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FEBRUARY 13, 1892.



SUMMARY:—

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IN August last we spoke with considerable emphasis in commendation of the steps then being taken to procure designs for the proposed Rhode Island State-house, and because these designs are published in fair completeness in this week's [International] issue, we revert to the matter once more for the sake of laying stress upon one of the best features in the conduct of this competition, namely, the preparing of the statement of conditions and particulars at a full meeting of all the invited competitors. One of these competitors in writing to us uses these words: "When the competitors first met, most of them were somewhat at a loss concerning the exact object of the meeting. When we parted, we all agreed that we had obtained a splendid result, that we were establishing a correct precedent, and that our work would be all the better owing to this friendly meeting and discussion, and the complete understanding between us." This preliminary consultation of invited competitors with one another was first used, so far as we know, in the competition for the monument at West Point and again in the Grant Monument competition. In all these instances the advantages of this consultation have been so apparent to both competitors and clients that this practice ought to be insisted on for future limited competitions. The submitting of designs whose authorship is declared, and the public exhibition of the designs submitted, both before and after the award, although good features, are not of such prime importance as the securing of a perfect mutuality of understanding between all the parties interested. Since writing the foregoing matter, announcement has been made that a decision has been reached which places the designs in the following order: McKim, Mead & White of New York first; Shepley, Rutan & Coolidge of Boston second; and Stone, Carpenter & Willson third. Pending final legislative action the decision merely protects the interests of the architects given the first place and those of the State of Rhode Island.

A TERRIBLE catastrophe occurred in New York on Sunday in the burning of the Hotel Royal, by which it is supposed that about fifty people lost their lives. The hotel, which was situated on the corner of Sixth Avenue and Fortieth Street, overlooking Bryant Park, was built twenty-

five or thirty years ago, but had been kept in good order, and was rather an attractive-looking house. It was, however, constructed in the manner which prevailed in New York before the time of strict building-laws, with thin walls, and wooden beams; and, by an arrangement which most architects would now think criminal, but which was very popular, both with the profession and the public, twenty years ago, and is to be found still existing in scores, perhaps hundreds, of buildings dating from that period, the elevator ran in a wooden cage occupying the well of a wooden staircase. Fire broke out, in some unknown way, in the basement, and, as usual, made its way at once to the elevator shaft; and, although the house was full of people, and the engineer and clerk were both on duty, and hastened to give warning as soon as the existence of the fire in the basement was discovered, the flames reached the top so suddenly that the first alarm-signal was sent by an actor, who, in crossing the Park on his way home from his work, saw the fire bursting out of the roof of the hotel. As all escape by the stairs was thus immediately cut off, the occupants of the various rooms were obliged to get out of the windows as best they could, and in the utmost haste, as the fire in a few minutes burst through the doors from the blazing halls. The law of the State of New York provides that every room in every hotel shall be provided with a rope, which can be fastened to the window sill, and used for lowering women and children, and which serves as a tolerably good ladder for a man who can use his arms and legs; but, notwithstanding the law, many of the rooms in this hotel had no rope, and the unfortunate inmates either threw themselves out, or were saved by the brave firemen, who set ladders on all sides, and used them until the walls fell in. It is said that one of the persons who escaped remarked to a reporter that this was the fifth time he had been caught in a hotel fire. Probably the next hotel he patronizes in New York will be a fireproof one, but outside of the great cities there are no fireproof hotels, and even in New York probably the majority of the hotels, particularly the more moderate-priced ones, are liable to just such conflagrations.

A REPORT is in circulation, to the effect that the combination of manufacturers, which has kept up the price of iron beams in this country, for more than twenty years, to a point about three times as high as that at which beams of the same sort can be had in Germany or Belgium, or England, or France, and about three times as high as that for which rolled rails, of the same material, and made in the same way, can be bought here, has been dissolved, and it is certain that American beams have been offered in New York lately at less than two-thirds the combination price. We hope the rumor may be true, although it is almost too much to hope that a combination which must have proved so enormously profitable to the nine or ten manufacturers who compose it should be so easily broken up. So far as the art of building is concerned, the most pressing need of the present day is cheap iron beams. There is no place in the world where the use of iron beams is better understood than in this country, but their enormous cost prevents their use in any but the most expensive city buildings. If they could be had at the foreign rates, they would be, we think, more freely used than they are abroad. We have before mentioned that an iron beam costs less in Paris or Berlin than a Georgia-pine beam of the same strength costs in New York, and as the present tendency in this country is to build for solidity and durability, the iron would, under such circumstances, be greatly preferred here. As matters are now, the use of iron beams being, in most cases, out of the question, our architects have devised all sorts of ways of protecting wooden beams from fire, so as to give them some of the advantages of iron; but only great care and skill can provide with certainty against the rotting of wood under such circumstances, and no treatment can prevent wooden beams from shrinking, or avoid the defects which proceed from the shrinkage.

A CASE was decided recently in England which has an interest for picture-buyers as well as picture-sellers. At the Birmingham County Court, Mr. A. W. Wood, an accountant, sued a certain firm of auctioneers for fifty pounds damages for breach of warranty in the sale of three pictures. The trustees of the estate of the late Mr. John Staniland, of

Malton, in Yorkshire, were joined as third parties, on the ground that they were liable to indemnify the defendants, if a verdict should be found against them. The plaintiff said that he attended at the defendants' salesrooms, on a certain day, when a sale of the collection of the late Mr. Staniland was announced. Lot 39 in the catalogue was described in the catalogue as an "Infant Saviour," by Guido, and was sold to the plaintiff for ten guineas. Lot 48 was described as "Cyrus Defeated by Tomyrus," by Rubens. The auctioneer said that the picture was a genuine production by Peter Paul Rubens, and had cost the late owner fourteen guineas. Lot 45 was described as "Salvator Rosa — mountainous ravines and cascades." This work Mr. Wood bought for five guineas. Afterwards, having consulted artists and picture-dealers, he found that the pictures were not genuine, but only copies. In cross-examination, the plaintiff said that he did not notice the condition in the catalogue, that purchasers would have to take the pictures without a guaranty of genuineness. The defendants claimed that, having disclosed the names of the persons for whom they sold the pictures, they were not liable; and that they gave no warranty of the genuineness of the pictures, and that they were protected by the conditions of the sale. The jury, however, returned a verdict that the defendants did guarantee the pictures to be genuine, and fixed the damages at the price paid for them.

A LONG and interesting story might be written about the adventures of picture-buyers in their affairs with dealers and auctioneers. Of course, there are many picture-dealers of the highest character, and in their hands a purchaser is safe, but there are many more whose ingenuity in getting more for their merchandise than it is worth is only surpassed by that of a country horse-jockey, and some auctioneers are not far behind them. It will surprise a good many people to learn that real paintings in oil, on canvas, mounted on stretchers, ready for framing, are sold at a profit to dealers for prices ranging from a dollar and a half to two dollars each. These productions are of tolerable size, measuring perhaps two feet in length, by eighteen or twenty inches in height, and, being generally of pretty landscape subjects, are not without a considerable charm to persons who have not had much experience in such matters. These pictures are said to be made in factories, by the coöperation of a number of artists, one of whom wields the blue paint-pot and the sky brush, while the next dashes in clouds, a third lays the yellow ochre high-light on the foreground, a fourth manages the middle-distance, with a suitable mixture of yellow and black, a fifth roughs out the trees, and so on. As the manufacture is for the wholesale trade, a hundred or more replicas of each subject are turned out, and it may be imagined that they pass through the successive processes with great rapidity; but the finished work forms unmistakably a "landscape in oil." Hundreds, perhaps thousands, of these pictures are sold, fitted with a showy frame in Dutch metal, by men who either peddle them about from house to house, or leave them as pledges, which are never reclaimed, for a loan of ten dollars; and many a mansion of considerable pretension has its parlors adorned with such objects, which, for this market, are usually signed, or furnished with a name attached to the frame, and often bring ten times their value. Not unfrequently, these pictures get into the auction rooms, but it is doubtful whether they bring there much more than they are worth, and the aim of the unprincipled picture auctioneers appears to be rather to sell cheap copies as genuine works of masters of great reputation. For doing this they have ample facilities, and it is a rare occurrence for them to be brought to justice for it. Even the best judges are often deceived in regard to old pictures, and the fact that the greatest experts in Europe are not yet agreed as to whether some of the principal works attributed to Raphael are genuine or not, should teach amateurs to be careful about trusting their own judgment. In many cases, particularly in the West, where there are no great museums, the pictures shown as Vandykes or Raphaels are ridiculous forgeries, but so long as the purchaser can flatter himself that there is the remotest chance of the picture being genuine, he will pay a high price for that chance. Moreover, in the higher circles of picture dealing, fictitious sales are said to be often made, at enormous prices, of single works by artists of note, for the purpose of effecting real sales, at an immense profit, of other pictures by the same artist, in the hands of the dealers who arrange the scheme. It is, of course, almost impossible to guard against fraud of this sort, the operation of

which may extend over two continents; and the best way for all buyers of works of art is to beware of works by artists of comet-like reputation. One does not have to live long to see these artificial glories fade away, as rapidly as they grew, while a picture bought because the purchaser liked it, independently of the name of the artist who painted it, and paid for at a fair price, is not only one of the most satisfactory investments of money that can be made, but is often one of the most profitable.

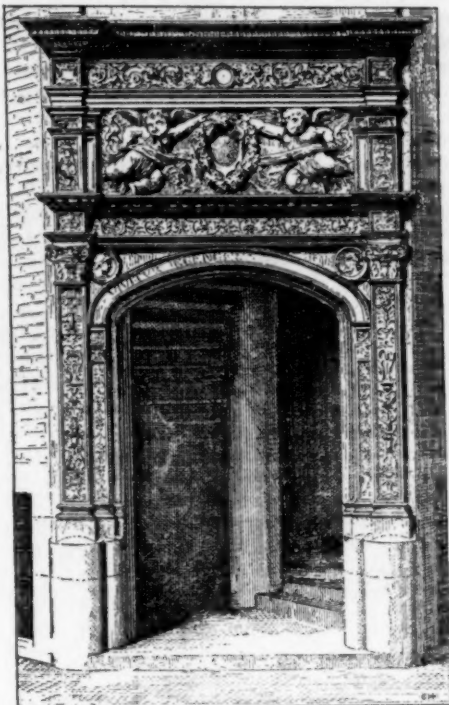
MR. HUBERT HERKOMER has an idea which architects might, perhaps, take to heart with advantage. As is well known, Professor Herkomer, besides lecturing to University students, has a school of art of his own. This school, as he informed his audience at a public lecture the other day, is "for the repression of the art-student." In other words, it is, as he manages it, a place where young people are thoroughly tried, to see if they have in them the natural capacity for making first-rate artists, and where, if they have not that capacity, they are frankly told so. Professor Herkomer says that there is enough mediocre art in the world already, without turning out people only capable of doing more; and if a student is capable of doing nothing better, his best friend should tell him so, and his best friend should be his master. All this sounds very much like the kind, but energetic and enthusiastic Herkomer, and what follows is also very characteristic. He finds, he says, that some people who could not paint good pictures might do good decorative work, and he has determined to add to his school a workshop, where decoration, carving and joinery can be taught, and done, properly and thoroughly, together with metal-work. In all cases, drawing would form a prominent part of the instruction, and the student of art who has got on the wrong track would be drawn aside to carving or woodwork, or perhaps silversmith's work, or ornamental ironwork, as his capacity might best show itself. Some time, he promises that, if he lives, the public shall see what his scholars can do, and it is much to be hoped that he may live to carry out his ideas.

WE have much pleasure in congratulating the *Deutsche Bauzeitung* on its twenty-fifth birthday, which finds it in a condition of deserved prosperity. Although a comparatively small and inconspicuous publication, in comparison with the great architectural journals of Paris or London, or even of our own country, there is no periodical printed which is edited with more care or technical knowledge, and every number contains fresh evidences of the thoroughness of training, seriousness of purpose, and knowledge of the wants of architects, on the part of its editors and managers, which have brought it to the very first rank among technical publications on the Continent. We are glad to acknowledge our indebtedness to it for many an interesting piece of information or technical suggestion, and to wish it many years more of increasing prosperity and influence in the advancement of the great school of modern German architecture, to which it, and the distinguished men who are connected with it, have contributed their full share.

SOME of our readers, who like novelties in hardware, may be interested in a receipt given by the *Revue Industrielle* for giving a dark-blue color to brass articles, without the expense and trouble of heating them, or exposing them to vapors. A solution is to be made of one hundred grammes of carbonate of copper in seven hundred and fifty grammes of ammonia. To make the solution, the ammonia and carbonate of copper must be put together into a well-closed bottle, and shaken until the solution is complete. The bottle is then to be opened, and one hundred and fifty grammes of distilled water added, and the mixture again shaken. It is then ready for use. If not wanted immediately, it must be kept in a cool place, in well-stopped bottles, or in glass jars, covered with a greased glass plate. When the liquid begins to lose its properties, it may be revived by adding a little ammonia. The objects to be colored must be perfectly clean; especially must every trace of grease be removed from them. They are to be suspended by a brass wire in the liquid, and moved gently about in it for two or three minutes; then washed off in pure water, and dried in saw-dust. All the operations should take place as far as possible out of contact with the air. Ordinary brass alone, that is, the alloy of copper and zinc, is suitable for this operation; bronze, or other alloys of copper containing tin, will not color well.

ARCHITECT, OWNER & BUILDER BEFORE THE LAW.¹—XIX.

CONTRACT BASED ON DRAWINGS USED FOR ESTIMATING.



From the Hotel de Lasbordes, Toulouse, France. From Havard's "Dictionnaire de l'ameublement."

WHERE a contractor has actually been misled by a discrepancy between two sets of drawings, of equal importance, it seems to be well settled that he is bound only by the ones which were shown him when he was making up the estimate on which his contract was based.

When the new City-Hall for Chicago was building, tenders were invited for the iron-work. One Sexton,² with others, made estimates. Some of the bidders looked at the original plans, while others, among whom was Sexton, had tracings given them to figure on. The tracings showed iron rafters weighing seven pounds per foot, and the foundation for skylights, with certain lines across the openings. The printed invitation to bidders called for estimates for the work including skylights, and the original drawings showed them, and showed also heavier rafters. Sexton called the attention of Jordan, the draughtsman in charge of the office in the absence of the city architect, to the fact that nothing in the tracings or specifications showed what the skylights were to be. Jordan told him that the plans for the skylights were not ready, that no sizes were marked on the tracings, and that he should not figure on them. Sexton put in his bid accordingly, and it was accepted, and a contract made by the city with him, which referred to "the plans, diagrams and specifications made and prepared for said work." When Sexton came to build the roof, the city demanded that he should put in rafters weighing from ten to thirteen and one-half pounds per foot, and should build the skylights. This he refused to do. On the trial, it was argued, on behalf of the city, that the original plans were the ones referred to in the contract, and that Sexton might have seen them, if he had asked to do so. The Supreme Court held that, although certain principles of law distinguish copies from original documents, they did not apply in this case. "The tracing copy," it said, "appears, at the time it was made, to have been an exact copy of the original, and it seems that changes were afterwards made on the original, which, through inadvertence, were not corrected on the copies. This was the fault of the city, and the loss due to it cannot be fastened on Sexton, who is not to blame for it. The expression 'plans and specifications,' in the contract, does not refer exclusively to the original plans from which the tracings are made. The latter, though for convenience called 'tracings,' are as clearly 'plans' within the meaning

"of the contract, to the extent of the work represented on them, as the originals. In this case, they were given to Sexton to estimate from, and he had a right to assume that they were the plans referred to in the contract."

DISCREPANCIES IN SPECIFICATIONS.

Where the discrepancy is between two different clauses in the specification, or between the specification and the contract, there is greater difficulty in deciding which forms the actual agreement between the parties, but the decisions of the highest courts are usually found to agree with the conclusions of common-sense, without much regard to fine-spun technicalities. A builder named Williams agreed to build a house for the Hon. Captain Fitzmaurice. He furnished his own specifications. In the specification, under the head of "Carpenter and Joiner," a description was given of the dimensions of the joists, rafters, ridges, etc., but no mention was made of the flooring-boards.

The specification stated, in general, that "the whole of the materials mentioned or otherwise in the foregoing particulars, necessary for the completion of the work, must be provided by the contractor." At the foot of the specification, Williams signed a memorandum, whereby he agreed with Captain Fitzmaurice "to do all the works of every kind mentioned and contained in the foregoing particulars, according, in every respect, to the drawings furnished, or to be furnished," for the sum of 1,100 pounds. The house was agreed to be completed and fit for occupation by August 1, 1858. Williams prepared the flooring-boards, brought them to the premises, and planed and fitted them to the various rooms; but refused to put them down without extra payment, because, as he said, the flooring was not mentioned in the specification; whereupon Fitzmaurice put an end to the contract, took possession of the works, and proceeded to complete the building, and used for the purpose the floor-boards which had been prepared for it. Williams demanded payment for the floor-boards, which, as he claimed, were his property, and, in the final settlement, refused to allow anything for the flooring. Both these points were brought before the court, which decided that Williams was not entitled to recover for the flooring as an extra, because it was included in the contract, though not mentioned in the specification; and that he could not maintain trover for the flooring-boards left on the premises by him, and subsequently used by Fitzmaurice.

It appeared by the evidence that when Williams had got as far as the floors, and had the stock for them on the ground, and fitted to its place, he sent the following letter to Captain Fitzmaurice.

"CONWAY, February 20, 1858.

"I am unable to proceed with your building, for want of the floor-boards being put down, which are not part of my contract. If you wish me to put them down, I will do so on having an order to that effect. Unless they are put down immediately, I shall not be able to complete my contract by the time fixed, and if they are not down within four days from this time, I shall conclude that you do not intend for me to go on with my contract, and I will measure the work that I have done, so as to be paid for that only."

(Signed,)

OWEN WILLIAMS.

There was some further evidence to the effect that Captain Fitzmaurice, before the contract was signed, wrote to Williams saying that there appeared to him to be some omissions in the specification, but that he trusted to him to do everything as it should be; and it appeared that the payments which Williams had already received, at the time when he stopped work, amounted to more than the value of what he had done.

Baron Pollock, for the court, said: "I own that when the rule was moved I had some doubt whether the specification was not to be regarded as the contract between the parties; but, upon the whole facts being disclosed, it appears to me that no person can entertain any reasonable doubt that it was intended that the plaintiff should provide the flooring, as well as the other materials requisite for the building, and that it was merely by inadvertence that no mention of the flooring was made in the specification. That the plaintiff intended to do it is manifested by his providing the material, which is brought to the house ready to be put in its place as flooring."

Baron Channek said: "I am of the same opinion. The contract was that the house should be completed and fit for occupation by the first of August, 1858, not that the works

¹ Continued from No. 841, page 85.

² Sexton vs. Chicago, 107 Ill. 323.

³ Williams vs. Fitzmaurice, 3 H. & N. 844.

"thereinbefore mentioned should be completed by that day. I think that, looking at the terms of the contract, it would not be reasonable to read it as if it excluded all work not specifically mentioned. The plaintiff contracted to do the entire work, in the various characters of bricklayer, carpenter, plumber, etc., for the sum of £1,100, and it is not the less a contract to do the whole, because it is specified that certain parts of the building shall be constructed in a particular way. It was a contract for the erection of a house, and, though the flooring was not mentioned in express terms, it was necessarily implied."

In a California case,¹ however, where the contract was to build a house according to certain specifications, and the specifications said nothing about the roof, it was held that the roof was not included in the contract.

Experts were called in to testify that the roof was implied in such contracts, if not mentioned; but the court said that: "Where a contract to build a house contains a specific description of every part, with one exception, stipulating for the manner, size, measurement and material of each with great particularity, it must be held that the exception was the result of design, and did not enter into the contract of the parties."

THE ARCHITECT'S CERTIFICATE.—THE CERTIFICATES.

After all the work is done, all the extra work noted, and, if allowed as extra, a reasonable price fixed for it, and an account made of all omissions, in order that, if the owner does not wish to have them made good, a proper allowance may be made for them, the architect issues his certificate, which, being the document in accordance with which the accounts are closed, should be prepared with conscientious care. It is usual to pay the builder instalments of the contract price, as his work goes on, in accordance with interim, or provisional, certificates given by the architect, and, as it is impossible to judge as accurately of the value of work partly done as it is of a completed job under a contract, and as a large reserve is usually made from the total amount earned by the contractor, to serve as a margin to cover contingencies until the completion of the contract, the architect is commonly allowed a certain liberty in estimating the provisional amounts due; but he must, nevertheless, be careful not to over-estimate them, or he may, if the builder should suddenly abandon his contract, as builders are strongly tempted to do when they come into possession of more money than they have earned, he may find himself, like the unfortunate Canadian architect whose case² is mentioned on page 76, compelled to pay out of his own pocket the difference between what he ought to have certified and the amount which the builder has obtained.

It ought not to be necessary to say again that the certificate, if the contract requires that one should be given before the builder can collect his money, must be in the form which the contract provides. This point is held very strictly by courts. An architect,³ where the contract was in the usual form, gave a certificate, saying that the work was done in such a manner that he would accept it if he were the owner, and that he was satisfied with it; but this was held in New York to be insufficient. So in Missouri,⁴ where the contract said that "a certificate" should be obtained by the contractor, prior to each payment, signed by the architects, and countersigned by the sureties; and that the final payment should be due "when the whole job is completed and accepted"; a final statement, approved by the architects, was held not to be a sufficient certificate to satisfy the contract, and the builder was held not to be entitled to recover upon it.

On the contrary, in a case in New York,⁵ where the architect had simply certified that the final payment was due "under the contract," this was held to be "under the circumstances," sufficient; and where the interim certificates had been given in the form: "This is to certify that \$— is now due to A. B. on account of his contract with you for doing the mason's and carpenter's work of" etc., and the owner had made payments on them without objection, at the time of their presentation, to their form, it was held that he could not raise the objection to them, for the first time, at the trial, that they were insufficient.

A contract⁷ provided that payment was to be made "when all the works are completely finished, and certified by the architect to that effect"; but without specifying the form of the certificate. The architect gave a certificate, saying, the contractors "have completed the masonwork to your building"; and this was held to be sufficient.

In Illinois,⁸ a certificate was given on what appears to have been a printed form, but which did not give all the assurances stipulated in the contract; and it was held, as being partial only, to be insufficient to compel payment.

After a certificate is given, the architect cannot recall it, unless he discovers that there was some mistake in it. An architect once gave a final certificate, and, later, wrote a letter, in which he said that the certificate was not intended as a final decision upon any just rebate or offsets; but the Superior Court of New York⁹ held that it was nevertheless conclusive. There may, however, be circumstances in which a different decision would be given. A church was built from plans made by a certain architect, but the erection was superintended by an assistant. With the tacit assent of the church authorities, and of the architect, certificates for interim payments were given by the local superintendent, and payments were made on them, although the contract provided that certificates were to be given by the architect. When the church was finished, the architect, who had not visited it before, refused to give a final certificate, although the local superintendent was willing to do so. It was held, on a suit¹⁰ by the contractor for his pay, that the opinion of the architect was, under the circumstances, immaterial, as the local superintendent had been virtually accepted in his place.

Although the certificate of the architect is *prima-facie* evidence, it is not conclusive upon the parties unless the contract provides that it shall be, as is very often the case. When such a provision is made, nothing but evidence of fraud or mistake will be admitted to contradict it.

A slight mistake, however, if it can be corrected, will not invalidate the whole. An architect once certified that a certain piece of work was done, when, in fact, about forty-five dollars' worth of work was needed to complete it. The owner refused to pay anything on the certificate, alleging that it was invalid on account of the mistake. The Supreme Court of Illinois¹¹ decided that this error did not impeach the certificate for fraud, or justify the owner in refusing to pay for, at least, the work actually done.

Where the contract so provides, the certificate of the architect is just as binding on the owner as on the builder.

In an Illinois case,¹² a final certificate had been given by the architect, making certain deductions for imperfect work. The owners refused payment, on the ground that the work had not been done according to specifications. The court refused to admit evidence of this, saying that by the contract the right of the builder to recover rested on the condition of producing the final certificate of the superintendent, and, when produced, it must be held, in the absence of fraud, or of such serious mistake as would prevent the architect from exercising his real judgment, to be conclusive on both parties. "The condition precedent to the payment of the money having been performed by the production and proof of the architect's (superintendent's) certificate, nothing remains for the defendants to do, and it is wholly immaterial whether the work was well or ill done, so that the superintendent was satisfied."

In this last case, the certificate made deductions for imperfect work. It is often the case that it is more convenient for the architect to give a certificate, saying that the work will be complete, or satisfactory, when certain alterations have been made. Very frequently the owner does not care to have the specified alterations made, and both he and the builder are impatient to settle their accounts without them; while the architect, of course, does not wish to certify that a contract has been exactly fulfilled when he knows that it has not been, and a conditional certificate satisfies all parties. In such a case, there is a serious doubt whether the certificate is such as the ordinary contract requires; but it has been held in Illinois¹³ that, where a certificate had been given, saying that when

¹ Stewart vs. Keteltas, 9 Bosw. 261.

² Barney vs. Giles, 120 Ill. 154.

³ Weeks vs. Little, 47 N. Y. Super. Ct. 1. Mercer vs. Harris, 4 Neb. 82.

⁴ Vermont Street Church vs. Brose, 104 Ill. 207.

⁵ Lincoln vs. Schwartz, 70 Ill. 134.

⁶ McAuley vs. Carter, 22 Ill. 83. See also, Korf vs. Lull, 70 Ill. 420; Taylor vs. Renn, 79 Ill. 181; Lull vs. Korf, 84 Ill. 225; Downey vs. O'Donnell, 86 Ill. 49; Finney vs. Condon, 86 Ill. 78; Snell vs. Brown, 71 Ill. 134; Mercer vs. Harris, 4 Neb. 82; Boettler vs. Tendick, 73 Tex. 488; Wyckoff vs. Meyers, 24 N. Y. 143.

⁷ Mills vs. Weeks, 21 Ill. 561.

¹ Reynolds vs. Jordan, 6 Cal. 108.

² Irving vs. Morrison, 27 C. P. (Upper Canada) 242.

³ Smith vs. Briggs, 3 Denio, 73.

⁴ Roy vs. Hoteler, 40 Mo. App. 213. See also, Barney vs. Giles, 120 Ill. 154.

⁵ Adams vs. Mayor, 4 Duer, 295.

⁶ Wyckoff vs. Meyers, 44 N. Y. 143.

⁷ Bloodgood vs. Ingoldsby, 3 Hill, 388.

certain slight alterations had been made the work would be acceptable, and there was evidence that the alterations had been made, and that no further objection had been raised, the acceptance was sufficient, and that no further certificate was necessary.

ARCHITECT MUST GIVE CERTIFICATE IF REQUESTED.

The architect is bound to give such a certificate as he thinks just, at the times mentioned in the contract, if either party requires it, and, if he unreasonably delays or withholds it, the builder is not obliged to wait for it.

An architect in England, on being applied to for a final certificate, gave the contractor a long list of things which, as he said, must be done before the contract would be completed. The contractor did them all, and came again after his certificate. The architect then presented him with another list of things which, as he said, were still lacking, but he added that, when these were done, the contract would have been completely performed. The contractor did all these, and applied a third time for his certificate, and the architect gave him still another list of trifling matters, which, he said, must be attended to before he could give it. The contractor, impatient at the delay, which had the appearance of being purposely made, sued to recover his final payment without the certificate, and was successful, the court holding that it was unreasonably withheld.

Moreover, if the work is done according to the contract, the architect is bound to certify to that effect, although it may be unsatisfactory for other reasons. A curious case¹ illustrating this point was decided in Illinois. A contractor had agreed to furnish stone for a building from a certain quarry, which had been recommended by the superintendent.

Under the contract, he was to be paid on presentation of a certificate from the superintendent, expressing satisfaction with the work and material. The stone changed color after being set in the wall; and the superintendent, after giving several certificates for payments on account, refused to give the final one, on account of the defect which had appeared in the stone. In a suit by the contractor for his money, which was resisted on the ground that the production of the certificate was, under the contract, an indispensable condition precedent to payment, the Supreme Court held that the refusal of the certificate was an act of bad faith in the superintendent, who was proved to have used the same stone in another building; and that the contractor was entitled to recover the contract price without the certificate.

Where work is supervised by a firm of architects, it has been held in Illinois² that the signature of one of the partners to a certificate, without objection from the other, is sufficient.

CERTIFICATE REQUIRED FOR EXTRA AS WELL AS CONTRACT WORK.

It is often claimed by builders that where extra work is done under a contract, the provisions of the contract as to the production of a certificate, as well as the other conditions of payment, apply only to the work done under the original agreement, and not to the extra work. This idea is entirely erroneous. It will be seen later that the courts uniformly hold that the contract conditions cover both the original and the extra work, except in case of changes so extensive that the work included in the original agreement can no longer be traced; and there are several decisions to the effect that the requirements of a contract as to certificates apply equally to work detailed in the specifications and to extra work or alterations.

Cases³ have already been referred to, which show that the certificate of an architect or superintendent is void, so far as it dispenses with the substantial provisions of the contract; and it has been held in several cases, where evidences of imperfect workmanship have shown themselves after the giving of the certificate, that it is not to be held as a waiver of defects which were not apparent upon mere inspection.

This is a point of great importance to architects. Builders, and owners also, usually assume that if the architect can once be induced to sign a final certificate, all the mistakes, malpractices and dishonest tricks which the contractor and his men have succeeded in concealing are thenceforth condoned, and, if they subsequently come to light, that it is the duty of the architect to pay for making them good.

It has been shown before that, although this notion has a certain foundation, it does not always hold good, even where the owner has paid the builder his contract price on the certificate; and where the payment has not been made on the final certificate, there should be no doubt that, if the owner knows of defects, or if any come to light, which were not known to the architect when the certificate was given, the owner is not only entitled, but bound, to withhold a suitable amount in the final settlement, and that, if he wilfully pays the builder for work which he knows has been omitted, or not properly done, he cannot afterwards hold the architect responsible for the amount, even though he may have innocently accepted the work and certified for payment.

In a case⁴ in New York, where, under the contract, the production of the architect's certificate was a condition precedent to payment, the architect, after the building had been substantially completed, gave the contractor a certificate for the final payment, on the understanding that he should make good some incompleteness in the work; but he afterwards revoked this certificate. The owner, the defendant in the case, refused to make payment according to the certificate, on the ground that an allowance of \$125 ought to be made him, by reason of the fact that the front and rear cornices were not constructed according to the specification. The question before the court was in regard to the effect of the architect's certificate. The counsel for the defendant conceded that "the revocation of the certificate produced no effect on its validity," and was commended by the court for doing so. The Court of General Term, in which the case was first heard, refused to admit evidence of the damage on account of the improper construction of the cornices, considering this to be shut out by the architect's certificate; and gave judgment for the builder. The defendant's counsel excepted to the exclusion of this evidence, and the case was carried to the Supreme Court on the exception. The Supreme Court held that the refusal of the General Term to admit the evidence was "substantial error," and reversed the judgment, saying that "While the plaintiff may recover on 'a substantial compliance with his contract, of which the certificate of the architect is evidence, yet the defendant must 'receive compensation for defects and omissions, by an allowance as a counter-claim in this action, and to that end he 'must be allowed to prove his damages.'"

So in Pennsylvania, where the contractor for the water-works of the city of Pittsburgh,⁵ who had agreed to build pumping-engines in accordance with certain specifications, and, in a suit for his pay, instead of proving compliance with the specifications, offered evidence that the engines were doing the work required of them, and offered, also, the certificates of the supervising engineer for monthly payments, which were based on estimates of the apparent value of the work done, the inferior court ordered a compulsory non-suit, and was sustained by the Supreme Court, which held that "Where a 'plaintiff sues on a written contract to recover the stipulated 'price for work agreed to be done, the burden of proof is on 'him to show a substantial performance of his contract, or a 'waiver by the defendant'; and that 'Where the contract 'provides that the materials used shall be of the best quality, 'the metals to be of a certain composition and tensile strength, 'the plaintiff must show affirmatively that the materials were 'of the required standard.'"

"The fact," the court said, "that the work was inspected 'during its progress by a mechanical engineer appointed by 'the defendant in pursuance of a provision in the contract, 'who reported from time to time that the work was progressing satisfactorily, and on whose certificates the plaintiff 'received large sums on account, does not constitute a waiver 'by the defendant of defects in quality which were not apparent upon mere inspection.'"

It will be observed that the doctrine laid down in these two cases differs widely from that accepted in Illinois, as shown in the decision quoted on page 100, and followed in several other cases in that State, so that the practice of different courts is, at least for the present, likely to vary on this point. In Virginia, a somewhat similar question has been decided entirely in the spirit of the New York and Pennsylvania decisions. A man in Richmond, named Iaege,⁶ contracted with one Martin that Martin should furnish materials and build him a house in

¹Badger vs. Kerber, 61 Ill. 328.

²Korf vs. Lull, 70 Ill. 420.

³Barton vs. Hermann, 11 Abb. Pr. 379. Morgan vs. Birnie, 9 Bing. 672. Westwood vs. Sec'y. State, 11 W. R. 261.

⁴Loeffler vs. Froelich, 35 Hun. 368.

⁵Hartup vs. Pittsburgh, 97 Penn. St. 107. See, also, Bond vs. Newark, 4 C. E. Gr. 376; Glacius vs. Black, 50 N. Y. 115.

⁶Iaege vs. Bossieux, 15 Gratt. 83.

a workmanlike manner, and that, on the completion of the building, the price to be paid should be fixed by referees chosen by the parties to the contract. Several payments on account were made as the work went on, and, when the house was completed, referees were chosen, who fixed the price to be paid.

Soon after this, and before the money had been paid, defects became apparent, proceeding, as the report says, "from shrinking of timber, showing that the work was executed in a defective and unworkmanlike manner." Iaege refused to pay the price fixed by the referees, and Martin's assignee brought suit, on the ground that their award was final; but the Supreme Court held that "The valuation does not conclude the owner of the house, but he is entitled to compensation for the defects, and, in a suit by the assignee of the builder to enforce lien for the price for building the house, the owner will only be required to pay what the building was really worth."

Two cases in Nebraska have been decided rather in accordance with the Illinois view, but in one of them there is a slight flavor, and in the other a strong one, of unfairness, which would be likely to have a considerable influence on the result.

In both these cases a certain Driscoll was the architect. In the first,¹ he had made plans and specifications for a house for one Mercer, and was to superintend its erection. A contract for building it was made with Rose Bros., who afterwards assigned to Harris, who were to receive payment when the work was done "in a good and workmanlike manner, to the satisfaction and under the direction of said architect, to be testified by a writing or certificate under the hand of said architect." Driscoll gave the contractors orders, signed by himself, for instalments on the contract price, which Mercer paid. December 12, 1870, Driscoll gave the contractors a writing, addressed to Mercer, saying: "Please pay to Messrs. Rose Bros. the sum of six hundred and two dollars and sixty-six cents, balance in full of contract price." Mercer refused to pay on this document. Harris, as assignee of Rose Bros., brought suit, and the defendant tried to introduce as evidence a writing of Driscoll, dated January 28, 1871, being thus nearly seven weeks subsequent to the other document, and stating the balance due on the contract to be \$507.55, with the following words added: "The above statement is correct, and includes all the moneys paid and due on account of the original contract. I have examined the work done, and, after making all due allowance for the seasoning of the material and settling of the building, etc., I find I cannot, without a decided detriment to my reputation, sign a certificate for the work being done in accordance to the plans, specifications, etc." (\$507.55 was the unpaid balance of the contract price, with no allowance for extras.)

The Supreme Court held that the order for the balance due was a sufficient certificate, being in the form which had been accepted by Mercer for previous payments; and that the subsequent statement of Driscoll could not be admitted; and as the contract made Driscoll the sole arbiter to decide between the parties to it as to the quality of materials and work, evidence from others as to the quality could not be received.

In the second case², Driscoll was architect of a school-house. The school trustees, in a suit for the contract price, alleged that the construction of the building was not according to the contract, and claimed that the final certificate of the architect, who had certified for the balance due, apparently in the manner required by the contract, was procured by fraud and collusion between the architect and the contractors. The court below ordered a verdict for the contractors, on the ground that the trustees could not go behind the certificate of the architect; and cited the case just described as authority for their decision; but the Supreme Court reversed the judgment, saying that the pleadings claimed fraud in the certificate, which they did not do in the other case, and that the way was thus opened to the defendants to show fraud by evidence which would have been properly excluded if the pleading had not raised the question.

[To be continued.]

THE EXCAVATIONS AT HISSARLIK. — Mme. Schliemann has decided to go on with the excavations commenced by her late husband at Hissarlik, but on a rather smaller scale than when he was alive. The work will be continued until the so-called "old town" has been entirely brought to light again. — *New York Evening Post*.

¹ Mercer vs. Harris, 4 Neb. 82.

² Sch. Dist. vs. Randall, 5 Neb. 408.

GERMAN CASTLES.³ — III.

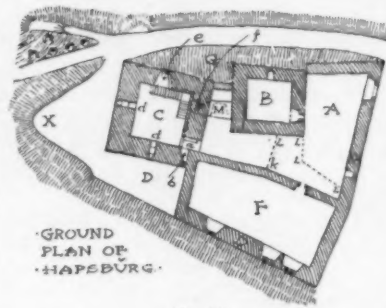


Fig. 16.

THE previous papers have given an account of the outermost portions of a typical average castle, and of the approach, the dry and wet moats, the rampart, the shield-wall and the gate-tower, or of the representatives of these portions. For although there are several hundred castles in the Vaterland, only a few have retained all the

original elements of a burg in their original designs. Most castles display some portions in their original entirety and the others portions in transformation, as where a moat is expanded into a miniature lake, or is turned into a duck and fish pond, or a gate-tower is transformed into an arch.

The general aspect of the outside walls is massive and plain. Abundant exceptions exist, but as a rule, whatever charm attaches to them is picturesque. This is due to the irregularity of the ground-plan, which in hill-castles is made to conform to the shape of the summit, and, also, very largely, to the expansive spaces taken up by the tall roofs. Each building has its own roof. Very often it is at a different level, or has a different slant from its neighboring roof. And while the wall-spaces are unfretted by sculptures or projections, those of the roofs are varied by gables or are laden with turrets.

Only one massive tower (as a rule) rises over the sky-line of the castle pile. This tower is the keep, or its representative. Its place in the ground-plan of a burg is opposite the gate-tower and face to face with it, as in the Wartburg, and in the primitive seat of the Austrian imperial house of the Hapsburgs (Figure 16 B), and the ducal castle in Bayreuth (Figure 17). But it sometimes rises, according to the exigencies of the site or the ideas of the builder and owner,

at the extreme end of the castle enclosure, or before the shield-wall, or back of the wall (Figure 18, Burg Liebenzell) or at one corner of the rampart. In Schloss Kufstein, in Mecklenburg, the keep or *burgfried* is pushed out to the front post without rampart or shield. The corner position for it is tolerably common. It is found rarely, on the other hand, in front of the *palast*, or built into this latter as a *burgfried*; and never within the palace's inner court — probably because to have reached it here the men, in cases of attack, would have had to take the roundabout way through the palace chambers in fleeing into the tower; for the *burgfried* was the last resort of

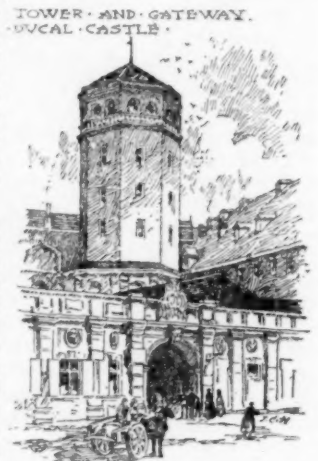


Fig. 17.

family and fighters, and it subserved this function down to the date, comparatively recent, of the use — the common use of cannon.

During the Middle Ages when contracts were made between parties for mutual protection or shelter, not the palace but the *burgfried* was stipulated to be the place where the shelter should be granted. No part of the castle came up to the tower in importance; and none, during feudal times, was built at so great a cost.



Fig. 18.

Its foundations are more solid than those of the rampart itself. The thickness of its walls is likewise greater. The front side of the *burgfried* wall of Liebenzell is nearly eleven feet thick, while the rampart is less than eight feet thick. The wall of the round tower of Besigheim measures thirteen feet through, and the tower of Trifels, in the Pfalz, has walls averaging from four feet to nine feet in thickness, notwithstanding the fact of the ground-floor being, inside, a mass of natural rock. Kufstein's *burgfried*, in Mecklenburg,

³ Continued from No. 832, page 148.

measures eight and a half feet and the tower of Krockow Castle, in West Prussia, eight feet and eight inches through their circular walls.

Most *burgfrieds* are circular or square. Where limestone prevails the first named rule. Where sandstone composes the material of the surrounding rock, the last named are found. In the flat-land



Fig. 19. Schloss Friedberg.

provinces, cylinder-shaped towers are met with; but with masonry composed of brick or rubble granite blocks the form is the square. The octagon form, like that of the tower of Bayreuth Castle is rare, save in the dynastic burg of the country. Albert Dürer recommends this form; and its advantage in exposing the smallest surfaces to the range of missiles was apprehended very well by the *burg herren* of the Middle Ages. But the great majority of such lords were without skilled masons. The trouble of getting enough exactly hewn blocks for the four corners of a square tower (see Schloss Friedberg) was extreme, let alone blocks for double that number. It happened often that towers were erected in great haste: chronicles are full of accounts of their being run up for a particular purpose or for a particular occasion.

The top Renaissance stories of the left-corner tower of Heidelberg Castle are eight-sided; but the original Gothic base is round. In



Fig. 20. The Munzthurm, Hall.

Heidelberg the octagon top is smaller than the circumference of the base. The tower at Hall (Figure 20) swells out at the top. The latter is the older type.

On the top of the *burgfried*, or near the top, were affixed all the adjuncts that mediæval builders destined for defence. Here, out of reach, were the *pech-nasen*, the battlement, the turrets. Here assem-

bled the whole force of the castle in times of attack. More room was needed on top than below, not less. Wherever a tower is diminished in the area of its top, its owner resigned some advantage; and as it was resigned inevitably to his loss, such an innovator found few followers—until, indeed, there was no danger or likelihood of attack any longer to be provided against.

The student can follow the gradual change. The earliest sort of *burgfried* (Steinsburg, Figure 21) is finished with Classical Roman regularity, and is furnished with a roomy, flat platform-roof and battlement. The earliest average tower is a steep-roofed, covered gallery with shoot-slits (windows) and *pech-nasen* (Schlurker Tower, Figure 22, Friedberg Tower). Later, the machicoulis became mere machicolation, or *pech-nasen* ornaments (Hall tower, Figure 20); and later still the *hurdel*, or gallery, with its windows and turrets, becomes first a balcony with turret doors (Erbach Castle tower, Figure 23), then a balcony with doors, with all reminiscences of the turret gone except a gable over the frieze (Bayreuth), and all reminiscences of the battlement absent save a balustrade.

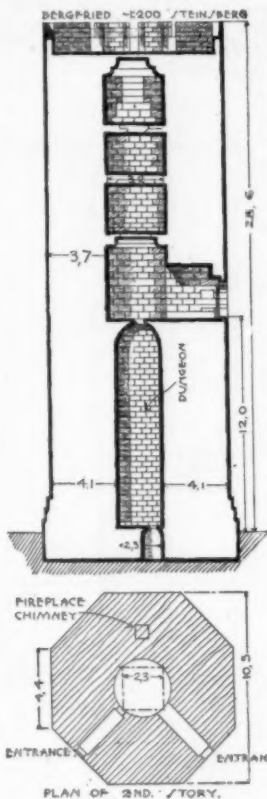


Fig. 21.



Fig. 22.

Just in proportion as feudal private warfare subsides, so diminishes the bulging tops of private towers. The typical ancient tower shows all the lower portions of its wall plain and vertical to the base. Any projection would have cut off the flow of tar and other fluids emptied from above on the enemy below through the embrasures of the battlement, or the holes in the floor of the *pech-nasen* and *hurdel* balcony.

The Renaissance distinguished the different stories of the tower by horizontal mouldings. But it was the seventeenth century, with its new mode of warfare with powder and cannon, that saw arise the towers whose bases are expanded, as in sacred architecture.

Not only were the lower stories of the feudal *burgfried* perfectly plain and smooth; but they were perfectly massive. The ground-floor was windowless and doorless. The second floor held

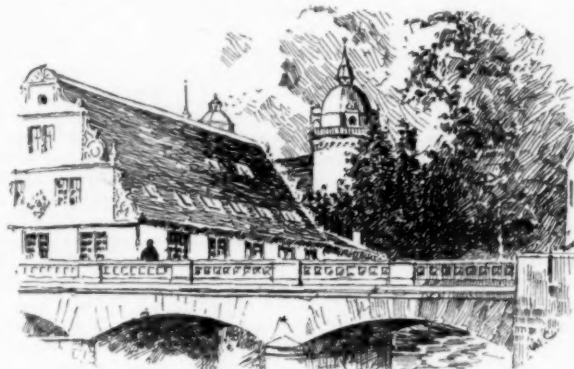


Fig. 23. Erbach Castle.

the entrance, and was provided with a window or two on the side of the tower that overlooked the court-yard. The topmost story alone had the windows on every side.

In most of the *burgfrieds* which I know, an archway has been hewn through the wall into the interior of the ground-floor. But numerous examples exist where the massive masonry of this part has been left intact. The name of the cellar-like part in every condition is *verlies*. It is the dungeon of old knightly tales: the strong, dark hole.

In the *burgfried* of Liebenzell (Figure 24), where it was divided

in two, the lowest portion only of the *verliess* is without light; the upper portion has an opening. In Steinsberg, the lowermost portion of the *verliess* resembles a round-topped cistern, and is hewn in the rock on which the tower stands. Was it a cistern for water?

Or did it serve as a sink-hole, or as a vault for the decaying bodies of hapless victims? And were dungeons designed to serve the function of prisons?

INTERIOR OF LIEBENZELL-
BURGFRIED

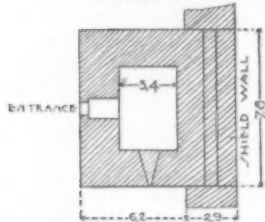
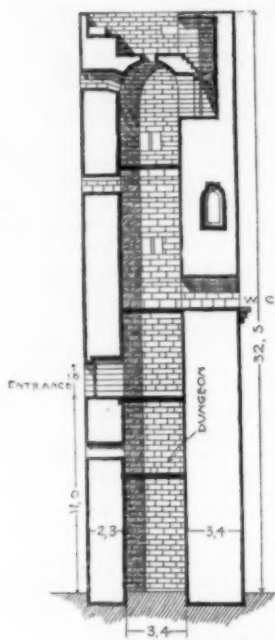


Fig. 24.

A layman has no other conception of a dungeon than that it is a prison. The whole weight of romantic literature has favored the idea for generations. But the sight of a sectional cut of a tower startles the scientific student into questionings and doubt. German archaeologists like Schulz throw the notion over. No human being could live four days in a *verliess*, he declares; it was totally devoid of light and of air. And prisoners were taken, as a rule, to live. If the cruel disposition of the men of the times would have allowed prisoners to perish, their avariciousness would not suffer it. Prisoners were kept alive to be ransomed. It is known, too, that ladders were often the only means of ascent into early towers, and how were struggling prisoners to be transported up such shaky structures?

The archaeologist thinks that the *verliess* was originally designed to contain stores, and Naeher quotes the conclusion as coinciding with his own. Perhaps the truth lies in the middle, and the fact was, the dungeon came to its peculiar doorless and windowless shape out of sheer regard to the perfecting of the tower's strength; that being once there, the cellar-like room was used for whatever purpose it could be turned to, generally as a store, but, in emergency, also as a lock-up. The construction of *burgfrieds* like Liebenzell, with an opening below the entrance and timber floors, suggests that the *verliess* might have served, occasionally, as a pitfall. On the besieged family finding that it was impossible to hold the entrance, and on taking flight, in consequence, to the upper stories, the men had only to cut the beams of the entrance floor and let the flooring behind them sink into the cellar. Their eager pursuers would then dash into the same abyss, the expected foothold being wanting. The orifice to the *verliess* was nothing but a trap-door in every case, and some dungeon roofs still retain the hooks to which ladders were fixed in the trap in order to descend to the floor.

There are other uses to which the *verliess* was put. That of Castle Krockow, to name an example, which had been transformed from a lumber-room, in 1812, into a strong storeroom—the French enemy being in the land—was newly paved in 1845, and found to have hiding-holes. A carefully cemented pit in the floor was empty. A hole in the wall, that was discovered by a workman, who accidentally threw down a pickaxe, and noticed that the spot gave a hollow sound, brought a hidden box to light.

Now the place for these secret cavities is set down as being in an

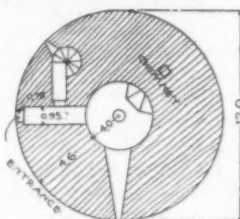
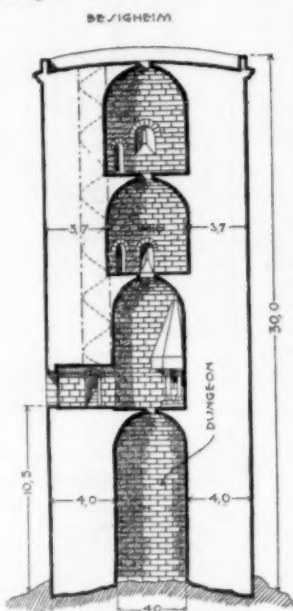


Fig. 25.

upper story of towers. Many plans took them into consideration, and they were often constructed coevally with the tower. The discovery in Krockow, however, and the experience of other families, point to the *verliess* as having likewise served the purpose of safes.

The hole in the floor of the Steinsberg *verliess* is surmised by archaeologists to have been a sink or a cistern, unpracticable as this spot was for a supply-reservoir for the water used in a boiling state in the way of defence, and disgusting as the idea is of drinking-water preserved in a place with stagnant air. The same sort of holes in private towers are taken by the owners of the castles themselves to be hiding-places, or the real or projected mouths of subterranean escape passages.

Such passages begin in the *verliess* of fifteenth-century castles.

Cisterns, on the other hand, are not thought of. Where, one may ask, are the authenticated cisterns that give Herr Naeher the idea of the Steinsberg hole having been one [vid Julius Naeher: "Die Mittelalterlichen Burgen in Südwest Deutschland"], or even of the authenticated traditional name of cistern?

Cisterns, according to the traditions which are in vogue in Silesian and Prussian castles, had their place at the top of towers, never in the *verliess* or bottom. Wherever the *burgfried* is still in use as a lodging, they are represented by reservoirs in the attic, into which pipes empty the rain-water from the roof.

The room above the dungeon of Besigheim (Figure 25) represents the living floor of German towers. It is entered through a door passage that lies over thirty-three feet above the level of the ground outside. To descend from the room, a flight of wooden steps had to be used that leaned against the outside wall. To mount out of it, one picks one's way to a narrow opening in side-wall of the passage, and ascends within the thickness of the masonry. A winding stone stairway goes to the top, and is lighted by slit-like windows a little less than two feet wide. The room within was heated by a fireplace, the projecting roof of which was pyramidal in shape, the shelf being supported by two pillars.

The bedroom story was above, the watcher's story was in the garret.¹ Both are devoid of fireplaces, and were without any means of heating, unless it were by opening the trap-doors in the middle of the floor.

In the *burgfried* of Steinsberg the fireplace was built in the fourth story, at the height of a foot above the floor. The smoke escaped through a chimney, the location of which is indicated in the plan of the second story (Figure 25).

The romantic chronicles and tales of the time (1284) name Liebenzell Tower as the residence of Kundigunde, the widow of Markgraf Rudolf, of Baden. But Liebenzell, like many of its (minor) contemporaries, is devoid of a heating place. The inhabitants resorted probably to stoves. Braziers were used in the southwestern provinces, and old samples of them are found amongst the lumber of castle garrets.

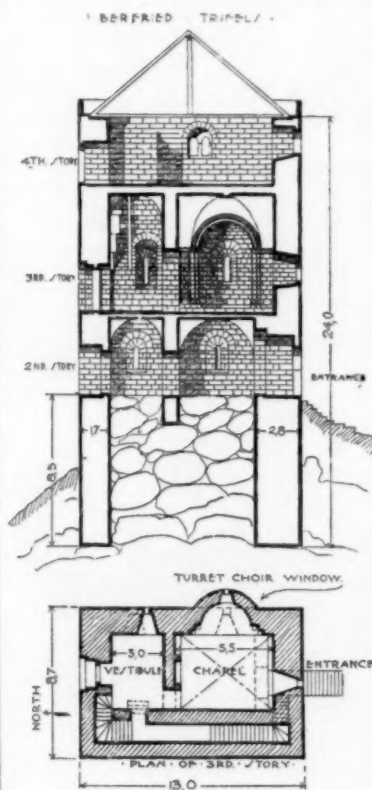


Fig. 26.

burgs. Yet, as they had been a sign of pretentious castle-building for centuries, reluctance was felt over giving them up. Without

¹ Webster's Dictionary defines the word: [O. Fr. *garite*, N. Fr. *Guérite*, a place of refuge; dungeon of a fortress, whither the beleaguered soldiers make their last retreat; sentinel-box, from O. Fr. *garir*, to preserve, save; from Goth. *varjan*.] That part of a house that is on the upper floor, immediately under the roof; an attic.

them, a *schloss* was hardly to be distinguished from a burger house or farm-court. They were the symbols *par excellence* of noble seats. If the defensive portions of the tower—the gallery, the *pech-nasen*, the shoot-slits, the strong chambers—could not be turned to any account, the stairways could. Stairways were needed for palaces, too. They had lain open hitherto; why not enclose them as in the *burgfrieds*?

The thought germinated and was embodied in the tower stairways of a hundred German castles. We shall describe them in connection with the *palast*. Here a second sort of *burgfried* must be mentioned, which, although rarer than the first, is still found copied often enough to call for some attention.

The student of French and Anglo-Norman architecture will recognize its type as being Frankish. The example selected for illustration shows the earliest form of it and the elements of the interior construction in their purity, the tower being the famous Trifels, in the Palatinate (Figure 26). Its site is upon a small, narrow tableland, the expanse of which was sufficient to include a gate and watch-tower in front and a *palast* behind, the *burgfried* rising in the middle, between the two buildings, some twelve feet from the palace. A bridge connected the last two; one end starting from the upper story of the palace and leading across to the chapel floor of the *burgfried*—precisely as in Dresden at the present day, where a wooden-roofed structure, following this old custom, is made to bridge the street, and form a passage for the occupant of the *schloss* to the gallery boxes of the court church (Hof Kirche).

The same bridges in the genuine German *burgfrieds* first described, were generally drawbridges and were attached to the lower (second or entrance) story, as in Steinsberg. They were designed to be let down only in cases of alarm or danger, when the family forsook the palace for the tower's more impregnable walls.

The chapel in these *burgfrieds* composed a part of the palace, and it was not necessary to leave the house to attend early mass.¹ The bridge was therefore essentially an escape, and was as little considered in ordinary times as the iron balconies and fire-escape ladders of modern city houses. For this reason they were relinquished often and easily. On the other hand the high bridge of Frankish pattern is sometimes retained, one of its transformations being the massive arch in the picturesque court of Erbach Castle (Figure 27).

But the chief difference between the Frankish style of German tower and the native style is seen within. Here every floor has two or more chambers. In Trifels there are even two stairways; one for the family, and one for their retainers or servants. The *burgfried* is designed for a residence as well as for a refuge. Its purpose is double, in a word, while that of the common German tower was single.

The ground plan extends itself from the square to a rectangular form, and wins room enough in this way for smaller chambers at the north side of the square, large principal rooms (Figure 26).

The entrance story lies upon the natural rock of the hill (Trifels lacks a *verliess* or dungeon). Both its chambers are vaulted, and both are lighted on the east by round-arched window-slits. A stairway opens its mouth in the side-wall of the entrance passage, and leads up through the thickness of the north-western wall to the third story. A second staircase descends directly from the small room into the one above it. From the chapel story up to the top floor, both stairways lie within the wall; the servants' stairway on the northern corner, communicating with the anti-chamber; and the narrower family stairway on the south, communicating with the imperial hall over the chapel.

The chapel is square with a semicircular choir on the east side. In the north wall is the round-arched doorway; in the southern

the wall within which the tower stairways lie. Along the foot of it runs a stone bench; and stone benches likewise line the sides of the choir and the window and the door sides of the room.

The secret hiding-hole of the *burgfried* is in the north wall. The vaulting is cross-vaulting. The arch of the choir springs from pairs of free columns, with Romanic capitals and Attic bases.

The great room over the chapel has a flat ceiling, and the windows, it must be carefully noticed, are the windows in pairs that distinguish palace windows of the earliest date. The native *burgfrieds* first described do not show this *palast* style of window. In Liebenzell they are restricted to the palace; the tower is provided only with loop-holes. The loop-holes in this chamber are in the southern wall and in a corner of the eastern wall.



Fig. 28.

The western wall embowels the steps that conduct upward to the roof and downward to the other floors. The pavement of the room consisted of slabs of marble and sculptured pillars adorned it.

From the top to the bottom the masonry is exact and beautiful. The exterior walls are an excellent isodromum of middle-sized sandstone blocks carefully hewn and furnished with smooth borders. Even in its present state of neglect, the impression left by the structure approaches to that left by monumental art. The semi-towerlet that marks the choir of the chapel is composed of carved blocks of the same hard, dark, reddish-hued sandstone as the tower wall, and follows its isodromic lines. Its supports are two massive cornices, the retreating surfaces of which are ornamented by a female and a bearded masculine head. An elaborate frieze crowns its top.

The dust of seven centuries lies on its stone rooflet, and in this ancient earth young plants take root and flower, till the whole turret looks, in June, like a *jardinière* thrust out from the stern and solitary wall by some ghostly hand. To the student of its dead masonry, the owner of the hand seems zealous in the work of reminding him that once, for long ages, the walls were the safe nests where mothers cherished the young blossoms of their maternal love, to then thrust them forth into the rough world—"the flowers of chivalry."

Such a stern background as the vigorous, flaunting, real and sculptured plants of the turret possess in the barren wall of the tower had the home life of the princes and knights who hold their places in the foreground of our mental pictures of mediæval times. The contrast between the full velvet and silken vestments of princes and the massive plain castles they lived and visited in is extraordinarily great. But, as a little deviation of fancy, we may add to this chapter of construction the question whether the riches in vestments were, indeed, all that we incline to think. The question may correspond to a grotesque. If we attach it to a description of the masonry of Trifels, as the builder attached the turret to the choir, it is because a document² happens to be at hand that was written from this same choir.

Trifels, it must be remembered, was the treasure *burg* of the German emperors down to the time of Rudolf of Hapsburg. The State jewels were kept under the altar of the chapel. In 1246, on the 17th of September, Conrad IV records the answer which he got from Isengard, the wife of his court carver, Philip of Falkenstein, as to what treasures were then in Trifels. The inventory is not much like the descriptions which laymen are used to in the epics and poetic ballads of the time:

"One [piece of] wood of Our Lord [s crucifix] with a gold cross.
One tooth of St. John's the Baptist.
The spear of St. Maurice.
One nail of Our Lord [s cross].
Two double-bladed swords.
The gold globe with a cross.
The imperial mantel.
3 golden spurs; 1 alb of white velvet; 2 pairs of scarlet breeches, and
2 shoes beset with stones."

COUNTESS V. KROCKOW.

[To be continued.]



Fig. 27. Court-yard of Erbach Castle.

wall, opposite the door, a small window. A second window is found terminating the choir, and appears outside as the upper opening in a semicircular turret (Figure 28). The west side of the chapel is

¹ And daily attendance at the mass was obligatory. The vows which a knight took on receiving the accolade, included a sacred promise to hear mass every morning. Aristocratic families in Catholic parts of the Empire have always sustained the custom, and architects have had to consider it when drawing plans for castles from the earliest times down to our own.

POSSIBLE REVOLUTIONARY MONUMENTS.—The House Committee on the Library has agreed to report favorably bills appropriating \$100,000 for a monument to the memory of the victims of the prisonships at Fort Greene, Brooklyn; \$18,484 to complete and dedicate the monument commemorating the surrender of Burgoyne at Saratoga; \$25,000 for a monument at Put-in-Bay, Ohio, commemorative of Commodore Oliver Hazard Perry and the battle of Lake Erie; \$25,000 for the preservation of the grave of General Daniel Morgan, at Winchester, Va., and the erection of a monument; \$25,000 for a monument to William Henry Harrison, the grandfather of President Harrison, at North Bend, Ohio; \$25,000 for a monument to Major-General Israel Putnam, at Washington; \$25,000 for a monument to Major-General Nathaniel Greene, at Guilford Court-house, N. C.

² Quoted by Krieg von Hochfelden from Or. Gölff, 3, 843.

furring to be filled solidly with masonry flush with laths. If wood partitions are used, to be of solid plank with some system of lathing which will allow the plaster to be forced solidly against the wood.

Stairs to have no concealed spaces and to be generally solidly built with the underside plastered against the steps.

Details of woodwork arranged in accordance with the general plan of preventing the spread of fire as much as possible.

If our building is well arranged for the adoption of these details, our building expert will see no reason for other than a small loss by fire under any circumstances. The amount of burnable material in any room could not burn a hole through its floor or ceiling and would spread laterally very slowly.

But the school building is only one of many classes where the solid work may be profitably applied and the gain in safety from fire, in strength and warmth may be realized.

These different advantages will be discussed separately, as will also some constructive features and difficulties.

FIRE-RESISTING QUALITIES.

The air may, perhaps, be cleared of much of the fog surrounding this subject if we begin by taking into account the uses to which buildings are put.

Let us begin by admitting that large commercial buildings with a number of stories connected by open stairways, elevator and light shafts, and piled full of combustible stock, have thus far been easily destroyed when the stocks have become generally ignited; and, so far as such buildings are concerned, they have not in any case shown themselves to be "fireproof," nor will they until we carry the art of fireproofing much beyond anything known to present practice. The fault is inherent in the arrangement or planning of such buildings, and, so long as such planning is regarded a commercial necessity, total losses of building and stock will be frequent.

There are plenty of warehouses, however, built with wooden floors and supports, having several stories, the connection between which is so arranged that almost any amount of non-explosive stock may be stored in them, and any fire occurring therein may easily be confined to one story.

But I scarcely need say that, in order to successfully withstand such a test, this wood construction must be with large timbers and solid planks spanning the intervals, no concealed spaces whatever for the passage of unseen flame being admissible. The success of this solid system of wood construction having been so abundantly proved under trying circumstances, is it not discreditable to designers of buildings that the system is not extended to less risky constructions? Why should a hotel, a school, a dormitory, hospital or office-building be so built that a fire with a few minutes' start will almost inevitably destroy the building, when with a little skill in designing, and often with no greater cost, a room in which a fire occurs might be closed by a common panelled door, and in the majority of cases the fire would "burn itself out," with the loss of the furniture and decorations of the room only?

The confusion carried with the terms "fireproofing" and "slow-burning" is added to by the use of much so-called fireproof material, good in itself, but so applied as to be worthless for the purpose in-

this tragic night owing to the much-vaunted "fireproofing" of the building, but for which, perhaps, some of the seven victims of this almost unprecedentedly quick destruction might still be living.

But the construction of this building was like that of so many others that they almost constitute a class. Enough good money and material was used in its floors and partitions to, perhaps, pay for a thorough job of solid-wood construction twice over. On a supporting frame of iron posts and girders ordinary wooden joists were laid. Tiling of fire-clay was suspended under these joists, upon which the plastering was laid. Other fire-clay tiles were cemented to the I-beams and columns. The fire, once between these joists, had free play through the whole area of the floor; it was not even held in check between two adjoining joists for the length of time necessary to eat away the ordinary lath-and-plaster construction, but had immediate access to the whole area of the floor. The heat soon became so intense as to shell the tiling off from the I-beams, and it is doubtful whether the most ordinary wood-construction would have yielded so readily as did this costly slow-burning (?) building.

(To be continued.)

WASHINGTON'S ARCHITECTURAL NEED.

[The following letter to the Washington *Evening Star*, by a citizen of Washington, who, though well educated in matters of art, is not in any way connected with the profession of architecture, is worth quoting in full.—EDS. AMERICAN ARCHITECT.]



XVI Century Chair. From Havard's "Dictionnaire de l'Ameublement."

WHERE are indications of a rather remarkable awakening at the present time of public sentiment of an enlightened sort regarding the architectural needs of Washington as the capital or residence city of our nation. It would be a happy thing if our new Congress should see here the opportunity to do something hitherto left undone, not so much for want of appreciation of the need as because of the little hope of getting a united public sentiment in favor of any movement adequate to the need. The hopeful indications at present are those exhibited on the one side by the government, on the other by the professional archi-

itects, and by all lovers of art in this country, by our Washington board of trade and by our public-spirited men generally. In this connection there is a passage in the recent report of Postmaster General Wanamaker which will bear frequent quoting:

"I suppose it would be considered no concern of mine, but what Washington needs is a commission of citizens, engineers, members of Congress, and perhaps cabinet officers, to suggest how some wise, economical and far-seeing plan for the erection of needed public buildings might be accomplished according to a definite, artistic, business-like plan. It would mean a saving in the end of \$20,000,000 perhaps, and meantime the architectural hodge-podge, whose only merit is its infrequency, would disappear and the executive departments would be housed in buildings owned by the government and forming part of a splendid whole."

What kind of buildings should occupy great conspicuous thoroughfares of the national capital? Are these to be left to the caprice of architectural cranks or the competitive advertising zeal of ambitious merchants? Undoubtedly Pennsylvania Avenue, of which the American loves to boast, is, as a roadway, one of the finest in the world, while, as the great central promenade and public thoroughfare of a capital city, it is probably, in its architectural display, the meanest and most insignificant. Many, probably, are inclined to grieve over the fact that the rows of buildings on either side of the avenue have not, at least, some little pretence to architectural harmony and dignity. I am inclined rather to think it a matter for congratulation that things have remained as they are, sooner than be undertaken in a small way or on a scale inadequate to the grandeur of the opportunity still before our country for developing here the most wonderful capital in the world.



Fig. 5.

tended. So recently as to be still fresh in the public mind, occurred a fire in an eight-story printing-office of a Western daily paper. A sense of security was felt by the occupants of the upper stories on

Had a more pretentious class of buildings already been erected on the avenue by government or otherwise it would have been much more difficult now to remove them, and not until now have the needs of the government increased to such dimensions as to justify the adoption of an architectural scheme grand enough to take entire control of any large section of the city. Perhaps I should modify this by saying that since the great department buildings have been erected this has been the case, for it is probably not far from the truth to say that had the War, State and Navy, the Interior, the Pension-office and Post-office and Treasury been built with a single front, instead of in quadrangles, and located on the south side of the avenue they would have formed a continuous line of palaces extending from the White House to the Capitol. But even with the great department buildings already located there is now a plain indication that the government will ere long have to duplicate its office accommodation, and that now, at the beginning a new architectural era in our city, plans should be wisely laid with a view to a result worthy of the immense expenditures of money that will be involved and the unparalleled opportunity for the artistic embellishment of the national capital that the erection of these buildings will afford. While the proper utilization of the avenue for the government and district buildings under a consistent and imposing architectural plan would undoubtedly involve the removal of every building now on it, it is not necessary that this should be done at once or at one time. What is needed, however, and needed now, is that before the avenue is occupied by any more buildings, whether public or private property, a government commission, as indicated by Secretary Wanamaker, should be appointed to agree in general under the wisest architectural, engineering and artistic counsel that can be got together upon a scheme for the building up of the avenue on such a scale of grandeur, dignity and beauty as the people of the United States owe it to their own honor and to the memory of their great patriot—Engineer Washington—to do.

A national art commission is what is now demanded of our government, with as much urgency, if not even more, than any of the commissions established within recent years, such as the Commission of Education and others. The expenditure of hundreds of millions of dollars of the people's money in work involving art, intelligence and looking to art culture, as is done in all our public buildings and historical monuments, demands that this expenditure be made under such wise direction as shall bring the nation the best returns possible for what is paid out. And yet who can pretend that a single Chief Engineer or Secretary of War or chairman of a Committee on the Library or Supervising Architect of the Treasury can properly administer so large a trust as this? Or who will suppose that for the millions that we Americans so generously pay for art advancement, especially in our public buildings and monuments, we get as good wares in return as foreigners do for less money? Our people have a right to such a commission as is indicated in the Secretary's letter, on the ground of simple honest dealing or getting a fair return for the money they pay. Why is it that with our boasted millions of surplus and our unbounded wealth as a nation we have still, outside of the noble Classic buildings designed by the government's early builders and the Washington Monument, hardly a government structure or statue in the whole country that a foreigner would cross the street to look at as a work of art, much less take a journey across the world to see, as people still flock to Rome and Athens, not to say Paris and Vienna and London, to see the buildings and monuments erected by government there? Truly it may be said to our people: "You pay your money, but you do not take your choice"—at least as intelligently as you could were a commission of the most competent men the government could select entitled to determine questions now left to the hurried and harassed judgment and decision of a single over-burdened official.

In the discussions which appeared in the *Star* relating to the style of the new Post-office building, the remark of the Supervising Architect was quoted to the effect that it had not entered into his mind to consider the relation the style of the new building would bear to that of adjoining sections of the avenue. If he meant by this that while the Post-office was built to stand the adjoining blocks on the avenue would sooner or later be demolished, and, therefore, need not be considered, he was doubtless correct; but if he meant that it did not matter whether one building on the avenue should maintain any architectural relation to any other—an idea which we would not for a moment think of imputing to him—then the remark would only illustrate a state of opinion which undoubtedly exists in many minds, and which earnestly calls for the precautionary action of an intelligent government art commission in determining in general what sort of buildings shall and what shall not be allowed henceforth to be built on the nation's most conspicuous avenue. To see what a government can do in the architectural control of a city, not to speak of Paris, we need only look at Munich, the capital of Bavaria, and to its famous Ludwig's Strasse, a magnificent avenue leading from the royal palaces out to the Arch of Triumph and the Art Academy, and bordered on either side by a continuous line of government buildings, churches, public libraries, academies and the University, all harmonious in style, and exhibiting a unity of design in all the several structures. The growth of the modern Munich has been contemporaneous with that of Washington and its population—is now about the same as that of our District of Columbia. Its galleries of art are among the most renowned in the world for external beauty of structure and for their priceless treasures. And yet

Munich is the capital of a comparatively poor little German kingdom, somewhat smaller in territory and in population than the single State of New York, and Washington is the capital of half a continent and of 65,000,000 of people. If Bavaria, with her 5,000,000 inhabitants, can afford a handsome capital-city that shall attract travellers and students from all the world, have not our 65,000,000 citizens a right to expect from our National Congress that it will provide for this nation a capital-city equally attractive? Thanks to Washington and to the wisdom of our fathers, we have here in our District of Columbia, the plan and the beginning of a capital-city capable, under wise direction, of becoming more beautiful than any capital the world has ever seen.

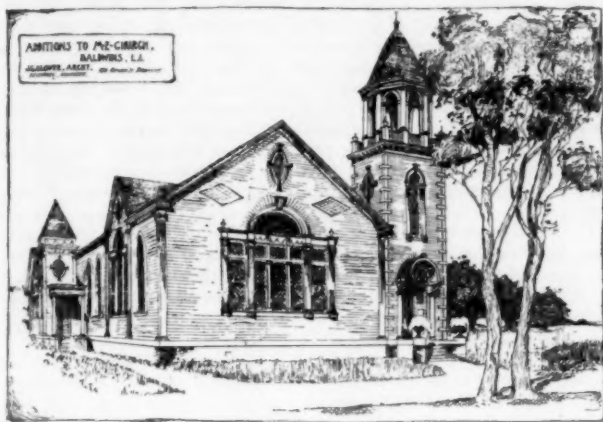
Such an art commission as Mr. Wanamaker proposes is not an unheard-of idea, even in our present American politics. A commission similar in its general purposes, if not in scope, has been, if I am not mistaken, within a year or two appointed by the government of Massachusetts. The Institute of American Architects is exerting its influence to have the architecture of our United States buildings throughout the country represent a wider range of design than what a single architect's office can furnish.

The Congressional Library Committees have long been charged with a responsibility that ought certainly no longer be treated as a mere appendage to duties of an entirely different character, and which is far too significant to be slighted in this manner.

Those of our people all over the land who have long been waiting for some measures to redeem our capital from the Vandalism or Philistinism which has long threatened it, and still disfigures it in so many ways, would feel a new confidence in the knowledge that such an art commission were in existence, and was beyond the disturbing effects of yearly or quadrennial political changes. The sight of sky-scraping warehouses, exposing for every thirty or forty feet of ornamental front some hundreds of feet of bare side walls, hideous with glaring advertisements, not to speak of the "hodge-podge" of public buildings mentioned by the Honorable Secretary, all this can be endured with better feeling by those who love Washington and have some pride as American citizens, when it is known that a commission exists with power not only to provide that the buildings put up by the Government shall occupy the sites best suited to them and to the advancement of the beauty of the capital as a whole, but also to prevent in the future the erection on a conspicuous thoroughfare of anything that shall be inharmonious and unworthy. With such a commission in charge, we might look hopefully forward to seeing not many years hence the avenue graced on either side with beautiful colonnades and arcades lining the front of our new District buildings—public library, museums, auditor's offices, Indian Department, geological survey and musical and art conservatories, and possibly the government's own national university. We might hope to see the most imposing site for a grand triumphal arch or national monument that any city of the world can boast to-day—that at the head of Sixteenth Street, as seen from Lafayette Square, at least no longer disfigured by that unsightly water-tank, a standing humiliation to all our pretences to more than a very third-rate provincial culture. Might we not even look forward with some hope to seeing the government take the initiatory steps toward the erection on this unparalleled site of the great Columbus Arch, which has been so frequently advocated in the *Star* as the nation's proper commemoration of the discovery of America? And lastly, might we not feel that the broad, magnificent and far-seeing scheme for a national gallery of art and history which that true patriot, Mr. Franklin W. Smith, has recently been unfolding before our Board of Trade, would not have to go begging for some proper arm of the government to give it an intelligent hearing, and, if found worthy, a cordial and generous support? Let us have, then, our national art commission, to save for the highest uses of the people, and for holding our place as a nation in the art-culture of the world, those magnificent opportunities, as yet unspoiled, which our young and beautiful capital city offers us. Let Congress not only save the \$20,000,000 which Secretary Wanamaker foresees will otherwise be spent on buildings put up, only to be torn down for their ugliness or their inappropriateness or bad location, but let the government begin now a symmetrical and intelligent architectural development of Washington according to a wise, liberal and far-seeing plan worthy, in dimensions and artistic idea, of the seat of government of a nation that calls itself a leader in the civilization of the world.

FRANK SEWALL.

SLIDING BOOK-RACKS FOR LIBRARIES.—The storage-room for books in the library of the British Museum has been increased almost indefinitely by the introduction of what are called "sliding book-presses." Until this device was hit upon, the librarians were at their wits' ends to know what to do with the ever-increasing multitudes of new volumes. The idea was borrowed from the Bethnal Green Museum, where flying book-shelves are suspended from beams projecting from the crowded book-cases. In the British Museum the new book-cases are suspended, in front of the old ones, from the gratings which support the ceilings, and are so constructed as to run easily upon wheels in any desired direction. The gratings, which have proved so convenient, were adopted in the first instance without the least notion of their ever being required to serve their present purpose. It is said that the arrangement is peculiar to the British Museum, but it will not be long before the example is followed elsewhere. Its adoption is reported to have saved the Museum authorities \$175,000. — *New York Evening Post*.

THE SEVENTH LEAGUE EXHIBITION.¹—II.

AFTER some pretty sketches, both in black and white and color, by Mr. Hawley, Mr. Rotch, Mr. Israel and Mr. O'Connor, we came to a large pen-and-ink perspective of what the catalogue modestly calls a "country mansion," by Mr. Robertson. This "country mansion," which is, we believe, destined for a situation not far from New York, must be the largest dwelling-house in the United States. It can be compared to nothing in the shape of a habitation except the enormous "dukeries" which astonish the traveller in the English counties. Mr. Augustus J. C. Hare, whom architectural tourists have reason to hold in grateful regard, is said to have described a visit that he made at one of these houses, which was so big that every evening, after the tea-hour, carriages were stationed at the outside door nearest to the drawing-room, to convey to the vicinity of their bedrooms those guests who had been assigned to the more distant wings; and the occupants of Mr. Robertson's castle would, we should say, find such an arrangement very convenient, if not necessary. It is needless to say that the architect has treated his subject very cleverly. It would be difficult to make a design of the kind without giving it an English flavor; and Mr. Robertson has frankly accepted this condition, and has produced a house that might, so to speak, meet Penshurst, or Wilton, or Knole in society, without feeling embarrassed or *parvenue*, and it is all the better entitled to associate with these august dwellings from the fact that, although evidently intended for a family inheriting English traditions, and having English ways of living, it has a certain character of its own. The only thing about the design which has the slightest air of borrowed finery is the chapel, which forms a pretty feature in the group; but, after all, there is no reason why an American family, of great wealth and extensive connections, should not have its private chapel; and, although we should not dare to say that some of our successful stock-brokers would be likely to wear out the floor of such an apartment with their knees, there is no doubt that in the mansions of many American millionaires as frequent and as sincere prayers are offered as at Hatfield or Arundel.

Next to the Robertson mansion comes a large frame of the drawings sent in competition for the gold medal of the League. As we are, perhaps, inclined to find somewhat less merit in even the successful work of students than its authors attribute to it, we strive to counterbalance this fault by forbearing to criticise the obviously imperfect efforts of beginners in the great and difficult art of architectural design, and will merely mention one curious example of the way in which a design should not be constructed. This extraordinary composition presents, as its primary feature, a sort of packing-box, on top of which is set the Castle of S. Angelo. This, again, is surmounted by a Spanish tiled roof, irregularly interrupted by dormers, of monstrous size and sprawly shape; and on an unexpected spot, near the rear, is planted the Madison Square Garden tower. Behind this tower, somewhere about the corner of the building, the Spanish tiled roof is seen again, descending toward the ground, exactly as if the heat of the sun had melted it, and a slide had taken place toward the rear. Unfortunately, this undigested mass of incongruous features is shown in a rather effective sketch, and the diagnosis of the case suggests fears that the author of it is so infected with the notion that architectural design consists in clever sketching that he can never be brought back to the healthy exercise of the higher faculties.

In No. 133 we have a design by Messrs. Little, Brown & Moore, of Boston, in a new vein, showing a church, English in style, modest and attractive. Then comes the design of Messrs. Heins & La Farge, for the New York Cathedral, as revised, and finally adopted for execution.

On the whole, we cannot say that the final design appears to us to have gained by the revision. The western towers, which were none too large before, have had their spires knocked off, and appear still smaller; and, with their open-work angles, modelled after those of Laon, are quite out of keeping with the very noble central tower. The Peterboro'-like west front, with its wall-surface nearly all cut

away, still further fails to support the heavy central mass, and the enormously high open balustrades bordering the flat roofs of the aisles and the west towers injure the scale, and still more the unity of style, of the design. We do not doubt that the architects are fully sensible of these discords in their great composition. Such a work of art is not brought to perfection without years of study, and the difficulties involved in meeting the wishes of a dozen zealous and intelligent committee-men, to say nothing of the complete change of orientation, are more than enough to explain the crudities which the talent that conceived the beautiful central tower may be trusted ultimately to overcome.

Whether by accident or intention, a great many new names appear on the catalogue this year as the authors of sketches, either from nature or imagination, and among the works by comparatively unknown persons are some of the best in the rooms. For example, near the Heins & LaFarge cathedral hang drawings by Mr. James Brite, Mr. Chester Holmes Aldrich, Mr. Albert Randolph Ross, Mr. T. G. Holyoke, Mr. Frederick P. Hill, Mr. Robert David Kohn, and Messrs. Fowler & Hough, all of which are of very exceptional merit. We ought not, perhaps, to speak of all these gentlemen as being unknown to fame, and, in fact, nearly all of them have exhibited with credit on previous occasions, but they appear this year with a brilliancy which will place them definitely in the ranks of those from whom excellent work is always to be expected.

We come now to an extensive collection of drawings and photographs connected with the Chicago Exhibition. Most of these designs are well known to the public, but the newspaper illustrations give little idea of the highly-studied proportions, and the splendidly-executed drawings, which attract great and deserved attention from the visitors.

Last of all, we turn to the bric-à-brac room, which is full of interesting objects. Passing over the usual number of queer-looking pictures, which we are informed are "decorative," we find some charming and novel architectural details, in the shape of carved and gilded and twisted columns, of which there is one from Venice, and half-a-dozen from Spain; a carved bracket from Grenada, and many panels and specimens of repoussé and wrought-iron work, old and new. Mr. John LaFarge has more than thirty water-color pictures, mostly sketches made during his tour in Oceania, which are interesting; but, to our mind, the most noticeable thing in the room is a portrait bas-relief, by Mr. St. Gaudens, exhibited by Mr. Stanford White. The portrait is about half-length, and represents what is certainly a very beautiful and noble figure, in bridal dress, holding flowers in its hand. It is treated very simply, but with such loveliness of composition and modelling as only a great master is capable of. As if by way of contrast to this perfect work is placed just under it what is alleged to be a "Wedding-Chest in Sycamore, Designed and Painted by" an artist whose name we will not advertise. To begin with, it always provokes us a little to have our attention drawn to a box as a "Wedding-Chest," as if its connection with weddings gave it any advantage, as a work of art, over a "Pork-Barrel in Hickory," or a "Wash-Tub in Cast-iron"; and an examination of the "wedding-chest" does not confirm the idea that it has any matrimonial appropriateness. On the contrary, we should have said that its more special adaptation was to express the aspirations of a carpenter's apprentice, who had found a box of paints and a Walter Crane nursery book, and thought that these, with an old tool-box and some pieces of moulding, were all that he needed for immortalizing himself. He has, apparently, set about doing so by gluing first some big mouldings on his box, followed by a few bits of machine-made beading. The form being thus happily completed, he has begun its adornment in color by painting on the front a group of figures on a green ground, some with clothes of raw blue, and others dressed in brown, but all, or nearly all, with enormous wings of pure vermilion. The effect of these sanguinary objects, leaping, as it were, from the inoffensive monotony of the sycamore background, is sufficiently startling, but an extra discord is imparted to it by its combination with the decoration of the ends, which consists of shields, charged with armorial bearings which would give a herald a fit, in tinctures of black and white, and a sort of feeble brown, as ugly as the front, but in a different way.

TURPENTINE "ORCHARDS."—The chief value of North Carolina is in its pine forests, which produce turpentine, tar, rosin and lumber. Turpentine "orchards" are distinguished by the trees being boxed; that part not so treated is called "round timber." A tree is "boxed" by having the bark stripped off from the ground upwards for six or eight feet on opposite sides of the tree. At the bottom a hollow place is chipped out of the trunk which holds the pitch or crude turpentine as it trickles or is scraped down the side of the tree. This is collected by mule teams and taken to the "still," where it is converted into turpentine or rosin. These "orchards" are let out by the thousand trees at the rate of \$40 to \$50 per 1,000. Each tree will produce about twenty-five cents' worth of pitch. A barrel of it is worth about \$2. The boxing process slowly kills the trees, and large portions of the forests are dead and desolate. The trunks of the trees are very "fat" or rich in pitch, and tar is produced by cutting the wood into strips, piling it with the ends towards the centre, like the spokes of a wheel, and covering over with dirt; the pile is then lighted at the centre, and the slow burning causes the pitch to flow out through a spout which has been thrust into the pile. Thus we have tar in its natural state. A two-horse load of wood will produce about one barrel of tar.—*Philadelphia Telegraph*.

¹ Continued from No. 841, page 87.



[Contributors are requested to send with their drawings full and adequate descriptions of the buildings, including a statement of cost.]

THE STAIRCASE HALL: HOUSE OF GORDON REED, ESQ., COWESETT, PROVIDENCE, R. I. MESSRS. GOULD & ANGELL, ARCHITECTS, PROVIDENCE R. I.

[Gelatine Print issued with the Imperial and International Editions only.]

COMPETITIVE DESIGNS FOR THE RHODE ISLAND STATE-HOUSE, PROVIDENCE, R. I. PLANS, SECTIONS AND PERSPECTIVE VIEWS SUBMITTED BY:

MESSRS. MCKIM, MEAD & WHITE, ARCHITECTS, NEW YORK, N. Y.

MESSRS. CARRERE & HASTINGS, ARCHITECTS, NEW YORK, N. Y.

[Additional Illustrations in the International Edition.]

MESSRS. J. C. CADY & CO., ARCHITECTS, NEW YORK, N. Y.

MESSRS. STONE, CARPENTER & WILLSON, ARCHITECTS, PROVIDENCE, R. I.

MESSRS. W. R. WALKER & SON, ARCHITECTS, PROVIDENCE, R. I.

MESSRS. HOPPIN, READ & HOPPIN, ARCHITECTS, PROVIDENCE, R. I.

MESSRS. SHEPLEY, RUTAN & COOLIDGE, ARCHITECTS, BOSTON, MASS.

THE Commission appointed by the General Assembly of the State of Rhode Island to obtain plans for a new State House submitted the following conditions to the architects competing.

1. The building must be planned so that it can be properly built, with ample light and air, upon a lot surrounded by streets or open ground, — said lot to be substantially level across its front, but with a rise from front to rear of 30 feet in 300. The building must be supplied with proper heating, lighting and ventilating apparatus, and with the necessary sanitary arrangements.

2. The drawings required in the competition will be as follows:

1st. One plan of the cellar and of each of the other floors.

2d. Three elevations of building — front, one side and rear.

3d. One longitudinal and one transverse section.

4th. One perspective view on the scale of $\frac{1}{4}$ inch to the foot, (with point of sight three hundred feet from nearest point to building,) which shall be rendered with cast shadows in brush wash in monotone, black or brown.

3. All drawings submitted, excepting the perspective, must be drawn on a uniform scale of $\frac{1}{4}$ inch to the foot; and all must be executed in India ink on heavy white paper without shading or shadows. Door and window openings must be tinted in India ink to show glass. Walls and partitions must be filled in solid with India ink. No landscape nor figures shall be drawn on either elevations, excepting one figure to indicate the scale.

4. All drawings submitted shall be either mounted on stretchers or heavy book-boards with white or tinted paper borders, and no border lines nor other framing will be allowed.

5. It is necessary that the designs submitted should be for a fire-proof building, and one that can be completed at a cost not exceeding one million dollars, on a good average foundation.

6. Each design shall be marked with the name of the architect or firm of architects submitting the same.

7. There shall also be a type-written description designating the materials the author proposes using in the construction of building, and such other general information as cannot be shown on the several drawings herein called for, as may be necessary to accurately determine the cost of the building. No drawings nor documents other than those herein called for will be received.

8. The author or authors of each design conforming to these conditions shall receive, as a compensation therefor, the sum of one thousand dollars.

All drawings will be the property of the architects or firms submitting them and will only be used in whole or in part by agreement with and compensation to their authors.

All rejected drawings shall be called for within thirty days after the decision of the competition, after which time the Commission will be no longer responsible for them.

9. The Commission shall appoint two or more architects of reputation, who shall not be competitors, to assist them. Such consulting architects shall certify to the Commission whether or not each competing architect shall have complied with these conditions, and

shall further assist the Commission in such manner as the Commission may desire.

Each competitor shall submit a reliable bid from some known builder for the building of the State-House, the Commission reserving the right to select a practical builder to check such bids.

10. A design shall be excluded from competition if any attempt is made by its author to influence the decision of the members of the Commission or their advisers; or if, in the opinion of the consulting architect, it in any particular violates the conditions herein stated; or if it shall be found that its probable cost will exceed the limits herein named by more than twenty-five per cent. The author or authors of an excluded design shall receive no compensation therefor.

11. No design shall be received after the date fixed, unless the time is extended by the Commission, in which case timely notice shall be sent to all competitors of such extension of time.

12. The arrangement and area of the rooms and spaces shall be as far as possible as follows:

Governor. — 3 rooms, 1,200 feet.

Secretary of State. — 3 rooms, 1,200 feet. Store-rooms for books connecting or near at hand.

Treasurer. — 3 rooms, 900 feet.

Auditor. — 3 rooms, 1,000 feet. Connecting or near Treasurer.

Adjutant-General. — 3 rooms, 1,200 feet.

Quartermaster-General. — 1 room, 400 feet. Connecting with Adjutant-General.

Insurance Office. — 2 rooms, 450 feet.

Board of Agriculture. — 1 room, 300 feet.

Board of Pharmacy. — 1 room, 300 feet.

Board of Charities and Corrections. — 4 rooms, 1,200 feet.

Board of Education. — 4 rooms, 1,200 feet.

Board of Health. — 3 rooms, 825 feet.

Board of Dentistry. — 3 rooms, 800 feet.

Board of Inland Fisheries. — 2 rooms, 600 feet.

Board of Shell Fisheries. — 1 room, 900 feet.

Pilot Commissioners. — 2 rooms, 600 feet.

Harbor Commissioners. — 1 room, 900 feet.

Commissioners of Railroads. — 2 rooms, 450 feet.

Commissioner of Dams. — 1 room, 150 feet.

Commissioner of Industrial Statistics. — 2 rooms, 450 feet.

Board of Soldiers' Relief. — 3 rooms, 750 feet.

Senate. — A chamber accommodating 36 Senators, Officers, Reporters, Clerks and Spectators.

Private office of President, 300 feet; Retiring-room for Senators, 500 feet; Coat-room, 250 feet.

House. — A hall accommodating 72 Representatives, Officers, Reporters, Clerks and Spectators.

Private office of Speaker, 300 feet; Private office of Clerks, 300 feet; Two Retiring-rooms (each), 600 feet.

14 Committee-rooms, 300 feet each.

Library. — (Near Secretary of State's office), 1,200 feet.

In addition to the above, provision must be made for the corridors, elevators, stairways, vaults, lavatories, engine, heaters, coal, vent-shafts, extra committee-rooms, store-rooms, etc., necessary for a building of this character.

13. From the designs furnished which conform to these conditions the Commission shall select one to be presented to the General Assembly of the State of Rhode Island as the design for the new State House. This design shall be in the possession of the State, but shall remain the property of the architect or firm who made it, and shall not be used in whole or in part except said architect or firm is employed as architect and superintendent of the building according to the rules of the American Institute of Architects.

14. All designs must be received by the Commission on or before 12 M. of January 14, 1892, care of, E. K. GLEZEN, Secretary.

4 Market Square, Providence, R. I.

Rhode Island
State House Commission.

HERBERT W. LADD, Chairman.
WILLIAMS AMES,
OLNEY ARNOLD,
ALBERT L. SAYLES,
FRANCIS L. O'REILLEY,
JOHN W. DAVIS,
GEORGE PEABODY WETMORE,
NATHANIEL B. CHURCH,
JOSHUA WILBOUR,
ENOS LAPHAM,
ROWLAND G. HAZARD.

PROVIDENCE, R. I., August 10, 1891.

A true copy, E. K. GLEZEN, Secretary.

HOUSE OF GORDON REED, ESQ., COWESETT, R. I. MESSRS. GOULD & ANGELL, ARCHITECTS, PROVIDENCE, R. I.

[Gelatine Print.]

FIREPLACE IN THE LIVING-ROOM OF THE SAME HOUSE.

[Gelatine Print.]

FIREPLACE IN THE PARLOR OF THE SAME HOUSE.

[Gelatine Print.]

BASEL, FROM THE RHINE.

THERE would be a difficulty in discovering a city or town on the Rhine in which quiet reigns more absolutely than in Basel. It is evident from his drawing that Prout was impressed with this quality. Everything seems to be at rest. The houses might be all untenanted. The river is not disturbed by a ripple. The shadows appear to be subject to no fluctuations. The boats seem anchored for ever, and the Prutesque mariners look on as if they had been converted into statues.

In another way Prout also exercised fine judgment. If he had taken a position on the other side of the bridge the cathedral would not have appeared so impressive, and the houses could hardly fail to assume an appearance of less stability.

The cathedral, which is of a warm red in color, is an important feature in a town which lies so low in comparison with the surrounding hills. It is a building containing masonry which belongs to at least five centuries. In 1019 the original cathedral was consecrated; in 1085 the greater part was destroyed by fire; the reconstructed building succumbed to an earthquake, and it was not until 1500 that the building could be considered as again complete. The cathedral has, during the present century, unfortunately suffered much from restorers. It was in a room in the upper part of the cathedral that the Council of Basel was held, from 1431 to 1447; but long as were the deliberations they did not end satisfactorily. A great many names of personages, who were esteemed while living, were connected with the cathedral; but the one name that is never likely to be forgotten is that of the homeless scholar, Desiderius Erasmus. He came to Basel to correct the proofs of his friend, the printer Froben, and lived in the Zum Luft; in pensive mood he perambulated the cloisters of the cathedral, and when, worn out with labor, he died in Basel, his monument of red marble was set up on the left side of the altar. But although a cosmopolite, like so many of the Renaissance scholars, the best memorial of Erasmus is, after all, the fine statue in Rotterdam, which looks down in a brotherly way on the market-women and their patrons. There alone he seems to belong to human kind, and to have some claims to be reckoned as one of a family. The town has also names of which the inhabitants may be proud. Holbein, who helped to keep art in England from dying out, was a native of Basel, and a good many of his pictures are in the Kunstsammlung. For his sake the town must have interest for an English traveller. The three Bernoullis, who were renowned as mathematicians, also were natives of Basel. Euler was another citizen. The famous, if unlucky, Paracelus was professor of medicine in the university, which was a sort of refuge for many who, in the sixteenth century, were not in accord with their age. It was no wonder, therefore, that when Vesalius wanted to publish his great work on Anatomy—he was the first to systematize it—he selected Basel as the most suitable place to begin a revolution in medicine and in art.

HANOVER CHAPEL, REGENT STREET, LONDON, ENG.: THE EXTERIOR. C. R. COCKERELL, R. A.

INTERIOR OF THE SAME, LOOKING EAST.

PARISH GHYLL, ILKLEY, YORKS. MR. T. BUTLER WILSON, ARCHITECT, LEEDS, ENG.



[The editors cannot pay attention to demands of correspondents who forget to give their names and addresses as guaranty of good faith; nor do they hold themselves responsible for opinions expressed by their correspondents.]

AUTOMATIC SPRINKLERS IN THEATRES.

BOSTON, MASS., January 20, 1892.

TO THE EDITORS OF THE AMERICAN ARCHITECT:—

Dear Sirs,—A reply to the request of Mr. Ernest A. E. Woodrow for a citation of the automatic-sprinkler fires in theatres, to which I made reference in a previous article, may also be of interest to others.

One fire occurred at the Opera-House, Woonsocket, R. I., on Tuesday evening, January 6, 1891. As the stage-mechanic was making preparations for the presentation of a play by the Boston Theatre Company, he lit the front border-light near the drop-curtain. A current of air fluttered a gauze drop against the flame. The drop caught fire and the blaze was instantly communicated to the drop-curtain. Fortunately the stage had been thoroughly protected, above and below, with Grinnell automatic sprinklers under a static water-pressure exceeding 100 pounds from the city supply. Under the gridiron, at the usual distance above the top of the drop-curtain, were installed six sprinklers. These were instantly unsealed by the heat, and higher up in a line with these, and just under the roof, three more were opened. At the peak of the roof, over the middle of the stage, was a large ventilator, towards which the flame rushed, opening five more sprinklers. Under such a deluge of

water as rained down from these fourteen sprinklers no fire could live.

Mr. G. W. Cumnock, agent of the Social Mills, happened to be close by when the automatic alarm of the sprinkler system sounded. He ran in, and found, to use his own words, "every vestige of fire quenched and the rush of water sounded like a mill-race." The rich drop-curtain valued at \$850 was ruined, and the total loss as finally adjusted, was \$1,350. Mr. Cumnock, who is a stockholder in the Opera-House, says that except for the prompt action of the Grinnell sprinklers the roof would have been destroyed and the theatre gutted.

The other fire referred to in my communication, where the action of the Gray automatic sprinklers averted what would undoubtedly have been a serious conflagration, occurred at the Morton House, New York City, on February 28, 1888, starting in the upper part and at the rear of the building, which adjoins the Union Square Theatre. The fire extended to the upper part of the theatre. The automatic sprinklers operated in the theatre, stopping the progress of the fire in that direction, and giving the fire-department of New York a chance to extinguish the fire where it originated.

Although it has always been claimed by every one familiar with the practical results of automatic sprinklers that all that can be legitimately expected of this form of fire apparatus is to extinguish fires originating under the sprinklers, still, as in this case, there have been a great many instances where automatic sprinklers have performed valuable service in checking fires originating elsewhere, and communicating to buildings or rooms equipped with them, notably in the hanging-lofts of paper-mills filled with separate sheets of paper in the process of drying. It can truly be claimed that this fire in New York was one of the severest tests to which an automatic sprinkler was ever subjected.

Some of the theatres in Boston are protected by automatic sprinklers, but happily no fire has yet occurred calling them into service, for which it is believed they are fully adequate.

A short absence has prevented an earlier reply.

Yours truly,

EDWARD ATKINSON.

BOSTON, MASS., February 3, 1892.

TO THE EDITORS OF THE AMERICAN ARCHITECT:—

Dear Sirs,—I send you another record of the successful operation of an automatic sprinkler in a theatre, taken from an English report.

Yours truly,

EDW. ATKINSON.

"NEW THEATRE ROYAL, BOLTON, December 3, 1888.

MESSRS. DOWSON, TAYLOR & CO., LTD.:—

Dear Sirs,—You will be pleased to hear that I had a practical test of your Grinnell sprinkler on Saturday night in my theatre. An escape of gas from the gasometer in the lime-light room (caused through the carelessness of one of my gas-men) accumulated at the ceiling of the room, and upon the entry of the gas-man and his assistant, a slight explosion occurred, and to the astonishment of the two men, who were not injured beyond their hair being slightly singed, one of the two sprinklers fixed in the room immediately came into operation, completely drenching them. The occurrence took place about 9 P. M., during the performance, and did not attract the attention of either the actors on the stage or the audience, and I consider that the circumstance under which the sprinkler acted proves in a remarkable manner the extreme sensitiveness of an automatic appliance which can come into operation simultaneously with an explosion of heat.

Yours truly,

(Signed) J. F. ELLISTON.

EXTERIOR COLORING.

FLORENCE, ITALY.

"O Tempera, O Mores!"

TO THE EDITORS OF THE AMERICAN ARCHITECT:—

Dear Sirs,—Methinks I see the editorial eyebrow elevated at the spelling of the second word in the above adjuration. I must therefore explain that it was provoked by waking this morning in beautiful Florence with a chamber-wall opposite my eyes treated (in distemper) with splashes of terra-cotta color on a background of light purplish-blue. Hence the spelling. In my opinion our architects are far ahead of the Continentals in the sense of color. Of course there are, in Europe, fewer opportunities of perpetrating horrors in exterior coloring, but those few are seized with eager alertness. The Venetian cannot color the exterior of his palace, but has to content himself with painting his mooring-posts blue striped with chrome yellow, and hangs brilliant ultramarine blue shades in all the windows.

Are we not also, however, far from perfect in this art of exterior colors? Cannot you, therefore, who have such a far-reaching voice, start a discussion that shall provoke thought and instruction from better minds and pens than mine?

Although I have studied the subject of color for more than twenty years, I feel less inclined now to dogmatize than ever, yet I will with diffidence offer some thoughts on exterior coloring in the hope of provoking further assistance from abler sources.

It seems to me that we may learn much from Nature, for we certainly are seldom offended by her taste when not interfered with by

man. This being granted, it follows that we may at least avoid offence by observing the general rules of Nature's coloring. Now apparently, one of her pet aversions is the use of large masses of brilliant and contrasting colors in immediate contrast. Either they are divided and mingled so as to blend at a short distance into one tint, as in blossoms and fruit against foliage, or they are toned down to deeper and therefore less contrasting colors, as in the leaves of purple beeches, which are often very beautiful against a green background. Another and very beautiful blending of contrasting colors is accomplished by *lightening* the tone. This we see often in rocks and mountains, where light shades of red, green and purple are often most beautifully blended.

But my letter is already too long, and rather than lengthen it by apologies, I will close it by remaining,

Yours sincerely, SAM. CABOT.

A QUESTION OF COPYRIGHT.

MILWAUKEE, WIS.

TO THE EDITORS OF THE AMERICAN ARCHITECT:—

Dear Sirs,—Has any one got the right to get his plans copyrighted after they have entered a competition, but on which the decision has not yet been given? Also, if a plan receives a premium, has the party who awards the prize a right to use parts of the plan?

Respectfully yours, W. C. AMES.

[THERE is no reason why the author of a design should not have it copyrighted at any time, before or after he has submitted it in competition. Whether a person who has given a premium for a design has a right to use portions of it depends upon the terms of the competition. It is often stipulated that all plans receiving premiums shall be the property of the person paying the premiums, to use as he may see fit. — EDS. AMERICAN ARCHITECT.]

NOTES AND CLIPPINGS

DETECTING FLAWS IN METAL.—A new instrument called the "schischophone" has been lately invented by Captain de Place (a French officer). The object of the instrument is to reveal the presence and the place of any blow-holes, flaws, cracks, or other defects which may exist in the interior of a piece of metal. When these defects are very great, the blow of a hammer on the piece of metal soon betrays their presence, but for small blow-holes, although these may also be very dangerous, there is not enough difference in the sound given by the hammer striking the piece of metal for it to be detected by the ear. The schischophone, however, will enable that difference to be heard. The apparatus consists of a pin which runs through a microphone of a special construction, which, as usual, is put in connection with the current of an electric battery. Without giving more details of the complicated mechanism of the instrument, one can understand that, when the pin strikes on a good part of the metal tried, a sound is produced, the vibrations of which affect the electric current in a certain way and then a certain sound can be heard in the telephone attached to the instrument. When the pin strikes on a part of the metal where there is a defect, the sound produced is different; the microphone, the current and the telephone are then affected differently, and the defect existing in the metal is revealed by the difference in the sound heard at the telephone. The ear must, of course, be used to the different sounds to be able to distinguish them; but the necessary skill is not very difficult to acquire. Trials with this instrument have been carried out at Ermont, at the works of the Northern of France Railway Company, in the presence of many engineers, to find defects in the rails. The telephone of the apparatus was placed at a long distance from the rails, from which it was also separated by a wall. The points where the instrument intimated a defect in the metal were carefully noted; the rails were then broken at those places and the defects were actually found. — *Engineering*.

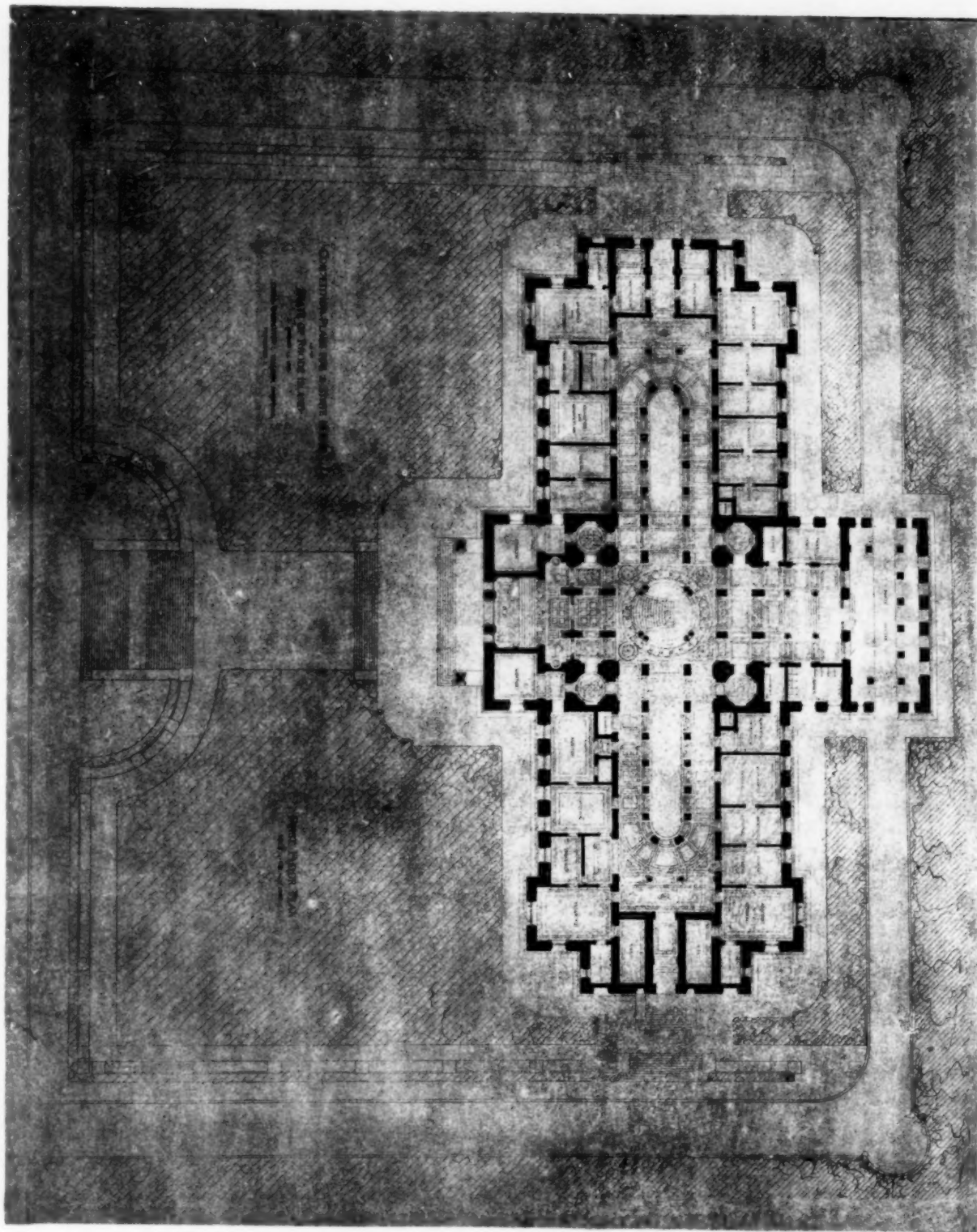
THE FEVER-RATE IN ITALIAN CITIES.—The official vital statistics of Italian cities for 1890 show that their general sanitary condition is not so bad as is often supposed. The approximate percentage of deaths from typhoid in the year specified was as follows: Rome, one to 3,000 of the population; Florence, one to 1,400; Naples, one to 4,000; Pisa, one to 270; Perugia, one to 1,300; Turin, one to 2,100; Venice, one to 2,000; Parma, one to 3,000; Siena, one to 800; Palermo, one to 1,300; Genoa, one to 2,000; Ravenna, one to 1,000; and Grosseto, one to 600. The deaths by malarial fevers in Florence and Naples are very rare, and may be disregarded as probably due to disease contracted out of the region. Those in Rome are one in 1,400, of which the greater part by far, as appears from the detailed records of the hospitals, are of the peasants who come from the Campagna and towns near the city for the treatment in the well-endowed hospitals, the worst case being that of Grosseto, where the deaths from malarial fevers are one in 200; Ravenna having one to 4,600. The proportion in most of the other cities is trivial; in Venice one to 20,000, Perugia one to 27,000, and from those proportions downwards. Of the cities most visited by foreigners, those giving the lowest figures of typhoid—the malady most to be apprehended—are Naples, then Rome and Parma, Venice, Genoa and Turin, Florence, Palermo, and Perugia. The fact least expected, perhaps, is that Naples is the healthiest of Italian cities and Rome the next, while Siena on its mountain-top is worse than Ravenna in the marshy plain, and only superior to Pisa as regards mortality by typhoid. — *New York Evening Post*.

THE PROFIT AND LOSS ON THE PARIS EXHIBITIONS.—The *Economiste Français* publishes a detailed analysis of the receipts and expenditure connected with the Universal Exhibition of 1889, the net financial outcome of the Exhibition being a balance of about £400,000 to the good. The receipts were made up of the money paid for admission, the produce of different concessions and lettings of space, the sale of materials, the subsidy of the city of Paris, and the amount contributed by the State. There were no fewer than 125 concessions of various kinds for cafés and restaurants, which produced about £90,000, while a sum of nearly £9,000 was received for concerts, subscriptions to water and gas, the total receipts amounting to £2,000,000, or £280,000 more than the estimate. The receipts of the 1867 Exhibition were £1,050,000, while those for the Exhibition of 1878 did not amount to more than £927,000, including a subsidy of £248,000 from the city of Paris. Upon the other hand, the expenses of the 1889 Exhibition, which had been estimated at £1,860,000, did not amount to more than £1,000,000, while for the 1867 Exhibition they were £936,800, and for that of 1878 £2,216,000, including a sum of £560,000 spent upon the Palace of the Trocadéro. In other words, while the 1889 Exhibition left a profit of £400,000, that of 1867 gave one of only £112,000, and that of 1878, organized at the cost of the State, left a deficit of £1,268,000. It should be pointed out, however, that in 1878 there was no subsidy from the State, whereas in 1889 the State contributed £680,000, and in 1867 £240,000. — *New York Evening Post*.

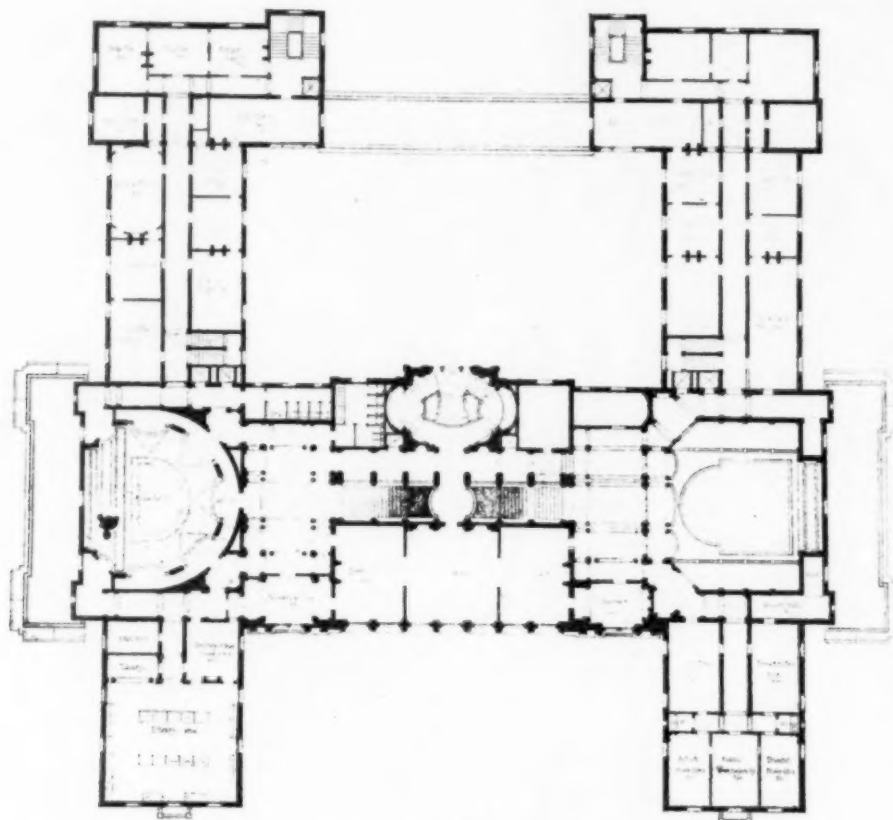
MONUMENT TO CHAPU.—It is proposed to erect in his native place, Le Mee, near Meulan, a monument to Chapu, the illustrious French sculptor. It will consist of three steles of marble, on one of which will be a medallion portrait of the artist, on another a similar portrait of his father, on the third a portrait of his mother. A reproduction of his *Immortalité*, now in Père Lachaise, will accompany his own portrait on the central stele. — *Exchange*.

TRADE SURVEYS

THERE is an agitation, either opened or covered, in nearly all the Governments of the world respecting the enlargement of the volume of money, to say nothing of the agitation going on in the United States and out of Washington. There is quite an agitation in Great Britain in which the London Chamber of Commerce seems to be taking the lead, wherein Mr. Goschen's proposal to increase the circulating medium of Great Britain and to concentrate gold, is earnestly discussed. In Germany, France, Italy and Spain, the same subject has been discussed within the past year with more or less interest. The subject has been discussed among the Government officials in Russia, but mainly with a view of borrowing money to the best advantage. It is rather remarkable that the London Chamber of Commerce unanimously agreed that the metallic reserves of the country are insufficient, and ought to be increased. This is a wonderful step for Englishmen to take, and a surprising admission. Mr. Goschen's proposition to issue one pound notes, which has been under discussion for a long time, was defeated, and the whole question was shelved for the time being, by calling for a parliamentary inquiry into the entire matter. It is important to note that the business interests are taking the lead in this matter; heretofore the discussion has been confined to parliament officials. As long as Great Britain could control the trade of the world without interference, its monetary basis was secure, and did not need modification, but now that the trade of the world is being divided up, and new conditions developing themselves in the commercial affairs of that Island, new financial necessities are arising. Three years ago a proposition to have an international conference on the silver question was ignored as was several previous suggestions of the same sort. Whether anything will grow out of the present change of sentiment, remains to be seen. The Government will be very slow to act, even upon the recommendation of such an influential body as above mentioned. The fact, however, should be strongly emphasized, that there is need of more money in some form or shape, and it must come, because the whole world, so to speak, is calling for it. It would appear that it must come through an international conference coming to some practicable agreement with reference to silver. The demand for silver in Europe has been steadily increasing for weeks past, and has averaged over a million and a half ounces per month. This demand must grow in the aggregate, although perhaps not regularly. Europe is suffering for a broader metallic basis. European financiers recognize that the United States could draw fifty million dollars at least in gold, and if this were done, they recognize that undesirable consequences might follow. Just how all this muddle will be settled, it is not at present to the point to say or to talk about. The point is to direct attention to the magnitude and importance of the demands for a wider metallic or paper basis. The opinions of statesmen and the merchant princes of the world are undergoing a change; it is a change necessitated by new commercial and industrial conditions. The outside world is absorbing an enormous capital, and the waste places are filling up with an energetic population. New markets are developing, as well as new sources of supply. The consumptive capacity of the world at large is increasing. Railroads are wanted; ships are in demand. Machinery of all kinds is required, and a host of requirements are coming up which call for a distribution of capital as well as an increase of it. These are some of the new conditions upon which we are entering, and which lie at the basis of the present demand for a greater supply of money. Clearing House returns show a sharp improvement in business. The improvement is only for present requirements, that is to say, requirements for the spring and summer are not covered, excepting in isolated instances. The industrial situation throughout the country is slowly improving, but there is something to complain of with all. Traders feel cramped, and in danger; new obligations are made with great care. Jobbers report it difficult to make heavy sales. While there is a large volume of money in financial centres, there is a scarcity in outlying localities. The great industries are quietly improving, but prices keep at a very low point. All of the features heretofore pointed out, still remain. There is a great deal of care exercised in maintaining supplies at a safe point. Large stocks in any direction are exceptional; at the same time there is expressed a strong confidence in a greatly increased demand which will call into exercise all of the productive capacity of the country, and which will maintain it at pretty near a maximum point throughout the year.



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SCALE ONE INCH EQUALS EIGHT FEET

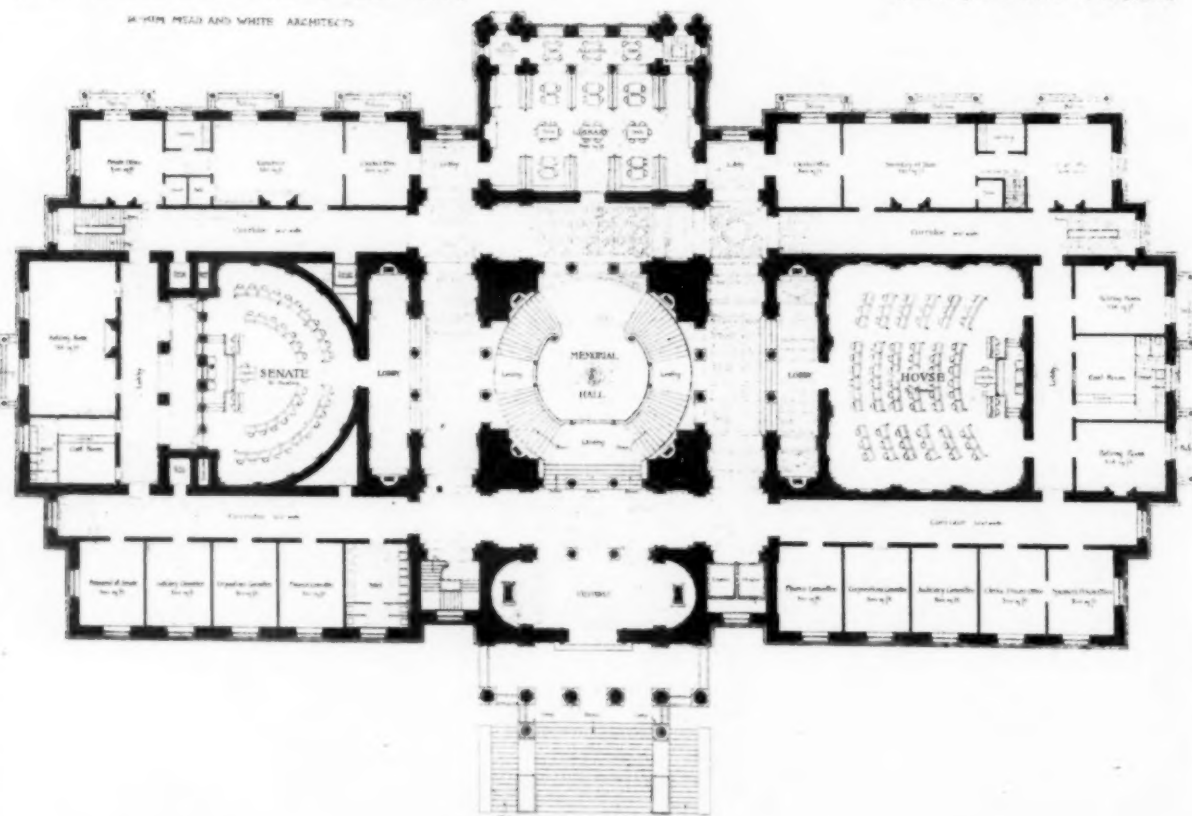
FRANCIS ROCKE, ARCHT. STATE HOUSE AT PROVIDENCE R.I.
SECOND FLOOR PLAN.

Francis Rocke
Jan 12, 1892

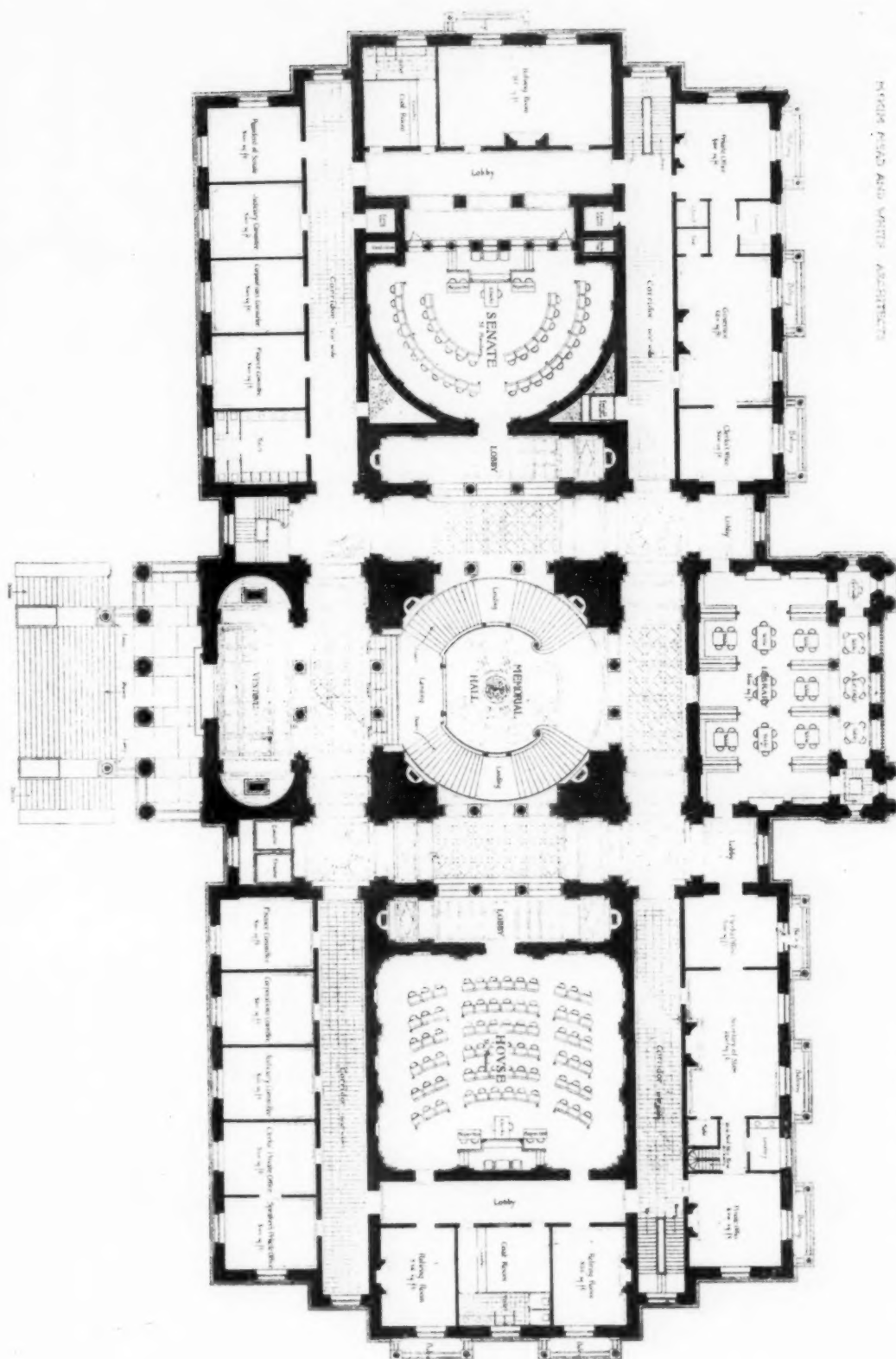
DESIGN FOR THE RHODE ISLAND STATE HOUSE

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HOUSE AND SENATE FLOOR PLAN

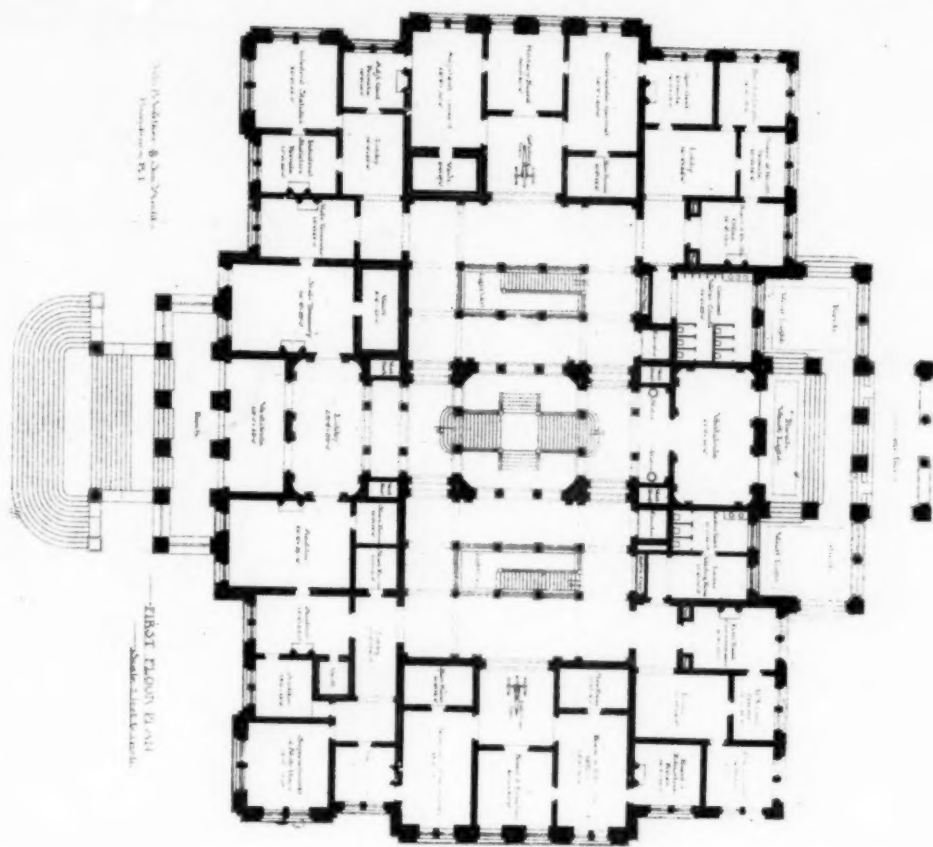


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HOUSE AND SENATE FLOOR PLAN





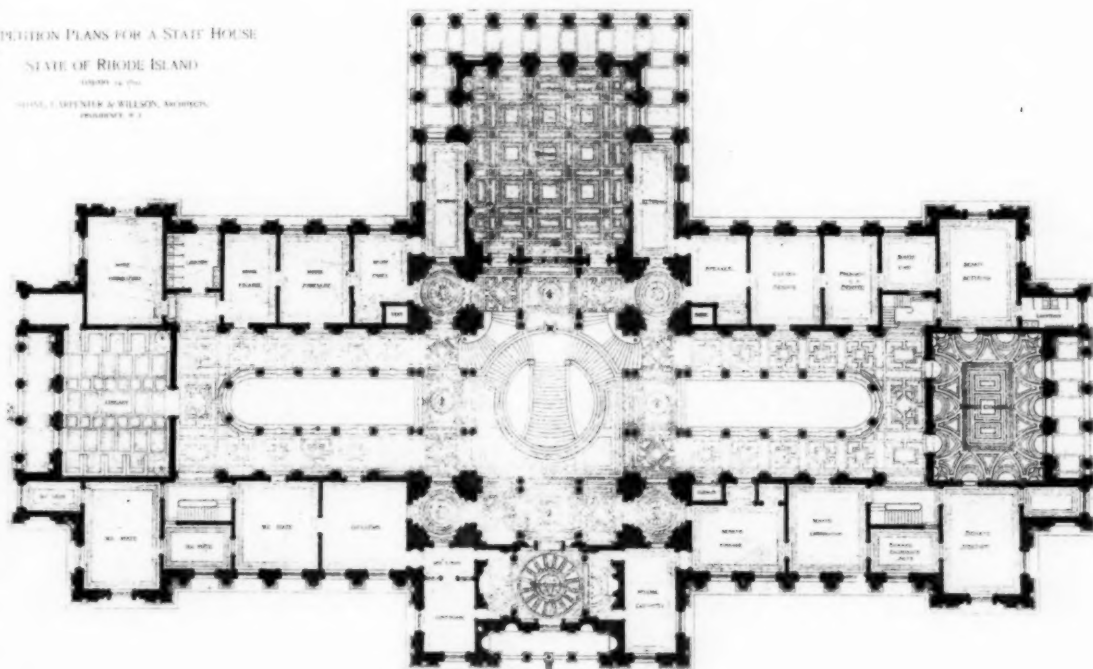
COMPETITION PLANS FOR A STATE HOUSE

STATE OF RHODE ISLAND

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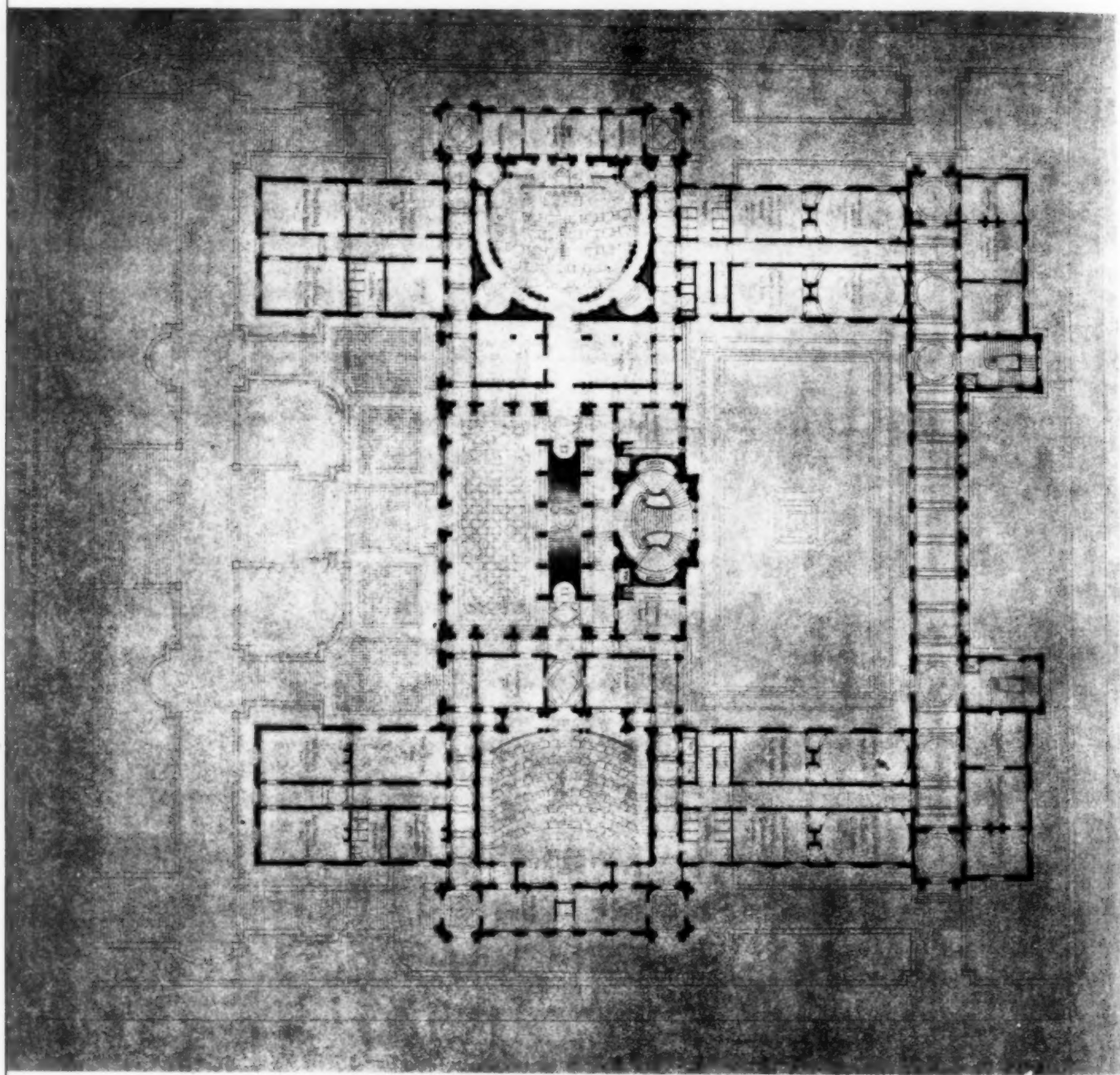
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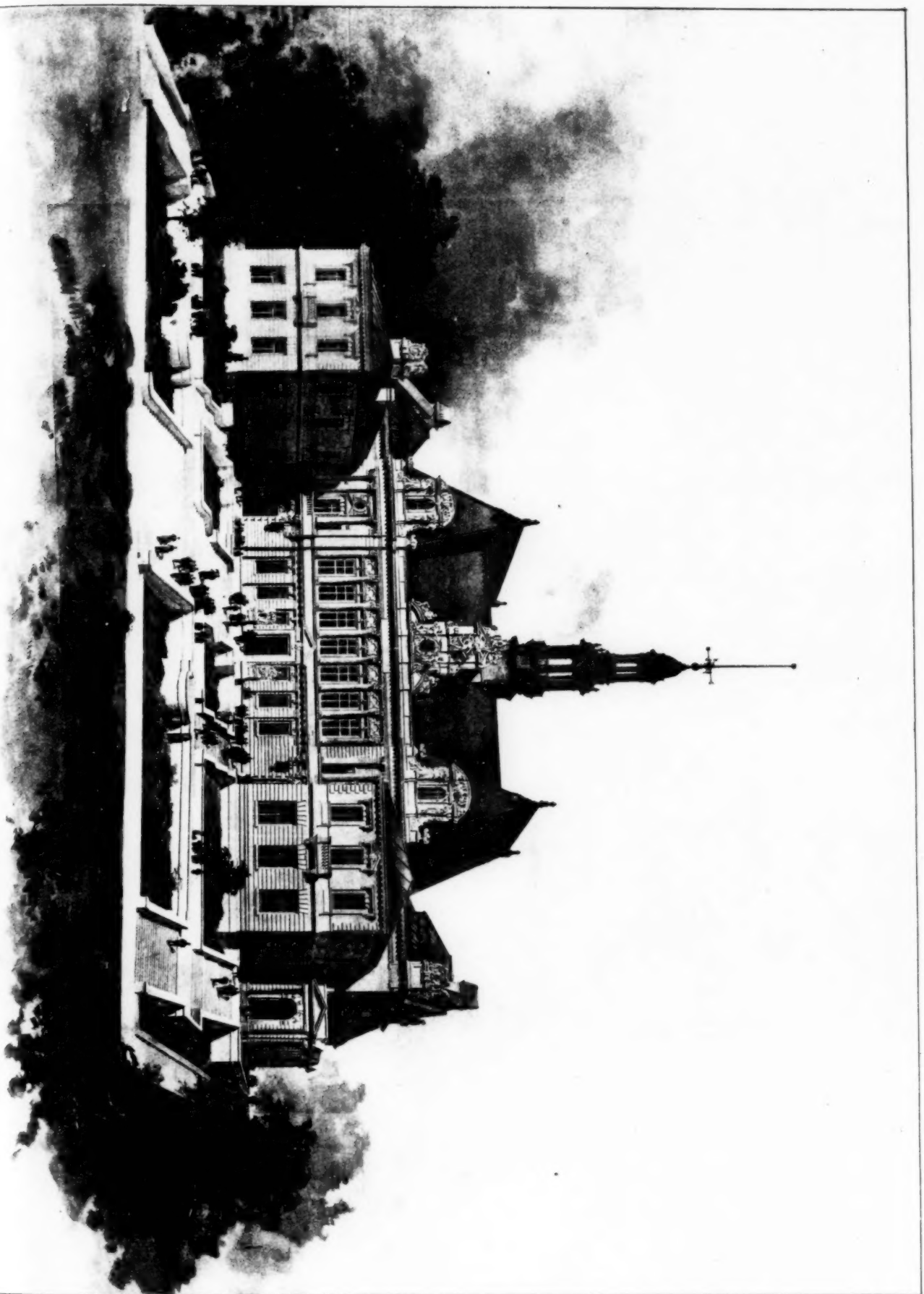
SECOND FLOOR PLAN

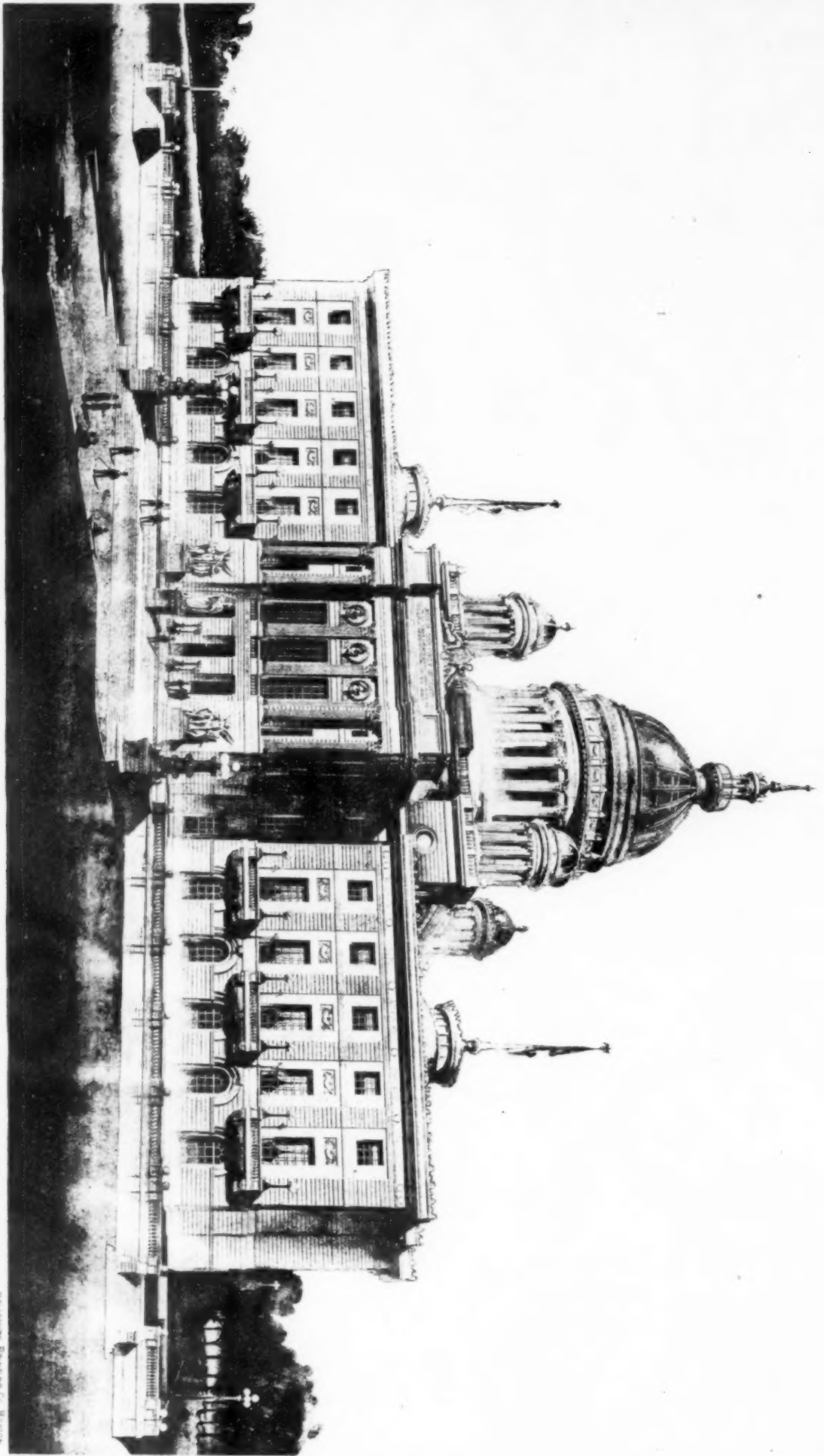
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COMPETITIVE DESIGN FOR RHODE ISLAND STATE HOUSE

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