

APPENDIX No. 1

Q. I understand that point entirely. Heretofore the production of aluminium has been exclusively in the hands of the Pittsburgh Reduction Co., of Pennsylvania, and the Herault Co. of Paris. They obtained patents which precluded anybody using that electrical furnace and that process. The Herault patent expired in Europe about two years ago, and I am informed the Hall patents expire this year. During those fourteen or sixteen years of the lockup of the industry, the Hall and the Herault—the Herault particularly—having bauxite in France, he having found a process suitable for the reduction of that and giving great satisfaction, had no reason to go further to test anything else. And the same way, those people in Pennsylvania, having agreed that the market in Europe should not be interfered with by the manufacturers in the United States, and vice versa, they followed out the Herault idea of using bauxite, and it did not pay them to throw over something they were certain of in order to look for something else. Having arrived at this stage that it is a free market for manufacturing—because it never was patented in Canada anyway—I am looking for the assistance of our expert men to ascertain if we cannot in some way, either by electricity or by chemistry, utilize some of the minerals we have. I should like to ask you if you are conversant with minerals as a study?—A. I am not an expert.

Q. But you have an idea of them?—A. I know something of the subject.

Q. Here is a specimen of pyrophyllite; did you ever see any of that before?—A. No, except as specimens.

By the Hon. Mr. Sullivan:

Q. What is it that makes corundum so refractory that it is difficult to get the metal from it?—A. Because it contains silicate and iron in certain combinations—I think that is why—I am not speaking with authority on that point.

By the Hon. Mr. Domville:

Q. The specimen of pyrophyllite which I have here runs 45 per cent of alumina, and the balance is absolute silica—nothing in it at all. It is a silicate of alumina. Now there are only two cases so far as I can find in the books published where there is even mention made of pyrophyllite. Suppose that can be found in Canada, do you think there could be any difficulty in finding a process that would separate the silica from the alumina, it having no impurities?—A. I may say all the ores that are used contain quantities of silica, running as high as 25 and 30 and even 40 per cent.

Q. You cannot find any alumina without silica except in the corundum, and even in that there is a small percentage?—A. A very small amount.

Q. In your experience you have never heard this question of the formation of pyrophyllite existing in Canada, or whether if it did exist any steps have been taken to see whether it could be used practically?—A. No, I have not. Where is this found?

Q. I am only putting it, suppose that exists, has any attempt been made in this country to utilize it?—A. In my opinion there are very few problems in nature which human ingenuity cannot work out. It took a long time even to work up to the production of the metal aluminium, although its existence had been known for many years. It was known in the middle of the eighteenth century, and yet it was not until, I think 1827, that the process was discovered.

By the Hon. Mr. Sullivan:

Q. Later than that, was it not? By Deville?—A. There was one who made the discovery before Deville. Deville's process was the chemical one, and that continued to be the process down to 1880 or 1881 when the electrical process supplanted it.

By the Hon. Mr. Domville:

Q. A man of your age, and experience and position, would not like to say that it could not be made in Canada?—A. Certainly not. If I had my way I would offer a reward, and a handsome reward, to the scientists who would discover a process of ex-