

was needed and the Helen mine was found not far away at a convenient spot. It not only supplied all the iron ore needed, but called for the erection of blast furnace and works for the manufacture of Bessemer steel. A glutton might now be content, but Jason is far from being satisfied. He is only at the beginning of his career. "We found," he says, "that in this process," that is of reducing and refining the copper and nickel ore which are found together, "we required certain alkalies." Here, again, he had no difficulty in finding what was required and what would also yield valuable by-products. There are any number of salt wells on the shores of Lake Huron. "We had only to take one of our dynamos, attach it to an iron pot, fill the iron pot with brine, and the chlorine gas came off through suitable tilting, while the other part of the salt, the sodium, came off as caustic soda through the water. . . . So the next step was the establishment of an alkali plant, a chemical works. We began to investigate all round the world for the best process for the electrolytic decomposition of salt, and we finally selected a process which had been recently invented known as the 'Rhodin' process. After careful examination on a practical scale, we have adopted it, and are now building alkali works. What we needed out of the salt was really the sodium for our refining processes. We did not need the chlorine, but we could not allow it to go to waste. That was another by-product. So we came to the next step in the evolution. Chlorine is universally made into bleaching powder, a substance used for bleaching wools, cloths and fabrics of all sorts. Bleaching powder consists of about 37 per cent. of active chlorine gas and the other 63 per cent. is just lime. The lime is a medium for conveying the chlorine gas about. It has an affinity for the chlorine, which is seized by the lime in the lime chambers and the lime, which becomes impregnated with it up to 44 per cent., then ceases to take any more. Then it is barrelled up, and sent

about the world. Well, we said, here is a case just like our wet wood pulp. The people who are shipping that lime around the world are paying freight on something that is entirely useless. At Sault Ste. Marie, where everything must be saved that men may survive, we cannot tolerate any such nonsense as that, so we take the gas from the receptacle where it is formed and pump it with a glass pump into the lime water. Instead of pumping it into lime, we pump it into lime water. The lime water is then utilized for bleaching the sulphite pulp. So, you see, there is the continuation of the evolution!"

I have no desire to weary my readers, all of whom may not be scientific, though all are patriotically interested in the development of the country; of necessity then in every chief, who, by organizing industry, is "turning rivers into a wilderness," "where the hungry may dwell and prepare a city to dwell in, and sow fields and get them fruits of increase." His is a nobler work than soliciting or paying for votes. The chief is the man who sees before and after. The average man sees only the present; and, therefore, it is a blessing that the prosecution of the best work is not dependent on votes. They would not be given for enterprises from which no immediate result can be expected. Fortunately the progress of society has in no age depended on votes but on leadership. The *causa causans* of every movement is to be looked for in the man who leads, and true leadership consists not in yielding to the cries of the people, but in persuading, inducing and enabling them towards effort in the right direction. "Take us back to Egypt," cried Israel, but Moses refused to listen. He paid no attention to the will or votes of the people, though he loved them better than the highest position on earth. That was the good old way with leaders of men. It must be the new way, too, if it is to end in good.

Four years ago, on the occasion of my first visit to the block-house, the only building on the ground beside the 20,000 horse-power canal was the half-