)ART OF BELLAMY'S DREAM REALIZED

DYNAMOPHONE PERFECTED NEARLY 100 YEARS AHEAD OF HIS PROPHESIES DATE

ItEAMS are coming true very rapidly these days. Fact is out-running fancy and truth is discounting fiction to a extent positively bewildering to him whose eyes are open to the scientific wonders of the day.

Just twenty years ago Edward Beilamy wrote "Looking Backward." Few books ever published have been more widely read. It was interesting then because it was such a deliclously daring journey into dreamland. Beilamy "looked back" from the year 2000 and described the transformed civilization as he found it in Boston after his sieep of 113 years.

In 1887 the book was interesting because of the marvelious inventions the author dreamed would come into use in a little more than a century. It is interesting to-day because in less than two decades many of these creations of fancy have crystallized into realities, and some of them have been developed far beyond the wildest flights of Beilamy's imagination.

One of the most striking illustrations of this is the final perfection of the dynamenhame a wonderful electrical invention one of the most striking interactions of this is the final perfection of the dynamophone, a wonderful electrical invention for producing scientifically perfect music and which is now being installed in a building not far from the Metropolitan Opera House, in New York. When installed, the great musical invention will supply over relephonic wires all kinds of supply over telephonic wires all kinds of music, not only to homes, theatres and churches in the city, but its production will be transmitted to adjacent localities wherever high grade music is desired at a

One of the most interesting chapters in "Looking Backward" was a description of just such a distribution of music as this. When the author awakened from his long sleep he found that residents of Boston no longer left their homes to enjoy the best music. At any hour of the day or night one had but to touch a button and the room was flooded with any sort of music one desired. But this music proceeded from central music rooms in various parts of the city, where trained musicane.

Crossing the room of democracy until design of the city, where trained mustclans were constantly employed, the
strains of their instruments or voices being
simply transmitted over wires.

Here is an instance where the reality of 180 has far eclipsed what Bellamy desaude would be the must be and the same of the control of the control

on the mut wenty-four really herald the see," she said, "prohours."

course, the Crossing the room,
so far as I could see we have good music, ing now simultane-

Of

the dynamophone. Operating



Dr. Thaddeus Cahill .~

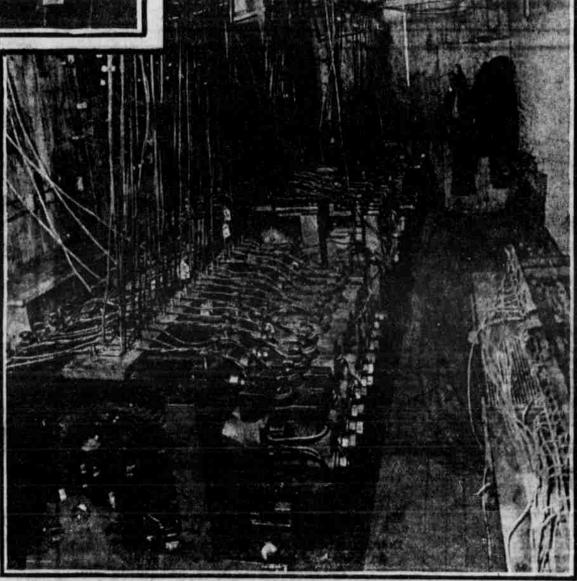
ELECTRICITY IN SMELTING.

THE Canadian government in 1904 sent a commission, headed by Dr. Haanel, superintendent of mines, to Europe to inquire into the different electro-thermic processes for the smelting of from ores and the making of steel. Careful investigation of the various processes used at different points was made, and the result reported on the return of the commission was so favorable that the Canadiana mission was so favorable that the Cana-dian government decided to make further experiments and tests with Canadian ores, and selected Sault Sainte Marie as the point where they should be made. Preparations for making these tests were commenced in November, 1905, under the direction of Dr. Heroult, of La Pras.

"Successful demonstration of all points stated in my memorandum on electric smelting of Canadian iron ores requires investigation. Output greater than figure adopted by Harbord in report of commission. Successful substitution of charcoal, and therefore of peat for coke."

The experiments were made with hema-tite, magnetite and titanic ores taken from various places, some of which Dr. Haanel could not treat commercially by any other known process. The furnace used was about 220 horse power and produced from about 20 horse power and produced from two to three tons per day. Ores containing 4 per cent of sulphur contained, when treated, 0.003 per cent in the metal. About 100 tons of ore was treated, making 55 tons of iron, of mostly car wheel quality. The pyrrhotite referred to by Dr. Haanel was roasted nickeliforous or from the nickel mines near Sudbury. No serious difficulty was encountered in the making of the experiments; everything worked smooth and casy.

Both Dr. Hannel and Dr. Herouit assert that the tests fully demonstrate that the process is a commercial success. No full detailed statement will be given to the public until report is made to the government, but Dr. Hannel says that as soon as his report is made out it will be forwarded to the Department of Commerce and Labor at Washington. The two principal points that have been demonstrated are that the electrical process is good so for as the ore is concerned, in that it profor as the ore is concerned, in that it pro-duces a superior quality of iron; that sul-phuric, titanic and other impure iron ores heretofore considered useless can be used, and that it is commercially feasible from an economical point of view.



Mechanism of the dynamophone -

(From Meclium's Mag sains, July, 1908, describing Backward, 1985, described Backward, 1985, describing A Scientific Defence of Tobacco——Cigarettes Declared the Satest Form of Its Use Tobacco and the Sates Form of Its Use Tobacco and Its Use Tobacco