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SUMMARY:—

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THE Harrisburg Competition cases have both been decided by the Supreme Court of Pennsylvania against the architects, the Court upholding the doctrine of the court below, that the Commissioners exceeded their authority in proposing to architects the terms of the programme to which they signed their names, and that the architects ought to have known this; so that they have only themselves to blame for the consequences of trusting the representations made to them over the signatures of the highest officers of the State. It is a satisfaction to find that the Pennsylvania newspapers appear to view the whole transaction in its proper light. "Punic faith," however immediately profitable, is seldom advantageous in the long run, and unless the Legislature should take action this winter to redeem the good name of the State, Pennsylvania must take its place, in the eyes of the world, with the other communities of repudiators which have disgraced American civilization. Naturally enough, the Pennsylvania newspapers throw the responsibility for the scandal upon the present members of the Commission, as individuals; but the rest of the world will soon forget the personal part of the matter, and will remember only that the programme by which the best and most scrupulous part of the profession was deceived was signed by the Governor, the Acting President of the Senate, the Speaker of the House of Representatives, the State Treasurer, and the Auditor-General of the Commonwealth of Pennsylvania; and documents inviting confidence on the part of the public, and signed by these officials, will excite laughter for a century to come.

AS the annual horse-show is being held in New York this week, it seems proper to borrow the language appropriate to the season, and say that the "blue ribbon" of architecture has unquestionably been carried off by the firm of Carrère & Hastings, whose competitive designs have within the week been accepted for two of the most important buildings about to be erected in this country. Not only have they been awarded the execution of the new Public Library Building on the site now occupied by the reservoir at Forty-second Street, New York, but their design has also been accepted for execution by the National Academy of Design, whose new building is to form part of the extremely interesting group which is to crown Bloomingdale Heights. It is peculiarly satisfactory that the competition for the Academy of Design building has been decided in their favor, since certain preliminary negotiations, conducted by the Academy with them, gave reasonable grounds for belief that the commission was to be placed in their hands without competition. There is, in these

days, so much disposition to carp at the manner in which competitions are decided, even when the most painstaking efforts have been made by men of acknowledged probity and ability, that we do not question that there will be found some who will raise their voices against the awarding of these two competitions, and will declare that the explanation, if not venal, is very simple, since in both cases the committee of professional advisers consisted of men trained at the Ecole des Beaux Arts, while the successful architects themselves not only received their training there, but are pronounced advocates of the system of education followed at the Paris school. The fact that no member of one committee served upon the other will be without weight with those of a hypercritical turn of mind.

IN the competition for the great New York Library Building, the design of Messrs. Howard & Caudwell is said to have been placed second, and that of Messrs. McKim, Mead & White third. According to the accounts, Messrs. Carrère & Hastings followed quite closely the scheme of plan outlined by the Library Trustees, while Messrs. McKim, Mead & White availed themselves of the permission given to substitute a different arrangement; but the experts found that, notwithstanding the great artistic merit of the latter design, the arrangement was less suitable for a working library than that of Messrs. Carrère & Hastings. We need hardly say that the profession generally will take pleasure in congratulating Messrs. Carrère & Hastings on their success, and will watch the execution of their design with much interest. Messrs. McKim, Mead & White have already a magnificent library building in New York,—that for Columbia University,—and the development, under different hands, of the solution of a very similar problem will afford valuable professional lessons.

IT may be recalled that a few weeks ago we published a note of warning in the matter of the competition about to be held for the Public Library Building at Lynn, Mass. Events seem to have proved that we had good and sufficient reason for the publication in question, for the undertaking has resulted in a rather amusing way, which the newspapers are doing their best to place in the light of a grave scandal. Indeed, if we felt at liberty to publish all the facts and allegations that have been laid before us, we could tell a very amusing story. Apparently, other people than ourselves had suspicions that the competition was one of those preordained affairs which, though more than suspected, cannot be detected and proved with certainty before the event; for not only did the architects in Lynn refrain from entering the competition, but a certain public-spirited citizen of that town, who had had his own suspicions aroused, and was determined that the city should have the benefit of capable architectural advice, employed at his own expense a firm of Boston architects to prepare, and submit, a design for the library building in question. The number of designs actually submitted was phenomenally small for a competition such as this, and the design procured by the public-spirited citizen we refer to was, as it is alleged, rejected by the trustees on the ground that it was too handsome a building to be built in the City of Lynn!

THE United States Circuit Court of Appeals has rendered an important decision in Missouri. It seems that the Oxley Stave Company, of Kansas City, bought a machine for hooping barrels. On placing the machine in its factory, objection was made to its use by the Kansas City Coopers' Union, which demanded its removal. The managers of the Company refused to comply, and the Coopers' Union, seconded by the local Trades Assembly, ordered a "boycott" against the Company. The officers of the latter applied to the United States District Court for an injunction to restrain the maintenance of the boycott, and were successful. The representatives of the unions appealed, but the decision of the lower Court was affirmed by a majority opinion, on the ground that the defendants "had no right to form a conspiracy to deprive the plaintiff of the right to manage its own business." However we may approve the outcome of the case, one can hardly help reflecting that the principle so laid down is rather perilously comprehensive as the basis for a judicial decision; but the dissenting opinion of the minority of the Court seems to have been more comprehensive still. According to this opinion, which was

rendered by Judge Caldwell, "All capital seeks to increase its power by combination, and to that end assumes the form of corporations and trusts." These corporations and trusts "are the employers of the great mass of the laborers," and "the struggle is constant between the laborers, whose labor produces the dividends, and those who enjoy them." From these premises Judge Caldwell deduces the conclusion that "the only weapon of defence the laborer can appeal to is the strike, or the boycott, or both," and "if these weapons are withheld from them, then, indeed, are they left naked to their enemies."

THE poetry of this opinion will not, we fear, blind the eyes of unsentimental persons to the lapses in the reasoning on which it is based, or, rather, to the assumptions from which the conclusions are drawn. That "all capital seeks to increase its power by combination" is as debatable an assertion as the following one, that corporations and trusts "are the employers of the great mass of the laborers." Even granting these two propositions, however, it does not follow that "the struggle is constant between the laborers, whose labor produces the dividends, and those who enjoy them." In very many cases, the labor of the laborers produces no dividends at all, and people who "enjoy" the fruit of such labor are not the stockholders, who are often sorely distressed at the failure of returns from their invested savings, but the laborers themselves, who are kept employed, although their labor produces only enough to pay their own wages. What sort of "struggle" was that, for example, between the Pullman Company, which carried on its business for years at a loss, for the sake of keeping its men employed, when it would have "enjoyed" a much greater pecuniary benefit from turning them and their families adrift; or, in fact, between the vast majority of employers, including the managers of corporations, who sincerely wish to keep their people steadily employed, and their laborers, who find in the undisturbed and reasonably profitable operations of the property which employs them not only comfort and happiness but their sole safeguard against starvation. Judge Caldwell's peroration, to the effect that if working-people are not allowed to try to break down their employers' business they are "left naked to their enemies," is a curious illustration of the kind of social science which starts with the assumption that men are mere wolves, constantly employed in snatching from each other the last morsel of food, whereas every day's experience in every factory and workshop, every day's session of the public schools, and all the acts of kindness, forbearance or faithful industry which fill the main part of the lives of the vast majority of people, prove the contrary. So long as the demoniac theory of life served only to amuse fantastic philosophers it was not very dangerous, but its adoption by judges on the bench is a serious matter.

THE New York Rapid Transit Commission has definitely decided in favor of underground railways for transporting passengers through the crowded parts of the city, and it is probable that work upon such roads will be begun within a few weeks. A plan has been drawn up by the Commission, which must first be submitted to the Courts, and, if approved by them, will be offered for public competition. A company has been formed, which will bid for the franchise, and, if its bid is accepted, will proceed at once to build the road, operating in several places at once, so that the different sections may be united, and the line put in use, as soon as possible. Taking into consideration all the circumstances, there can be no doubt that the Commission has decided wisely. The successful completion and operation of a large part of the Boston underground railway shows how freely subterranean tracks can be utilized by electrical traction, and the problem in New York is much simpler than it was in Boston.

M. CHARLES MORIN, who died a few days ago in Paris, had had an eventful as well as honorable history. Although a Parisian by birth, he was called, while still a brilliant pupil of the School of Fine-Arts, to fill the post of architect to the City of Haguenau, in Alsace. Shortly afterwards, he was appointed architect-in-chief to the Department of the Lower Rhine, and Crown architect for the city of Strasburg. He filled these offices for thirty years, to the satisfaction of the public authorities, until the siege and capture of Strasburg by the Germans, and, during the siege, he distinguished himself by his courage in protecting the buildings

under his charge. After the Germans had come into full possession of Alsace, he was notified that he might retain his various positions, on condition of signing naturalization papers as a German citizen. He declined to do this, and was ordered to leave the country within three days. He was, of course, compelled to obey, and returned to Paris, where, notwithstanding the general disorganization, employment was found for him as Inspector to the Palace of the Elysée. Afterwards, he was made architect to the dioceses of Digne, Fréjus and Bordeaux, and Vice-President of the Parisian Commission of Unwholesome Dwellings. The Société Centrale des Architectes suspended its rules, and elected him a member by acclamation, and he sometimes served on the Council of the Society.

WE have often spoken of the artistic movement which is going on in Belgium, not only in secular but in ecclesiastical society. Within a few years, it has shown itself in a new form, in the establishment of an association resembling our Municipal Art Leagues, which has for its purpose the improvement of sign-boards, posters, newspaper-stands, street fronts and the other objects which meet the eyes of the public. Already, some of the Belgian posters are, to our mind, the best in the world; but the association has done far more than improve bill-boards. With the help of municipalities and private individuals, who have contributed money liberally, available walls have been painted in fresco by artists of the first rank, public buildings have been rebuilt and redecorated, and a visible change wrought in the aspect of the large towns. It will be remembered that for many years the pupils of the Academy of Fine-Arts at Antwerp were sent out, during their summer vacations, to paint in fresco the interiors of village churches, of course as a gift to the parish. For all we know, this practice is still kept up, and many a little Belgian church must possess precious examples of the art which youthful fervor and lofty and untrammelled inspiration conspire to produce. From Belgium, the fashion of attention to art in the public streets has spread to France, and even, it is said, to Italy. In the latter country, especially, it ought to find a fertile soil, for the love of art, pure and simple, without any admixture of fashion, or rhetoric, or archaeology, is inborn in the Italian race.

SO practical a journal as the *Revue Industrielle* views with very little sympathy Lord Kelvin's enthusiasm over the prospect that the cataract of Niagara would soon be absorbed by the feed-pipes of hydraulic motors, and the five-million-horsepower now "wasted" utilized in turning mills. In the first place, as the *Revue Industrielle* says, the power, even of Niagara, cannot be utilized without preliminary outlay. Many water-powers in France and Switzerland have failed to pay interest on the cost of making them available, and, it might have added, the power furnished by the present Niagara Company is sold, under long contracts, at a loss, the cost of distribution having proved to be much greater than was anticipated when the contracts were made. Moreover, as it says, supposing the five-million-horsepower to be available for use, it is by no means certain that customers would be found for it. The aluminium, carborundum and calcium carbide industries, which can use electric currents to advantage, are already grouped around the Falls, and a saving in the cost of power, supposing that such saving were certain, is not a sufficiently large element in the expense of most industrial operations to make it desirable to transfer a factory from a location otherwise favorable to Niagara. When the Niagara Company was first formed, it was said that power would be transmitted to Buffalo, Rochester, and even New York; but no attempt seems to have been made to deliver it beyond the immediate vicinity of the Falls, and the cost of transmission will probably limit the distance at which it can be made practically available to a comparatively short radius. Another point which the *Revue* suggests is not without interest. According to all the geologists, the cataract of Niagara is retreating perceptibly toward Lake Erie; while some maintain that, in addition, the water of the Great Lakes is tending to find its outlet through the Mississippi, instead of the St. Lawrence. In either case, the effect of a change upon the utilization plant, and upon all the industries dependent upon it, would be disastrous; and, while the change is not likely to take place for centuries, if at all, it is not impossible that an earthquake might in a moment make the system useless.

COMPETITIONS.¹—VI.

VI. THE PROGRAMME.



Design for Monument at Fontenay-le-Comte, France. M. Letrosne, Architect.

LOGICALLY the consideration of the programme precedes that of the jury, for the programme must guide the jury, exactly as it guides the competitors. But the duties of the adviser sometimes approximate and include those of the jury, and in the present discussion it seemed better to consider these allied functions in association.

"The programme," says the General Code of the Joint Committee, "is the offer made by the promoter and includes the written or printed statement of the terms of a competition, on the basis of which proposals are to be made." Taking up the question separately, the same code provides that "the programme is to be regarded as an agreement, the terms of which must be carried out in good faith by all parties."

This is the crux of the whole matter. Once established that a competition programme is a contract, that the promoters are legally bound to carry out its conditions as contained therein, fasten a like responsibility on the competitors, and the thing is done. The troubles concerning competitions vanish into the air; there is no more dissatisfaction, no more distrust. The promoters, especially, held fast, every one is as happily satisfied with the result as it is possible to be where the success of one person may mean to him the obtaining of a handsome monetary consideration, while the rest get such prizes as they may be entitled to,—or nothing at all. Architects have been so frequently disappointed with the results of competitions, have been so befooled, misled, deceived, that the question of obtaining legal advice as to the status of any programme, or their own status under it, has been extensively agitated, and it is now generally regarded that such advice is a simple safeguard that no wise competitor will avoid seeking. But such advice obtained, how enforce it? No one has ventured to explain how this can be done; but until that task is undertaken and carried to a successful issue competitions must remain a moot question, and the occasion of more or less distrust.

An earnest attempt to bring the promoter before the courts for alleged breach of contract was begun by Messrs. W. & G. Audsley, in connection with the City Hall Competition in New York. It will be remembered that, after the drawings had been sent in, a very long period ensued during which no action was taken concerning them, and the newspaper agitation against the erection of a large new building in the City Hall Park was brought to a successful conclusion by the newspaper press of the metropolis. The Messrs. Audsley sought to obtain a mandamus directing the Commissioners to make a decision; their plea was rejected by the Court on the ground that they had a case for civil damages, but before that could be brought the Commissioners made an award, though not on the basis proposed in the "Instructions to Architects," and the matter came to an end without the aid of a judicial decision.

The position of the architect appears to be, somewhat, that the promoter is a vile creature, who must be bound by chains of iron, while he himself is relatively free to disport himself as he pleases, or at least has everything his own way. Yet every architect knows how difficult it is to guide a client as he should be guided; how, then, harness a promoter who leaves it optional with you to make a bid for his work? The promoter may be justified in maintaining that no competitor need compete unless he wishes to, and that the expense he is put to is a simple business risk. It is somewhat different with a paid competition. Then the promoter deliberately invites men to undertake the solution of the problem he has in hand. He tells them, in effect, that he who presents the best solution will obtain the coveted commission. The risk is small for the competitor, for if not wholly repaid for his cash outlay occasioned by preparing his drawings he is at least partly recompensed for them. In such a case a formal contract might well be made between the promoter and his competitors, but it has not yet been legally established that a programme is such an instrument. Certainly the simple statement by the architectural societies that it is not in itself

sufficient to establish it legally. And such a legal establishment is imperatively needed.

The disadvantages of such a situation are too obvious to be commented on at length: a more direct fact is that the societies that would better the situation have not provided the machinery for accomplishing their purpose. It is not what should be done, what should exist, but how the desired condition is to be enforced. And that has yet to be shown. That this is at once the unsettled and vital question in competitions is about all that can be said of it.

But though this question is doubtful and unsettled, it is clear that the programme must be complete. The General Code prepared by the Joint Committee specifies very fully that it must:—

- "(A) State that the competition is held under the general rules governing competitions as endorsed by such and such a society.
- "(B) Contain a definite statement as to proposed cost.
- "(C) Fix a method of securing anonymity.
- "(D) Name the jury, which must be a jury of experts.
- "(E) Fix uniform requirements for drawings, models or other forms of proposals.
- "(F) Fix a definite time and place for receipt of drawings, models or other forms of proposals.
- "(G) Fix the nature or amount of the award or prizes.
- "(H) Fix the period of time within which decision will be rendered."

In two particulars at least these requirements are indefinite. The Committee, while they were considering the question, might as well have recommended a definite method of securing anonymity as leaving it to the decision of the subscribing societies. The Royal Institute of British Architects long since inserted in its "Suggestions for the Conduct of Architectural Competitions" a provision to the effect that "no design should bear any motto, device or distinguishing mark, but all designs should be numbered by the promoters in order of receipt." That this is now generally recognized as the most approved mode of preventing the disclosure of authorship of designs is evident from several recent programmes. Thus the Harrisburg programme provides that: "Each set of drawings, with its accompanying description, is to be enclosed in a double wrapping, the inner to be sealed with wax, and the outer to bear only such markings as may be necessary to its prompt and safe delivery, and neither the wrappings nor their contents are to bear or contain anything that may suggest or reveal the authorship of the design. There is to be enclosed within the inner wrapping of each set of drawings an opaque sealed envelope addressed in typewriting to the Commissioners and enclosing the name and address of the architect or architects submitting such drawings. At the time set for final receipt of drawings the outer wrapping of packages is to be removed and destroyed in the presence and under the direction of the Commissioners, and the package in its unbroken inner wrapping is to be deposited in a safe place in the custody of the Commissioners until opened to be numbered. . . . After the date set for final receipt of drawings, the Commissioners and their professional adviser will open each package and place upon the envelope and each sheet of drawings contained in such package a number, such numbering of designs to be consecutive. Each design will then be known, until the final award is made, by the number thus placed upon it." Special provision is also made for the care of the numbered envelopes until the award is made by the Commissioners.

The requirement that the programme shall name the jury is also open to criticism. Now the programme is the instrument of instruction to the competitors, and if the competitors are to have a voice in the selection of the jury, as is now generally desired by the architects and the societies, it is obvious that their names cannot be inserted in the original programme. It would appear, therefore, as though the practical bearings of this clause had not been fully considered. And, singularly enough, it is not specified that the programme shall give full and complete information concerning the subject of the competition.

The requirements formulated by the Joint Committee are very similar to those of the Architectural League, on which they are based; but the League's rules contain a provision under this head which might well have been determined by that Society, instead of being left in an indefinite form; that is, that the programme shall "state whether the prime object of the competition is to fix a matter of design or whether it is a means of test having for its object the selection of an artist." It is now generally conceded that the object of a competition is the selection of an artist, which in itself can be taken as a guaranty of any question of design.

The Code of the American Institute of Architects requires that the programme shall: "Fix a definite time and place for the receipt of designs, fix an exact limit of cost, give all possible information in regard to the lot and its surroundings, and the general character of the soil and sub-soil, and grades and levels of the surface and the position and depth of sewers; it shall fix the number and scale of drawings required and shall require as few drawings as are necessary to give a fair idea of the scheme of design. These drawings shall consist only of floor plans, sections and elevations, the latter made with carefully constructed shadows; the openings and shadows rendered in line, monotone or color at the discretion of the competitor." The code further adds, "The perspective tends to discourage serious study, to deceive the jury, and to entail a more than useless expense upon the architect, and should be excluded from competitions."

¹ Continued from No. 1142, page 58.

In other words, the programme should give all possible information to the competitor, exactly as though each had been separately and alone asked to prepare designs for a particular building. The detail contained in this Code could not well have been adopted in the General Code designed to cover the sister arts of architecture, painting and sculpture prepared by the Joint Committee; hence for architectural competitions the Code of the Institute offers a better guide. The Suggestions of the Royal Institute of Architects do not cover the ground so much in detail as the American code, but stipulate that "if perspective views be required, it should be so stated, and they should be uniform in scale, number, mode of coloring, etc."

But surely it is a step in advance to omit the elaborately colored perspectives, the marvellous water-colors that architects seem to imagine, at times, to be the highest form of pictorial art. That is an extravagance a client may indulge in if he wishes to pay for their production. The brilliant fancies that formed so conspicuous a feature of the competition drawings in the final competition for the Cathedral of St. John the Divine in New York have no proper place in an affair of sober earnest thought such as an architectural competition.

As a matter of fact, the more modern tendency is towards absolutely uniform drawings. The instructions issued to architects for a new City-hall in New York (1893) required that the perspective be drawn in line only, "without shadows or shadings, or any indication of texture, and there is to be no foreground or background, nor any figures or accessories, save that the position of the streets and sidewalks is to be shown. But a single figure is to be drawn to indicate the scale. The elevation and sections are to be drawn in the same way, no shadows being cast. A single human figure is to be drawn in each." A lithographic plate accompanied the instructions, giving examples of the kind of drawings required in each case, leaving no uncertainty in the minds of the competitors, and securing absolutely uniform results. The object of this care was, of course, to reduce the labor of the architect to a minimum, and that seems to have been achieved with reasonable success.

Not only was the labor of preparing drawings reduced to the lowest point so far as method of rendering was concerned, but the number of drawings called for in this competition were as few as possible, and included a plan of the basement and the first and second stories, an elevation of the south front, one perspective, two sections through the building, and a block plan showing its relationship to buildings adjacent to it in the park. The instructions stated that "These drawings will suffice to show the distinctive character of the several designs submitted, and to enable the Commission to judge of their relative merits. It is assumed that if the arrangement of these three floors is satisfactory, the arrangement of the upper floors can be made so." As the building proposed to be erected in this competition would have been one of the costliest public buildings recently built in this country the liberality of the requirements as to drawings was unusually marked.

In the programme for the new Capitol at Harrisburg it was stipulated that the drawings "must be rendered in monotone without the admixture of other color, and all elevations and sections must have shadows accurately cast at an angle, with both horizontal and vertical planes, of forty-five degrees. Walls and partitions in floor plans are to have no cast shadows. All drawings are to be rendered without accessories of any kind, whether of scenery or of architectural or other treatment of grounds, except that in all drawings flat or graded washes may be employed to indicate ground or background and halls, corridors, stairs, etc., and except also that in the general plan and elevation of grounds and buildings there are to be shown the actual defining lines and contours of the plot and of its walks, drives, steps and surrounding streets; and a single human figure shall be drawn against an elevation or section in each drawing to indicate the scale." Specifications as to the size of sheet on which the drawings were to be made, the absence of mounting and other technical particularities were also given.

This competition was rather complicated in that no less than four new buildings were called for in the completed scheme, though only one, the Legislative Building, was to be erected at once. The requirements for drawings, while not burdensome, were, therefore, somewhat extensive, and called for a plan of the grounds and buildings, a plan of each floor of the Legislative Building; three elevations of the same and two sections, one plan of the principal floor and the second floor of the three other buildings included in the full scheme, with two elevations of each. This unquestionably called for a good deal of work, but in view of the complicated nature of the problem it was, perhaps, impractical to ask for less. The programme contained a contour map of the grounds, thus giving all necessary information. After the programme had been issued a request was received asking for a reduction in the number of drawings required, and was favorably recommended by the professional adviser of the Commissioners; but after consideration it was decided to adhere to the original requirements.

In the preliminary competition for the New York Public Library the elevations were to have the shadows carefully cast and indicated by a flat tint of India ink. "The sections of the walls and floors, both in the floor plans and in the sections, must be blackened with India ink. There is to be no indication of tiling." The drawings required were floor plans for each story, three elevations and two sections. The programme also contained a series of diagrams giving a suggested arrangement of the interior for the guidance of competi-

tors, though it was stated: "In particular for the competitors, that, even if they should judge it best to adhere substantially to the arrangement shown in the diagram, they shall present also an alternative scheme," thus opening the way to absolute freedom of action.

These are examples of programmes drawn with great care and looking well to the interests of the competitors in reducing their labors to the smallest amount. The programme issued for a new Public Library and Baths at Shoreditch (England) represents the opposite side. The drawings were to be drawn to a working scale ($\frac{1}{8}$ inch to the foot), three elevations, two sections, a perspective, a detail of part of the elevation, a detail to the same scale ($\frac{1}{4}$ inch) of the counters of book-cases in the lending and reference libraries, a detail showing collapsible or removable dressing-boxes for the first-class swimming-bath, plan of the engineering arrangements of the baths and the heating of both buildings. This was a programme in which entirely too much was required. The programme for the Bath pump-room competition which preceded it erred in another way, in giving quite inadequate information as to the accommodation required and the purposes for which the additional buildings were intended. This was a notable competition, and might well have attracted the ablest of English architects: as a matter of fact, only fourteen sets of drawings were sent in, though a couple of years later more than 400 architects submitted designs for the unimportant Exeter church, which, like the Bath competition, was burdened with an unsatisfactory programme. The latter document included as extraordinary a provision as was ever inserted in a programme. "The above particulars," it was stated "are considered to be all that is requisite for competitors to be supplied with in order that they may compete, and no other information will be afforded under any pretext whatever." At the time it was generally supposed the competition was conspicuously neglected because of the insufficient programme.

As the programme should be a complete guide to the competitors, it follows that, if the promoters have a decided preference for any special feature or a particular style, it should be stated. A dome may not always be the finest possible feature for a great public building, but if the promoters are inclined to favor it, it is fairest to all concerned to say so in the programme. Style should also be mentioned, though with the present Classic or French fashion it is hardly possible for a public building to be offered in any other than the most fashionable form. The opinion of the jury on such a point as this is likely to strongly influence any competitor.

If the competition is being held for a public building the programme should contain, in addition to all the necessary information for the architect, a copy of the act or statute under which it is authorized. This helps to round out the completeness of the programme, and at the same time enables the architect, if he will, to ascertain exactly what his position may be in the competition. This information was not given in the "Instructions" for the New York City-Hall competition, though the chapter and law under which it was held were quoted by number and date. The Harrisburg programme, however, contained the Act of the Legislature, as did the programme for the preliminary competition for the New York Public Library.

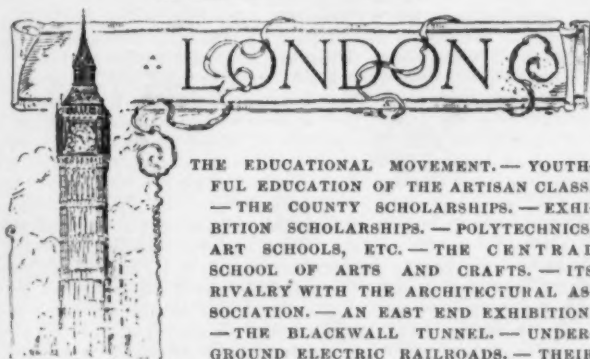
It is a much simpler matter to say, as do the Suggestions of the Boston Society of Architects, that "the absolute requirements of the building should be fully stated," than actually to set them forth for a large public building, like a State capitol or a city-hall or a court-house in a large city. No one would undertake to design an actual building of this class without knowing the exact use of each room; not only by whom it was used, but how it was used. A plan, to be reasonably successful, must exhibit the fullest knowledge of the conditions, and this, in many cases, can only be obtained on the spot and after exhaustive and painstaking care. That such and such a department, or such and such an official will require so many square feet of space, or that it must be divided, with so many square feet for certain purposes, is not enough for a practising architect to know. If the competition were limited to architects living in the city in which it is held all would be on the same basis, in a sense, for the necessary information could be had by each competitor with relatively slight exertion. But in a general competition, in which designs are expected from everywhere, those at home have an advantage over the foreigners that is contrary to the spirit of a fair competition. The question as to the exact amount of information needed in a programme from this point-of-view has not yet been sufficiently agitated by the architectural profession. The Code of the American Institute of Architects, the Suggestions of the Royal Institute, the Code of the Society of Beaux-Arts Architects scarcely touch on it; not at all, in fact, in detail. It is obvious, however, that it is necessary to know not only who is to use certain rooms, but how they are to be used, though it is possible that the setting forth of this information at proper length may extend our competition programmes beyond the already considerable bulk some of them show. It is, however, an important matter that advisers should give earnest attention to.

To revert to the jury again for a moment, it should be pointed out that the programme is as important as a guide to them as it is to the competitors. There is not a little satire in the requirement of the Joint Committee that the first thing a jury is to do is to read over the programme; but it is obvious they must know what they are about and what is required, not of them alone but of the competitors. Nor is the programme without significance to the promoters, for it is the instrument through which they make public their wants

and the document by which they are expected to abide. The programme is, in fact, the kernel of the competition, and if that be faulty, incomplete or misleading, there can be no competition at all, be the wishes of the promoters what they may, and the honesty and standing of the adviser and the jury of the best. That few programmes have been issued to which competitors have not some exception to take, or in connection with which some would-be competitor has not some query to raise, shows how difficult it is to obtain a perfect document of this sort. In a limited competition it is possible, and perhaps advisable, as the New York architects have stated, for the competitors to consult with the adviser and the promoters concerning it. Then differences can be adjusted, ambiguities removed and difficulties made clear. Certainly after such a conference the competitors can have little cause for complaint if the programme is not exactly as they wish it.

BARR FERREE.

(To be continued.)



THE EDUCATIONAL MOVEMENT.—YOUTHFUL EDUCATION OF THE ARTISAN CLASS.—THE COUNTY SCHOLARSHIPS.—EXHIBITION SCHOLARSHIPS.—POLYTECHNICS, ART SCHOOLS, ETC.—THE CENTRAL SCHOOL OF ARTS AND CRAFTS.—ITS RIVALRY WITH THE ARCHITECTURAL ASSOCIATION.—AN EAST END EXHIBITION.—THE BLACKWALL TUNNEL.—UNDERGROUND ELECTRIC RAILROADS.—THEIR EFFECT ON SUPERPOSED BUILDINGS.

AT this period of the year, when the desire, implanted by the heat of summer, for rest, recreation and change of scene has been satisfied, the mind of the student turns to the educational facilities offered for the ensuing session. The classes and lectures provided at the various centres of instruction recommence, as a rule, with the opening of the month of October, and it may be well at this time briefly to review the opportunities now available to the students of architecture and its many allied handicrafts.

The direct training of the artisan may be said to begin almost with infancy, and though in the early years the instruction is of a vague and general character, it cannot be considered altogether ineffectual. Those who have made a study of technical education in its relation to workmanship are united in the opinion that the spirit of modern handicraft will be most readily and permanently raised by approaching the agent in its simplest and most impressionable form, namely, in the period of childhood. At this time tradition does not handicap, nor is anything to be unlearned: under such system, in fact, education, in its real, contrasted sense, becomes possible and genius probable. The Germans and your countrymen have, I believe, much to teach us in the theory and practice of education, but generally speaking very rapid progress is now noticeable throughout England, and development and results will alike be watched with hope and interest. The Annual Exhibition which was recently held by the School Board of London is in many respects important, and particularly when regarded as indicative of the line which present-day education is following. For intrinsic merit the exhibition was perhaps not primarily attractive, as the exhibits were essentially elementary. But to those to whom the economics of education form an interesting study, or to lovers of human nature, there was much in the exhibition to induce speculation as to what manner of men and workmen the growing generation may become. Even to the most casual and superficial observer there was a stamp of loving perseverance notable in the work of these little people (who vary in age from about six to twelve years), and a character of care and thought that may bring a glow of hopeful pride to those who have worked and are working so hard to improve the aspect of labor and the handicrafts in this country and especially in this city. East London, with its enormous acreage and 2,000,000 working inhabitants, is a dead letter and a mystery to the greater number of Englishmen: by its vastness it has discouraged many who have endeavored to enter into its life and raise the point-of-view. So it is perhaps on occasions like this, when types of the outcome of widespread effort are grouped in a single room, that those who have taken in hand the task of preaching a gospel of life and work to the future artisans of London are able to feel towards their enterprise the greatest satisfaction and encouragement. Of a wide range of objects exhibited it is pertinent here only to mention a few, such as drawings, paintings, designs in paper and color, woodwork, carving and inlay, modelling in clay and paper, entirely the work of infants and children not more than twelve years old. Many of these exhibits possessed real beauty of execution, and, apart from the interest attaching to them from the youth of the authors, they have an importance in the fact that they represent the effort of those in whose care primary education is placed to discover the bent and aptitude of the child subject, and, more than this, to foster the inclination when determined and to lay the primary foundation for future work. Thus the road to de-

sign and the many crafts involving plane and solid geometry is prepared by inducing a familiarity with simple plane and solid geometrical figures. Encouragement to the sense of proportion and color is given in the same way and with the aid of the brush and pencil and with colored papers and other contrivances used simply; and later comes the handling of tools and materials. In this way, in the public elementary schools is created the germ of the work, and its further development is entrusted to the secondary or higher grade schools. These are now very numerous in London, some having existed for several years, while others have been founded by local and other authorities within the last few years, under the powers granted by the Technical Education Acts of 1889 and 1891. The movement which has taken place in respect to education as the effect of these Acts is remarkable not only in London but in the provinces as a whole. In London alone the London County Council spends some £150,000 annually in maintenance grants to meet the salaries of teachers of science, art, domestic economy, manual and commercial training, and in the subsidizing and equipment of secondary schools. There is a wide system of county scholarships, enabling those who obtain them to continue their studies and training to a later age than is compulsory under the Elementary Education Acts. On leaving the public elementary schools at the age of twelve a child may obtain a Junior County Scholarship, of which 600 are awarded to London children yearly.

These scholarships include free education at a secondary school together with money payment of £8 to £12 per annum, in lieu of the wages which might otherwise be earned by the scholar. The Junior County Scholarships are available for two years and provide instruction in a wide range of subjects. The second step is embodied in the Intermediate Scholarships, of which about seventy are given annually. They are open to boys and girls under sixteen years of age and afford free education until the age of nineteen, with money payments of from £20 to £35 per annum. The highest grade, the Senior County Scholarship, is awarded to especially promising students of nineteen years of age and under, giving free instruction at a college or technical institute for three years, with money payments of £60 per annum. It is hoped that in course of time the financial position of the Board may permit of the number and scope of the scholarships being extended. It will, of course, be understood that the range of subjects dealt with in the secondary grade schools is wide, adaptable to the very varied needs of modern life and enterprise, and to either sex. Training for the building trades and handicrafts is, however, one of the most important elements in the scheme.

In addition to the scholarships already mentioned, there are between five and six hundred exhibitions and scholarships attached to particular lines of study, some 150 being intended especially to encourage the study of design and workmanship in handicraft. These latter include Schools of Art Scholarships, Artisan Art Exhibitions, Evening Art and Science Exhibitions, etc., providing free tuition for two to three years, with money payments ranging from £5 to £20. Apart from scholarships and free tuition, the various Technical Institutions and Polytechnics of London are now able, by the subsidies granted by the County Council, to offer practical and theoretical technical instruction of a high character at a very small fee. The large Polytechnics of London are eleven in number, and afford classroom and workshop instruction in all the building trades and in many others. They include, also, schools of art where facilities and instruction are obtainable in drawing, both mechanical and otherwise. There are twenty-two centres, in addition, where workshop evening classes are held and thirty-seven centres for drawing and building construction; to these must be added numerous secondary schools held by the School Board in their schools, with the support of the County Council, with fourteen Technical Institutes and Handicraft Schools, eleven Art Schools, and three higher class institutions of university rank. This mere quotation of figures can, of course, convey no very vivid impression of the organization produced by latter-day requirements: otherwise it would be possible to complete the picture by mentioning the number of establishments not receiving support from the Technical Education Board, and self-controlled therefore. It is proper to mention that all the institutions recognized and aided by the funds of the County Council are subject to inspection by the Board; local control being permitted as far as is compatible with the effective and satisfactory disposition of the grants. The school, however, which promises to rank among the first in importance is that opened by the County Council last year, to be entirely and directly under the control of the Technical Education Board and its officers. This is the Central School of Arts and Crafts, Regent St. West. This school is now beginning its second session, and in the prospectus recently issued the aim of the establishment is laid down. It is "to provide instruction in those branches of design and manipulation which directly bear on the more artistic trades." The amateur student is not provided for, and "there is no intention that the school should supplant apprenticeship—it is rather intended that it should supplement it, by enabling its students to learn design and those branches of their craft which, owing to the sub-division of processes of production, they are unable to learn in the workshop." With this preface the several subjects of instruction are dealt with, the whole being "adapted to the needs of those engaged in the different departments of Building-work (Architects, Builders, Modellers and Carvers, Decorators, Metal Workers, Designers in Wall-papers, Textiles, Furniture, Stained-glass, Bronze, Lead, etc.)." The whole of the lectures and classes

are available to students on payment of 2s. 6d. per month, the single fee admitting to any or all of the subjects. This rule finds exception in the case of the Life Class, for which extra payment of 2s. 6d. is necessary per month. It will be seen that the Directors do not wish to allow the question of fees seriously to affect the utility of the establishment. As a school of architecture, it is just this moderation of charge which brings it into rivalry with the school of the Architectural Association. The outcome of the competition is unlikely to remain anyways doubtful. The result must be that the Association will reduce its tuition-fees to more reasonable figures. This may become possible when the Association possesses premises of its own, and is not compelled to sacrifice a large percentage of its income in payment of rent. As I noted in a former letter, the Jubilee of the Association, celebrated last spring, has been commemorated by the establishment of a fund for the acquisition of premises suited to its work and requirements, and it is satisfactory to note that Mr. Hampden W. Pratt, in delivering his address a few days ago as president for the ensuing session, was able to state that the matter was being taken up with enthusiasm on all sides. But, even so, it is by no means certain that the tuition fees of the Association could so far be reduced as to render the educational position secure. There are some adherents to the Association who would wish to see its schools aided by the grants of the Technical Education Board, but others are unwilling to accept the supervision that this aid would involve. Mr. Hampden Pratt left no doubt as to the presidential view. "The question," he said, "of establishing a Municipal School of Architecture has been talked of, and may yet come; but such an institution could never do the work that the Association undertakes, neither could the Association open its doors to outsiders and accept grants or subsidies from County Councils or other public bodies without sacrificing its freedom and ceasing to fulfil the objects for which it exists." This view may be correct, but it is certain that the foundation of the new School of Arts and Crafts will at least tend to keep in the Association a healthy spirit of emulation.

The subject placed first on the list of the new Central School is Architectural Design, which is treated by lecture or otherwise as may be advisable. "From the point-of-view that Architecture should respond to the facts of modern life," demonstrations of the mechanics of construction are given concurrently with lectures upon Design, and drawing from natural forms is made the basis for the consideration of ornament. Modelling and practical work in masonry and lead-work are also recommended to students. The point-of-view that "Architecture should respond to the facts of modern life" is one that commends itself naturally and perhaps a little obviously to the superficial. But, though the exact shade of intention is unpronounced, the general meaning is clear. It is a protest against tradition in architectural form and usage, and is representative of the modern school of architects, who have nothing in common with Classicists, nor with the Gothic Revival, nor tradition apart from utility whatsoever. They may be termed the ultra rationalists, for common-sense with a combining feeling for beauty is their motive. Their spirit is not in its entirety shared by the bulk of the members of the most important architectural societies, and this fact has tended to form them into a body somewhat apart from the R. I. B. A. and Architectural Association. Hence with this new spirit animating the Central School and its prospectus, it comes self-suggested that the Directors should include Messrs. George Hampton, A. R. A., and W. R. Lethaby, and that the architectural lecturer should be Mr. Halsey Ricardo. Although the majority of the classes are associated directly or indirectly with building work, instruction is given in several other crafts of interest, as enamelling, gold and silver working, bookbinding, and embroidery. It is further hoped that it may be possible in the near future to provide instruction in wood-engraving, carving, gilding, gesso-work, ornamental plastering, cabinet-work, lettering and illuminating, wrought-iron and brass, metal-casting and others. It is thus evident that the ambition of the Directors is to bring the new establishment into a high and extended condition of utility. The scheme has been well thought out and approached courageously, and when the school has arrived at its full working level there will be little doubt as to the justice of the title claim "The Central School of Arts and Crafts."

In November we are to have at the People's Palace, in the East End, an East London Diamond Jubilee Trades and Inventions Exhibition, which, it is announced, will be opened by Lord Salisbury. The exhibits are to be very diverse in character, including sections for architecture, building joinery, textiles, glasswork, furniture and decoration, plaster and metal work. No charge is to be made to exhibitors for stands and none for the reception and arrangement of goods. There is thus every likelihood that a thoroughly representative collection of objects may be brought together: the exhibition will be examined with care and interest by those who are watching for patent evidences that the new educational movement has already begun to bear fruit.

In these days, remarkable in the development of rapid intercommunication and no less in the growth of land values, the underground service of London becomes yearly more extensive and complicated. The existing railway systems are important, including the well-known Underground Railway, with the "Inner" and "Outer" circular rails and external branches in many directions to the suburbs, and one branch beneath the Thames to the southeast of London. This is a work which has now been in existence for many years. Latterly it has been augmented by an electric service running from near

London Bridge in tubular tunnels towards the southwest of London for a distance of about four miles. But the most recent subterranean work completed is the Blackwall Tunnel, for vehicular and pedestrian traffic, connecting the north and south banks of the Thames some three miles below Tower Bridge. This was commenced many years ago and was opened about the time of the Jubilee festivities in the current year. A curious story is told about its inception: The old Metropolitan Board of Works, which was, in 1889, displaced by the County Council as the central municipal authority for the metropolis, knowing that, as a body, their days were numbered, determined to set matters in motion for the commencement of a great work which should hand down their names in honor to posterity. The scheme for the Blackwall Tunnel was opportunely just then on hand; the moribund Board of Works determined that this should form their honorable memorial. Accordingly, preliminaries were rushed through, a tender was obtained for the work and provisionally accepted. It was further decided that the Board should meet again, to finally complete the matter, a few days before April 1st, on which day the Board was to come automatically to the end of its existence. These steps, however, were not unobserved by the County Council, already elected but not yet in office; this body had no desire to find, upon taking office, that they were pledged to a scheme involving expenditure of over a million pounds sterling, in the preparation and arrangement of which they had as a body played no part. The more so, because the Council had themselves a scheme for the tunnel, to their minds more practicable, certainly less costly. Representations, therefore, were made to the Board of Works asking them to reconsider the position before committing the municipality to the scheme. This, however, was without effect. Meantime the Government, in the form of the Local Government Board, prepared a *coup*. Ten days before April 1st, and a week before the final meeting of the Board of Works at which the contract for the tunnel was to have been entered into, an order came down from the authorities stating that it appeared expedient to bring the existence of the Board to an end immediately, instead of waiting, as had been intended, until April 1st. This forever severed the Blackwall Tunnel Scheme from the Board of Works, and the County Council was left to carry out its own plans in its own time.

The general features and character of this work as well as the methods employed in carrying it out are perhaps no longer sufficiently novel to bear repetition. One point in the construction, however, was recalled to public notice the other day in a noteworthy manner. No one who has visited the tunnel can fail to have been struck with the remarkable magnification of sound which takes place within it. The tunnel is lined throughout with white glazed bricks and the walls and roof are unbroken except at two or three points, where ventilation shafts occur. The roadway is paved with granite cubes upon the approaches as well as the whole of the descents, except for a short space of two or three hundred yards immediately below the centre of the bed of the river. This part of the roadway is level, and wood-block paving is used. While traffic is proceeding in the tunnel the combined effect of the paving and the unbroken polished surface of the walls and roof is to produce a roar of sound sufficient to alarm many a steady horse. The tunnel curves slightly in places, and at times when from neither direction a vehicle is visible the sound is yet such as to produce the illusion of several heavy trains running overhead at high speed. The first day on which the tunnel was used must have furnished a severe test as to these sound effects upon horses—though the subjects were of a type theoretically indifferent to noise. This was the occasion of the passage of many batteries of horse-artillery and squadrons of cavalry to take part in the procession of Imperial and Colonial troops which passed through the main streets of the East End a few days before Jubilee day. No remark was at that time made as to the noise. A few weeks ago, however, a pair of dray-horses took fright and bolted, their driver losing his life in the endeavor to stop them. The tunnel, though allowing of two vehicles to pass in comfort, is narrow beyond the hope of avoiding collision under such circumstances. The only other vehicle in that part at the time was a light trap, and the accident resolved itself into a race between dray and trap; the horse in the latter was not unequal to the occasion and came through the tunnel closely followed by the terrified dray-horses. This, of course, is an incident which in its main details happens frequently in the streets of London. The narrowness and length of the tunnel, however, renders the likelihood of fatal accident far more likely. It is not very clear why wood-block should not have been used for the paving throughout. The gradient is, except at the entrances, almost unnoticeable, and, of course, after the commencement of the actual tunnel there is no possibility of that greasy slipperiness which wood-block develops in wet and frosty weather. At a late meeting of the County Council the question was raised, and it was promised that the matter should be reconsidered. However, unless accidents recur, there is no likelihood, nor perhaps justification, for the expense and inconvenience of a sweeping alteration.

Of the underground works now in progress, the new electric railways stand first in importance. There are three separate systems in process of construction, each of which takes its start from a common station beneath the important centre at the Mansion House and Bank of England. The first to be undertaken was that connecting the City with Waterloo Station, the terminus of the Southwestern Railway, which possesses a great daily suburban traffic, second only,

perhaps, to that of the Great Eastern Railway. This line, which passes without intermediate stations between its termini, is now almost completed and will be opened for traffic in the course of a few months. As a piece of engineering the enterprise forms a remarkable record of success. The tunnels were driven, without mishap, beneath the Metropolitan Underground Railway and through difficult strata beneath the bed of the Thames. Although the actual tunnel has now been completed several months, with tube sections bolted in position and backed with grout, an alarming report was spread the other day to the effect that an important block of premises situated over the tunnel was showing signs of subsidence. Settlement is certainly taking place to some extent, though the danger may be comparatively small. The situation is probably comparable in some degree with that existing in the salt district of Cheshire, where serious subsidences are of frequent occurrence, owing to the continual pumping of brine. The supporting power of the gravel beds beneath the Mansion House district has, in all probability, been temporarily impaired by the constant pumping of water in connection with these deep and very extensive underground works.

Running westwards from the same central station, which forms the terminus to the City and Waterloo Railway, there is the Central London Railway. Some time ago I described in these columns the principal characteristics and details of the scheme, which is intended to relieve the traffic to and from the City along the line of Holborn, Oxford Street, and Bayswater to Shepherd's Bush, a distance of some six miles. The works are proceeding at a dozen different points on the route and tunnels are being driven in either direction. The task is so extensive, however, that the railway will probably not be opened for at least eighteen months or two years. These railways are being constructed and will be worked in a manner similar to that adopted by the South London Electric Railway. The latter now for several years has connected the south of London with the City at a point a little north of London Bridge; and it is to produce this line of service to the Central Station at the Mansion House that the third tunnel system of which I have spoken is now being carried out. The new tunnel will not be more than a mile in length, but the progress of the works will be watched with anxious interest, as the Mansion House terminus, closely connected with the terminus of the other systems, is planned exactly beneath the Church of St. Mary's Woolnooth, and involves cutting away nearly the whole of the supporting subsoil. The company was, at the time of the inception of the scheme, most anxious to obtain possession of the church, with a view to clearing the site for station purposes. This was, however, energetically and successfully opposed by the Society for the Protection of Ancient Buildings, and the company is therefore compelled to make the best of its position without disturbing the fabric of the church. St. Mary's Woolnooth is an interesting and effective Renaissance building with a large amount of internal ornamental woodwork and plaster decoration. The foundations are being cut away almost throughout, the south wall will be carried entirely on steel girders, and the north wall will be, for a considerable part, treated in a similar manner. The support and foundations of the whole of the twelve columns carrying the arcade to the nave will be cut away, and stanchions and girders substituted.

Further underground electric railways are in contemplation, including a scheme for fast traffic under the bed of the existing Metropolitan (steam) Railway. There is a rumor, too, of another tunnel for vehicular traffic under the Thames between the Blackwall Tunnel and the Tower Bridge. The subterranean systems of London grow yearly and there is every likelihood that this will continue; for certainly the traffic in the streets has in parts reached a degree almost final.



SKETCH-CLUB OF NEW YORK.

THE regular monthly meeting of the Sketch-club of New York was held at the Club-rooms, 3 East 14th Street, on Saturday evening, November 6, 1897. Mr. Evans presided.

The Advisory Board reported through Mr. Bruce Price on the adjudication of the Burial-vault Competition. The report showed the designs submitted by Messrs. J. E. Walker, J. A. Wafaling and W. P. Bausmith as placed respectively first, second and third. Under the terms of the competition these gentlemen are admitted to membership in the Club without the payment of initiation fee and first quarter's dues.

A vote of thanks was extended to Mr. Price for his interest in the competition. Discussion followed upon the suggestion of devising an appropriate medal to be awarded in a yearly or semi-yearly competition for members of the Club.

Mr. Rose reported that the life-classes were in progress under a competent instructor and that there were still four or five vacancies for those who wished to join the classes, the cost of instruction being \$2 initiation-fee and 40 cents a night, the classes meeting two nights a week.

Messrs. Ross and E. G. Smith were appointed to fill the vacancies on the Entertainment Committee.

Mr. Ross was also appointed to conduct the Research Class during December and the following months.

ARTHUR M. DUNCAN, Recording Secretary.



[Contributors of drawings are requested to send also plans and a full and adequate description of the buildings, including a statement of cost.]

THE CHICAGO PUBLIC LIBRARY, CHICAGO, ILL. MESSRS. SHEPLEY, RUTAN & COOLIDGE, ARCHITECTS, BOSTON, MASS.

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

A DESCRIPTION of this building may be found in our issue for October 2, last.

DESIGN FOR THE NEW YORK PUBLIC LIBRARY. SUBMITTED IN THE PRELIMINARY COMPETITION BY MR. W. W. KNOWLES, ARCHITECT, NEW YORK, N. Y.

DESIGN FOR THE NEW YORK PUBLIC LIBRARY. SUBMITTED IN THE PRELIMINARY COMPETITION BY MR. F. K. DINKELBERG, ARCHITECT, NEW YORK, N. Y.

THE DELIVERY-ROOM: CHICAGO PUBLIC LIBRARY, CHICAGO, ILL. MESSRS. SHEPLEY, RUTAN & COOLIDGE, ARCHITECTS, BOSTON, MASS.

[The following named illustrations may be found by reference to our advertising pages.]

APSIDAL TREATMENT, NO. 26: CHOIR OF THE CATHOLIC HOF-KIRCHE, DRESDEN, SAXONY.

SKETCHES IN LANCASHIRE, ENG.

This plate is copied from the *Builder*.

[Additional Illustrations in the International Edition.]

CENTRAL PORTION OF THE PALAZZO DEL MONTE DI PIETÀ, BRESCIA, ITALY.

[Gelatine Print.]

ENTRANCE FROM MAIN STAIRCASE TO DELIVERY-ROOM: CHICAGO PUBLIC LIBRARY, CHICAGO, ILL. MESSRS. SHEPLEY, RUTAN & COOLIDGE, ARCHITECTS, BOSTON, MASS.

[Gelatine Print.]

ROYAL COUNTY THEATRE, KINGSTON-ON-THAMES, ENG. C. J. PHIPPS AND C. J. BOURNE, ARCHITECTS.

TOWER BRIDGE HOTEL, TOOLEY ST., LONDON, ENG. MR. L. A. WITHALL, ARCHITECT.

PREMISES, LIONEL ST., BIRMINGHAM, ENG. MESSRS. CROUCH & BUTLER, ARCHITECTS.



[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.]

THE MEXICAN FEDERAL PALACE COMPETITION.

HOUSTON, TEX., October 6, 1897.

TO THE EDITORS OF THE AMERICAN ARCHITECT:—

Dear Sirs,—In the issue of *American Architect* for July 17, 1897, in which there appeared a translation of the programme for the competition for the Legislative Palace for Mexico, I find by comparing the same with the official programme in the Spanish language that there is a mistake in No. 31. The Senate should accommodate eighty members, instead of fifty.

This may be of interest to architects who have not the official programme in Spanish, or the means of translating it.

Yours respectfully, GLEN ALLEN.

NOTES AND CLIPPINGS

SPONTANEOUS IGNITION OF COAL. — Mr. J. L. Howard, in a recent paper before the Pacific Gas Association, took up the subject of the spontaneous ignition of coal, a subject of considerable importance to the coal-carrying trade and to marine underwriters. While he thinks that the true cause of the spontaneous combustion of coal has been discovered the study of prevention and control has not, in his view, progressed very far. He traces the cause to the accumulations of fine coal directly under the hatches of vessels, which occur during the process of loading. In this process, with bituminous coal, he states, it will be found that whether the coal be dropped from a chute or spout that overhangs the hatchways of the upper deck, or whether the coal be lowered through the hatchways and dropped in the hold with a minimum of fall, the forming pile will assume the shape of a cone. In this process there will be breakage, dependent upon the friability of the coal and the amount of the fall. This breakage will be sensibly increased if, in addition to the drop, the coal is allowed to go into the ship with the velocity due to the steep incline of the loading chute. There will be a shattering of lumps and a compacting of the mass because of the impact of blows from the falling body of coal. . . . The fine coal resulting from this method of loading a ship lies in an inert mass where it falls, whereas the tendency of the lumps is to roll down the sides of the cone toward its outer edges. Having thus explained the manner in which these masses of fine coal are accumulated, it is next shown that after their formation they generally remain as formed throughout the voyage, always incurring the danger of, and frequently resulting in, spontaneous combustion, with loss of ship and cargo. Whether this combustion results from the chemical combination of atmospheric oxygen with the carbon, or with the sulphur of the coal, or with both, it is certain that, the larger the surface of any substance exposed to chemical reaction in proportion to its mass, the more active will be the reaction, and the more rapidly will the temperature be raised by the heat generated in the reaction. The finer a substance is pulverized, the greater will be the sum of its surfaces in proportion to its mass or weight. The combination of oxygen with the sulphur of the coal is the explanation of the spontaneous combustion of coal given by Berzelius, and is the more generally accepted explanation. In every pile of coal there exist two of the conditions that obtain in active furnaces. In the one case the combustion is made visible and intense through the greater rapidity with which the chemical action is made to occur after heat has been first applied; in the other the combustion is as surely taking place, though not apparent until the self-evolved heat reaches a point where the conditions are identical. The danger is not confined to bituminous coals, though these are more frequently the subject of spontaneous combustion. Prof. Vivian B. Lewes holds the opinion that it is the reaction between the hydrocarbons and atmospheric oxygen that causes coals to heat; and perhaps this theory accounts for the fact that bituminous coals, being richer in hydrocarbons, are more liable to heat. If the plausible theory that spontaneous combustion originates in the finely pulverized coal left in undisturbed masses in ships or in land-storage be the true one, the avoidance of such sources of danger does not seem difficult, though it might, in some measure, retard the rapidity with which vessels are now loaded with coal, and somewhat increase the cost of handling. — *Providence Journal*.

SMOKE-DUCTS IN ANCIENT HOUSES. — Those passages of the ancients which speak of smoke rising up from houses have with equal impropriety been supposed to allude to chimneys. Seneca says, "Last evening I had some friends with me, and on that account a stronger smoke was raised; not such a smoke, however, as bursts forth from the kitchen of the great and which alarms the watchmen, but such an one as signifies that guests have arrived." The true sense of these words undoubtedly is that the smoke forced its way through the kitchen windows. Had the houses been built with chimney funnels, there could be no cause for alarm; but as the kitchens had no convenience of that nature, an apprehension of fire when extraordinary entertainments were to be provided seems to have been well founded, and on such occasions people were stationed in the neighborhood to be constantly on the watch to extinguish the flames in case a fire should happen. There are to be found in Roman authors many other passages of a similar kind. Aristophanes, in one of his comedies, introduces his old man, Polycleon, shut up in a chamber whence he endeavors to escape by the chimney. This passage may readily be explained, when we consider the illustration of the scholiasts, by a simple hole in the roof, as Reiske had supposed; and, indeed, this appears to be the more probable, as we find mention made of a top or covering with which the hole was closed. It has been said that the instances of chimneys remaining among the ruins of ancient buildings are few and that the rules given by Vitruvius for building them are obscure; but it appears that there exist no remains of ancient chimneys and that Vitruvius gives no rules, either obscure or perspicuous, for building what, in the modern acceptance of the word, deserves the name of a chimney. The ancient mason-work still to be found in Italy does not determine the question. Of the walls of towns, temples, amphitheatres, baths, aqueducts and bridges there are some, though very imperfect, remains, in which chimneys cannot be expected; but of common dwelling-houses none are to be seen, except at Herculaneum, and there no traces of chimneys have yet been discovered. The paintings and pieces of sculpture which are preserved afford as little information, for nothing can be perceived in them which bears the smallest resemblance to a modern chimney. If there were no funnels in the houses of the ancients to carry off the smoke the directions given by Columella, to make kitchens so high that the roof should not catch fire, were of the utmost importance. An accident of the kind, which the author seems to have apprehended, had almost happened at Beneventum, when the landlord who entertained Mæcenas and his company was making a strong fire in order to get

some birds the sooner roasted. Had there been chimneys in the Roman houses, Vitruvius certainly would not have failed to describe their construction, which is sometimes attended with considerable difficulties, and which is intimately connected with the regulation of the plan of the whole edifice. He does not, however, say a word on the subject; neither does Julius Pollux, who has collected with great care the Greek names of every part of a dwelling-house; and Grapaldus, who in later times made a collection of the Latin terms, has not given a Latin word expressive of a modern chimney. — *The Architect*.

HINGED MASONRY ARCHES. — We are quite accustomed to see iron or steel arched bridges hinged at the crown and abutments, but to treat a masonry arch in this manner would at first sight appear to be rather venturesome. In Germany, however, several bridges were built some few years ago on this principle, one of them having an effective span of 150 feet, and the result has been quite successful, both from a constructional and from an economical point-of-view. A complete description of this method of construction was contributed by Mons. G. La Riviere to the "*Annales des Ponts et Chaussées*" soon after the bridges were built, and is well worthy of careful perusal. The author draws attention to several curious features in the design of these bridges, but by far the most remarkable is the introduction of the three joints in the masonry ring. These joints, which really act as hinges, are placed one at the crown and one at each abutment, and prevent, of course, the line of pressure deviating very much from the centre line of the arch ring, thereby removing all ambiguity as to the actual stresses. The rise of the arches in some cases is not more than one-tenth the span, and no masonry backing is employed, the roadway being supported from the arch by means of thin spandrel or cross-walls. The hinged joints are made by inserting sheet-lead about three-fourths-inch thick, extending over only the middle third of the arch stone. At first it was thought that this joint should be made by means of bearing plates and pins, much in the same way as would be done in a steel arch, but this arrangement was subsequently abandoned in favor of the sheet-lead. — *Scientific American Supplement*.

FOREST FIRES SET BY FRICTION. — A Canadian engineer has evolved a new theory to account for forest fires. While with a Government surveying party recently in a part of the far Northwest, where these conflagrations are frequent and destructive, he happened to catch a tree in the very act of setting fire to itself and its companions. It was this way: The tree had been partly uprooted by a severe wind-storm, and leaned over against the trees nearest to it, some of which happened to be dead. Fierce gusts blew down from the neighboring mountains and caused the branches of the inclined tree to rub with considerable force against those upon which it rested. After the friction thus developed had been kept up for many hours, averse this courageous engineer, the dead wood upon which it was exerted first began to glow, then burst into flame, and a fire that swept through miles and miles of valuable timber was the result. The story is one which it is hard, but not impossible, to believe, and it is more than likely that several times since the world began woodlands have been devastated in just this way. There is much doubt, however, if any appreciable amount of responsibility will be taken from careless campers by the engineer's discovery. Not once in a thousand years could the circumstances he records be duplicated, while the reckless hunter and prospector regularly endanger the forests at least three times a day. Simplest explanations are usually best. — *N. Y. Times*.

THE BISMARCK MONUMENT COMPETITION, BERLIN. — We regret to learn from Berlin that there has been another competition scandal, not very unlike the one which created so much ill-feeling in connection with the Emperor William Monument. A Bismarck "national" monument is to be placed opposite the Berlin Houses of Parliament, and there was a general competition for the design last year. This has now been followed by a limited competition, for which invitations were issued to a number of architects and sculptors who had been prominently associated with the earlier competition. Professor Begas was also invited, in accordance with the instructions from the Emperor, though he had not participated in the preliminary work. The usual farce was again gone through, and many models and drawings prepared, though some of the better men, like Professors Diez and Riemann, already anticipated the fiasco and refused to compete. Again the assessors appear to have followed the hints given them by the Emperor, and selected Professor Begas's design for the first premium and the commission. There were to be sixteen assessors, but we understand that several of them, including Professor Wallot and Professor Lenbach, absented themselves when they saw what was required of them. — *The Builder*.

WHAT CAUSES PLASTERING TO CRACK. — A correspondent writing to a New York contemporary makes this curious suggestion, "While the subject of the cause of cracks in plastering is under consideration, I wish to call attention to the following case. A brick school-house, built in 1873, has one schoolroom in the second story 32 feet by 52 feet long, and 14 feet high. The space below has two rooms with a brick partition between them. These rooms are 12 feet high, and all are built strong, finished with two coats of lime and sand mortar and the ceilings hard finished. The lower rooms are of the same size and finished alike. The large room in the second story and one of the lower rooms were used constantly, while the other room was not used for a period of four years, at the expiration of which time it was opened for school purposes. The walls and ceilings were as sound as the day they were finished, while the ceilings of the other rooms were badly cracked, and some of the mortar had fallen off. Now, if the trouble was caused by the shrinkage of timbers or hard usage of the floors above, I think the last room used would show some signs of it. After using it a spell, the walls cracked the same as the plaster in the other rooms. I think the partial vacuum produced by opening and shutting the doors caused the breaking of the mortar."

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ENTRANCE FROM MAIN STAIRS TO DELIVERY ROOM: (

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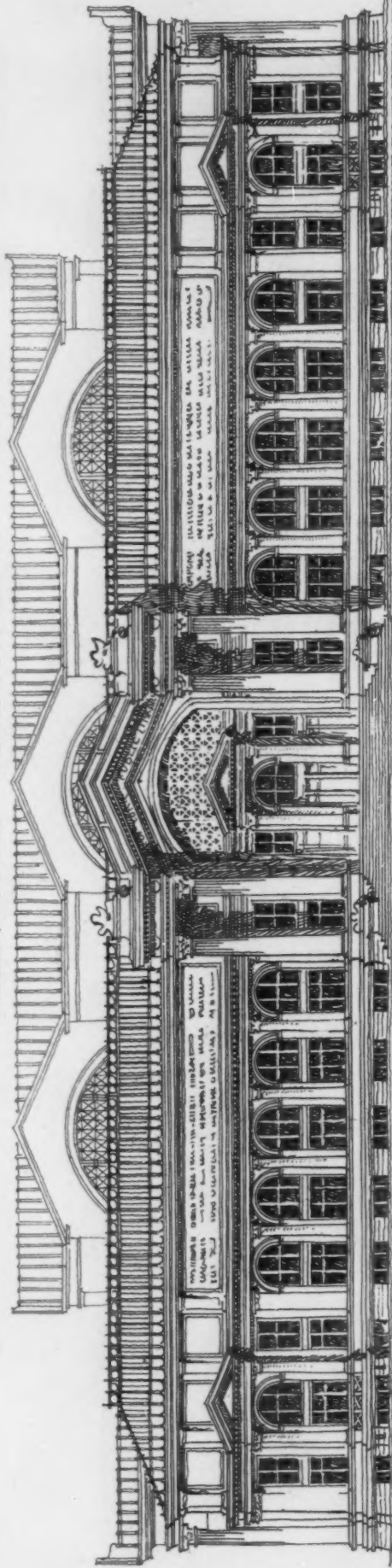
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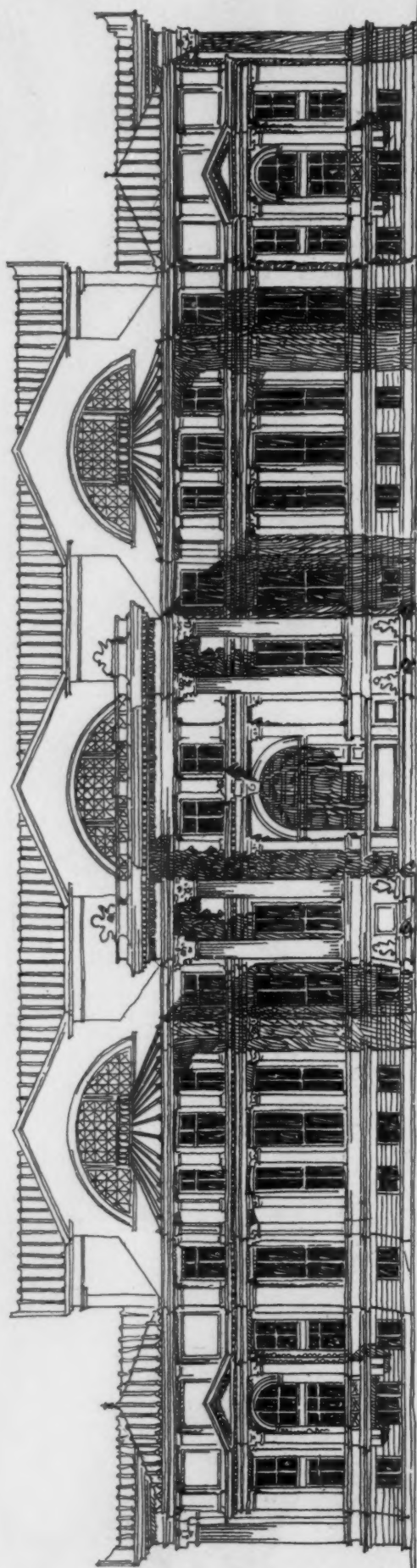
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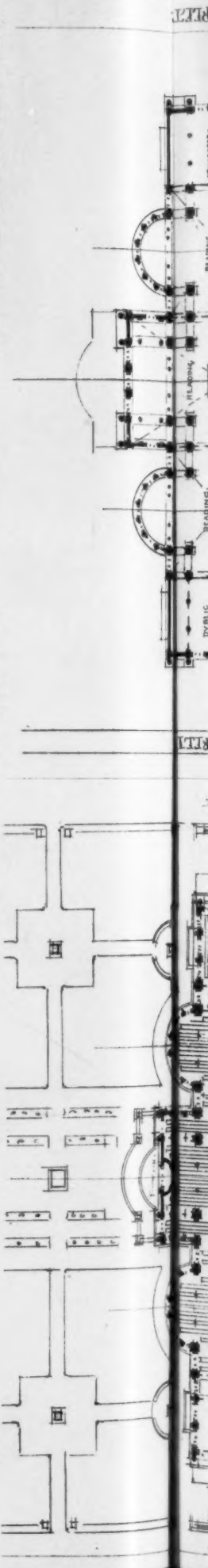
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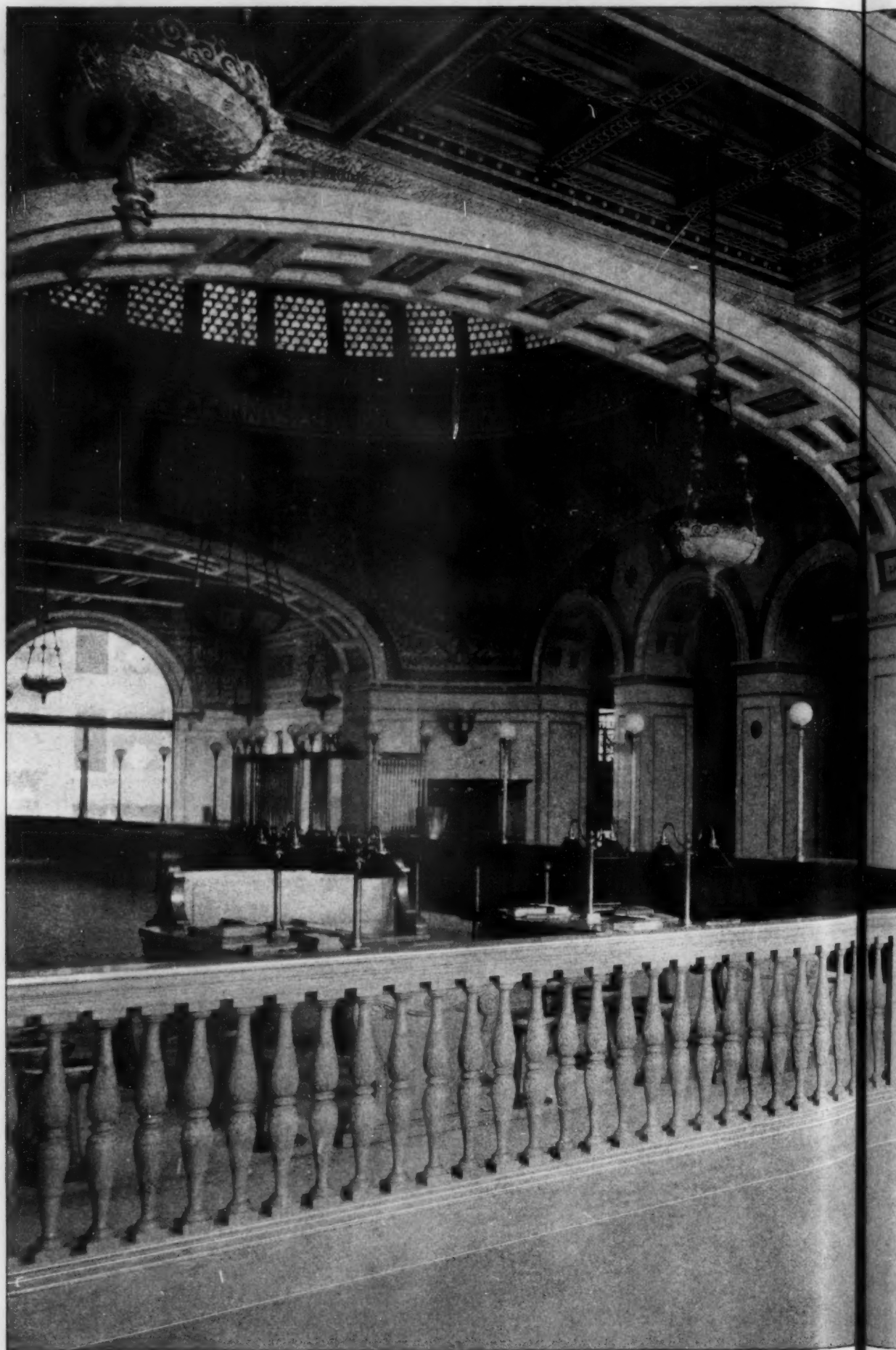
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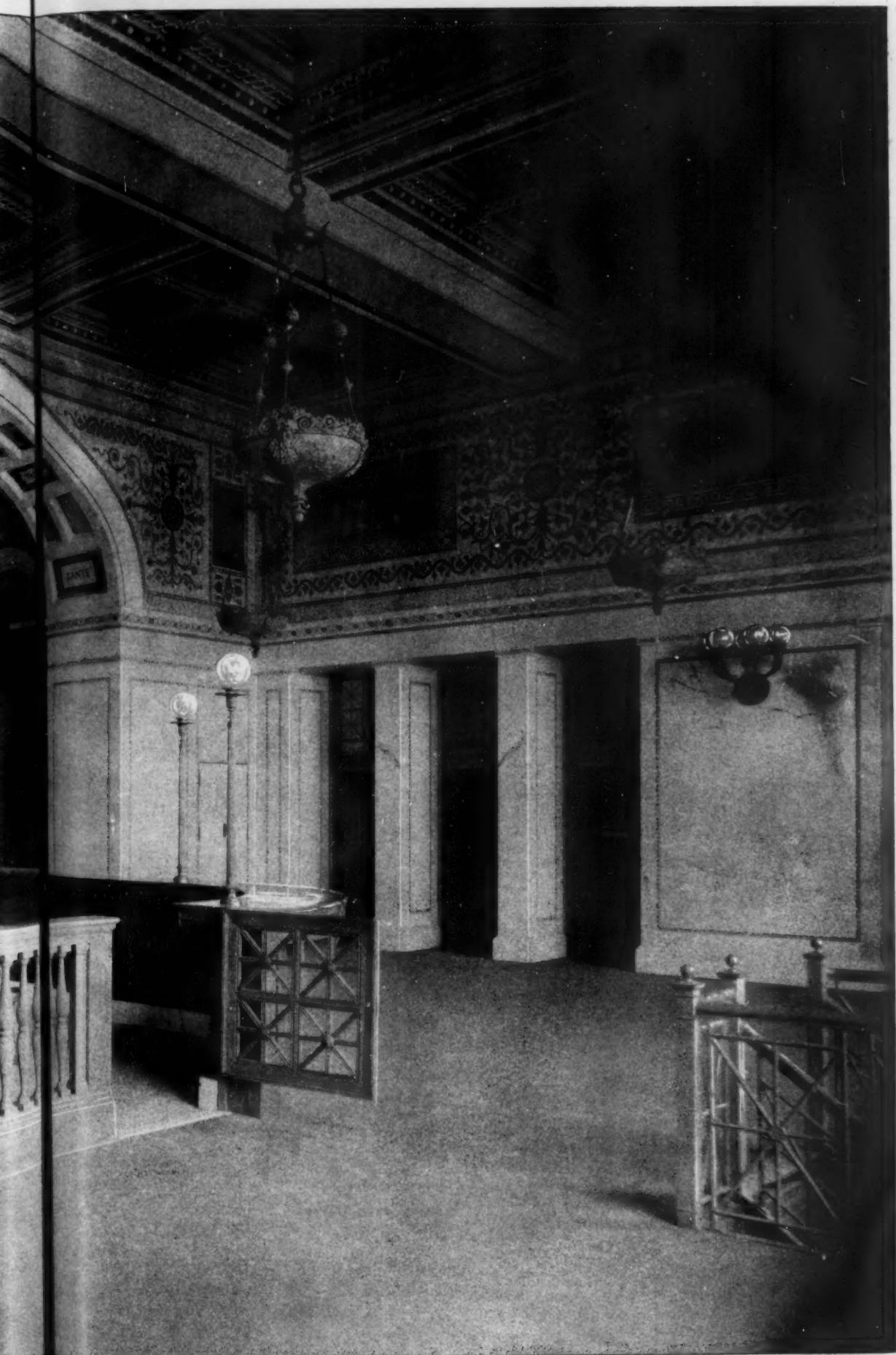
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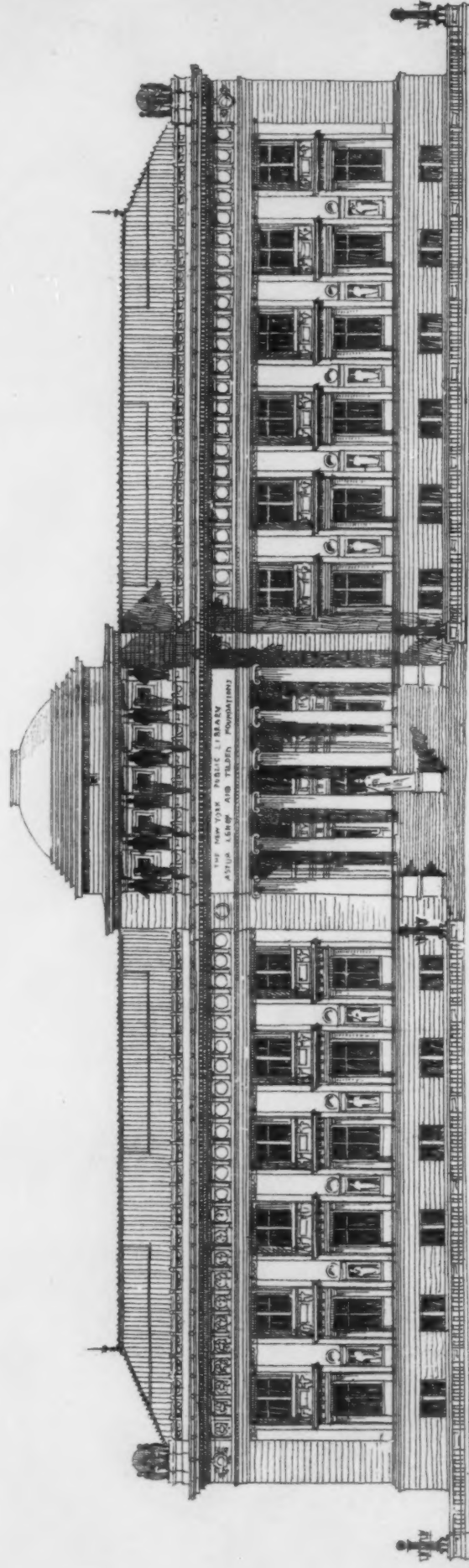
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The Late C. J. PHIPPS, Architect



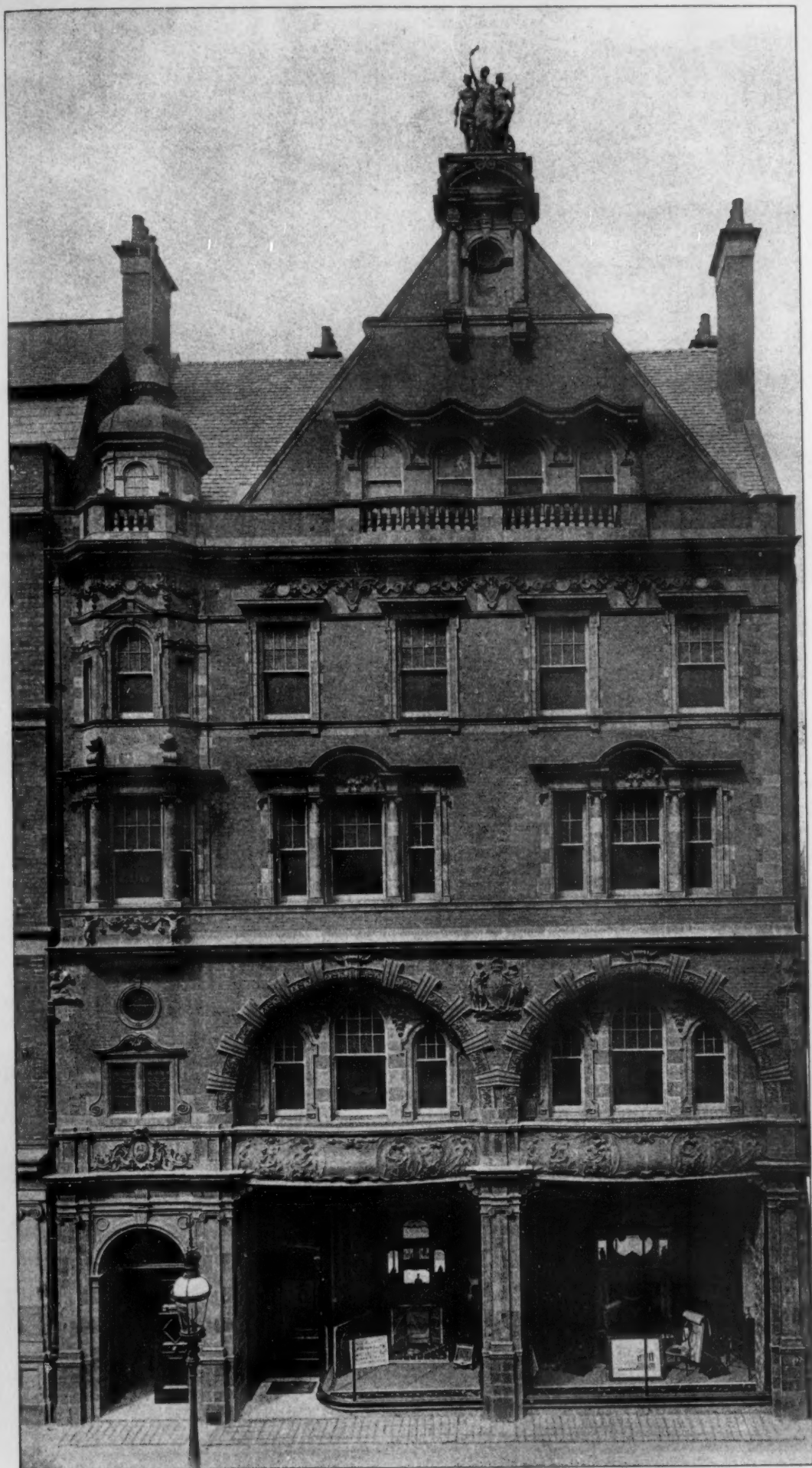
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HIPPES, Architects
Completed by C. J. BOURNE.



TOWER BRIDGE HOTEL, TOOLEY STREET, S.E.

L. A. WITHALL, Architect.



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