

A NEW and rather difficult problem now confronts electrical engineers in their work in cities. This is the effect of the earth-return current on lead pipes and lead covered cables. Complaints have been made in several American cities, notably in Boston, Cleveland, Minneapolis and Chicago, that the water pipes have been seriously injured by the flow of electricity through the earth in the completion of the circuits. Mr. Barrett, the city electrician of Chicago, has made a report on the subject, published in the *Western Electrician*, and this report seems to show beyond question that escaping current from this source does accomplish injury to the pipes. The situation, says our contemporary, "is clearly one of considerable gravity and must be fairly met. Various remedies have been proposed, but so far none have been devised that have proved entirely successful. Of course the substitution of the double trolley system would remove the cause of complaint, but electric railway companies will exhaust every other means before going to the great expense and introducing the complications which this remedy would involve. Electric railway engineers are devoting themselves assiduously to the problem, however, and we hope that their inventive ability will be equal to the task of hitting upon a successful palliative adapted for commercial use."

With regard to the subject of the electrical transmission of power, we have the following letter from a gentleman in British Columbia: - "I have just received from a friend a copy of THE CANADIAN ENGINEER for the month of May. I read that Von Siemens was expected in Canada soon, in connection with electrical transmission of power from Niagara Falls to Hamilton. Now, I write to inform you that I can produce an underground conductor, which, under favorable conditions, that is to say, when properly applied, will prove superior to any other conductor for long distance on land or in shallow water; and will cost a great deal less than any other kind of conductor. I have not means myself to do anything with it. If you can do anything to assist me, or suggest to whom I should apply, I would thank you very much." We shall be glad to put our correspondent in communication with any firm interested. It may easily be that the writer of this letter has a valuable idea.

It is said that one of the subjects which is likely to engross a great deal of attention at the forthcoming convention of stationary engineers in Montreal, is the question of "High-speed vs. Slow-speed Engines" as applied to electrical work. Some prominent members who have given the subject close thought will come out as the uncompromising champions of the low-speed engine.

The advantages of electricity for heating street cars is apparent; there is no stove room wasted and the heat can be turned on or off at pleasure. For an ordinary 16-foot car a current of about 1,200 or 1,400 watts is sufficient in all sorts of weather.

The telephone-meter is a newly invented instrument for registering the time of each conversation at the telephone. By its use, rentals of telephones would be fixed on a scale according to the amount of service rendered.

NIKOLA TESLA observes that the day when we shall know what electricity is, will chronicle an event probably greater, more important, than any other recorded in the history of the human race.

It is said that a plate of iron, when used as a telephone diaphragm, will respond to and transmit perfectly all sound vibrations, even though it be an inch in thickness.

Electric Flashes.

THE new electric light system at Renfrew is in operation.

A CANYASS is being made for a \$25,000 electric light plant at Kaslo, B.C.

Work is proceeding upon the electric street railway at Amherstburg, Ont.

AN independent new electric street railway is being agitated for in Hull, Ont.

THE Vancouver, B. C., City Council are offering \$360,000 for the street railway.

J. B. SMITH & SONS, Callender, Ont., have put in an electric light plant at their mills.

THE Toronto Street Electric Railway system will, perhaps, be extended to Long Branch.

THE Kingston Electric Light Company are putting new engines and boilers in the power station.

THE Niagara Falls and River Electric Railway is now in good running order and is paying well.

THE Hamilton and Dundas Railway Co. is asking for permission to convert its road into a trolley line.

THE by-law providing for the grant of \$31,000 for an electric railway from Hamilton to Beamsville has been carried.

THE Vancouver Electric Railway, Light and Power Company (Limited) have advertised their plant for sale by tender.

THE Toronto Electric Railway Co. will this summer build a motor house on Esplanade Street, at a cost of \$30,000.

JOHN A. BURNS, engineer, Craig street, Montreal, has been appointed local agent for the Kay Electric Works, Hamilton.

THE Ottawa Electric Railway Co. have decided to build an electric car factory as a separate branch of their business.

WM. NEWMAN has been appointed engineer for Windsor, in connection with the special work of the new electric railway.

THE village of Maisonneuve, an eastern suburb of Montreal, is extending the arc light system throughout most of the streets.

JOHN A. CULVERWELL, late with the Edison Company, is now general agent for the Automatic Telephone and Electric Company.

PEOPLE in Edmonton, Alta., are agitating for the construction of an electric railway from the town to the C. & E. Railway station.

JAMES ANDERSON has been appointed manager of the electric light branch of the Sandwich, Windsor and Amherstburg Railway.

SOME merchants at Peterboro' are seeking an injunction to restrain the Electric Railway Company from laying their tracks along George street.

JOHN BAIN, with the R. G. McLean Company, has been appointed to the superintendence of the Niagara Falls and River Electric Railway.

A RESOLUTION has been passed by the Toronto and Scarborough Electric Railway Company, authorising its directors to issue debentures to the amount of \$50,000.

THE Montreal Electric Street Railway Company are pushing the work on the extension of their lines to the utmost; that along Notre Dame street is nearly complete.

THE Montreal Street Railway are extending an electric line from their present eastern terminus at the Hochelaga convent to the toll gate at the village of Longue Pointe.

A NEW electric light plant has been ordered by New Westminster, B.C., to the value of about \$25,000. It is expected that it will yield an annual income to the city of \$20,000.

W. H. FITZPATRICK, proprietor of the woolen mill at Hopewell, N.S., proposes to form a company to put in a plant to supply electric light to New Glasgow, eight miles distant.

A. W. CONGDON has succeeded C. F. Medbury as agent for the Quebec district for the General Electric Co. Mr. Congdon's quarters are, as before, in the Temple Building, Montreal.