

**World's Production.**—The world's production of lead in 1928 was about 1,846,650 short tons. The principal producers were the United States with 35 p.c., Mexico 14 p.c., Australia 10 p.c., Canada 9.2 p.c. and Spain 7.3 p.c.

**Subsection 5.—Nickel.**

With the exception of the nickel in the ores shipped from the Cobalt district the Canadian production of nickel is derived entirely from the well-known nickel-copper deposits of the Sudbury district, Ontario. From 830,477 lb. in 1889 the production of nickel increased continually to 92,500,000 lb. in 1918, constituting a record. After a slump to 19,293,000 lb. and 17,597,000 lb. in 1921 and 1922 respectively there was an increase to 73,857,114 lb. in 1925, followed by a drop to 65,714,294 lb. in 1926. In 1928 production rose to a record of 96,755,578 lb., exceeding that of the war year 1918, while the preliminary estimate for 1929 shows a further increase to 110,275,812 lb.

In recent years the producing companies have instituted researches to find new peace-time uses for the metal. The success attending their efforts in that direction accounts very largely for the marked increase in production during the past few years. The automobile industry, electrical machinery, cooking utensils, new submarine cables and various nickel alloys are all helping to absorb this increased production.

**Sudbury.**—The nickel-bearing rocks of the Sudbury district, with a width of about two and one-half miles, form a wide ellipse 36 miles long and 13 miles broad. The ores consist mainly of a mixture of pyrrhotite and chalcopyrite associated with norite, a basic intrusive rock. The nickel occurs in the pyrrhotite as pentlandite and varies somewhat in amount. The ore mined in the district varies considerably in richness, the average metal content being about 2 to 4 p.c. of nickel, 1 to 3 p.c. of copper and 45 p.c. iron, although portions of the new Frood deposit are much richer than this especially in copper. Cobalt, gold, silver, platinum and palladium are nearly always present in very small quantities. The matte produced by the companies at Sudbury has averaged about 50 p.c. nickel and 30 p.c. copper.

**World's Production.**—The world's production of nickel was about 51,500 short tons in 1928, of which output 90.0 p.c.<sup>1</sup> was Canadian in origin, while the remainder was derived from New Caledonia, India and Norway. The proved deposits of nickel ore in Canada are estimated to be sufficient to provide for the world's requirements for many years, while there are still large reserves undeveloped

**16.—Quantity and Value of Nickel Produced in Canada during the calendar years 1901-1929.**

NOTE.—For figures for the years 1889-1900, see 1929 Year Book, p. 368.

Years.	Quantity.	Value.	Years.	Quantity.	Value.	Years.	Quantity.	Value.
	lb.	\$		lb.	\$		lb.	\$
1901....	9,189,047	4,591,523	1911....	34,098,744	10,229,623	1921....	19,293,060	6,752,571
1902....	10,693,410	5,025,903	1912....	44,841,542	13,452,463	1922....	17,597,123	6,158,993
1903....	12,505,510	5,002,204	1913....	49,676,772	14,903,032	1923....	62,453,843	18,332,077
1904....	10,547,883	4,219,153	1914....	45,517,937	13,655,381	1924....	69,536,350	12,126,732 <sup>2</sup>
1905....	18,876,315	7,550,526	1915....	68,308,657	20,492,597	1925....	73,857,114	15,946,672 <sup>2</sup>
1906....	21,490,955	8,948,834	1916....	82,958,564	29,035,498	1926....	65,714,294	14,374,163 <sup>2</sup>
1907....	21,189,793	9,535,407	1917....	82,330,280	33,732,112	1927....	66,798,717	15,262,171 <sup>2</sup>
1908....	19,143,111	8,231,538	1918....	92,507,293	37,002,917	1928....	96,755,578	22,318,907 <sup>2</sup>
1909....	26,282,991	9,461,877	1919....	4,544,883	17,817,953	1929 <sup>3</sup> ....	110,275,812	27,115,423 <sup>2</sup>
1910....	37,271,033	11,181,310	1920....	61,335,706	24,534,282			

<sup>1</sup> This figure includes some nickel produced in the U.S. as a by-product from the electrolytic refining of Canadian copper; such nickel is not included in the table. <sup>2</sup> A change in the method of computing the value of nickel produced accounts for the drop in value after 1923. <sup>3</sup> Preliminary figures.