

ordered to be made in New York forty miles of a five-wire cable, enclosed in lead, while Mr. Cornell invented a plough to make the trench for its reception. This cable was laid from Baltimore to the Relay House, seven miles distant; but on testing it, the escape of current was found so great that the necessity to abandon it was at once evident. And half the Government appropriation of \$30,000 was absorbed in the fruitless experiment! It was now determined to place the wire upon poles, and this was done, two copper wires No. 14, covered with cotton saturated with gum shellac, being used. The rudimental notions of insulating the wires are illustrated by Reid. One of Vail's, which is not described, but which Morse, as well as the scientist, Professor Henry, approved, was rejected. That of Cornell, which was at first adopted, was to place the wires, well wrapped with cloth soaked with the inevitable gum shellac, between two plates of glass on the projecting knob or cross-arm of each pole, a wooden cover being nailed over, to protect from rain and to press the glass upon the wire.

It took a year to complete the first short line. The battery was 100 cells of Grove, which was renewed three times a week, and the circuits were left open when the wire was not in use. The public were slow to believe in the new messenger of commerce; it was a curiosity merely, and the enterprise dragged, when in 1845 a simple incident brought the telegraph into instant public recognition. The National Convention to nominate a President of the United States was in session at Baltimore. James K. Polk had been nominated for the Presidency, and Silas Wright, then in Washington, for the Vice-Presidency. Mr. Vail sent word of this over the wires to Mr. Morse, who at once told Mr. Wright. "In a few minutes the Convention received a message from Mr. Wright respectfully declining the nomination, and the presiding officer read the despatch. The Convention could not and would not believe it, but adjourned to await the report (by mail, presumably) of a committee sent to Washington to confer with Mr. Wright. But the committee confirmed the telegraphic message, and when the fact was known, the fame of the telegraph at once took wing."

At this time Mr. O. S. Wood, soon afterward the manager of the Montreal Telegraph Co., was connected with the engineering department of the State of New York. He was induced by his brother-in-law, Ezra Cornell, to give up his profession and enter the office of Professor Morse at Washington. In the winter of 1844-45 he received by wire the result of the presidential election in Northern and Eastern States, and spent much of his time explaining to Congressmen the working of the wonderful machine. A tariff of "one cent for every four characters" was imposed by the Postmaster-General upon public messages sent over this line. This was in April, 1845. On the 5th of that month the revenue of the line was 12½ cents. "The 6th was the Sabbath. On the 7th the receipts ran up to 60 cents and on the next day to \$1.32." It was then that Morse offered the invention to the American Government for \$100,000, but the offer was refused. It was then, fortunately perhaps for the world, that the resolve was taken to offer the invention to the public. Amos Kendall, who was Morse's agent, L. D. Gale and Alfred Vail joined in the effort to enlist private capital. F. O. J. Smith, the other partner of Morse, determined to act for himself. Kendall was Postmaster-General under Andrew Jack-

son. He took steps to connect by telegraph Baltimore and Washington with New York. The list of original subscribers (of \$15,000 in all) to the enterprise is interesting. Kendall and Cornell were down for a modest \$500 each; Corcoran & Riggs, of Washington, for \$1,000; F. O. J. Smith for \$2,750. Incorporation was granted by the Legislature of Maryland in 1845, the first telegraphic charter issued in the United States. Poles 200 feet apart; glass bureau-knobs for insulators; wires of copper; magnets weighing 100 pounds, enclosed in walnut boxes; a Grove main battery of 80 cells—such was the outfit. But the Morse alphabet then adopted has not in all the intervening years been improved upon. As Reid's poetic description says: "Its simplicity and availability are wonderful. It can be used by sight, by sound, by touch, by taste, by sense of feeling. Men can wink it with their eyes, can beat it with their feet. The prisoner can tap it on the wall or grating of his dungeon. Lovers in distant rooms can converse by it on the gas pipe. Its uses are endless. It is the telegraphic language of the world." Such is the alphabet still in use in the ten thousand offices of the telegraph on this continent and over a large part of the civilized globe.

OTTAWA BOARD OF TRADE.

The inaugural address of Mr. Wm. Scott before the Ottawa Board of Trade last month foreshadowed some topics for discussion by that body during the coming year. Referring to the municipal government of the city, he says, very aptly—and his words are applicable to other and even larger places than Ottawa: "The pail and water barrel of the days of Bytown have given place to a system of water works, the volunteer fire brigade of those days has given place to a paid efficient fire service, but still we retain the ancient mode of city government after our city has outgrown it." A school of mines at Ottawa; a fire-proof building for the Geological Museum; the Torrens system of land transfer; a Government guarantee for registered letters, are matters deemed worthy the consideration of the board. With reference to the market fees and the tolls on roads, Mr. Scott drew attention to a resolution lately passed by the Toronto City Council, that as soon as the County of York makes free the tolls on the macadamized roads leading to the city, the city market fees will be abolished. In regard to the bonusing of railways and manufactories, he said "this board has already placed itself on record. It has not recommended the bribing of manufactories to leave other cities and come here, but has adopted the sounder policy of granting bonuses to railroads, so that raw material may be brought in, and the manufactured product be shipped out at a low rate of freight."

NEW WESTMINSTER BOARD OF TRADE.

The annual meeting of the New Westminster Board of Trade was held in that city on the 22nd February. Mr. T. J. Trapp, the president, in the chair. After some verbal reports as to the dredging of the Annacis Island bar had been made by the president, and after some correspondence had been dealt with by the board, the annual report was submitted by the secretary-treasurer. It noted an increase in membership from 72 to 78, there having been five withdrawals and thirteen new members during the year. The annual

receipts are increasing and the board has \$1,140 money in hand. In 1892 the receipts were \$980 and the outlay \$557. The secretary explained that the report was necessarily brief, owing to lack of time, but that he would prepare a fuller one for publication, going into the work of the board for the year. On motion, the question of printing the annual report in pamphlet form was referred to the council.

The election of officers for the ensuing year resulted as follows:—

President—T. J. Trapp, re-elected by acclamation.

Vice-president—Jno. Wilson, elected by acclamation.

Secretary-treasurer—D. Robson, re-elected by acclamation.

Council—C. E. Woods, D. S. Curtis, C. G. Major, E. A. Wyld, D. J. Munn, Jno. Reid, W. A. Duncan, and W. H. Keary.

Board of arbitration—W. J. Walker, E. A. Jenns, H. Hoy, and G. D. Brymner.

The question of the discount on American silver was brought up by Mr. Robson, who understood that the banks in Vancouver were charging 20 per cent. discount, and it was rumored that the banks in New Westminster city proposed doing the same. Two weeks' or a month's notice, he suggested, should be given of such a step.

Mr. Wyld, manager of the Bank of British Columbia, informed the board that a full fortnight's notice would be given, if it was decided to raise the discount in this city from 5 to 20 per cent. He also announced, to quiet a rumor, the fact that the banks had plenty of Canadian silver for circulation.

A petition from the bar of the mainland to the Minister of Justice was then submitted, setting forth the great inconvenience to which part of the province was subjected by the fact that only one out of the five Supreme Court judges resided on the mainland of the province; and requesting that the law requiring three of the judges to reside on the mainland should be enforced. On motion of Messrs. Major and Walker, the board passed a resolution, to be attached to the petition, strongly supporting the request.

OWEN SOUND BOARD OF TRADE.

On the 24th of February was held in the Council Chamber the annual meeting of the Owen Sound Board of Trade. The president, Mr. S. J. Parker, occupied the chair, and some thirty gentlemen were present. The report read by the president refers to the deepening of the channel and inner harbor of the port, which has been begun, and which when finished will accommodate the largest vessels of the Upper Lakes. Although \$85,000 in bonuses had been voted in 1891 to the Grand Trunk Railway by Owen Sound, Sarawak and Keppel, to induce the extension of that railway from Park Head to Owen Sound, nothing has been done towards construction. The time for action expired in December last, but till 1st June, 1893, has been granted to the Grand Trunk in which to make a move if so disposed. The manufactures of the town are referred to. A paragraph deals with the steps proposed for maintaining the health of the town. Pure water, good drainage and periodical inspection of premises are recommended. The membership of the board is 63. The secretary's report shows that the C. P. R. steamers took from Owen Sound northward last season 42,382 tons, and brought down 45,680 tons, an increase over 1891. Grain received at the elevator was 2,398,068 bushels, an increase of more than a