

Manitoba.—The Manitoba Power Commission entered into contract with the city of Winnipeg for a supply of power, and built 164 miles of transmission lines from Winnipeg, connecting Oakville, Portage la Prairie, Carman, Morden and Roland. The Commission purchased the hydro plant of the Minnedosa Power Co. and also built a fuel plant at Virden equipped with two oil engines aggregating 240 h.p. The Minnedosa plant is equipped with a 450 h.p. water turbine operating under a head of 19 ft. and two oil engines of 120 h.p. each. Minnedosa and Virden are not connected with the system of transmission lines, but are separately operated units.

VIII.—MANUFACTURES.

1.—Evolution of Canadian Manufactures.

Manufacture is defined as the operation of making wares from raw materials, by the hands, by tools or by machinery, thus adding, in the phraseology of the economist, new utilities and therefore additional value, to the already existing utilities and values of the raw material. Manufacture, in primitive societies and in the pioneer stages of new communities, is normally carried on within the household for the needs of the household, as was the case among the early settlers of Canada in the seventeenth and eighteenth centuries, when domestic manufactures were carried on in combination with the cultivation of the soil, mainly at the times of the year when agricultural operations were suspended. At a later period in the evolution of society, small manufactures are carried on in specialized workshops for the needs of the immediate locality or neighbourhood, as was generally the case in Eastern Canada in the first half of the nineteenth century. Later still, as a consequence of the introduction of machinery operated by steam or electric power—the so-called “Industrial Revolution”—and of the cheapening of transportation, manufacture has to an ever-increasing extent been concentrated in factories, often employing hundreds and even thousands of persons and producing for a national or even for an international market. So far as Canada is concerned, this “industrial revolution” may be said to have commenced shortly before Confederation and to be still in progress. The growth of manufacturing production since 1870 is outlined in this article and the accompanying Table 1, while the increasing importance of manufacturing for the international market may be illustrated by the statistics of Table 7 of the Trade and Commerce section of the 1920 Year Book, which shows that Canadian exports of manufactured produce increased from less than \$3,000,000 per annum on the average of 1871-1875 to \$435,000,000 in the post-war fiscal year ended March 31, 1920.

The kind of manufactures to be established in a community will in the beginning be largely determined, more especially where transportation charges are high, by the type of raw materials available in that community. For example, probably the first agricultural process to be carried on by Europeans in what is now the Dominion of Canada, was the raising of a crop of grain at Port Royal, Nova Scotia, in 1605; the first manufacturing process was the grinding of the grain in the autumn of the year. Other earlier manufactures were also necessarily connected with the satisfaction of the primary needs of human beings for food, clothing and shelter, and with the other primary need for protection. At a census of occupations taken in 1681, we find a comparatively large number of tailors and shoemakers, masons and carpenters, gunsmiths and edge-tool makers, enumerated.

Nearly two centuries later, the first census of manufactures taken after Confederation for the year 1870 indicated that the majority of the industries were those