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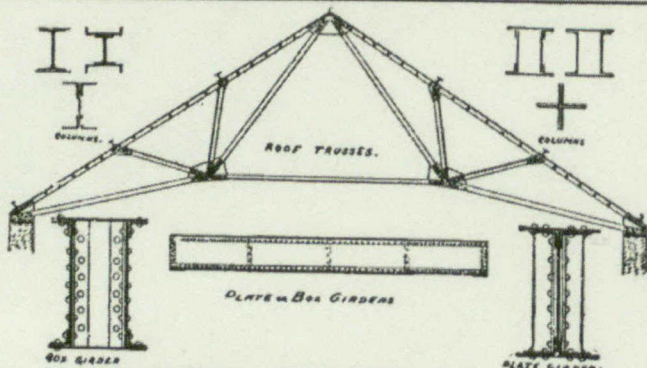
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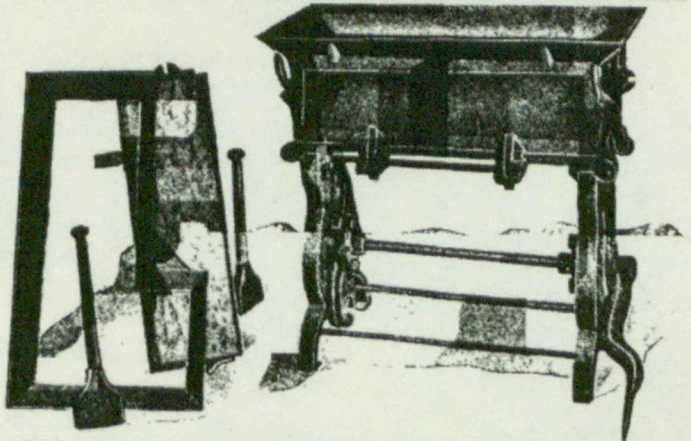
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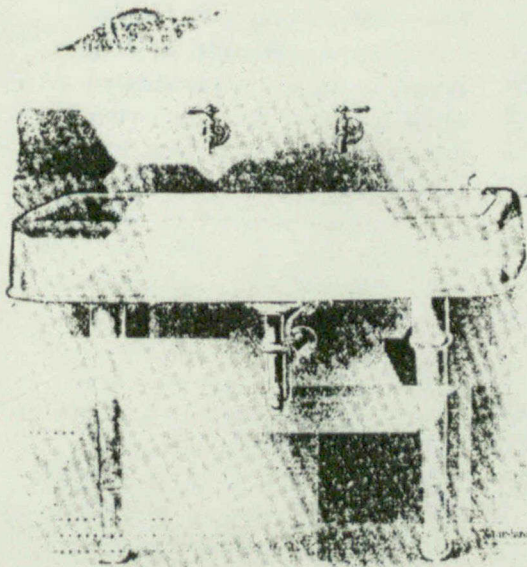
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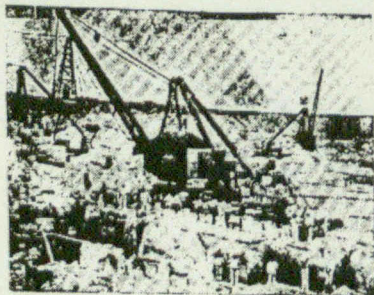
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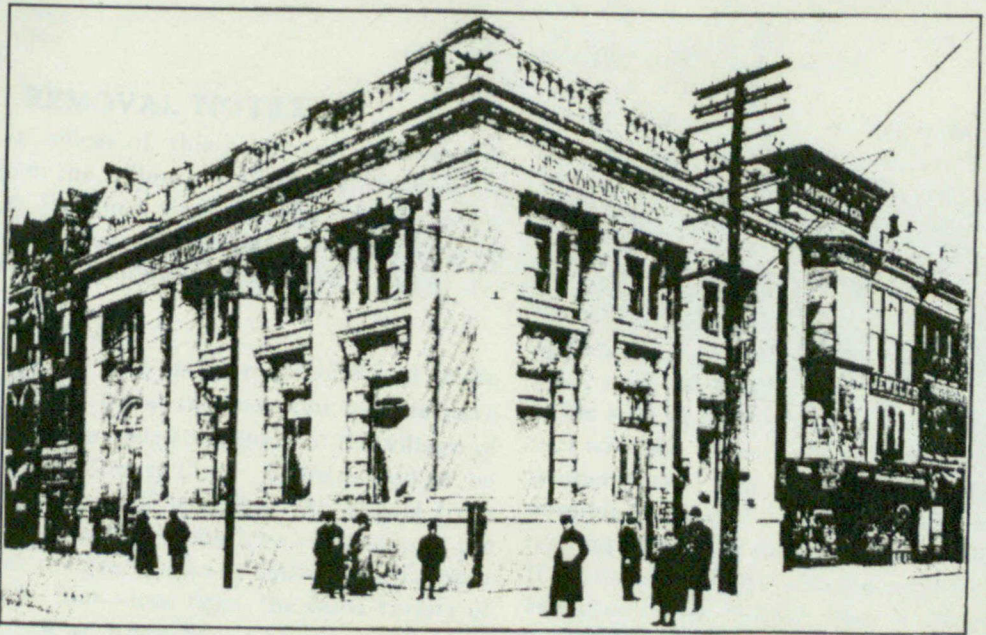
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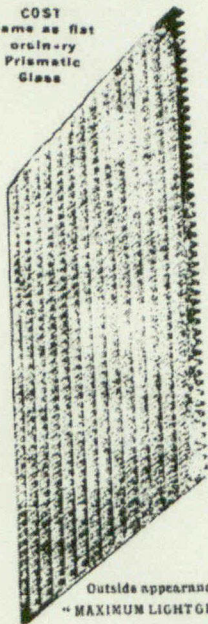
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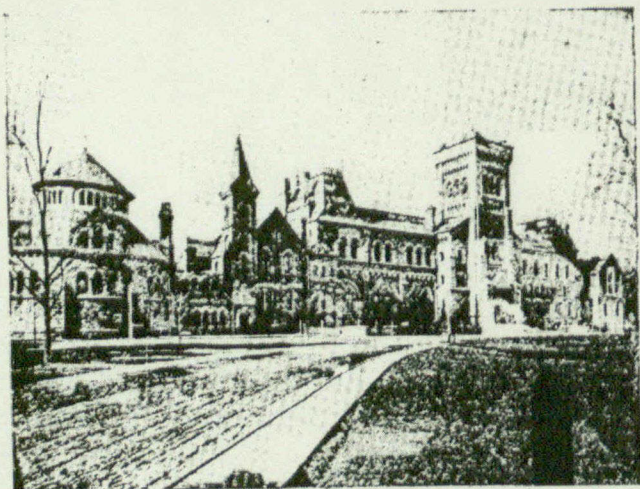
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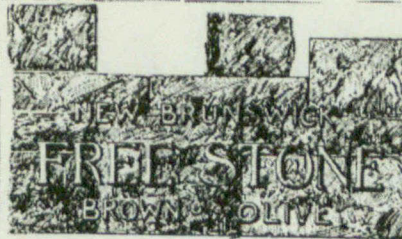
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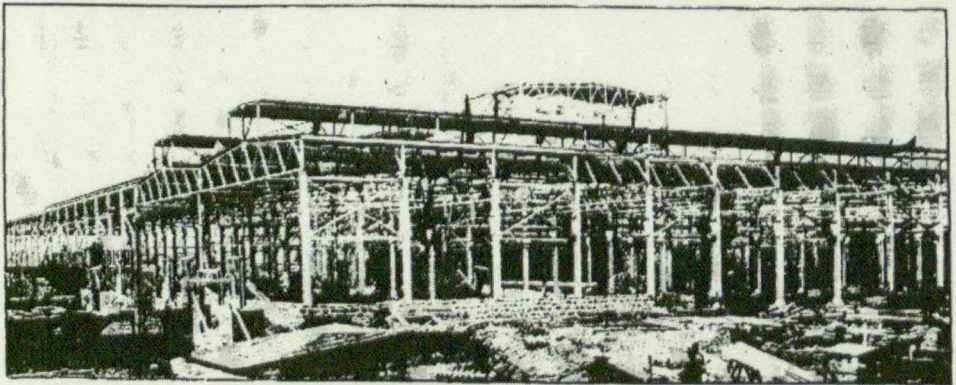
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MARCH, 1906.

ILLUSTRATIONS ON SHEETS.

Views illustrating Prof. Nobb's paper on European Official Architecture.
Canadian Architect and Builder Competitions for a House of small cost in a Country Town. Designs awarded First and Second Prizes.
Dining Room Fireplace at the Nook, Bermingham.—Messrs. Crouch and Butler, Architects.

ADDITIONAL ILLUSTRATIONS IN ARCHITECTS' EDITION.

Studio Club Toronto, Sketch for Village Cross, Awarded First Mention, by Mr. W. B. Van Egmond.
Sketches in Old Quebec, by Mr. G. Roxburgh Smith, Montreal.

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REMOVAL NOTICE.

The Montreal offices of this paper will, on May 1st, be removed from the Alliance Building to Room B 34, Board of Trade Building, St. Sacrament street, where our friends and business acquaintance will always be welcome. The telephone number will remain unchanged, Main 2299.

Granite in Ontario.

Red and grey granite said to be equal to Aberdeen granite have been discovered in the neighbourhood of the village of Bancroft, Hastings, County Ont. There is said to be also a remarkable vein of marble. An expert from Akron, O., (symptomatic of American ownership of the quarry) says that the granite can be delivered in Toronto for \$1.25 a cubic foot—less than the same variety of rough block costs at Aberdeen. So they will have granite to burn in Toronto.

Permanent Building Exhibits.

Baltimore and Pittsburg building journals have been commenting in terms of great satisfaction upon permanent exhibitions of building materials which have been established in those cities, by the Baltimore Builders' Exchange and the Pittsburg Builders' Exchange League. Space was taken up at once by exhibitors and it is asserted that dealers and manufacturers are already feeling the benefit of exhibiting their material. An argument in favor of such exhibitions is not necessary; it is only a question of when the condition of the building business justifies their establishment. We commend the matter to the attention of the Montreal and Toronto Builders' Exchanges to decide that point.

A New Light on the Care of Boilers.

At the recent Clayworker's Convention at Hamilton some remarks made by Mr. Wickens upon the practice of putting oil in boilers (to remove scale) has an interesting application in domestic work. Mr. Wickens condemned the practice because experi-

ments indicate that oil on the inner surfaces of a boiler prevent the communication of heat from the fire to the water. For the purpose of testing the matter, he says, the Manchester Steam Users' Association built some experimental boilers. Having first tested the efficiency of a boiler when clean, they emptied it and painted the inside with a thin film of oil. Heat was applied in a mensurable manner by Bunsen burners. They took the temperature of the metal on both sides—the side in contact with the fire and the side in contact with the water. The difference between the two temperatures was 299 degrees, when the thinnest possible coating of oil was applied; and, with a thick coating of oil, the difference amounted to 690 degrees. If oil thus interferes with the conduction of heat, what becomes of the advice that is usually given householders as to oiling the inside of their hot water system if they empty it? The trick is supposed to be to introduce a sufficient quantity of oil into the expansion tank and then (having of course checked the supply, if it is automatic) to draw off, from the bottom, all the water in the system. The oil will follow the retreating water and coat the inside of everything with that very thin film which was found so effective to prevent the communication of heat from iron to water. The presumption is that, (to say nothing of doing some work of the same kind in the boiler), it will prove equally effective, upstairs with the radiators, in preventing the communication of heat from water to iron.

English Cathedral Stones in America.

An English journal says that some of the stones which it has been found necessary to remove from the Bell Harry Tower of Canterbury Cathedral, in the course of its reparation, are to be sent to Washington, to be incorporated in the new cathedral there. This is not the first time that old stones from England have added an interest to buildings in America. Some historical connection between the new building and the old has usually given the motive, and adds to the sentiment which the old stone inspires. The town of

Salisbury, in Connecticut, (so named because it was originally settled by a colony from Salisbury in Wiltshire), when its public library was being built, procured from the cathedral yard of the parent town a carved stone, which formed part of a heap of such rejecta there but, in the library, has a place of honour as a central object over the mantel piece in the reading-room; where it is not only in itself a quaint and interesting ornament but serves to associate the little town with the Englishmen who founded it. The window tracery from the church of St. Botolph in Boston, Lincolnshire, which is built into the cloister arcade of Trinity church in Boston, Mass., has the same sort of association attaching to it; intensified by the fact that John Cotton, who came to New England from Boston in 1632, had been, for twenty-one years before he left England, vicar of St. Botolph's. There is a more private example in this country, where a stone, taken from the ruins of an ancient family seat in England, and carved with the ancestral coat of arms, ornaments the entrance porch of the eldest son of the Canadian branch of the family. Here is a good kind of memento collecting.

Over Specifying. If architects are to use standard specifications, which the hurry of business operations seems to make necessary, it would be at least well to have more than one standard, and to take some initial pains, even at the expense of initial expenditure of time, to get the standards right for the kind of work. Most men, after all, have a practice which does not vary much in the range of subject matter; and buildings of one class by the same designer are as much like one another in the materials of their construction, as are boots of one class by the same maker. Why not have a standard specification, for each class, that will truly express the condition of material and workmanship that are expected for the money and can be insisted upon. To specify clear pine flooring not over three inches wide, and take 6 inches with knots, is to establish a state of demoralization that will produce nothing but bad work. If there is to be no standard fixed otherwise than by the point where the will of the architect and the will of the contractor reach a state of statical equilibrium, the contractor will get the best of it every time—and does. The standard of ordinary work in this country is already not *what is right* but *what will do*. The builders run our building business, and are justified under the circumstances in doing so. If the specified standard is not genuine and intended to be carried out, the contractor can only set his own standard; but that will be set to suit his own purpose, which is to make money. The lower the standard he can get accepted the better for his purpose. The natural tendency of an uncertain standard in contract work is downwards. The cure is in reasonable specification, and carrying it out.

The Architectural League of America. The Architectural League of America grew out of the new life that has come to architecture in recent years. It seems to be an integral part of that life and is expanding its operations so as to keep pace with the expansion of architectural effort, both in degree and in the kind of work, which is con-

spicuous just now in the United States, as in England and the countries of Europe. The only Canadian body affiliated with the League at present is the Architectural 18 Club of Toronto, a member of which, Mr. J. P. Hynes, is chairman of one of the committees of the Club. There is no reason why the Province of Quebec Association of Architects and the Ontario Association of Architects should not become members of the League. It is a question whether it would not be to their advantage. From a material point of view there is the stimulation of the League's literature:—reports on current civic improvement; an illustrated volume compounded of illustrations of the best works exhibited in the local exhibitions; and doubtless other developments in this direction;—there are scholarships, for study in the architectural course of Harvard University, and a travelling scholarship; there is a bureau for the formation of parties to travel and study in Europe, apart from scholarship winning. In many ways—in ways no doubt yet to be developed—the League is so active that we may fairly look to it to lead the way in American architecture. There is no doubt, however, that to follow such a lead is to follow in the direction of Americanization, and this word has not been one of entirely favourable import hitherto. At this moment we learn that the competition for the travelling scholarship is to be held on Easter Sunday, as a convenient day for getting the men together. This is Americanization and it is not worth following. It is this undue estimate, of the importance of material things and undue yielding to their pressure that is such a signal modern instance of the truth that the penalty upon us is to be satiated with our own ways. It is this that is making the world unpleasant to live in.

TORONTO ARCHITECTURAL STUDIO CLUB.

For several years the various efforts to institute architectural design classes in Toronto have not met with the success that should attend so important a phase of architectural education.

This year the Toronto Architectural Studio Club have made a very successful start in the right direction from which much good should result to the members themselves and to the profession generally. This club is the outcome of meetings called by the architects in December and has been organized and entirely supported by the draughtsmen with the assistance of Mr. John M. Lyle who is acting as patron of the club. Problems are conducted along Beaux-Arts Principles, being set and criticized, until completion by the Patron and the final awards made by a committee of architects.

The first problem resulted in seventeen very creditable designs, and following were the awards made:

First mention.—W. B. Van Egmond.

Second mention.—Wm. Somerville, Norman Anthony, John Tsuvoi, E. H. Yeigh.

Third mention.—A. M. Weir, F. H. Banforth, J. J. Beck, F. A. Carney, R. Coutts, B. Frank Kelly.

"A Casino by the Seaside" is the subject of the second problem which is well under way and will be completed in April when an exhibition will be held of designs in both problems. It is the intention to start a new problem immediately on the completion of the present one, which will extend to the fall and will be a splendid groundwork for next season when it is

expected the problems will be in conjunction with the Beaux-Arts classes which are so successful in New York. Outdoor sketch work will also be taken up during the summer.

Much interest has been manifested by the members in their work as they are realizing the decided advantages to be gained by working together in a class of this nature, and they invited all Toronto draughtsmen desirous of a proper training in architectural design to take up the work of the next problem.

The club rooms are at No. 18 Richmond Chambers, 11½ Richmond street west, where criticisms are held every Tuesday and Friday from 5.30 to 6.30 p.m. and to which any person interested will be made welcome.

THE ONTARIO SOCIETY OF ARTISTS AND PICTURE MAKING.

The general verdict is that this is a good exhibition; that the standard of technique is high. That is true. The standard of technique is so high that we want something more; and it is a good time to talk about it. That is the general impression left by the exhibition upon the writer of this notice. As the exhibition will be over before this is printed we can only deal with the question in a general manner. It is not likely that the opinion expressed here is unique, and, so far as it is true, those who studied the pictures will probably find it recall feelings of their own which they did not take the pains to formulate.

There is an opinion among some artists, young ones chiefly, that a slice of nature is a picture. The writer recalls a conversation with a young artist, (female); fresh from study then; with the bloom of either London or Paris upon her, and all the dogmatism of discipleship in teaching not yet fully understood. The conclusion we arrived at was that a slice of nature is a picture and that the writer, in wishing to select from nature, is following the way of him who was a liar from the beginning. Let that be so. It is only a matter of words. We may extend the word picture to cover almost any graphic representation, and agree with Bacon that "A mixture of a Lie doth ever adde Pleasure." But, if a straightforward study is to be our whole work, it must be carried out to such an extent that our pleasure is in the carrying out. Impressions or decorative effects, will not do here; the essence of these is composition.

But we do not find in the gallery any extract from nature that can pretend to such greatness in technique, or such effectuate development of the beauty of details, that our delight is in these and we value the extract as an extract. We should be glad to see some work of the kind. It is a worthy field of effort, or at any rate an honourable road by which to ascend to the greatest achievement. All the great men have approached greatness by way of it, and it must be the only sure road to greatness in art, for the distinguishing mark of all great art is delicacy.

The other field of effort is composition; still the representation of nature, but its representation with selection of facts, so as to express an idea.

That an artist should fail to either make much of the objects he admires or to make much of the idea they suggest seems to a layman like working without a motive.

Is a picture much to ask for, because it deals with

ideas? Ideas are not all transcendent, but are of all degrees, like the race of men. We need only ask from a painter the idea he has, and we may be quite sure that somewhere among "the bourgeois who carry the purse," will be found one to whose mind it appeals.

The scene before me as I write suggests that a study of nature will best enable us to see what goes to picture making; for, the view up King street, (Toronto) out of my office window, strikes me, at the present moment, as a picture. It does not always strike so; then here is an opportunity to find out something of what goes to make a picture. This is March 19, the snow storm of the season. The air is full of a driving snow that obscures detail, so that the buildings appear as masses only, (and the situation is favoured in its building masses), rising from the snowy street to the gray sky, against which they are defined, sometimes by dark outlines, sometimes by ledges of snow on the cornices; and the general mass, so subdued in tint that it is hard to distinguish brick from stone, is delicately slashed with white, from snow lying on the projecting features of the buildings and piled on the sills of the windows and recesses which enrich the building masses with patches of a slightly darker tint. Down on the street the black figures of foot passengers serve a like harmonious function, by carrying the dark of the buildings into the white wedge of street. They, (almost entirely men), hurry along with heads down; giving a greater impression of the press of business than one receives in ordinary weather, when people stroll along at their ease and may be out for pleasure. The street cars pulling up at the corner every moment, each with its load of snow on top, add to the impression of how the daily life and labour of the city goes on continually, no matter what the weather. The whole of this, seen through the framing of a large window, and all pulled together into a gray harmony by the snow which fills the air with hurrying flakes, not in an even tint but in irregular clouds, strongly reinforced occasionally by drifts streaming from the roofs, where a stronger gust than usual strikes them—all this makes a picture. The question is wherein lies the pictorial essence. It is not all in the suppression of ugly detail, (the overhead wires are overpowered for once!), for the same view on a brilliant day is also a picture. It is not merely in the obvious breadth of effect. All effects are broad. The less obvious require the greater master to represent and therefore ought, and in fact do, make the greater picture. To seek only the obviously broad, or to simplify down to an empty breadth, is the practice of our decorative landscapists; with whom we have a quarrel on that account which it will be necessary to ventilate in another number, for want of room in this. The pictorial quality of this fine scene before me seems to lie in its definiteness. It has strong character, which possesses the mind and suggests ideas. The nature of the idea and the way of expressing it will vary with the artist. The grandeur of the storm is the great thing no doubt and it may fairly be said that the man who best represents that as his whole theme does the best service to the possessors of his picture, as he gives them the occasion for ideas of their own to arise. But pictorial art has its limitations. It is not possible to express the whole truth. Something must be suggested, and that

is where the artist comes in. We are all familiar with the whitening bones of horses and the ruined remains of waggons in the foreground of a prairie scene, conveying the suggestion that, though we can see but little of the prairie in the picture, it stretches many days' journey behind and probably many days' journey ahead. The ocean is a paltry thing to see; about eight miles is the utmost extent of it presented to the eye from the deck of a ship. It is a poor spectacle, except in a storm; and even then one is not happy with it. "Is this the mighty ocean," says the poet, "is this ALL." If a poet can get no further than that, what is the use of a painter representing it baldly and without suggestion. Some men on a raft, straining their eyes towards the empty horizon, would bring home to one the fact that there is a beyond full of unknown possibilities; but this is a dramatic and painful circumstance to disturb ourselves with and, worse than that, it is unusual and will not serve our purpose half as well as the simple everyday phenomenon of ocean life—the appearance of top masts above the horizon, before the vessel comes in sight; or the lingering of a steamer's smoke above the line after the ship itself, funnel and all, has dipped below. Some suggestion, some selection of incident, animate or inanimate, is necessary to convey the whole truth of a scene, the idea it aroused in the painter. Turner has a view of Salisbury Plain with a retreating thunderstorm and lightning streaming from it the ground. In the foreground is a dead sheep, with its lamb bleating beside it, which marks the recent passage of the storm and brings to our mind what he cannot depict—the noise and danger of the storm beyond us and the quiet and desolation it has left behind.

So, in our storm; we want more than a mere attempt to represent the appearance of the weather. There are accessory incidents which turn the mind, in one way or another, to conceive more fully what it was like. The choice depends upon the artist. One man may enjoy the accident of the electric railway's sweeper passing and the clouds of snow it whirled out; I have preferred to emphasize the *city* in the storm, and suppressed the sweeper which, (besides being too overpowering as an incident), in sweeping the tracks, swept the street clear of people, who dived into doorways as it passed and for the moment depopulated my city of irrepressible toilers.

The sparrows too are an interesting incident. They flit about apparently unconcerned, looking very black, in the branches of a tree below which stretches its black arms across the road, (speaking in terms of perspective), and makes a valuable connecting link between the black building masses on each side. An old master or a great master would certainly work in the sparrows as a note of relief in the strenuousness of the storm. I confess insufficiency and place them here as a separate idea, like a little etching on the margin of a big one.

Surely—to return to our subject, the want of apparent purpose in so many of the pictures at the Ontario Society's Exhibition—it requires no great genius to perceive the makings of a picture in a scene, and the faculty must be cultivable by practice, so that the professional man will far exceed the layman in this perception. And he gives pleasure to the layman just in proportion as what he sees is worth seeing and as he can express it so that the layman can see it too.

CANADIAN ARCHITECT AND BUILDER COMPETITION.

A HOUSE OF SMALL COST IN A COUNTRY TOWN.

MACBETH.—Undoubtedly first. It is a convenient arrangement which will build well, and has at the same time the necessary elements of picturesque interest both inside and outside. The questionable points are remediable. These we should consider to be: (1) The sacrifice made in the width of the dining and living rooms for the sake of having a portion of the verandah sheltered in that way. The great value of this form of recessed shelter is the shadow it casts, (as will be seen in the rear elevation), but this effect though highly delightful to the eye of the mechanic (as he consults his sundial), requires the dining room to depend too much upon light from the side, which it was intended that the narrowness of the lot prescribed for this competition should discourage. To light a living room by a window three feet from the boundary line of the lot is bad work. (2) The seat in the hall would in practice be turned into a coat closet, and the question is whether it should not be made so at once by the hand of the artist. He would probably do better service to the hall's beauty by providing for its perpetual tidiness than by giving it that suggestion of refined and studious repose which constitutes part of the beauty of an alcoved seat. The mechanic and his young family, (a mechanic's family is always a young family), will do little sitting about with books in their hands. (3) There is not much wall space in the kitchen, and it is a question whether the pantry would not be better entered from the kitchen porch, (which does not require two doors). (4) There may be some question about the step from the hall to the rooms but there is no question about the beauty it adds to the house, and fortunately it serves a useful purpose at the foot of the stair in making an entrance into the kitchen at that point compatible with headroom in the cellar stair.

MOGUL.—Plan very good. Drawing decided and indicating material well except perhaps roof which does not accord with rest of drawing. Faults, too many windows and expensively attained verandah with foundations as costly as house. Canopies over windows and dormer treatment of doubtful value considering the cost.

ECONOMY.—The plan is a plain plan which, though good in the main, seems to lack originality. It might be much improved by a little more thought. Exterior shows proper use of rough cast—on an upper storey protected by eaves and out of reach of wanton injury. Drawing sober and good without dash. Drawing reserved for publication.

CANADIENNE (girls head in tuque).—The effort to give an effect of space by opening up the rooms is commendable, but there is much to be questioned about the comfort of the arrangement. Chimney not bulky enough for suggested stone, and upper part of stack small and tame. Drawing shows hesitancy.

FACTUM EST.—This designer has fairly met the terms of the problem and therefore gets place above what either the artistic conception of his plan or its artistic rendering would warrant.

His plan is similar in outline to that of Economy but much more compact. A good enough plan of the angle shape which too many of the competitors have favoured

above the square form we think. The sitting room, with front door opening into it and staircase proceeding from it seems to be transformed into that uncomfortable object of some women's ambition known as a "reception hall". That it is intended for more domestic use is shown by the piano. Factum Est is to be commended for laying down his furniture in the plan; though this practice need not enter into the drawing of any but the sketch plan. As to the execution of drawings would say that a wash drawing should have less line and a line drawing less wash. The coloured perspective is juvenile; not so bad in tone of color, but lacking quality of light. If the position of the larder were changed, the chimneys could be grouped into one stack which would be better. Drawing speckled and uncertain.

Drawing reserved for publication.

DOMINION.—With the exception of the verandah, which is unduly costly, this is a feasible house and the most interesting of the original plans, but it has too many faults for a good place; faults which seem to indicate want of attention to practical matters. The verandah, for example, besides having only five feet of width, as a result of the expense of building it in the manner drawn, occupies at its base the whole width of the lot, and the eaves project on the neighboring lots. The columned archway to the living room does not suggest a mechanic's cottage; and comfort, with the front door so close, would be better served by a door. The dark pantry is quite unnecessary; for the larder might take the place of the coat closet; the kitchen entry be (more conveniently) in part of the present pantry space and the pantry moved up to the window. A coat closet if needed would come out of the hall, leaving only a portion of the stair open.

OWL.—A good plan with originality in position of stair; but think one lean too from front of gable might be worked with advantage. It is not good practice to make the middle of the three gable windows higher than the other two. Drawing clean but lacking blackness and vigour.

ICTINUS.—Is good in plan with space well utilized; we think, however, that east window of dining room should be dispensed with. The four gables necessary to make 1st floor available are too much and a little extra height of wall would dispense with those on front and rear, and there would be gain in repose. Drawing clean and with certain vigor but hardly correct in scale; the window bars and other features being coarse. Drawing reserved for publication,

(1,500).—At first sight a good plan with just sense of space values, but on second thoughts would judge single nook spoiled by necessities of traffic to kitchen and to upstairs. Drawing clean but crude. Drawing reserved for publication.

PALLAS.—The wide single pane windows of the exterior are on a different scale from the general composition of the house. The interior is greatly wanting in simplicity. Drawing wanting in decision.

511,15.—A story and half house with bedroom and bathroom downstairs to overcome lack of space in half story. This is neither comfortable nor really economical. If there is to be parlor in this class of house, think fireplace should be in dining room which is used as sitting room.

X.—Plan simple and provides the accommodation

fairly well. Suggest steeper roof and more accentuated gables as improvement to front. Drawing rudimentary.

HOPE.—Drawing weak and undecided style of house; two stiff and German like for good Gothic; plan not bad but too spreading; and hall and stair case pretentious for house of this class.

N.O.T. PEN.—N.O.T. Pen is to be congratulated on putting three elevations, a perspective and two plans of an American Gambrel roof house, as good as the majority of such, on a piece of paper $7\frac{1}{2}'' \times 12''$. The drawings denote considerable knowledge but he has put absurd limitations on his work by using such a poor little bit of absorbent paper.

WHEEL OF FORTUNE.—Is strongly reminiscent of a style of city house which never had any reason for its prevalence, being without distinctive character as a home. Drawing neat and if done by young person gives promise of better things when confidence of touch is gained.

OUR ILLUSTRATIONS.

CANADIAN ARCHITECT AND BUILDER COMPETITION. A HOUSE OF SMALL COST IN A COUNTRY TOWN. DESIGN AWARDED FIRST PRIZE, BY MR. E.H. YEIGH; DESIGN AWARDED SECOND PRIZE, BY MR.

W. B. VAN EGMOND.

Comment upon these designs is included in the report of the judging committee on page 36.

VIEWS IN BERLIN AND ST. PETERSBURG, ILLUSTRATING THE PAPER BY PROFESSOR P. E. NOBBS ON THE OFFICIAL ARCHITECTURE OF EUROPEAN CAPITALS.

DINING ROOM FIREPLACE AT THE NOOK, BIRMINGHAM, ENGLAND. MESSRS. CROUCH AND BUTLER, ARCHITECTS.

Messrs. Crouch and Butler are the authors of a book called the Apartments of the House which errs on the side of over culture of antiquity. Our illustration is an example in their own work of their deduction from old examples that half timbering should be shown on the interior of a house in the construction of which it has place.

ARCHITECTURAL STUDIO CLUB, TORONTO. DESIGN FOR VILLAGE CROSS, AWARDED FIRST MENTION.

Under this general term was included any central object, for a cross-roads or common, having some public utility—as a clock or fountain.

We have obtained this drawing partly with the design of calling the attention of Toronto students to the advantages of joining the club.

The account of the club on page 36 has been furnished us at our request. It should be added to that account that the club has a constitution and fees but membership is unlimited.

SKETCHES IN OLD QUEBEC BY MR. J. ROXBURGH SMITH, MONTREAL.

Our reduction of these very nice pencil sketches has not done full justice to them. While we regret to be obliged to say this we take the opportunity of warning students that the pencil drawing and washed drawing are very difficult to reproduce with an effect equal to the original. If they want to have sketches that will reproduce well, they should draw for reproduction—that is in line and with a material that is truly black, as India ink or crayon.

THE OFFICIAL ARCHITECTURE OF EUROPEAN CAPITALS.*

Mr. Chairman and Gentlemen:

It is with very special pleasure that I find myself again before you after a lapse of two years, for the kindly welcome which you extended to me when first I visited Toronto as your guest is one of my most cherished memories. I was then new to Canada and to my duties at McGill and had been here just long enough to fully appreciate the difficulties of my task and not long enough to realize how best to assail the problems that presented themselves to me. Your sister association had not taken any pains to veil its candid opinion that a school of design at McGill was not to be taken seriously. It was thus with very uncertain feelings that I journeyed hither, in 1904, and I am delighted to have this opportunity of thanking your association for the moral support I then received—real'y gentlemen I went back from Toronto on that occasion very greatly strengthened by your kindly welcome and I find myself again among you with sincerest pleasure.

I must congratulate you gentlemen on the spirit of striving after better things which the subject of this year's conference makes patent. Let us hope that your example of civic pride and interest in the questions of city improvement may one day be felt even as far as Montreal and may help to bring even her authorities to a sense of their responsibility and duty to the future inhabitants.

Our theme this morning is the Official Architecture of the European capitals and from its nature this discourse will have to resemble somewhat a "personally conducted" lantern show to some extent. It is, however, not part of my intention to bore you with anecdotes, name or dates, and I may as well say at once that the important points, I wish to bring out, have not much to do with the actual architecture we are going to look at which, as a body of work, I find inexpressibly uninteresting.

First, we shall hastily review the ancient world's official architecture with a view to forming an opinion on what such work has always and should ever express. The origins of the modern school of official architecture in France will be touched on, but the scope of the paper will not admit of any serious consideration of Paris; which may be the less missed as it is so well known. With London we shall have nothing to do; not because official art is there wanting, but because her official buildings are in a class by themselves, not belonging to the general school of work inspired by the Grand Siècle in France.

St. Petersburg, Berlin and Vienna are our particular prey this morning, and after reviewing these we shall formulate some theories and derive some lessons. . . .

What precisely is meant by official architecture may be best explained by a glance at the history of our age.

I hold most strongly that in general, rapidly traversed history is always dull; but it is essential to my effort to analyse what official architecture does and should express; to trace its earlier manifestations. I beg your patience while I say a few words on the official architecture of Rome, which was the link between the ancient art of Greece and the modern classicism initiated at the time of the Renaissance in Italy.—For it was from the Roman and not from the Greek remains that the Italian architecture of the XV and XVI centuries derived the traditions which have ever since remained the basis of the language of official art.

M. Viollet le Duc in those lectures, which in spite of the way that archæologic research has tended to upset his favorite theories, will always remain a source of immense inspiration to those of us who take the trouble to ponder over the whys and wherefors of our art, has aptly summed up the Roman position with regard to art, maintaining that the art of government of men was the one native and natural accomplishment, and that the Roman gladly borrowed his plastic art from those he conquered but used it then in a characteristically political way for the glorification of the *Senatus Populusque Romanus* and for the good of the conquered people.

The great combined groups of buildings set out in axial systems were the Roman contributions to our subject; and not only in Rome but in all the provinces it was the policy to erect official Halls of Justice, baths, theatres, temples and monuments.

Such, then, were the aims and the ideals of Roman official art—art definitely fostered by a government for definite political purposes for the first time.

Christianity with its humble beginning was destined over and over again to manifest her inheritance of Roman ideals by great architectural enterprises which cannot be described as other than official.

Santa Sophia at Constantinople, finally dedicated by Justinian in A.D. 563, was the work of one of the last great builder Kings of the ancient order of things when war and building were the chief duties of Kingship.

The building of the Gothic period is of an essentially different intention from the official work of the ancient and the modern world. It is in spirit spontaneous as opposed to being inspired. Cities and nations united to engage in great architectural enterprises it is true, but the political stimulus is absent. Even in the instruction of the Florentians in 1294 to Arnolf, the architect of the cathedral—"to make a design with the most exalted and most prodigal magnificence in order that the industry and power of man may never create or undertake anything whatever more vast or more beautiful"—the note of pious sacrifice to the glory of God is more clear than the note of civic pride, which is also, it must be conceded, present.

Leaving the Gothic Period as essentially non-official, the next rkl nada on our course is the erection of St. Peters at Rome. Founded by Pope Julius II in 1506 as a private mausoleum proportionate to his sense of his own dignity, and completed in 1626 as the central church of christendom, this building expresses the close association of Christianity and Neo Paganism in its time. The Pope had become the true successor of the Roman experts and, as Symonds aptly says in his life of Michelangelo, "the new temple embodied an aspect of Latin Christianity which had very little indeed in common with the piety of the primitive church. St. Peters as we see it now represents the Majesty of Papal Rome. It is the visible symbol of that Schism between the Teutonic and the Latin branches of the Western church, which broke out soon after its foundation and became irreconcilable before the cross was placed upon its cupola."

Besides St. Peters and the many palaces of the princes of the church, we have in the group of buildings in the capitol, a deliberate reminiscence of such great schemes of official art as the Forum of Trajan.

The XVII and XVIII century official buildings of Paris, and even more, the arrangement of public places by the King's architects, must be touched on (though I do not propose in any sense to review the official buildings of the Paris of to-day). These works constituted the models for all the European official architecture, even as the French official system of administration, as evolved in the Grand Siècle forms the model European government to this day.

We must now turn to the German Capital.

Berlin was a very unassuming business city till after the Franco-Prussian War, for it was with the milliards extracted as war indemnity from France that the Imperial government set about adorning its capital.

The Palace and the old Brandenburger Thor, at the entrance to the park, gave the cue to the city improvements commission; and the great boulevard known as Unter den Linden connects the palace with the park.

A glance at this quarter of the city shows how active the authorities have been during the last 30 years; for the "Prussian Diet" the "Reichstagsgebäude" or imperial parliament house, the museum and picture galleries and the Cathedral, are all modern; as are also the University buildings and technical schools, which, under so paternal a government as that of the Hohensollerns, may well be classed as official.

These buildings need not detain us long. They are all externally well built and ably planned. They all lack to my mind the highest qualities of architecture. It is remarkable that the Teutonic temperament with all its intense sentimentality, extreme earnestness, and enormous vigour, fails so conspicuously in the arts. The essential coarseness of fibre in the German character permeates German art. The natural graces of the national character, the kindness, the sympathy and the culture seem strangely enough to fail to find expression in their art, and particularly in their official art, which is somehow always imbued with the bombastic swagger of the jingling spur and the mailed fist.

It may of course be personal idiosyncrasy on my part which prevents my appreciating German art. At least let me say that I do appreciate German kindness and German culture.

The intemperate swagger of German heraldic decoration has pervaded the *Denkmäler* or monuments, with which a keen sighted government has adorned the city and advertised the virtues of the Imperial house it serves.

Opposite the palace is an equestrian statue of the grand old emperor William backed by a colonnade and surrounded by

* Paper read at the annual meeting of the Ontario Association of Architects by Prof. Percy E. Nobbs, of McGill University, Montreal.

lesser groups. The whole conception is in the grandiose spirit introduced into architecture and sculpture by Michelangelo and elaborated under Lou's XIV. It is art of the kind which supplies all the needs of the beholder—a great banquet if you like and you must taste it all. Nothing is suggested and nothing is veiled in mystery.

Then again in that splendidly kept park the Tiergarten where, in order that the green carpet may reach to the very roots of the noble trees, different varieties of grass are carefully grown, we have an all but grotesque exhibition of imperial pride. Leading from that most blatant of all monuments of victory, which celebrates the Franco-Prussian war, we find a noble avenue lined on one hand with a set of monuments illustrating the long line from which the Emperor springs. Now many of these ancestors were very ordinary princelings and some were quite nonentities while the great Frederick and the old Emperor William were men of international scale.

I suppose the fact that the designers wish to express is that all these persons were equally great, and mainly great because they were ancestors of the Kaiser. Anyhow they all have equal honour done them in a series of designs in various styles all of a size and all of one scheme.

In the focus of a raised semicircle of white marble stands the Ancestral prince while on the dies of the balustrade behind him are found—busts of his two chief advisers. The national passion for order is well evinced in this absurd scheme for if the old Emperor William, Moltke and Bismarck make a good trio it does not follow that the local nonentities of Prussian administrators in other periods deserve recognition at all. This is not the way to express history in art—one page to the man—it is neither good history nor good art, and the chief interest to a designer is to note the cold scholarly ingenuity with which something of the decorative method of many centuries has been applied. (I use the word applied advisedly) to a Greek semicircular garden seat that focuses on the back of a Kaiser's ancestor, which appears of absorbing interest to the two henchmen behind.

Vienna is the centre of fashion for Eastern Europe, drawing to its mighty heart all the rank and style of not only the Austrian Nations but of English, Germans, Poles, Russians and Balkans.

A glance at the plan will show how this old city has been remodelled by wise official care. The original town is now enclosed by a car track instead of a wall and on each side of this main circular route we find noble spaces and parks with fine groups of public buildings.

As this great boulevard wheels gradually around we are saved the extreme regularity and monotony which characterizes the great Commonwealth Avenue of Boston. Interminable boulevards are, to my way of thinking, akin to nightmares. The sense of helplessness one feels, on looking both ways down a street which vanishes to the horizon, may be impressive but it is not comforting, if one has to get to one end of it in a hurry. Axial planning has become too axiomatic with the T square designers of modern cities, and I think such a system as that of Vienna with its noble axial groups of buildings set picturesquely about an ever turning boulevard should get more attention than it has yet got. Vienna is one of the most impressive capitals in the world. Nowhere has a sense of dignified luxury and pleasurable pomp, been better expressed in architecture. The buildings, themselves, are not very striking; just the ordinary civilized European classic; but the massing and the disposition are unexcelled. There is a good deal of official statuary in commemoration of the exciting history of comparatively recent times.

I shall never forget the hazy winter morning when I first strolled through the city of Vienna. Here the busy narrow streets of the old town contrasted with the wide park circle, with its great masses of building standing up in grey blue silhouette against the morning pink.

St. Petersburg or Petersburg, as those who have lived there call it, differs from the other European capitals in this that it was a city laid out and planned in modern times. In 1702 it was a swamp with a Swedish fort overlooking the river. The city rose at the command of Peter the Great, and the magnificent lay out of the plan was developed under Catherine II. whom, I regard as the last of the great royal builders of Europe. Petersburg is a city of brick and plaster. The classic Palladianism of its public buildings is only skin deep and requires continual patching and painting. The street architecture is tinted in the cheeriest colours; pink, yellow and pale green being the favorites; but blue and chocolate are often met with. There is thus not much in the way of nobility or dignity in the architecture, and the charm of

the place depends chiefly on the magnificent scale both of the buildings and the streets, and the skillful lay out of the city as a whole. To my mind the noblest official monument in Petersburg is the quay. On both sides of the river there are about 5 miles of red granite quays, the parapet consisting of great blocks which are simply moved out of the way when a barge unloads its cargo.

The famous Winter Palace is a plaster building, of pronounced Rococo type architecturally unworthy of its fame. It is painted in two shades of pink, and has a certain picturesque richness when seen across the river. The most original building is the Admiralty, which is painted white and yellow, with a green roof and a gold spire, and forms 3 sides of a quadrangle facing the river. The bottom square has unfortunately been built up with residences and palaces, but the two great archways abutting on the river some 400 yards apart form splendid stops to so huge a building. The delicate spire (and spires and towers have always been the strongest line of the Russian architects) is placed at the focus point, from which the three great streets of the city radiate, and gleams from miles away. There is no finer effect in city arrangement than that of a dome or spire at the end of a great vista of houses or an avenue of trees.

A glance at the plan of St. Petersburg will show that, if the individual buildings are spiritless, the *tout ensemble* is eminently interesting and noble; and, considering the flatness of the site, wonderfully picturesque.

As notable buildings I might mention (1) the Exchange, (2) the Holy Synod, (3) the Academy, (4) the University; all of which are strictly government works, or official in character. With monuments Petersburg is well supplied and I might mention first St. Isaac's Cathedral which was built as a thank-offering to celebrate the victory over Sweden when Finland changed hands in 1809; the dome of plate gold, about 1/16 of an inch thick, swallowed up nearly all the indemnity I believe. After the Russo-Turkish war of 1877 a great church was erected in Moscow in a similar spirit of victorious piety. Of the architecture of Moscow I need say nothing here for it is not only a thing very much by itself but essentially non-European.

The Russians are great bronze founders and some excellent statues adorn the public squares.

Having now reviewed as much official architecture as will afford us food for reflection we may consider a few points of a general nature.

Of the sameness of it all I shall have more to say in conclusion but we may here note that the classic style remains everywhere as the natural vehicle of official architectural expression. Gothic public buildings have been attempted at Manchester and at Westminster with mixed success, and there is to be said for Gothic, that great groups hang better together than when classic motif is resorted to.

Classic buildings suffer from indiscriminate juxtaposition more than Gothic buildings do, the scale in Gothic work being essentially persistent while in classic it is proportional to the whole. Buildings of equal height in one and in three orders simply ruin one another if placed side by side while any Gothic group is held together by the fact that mullions are never very much more or less than 30 inches apart.

There is therefore all the more reason why ample spaces and careful general schemes such as that of Vienna should be resorted to if classic public buildings are to be mutually improving instead of mutually destructive in effect.

Time does not permit me to say more than a word about Place and Street planning. Paris, which was ruined from the picturesque point of view when Haussmann drove its great boulevards for strategic reasons through the town, has come to be accepted as a commendable example of city layout. In a recent paper on the plans of cities and public places in the R. I. B. A. journal, Mr. J. W. Simpson has gone into this question of great intersecting thoroughfares, basing his observations on Herr Stübgen's monumental work *Der Städtebau* forming part of *Das Handbuch der Architectur*.

By the way, Wren's plan for the rebuilding of London shows us both the right and wrong kind of spider's web system.

Where streets radiate from a building or a bridge no harm results; but traffic is simply clogged by Union Jack plans, with a central fountain to make confusion worse.

Mr. Simpson's paper is a plea for the asymmetric or picturesque arrangement of open spaces, and what he has to say about placing monuments along side great buildings, by way of contrast in scale and diversion of interest is very suggestive. His

paper is a healthy protest against the axial T square planning which has made so many modern cities deserts of dreariness. By all means let us plan for symmetry, when an effect is wanted, and let us rejoice in long vistas, when there is anything at the end of the vista; but let us remember that the beauty of symmetry in a lay out cannot be at all enjoyed unless there is an asymmetric note by way of contrast.

And now we must say a general word on the official use of sculpture. It is deplorable how that noble art, once the handmaid of architecture, is following the lead of painting and degenerating to the manufacture of chimney piece ornaments and mere household gods.

England is worse off than any of the old countries in ornamental city statuary. The figure exalted upon a pedestal is about all the British Civic adorer's mind runs to. The French delight in mighty groups of vivid dramatic power; often in doubtful taste, but nevertheless "La Glorie" and "La Belle France" find true and generic expression in French public places and parks.

The Italian sentiment is newly revived, nationality expresses itself in equestrian statues of the Kings in great new squares; and neither the statues nor the squares are artistically worth the beautiful old work which is too often ruthlessly destroyed to make way for these official city improvements.

I do not think that great systematic schemes of sculptural adornment, such as that at Berlin, can ever be successful. The men and the events and the ideals to be so honored should be more discriminately chosen.

In spite of all we can say against the spirit and execution of the official statues adorning modern European Capitals, there is no denying that the intention is right. The noble epic art of sculpture should be at its best in dealing with great patriotic themes, and it is deplorable that, having such a history as we have, and such inordinate prosperity as we have, this empire of ours should find as little use for sculpture.

In conclusion gentlemen let me endeavour to answer two questions in the light of what we have been looking at.

First: What does official architecture as we find it in Europe express, as a direct sentiment?

Secondly: Judged from the ethnographic standpoint—by which I mean the consideration of architecture as the expression of the historic and social influences of the time and place in which it is generated—let us enquire why is the official architecture of Europe so similar in form?

Official architecture must express the sentiments of order, dignity, power and pride; for it is called into being by the exigencies of social organization, the end of which is government; and its aim must always be at once to express the dignity of authority and to foster the sense of loyalty to the community, which is ever the basis of power of the village, the city, the province or the state. The healthy competition of cities and the struggle for the survival of the fittest among the organized states of the modern world are alike the legitimate source of official architecture. The late Samuel Laing, in the conclusion of his treatise on modern science and modern thought, has pointed out that the good of humanity at large is too vast and incoherent a sentiment to adopt as a mainspring of human effort, and action and counsels the more limited idea of loyalty to the welfare of the community to which one belongs, as a surer inspiration of life. It is this sense of loyalty and pride that public architecture should above all things express—public self respect. Professor Baldwin Brown, of Edinburgh, wrote me a day or two ago "The best of architecture is that it is so democratic; appealing, whether effectively or not, to the public at large." It is the very thing about our art which has caused the wise rulers of a hundred generations to use this art in a political spirit. And this brings me to the second question—why is the official architecture so similar in form?

The spirit of our time is above all things this, that government has become a complicated science, and that, wherever one goes in civilized lands, the same system obtains. The welfare of the people may be regarded by officials as the means of ensuring the power of the state; or the broader view, that the power of the state is the best security for the welfare of the people, may be the ultimate test of policy and administration; but, whichever way the official mind regards its duty, the practice throughout Europe is the same. Whether the government be an autocracy, a limited monarchy or a republic, the official technique of modern states is all but identical. Now let us enquire whence this science of government has been derived. In two words

this question can be answered—Rome—France. A century hence it will be possible to add England; but the principles of parliamentary power are still in their infancy, as far as Europe is concerned, and the model of governance by a bureaucracy is still the European ideal.

The Roman ideal of a national mission, and incidentally of the place of art in the political system, is amply explored in Viollet le Duc's third lecture, entitled "a comparison between Greek and Roman Architecture," in the conclusion of which he says, of our own time, that it is "a compound of the traditions of classical antiquity, of the influence of the spirit of Christianity, and of the long struggles of the middle ages."

When we consider how all our systems of law are saturated with the principles of Roman law, the common law of Scotland and Holland especially; and also how the Renaissance in Italy revived for the modern world the Classic traditions of thought and literature; we see very good reason why modern states should carry on the traditions of Roman art, as an outward manifestation of the principles that underlie their very being. But there is a certain similarity in all this work, which is even more distinctive than the use of Roman orders. I refer to the obvious influence of the Academic school of XVII and XVIII century France. In her introduction to that intensely practical and suggestive work, "Art in the Modern State," Lady Dilke says: "to the student of the modern social system, (and I would add to the student of art), a minute knowledge of the life of France during the Grand Siècle is indispensable. The France of Richelieu and Colbert gave birth to the modern State; so that, if we would know anything accurately about the modern political and social organization, we have to look to the system which lies at the root of its growth."

Now a very important part of that system was the recognition by the State of the relations between art and industry, and the centralization of art education and of artistic effort by the Government of France under the enlightened Colbert, which resulted in the academic official school of architecture.

Not only did the European states institute government schools of architecture on the French system but these schools naturally carried on the French Academic traditions, and so it is that French influence on modern governmental methods is reflected in the French influence of modern official art. Lady Dilke further states that the Architecture of the Grand Siècle is not only all Royal but all monotonous and this characteristic has been accepted with the rest. It is indeed only during the last few years that we note any attempt on the part of Russian, German and Scandinavian architects to put something of local tradition into their work, as an expression of nationalist sentiment and a reflection of the Gothic Revival in England last century. Even the red tape chancelleries of Europe are beginning to tire of the dry formulae of the academic school. Still classic is the essential style for public works, and will probably always be so, and it is a source of immense satisfaction for us to note how the spirit of the freer classic of England is likely to express the development of the parliamentary system during the coming century.

What are the lessons then that this great body of official work can teach us which may be of use to us in the scheming out of our own great city problems?

First: I would say we have realized the importance of great buildings having great spaces about them, planned out with a sense of scheme. And this can only be contrived at a reasonable cost when the cities are young.

Secondly we see every reason for adhering to classic tradition for public work; but I would add a rider to this—that classic does not necessarily mean French academic and there is room in a scheme of formal dignity for national tradition. Let our classic be the English classic evolved by that great series of artists Jones, Wren, Hawksmoor, Gibbs, Adams, Chambers, and resuscitated with added vigour by Brydon and Norman Shaw who is still happily with us exercising a beneficent influence on the vast schemes of city improvement in Liverpool and London.

Gentlemen if ever you again honour me with an invitation to your conferences I hope you will permit me to choose for my theme the classic revival of the XIX century in England. Many schools of architecture are good and detectable for the cosmopolitan; but those that have a note of national temperament are best for those who have the good fortune to own a nationality; and it is in our public buildings above all that this note should find tuneful expression.

MONTREAL NOTES.

The approaching season promises to be a busy one for the building trades in Montreal. As last year the banking businesses continue to push forward in what is to them good investment and advertisement. The Royal Bank proposes to erect, in St. James Street, an imposing building, ninety feet in height, with a front of white marble. The dominating feature is to be an Ionic colonnade with pillars forty feet in height. The building is to become the head office of the bank. It consists only of three storeys which will be devoted to banking purposes. The architect is Mr. H. C. Stone. The Dominion Guarantee Company is to erect, at the corner of St. James St. and St. Michaels Lane, a three-storey office building which has been designed by Messrs. Ross & Macfarlane. The City and District Savings Bank is to build a new branch office at the corner of Ontario Street and Maisonneuve Street. Mr. A. H. Lapierre is the architect. The new branch of Molsons Bank, at the corner of St. Catherine Street and Stanley Street, from the designs of Messrs. Finley and Spence, is now completed; and the Bank of Quebec, at the corner of St. Catherine Street and Amherst St., by Messrs. Cox and Amos, is rapidly approaching completion.

Churches seem to have started on a sort of stampede from the central parts of the town to the outlying quarters. The Church of the Messiah, on Beaver Hall Hill and occupying the site of the original Beaver Hall, is now being converted, or shall we say apostatized to baser uses. The building was not without a real if humble architectural merit, though sadly marred by a tin spire and wooden traceries simulating stone. Its site on the salient portion of the bend of the road rising steeply from Victoria Square is one of charming possibilities. Nothing however need be hoped for here at present, as the church seems to be in process of being cut and chopped about to suit some kind of manufacturing business. The new church of the Messiah is to be built on Sherbrooke Street, near Simpson Street.

The Emmanuel Congregational Church is to have a new building on Drummond Street near Sherbrooke Street. The work was entrusted to the firm of Saxe and Archibald as the result of a limited competition; one of the first competitions, we suppose, to be conducted according to the new code of competitions recommended by the P.Q.A.A. which is thus beginning to bear good fruit. Mr. Darling, of Messrs. Darling and Pearson, of Toronto, was the assessor. The tower of this church, as shewn on the competitive drawings, is the choragic monument of Lysicrates; and, as the front porch is, within a little, the Erechtheum it promises to be a model of all the architectural virtues, neatly bound together. It is a little disappointing after this to find that the material is only to be light grey brick with sandstone trimmings. The seating capacity of the building is to be one thousand persons. The scheme includes large Sunday school and lecture hall and the cost is to be in the neighbourhood of \$80,000. In several other cases congregations are discussing the advisability of moving their tabernacles to points where they may fairly expect to be within walking distance of their members. The Italian colony is to build, at the corner of Dorchester Street and St. Timothy Street, a church and school,

on which they are preparing to spend about \$75,000.

The demand for apartment houses continues unabated; at least new projects go on to development. The Linton estate, on Sherbrooke Street, has not yet begun operations in this line; but it is understood that quite a large block, to cost \$750,000, is to be erected here. At the corner of Pine Avenue and Du-rocher Streets "The Pine Avenue Apartments" are about to be built, providing accommodation for thirty-five families. The architects are Messrs. Finley and Spence. The materials will be red brick and white sandstone. It is estimated to cost \$150,000.

An important work of a utilitarian kind will be a new warehouse for the Terminal Warehouse & Cartage Co., Limited, a building to cost 200,000 dollars. It is to be erected between Grey Nun and King streets below Commons. There will be six storeys, all of fireproof construction, no wood being employed; windows and doors being of iron. The walls will be of brick; the total floor area 120,000 square feet. A special feature of the building will be the wine vaults. Messrs. Marchand & Haskell are the architects.

Concerning the additions to be made to the Windsor Hotel, to be built on the site of the old Windsor Hall and adjoining buildings, one is glad to find that fireproof structure is being aimed at. The quantity of iron piping spreading like some strange creepers over so many down-town buildings, blossoming into water curtain nozzles in front of cornices and windows, bears witness to some hard thinking being done on the subject of fireproofing just now. The Hotel building is to be nine stories high and the drawings show a roof with high pitched curve, of a type which our reading of the building act had led us to believe was prohibited in Montreal, owing to danger to the public from ice falling from the eaves. In the matter of design the elevations do not aspire to much. The architects are Messrs. Hardenburgh & Bradford L. Gilbert, of New York. Their local confederates are Messrs. Hutchison & Wood. Not unnaturally the placing of this work has re-awakened to some extent the old question as to whether United States architects should not be excluded from practising in Canada till such time as this amiable republic shall see fit to permit Canadians to practice in their free and enlightened reservations.

The Province of Quebec Association of Architects has appointed a Committee on City Improvement. This consists of Prof. Nobbs, chairman, Messrs. J. R. Gardiner, J. O. Marchand, E. Maxwell, W. S. Maxwell and Jos. Venne. This Committee is putting itself in communication with the City Council and all associations interested in the subject. By this means the Association seems in a fair way to obtaining an effective influence in civic projects. Already the long discussed question of the mountain look-out has been referred to this Committee, and the standing of the members composing it is a guarantee that such matters will be treated in a broad intelligent spirit, free from suspicion of private interest. Some of the bodies which are taking an interest in the Committee's work are the Montreal Fine Arts Association and the Parks & Playgrounds Association. The latter body, which has lately been increasing in influence, has recently been applying for powers to hold property on an extensive scale, and is a society that exists purely for the benefit it can be to the public.

THE SKETCH CLUB OF THE P. Q. A. A.

STRUCTURAL STEELWORK.

On Wednesday evening, February 14th, Mr. J. L. Harrington, of the Montreal Locomotive & Machine Company, addressed the Club on the subject of Structural Steelwork. The system of tall framed building, he said, originated in Chicago, a city which had plenty of room for expansion and which adopted the system of tall buildings simply owing to the value of central building sites. New York soon followed; and in this case the naturally confined city limits formed an additional incentive to this kind of building.

As the most valuable recent collection of reliable and original data on all matters relating to the design of Steelwork in buildings, Mr. Harrington called attention to Mr. C. C. Schneiders paper read before the American Society of Civil Engineers. One of the most remarkable facts which Mr. Schneider may be considered to have established is that the actual load on the floors of large office buildings never exceeds 40.2 lbs per foot on any floor and that, considering the building as a whole, 17 lbs per foot is the highest recorded average. The heaviest load that is likely to occur is that of a portable safe which may be anything from 2,000 to 16,000 lbs. Special provision ought of course to be made for weighty articles of this kind.

As it is extremely unlikely that all the floors of a building should at any one time be loaded to their maximum, the building by-laws of some cities now permit a reduction in the calculations for each storey of 5 per cent. on the storey above until a 50 per cent. reduction has been reached. This the lecturer considered a fair and safe rule.

When a building is exposed to severe wind strains, as is very often the case, the wind braces should be an integral part of the framework of the building. It is not safe nor sufficient to trust to partitions, especially where these are only inserted after the framework is erected.

As regards the details of structural steelwork, Mr. Warrington referred to the divergence commonly occurring between the forms arrived at by calculation and those which are found best in practice. A method suggested merely by the calculation of a particular case is often so difficult of execution as to be unreasonably costly and in the end insecure. Hence the necessity of adhering to standard sections of materials and types of connections which workmen being accustomed to can make a thorough job of. The lecturer exhibited sets of blue prints showing such types of work.

THE LOUIS XV STYLE.

Mr. W. S. Maxwell spoke to the club on the subject of the Louis XV style. The French renaissance styles he said deserved study if only for the reason that they have exercised appreciable influence over half the world. The style of the period of Louis XV differs from that of Louis XIV in the introduction of a certain severity of composition. The period of the intervening regency was marked by a very appreciable improvement in the condition of the bourgeois class who began to build houses for themselves in great numbers. They generally preferred the country. Their homes were frequently characterized by an inferior taste, but as often display a great deal of good sense.

Under Louis XV it was felt that little was being done of any important nature in architecture, and

something like a revival of the magnificence of the time of Louis XIV was aimed at. To this end many fine blocks of buildings were erected in Paris, numbers of which, while externally resembling magnificent palaces, were internally divided into more or less modest dwellings. The King himself, tired of the burdensome magnificence of life in the great palace of Versailles, built the Petit Trianon in the grounds as a dwelling wherein a man might take a little real pleasure.

The architectural compositions of the time bear evidence of much studied elegance and gracefulness of line. Sculptural work is executed with astonishing technical skill and spirit, especially in the horses and other animals which the sculptors of the period delighted to introduce. Often enough these sculptures are open to the criticism that they are applied with little regard to their architectural setting.

The interior work of the period is the most characteristic and remarkable. Full and even loaded with detail it is yet arranged with art enough to carry it all off. The workmanship is of the highest order. The greatest artists of the day such as Boucher and Watteau did not disdain to apply their talents to the details of interior decorations. Boffrand was probably the most distinguished decorative artist of that or any other period. Restraint and dignity distinguish his work from that of his contemporaries. Whilst the details are endlessly varied the general scheme of treatment of interiors is very uniform. The floors are generally of marquetry in simple geometrical patterns. The walls have a low panelled dado with tall panels over, extending to the start of the cove which is the customary manner of forming the junction with the ceiling. Smaller pannels over the doors are favourite positions for decorative paintings. The panel molds break at the top into foliage, with pendants, garlands, etc., executed in relief in wood or plaster; delicate flowers being introduced with sparkling effect. In the painted decorations, the nude figures of the preceding epoch were supposed to shock the gay world of Louis XV., which delighted in daintily dressed shepherds and shepherdesses playing with swings, etc., an occasional little exposé intimating that the prudishness was not to be taken too seriously.

Mr. Maxwell illustrated his remarks by a large number of lantern slides which he had had specially prepared for the occasion.

GLASS SAND.

The manufacture of glass requires a purer sand than that used for any other purpose, and glass sand is therefore higher priced than other sands, says A. T. Coons in Mineral Resources of the United States. The chief impurities are iron, alumina and clay, which color the glass and give it a cloudy appearance. These impurities are removed by washing and sometimes, in the case of iron, with a magnet. The purity of the sand used is regulated by the quality of glass desired. Glass sand is mined in more or less pure state from deposits of sand, and it is also obtained as a rock easily disintegrated when exposed to the air, or from hard sand stones, which have to be crushed before used.

To renovate varnish work make a polish of 1 qt. good vinegar, 2 oz. butter of antimony, 2 oz. alcohol and 1 qt. oil. Shake well before using.

The Alza Company, Limited, of Montreal, whose advertisement will be found in the present issue, publish a number of excellent testimonials in favor of their Patent Window Device, the purpose of which is to facilitate the cleaning of windows without the danger which usually attaches to this work.

PINHOLE PHOTOGRAPHY.

It is not generally appreciated says H. Walker in *Photographic News*, that a knowledge of pinhole photography is decidedly advantageous to every amateur photographer. When it is realized that a lens is not absolutely essential for the production of a photograph, we know that, should we inadvertently leave our lens behind us, it is still possible to secure passable photographs with no other objective than that provided by a piece of cardboard which has been punctured by the point of a pin. Suppose for a moment that you reach some distant scene with the idea of enjoying a day's photography, and, as indicated above, you discover that your lens is not in your bag. What are you to do? The best course would be to go through your pockets to see if you could find a postcard, or other opaque piece of paper. If you have, take a portion of it and fix it in the lens flange, or panel, in such a way as to exclude all extraneous light, and then with a pin, prick as fine a hole as possible in the centre of the paper. You are now ready to commence operations, but what about the angle of view? Well, suppose you try a distance of 5 inches between pinhole and plate for moderate wide angle, and from 8 to 12 for narrow angle. If you are out for pictorial work pure and simple, the latter distances are to be commended. You will, of course, not be able to compose the view on the focussing screen, and, until you have had some experience of the work, you will have to exercise a considerable amount of faith as to what you are likely to include on the plate. If you are using dark slides a lens cap is unnecessary, and if the plates are special rapid, the sun shining, and the view open landscape, an exposure of three minutes will suffice. Where there is deep shadow that time may at least be doubled. A full exposure must be given, relying on correcting over-exposure in development. For slow plates the times given above should be doubled; and where the camera is extended beyond 8 in. a minimum of five minutes with special rapid plates should be given. There is equality of focus at all distances, and the finer the pinhole the sharper the image. The method described is a very rough and ready one, and such as would have to be adopted under the circumstances imaged.—*The Photographic Times*.

ART AND ARCHITECTURE.

Under this caption Mr. Chas. H. Watson of Toronto, Canada, recently read an able paper at the second annual convention of the National Cement Users' Association held in Milwaukee. Mr. Watson, viewing the subject from the standpoint of the manufacturer, spoke of the unsatisfactory nature of a large number of structures heretofore erected of artificial stone, but stated that the past two years had brought about considerable progress in this line and that manufacturers were commencing to realize the necessity of artistic and pleasing effects of concrete surfaces. He said the character of concrete structures depended upon two factors. First, design, which lies almost entirely within the jurisdiction of the architect, and, second, execution, which depends upon the contractor or manufacturer. Artistic effects depend upon the co-operation of the contractor with the architect. He believed it better to adapt material for its special uses rather than to endeavor to transform the material itself. He did not believe that it was a good plan for designers to use concrete to imitate other materials, and that architects should prepare plans especially designed for this material, instead of using the plans of a building to be constructed of some other material and substituting artificial stone instead of this material. He maintained that there were many different methods in improving the appearance of concrete structures and that the most successful had been the practice of finishing the surfaces by bush hammering or chiseling. Another good method of finishing was the removal of the cement or mortar binder from the stone ingredients or alternately washing the surface

with acid and water, or by washing out the cement with water while the product is in a green state. He maintained that stone should be selected to suit the design, and that the architect should become familiar with the exact product of different processes before adopting them for any special design. The development of the use of concrete blocks for ornamental building material was greater in countries where there was a scarcity of material for building such as in Germany and France. He spoke of the importance of cement manufacturers recognizing the necessity of manufacturing a high grade of cement suitable for this trade which required a non-staining, light colored and perfectly sound cement. Engineers, architects and manufacturers should work together to standardize the process of manufacture. He appealed to every engineer, architect, contractor or manufacturer, to assist in this work by studying the problem of bringing about the adoption of more artistic concrete structures. Mr. Watson's address was received with prolonged applause, at the conclusion of which he exhibited a large number of stereopticon views of various buildings constructed by the Roman Stone Company of Toronto, throughout different parts of the entire Dominion. These views were a revelation to the members present, who had no idea that such progress was being made in the use of cement in Canada. A discussion followed with reference to the ingredients of the stone and Mr. Watson stated that he used rubble stone graded in four different sizes, which varied from about the size of corn to dust that would pass a thirty mesh screen. The stone weighed when dry 129 pounds to the cubic foot, and its absorption was about 7 per cent., while that of the stone he used was about 6 per cent. He said the absorption of sandstone would run as high as 15 per cent.

SPECIFICATIONS FOR LIGHTNING PROTECTION.

A committee of the National Fire Protection Association has, after conducting numerous experiments and examining available data, formulated specifications for a standard lightning rod. This rod is not covered by any patents, and it is believed that competition will result in making an equitable price to all parties. Information recently given out by H. D. Davis, State Fire Marshal for Ohio, includes the following abridged specifications:

Protection against lightning is advisable on isolated buildings, and on all buildings having tall chimneys, steeples, high peaked or gable roofs or flag poles. One rod with proper air and earth terminal is recommended per unit of roof area as follows: Pitched roofs of metal, one each 2,000 square feet of ground area; pitched roofs other than metal, one each 5,000 square feet of ground area; flat roofs of metal, one each 5,000 square feet of ground area. Air terminals should never be more than 50 feet apart and each should be provided with its individual ground. A low, broad building of greater area than 75 x 100 feet can best be protected by an additional rod through the centre of the building.

The air terminal to be placed at the highest point of the roof or structure. Where there are two or more gables, or other projections above the roofs of nearly equal height, each to have an air terminal and all to be connected together. Where trees stand so close to a building that branches overhang or approach very close to the roof a conductor with proper earth terminal to extend along the trunk of each tree to near the highest branch top fastened by a band around the branch or trunk and equipped with a cluster of points.

Conductors to be put in sheet or tape form of either copper, weight not less than six ounces per foot, or iron weighing not less than 2¼ pounds per foot, the latter to be painted or galvanized to prevent corrosion. One-inch iron rod can be used to connect iron ground with copper conductor, the conductor terminating above the surface of the ground. Air terminals to be rods of iron or copper, not less than ¾ inch in diameter, with point cone shaped and height of cone equal to the radius of

the base. One foot below the point there should be a casting holding four copper points. Large chimneys should have a band of iron or copper not smaller than the conductor around the top 6 inches below the corbelling, and provided with copper point 1 foot long and $\frac{1}{2}$ inch in diameter. Terminals should extend not less than 3 feet above roofs or chimneys. Terminals can be satisfactorily made of $\frac{3}{4}$ -inch copper or iron pipe.

All joints to be made mechanically and electrically secure and then soldered. To be run down side of building where best ground is obtainable, preferably on the side most exposed to rain. Not to be run nearer than 5 feet to interior piping unless absolutely unavoidable. To be run as straight as possible, avoiding all turns of radius of less than 1 foot, and to incline downward throughout its entire course. Should never be insulated, but fastened securely to the surface. Must never be run through iron pipes.

Connections to be made with iron piping or castings to be made by screwing a brass plug into same and fastening conductor securely to it, then soldering. Or, with copper ground, by riveting and soldering, the connection then being coated with asphaltum paint. A copper plate not less than 2×3 feet by $\frac{1}{16}$ inch buried in permanently damp earth, not less than 4 feet below the surface, with 3 inches of crushed coke or charcoal underneath, and the same material above to within 6 inches of the surface of the ground. Or an iron casting so shaped as to have a number of pockets or cups facing upward. Should have not less than 6 square feet of surface. Should be buried with not less than 6 inches of scrap metal and coke under and 6 inches over same.

A proper ground is absolutely essential, and permanently damp earth is absolutely required.—*Carpentry and Building*.

A NOVEL ASSOCIATION OF ARCHITECTS.

Among the architectural associations of the country, probably the most unique is the Chicago Architects' Business Association. Some ten years ago the architects of the city concluded that there were a number of vexing problems that affected the welfare of the profession and which were of a nature that could not be advantageously cared for by the Chapter of the Institute. It was decided, therefore, to form a society to take up these questions which leaned toward the business of architecture, and the Chicago Architects' Business Association was organized. That there was reason for its being is shown by the fact that for a decade it has constantly gained in strength and influence, says a writer in the *Inland Architect*. It was the chief instrument in obtaining the passage of the architects' license law of Illinois. It has achieved many reforms in the conduct of the city building department and in the relation of architects to contractors, and has been largely instrumental in the revision of the building laws. Early in its career the association made a thorough investigation of the city building department and found, as was expected, an utter lack of competency among the heads of the department, and, to say the least, very lax methods prevailing throughout. There was no check upon the kind of building that might be erected by any owner who had influence with the department. So flagrant was this condition that there was no market for buildings that rigidly conformed to the building laws. They could not compete in price with the buildings of cheap construction, glossed over to present a fair appearance, erected by owners who were allowed to evade every building law in the code with impunity. These abuses the business association undertook to reform. They employed an inspector to visit question-al jobs and to report fully upon violations of the building ordinance. These violations were systematically reported to the building department but were usually defended or entirely ignored. The association thereupon took up the subject with the aldermen and mayor and forced the issue so strongly that an investigation of the department was made which resulted in ousting the building commissioners respon-

sible for the violations. The department was reorganized and has shown a great improvement. Special permits are now of rare occurrence and when issued are thoroughly investigated by the association, which usually succeeds in having them revoked.

Much attention has been given to a revision of the building ordinances and the dominating influence of the association has been shown in this direction. So careful and systematic has been the work in this connection that the association's printed records of the building laws and code are more accurate than those of the city itself. Many differences between architects as a class and building associations have been adjusted. The business association maintains an arbitration committee of seven members, who are frequently called upon to settle disputes and whose findings are accepted as final. A hand book is issued annually which contains the building and lien laws, papers read before the association during the year, besides much general information on building subjects, tables, etc. This annual is a source of considerable profit, as is the building contract form adapted to local needs, prepared by the association. Without these sources of revenue the association would be hampered in its work, much of which involves considerable expense. The initiation fee and dues are so low as to be favorable to the large membership that is desirable. Any licensed architect of the city is admitted to full active membership. No similar association exists elsewhere, but the success achieved by the Chicago Architects' Business Association is such that the architects of other cities may well consider the advisability of organizing along the same lines for the accomplishment of similar objects.—*The Ohio Architect and Builder*.

"PAUL'S CROSS."

In the north-eastern corner of the churchyard of St. Paul's Cathedral, close to the wall of the church, is the site of Paul's Cross, an open-air pulpit from which, from very early times in the history of London, sermons were preached and proclamations made. In several Continental churches—notably the Cathedral of Perugia—such external tribunes still remain, generally against the church wall, with access by a door from the inside. But Paul's Cross, the London mediæval and later example, was a detached structure. An illustration in the issue of the *Daily Graphic*, of January 27th, shows it as it was in its later days, with its little room, its projecting pulpit and enclosing wall, within which the privileged—sometimes Royalty itself—sat, and its open surrounding space where the citizens, seated on benches or standing about, listened to words of wisdom—or otherwise.

PREPARING A CANVAS COVERED PORCH FLOOR.

Answering a correspondent of that journal who asks how to prepare a new second-storey porch floor to be covered with canvas and then painted, a recent issue of the *Painter's Magazine* has this to say: "The floor should be oiled first and then coated with a very stout pure lead and oil paint, in which the stretched canvas is laid and nailed down with galvanized iron tacks. The canvas is then given a good coat of pure lead and linseed oil paint, on which a finishing coat of good floor paint should be applied."

The effect of retempering mortar of Portland cement and crushed quartzite has been investigated in the laboratory of the United States Office of Public Roads. There were five briquettes in each set of specimens, one set of neat cement and the others of 1:1, 1:2 and 1:3 mort r. The briquettes were made in three series, A, of mortar put in the molds immediately after mixing; B, of mortar allowed to take an initial set, and then broken up and made into briquettes; C, of mortar allowed to take its final set, and then broken up and made into briquettes. Series B showed practically the same or higher strength than Series A except in the 1:3 mortar, where the falling off averaged 81 pounds. Series C showed a falling off ranging from 5 pounds with 1:2 mortar to 117 pounds with neat briquettes. Enough water was used in tempering to give normal consistency to the mortar.

THE CHATHAM CENTRAL HEATING PLANT.

The City of Chatham has the distinction of being the first in Canada to install a central heating plant. The system is steam, installed by the American District Steam Company, of Lockport, N. Y., as an adjunct to the Electric Railway Company. The exhaust steam from the power house is used for the heating plant, and the shareholders of the heating company are the shareholders of the railroad.

Although new in this county, there is no reason for predicting anything but success for the system. The installing company have already over two hundred systems of the kind in successful operation in the United States. The waste by the non-use of exhaust steam in large works must be enormous, since nearly 90 per cent. of the steam generated is discharged. A heating system of this kind is therefore a true economy; and when run in conjunction with power works of sufficient magnitude, its success seems guaranteed. In other respects the advantage is obvious. To turn on heat as one does light, without having any of the encumbrance, labour, dirt or danger of its generation on the premises, is a decided advance in the art of comfortable living. We shall doubtless

see a large extension of the application of this system in towns that have grown up to the railway point and are not within reach of water power.

The essential condition of successful heating, where the steam is conveyed so long a distance, (there are 4,300 feet of main supply pipe in Chatham,) is an insulation of the pipe that will allow the steam to deliver to the customer as nearly as possible all the thermal units it contains when it leaves the central station. The insulation adopted by the American District Steam Company is a tin-lined wood casing, having a shell 4 inches in thickness, with an air space between the casing and the asbestos covered pipe, which is inserted therein. This casing is made of white pine staves, tongued and grooved, and bound together with heavy galvanized steel wire wound spirally. The surface is then covered with asphaltum and sawdust. With this covering the steam is said to be carried long distances with very slight loss from condensation. The pipes are all laid to a grade to prevent any accumulation of water from this cause.

It is necessary also to provide for pipe expansion by joints that will require no packing or other attention after the pipe is once installed. This is taken care of by a patented device which takes up expansion, with-

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Where a building is already equipped with steam radiators, but a few minor changes are required. Hot water radiators can be adapted to the service; or, if the customer wishes to continue heating by hot water, steam is supplied to a special form of water heater which is installed. It is simply, in effect, the use of steam instead of fuel to heat the water in the boiler. The condensation from the steam is conveyed to a cast iron economizing coil, or form of hot water radiator, in the basement. This coil is placed in a tin lined enclosure, together with a steam trap. A register in the ground floor delivers the heat from the coil to the room above. After all available heat has been utilized, the water flows to the meter, which records the condensation in pounds and the customer pays a price per thousand pounds of water. Every pound of water registered by the meter shows a given number of British thermal units delivered in dry steam.

Steam heated buildings have their use of steam rated in the same way, by meter. It is obviously fairer than a flat rate; for not only are equal spaces different in exposure, glass area, and excellence of construction, but the habits of the occupants are different. People have various tastes in heat and some buildings are not heated all the time. Under the meter system, heat not used is saved. Churches, schools, lodge-rooms, stores, &c., can be charged exactly according to their use of heat, and will use it exactly as they wish to be charged.

THE BUILDERS' EXCHANGE OF MONTREAL.

The Annual Report of the Builders' Exchange of Montreal is a document of considerable interest. We extract a portion which has passages referring to matters of general interest to the building trades and others.

The one source of "danger ahead" in the activities of the coming year lies in the ever-recurring labor problem. It labor leaders would be well-advised, as much in the interests of labor as of capital, they would hesitate in forcing wasteful and pernicious strife upon the building trades' employers. With legitimate trade-unionism we have no quarrel; the spurious article we shall contest in the future as in the past. When unions assume an attitude of despotism by their latest methods of endeavoring to restrict output; to refuse apprentices; to interfere with internal control of shops and factories by walking delegates; to boycott particular employers by black-listing their goods; and to induce sympathetic strikes in trades with which they have no quarrel, we must in self-defence co-operate by being thoroughly prepared and organized. "Whoever pays the piper has the right to call for the tune," and employers must fearlessly assert their liberty to employ competent workers irrespective of being union or non-union men. Contractors do not begrudge just wages to competent workers, and wages can always be satisfactorily adjusted by mutual conference; but arbitration with irresponsible bodies without liability for breach of contract, is mere waste of time.

This leads us to the subject of technical education—a worthy field for practical philanthropy, following the lead given by Sir Wm. Macdonald in other branches. The crying need of all trades to-day is for competent mechanics. The unions, whose pride it should have been to admit only such to full membership, have exerted their influence steadily in the opposite direction, in the persistent effort to establish an artificial uniformity both in output and wages—a glaring injustice to the capable mechanic as well as to the employer. All incentive to self-improvement is thus taken away from the worker.

The practical abolition of the apprenticeship system and the

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fatal facility with which many things are learned superficially, from laying bricks to legislating for the nation, has filled the land with "half-baked" men—men trained for nothing in particular and good for nothing in general.

The practical solution is for employers to revert to the former well-tested system of "articled apprenticeship," and to take a personal interest in training the young men so bound, making this youthful period of life attractive by encouraging friendly competition in technical schools.

Your directors cannot too warmly urge a federation of all the Employers' Associations in corporate union with the Builders' Exchange as a central nucleus, representative of their individual and united interests. By such consolidation we could speak with no uncertain sound in all labor questions. They also ask your co-operation for closer intercourse and more cordial relations with the architects, and would suggest a joint representative conference at an early date to discuss the advisability of a uniform contract; a responsible method of furnishing quantities; the protection of sub-contractors and the amendment of the law as to the unjust responsibilities now resting upon both architect and contractor as to liability for structures.

The need a commodious Builders' Exchange building will be one of urgency in the near future, and your Directors are strongly in favor of a permanent exhibit, wherein sample and desk-space can be rented, as an attractive and beneficial addition to the advantages offered to our members.

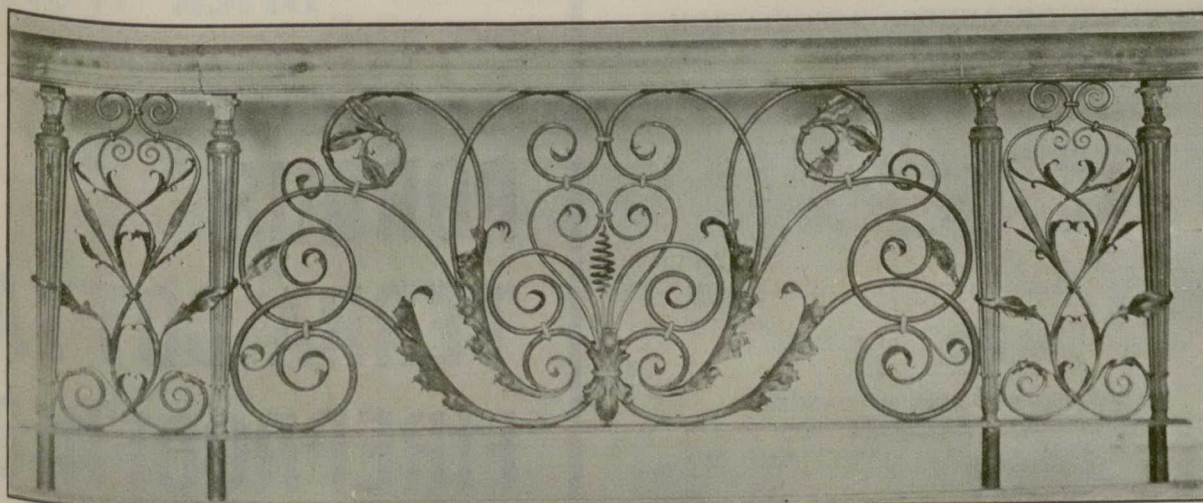
The new officers of the Exchange are: President, R. G. Hood, (Wm. Hood & Sons); Past President, Mr. N. T. Gagnon; Vice President, Mr. Jos. O. Deslauriers; Directors, Messrs. John Duthie, (Forsyth Marble & Granite Co.), Alex. Bremner, (Cement & Supply Dealer), W. E. Ramsay, (Sheet Metal & Supply), John Gray, (Gray & Wighton), J. N. Arcand, (Master Painter's Association), J. Lefebvre, (Master Plasterers' Association), W. B. Shaw, (Electrical Contractor's Association), Jos. Thibeault, (Master Plumber's Association); Secretary Mr. J. Henry Lauer.

CURLY GABLES.

To the list of stock features in modern architectural practice which have been pilloried in these columns at

one time and another we think the overuse of the curly gable should be added. The fronts of buildings are disturbed quite enough as a rule without any playful fancy in gables. The curly form has the distinction of antiquity, but we are inclined to regard it more or less with suspicion. It never was a particularly logical use of material. A gable coping requires to be protected against the penetration of water and the consequent disintegration by frost, but the curved and twisting outline of the Dutch gable does not carry off the water quickly enough. These Dutch gables, however, were built of bricks, and the same necessity for care in this respect did not arise as with stone copings. If the mortar which kept the bricks in place was disintegrated it could easily be re-pointed, or the brickwork reset. But with stone the material, once loosened, is irretrievably damaged, and the forms copied to-day from the brick gables of the past are unsuitable with stone coping. Apart from this, moreover, the effect of the gable upon the general design of a modern building is more often than not distressing. Whereas the gable end of the Netherlands usually gave relief to a somewhat plain street front of a house of narrow width, modern frontages are wider and generally embrace many more decorative features, containing two or three gables. The curly gable thus creates an unhappy effect. It quarrels with the rest of the front and destroys all restfulness or austerity; the building becoming overloaded. There is a further development in the use of segmental gables. From a practical point of view this form may rank next in efficiency to the straight pointed gable, but we feel that it was more appropriate in its original position—namely, at the end of a barrel roof—than as now commonly employed. The outlines produced by pitched roofs of many little gables and gables running against segmental gables are not particularly pleasing, and the gables of flattened curve or hog-backed gables are the ugliest and most ludicrous of recent architectural inventions.—*Building Journal and Architectural Record.*

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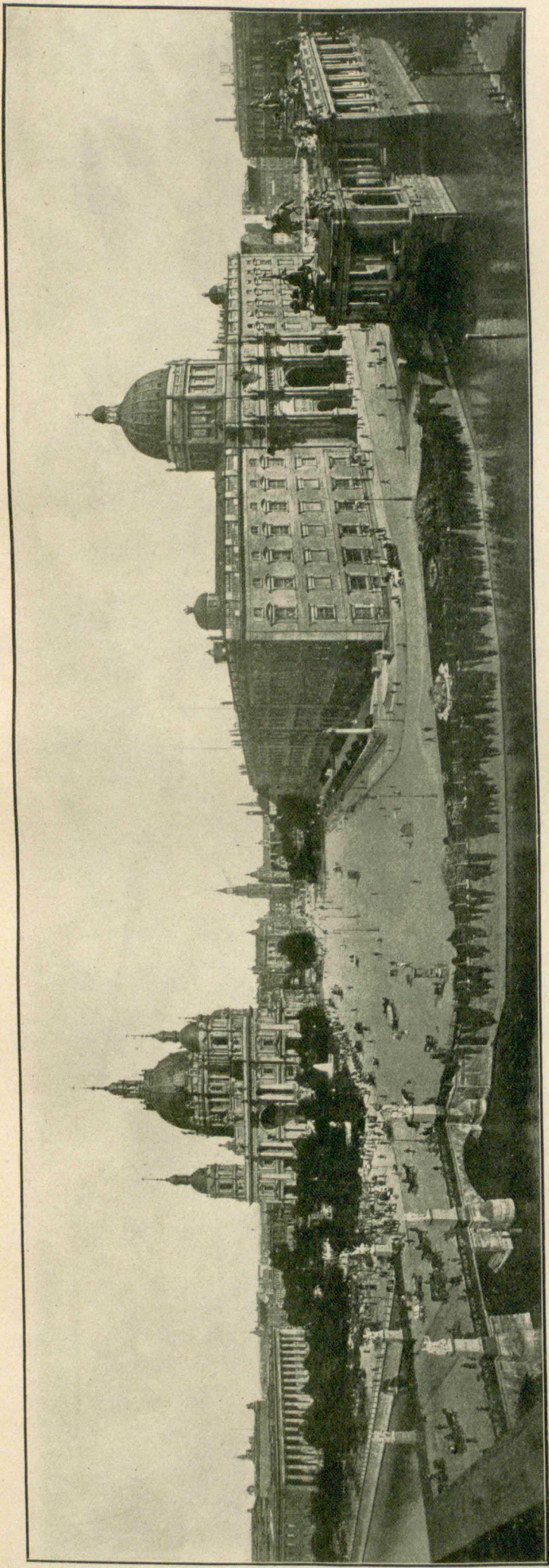
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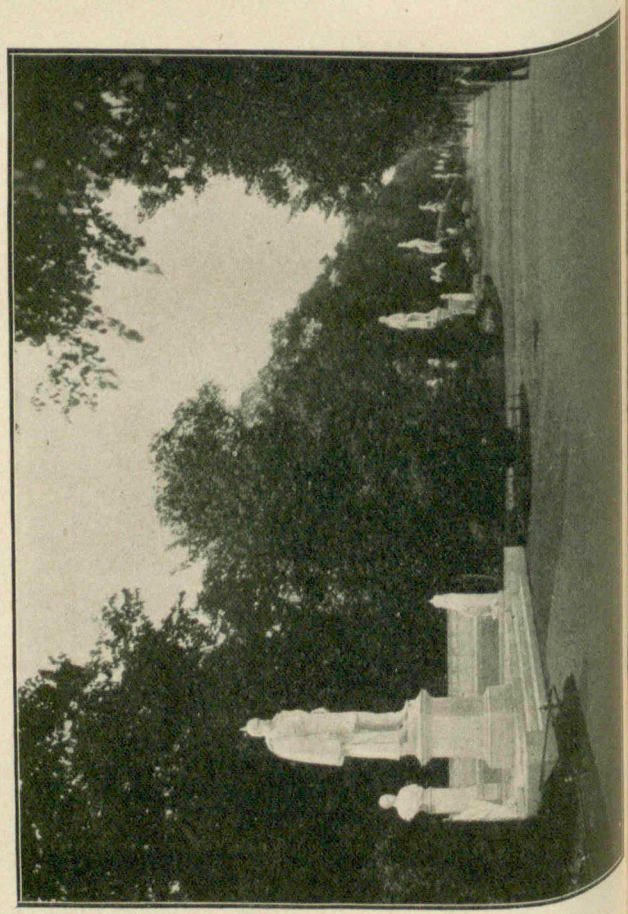
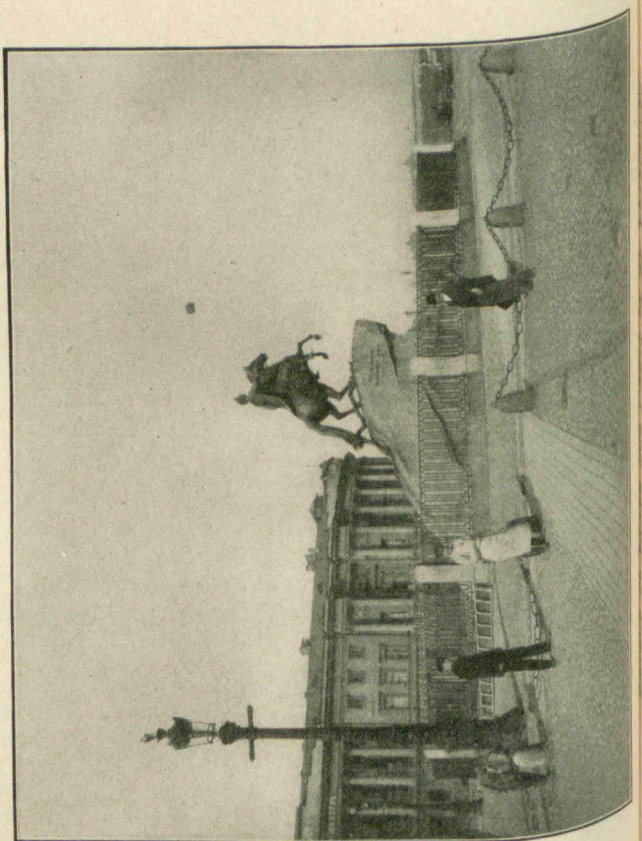
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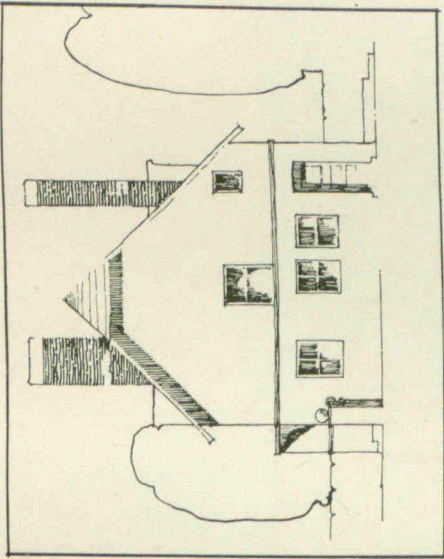
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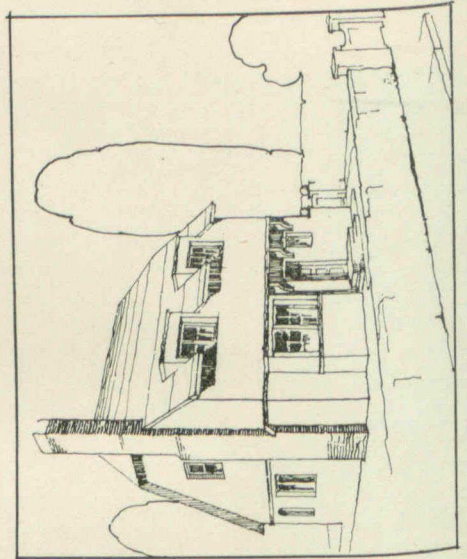
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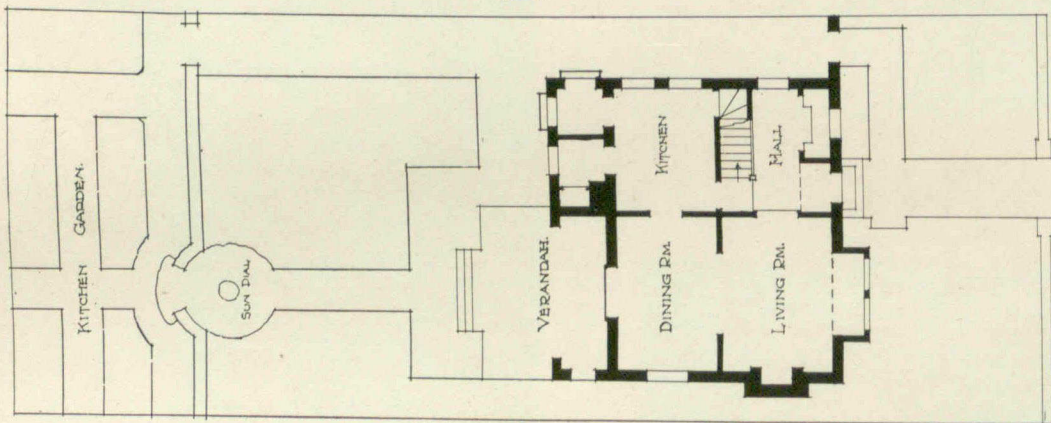


NORTH ELEVATION

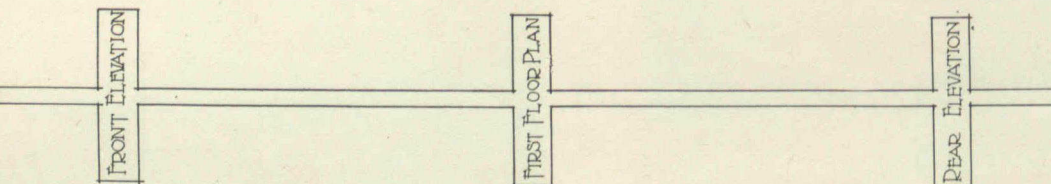
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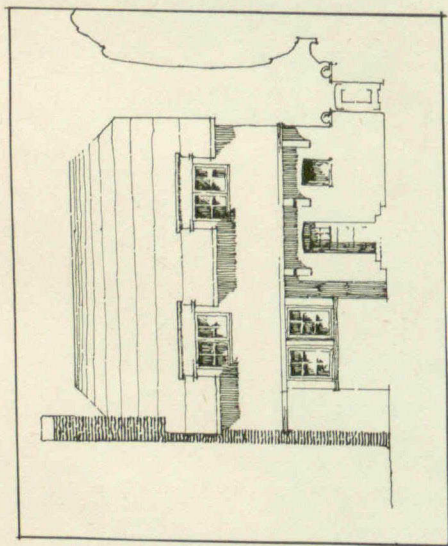
PERSPECTIVE



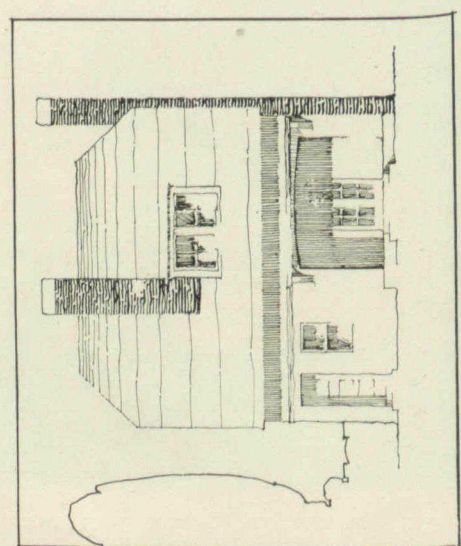
FIRST FLOOR PLAN



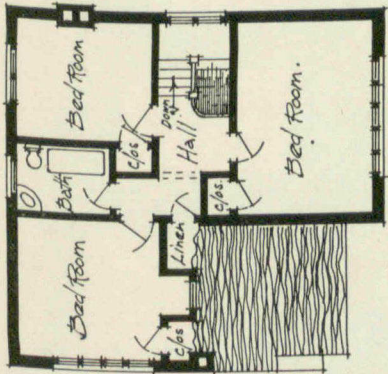
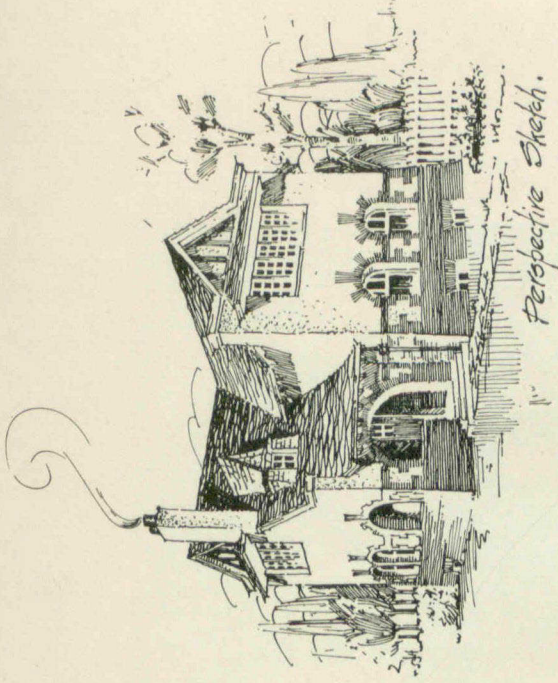
SECOND FLOOR PLAN



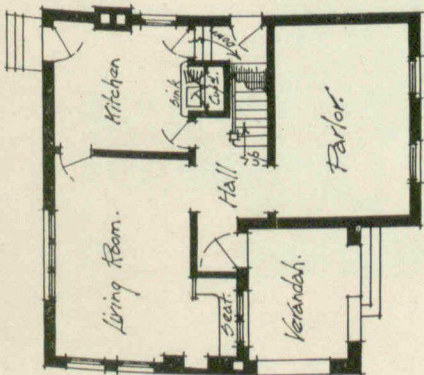
FRONT ELEVATION



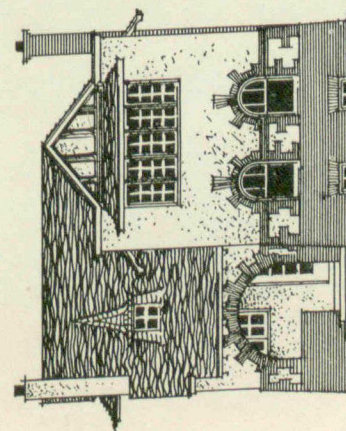
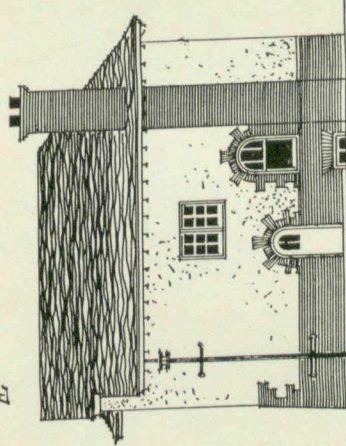
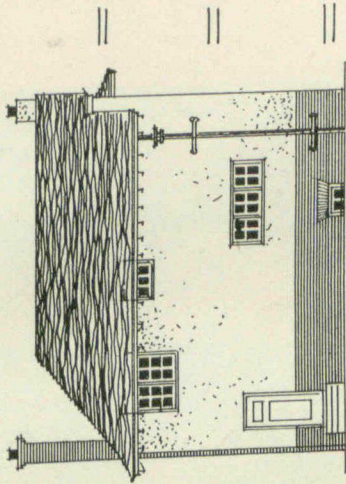
REAR ELEVATION



First Floor.

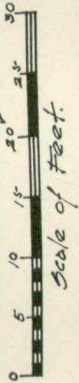


Ground Floor.



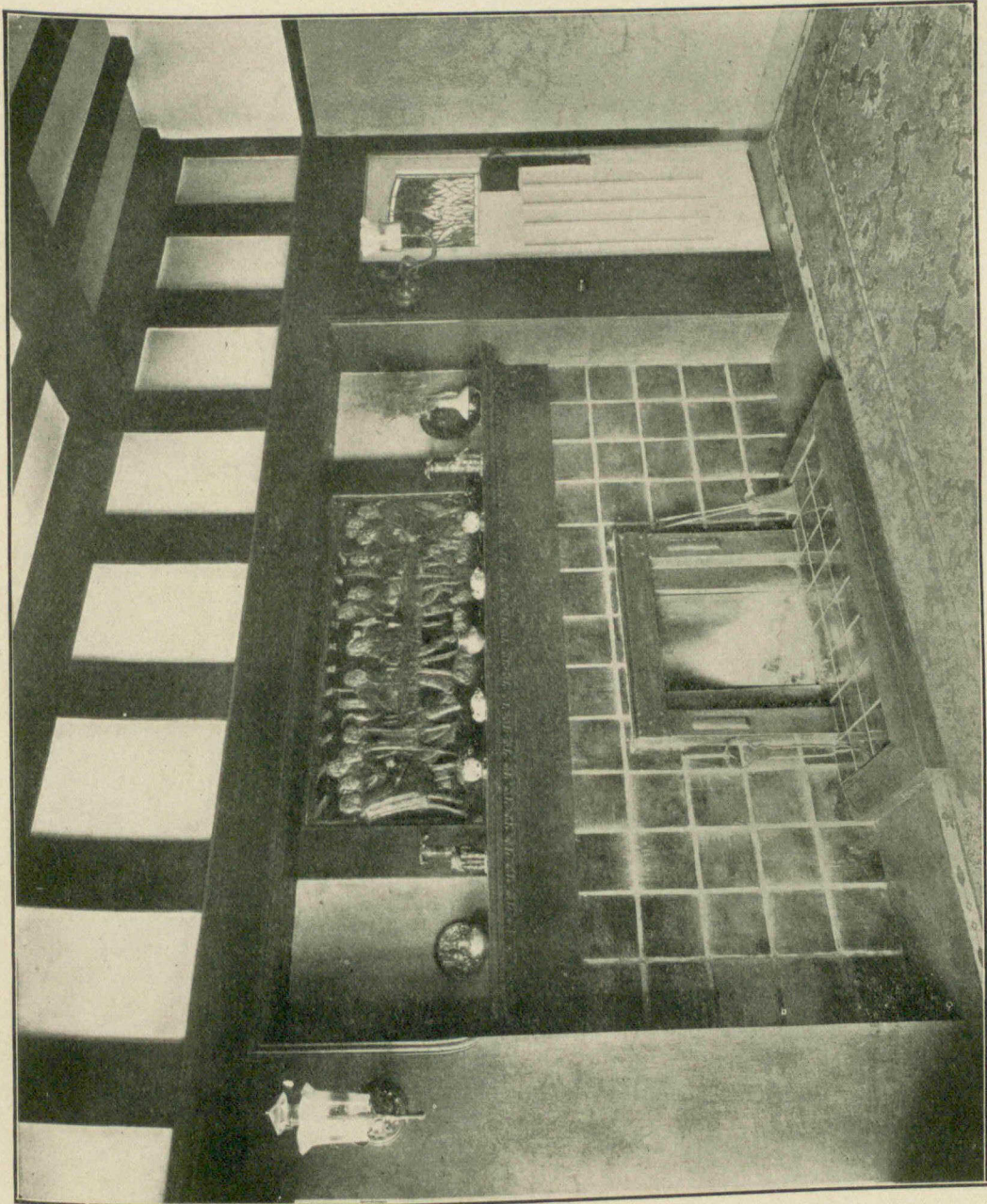
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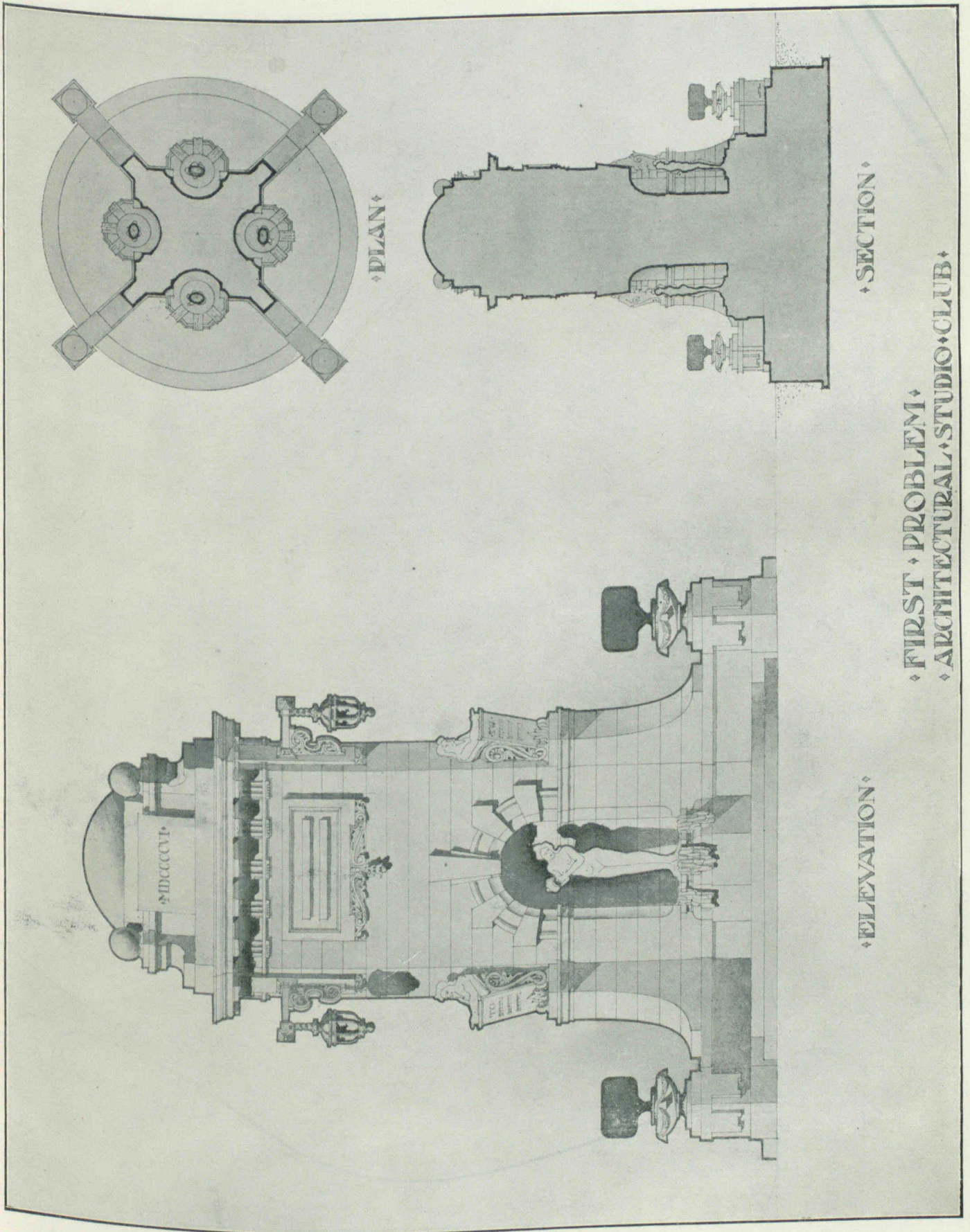


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SELECTION OF PORTLAND CEMENT TO BE USED IN CONCRETE BLOCKS.

Mr. R. K. Mead of East Nazareth, Pa., recently read a paper on this subject before the National Association of Cement Users of the United States. After showing the importance the bearing of the class of buildings now constructed of concrete blocks would have upon the industry in the next generation, he stated that all Portland cements were by no means good cements and that Portland cement being improperly made would undoubtedly constitute one of the greatest reasons for concrete block failure. He stated that the manufacture of concrete blocks needed a very fine cement and that it should be one which would give the block good color and requisite strength. He stated if the block

manufacturer allowed his warehouse to become the dumping ground for cement rejected for the heavy rough undertakings, he could never expect to get out a highclass product. The all important qualities, he said, that cement should possess, to be adapted for use in the manufacture of concrete blocks, are: 1st, endurance; 2nd, strength; 3rd, color. He then went on to show the importance of the property of endurance, and showed how that many cements, because of improper mixture, not enough burning, shipped too green, not ground fine enough, would cause the block to expand and eventually disintegrate. He said that such a class of product was by no means unknown in the United States, and that oftentimes cement rejected for large undertakings was dumped on the block manu-

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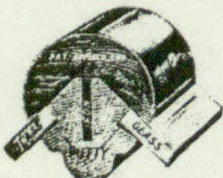
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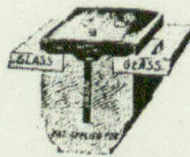
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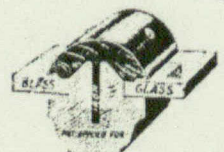
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facturer. For this reason every block manufacturer should test to his complete satisfaction the cement before accepting it. Some care should be taken to guard against coloring materials for concrete blocks which contain chemicals such as sulphides or sulphates, chromates, acetates, etc., likely to react in the cement to the damage of the block. These caused a block to expand and eventually disintegrate. Oxide colours were the best. He then showed what constituted the strength of cement and said that while fine grinding did not often increase the neat test, still when mixed with the aggregates it produced a much stronger product. He then showed very minutely why cements made by various defective processes were by no means adapted to the use of concrete blocks. He compared the slower hardening cement made in the upright kilns with the quicker-setting cement made in the rotary kilns and showed that in Germany to-day the scientists seemed to be satisfied that prompt hardening cements are all right, inasmuch as they are rapidly replacing

the upright kiln with rotary kilns. He then brought out the fact that cements free from iron and manganese would produce a much whiter block. For colored blocks, darker cements may be used, but the color should be uniform. The less sulphate of lime present in cement intended for concrete block manufacture the better, because it is this sulphate of lime that causes the white efflorescence on the surface of the blocks. Cement containing sulphate of iron should not be used, inasmuch as it caused dirty brown blotches to appear on iron or "rust." Overclayed cements also show the same dirty brown color throughout the mass, as in such cements the iron seems to be present as the red-brown "sesquioxide instead of the black "magnetic" oxide of well-made cements.

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PERSONAL.

We regret to note the death on March 21, at Toronto, of the wife of C. H. Acton Bond, architect, of Toronto.

Mr. W. L. Symons and Mr. Edmund Burke, of Toronto, will probably attend the International Convention of Architects to be held in London in July next.

Mr. Fred T. Hodgson, the well known architect and technical writer of Collingwood, recently celebrated, with his wife, the 50th anniversary of their wedding. They received the congratulations of a large number of friends throughout Canada and the United States, and were presented with addresses by a number

of the fraternal organizations with which Mr. Hodgson is connected.

Mr. Lawrence J. Gomme, who has been for the past five and a quarter years assistant librarian, under Mr. Rudolph Dircks, at the Royal Institute of British Architects, sailed yesterday (Thursday) in the Allan liner, Sicilian, for Montreal, where he is taking up a business. Mr. Gomme, who is a nephew of the clerk to the London County Council, takes with him the goodwill of all who have come into contact with him at 9, Conduit-street, W., and have experienced his courtesy and intimate knowledge of the books and pamphlets there shelved.—*Building News.*

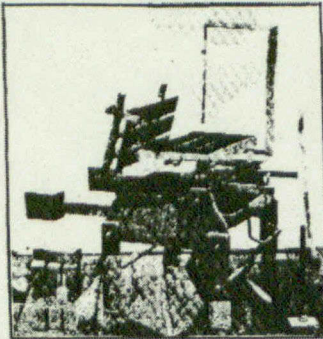
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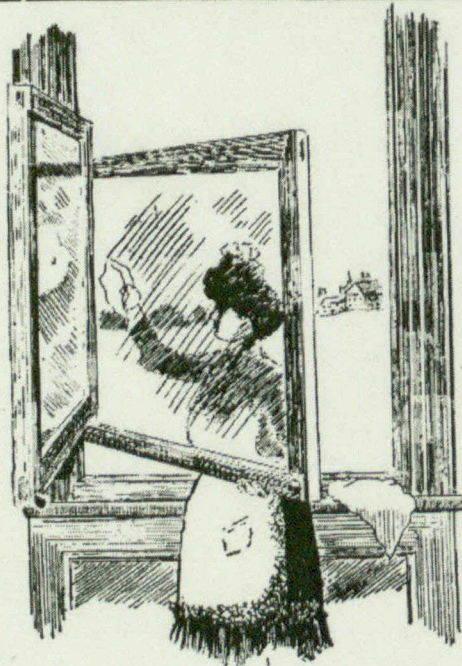
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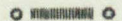
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SCHOOL FOR CLAY-WORKERS.

A deputation of the Ontario Clay Products Manufacturing Association waited recently upon Dr. Pyne, Minister of Education for Ontario, to ask for the establishment of a government school for instruction in clay-working.

According to the statement of the deputation over 3,500 people are engaged in the industry. Schools similar to that asked for are carried on in England and Germany, and are said to greatly enhance the value of the output and give employment to a greater number of people.

Dr. Pyne promised to give the matter his best consideration.

In the deputation were Messrs. S. J. Fox, M.P.P., Victoria West, president; J. M. McConnell, Milton, vice-president; Professor Baker, and C. T. Chown, of the Kingston School of Mines.

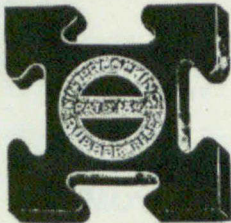
PEASE FOUNDRY COMPANY'S EXPANSION.

The Pease Foundry Company are building a new wareroom and office building on Queen street east, Toronto. The property upon which it will stand was the site of what was known as the old Duke of York tavern, a building erected over seventy years ago. The new Pease building will be 35 by 100 feet, with a basement and three storeys, constructed of brick and stone. The first floor will be occupied as a showroom, the second will have the general offices of the company, and the third will be used as a tin shop.

They also proposed to consolidate their workshops, which have hitherto been conducted, one in Mimico and the other in Toronto, in one large plant on Shaw street, Toronto.

It is expected that both the office building and the manufacturing plant will be completed during the summer months.

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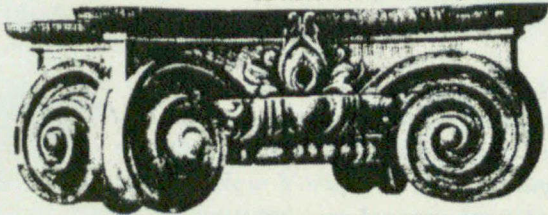
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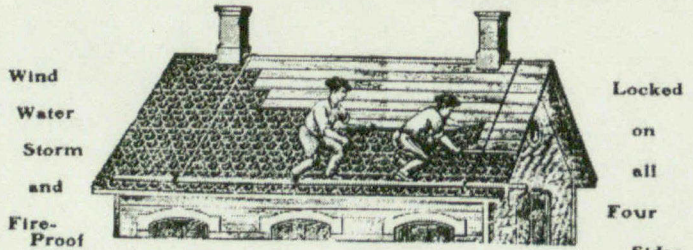
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PRODUCTION OF CEMENT IN CANADA.

From a Report of the Geological Survey of Canada.

The production of natural rock cement which in 1904 had decreased to 56,814 barrels, valued at \$50,247, fell off in 1905 to the comparatively small amount of 16,184 barrels, valued at \$10,274. This was made by three firms in Ontario.

The production of Portland cement, however, continues to increase steadily. Thirteen companies were operating plants during 1905 with a total daily capacity of about 8,000 barrels, viz.; one in Nova Scotia, two in Quebec, nine in Ontario and one in British Columbia, while another in Ontario was engaged in reconstruction work.

Detailed statistics of production in 1904 and 1905 are as follows:—

	1904.	1905.
Portland cement sold..... brls.	910,358	\$1,346,548
" manufactured... " "	908,990	1,533,628
Stock on hand, Jan. 1..... " "	115,419	112,086
" Dec. 31..... " "	112,051	299,166
Value of cement sold.....	\$1,287,992	\$1,913,740

The average price per barrel at the works in 1905 was \$1.42, being only a fraction of a cent higher than the average price in 1904.

The imports of Portland into Canada in 1905 were:—

Six months ending June.....cwt.	1,043,659	\$ 405,182
" December... " "	1,470,306	509,422
Total.....	2,513,965	\$ 914,610

This is equivalent to 718,275 barrels of 350 pounds each at an average price per barrel of \$1.27. The duty is twelve and a half cents per hundred pounds.

The imports in 1904 were equivalent to 784,630 barrels of 350 pounds each valued at \$1,061,056, or an average price per barrel of \$1.35.

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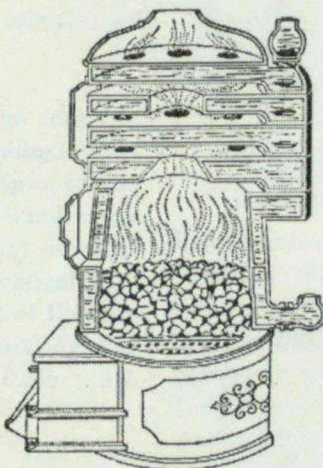


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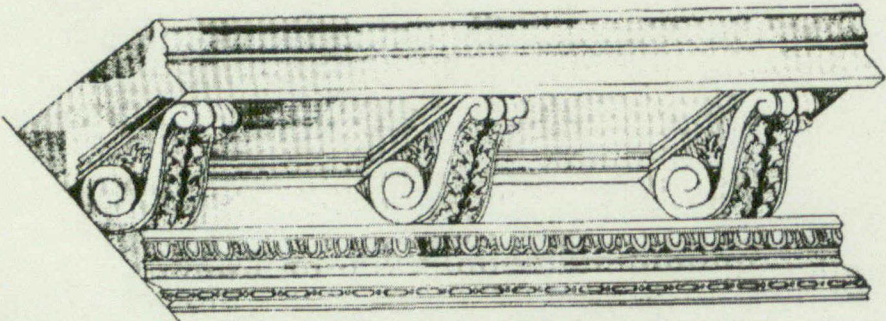
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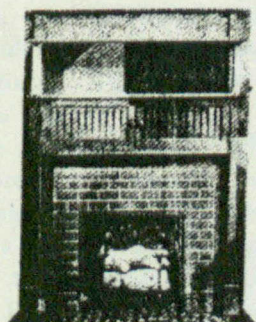
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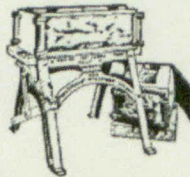
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