rocks from which it issued is probably long since exhausted. These sands are, however, in an adjacent part of the country covered by shales, and a boring, already 1,700 feet deep, is now being put down by the Geological Survey, under instructions from the Government, at Athabaska Landing, in order to ascertain whether supplies of petroleum do not exist below this protective covering. If they do another great oil field is assured to the Dominion.

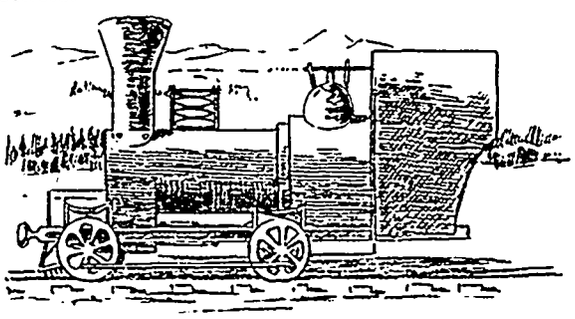
Another mineral with which the Dominion is abundantly supplied and which is extensively worked is salt, somewhat over 57,000 tons having been produced last year. This salt comes principally from Ontario and New Brunswick, although it is known to occur elsewhere in the Dominion, especially in Manitoba and the North-West Territory, where brine springs abound. In Ontario, which is our principal salt-producing province, the salt is derived from beds at or near the base of the Onandaga formation, where it occurs interstratified with marls, dolomites and shales. The salt is brought to the surface in solution in form of saturated brines, formed by the surface water percolating down through the rock and dissolving the solid salt of the above-mentioned beds. These brines being tapped by bore holes or wells, are pumped to the surface and then evaporated. In 1876 a boring by means of a diamond drill was made at Goderich, Ont., in order to ascertain the thickness of these salt beds and their distance below the surface. As a result of this boring it was ascertained that the first salt bed lay 1,006 feet below the surface and was 31 feet thick. In the following 520 feet five additional beds of salt were penetrated, the total thickness of salt discovered amounting to no less than 126 feet. This section may be taken as an index of the general character of the formation traversed by the Ontario brine wells, which are usually from 1,000 to 1,500 feet deep. It shows that under this part of Ontario there lies an inexhaustible supply of salt, which has been proved by analysis to be very pure and of excellent quality. The brine springs of Manitoba and the North-West Territory, which, as mentioned above, are very numerous and very saline, are as yet worked only to supply local requirements.

In addition to the various minerals above referred to, a number of others also occur in the Dominion, and are more or less extensively worked. Among these are iron pyrites, chromic iron ore, arsenic and antimony ores, manganese ore, iron ochres, graphite, soapstone, whiting, lithograph stone, grindstone, moulding sand, etc. Large supplies of natural gas are also found at certain localities, as well as many deposits of other minerals, which as yet are of little or no commercial value, but which will undoubtedly be worked with profit as the country becomes opened up and more thickly settled. The Dominion also possesses immense supplies of excellent structural material—granites, sandstones, limestones and other building stones, slates, sands and gravels, brick clays, materials for the manufacture of cements, pottery, terra cotta, tiles, etc. The annual output of these has already a value of over $5,000,000.

The mineral deposits of the Dominion will, moreover, be a permanent and continued source of wealth to the people of Canada. While the fur trade has greatly diminished in value, and the timber supplies of the Dominion, being rapidly destroyed, must follow, (unless some steps can be taken, as in older countries, to grow forests as well as to cut them down), the mines and quarries of the Dominion will year by year become more numerous, better developed, and more productive, and will always constitute one of the chief sources of our national wealth and prosperity.

REMINISCENCES OF CANADA'S FIRST RAILWAY.

A representative of THE CANADIAN ENGINEER recently had an opportunity of gathering some interesting facts about early locomotive engineering in Canada, from Geo. Ostrout, late of Montreal, who drove the first engine on the Laprairie and St. John Railway, and who, at the age of 70, could sit down, and with a steady hand, prompted by a perfectly clear technical memory, draw his first love, the "Dorchester," so well that the sketch needed only to be brought up to the requirements of modern illustration for reproduction here. Mr. Ostrout was born in Montreal, on February 28th, 1826, and records as his first recollection the building of the island wharf for Bronson & Spiers, in 1830 1831. In 1832, during the cholera epidemic, young Ostrout and his mother boarded a steam ferry. Near them sat an old lady who, like many others at that time, had a superstitious horror of any powerful agent whose pedigree she did not know. She informed the Ostrouts that nought but unavoidable circumstances could have forced her into such a wicked contrivance, and that the devil himself must be aiding the engine driver. Young Ostrout replied that he meant to learn how to start an engine, devil or no devil, and a few years afterwards, when the lad had attained the advanced age of 12 years, he was actually running an engine on a three-mile journey, while the responsible driver lolled in a shed playing checkers. Previous to this, the cars had been drawn by horses driven tandem. Most of these cars were made in Troy, N.Y., were mounted on four wheels, and had a high seat and a brake, acting on one pair of wheels, at each end. They were divided into three compartments, each having its own door, and with two leather-cushioned seats running athwart the car. The conductor had to travel on the step-rail which ran round the outside, unless he too got inside to play checkers.



This was the state of things when the first locomotive—the "Dorchester"—arrived. She was built by Stephenson & Son, of Newcastle-upon-Tyne, of the type known as the "inside connection." The wheels were four in number, having felloes and spokes of English oak, with iron hubs and tires. She had two safety valves. That over the steam chest had a rod running back to the engineer, with a spring balance attached to the end by a screw, which could be shifted at will. The other valve was placed forward, as shown. It was pressed down by a number of elliptic springs, placed back to back between two little pillars, with cross-bar and nuts. The valve motion in the steam chest was produced by one eccentric for each cylinder, the back and forward motion being caused by raising