result is now produced with one horse-power. Montreal was the first harbor in the world lighted by electricity, whereby she secures the utmost despatch in the discharge and loading of her ocean visitors.

Ottawa is exclusively lighted with electricity by the arc light, which has replaced gas at the same cost, the fine water power of that city driving the dynamos. It has also the incandescent system for interior lighting. This system has also been introduced in our new towns of Vancouver and Calgary in advance of the gas.

It is estimated that the capital invested in electric lighting in Canada reaches $2,000,000 already, that there are about 3,000 arc lights, and about 15,000 Edison incandescent lights in use here.

A street railway has been successfully worked by electricity upon the over head system, between Windsor and Walkerville, in Ontario, for several years. It was one of the earliest applications of the system upon this continent. There is also an exhibition one in Toronto.

The line between St. Catharines and Thorold is worked by electricity.

The Phonograph is the latest wonder of Electric application. It was invented 10 years ago by Edison, but remained a curiosity until last year, the inventor meanwhile having been occupied with the incandescent light. Hardened wax cylinders have been substituted for the original tin foil covered ones. These cylinders are provided with a mailing case, so that not only the spoken words, but the expression and inflection of the voice can be transmitted to distant points. It will replace the stenographer, can make no mistakes, will be an unimpeachable witness and cannot be confused by cross-examination. Besides its use in Court, it will report speeches, songs, lessons, and orders, and read to the sick in hospitals, etc. Four cylinders, each 4 inches in diameter and 8 inches long, will record the whole of Nicholas Nickleby.

EARLY ENGINEERS.

I am unable to give much information about the early engineers of Canada. Royal Engineers controlled the Rideau Canal, but had civil engineers as assistants, all of whom I believe came from Britain. Nichol H. Baird, who was the chief, and John McTaggart, are two of the names associated with that work. When the Lachine Canal was undertaken, Thos. Burnett was brought out from Britain as Chief Engineer. Francis Hall, a pupil of Telford, was the Engineer of the Shubenacadie Canal, which was commenced in 1825. As this work was suspended, and remained so, he removed to St. Catharines, and was consulted with respect to the Welland Canal, and also that at Burlington Beach near Hamilton.

Samuel Clowes, a British engineer, was employed by the commissioners of Internal Navigation in 1824, to report upon the Rideau Navigation