

Turret Chief, Thos. Crossley, chief; W. McCallum, assistant. Turret Crown, Wm. Byers, chief; A. Lockerby, assistant.

Canadian Pacific Lake Line.—Manitoba, W. Lewis, chief; J. Walters, assistant. Alberta, A. Cameron, chief; C. Butterworth, assistant. Athabasca, W. Lockerbie, chief; J. W. Davey, assistant.

Northern Navigation Co.—City of Collingwood, B. Robinson, chief. Germanic, Joe Aston, chief. City of Midland, W. Whipps, chief. Atlantic, D. McLeod, chief. Britannic, S. Burgess, chief. City of Toronto, D. Harman, chief. Majestic, J. W. Aston, chief.

Lake Erie and Detroit River Line.—Car ferry Shenango No. 1, running on Lake Erie, Thomas A. Morrill, chief; James Cameron, assistant. Operating between Sarnia and Port Huron, car ferry International, George Brown, chief; John Downey, assistant.

Personal.

R. J. Gatling, inventor of the well-known Gatling gun, is dead.

A. B. Jardine, founder of the Tool Works, at Hespeler, in 1870, is dead.

Capt. Wm. Nichols, manager of the G.N.W. Telegraph Co., at Ottawa, is dead.

Thomas Ryan, engineer of the Government buildings, Montreal, died February 2nd. He was for many years engineer in charge of the Ottawa River Navigation Company's fleet.

George Tait, for many years city salesman for the Gutta Percha Rubber Manufacturing Co., of Toronto, has been appointed manager of the fire department supplies of this company for Ontario.

F. Hopkinson Smith, whose novel, "The Fortunes of Oliver Horn," has captivated the reading world, is a civil engineer. He paints and writes books for recreation. His writings are largely biographical.

David Bowker, the oldest engineer on the Eastern division of the Canadian Pacific Railway, has given up rail-roading and gone to a farm. He worked for the South Eastern Railway when it was opened into Newport.

Capt. John P. Angrove, one of the best known ship-masters in Nova Scotia, died February 12th. He took the ferry steamer Scotia from Halifax to Mulgrave and was employed by the Kingston Wrecking Co. to command the tug Petrel, which floated the steamer Scottish King on the Newfoundland coast.

Thomas Bell, one of the oldest railway engineers in Canada, died at Stratford, February 23rd, aged 82. Beginning his career on the Glasgow division of the Caledonian Railway in 1844, he came to Canada eleven years later, and had charge of one of the two engines running out of Toronto on the main line of the Grand Trunk. In 1859 he took the first engine to Sarnia. In 1893 he retired.

A C.P.R. engineer, named Vance, was frozen to death in a blizzard, near Battleford, February 15th. He was in charge of a party, who were making a survey of the proposed road from Saskatoon to Battleford. He was thirty-five years of age, and lived at Edmonton, but he was formerly a resident of Nelson, B.C. Last year he was engaged in straightening the C.P.R. between Sharbot Lake and Tweed.

—A. Macfarlane & Co., metal brokers and manufacturers' agents, Coristine building, Montreal, is the title of a new firm, composed of Archie Macfarlane, lately with Caverhill, Learmont & Co., and James Arnold, lately with Dorken Bros. & Co., Montreal. This new firm is open to represent manufacturers of small tools and hardware specialties. They have already secured the sole agency for Canada of such well

known concerns as the Prentiss Vise Co., C. E. Jennings & Co., Cleveland Block Co., and eight or ten others.

—The railway running from Caracas in Venezuela, built by English enterprise, is a marvellous feat of engineering skill. The first and larger part of the route is a constant climb up the steepest of grades, around the sharpest of curves, and through seemingly interminable tunnels. At almost any moment you can look out of the front car windows and see the back of the train, considerably below. For an instant you may think it another train, and when you realize that it is not, but a part of your own, you shudder to think what would happen if anything should give way. But there is little danger, as security has been provided in several ways. Up around and among the peaks you climb through coffee planted on the rugged mountain sides, and, having reached the highest part of the road, above which the mountains still tower, you descend a thousand feet and find yourself in a beautiful green valley, though still many thousand feet above sea level. Altogether you have travelled 24 miles to reach a destination which the birds make in 6, and which the redoubtable Drake accomplished in 9 when he sacked Caracas, and carried off a million dollars' worth of treasure.

MINING IN SOUTHERN BRITISH COLUMBIA LAST YEAR.

A recent number of the Engineering and Mining Journal contains a review, by S. S. Fowler, of mining in Southern British Columbia in 1902, that being the part of the province from which the greater part of the mineral product is derived, the output from the northern part being chiefly alluvial gold. In reviewing the industry the output is considered according to its nature, (a) silver-lead ores, (b) gold-copper ores, (c) gold milling ores, (d) coal and coke. Treating of these in order the writer says:

The silver-lead industry, seems as though smitten by a plague. This is the result of very low prices and a distant market for its lead. Although we have the advantage of ample local smelting facilities, the fact that the Canadian market for lead is very limited, and that the American is not open to us, forces the bulk of our lead product to far-off and low-priced markets at great cost. Consequently, only those mines whose ore is rich in silver can continue to operate. In East Kootenay, the St. Eugene, capable of an output of 3,000 tons of 65 per cent. lead concentrate monthly, has been idle throughout the year. The North Star has produced sparingly, and practically only enough to meet the expenses of development. The Paradise, the only mine in the province having considerable amounts of carbonate of lead, is also low-grade in silver, and has shipped very little during the year. Here, again, development only is being done in hope of better times. In the Slocan district of West Kootenay, famous for the high ratio of its silver to lead, the number of operating properties has continued about as in previous years, and the output of ore and concentrates will be about 26,000 tons, approximately the same as for 1901. It must be stated, however, that this figure is maintained by the considerable output of dry silver ores, and the actual tonnage of lead will probably be shown to be much less than of the previous year, while both lead and silver will not bear comparison with the output of the banner years of 1897 and 1898. The chief producers of the year, as to tonnage, have been Whitewater, Rambler-Cariboo, Payne, Enterprise, Arlington and Bosun, and these, with some 25 or 30 others, which have produced during 1902, are employing at the close of the year probably not over 400 men. Such are the straits in which all manner of adverse external conditions have placed a large number of excellent properties. The only other silver-lead district is that of Lardeau, which has not yet reached a stage of large production, owing, until recently, to its inaccessibility. Like the Slocan, its lead ores are high-grade in silver, and it suffers from the same adverse circumstances. The chief mines are the Nettie L., Silver Cup and Triune. A determined