

amount of electric power to operate a system of street and suburban railways and supply various small manufactories. Including the current required for lighting the city, it is claimed that as much as 15,000 H.P. can be profitably used. A company is being formed by Messrs. Jno. Patterson, E. B. Osler and others to develop the scheme.—Tenders were asked this week for the construction of a pipe sewer on Wilson street, between Ashley and Wentworth streets.

**MONTREAL, QUE.**—A number of capitalists are at present forming a company to undertake the construction of a railroad between Joliette and St. Lin. The road will pass through St. Paul, St. Esprit, St. Ignace, St. Julienne, St. Alexis and St. Jacques. Letters patent of incorporation are to be applied for at the next session of the Provincial Legislature.—A meeting of the congregation of Erskine church was to have been held on Thursday evening last to select a site for the new building.—The Parks and Farnes Committee have applied to council for an appropriation of \$2,000 with which to complete the Superintendent's residence.—It is said to be the intention of the City Council to call the tenders for lighting of the streets by electricity by the 1st of November.—Mr. J. F. Whitwell is surveying the line for the proposed railway between Stanbridge Station and Philipsburg. Operations will commence early in the spring.

**TORONTO, ONT.** At a meeting of the City Council held on Tuesday last, a by-law was introduced and passed providing for the raising of money for permanent pavements on the following streets: Dundas street, Soraraen ave. to Bloor st., cost \$12,000; King st., Sherbourne st. to River st., cost \$18,100; Spadina ave., Queen st. to Bloor st., cost \$32,650; King st., Dufferin st. to Roncesvalles ave. cost \$22,700; Queen st., Daves ave. to railway crossing, cost \$9,200; Howard Park ave., Dundas st. to Roncesvalles ave., cost \$3,800; High Park ave., Roncesvalles ave. to High Park, cost \$10,100; Avenue road, Bloor st. to North city limits, cost \$27,000; Queen st., from Railway tracks to East city limits, cost \$55,000.—Hon. Frank Smith is the promoter of a scheme for the erection of a large hotel to be undertaken by a joint stock company, the capital of which is placed at \$1,000,000. Mr. Smith has offered to take stock to the extent of \$25,000.—A new water main is to be laid to connect with the Isolation hospital.—The City Engineer will be asked to report as to the cost of the work necessary to strengthen the Queen street bridge over the Don in order to allow of the laying of heavier rails for the trolley cars. The Engineer will also be asked to consider the proposed extension of the street railway system in Roncesvalles avenue and Glen road.—It has been decided to advertise for tenders for the erection of buildings at the new rifle range and also for the sinking of a well. The buildings required include a caretaker's house, a shelter for the men and a storehouse for ammunition, the cost of which will be about \$5,000.—Building permits have been granted as follows: Geo. Gooderham, 14 story bk. stable, rear residence n. e. cor. St. George and Bloor streets, cost \$6,000; J. Wallace, 692 Euclid ave., pair s. d. 2 story and attic bk. dwellings, 437 and 479 Euclid ave., cost \$5,500; Wm. Hutchison, 27½ Seaton st., pair s. d. 2 story and attic bk. dwellings, 159 and 161 Sherbourne st., cost \$5,000; J. P. Clark, pair one story bk. and stone stores, 79 and 81 Queen st. w., cost \$5,000; Doty Engine Co., one story bk. foundry, Niagara st., near Bathurst st., cost \$5,000.—Messrs. Strickland & Symons, architects, 18 Toronto st., are about to let contracts for the new Albany Club building, having a frontage of 70 feet on Victoria street, and also for a new office building on the corner of Victoria and Adelaide streets. Both these buildings are to be of pressed brick and cut stone.

#### FIRES.

The residence of Mr. Thos. Hodgins, of Lyendinage, Ont., was destroyed by fire on the 24th ult.—A disastrous fire occurred at Mile End, a suburb of Montreal, last week, destroying the residence of the following persons: Rudolphe Reinhold, Nazaire Lord, Joseph St. Jean, Ferdinand Cliroux, Leandre Valliere, Andre Bernard, Hyacinthe St. Jaynes, Chas. Lebel, Geo. Hoyne and Mr. Mevard. The total loss is estimated at

\$10,000, the dwellings being all frame.—A fire occurred at Virden, Man., on Thursday last which destroyed the Grand Central Hotel, Virden Hotel, McDougall's implement warehouse, Higginbotham's, Wilcox's and Wyatt's stores and the C. P. Railway sheds.—Mr. Thos. Ecroyd's tannery, at St. Henri, Que., was totally destroyed by fire on the 29th ult., entailing a loss of \$50,000. The insurance was \$25,000.—Mr. H. Hempworth's woolen mill at Selkirk, Man., was destroyed by fire recently. The loss will be about \$3,000. No insurance.—The St. Croix cotton mill at Milltown, N. B., was destroyed by fire last week. Loss, from \$15,000 to \$20,000.—The Hensall House, at Hensall, Ont. owned and occupied by R. A. McIntyre, was burned on Saturday last. Loss, \$5,000; insurance \$3,000.

#### CONTRACTS AWARDED.

**SMITH'S FALLS, ONT.**—M. Ryan has the contract for enlarging and improving St. John's church, in this town. The price is in the neighborhood of \$13,000.

**BRANTFORD, ONT.**—The T. H. & B. Railway Company has let the contracts for the foundation and stonework of the new bridge to Mr. Wm. Gibson, of Beamsville.

**CHATHAM, ONT.**—Mr. John Piggott, of this town, has received the contract for supplying all the materials for the seven new railway stations on the extension of the Lake Erie and Detroit Railway between Leamington and Ridgetown.

**TORONTO, ONT.**—Mr. A. G. McIntyre has been awarded the contract for the galvanized iron work of the new Methodist church, Walkerville, also for the slating, felt roofing and galvanized iron work of three houses on Nassau street, this city.

**OWEN SOUND, ONT.**—Capt. John Simpson has secured the contract for the building of a fine new steamer for the North Shore Navigation Company, the cost of which is estimated at \$90,000. The contract for the new engines has not yet been awarded.

**KINGSTON, ONT.**—Tenders for alterations and additions to Mr. Hendry's residence have been awarded as follows:—Masonry, W. McCartney; carpentry, Messrs. McFarlane and Ackroyd; painting, Savage Bros.; plumbing and unsmithing, McKelvey & Birch.

**PRESBOTT, ONT.**—Messrs. Ross & Co., have been awarded the contract for furnishing the pews for the new Presbyterian church. The seating capacity will be 1000 and the pews will cost about \$1,000.—Messrs. Ward & Stelle have been awarded the contract for the improvements to be made to the Daniels Hotel.

**VANCOUVER, B. C.**—The tenders for the construction of the First Presbyterian Church have been opened, and the contract has been awarded to Messrs. Fraser Bros.—Mr. Horrobin has been awarded the contract for the erection of the brick and stone building to be erected by the Marquis of Queensberry on the site of the old St. Charles Hotel building.

#### TERMS OF ARCHITECTS' CERTIFICATES.

A curious case which turned upon the terms of an architect's certificate has been tried in Melbourne. The action was brought by a builder to recover the amount stated in a final certificate. In 1890 the plaintiff agreed to erect a house in St. Kilda, according to designs by Mr. Askew, architect, and to his satisfaction, for \$9,000. After the work was completed the builder applied for a final certificate, but the building owner at the same time sent in a protest against the granting of such a document on the ground that he had sundry claims to bring against the builder. The architect gave a certificate to the following effect:—"I hereby certify that the contractor is entitled to receive the sum of 660l. 19s. 10½d. as final payment of contract and extras in erecting resi-

dence at St. Kilda. As owner has intimated to me that he has claim upon you for delay and other deductions and omissions than those in my statements of account dated July 16 and 28, the certificate is issued subject to his counterclaims, an account of which he will render to you direct without my intervention." The building owner declined to act on the certificate, and the action was brought to recover the sum named, together with 50l. 10s. for extras.

The defence brought forward was that the certificate was not valid within the meaning of the contract, inasmuch as it did not set forth that the work had been performed to the architect's satisfaction, that although it purported to be a final certificate, it could not be so, as it was issued subject to any counter-claim defendant might have against plaintiff; that it had been agreed that the contract price should be reduced by 85%, upon certain parts of the plans and specifications being omitted, and that defendant was entitled to set off this amount against plaintiff's claim; and as to the extras claimed by plaintiff, that they had never been ordered, and that the work had never been done, or, if it had, it was part of the original contract. Defendant also claimed to set off against plaintiff's claim the sum of 96l., being penalties for six weeks overtime, at 16% per week, in finishing the work. A counter claim for 2,000l. damages was also preferred on the ground that the building had not been carried out according to plans and specification, and was therefore very much less valuable than it otherwise would have been. On behalf of plaintiff, it was replied that the certificate was a final one within the meaning of the contract, that the architect's satisfaction with the work, though not expressed in the document, must be implied from his issuing it as a final certificate, and that defendant was therefore debarred from going behind it to establish any counterclaim for overtime or defective work or material. It was further contended for plaintiff that all extras were ordered by either defendant or his architect, and that the contract time was exceeded on account of these extras and of the non-arrival of various fittings from England. It was held by Mr. Justice Williams that the certificate was a final one within the meaning of the contract and that defendant, by that fact, was precluded from pleading negligent or improper workmanship. He decided against defendant as regards penalties on the questions of both law and fact. A verdict was given for plaintiff for the final amount of the certificate, 660l. 19s. 10½d. with costs, but plaintiff's further claim for 50l. 10s. was disallowed, on the ground of both law and fact. There was a verdict for the defendant on the counterclaim for two small items, amounting to 42l. 5s. with costs. The judge said that there ought to have been no interference with the architect in the preparation of the certificate.

#### THE NEW EXPLOSIVE.

Herculite, says *Iron*, is the name of a new explosive, which, owing to its qualities of slow combustion and safety in handling, is claimed by its inventor, A. Pallé, to be superior to the best of the nitroglycerine compounds. It is yellowish-gray powder, and is said to be composed of sawdust, camphor, nitrate of potash and several other substances which are kept secret. Experiments conducted in a quarry with the new explosive showed that a shot could not be fired by sparks, flame or detonation. When burning, a flame similar to that of dynamite is produced which can only be extinguished with difficulty. In the tests, a small quantity of the powder was placed on a stone and struck with a hammer without explosion resulting. A half-pound charge of compound was inserted in a blast hole about four feet deep, which was then tamped with sand and earth, and the explosive was fired by means of a special igniter. The result was that a block of stone weighing 30 tons was displaced without being fractured. By the addition

of naphtha or ammonia to the ingredients of the power it can be made quick-burning. The price of herculite is stated to be only six cents per pound.

## MUNICIPAL DEPARTMENT.

### APPRECIATION OF "THE RECORD."

QUEBEC, Sept. 22, 1892.

Editor CANADIAN CONTRACT RECORD.

DEAR SIR,—Your CONTRACT RECORD is becoming very interesting and instructive. The article under the heading of "Municipal Department," on street grades and decisions of court therein, in a recent issue, is extremely important, and throws much light on a much debated question.

C. BAILLAIRÉ,  
City Engineer.

### EPIDEMICS OF TYPHOID FEVER.

It would appear that there has been too much haste in admitting that the spread of various epidemic diseases is due to germs in drinking-water exclusively. This very simple explanation is certainly seductive, but from time to time, facts related by observers whose competence is beyond dispute, appear to have been overlooked.

Among these contradictory observations, must be cited that by Mr. Arnould, of a grave epidemic of typhoid fever which originating in the garrison of Landrecies, on the 29th of January, 1891, broke out at Maubeuge in February, and on March 10th attacked the troops of Avesnes, where there were 370 cases and 35 deaths out of a force of 1,300 men.

It should be told that Mr. Arnould at first suspected the drinking-water of having engendered and diffused the malady. Yet the researches which were made on this theory, as well as the discussion of elements, brought into the question by the distribution of the cases observed, made it impossible for Mr. Arnould to maintain the accusation against the drinking water, which is so much the fashion at present.

On the one hand, the water of Landrecies, of recognized purity, is used in common by the soldiers and the townspeople, and among the latter there were but five cases of typhoid, while among the garrison there were sixty-three. Moreover, the practice of boiling the water, used from the beginning of the epidemic, was not discontinued. On the other hand, at Maubeuge, water from three different sources is used, yet among the inhabitants who drank the most suspected of these three, there was not a single case of typhoid. Finally, while at Avesnes the water was defective from all points of view, no one ever discovered in it the typical bacillus.

In the diffusion of the epidemic, the part played by man appeared considerable; either the sick persons or those coming from the seat of the disease contaminated healthy individuals by direct contact, or contagion was brought about by the intervention of clothes, food, air, or even water. Thus at Maubeuge, where there were 250 cases of typhoid fever, one physician and twelve hospital attendants out of fifty-five were attacked by the disease, when as yet but a single man of the garrison had been ill with it. Finally, there were some cases observed among those employed in the work of disinfection, and there were very clear proofs that the