

MANUFACTURES.

Manufacture is defined as the operation of making wares from raw materials, by the hands, by art 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. At a later period in the evolution of society, 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 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 109, while the increasing importance of manufacturing for the international market may be illustrated by reference to 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 processes were the construction of a mill equipped with a water wheel and the grinding of the grain into flour in the autumn of the same 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.

The earlier manufactures were necessarily of a rather crude and primitive type, concerned with the preparation of commodities which were too bulky to bear the heavy transportation charges of those days, when only one round trip per annum could be made between France and Quebec, and vessels were constantly subject to the storms of the North Atlantic and very frequently to the attacks