

## ST. JOHN, N. B.

(Correspondence of the CANADIAN ARCHITECT AND BUILDER.)

YOU are probably aware that this city has risen, Phenix like, from the ashes of the 1877 fire, and shares with Chicago the earned emblematic sobriquet of "Phenix City." Instead of "the Liverpool of America," that so aptly personified the facilities and business of the should-be eastern terminus of the Canadian Pacific railroad.

The recent fire of a month ago has partly laid bare a site for the long contemplated "Grand Opera House," for which preliminary plans have been prepared and a subscription list for stock opened. All indications point to a practical realization of the most sanguine hopes of the company. Theatres have had a somewhat transient and hard line existence here, the old Lyceum to the contrary notwithstanding. The play house of St. John's father of dramatics, Longgan's Lyceum of the south side King's Square, the Academy of Music, of German street, and Small's Hall, (more familiarly known as Bishop's & Lee's Opera House and Professor Nelson's "Figaro") were all destroyed in the holocaust of the 20th of June, 1877, leaving only the Mechanics' Institute, now in its fiftieth year, and Dockerell Hall, of Union street, as available for entertainments. As flame has been historical the world over for the destruction of the play house, it is well that the company in this case intend to look well to having their building fire proof, with three separate exits, and two iron fire escapes.

The only buildings of a public character now in course of erection in St. John are the electric light works building, and Seord's Hospital, both in brick with principally stone trimmings.

## QUEBEC.

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THE large stores being erected for Mr. O. E. Murphy on Dalhousie street, are nearing completion. The front on the street named is 140 feet, with two extensions in rear 50 feet, the whole being 40 feet in width and three stories in height. The design is perfectly plain, walls faced with pressed red brick. Mr. O'Leary contracted for the mason work, and Mr. S. Peters for the woodwork; Mr. Hume, C.E., prepared the plans.

A handsome stone residence from the design of Mr. E. Charest, architect, is being erected by Messrs. Laroux, mason, and Mr. DeVarennes, carpenter, for Mr. Dusault, of the firm of B. Houde & Co., tobacco manufacturers. The walls are of rock faced Deschambault stone in regular courses, with trimmings of same stone, chiselled. Stone steps leading to a portico, and terminating in a tower placed in the centre of the front, give a bold and handsome appearance to the building. It stands immediately opposite St. John's church on the street bearing the same name, with stables, etc., in rear of house. The cost will be in the neighborhood of \$20,000.

A cottage residence is being put up for Mr. J. J. Boers on D'Aiguillon street, at a cost of about \$14,000. Rock faced stone foundation, walls of white brick, and trimmings of cut stone. Mr. H. Staveley, architect; J. Kelly, carpenter, and J. Juneau, mason.

## ENGINEERING SOCIETY.

WE are pleased to notice that the Engineering Society in connection with the School of Practical Science in this city enters upon its work for the coming winter under most favorable auspices. The membership of the Society numbers upwards of 140. The objects of the organization are stated to be:

1. The encouragement of original research in the science of engineering.
2. The preservation of the results of such research.
3. The dissemination of these results among its members.
4. The cultivation of a spirit of mutual assistance among the members in the practice of the profession of engineering.

At the semi weekly meetings of the Society, papers on engineering and scientific subjects are read and discussed by students and professors. The president for the present year is Mr. H. E. T. Haultain.

## JOINTS IN SEWER PIPE.

THE joints in stone-ware sewer pipe are a generally acknowledged point of weakness, says a writer in the *Building Budget*, and in sewers within the house walls architects have to a certain extent tried to overcome this by embedding the sewer in concrete. Under the test of filling the sewer with water this is not found to make an impervious drain, and we would suggest as a surer method of making a tight joint, the following clause for the specifications: "Each joint shall be made by filling the joint perfectly with portland cement mortar made of one part cement and one part sand, caulking the same thoroughly all around the pipe with a proper hardwood caulking tool, making the joint flush with the end of the socket, and striking it off smooth all around the pipe with a trowel." Throwing on more mortar and striking off to make an outside collar may be as each architect considers necessary, but the joints made as above will be tighter and stronger than if the sewer were imbedded in concrete as ordinarily made. It is not safe, however, to specify this and leave it to be done or omitted as the drain-layer sees fit. House drains should be laid in open trenches, and during pipe-laying the superintendent should see every pipe laid.

## HOW VANCOUVER WAS BUILT.

A GENTLEMAN who arrived in Boston yesterday fresh from Vancouver, the Pacific terminus of the transcontinental railway, gives the genesis of that city in terms which are as startling as they are significant. Two years ago there was but one house in the locality. A year ago there were a dozen struggling log huts. To-day there is a population of 5,000 persons; the Victoria Hotel is one of the finest houses in the country, charging \$4 a day and worth it; the main street, built through the virgin forest, as it stood a year ago, is flanked by granite blocks that rest where stumps fifteen feet or more in diameter have been blown out by dynamite; the town is lighted by electricity; there is semi-weekly communication

with China and Japan by steamship, and the Canadian Pacific keeps that northernmost city on the Pacific coast in daily communication with the eastern world. All this is substantially a year's work. Other places of this size, or even greater, have sprung up in a night like Jonah's gourd, but it is believed that there is no record on the American continent of the building of a similar town, with all the improvements of modern civilization, within so short a space of time.—*Boston Herald*.

Mortar and paint may be removed from window glass with hot, sharp vinegar.

Wide lath do not make a good job of plastering on a ceiling. Use inch lath and give them good distance apart.

Mr. Hewley has commenced the erection of his new stove works at Barrie, Ont.

Tenders are being asked for the construction of an iron trestle bridge over the Ottawa river to connect Ottawa city with the city of Hull.

Good stable floors may be made by first paving with broken stones and then covering with concrete, and finally laying the whole with plank.

It is reported that Messrs. Davis, of Ottawa, and E. E. Gilbert, of Montreal, have been given the contract for improvements on the Cornwall canal.

To prevent screws from becoming fixed and rusted, make a mixture of graphite and oil, which will facilitate the tightening of them up, reducing the friction in the sockets, and protecting them for years from rust.

Asbestos powder, made into a thick paste, with liquid silicate of soda, is used with great advantage in making joints, fitting pots, connecting pipes, filling cracks, etc. It hardens very quickly, stands any heat, and is steam-tight.

The *Builder* and *11 outworker* points out that thoughtful acts on the part of workmen sometimes lead to disastrous results. A well-known instance of a falling mill has been ascribed to fastening a block and tackle to a column and pulling it out of position while moving some heavy machinery. A few years ago, one of the roof trusses fell into the hall in Marblehead, Mass., because a pipe had cut one of the members nearly in twain, rather than make an offset in his pipe.

We learn from the *Engineering and Building Record* that the engineers of the Minneapolis Sewer Department are meeting with trouble from water in the sewer tunnel that they are now building, and of which about 2,000 feet remain unfinished. Engineer Van Duzee has suggested two plans for overcoming the difficulty, one by freeing and the other by the use of compressed air, at an estimated cost of \$40,000 and \$15,000 respectively. Mr. Van Duzee favors the internal shield plan, but its use has been opposed on account of the expense.

A new brick machine of simple construction is reported upon favorably from Nashville, Tenn. It is the invention of Mr. John E. Lesueur, an extensive manufacturer of brick of that city. The machine is set in a pit, and it is described as having a class of moulds linked together to form an endless chain, pressed beneath the pug mill whence they pass to the presser. The machine can be made of varying capacity, the one working at Nashville, being equal to 60,000 bricks per day. Mr. Lesueur has associated himself with Mr. John D. Anderson, and they are organizing to introduce the invention throughout the United States.

World says: Few steam fitters or engineers understand the valuable properties of graphite in making up joints; this valuable mineral cannot be over-estimated, in this connection. Indestructible under all changes of temperature, a perfect lubricant, and an anti-incrustant, any joint can be made up perfectly tight with it and can be taken apart years after as easy as put together. Rubber or metal gaskets, when previously smeared with it, will last almost any length of time, and leave the surface perfectly clean and bright. Few engineers put to sea without a good supply of this valuable mineral, while it seems to be almost overlooked on shore.

A construction detail that is gaining much popularity in some Western clides is the bricking in of frame houses. The building is sided up with matched stuff, as if complete, then a brick face wall, four inches thick, is laid in contact with the exterior, tied on by spikes about every sixth course. A boy distributes them all around on top of the wall. They are laid in the mortar-bed ready and driven through into the siding till the heads are flush with the face of the wall, when the next courses are laid, and so on. The walls present the appearance of solid masonry, are durable, and, as they add to the warmth of the buildings, seem to present substantial recommendations, especially for severe climates.

At the instance of the Belgian Minister of Public Works, Messrs. Boudin and Donny have investigated the subject of rendering wood fire-proof. They report that the resistance of wood to heat may be considerably increased, though absolute non-combustion cannot be secured. The resisting material must take the form of an injection into the fibres of the wood or of a coating; and it must be not too expensive, non-corrosive, speedy in becoming fixed, easily applied, neat and unalterable. An injection of a concentrated solution of phosphate of ammonia is recommended as the best treatment for small pieces of wood; but a more generally available plan is coating with cyanide of potassium or asbestos paint.

Sir Frederick Bramwell concludes an address before the British Association on "The Glories of Modern Science," by saying:—"To what and to whom are these meritorious prime movers due?" I answer: To the application of science, and to the labors of the civil engineer, using that term in its full and proper sense as embracing all engineering other than military. I am, as you know, a civil engineer, and I desire to laud my profession and to magnify mine office; and I know of no better means of doing this than by quoting to you the definition of "civil engineering," given in the charter of the Institution of Civil Engineers, namely, that it is "the art of directing the great sources of power in nature for the use and convenience of man."



## A CRITICISM OF THE PROVINCIAL ART SCHOOLS.

Editor CANADIAN ARCHITECT AND BUILDER.

THROUGH reading the daily papers I became aware that the prizes and certificates won by the students of the Toronto Art Schools were presented by His Worship the Mayor to the successful candidates in the theatre of the Normal School, on Friday afternoon, Sept. 27th.

There was not a large attendance of spectators or students, especially of the former. Neither were many of the prize or certificate winners present—I understand not more than one in ten. This is deplorable, and shows that there is something radically wrong with the school. That there should not be many present outside of those directly interested in the school, is not surprising, and does not call for comment. The public is usually apathetic and indifferent towards any movement unless it promises some possibility of materially enriching them. Dollars and cents is the great force of the present day, and it is therefore surprising that but few of our citizens thought it worth while to be present at this meeting to give some encouragement to Art. But that there should have been so few of those who had won honors calls for some explanation. I can think of only three reasons for so poor an attendance of those directly interested: First, that the meeting was held at an inconvenient season, and that it was impossible for them to be present. Second, that they were so overcome by bashfulness that they would rather stay away than be formally presented before strangers with the prizes they had won—they might have come, for strangers were few. Third, that the students take so little interest in their work, have so little enthusiasm, that they do not consider it worth the trouble to be present on such an occasion.

That this school is not the success that it should be, and might easily be, is evident in more ways than one. Those at its head lamented that there were so few students in attendance; that instead of two hundred there should be at least one thousand; that there is much better attendance in the smaller cities. To my mind instead of lamenting, the directors should be thankful that there are so many in attendance, considering the condition of the school. The poor attendance is undoubtedly caused by the indifferent work the school is doing, which is the result of the incapacity of the directors, and of the ignorance of Art on the part of the teachers.

This Art School was first established by the Ontario Society of Artists, in their old quarters at 14 King st. west. By ceaseless efforts the society, with the assistance of the teachers, made the school a great benefit to the city. It had a large number of students, and what was of more importance, it had instilled in them an enthusiastic love of Art. The school grew so rapidly that the King street quarters became too small, and it was obliged to remove to the Normal School building, where it has by degrees come under the influence of the Education Department. That it has not thriven under the Department's administration, as we not require proof. The drawings which have been exhibited with so much laudation of the work of the school, so much noise about the influence of Art, and so much unnecessary information about the work of Art in Canada, and the necessity of Art institutions and training, prove most conclusively that the school is not accomplishing the work for which it was established, and which it should do.

Notwithstanding that the school does not teach Art, and that its directorate and teaching staff are entirely ignorant of Art, a person would be led to believe by the upholders of the school, that outside of the Art Schools there is no Art in Canada. We are persistently informed that we are without artists, and that to the United States we must apply if we want artistic work. The truth is that we have more love of Art and better artists in our own land than have the States, when due allowance is made for the difference in population and wealth. Wealthy men buy works of art more often because pride and jealousy urge them, than because they have any love or appreciation of the beautiful. We may therefore say that it is wealth that encourages Art, and that alone. Because the States have accumulated a large amount of wealth, rather than because the people are artistic, they have become possessed of artists of which they may well be proud, and whom we should admire. But when it comes to belittling ourselves and worshipping lowly and fifth rate men, because they are residents of the States, it is too much for us to quietly submit to. It certainly tends to show little knowledge of Art on our part as a people. But after all, is it the people? Is it not those among us who, having little or no knowledge of Art, and having become possessed of some wealth, are now attempting to impress us with their assumed and fictitious love of Art? Then again, there are those amongst us who, recognizing that it is the fashionable thing to be artistic, and being possessed of little knowledge of Art, and aware of the fact, are trying to hide their ignorance by loud statements of our lack of Art and the necessity of Art training. I imagine that some of these people have obtained control of the Art School of this city.

How does it come, that in a school established and supported by the Ontario Society of Artists until it had become firmly established and was doing good work, there is not now a single member of that Society connected with the school in any way whatever. The Society has received the cold shoulder, and no mistake, simply because it could not look at Art through the spectacles of the Minister of Education and his satellites. The teachers who were members of the Society were all compelled to resign one by one, disheartened and disgusted with the treatment to which they were subjected by the "book artists" of an hour, whose ideas of Art never rise above the plates to a medical work, who have been placed in control. These teachers had been teaching not for the