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IN the competition for a museum at Cairo, mention of which was recently made in these columns, 73 designs were submitted. The Technical Committee appointed to examine the designs, have recommended that no first premium should be awarded, as none of the designs came sufficiently near meeting the requirements. They further recommended that four designs which most nearly fulfil the requirements, should be awarded a premium of £225 each, and that the second premium be given to No. 62, by Mr. Trauchet. Nos. 8, 28, 33 and 71 are given honorable mention. All the awards go to French architects.

A COMPANY composed of leading citizens of Montreal is applying for incorporation for the purpose of perfecting arrangements for an International Exhibition to be held in that city from the 24th of May to the 31st of October, 1896. The local architects are already engaged on the preparation of designs for the necessary buildings. Mr. Joseph H. Stiles, who was a member of the Committee on Awards in connection with the recent California Exposition, is Director General of the enterprise. An effort will shortly be made to interest every section of the Dominion in the undertaking. The promoters have taken this definite action after having visited Europe, and satisfied themselves that Great Britain will exhibit. In view of the ability, financial and otherwise, of the gentlemen who have taken this important matter in hand, there is little reason to doubt its ultimate success. If successfully carried out it should prove to be of incalculable benefit to Canada. The present seems an opportune time, when the commercial depression is lifting, to successfully launch the enterprise.

ARCHITECTURAL competitions are of late becoming more frequent. There seems to be a growing disposition on the part of church and other corporations to secure designs in this way, the object being to get their work done more cheaply. The falling off in building enterprises, consequent upon the commercial depression, has been favourable to the growth of the competition evil. Architects with little or nothing to do, have been tempted to disregard the ethics of the profession, and to enter competitions, depending on the slightest possible hope that they would derive some benefit therefrom. The apparent willingness of a certain number of architects to enter these competitions, has not only helped to propagate the evil, but has encouraged the promoters to more and more disregard the rights of competitors in framing the conditions. As is illustrated by an article published on another page concerning a competition on the Pacific Coast, architects are now invited to submit designs in competition without any provision being made to secure a proper award. They are distinctly told that the right is reserved to reject any or all the designs submitted, and no guarantee is given that in the event of a design being chosen, the author will be given the carrying out of the work. In other words the competitor is asked to place himself completely at the mercy of a body of men who in nine cases out of ten have not the slightest knowledge of the proper manner of conducting a competition, and who want to be at liberty to do as they please regardless of the rights of competitors. May we be permitted to enquire to

what greater injustice and indignity architects must be asked to submit themselves, before they will consider the time has come to call a halt. We are glad to see that at least one member of the profession on the Pacific Coast has unmistakeably shown that he considers the time has already arrived. Every reputable member of the profession who desires to maintain his own self respect, the esteem of his professional brethren and the welfare of the profession, should fall into line.

NEGOTIATIONS have been in progress since the first of the present month between the Toronto Builders' Exchange, representing the master builders of the city, and the masons', bricklayers' and labourers' unions, with the object of endeavoring to arrive at a satisfactory understanding with regard to the rate of wages to be paid now that the five years agreement between these bodies has expired. A number of conferences have been held and an agreement has been reached as between the Exchange and the Labourers' Union, under which the rate of wages will be reduced by about 20 per cent., or from twenty-one cents to eighteen cents per hour. It is understood that the master builders have expressed their willingness to come to an agreement on the same basis with the bricklayers' and masons' unions. Indeed we have been informed that the delegates appointed by these unions to negotiate with the master builders have reported in favor of an agreement on these terms, but their report has thus far not been ratified by the unions. It is to be hoped that the unions will see the advisability of acting on the advice of their delegates in this matter. If the labourers' union, which is least able to bear a reduction in wages, sees the necessity for such reduction, there is the more reason why the better paid trades should fall into line. It is scarcely necessary for us to point out that during the last three or four years the stagnant conditions prevailing in the building trades have borne heavily upon employers and employees alike. The former have found it extremely difficult to secure contracts, and the competition has been such that in order to secure work, contracts have had to be taken at very unprofitable figures. The employees have suffered from lack of employment, but when employed, they were paid the same rate of wages as in prosperous times. The employers have therefore been under the double disadvantage of having little to do, and of being compelled to pay high wages on such work as they could secure, while being at the same time forced by the keenness of competition to take contracts at unprofitable prices. In view of these circumstances, it would be most unwise for the unions to endeavor to maintain the rate of wages which prevailed under the recent agreement. Everything except labor has been forced down in price. The manufacturer and supply merchant have alike been compelled to cut prices, until it is estimated that prices of materials to-day are from twenty to thirty per cent. lower than five years ago. The unions should take a common sense view of the situation, and agree at once to accept, say a reduction of twenty per cent. We cannot imagine that they will be so blind to their own interests as to attempt to enforce payment of the present rate of wages. The result of such action would be to negate the benefits which are in prospect for both employers and employees from the improved conditions which are now commencing to be felt. It should be remembered that the price of labor is governed to a considerable extent by local conditions. What these conditions have been in the city of Toronto it is not necessary to describe. So far as the master builders are concerned, while they are firm in their determination not to renew an agreement on the basis of the one which has recently expired, they have shown their desire to meet the employees on any fair and reasonable ground. The settlement of the matter now rests with the unions, as their acceptance of the twenty per cent. reduction agreed to by the labourers' union will adjust matters for the present year at least. We do not believe that the master builders will be willing to again enter into a long term agreement, as their experience under the last one clearly demonstrated that the advantage of such an agreement is largely on the side of the employee. As has been pointed out, the employers were forced by this agreement to pay a much higher rate of wages than the conditions warranted. A point which should be guarded in any new agreement which may be entered into is, that the unions should bind themselves to expel any member of their organization who shall undertake contracts on his own account, and thus enter into competition with

the legitimate master builder. It is understood that this is an evil from which the employers have suffered to a considerable extent during the recent depression.

THE ROYAL CANADIAN ACADEMY EXHIBITION.

THE architectural section of this exhibition has for the first time formed an important part of the exhibition. Even so, the profession is not widely enough represented. The drawings are nearly all by a few well-known Toronto men. Of members of the Ontario Association not residing in Toronto, there is but one exhibitor of original design, Mr. Fred. Henry, of London, and a couple of English sketches by Mr. W. L. Munro of Hamilton. Outside of the Ontario Association, there are but three exhibitors:—Mr. W. C. Harris, of Charlottetown, P. E. I.; Mr. A. T. Taylor, of Montreal, and Messrs. Clift & Pope, of Montreal, who sent in a set of competition drawings, which, contrary to the rules of the exhibition, were unframed, and were hung only at the request of the Ontario Association.

It can hardly be said, that the greater part of the drawings exhibited were exhibition drawings at all. They seemed to be, for the most part, office perspectives, made at any time in the last few years to show clients how their work would look, or to give the boys in the office practice. We would be the last to advocate a practice of mispending time in making pretty drawings of buildings, but on a special occasion of this kind, which is intended to appeal to the general public, who only understand a picturesque representation, a little of the spirit of the shop window architect, would have been in order. Canadian architects are always threatened by the idea that important work is best entrusted to an American architect from a larger city than Toronto, and it would be serviceable to the profession to make a good show occasionally, such as the public can understand. It is, however, apparent from this exhibition, that the important work which is being done now is in the hands of Canadian architects.

The largest piece of work is the Brockville Lunatic Asylum, designed by Mr. Tully, and recently completed. The perspective is on so small a scale that it needs a little calculation to convince the mind of its real extent, which must be at least 1,000 feet in length. There is, of course, repetition of pavilions, but the variable remainder is still of great extent. Mr. Tully also exhibits the original perspective of Trinity College—an old fashioned sepia drawing—and thus brings together what was probably his first and his most recent, though we hope not his last, great work. In the drawing of Trinity there appears a stone parapet wall to the terrace which was not executed, unfortunately it seems to us; the decisive base thus given to the building would have contributed greatly to its dignity. It is always difficult to have an adjunct of that kind executed at once, unless there is a consideration of pure utility to recommend it, and they appear to have been contented with a grass embankment at Trinity.

Next in size come the competition drawings of Messrs. Siddall & Baker and Mr. J. F. Brown, for the Legislative Buildings of Victoria, B. C. It is impossible to criticize these buildings fairly without the plans, but the plans would probably justify us in a suspicion of over windowing in parts. Mr. Brown's use of Romanesque forms is original and interesting, and without any of the brutal quality which, as in the case of the Ontario Parliament Buildings, is so often associated with that style. Of other large work, Messrs. Strickland & Symons' new Union Station, Toronto, has already appeared in the CANADIAN ARCHITECT AND BUILDER, is now sufficiently near completion to be a familiar object to Torontonians. It is modelled on an American type exemplified by the Illinois Central Station, at Chicago, but is a better design, and has had the peculiar difficulty of amalgamation with the old station, a difficulty which with that proceeding from the different levels, appears to have been skilfully met. The drawing by D. A. Gregg, about 3 x 5 feet in dimensions is a model of clear, serviceable perspective rendering, and should be studied by draughtsmen.

Mr. Lennox's design for the proposed new hotel, the next large piece of work, is also a beautiful drawing—indeed the drawing itself has so much claim to be considered as a work of art, that the tendency is to consider it apart from the design, and turning to Mr. Gregg's plain rendering of the Union Station which hangs next on the wall, one is compelled to admit

that it carries greater weight. Nevertheless, Mr. T. R. Johnson, who has signed a companion drawing of Mr. Lennox's Beard Estate Building, and is obviously the author of this, is to be congratulated upon a clear evidence of unusual talent. As to the hotel, if Toronto capitalists can build it, and Toronto's attractiveness can support it, we shall be very glad to see it. It may be questioned whether the received idea that hotels should be designed with some frivolity is correct, but this granted, the design in question is excellently carried out, amazingly so, when we consider that the style in which Mr. Lennox has worked out his large buildings, hitherto, is anything but frivolous. As a matter of fact, one feels sure that the gracefully projecting consoled cornices of this style mean galvanized iron, and sadness draws a veil over enthusiasm.

Mr. Burke's Simpson building of last year, now "the old Simpson building," will, we may suppose, be repeated in the more extensive new Simpson's building, which is about to rise from ashes. The problem, a packing box full of windows, is an exceedingly difficult one, and Mr. Burke had succeeded in giving a dignified solution without in the least entrenching upon the first requisite of such a building—abundance of light. Indeed the very determination to fulfil the conditions perfectly saved the design. Being full of light from top to bottom, the usual abrupt transition from solidity to plate glass is avoided, and though the show windows are unusually wide, the effect is unusually solid.

There is a design for a store front by Mr. Wickson, which, although it has a central gable brought by a pier plump down upon the middle of the girder, shows how suitable the mullioned gothic he has employed is for this kind of work: how much more suitable than the classic handling which has always prevailed. The English architects have now gone to Belgium in search of a style and the example has already made itself felt in this country and more of the same may be expected. If instead of looking merely for style our shop front designers would take a hint from the Flemish they ought to find the most characteristic fronts, which are simply mullions and glass from end to end, serviceable models for a store which is to be well lighted on each floor.

There are several other public and commercial buildings of various kinds which should be mentioned. Mr. Taylor, of Montreal, shows drawings of a new wing to the Art Gallery at Montreal, and the Notre Dame street branch of the Bank of Montreal, both of which are designed with knowledge and also well drawn. Mr. Taylor is evidently facile with his brush and has sent besides his own designs some water colour sketches of old buildings in Europe.

Messrs. Clift & Pope's design is a good commercial front.

Mr. D. B. Dick exhibits a photograph of the University Library and drawings of the interior of the library reading room and of the gymnasium. The stack room is the most interesting because the most straightforward part of the library. This cause and effect relation never fails. When will it be recognized as the only sure road to success?

Mr. Lennox's Athletic Club is a building of multifarious uses and has no leading motive such as the massive Romanesque requires. It is not a style that descends readily to the trifles of daily life.

The free handling of classic in Messrs. Gordon & Helliwell's competition drawing for the art gallery of Milwaukee is good.

Mr. Gouinlock's sketch for the Sheppard Publishing Co.'s building makes one hopeful for the coming Foresters' building.

Among the designs for churches, Mr. W. C. Harris, of Charlottetown, seems to have enjoyed the best opportunities and exhibits designs in a scholarly style for two handsome cut stone churches at Charlottetown. The interior of one of them is also exhibited and shows an octagonal crossing with the ceiling level with the nave and transepts, and showing outwardly as a small pyramid on the roof. A plan of this church would have been interesting.

Mr. Townsend has two very charming country churches which look to our mind as perfect in their way as any work of the living periods of church building. The wooden spires which make no profession of being stone and the country simplicity of other details do not impress one in the first place with their originality, they seem so fitting, but a closer inspection shows that this is original work of the first quality.

Mr. Darling who seems to be the church designer par excellence shows as great originality in another way. The examples shown, more costly than Mr. Townsend's, compare more directly in detail with old work, but the work is not so much an adaptation of gothic as an appropriation. It compares with old work but is essentially of our own generation. The modern multiplication of conveniences and the requirements of our climate, usually evaded by a designer or concealed under the exterior of an ancient church which had none of them, all appear as features in Mr. Darling's design and the result is that his churches have a touch of the same more highly organized character that distinguishes our modern domestic work from that of former periods. The type is thus somewhat altered but the gothic feeling is perfect and the variety and interest of the features increased.

It is precisely this more highly developed modernness that most of the other designs lack and which chills interest in them not only in spite of their "correctness" but because of it, for it is not correct now.

Mr. J. F. Brown opens up another question in a well worked out design for the Chester Mission of the Jarvis Street Baptist church. At first sight this appears to be a pretty little Anglican church with an apsidal chancel. The plan, which is inserted on a smaller scale, shows that what appears to be a chancel is in reality the infants' department at the entrance end of the church, the opposite end from the pulpit and choir. Is this good designing or not? It is an adaptation of an old external form to an internal use to which the old form is perfectly suited. Instead of looking upon it as a chancel clapped on to the wrong end of the church, we may consider it as an expansion of the apsidal baptistry which was common at the entrance end and was like this devoted to the young. Nevertheless the design is disturbing. The natural man abhors it but has no arguments. The truth probably is that whereas the chancel was the glory of a church, this infants' department is a mere adjunct, to be connected with the church occasionally by opening folding doors, and the real centre of interest, the pulpit and its surroundings, has probably no external expression but a flat wall and some little useful windows for the baptismal vestries, so that the design is in reality, turned round, proving once more the futility of imitation, even the cleverest.

Space fails to comment upon the dwelling house work, and indeed there are but few designs and no plans except on one of Mr. Townsend's drawings. There is little satisfaction in either looking at or discussing a dwelling house without knowing its plan. That which Mr. Townsend has shown for a \$4,000 cottage in the country, is an admirable piece of work, and is carried out in elevation with the refinement and simplicity of true design. Scientific house planning is a study of our own days, and although the present exhibition is not strong in this class of work, it is satisfactory to know from papers that have been read in the Architectural Societies and printed in this journal, that the mind of the profession in Canada is turned towards its study; for it is the principles which have found acceptance in this branch of design that will be at the bottom of all true advance in architecture.

QUESTIONS AND ANSWERS.

H. Bros., Kincardine, Ont., write: We want to build a brick chimney 80 feet high, square chimney. What size should the base be for this chimney, and should cement or mortar be used.

ANSWER.—It will depend largely upon the nature of the soil upon which the chimney is to be built, as to the dimensions at the base. If built on clay soil, allow about three tons to the square foot; if on sand, about four tons to the square foot. You should take into consideration also, the thickness of the walls. Unless the chimney requires to be rapidly constructed, the use of cement mortar is not necessary; a good quality of ordinary mortar will be sufficient.

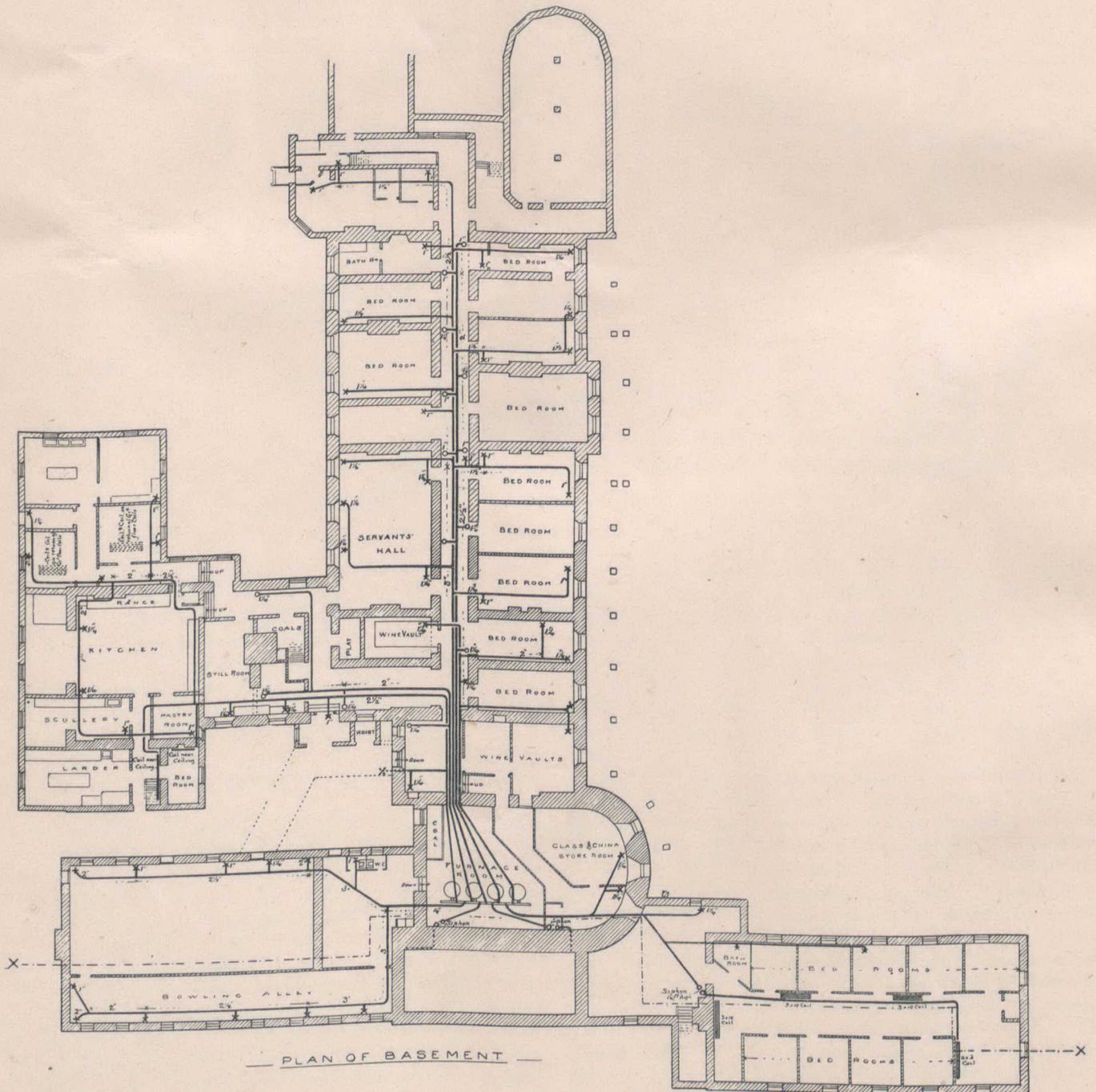
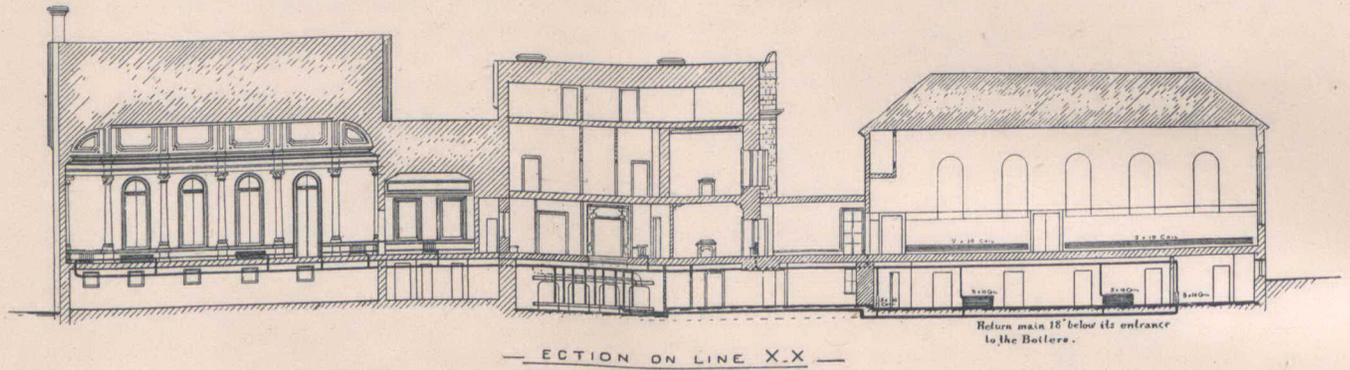
PERSONAL.

Mr. R. McKay Fripp, F.R.I.B.A., of Vancouver, has lately returned from a visit to Europe.

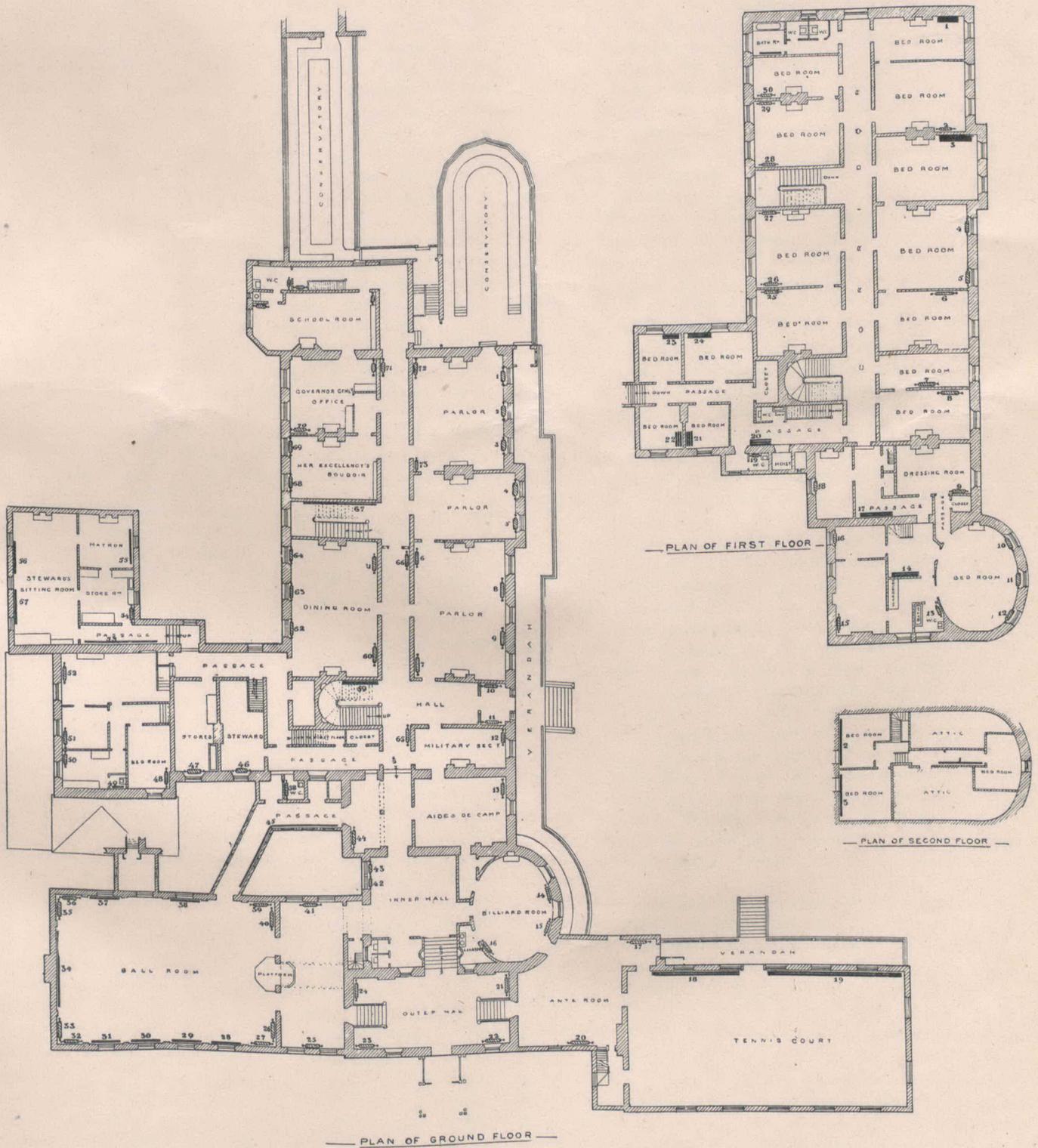
Mr. Edward Elliott, architect, Halifax, N. S., has recently associated with him in his practice Mr. Chas. H. Hopson, of Washington, D. C. The firm will hereafter be known as Elliott & Hopson.

The death is announced at Hamilton, of Mr. Hiram King, who was engaged on the construction of the Desjardins Canal, Great Western and Hamilton and North-Western railways. Mr. King has resided in Hamilton since 1861. He was in his ninety-second year.

**PLAN SHOWING THE HEATING APPARATUS,
OF GOVERNMENT HOUSE, OTTAWA ONT..**



PLAN SHOWING THE HEATING APPARATUS .
— OF GOVERNMENT HOUSE OTTAWA ONT. —



BRICK FOR STREET PAVEMENTS.

THE recommendation of City Engineer Keating, of Toronto, that \$80,000 be expended in brick pavements, has, naturally led to enquiries as to the wisdom of the suggestion, and should it be carried out, of the ability of brick manufacturers to meet the demand. Interest in the matter is accentuated from the fact that the Council of the City of London has had this question under consideration, and recently sent a deputation to leading American cities to make enquiries as to the utility of brick pavements. Winnipeg is also giving thought to the question, so that altogether brick for street pavements is becoming an active municipal problem.

At all times the subject of road-making is an important one for municipal bodies, and students of municipal engineering, though opinions and experience differ widely in different countries. In Great Britain, Germany, and other continental cities, wood paving is growing in favor, recent investigations in Berlin, that had been conducted with a thoroughness, characteristic of the German people, and extending over a period of fifteen years, resulting in a verdict decidedly favorable to wood paving. In Canada and the United States, municipal bodies have shown a growing dislike for wood pavements. For a decade and more past, opinion has been growing in favor of asphalt, with brick, during more recent years, finding many strong advocates.

For street paving in Toronto brick has been very little used, though it may be news to not a few to learn that the following streets are paved with brick: Dundas street, from the bend to Lansdowne avenue; Lansdowne Ave., from Dundas to College; College, from Lansdowne Ave. to Bathurst; Bathurst, from Queen to Bloor, the pavement being laid between the street car rails only, and has been down about two years. Besides these streets, to a limited extent brick has been used for pavements in a few private lanes, and yards, where heavy traffic occurs. Just at the present time a lane in connection with the Gas Company's works, in the east end of Toronto, is being paved with brick by Messrs. Taylor Bros., of the Don Valley. This is in the line of an experiment, in anticipation of brick coming more widely into use for street pavements. Outside of these local instances, if we except a brick pavement on one of the main streets in the town of Chatham, laid in 1890, brick, as a paving material, has not been used in Ontario.

What is to be said in favor of brick paving? Contrasted with asphalt, it is claimed that it is less noisy. The objection against asphalt, because of its slippery nature in winter, rendering driving, in a measure, dangerous, will not hold good with brick, so its friends allege, from the fact that horses are able to secure a foothold in the small spaces between the bricks, and this prevents their slipping. In point of sanitation brick and asphalt hold about the same position. Where necessity compels the tearing up of the road to effect repairs in gas mains, water pipes, and so on, bricks are more easily removed and replaced than asphalt.

If brick, however, is to come into active competition with asphalt the decision will rest largely on the price, and the ability of manufacturers to make a brick of the needed quality, and evenness throughout. The bricks used on Dundas, College and Bathurst streets were imported from the United States, and cost, laid down, from \$20 to \$23 per thousand. About half of this amount was represented in freight and duty. With bricks manufactured in our own country, this cost ought to be largely reduced, and yet, as we understand the temper of those who have looked into this matter, the cost would need to be brought down to about \$12 a thousand, if the argument of cost of brick, as against asphalt, is to prove an important factor.

Are Canadian brick manufacturers in a position to make a satisfactory brick for street pavements, and in sufficient quantities to meet a large demand from leading municipalities? Why not? In the Don Valley and at the Humber, experts say that shale exists in abundance, suitable for making a good paving brick, so that Toronto is favorably situated for a brick industry. Mr. C. R. S. Dinnick has entered into the manufacture of vitrified brick at his manufactory, near Toronto Junction, and like others, looking forward to brick, coming into increased use for pavements, he has been putting himself in shape to meet a demand in this direction. In tests of vitrified bricks, made by Mr. C. H. C. Wright, of the School of Practical Science, Ontario bricks held a creditable place in contrast with bricks of well-known manufacturers in the United States.

It would seem, therefore, that there is much to be said favorable to brick paving, and if leading cities, like Toronto, London, and Winnipeg, are going to embark on work of this nature, there is encouragement for the extension of brick manufacture in Toronto, and other parts of Ontario.

OUR PUBLIC PARKS.

THE city of Toronto can boast of as many natural beauties of scenery in its parks and ravines, with their numerous glades and dells, as any large populously inhabited centre can wish. The Torontonians, generally speaking, proud of his city, and in all matters connected with municipal government is a law-abiding subject. There is one feature, however, in which his perversity and want of decorum may be said to earn for him the appellation, sometimes applied by provincial papers, of "hoggishness," and that is the determined way in which all these natural beauties are neglected and abused.

The condition of our public parks is deplorable. Apathy on the part of those charged with their proper maintenance leads the public to conduct itself in a manner which can find no parallel in any city of the size of ours. There is hardly a strip of boulevard which is not wantonly injured. The proper crossing place, or the appointed portion of sidewalk, is not put to its proper uses: a line across the grass is the rule. The earnest appeals of householders, who desire to keep their lawns trim and neat, are disregarded, and in public parks the rule is to avoid the path and spoil the sward.

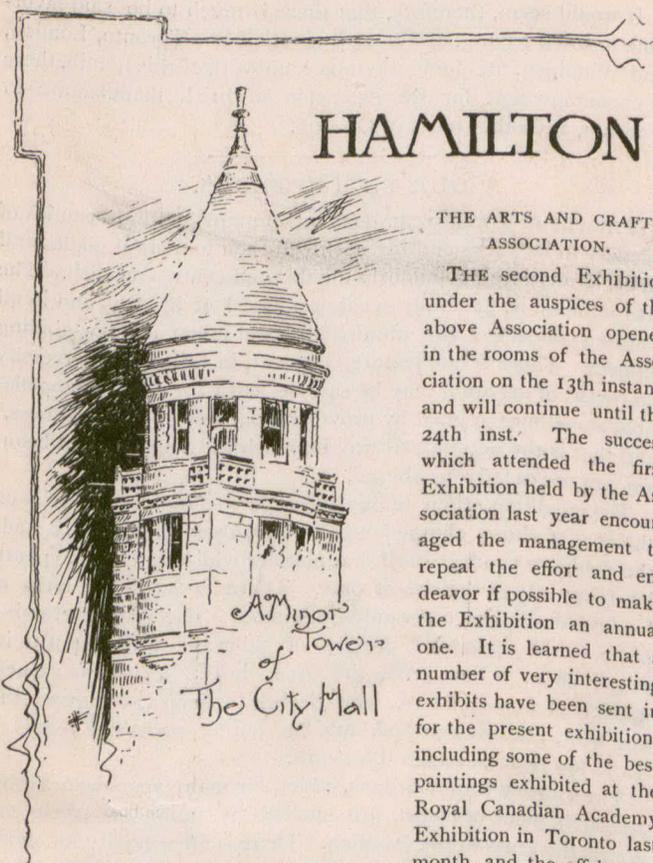
The Horticultural Gardens, which for many years were a most attractive place of resort, are spoiled by numerous tracks cut across the grass to the Pavilion. There is no necessity for shortening the distance from the Carlton street gate to the Pavilion; the beautiful broad walks, with their flower-flanked borders, are much more pleasant walking; the use of them will permit of the beautiful sward being cultivated, which has always been the charm of this pretty little breathing space, whereas, the well beaten track across the grass is worse than an eyesore. In the Rosedale ravines, and those passing northward to Reservoir Park, there lie attractions innumerable for the opening up of lovely vistas, of charmingly wooded hill sides, gracefully curving drives, and glimpses of scenery overhead and in front, as one would traverse them, were they put to a proper and suitable use.

But what of the Queen's Park? Is there a citizen who can visit another town or city without being ashamed and humiliated as he thinks of the condition of this park? The limited area for a public park which existed a few years ago has been sadly encroached upon by the erection of huge piles of stonework, till little of the ground seems to be left, and what remains is in a state of disorder, which is shameful to those charged with the maintenance of the grounds. Not only this; the conduct of the public in crossing the sward in every direction to make a cut-off, thereby breaking down fences, encroaching on boulevards and private property, has made the Queen's Park one of the most neglected and pitiable sights anyone would wish to see. No truly loyal citizen can take a stranger through the park with a feeling of pleasure. We spend large sums of money in advertising the advantages of the city, enumerating amongst other things its natural beauties. Can we call the Queen's Park one of them?

How do we compare in the maintenance of our public parks with such cities as Montreal and Halifax? The latter city, with a population of one-quarter of ours, has a public park which is a delight to all who visit it; whilst a visit to Montreal in summer makes one come home with a heavy heart to contemplate decay and ruin in every part of Queen's Park.

There are several associations who are interested in promoting the prosperity of the city for directly financial reasons. These of themselves are powerful enough to cause some immediate action being taken to mend the existing condition of the park, could they be induced to do so. They would soon receive the assistance of other associations, whose artistic pursuits and education would be invaluable in restoring to its natural beauty one of the most picturesque plots of pleasure ground any city can wish to possess.

Mr. G. Ernest Fairweather recently delivered a lecture on "Art and Architecture," at St. John, N. B.



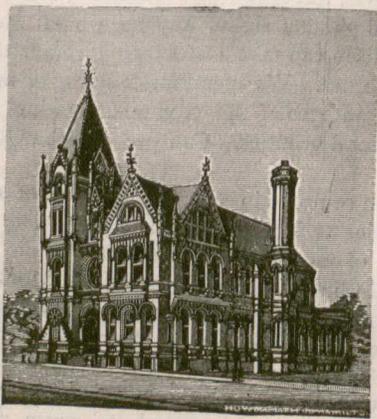
HAMILTON

THE ARTS AND CRAFTS ASSOCIATION.

THE second Exhibition under the auspices of the above Association opened in the rooms of the Association on the 13th instant, and will continue until the 24th inst. The success which attended the first Exhibition held by the Association last year encouraged the management to repeat the effort and endeavor if possible to make the Exhibition an annual one. It is learned that a number of very interesting exhibits have been sent in for the present exhibition, including some of the best paintings exhibited at the Royal Canadian Academy Exhibition in Toronto last month, and the affair pro-

mises to be even more successful than the one held last year. The Association is doing excellent work, and is deserving of every encouragement at the hands of the citizens. It is one of the few institutions of the kind in Canada that have achieved a satisfactory measure of success, and should therefore be an object of pride to the city in which it is located.

The Association was originally founded in October, 1885, by a contribution of \$50 each from fifty individual citizens who felt an interest in matters artistic, and in the improvement of handicraft on the part of mechanics and amateurs. The Association is held in high esteem by the artizan classes, inasmuch as it aims to enhance artistic skill and to insure public recognition to the artizan who produces meritorious work. At the Exhibitions of the Association the name of the artizan takes precedence of that of the firm with which he may be employed in connection with any exhibit of his work. This is a distinct departure from the method pursued at the various industrial exhibitions held throughout the Dominion. At these the name of the artizan is conspicuous by its absence. All exhibits are made in the name of the manufacturer, and no recognition whatever is given the skill of the artizan. The result of the different method pursued by the Arts and Crafts Association has been to stimulate artizans in various lines of manufacture in this city to put forth their highest skill, knowing that their name and work would



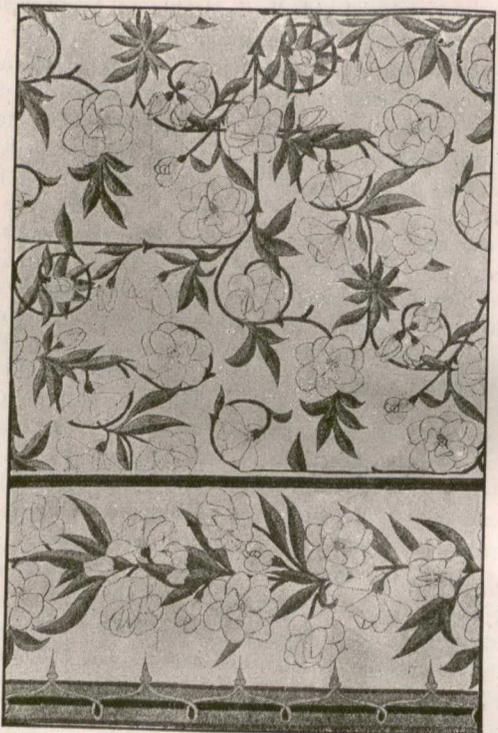
PUBLIC LIBRARY BUILDING, HAMILTON—HEADQUARTERS OF THE ARTS AND CRAFTS ASSOCIATION.

have to bear public criticism. The tendency has been towards bettering the position of the painstaking and skilful workman, while employers vie with one another in exhibiting the products of their manufactories and the skill of their workmen, and the public are educated to know and appreciate a good article, so that the result from every point of view is most gratifying.

During the past winter the students in attendance at the classes of

the Association have not only had the benefit of trained instructors, but have listened at intervals to papers by practical men on such subjects as "Stained Glass," "The History of Architecture," "Wood Carving," "Furniture," etc. The subjects taught may be classed under the following heads:—Freehand, model, crayon, geometric, architectural, mechanical, perspective and memory drawing; shading, painting (oil and water color) from copies, casts and nature: painting portraits from life; modeling in clay or wax; wood carving; art needlework; casting; etching on copper; engraving; lithography; pen drawing for illustration; designing, as required for all industrial pursuits; practical plane, solid and descriptive geometry; architecture and engineering, with subsections of the same.

Students are privileged to work in the school seven or eight hours daily under an instructor who sees that no time is wasted, and can compete in about twenty-five sections, or study for medals and certificates granted by the Education Department of Ontario. A Sketching Club is organized during the summer vacation, each member paying a small entrance fee. The total amount of these fees, less postage, etc., is refunded to the members in the form of prizes. There is also in connection with the School an Art Literary Society. The efficiency of the



WALL PAPER DESIGN AWARDED DIPLOMA AT THE WORLD'S FAIR.

School may in some measure be judged by the fact that in the competition for scholarship at the Ecole des Beaux Arts, in Paris, whereat hundreds of the best students from all parts of the world competed, Mr. John Lyle, a late student of this school, took the third place in the art subjects, and fifth place in modelling in clay, and gained his admission to what is considered the most advanced art academy known.

Mr. S. John Ireland, the Principal of the School, is exceptionally well qualified for the position he occupies, having had an unusually varied experience in the art and technical schools of England. It is a rare thing indeed to find a man who, like Mr. Ireland, has a practical knowledge of subjects so widely different from one another as water-colour drawing and machine design. Mr. Ireland is enthusiastically interested in the work in which he is engaged, and can be depended on to bring the efficiency of the school up to the highest possible point compatible with the means and appliances at his disposal.

There is one feature in connection with the institution which is open to criticism. The work of the students is judged by the Education Department of Ontario, which exercises control over the so-called "Government Art Schools" of the Province. If I am rightly informed, the names of the persons appointed to judge the merits of the work of the students are not disclosed, and there is no guarantee to the public that they are qualified for their duties. This fact has a tendency to weaken public confidence in the work of these institutions, and to limit the attendance and ambition of students. It is a well-known fact that the gentleman under whose control these art schools are placed has had no training for the position, and this fact has greatly retarded their success. If it is the intention of the Government to continue the yearly grants to these schools, they would do well to place them under control of a thoroughly qualified superintendent, and appoint equally well qualified persons, whose names should be given to the public, to pass judgment on the merits of the pupils.

In the ARCHITECT AND BUILDER for June some details will be



STORE OF MESSRS CATTO & SON
 NOS. 57-61 KING STREET EAST
 TORONTO CANADA

LANGLEY & LANGLEY, ARCHTS.
 CANADA LIFE CHAMBERS.

given of the Hamilton Arts and Crafts Association Exhibition now in progress.

ARCHITECTS' GRIEVANCES.

The local architects are complaining of the increased competition to which they are being subjected by builders. In most cities of Canada it is understood that the preparation of architectural plans and designs is finding its way more and more into the hands of properly trained architects, but in this city the opposite seems to be the case; the disposition of owners of property seems to be to dispense with the services of an architect in the belief that by so doing his fees can be saved. It is well known to those familiar with the subject, that the cheapest work often proves to be the dearest in the end, but most persons look only to the present advantage. The peculiar condition prevails in this city of builders entering into competition wherever possible with architects, and at the same time where the latter have work to be done, expecting the privilege of tendering upon it. An instance is cited in which an architect prepared designs for a building, and after calling for tenders was compelled by the owner to modify them in order to reduce the cost—again called for tenders with the result that the cost was declared to be still too high, and finally had the work taken out of his hands entirely and turned over to a builder. These are the kind of things with which Hamilton architect are contending at present, and some of them are in consequence feeling far from satisfied with their lot.

LEGAL.

THE case of the Royal Electric Co. v. Wand, and Wand, Plaintiff in Warranty, v. Walbank, decided in the Montreal courts recently, is one in which architects and contractors will doubtless feel an interest:

On the 17th April, 1889, a contract was entered into by which the principal defendant, Wand, undertook to build a brick chimney for the electric station of the principal plaintiff, at a fixed price of \$3,300, and according to certain drawings and specifications made by the defendant in warranty (who as architect was to be the depository thereof) in a good workmanlike and as substantial manner, to his satisfaction and under his direction. In May 1893, the principal plaintiff instituted an action against the contractor, alleging in effect that the contractor had not built the chimney according to the rules of art, and that by reason of defects in its construction it had deteriorated to such an extent that it had been condemned by the city Building Inspector and by other skilled persons, who were of opinion that it would have to be partly demolished and reconstructed on a different plan; that in consequence it was taken down to the point indicated in the report of these experts, and reconstructed according to their advice, at a cost of \$1,116, apart from the experts' fees, which amounted to a further sum of \$165, making altogether \$1,281.04. By the present action in warranty the plaintiff in warranty alleged in effect that he was not responsible to the principal plaintiff in the present suit, but if there was any responsibility, the same must fall upon the defendant in warranty as architect; that the plaintiff in warranty, as contractor, had carried out the drawings, plans and specifications with great care and in a workmanlike manner, with the best of materials, to the satisfaction of the architect, and that if any damages had arisen they had been caused by the faulty plans of the architect, and the responsibility must fall upon him. The defendant in warranty pleaded, first, a demurrer which was dismissed. Secondly, a plea to the merits, alleging in effect that the plans and specifications were correct and sufficient according to the rules of art in every respect, and the defects in the chimney were due to the fact that the contractor did not follow the plan nor carry out the specification provided for his guidance in certain respects pointed out in the plea. The plaintiff in warranty answered saying that he conformed to the plans and specifications, and to the instructions he received from the defendant in warranty, and that the work was done under his supervision. The principal defendant pleaded to the principal action, stating in effect what he had alleged in his action in warranty. The principal action was tried alone, and the principal defendant was condemned to pay the principal plaintiff the sum of \$1,281.04, representing the cost of taking down and rebuilding the chimney according to the report of the experts. The court held that the plaintiff in warranty had failed to prove the material allegations of his declaration, and particularly that he constructed the chimney in question according to the drawings and specifications of the defendant in warranty, or that the damages resulting from the manner in which the chimney was built were caused by any defect in the drawings or specifications. The court held that the drawings and specifications were correct and sufficient and in accordance with the rules of art; that there was nothing unusual about them, or there would have been no difficulty in constructing the chimney in question in accordance therewith, and that, in fact, numerous chimneys had been constructed according to specifications substantially the same. The court further held that the plaintiff had departed from the drawings and specifications in several important and material respects. Instead of the inner wall or core of the chimney being carried up to the point indicated on the plan, and there united with the outer wall, it was carried up and united with the outer wall about 16 feet higher at the spring of the arches, and it was proved that this was the cause of the weakness of the chimney, and that the chief failure and defect in the chimney occurred at the place where the plaintiff united the wall, contrary to the defendant's plan. There was also a defect as to the holes for ventilation. The plaintiff in warranty should have consulted with the defendant in warranty, and followed his instructions

if he did not fully comprehend the specifications. The weight of evidence went to establish that the damage to the chimney was not caused by wind pressure, but by the expansion of air, and that what contributed most to the cause of damage was the carrying up of the inner wall, and the failure to provide proper ventilation and to properly bond the chimney as required by the specifications. Upon the whole, the court came to the conclusion that the action of the plaintiff in warranty must be dismissed.

THE COMPETITION EVIL.

WE have received from Mr. Edw. Mallandaine, architect, Victoria, B. C., the following copy of a notice which recently appeared in the Pacific Builder, of Portland, Ore., and of a letter with reference thereto addressed by him to the Board of Supervisors:

NOTICE TO ARCHITECTS.

The board of supervisors of the county of Santa Cruz, state of California, ask for plans and specifications in detail for a county courthouse to be built on the lot owned by the county situated on the corner of Pacific avenue and Cooper street in the city of Santa Cruz. Two plans are asked for, one for an iron and steel fire-proof building, and the other a brick and stone combination. The building to consist of two storeys, and to be designed to provide for a courtroom and other rooms for offices for all the county officials, as well as a room for the board of supervisors, save and except an office for the county recorder, together with vaults for the county treasurer and county clerk, the necessary toilet rooms and other accessories to a building of that description. The cost of said building not to exceed \$40,000. Plans and specifications will be received up to April 22, at 10 a. m. Each plan must be accompanied by a certified check for five per cent. of the estimated cost; conditioned that the architect whose plans are accepted will give good and sufficient bond that the cost of erecting said building shall not exceed the cost mentioned in his plans and specifications. All plans must be in black and white and addressed to the clerk of the board. The board reserves the right to reject any or all plans and specifications submitted. Ed. Martin, clerk.

(COPY)

VICTORIA, B. C., April 13th, 1895.

The Board of Supervisors for the County of Santa Cruz, Cal.
Ed. Martin, Secy.

SIRS,—The unmitigated insult to the profession at large set forth in your "Notice to Architects," (Pacific Builder) causes me to write and ask which of the two parties is more fit for Stockton—the one who drew up the notice or the lunatic at large who would act on it. The unblushing effrontery displayed is only equalled by the ignorance shown of all professional, not to say, business dealing.

I am, Sirs, &c.,

EDW. MALLANDAINE, Architect.

In placing the above material at our disposal, Mr. Mallandaine remarks that "it will show that at least one architect is to be found who can resent an insult to the profession."

MANUFACTURES AND MATERIALS

Mr. Theophile Girouard, St. Catharines, Ont., has patented an exterior finish for frame structures.

The Albert Mfg. Co., of Hillsborough, N. B., are making large shipments of their goods to Ontario.

The Gurney Stove & Range Co., limited, is applying for incorporation in Manitoba, with a capital stock of \$50,000.

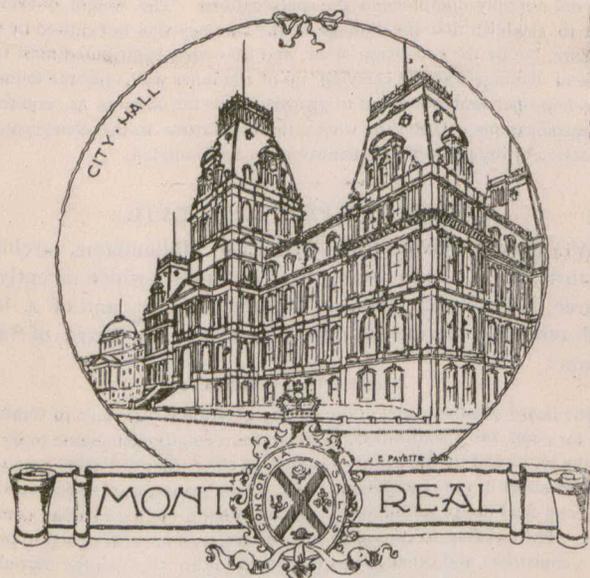
A handsomely printed and elaborately illustrated catalogue has been issued by Messrs. A. B. Ormsby & Co., 126 Queen St. east, Toronto, descriptive of their metal ceiling, wall decorations, etc.

The Metallic Roofing Co. of Toronto have issued a neat catalogue for 1895, illustrating their various brands of roofing, sheeting, corrugated iron, etc. Several illustrations of buildings on which their goods have been used are also published.

A sample of pure limestone from a quarry which is about to be opened at Lake Manitoba, is being exhibited at Winnipeg. The quarry is about 56 miles from Winnipeg. The stone will be conveyed by barges to Westbourne. The material is said to be very easy to work, and that on this account it will be able to compete with Selkirk sand-stone.

An order has been given by the Courts for the winding up of the British Columbia Pottery & Terra-Cotta Co., Limited. The company was incorporated in September, 1890, with headquarters at Victoria, and a nominal capital of \$60,000 divided into 1,000 shares of \$60.00 each, of which about \$36,000 have been allotted and paid up in full. A liquidator will be appointed.

Mr. Wm. V. Williams, of Winnipeg, is about to commence the manufacture of a patent pressed brick, manufactured by a chemical process, and which, he claims, will revolutionize the existing order of things in the building trades. The brick, which can be made in any colour is said to be suitable for a variety of purposes, and to be cheap and durable. A company to manufacture is said to be in process of formation.



(Correspondence of the CANADIAN ARCHITECT AND BUILDER.)

PROVINCE OF QUEBEC ASSOCIATION OF ARCHITECTS.

At the last meeting of the Council of the above Association, Messrs. Resther and Findlay were appointed to the vacancy in the Council due to the retirement of Messrs. Dunlop and Gauthier.

THE ONTARIO LEGISLATIVE BUILDING.

THE Gazette of this city recently contained the following:—The complaint is made that the acoustics of the new Ontario Legislative chamber at Toronto, are so bad that the members cannot hear each other across the floor, and visitors in the gallery might as well be at a pantomime. Public opinion is divided as to whether the architect is a blunderer or an unconscious philanthropist. If all legislative chambers were arranged on like principles the members might give up talking, do nothing but work, and save both the ears and the purses of their countrymen.

THE LAND SURVEYORS' ASSOCIATION OF THE PROVINCE OF QUEBEC.

On the 10th of April was held the annual meeting of the above Association in the Government Buildings in Quebec. Matters of general interest were discussed by the 35 members present, and papers were read by Messrs. W. McLea Walbank on "Provincial Land Surveyors—What We Are and What We Will Have to Be," and by Mr. J. N. Castonguay on "Euclid as Applied to Surveying." At a meeting of the Board of Directors held the previous day, the following examiners were appointed for the ensuing year: Messrs. J. E. Mailhot, of Quebec; B. C. Talbot, of Montmagny; J. N. Castonguay, of Arthabaska; D. C. Morency, of Levis, and W. McLea Walbank, of Montreal. The annual examinations were held immediately after the annual meeting and lasted until the 20th. There were seven candidates for admission to practice, of which one, Mr. J. E. Marion, passed. For admission to study the only candidate was Mr. Jerman, who passed successfully. The members of the Board of Directors, who are eligible for three years, are as follows: President, Messrs. A. Painchaud; 1st Vice-Pres., W. McLea Walbank; 2nd Vice-Pres., P. H. Dumais; Secretary-Treasurer, C. E. Gauvin; Syndic, George Roy, and Messrs. Thos. Breen, J. N. Castonguay, P. C. Talbot, J. E. Sirois, John Sullivan, D. C. Morency, J. P. B. Caspain, J. E. Mailhot, J. L. Michaud, F. X. Genest.

COUNCIL OF ART AND MANUFACTURES OF THE PROVINCE OF QUEBEC.

On Tuesday, the 30th inst., took place the official closing and distribution of prizes to the students of the evening classes of the Art and Manufactures School, with whose work the readers of the CANADIAN ARCHITECT AND BUILDER are already familiar, this institution having been the subject of my monthly correspondence in your November issue. The meeting was held in the Monument National on St. Lawrence street, in the same building as are now located the classes themselves, the accommodation at the old St. Gabriel street school having been found inadequate for the ever-increasing number of students.

There was a large and enthusiastic assemblage presided over by the President of the Council, Mr. L. J. Boivin, accompanied on the platform by the Vice-President, Mr. J. C. Wilson and Messrs. Hon. Judge Jette, Hon. Joseph Royal, Ex-Ald. Clendinneng, J. W. Hughes and others. The President opened the meeting by reading an address containing an historical sketch of the Council from its foundation up to the present date, accompanied by a most convincing proof of the great good conferred by the institution on apprentices in the several branches of the industries, and artist students, in giving them preliminary instruction in the great principles of art, and also treating of the greater good which must result in the future, to individuals, students and the country at large. The address was in substance as follows:

"Ladies and Gentlemen—I seize this opportunity afforded me by this distribution of prizes to the pupils of the night schools under the patronage of the Council of Arts, to say a few words as to the object the Government of this Province had in view in establishing that Council.

"On the 24th Dec., 1872, the act passed which legally constituted this Council to replace the old Board of Arts and Manufactures. The object of the Council, like that of the Board, its predecessor, is to advise the Commissioner of Agriculture and Civilization, and the Department of Public Instruction, as to all measures of a nature to develop the progress of Arts and Manufactures in this Province. Now that twenty-two years have elapsed since that period, when I recall to mind those who formed part of the first Council, it is impossible for me not to admire the wisdom which presided at the selection: the clergy, the liberal professions, journalism, trade and industry, were all represented.

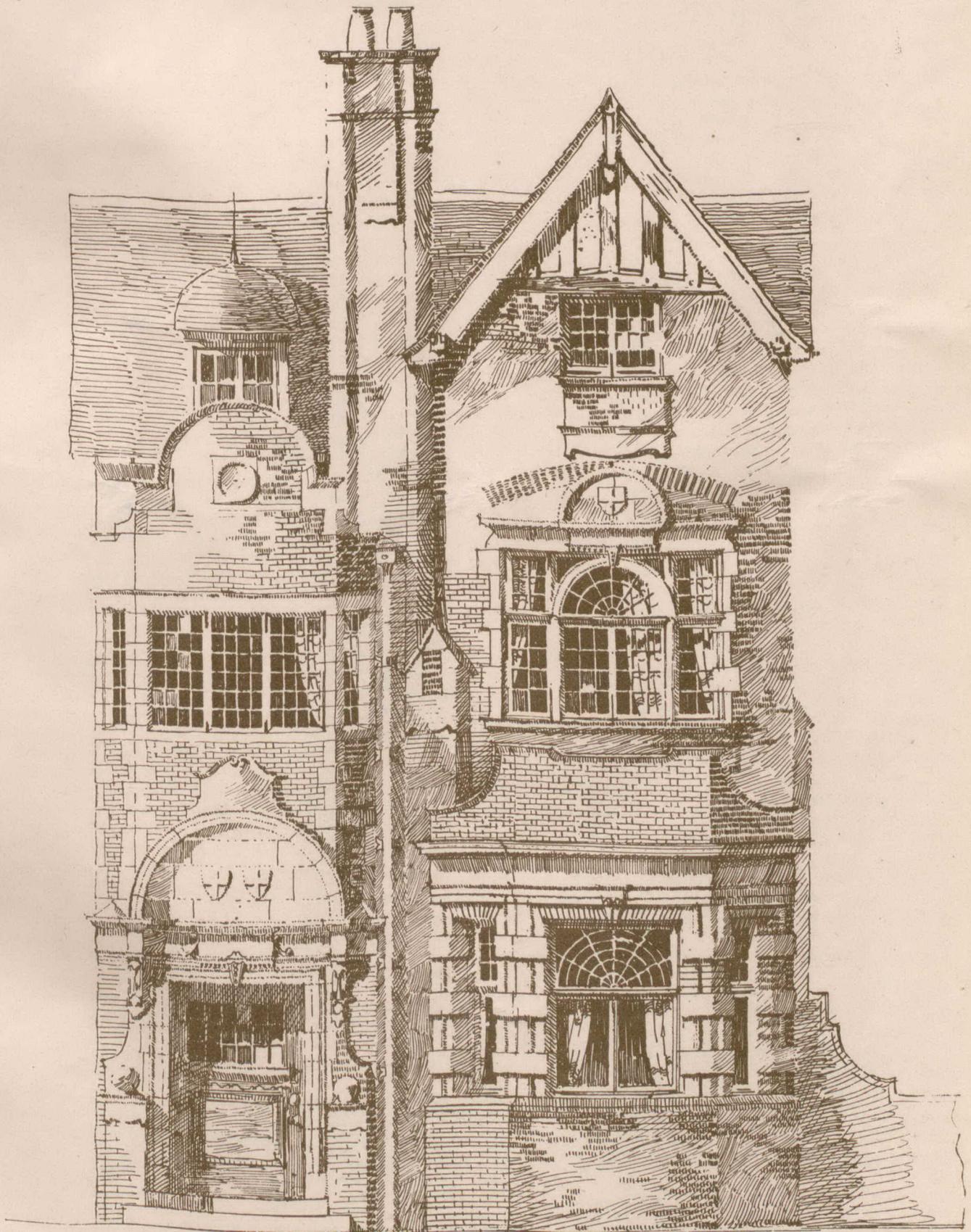
"It is a generally admitted fact that the population of this Province have a natural talent and aptitude for handicraft, and especially for working in wood, iron and stone. There is probably not a single village which does not contain several youths who have a really remarkable talent for drawing. Unfortunately, this talent remains unknown and undeveloped through want of that technical education which we endeavor to give in our schools. It is very important that before learning a trade the workman should be able to trace on paper the model of what he wants to do, for drawing is the soul of all technical education. Once he knows how to draw he will easily understand and execute his work in wood or iron. If any article is made in accordance with the rules of drawing and geometry, it will not only be solid and useful, but will also have the elegance which will make it preferable to the purchaser. Take, for instance, the dress goods sold in our shops. Select two pieces of the same weight and quality; there is no difference in the use for which both are intended. How is it, therefore, that one sells for 25 per cent. more than the other? The reason is very simple: the pattern or design of one is the work of a man who is educated in the art of his trade; a workman who, during his apprenticeship, was not afraid to come and spend three evenings a week learning drawing, developing his intelligence and thereby securing for the future wages sometimes thrice as high as his companions, as intelligent and capable physically as himself—with this difference, however, that they neglected to learn while young. Examples might be multiplied indefinitely, but this one is sufficiently striking to convey my meaning.

"But, ladies and gentlemen, there is another and much higher consideration, which alone would suffice as a reason for the existence of these schools, and amply reward those who make sacrifices for their development. Man by nature loves and constantly seeks the beautiful. By developing this faculty he admires still more the handiwork of the Creator in all his surroundings. When he traces on paper a mountain, a river, a pure and cloudless sky, he sees everywhere the hand of the Great Master of all things. His soul rises higher and higher, his intelligence develops itself more rapidly, and the sense of beauty which he acquires will, without effort, inspire in him a sense of right. The workman, with the education suited to his trade, will not only always command better wages, but, from the fact of his intelligence being more fully developed, he will be a steadier workman. His cottage, however modest it may be, will be a model of cleanliness and taste. Thrift will reign in his home, because he will not have contracted bad habits in his youth, but it is in his great respect for the laws of his country that the State will reap its reward for the sacrifices it has made in educating the working man.

"Such, ladies and gentlemen, are some of the results which we have endeavored and are still endeavoring to obtain by further developing these working-man schools placed under our control. In looking over what has been done in twenty years, I was myself surprised at the great number of pupils who have been through our classes. I have made a summary of the attendance books of our various schools, and I find that, from 1872 to 1894, twenty-three thousand five hundred and seventy-five pupils have attended our classes. These classes are in Montreal, Quebec, Three Rivers, Sorel, Levis, St. Hyacinthe, St. Romuald, Sherbrooke, Huntingdon, St. Jerome, Granby, Chicoutimi, Farnham, Silvery, and for some years at Iberville. The Government of this Province has expended \$185,200 in twenty-two years for the maintenance of these schools, say about \$7.85 per pupil, making 35½c. per head per annum.

"I fancy I hear many of you asking of what use has this instruction been. What has become of the pupils who have passed through your schools during twenty-two years? The report of our Secretary for 1893 to the Honorable Commissioner of Agriculture, gives the answer to these questions. This report contains the names and occupations of 550 of our former pupils, who all fill important positions, either on their own account or as foremen in industrial establishments. Several of them are now in Paris or Rome continuing their studies. However, the number of those who owe their success to the instruction they have received in our schools is much larger, but you understand how difficult it is for us to discover their whereabouts. This, ladies and gentlemen,

◦ SKETCH OF
◦ RESIDENCE
◦ FOR HOWARD ST. :



is what has been done in the past. The specimens of the work hanging on the walls show sufficiently what we are doing now.

The removal of our classes from premises which had become too small, to this splendid building, calls upon us to do much more than has been done in the past. New requirements demand our attention. To our classes in freehand, mechanical and architectural drawing, we will soon have to add classes of mechanical application. Pupils must be taught to apply to material substances the principles they have learned to put down on paper. Workshops with forges and turning lathes have become indispensable. Carriage-making, joiner-work, brick-making and laying, stone-cutting, making wooden patterns for iron and brass foundries, filing and polishing iron and wood, are so many things which want of means has hitherto prevented us from taking up. It is for you, gentlemen, who by your social position, are more especially charged with the duty of watching over the welfare of your fellow-citizens, to reflect upon the material and moral advantages that would flow from such a teaching.

And what have we done for the working-women. We frequently receive petitions asking us to do something for them. In our large towns there are those who are only waiting for the opportunity to acquire instruction in the various occupations which are suited to them. If we do not hasten to do something, the time is not far distant when they will work at many things which are now reserved for men. Most offices now employ women as stenographers, typewriters and assistant accountants. To my mind such a state of things is subversive of social order and can be productive of no good. Without doubt, women, as well as men, are subject to the law of labor, but we must carefully avoid whatever may contribute to lower woman's influence in the family. Let us give her cooking schools, where she can learn cooking, and study those industries which are specially suited to her sex—easier for her. Let them study needlework and crochet, which, with the aid of the study of drawing, might be made much more remunerative than any work they now do in shops, offices and factories. By developing the kind of instruction suited to working men and working women, we will escape those anomalies which threaten to subvert our social condition, to the detriment of the family, which is the basis of every well regulated society.

"Such, ladies and gentlemen, is a programme which is only slightly outlined, but which calls more and more for the attention of every citizen who wishes to promote the welfare of his fellow-citizens and of his country. In the first place, we must have those schools of application, of which I have just spoken, in which the great principles of mechanics would be applied, in which the future foremen of our large workshops would be trained, instead of our having to go abroad for them. I believe that before long our means will allow us to develop that portion of our programme. The installation of these workshops in schools are expensive, but fortunately there exists an establishment in Montreal with ample plant, which could be completed at a comparatively slight cost. I mean the institution founded by the executors of the late F. X. Beaudry at the corner of St. Catherine and St. Urbain streets. Circumstances have not permitted these executors to give it the development which the testator had in view, but I have reason to believe that before long it will be again devoted to its object—the instruction of young workmen in the mechanical and industrial arts, and that an understanding will be arrived at between the Council and the administrators of that estate for the use of these workshops.

"We have everything needful for training our young men for the liberal professions; we now have excellent commercial colleges, where those who wish to adopt business pursuits find everything necessary to prepare them for that important career; but what have we for preparing those who are destined to industrial arts? Nothing, or almost nothing, and yet, gentlemen, the constant transformations of industry call continually for educated workmen to allow us to maintain an honorable position in this vast country. We must do here what is done in England, France and Germany: the municipalities must assist the Government. There are towns in England of from 3,000 to 4,000 souls, which allow these schools from \$25,000 to \$50,000 a year. How could the corporation of the city of Montreal more profitably employ a sum equal to our subsidy from the Government—\$10,000 a year? With such an additional amount, the number of our pupils would soon reach 1,000 to 1,200. Montreal would become the great centre of industrial teaching for the whole country.

"The citizens who are always interested in seeing that their money is judiciously expended, should take an interest in the development of these studies to which they have hitherto been so indifferent. These, ladies and gentlemen, are the suggestions which I have thought proper to make on this occasion, where we have representatives of all classes of society assembled together. May these suggestions bear the fruit which I hope from them."

Then came speeches from Hon. Judge Jette and Hon. Jos. Royal, followed by a lecture on "Practical Education" by Mr. J. W. Hughes, which we regret, owing to pressure of space in this number, we are unable to publish.

The distribution of prizes, amounting to \$145 in value, followed the speeches. The prizes were distributed in cash to the most deserving pupils of the different classes as follows:—

Freehand Drawing (Advanced)—Mr. E. Dyonnet, Teacher—1st prize, S. Robertson, \$10; 2nd prize, J. B. Lagace, \$6; 3rd prize, N. Chaput, \$4.

Freehand Drawing (Junior)—Messrs. E. Dyonnet and J. H. Egan, Teachers—1st prize, Jas. Gray, \$8; 2nd prize, A. L. Dupont, \$5; 2nd prize, B. Aubin, \$5; 3rd prize, Geo. Moore, \$4; 4th prize, W. Fleming, \$3.

Architectural Drawing (Advanced)—Messrs. H. J. Peters and P. N. Picard, Teachers—1st prize, Charles Mitchell, \$5; 2nd prize, A. Paquet, \$4. Beginners—1st prize, E. Desautels, \$5; 2nd prize, A. Carot, \$3.

Mechanical Drawing, (First Season Pupils)—Messrs. J. T. Gardhan and Jos. Clement, Teachers—1st Prize, G. Wooley, \$5; 2nd prize, F. Ponton, \$3; 3rd prize, A. Reid, \$2. Pupils of more than one season—1st prize, J. Boisclair, \$5; 2nd prize, W. Pettigrew, \$3; 3rd prize, J. Lacroix, \$2.

Lithography—Mr. J. A. P. Labelle, Teacher—1st prize, H. Jackson, \$4; 2nd prize, Jos. Gray, \$3; 3rd prize, H. S. Nutter, \$2.

Modelling—Mr. J. O. Gratton, Teacher—1st prize, E. Soucy, \$4; 2nd prize, Louis Phillon, \$2; 3rd prize, A. Monastesse, \$1.

Wood Carving—Same Teacher—1st prize, E. Laliberte, \$3.

Plumbing (First Division)—Messrs. W. Britton and J. A. Peard, Teachers—1st prize, D. Coristine, \$6; 2nd prize, H. Russell, \$4; 3rd prize, Z. Bisson, \$3; 4th prize, T. Daigle, \$2. Second Division—1st prize, G. Guerin, \$5; 2nd prize, J. Laroche, \$3; 3rd prize, G. Jax, \$2; 4th prize, A. Duclos, \$1.

Stair Building and Building Construction—Mr. L. H. Blouin, Teacher—1st prize, J. B. Martineau, \$5; 2nd prize, Jos. Laplante, \$3; 3rd prize, H. Paquet, \$2.

Prizes were also distributed to the Boot and Shoe Pattern Making Class, but are omitted, as they hardly interest our readers.

The exhibition of specimens of the pupils' work held from the 29th April to the 4th inst., on the occasion of the distribution of prizes, was located in the large Banqueting Hall of the Monument National, where each branch of the school established all through the Province, had a wall space and tables allotted to their exhibits. The first exhibit that met my eye as I entered was that of Levis, consisting mainly of mechanical drawings. These were accompanied by freehand drawings rendered in crayon, one of which, a floral study by Mr. Geo. Buckhand, is worthy of special mention. Mr. Jos. Turgeon exhibited a good drawing of the figure of a woman, as did also Mr. S. R. Page. If Quebec did not possess an extensive exhibit, it was nevertheless well represented by Mr. J. A. Gosselin with his drawing of a head of a child, and by Mr. A. Turcotte with his drawing of a typical old "habitant" of the French province, rendered in lead pencil, which, while not possessing all the brilliancy of the crayon, is none the less more pleasing.

Montreal, as it might be supposed, had the most extensive exhibit: the advanced class of Freehand Drawing, the Modeling class, the Plumbing class, the Lithography class, all making a very good showing, but unfortunately half of the balance might as well have been left out altogether. The evident cause of the failure of the Architectural class is no doubt to be attributed to the fact that this class is mainly frequented by apprentices connected with the building trades, and who have had but one season's practice. The architectural student, having enough geometrical drawing practice during office hours, prefers to follow the course of the Modeling class or the Freehand Drawing class, where he is likely to derive more advantages. Mr. Charles Mitchell, a young architectural student, the winner of the first prize, exhibited drawings showing considerable skill, and his drawings in fact were the only exhibits of any interest in that section, one being a suburban residence in the colonial style rendered in water colors, and the other, two designs for school buildings, one of which was drawn in perspective in pen and ink.

In the Advanced Freehand Drawing class Mr. S. Robertson was without comparison the leader, all his drawings being nude studies of figures drawn in a sketchy way, and exhibiting a considerable knowledge of anatomy. Most of the other drawings exhibited were drawn from plaster casts executed by the pupils of the Modeling class of the school. Messrs. D. Coristine and H. Russell, of the Plumbing Class, have done work that could well compare with that of many excellent and experienced plumbers. The Modeling exhibit, although consisting of few specimens, was one of the finest in the Exhibition, and Mr. E. Soucy's work might fittingly find a place in the International Exhibition of Art.

Mr. A. C. Hutchison is daily expected to arrive home from his European tour.

I have been requested to state that Mr. Mann, the architect of the French Baptist church, corner of Cadieux and St. Catharines streets, which has been condemned and ordered to be torn down, is not Mr. Eric Mann, the well-known architect of St. John street. The latter gentleman, unfortunately, owing to similarity of name, has been getting credit in many quarters for the failure which this building has turned out to be.

STUDENTS' DEPARTMENT.

DOMES.

DOME is usually understood to mean a roof which is round or polygonal horizontally and of which any vertical section is either a round or a pointed arch. There happen to be none of elliptical or any other section than these. But some, especially in the East, have what is called an ogival outline, convex below and concave towards the top, and these are generally called cupolas, though there is no real distinction. Most of the great European domes have an opening or eye at the top, on which stands a lantern, except in the Pantheon at Rome, where the eye is open. Until modern times all the domes worth notice were of masonry—i. e., stone, brick, tiles, or pots, which last were used for lightness.

Pointed domes are much larger than hemispheres, having lost the flat top which has the greatest bursting pressure. A dome generally by the revolution of an equilateral arch, or one of sixty degrees, requires only a thickness of 0.137 diameter, 16½ in. for 100 ft., and one of seventy degrees requires 20 in. The tension at the bottom of a sixty-degree dome is only 15 of its weight, which weight, however, is 372 of a hemisphere on the same base, their heights being as 173 to 1.

For the same reason pointed domes are fitted for carrying a lantern, but they are not much benefited by tapering, having already lost the most oppressive parts. The Florence dome, across the flat sides of the polygon, is about seventy degrees of the circle of its curvature. Both in hemispherical and pointed domes the weight of the lantern they will carry varies practically as the cube of the thickness. Moreover, a lanterned dome requires tying much higher up than a plain one. In short, the cone is the only proper way of carrying a stone lantern. The cone at St. Paul's has a great chain round the base, which is probably superfluous, as the drum below it seems to be thick enough to contain the requisite slope, and visibly leans inwards besides.

Ribs inside a dome weaken more than strengthen it, as some persons imagine, unless they are themselves deep enough to be stable as independent arches, or unless they decrease in width and weight upwards like a lune, as those in the Pantheon do, which also is so enormously thick at the haunches that it has

superabundant stability. Some of the Indian domes are thick enough for arches, and they have neither eyes nor lanterns. Polygonal domes may be considered as composed of a small number of widish lunes, and only differ from round ones in being rather weaker for any given thickness and size.

Domes require no wooden centering to build them on as arches do, until they get near the top—i. e., so long as each stone is laid on the ring of stones below it will not slide inwards. And if they are notched to prevent sliding the whole dome may be built without centering. The dome of Mousa in Malta was so built in this century by a common mason, who must, however, have been a man of genius. There would be no difficulty in building a dome of almost any size of bricks or stones, with the help of hoop iron in all the lower courses up to about twenty-three degrees from the bottom, and then less up to fifty-two degrees, and higher if it has to carry a lantern.

PROVINCE OF QUEBEC ASSOCIATION OF ARCHITECTS.

MEMBERS and students of the above Association are invited to compete for a design for a seal, envelope and letter heading, to be delivered to the Secretary, 97 St. James Street, Montreal, before the 1st of August next. The design must be made so that the seal may be omitted or used as desired. The author of the best design will be awarded a prize of \$10, the best four designs to be published in the CANADIAN ARCHITECT AND BUILDER.

USEFUL HINTS.

There is an advantage in varnishing those parts of inside blinds which face the light, with good spur varnish. The exposure to weather and to the rays of the sun to which the facings of the blinds are subjected when closed, soon bleaches or blisters the ordinary furniture varnish that is commonly used on interior work. The exterior varnish being a slow dryer, withstands the elements much better than the varnish commonly used on interiors.

GLASS THAT EXCLUDES HEAT.—The announcement made of a German method of producing glass which will transmit light freely, but not heat, is supplemented by some details as to the process of manufacture. A plate of this material 4-10ths of an inch thick, containing 28 per cent. of iron in the form described as ferrous chloride, allowed only 4.06 per cent. of radiant heat to pass through it, while another plate of equal thickness, and containing quite as much iron in the form of ferric chloride, permitted 11.2 per cent. to pass. The chemical distinction is very small, but the effect is said to be marked. A new thin slab of this glass permitted less than one per cent. of the heat of gas flames to pass, although transmitting 12 per cent. of heat from sunlight. Ordinary window glass, on the other hand, lets some 86 per cent. of heat through.

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