

OUR TELEPHONES.

We promised some time ago to give a more or less detailed account of the telephone, and of the company's operations in Canada, especially in this city. We are now enabled, from statistics supplied by the company, to fulfil that promise, and will try not to use any technical terms that can possibly be avoided.

The latest statistics show that there were—all told—something over 25,000 telephones in use in the Dominion on the 31st Dec. last, comprising 240 exchanges, with 15,000 miles of wire in use connecting the instruments therewith, and about 1200 miles of poles used for conveying this wire. The employees number over 1100. These figures apply to Exchange connections only. The Trunk Line business is extensive also, and increasing rapidly.

In Nova Scotia there are 1550 telephones in use at the present time, nearly 900 being connected with the Halifax Exchange, where the employees number 30 to 35.

SYSTEM.—Each subscriber has a separate wire direct to the switchboard. Lead covered aerial cables, containing 50 wires each are used, from about 1000 feet out, to complete the numerous circuits to the central. The cables are brought from the poles along the street, over and through the roof of the main building, to what is termed the distributing room, where about two feet of the outside lead covering is stripped from each. The conductors are then, after being carefully tested and numbered from the street end—taken up through a table, arranged in squares—an exact duplicate of the arms and pins on the poles—to binding screws, where the number and course of each conductor is recorded; this facilitates rapid testing. To the other end of the binding screw another cable is attached, which runs underneath the floor to the lightning-arrester partition, where each conductor is connected with one end of an arrester. The cable is again connected with the other end of the arrester, and leads off to the switchboard communication, which is permanently connected with the ground.

There are eighteen switchboards in use in the Halifax Exchange, each arranged for 50 subscribers. The upper portion of each board is occupied by the fifty annunciator dials, which are distinctly connected with fifty subscribers. Immediately below these are a like number of switch openings, which serve to make the connections between the subscribers' lines. The fifty annunciators and switch openings are both disposed in ten horizontal rows of five each, below which is a small table on which are arranged two rows of contact keys—the inner row containing 5—the outer 10; and this table also supports ten moveable plugs, whose connecting cords pass down below, and are stretched by small weighted pulleys; when the handle in a subscriber's bell-box is turned, a current is generated which attracts the armature in the annunciator, thus allowing a little shutter to fall, and display the subscriber's number. Each of the switch openings is so arranged, that, by inserting one of the ten plugs mentioned, the circuit leading to the annunciator is broken, and a new one is closed simultaneously. After one of the plugs is inserted, the subscriber's circuit is open, and the inner row of keys is provided to enable the operator to temporarily close the circuit to the ground. The operator, seeing a shutter fall, immediately puts the plug into the corresponding switch opening, thus breaking the signalling current. The operator's receiver at the same time becomes added to the circuit, and by pressing the corresponding key or lever, the circuit to the ground is again completed. The operator then gives that well-known "hello," and on being requested to connect with another number puts the next plug into the switch opening corresponding with the number asked for, completing the circuit between the two subscribers. By pressing the outer button, she closes the circuit of the one asked for, and rings his bell.

The hurried business man does not—very naturally—stop to think, when he gives the bell handle a savage yank, what a curious course is pursued by the wire which gives life to his telephone. how many sensitive little devices are necessarily used, or,

how anyone of them—at anytime and without apparent cause—may refuse to act. It may be merely a little dust on a contact, which has escaped the switchboard—inspector's eye, but it is sufficient to render the instrument useless for the time. Then there are gales and sleet storms, so commonly incident to this coast, which are a terrible bugbear to the management, and a horrible dread to the financial officers of the company, and subscribers do not of course stop to think whether or not the telephone people have difficulties to contend with; the first idea of a "number" when no response follows the ring of his bell, is that the operators are in fault, and that the Company at best is an indifferent money-making monopoly.

The expense of maintaining the system is enormous, and the outlay for new devices—constantly being added to perfect the service—is very heavy indeed. The rates charged in this city are certainly not higher than is necessary to provide a well cared for service, and pay the shareholders their modest 6 p. c. dividend.

It is the intention of the Company next season to erect a brick building solely for their own purposes on the property at the corner of Hollis and Salter streets, lately purchased. In this building the newest system of switchboards will be placed. It is estimated that the new board and inside connections alone will cost \$20,000.

We who constantly use and appreciate the telephone live in hopes that its increasing popularity will before long enable the Company to still further reduce the rates—as they certainly will as soon as the number of subscribers is large enough—and so bring it within the reach of the poorest of those who have any business to transact. As it is, this is the one convenience in which we are undisputedly ahead of old Europe, and we ought to be proud of it.

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