue; cost $70,000.

Architects Donaldson & Meier: For Roman Catholic Society of the Holy Assumption, a two-story brick schoolhouse, size 40 by 72 feet; cost $7,000.

Architects Rogers & Macfarlane: For I. A. McGraw, M. D., and C. A. Lightner, a double brick residence on Van Dyke near Jefferson avenue; size 68 by 85 feet; buff pressed brick and stone; cost $25,000.

Architects M. L. Smith & Son: For Col. John Atkinson, a four-story brick office building; to cost $10,000. For R. McDougall, a two-story frame summer residence on Grose Isle in Detroit river; cost $5,000.

Architect A. E. French: For Mr. Williams, a three-story brick residence; to cost $6,000.

Architects Malcombson & Higginbotham: For Mr. Nichols, a two-story double frame residence on Eleventh street near Church street; cost $5,000.

Architects E. A. Walshe & Son: For Patrick Hickey, a two-story brick residence; cost $5,000.

Architects Van Leyen & Rill: For Beth Jacob Congregation, a brick and stone synagogue; cost $10,000.

Architect E. C. Van Leyen: For Parker, Webb & Co., a two-story brick and stone office building on Rose and Twentieth streets; to cost $5,000.

Architect J. G. McLean, Windsor, Ontario: For the Windsor School Board, a two-story brick schoolhouse; to cost $12,000. For the Ancient Order of Foresters, a three-story brick hall and office building; to cost $10,000.

Architect James A. Maycock, of Windsor, Ontario: For Windsor School Board, a two-story brick schoolhouse on corner of Tuscarora and Louis streets; to cost $22,500.

**Milwaukee, Wis.**—Architect Charles Kirchhoff: For the Schlitz Brewing Company, a three-story restaurant; size 25 by 100 feet; brick with stone trimmings; cost $11,000.

**Minneapolis, Minn.**—Architect W. S. Hunt: For H. Weiskopf, a three-story double flat building; size 47 by 106 feet; brick and stone; cost $12,000. The Franklin M. E. Church are contemplating erecting a new church, the building to cost $40,000.

Architects Bertrand & Keith: For J. W. McCoy, a two-and-a-half-story dwelling, stone and frame; size 45 by 70 feet; modern improvements; cost $15,000.

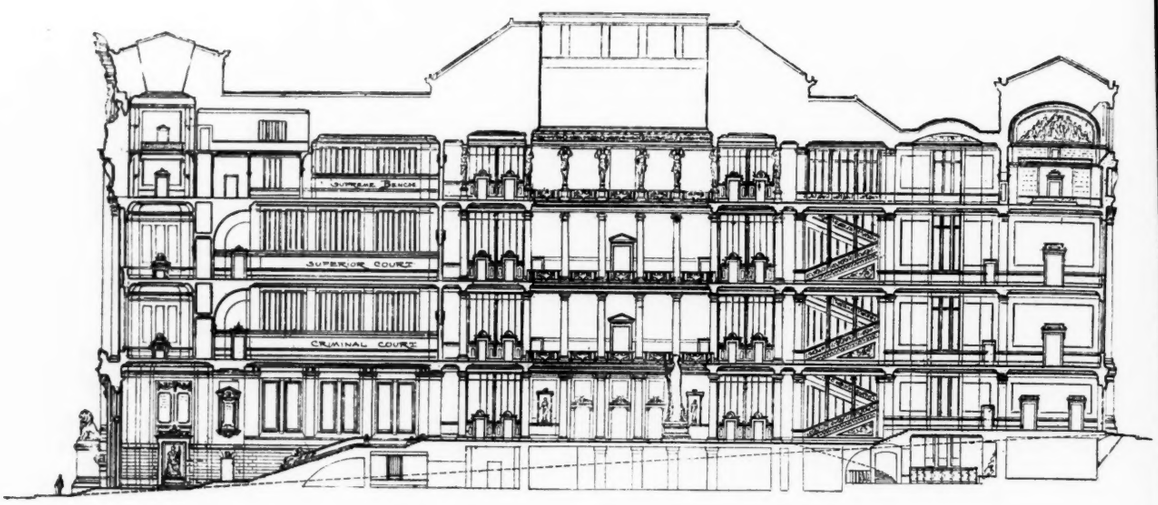
**Pittsburgh, Pa.**—Architect C. L. Phillis: For J. Twitchell, a two-story brick dwelling; to cost $6,000.

**St. Louis, Mo.**—Architects Barnett, Haynes & Barnett: For J. P. Wood, a four-story addition to St. John's Hospital; size 40 by 105 feet; pressed brick and stone; cost $20,000. For B. F. Hammett, a three-story residence; size 50 by 70 feet; brick and stone, slate roof; cost $20,000. For John Griffen, a two-story store and apartment building; size 36 by 56 feet; brick and stone; cost $10,000.

Architect A. Monschein: For J. P. Pray, a two-story residence; size 29 by 50 feet; brick and stone, slate roof; cost $10,000.

Architect M. T. O. Allardt: For M. A. Moran, two two-and-a-half-story dwellings; size 24 by 38 feet each; pressed brick, stone trimmings; cost $12,000. For E. Scown, a two-story flat building, brick, slate roof, all modern improvements; cost $6,000.

Architects C. H. Brown & Son: For J. O. F. Delaney, two three story store buildings; size 51 by 100 feet; brick and stone; cost $9,000.

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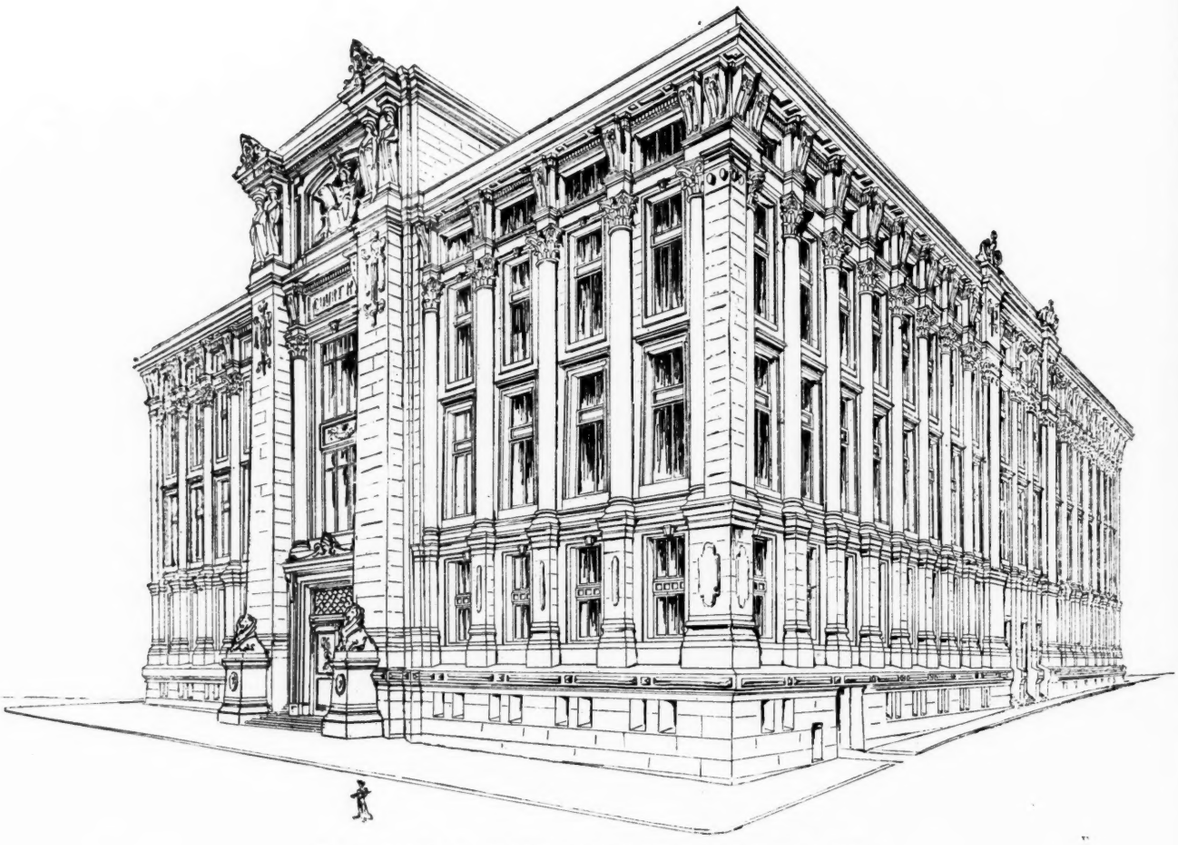
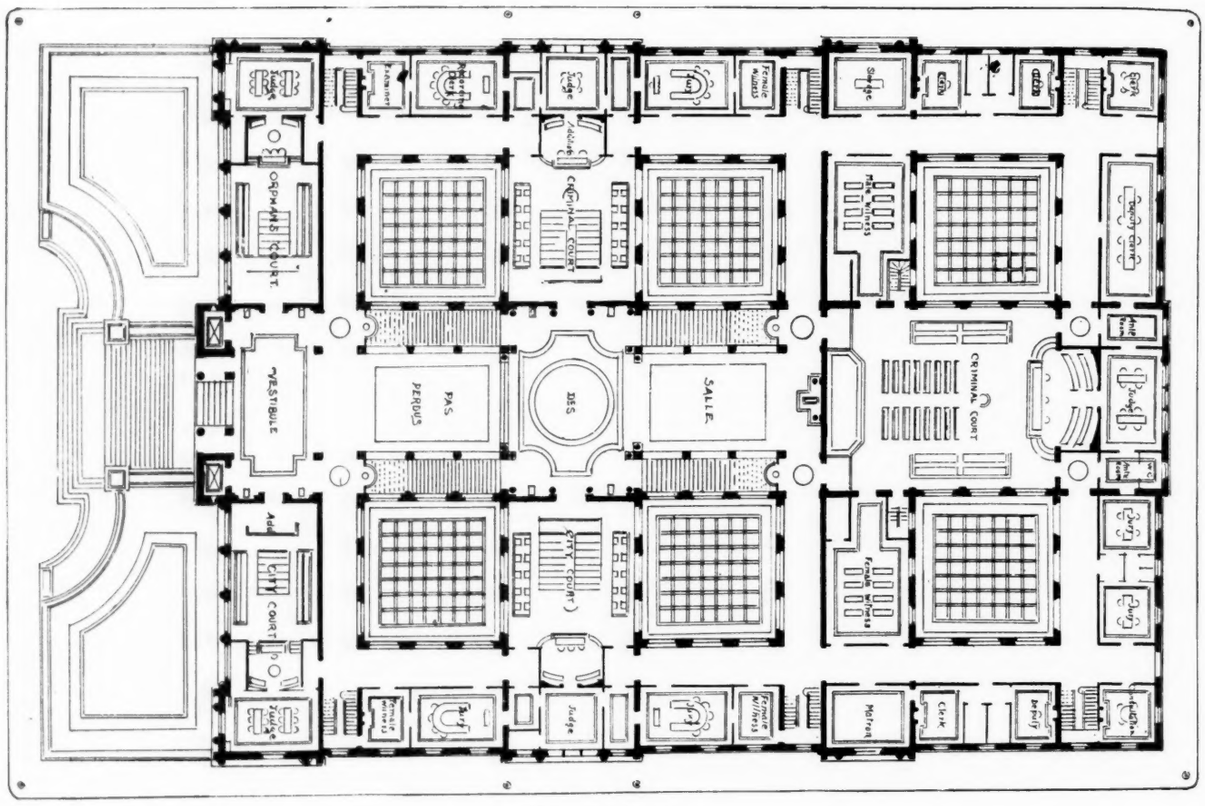


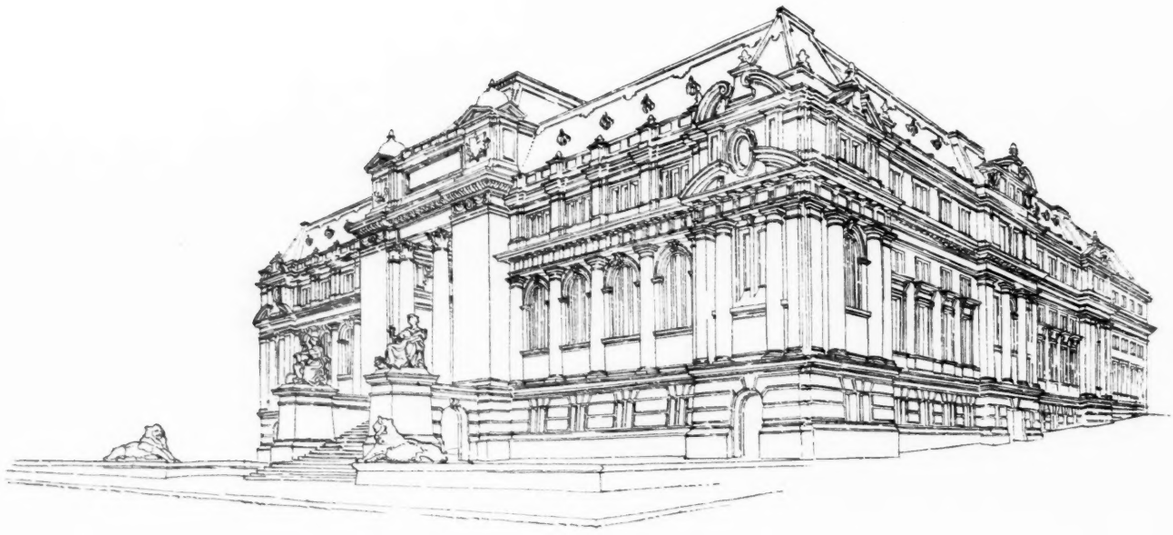
BALTIMORE COURTHOUSE COMPETITION.

(One of the best ten designs.)

SUBMITTED BY D. DESPRADELLE, ARCHITECT, BOSTON.



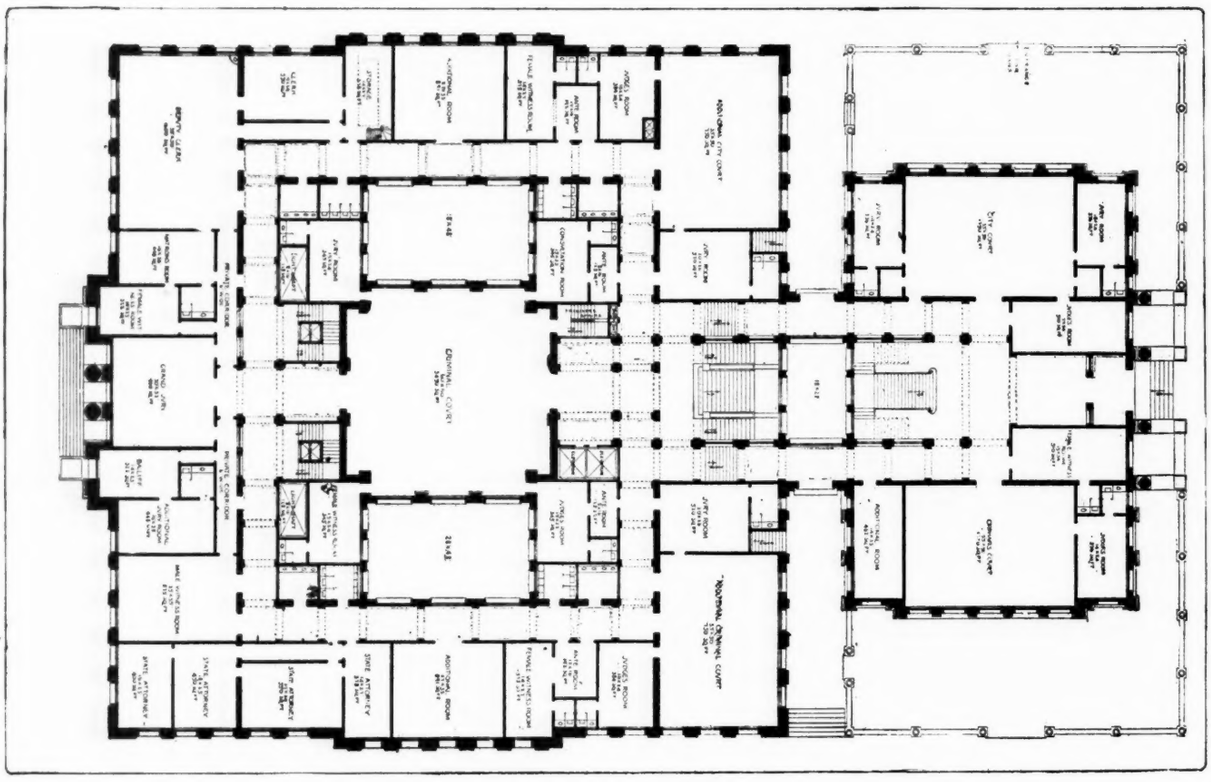

FIRST FLOOR PLAN.



BALTIMORE COURTHOUSE COMPETITION.

(One of the best ten designs.)

SUBMITTED BY WHITNEY WARREN, ARCHITECT, NEW YORK.



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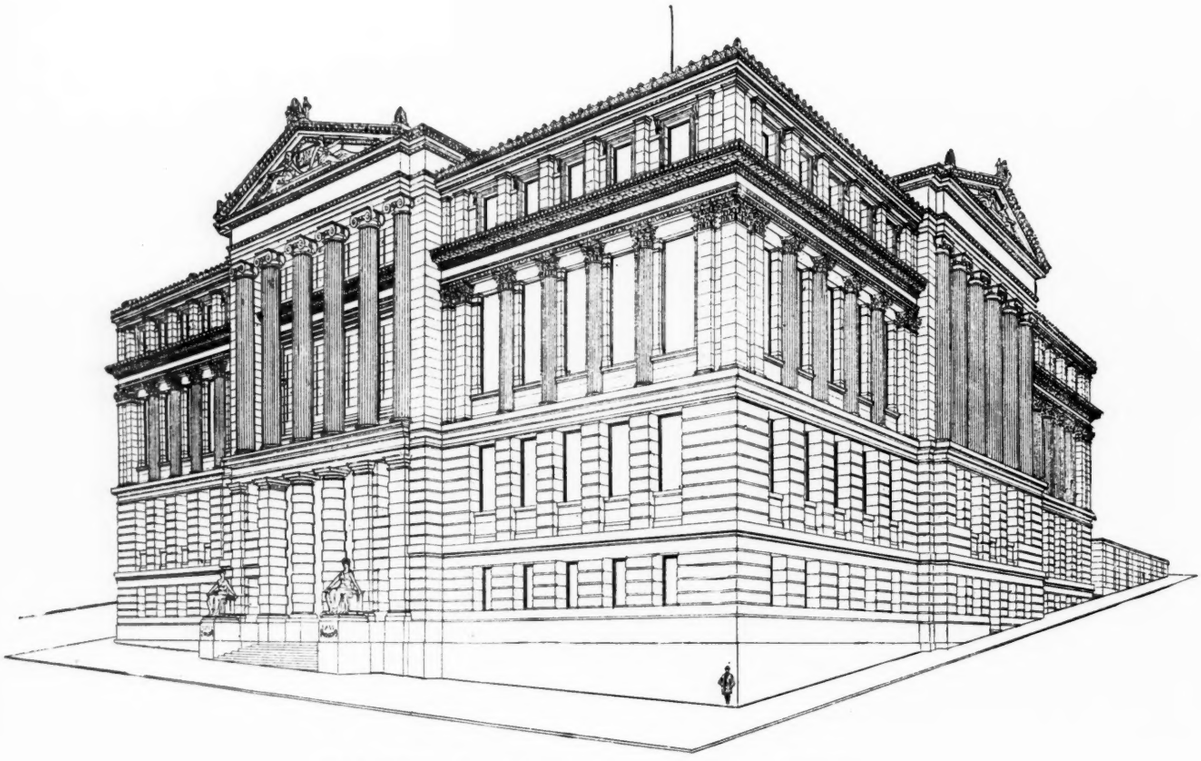
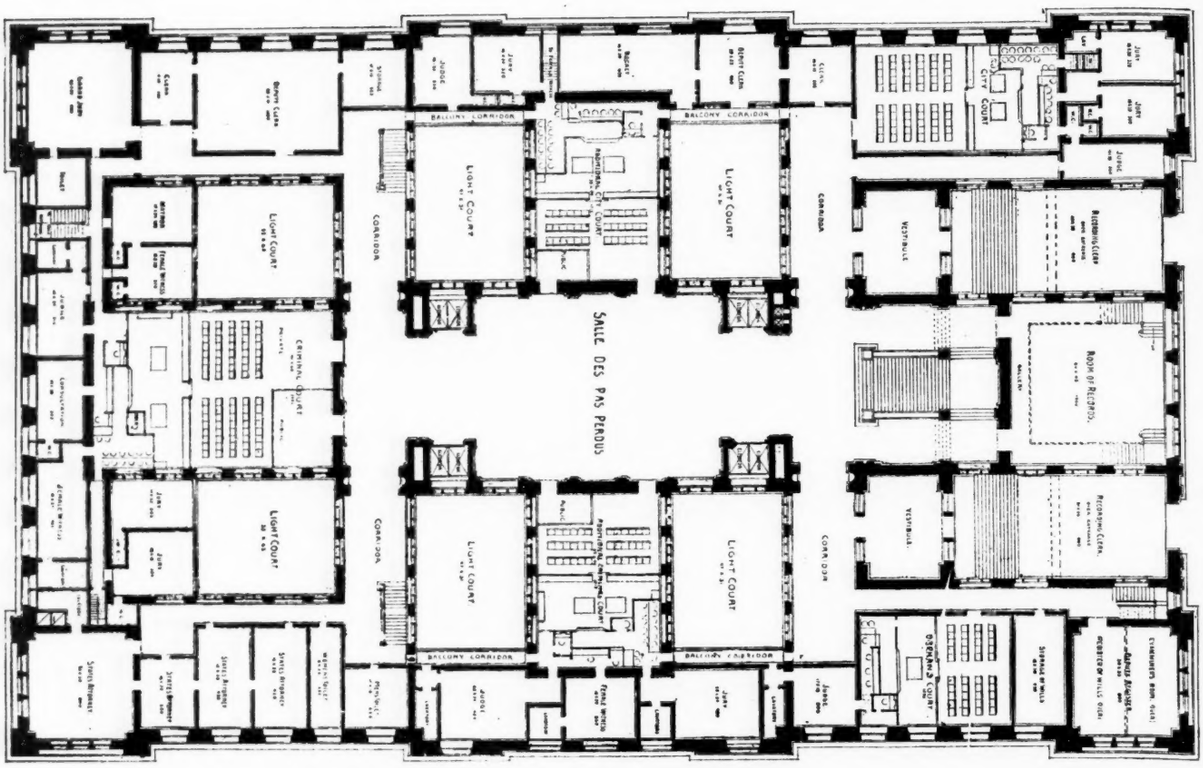


BALTIMORE COURTHOUSE COMPETITION.

(One of the best ten designs.)

SUBMITTED BY VANDER BENT & ROSS, ARCHITECTS, NEW YORK.

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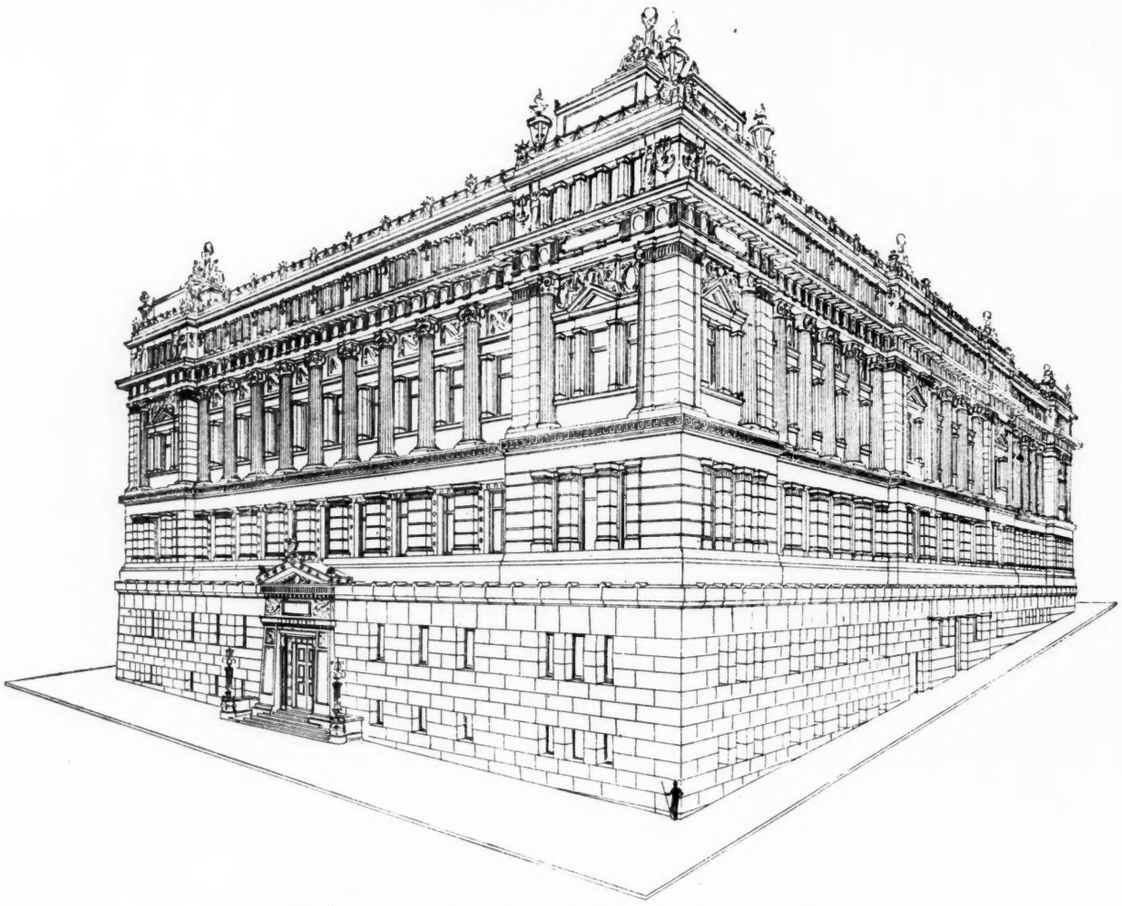
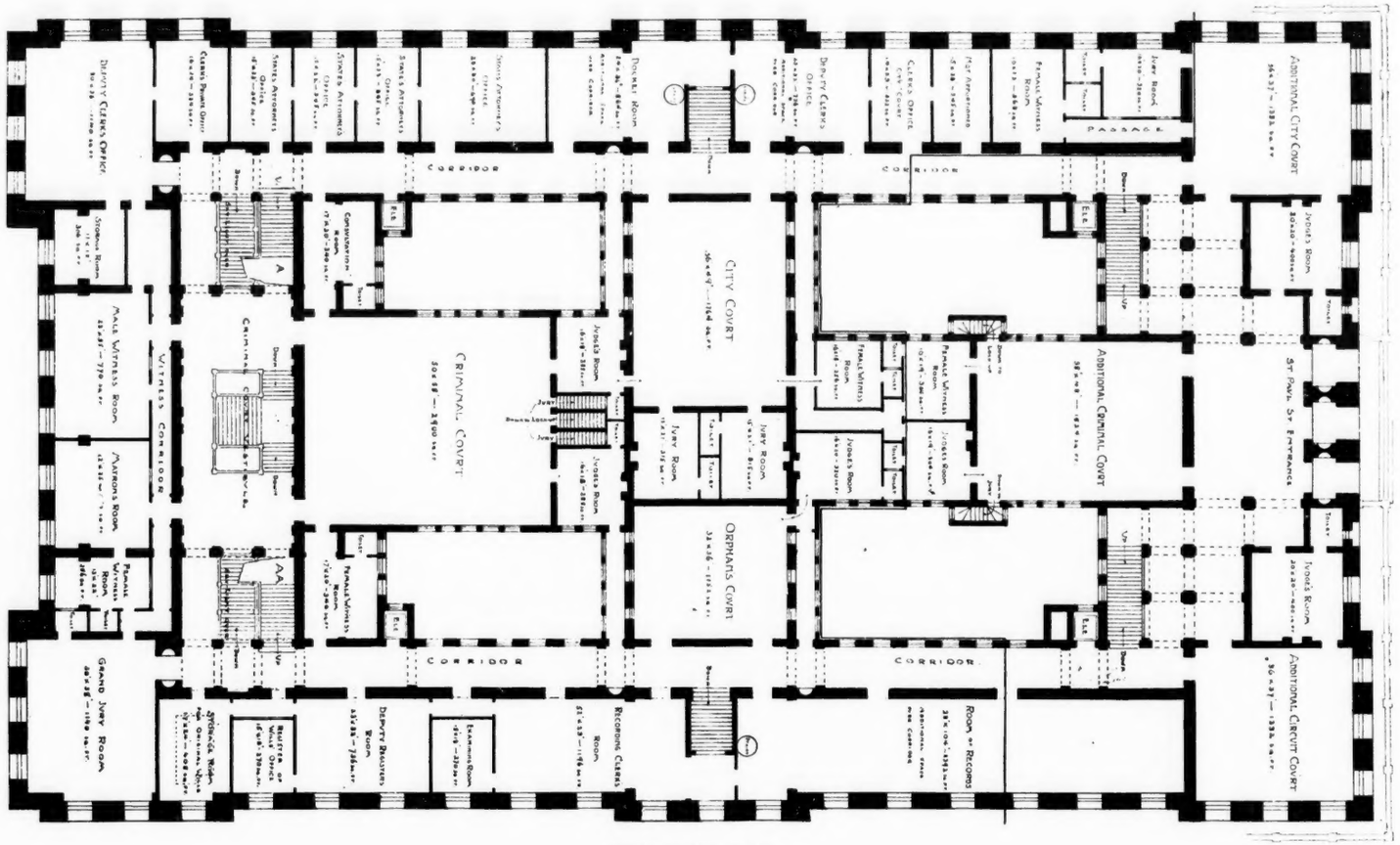


BALTIMORE COURTHOUSE COMPETITION.

(One of the best ten designs.)

SUBMITTED BY DE WITT TAYLOR KENNARD, ARCHITECT, CHICAGO

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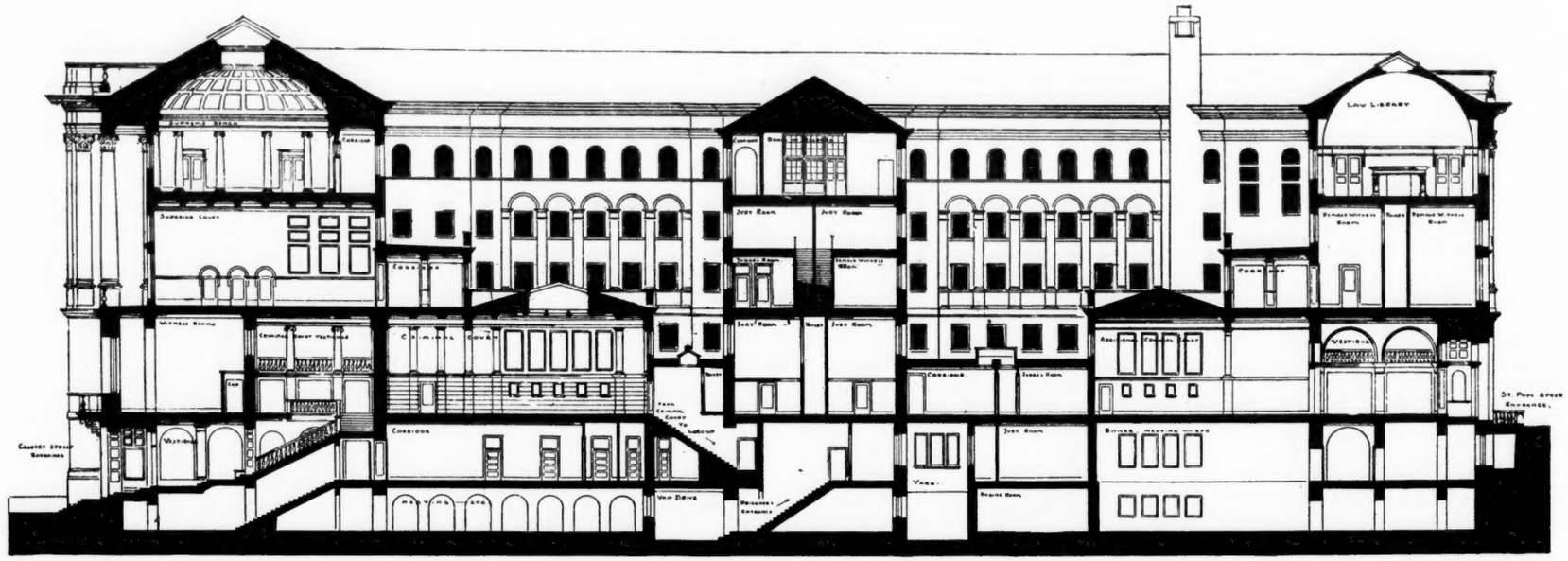
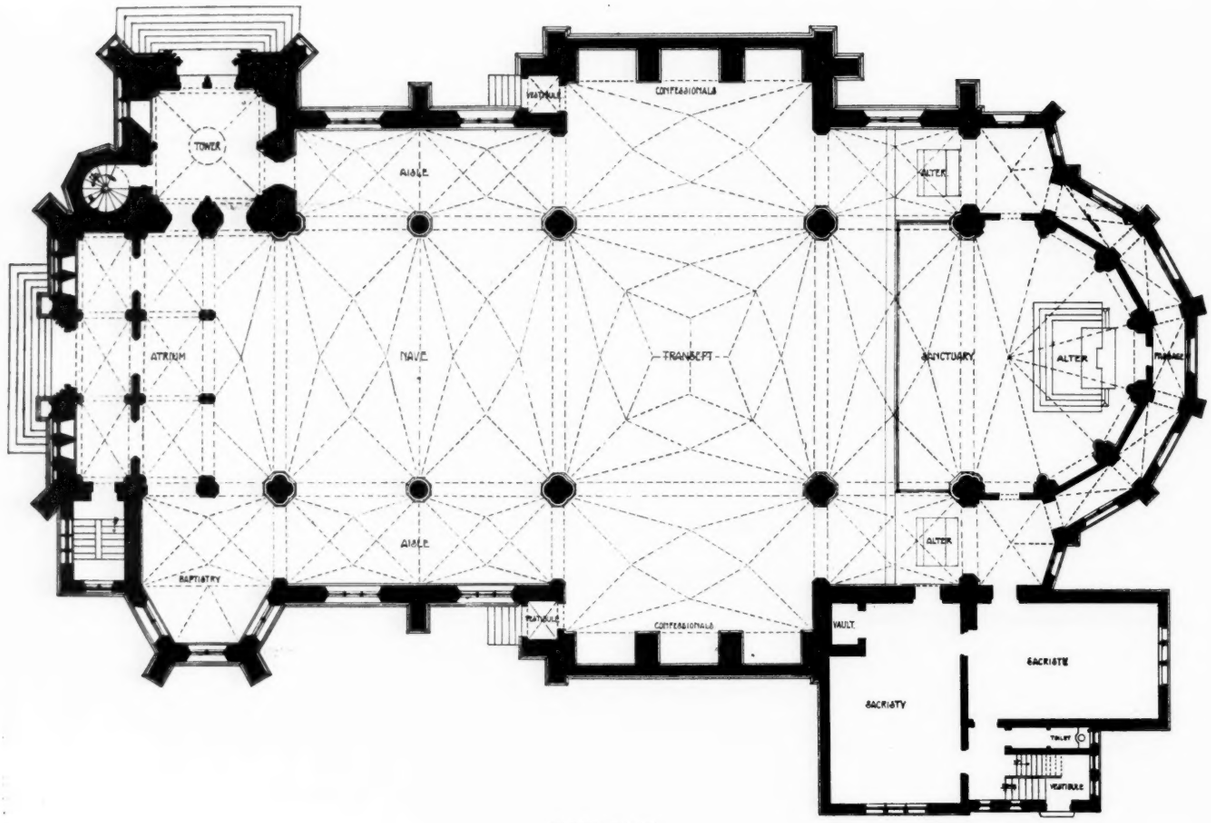
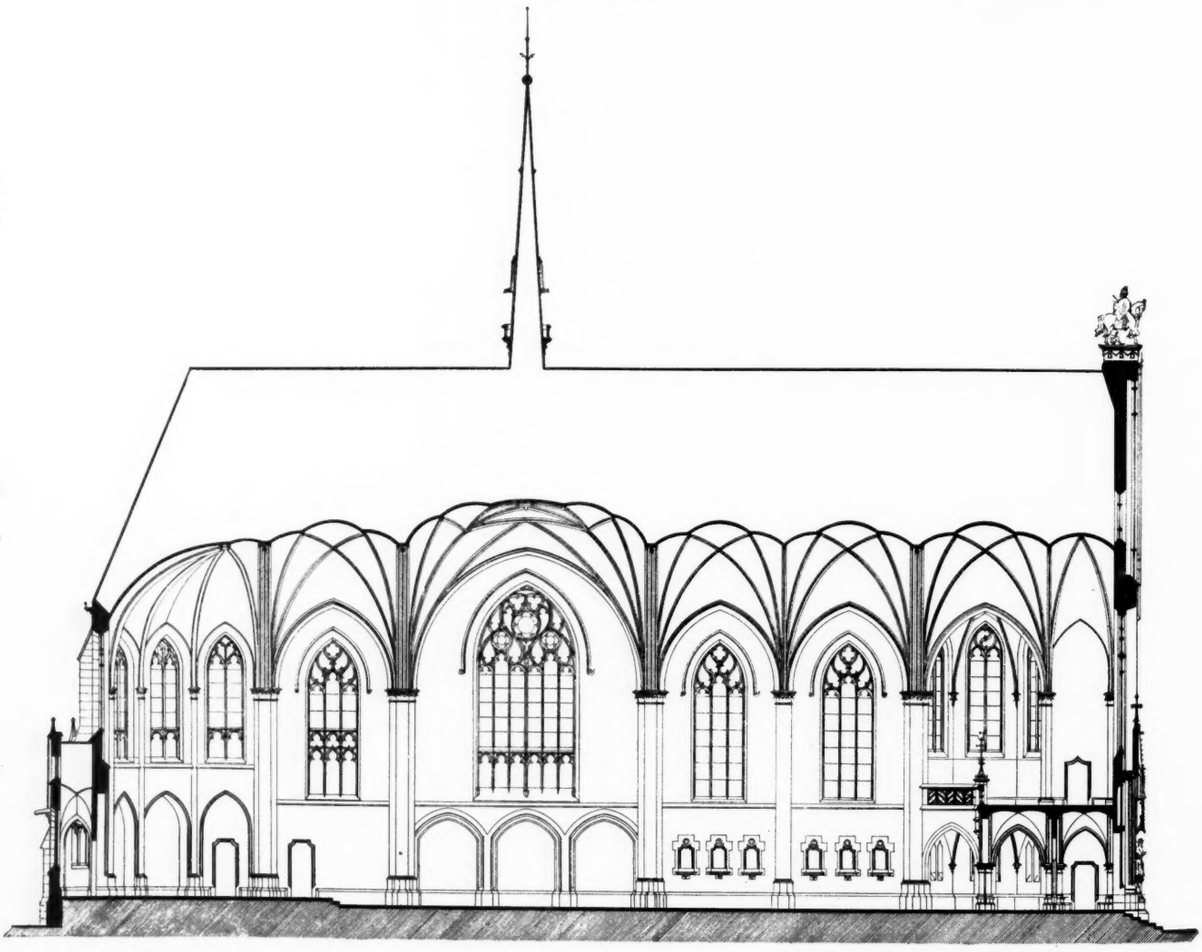



SECTION · EAST AND WEST




FLOOR PLAN.



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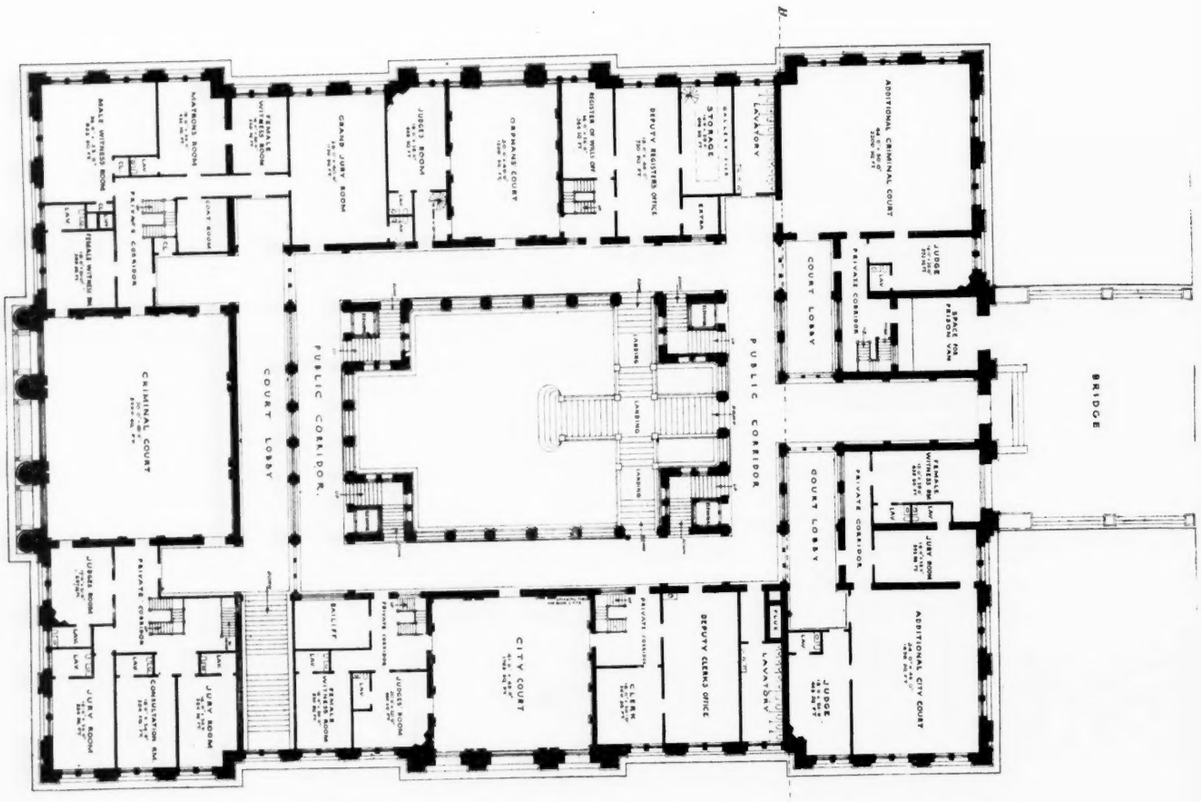


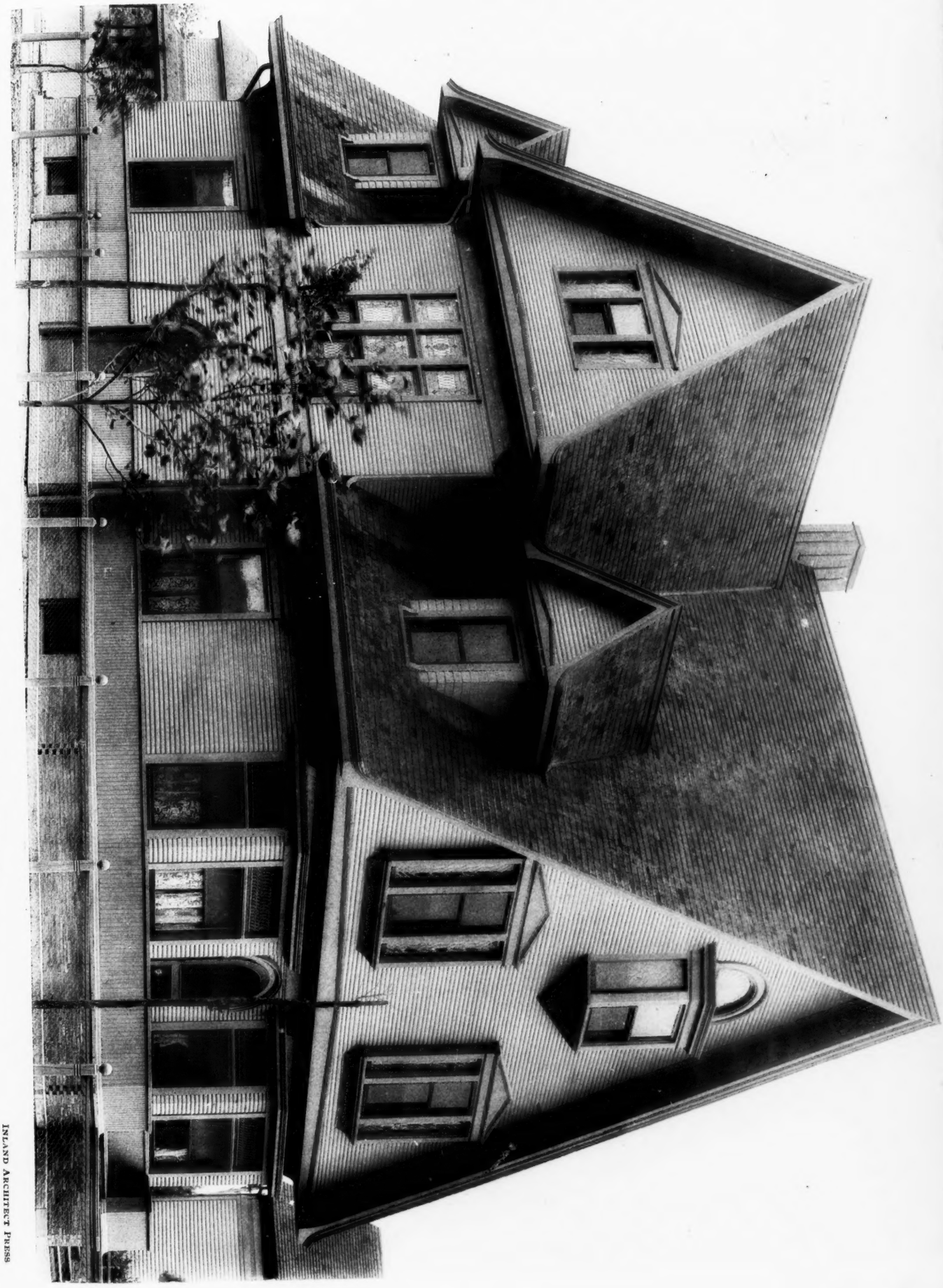

FIRST FLOOR PLAN.

**BALTIMORE COURTHOUSE COMPETITION.**

(One of the best ten designs.)

SUBMITTED BY SHEPLEY, RUTAN & COOLIDGE, ARCHITECTS, CHICAGO, ST. LOUIS AND BOSTON.

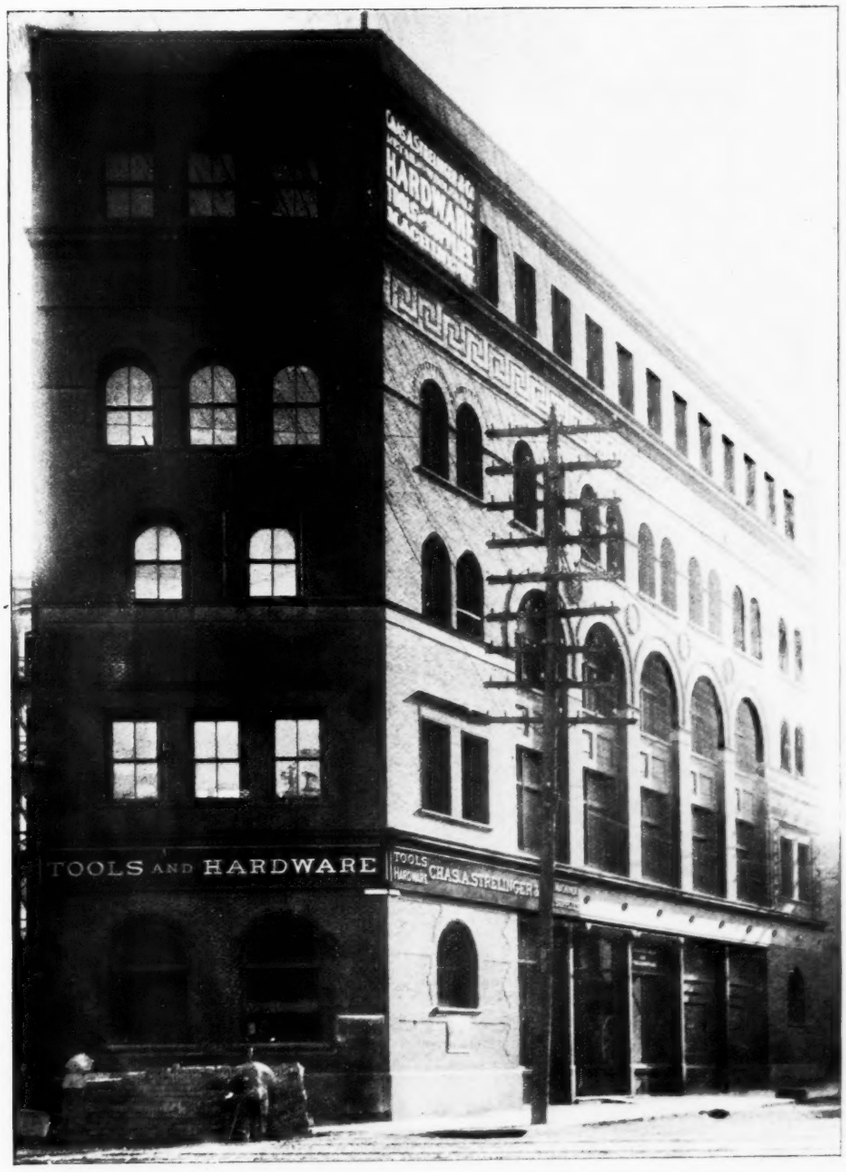
FRANK L. WRIGHT, ARCHITECT.



RESIDENCE OF W. I. CLARK, LA GRANGE, ILLINOIS.

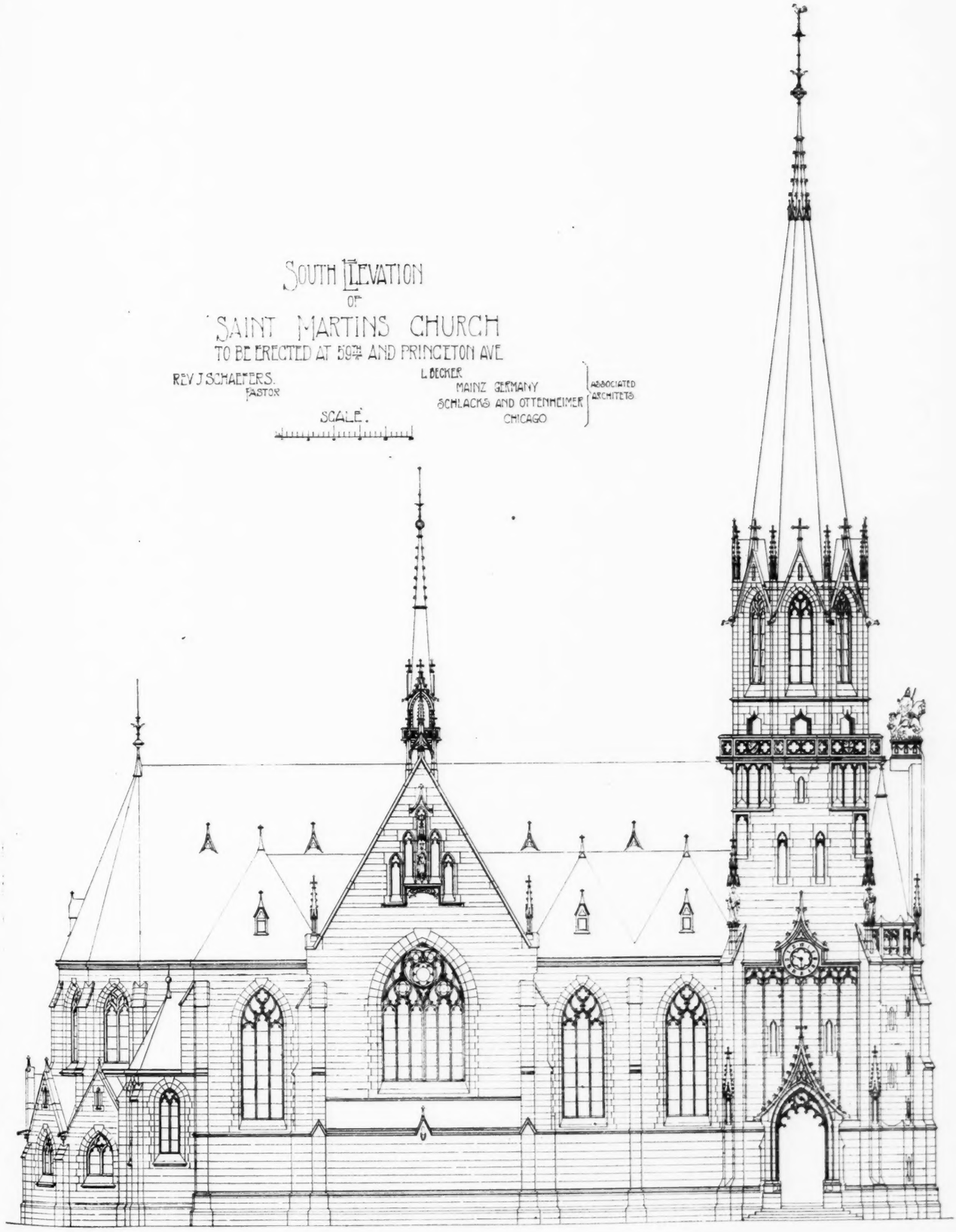
FRANK L. WRIGHT, ARCHITECT.

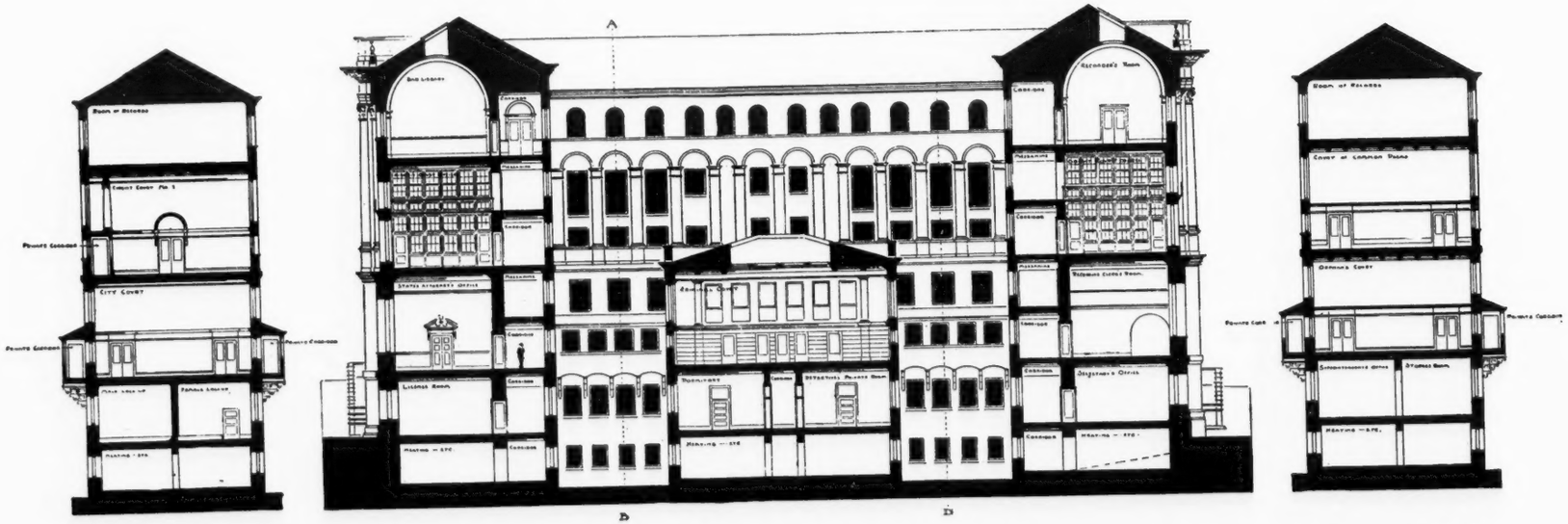
INLAND ARCHITECT PRESS




STRELINGER STORE, DETROIT, MICHIGAN.

ROGERS & MACFARLANE, ARCHITECTS.


SOUTH ELEVATION
OF
SAINT MARTINS CHURCH
TO BE ERECTED AT 59TH AND PRINCETON AVE
REV J SCHAEFERS.
PASTOR
L BECKER
MAINZ GERMANY
SCHLACKS AND OTTENHEIMER
CHICAGO
ASSOCIATED ARCHITETS
SCALE.



SECTION · A-B

SECTION · NORTH AND SOUTH

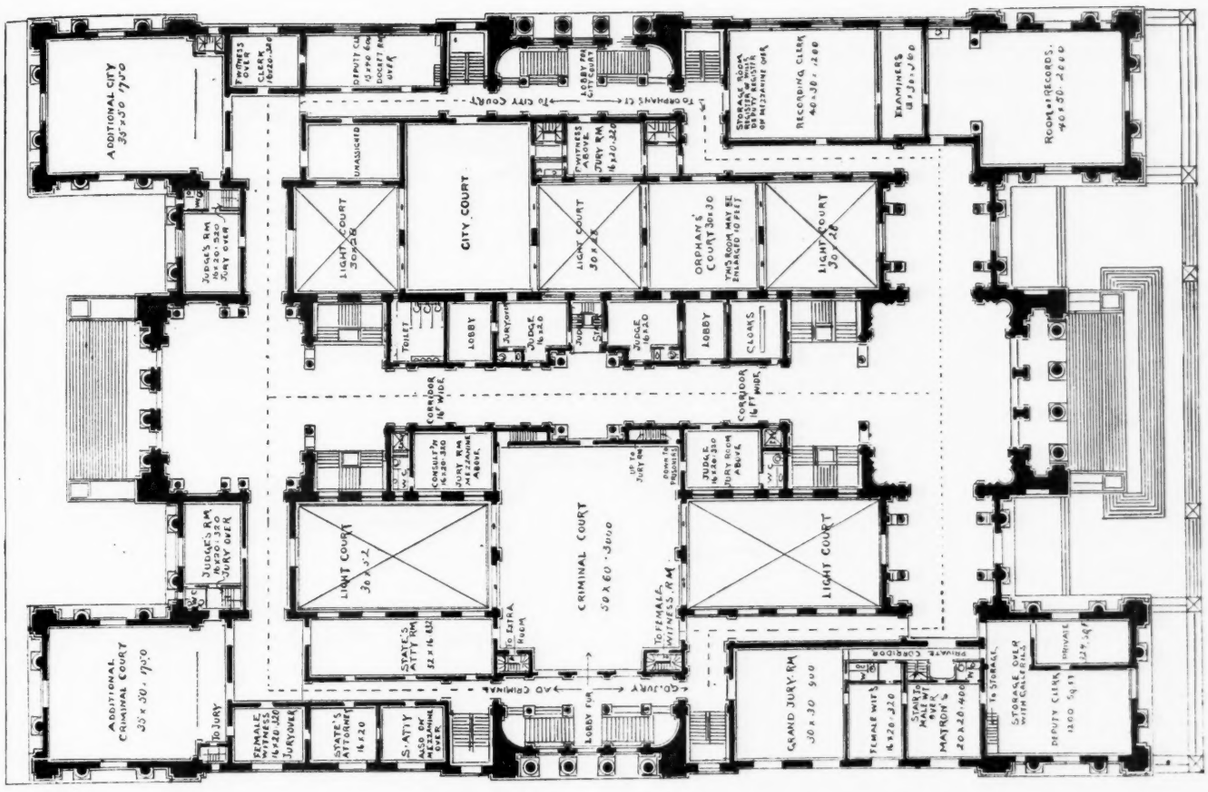
SECTION · C-D

**ACCEPTED DESIGN, BALTIMORE COURTHOUSE COMPETITION.**

WYATT & NÖLTING, ARCHITECTS, BALTIMORE.

ACCEPTED DESIGN, BALTIMORE COURTHOUSE COMPETITION.

WYATT & NÖLTING, ARCHITECTS, BALTIMORE, MARYLAND.

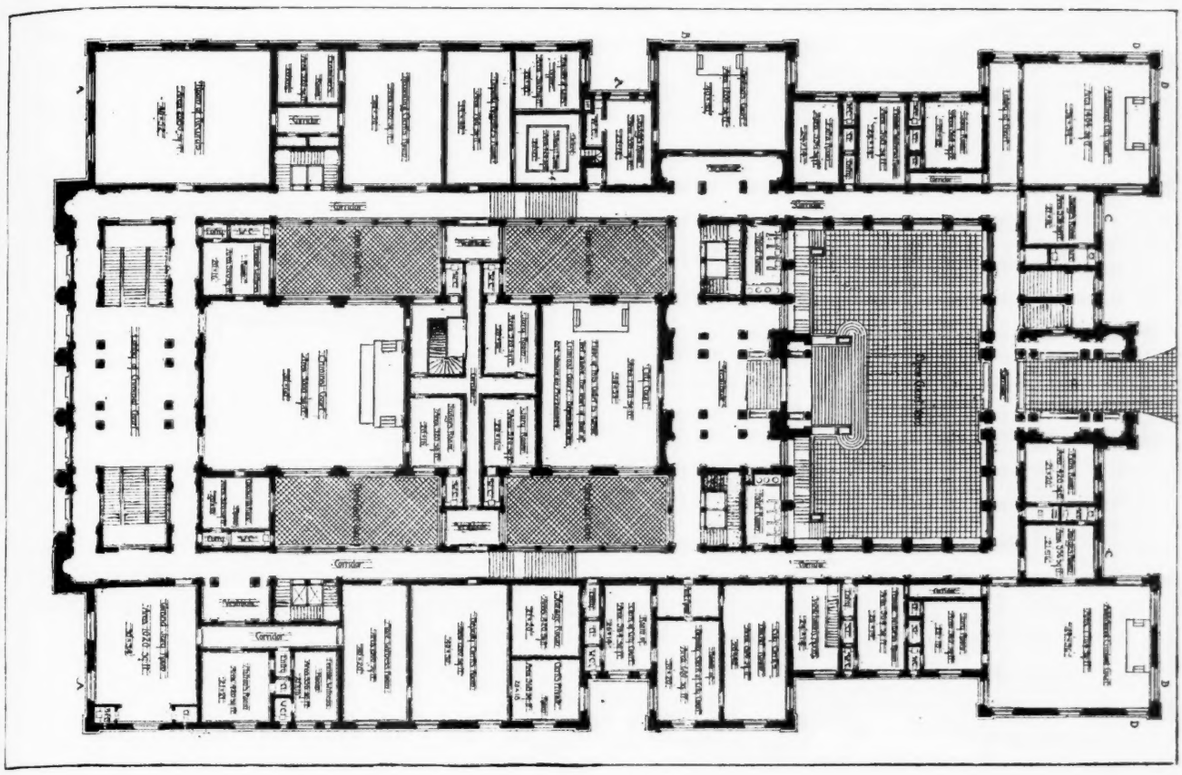



FIRST FLOOR PLAN.

BALTIMORE COURTHOUSE COMPETITION.

(One of the best ten designs.)

SUBMITTED BY BORING & TILTON, ARCHITECTS, NEW YORK.



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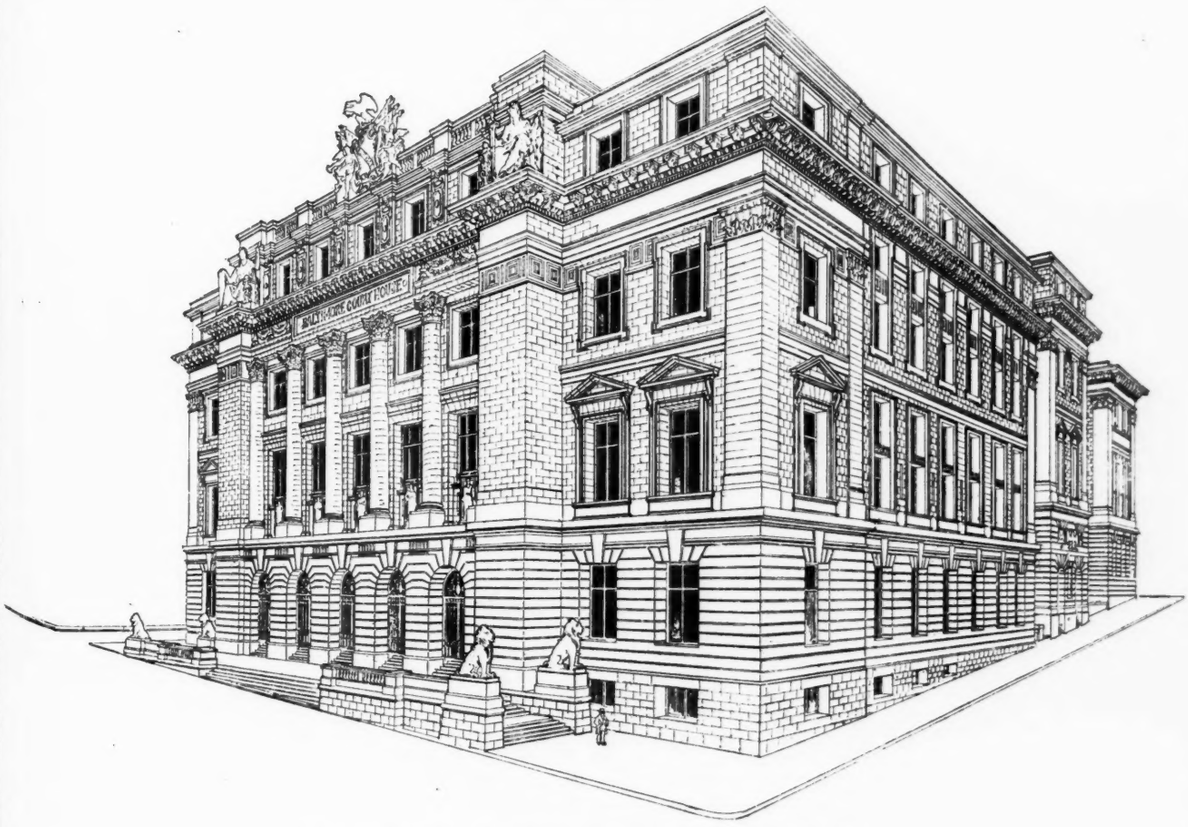
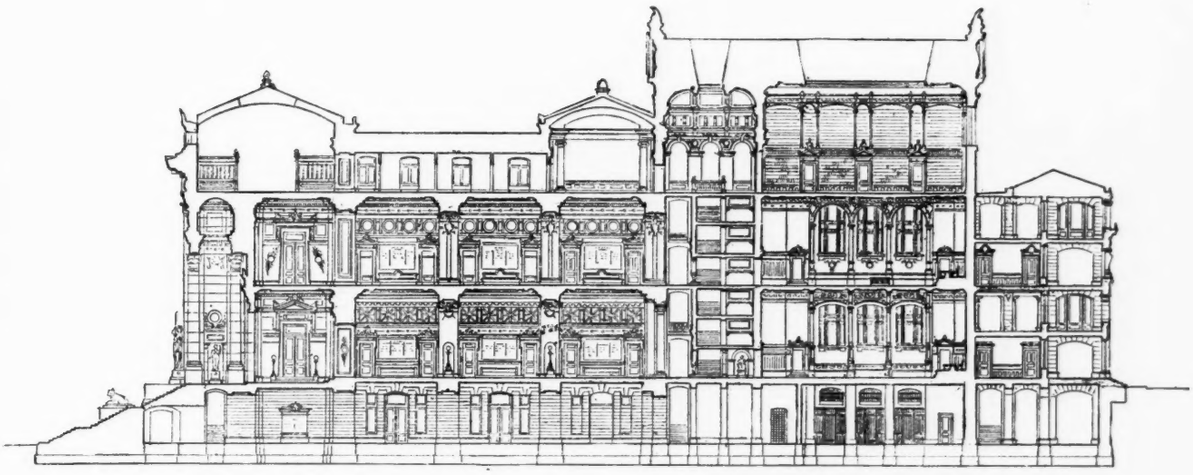


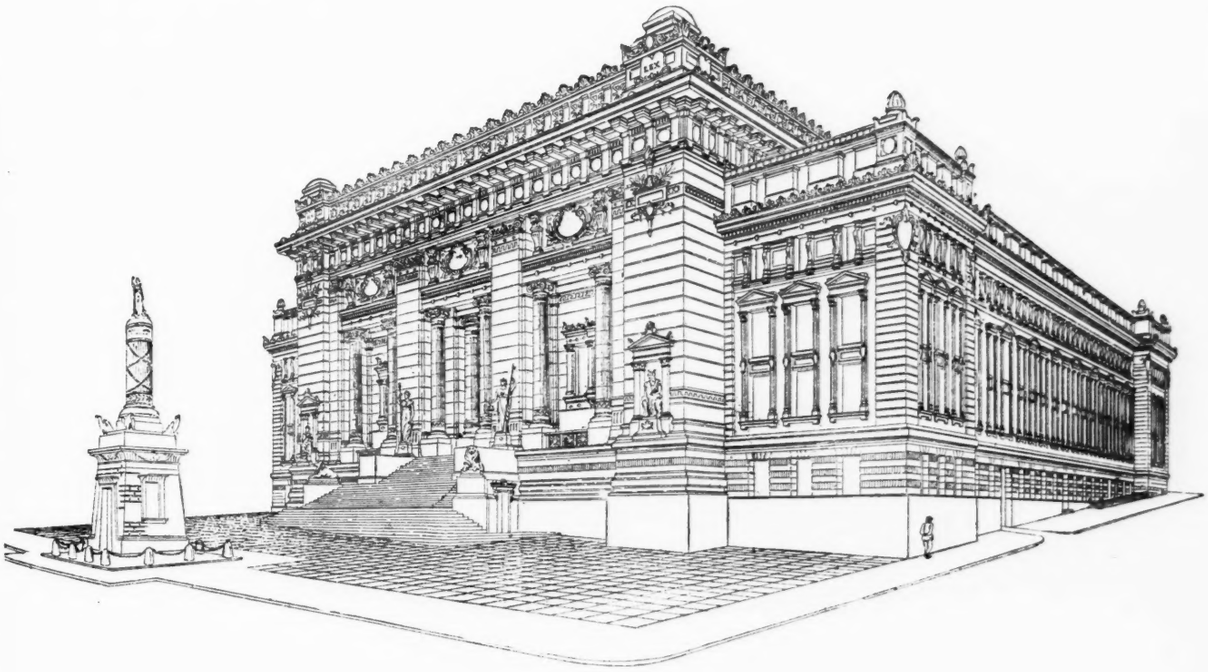
BALTIMORE COURTHOUSE COMPETITION.

(One of the best ten designs.)

SUBMITTED BY CARRÉRE & HASTINGS, ARCHITECTS, NEW YORK.



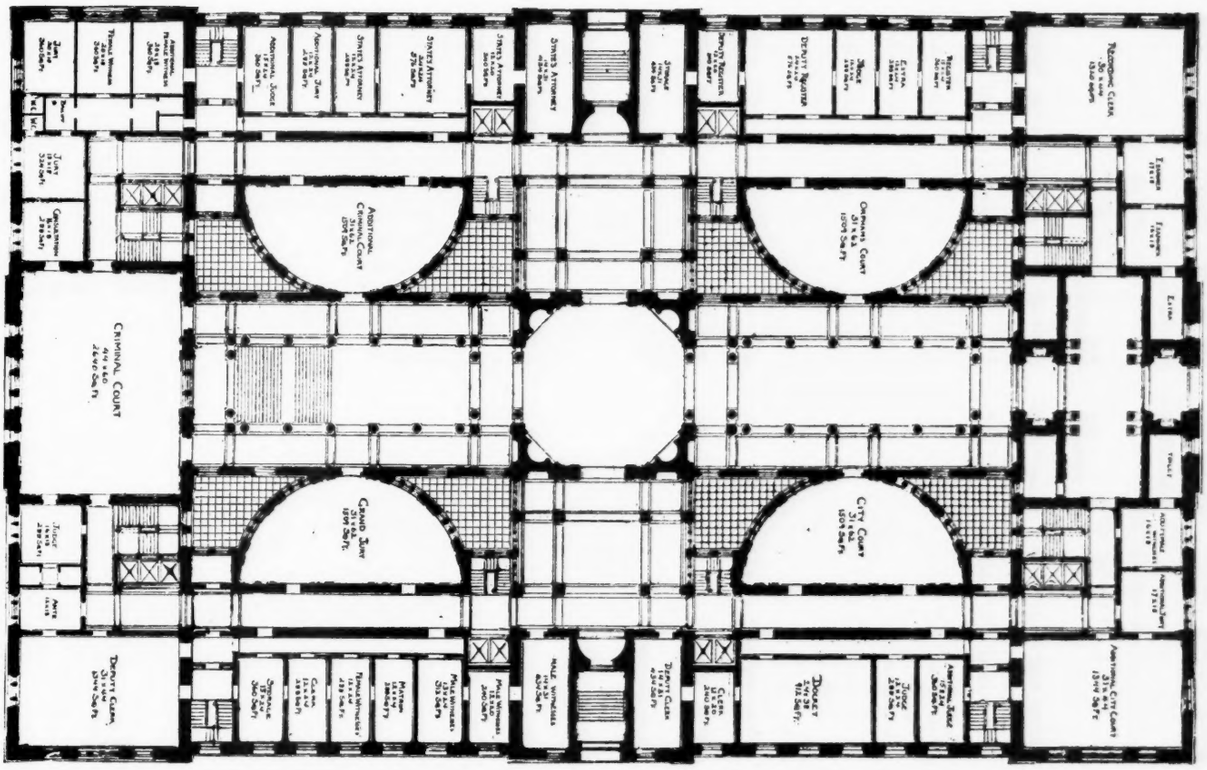
LONGITUDINAL SECTION.



BALTIMORE COURTHOUSE COMPETITION.

(One of the best ten designs.)

SUBMITTED BY J. L. WEES & A. GUISSART, ARCHITECTS, ST. LOUIS, MISSOURI.

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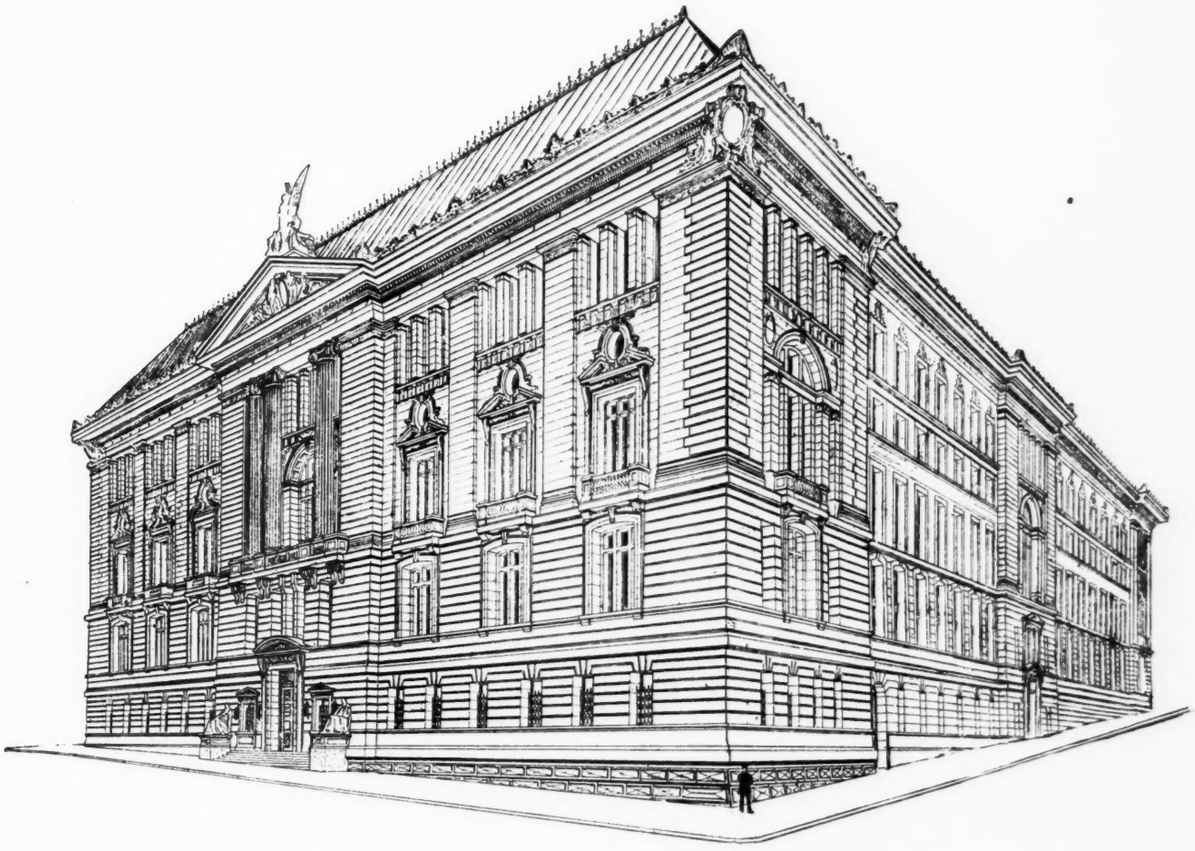

BALTIMORE COURTHOUSE COMPETITION.

(One of the best ten designs.)

SUBMITTED BY BENSON & BROCKWAY, ARCHITECTS, NEW YORK.