

in their power house at Chaudiere Falls, so that, if necessary, they can use steam during the winter months. The contract will probably be given to the Doty Engine Works.

Efforts are being made in Hamilton to make the H. G. & B. and Hamilton and Dundas Street Railways pay a mileage rate for the use of the city streets.

The large Reliance dynamo, at Cook & Sons' power station, at St. Catharines, Ont., broke down a few days ago, and all the motors in the city stopped suddenly.

MANAGER THOMSON, of the Hamilton Electric Company, has given up his appointment. The company are dispensing with his services from motives of economy.

WHILE George Stratford was driving near West Brantford, a call-bell wire accidentally fell across the trolley line, and his two horses, touching it, fell down dead.

BRANTFORD citizens are subscribing a bonus of \$3,000 to the Brantford Electric Street Railway Company to induce it to extend its line to Terrace Hill and Grandview.

THE shareholders of the Montreal Street Railway have authorized the issue of new bonds to the amount of \$700,000, to be used chiefly for the conversion of the road to electricity.

THE Chambers Electric Light and Power Co., of Truro, N.S., have made an offer to place and light in that city forty arc lamps, and set up a fire alarm service for the sum of \$3,000 per year.

CLOSE & FRASER, of Toronto, who have in hand the construction of the Belleville Electric Railway, have asked for an extension of time in which to begin operations. The City Council have granted the extension on a deposit of \$1,000.

MR. DAWSON, C.E., is at Hector, B.C., looking into the matter of introducing electricity to obtain power for hauling the trains from Field up the heavy grade of the hill. Another electrician has also been there recently with Mr. Dawson for the same purpose.

AT a special meeting of the Fredericton city council the tender of the Brush-Swan Company to light the city with fifty arc lights, each of twelve hundred candle power, for \$2,000 a year, was accepted. The work of putting in the plant will be commenced at once.

WALTER GREEN, proprietor of the Wingham, Ontario, Electric Light Works, is building a brick dynamo house in Lower Wingham, where work will in future be carried on. The water resources are being much improved, also, as water is to be the motive power employed.

THE Kay Electric Works, Hamilton, recently put in a motor for the Lawson Printing Co. of that city; and a 25 h. p. generator and 20 h. p. motor for the flour mills of Thos. Cook, Corvill, Ont., replacing rope transmission. Mr. Cook formerly got 5-horse power from rope transmission from the water power, whereas he now gets 20-horse power from the same source through electricity.

It is said to be a question whether the Hamilton, Grimsby and Beamsville Electric Railway will ever be built, in the event of the opposition to the laying of a double track on Main street being successful. Before starting construction work Myles and Rutherford, the principal projectors, are awaiting the result of the vote on the bonuses from the townships through which the road will pass. If the bonuses are given work will be commenced this fall.

A CHANGE has been made in the well-known electrical business of T. W. Ness, Montreal and Toronto. Mr. Ness has taken in as partners N. W. McLaren, son of W. D. McLaren, of baking powder fame, and J. L. Rankin, son of the founder of the old commission house of Rankin, Beattie & Co., of Montreal. The business of Mr. Ness has grown to such proportions in the last three years that such a step was forced upon him. The new partners not only bring further capital to the business, but will be active workers.

T. B. GRIFFITH, manager of the Hamilton Electric Railway Co., died in that city on the 22nd ult., from paralysis, brought on largely, it is thought, through overwork during the construction of the new lines and their conversion to electricity. Mr. Griffith was only 39 years old, and by his own industry had risen from a poor boy to a position of influence. He had just finished a fine residence, and had a controlling interest in the street railway, besides being one of the chief shareholders in the Hamilton Steamboat Company, owning the *Macassa*, *Modjeska* and *Mareppa*.

TELEPHONES.

THE subject of telephones is one which is of especial interest at the present time, when the patents are expiring in the United States, where the Bell Co. have had a huge monopoly for the last fourteen years. Canada has, however, been a free country for telephones, as the patents were not sustained, and it will therefore be in keeping to give a brief review of the business of T. W. Ness (now T. W. Ness & Co.), Montreal, who for a number of years has been the largest manufacturer of telephones in Canada.

To show the wonderful growth of the business, it is only necessary to state that four years ago the telephone sales for the first month numbered two instruments, and at the present time over sixty hands are employed on the premises besides many local agents throughout the country. Branch show rooms have been opened in Toronto, Ont., and also in the United States.

A visit to the factory of this firm is an exceedingly interesting one, as a novice has little idea of the great variety of different tools and machinery required for turning out the many different parts of a telephone.

Mention will be made first of the standard main line telephones, which are suitable for private lines or regular exchanges. They can be used on lines up to 200 miles long. Many of these instruments are in constant use in local exchanges, and the firm have a number of very flattering letters showing the great satisfaction which they are giving. The No. 3 telephone is a popular one, as in it the transmitter and magneto are combined in one box, and it thus takes up very little space, in fact may be mounted on a stand and attached to a desk or other convenient place.



The accompanying cut shows a small switchboard in operation, the drop used in these instruments being the very best that can possibly be constructed.

The system of warehouse telephones used by this firm deserves more than a passing notice, as it is coming into general use throughout Canada, especially in cities where large manufacturers wish to connect the different parts of their premises. These instruments are so arranged that the manager in the office may at a moment's notice call up any of the departments without leaving his desk. This certainly insures a vast saving of time, and those using the instruments report that they very soon pay for themselves in the saving of time sending messengers to and from the office, to say nothing of the immense convenience that they afford to those using them. Briefly described, the system is such that each telephone is its own switchboard and therefore no central exchange whatever is required. All the objection to the old fashioned "plugging" system is done away with, as no plugs whatever are employed. Each instrument may be used to call up any of the others by simply turning the lever to the point desired and pressing down. This rings a bell on the instrument with which communi-