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Vol. XIX.—No. 10.

TORONTO, MONTREAL — OCTOBER, 1906 — WINNIPEG, VANCOUVER

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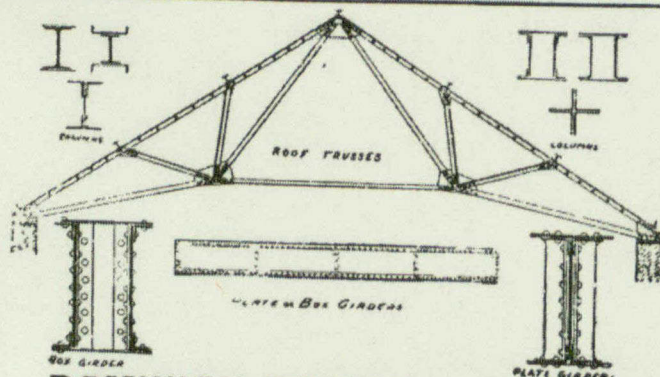
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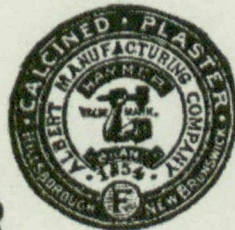
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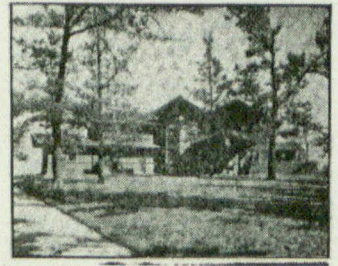
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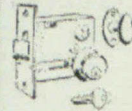
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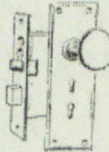
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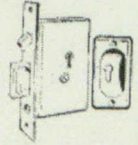
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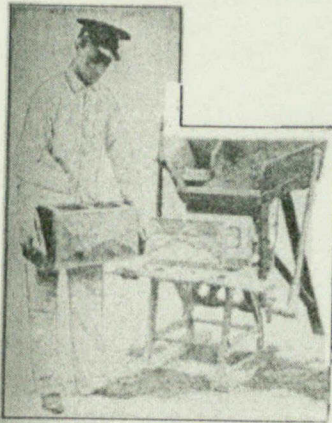
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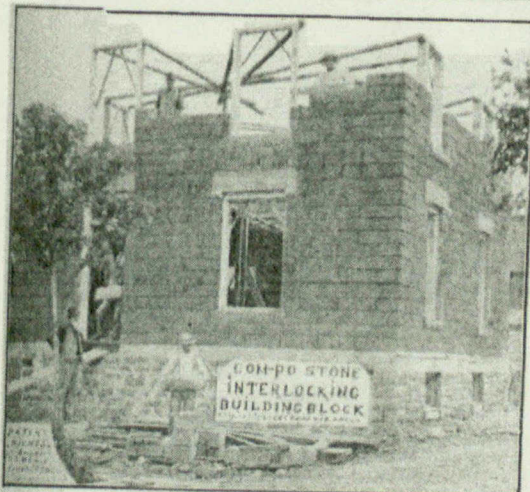
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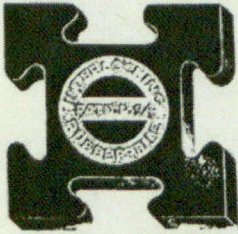
not yet been proved, however, what the effect of the soda will be upon the quality and durability of the cement in the course of time."

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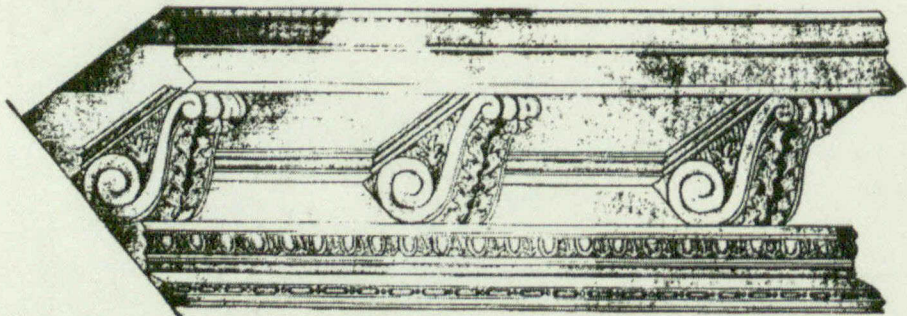
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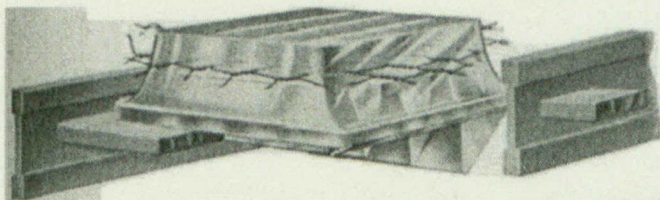
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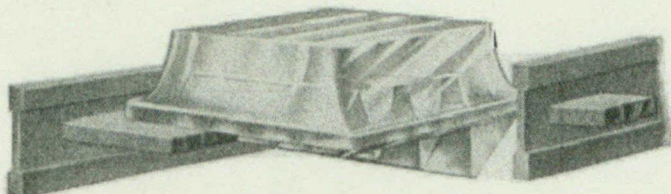
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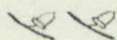
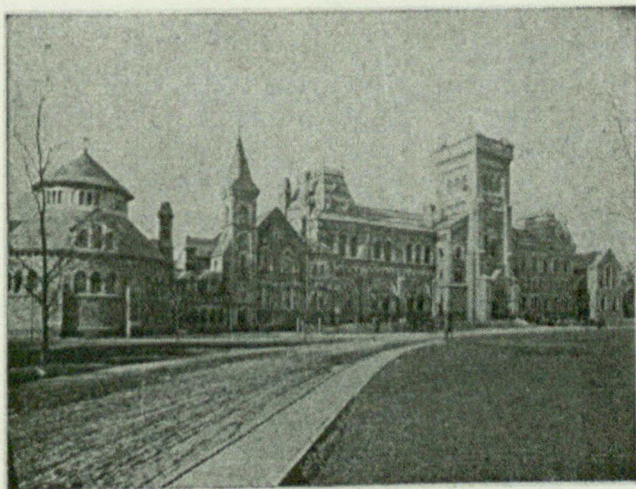
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With regard to the word "mews" which I have used in regard to the baron's stable, I have sometimes been asked by people as to the origin of this term as applied to stables. It dates back to the olden times when the King of England and the great nobles kept falcons for purpose of the chase. The large and roomy buildings where these costly and highly prized birds were kept used to be described as "the mews," owing to the fact that the birds mewed, or moulted there annually. King Charles II, although he appointed his illegitimate son by Nell Gwynne, namely, the Duke of St. Albans, to the office of hereditary high falconer, a sinecure which is held to-day by his descendant, the pre-

sent Duke of St. Albans, nevertheless did away with the royal falcons and converted the building where they were kept into stables for his horses. The building had been known up to that time as the the Royal Mews, and it has retained that name ever since, the term being, in course of time, applied to stables of any kind.—*Marquise de Fontenay, in New York Tribune.*

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The foreman took the vase in his hand, turned it over and

returned it with the brief reply: "I don't think that I can learn much from it."

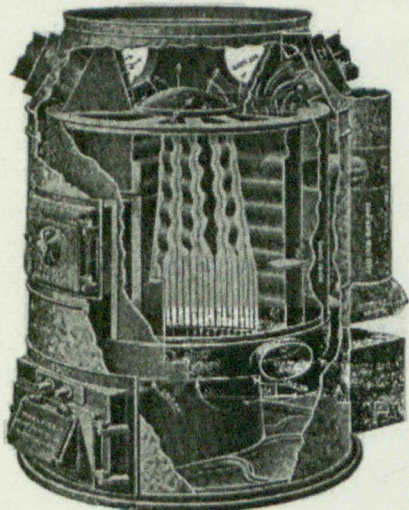
"Why not?" asked the manufacturer.

"I don't like telling you, sir."

"Come—out with it."

"Well, I designed that vase myself. It is a foreign imitation of our own work and is worth £5 at the outside."—Liverpool Post.

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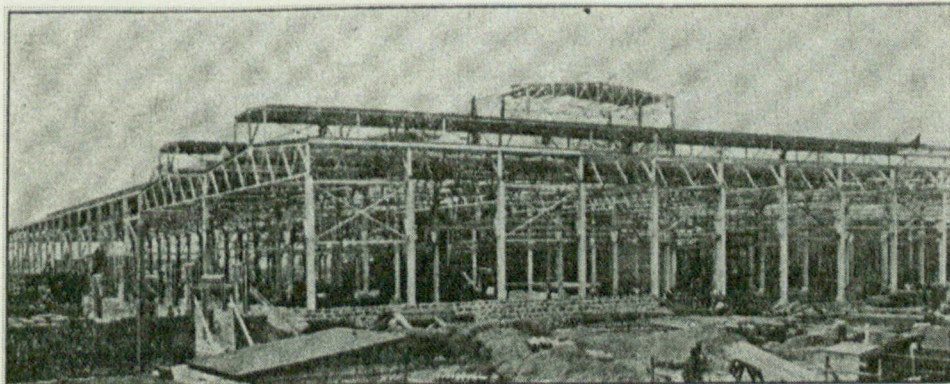
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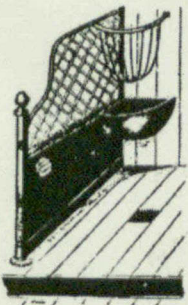
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C. H. MORTIMER PUBLISHING COMPANY
W. A. LANGTON

PUBLISHERS.
EDITOR.

OFFICES: CONFEDERATION LIFE BUILDING, TORONTO, CANADA.

VOL. XIX.—No. 227.

OCTOBER, 1906.

ILLUSTRATIONS ON SHEETS.

Emmanuel Church, Montreal.—Messrs. Saxe & Archibald, Architects, Montreal.

ADDITIONAL ILLUSTRATIONS IN ARCHITECTS' EDITION.

Houses in Victoria, B. C.

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To Designers.

The attention of designers is directed to a competition for advertisement designs by the publishers of the CANADIAN ARCHITECT AND BUILDER. Particulars regarding this competition are printed on another page of this number. There should be a large number of competitors in this new field of effort.

Experimental Disposal of Sewage.

The thing that daunts a municipal council in the question of sewage disposal is, more than anything else, the doubts that hang about the question. To spend a large sum of money in works that have something of the character of an experiment is not good business. When the thing is done there is every possibility that it will immediately become evident that it ought to have been done differently. There is, it is true, the experience of other towns to look to for evidence as to what method of work to adopt, but, quite apart from the fact that a big city cannot afford to wait until its problems are solved elsewhere, there is this peculiarity about the question that what suits one city will not necessarily suit another which is apparently the same in size and general conditions. Circumstances—the kind of manufacturing that prevails, or other conditions—so alter the character of the sewage that the method of treatment that suits well the sewage of one town may require modification before it will treat satisfactorily the sewage of another. It is a matter of experiment after all. But there is no occasion for a full size experiment. Any large business concern, with a problem of this kind ahead, would spend time and money in making preliminary experiments so as to arrive at a certainty before launching upon the large undertaking. This is what should be done by a large city like Toronto—in which

the sewage question has become acute. As the lake is both the receptacle for sewage and the source of the water supply the sewage must be rendered innocuous before it is let go even into the bay. The population of half a million that is promised to the city in the near future will spread for a long distance along the lake shore and will make a mighty flood of sewage. There does not seem to be much safety in letting it go crude into the lake or into waters confluent with the lake. So Toronto is face to face with the need for a thorough understanding of the nature of its sewage and how to denature it. Apparently this knowledge does not cost much. The city of Columbus, Ohio, had an experimental station going for a year at a total cost, for plant and operation, of \$44,000. There were employed: An engineer and two assistants; a chemist and two assistants; a bacteriologist and two assistants; three inspectors; a stenographer, and a janitor. The station was connected with a main artery of the sewage system so that the character and quantity of the effluent was under observation at all hours of every day for a year. The result is a certain knowledge of the nature of the sewage and how to treat it, reported in a volume now before us, which fortunately it is not necessary to read—only to point to as an example of what should be done.

Competition Drawings

There was some discussion recently, at a lunch of the Toronto Chapter of Architects, about the character of drawings for competitions, with special reference to the Ottawa competition. The conditions as published in the newspapers, (one wonders how, for they are not yet issued), speak of line drawings, with blacked sections and windows—in fact the clauses drawn up by the Architectural Associations, in regard

to this matter. The present writer raised his voice in favour of holding to this condition and to its intention of keeping all drawings upon an equal basis in point of draughtsmanship. The meeting however was in favor of the more recent practice of washing and shading elevations with tints of monochrome. Things have moved on since the Associations drew up their conditions, and this is perhaps an improvement. There is in our illustration sheets this month a set of competition drawings of the kind which show that the process is explanatory without being necessarily deceptive. It was noticeable, however, in the discussion which led to the decision in favour of washed drawings, that there were several arguments advanced which implied or expressed in plain terms, the doctrine that draughtsmanship *per se* should be a factor in the competition.

If the attractiveness of drawings is to weigh—as it is sure to do, if attractiveness is permitted to be an end, even a subsidiary end—design will suffer. It is the promoters of the competition that the advocates of attractive drawing have in mind, (so they said), not the assessors. Could there be a more fatal policy! It is bad enough to distract the professional arbitrator by a display of inapposite excellences. He is but human, and should have correct judgment made easy not difficult. But how about his position with the assessors? If he finds a piece of great work; something with character, fit to rank with the world's masterpieces; but not likely to look well in elevation—something that will look monstrous, like the church of Santa Sofia; or uncouth, like the Pantheon at Rome; or crazy, like the Gothic Venetian palaces; or overpowering, like the Florentine Renaissance palaces, the Ricardi or Strozzi palaces; or monotonous, like Westminster Palace—how is he to justify his choice to the promoters, who see their glory established forever in another design, a beautiful alabaster front, (which later turns out to be brick), in a style easily recognizable as the very best of architecture, spreading itself with great dignity in front of a mass of the bluest of trees. If the mass of competing architects are so intent on playing to the promoters, by devices which will not bear analysis in point of purity of motive to let all designs have an equal chance so that the best may win, why should they expect the arbitrator to be free from the double motive. They certainly make it difficult for him. No man wants to play the crank to his clients, or to assume responsibility they want to take themselves. 'If they like the drawing,' he argues, 'they will like the work, at any rate they will not blame me.' And the commonplace triumphs. It is always likely to triumph if the drawings themselves are made an object of effort with the intention (openly admitted) of helping the design to "get there" by dint of drawing, if the design is not sufficient alone.

New Government Buildings at Ottawa.

The Dominion Government proposes to erect two groups of buildings upon Major's Hill, at a cost of about \$3,000,000, and is going to invite a competition of Canadian architects for a design of the buildings and their surroundings, including the connection of these buildings with Parliament Hill by an avenue and a foot-bridge across the ravine of the canal. It is not proposed to commit the erection of the buildings to the charge of the successful competi-

tor. The intention is evidently to have the design carried out by the permanent staff. This seems reasonable enough, as the buildings are to be erected within sight of the chief architect's office; and the first prize of \$8,000 will no doubt pay the winner for the cost and labour of an effort ending on February 15th. It would pay better if the prize were \$10,000. The symmetry of a total of \$15,000 for the four prizes would be spoilt; perhaps also a larger first prize would upset a calculation fixing the amount of the prize list at one tenth of a five per cent. commission on \$3,000,000; but doubtless, before the building is done, its cost will expand sufficiently to restore this ideal balance. It is not a good thing to skimp in the offer of prizes. The first sketch is the design—that which makes the difference between a good building and a bad building—for which it is usual to pay one per cent. of the total cost. The Government is going to get possession of no less than four designs for a charge of one half per cent. on the estimated cost. It is a good enough bargain to enable the Minister of Public Works to go further with the prize winner and make use of him as consulting architect during the progress of the work on his design. He ought to inspire the detail as well as the design and see that it is all carried out according to his ideas. A fair salary while the work is in progress would secure services sufficient for this temporary association with the chief architect's office. The outlay for it would be more than repaid by time saved to the office and work done. The chief architect is immersed in executive work; he cannot attend to the details. Some special direction will be needed for work of this character, and why not the direction of the designer of the work. The work will be harder to anyone else, and less likely to be successful.

The proposed conditions of competition "recommend" that "some phase of gothic style" should be adopted, so that the new building should harmonize with the government buildings on Parliament Hill. This is an excellent recommendation and, coming from the assessors, is likely to be received with respect by competitors. As the original set of buildings, parliamentary and administrative, were built at one time and under one designer, so that they are a harmonious group; and were well done, so that their gothic character is an honourable distinction; there is reason to continue the style in all buildings to be associated with the original group. Each building added in harmony with others, in a group, both adds to the importance of the original buildings and receives additional importance from them; just as planets in conjunction seem each to be brighter than when they were solitary. An example to the contrary may be seen in the group of buildings of the University of Toronto, where a noble site for the display of buildings has been spoilt by the abandonment of the style of the original building.

The habit of order is much more far-reaching than is generally supposed. It governs all arrangements, those of time as well as of place; it influences thought as well as action, character as well as conduct. It is the constant preventer of waste in every direction. Economy demands orderly and systematic arrangements. No disorderly person can ever be truly economical.

REASON AND TRADITION.

A new book by Mr. T. G. Jackson and a new book by Mr. Reginald Blomfield are reviewed together in *The Builder*, in a long article with the above title. Mr. Jackson's volume of lectures are collected under the title of "Reason in Architecture"; Mr. Blomfield's studies are of architects and works of the traditional Renaissance; the reviewer—if the editor of *The Builder* is himself the reviewer—is usually lucid in the direction of both reason and tradition; but so far as one can judge, from an acquaintance with Mr. Blomfield's book and this review of the other, there is no great light shed yet upon the application of either reason or tradition to architecture as it is practised in our generation.

The attitude of these and other critics towards current architectural construction is that of despair; apparently because the method of construction is what it is instead of something else. The review says:—"Formerly walls were built first and girders, where required for large floors, were placed on them or built into them as they went up; now the iron standards and girders are built first and the walls built as screens round them." That states the situation. But why should we talk about it in a complaining manner? It is our problem. "If iron is to be the essential construction," Mr. Jackson is said by the review to urge, "let the architectural treatment express the fact, and not continue in a commonplace and gewgaw manner, a method of design proper to masonry construction. Among other suggestions, he asks why should not a visible iron framework be used, filled in with whatever material is desired for walling, just as half-timber work used to be used in the days when it was a real construction and not an archaeological pretence; the iron framing taking the place the oak framing once took."

And if the iron framing took the place once taken by the oak framing, what would that be but an archaeological pretence? It would be a case of tradition taking the place of reason. For wood this construction is excellent; but iron requires protection. Iron must therefore be concealed and with its concealment we initiate a new school of design in which the whole array of precedent for exhibited and adorned design is useless to us as precedent.

It is a hard case and one which apparently gets little sympathy from the learned. Yet that is what they must give us if they are to do any good. This effort to find a way of working new material in an old manner is work for a school boy not for a scholar. It is trifling. The architect is a man of his time. The conditions are fixed for him by the material in use; it is left for him only to develop beauty from them. The condition of an embedded skeleton is ours. The skeleton and its covering have both constructional reasons; sound constructional reasons we believe. At any rate there they are. They are our generation's form of construction—one form. The other, reinforced concrete, is of the same kind, in point of there being no decorative motive involved in the actual construction.

There is plenty of analogy in nature for a concealed skeleton as the basis of a beautiful structure, but the parallelism is not complete. The skeleton in nature is only a frame for a covering which is as much or more the essential structure: In our steel frame buildings the skeleton is the chief part of the structure, and the covering is for the most part only covering. The

muscles which keep the human body erect, and by their contour and modelling give it beauty, have no analogy in the irresponsible masonry of protected steel building. The walls, as a whole, have a little variety in their nature. They consist of piers and filling, and there are openings with some simple accessories. Floors have some individual life in their construction, but the necessity for completed protection is so serious that it is better to envelope every bearing member deep in protection and obliterate constructive lines. Externally also the roof is flat. We cannot pitch roofs towards the street, and shed masses of snow upon the sidewalk; nor can we pitch towards a party wall, and collect the snow in a horizontal valley.

So the reasonable construction of our building leaves us with something not far removed in appearance from a packing box. Such is our architectural problem.

We may not wriggle but must face it fairly. Any attempt to torture the construction into an unnatural visibility, in order that we may contrive a "straight forward" design, is a bad kind of deceitfulness—deceiving one's self. How it can end in anything but a plain lie, after all, it is difficult to see; there being still the necessity of concealing the iron.

There have been many lies concocted for the sake of Gothic truth; all from the best motives; on the understanding that Gothic truth is all truth, as concerns architecture. But is it? There is the other style and the other kind of truth. Gothic architecture is incomparably the more delightful and interesting style, and to exercise the intelligence that conceived its execution seems a more joyful life than elaborating Greek perfection; but enthusiasm for Gothic architecture does not prevent the suspicion that the Greek is the higher flight of intellect. It was at any rate, a condition precedent of the other. Aesthetic truth is the first truth in architecture, and survives all others. Its expression, which ran through the Gothic period, survives the decline of the special structural conditions of that style, (which perhaps our Georgian ancestors were right in thinking too barbarous for our age), and survives for application to our inarticulate, encased, structure.

Now as to the application. The review before us says that "ornament is only desirable so long as it . . . assists, or at all events does not contradict, the expression of structure." We must, for the purpose of our type of structure, take this doctrine in a large sense. We have no structural details to ornament, or to make ornamental. The enthusiastic statement, one so frequently meets with, that the reinforced concrete building is "a monolith", is as true in total result, though not in actual construction, of the building which consists of a steel frame encased. The building is unified and we must regard it as a whole.

Leaving out of account such chances as there are of an external expression of the functions of piers and wall-veil, or an internal expression of floor structure, or any other structural variation of surface that may be made to tell its story—there are several features necessary for the aesthetic expression of buildings, and as necessary for this monolith as for another. These are such things as the base, the cornice, the finish of angles (whether of openings, or of the building as a whole), protective heads to defend windows, sills to defend walls, etc.

The base is not a constructive feature. It is true

that the lower part of a wall should have extra thickness and that the upper wall should bear on the centre of the lower; but we do not build it so. The inconvenience of doing so is greater than the need of it. We make a small offset or a difference in material, merely for the purpose of expression—for aesthetic reasons. We should therefore continue to do so.

The cornice is not a constructive feature. It could shed water clear of the wall if it were allowed to do so; but cornices have usually been provided with gutters; and, unless we are mistaken, temple walls had cornices before temple roofs were pitched. The cornice is there to emphasize the top of the wall. Its purpose also is aesthetic, and as necessarily applicable to the wall of a monolith as to that of any other description of building.

In the same manner the sills:—what constructive function they have is still required, and the aesthetic emphasis of it also. There is an interesting account in Garbett of the *rationale* of the blocks one finds under the ends of Venetian Gothic sills, just under the architraves of the opening. These have no constructive function, though the sills project a good deal. Their purpose is aesthetic; to finish the line of the architraves with a handsome blob where they are crossed by the line of the sill. Any one can see the value of that. It is a good example of aesthetic truth. Garbett credits the designers of guttae under the Doric triglyph with an understanding of it, if not with its discovery. It and other truths of a like nature are as old as architecture, and why should we—how can we in fact—dispense with them now?

It does not follow however because we must have a cornice it must consist of cyma reversa, dentil, astragal, ovolo, etc., etc. Particularly if the cornice is not of stone, may we claim a rest from this monotony. It is not true, as scholars tell us, that further invention is impossible. It cannot be true. The evidence is the other way. What a difference there is between a cornice of the Orders and the cornice of the Doges' Palace, or of the Ca'Doro at Venice! Yet these latter are quite satisfactory. They are made up, it is true, of old elements—a row of tombstones and a string course. In that sense, of course, there is no invention; but nobody wants to invent new elements, any more than we want to invent a new scale. It is new times we want. And there is no reason why we should not get them.

THE DUTY ON FOREIGN PLANS.

We have received the following copy of a letter to the Registrar of the Ontario Association of Architects, enclosing the new Memorandum of the Department of Customs for the guidance of Appraisers in fixing the duty payable on important architectural drawings:

OTTAWA, June 13th, 1906.

The Secretary, the Ontario Association of Architects, Toronto, Ont.

DEAR SIR,—Referring to the representations made by your Association to the Tariff Commission at their session in Toronto in November last, relative to the Customs treatment of imported blue prints and building plans, I beg respectfully to enclose you herewith for your information a copy of memorandum of instructions which has been issued by this Department for the guidance of its officers throughout the Dominion.

Yours very truly,

(Signed) JOHN BAIN.

Secretary, Tariff Com'n.

APPRAISERS' BULLETIN NO. 152.

File No. 47, 693.

INDEX SUBJECT.
Blue Prints and
Architects Plans.

For the Guidance of Customs Officers,
Commissioner of Customs.
Department of Customs,
Ottawa, 7th June, 1909.

CURRENT VALUES FOR DUTY-(CLASS B).

ENTRY OF ARCHITECTS' PLANS AND BLUE PRINTS.

Memo. No. 7278 respecting Architects' Plans is cancelled and the following rules are submitted for guidance in the entry and appraisement of such plans:—

1. The rate of duty on Drawings, Blue Prints and Building Plans is 20 per cent ad valorem under Tariff item 130. Specifications, however, are free as "manuscript," when written or typewritten.

2. Special Plans of Buildings, or blue prints as substitutes therefor, are to be valued for duty at the charge usually made by the Architects for the drawings, without the specifications. This charge may be fixed for duty purposes at one per cent. of the estimated cost of the building to be erected.

Detailed drawings, or blue prints as substitutes therefor, if imported separately, to be appraised at a valuation of one per cent. of the estimated cost of such detail.

3. When the building is estimated to cost less than \$10,000, the plans or blue prints thereof may be appraised at the usual charges for furnishing same, according to the special circumstances in each case irrespective of the preceding rule (No. 2).

4. Blue prints or copies of Building Plans may be admitted at the cost of production when duty has been once paid on the original or a copy thereof in Canada under the foregoing rules, upon proof of such payment to the satisfaction of the Collector at the Port of entry.

5. Blue prints of cars and machinery, being copies of standard designs, may be valued for duty at 75 cents per pound.

COMPETITIVE PLANS FOR EXHIBITION.

6. Competitive Plans brought in for inspection may be entered as for warehouse and inspected under Customs supervision, subject to payment of duty within 60 days unless then rejected and ex-warehoused for exportation.

JOHN McDUGALD,
Commissioner of Customs.

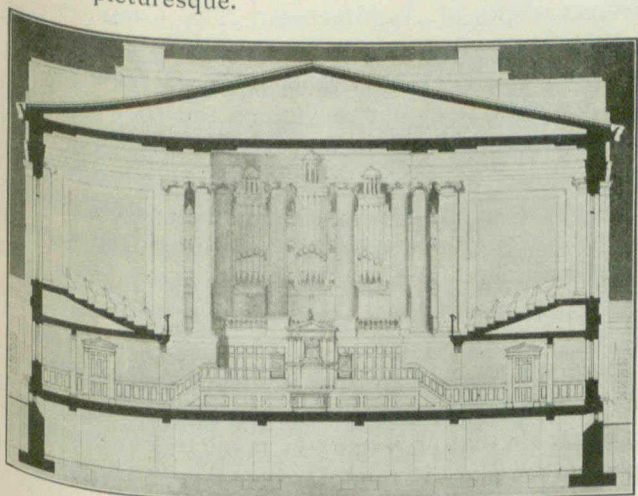
Although building plans by foreign architects are dutiable, the collection of the duty has been based upon an estimation of the value of plans that reminds one of the appraisement of an oil painting as so much for the paint and so much for "the man's time a layin' of it on". The customs officers have shared the general misconception of the nature of an architect's drawings, and rated the value of incoming blue prints by the time they supposed to have been necessary to make the original tracing—say five to ten 50 cent hours. The Associations of Architects, both of Quebec and Ontario, have more than once objected to this estimate of the value of architectural drawings, and have stated the doctrine, which it seems so impossible for the man in the street or the man on the bench to understand—that architectural drawings are not an end, but an instrument towards an end, which is service. In this case it is clear that the building-owner's importation is the service of the foreign architect. The drawings are the means by which he executes the service for which he was employed, viz. the erection of a building; and their passage through the Custom House marks the occasion of the importation. Whatever the architect charges the client is the value of the importation, and the customs rate should be assessed on that. These charges, which range from one per cent. for preliminary to five, seven and ten for complete services, are not likely to trouble the Custom House in the preliminary stage, when the tracings are small enough to travel in a letter. It is working drawings that come into the country in such bulk that their nature has to be acknowledged. The rating of one per cent. as the "charge usually made by the architects for the drawings" is therefore still below the mark as regards the value of the services represented by the drawings. It is quite unnecessary to present this valuation in the form of an assertion that it is "the charge usually made by the architects for the drawings", and there is no reason to believe that the Department of Customs does not perfectly well know that the statement is untrue. The valuation of an architect's services has been explained to the Department more than once, fully accompanied by printed documents.

OUR ILLUSTRATIONS.

EMMANUEL CHURCH, MONTREAL. MESSRS. SAXE AND ARCHIBALD, ARCHITECTS, MONTREAL.

To one who has studied the churches of Wren and his followers, this type of plan seems to embody the idea of a Protestant church. It is eminently fitted for preaching, without losing the form which we are accustomed, for good reasons, to look upon as peculiarly suited to common worship.

The plan before us seems to be worked out perfectly in every respect. The conditions point to a symmetrical arrangement of the rear. It would be equally good, in the style, if the conditions forbade symmetry, and required that most beautiful kind of composition the classical picturesque.



TRANSVERSE SECTION.

It is the low-pitched roof that generates the classical feeling. It suits our methods of construction, and harmonizes with our general manner of building. It gets over the objection to Gothic, as usually practised, that it is out of keeping with our time and the buildings in which we live our daily life. If there is any influence of architecture upon the mind, it cannot be a good thing to have religion associated with surroundings that are so distinctly not of our own century.

Gothic architecture, (real gothic), is lovely, and the Orders are a bore. If we must abandon the one we do not want to fall entirely into the clutches of the other. It is interesting to note, in the side elevations before us, slender pilaster shafts at the windows that are more than half Christian. If their sire was a pilaster their dam was certainly a vaulting shaft. Their proportions are unknown to Vignola, but they are as classical as anything measured by diameters; because the face of the pilaster is the same as the face of the wall, and the ornament, (cap and base), is an excrescence beyond this line. The ornament is æsthetic not constructional. That is why it is classical in feeling, and that is why our work tends to be classical. The question has nothing to do with the Orders.

The building is being erected on the east side of Drummond street within 200 feet of Sherbrooke street. The materials of construction are grey pressed brick and Indiana limestone. The interior is finished in hardwood and the windows of the church proper will be leaded. The entrance vestibules will have marble floors and the walls, to a height of nine feet, will be lined with marble. Above this will be an ornamental plaster ceiling. The ceiling of the Auditorium will have flat panels and intersecting plaster beams, ornamented on the soffit. The building is heated with a

combination system of hot water and hot air. The cost, including all furnishings, is to be \$100,000.

HOUSES IN VICTORIA, B. C.; THE WORK OF MR. F. M. RATTENBURY AND MR. S. MACLURE.

The lovely setting of these four houses gives them, at first sight, a similarity in appearance that disappears upon closer inspection. Mr. Maclure's cottage classes with American work. It is an architectural composition which can be stated—large and small mass similar to one another, linked by the dormer which is similar to both. The details also have an established form which to some extent conditions the design. All this formality in so small a house is difficult to keep within the limits of refinement. The success in the present case will be seen to be due to simplicity. Besides the dormer, there is but one feature, the colonnade; and that is so continuous as to be an integral part of the mass.

It is not so easy to put the composition of Mr. Rattenbury's houses in a formula. They exemplify very well the idea of the natural growth of elevation from plan and give pleasure rather after the manner of natural objects, without inviting to analysis or criticism. Neither systematic features nor ornamental details are likely to develop much under this elastic method of work. Details in simple work, will be purely constructive, and unnoticeable. It is the handling of material in the mass that gets particular attention,—as in these interesting rubble walls. The result is a harmony with nature that makes this type of house, much more than the formal design, a part of the landscape. If the reader will take a magnifying glass, so that he may place his eyes close to the cut, at the point of sight for the perspective, he will find in the left hand corner of No. I, along the lower storey of No. III, and at the entrance of No. IV, a harmony of house and garden that is as charming as one could wish to have it.

BOOKS.

BUILDING CONSTRUCTION AND DRAWING, BY CHARLES F. MITCHELL, ELEMENTARY COURSE. PRICE 3S. BUILDING CONSTRUCTION, BY CHARLES F. MITCHELL, ADVANCED AND HONOURS COURSE. PRICE 5S 6D. NEW EDITIONS. PUBLISHED BY B. T. BATSFORD, 94 HIGH HOLBORN, LONDON, W. C. The need for new editions of these works occurring at a time of great progress in the science of construction and in the direction of the standardization of materials, the original matter is rewritten to a great extent and largely extended, and there is a new chapter on the subject of reinforced concrete construction. The author has modernized and simplified the calculations, and included specifications of the Engineering Standards Committee relating to portland cement and structural steel work and British standard sections.

Some time ago, says *Indian Engineering*, the consulting architect to the government of India was ordered to be supplied with photographs of all new buildings, with a note thereon of the date and hour that they were taken, in order to enable him to judge more accurately as to the effect of the sun on the buildings. It has now been decided that the usefulness of these photos would be further increased with the supply of information as to the plinth area rate, and details of the materials used in construction.

SEVENTH INTERNATIONAL CONGRESS OF ARCHITECTS.

REPORT OF MR. ALCIDE CHAUSSE, OFFICIAL DELEGATE OF THE CORPORATION OF THE CITY OF MONTREAL, OF THE PROVINCE OF QUEBEC, ASSOCIATION OF ARCHITECTS, AND OF THE MONTREAL BUILDERS' EXCHANGE. STEWARD-INTERPRETER, MEMBER OF THE BOARD OF THE PERMANENT COMMITTEE, ETC.

I beg leave to report that I have attended the International Congress of Architects, held in London, from July 16th to 21st, to which you had delegated me as official representative of the Corporation of the City of Montreal.

At the opening session which was held in Guild Hall under the immediate patronage of H. R. H. King Edward VII, and the honorary chairmanship of H. R. H. the Princess Louise and H. H. the Duke of Argyll, the Honorable Lord Mayor of London, Sir Walter Vaughn, Bart., the Sheriffs of London being present. Addresses of welcome were read by the President of the Royal Institute of British Architects to the members of the Congress which had been delegated by different nations.

These official delegates in their replies to the president's address offered their thanks for the cordial reception which was given them.

The same evening a brilliant reception was given in the room of the Royal Academy of Fine Arts, where we had the pleasure of viewing the finest collection of paintings by the greatest artists of the Empire.

On Tuesday (the 17th) after having taken part in the proceedings of the first meeting of the Congress, we attended a magnificent reception given in our honor by the Honorable Lord Mayor and Lady Mayor of London, in the Mansion House, where renowned lyric artists and a fine orchestra contributed to the magnificence of the reception.

The meetings of the Congress were held simultaneously at the rooms of the Royal Institute of British Architects and at the Grafton Galleries. At this last place I had the honor of being appointed Honorary Secretary of one of the most important meetings.

The different questions discussed by the members of the Congress were of the utmost importance. The architectural copyright and ownership of drawings in all countries was the principal question. The resolution adopted, after much reading of paper and discussion by the members of the Congress, proved to be the main subject of the Congress; and the matter will be laid before the different governments so that proper legislation be enacted to protect the architects in every country.

The resolutions adopted by the Congress were the following:

SUBJECT I.—*"The Execution of Important Government and Municipal Architectural Work by Salaried Officials."* Resolution adopted: That in the future and in the interest of administrative bodies and the public, and in the higher interests of the art of architecture, public bodies, (whether Governmental, Provincial or Municipal), should entrust important architectural works only to qualified professional architects, either by competition or otherwise.

SUBJECT II.—*"Architectural copyright and the ownership of Drawings."* It was resolved: That this Congress is of opinion that the architect is employed to produce a building, and that all drawings and papers

prepared by him to that end are undoubtedly his property.

It was further resolved: That this seventh International Congress of Architects assembled at London in 1906, recalling on the one hand the resolutions passed during the past twenty-eight years by the International Congress of Architects and the International Congress of Artistic Copyright, as well as by the International Congress of the Association Littéraire et Artistique Internationale, notably at Madrid in 1904; recalling on the other hand, the "Protocole de Cloture" of the Diplomatic Conference held at Paris in 1896, which upholds the principle of complete protection of works of Architecture; recalling, finally, the Spanish law of 1876 and the French law of 1902, both which expressly protect works of Architecture. The Congress is of opinion: 1. That architectural designs comprise design of facades, exterior and interior, together with the plans, sections and elevations and they constitute the first manifestation of the architect's idea and the work of architecture. 2. That the building is but a reproduction, on the site, of the architectural drawings; and this Congress renews the resolution that works of Architecture be protected in all legislative enactments and in all international conventions equally with every kind of artistic work.

SUBJECT III.—*"Steel and Reinforced Concrete Construction."* Resolved: That this Congress considers it desirable that an inquiry be made as to what failures have taken place in reinforced concrete buildings, and as to the cause of the failures, and that this Congress is of opinion that, where reinforced concrete is intended to be fire resisting, the greatest possible care should be taken as to the nature of the aggregate and its size, as also to the protection of the steel.

SUBJECT IV.—*"A statutory qualification for Architect."* Canada was found to be the only country, where, in the Province of Quebec, a Diploma of Architecture is necessary in order to practice as an Architect. It was resolved; that it is desirable, in the interests of the public of all nations, and in the interests of architecture, that practitioners should have a statutory qualification.

SUBJECT V.—*"The Education of the Public in Architecture"*. This subject was much discussed but no resolution was proposed.

SUBJECT VII.—*"How far should the Architect receive the Theoretical and Practical Training of the Craftsman?"* Resolved: That this Congress considering that the Architect, the master of the works, having under his immediate direction workmen and artisans of the most varied bodies of the State, and utilising the services of the most varied industries, has no means of acquiring in each of these trades and in each of these industries the complete knowledge of a specialist, expresses the desire that the opportunity should be given to the architectural student to acquire in a general but exact manner the technical part of the various trades and industries of the building trade without claiming to practice these trades and industries. It also expresses the wish that between these schools international and continuous relations may be established.

SUBJECT VII.—*"This Subject 'The planning and laying out of street and open spaces in cities'"* was much discussed but no resolution was proposed.

SUBJECT.—VIII.—*"To what extent and in what sense*

should the Architect have control over other Artists or Craftsman in the completion of National and Public Buildings? Resolution adopted:—That the Architect in the construction of a building should be given absolute power over the co-operating craftsman, but in a special manner over the co-operating artists.

SUBJECT IX.—“*The responsibilities of a Government in the Conservation of National Monuments.*” Resolved:—That in all countries the Government shall be authorized to expropriate a monument possessing historical, artistic or archaeological interest if it is not kept in a due state of preservation by its owner.

SUBJECT X.—“*The Conduct of International Architectural competition.*” Resolution adopted: That the Congress, taking into consideration the reports submitted, recommends them to the examination of the Permanent Committee of the Congress in order that they may submit a special report to the next Congress.

It was further decided to submit the following recommendations to the Permanent Committee: 1.—That the Permanent Committee shall nominate a special commission of seven members who shall study the question of International public competition for the next Congress. 2.—The programme should make clear that the jury shall not and should not have directly or indirectly any material interest in the execution of works put out to competition.

Between session of the Congress excursions in and around London had been organized by the President and the Secretary of the Institute of British Architects, the first being to Hatfield House, 17½ miles from London. The owner, Lord Salisbury, gave us permission to visit every part of this historical residence, which was built between 1607 and 1611. The next place visited was Hampton Court Palace, built by Cardinal Wolsey, who presented it to Henry VIII in 1526.

The following places were also visited by the members of the Congress:—Westminster Abbey; Windsor Castle, the residence of the monarchs of England; St. Paul's Cathedral, built in 1675-1697; The Temple, a group of buildings on Fleet street used as law offices; Church of St. Bartholomew the Great at West Smithfield; the Institute of Chartered Accountants, off Moorgate street, a modern building of a very imposing design; the Kensington Palace, where Queen Victoria was born in 1819 and where she held her first Council in 1837; Dorchester House, erected 1853-1854; the Tower of London, the most celebrated fortress of Great Britain; the universities of Oxford and Cambridge; the Victoria and Albert museum; the museum of Natural History; Greenwich Hospital; the Houses of Parliament; the House and Museum of Sir John Soane; and the Tower Bridge.

Arrangements had also been made to visit the famous Doulton's Potteries, Lambeth, and the yards and shops of the great builders Messrs. Holloways, near Victoria Bridge.

On the last day of the Congress a last meeting of the Permanent Committee was held in the rooms of the Royal Institute. I had the honor to be appointed a member of the Board of this Permanent Committee, and M. J. S. Archibald, of Montreal, was appointed a member of the Committee. It was decided that the Eighth International Congress of Architects was to be held in May 1908 in Vienna, (Austria), to coincide with

the sixtieth anniversary of the reign of Emperor Francis Joseph, and that some of the meetings of the Congress were to be held in Budapest, (Hungary).

A great number of social functions were held during the Congress week, and I had the honor and pleasure to accept invitations to the following: Reception by the President of the Royal Institute of Royal Architects, at the Grafton Galleries; Soirés at Burlington House, offered by the President and Council of the Royal Academy of Arts; Conversazione at the Mansion House, by kind invitation of the Right Hon. Mayor of London; reception at the Lyceum Club; dinner at Mr. Andrew T. Taylor's residence (a former Montrealer); garden party at Royal Botanic's Gardens, Regents Park, by kind invitation of the President and Council of the Royal Institute of British Architects; a banquet given by the Society of Architects at the Royal Hotel; an evening at the Art Workers' Guild at Clifford Inn Hall and the Farewell Banquet of the members of the Congress in the magnificent Banquet Hall of the Hotel Cecil.

Respectfully submitted,

ALCIDE CHAUSSE,

President of P. Q. A. A.; Architect and Inspector of Buildings.

MONTREAL NOTES.

The Outlook on Mount Royal, though not so far advanced as to permit one to judge perfectly of the effect, has at least got so far that it will in all probability be completed before winter sets in. It is satisfactory to think that this matter, which was taken up and let drop in a vacillating way during so many years, was at last brought to a definite result through the action of the Province of Quebec Association of Architects, who registered their appeal with the city authorities to have such matters put in the hands of men of professional training and experience. This simple proceeding on the part of the association was taken in such good part and acted on so readily by the authorities that one can only hope that the Association will continue to keep its eye on all similar affairs in future, and will be supported therein by all its members and by the public at large. Attention may be called to another scheme which has for a long time been in the same much promised and still unperformed state as once the Outlook was. This is the question of the bridge which it is proposed to erect over the wharves, to enable the passengers to reach the ferry boats without having to cross the railway lines that border the river. This is, no doubt, for more a matter of utility than of appearance only, and differs widely from the case of the outlook; but the question is one of greater importance, and worthy of being treated in a broader manner than seems to be appreciated at present by the city authorities.

In the first place the question is one of safety to life and limb for, although no serious accident may have occurred, the danger is undeniable where thousands of people are daily crossing so many railway lines along a length which has at present no defined limits. In the second place, it is safe to say that all summer long thousands of passengers every day arriving and leaving on ferries and on river and ocean steamers are put to the greatest personal inconvenience, dodging trains and lines of heavy teams or waiting for them to pass,

THE CANADIAN ARCHITECT AND BUILDER

and finding a path through a wilderness of merchandise of every nature under the land. The simple expedient of a bridge would make a vast improvement to all this; but surely even more can be readily done. An entirely better passenger accommodation on the wharves themselves could be provided in connection with such a bridge, and the stream of passenger traffic could thus be kept more distinct from the freighting, though naturally they cannot be entirely detached. The high level of the streets immediately in rear of Victoria Pier affords a natural opportunity for effecting this separation by means of a bridge. The landing stage at Liverpool, England, gives an example of how a great city can manage to handle its passengers entirely independent of its goods. We are not situated as Liverpool is, but there is much that we can do in this line. Then again not only is the way across the wharfage perilous and disagreeable to pedestrians or to cabs but, once arrived in Commissioner Street, the access to the town is still difficult. "Cabby" seems to prefer St. Francois Xavier Street, apparently because that is the quickest way out of the warehouse district into the professional one. This street is exceedingly narrow and steep and by no means a convenient or impressive entrance to the city. For pedestrians using the ferries, the car line running along the river front is for some reason not one of those on which the service is frequent enough to be convenient. No doubt the passengers arrive largely in great numbers at times which it is impossible, in some cases at least, to foresee precisely. Streams of passengers are always to be seen making their way between Bonsecours Market and the church, and preferring to go as far as Craig Street before taking car. The main reason for this is that the Commissioner Street car route is not one that serves the city conveniently.

All this brings us to the point that the new bridge should be an important one, and should moreover be combined with a scheme of bringing better car service and easier cab access to the succour not only of the much "bechildered" pic-nickers to St. Helen's Island but also of the whole bewildered race of tourists and immigrants. The scheme that is at present in contemplation is apparently nothing more than the erection of a light iron foot bridge over the railway lines, and so far good; let us have that and quickly; but we submit that there is a larger scheme which ought to supersede that within a few years, and it is to be hoped that the P.Q.A.A. Committee on City Improvements will take cognisance of the need, so that we may see the matter taken up in a way that will do the city credit from an architectural point of view. Suggestions have been made on the part of the shipping interests of the port, that engineering specialists should be called on to draw up a report on the best means of improving the shipping accommodation and conveniences. This is, no doubt, for the benefit of trade, but passengers also are making more and more demands on the river. Both above and below the city the banks are becoming more and more occupied with village and country houses. The ferries, therefore, call for increased conveniences too. So far passengers have received a somewhat rough handling, and, unless the city looks after their interests, they stand the same chance of being made to take a place quite secondary to mere "goods."

An evening paper has been making a stir with regard to the amount of builder's material which is at present obstructing sidewalks and streets in various parts of the city. Strictures on this matter are very much in order there is no doubt the man in the street fares badly. In commenting on the matter, however, it is customary to assume that this disposal of material is a gratuitous piece of insolence on the part of the builder, who is pictured as a ruffian who spends his time devising inconveniences to annoy the public. The system of paying for so much of the street to dump material on is, if not expressly provided for in the city by-laws, at least in practice acted up to systematically by builders and city authorities alike. Let the authorities improve their by-law and see that they are enforced and no doubt the building will submit to the improved arrangement, even if he has to adjust his prices accordingly.

We are threatened with another big hotel. We are treated to so many schemes for big hotels that we begin to become indifferent to the glowing word pictures of them which appear in our newspapers. They are flaunted before us with every particular of luxury and of cost. They are designed regardless of expense, and with every aid to living that can be suggested by a mind unable to conceive of any life beyond such as may be lived in New York. They fix upon a local habitation and a name, as often as not they vanish into thin air, being of such stuff as dreams are made of. This latest vision is described as occupying the side of Dominion Square, extending from the Y. M. C. A. building, we know not how far in the direction of St. Catherine Street. The cost is to be \$1,000,000 "or so." We could really be doing with one or two more nice hotels of stone and lime as, during the past summer, accommodation was short and people had to sleep in railway cars in the stations, anything tangible being better than a vision in these cases.

The expropriation of the Amherst Farm has added a new park to the city. The actual expropriation includes the whole district bounded by the C. P. R. tracks, Papineau avenue, Mount Royal avenue and St. Davis street. Within this district is to be formed a public park to be known as the Cremazie Park. The total cost is \$16,837.20, of which half is paid by the city and half by the proprietors in the immediate neighborhood.

The McGill University Students Union building is now completed, and was opened for the use of students on the first of October.

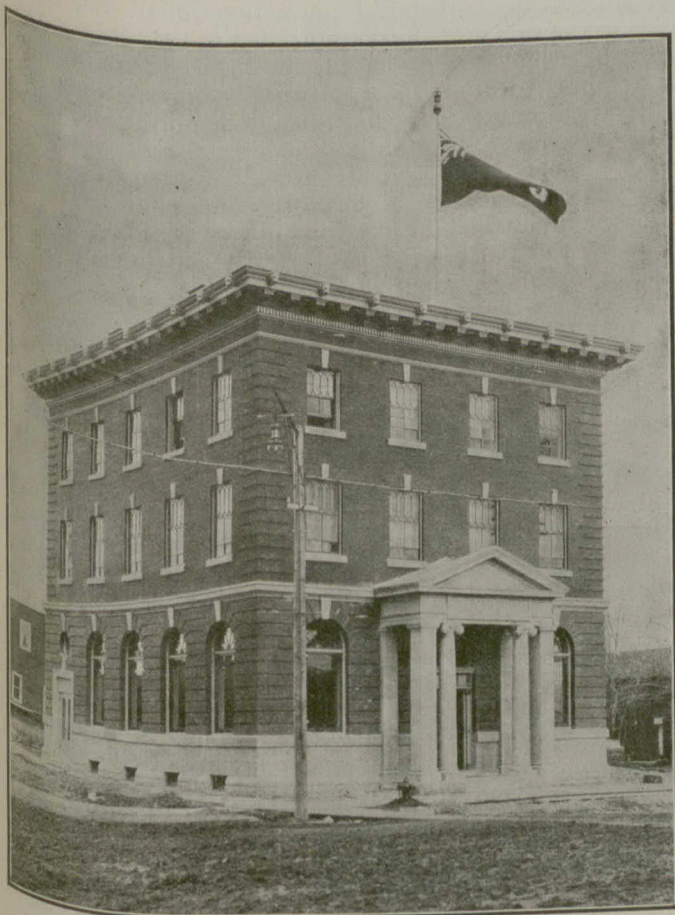
It is announced that the Morgan Cement Works at Longue Pointe have become the property of a strong syndicate which has the intention of putting plant down to turn out 600,000 barrels per year, with a view also of eventually increasing the output to double that figure.

We are promised a new jail, at the cost of about \$1,000,000, to be built on the Back river and to be commenced next spring. This it is said, is to be arranged on the most modern principles and adequate to meet the wants of a quarter of a century hence. One million dollars plus the cost of our police system is quite a fairish sum to hand over to keep ourselves from being robbed.

The assessed valuation of the city for the current year is placed at \$202,314,805, or an increase of twenty millions over last year. More than fifty million dollars worth is included in exemptions from taxation.

THE APPRENTICESHIP PROBLEM IN THE UNITED STATES.

Under the beneficent auspices of trade-unionism the apprentice, at the present ratio of reduction, is ultimately to become an unknown quantity. History is not likely to repeat itself if the unionists have the ordering of events. In England, when manufacturing industries were struggling to maintain a foothold in that country, the apprentice was an important person. On him rested the hope of perpetuity of the craft to which he was bound and to that practice which lasted through two or three centuries, England owes her ascendancy as a manufacturing nation. For three-quarters of a century of the Republic of the United States, apprenticeship was an institution honored and encouraged by our infant industries and from among those youths who served to learn the several arts and trades have sprung the inventors and master minds which have made mechanical superiority possible. In those times there was no drastic limitation of numbers, none of the antagonistic feeling evinced toward the



BANK OF MONTREAL BUILDING, EDMONTON, ALTA.

neophyte by the journeymen as now; but pains were taken to teach the beginner all the intricacies of the business that he might become an accomplished workman and a worthy successor to those who, in the course of time, would lay down their tools forever.

This was before selfishness and avarice took possession of the journeyman and strangled in him the more generous and better impulses of his nature. Today the average workman sees in the apprentice a competitor who will one day deprive him of work and take the bread out of his mouth. Having arrogated to himself the control of supply and demand, in the labor market, he would create a scarcity of skilled workmen by excluding apprentices from his particular trade or calling, regardless of the consequences as the years go by when skilled labor, by his process, would become extinct. By a system of selfish reasoning he argues the less skilled labor, the greater the demand and the higher wage. Hence, the rigid regulations and the higher wage. Without discussing the falsity and injustice of such an inference, the problem to the employer and to the community at

large is of serious import. To maintain a balance in the ranks of skilled labor in its relation to employing capital, there must be a supply of new material to take the place of that which ceases to exist. What is the remedial method to be employed? Since the union will not admit apprentices in such numbers as will fill the inevitable void, the supply must come from some other source. Industrial economists are turning their consideration to the trades training school as a solution of the situation. While such a school as that suggested is experimental, it will serve to point out the need of such an institution in every State of the Union and may lead to the establishment of a school where a course of practical instruction will be taught which will turn out workmen better skilled and more intelligent than the average mechanic of today.

A majority of boys leave the public schools at or about the age of sixteen. They possibly have passed through the grammar course and have a fair knowledge of the branches taught up to that grade. Their minds are in a receptive condition and would be quick to acquire technical knowledge under proper instruction. Two questions arise in this connection—First, is the State justified in maintaining such a school and, second, is it practicable? The city and State already supply the public schools and the city furnishes a collegiate course for those who expect to follow a profession or a business career. If professional, why not mechanical? The one is quite as important to the general welfare as the other. The practicability of a mechanical training school as distinguished from the polytechnic, presents difficulties more serious. To teach masonry, brick-laying, carpentry, structural iron work and the many other branches of building requires a more than theoretical training, yet this knowledge could be imparted to a limited extent. There are, however, many branches which could be successfully taught and their requirement would provide thousands of young men with a means of livelihood.

The subject of trade training as a feature of public school curriculum is being carefully considered in industrial circles. The Master Builders of Baltimore, at their recent quarterly meeting, approved the idea, while Mr. S. H. Calkins, of this city, representing the Tile Dealers and Tile Manufacturers of the United States has, in the name of the association, offered the tiles necessary for the instruction of a class in tile laying, and if need be to pay the salary of an instructor. Doubtless were a school of the character indicated opened in this city under the auspices of the School Board, other trades would become contributors to its support and development, and an institution of this kind would, properly conducted, soon solve, locally, at least, the problems of apprenticeship and the supply of skilled labor.—*Architects and Builders' Journal.*

EDISON ON CONCRETE BUILDING.

According to an interview in the New York Press, Mr. T. A. Edison is turning his attention to concrete building. We are told: "Whole houses moulded in a single casting out of solid concrete which will provide cosy homes for working men at a cost of from one-sixth to one-fourth of what the average mechanic pays to-day is a goal which Thomas A. Edison is striving to reach by a plan he is confident will work out successfully."

Edison's idea is an elaboration of the plan of reinforced concrete construction that now is being used with great success in putting up large fireproof factory and office buildings. All of the new buildings that are going up in the Edison plant in Orange are of this style of construction. The foundations, walls, floors and ceilings, and even the window-frames, are of solid concrete, except that thin steel bars are used to reinforce the concrete joists while they are hardening.

Temporary wooden frames are built, into which liquid concrete is pumped. When the concrete dries and hardens, the wooden frames are removed, leaving solid concrete, which, it is claimed, will last for centur-

ies, gaining strength with the flight of time. Carrying this process several steps further, Edison has evolved his plan for turning out whole homes at one casting. By the present methods only a small part of a building is moulded at one time.

Describing in detail the plan he has devised, Edison said:

"I purpose, after obtaining the designs, to have metallic moulds made to correspond with them. The mould for each house will be made in detachable parts. There will be separate plates, and small moulds that can be screwed together easily to form one mould for an entire house. That a fine finish may be obtained, the inside surfaces of the parts will be nickel-plated. After a mould for a whole house is set up, it will be a very simple matter to pump concrete into every nook and cranny. The pumping process will not require more than a few hours. After four days, that at most will be necessary for the hardening of the concrete, the parts of the mould will be unscrewed and taken off, and a solid concrete house will remain."

Edison says the plan will be carried out in such detail that dormer windows, chimneys, spouts, and ornamental designs will be moulded with the whole, and that inside cupboards, fireplaces, stairways with ornamental balusters, mantelpieces and even bathtubs will



BANK OF NOVA SCOTIA BUILDING AT CALGARY.

be formed all in the one cast which the house proper will be made. In fact, the house will be so complete that when the mould is removed the installation of electric wires, window-sashes, &c., will be all that will be necessary before the furnishers and carpet layers may go to work. Even the plumbing and gas piping will be of concrete moulded in the original cast.

As a practical demonstration of what may be accomplished by the process, Edison has built a complete chicken house in his own backyard moulded in one solid piece out of concrete. It has many compartments and doorways and decorated cornices of intricate design. Of it Edison said: "Members of my family laughed at me when I told them I was going to make a chicken coop out of concrete, but they are not laughing at me now."

The original cost of each mould, with all its component parts, the inventor estimates at \$25,000. From each mould, however, he says, an unlimited number of houses may be produced. Because the parts of a mould are to be detachable, it will be portable, and one mould may be sent with little difficulty from town to town to be used in this unique process of construction. About ninety houses could be built in one year by the use of a single mould.

The cost of a house of the kind proposed will depend principally on the quality of rock found in the

vicinity of the proposed site. Edison recently has perfected a method of extracting cement in profitable quantities from almost any sort of rock, much of which could not be utilised profitably in this way before. Naturally the cost of homes will be greater where the quality of rock is inferior. The inventor says, nevertheless, that under ordinary circumstances the concrete villas will not cost more than from \$500 to \$600 apiece.

An "error" that many builders are making in putting up concrete buildings, according to Edison, is in the matter of using heavy steel beams to sustain the concrete.

"These fellows," he said, "are so prone to stick to the old cut-and-dried ideas that they cannot seem to realize that the heavy joists are not necessary in reinforced concrete construction. Thin iron bars are all that is needed. The only reason they are required—and even this only applies to big buildings—is because of the peculiar action of concrete while it is hardening. A fresh laid concrete floor in the process of drying compresses on top, and for that reason becomes all the stronger for age. On the underside, however, the tendency is to sag before it actually hardens. For that reason the thin steel bars are needed to hold it in place until it is thoroughly dried out. If these bars could be removed afterwards, and the space they occupy be filled with concrete, the floor would be all the stronger with no steel to sustain it at all. In the moulding of working men's cottages, however, it will not be necessary to use steel bars, as they are required only in the construction of buildings whose floors are designed to bear the weight of heavy machinery or superstructure."

—*The Building News.*

THEY MANAGE THESE THINGS BETTER AT OTTAWA.

We copy the following editorial note from the *Engineering News*.—

Among the things that engineers have good reason to be thankful for is their relative freedom, as compared with architects, from the vexed problem of competitions. This subject has again been brought prominently before architects by an announcement of a competition designed to secure plans for a \$4,000,000 educational building at Albany, N. Y. The main features of this competition are set forth in a typewritten statement sent out from Albany, as follows:

Plans for the new Educational Building to be built by the State in Albany, N. Y., at a cost of \$4,000,000, will be selected in the following manner: Two competitions among architects will be had. In the first competition, all architects will be invited to compete, and they will be given about three months' time to make their plans. Out of these plans presented to the board of award (composed of trustees of public buildings, of which Governor Frank W. Higgins is chairman; Dr. Andrew W. Draper, Commissioner of Education, and Dr. Albert Vander Veer, of the Regents), the ten best plans will be selected by the board. The board of award will call the authors of the ten best plans together to advice with them in regard to a second competition between the ten. In the second competition, the board will select the first, second and third most meritorious plans submitted and these three sets of designs will become the property of the state. The architects of the three, whose plans are considered best, will be employed as architect of the building, provided he is a man of assured responsibility.

In the matter of awards, it is expected to pay each of the ten architects successful in the first competition \$500, and an additional \$1,000 if he goes into the second competition in good faith. Besides these awards, there will be paid an additional \$1,000 to the architect submitting the third best set of plans in the second competition, an additional \$2,000 to the architect submitting the second best set of plans, and the income from the construction to the successful architect whose plans shall be adopted. The compensation

to the successful architect is 5% of the amount of the contracts which figure in the erection of the new building. Prospectuses for the architectural competition will be prepared and ready for distribution shortly.

As is usual in competitions of this general character, a considerable number of men are asked to give their services absolutely without compensation, and only inadequate compensation is offered for such as are paid anything. The object of the competition is to provide the state with a large variety of preliminary plans from which it can select. In the first of the proposed two competitions, the insignificant sum of \$500 will be paid to each of the architects submitting one of "the ten best plans," and \$1,000 additional for each or such of the ten as enter the second competition "in good faith." In the final competition, one of the ten will be paid \$1,000 and another \$2,000; the first best will receive the appointment and will be compensated for his work at the rate of 5% on the contract prices, in addition to the \$1,500 which he would have previously received. Leaving out of account the 5% commission

however, that the conditions will be materially improved for the "ten best," as a result of the conference which it is proposed to hold between them and the board of award, when these ten men are selected.

GERMAN LABOR BUREAUS

In Germany the proper distribution of labor for the unemployed seems to have been secured with great success. In one year the municipal labor registries of Prussia, Wurtemberg, Baden and Bavaria filled no less than 413,514 situations. Nearly half a million persons applied for work at their various offices, and to meet this huge demand there were received from different employers, industrial and domestic, 567,176 applications for workers. The central bureau in Berlin alone, in 1904, filled 67,017 situations, the bureau of Munich filled 46,822, and that of Cologne 27,357. The work seekers belonged both to the skilled and unskilled, in about equal proportions. The confidence of both wage-earners and employers has been gained by the



A NOVEL HOUSE-MOVING.

A large residence, about 35 x 50 feet, two stories high, moved on two large lighters a distance of two miles at Dalhousie, N. B., last fall. Owned by W. S. Montgomery, President and Manager of the Restigouche Woodworking Company. The lighters were towed by a gasoline launch and the moving by water was completely successful, though novel.

as applying to the work done by the fortunate architect subsequent to his appointment, the State of New York will at most have paid \$18,000 for the benefit of what its representatives hope will be a large number of preliminary plans for a \$4,000,000 building. If it followed out the accepted practice among the best architects, of paying 1½% for preliminary sketches, it would cost the state \$60,000 for one man's preliminary plans alone.

Having discussed briefly the compensation feature of the competition, attention may be turned to what is in some respect a more serious aspect of the case, namely, the fact that all this un-remunerated and poorly paid work asked for by the great State of New York is to be judged, so far as the announcement indicates, by three laymen, some if not all of whom owe their offices to the chances of politics. Such conditions, we should suppose, would keep most or all of the best architects out of the competition. It may be,

establishment of non-party labor bureaus, which, though municipally supported either wholly or partly, place the management in the hands of an impartial committee, chosen in equal proportions from the ranks of employer and employed. Most of the German bureaus are absolutely free both to employer and employed, but Berlin charges workmen 2½d. for the purposes of registration. The present success of these labor bureaus has been achieved largely because both state and municipal authorities have adopted a bold, far-seeing and generous policy, and after all the expense is trifling, even on the magnificent scale of the work as carried on in Berlin. The 67,000 situations filled in 1904—the latest report available—were filled at a cost to the public of less than 8d. each.

The first thing to do when about to write an ad. is to read the people you wish to reach, and then write to them.

THE EXTERMINATION OF THE MOSQUITO*

Through the courtesy of the Island Association I am with you to-night for the purpose of laying before you some facts connected with an important reform which is gathering considerable headway in the States and other parts of the world, and is giving some excellent proofs of its entire practicability. I am constructively addressing his Worship the Mayor and Members of the City Council and other Officials invited, who may or may not be present; assuming that what may be said or done in this meeting will come to your attention, through resolution or otherwise. I may say that your Mayor has shown an interest in the movement by his attendance at a preliminary luncheon conference at the Club yesterday, and has expressed himself as willing to do anything in his power to forward the desired object for which we are assembled. And as desirable as any City action that may be taken it is of equal or greater importance that the authorities of the Province should be enlisted in the good cause; for the subject is coming to be considered to be an equal obligation upon the City as are those of roadmaking and like public improvements,

We of the states consider our brethren on the North as so closely related to us that we are very willing to give them any suggestions in lines of work which we may have taken up, assuming that you would gladly reciprocate. We think the reform so important that a number have formed an association having for its object the distribution of literature on the subject, the obtaining of necessary laws to carry out the reform and the aid in spreading the reform in every possible way. So firmly has the desirability of the movement appealed to us that many are giving of their private funds and very largely of their time to support our campaign of education. The society for which I am Secretary has been in existence about 3 years and expended its first year about \$1000. to carry on the propoganda. Finding that others besides those within the limits of the States desired information and to join the Society, it was decided to adopt the name "American" rather than "National"; in order that all in every part of the Americas would be free to join. Our correspondence runs extensively throughout the Americas, from Assiniboia in the North to the West Indies and Districts in South America; so that the people of Toronto may feel that they are interested in the society as properly as are any others.

In our first epoch we meet what every reform must meet and pass through, the period of ridicule, but we are glad to say that as the press and people have become enlightened on the subject, ridicule has turned to cordial endorsement and co-operation, except in very rare instances in a certain class of papers.

I am going to assume that you are informed fully enough on the wonderful proofs as to the dangerous character of certain mosquitoes to health, and the injury which all mosquitoes give to property and other interests in any community in which they prevail. I can in a word say that the demonstrations of the scientists of the connection between mosquitoes and malaria have never been excelled in clearness of proof; and what has been shown of malaria has been shown to be true of yellow fever, though that interests this Northern section only indirectly. An eminent writer has recently said of malaria that in his section it is responsible for more losses than any four diseases with which they are afflicted. And when we consider that it is not alone the deaths that occur from malaria, but the lessening of the vital forces of the section, we can readily believe this claim will apply to any section of the Western hemisphere. The other interests which are affected by this evil, while on a different plane from that of health, are of themselves very important. Whole sections of beautiful country are practically unpopulated through the agency of the mosquito; property values are lessened, and a general decrease in all interests results. I recall the fact of a very large hotel in an attractive country being this year closed, the large plant remaining unproductive, entirely on account of the prevalence of mosquitoes; and this is only one instance of many that exist.

I am going to assume also that you are so well satisfied that the mosquito is a nuisance that you are ready to co-operate in any movement which can be shown to be a practical remedy, and I shall therefore refer to a number of points that show what may be expected of the reform and what other people think of investing in it. And in this recital I shall have to be somewhat personal. Having always lived where mosquito producing

marshes were common, my mind ran to the thought of the utilization of these waste areas. About a quarter of a century ago the United States Government took up the matter of having a report made of the coast marshes of the country, and examinations were made from Maine to Texas and along the Pacific borders of the States. On a few points where reclamations had been made for agricultural purposes the report not only showed the great value of this improvement but casually mentioned in some instances that mosquitoes were eliminated. It was this report that gave me the first thought of the desirability and practicability of drainage for mosquito extermination. During the intervening years the thought has gained strength, for in this was the true solution of the question. And when many years ago the theory was announced and afterwards so clearly proven by Major Ross, a doctor in the English army, that malaria was the result of a bite of an inoculated mosquito, our cause gained a great impetus. The use of oil for this purpose is conceded to be only a temporary remedy and it is now acknowledged that to drainage we must look for the solution of all the evils which attend the prevalence of mosquitoes.

It has taken some years of work to lead up to public action, but this we are now obtaining in many places in the States and abroad. When action was first started to secure Legislation in the State of New Jersey it was met with persistent ridicule, but, after the expenditure of some \$10,000 in preliminary investigation and experiments on a small scale, the results were so encouraging that now that State has appropriated \$350,000, to be expended in a series of years in the drainage of wet lands, and the State is not even considering the benefits to agriculture. In New York State we have been working for an initial \$5,000 with which to make a start, but so far have failed owing, as I am informed, to the fact that the Committee having charge of such matters have thought that public opinion was not sufficiently enlightened on the subject to justify the expenditure of any money. In the same State when a Bill was introduced in the Legislature by a Member, making the drainage of breeding areas possible, he was laughed to ridicule; but so thoroughly did we inform the next Legislature that when the Bill again came up it was passed without dissent, and now the State of New York has a law which we commend to your consideration, by which any water found to be breeding mosquitoes may be declared a nuisance by the local board of health, and provision is made for getting rid of it. While these two States are farthest advanced in this legislation, others have already taken up the subject or are preparing to do so. In a little town on the New England Coast, almost entirely supported by Fisheries, one of our members, a summer resident, became interested in the subject of extermination, procured our literature and started a campaign. The work was mainly the spreading of oil over the breeding places and this was so successful that the town voted about \$800 a year for some 3 years for this work. Finding that it was not reaching the root of the matter, they asked the Secretary to visit them and inspect the situation; which he did last year, and the result of the public meeting and action which has since been taken is that the Legislature of that State has authorized this humble community to appropriate the sum of \$20,000 in work recommended to them.

As I have said before this matter of Legislation has only been brought about by the expenditure of private funds in large amounts. About 3 years ago one progressive gentleman undertook a certain movement to the extent of \$10,000, and, though his death prevented the carrying forward of the work, at the close of the first season persons who had been residents of the section for 25 years testified that there had never been a season in all their residence there when there had been less mosquitoes. And that movement has resulted in the spread of the importance and desirability of action.

Another section has been spending \$1,000 a year for about 5 years in draining its marshes, meanwhile using oil; and, though exposed on every side, it has shown that this work is most important and successful; so much so that there is now no difficulty in securing the votes for the annual appropriation. There are communities in New Jersey which spent large sums of money in local successful work before the State took up the matter at all, and are still doing this work with most gratifying results.

Many sections are having their territory examined to ascertain the possibility of relief, and this is occurring in various States. The first large movement was that in the territory around

*A paper read by Professor. Henry Clary Weeks, of New York, before the Toronto Island Association.

Oyster Bay, on the North shore of Long Island, in which the speaker was retained as engineer.

Like almost every movement since, that was started at a dinner conference and some \$3000 or \$4000 was subscribed by individuals with which to carry on the movement. Surveys were made, work was begun and, on account of the progress of breeding, oil was used in some instances during the succeeding summer. This initial work was on an island in Oyster Bay known as Centre Island. Many costly houses had been erected here, and vast sums of money spent in improvements, including an elegant club house for the Seawanhata-Corinthian Yacht Club; and this in the face of the fact that it was acknowledged that few, if any, places excelled the island in its output of mosquitoes. By rapid work we anticipated the breeding while the work of drainage was going on, and at the end of that season the Treasurer of the Committee, a prominent New York banker, wrote me that never before had the islanders been able to enjoy their lawns and piazzas in the evenings. And places adjacent the marshes, which were said to have been almost impassable on account of mosquitoes, were entirely freed from them. I was there this summer, and it was told to me, by those who had been there during the intervening years, that the good results were continued up to this time. During the work my opinion was asked as to the value of the marshes which we were operating on, and I stated that \$10 an acre would be a fair price for them; but, when we had completed our work and the results had been shown, an owner was asked by one desiring to purchase some of the marshes to put a price on them; it was \$3000 an acre. The values on the island I am informed have steadily increased, and this we hold will be the case in all communities successfully carrying out this class of work. A territory of about 75 square miles was gone over by me and reported upon, and the work on this island was only a part of that recommended for the larger territory. This report involved another private expenditure of some thousands of dollars, illustrating the progressiveness of that community.

You are doubtless familiar with the work done at Havana in exterminating yellow fever. For two centuries that dread disease had been endemic at Havana and, after the discovery of the germ of this disease by a commission of surgeons, work was begun to rid the city of mosquitoes, and the first time it was there for many months after the U. S. army left was when the Cubans themselves relaxed their efforts. Something like \$100,000 was spent in mosquito work alone by the United States army. Work by the same physician, who is one of the members of the Advisory Board of our society, is now going on in the Isthmus of Panama, and already a million dollars has been expended on it, with the result that the Health Officer's report now shows that the large forces of workers and the army are as healthy as they would be working in almost any part of the United States.

Now all this is the prelude to what I want to say as to your situation here on the island, as far as I have been able to examine it. You are of course absolutely free from the great peril of the salt water marsh mosquito, but you are not free from the malaria breeders or others which cause great annoyance and discomfort, as well as depreciation of values. These are inherent in the island here, so convenient to your beautiful city. The isolated character of your situation as an island would make the work done here to be entirely unaffected by surrounding exposures. I have not examined a wide enough territory in the city to know whether, if you should free the island from mosquitoes, you would get any output from the main land but my impression is that you would not.

I consider that a thorough scheme of work carried on here would be quite beyond what might be called an experiment. Indeed I feel assured that the island can be absolutely freed from mosquitoes and what that means to you in all respects you are able to judge as well as the speaker.

LOW SUMMER TOURIST RATES WEST.

During the entire summer the Chicago and North Western Railway will have in effect very low round trip tourist rates to Colorado, Utah, California, Oregon, Washington and British Columbia points. Choice of routes going and returning with favorable stop-overs and time limits. Very low excursion rates to the Pacific Coast from June 25th to July 7th. For further particulars, illustrated folders etc., write or call on B.H. Bennett, General Agent, 2 East King Street, Toronto, Ont.

CANADIAN ARCHITECT AND BUILDER COMPETITONS.

It is proposed to have three competitions for students and draughtmen, as described below, with prizes for each competition, and the conditions that the CANADIAN ARCHITECT AND BUILDER may reproduce for the benefit of its subscribers the designs of the prize-winners in each competition.

The intention is to offer suggestions of good design for the use of builders and others in the country, who erect buildings without consulting an architect.

Each drawing to be accompanied by a brief description of the material intended to be used.

Both drawings and description are to be signed with a *nom de plume*, and the same *nom de plume* is to be written on a sealed envelope which contains the competitor's name and address.

The drawings must be made in line for reproduction, and arranged within a rectangular border with sides in the proportion of 7 to 10. If drawn large, the lettering should be large in proportion, so as to be legible when the drawing is reduced to the size of the reproduction, which will be 7 inches by 10 inches. The scale must be drawn, not merely noted.

COMPETITION I. Drawings to be delivered at the office of the CANADIAN ARCHITECT AND BUILDER, Confederation Life Building, Toronto, on or before the 1st of December next.

This competition will repeat the theme of a small house in a country town. The cost to be between \$2,000, and \$3,000, exclusive of land. The lot will be supposed to be 50 feet wide by 150 feet deep, on a residential street in which the houses are set back 30 feet from the line of the lot upon the street. The house may be supposed to face any of the cardinal points of the compass; but must be planned to suit the particular aspect selected, and will be judged according to the manner in which this prime requisite of house-planning is treated.

There will be two sheets of drawings required in this competition. One will contain the plans and elevations and the other will contain certain details.

The drawings required are: plans of the ground and first floor, elevations of three sides, and a perspective in which the fourth side will be shown.

The ground floor plan must show the laying out of the grounds as much as space will permit, and must have drawn upon it a diagram showing the points of the compass.

The sheet of details must show the porch, main eaves and gable, (if there is a gable), drawn to a scale large enough to show the construction, and giving sectional details to a still larger scale.

The prizes for this competition will be: First prize, \$20; second \$15; third, \$5; fourth, a year's subscription to the CANADIAN ARCHITECT AND BUILDER.

COMPETITION II. Drawings to be delivered at the office of the CANADIAN ARCHITECT AND BUILDER on or before the 1st of January, 1907.

The subject is a farmhouse. There will be one sheet of drawings, similar to that required for competition I; that is to say a sheet containing, within a 7 x 10 border, ground and first floor plans, three elevations, and a perspective showing the fourth side; but, in this case, as the cellar of a farmhouse is used for storage, there must be also a plan of the cellar; drawn on a separate piece of paper, so that it may be reproduced separately for insertion in the text.

There is no definite cost fixed; but there must be a limit. Houses quoted in the *Farmers' Advocate* (which, as well as other farming journals, is recommended for consultation), range in cost from \$1600 to \$4500. A house of the former price was 31 ft. by 37 ft. The \$4500 house is a well built frame house, on a stone foundation, and measures 26 ft. by 54 ft. in the main part with an 18 ft. x 36 ft. wing, the greater part of which is shed. This is an unusually good house with brick cellar walls, open fireplaces in the living rooms, bathroom with water supply, and in all respects well appointed. This scale of excellence seems to be above the ordinary, while that of the \$1600 house is hardly sufficient for what is now recommended. It will probably be safe to rate the cost of such a house as is now wanted at about \$2.00 per square foot on the ground. Competitors may plan for any size between the limits of \$2,000 and \$4,000. We want houses of different sizes: and the plans will be judged not according to size but according to merit within the size adopted. It must be remembered, however, as regards size, that compactness is a great gain where there are no household servants; and

an unnecessary scale of accommodation, for dignity rather than comfort, is no merit in a design for an ordinary Canadian farmhouse. The first intention should be to save steps; not by squeezing to such an extent that the inconvenience of huddle takes the place of the inconvenience of oversize; but by a compactness of arrangement that will make the service department—dining room, kitchen, pantry, summer kitchen and woodshed—touch upon one another without intervening passages to traverse and keep clean, and, in general, throughout the house, will serve comfort by giving, as far as possible, exactly the space required for comfort—not less, but certainly no more. Waste spaces that require defence indicate the need for further study of the plan.

So far there is not much difference between a farmhouse and another dwelling, except that the kitchen must be a room of good size. But there are some special points to be considered.

The modern farm house is equipped with the appliances for water drainage. A septic tank with subsoil discharge can be built for a \$100 or so, and is to be assumed as the method of drainage; so that the house will be equipped with the conveniences of an ordinary bathroom. But water supply varies, and it will be best to consider that the only dependence is upon rain water from the roof. For this reason there is usually a cistern

CANADIAN ARCHITECT AND BUILDER on or before the 1st of February, 1907.

The subject is a shop front for a shop such as is usually occupied by a grocer, druggist, hardware merchant, &c.

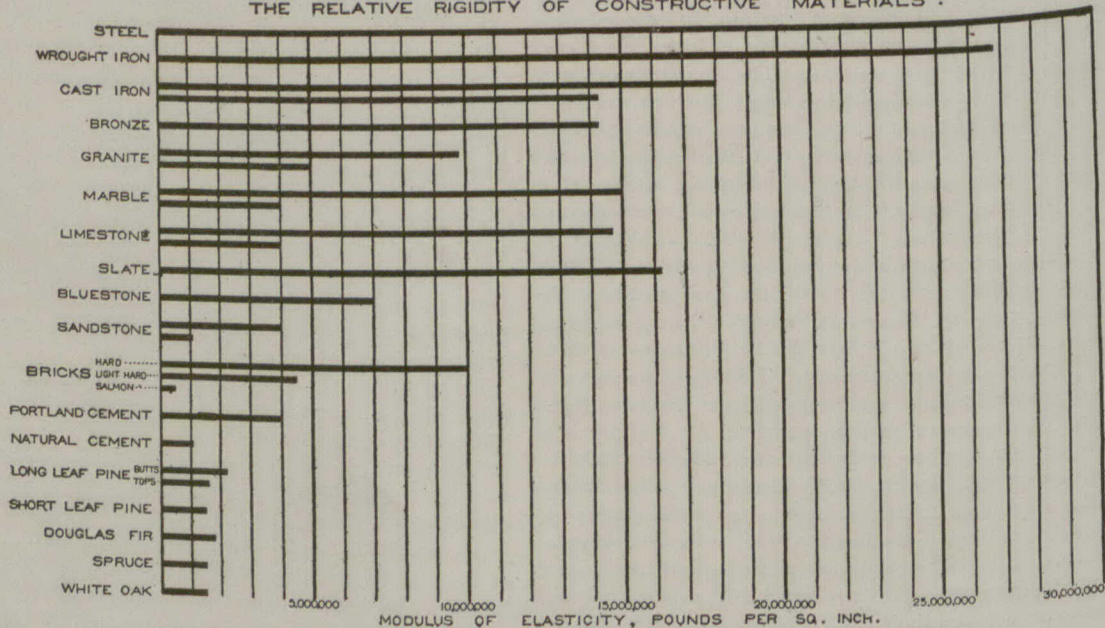
The building will have light on front and back only. It will have a frontage of 25 feet, in which must be included a separate entrance for a dwelling above the shop. The floor plans of the dwelling must be given on a separate sheet of paper, so as to be reproduced separately on a small scale, for insertion in the text. What is required on the drawing sheet is only—an elevation of the whole front, to a scale of 8 ft. to an inch; a plan through the shop window to a scale of 4 ft. to an inch; and details of the shop window to a scale of 1 ft. to 3/4 in. The whole to be arranged within a border with sides having the proportions of 7 to 10.

The prizes for this competition are:—First prize \$15.00; second, \$5.00; third, a year's subscription to the CANADIAN ARCHITECT AND BUILDER.

THE RIGIDITY OF CONSTRUCTIVE MATERIALS.

The relative rigidity of the materials of construction, as shown by their moduli of elasticity, is exhibited on the accompanying

THE RELATIVE RIGIDITY OF CONSTRUCTIVE MATERIALS.



THE MODULI OF ELASTICITY OF DIFFERENT CONSTRUCTIVE MATERIALS.

room in the cellar with a tank from which water is drawn by a pump in the kitchen. To get water in the bathroom there may be either a bathroom cistern filled by a force pump, or the roof water may be led first to the bathroom cistern and overflow to the tank in the cellar. In either case one would think there is advantage in a ground floor bathroom. There is no particular reason why the bathroom should be on the bedroom floor. The morning bath is not in vogue in farm houses. After the day's work is over, and in the leisure of the evening is a much more serviceable time for this ceremony. A bathroom adjacent to the kitchen will make the supply of both hot and cold water easier. It might open off a back vestibule, which will be needed so that the men can take off their dirty boots before coming into the house. To have washing arrangements here also will be a good thing. It is not, however, intended to dictate the plan in this respect.

Besides the tank room the cellar will require subdivisions for a furnace and fuel, for vegetables, for fruit, and for milk. There ought to be a special entry to the cellar for this produce, and it might conveniently be the woodshed, (which in combination with the summer kitchen usually makes a one-storey wing in the rear). If, as is usual, the wood shed is beyond the summer kitchen and the depth of the summer kitchen has to be passed to reach the cellar, the situation invites to the convenience of an inclined plane.

These suggestions are not intended to give a complete account of the requirements of a farm house, but rather to suggest that the subject requires some study. This is best done, for those who are not in touch with farming life, by looking through a volume or two of a good Agricultural journal.

As to design, simplicity is of course necessary. The house will be more economical to build, to keep and to use, if it is simple in form. But there is no occasion to despair of its appearance on this account. A small building, on such a spacious site as a farm, ought not to have its mass much cut up. There is sure to be, in the summer kitchen, a minor mass that will take care of composition in the rear. The entrance front will have its necessary appendage in the way of porch, verandah &c.; and, an isolated building is always the better for having the entrance marked by something in the upper part of the building which expresses its position.

The prizes for this competition will be:—First prize, \$15.00; second, \$5.00; third, a year's subscription to the CANADIAN ARCHITECT AND BUILDER.

COMPETITION III. To be delivered at the office of the

diagram and the table of numerical values furnished by James E. Howard, of Watertown, Mass. The data used in their preparation are from the results of tests made at the Watertown Arsenal, although some of the data might, of course, be had from many other sources.

Does it pay to eat, drink and sleep? You have to. Does it pay to advertise? 'Tis the "eat and drink" of business. You can't live on sleep alone.

ONTARIO ASSOCIATION OF ARCHITECTS.
STUDENTS' CLASSES.

The Mathematical Classes will be resumed in the rooms of the O. A. A., 96 King St. West, on Monday, October 22nd, at 8 p. m.
Mr. Thomas Taylor, graduate of the School of Practical Science and now on the Engineering Staff of the Canada Foundry Co., will have charge of these classes.

Arrangements are now being made for lectures and classes in other departments of the Curriculum, announcement of which will be given later.
The fees for the full course up till March, 1907, will be Five Dollars, payable in advance to the Secretary-Treasurer.

9 Yonge St., Toronto.
Oct. 16th, 1906.

A. H. GREGG,
Sec.-Treasurer.

HAVE you seen my



Can you beat it?

MEMORIAL WINDOWS

H. E. ST. GEORGE,
74 Fullerton Street, LONDON, ONT.

COMPETITION FOR ADVERTISEMENT DESIGNS.

We wish to make the advertisement pages of the CANADIAN ARCHITECT AND BUILDER an artistic collection of attractive designs, each telling its own tale and irresistibly drawing the attention of readers to the articles advertised in an effective and artistic way.

With this object we invite competitive designs suitable for advertising the goods of any firm advertising in the CANADIAN ARCHITECT AND BUILDER. Competitors may base their ideas on an advertisement already appearing, or they may put themselves in communication with an advertiser with a view to finding out what he would like to emphasize in his advertisement.

Competitors may send in one or more designs, and may exercise their own discretion as to the size of the same. Each, however, must be suitable for reproduction as either a full, half, or quarter-page of the CANADIAN ARCHITECT AND BUILDER (the dimensions of which can be easily ascertained by a reference to advertisements at present appearing), and should be drawn $1\frac{1}{4}$ times the size.

Designs must be drawn with pen and perfectly black ink on white Bristol board, and must be sent in securely packed to prevent damage, with name and address of author written on the back.

To the author of the design which we consider the most suitable and the most artistic we shall award a prize of Ten Dollars, to that placed second Five Dollars, and to that placed third one year's subscription to the CANADIAN ARCHITECT AND BUILDER.

The prize designs will become the property of the CANADIAN ARCHITECT AND BUILDER, with the right of making any arrangement with the advertiser with reference to publication of same.

The publishers reserve the right of purchasing any

designs sent in competition other than the prize ones at a price not exceeding \$2 each.

The James Smart Manufacturing Co., of Brockville, Ont., have authorized us to announce that they will also give a prize of \$10 for the best advertisement that may be submitted for the Kelsey Warm Air Generator. They will be prepared to send to any contestant such of their printed matter as may be desired. Contestants for this prize should make their drawings with pen and black ink on white card board.

All designs must be sent in on or before December 5th, 1906. Any arriving afterwards will be ineligible for the competition.

All drawings must be addressed "Advertisement Design Competition," CANADIAN ARCHITECT AND BUILDER, Confederation Life Building, Toronto, Canada.

ARCHITECTURAL TRAINING IN MONTREAL.

The Architectural Department at McGill University opens its winter course with an increase in the number of students over all previous years. There are seventeen students on the roll and nearly all of these have the intention of following out the complete course of four years training.

The evening classes at the Monument National, under the charge of the Council of Arts and Manufactures, opened on the 15th of October. Instruction is given in Architecture by G. A. Monette and Alph. Venne; in Carpentry and Stair Building by Eug. Bertrand and Geo. Corriveau; there are also classes in freehand and mechanical drawing.

The Sketching Club of the P. Q. A. A. is to re-open its winter weekly meeting in the Association rooms on Wednesday, the 24th Oct. when the work of the season will be discussed, and first series of competitions will be announced.



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DEC. 30 1902
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the Proprietors' Choice

Owners of Apartment Houses, Hotels and Office Buildings prefer "Standard" Fixtures above all others for their buildings as well as their homes. They know the superiority of "Standard" Equipment in appearance, durability and sanitation, for our extensive national advertising has taught them to discriminate in our favor.

Plate P.878—"Standard" Porcelain Enamelled "Delecto" Siphon Jet Closet with $1\frac{1}{4}$ inch Brass Connection, Plain Oval Seat and Paneled Cover. Nickel-plated Cast Brass Hinges Nickel-plated Brass Vimometer, Floor Flange, Rubber Gasket, Screws, Bolts and Washers complete.

Standard Sanitary Mfg. Co. Pittsburgh, Pa., U. S. A.

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THE CANADIAN ARCHITECT AND BUILDER will be mailed to any address in Canada or the United States on the following terms: Architects' Edition, \$3.00 per year; Regular Edition, \$2.00 per year. The price to foreign subscribers is: Architects' Edition, 16 shillings; Regular Edition, 12 shillings. Subscriptions are payable in advance. The journal will be discontinued at expiration of term paid for, if so stipulated by the subscriber; but where no such understanding exists, will be continued until instructions to discontinue are received and all arrears of subscription paid.

ADVERTISEMENTS.

Prices for advertisements will be sent promptly on application. Orders for advertisements should reach the office of publication not later than the 12th, and change of advertisements not later than the 5th day of the month.

EDITOR'S ANNOUNCEMENTS.

Contributions of value to the persons in whose interest this journal is published are cordially invited. Subscribers are also requested to forward newspaper clippings or written items of interest from their respective localities.

Subscribers who may change their address should give prompt notice of same. In doing so, give both old and new address. Notify the publishers of any irregularity in delivery.

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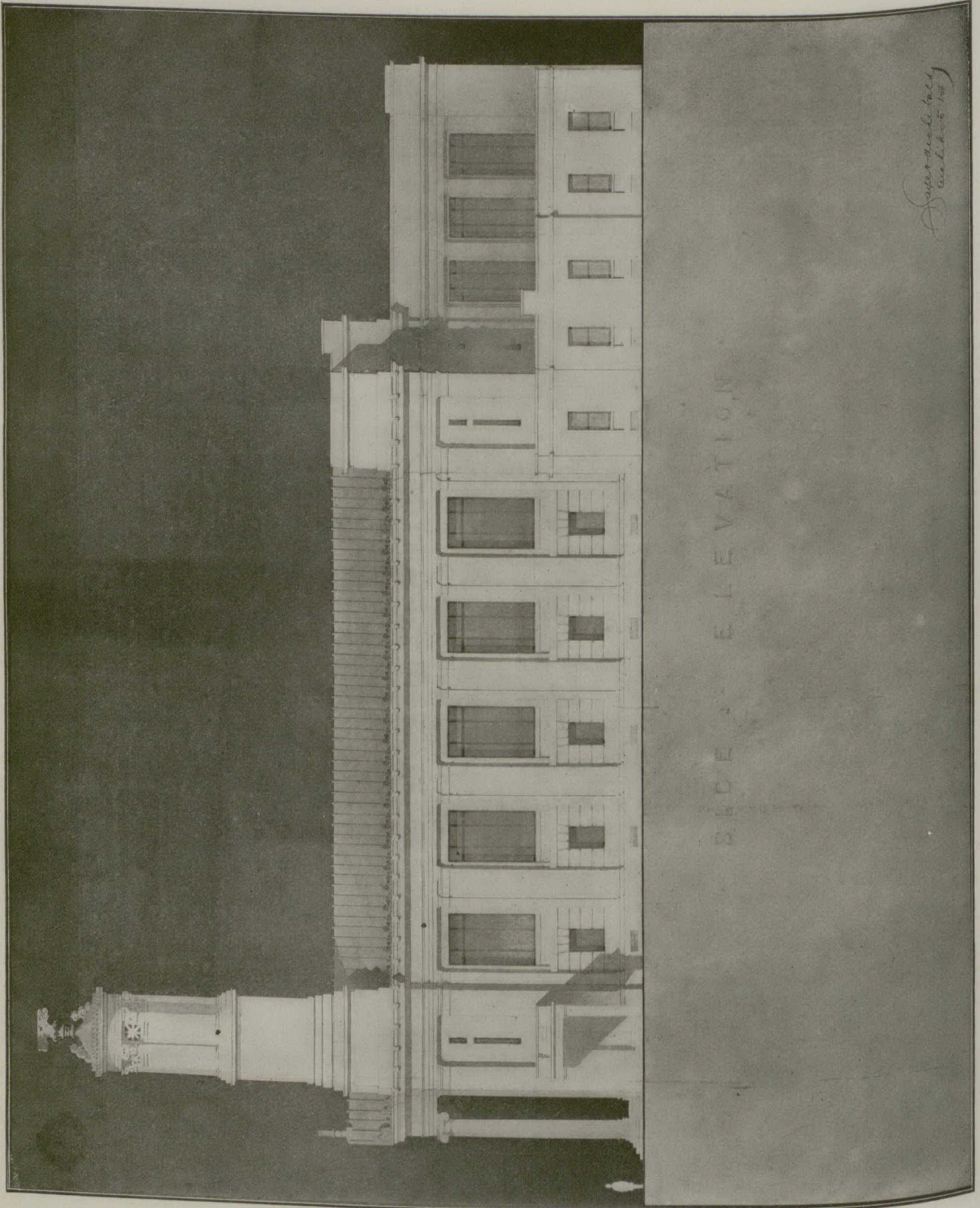
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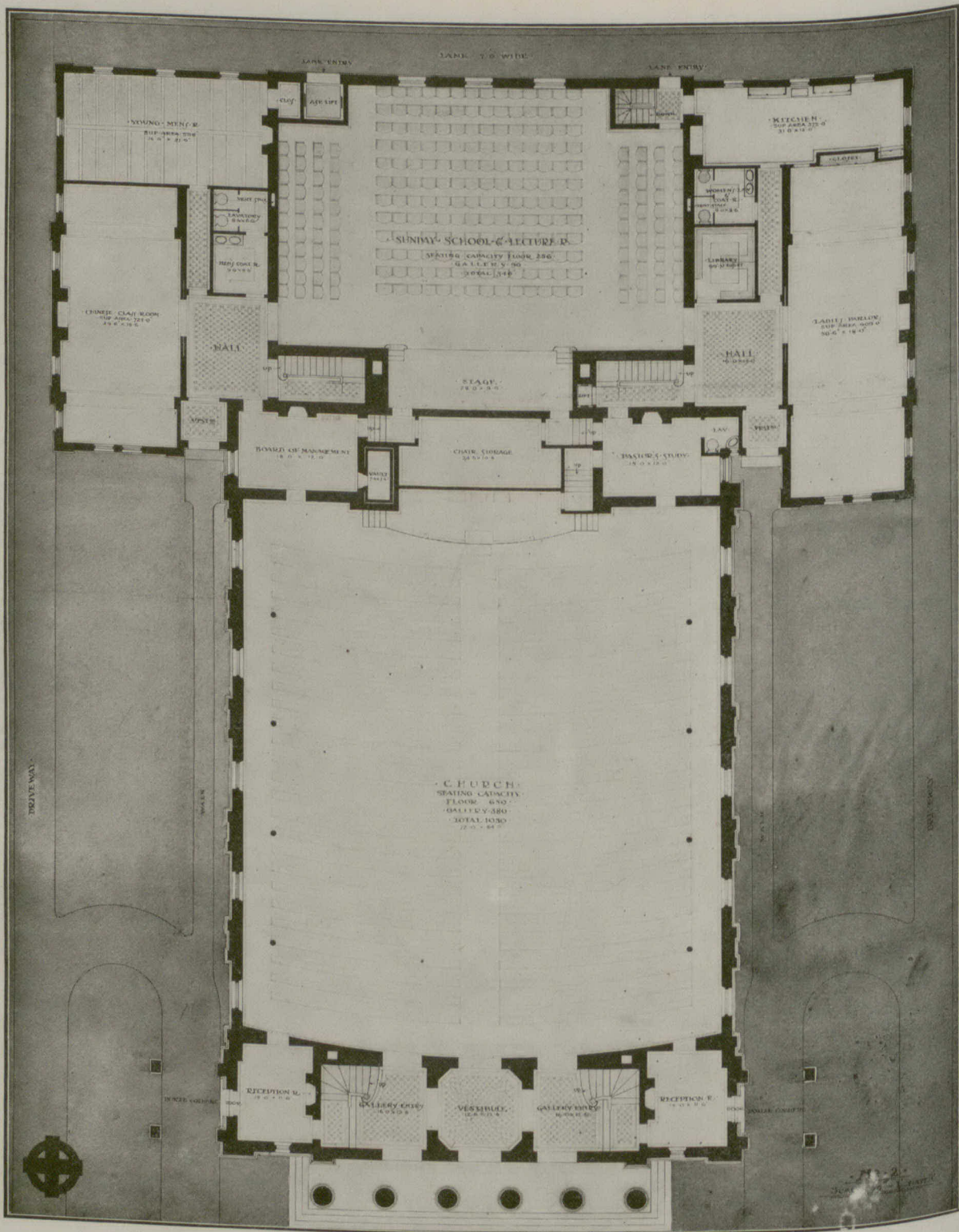


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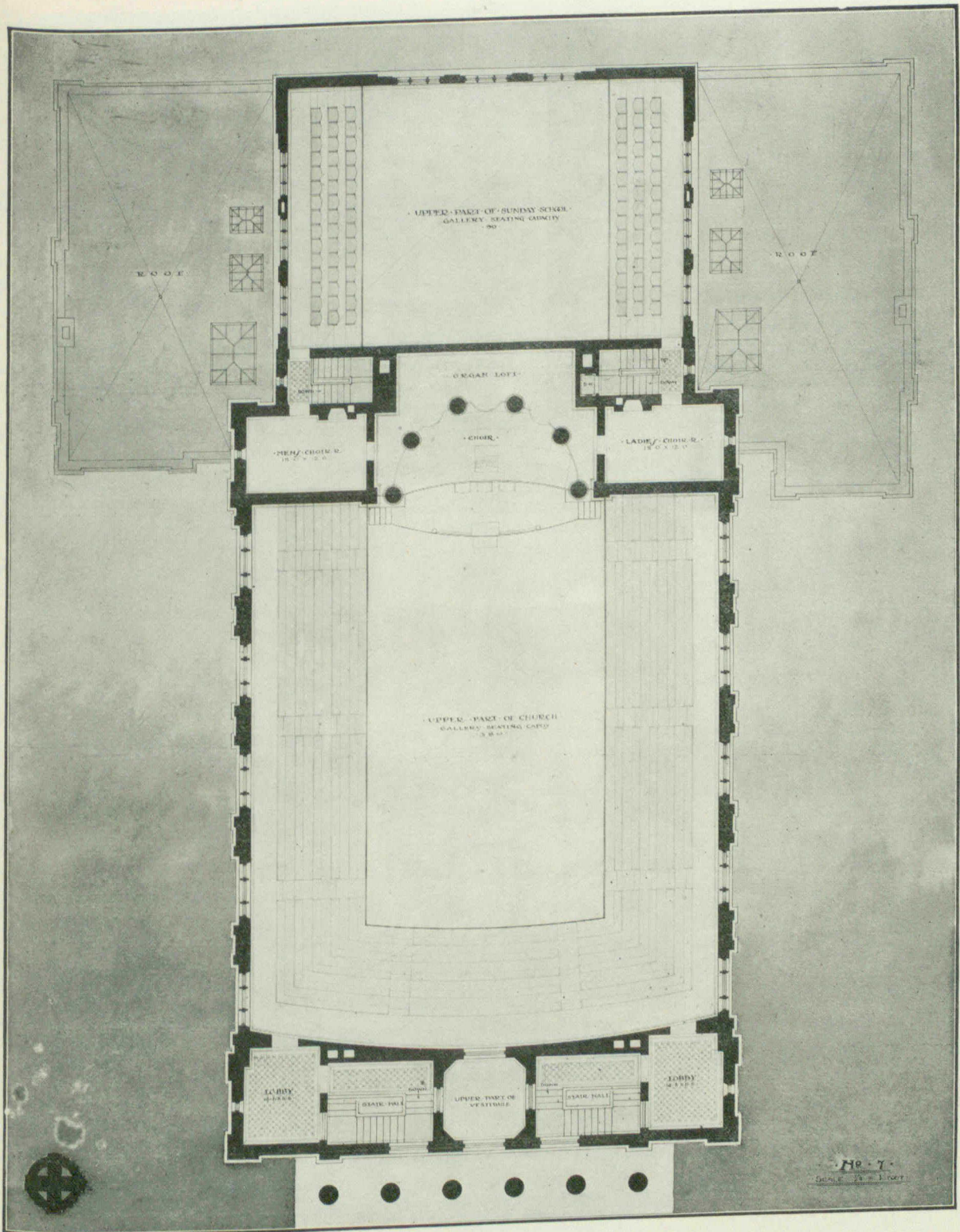
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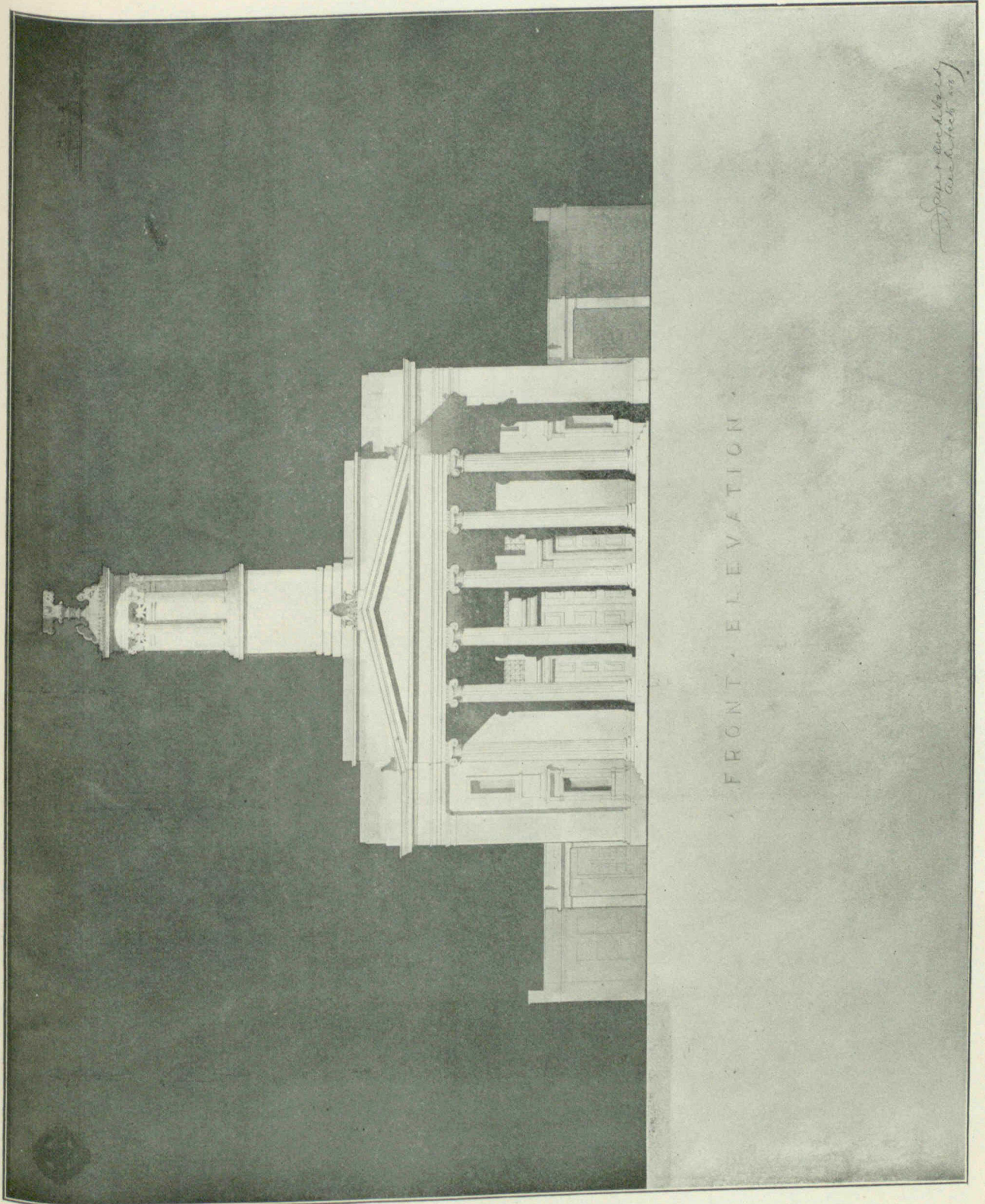
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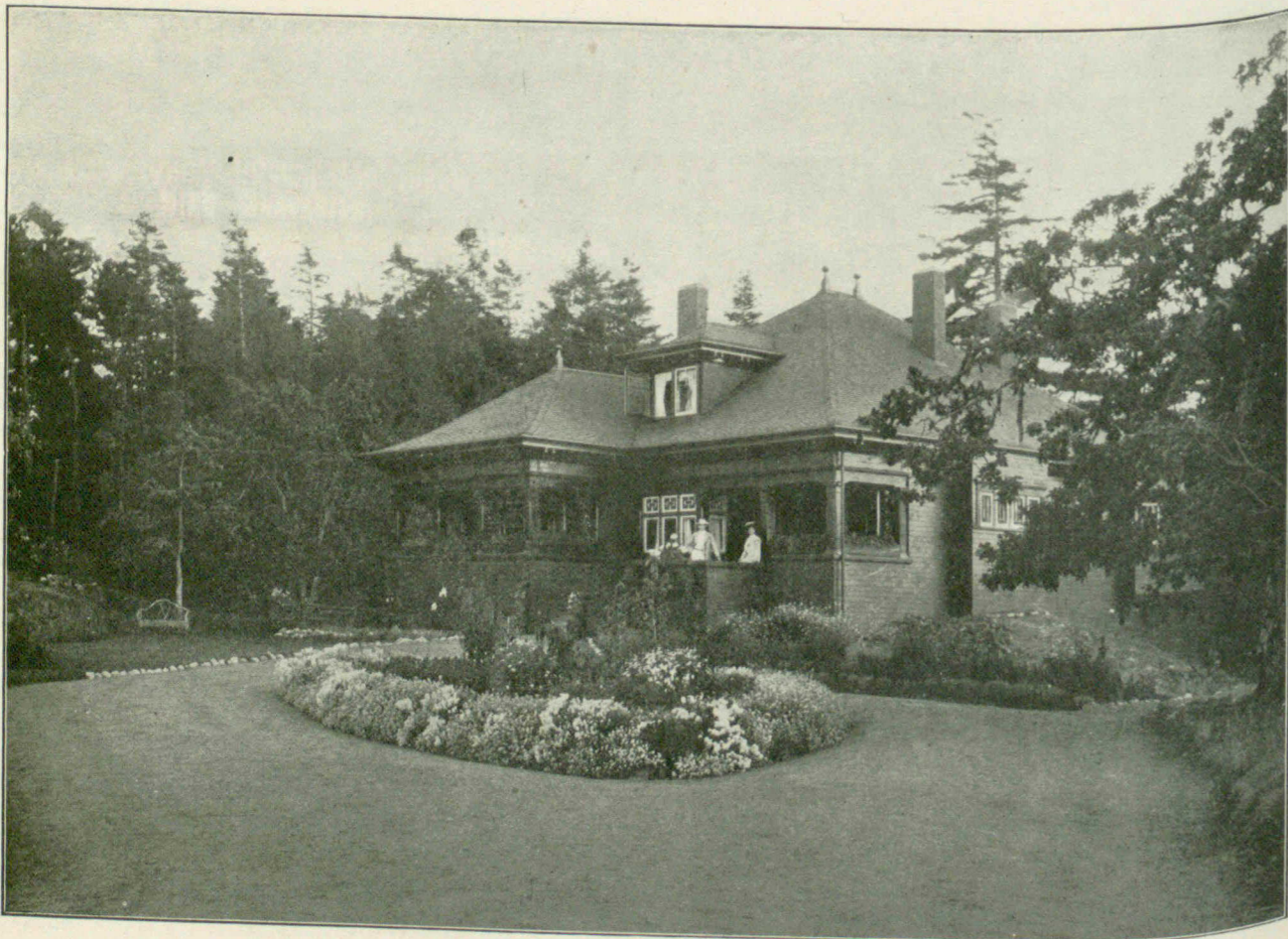
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NOTES.

The Manitoba Glass Manufacturing Company, of Beausjour, Man., have now completed their plant. Their building is eighty-four by seventy feet. In the centre is placed the smelter, which will hold five melting basins, each basin holding about fifty-five gallons. There are five other kilns, each twelve feet square, for tempering the glass.

A bad fire occurred at the plant of the Edmonton Brick Company on October 10th. The engine house and adjoining sheds are a total loss, while the engine, boiler and much machinery were badly damaged. The company are installing an up-to-date brick manufacturing plant with an artificial dryer which will be in operation by the middle of November.

The widely known contracting firm of Orr Brothers, of Toronto, have recently been granted a charter of incorporation by the

Ontario Legislature, to take over the business, of Orr Bros. and Alexander Orr and of Orr Bros., Limited, of Toronto, and to carry on the business of general contractors, etc. The corporate name of the company is to be Orr Brothers, Limited, Toronto will be chief place of business and the capital stock \$120,000. The directors are Messrs. Robert J., William, George, Archibald, Alexander and James C. Orr.

At Exshaw, a new Alberta town, has been found a ledge of lime rock that after exhaustive tests has been found to be fitted for the manufacture of a superior quality of Portland cement, with the further advantages of proximity to inexhaustible supplies of coal and shale. This town has been established by the Western Canada Cement Company, and is located on the main line of the C.P.R. just where it enters the mountains, about sixty miles west of Calgary. Here works are being established at an outlay of \$1,000,000.

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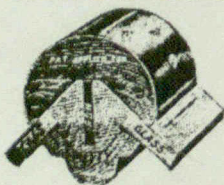
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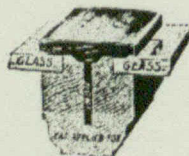
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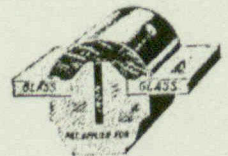


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"WHAT IS TRUTH?"

By CHARLES F. BINNS.

A recent issue of a prominent trade journal devotes two inches of its valuable space to the announcement that from an American pottery there are issuing "two distinct novelties in steins. One represents a football, and the other a bowling ball. They are splendid specimens of modeling. Their striking resemblance to the real article is further intensified by the leather-like coloring which clothes the ware. Not a detail is lost in the painting of these steins—the seams, thread, and other apparently subordinate features being brought out with astonishing naturalness." This paragraph would be amusing if it were not so serious.

Certain thoughts are suggested by the statements made, and, though it may seem like flogging a dead horse, a consideration of the matter will, perhaps, be pardoned because there are always some people who need to be reminded of obvious truths. It would appear, first, that the potteries are employing modelers who are not artists. This may seem a strong statement but what artist, what person who had any sense of art would consent to put his hand to such work? The second point is that there is a terrible paucity of ideas among manufacturers and their designers. The revelation that those who are supposed to produce beautiful things are driven to such expedients is perfectly startling. Thirdly, it is plain that behind the fact of production is the question of demand. If objects like these did not sell they would not be made.

To make the issue plain it must be pointed out that not only is it offensive to the principles of construction to imitate one material in another but it is doubly so where a fit and proper material is disguised by a surface colored to represent one which is unfit.

To illustrate. Suppose the porch of a large building is supported by stone columns. By some freak of

fancy the owner instructs his workmen to carve the stone into an imitation of reeds and rushes and then, to heighten the illusion, the growth is painted in proper colors and "with astonishing naturalness." It does not need an educated eye to see the folly of, apparently, upholding a structure with a bunch of reeds. This is perhaps, an extreme instance but the principle is exactly that involved in the case under discussion.

A stein made of pottery is a perfectly suitable and appropriate object. It is firm to hold and to use, impervious to liquid and easily cleaned. It is true that at one time steins or "black-jacks" were made of leather, but that was when pottery as now known did not exist and as soon as the proper material was available, the improper disappeared.

Now the bon-vivant is invited to drink from a leathern vessel a "splendid specimen of modeling" but which pretends to be, not a stein but a football! Obviously, too, there must be a handle to this football or it could not be used, and so, at one and the same time, a material clean, fit and appropriate is masked under the semblance of one which is unclean, unsanitary and offensive, and an excrescence foreign to the subject must perforce be added in order to make it possible of employment.

The basis of art is truth and it is a sad pity when manufacturers are driven to unworthy expedients in their search for novelty.

The public must, after all, be charged with a large measure of the responsibility, for if the producer can say "it sells," the last word has been spoken. A glance through the stores where bric-a-brac is sold only confirms this view. It is lamentably true that articles which are an imitation of some well-known object are popular. The vase in the form of a bird's nest which, as naturally built, is utterly unfit for holding water; the cream jug with a cat for a handle, or even con-

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structed of the body of the animal—a disgusting piece of realism; the body of a swan hollowed out to hold flowers; all these are evidence of a debased taste and one looks in vain for a remedy.

The remedy is to be found in a patient education of the public taste, but at the moment of mention a difficulty is foreseen. Manufacturers do not claim to be educators. They have large capital invested and must earn dividends. They have also a large number of people dependent upon them and the pay-roll must be met. The general opinion is that plain or undecorated wares will not sell, and by the man in the street the demand for ornamentation is looked upon as evidence of the appreciation of art.

The burden rests, then, upon the few. They must preach and illustrate in spite of deaf ears and blind eyes. Well it is for them that they live in an atmosphere of truth, for the world will not afford them breath.

It is a consolation to know that truth has always been compelled to fight error—that in the end, somewhere, somehow, truth must prevail. Happy is the man who is not compelled, by the insistent demand for money, to pander an evil taste. But upon him all the more heavily rests the great responsibility. "Woe is me," cried the great apostle, "if I preach not the gospel," and something of this impelling force must be felt by every one who knows the truth.—Brick.

TESTING MATERIALS BY SAND BLAST.

Abrasion tests of structural materials, whether conducted by grinding machines or by tumblers, do not lead to reliable conclusions say The Builder. In the former class of apparatus, the detached particles are

apt to increase the grinding effect or to reduce it by filling up the interstices of the material, and the grinding medium itself becomes worn after a time so that its effect diminishes. In the latter class of apparatus the interstices of the material becomes filled up and so lead to inaccurate results. A new method by which such difficulties and errors attending the use of existing apparatus can be avoided, is afforded by a modified form of the sand blast apparatus as applied in the Prussian Royal Testing Laboratory at Gross-Lichterfelde. Tests there conducted on various kinds of building stone, road metal, timber, linoleum, and other floor-covering materials, show that exposure to the sand blast for the short period of two minutes is sufficient to furnish a reliable indication of the structure and relative resistance of any material. The method is specially suitable for tests of building materials intended to be placed in position where they will be exposed to abrasive action.

The sale of the immense limestone deposit at George's River has been concluded whereby the transfer of an area two miles long and half a mile wide, and estimated to contain two hundred million tons of limestone, has been made by Rev. M. A. McPherson, of Little Bras d'Or, N.S., to the Dominion Iron and Steel Company. The steel company had the areas bonded for some time past, and last winter used about two thousand tons of the limestone at their plant at Sydney, N.S.

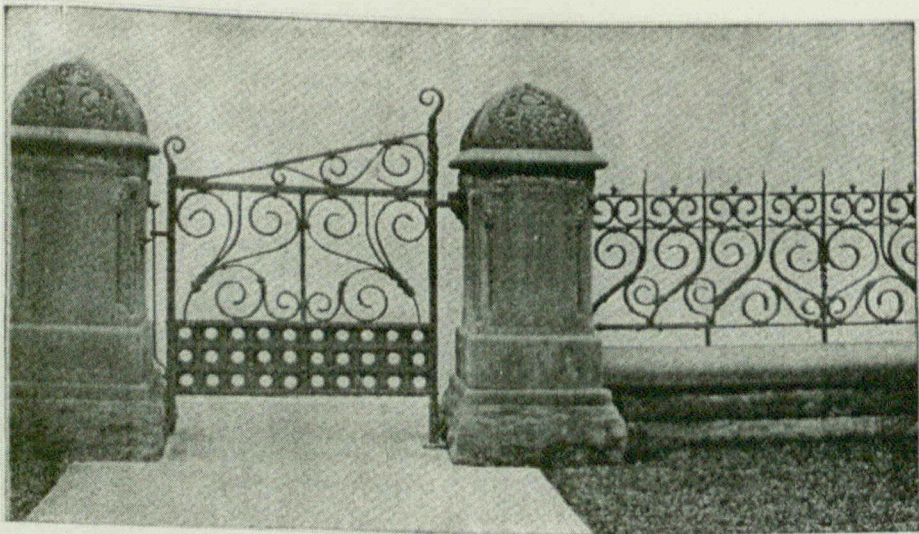
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ARCHITECTURAL FAILURES.

Architecture is not a profession for a poor man to enter; yet it is one which is exceedingly attractive to parents who have not the capital with which to start their sons in what is known as business—in other words in trade. In its lower ranks it is a very cheap profession to enter. The premium asked in small provincial offices is generally small and often non-existent. Instruction of a sort is obtainable in the technical schools at nominal fees, and at the outset of an independent career there is no expensive stock-in-trade required. It is certainly a fact that in all professions the only definite capital upon which a practitioner can depend is his brains, and the only commodity for which he can charge is his time. Yet, in all other professions, there is so considerable an outlay necessitated in the education which is an essential prelude to commencing practice, that a poor man hesitates before entering his son in a calling which demands so great an expense in the initial stages, and the result is that the proportion of men who for want of capital are unable to tide over a period of depression is not so large as it is in architecture.

This condition of affairs, handicapping many a man at the outset of his career, is particularly deplorable in a profession which depends upon one of the most fluctuating of all industries—that of building. The legal professions are by no means so greatly influenced by good and bad seasons, for men will quarrel at all times, and legal business must be done. It is much the same with the medical profession, for the state of trade has little to do with the health of the community, and so long as human beings are subject to human ill, the doctor will find work to do. Given a few bad years of generally depressed trading, the capital available for building enterprise is withdrawn, building ceases, and there is no work left for architects to do. Such has been the condition of affairs now ever since

the boom which preceded the Boer war, and its long continuance in having very very serious effects, to which we have drawn attention on more than one occasion. It is exceedingly difficult to suggest how best to meet the circumstances at this moment. Young men keep crowding into the profession, as is evidenced by the steadily-increasing number of the entrants for Institute examinations, only to find, when they come out of their articles, that there is no room for them either as assistants or principals. They, however, are young, and can look forward to the natural swing of the pendulum, while it is possible that before they have reached the age when the subsequent rebound takes place and bad times recur, there will be some measure of registration such as will put a stop to the entrance of the horde of half-qualified men, who now make the earning of a living so difficult, both for themselves and their more competent brethren. Meanwhile, it would be idle to disguise the fact that there are middle-aged men at the present moment, brought up as architects, who have been honourable practitioners for many years, and now find that they must turn to some other means of earning a livelihood. Those who still retain energy and business capacity can perhaps find work to do. Our advertisement columns show that there is a demand for them by the occasional announcement of a vacancy for a traveller who is acquainted with architectural work. It is not every cultivated gentleman, however, who can in this way put aside the prejudices of a life-time and become a successful traveller or tradesman after having proved an unsuccessful architect. *The Building News.*

The building strike in Zurich, one of the longest and most severe that Switzerland has known, has resulted in a complete victory for the masters. After a three months' struggle, which has been a period of great misery for a large number of families, the men have gone back to work unconditionally. The strike has cost the country and the town of Zurich £4,000.

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NOTES.

Mr. C. C. King, architect, Stratford, Ont., has accepted a position as manager in the office of Messrs. Burke & Harwood, architects, Toronto.

The Lehigh Portland Cement Cement Company, Limited, with head office in the Township of Thurlow, County of Hastings, and capitalized at \$1,000,000, have been granted a charter by the Provincial Government. The provisional directors are Messrs. H. C. Trexler, E. M. Young, C. A. Matcham, G. Sykes, all of Allentown, Penn., and A. W. Thorn, of Buffalo, N.Y.

There has not been a regular meeting of the Montreal Master Painters' and Decorators' Association since last April. A movement was under way to secure a room on St. James street, but

the proposition that the association should become affiliated with the Builders' Exchange and meet there is growing in favor, and probably will be unanimously accepted. Several of the master painters are already members of the exchange.

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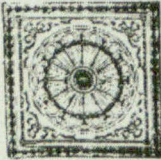
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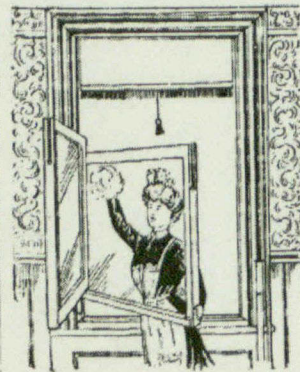
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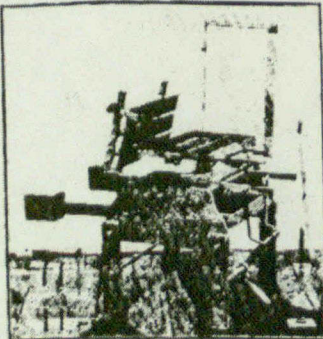
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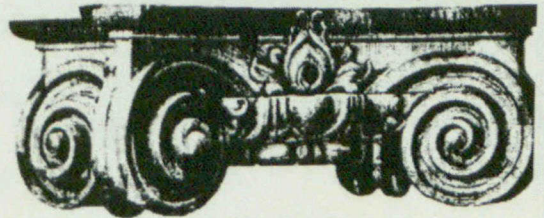
Anybody who knows the two varieties knows that the old-fashioned country carpenter is as immensely the intellectual as he is the social superior of the modern town-bred carpenter, who has been reduced to become, in his day's work, a dreary specialist whom it were juster to call an automaton, and whom no sane employer would any longer think of invoking for the solution of a practical mechanical problem. The interval is vast. The colonial carpenter was an educated and thinking being, to whom within the sphere of his special information, the community deferred. The modern urban carpenter is the wage-devourer that we know, whose opinion no sane being would think of invoking on any mechanical question outside of his daily routine. No wonder the colonial carpenter became, by an easy transition, the architect of his time, and had no need to add that designation to the designation of his trade. He was quite, as to trained intelligence and mechanical equipment, what we now mean by an architect, while his successor is the automaton and tool of his "union." When we reflect that, for fifteen years, "The Young Carpenter's Assistant" was the vade mecum of the trade, art, or profession to which it was addressed, and when we consider what kind of technical pabulum has supplanted it with the generation of carpenters that now is, we shall find no difficulty in explaining to ourselves how the "young carpenter" of 1805, or of 1817, was so much more professional a person, and so much more respected a citizen, than the ordinary urban members of a carpenters' trade union is in 1905. The question is much larger than one of the practice of architecture.—"M.S.," in the Architectural Record Magazine.

Education for the Masses.—Sign on a factory: "Cast Iron Sinks."—*Princeton Tiger*.

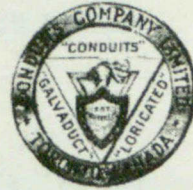
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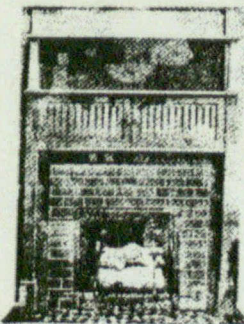
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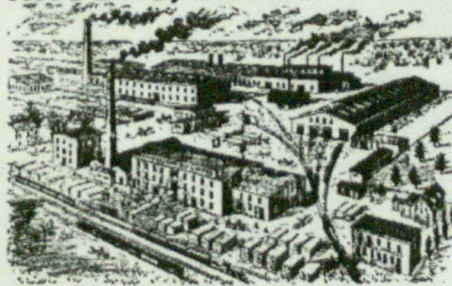
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