

and 1938, is shown in Table 2 of this chapter, while the production by provinces in 1938 is given in Table 6. The estimated value of all clay products made in 1939 was \$4,984,491.

Cement.—The cement industry in Canada began with the manufacture of hydraulic or natural rock cement. The first production was probably at Hull, Quebec, between 1830 and 1840. The manufacture of Portland cement began about 1889. Owing to its superiority in uniformity and strength, it soon superseded the older product. Portland cement consists of an accurately proportioned mixture of lime, silica, and alumina. The lime is usually furnished by limestone and the silica and alumina by clay or shale. The cement industry has naturally become established where these materials are situated and where fuel supplies and transportation are readily available. The largest production is in Quebec and Ontario, although there are also active plants in Manitoba, Alberta, and British Columbia. As may be seen from Table 34, production declined greatly from 1929 to 1933, but has recovered somewhat since then. Production by provinces in 1938 is given in Table 6, p. 323.

34.—Production, Imports, Exports, and Apparent Consumption of Portland Cement, by Quantities and Values, 1920-39.

NOTE.—Figures for the years 1910 to 1919, inclusive, will be found at p. 356 of the 1939 Year Book.

Year.	Production. ¹		Imports.		Exports.		Apparent Consumption.	
	bbl. ²	\$	bbl. ²	\$	bbl. ²	\$	bbl. ²	\$
1920.....	6,651,980	14,798,070	32,963	112,466	835,667	2,193,626	5,849,276	12,716,910
1921.....	5,752,885	14,195,143	12,057	75,670	242,345	650,658	5,522,597	13,620,155
1922.....	6,943,972	15,438,461	30,914	83,037	425,137	699,738	6,549,749	14,821,780
1923.....	7,543,589	15,064,661	17,697	75,294	493,751	824,811	7,067,535	14,315,144
1924.....	7,498,624	13,398,411	27,672	69,320	153,520	213,845	7,372,776	13,253,886
1925.....	8,116,597	14,046,704	21,849	63,067	997,915	1,498,495	7,140,531	12,611,276
1926.....	8,707,021	13,013,283	21,114	77,866	285,932	358,231	8,442,203	12,732,918
1927.....	10,065,865	14,391,937	19,354	87,541	249,694	308,144	9,835,525	14,171,334
1928.....	11,023,928	16,739,163	34,047	146,164	267,325	340,624	10,790,650	16,544,703
1929.....	12,284,081	19,337,235	55,980	189,169	234,111	252,955	12,105,950	19,273,449
1930.....	11,032,538	17,713,067	143,436	569,848	198,736	212,071	10,977,238	18,070,844
1931.....	10,161,658	15,826,243	38,392	143,491	114,064	124,267	10,085,986	15,845,467
1932.....	4,498,721	6,930,721	21,351	58,092	53,333	38,921	4,466,739	6,949,892
1933.....	3,007,432	4,536,935	19,119	37,768	52,531	47,369	2,974,020	4,527,334
1934.....	3,783,226	5,667,946	14,341	45,548	70,046	55,181	3,727,521	5,658,313
1935.....	3,648,086	5,580,043	17,738	60,079	55,607	44,365	3,610,217	5,595,757
1936.....	4,508,718	6,908,192	39,867	107,180	68,929	56,909	4,479,656	6,958,463
1937.....	6,168,971	9,095,867	61,082	134,113	72,568	82,978	6,157,485	9,147,002
1938.....	5,519,102	8,241,350	48,497	105,326	89,419	101,059	5,478,180	8,245,617
1939 ³	5,731,264	8,511,211	16,622	58,310	156,556	159,579	5,591,330	8,409,948

¹ 'Production' as used here means quantity and value of sales. ² The barrel of cement=350 lb. or 3½ cwt. ³ Preliminary figures.

Sand and Gravel, and Stone.—The Mining, Metallurgical and Chemical Branch of the Bureau of Statistics presents details of production and organization of the stone industry separately from that of sand and gravel, but for the sake of brevity they are here discussed together. However, the figures of stone production shown do not include the limestone used to produce lime and cement, nor the quartz and other rock minerals, which are shown separately in Table 2, p. 317. The production of these materials increased greatly up to the recent world depression. The expansion in the stone industry was chiefly in crushed stone. Thus a production of crushed stone in 1922 of 3,044,399 tons had increased by 1930 to 8,062,330 tons, while in the same period the production of sand and gravel increased from 11,666,374 tons to 28,547,511 tons. During the depression the output contracted sharply, but