

The reception committee had arranged for two special trains to convey the delegates to the works selected for inspection. The route taken afforded an excellent opportunity for seeing the city, which reminded me of some of the great manufacturing cities of England, a city of flame and smoke, much smoke. The first visit made was to the extensive works of the Westinghouse Electric and Manufacturing Company. Several hours were spent in going over the works, and an experiment with an 135-ton electric locomotive witnessed. Also an experiment with a series of air-brakes, all of which proved satisfactory. Mr. George Westinghouse was present, and treated the delegates with marked courtesy and hospitality. Time was too short to do justice to the works, but I arranged with the company to keep me posted as to any new development in electric traction. The company expend large sums in experiments in this direction.

After lunch, tendered by the company, we took train and went on to Carnegie's great homestead and steel-works. The various mills were in full swing, rolling various sections of steel (but no rails and armour plates) in various stages of manufacture.

Having completed the visit we again took train, arriving at the central station at 5 p.m. An hour later we left by special train for Cleveland, where we arrived the same evening.

Cleveland is an important manufacturing centre, having some 3,400 industries, with an annual output of £30,000,000. A specialty is the manufacture of coal and iron-ore handling machinery. Tugs were placed at the disposal of the delegates, and under the guidance of an influential reception committee we went down the river for a view of the ore- and coal-handling machinery located near the docks. Coal was being shipped at a hoist or lift at the rate of 40 tons every three minutes. The system is an excellent one for hard coal, but it would not be suitable for the friable New Zealand coal.

Leaving the tug we next visited the works of the Williams-Seaver-Morgan Company, which cover an area of about 6 acres. The company manufacture coal- and ore-handling machinery, hoisting, hauling, and conveying machinery, and many other specialties. All machine tools are equipped with variable-speed motor drives. The shops are modern.

This visit concluded, we proceeded to view the works of the Brown Hoisting Machinery Company. This company manufacture hoisting and conveying machinery and general appliance for dock, railway, and steel works, &c. The shops are well found with modern high-speed tools, cranes, &c. Electric motors are exclusively used.

A visit was next made to the King Bridge Company, where forty-five minutes were spent inspecting the various shops and the bridges under construction. The capacity of the plant is 30,000 tons of finished bridge-work per annum.

The final visit of the day was made to the Lake Shore and Michigan Southern Railway Company's locomotive and car shops and marshalling-yards at Collingwood. The shops are commodious and well designed. They were completed in 1902, and are equipped with all modern machinery, cranes, &c., electrically driven. Repairs only are dealt with in these shops. They maintain in good order 450 locomotives, 650 carriages, and a considerable freight equipment. A well-arranged store is a feature in connection with the shops. The general arrangement of the shops and the disposition of the machinery are very good, and cleanliness and order are very conspicuous. The yards are similar to those at Altoona, but not so extensive. A short time was spent in seeing trains marshalled. Five thousand trucks are dealt with daily.

Left for Buffalo at 5.45 p.m., and arrived there at 10.15 p.m.

The principal receipts at Buffalo are grain, flour, lumber, and iron-ore. To deal with the enormous grain business twenty-two elevators, having a storage capacity of 25,000,000 bushels, have been provided. The elevators are capable of dealing with 5,000,000 bushels daily. The development of electric power at Niagara provided unequalled advantages for all lines of manufacture.

The International Traction Company at Buffalo own the best-equipped trolley system in the country, with a track of some 350 miles in Buffalo and along the Niagara frontage, operated, heated, and lighted by Niagara Falls power.

Wet weather prevented the carrying-out in full of the programme which had been arranged for by the reception committee, a trip on Lake Erie and an inspection of the grain-elevators being the only part of an elaborate programme which was carried out.

Went on to Niagara, where we were conducted over the American power plant of the Niagara Falls Power Company, which has an output of 105,000-horse power. The power plant of the Niagara Falls Hydraulic Power Company, having a horse-power of 50,000, was also inspected. These companies have water-rights for an additional 145,000-horse power. On the Canadian side three companies are now constructing power plants having a collective horse-power of 450,000. There is a feeling in the minds of many that the diversion of so large a volume of water will destroy the grandeur of the falls; on the other hand many say there is no perceptible difference in the flow, and that Niagara can be drawn on for a further very large horse-power.

After seeing the rapids by searchlight we left for Schenectady, which city was reached on the morning of 20th May. An early start was made, and we first visited the extensive works of the General Electric Company, the total floor-space of which covers nearly 58 acres. The shops are well equipped with up-to-date appliances, and a very large business is done. The company, in conjunction with the American Locomotive Company, are building fifty electric locomotives for the New York Central and Hudson River Railroad Company. The manufacture of the Curtis steam-turbine is undertaken by the company, and at the date of my visit Curtis turbines having a horse-power of 220,000 had been supplied, and orders were in hand for the supply of 420,000-horse power. The company gave a demonstration with one of their electric locomotives, which was successful. It weighed 100 tons, and attained a speed of sixty miles per hour.

Our next visit was to the works of the American Locomotive Company, where a large business is done. The shops are well arranged, and the machinery is of a modern type, electrically driven.